

# AMF AMPLIFIER PRODUCTS



- Low-Noise Amplifiers
- Medium Power Amplifiers
- Power Amplifiers
- SATCOM LNAs
- Special Amplifier Designs





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- Medium Power Amplifiers
- Power Amplifiers
- SATCOM LNAs
- Special Amplifier Designs



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## INTRODUCTION

This short form catalog is intended to provide an overview of MITEQ's AMF Amplifier Department's standard products and custom capabilities. The products within this catalog are organized into five major sections:

- Low-Noise Amplifiers
- Medium Power Amplifiers
- Power Amplifiers
- SATCOM Amplifiers
- Special Amplifier Designs

This division is based upon this department's emphasis in the amplifier market. The low-noise and power sections are further subdivided into classifications of bandwidth:

- Moderate
- Octave
- Multioctave
- Ultra-Broadband
- Coaxial Millimeter Wave

In addition to the detailed product information, we have included typical test data from some of our amplifiers to give a feel for the performance listed in the specification tables. We have also included, for your reference, a section filled with application notes written by our engineers to help in understanding some system design parameters when using our amplifiers. Included in this section is a note on specification definitions. You may also find these especially informative in assuring that your requirements are in line with the catalog specifications.

In all, we think you will find this catalog informative and a useful tool to better understand MITEQ's AMF Amplifier Department, as well as a good general reference for any amplifier application.

## CORPORATE OVERVIEW

**MITEQ**, an acronym for (M)icrowave (I)nformation (T)ransmission (EQ)uipment, designs and manufactures a complete line of high-performance components and subsystems for the microwave electronics community. Located on Long Island, New York for more than thirty-five years, it has grown into a company, which is dedicated to achieving technical excellence, producing quality products and satisfying our customer's specific needs.

### STANDARD PRODUCT LINES

MITEQ's product lines are basically split between two market segments:

- **Microwave components and integrated assemblies**
- **Satellite communications & earth station equipment**

The Microwave Component Division offers designs up to and over 60 GHz, including:

- **Amplifiers:** Moderate to broadband, ultralow-noise to medium-power, bipolar, and GaAs FET designs
- **Mixers:** Single-, double-, and triple-balanced, MESFET and Schottky mixers and low-noise receiver front ends
- **Frequency multipliers**
- **Passive power components**
- **Microwave control products:** Solid-state switches, digital attenuators, limiters, and phase shifters
- **RF and IF signal processing components**
- **Oscillators:** Crystal, voltage, free-running, and phase-locked
- **Frequency synthesizers**
- **Integrated multifunction assemblies**
- **Fiber optic products**

MITEQ's Satellite Communication and Earth Station Equipment Groups manufactures the following:

- **Up/downconverters**
- **Test translators**
- **IF/video equalizers**
- **Redundancy switchover units**
- **Video modulators and modems**

Specific products include synthesized converters with 1.0 kHz and 125 kHz frequency step sizes, INMARSAT L- and C-band converters, pilot generators and receivers, crystal controlled converters, video exciters, and custom designed products.

### CUSTOM DESIGN CAPABILITIES

Although MITEQ offers one of the broadest lines of standard catalog items, the bulk of MITEQ's business is in customized components, assemblies, and systems designed specifically around the customer's needs. MITEQ's heavy emphasis on internal R&D throughout its history has led to the creation of a company with the ability to adapt quickly to the changing needs of the customer and market while at the same time offering competitive prices and fast turnaround times.

### APPLICATIONS

MITEQ's components and systems are supplied to a wide variety of military and commercial markets including:

- Satellite and ground-based communication systems
- Missile guidance
- Military electronic countermeasures, radar warning and surveillance systems
- Land, sea, and airborne radar
- Air traffic control radar
- Radioastronomy
- Research and development efforts

### MANUFACTURING AND DESIGN CAPABILITIES

MITEQ's state-of-the-art facilities presently consist of four adjacent buildings totaling 215,000 square feet. In addition to housing thirteen separate engineering and manufacturing groups, MITEQ prides itself on its support groups including: drafting, which uses the latest commercial CADD and proprietary software programs; and an extensive machine shop, which includes top-of-the-line numerically-controlled Okuma, Mitsui, Seiki and Matsuura vertical machines capable of machining to the tightest of tolerances, guaranteeing repeated accuracy and reliability. MITEQ has five Class 100,000 and two Class 10,000 clean rooms in order to support our high reliability space and military projects.

To accomplish the engineering, manufacturing and testing of MITEQ's components and assemblies, MITEQ invests heavily in capital equipment. This state-of-the-art equipment includes a wide array of vector network analyzers and synthesized sources, phase noise test sets, custom noise figure measuring equipment, glass furnace equipment to control the process of glass sealing, thermal/humidity chambers, and PIND and shock and vibration stations for environmental screening, to name just a few.

### QUALITY ASSURANCE

MITEQ, a recognized world class supplier with an outstanding reputation for product quality, has undergone the extensive ISO-9001:2000 certification process to help secure its future as a primary source for advanced microwave products.

### SPACE HERITAGE

MITEQ's continued advancements in this state-of-the-art and unique capability have led to wide acceptance by the microwave community as a forerunner in spaceborne technology. Our space-qualified components include mixers, oscillators, amplifiers, synthesizers, and super-components. MITEQ's Space-Qualified Quality Assurance Plan establishes the actions necessary to provide confidence that the end item will meet the quality, reliability, and electrical performance required for space-qualified applications. Recent space platforms include:

- AMSU-B • SSMIS • GEOSAT • SEAWINDS
- TERRASARX • SEASAT • SPINSAT • TOPEX
- HERSHEL • EOS-MILS • SAR-LUPE

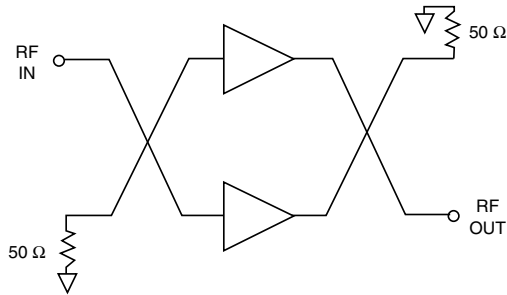
### CUSTOMER SERVICE

MITEQ continually evaluates its service procedures to ensure that a close relationship is maintained between the company and its customers. The goal in every case is to deliver products of exceptional quality, backed by responsive technical and administrative support. MITEQ remains committed to offering comprehensive technical support to its customers through a direct customer-to-MITEQ engineering link. This enables a quick response to the customer's needs, and ensures receipt of exactly what the customer requires; delivery of cost-effective solutions for the most demanding applications.

# AMF TECHNOLOGY OVERVIEW

## CIRCUIT DESCRIPTIONS

MITEQ's AMF amplifiers incorporate many design techniques commonly used throughout the industry. Through extensive study and years of experience, our engineers have become more proficient in certain subtleties of amplifier design, most notably in the area of noise and power match optimization. Although noise figure is clearly a mark of excellence for MITEQ, an advantage that cannot be overlooked is our flexibility to utilize and combine all techniques to meet the customer's specific requirements. Each system requirement has an optimum approach, and MITEQ uses all of the available design options plus a few "tricks of the trade" to offer the best performance.



**BALANCED AMPLIFIER STAGE**

## BALANCED AMPLIFIERS

During the early years at MITEQ, the balanced amplifier approach was most widely used. Each amplifier stage in a balanced design employs a 90° hybrid at the input and output to feed two discrete transistors. The advantage of using this topology is:

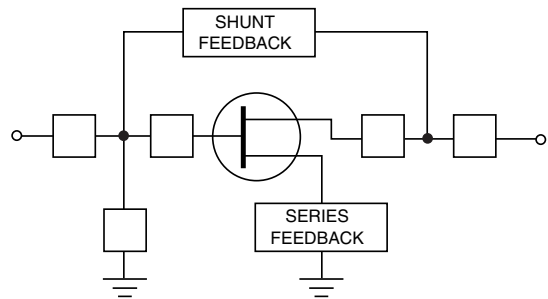
- Good VSWR characteristics
- Easily cascadable stages
- Easy power matching
- Improved output power performance

The disadvantages of this type of design are equally



**BALANCED AMPLIFIER**

as clear. The cost and size are adversely affected because of the two FETs per stage. In addition, if used as the input stage of an amplifier, the loss of the 90° hybrid will degrade the minimum achievable noise figure. Finally, this design is bandwidth limited due to the problems in realizing multioctave 90° hybrids. AMF series amplifiers that utilize the balanced approach are designated by our "B" series, for example; AMF-2B, AMF-3B, AMF-4B, etc., representing 2-, 3- and 4-stage balanced amplifier designs.

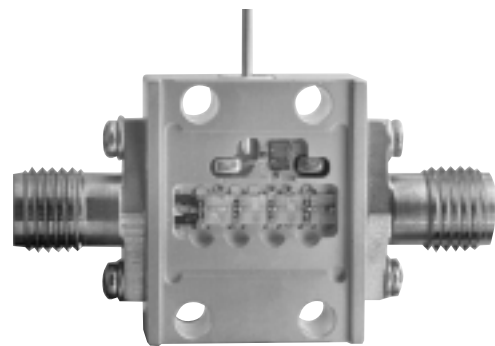


**FEEDBACK AMPLIFIER STAGE**

## FEEDBACK DESIGNS

MITEQ has established a technique to counter the deficiencies of the balanced approach and developed an amplifier series based upon a feedback design approach. Our "F" series AMF amplifiers use this approach when its advantages fit the specific applications.

Feedback based designs use a single transistor in each stage. The impedance of the FET is matched to the input or output source and load impedance by means of feedback. Two basic types of feedback are applied, series or parallel. Series feedback is also known as "lossless" feedback because there is no additional lossy circuits added to the input of the FET. Although difficult to optimize, a lossless feedback design provides the lowest noise figures available today.

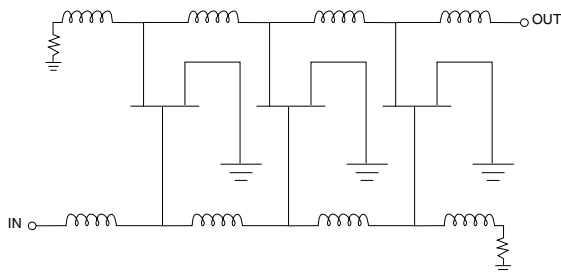


**FEEDBACK AMPLIFIER**

## AMF TECHNOLOGY OVERVIEW (CONT.)

When implementing this design, the engineer must pay particular attention to impedance matching the input stages. The interaction of power and noise match of the transistor must be optimized over the specified band. This optimization of a feedback amplifier design involves a tradeoff exercise between input VSWR and noise figure performance. The matching techniques utilized are best accomplished in "chip and wire" construction where subtle tuning can be realized. This is an area that requires extensive experience and a detailed knowledge of the transistor and impedance matching circuits in order to achieve the best possible performance.

MITEQ is not the only company using a feedback approach to achieve low noise figures; however, many of our competitors must utilize input and inter-stage isolators to allow them to provide good VSWR performance in the presence of the best noise match. Although isolators are sometimes used for special applications, MITEQ has been able to achieve both a good power match and an optimum noise match without isolators. This gives us a great advantage over our competition by providing the lowest noise figures available.

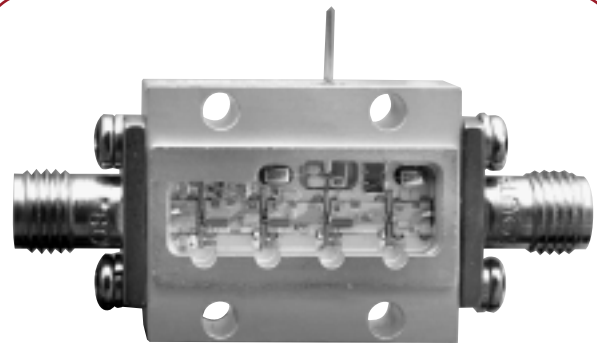


**DISTRIBUTED AMPLIFIER STAGE**

### DISTRIBUTED AMPLIFIERS

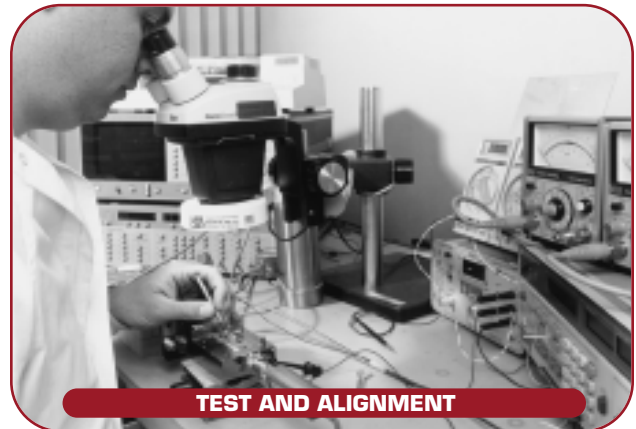
Although the feedback approach has no implicit bandwidth limitations, MITEQ's AMF Department utilizes a distributed amplifier approach to support broadband and ultra-broadband applications.

This technique uses multiple FETs per stage in a "traveling wave" approach to provide each stage with a balanced combination of gain flatness and power. The textbook design of a distributed amplifier uses 50 ohm termination resistors in each stage, which have a negative effect on noise figure. MITEQ's engineers have developed proprietary techniques to implement this approach and still achieve low noise performance. Our "D" series amplifiers utilize the



**DISTRIBUTED AMPLIFIER**

distributed amplifier design approach and achieve multi-octave to ultra-broadband designs in excess of 40 GHz.



**TEST AND ALIGNMENT**

### SATCOM AMPLIFIERS

MITEQ's SATCOM amplifiers are offered with and without the use of input isolators. In both cases, feedback is the technique used in the input stage to facilitate impedance matching for an optimum balance of power (VSWR) and noise figure.

### CUSTOM ENGINEERING

All these circuit approaches are combined to provide an endless array of amplifier designs. The positive and negative features of each design are weighed and combined to meet each customer's specific requirements. In addition to these approaches, MITEQ's AMF Amplifier Department integrates other features to meet custom design requirements, including:

- Gain control
- Input limiter protection
- Sloping amplifiers
- Limiting amplifiers
- Various bias options

## AMF TECHNOLOGY OVERVIEW (CONT.)

These various design possibilities are best discussed directly with our engineers. MITEQ's engineering personnel not only possess the detailed amplifier knowledge, but also have extensive overall systems background to help customers translate their true requirements into specifications. This direct contact on an "engineer-to-engineer" basis has allowed MITEQ to better support our customer base with information and suggestions to improve the use of our amplifiers in their systems.

### CONSTRUCTION

MITEQ's AMF amplifiers are manufactured with our internal thin film hybrid manufacturing process. This type of Microwave Integrated Circuit (MIC) construction was introduced to MITEQ during the early 1970s and has been the main manufacturing technique for our amplifiers ever since. Our expertise in this form of microminiature integration has allowed MITEQ to achieve truly state-of-the-art performance, particularly in the areas of low-noise figure and broadband amplifier design.

Most balanced amplifiers made by the AMF Department are constructed using a carrier technique. Each amplifier stage is individually manufactured and tuned on a stand-alone carrier assembly. These carriers are then cascaded in the final chassis to achieve the total specified parameters of the amplifier. Final alignment and test is performed with-



in the overall chassis to ensure compliance to these specifications.

The distributed amplifiers and the feedback designs use a technique where the FETs are mounted directly to the chassis. This technique allows MITEQ to achieve a physically smaller mechanical interface between the input stage and the coaxial transition, making lower noise figures possible. Also, the tighter interstage tolerances assist in achieving broader bandwidths, as required by both of these series.



To accomplish the manufacturing and testing of our cutting edge amplifiers, equally state-of-the-art equipment must be utilized. This includes purchases of CNC machining equipment to manufacture tight tolerance kovar chassis for our millimeter-wave amplifiers, glass furnace equipment to control the process of glass sealing, 100 GHz network analyzers to test our millimeter-wave amplifiers, thermal/humidity chambers, PIND, shock, and vibration stations for environmental screening.

In addition to special equipment, MITEQ maintains a large inventory of standard equipment for microwave integrated circuit assembly, including; thermocompression wirebonders, eutectic substrate attach flow ovens, wire pull testing equipment, etc. All-in-all, MITEQ's capitalization has allowed us to confidently approach any amplifier requirement.

## TEMPERATURE COMPENSATED AMPLIFIERS

### FEATURES:

- Moderate to broadband to 50 GHz
- Gain windows from as low as  $\pm 1$  dB over  $-54$  to  $+85^\circ\text{C}$

### APPLICATIONS:

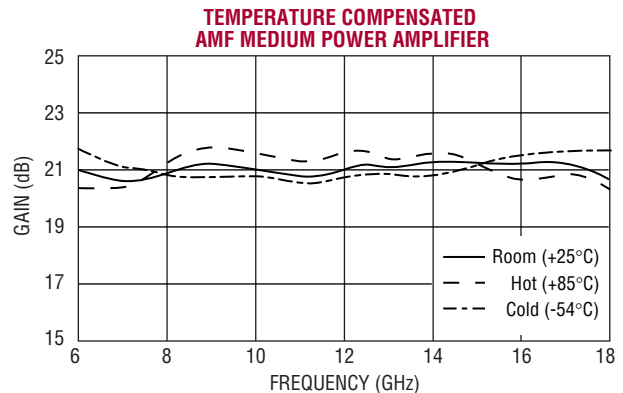
- Military systems
- Stringent environmental industrial applications
- High performance commercial applications

For applications where normal amplifier gain variations as a function of temperature range exceed the allowable specification limits, MITEQ offers temperature compensated amplifier designs whose gain variations have been reduced with respect to uncompensated designs. Since gain variations over temperature are not constant over the entire frequency range, MITEQ has adopted a gain window specification. Please reference the Specification Definitions section for a detailed description of this specification.

Some typical techniques used for compensating for gain variations are as follows: Integrating a PIN diode attenuator and FET bias current compensation. In this approach, the control current of a PIN diode attenuator is automatically decreased by means of a thermistor so that at high temperatures there is less attenuation. This compensates for the decreased gain due to an

increase in ambient temperature. The attenuator is placed between the gain stages of the amplifier so that noise figure and output power performance are minimally degraded. In another approach, the FET itself is compensated. In regions of low bias current, the FET gain is proportional to the current. The FET bias current is automatically increased by means of a thermistor at high temperatures to increase the gain, in order to compensate for a decrease in gain as a result of the increase in ambient temperature. MITEQ utilizes any or all of these methods depending on the specific application or requirement.

Shown here is typical compensated amplifier performance over temperature. Please contact the factory with your individual requirements.



## LOW-PHASE NOISE AMPLIFIERS

### FEATURES:

- Low residual AM/PM noise from  $-150$  dBc/Hz at 10 kHz
- Guaranteed performance
- Supporting test data

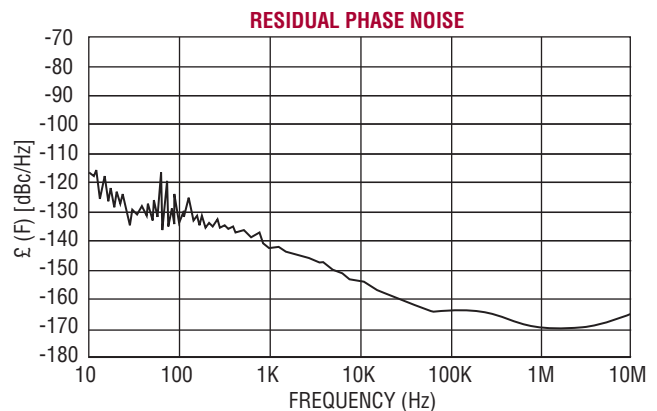
### APPLICATIONS:

- Coherent FMCW radars
- Low PM noise measurement systems

Manufacturers of coherent radar systems require low phase noise amplifiers for their receiver and exciter systems. The phase noise of the amplifier is not correlated with the low noise figure, i.e. the lowest noise figure amplifier does not always have the lowest phase noise. In order to provide the lowest phase noise amplifiers, MITEQ has measured phase noise for distributed, single-ended, and balanced amplifiers to determine the optimum design. We have also measured the amplifiers with ion-implanted FETs and epitaxial FETs to determine the optimum devices.

Phase noise has been further reduced 4 to 5 dB by

combining four (4) phase-matched amplifiers in parallel with input and output 4-way power dividers/combiners. The signal remains coherent while the phase noise is random in each amplifier, resulting in a net reduction in the additive phase noise of the overall unit. Typically low phase noise designs achieve  $-140$  dBc/Hz at 1 kHz offset from the carrier, and  $-150$  dBc/Hz at 10 kHz offset from the carrier. This is 10–15 dB lower than nonoptimized models. Please contact factory with your specific requirements.





## MICROWAVE LIMITING AMPLIFIERS

### FEATURES:

- Tightly controlled output power over:
  - Input power range
  - Temperature
  - Frequency

### APPLICATIONS:

- Local oscillator driver networks
- Microwave phase/frequency discriminators

Although the majority of applications utilize the amplifiers operating within their linear range, there are requirements when an amplifier is required to operate in the saturated mode. The use of a microwave limiting amplifier is ideal for applications which require tightly controlled output power delivered over a wide range of input powers, or over a wide frequency range or even a wide temperature range. Typical applications are in a local oscillator chain, where a mixer needs to see a tightly controlled LO power drive for optimum performance.

### PLEASE NOTE:

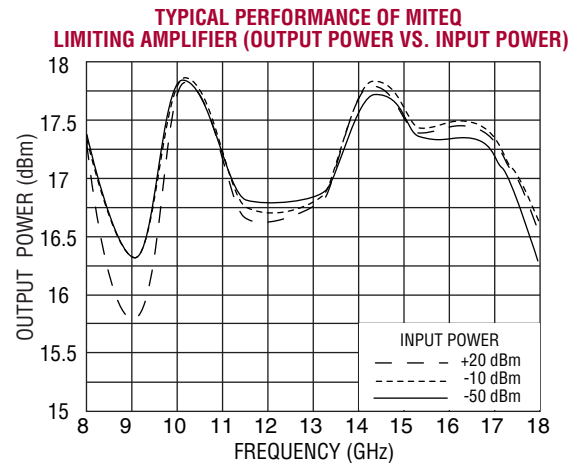
When you require this type of amplifier, it is important to specify that the amplifier is being used as a limiting amplifier, not as a linear amplifier. Do not specify the linear gain and compression or saturation point. The best method of specifying a limiting amplifier is to define the following parameters:

1. Input power range
2. Desired output range

All other specifications will need to be met over these ranges.

If the device is specified to operate in saturation:

1. The design will include sufficient gain to ensure the device is in hard saturation over the entire input dynamic range.
2. The devices in the output stages will be selected to handle more power than required with the bias set to control the output power. This will extend the operating life of the unit.



## SLOPING AMPLIFIERS

- FEATURES:**
- Customized gain vs. frequency response
  - Octave to multioctave band designs

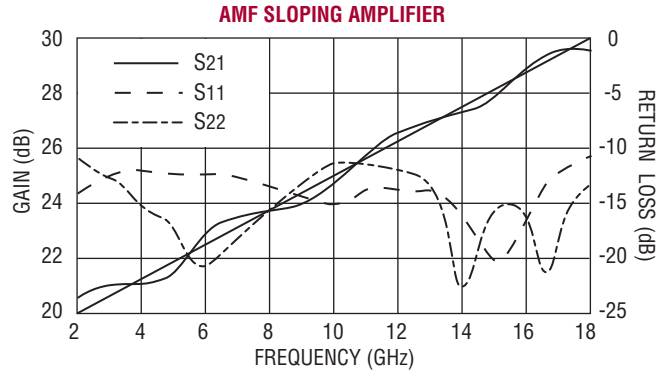
- APPLICATIONS:**
- System slope compensation
  - Long cable slope compensation

In using either the distributed or feedback amplifier design approach, distributed circuit elements can be utilized as part of the feedback network to shape the gain response versus frequency.

Typical gain slopes achievable by MITEQ are:

$$\frac{\Delta \text{Gain} = 10 \text{ dB}}{\Delta \text{Frequency} = 2 \text{ to } 18 \text{ GHz}}$$

Customizable performance is readily achieved through tuning the feedback elements (capacitors and inductors). Both the circuit architecture and the MIC construction techniques used at MITEQ enable a variety of responses over almost any frequency range.



## WAVEGUIDE INPUT LOW-NOISE AMPLIFIERS

- APPLICATIONS:**
- SATCOM amplifiers
  - Radar front ends

- OPTIONS:**
- Input limiter protection to 100 watt CW
  - Flat or grooved flanges
  - Pressurized waveguides

### TYPICAL PERFORMANCE

AVAILABLE FREQ. RANGE (GHz)	FLANGE TYPE	AVAILABLE GAIN (dB)	AVAILABLE NOISE FIGURE (dB)	AVAILABLE VSWR
5.4–5.9	CPR-187	20–50	0.8	1.5:1
8.5–9.6	WR-112	20–50	0.9	1.5:1
8–12	WR-90	20–50	1.2	2:1
12–18	WR-62	20–40	1.5	2.3:1
18–26	WR-42	20–40	2.1	2.5:1
26–40	WR-28	20–40	3.3	3:1

## SPECIFICATION DEFINITIONS

### GENERAL SPECIFICATIONS

Most models shown in this catalog are classified by several specifications, namely:

- Operating frequency range
- Gain
- Gain flatness
- Noise figure
- Output power at 1 dB compression
- Input and output VSWR
- DC supply voltage and current consumption

The specifications for the MITEQ amplifiers listed in this catalog are based on operation at normal room ambient conditions of +23°C. For amplifier requirements at other temperatures and environments, please consult the factory or your local representative.

### OPERATING FREQUENCY RANGE

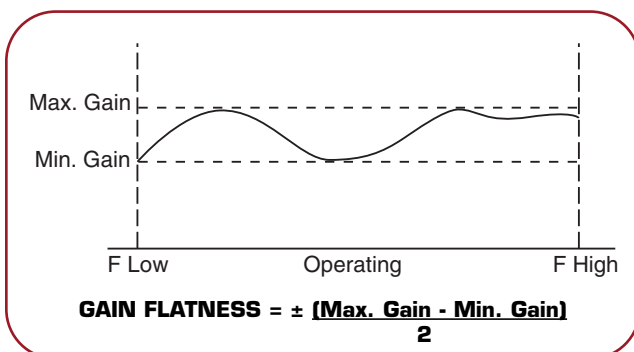
The operating frequency range is the range of frequencies over which the amplifier will meet or exceed the specification parameters. The amplifier may perform beyond this frequency range, and in cases where the amplifier is specified over less than an octave, the actual frequency response may be significantly greater than the specified operating frequency range.

### GAIN

Gain is defined as the ratio of the power measured at the output of an amplifier to the power provided to the input port. It is usually expressed in decibels and is typically measured in a swept fashion across the operating frequency range. The gain of an amplifier is usually not an exact quantity, and it is typically specified within a window. It is also important to differentiate between small-signal linear gain and power gain, which may be compressed. In addition, any out of band gain requirements should be addressed.

### GAIN FLATNESS

The gain flatness of an amplifier is measured by viewing the swept gain and determining the difference



between the minimum gain and the maximum gain recorded over the operating frequency range. Unless the amplifier is specified to operate over a defined temperature range, this measurement is performed at ambient temperature (+23°C). If a range of temperatures are specified, the measurement must also be verified at the temperature extremes

### NOISE FIGURE

Noise figure is classically defined as:

$$\frac{S_i/N_i}{S_o/N_o} = \frac{\text{Signal-to-noise ratio at the amplifier input}}{\text{Signal-to-noise ratio at the amplifier output}}$$

Since all amplifiers add thermal noise, the signal-to-noise ratio at the output will be degraded. Therefore, the noise figure will be a ratio greater than one, or when expressed in decibels, a positive number i.e.  $NF/dB = 10 \text{ Log}_{10} (NF \text{ Ratio})$ . The additive noise of an amplifier can also be expressed in a parameter referred to as noise temperature. In this approach, the noise temperature of the amplifier is equal to the temperature (in Kelvin) of a 50 ohm termination at the input of an ideal noiseless amplifier with the same gain and generating the same output noise power.

The relationship between noise figure and noise temperature is:

$$\text{Noise Figure} = 10 \text{ Log}_{10} \left\{ \frac{\text{Noise Temp. (K)} + 1}{290 \text{ K}} \right\}$$

Noise figure data is measured at discrete frequencies throughout the band. Test data is supplied at +23°C unless specified otherwise.

### OUTPUT POWER AT 1 dB COMPRESSION

The 1 dB output compression point of an amplifier is simply defined as the output power level at which the gain drops 1 dB below the small signal.

All active components have a linear dynamic range. This is the range over which the output power varies linearly with respect to the input power. As the output power increases to near its maximum, the device will begin to saturate. The point at which the saturation effects are 1 dB from linear is defined as the 1 dB compression point. Because of the nonlinear relation between the input and output power at this point, the following relationship holds:

$$P_{\text{OUT}} (1 \text{ dB}) = P_{\text{IN}} (1 \text{ dB}) + \text{Linear Gain} - 1 \text{ dB}$$

### INPUT AND OUTPUT VSWR

Most RF and microwave systems are designed around a 50 ohm impedance system. An amplifier's impedance is designed to be as close as possible to 50 ohms; however, this is not always possible, espe-

## SPECIFICATION DEFINITIONS (CONT.)

cially when attempting to simultaneously achieve a good noise figure. The Voltage Standing Wave Ratio (VSWR) of an amplifier is a measure of an amplifier's actual impedance (Z) with respect to the desired impedance (Zo), in most cases 50 ohms.

The VSWR is derived from the reflection coefficient  $\Gamma$ , where  $\Gamma$  is a ratio of the normalized impedance:

$$\Gamma = \frac{Z - Z_0}{Z + Z_0}$$

and:

$$\text{VSWR} = \frac{1 + |\Gamma|}{1 - |\Gamma|}$$

VSWR is "measured" with either a scalar or vector network analyzer. The reflection coefficients are determined by comparing the incident power and the reflected power at both ports of the device which in turn are converted and displayed as VSWR. The ratio of the reflected power to the incident power is also known as the return loss.

### DC SUPPLY VOLTAGE AND CURRENT CONSUMPTION

Amplifiers, being active devices, require DC power supplies for their operation. MITEQ's amplifiers typically require +15 volts and include an internal voltage regulator. The use of a regulator allows for specification compliant operation even in the presence of power supply voltage variations, as long as minimum voltage supplied is greater than the specified drop-out voltage of the regulator. It should be noted that the regulators also typically provide over-voltage and thermal protection. MITEQ also includes reverse voltage protection diodes on the DC line to prevent damage due to the application of a negative voltage.

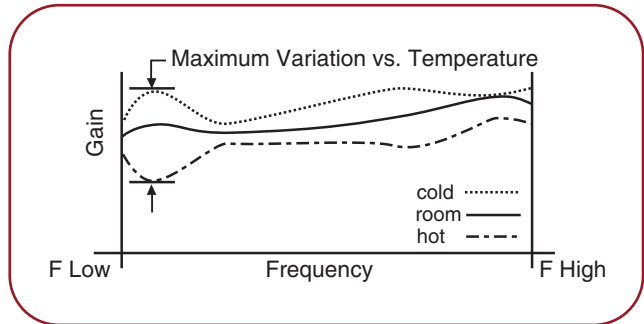
### ADDITIONAL SPECIFICATIONS

In addition to the electrical specifications for most of the models within this catalog, there are additional specifications useful to the engineer designing around stringent system requirements:

- Gain variation vs. temperature
- Overall gain window
- Intercept point
- Dynamic range
- Reverse isolation
- Phase linearity
- Phase and amplitude matching and tracking
- AM to PM conversion
- Pulse performance
- Maximum input power
- Group delay

### GAIN VARIATION VS. TEMPERATURE

Gain variation versus temperature defines the maximum allowable variation of the linear gain due to temperature at any discrete frequency. As a result, this parameter does not account for drift over frequency.

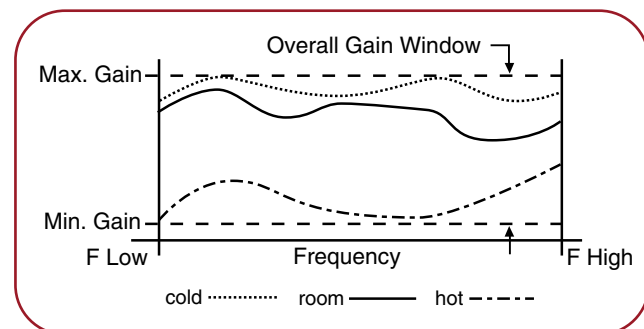


Gain variation versus temperature is measured by performing swept gain measurements at the specified temperature extremes and comparing the deviations between the two sweeps at each frequency to determine the greatest change. When a  $\pm$  value is used, the delta is taken at both temperature extremes with respect to room temperature (+23°C). (For typical gain variation values vs. temperature see Thermal Consideration section on page 13).

### OVERALL GAIN WINDOW

An overall gain window specification defines the absolute minimum and maximum gain values over both temperature and frequency.

It is the most complete way to specify an amplifier, however, it also impacts the price due to the additional testing and alignment required by adding this constraining parameter.



### INTERCEPT POINT

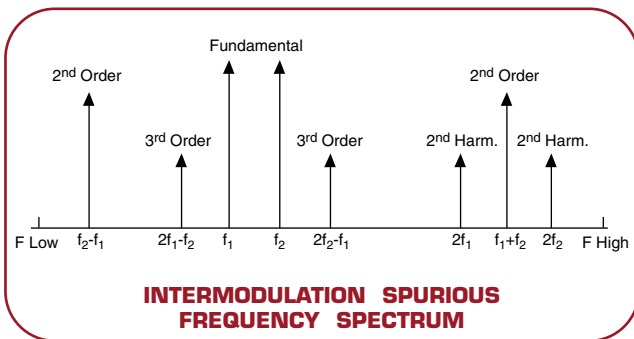
Solid-state amplifiers use transistors, either bipolar or field effect, to provide gain. Although these transistors are generally used in a linear mode they still exhibit nonlinear phenomenon, such as intermodulation effects and harmonic generation. These effects are evident in spurious products present at the output.

## SPECIFICATION DEFINITIONS (CONT.)

In the case of the single-tone condition, the spurious signals are the harmonics of the fundamental input signal. In the case of the two-tone input condition, the spurious signals are mixing products of the two input signals. The most common are the second order and the third order two-tone intermodulation products. Note that the two equal tones at the input of a nonlinear device generate the following products at the output:

$$F_{12} = MF_1 + NF_2$$

Where M and N are integers



Second order two-tone spurs are the sum and difference product of the fundamental input frequencies, i.e.,

$$f_{SPUR} = f_1 \pm f_2$$

These spurious signals are only of concern when the band is greater than one octave. If the frequency range is less than one octave, the two-tone second order spurs will be out of band and may not need to be specified unless they impact another part of the system.

These intermodulation products are characterized with respect to the input signal by means of a theoretical tool called an intercept point. These points are defined as the point where the linear curve of input vs. output power of the fundamental would intersect with the linear curve of the intermodulation products of interest if saturation effects would not limit the output levels of these signals. Since it is known that the second order intermodulation products have a slope of 2:1 with respect to the fundamental input power, the value of the products can be estimated if the input signal power ( $P_{IN}$ ) and the output second order intercept point ( $OIP_2$ ) are known. The relationship is as follows:

$$\begin{aligned} IM2R &= OIP_2 - (P_{IN} + G) \\ &= IM2 \text{ rejection in dBc} \\ IM2 &= 2(P_{IN} + G) - OIP_2 \\ &= IM2 \text{ level in dBm} \end{aligned}$$

Third order products are the ones where  $M+N=3$ .

$$f_{IM3} = |2f_1 \pm f_2| \pm |f_1 \pm 2f_2|$$

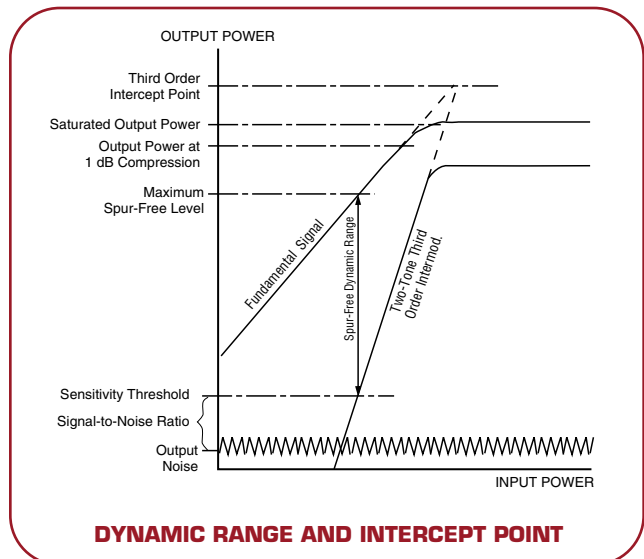
The slope of third order products is 3:1 with respect to the fundamental input power, and again the value of the signals can be estimated if the input signal power ( $P_{IN}$ ) and the output third order intercept point ( $OIP_3$ ) are known. The relationship is as follows:

$$\begin{aligned} IM3R &= 2\{OIP_3 - (P_{IN} + G)\} \text{ in dBc} \\ IM3 &= 3(P_{IN} + G) - OIP_3 \text{ in dBm} \end{aligned}$$

### DYNAMIC RANGE

Dynamic range can be defined in several ways. The two common definitions are to define the linear dynamic range and the spurious free dynamic range.

The linear dynamic range defines the difference between the Minimum Detectable Signal (MDS), referred to the input of the amplifier or receiver and the maximum signal level at which the amplifier remains linear. This is typically defined by the input 1 dB compression point ( $P_{IN} 1 \text{ dB}$ ). The minimum detectable signal is defined by system constraints, such as noise figure, bandwidth, and predetection signal-to-noise ratio.



Spurious-free dynamic range is defined as the difference between the minimum detectable signal and the point at which the intermodulation signals generated from two equal tones would either equal this MDS or some other acceptable level. The spurious-free two-tone dynamic range (SFDR) can be easily derived by the following relationship:

$$SFDR = 2/3 (IIP_3 - MDS)$$

$$MDS \text{ (dBm)} = -114 + 10 \log_{10} (BW \text{ in MHz}) + N.F. + SNR$$

Where  $IIP_3$  is the input  $IP_3$

## SPECIFICATION DEFINITIONS (CONT.)

### REVERSE ISOLATION

Reverse isolation simply defines the isolation between the output and input of an amplifier. It is tested by injecting a signal into the output port and measuring its level at the input. Typically, reverse isolation is twice the gain.

### PHASE LINEARITY

The phase of a signal versus frequency will be distorted due to the reactance elements within the amplifier. This “linear” distortion is called phase linearity and is measured by means of a vector network analyzer across the operating frequency range.

### PHASE MATCHING

Phase matching, in the strict sense, is defined as minimizing the relative difference in insertion phase between any two units. This parameter is usually defined across the operating frequency band, however, in some cases it is defined over frequency segments ( $\Delta F$ ) within the overall operating band.

### GROUP DELAY

Group delay is a measure of how long it takes a signal to transverse a network. For a fixed circuit it is a weak function of frequency and it is usually expressed in units of time (nSec or pSec). Group delay consistency and flatness over frequency can be very important to many applications

### PHASE TRACKING

Phase tracking is very similar to phase matching. However, an arbitrary fixed offset exists between the amplifiers that can usually be compensated by the system software. The offset, sometimes referred to as the DC component (because all that remains is the phase versus frequency ripple and slope), is calculated at each temperature based upon an average over the band. As with phase matching, there are many variations on this theme that should also be discussed with MITEQ’s engineering before committing to a final specification.

### AMPLITUDE MATCHING

Same as phase matching, except substitute gain for phase.

### AMPLITUDE TRACKING

Same as phase tracking, except substitute gain for phase.

### GAIN RIPPLE

In addition to defining a gain window and overall flatness, sometimes it is also necessary to define a maximum gain change within a small portion of the total band. Typically this is quantified and specified in dB/MHz.

### AM TO PM CONVERSION

This specification parameter defines the change in phase at any fixed frequency within the operating band relative to the input signal power. It is usually defined in terms of degrees per dB ( $^{\circ}/\text{dB}$ ) over a specified input dynamic range. Most GaAs FET amplifiers exhibit well-behaved AM/PM conversion (less than  $1^{\circ}/\text{dB}$ ) up to a few dB below the 1 dB compression point. Beyond the 1 dB compression point, the variation can be quite large, depending on the devices and biasing conditions used.

### PULSE PERFORMANCE

A variety of pulse conditions can be specified for an amplifier, including amplitude or phase overshoot and ringing, amplitude or phase settling time, recovery time, etc. As with the matching and tracking specifications, they are typically system dependent and rarely fall into a standard definition. Therefore, it is best to contact MITEQ’s engineering staff when attempting to define the operation of an amplifier in the presence of pulsed signals.

### MAXIMUM INPUT POWER

Most low-noise figure amplifiers will withstand an input level of +15 dBm CW. In the event that you require a higher input level, an input limiter can be added to the front end of the amplifier in order to protect it. The problem with the addition of the limiter is that its insertion loss is directly additive when calculating the overall noise figure.

## THERMAL CONSIDERATIONS

The following information can be used as a guide relative to the changes in performance of an amplifier as a function of temperature.

### GAIN

The gain of a typical amplifier, that is not temperature compensated, tends to decrease as the operating temperature of the device increases. Since most low-noise amplifiers have their specifications defined at 23°C, the difference in the gain caused by temperature is approximately 0.01 dB/°C/stage for driver stages and 0.015 dB/°C/stage for power stages. By temperature compensating the amplifiers, improvements of 1/4 to 1/2 of the uncompensated gain change can be realized depending on the frequency bandwidth, gain, power, and temperature extremes.

### 1 dB COMPRESSION POINT

The 1 dB compression point of a low-noise amplifier varies inversely proportional to the operating temperature. As the temperature increases over room temperature (23°C), the 1 dB compression point will typically decrease up to 0.01 dB/°C.

### NOISE FIGURE

The noise figure of a typical amplifier will increase as the operating temperature of the device increases over room temperature (23°C). This rise in noise figure is typically 0.01 dB/°C. Thus, if the noise figure of an amplifier is defined by the manufacturer as 0.9 dB, and the unit has to operate at 85°C, the expected noise figure will be approximately:

$$[85^\circ - 23^\circ\text{C}] [0.01 \text{ dB}/^\circ\text{C}] + 0.9 \text{ dB} = 1.52 \text{ dB}$$

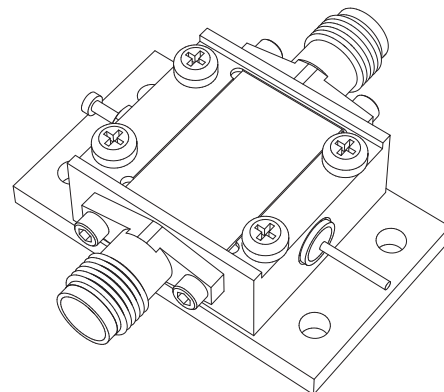
Similarly, for cold temperatures, the noise figure decreases at the same rate.

### HEATSINKING

All of MITEQ's amplifiers utilize active components that generate heat when bias is applied. As such, proper mounting must be achieved to maintain the junction temperatures of the devices and ensure specification compliant operation. This is done via conduction cooling of the amplifier case to a base plate or mounting surface. It is recommended that the mounting surface is smooth and clear of any foreign substances, so that there is a clear thermal path between the base plate of the amplifier and that of the mounting surface. We also recommend that thermal grease be used wherever possible to enhance the conductivity of the thermal path.

Since the amplifiers are sealed, there is no way to remove the heat other than by conduction, even if the ambient temperature is significantly below that of the base plate. For higher power models, heatsinks are required. Please consult the factory for details.

In order to increase the efficiency and reduce the thermal stress on the components in our amplifiers, MITEQ has done extensive research on the thermal effects of the heat generating devices in our amplifier designs. Most of our designs use either Kovar, copper/tungsten, or aluminum for the chassis.



**TYPICAL AMPLIFIER MOUNTING**

## THERMAL CONSIDERATIONS (CONT.)

### AMPLIFIER CONFIGURATION

It is important for the user to understand that in addition to the thermal resistance of the chassis metal, every interface, starting with the mounting of the FET into the amplifier package, results in a thermal gradient. As such, one should try to minimize these various interfaces by directly soldering the unit wherever possible.

In order to minimize the amount of heat dissipated, MITEQ either eutectically bonds or epoxies the FETs directly to the housing. This usually ensures the best thermal transfer out of the active device. Typical

power dissipation for the FETs in a two-stage low-noise amplifier is in the order of 100 mW. For a medium power FET, the maximum channel temperature can be calculated to be 135°C, for a base plate temperature of 85°C. The equation is as follows:

$$T_J = T_{\text{case}} + (V_{DS})(I_{DS})(R_{\Theta_{JC}})$$

Where  $(R_{\Theta_{JC}})$  can be very high for small transistors

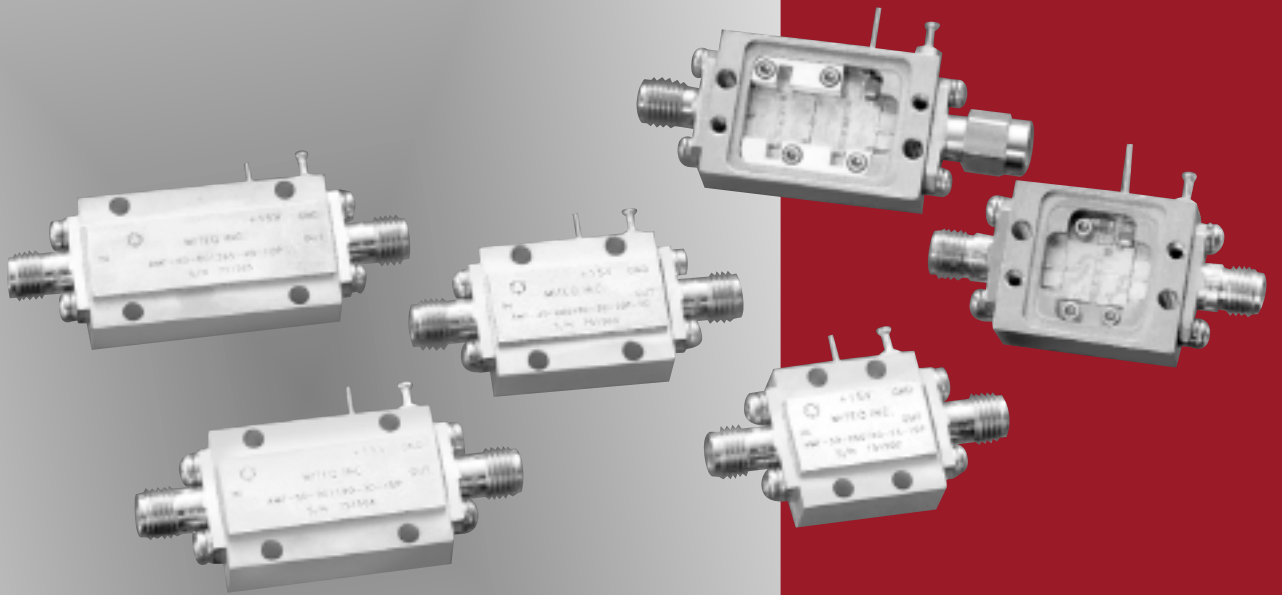
To further guarantee a good thermal path, the base of both the amplifier and mounting fixture should be machined to very fine tolerance (i.e., 0.001"/inch).





# LOW-NOISE AMPLIFIERS

The amplifiers listed within this section represent only a sample of the design capability of the AMF Amplifier Department. For variations to the models listed within this section, please contact MITEQ for technical assistance.



## LOW-NOISE AMPLIFIERS

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS ( $\pm$ dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>OCTAVE BAND</b>								
AMF-1F-00050010-13-10P	0.05–0.1	17	1.5	1.3	10	2.5:1	100	132513
AMF-2F-00050010-13-10P	0.05–0.1	33	1.5	1.3	10	2.5:1	150	132513
AMF-3F-00050010-13-10P	0.05–0.1	48	1.5	1.3	10	2.5:1	200	132513
AMF-4F-00050010-13-10P	0.05–0.1	63	1.5	1.3	10	2.5:1	250	132513
AMF-1F-00050010-15-10P	0.05–0.1	17	1.5	1.5	10	2.5:1	100	132513
AMF-2F-00050010-15-10P	0.05–0.1	33	1.5	1.5	10	2.5:1	150	132513
AMF-3F-00050010-15-10P	0.05–0.1	48	1.5	1.5	10	2.5:1	200	132513
AMF-4F-00050010-15-10P	0.05–0.1	63	1.5	1.5	10	2.5:1	250	132513
AMF-1F-00050010-20-10P	0.05–0.1	17	1.5	2	10	2.5:1	100	132513
AMF-2F-00050010-20-10P	0.05–0.1	33	1.5	2	10	2.5:1	150	132513
AMF-3F-00050010-20-10P	0.05–0.1	48	1.5	2	10	2.5:1	200	132513
AMF-4F-00050010-20-10P	0.05–0.1	63	1.5	2	10	2.5:1	250	132513
AMF-1F-00100020-07-10P	0.1–0.2	17	1.5	0.7	10	2.3:1	100	132513
AMF-2F-00100020-07-10P	0.1–0.2	33	1	0.7	10	2.3:1	150	132513
AMF-3F-00100020-07-10P	0.1–0.2	48	1	0.7	10	2.3:1	200	132513
AMF-4F-00100020-07-10P	0.1–0.2	63	1	0.7	10	2.3:1	250	132513
AMF-1F-00100020-12-10P	0.1–0.2	17	1.5	1.2	10	2.3:1	100	132513
AMF-2F-00100020-12-10P	0.1–0.2	33	1.5	1.2	10	2.3:1	150	132513
AMF-3F-00100020-12-10P	0.1–0.2	48	1.5	1.2	10	2.3:1	200	132513
AMF-4F-00100020-12-10P	0.1–0.2	63	1.5	1.2	10	2.3:1	250	132513
AMF-1F-00100020-20-10P	0.1–0.2	17	1.5	2	10	2.3:1	100	132513
AMF-2F-00100020-20-10P	0.1–0.2	33	1.5	2	10	2.3:1	150	132513
AMF-3F-00100020-20-10P	0.1–0.2	48	1.5	2	10	2.3:1	200	132513
AMF-4F-00100020-20-10P	0.1–0.2	63	1.5	2	10	2.3:1	250	132513
AMF-1F-00200040-06-10P	0.2–0.4	17	1.5	0.6	10	2.3:1	100	132513
AMF-2F-00200040-06-10P	0.2–0.4	33	1	0.6	10	2.3:1	150	132513
AMF-3F-00200040-06-10P	0.2–0.4	48	1	0.6	10	2:1	200	132513
AMF-4F-00200040-06-10P	0.2–0.4	63	1	0.6	10	2:1	250	132513
AMF-1F-00200040-12-10P	0.2–0.4	17	1.5	1.2	10	2:1	100	132513
AMF-2F-00200040-12-10P	0.2–0.4	33	1.5	1.2	10	2:1	150	132513
AMF-3F-00200040-12-10P	0.2–0.4	48	1.5	1.2	10	2:1	200	132513
AMF-4F-00200040-12-10P	0.2–0.4	63	1.5	1.2	10	2:1	250	132513
AMF-1F-00200040-20-10P	0.2–0.4	17	1.5	2	10	2:1	100	132513
AMF-2F-00200040-20-10P	0.2–0.4	33	1.5	2	10	2:1	150	132513
AMF-3F-00200040-20-10P	0.2–0.4	48	1.5	2	10	2:1	200	132513
AMF-4F-00200040-20-10P	0.2–0.4	63	1.5	2	10	2:1	250	132513
AMF-1F-00250050-06-10P	0.25–0.5	17	1.5	0.6	10	2.3:1	100	132513
AMF-2F-00250050-06-10P	0.25–0.5	33	1	0.6	10	2.1:1	200	132513
AMF-3F-00250050-06-10P	0.25–0.5	48	1	0.6	10	2.1:1	200	132513
AMF-4F-00250050-06-10P	0.25–0.5	63	1	0.6	10	2.1:1	250	132513
AMF-1F-00250050-12-10P	0.25–0.5	17	1.5	1.2	10	2:1	100	132513
AMF-2F-00250050-12-10P	0.25–0.5	33	1.5	1.2	10	2:1	150	132513
AMF-3F-00250050-12-10P	0.25–0.5	48	1.5	1.2	10	2:1	200	132513
AMF-4F-00250050-12-10P	0.25–0.5	63	1.5	1.2	10	2:1	250	132513
AMF-1F-00250050-20-10P	0.25–0.5	17	1.5	2	10	2:1	100	132513
AMF-2F-00250050-20-10P	0.25–0.5	33	1.5	2	10	2:1	150	132513
AMF-3F-00250050-20-10P	0.25–0.5	48	1.5	2	10	2:1	200	132513
AMF-4F-00250050-20-10P	0.25–0.5	63	1.5	2	10	2:1	250	132513

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>OCTAVE BAND (CONT.)</b>								
AMF-1F-00500100-08-10P	0.5-1	16	2	0.8	10	2.3:1	100	132513
AMF-2F-00500100-05-10P	0.5-1	32	1.5	0.5	10	2.1:1	150	132513
AMF-3F-00500100-05-13P	0.5-1	45	1.5	0.5	13	2.1:1	200	132513
AMF-4F-00500100-12-10P	0.5-1	60	1.5	1.2	10	2:1	250	132513
AMF-1F-00500100-12-10P	0.5-1	16	1.5	1.2	10	2:1	100	132513
AMF-2F-00500100-12-10P	0.5-1	32	1.5	1.2	10	2:1	150	132513
AMF-3F-00500100-12-10P	0.5-1	45	1.5	1.2	10	2:1	200	132513
AMF-4F-00500100-12-10P	0.5-1	60	1.5	1.2	10	2:1	250	132513
AMF-1F-00500100-20-10P	0.5-1	16	1.5	2	10	2:1	100	132513
AMF-2F-00500100-20-10P	0.5-1	32	1.5	2	10	2:1	150	132513
AMF-3F-00500100-20-10P	0.5-1	45	1.5	2	10	2:1	200	132513
AMF-4F-00500100-20-10P	0.5-1	60	1.5	2	10	2:1	250	132513
AMF-1F-01000200-08-10P	1-2	16	2	0.8	10	2:1	80	122686
AMF-2F-01000200-04-10P	1-2	32	2	0.4	10	2:1	130	122686
AMF-3F-01000200-04-13P	1-2	45	1.5	0.4	13	2:1	180	121622
AMF-4F-01000200-04-13P	1-2	60	1.5	0.4	13	2:1	230	121623-4
AMF-1F-01000200-12-10P	1-2	16	2	1.2	10	2:1	80	122686
AMF-2F-01000200-12-10P	1-2	32	2	1.2	10	2:1	130	122686
AMF-3F-01000200-12-10P	1-2	45	1.5	1.2	10	2:1	180	121622
AMF-4F-01000200-12-10P	1-2	60	1.5	1.2	10	2:1	230	121623-4
AMF-1F-01000200-20-10P	1-2	16	2	2	10	2:1	80	122686
AMF-2F-01000200-20-10P	1-2	32	2	2	10	2:1	130	122686
AMF-3F-01000200-20-10P	1-2	45	1.5	2	10	2:1	180	121622
AMF-4F-01000200-20-10P	1-2	60	1.5	2	10	2:1	230	121623-4
AMF-1F-02000400-10-10P	2-4	12	2	1	10	2.3:1	80	131580
AMF-2F-02000400-05-10P	2-4	28	2	0.5	10	2:1	100	131580
AMF-3F-02000400-05-10P	2-4	40	1.5	0.5	10	2:1	150	131581-3
AMF-4F-02000400-05-10P	2-4	50	1.5	0.5	10	2:1	200	131581-4
AMF-5F-02000400-05-10P	2-4	60	1.5	0.5	10	2:1	250	131581-5
AMF-1F-02000400-15-10P	2-4	10	2	1.5	10	2.3:1	80	131580
AMF-2F-02000400-12-10P	2-4	26	2	1.2	10	2:1	100	131580
AMF-3F-02000400-12-10P	2-4	38	1.5	1.2	10	2:1	150	131581-3
AMF-4F-02000400-12-10P	2-4	48	1.5	1.2	10	2:1	200	131581-4
AMF-5F-02000400-12-10P	2-4	58	1.5	1.2	10	2:1	250	131581-5
AMF-1F-02000400-20-10P	2-4	10	2	2	10	2:1	80	131580
AMF-2F-02000400-20-10P	2-4	26	2	2	10	2:1	100	131580
AMF-3F-02000400-20-10P	2-4	38	1.5	2	10	2:1	150	131581-3
AMF-4F-02000400-20-10P	2-4	48	1.5	2	10	2:1	200	131581-4
AMF-5F-02000400-20-10P	2-4	58	1.5	2	10	2:1	250	131581-5
AMF-1F-02600520-12-10P	2.6-5.2	12	2	1.2	10	2.3:1	80	131580
AMF-2F-02600520-06-10P	2.6-5.2	24	2	0.6	10	2:1	100	131580
AMF-3F-02600520-06-10P	2.6-5.2	33	1.5	0.6	10	2:1	150	131581-3
AMF-4F-02600520-06-10P	2.6-5.2	43	1.5	0.6	10	2:1	200	131581-4
AMF-5F-02600520-06-10P	2.6-5.2	53	1.5	0.6	10	2:1	250	131581-5
AMF-1F-02600520-20-10P	2.6-5.2	10	2	2	10	2.3:1	80	131580
AMF-2F-02600520-15-10P	2.6-5.2	20	2	1.5	10	2:1	100	131580
AMF-3F-02600520-15-10P	2.6-5.2	30	1.5	1.5	10	2:1	150	131581-3
AMF-4F-02600520-15-10P	2.6-5.2	40	1.5	1.5	10	2:1	200	131581-4
AMF-5F-02600520-15-10P	2.6-5.2	50	1.5	1.5	10	2:1	250	131581-5

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>OCTAVE BAND (CONT.)</b>								
AMF-1F-02600520-25-10P	2.6–5.2	10	2	2.5	10	2:1	80	131580
AMF-2F-02600520-25-10P	2.6–5.2	20	2	2.5	10	2:1	100	131580
AMF-3F-02600520-25-10P	2.6–5.2	30	1.5	2.5	10	2:1	150	131581-3
AMF-4F-02600520-25-10P	2.6–5.2	40	1.5	2.5	10	2:1	200	131581-4
AMF-5F-02600520-25-10P	2.6–5.2	50	1.5	2.5	10	2:1	250	131581-5
AMF-1F-04000800-15-5P	4–8	10	2	1.5	5	2.3:1	50	131580
AMF-2F-04000800-09-5P	4–8	20	2	0.9	5	2.3:1	80	131580
AMF-3F-04000800-07-10P	4–8	30	1.5	0.7	10	2:1	125	131581-3
AMF-4F-04000800-07-10P	4–8	40	1.5	0.7	10	2:1	150	131581-4
AMF-5F-04000800-07-10P	4–8	50	1.5	0.7	10	2:1	175	131581-5
AMF-1F-04000800-20-5P	4–8	8	2	2	5	2.3:1	50	131580
AMF-2F-04000800-15-5P	4–8	18	2	1.5	5	2.3:1	80	131580
AMF-3F-04000800-12-10P	4–8	28	1.5	1.2	10	2:1	125	131581-3
AMF-4F-04000800-12-10P	4–8	38	1.5	1.2	10	2:1	150	131581-4
AMF-5F-04000800-12-10P	4–8	48	1.5	1.2	10	2:1	175	131581-5
AMF-1F-04000800-25-5P	4–8	8	2	2.5	5	2.3:1	50	131580
AMF-2F-04000800-25-5P	4–8	18	2	2.5	5	2:1	80	131580
AMF-3F-04000800-25-10P	4–8	28	1.5	2.5	10	2:1	125	131581-3
AMF-4F-04000800-25-10P	4–8	38	1.5	2.5	10	2:1	150	131581-4
AMF-5F-04000800-25-10P	4–8	48	1.5	2.5	10	2:1	175	131581-5
AMF-1F-06001200-18-5P	6–12	7	2	1.8	5	2.3:1	50	131580
AMF-2F-06001200-15-5P	6–12	15	2	1.5	5	2.3:1	80	131580
AMF-3F-06001200-12-10P	6–12	24	2	1.2	10	2:1	125	131581-3
AMF-4F-06001200-12-10P	6–12	33	2	1.2	10	2:1	150	131581-4
AMF-5F-06001200-12-10P	6–12	42	2	1.2	10	2:1	175	131581-5
AMF-1F-06001200-28-5P	6–12	7	2	2.8	5	2.3:1	50	131580
AMF-2F-06001200-20-5P	6–12	15	2	2	5	2:1	80	131580
AMF-3F-06001200-20-10P	6–12	24	2	2	10	2:1	125	131581-3
AMF-4F-06001200-20-10P	6–12	33	2	2	10	2:1	150	131581-4
AMF-5F-06001200-20-10P	6–12	42	2	2	10	2:1	175	131581-5
AMF-1F-06001200-35-5P	6–12	6	2	3.5	5	2:1	50	131580
AMF-2F-06001200-30-5P	6–12	14	2	3	5	2:1	80	131580
AMF-3F-06001200-30-10P	6–12	23	2	3	10	2:1	125	131581-3
AMF-4F-06001200-30-10P	6–12	32	2	3	10	2:1	150	131581-4
AMF-5F-06001200-30-10P	6–12	41	2	3	10	2:1	175	131581-5
AMF-1F-08001200-15-5P	8–12	7	2	1.5	5	2.3:1	50	141132
AMF-2F-08001200-10-5P	8–12	15	2	1	5	2.3:1	80	141132
AMF-3F-08001200-09-10P	8–12	24	1.5	0.9	10	2:1	125	141132
AMF-4F-08001200-09-10P	8–12	33	1.5	0.9	10	2:1	150	137138-4
AMF-5F-08001200-09-10P	8–12	42	1.5	0.9	10	2:1	175	137138-5
AMF-6F-08001200-09-10P	8–12	51	1.5	0.9	10	2:1	200	137138-6
AMF-1F-08001200-20-5P	8–12	7	2	2	5	2.3:1	50	141132
AMF-2F-08001200-15-5P	8–12	15	2	1.5	5	2:1	80	141132
AMF-3F-08001200-15-10P	8–12	24	1.5	1.5	10	2:1	125	141132
AMF-4F-08001200-15-10P	8–12	33	1.5	1.5	10	2:1	150	137138-4
AMF-5F-08001200-15-10P	8–12	42	1.5	1.5	10	2:1	175	137138-5
AMF-6F-08001200-15-10P	8–12	51	1.5	1.5	10	2:1	200	137138-6
AMF-1F-08001200-35-5P	8–12	6	2	3.5	5	2:1	50	141132
AMF-2F-08001200-30-5P	8–12	14	2	3	5	2:1	80	141132
AMF-3F-08001200-30-10P	8–12	23	2	3	10	2:1	125	141132
AMF-4F-08001200-30-10P	8–12	32	2	3	10	2:1	150	137138-4
AMF-5F-08001200-30-10P	8–12	41	2	3	10	2:1	175	137138-5
AMF-6F-08001200-30-10P	8–12	51	1.5	3	10	2:1	200	137138-6

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>OCTAVE BAND (CONT.)</b>								
AMF-4F-10002000-17-10P	10–20	31	2	1.7	10	2:1	150	137139-4
AMF-5F-10002000-17-10P	10–20	38	2	1.7	10	2:1	175	137139-5
AMF-6F-10002000-17-10P	10–20	45	2	1.7	10	2:1	200	137139-6
AMF-3F-10002000-20-8P	10–20	22	2	2	8	2:1	125	141381
AMF-4F-10002000-20-10P	10–20	31	2	2	10	2:1	150	137139-4
AMF-5F-10002000-20-10P	10–20	38	2	2	10	2:1	175	137139-5
AMF-6F-10002000-20-10P	10–20	45	2	2	10	2:1	200	137139-6
AMF-3F-10002000-50-8P	10–20	20	2	5	8	2:1	125	141381
AMF-4F-10002000-50-10P	10–20	30	2	5	10	2:1	150	137139-4
AMF-5F-10002000-50-10P	10–20	35	2	5	10	2:1	175	137139-5
AMF-6F-10002000-50-10P	10–20	40	2	5	10	2:1	200	137139-6
AMF-3F-12001800-13-8P	12–18	22	2	1.3	8	2:1	125	141381
AMF-4F-12001800-13-10P	12–18	31	2	1.3	10	2:1	150	137139-4
AMF-5F-12001800-13-10P	12–18	38	2	1.3	10	2:1	175	137139-5
AMF-6F-12001800-13-10P	12–18	45	2	1.3	10	2:1	200	137139-6
AMF-3F-12001800-20-8P	12–18	22	2	2	8	2:1	125	141381
AMF-4F-12001800-20-10P	12–18	31	2	2	10	2:1	150	137139-4
AMF-5F-12001800-20-10P	12–18	38	2	2	10	2:1	175	137139-5
AMF-6F-12001800-20-10P	12–18	45	2	2	10	2:1	200	137139-6
AMF-3F-12001800-30-8P	12–18	22	2	3	8	2:1	125	141381
AMF-4F-12001800-30-10P	12–18	31	2	3	10	2:1	150	137139-4
AMF-5F-12001800-30-10P	12–18	38	2	3	10	2:1	175	137139-5
AMF-6F-12001800-30-10P	12–18	45	2	3	10	2:1	200	137139-6
AMF-4F-12002400-25-10P	12–24	31	2.5	2.5	10	2.5:1	150	128066-4
AMF-5F-12002400-25-10P	12–24	38	2.5	2.5	10	2.5:1	175	128061-5
AMF-6F-12002400-25-10P	12–24	45	2.5	2.5	10	2.5:1	200	128061-6
AMF-4F-12002400-30-10P	12–24	31	2.5	3	10	2.5:1	150	128066-4
AMF-5F-12002400-30-10P	12–24	38	2.5	3	10	2.5:1	175	128061-5
AMF-6F-12002400-30-10P	12–24	45	2.5	3	10	2.5:1	200	128061-6
AMF-3F-12002400-50-8P	12–24	20	2.5	5	8	2.5:1	125	128066-3
AMF-4F-12002400-50-10P	12–24	30	2.5	5	10	2.5:1	150	128066-4
AMF-5F-12002400-50-10P	12–24	35	2.5	5	10	2.5:1	175	128061-5
AMF-6F-12002400-50-10P	12–24	40	2.5	5	10	2.5:1	200	128061-6
AMF-4F-15003000-30-8P	15–30	27	2	3	8	2.5:1	150	128066-4
AMF-5F-15003000-30-8P	15–30	34	2	3	8	2.5:1	175	128061-5
AMF-6F-15003000-30-8P	15–30	40	2	3	8	2.5:1	200	128061-6
AMF-4F-15003000-40-8P	15–30	27	2	4	8	2.5:1	150	128066-4
AMF-5F-15003000-40-8P	15–30	34	2	4	8	2.5:1	175	128061-5
AMF-6F-15003000-40-8P	15–30	40	2	4	8	2.5:1	200	128061-6
AMF-4F-15003000-50-8P	15–30	25	2	5	8	2.5:1	150	128066-4
AMF-5F-15003000-50-8P	15–30	30	2	5	8	2.5:1	175	128061-5
AMF-6F-15003000-50-8P	15–30	35	2	5	8	2.5:1	200	128061-6
AMF-3F-18002650-20-8P	18–26.5	22	2	2	8	2.5:1	125	128066-3
AMF-4F-18002650-20-10P	18–26.5	30	2	2	10	2.3:1	150	128066-4
AMF-5F-18002650-20-10P	18–26.5	38	2	2	10	2.3:1	175	128061-5
AMF-6F-18002650-20-10P	18–26.5	45	2	2	10	2.3:1	200	128061-6
AMF-3F-18002650-25-8P	18–26.5	22	2	2.5	8	2:1	125	128066-3
AMF-4F-18002650-25-10P	18–26.5	30	2	2.5	10	2:1	150	128066-4
AMF-5F-18002650-25-10P	18–26.5	38	2	2.5	10	2:1	175	128061-5
AMF-6F-18002650-25-10P	18–26.5	45	2	2.5	10	2:1	200	128061-6

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>OCTAVE BAND (CONT.)</b>								
AMF-3F-18002650-45-8P	18–26.5	20	2	4.5	8	2:1	125	128066-3
AMF-4F-18002650-45-10P	18–26.5	28	2	4.5	10	2:1	150	128066-4
AMF-5F-18002650-45-10P	18–26.5	35	2	4.5	10	2:1	175	128061-5
AMF-6F-18002650-45-10P	18–26.5	40	2	4.5	10	2:1	200	128061-6
AMF-3F-20004000-40-8P	20–40	18	2.5	4	8	2.8:1	125	128066-3
AMF-4F-20004000-40-8P	20–40	24	2.5	4	8	2.8:1	150	128066-4
AMF-5F-20004000-40-8P	20–40	30	2.5	4	8	2.8:1	175	128061-5
AMF-6F-20004000-40-8P	20–40	35	2.5	4	8	2.8:1	200	128061-6
AMF-3F-20004000-50-8P	20–40	18	2.5	5	8	2.8:1	125	128066-3
AMF-4F-20004000-50-8P	20–40	24	2.5	5	8	2.8:1	150	128066-4
AMF-5F-20004000-50-8P	20–40	30	2.5	5	8	2.8:1	175	128061-5
AMF-6F-20004000-50-8P	20–40	35	2.5	5	8	2.8:1	200	128061-6
AMF-3F-20004000-60-8P	20–40	15	2.5	6	8	2.8:1	125	128066-3
AMF-4F-20004000-60-8P	20–40	20	2.5	6	8	2.8:1	150	128066-4
AMF-5F-20004000-60-8P	20–40	25	2.5	6	8	2.8:1	175	128061-5
AMF-6F-20004000-60-8P	20–40	30	2.5	6	8	2.8:1	200	128061-6
AMF-3F-2600400-33-8P	26–40	18	2.5	3.3	8	2.7:1	125	128066-3
AMF-4F-2600400-33-8P	26–40	24	2.5	3.3	8	2.7:1	150	128066-4
AMF-5F-2600400-33-8P	26–40	30	2.5	3.3	8	2.7:1	175	128061-5
AMF-6F-2600400-33-8P	26–40	35	2.5	3.3	8	2.7:1	200	128061-6
AMF-3F-2600400-40-8P	26–40	18	2.5	4	8	2.7:1	125	128066-3
AMF-4F-2600400-40-8P	26–40	24	2.5	4	8	2.7:1	150	128066-4
AMF-5F-2600400-40-8P	26–40	30	2.5	4	8	2.7:1	175	128061-5
AMF-6F-2600400-40-8P	26–40	35	2.5	4	8	2.7:1	200	128061-6
AMF-3F-2600400-50-8P	26–40	18	2.5	5	8	2.7:1	125	128066-3
AMF-4F-2600400-50-8P	26–40	24	2.5	5	8	2.7:1	150	128066-4
AMF-5F-2600400-50-8P	26–40	30	2.5	5	8	2.7:1	175	128061-5
AMF-6F-2600400-50-8P	26–40	35	2.5	5	8	2.7:1	200	128061-6
AMF-3F-2600400-60-8P	26–40	15	2.5	6	8	2.7:1	125	128066-3
AMF-4F-2600400-60-8P	26–40	20	2.5	6	8	2.7:1	150	128066-4
AMF-5F-2600400-60-8P	26–40	25	2.5	6	8	2.7:1	175	128061-5
AMF-6F-2600400-60-8P	26–40	30	2.5	6	8	2.7:1	200	128061-6
<b>MULTIOCTAVE BAND</b>								
AMF-1F-00050050-13-10P	0.05–0.5	17	2	1.3	10	2.5:1	100	132513
AMF-2F-00050050-13-10P	0.05–0.5	33	2	1.3	10	2.5:1	150	132513
AMF-3F-00050050-13-10P	0.05–0.5	48	2	1.3	10	2.5:1	200	132513
AMF-4F-00050050-13-10P	0.05–0.5	63	2	1.3	10	2.5:1	250	132513
AMF-1F-00050050-20-10P	0.05–0.5	17	2	2	10	2.5:1	100	132513
AMF-2F-00050050-20-10P	0.05–0.5	33	2	2	10	2.5:1	150	132513
AMF-3F-00050050-20-10P	0.05–0.5	48	2	2	10	2.5:1	200	132513
AMF-4F-00050050-20-10P	0.05–0.5	63	2	2	10	2.5:1	250	132513
AMF-1F-00050050-30-10P	0.05–0.5	17	2	3	10	2.5:1	100	132513
AMF-2F-00050050-30-10P	0.05–0.5	33	2	3	10	2.5:1	150	132513
AMF-3F-00050050-30-10P	0.05–0.5	48	2	3	10	2.5:1	200	132513
AMF-4F-00050050-30-10P	0.05–0.5	63	2	3	10	2.5:1	250	132513
AMF-1F-00100100-07-10P	0.1–1	17	1.5	0.7*	10	2.3:1	100	132513
AMF-2F-00100100-07-10P	0.1–1	33	1.5	0.7*	10	2.3:1	150	132513
AMF-3F-00100100-07-10P	0.1–1	48	1	0.7*	10	2.3:1	200	132513
AMF-4F-00100100-07-10P	0.1–1	63	1	0.7*	10	2.3:1	250	132513

\* Noise figures are 0.9 dB maximum below 200 MHz.

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MULTIOCTAVE BAND (CONT.)</b>								
AMF-1F-00100100-15-10P	0.1-1	17	1.5	1.5	10	2.3:1	100	132513
AMF-2F-00100100-15-10P	0.1-1	33	1.5	1.5	10	2.3:1	150	132513
AMF-3F-00100100-15-10P	0.1-1	48	1	1.5	10	2.3:1	200	132513
AMF-4F-00100100-15-10P	0.1-1	63	1	1.5	10	2.3:1	250	132513
AMF-1F-00100100-30-10P	0.1-1	17	1.5	3	10	2.3:1	100	132513
AMF-2F-00100100-30-10P	0.1-1	33	1.5	3	10	2.3:1	150	132513
AMF-3F-00100100-30-10P	0.1-1	48	1	3	10	2.3:1	200	132513
AMF-4F-00100100-30-10P	0.1-1	63	1	3	10	2.3:1	250	132513
AMF-1F-00100200-15-10P	0.1-2	16	2	1.5	10	2.5:1	100	132513
AMF-2F-00100200-10-10P	0.1-2	30	2	1	10	2.2:1	150	132513
AMF-3F-00100200-10-10P	0.1-2	45	1.5	1	10	2.2:1	200	132513
AMF-4F-00100200-10-10P	0.1-2	60	1.5	1	10	2.2:1	250	132513
AMF-1F-00100200-20-10P	0.1-2	16	2	2	10	2.2:1	100	132513
AMF-2F-00100200-15-10P	0.1-2	30	2	1.5	10	2.2:1	150	132513
AMF-3F-00100200-15-10P	0.1-2	45	1.5	1.5	10	2.2:1	200	132513
AMF-4F-00100200-15-10P	0.1-2	60	1.5	1.5	10	2.2:1	250	132513
AMF-1F-00100200-30-10P	0.1-2	16	2	3	10	2.2:1	100	132513
AMF-2F-00100200-30-10P	0.1-2	30	2	3	10	2.2:1	150	132513
AMF-3F-00100200-30-10P	0.1-2	45	1.5	3	10	2.2:1	200	132513
AMF-4F-00100200-30-10P	0.1-2	60	1.5	3	10	2.2:1	250	132513
AMF-2F-00100400-10-10P	0.1-4	25	2	1*	10	2:1	100	122686
AMF-3F-00100400-10-10P	0.1-4	35	2	1*	10	2:1	150	121622
AMF-4F-00100400-10-10P	0.1-4	45	2	1*	10	2:1	200	121623-4
AMF-5F-00100400-10-10P	0.1-4	55	2	1*	10	2:1	250	121623-5
AMF-6F-00100400-10-10P	0.1-4	65	2	1*	10	2:1	300	121623-6
AMF-2F-00100400-20-10P	0.1-4	25	2	2	10	2:1	100	122686
AMF-3F-00100400-20-10P	0.1-4	35	2	2	10	2:1	150	121622
AMF-4F-00100400-20-10P	0.1-4	45	2	2	10	2:1	200	121623-4
AMF-5F-00100400-20-10P	0.1-4	55	2	2	10	2:1	250	121623-5
AMF-6F-00100400-20-10P	0.1-4	65	2	2	10	2:1	300	121623-6
AMF-2F-00100400-30-10P	0.1-4	25	2	3	10	2:1	100	122686
AMF-3F-00100400-30-10P	0.1-4	35	2	3	10	2:1	150	121622
AMF-4F-00100400-30-10P	0.1-4	45	2	3	10	2:1	200	121623-4
AMF-5F-00100400-30-10P	0.1-4	55	2	3	10	2:1	250	121623-5
AMF-6F-00100400-30-10P	0.1-4	65	2	3	10	2:1	300	121623-6
AMF-1F-00500200-10-10P	0.5-2	16	2	1	10	2:1	100	132513
AMF-2F-00500200-07-10P	0.5-2	30	2	0.7	10	2:1	150	132513
AMF-3F-00500200-07-10P	0.5-2	45	1.5	0.7	10	2:1	200	132513
AMF-4F-00500200-07-10P	0.5-2	60	1.5	0.7	10	2:1	250	132513
AMF-1F-00500200-15-10P	0.5-2	16	2	1.5	10	2:1	100	132513
AMF-2F-00500200-15-10P	0.5-2	30	2	1.5	10	2:1	150	132513
AMF-3F-00500200-15-10P	0.5-2	45	1.5	1.5	10	2:1	200	132513
AMF-4F-00500200-15-10P	0.5-2	60	1.5	1.5	10	2:1	250	132513
AMF-1F-00500200-30-10P	0.5-2	16	2	3	10	2:1	100	132513
AMF-2F-00500200-30-10P	0.5-2	30	2	3	10	2:1	150	132513
AMF-3F-00500200-30-10P	0.5-2	45	1.5	3	10	2:1	200	132513
AMF-4F-00500200-30-10P	0.5-2	60	1.5	3	10	2:1	250	132513

\* Noise figures are 0.9 dB maximum below 200 MHz.



## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MULTIOCTAVE BAND (CONT.)</b>								
AMF-2F-00500400-10-10P	0.5–4	25	2	1	10	2:1	100	122686
AMF-3F-00500400-10-10P	0.5–4	35	2	1	10	2:1	150	121622
AMF-4F-00500400-10-10P	0.5–4	45	2	1	10	2:1	200	121623-4
AMF-5F-00500400-10-10P	0.5–4	55	2	1	10	2:1	250	121623-5
AMF-6F-00500400-10-10P	0.5–4	65	2	1	10	2:1	300	121623-6
AMF-2F-00500400-20-10P	0.5–4	25	2	2	10	2:1	100	122686
AMF-3F-00500400-20-10P	0.5–4	35	2	2	10	2:1	150	121622
AMF-4F-00500400-20-10P	0.5–4	45	2	2	10	2:1	200	121623-4
AMF-5F-00500400-20-10P	0.5–4	55	2	2	10	2:1	250	121623-5
AMF-6F-00500400-20-10P	0.5–4	65	2	2	10	2:1	300	121623-6
AMF-2F-00500400-30-10P	0.5–4	25	2	3	10	2:1	100	122686
AMF-3F-00500400-30-10P	0.5–4	35	2	3	10	2:1	150	121622
AMF-4F-00500400-30-10P	0.5–4	45	2	3	10	2:1	200	121623-4
AMF-5F-00500400-30-10P	0.5–4	55	2	3	10	2:1	250	121623-5
AMF-6F-00500400-30-10P	0.5–4	65	2	3	10	2:1	300	121623-6
AMF-1F-00800250-10-10P	0.8–2.5	16	2	1	10	2:1	100	122686
AMF-2F-00800250-06-10P	0.8–2.5	30	2	0.6	10	2:1	150	122686
AMF-3F-00800250-06-13P	0.8–2.5	45	1.5	0.6	13	2:1	200	121622
AMF-4F-00800250-06-13P	0.8–2.5	60	1.5	0.6	13	2:1	250	121623-4
AMF-1F-00800250-15-10P	0.8–2.5	16	2	1.5	10	2:1	100	122686
AMF-2F-00800250-15-10P	0.8–2.5	30	2	1.5	10	2:1	150	122686
AMF-3F-00800250-15-13P	0.8–2.5	45	1.5	1.5	13	2:1	200	121622
AMF-4F-00800250-15-13P	0.8–2.5	60	1.5	1.5	13	2:1	250	121623-4
AMF-1F-00800250-30-10P	0.8–2.5	16	2	3	10	2:1	100	122686
AMF-2F-00800250-30-10P	0.8–2.5	30	2	3	10	2:1	150	122686
AMF-3F-00800250-30-13P	0.8–2.5	45	1.5	3	13	2:1	200	121622
AMF-4F-00800250-30-13P	0.8–2.5	60	1.5	3	13	2:1	250	121623-4
AMF-3F-01000400-08-10P	1–4	35	1.5	0.8	10	2:1	150	131581-3
AMF-4F-01000400-08-10P	1–4	45	1.5	0.8	10	2:1	200	131581-4
AMF-5F-01000400-08-10P	1–4	55	1.5	0.8	10	2:1	250	131581-5
AMF-2F-01000400-15-8P	1–4	26	2	1.5	8	2:1	100	131580
AMF-3F-01000400-15-10P	1–4	35	1.5	1.5	10	2:1	150	131581-3
AMF-4F-01000400-15-10P	1–4	45	1.5	1.5	10	2:1	200	131581-4
AMF-5F-01000400-15-10P	1–4	55	1.5	1.5	10	2:1	250	131581-5
AMF-2F-01000400-30-8P	1–4	26	2	3	8	2:1	100	131580
AMF-3F-01000400-30-10P	1–4	35	1.5	3	10	2:1	150	131581-3
AMF-4F-01000400-30-10P	1–4	45	1.5	3	10	2:1	200	131581-4
AMF-5F-01000400-30-10P	1–4	55	1.5	3	10	2:1	250	131581-5
AMF-3F-02000600-13-10P	2–6	33	2	1.3	10	2.5:1	150	131581-3
AMF-4F-02000600-13-10P	2–6	42	2	1.3	10	2.5:1	200	131581-4
AMF-5F-02000600-13-10P	2–6	51	2	1.3	10	2.5:1	250	131581-5
AMF-3F-02000600-20-10P	2–6	33	2	2	10	2.5:1	150	131581-3
AMF-4F-02000600-20-10P	2–6	42	2	2	10	2.5:1	200	131581-4
AMF-5F-02000600-20-10P	2–6	51	2	2	10	2.5:1	250	131581-5
AMF-3F-02000600-35-10P	2–6	33	2	3.5	10	2.5:1	150	131581-3
AMF-4F-02000600-35-10P	2–6	42	2	3.5	10	2.5:1	200	131581-4
AMF-5F-02000600-35-10P	2–6	51	2	3.5	10	2.5:1	250	131581-5

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MULTIOCTAVE BAND (CONT.)</b>								
AMF-3F-02000800-15-10P	2–8	30	2	1.5	10	2.5:1	150	131581-3
AMF-4F-02000800-15-10P	2–8	38	2	1.5	10	2.5:1	200	131581-4
AMF-5F-02000800-15-10P	2–8	46	2	1.5	10	2.5:1	250	131581-5
AMF-3F-02000800-25-10P	2–8	30	2	2.5	10	2.5:1	150	131581-3
AMF-4F-02000800-25-10P	2–8	38	2	2.5	10	2.5:1	200	131581-4
AMF-5F-02000800-25-10P	2–8	46	2	2.5	10	2.5:1	250	131581-5
AMF-3F-02000800-35-10P	2–8	30	2	3.5	10	2.5:1	150	131581-3
AMF-4F-02000800-35-10P	2–8	38	2	3.5	10	2.5:1	200	131581-4
AMF-5F-02000800-35-10P	2–8	46	2	3.5	10	2.5:1	250	131581-5
AMF-2F-04001000-16-5P	4–10	16	2	1.6	5	2.5:1	100	131580
AMF-3F-04001000-14-10P	4–10	24	2	1.4	10	2:1	150	131581-3
AMF-4F-04001000-14-10P	4–10	33	2	1.4	10	2:1	200	131581-4
AMF-5F-04001000-14-10P	4–10	40	2	1.4	10	2:1	250	131581-5
AMF-2F-04001000-20-5P	4–10	16	2	2	5	2.5:1	100	131580
AMF-3F-04001000-20-10P	4–10	24	2	2	10	2:1	150	131581-3
AMF-4F-04001000-20-10P	4–10	33	2	2	10	2:1	200	131581-4
AMF-5F-04001000-20-10P	4–10	40	2	2	10	2:1	250	131581-5
AMF-2F-04001000-30-5P	4–10	16	2	3	5	2.5:1	100	131580
AMF-3F-04001000-30-10P	4–10	24	2	3	10	2:1	150	131581-3
AMF-4F-04001000-30-10P	4–10	33	2	3	10	2:1	200	131581-4
AMF-5F-04001000-30-10P	4–10	40	2	3	10	2:1	250	131581-5
AMF-2F-04001200-17-5P	4–12	15	2	1.7	5	2.5:1	100	131580
AMF-3F-04001200-15-10P	4–12	23	2	1.5	10	2:1	150	131581-3
AMF-4F-04001200-15-10P	4–12	32	2	1.5	10	2:1	200	131581-4
AMF-5F-04001200-15-10P	4–12	39	2	1.5	10	2:1	250	131581-5
AMF-2F-04001200-25-5P	4–12	15	2	2.5	5	2.5:1	100	131580
AMF-3F-04001200-25-10P	4–12	23	2	2.5	10	2:1	150	131581-3
AMF-4F-04001200-25-10P	4–12	32	2	2.5	10	2:1	200	131581-4
AMF-5F-04001200-25-10P	4–12	39	2	2.5	10	2:1	250	131581-5
AMF-2F-04001200-35-5P	4–12	15	2	3.5	5	2.5:1	100	131580
AMF-3F-04001200-35-10P	4–12	23	2	3.5	10	2:1	150	131581-3
AMF-4F-04001200-35-10P	4–12	32	2	3.5	10	2:1	200	131581-4
AMF-5F-04001200-35-10P	4–12	39	2	3.5	10	2:1	250	131581-5
AMF-3F-05001500-17-10P	5–15	22	2	1.7	10	2:1	100	141381
AMF-4F-05001500-17-10P	5–15	31	2	1.7	10	2:1	150	137139-4
AMF-5F-05001500-17-10P	5–15	38	2	1.7	10	2:1	200	137139-5
AMF-6F-05001500-17-10P	5–15	45	2	1.7	10	2:1	250	137139-6
AMF-3F-05001500-25-10P	5–15	22	2	2.5	10	2:1	100	141381
AMF-4F-05001500-25-10P	5–15	31	2	2.5	10	2:1	150	137139-4
AMF-5F-05001500-25-10P	5–15	38	2	2.5	10	2:1	200	137139-5
AMF-6F-05001500-25-10P	5–15	45	2	2.5	10	2:1	250	137139-6
AMF-3F-05001500-35-10P	5–15	22	2	3.5	10	2:1	100	141381
AMF-4F-05001500-35-10P	5–15	31	2	3.5	10	2:1	150	137139-4
AMF-5F-05001500-35-10P	5–15	38	2	3.5	10	2:1	200	137139-5
AMF-6F-05001500-35-10P	5–15	45	2	3.5	10	2:1	250	137139-6

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MULTIOCTAVE BAND (CONT.)</b>								
AMF-3F-06001800-15-5P	6–18	22	2	1.5	5	2:1	100	141381
AMF-4F-06001800-15-10P	6–18	31	2	1.5	10	2:1	150	137139-4
AMF-5F-06001800-15-10P	6–18	38	2	1.5	10	2:1	200	137139-5
AMF-6F-06001800-15-10P	6–18	45	2	1.5	10	2:1	250	137139-6
AMF-3F-06001800-20-5P	6–18	22	2	2	5	2:1	100	141381
AMF-4F-06001800-20-10P	6–18	31	2	2	10	2:1	150	137139-4
AMF-5F-06001800-20-10P	6–18	38	2	2	10	2:1	200	137139-5
AMF-6F-06001800-20-10P	6–18	45	2	2	10	2:1	250	137139-6
AMF-3F-06001800-30-5P	6–18	22	2	3	5	2:1	100	141381
AMF-4F-06001800-30-10P	6–18	31	2	3	10	2:1	150	137139-4
AMF-5F-06001800-30-10P	6–18	38	2	3	10	2:1	200	137139-5
AMF-6F-06001800-30-10P	6–18	45	2	3	10	2:1	250	137139-6
AMF-3F-08001800-14-5P	8–18	22	2	1.4	5	2:1	100	141381
AMF-4F-08001800-14-10P	8–18	31	2	1.4	10	2:1	150	137139-4
AMF-5F-08001800-14-10P	8–18	38	2	1.4	10	2:1	200	137139-5
AMF-6F-08001800-14-10P	8–18	45	2	1.4	10	2:1	250	137139-6
AMF-3F-08001800-20-5P	8–18	22	2	2	5	2:1	100	141381
AMF-4F-08001800-20-10P	8–18	31	2	2	10	2:1	150	137139-4
AMF-5F-08001800-20-10P	8–18	38	2	2	10	2:1	200	137139-5
AMF-6F-08001800-20-10P	8–18	45	2	2	10	2:1	250	137139-6
AMF-3F-08001800-30-5P	8–18	22	2	3	5	2:1	100	141381
AMF-4F-08001800-30-10P	8–18	31	2	3	10	2:1	150	137139-4
AMF-5F-08001800-30-10P	8–18	38	2	3	10	2:1	200	137139-5
AMF-6F-08001800-30-10P	8–18	45	2	3	10	2:1	250	137139-6
AMF-4F-12002600-30-10P	12–26	30	3	3	10	2.5:1	150	128066-4
AMF-5F-12002600-30-10P	12–26	35	3	3	10	2.5:1	200	128061-5
AMF-6F-12002600-30-10P	12–26	44	3	3	10	2.5:1	250	128061-6
AMF-4F-12002600-40-10P	12–26	30	3	4	10	2.5:1	150	128066-4
AMF-5F-12002600-40-10P	12–26	35	3	4	10	2.5:1	200	128061-5
AMF-6F-12002600-40-10P	12–26	44	3	4	10	2.5:1	250	128061-6
AMF-4F-12002600-50-10P	12–26	30	3	5	10	2.5:1	150	128066-4
AMF-5F-12002600-50-10P	12–26	35	3	5	10	2.5:1	200	128061-5
AMF-6F-12002600-50-10P	12–26	44	3	5	10	2.5:1	250	128061-6
AMF-3F-16002600-25-5P	16–26	20	2	2.5	5	2.3:1	100	128066-3
AMF-4F-16002600-25-10P	16–26	30	2	2.5	10	2.3:1	150	128066-4
AMF-5F-16002600-25-10P	16–26	35	2	2.5	10	2.3:1	200	128061-5
AMF-6F-16002600-25-10P	16–26	44	2	2.5	10	2.3:1	250	128061-6
AMF-3F-16002600-35-5P	16–26	20	2	3.5	5	2.3:1	100	128066-3
AMF-4F-16002600-35-10P	16–26	30	2	3.5	10	2.3:1	150	128066-4
AMF-5F-16002600-35-10P	16–26	35	2	3.5	10	2.3:1	200	128061-5
AMF-6F-16002600-35-10P	16–26	44	2	3.5	10	2.3:1	250	128061-6
AMF-3F-16002600-50-5P	16–26	20	2	5	5	2.3:1	100	128066-3
AMF-4F-16002600-50-10P	16–26	30	2	5	10	2.3:1	150	128066-4
AMF-5F-16002600-50-10P	16–26	35	2	5	10	2.3:1	200	128061-5
AMF-6F-16002600-50-10P	16–26	44	2	5	10	2.3:1	250	128061-6
AMF-3F-18004000-37-6P	18–40	18	3	3.7	6	2.9:1	100	128066-3
AMF-4F-18004000-37-8P	18–40	24	3	3.7	8	2.9:1	150	128066-4
AMF-5F-18004000-37-8P	18–40	30	3	3.7	8	2.9:1	200	128061-5
AMF-6F-18004000-37-8P	18–40	35	3	3.7	8	2.9:1	250	128061-6

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MULTIOCTAVE BAND (CONT.)</b>								
AMF-3F-18004000-50-6P	18–40	18	3	5	6	2.9:1	100	128066-3
AMF-4F-18004000-50-8P	18–40	24	3	5	8	2.9:1	150	128066-4
AMF-5F-18004000-50-8P	18–40	30	3	5	8	2.9:1	200	128061-5
AMF-6F-18004000-50-8P	18–40	35	3	5	8	2.9:1	250	128061-6
AMF-3F-18004000-60-6P	18–40	18	3	6	6	2.9:1	100	128066-3
AMF-4F-18004000-60-8P	18–40	24	3	6	8	2.9:1	150	128066-4
AMF-5F-18004000-60-8P	18–40	30	3	6	8	2.9:1	200	128061-5
AMF-6F-18004000-60-8P	18–40	35	3	6	8	2.9:1	250	128061-6
AMF-2D-00500400-14-10P	0.5–4	26	1.5	1.4	10	2:1	120	110699-2
AMF-3D-00500400-13-15P	0.5–4	35	1.5	1.3	15	2:1	275	110699-3
AMF-3D-00500400-14-13P	0.5–4	35	1.5	1.4	13	2:1	180	110699-3
AMF-3D-00500400-23-13P	0.5–4	35	1.5	2.3	13	2:1	180	114293-3
AMF-4D-00500400-14-13P	0.5–4	47	1.5	1.4	13	2:1	220	110699-4
AMF-4D-00500400-23-13P	0.5–4	47	1.5	2.3	13	2:1	220	114293-4
AMF-2D-00500800-18-10P	0.5–8	22	1.5	1.8	10	2:1	120	114293-2
AMF-2D-00500800-25-13P	0.5–8	22	1.5	2.5	13	2:1	120	114293-2
AMF-3D-00500800-18-13P	0.5–8	32	1.5	1.8	13	2:1	180	114293-3
AMF-3D-00500800-25-13P	0.5–8	32	1.5	2.5	13	2:1	180	114293-3
AMF-4D-00500800-18-13P	0.5–8	42	1.5	1.8	13	2:1	220	114293-4
AMF-4D-00500800-25-13P	0.5–8	42	1.5	2.5	13	2:1	220	114293-4
AMF-2D-01000400-14-13P	1–4	26	1	1.4	13	2:1	120	110699-2
AMF-2D-01000400-20-13P	1–4	26	1	2	13	2:1	120	114293-2
AMF-3D-01000400-14-13P	1–4	36	1	1.4	13	2:1	180	110699-3
AMF-3D-01000400-20-13P	1–4	35	1	2	13	2:1	180	114293-3
AMF-2D-02000600-16-13P	2–6	23	1.5	1.6	13	2:1	120	114293-2
AMF-2D-02000600-23-13P	2–6	23	1.5	2.3	13	2:1	120	114293-2
AMF-3D-02000600-16-13P	2–6	34	1.5	1.6	13	2:1	180	114293-3
AMF-3D-02000600-23-13P	2–6	34	1.5	2.3	13	2:1	180	114293-3
AMF-4D-02000600-18-13P	2–6	43	1.5	1.8	13	2:1	250	114293-4
AMF-2D-02000800-18-13P	2–8	22	1.5	1.8	13	2:1	130	114293-2
AMF-2D-02000800-25-13P	2–8	22	1.5	2.5	13	2:1	130	114293-2
AMF-3D-02000800-18-13P	2–8	33	1.5	1.8	13	2:1	180	114293-3
AMF-3D-02000800-25-13P	2–8	33	1.5	2.5	13	2:1	180	114293-3
AMF-3D-02001800-24-10P	2–18	22	1.5	2.4	10	2.2:1	120	121622
AMF-3D-02001800-32-13P	2–18	20	1.5	3.2	13	2.2:1	150	121622
AMF-4D-02001800-23-10P	2–18	31	1.5	2.3	10	2.2:1	185	121623-4
AMF-4D-02001800-30-13P	2–18	28	1.5	3	13	2.2:1	185	121623-4
AMF-5D-02001800-26-10P	2–18	38	2	2.6	10	2.2:1	225	121623-5
AMF-3D-02002200-37-10P	2–22	18	2	3.7	10	2.5:1	120	121622
AMF-3D-02002200-45-10P	2–22	18	2	4.5	10	2.5:1	120	121622
AMF-4D-02002200-29-10P	2–22	26	2	2.9	10	2.2:1	200	121623-4
AMF-4D-02002200-35-10P	2–22	25	2	3.5	10	2.5:1	200	121623-4
AMF-4D-02002200-45-13P	2–22	24	2	4.5	13	2.5:1	200	121623-4
AMF-2D-04001800-35-10P	4–18	13	1.5	3.5	10	2.2:1	80	122686
AMF-2D-04001800-40-10P	4–18	13	1.5	4	10	2.2:1	80	122686
AMF-3D-04001800-24-10P	4–18	22	1.5	2.4	10	2.2:1	130	121622
AMF-3D-04001800-30-10P	4–18	22	1.5	3	10	2.2:1	130	121622
AMF-4D-04001800-24-10P	4–18	30	1.5	2.4	10	2.2:1	160	121623-4
AMF-4D-04001800-30-10P	4–18	30	1.5	3	10	2.2:1	160	121623-4
AMF-5D-04001800-26-10P	4–18	38	2	2.6	10	2.2:1	225	121623-5

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS ( $\pm$ dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MULTIOCTAVE BAND (CONT.)</b>								
AMF-2D-06001800-35-10P	6-18	13	1.5	3.5	10	2.2:1	80	122686
AMF-2D-06001800-40-10P	6-18	13	1.5	4	10	2.2:1	80	122686
AMF-3D-06001800-24-10P	6-18	22	1.5	2.4	10	2.2:1	130	121622
AMF-3D-06001800-30-10P	6-18	22	1.5	3	10	2.2:1	130	121622
AMF-4D-06001800-24-10P	6-18	30	1.5	2.4	10	2.2:1	175	121623-4
AMF-4D-06001800-30-10P	6-18	30	1.5	3	10	2.2:1	175	121623-4
AMF-5D-06001800-26-10P	6-18	38	2	2.6	10	2.2:1	225	121623-5
AMF-6D-06001800-27-10P	6-18	45	2	2.7	10	2.2:1	350	121623-6
AMF-3D-12002600-38-10P	12-26	15	2	3.8	10	2.5:1	120	121622
AMF-3D-12002600-45-10P	12-26	15	2	4.5	10	2.5:1	120	121622
AMF-4D-12002600-38-10P	12-26	20	2	3.8	10	2.5:1	160	121623-4
AMF-4D-12002600-45-10P	12-26	20	2	4.5	10	2.5:1	160	121623-4
AMF-4D-18004000-45-6P	18-40	20	2.5	4.5	6	2.5:1	160	125292
AMF-4D-18004000-55-6P	18-40	20	2.5	5.5	6	2.5:1	160	125292
AMF-3D-20004000-50-12P	20-40	20	2.5	5	12	2.2:1	160	125294
AMF-3D-26004000-45-6P	26-40	15	2	4.5	6	2.5:1	120	125292
AMF-3D-26004000-55-6P	26-40	15	2	5.5	6	2.5:1	120	125292
AMF-4D-26004000-45-6P	26-40	20	2	4.5	6	2.5:1	160	125292
AMF-4D-26004000-55-6P	26-40	20	2	5.5	6	2.5:1	160	125292
<b>MODERATE BAND</b>								
AMF-1F-00500070-06-10P	0.5-0.7	17	1.5	0.6	10	2:1	100	132513
AMF-2F-00500070-05-10P	0.5-0.7	33	1.5	0.5	10	2:1	150	132513
AMF-3F-00500070-05-13P	0.5-0.7	48	1	0.5	13	2:1	200	132513
AMF-4F-00500070-05-13P	0.5-0.7	63	1	0.5	13	2:1	250	132513
AMF-1F-00500070-12-10P	0.5-0.7	17	1.5	1.2	10	2:1	100	132513
AMF-2F-00500070-12-10P	0.5-0.7	33	1.5	1.2	10	2:1	150	132513
AMF-3F-00500070-12-13P	0.5-0.7	48	1	1.2	13	2:1	200	132513
AMF-4F-00500070-12-13P	0.5-0.7	63	1	1.2	13	2:1	250	132513
AMF-1F-00500070-20-10P	0.5-0.7	17	1.5	2	10	2:1	100	132513
AMF-2F-00500070-20-10P	0.5-0.7	33	1.5	2	10	2:1	150	132513
AMF-3F-00500070-20-13P	0.5-0.7	48	1	2	13	2:1	200	132513
AMF-4F-00500070-20-13P	0.5-0.7	63	1	2	13	2:1	250	132513
AMF-1F-00700090-06-10P	0.7-0.9	16	1.5	0.6	10	2:1	100	132513
AMF-2F-00700090-05-10P	0.7-0.9	32	1.5	0.5	10	2:1	150	132513
AMF-3F-00700090-05-13P	0.7-0.9	45	1	0.5	13	2:1	200	132513
AMF-4F-00700090-05-13P	0.7-0.9	60	1	0.5	13	2:1	250	132513
AMF-1F-00700090-12-10P	0.7-0.9	16	1.5	1.2	10	2:1	100	132513
AMF-2F-00700090-12-10P	0.7-0.9	32	1.5	1.2	10	2:1	150	132513
AMF-3F-00700090-12-13P	0.7-0.9	45	1	1.2	13	2:1	200	132513
AMF-4F-00700090-12-13P	0.7-0.9	60	1	1.2	13	2:1	250	132513
AMF-1F-00700090-20-10P	0.7-0.9	16	1.5	2	10	2:1	100	132513
AMF-2F-00700090-20-10P	0.7-0.9	32	1.5	2	10	2:1	150	132513
AMF-3F-00700090-20-13P	0.7-0.9	45	1	2	13	2:1	200	132513
AMF-4F-00700090-20-13P	0.7-0.9	60	1	2	13	2:1	250	132513
AMF-1F-00800100-06-10P	0.8-1	16	1.5	0.6	10	2:1	100	122686
AMF-2F-00800100-04-10P	0.8-1	32	1.5	0.4	10	2:1	150	122686
AMF-3F-00800100-04-13P	0.8-1	45	1	0.4	13	2:1	200	121622
AMF-4F-00800100-04-13P	0.8-1	60	1	0.4	13	2:1	250	121623-4
AMF-1F-00800100-12-10P	0.8-1	16	1.5	1.2	10	2:1	100	122686

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS ( $\pm$ dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-2F-00800100-12-10P	0.8-1	32	1.5	1.2	10	2:1	150	122686
AMF-3F-00800100-12-13P	0.8-1	45	1	1.2	13	2:1	200	121622
AMF-4F-00800100-12-13P	0.8-1	60	1	1.2	13	2:1	250	121623-4
AMF-1F-00800100-20-10P	0.8-1	16	1.5	2	10	2:1	100	122686
AMF-2F-00800100-20-10P	0.8-1	32	1.5	2	10	2:1	150	122686
AMF-3F-00800100-20-13P	0.8-1	45	1	2	13	2:1	200	121622
AMF-4F-00800100-20-13P	0.8-1	60	1	2	13	2:1	250	121623-4
AMF-1F-00950145-07-10P	0.95-1.45	16	1.5	0.7	10	2:1	100	122686
AMF-2F-00950145-04-10P	0.95-1.45	32	1.5	0.4	10	2:1	150	122686
AMF-3F-00950145-04-13P	0.95-1.45	45	1	0.4	13	2:1	200	121622
AMF-4F-00950145-04-13P	0.95-1.45	60	1	0.4	13	2:1	250	121623-4
AMF-1F-00950145-12-10P	0.95-1.45	16	1.5	1.2	10	2:1	100	122686
AMF-2F-00950145-12-10P	0.95-1.45	32	1.5	1.2	10	2:1	150	122686
AMF-3F-00950145-12-13P	0.95-1.45	45	1	1.2	13	2:1	200	121622
AMF-4F-00950145-12-13P	0.95-1.45	60	1	1.2	13	2:1	250	121623-4
AMF-1F-00950145-20-10P	0.95-1.45	16	1.5	2	10	2:1	100	122686
AMF-2F-00950145-20-10P	0.95-1.45	32	1.5	2	10	2:1	150	122686
AMF-3F-00950145-20-13P	0.95-1.45	45	1	2	13	2:1	200	121622
AMF-4F-00950145-20-13P	0.95-1.45	60	1	2	13	2:1	250	121623-4
AMF-1F-00950175-08-10P	0.95-1.75	16	1.5	0.8	10	2:1	100	122686
AMF-2F-00950175-05-10P	0.95-1.75	32	1.5	0.5	10	2:1	150	122686
AMF-3F-00950175-05-13P	0.95-1.75	45	1	0.5	13	2:1	200	121622
AMF-4F-00950175-05-13P	0.95-1.75	60	1	0.5	13	2:1	250	121623-4
AMF-1F-00950175-15-10P	0.95-1.75	16	1.5	1.5	10	2:1	100	122686
AMF-2F-00950175-15-10P	0.95-1.75	32	1.5	1.5	10	2:1	150	122686
AMF-3F-00950175-15-13P	0.95-1.75	45	1	1.5	13	2:1	200	121622
AMF-4F-00950175-15-13P	0.95-1.75	60	1	1.5	13	2:1	250	121623-4
AMF-1F-00950175-25-10P	0.95-1.75	16	1.5	2.5	10	2:1	100	122686
AMF-2F-00950175-25-10P	0.95-1.75	32	1.5	2.5	10	2:1	150	122686
AMF-3F-00950175-25-13P	0.95-1.75	45	1	2.5	13	2:1	200	121622
AMF-4F-00950175-25-13P	0.95-1.75	60	1	2.5	13	2:1	250	121623-4
AMF-1F-01100180-08-10P	1.1-1.8	16	1.5	0.8	10	2:1	100	122686
AMF-2F-01100180-04-10P	1.1-1.8	32	1.5	0.4	10	2:1	150	122686
AMF-3F-01100180-04-13P	1.1-1.8	45	1	0.4	13	2:1	200	121622
AMF-4F-01100180-04-13P	1.1-1.8	60	1	0.4	13	2:1	250	121623-4
AMF-1F-01100180-15-10P	1.1-1.8	16	1.5	1.5	10	2:1	100	122686
AMF-2F-01100180-15-10P	1.1-1.8	32	1.5	1.5	10	2:1	150	122686
AMF-3F-01100180-15-13P	1.1-1.8	45	1	1.5	13	2:1	200	121622
AMF-4F-01100180-15-13P	1.1-1.8	60	1	1.5	13	2:1	250	121623-4
AMF-1F-01100180-25-10P	1.1-1.8	16	1.5	2.5	10	2:1	100	122686
AMF-2F-01100180-25-10P	1.1-1.8	32	1.5	2.5	10	2:1	150	122686
AMF-3F-01100180-25-13P	1.1-1.8	45	1	2.5	13	2:1	200	121622
AMF-4F-01100180-25-13P	1.1-1.8	60	1	2.5	13	2:1	250	121623-4
AMF-1F-01200160-07-10P	1.2-1.6	16	1.5	0.7	10	2:1	100	122686
AMF-2F-01200160-04-10P	1.2-1.6	32	1.5	0.4	10	2:1	150	122686
AMF-3F-01200160-04-13P	1.2-1.6	45	1	0.4	13	1.7:1/1.5:1	200	121622
AMF-4F-01200160-04-13P	1.2-1.6	60	1	0.4	13	1.7:1/1.5:1	250	121623-4

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS ( $\pm$ dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-1F-01200160-15-10P	1.2–1.6	16	1.5	1.5	10	2:1	100	122686
AMF-2F-01200160-15-10P	1.2–1.6	32	1.5	1.5	10	2:1	150	122686
AMF-3F-01200160-15-13P	1.2–1.6	45	1	1.5	13	1.7:1/1.5:1	200	121622
AMF-4F-01200160-15-13P	1.2–1.6	60	1	1.5	13	1.7:1/1.5:1	250	121623-4
AMF-1F-01200160-25-10P	1.2–1.6	16	1.5	2.5	10	2:1	100	122686
AMF-2F-01200160-25-10P	1.2–1.6	32	1.5	2.5	10	2:1	150	122686
AMF-3F-01200160-25-13P	1.2–1.6	45	1	2.5	13	1.7:1/1.5:1	200	121622
AMF-4F-01200160-25-13P	1.2–1.6	60	1	2.5	13	1.7:1/1.5:1	250	121623-4
AMF-1F-01500180-07-10P	1.5–1.8	16	1.5	0.7	10	2:1	100	122686
AMF-2F-01500180-04-10P	1.5–1.8	32	1.5	0.4	10	2:1	150	122686
AMF-3F-01500180-04-13P	1.5–1.8	45	1	0.4	13	1.7:1/1.5:1	200	121622
AMF-4F-01500180-04-13P	1.5–1.8	60	1	0.4	13	1.7:1/1.5:1	250	121623-4
AMF-1F-01500180-15-10P	1.5–1.8	16	1.5	1.5	10	2:1	100	122686
AMF-2F-01500180-15-10P	1.5–1.8	32	1.5	1.5	10	2:1	150	122686
AMF-3F-01500180-15-13P	1.5–1.8	45	1	1.5	13	1.7:1/1.5:1	200	121622
AMF-4F-01500180-15-13P	1.5–1.8	60	1	1.5	13	1.7:1/1.5:1	250	121623-4
AMF-1F-01500180-25-10P	1.5–1.8	16	1.5	2.5	10	2:1	100	122686
AMF-2F-01500180-25-10P	1.5–1.8	32	1.5	2.5	10	2:1	150	122686
AMF-3F-01500180-25-13P	1.5–1.8	45	1	2.5	13	1.7:1/1.5:1	200	121622
AMF-4F-01500180-25-13P	1.5–1.8	60	1	2.5	13	1.7:1/1.5:1	250	121623-4
AMF-1F-01500250-08-10P	1.5–2.5	16	1.5	0.8	10	2:1	100	122686
AMF-2F-01500250-06-10P	1.5–2.5	32	1.5	0.6	10	2:1	150	122686
AMF-3F-01500250-06-10P	1.5–2.5	45	1	0.6	10	2:1	200	121622
AMF-4F-01500250-06-10P	1.5–2.5	60	1	0.6	10	2:1	250	121623-4
AMF-1F-01500250-15-10P	1.5–2.5	16	1.5	1.5	10	2:1	100	122686
AMF-2F-01500250-15-10P	1.5–2.5	32	1.5	1.5	10	2:1	150	122686
AMF-3F-01500250-15-10P	1.5–2.5	45	1	1.5	10	2:1	200	121622
AMF-4F-01500250-15-10P	1.5–2.5	60	1	1.5	10	2:1	250	121623-4
AMF-1F-01500250-25-10P	1.5–2.5	16	1.5	2.5	10	2:1	100	122686
AMF-2F-01500250-25-10P	1.5–2.5	32	1.5	2.5	10	2:1	150	122686
AMF-3F-01500250-25-10P	1.5–2.5	45	1	2.5	10	2:1	200	121622
AMF-4F-01500250-25-10P	1.5–2.5	60	1	2.5	10	2:1	250	121623-4
AMF-1F-01700210-08-10P	1.7–2.1	15	1	0.8	10	2:1	100	122686
AMF-2F-01700210-04-10P	1.7–2.1	30	1	0.4	10	2:1	150	122686
AMF-3F-01700210-04-13P	1.7–2.1	43	0.5	0.4	13	1.5:1	200	121622
AMF-4F-01700210-04-13P	1.7–2.1	58	0.5	0.4	13	1.5:1	250	121623-4
AMF-5F-01700210-04-13P	1.7–2.1	68	0.5	0.4	13	1.5:1	300	121623-5
AMF-1F-01700210-15-10P	1.7–2.1	15	1	1.5	10	2:1	100	122686
AMF-2F-01700210-15-10P	1.7–2.1	30	1	1.5	10	2:1	150	122686
AMF-3F-01700210-15-13P	1.7–2.1	43	0.5	1.5	13	1.5:1	200	121622
AMF-4F-01700210-15-13P	1.7–2.1	58	0.5	1.5	13	1.5:1	250	121623-4
AMF-5F-01700210-15-13P	1.7–2.1	68	0.5	1.5	13	1.5:1	300	121623-5
AMF-1F-01700210-25-10P	1.7–2.1	15	1	2.5	10	2:1	100	122686
AMF-2F-01700210-25-10P	1.7–2.1	30	1	2.5	10	2:1	150	122686
AMF-3F-01700210-25-13P	1.7–2.1	43	0.5	2.5	13	1.5:1	200	121622
AMF-4F-01700210-25-13P	1.7–2.1	58	0.5	2.5	13	1.5:1	250	121623-4
AMF-5F-01700210-25-13P	1.7–2.1	68	0.5	2.5	13	1.5:1	300	121623-5

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-1F-02100240-08-10P	2.1–2.4	15	1	0.8	10	2:1	100	122686
AMF-2F-02100240-04-10P	2.1–2.4	30	1	0.4	10	2:1	150	122686
AMF-3F-02100240-04-13P	2.1–2.4	43	0.5	0.4	13	1.5:1	200	121622
AMF-4F-02100240-04-13P	2.1–2.4	58	0.5	0.4	13	1.5:1	250	121623-4
AMF-5F-02100240-04-13P	2.1–2.4	68	0.5	0.4	13	1.5:1	300	121623-5
AMF-1F-02100240-15-10P	2.1–2.4	15	1	1.5	10	2:1	100	122686
AMF-2F-02100240-15-10P	2.1–2.4	30	1	1.5	10	2:1	150	122686
AMF-3F-02100240-15-13P	2.1–2.4	43	0.5	1.5	13	1.5:1	200	121622
AMF-4F-02100240-15-13P	2.1–2.4	58	0.5	1.5	13	1.5:1	250	121623-4
AMF-5F-02100240-15-13P	2.1–2.4	68	0.5	1.5	13	1.5:1	300	121623-5
AMF-1F-02100240-30-10P	2.1–2.4	15	1	3	10	2:1	100	122686
AMF-2F-02100240-30-10P	2.1–2.4	30	1	3	10	2:1	150	122686
AMF-3F-02100240-30-13P	2.1–2.4	43	0.5	3	13	1.5:1	200	121622
AMF-4F-02100240-30-13P	2.1–2.4	58	0.5	3	13	1.5:1	250	121623-4
AMF-5F-02100240-30-13P	2.1–2.4	68	0.5	3	13	1.5:1	300	121623-5
AMF-1F-02200230-08-10P	2.2–2.3	15	1	0.8	10	2:1	100	122686
AMF-2F-02200230-04-10P	2.2–2.3	30	1	0.4	10	2:1	150	122686
AMF-3F-02200230-04-13P	2.2–2.3	43	0.5	0.4	13	1.3:1/1.5:1	200	121622
AMF-4F-02200230-04-13P	2.2–2.3	58	0.5	0.4	13	1.3:1/1.5:1	250	121623-4
AMF-5F-02200230-04-13P	2.2–2.3	68	0.5	0.4	13	1.3:1/1.5:1	300	121623-5
AMF-1F-02200230-15-10P	2.2–2.3	15	1	1.5	10	2:1	100	122686
AMF-2F-02200230-15-10P	2.2–2.3	30	1	1.5	10	2:1	150	122686
AMF-3F-02200230-15-13P	2.2–2.3	43	0.5	1.5	13	1.3:1/1.5:1	200	121622
AMF-4F-02200230-15-13P	2.2–2.3	58	0.5	1.5	13	1.3:1/1.5:1	250	121623-4
AMF-5F-02200230-15-13P	2.2–2.3	68	0.5	1.5	13	1.3:1/1.5:1	300	121623-5
AMF-1F-02200230-30-10P	2.2–2.3	15	1	3	10	2:1	100	122686
AMF-2F-02200230-30-10P	2.2–2.3	30	1	3	10	2:1	150	122686
AMF-3F-02200230-30-13P	2.2–2.3	43	0.5	3	13	1.3:1/1.5:1	200	121622
AMF-4F-02200230-30-13P	2.2–2.3	58	0.5	3	13	1.3:1/1.5:1	250	121623-4
AMF-5F-02200230-30-13P	2.2–2.3	68	0.5	3	13	1.3:1/1.5:1	300	121623-5
AMF-1F-02200240-08-10P	2.2–2.4	15	1	0.8	10	2:1	100	122686
AMF-2F-02200240-04-10P	2.2–2.4	30	1	0.4	10	2:1	150	122686
AMF-3F-02200240-04-13P	2.2–2.4	43	0.5	0.4	13	1.3:1/1.5:1	200	121622
AMF-4F-02200240-04-13P	2.2–2.4	58	0.5	0.4	13	1.3:1/1.5:1	250	121623-4
AMF-5F-02200240-04-13P	2.2–2.4	68	0.5	0.4	13	1.3:1/1.5:1	300	121623-5
AMF-1F-02200240-15-10P	2.2–2.4	15	1	1.5	10	2:1	100	122686
AMF-2F-02200240-15-10P	2.2–2.4	30	1	1.5	10	2:1	150	122686
AMF-3F-02200240-15-13P	2.2–2.4	43	0.5	1.5	13	1.3:1/1.5:1	200	121622
AMF-4F-02200240-15-13P	2.2–2.4	58	0.5	1.5	13	1.3:1/1.5:1	250	121623-4
AMF-5F-02200240-15-13P	2.2–2.4	68	0.5	1.5	13	1.3:1/1.5:1	300	121623-5
AMF-1F-02200240-30-10P	2.2–2.4	15	1	3	10	2:1	100	122686
AMF-2F-02200240-30-10P	2.2–2.4	30	1	3	10	2:1	150	122686
AMF-3F-02200240-30-13P	2.2–2.4	43	0.5	3	13	1.3:1/1.5:1	200	121622
AMF-4F-02200240-30-13P	2.2–2.4	58	0.5	3	13	1.3:1/1.5:1	250	121623-4
AMF-5F-02200240-30-13P	2.2–2.4	68	0.5	3	13	1.3:1/1.5:1	300	121623-5
AMF-1F-02300270-08-10P	2.3–2.7	15	1	0.8	10	2:1	100	131580
AMF-2F-02300270-04-10P	2.3–2.7	30	1	0.4	10	2:1	150	131580
AMF-3F-02300270-04-13P	2.3–2.7	43	0.5	0.4	13	1.5:1	200	131581-3
AMF-4F-02300270-04-13P	2.3–2.7	58	0.5	0.4	13	1.5:1	250	131581-4
AMF-5F-02300270-04-13P	2.3–2.7	68	0.5	0.4	13	1.5:1	300	131581-5



## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-1F-02300270-15-10P	2.3–2.7	15	1	1.5	10	2:1	100	131580
AMF-2F-02300270-15-10P	2.3–2.7	30	1	1.5	10	2:1	150	131580
AMF-3F-02300270-15-13P	2.3–2.7	43	0.5	1.5	13	1.5:1	200	131581-3
AMF-4F-02300270-15-13P	2.3–2.7	58	0.5	1.5	13	1.5:1	250	131581-4
AMF-5F-02300270-15-13P	2.3–2.7	68	0.5	1.5	13	1.5:1	300	131581-5
AMF-1F-02300270-30-10P	2.3–2.7	15	1	3	10	2:1	75	131580
AMF-2F-02300270-30-10P	2.3–2.7	30	1	3	10	2:1	125	131580
AMF-3F-02300270-30-13P	2.3–2.7	43	0.5	3	13	1.5:1	175	131581-3
AMF-4F-02300270-30-13P	2.3–2.7	58	0.5	3	13	1.5:1	225	131581-4
AMF-5F-02300270-30-13P	2.3–2.7	68	0.5	3	13	1.5:1	275	131581-5
AMF-1F-02700310-09-10P	2.7–3.1	14	1	0.9	10	2:1	75	131580
AMF-2F-02700310-04-10P	2.7–3.1	28	1	0.4	10	2:1	125	131580
AMF-3F-02700310-04-13P	2.7–3.1	40	0.5	0.4	13	1.5:1	175	131581-3
AMF-4F-02700310-04-13P	2.7–3.1	50	0.5	0.4	13	1.5:1	225	131581-4
AMF-5F-02700310-04-13P	2.7–3.1	60	0.5	0.4	13	1.5:1	275	131581-5
AMF-1F-02700310-15-10P	2.7–3.1	14	1	1.5	10	2:1	75	131580
AMF-2F-02700310-15-10P	2.7–3.1	28	1	1.5	10	2:1	125	131580
AMF-3F-02700310-15-13P	2.7–3.1	40	0.5	1.5	13	1.5:1	175	131581-3
AMF-4F-02700310-15-13P	2.7–3.1	50	0.5	1.5	13	1.5:1	225	131581-4
AMF-5F-02700310-15-13P	2.7–3.1	60	0.5	1.5	13	1.5:1	275	131581-5
AMF-1F-02700310-30-10P	2.7–3.1	14	1	3	10	2:1	75	131580
AMF-2F-02700310-30-10P	2.7–3.1	28	1	3	10	2:1	125	131580
AMF-3F-02700310-30-13P	2.7–3.1	40	0.5	3	13	1.5:1	175	131581-3
AMF-4F-02700310-30-13P	2.7–3.1	50	0.5	3	13	1.5:1	225	131581-4
AMF-5F-02700310-30-13P	2.7–3.1	60	0.5	3	13	1.5:1	275	131581-5
AMF-1F-03000350-09-10P	3–3.5	14	1	0.9	10	2:1	75	131580
AMF-2F-03000350-04-10P	3–3.5	28	1	0.4	10	2:1	125	131580
AMF-3F-03000350-04-13P	3–3.5	40	0.5	0.4	13	1.5:1	175	131581-3
AMF-4F-03000350-04-13P	3–3.5	50	0.5	0.4	13	1.5:1	225	131581-4
AMF-5F-03000350-04-13P	3–3.5	60	0.5	0.4	13	1.5:1	275	131581-5
AMF-1F-03000350-15-10P	3–3.5	14	1	1.5	10	2:1	75	131580
AMF-2F-03000350-15-10P	3–3.5	28	1	1.5	10	2:1	125	131580
AMF-3F-03000350-15-13P	3–3.5	40	0.5	1.5	13	1.5:1	175	131581-3
AMF-4F-03000350-15-13P	3–3.5	50	0.5	1.5	13	1.5:1	225	131581-4
AMF-5F-03000350-15-13P	3–3.5	60	0.5	1.5	13	1.5:1	275	131581-5
AMF-1F-03000350-30-10P	3–3.5	14	1	3	10	2:1	75	131580
AMF-2F-03000350-30-10P	3–3.5	28	1	3	10	2:1	125	131580
AMF-3F-03000350-30-13P	3–3.5	40	0.5	3	13	1.5:1	175	131581-3
AMF-4F-03000350-30-13P	3–3.5	50	0.5	3	13	1.5:1	225	131581-4
AMF-5F-03000350-30-13P	3–3.5	60	0.5	3	13	1.5:1	275	131581-5
AMF-1F-03400420-09-10P	3.4–4.2	13	1	0.9	10	2:1	75	131580
AMF-2F-03400420-04-10P	3.4–4.2	28	1	0.4	10	2:1	125	131580
AMF-3F-03400420-04-13P	3.4–4.2	40	0.5	0.4	13	1.5:1	175	131581-3
AMF-4F-03400420-04-13P	3.4–4.2	50	0.5	0.4	13	1.5:1	225	131581-4
AMF-5F-03400420-04-13P	3.4–4.2	60	0.5	0.4	13	1.5:1	275	131581-5
AMF-1F-03400420-15-10P	3.4–4.2	13	1	1.5	10	2:1	75	131580
AMF-2F-03400420-15-10P	3.4–4.2	28	1	1.5	10	2:1	125	131580
AMF-3F-03400420-15-13P	3.4–4.2	40	0.5	1.5	13	1.5:1	175	131581-3
AMF-4F-03400420-15-13P	3.4–4.2	50	0.5	1.5	13	1.5:1	225	131581-4
AMF-5F-03400420-15-13P	3.4–4.2	60	0.5	1.5	13	1.5:1	275	131581-5

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-1F-03400420-30-10P	3.4-4.2	13	1	3	10	2:1	75	131580
AMF-2F-03400420-30-10P	3.4-4.2	28	1	3	10	2:1	125	131580
AMF-3F-03400420-30-13P	3.4-4.2	40	0.5	3	13	1.5:1	175	131581-3
AMF-4F-03400420-30-13P	3.4-4.2	50	0.5	3	13	1.5:1	225	131581-4
AMF-5F-03400420-30-13P	3.4-4.2	60	0.5	3	13	1.5:1	275	131581-5
AMF-1F-04300480-10-10P	4.3-4.8	13	1	1	10	2:1	75	131580
AMF-2F-04300480-05-10P	4.3-4.8	26	1	0.5	10	2:1	125	131580
AMF-3F-04300480-05-13P	4.3-4.8	38	0.5	0.5	13	1.5:1	175	131581-3
AMF-4F-04300480-05-13P	4.3-4.8	50	0.5	0.5	13	1.5:1	225	131581-4
AMF-5F-04300480-05-13P	4.3-4.8	60	0.5	0.5	13	1.5:1	275	131581-5
AMF-1F-04300480-20-10P	4.3-4.8	13	1	2	10	2:1	75	131580
AMF-2F-04300480-15-10P	4.3-4.8	26	1	1.5	10	2:1	125	131580
AMF-3F-04300480-15-13P	4.3-4.8	38	0.5	1.5	13	1.5:1	175	131581-3
AMF-4F-04300480-15-13P	4.3-4.8	50	0.5	1.5	13	1.5:1	225	131581-4
AMF-5F-04300480-15-13P	4.3-4.8	60	0.5	1.5	13	1.5:1	275	131581-5
AMF-1F-04300480-30-10P	4.3-4.8	13	1	3	10	2:1	75	131580
AMF-2F-04300480-30-10P	4.3-4.8	26	1	3	10	2:1	125	131580
AMF-3F-04300480-30-13P	4.3-4.8	38	0.5	3	13	1.5:1	175	131581-3
AMF-4F-04300480-30-13P	4.3-4.8	50	0.5	3	13	1.5:1	225	131581-4
AMF-5F-04300480-30-13P	4.3-4.8	60	0.5	3	13	1.5:1	275	131581-5
AMF-1F-04400510-10-8P	4.4-5.1	13	1	1	8	2:1	75	131580
AMF-2F-04400510-05-10P	4.4-5.1	25	1	0.5	10	2:1	125	131580
AMF-3F-04400510-05-13P	4.4-5.1	36	0.5	0.5	13	1.5:1	175	131581-3
AMF-4F-04400510-05-13P	4.4-5.1	47	0.5	0.5	13	1.5:1	225	131581-4
AMF-5F-04400510-05-13P	4.4-5.1	55	0.5	0.5	13	1.5:1	275	131581-5
AMF-1F-04400510-20-8P	4.4-5.1	13	1	2	8	2:1	75	131580
AMF-2F-04400510-15-10P	4.4-5.1	25	1	1.5	10	2:1	125	131580
AMF-3F-04400510-15-13P	4.4-5.1	36	0.5	1.5	13	1.5:1	175	131581-3
AMF-4F-04400510-15-13P	4.4-5.1	47	0.5	1.5	13	1.5:1	225	131581-4
AMF-5F-04400510-15-13P	4.4-5.1	55	0.5	1.5	13	1.5:1	275	131581-5
AMF-1F-04400510-30-8P	4.4-5.1	13	1	3	8	2:1	75	131580
AMF-2F-04400510-30-10P	4.4-5.1	25	1	3	10	2:1	125	131580
AMF-3F-04400510-30-13P	4.4-5.1	36	0.5	3	13	1.5:1	175	131581-3
AMF-4F-04400510-30-13P	4.4-5.1	47	0.5	3	13	1.5:1	225	131581-4
AMF-5F-04400510-30-13P	4.4-5.1	55	0.5	3	13	1.5:1	275	131581-5
AMF-1F-05400590-12-5P	5.4-5.9	13	1	1.2	5	2:1	75	131580
AMF-2F-05400590-06-10P	5.4-5.9	25	1	0.6	10	2:1	125	131580
AMF-3F-05400590-06-13P	5.4-5.9	36	0.5	0.6	13	1.5:1	175	131581-3
AMF-4F-05400590-06-13P	5.4-5.9	47	0.5	0.6	13	1.5:1	225	131581-4
AMF-5F-05400590-06-13P	5.4-5.9	55	0.5	0.6	13	1.5:1	275	131581-5
AMF-1F-05400590-20-5P	5.4-5.9	13	1	2	5	2:1	75	131580
AMF-2F-05400590-20-10P	5.4-5.9	25	1	2	10	2:1	125	131580
AMF-3F-05400590-20-13P	5.4-5.9	36	0.5	2	13	1.5:1	175	131581-3
AMF-4F-05400590-20-13P	5.4-5.9	47	0.5	2	13	1.5:1	225	131581-4
AMF-5F-05400590-20-13P	5.4-5.9	55	0.5	2	13	1.5:1	275	131581-5
AMF-1F-05400590-30-5P	5.4-5.9	13	1	3	5	2:1	75	131580
AMF-2F-05400590-30-10P	5.4-5.9	25	1	3	10	2:1	125	131580
AMF-3F-05400590-30-13P	5.4-5.9	36	0.5	3	13	1.5:1	175	131581-3
AMF-4F-05400590-30-13P	5.4-5.9	47	0.5	3	13	1.5:1	225	131581-4
AMF-5F-05400590-30-13P	5.4-5.9	55	0.5	3	13	1.5:1	275	131581-5

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS ( $\pm$ dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-1F-05800650-12-5P	5.8–6.5	13	1	1.2	5	2:1	75	131580
AMF-2F-05800650-06-10P	5.8–6.5	25	1	0.6	10	2:1	125	131580
AMF-3F-05800650-06-13P	5.8–6.5	36	0.5	0.6	13	1.5:1	175	131581-3
AMF-4F-05800650-06-13P	5.8–6.5	47	0.5	0.6	13	1.5:1	225	131581-4
AMF-5F-05800650-06-13P	5.8–6.5	55	0.5	0.6	13	1.5:1	275	131581-5
AMF-1F-05800650-20-5P	5.8–6.5	13	1	2	5	2:1	75	131580
AMF-2F-05800650-20-10P	5.8–6.5	25	1	2	10	2:1	125	131580
AMF-3F-05800650-20-13P	5.8–6.5	36	0.5	2	13	1.5:1	175	131581-3
AMF-4F-05800650-20-13P	5.8–6.5	47	0.5	2	13	1.5:1	225	131581-4
AMF-5F-05800650-20-13P	5.8–6.5	55	0.5	2	13	1.5:1	275	131581-5
AMF-1F-05800650-30-5P	5.8–6.5	13	1	3	5	2:1	75	131580
AMF-2F-05800650-30-10P	5.8–6.5	25	1	3	10	2:1	125	131580
AMF-3F-05800650-30-13P	5.8–6.5	36	0.5	3	13	1.5:1	175	131581-3
AMF-4F-05800650-30-13P	5.8–6.5	47	0.5	3	13	1.5:1	225	131581-4
AMF-5F-05800650-30-13P	5.8–6.5	55	0.5	3	13	1.5:1	275	131581-5
AMF-1F-06400720-13-5P	6.4–7.2	11	1	1.3	5	2:1	75	131580
AMF-2F-06400720-07-10P	6.4–7.2	23	1	0.7	10	2:1	125	131580
AMF-3F-06400720-07-13P	6.4–7.2	34	0.5	0.7	13	1.5:1	175	131581-3
AMF-4F-06400720-07-13P	6.4–7.2	42	0.5	0.7	13	1.5:1	225	131581-4
AMF-5F-06400720-07-13P	6.4–7.2	53	0.5	0.7	13	1.5:1	275	131581-5
AMF-1F-06400720-20-5P	6.4–7.2	11	1	2	5	2:1	75	131580
AMF-2F-06400720-20-10P	6.4–7.2	23	1	2	10	2:1	125	131580
AMF-3F-06400720-20-13P	6.4–7.2	34	0.5	2	13	1.5:1	175	131581-3
AMF-4F-06400720-20-13P	6.4–7.2	42	0.5	2	13	1.5:1	225	131581-4
AMF-5F-06400720-20-13P	6.4–7.2	53	0.5	2	13	1.5:1	275	131581-5
AMF-1F-06400720-30-5P	6.4–7.2	11	1	3	5	2:1	75	131580
AMF-2F-06400720-30-10P	6.4–7.2	23	1	3	10	2:1	125	131580
AMF-3F-06400720-30-13P	6.4–7.2	34	0.5	3	13	1.5:1	175	131581-3
AMF-4F-06400720-30-13P	6.4–7.2	42	0.5	3	13	1.5:1	225	131581-4
AMF-5F-06400720-30-13P	6.4–7.2	53	0.5	3	13	1.5:1	275	131581-5
AMF-1F-07100840-13-5P	7.1–8.4	11	1.5	1.3	5	2:1	75	131580
AMF-2F-07100840-08-10P	7.1–8.4	23	1	0.8	10	2:1	125	131580
AMF-3F-07100840-08-13P	7.1–8.4	34	0.5	0.8	13	1.5:1	175	131581-3
AMF-4F-07100840-08-13P	7.1–8.4	42	0.5	0.8	13	1.5:1	225	131581-4
AMF-5F-07100840-08-13P	7.1–8.4	53	0.5	0.8	13	1.5:1	275	131581-5
AMF-1F-07100840-20-5P	7.1–8.4	11	1.5	2	5	2:1	75	131580
AMF-2F-07100840-20-10P	7.1–8.4	23	1	2	10	2:1	125	131580
AMF-3F-07100840-20-13P	7.1–8.4	34	0.5	2	13	1.5:1	175	131581-3
AMF-4F-07100840-20-13P	7.1–8.4	42	0.5	2	13	1.5:1	225	131581-4
AMF-5F-07100840-20-13P	7.1–8.4	53	0.5	2	13	1.5:1	275	131581-5
AMF-1F-07100840-30-5P	7.1–8.4	11	1.5	3	5	2:1	75	131580
AMF-2F-07100840-30-10P	7.1–8.4	23	1	3	10	2:1	125	131580
AMF-3F-07100840-30-13P	7.1–8.4	34	0.5	3	13	1.5:1	175	131581-3
AMF-4F-07100840-30-13P	7.1–8.4	42	0.5	3	13	1.5:1	225	131581-4
AMF-5F-07100840-30-13P	7.1–8.4	53	0.5	3	13	1.5:1	275	131581-5
AMF-1F-07250775-13-5P	7.25–7.75	11	1	1.3	5	2:1	75	131580
AMF-2F-07250775-07-10P	7.25–7.75	23	1	0.7	10	2:1	125	131580
AMF-3F-07250775-07-13P	7.25–7.75	34	0.5	0.7	13	1.5:1	175	131581-3
AMF-4F-07250775-07-13P	7.25–7.75	42	0.5	0.7	13	1.5:1	225	131581-4
AMF-5F-07250775-07-13P	7.25–7.75	53	0.5	0.7	13	1.5:1	275	131581-5

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-1F-07250775-20-5P	7.25–7.75	11	1	2	5	2:1	75	131580
AMF-2F-07250775-20-10P	7.25–7.75	23	1	2	10	2:1	125	131580
AMF-3F-07250775-20-13P	7.25–7.75	34	0.5	2	13	1.5:1	175	131581-3
AMF-4F-07250775-20-13P	7.25–7.75	42	0.5	2	13	1.5:1	225	131581-4
AMF-5F-07250775-20-13P	7.25–7.75	53	0.5	2	13	1.5:1	275	131581-5
AMF-1F-07250775-30-5P	7.25–7.75	11	1	3	5	2:1	75	131580
AMF-2F-07250775-30-10P	7.25–7.75	23	1	3	10	2:1	125	131580
AMF-3F-07250775-30-13P	7.25–7.75	34	0.5	3	13	1.5:1	175	131581-3
AMF-4F-07250775-30-13P	7.25–7.75	42	0.5	3	13	1.5:1	225	131581-4
AMF-5F-07250775-30-13P	7.25–7.75	53	0.5	3	13	1.5:1	275	131581-5
AMF-1F-07300840-13-5P	7.3–8.4	11	1.5	1.3	5	2:1	75	131580
AMF-2F-07300840-08-10P	7.3–8.4	23	1	0.8	10	2:1	125	131580
AMF-3F-07300840-08-13P	7.3–8.4	34	0.5	0.8	13	1.5:1	175	131581-3
AMF-4F-07300840-08-13P	7.3–8.4	42	0.5	0.8	13	1.5:1	225	131581-4
AMF-5F-07300840-08-13P	7.3–8.4	53	0.5	0.8	13	1.5:1	275	131581-5
AMF-1F-07300840-20-5P	7.3–8.4	11	1.5	2	5	2:1	75	131580
AMF-2F-07300840-20-10P	7.3–8.4	23	1	2	10	2:1	125	131580
AMF-3F-07300840-20-13P	7.3–8.4	34	0.5	2	13	1.5:1	175	131581-3
AMF-4F-07300840-20-13P	7.3–8.4	42	0.5	2	13	1.5:1	225	131581-4
AMF-5F-07300840-20-13P	7.3–8.4	53	0.5	2	13	1.5:1	275	131581-5
AMF-1F-07300840-30-5P	7.3–8.4	11	1.5	3	5	2:1	75	131580
AMF-2F-07300840-30-10P	7.3–8.4	23	1	3	10	2:1	125	131580
AMF-3F-07300840-30-13P	7.3–8.4	34	0.5	3	13	1.5:1	175	131581-3
AMF-4F-07300840-30-13P	7.3–8.4	42	0.5	3	13	1.5:1	225	131581-4
AMF-5F-07300840-30-13P	7.3–8.4	53	0.5	3	13	1.5:1	275	131581-5
AMF-1F-07900840-13-5P	7.9–8.4	11	1	1.3	5	2:1	75	131580
AMF-2F-07900840-08-10P	7.9–8.4	23	1	0.8	10	2:1	125	131580
AMF-3F-07900840-08-13P	7.9–8.4	34	0.5	0.8	13	1.5:1	175	131581-3
AMF-4F-07900840-08-13P	7.9–8.4	42	0.5	0.8	13	1.5:1	225	131581-4
AMF-5F-07900840-08-13P	7.9–8.4	53	0.5	0.8	13	1.5:1	275	131581-5
AMF-1F-07900840-20-5P	7.9–8.4	11	1	2	5	2:1	75	131580
AMF-2F-07900840-20-10P	7.9–8.4	23	1	2	10	2:1	125	131580
AMF-3F-07900840-20-13P	7.9–8.4	34	0.5	2	13	1.5:1	175	131581-3
AMF-4F-07900840-20-13P	7.9–8.4	42	0.5	2	13	1.5:1	225	131581-4
AMF-5F-07900840-20-13P	7.9–8.4	53	0.5	2	13	1.5:1	275	131581-5
AMF-1F-07900840-30-5P	7.9–8.4	11	1	3	5	2:1	75	131580
AMF-2F-07900840-30-10P	7.9–8.4	23	1	3	10	2:1	125	131580
AMF-3F-07900840-30-13P	7.9–8.4	34	0.5	3	13	1.5:1	175	131581-3
AMF-4F-07900840-30-13P	7.9–8.4	42	0.5	3	13	1.5:1	225	131581-4
AMF-5F-07900840-30-13P	7.9–8.4	53	0.5	3	13	1.5:1	275	131581-5
AMF-1F-08500960-13-5P	8.5–9.6	10	1	1.3	5	2:1	40	131580
AMF-2F-08500960-09-8P	8.5–9.6	22	1	0.9	8	2:1	65	131580
AMF-3F-08500960-09-10P	8.5–9.6	34	0.5	0.9	10	1.5:1	110	131581-3
AMF-4F-08500960-09-12P	8.5–9.6	41	0.5	0.9	12	1.5:1	150	131581-4
AMF-5F-08500960-09-12P	8.5–9.6	50	0.5	0.9	12	1.5:1	200	131581-5
AMF-1F-08500960-20-5P	8.5–9.6	10	1	2	5	2:1	40	131580
AMF-2F-08500960-20-8P	8.5–9.6	22	1	2	8	2:1	65	131580
AMF-3F-08500960-20-10P	8.5–9.6	34	0.5	2	10	1.5:1	110	131581-3
AMF-4F-08500960-20-12P	8.5–9.6	41	0.5	2	12	1.5:1	150	131581-4
AMF-5F-08500960-20-12P	8.5–9.6	50	0.5	2	12	1.5:1	200	131581-5

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-1F-08500960-30-5P	8.5–9.6	10	1	3	5	2:1	40	131580
AMF-2F-08500960-30-8P	8.5–9.6	22	1	3	8	2:1	65	131580
AMF-3F-08500960-30-10P	8.5–9.6	34	0.5	3	10	1.5:1	110	131581-3
AMF-4F-08500960-30-12P	8.5–9.6	41	0.5	3	12	1.5:1	150	131581-4
AMF-5F-08500960-30-12P	8.5–9.6	50	0.5	3	12	1.5:1	200	131581-5
AMF-2F-09001000-10-5P	9–10	22	1	1	5	2:1	65	141132
AMF-3F-09001000-08-8P	9–10	34	0.5	0.8	8	2:1	110	141132
AMF-4F-09001000-08-10P	9–10	41	0.5	0.8	10	1.5:1	150	137138-4
AMF-5F-09001000-08-10P	9–10	50	0.5	0.8	10	1.5:1	200	137138-5
AMF-6F-09001000-08-10P	9–10	59	0.5	0.8	10	1.5:1	250	137138-6
AMF-2F-09001000-20-5P	9–10	22	1	2	5	2:1	65	141132
AMF-3F-09001000-20-8P	9–10	34	0.5	2	8	2:1	110	141132
AMF-4F-09001000-20-10P	9–10	41	0.5	2	10	1.5:1	150	137138-4
AMF-5F-09001000-20-10P	9–10	50	0.5	2	10	1.5:1	200	137138-5
AMF-6F-09001000-20-10P	9–10	59	0.5	2	10	1.5:1	250	137138-6
AMF-2F-09001000-30-5P	9–10	22	1	3	5	2:1	65	141132
AMF-3F-09001000-30-8P	9–10	34	0.5	3	8	2:1	110	141132
AMF-4F-09001000-30-10P	9–10	41	0.5	3	10	1.5:1	150	137138-4
AMF-5F-09001000-30-10P	9–10	50	0.5	3	10	1.5:1	200	137138-5
AMF-6F-09001000-30-10P	9–10	59	0.5	3	10	1.5:1	250	137138-6
AMF-2F-09001100-10-5P	9–11	20	1.5	1	5	2:1	65	141132
AMF-3F-09001100-09-8P	9–11	30	1	0.9	8	2:1	110	141132
AMF-4F-09001100-09-10P	9–11	38	1	0.9	10	1.7:1	150	137138-4
AMF-5F-09001100-09-10P	9–11	45	1	0.9	10	1.7:1	200	137138-5
AMF-6F-09001100-09-10P	9–11	52	1	0.9	10	1.7:1	250	137138-6
AMF-2F-09001100-20-5P	9–11	20	1.5	2	5	2:1	65	141132
AMF-3F-09001100-20-8P	9–11	30	1	2	8	2:1	110	141132
AMF-4F-09001100-20-10P	9–11	38	1	2	10	1.7:1	150	137138-4
AMF-5F-09001100-20-10P	9–11	45	1	2	10	1.7:1	200	137138-5
AMF-6F-09001100-20-10P	9–11	52	1	2	10	1.7:1	250	137138-6
AMF-2F-09001100-30-5P	9–11	20	1.5	3	5	2:1	65	141132
AMF-3F-09001100-30-8P	9–11	30	1	3	8	2:1	110	141132
AMF-4F-09001100-30-10P	9–11	38	1	3	10	1.7:1	150	137138-4
AMF-5F-09001100-30-10P	9–11	45	1	3	10	1.7:1	200	137138-5
AMF-6F-09001100-30-10P	9–11	52	1	3	10	1.7:1	250	137138-6
AMF-2F-09501050-10-5P	9.5–10.5	20	1.5	1	5	2:1	65	141132
AMF-3F-09501050-09-8P	9.5–10.5	30	1	0.9	8	2:1	110	141132
AMF-4F-09501050-09-10P	9.5–10.5	38	1	0.9	10	1.5:1	150	137138-4
AMF-5F-09501050-09-10P	9.5–10.5	45	1	0.9	10	1.5:1	200	137138-5
AMF-6F-09501050-09-10P	9.5–10.5	52	1	0.9	10	1.5:1	250	137138-6
AMF-2F-09501050-20-5P	9.5–10.5	20	1.5	2	5	2:1	65	141132
AMF-3F-09501050-20-8P	9.5–10.5	30	1	2	8	2:1	110	141132
AMF-4F-09501050-20-10P	9.5–10.5	38	1	2	10	1.5:1	150	137138-4
AMF-5F-09501050-20-10P	9.5–10.5	45	1	2	10	1.5:1	200	137138-5
AMF-6F-09501050-20-10P	9.5–10.5	52	1	2	10	1.5:1	250	137138-6
AMF-2F-09501050-30-5P	9.5–10.5	20	1.5	3	5	2:1	65	141132
AMF-3F-09501050-30-8P	9.5–10.5	30	1	3	8	2:1	110	141132
AMF-4F-09501050-30-10P	9.5–10.5	38	1	3	10	1.5:1	150	137138-4
AMF-5F-09501050-30-10P	9.5–10.5	45	1	3	10	1.5:1	200	137138-5
AMF-6F-09501050-30-10P	9.5–10.5	52	1	3	10	1.5:1	250	137138-6

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-2F-10701270-12-5P	10.7–12.7	20	1.5	1.2	5	2:1	65	141132
AMF-3F-10701270-10-8P	10.7–12.7	30	1	1	8	2:1	110	141132
AMF-4F-10701270-10-10P	10.7–12.7	38	1	1	10	1.7:1	150	137138-4
AMF-5F-10701270-10-10P	10.7–12.7	45	1	1	10	1.7:1	200	137138-5
AMF-6F-10701270-10-10P	10.7–12.7	52	1	1	10	1.7:1	250	137138-6
AMF-2F-10701270-20-5P	10.7–12.7	20	1.5	2	5	2:1	65	141132
AMF-3F-10701270-20-8P	10.7–12.7	30	1	2	8	2:1	110	141132
AMF-4F-10701270-20-10P	10.7–12.7	38	1	2	10	1.7:1	150	137138-4
AMF-5F-10701270-20-10P	10.7–12.7	45	1	2	10	1.7:1	200	137138-5
AMF-6F-10701270-20-10P	10.7–12.7	52	1	2	10	1.7:1	250	137138-6
AMF-2F-10701270-30-5P	10.7–12.7	20	1.5	3	5	2:1	65	141132
AMF-3F-10701270-30-8P	10.7–12.7	30	1	3	8	2:1	110	141132
AMF-4F-10701270-30-10P	10.7–12.7	38	1	3	10	1.7:1	150	137138-4
AMF-5F-10701270-30-10P	10.7–12.7	45	1	3	10	1.7:1	200	137138-5
AMF-6F-10701270-30-10P	10.7–12.7	52	1	3	10	1.7:1	250	137138-6
AMF-2F-11001170-11-5P	11–11.7	20	1	1.1	5	2:1	65	141132
AMF-3F-11001170-09-8P	11–11.7	30	0.5	0.9	8	2:1	110	141132
AMF-4F-11001170-09-10P	11–11.7	38	0.5	0.9	10	1.5:1	150	137138-4
AMF-5F-11001170-09-10P	11–11.7	45	0.5	0.9	10	1.5:1	200	137138-5
AMF-6F-11001170-09-10P	11–11.7	52	0.5	0.9	10	1.5:1	250	137138-6
AMF-2F-11001170-20-5P	11–11.7	20	1	2	5	2:1	65	141132
AMF-3F-11001170-20-8P	11–11.7	30	0.5	2	8	2:1	110	141132
AMF-4F-11001170-20-10P	11–11.7	38	0.5	2	10	1.5:1	150	137138-4
AMF-5F-11001170-20-10P	11–11.7	45	0.5	2	10	1.5:1	200	137138-5
AMF-6F-11001170-20-10P	11–11.7	52	0.5	2	10	1.5:1	250	137138-6
AMF-2F-11001170-30-5P	11–11.7	20	1	3	5	2:1	65	141132
AMF-3F-11001170-30-8P	11–11.7	30	0.5	3	8	2:1	110	141132
AMF-4F-11001170-30-10P	11–11.7	38	0.5	3	10	1.5:1	150	137138-4
AMF-5F-11001170-30-10P	11–11.7	45	0.5	3	10	1.5:1	200	137138-5
AMF-6F-11001170-30-10P	11–11.7	52	0.5	3	10	1.5:1	250	137138-6
AMF-2F-12201280-11-5P	12.2–12.8	20	1	1.1	5	2:1	65	141132
AMF-3F-12201280-09-8P	12.2–12.8	30	0.5	0.9	8	2:1	110	141132
AMF-4F-12201280-09-10P	12.2–12.8	38	0.5	0.9	10	1.5:1	150	137138-4
AMF-5F-12201280-09-10P	12.2–12.8	45	0.5	0.9	10	1.5:1	200	137138-5
AMF-6F-12201280-09-10P	12.2–12.8	52	0.5	0.9	10	1.5:1	250	137138-6
AMF-2F-12201280-20-5P	12.2–12.8	20	1	2	5	2:1	65	141132
AMF-3F-12201280-20-8P	12.2–12.8	30	0.5	2	8	2:1	110	141132
AMF-4F-12201280-20-10P	12.2–12.8	38	0.5	2	10	1.5:1	150	137138-4
AMF-5F-12201280-20-10P	12.2–12.8	45	0.5	2	10	1.5:1	200	137138-5
AMF-6F-12201280-20-10P	12.2–12.8	52	0.5	2	10	1.5:1	250	137138-6
AMF-2F-12201280-30-5P	12.2–12.8	20	1	3	5	2:1	65	141132
AMF-3F-12201280-30-8P	12.2–12.8	30	0.5	3	8	2:1	110	141132
AMF-4F-12201280-30-10P	12.2–12.8	38	0.5	3	10	1.5:1	150	137138-4
AMF-5F-12201280-30-10P	12.2–12.8	45	0.5	3	10	1.5:1	200	137138-5
AMF-6F-12201280-30-10P	12.2–12.8	52	0.5	3	10	1.5:1	250	137138-6
AMF-2F-12701330-13-5P	12.7–13.3	18	1	1.3	5	2:1	65	141381
AMF-3F-12701330-11-8P	12.7–13.3	28	0.5	1.1	8	2:1	110	141381
AMF-4F-12701330-11-10P	12.7–13.3	36	0.5	1.1	10	2:1	150	137139-4
AMF-5F-12701330-11-10P	12.7–13.3	43	0.5	1.1	10	2:1	200	137139-5
AMF-6F-12701330-11-10P	12.7–13.3	50	0.5	1.1	10	2:1	250	137139-6

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-2F-12701330-20-5P	12.7–13.3	18	1	2	5	2:1	65	141381
AMF-3F-12701330-20-8P	12.7–13.3	28	0.5	2	8	2:1	110	141381
AMF-4F-12701330-20-10P	12.7–13.3	36	0.5	2	10	2:1	150	137139-4
AMF-5F-12701330-20-10P	12.7–13.3	43	0.5	2	10	2:1	200	137139-5
AMF-6F-12701330-20-10P	12.7–13.3	50	0.5	2	10	2:1	250	137139-6
AMF-2F-12701330-30-5P	12.7–13.3	18	1	3	5	2:1	65	141381
AMF-3F-12701330-30-8P	12.7–13.3	28	0.5	3	8	2:1	110	141381
AMF-4F-12701330-30-10P	12.7–13.3	36	0.5	3	10	2:1	150	137139-4
AMF-5F-12701330-30-10P	12.7–13.3	43	0.5	3	10	2:1	200	137139-5
AMF-6F-12701330-30-10P	12.7–13.3	50	0.5	3	10	2:1	250	137139-6
AMF-2F-13201400-13-5P	13.2–14	18	1	1.3	5	2:1	65	141381
AMF-3F-13201400-11-8P	13.2–14	28	0.5	1.1	8	2:1	110	141381
AMF-4F-13201400-11-10P	13.2–14	36	0.5	1.1	10	2:1	150	137139-4
AMF-5F-13201400-11-10P	13.2–14	43	0.5	1.1	10	2:1	200	137139-5
AMF-6F-13201400-11-10P	13.2–14	50	0.5	1.1	10	2:1	250	137139-6
AMF-2F-13201400-20-5P	13.2–14	18	1	2	5	2:1	65	141381
AMF-3F-13201400-20-8P	13.2–14	28	0.5	2	8	2:1	110	141381
AMF-4F-13201400-20-10P	13.2–14	36	0.5	2	10	2:1	150	137139-4
AMF-5F-13201400-20-10P	13.2–14	43	0.5	2	10	2:1	200	137139-5
AMF-6F-13201400-20-10P	13.2–14	50	0.5	2	10	2:1	250	137139-6
AMF-2F-13201400-30-5P	13.2–14	18	1	3	5	2:1	65	141381
AMF-3F-13201400-30-8P	13.2–14	28	0.5	3	8	2:1	110	141381
AMF-4F-13201400-30-10P	13.2–14	36	0.5	3	10	2:1	150	137139-4
AMF-5F-13201400-30-10P	13.2–14	43	0.5	3	10	2:1	200	137139-5
AMF-6F-13201400-30-10P	13.2–14	50	0.5	3	10	2:1	250	137139-6
AMF-2F-14001450-13-5P	14–14.5	18	1	1.3	5	2:1	65	141381
AMF-3F-14001450-11-8P	14–14.5	28	0.5	1.1	8	2:1	110	141381
AMF-4F-14001450-11-10P	14–14.5	36	0.5	1.1	10	2:1	150	137139-4
AMF-5F-14001450-11-10P	14–14.5	43	0.5	1.1	10	2:1	200	137139-5
AMF-6F-14001450-11-10P	14–14.5	50	0.5	1.1	10	2:1	250	137139-6
AMF-2F-14001450-20-5P	14–14.5	18	1	2	5	2:1	65	141381
AMF-3F-14001450-20-8P	14–14.5	28	0.5	2	8	2:1	110	141381
AMF-4F-14001450-20-10P	14–14.5	36	0.5	2	10	2:1	150	137139-4
AMF-5F-14001450-20-10P	14–14.5	43	0.5	2	10	2:1	200	137139-5
AMF-6F-14001450-20-10P	14–14.5	50	0.5	2	10	2:1	250	137139-6
AMF-2F-14001450-30-5P	14–14.5	18	1	3	5	2:1	65	141381
AMF-3F-14001450-30-8P	14–14.5	28	0.5	3	8	2:1	110	141381
AMF-4F-14001450-30-10P	14–14.5	36	0.5	3	10	2:1	150	137139-4
AMF-5F-14001450-30-10P	14–14.5	43	0.5	3	10	2:1	200	137139-5
AMF-6F-14001450-30-10P	14–14.5	50	0.5	3	10	2:1	250	137139-6
AMF-2F-14501550-14-5P	14.5–15.5	16	1	1.4	5	2:1	65	141381
AMF-3F-14501550-12-8P	14.5–15.5	26	0.5	1.2	8	2:1	110	141381
AMF-4F-14501550-12-10P	14.5–15.5	34	0.5	1.2	10	2:1	150	137139-4
AMF-5F-14501550-12-10P	14.5–15.5	41	0.5	1.2	10	2:1	200	137139-5
AMF-6F-14501550-12-10P	14.5–15.5	48	0.5	1.2	10	2:1	250	137139-6
AMF-2F-14501550-25-5P	14.5–15.5	16	1	2.5	5	2:1	65	141381
AMF-3F-14501550-25-8P	14.5–15.5	26	0.5	2.5	8	2:1	110	141381
AMF-4F-14501550-25-10P	14.5–15.5	34	0.5	2.5	10	2:1	150	137139-4
AMF-5F-14501550-25-10P	14.5–15.5	41	0.5	2.5	10	2:1	200	137139-5
AMF-6F-14501550-25-10P	14.5–15.5	48	0.5	2.5	10	2:1	250	137139-6

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-2F-14501550-35-5P	14.5–15.5	16	1	3.5	5	2:1	65	141381
AMF-3F-14501550-35-8P	14.5–15.5	26	0.5	3.5	8	2:1	110	141381
AMF-4F-14501550-35-10P	14.5–15.5	34	0.5	3.5	10	2:1	150	137139-4
AMF-5F-14501550-35-10P	14.5–15.5	41	0.5	3.5	10	2:1	200	137139-5
AMF-6F-14501550-35-10P	14.5–15.5	48	0.5	3.5	10	2:1	250	137139-6
AMF-2F-15501650-14-5P	15.5–16.5	16	1	1.4	5	2:1	65	141381
AMF-3F-15501650-12-8P	15.5–16.5	26	0.5	1.2	8	2:1	110	141381
AMF-4F-15501650-12-10P	15.5–16.5	34	0.5	1.2	10	2:1	150	137139-4
AMF-5F-15501650-12-10P	15.5–16.5	41	0.5	1.2	10	2:1	200	137139-5
AMF-6F-15501650-12-10P	15.5–16.5	48	0.5	1.2	10	2:1	250	137139-6
AMF-2F-15501650-25-5P	15.5–16.5	16	1	2.5	5	2:1	65	141381
AMF-3F-15501650-25-8P	15.5–16.5	26	0.5	2.5	8	2:1	110	141381
AMF-4F-15501650-25-10P	15.5–16.5	34	0.5	2.5	10	2:1	150	137139-4
AMF-5F-15501650-25-10P	15.5–16.5	41	0.5	2.5	10	2:1	200	137139-5
AMF-6F-15501650-25-10P	15.5–16.5	48	0.5	2.5	10	2:1	250	137139-6
AMF-2F-15501650-35-5P	15.5–16.5	16	1	3.5	5	2:1	65	141381
AMF-3F-15501650-35-8P	15.5–16.5	26	0.5	3.5	8	2:1	110	141381
AMF-4F-15501650-35-10P	15.5–16.5	34	0.5	3.5	10	2:1	150	137139-4
AMF-5F-15501650-35-10P	15.5–16.5	41	0.5	3.5	10	2:1	200	137139-5
AMF-6F-15501650-35-10P	15.5–16.5	48	0.5	3.5	10	2:1	250	137139-6
AMF-2F-16401710-15-5P	16.4–17.1	16	1	1.5	5	2:1	65	141381
AMF-3F-16401710-13-8P	16.4–17.1	26	0.5	1.3	8	2:1	110	141381
AMF-4F-16401710-13-10P	16.4–17.1	34	0.5	1.3	10	2:1	150	137139-4
AMF-5F-16401710-13-10P	16.4–17.1	41	0.5	1.3	10	2:1	200	137139-5
AMF-6F-16401710-13-10P	16.4–17.1	48	0.5	1.3	10	2:1	250	137139-6
AMF-2F-16401710-25-5P	16.4–17.1	16	1	2.5	5	2:1	65	141381
AMF-3F-16401710-25-8P	16.4–17.1	26	0.5	2.5	8	2:1	110	141381
AMF-4F-16401710-25-10P	16.4–17.1	34	0.5	2.5	10	2:1	150	137139-4
AMF-5F-16401710-25-10P	16.4–17.1	41	0.5	2.5	10	2:1	200	137139-5
AMF-6F-16401710-25-10P	16.4–17.1	48	0.5	2.5	10	2:1	250	137139-6
AMF-2F-16401710-35-5P	16.4–17.1	15	1	3.5	5	2:1	65	141381
AMF-3F-16401710-35-8P	16.4–17.1	25	0.5	3.5	8	2:1	110	141381
AMF-4F-16401710-35-10P	16.4–17.1	33	0.5	3.5	10	2:1	150	137139-4
AMF-5F-16401710-35-10P	16.4–17.1	40	0.5	3.5	10	2:1	200	137139-5
AMF-6F-16401710-35-10P	16.4–17.1	47	0.5	3.5	10	2:1	250	137139-6
AMF-2F-17101840-15-5P	17.1–18.4	16	1.5	1.5	5	2:1	65	141381
AMF-3F-17101840-13-8P	17.1–18.4	26	1	1.3	8	2:1	110	141381
AMF-4F-17101840-13-10P	17.1–18.4	34	1	1.3	10	2:1	150	137139-4
AMF-5F-17101840-13-10P	17.1–18.4	41	1	1.3	10	2:1	200	137139-5
AMF-6F-17101840-13-10P	17.1–18.4	48	1	1.3	10	2:1	250	137139-6
AMF-2F-17101840-25-5P	17.1–18.4	16	1.5	2.5	5	2:1	65	141381
AMF-3F-17101840-25-8P	17.1–18.4	26	1	2.5	8	2:1	110	141381
AMF-4F-17101840-25-10P	17.1–18.4	34	1	2.5	10	2:1	150	137139-4
AMF-5F-17101840-25-10P	17.1–18.4	41	1	2.5	10	2:1	200	137139-5
AMF-6F-17101840-25-10P	17.1–18.4	48	1	2.5	10	2:1	250	137139-6
AMF-2F-17101840-35-5P	17.1–18.4	16	1.5	3.5	5	2:1	65	141381
AMF-3F-17101840-35-8P	17.1–18.4	26	1	3.5	8	2:1	110	141381
AMF-4F-17101840-35-10P	17.1–18.4	34	1	3.5	10	2:1	150	137139-4
AMF-5F-17101840-35-10P	17.1–18.4	41	1	3.5	10	2:1	200	137139-5
AMF-6F-17101840-35-10P	17.1–18.4	48	1	3.5	10	2:1	250	137139-6



## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-3F-17502200-18-8P	17.5–22	23	1.5	1.8	8	2:1	100	128066-3
AMF-4F-17502200-18-10P	17.5–22	33	1.5	1.8	10	2:1	140	128066-4
AMF-5F-17502200-18-10P	17.5–22	40	1.5	1.8	10	2:1	180	128061-5
AMF-6F-17502200-18-10P	17.5–22	47	1.5	1.8	10	2:1	220	128061-6
AMF-3F-17502200-25-8P	17.5–22	23	1.5	2.5	8	2:1	100	128066-3
AMF-4F-17502200-25-10P	17.5–22	33	1.5	2.5	10	2:1	140	128066-4
AMF-5F-17502200-25-10P	17.5–22	40	1.5	2.5	10	2:1	180	128061-5
AMF-6F-17502200-25-10P	17.5–22	47	1.5	2.5	10	2:1	220	128061-6
AMF-3F-17502200-35-8P	17.5–22	23	1.5	3.5	8	2:1	100	128066-3
AMF-4F-17502200-35-10P	17.5–22	33	1.5	3.5	10	2:1	140	128066-4
AMF-5F-17502200-35-10P	17.5–22	40	1.5	3.5	10	2:1	180	128061-5
AMF-6F-17502200-35-10P	17.5–22	47	1.5	3.5	10	2:1	220	128061-6
AMF-3F-17502200-50-8P	17.5–22	23	1.5	5	8	2:1	100	128066-3
AMF-4F-17502200-50-10P	17.5–22	33	1.5	5	10	2:1	140	128066-4
AMF-5F-17502200-50-10P	17.5–22	40	1.5	5	10	2:1	180	128061-5
AMF-6F-17502200-50-10P	17.5–22	47	1.5	5	10	2:1	220	128061-6
AMF-3F-17701970-13-8P	17.7–19.7	24	1	1.3	8	2:1	100	128066-3
AMF-4F-17701970-13-10P	17.7–19.7	34	1	1.3	10	2:1	140	128066-4
AMF-5F-17701970-13-10P	17.7–19.7	41	1	1.3	10	2:1	180	128061-5
AMF-6F-17701970-13-10P	17.7–19.7	48	1	1.3	10	2:1	220	128061-6
AMF-3F-17701970-20-8P	17.7–19.7	24	1	2	8	2:1	100	128066-3
AMF-4F-17701970-20-10P	17.7–19.7	34	1	2	10	2:1	140	128066-4
AMF-5F-17701970-20-10P	17.7–19.7	41	1	2	10	2:1	180	128061-5
AMF-6F-17701970-20-10P	17.7–19.7	48	1	2	10	2:1	220	128061-6
AMF-3F-17701970-30-8P	17.7–19.7	24	1	3	8	2:1	100	128066-3
AMF-4F-17701970-30-10P	17.7–19.7	34	1	3	10	2:1	140	128066-4
AMF-5F-17701970-30-10P	17.7–19.7	41	1	3	10	2:1	180	128061-5
AMF-6F-17701970-30-10P	17.7–19.7	48	1	3	10	2:1	220	128061-6
AMF-3F-17701970-45-8P	17.7–19.7	24	1	4.5	8	2:1	100	128066-3
AMF-4F-17701970-45-10P	17.7–19.7	34	1	4.5	10	2:1	140	128066-4
AMF-5F-17701970-45-10P	17.7–19.7	41	1	4.5	10	2:1	180	128061-5
AMF-6F-17701970-45-10P	17.7–19.7	48	1	4.5	10	2:1	220	128061-6
AMF-3F-18002000-13-8P	18–20	24	1	1.3	8	2:1	100	128066-3
AMF-4F-18002000-13-10P	18–20	34	1	1.3	10	2:1	140	128066-4
AMF-5F-18002000-13-10P	18–20	41	1	1.3	10	2:1	180	128061-5
AMF-6F-18002000-13-10P	18–20	48	1	1.3	10	2:1	220	128061-6
AMF-3F-18002000-20-8P	18–20	24	1	2	8	2:1	100	128066-3
AMF-4F-18002000-20-10P	18–20	34	1	2	10	2:1	140	128066-4
AMF-5F-18002000-20-10P	18–20	41	1	2	10	2:1	180	128061-5
AMF-6F-18002000-20-10P	18–20	48	1	2	10	2:1	220	128061-6
AMF-3F-18002000-30-8P	18–20	24	1	3	8	2:1	100	128066-3
AMF-4F-18002000-30-10P	18–20	34	1	3	10	2:1	140	128066-4
AMF-5F-18002000-30-10P	18–20	41	1	3	10	2:1	180	128061-5
AMF-6F-18002000-30-10P	18–20	48	1	3	10	2:1	220	128061-6
AMF-3F-18002000-45-8P	18–20	24	1	4.5	8	2:1	100	128066-3
AMF-4F-18002000-45-10P	18–20	34	1	4.5	10	2:1	140	128066-4
AMF-5F-18002000-45-10P	18–20	41	1	4.5	10	2:1	180	128061-5
AMF-6F-18002000-45-10P	18–20	48	1	4.5	10	2:1	220	128061-6

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-3F-18002200-17-8P	18–22	23	1.5	1.7	8	2:1	100	128066-3
AMF-4F-18002200-17-10P	18–22	33	1.5	1.7	10	2:1	140	128066-4
AMF-5F-18002200-17-10P	18–22	40	1.5	1.7	10	2:1	180	128061-5
AMF-6F-18002200-17-10P	18–22	47	1.5	1.7	10	2:1	220	128061-6
AMF-3F-18002200-25-8P	18–22	23	1.5	2.5	8	2:1	100	128066-3
AMF-4F-18002200-25-10P	18–22	33	1.5	2.5	10	2:1	140	128066-4
AMF-5F-18002200-25-10P	18–22	40	1.5	2.5	10	2:1	180	128061-5
AMF-6F-18002200-25-10P	18–22	47	1.5	2.5	10	2:1	220	128061-6
AMF-3F-18002200-35-8P	18–22	23	1.5	3.5	8	2:1	100	128066-3
AMF-4F-18002200-35-10P	18–22	33	1.5	3.5	10	2:1	140	128066-4
AMF-5F-18002200-35-10P	18–22	40	1.5	3.5	10	2:1	180	128061-5
AMF-6F-18002200-35-10P	18–22	47	1.5	3.5	10	2:1	220	128061-6
AMF-3F-18002200-50-8P	18–22	23	1.5	5	8	2:1	100	128066-3
AMF-4F-18002200-50-10P	18–22	33	1.5	5	10	2:1	140	128066-4
AMF-5F-18002200-50-10P	18–22	40	1.5	5	10	2:1	180	128061-5
AMF-6F-18002200-50-10P	18–22	47	1.5	5	10	2:1	220	128061-6
AMF-3F-20003000-29-8P	20–30	18	2	2.9	8	2.5:1	100	128066-3
AMF-4F-20003000-29-10P	20–30	27	2	2.9	10	2.5:1	140	128066-4
AMF-5F-20003000-29-10P	20–30	35	2	2.9	10	2.5:1	180	128061-5
AMF-6F-20003000-29-10P	20–30	40	2	2.9	10	2.5:1	220	128061-6
AMF-3F-20003000-40-8P	20–30	18	2	4	8	2.5:1	100	128066-3
AMF-4F-20003000-40-10P	20–30	27	2	4	10	2.5:1	140	128066-4
AMF-5F-20003000-40-10P	20–30	35	2	4	10	2.5:1	180	128061-5
AMF-6F-20003000-40-10P	20–30	40	2	4	10	2.5:1	220	128061-6
AMF-3F-20003000-50-8P	20–30	18	2	5	8	2.5:1	100	128066-3
AMF-4F-20003000-50-10P	20–30	27	2	5	10	2.5:1	140	128066-4
AMF-5F-20003000-50-10P	20–30	35	2	5	10	2.5:1	180	128061-5
AMF-6F-20003000-50-10P	20–30	40	2	5	10	2.5:1	220	128061-6
AMF-3F-21002400-17-8P	21–24	22	1.5	1.7	8	2:1	100	128066-3
AMF-4F-21002400-17-10P	21–24	32	1.5	1.7	10	2:1	140	128066-4
AMF-5F-21002400-17-10P	21–24	38	1.5	1.7	10	2:1	180	128061-5
AMF-6F-21002400-17-10P	21–24	45	1.5	1.7	10	2:1	220	128061-6
AMF-3F-21002400-25-8P	21–24	22	1.5	2.5	8	2:1	100	128066-3
AMF-4F-21002400-25-10P	21–24	32	1.5	2.5	10	2:1	140	128066-4
AMF-5F-21002400-25-10P	21–24	38	1.5	2.5	10	2:1	180	128061-5
AMF-6F-21002400-25-10P	21–24	45	1.5	2.5	10	2:1	220	128061-6
AMF-3F-21002400-35-8P	21–24	22	1.5	3.5	8	2:1	100	128066-3
AMF-4F-21002400-35-10P	21–24	32	1.5	3.5	10	2:1	140	128066-4
AMF-5F-21002400-35-10P	21–24	38	1.5	3.5	10	2:1	180	128061-5
AMF-6F-21002400-35-10P	21–24	45	1.5	3.5	10	2:1	220	128061-6
AMF-3F-21002400-50-8P	21–24	22	1.5	5	8	2:1	100	128066-3
AMF-4F-21002400-50-10P	21–24	32	1.5	5	10	2:1	140	128066-4
AMF-5F-21002400-50-10P	21–24	38	1.5	5	10	2:1	180	128061-5
AMF-6F-21002400-50-10P	21–24	45	1.5	5	10	2:1	220	128061-6
AMF-3F-22002650-19-8P	22–26.5	22	1.5	1.9	8	2.3:1	100	128066-3
AMF-4F-22002650-19-10P	22–26.5	30	1.5	1.9	10	2.3:1	140	128066-4
AMF-5F-22002650-19-10P	22–26.5	38	1.5	1.9	10	2.3:1	180	128061-5
AMF-6F-22002650-19-10P	22–26.5	45	1.5	1.9	10	2.3:1	220	128061-6

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS ( $\pm$ dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-3F-22002650-25-8P	22–26.5	22	1.5	2.5	8	2:1	100	128066-3
AMF-4F-22002650-25-10P	22–26.5	30	1.5	2.5	10	2:1	140	128066-4
AMF-5F-22002650-25-10P	22–26.5	38	1.5	2.5	10	2:1	180	128061-5
AMF-6F-22002650-25-10P	22–26.5	45	1.5	2.5	10	2:1	220	128061-6
AMF-3F-22002650-35-8P	22–26.5	22	1.5	3.5	8	2:1	100	128066-3
AMF-4F-22002650-35-10P	22–26.5	30	1.5	3.5	10	2:1	140	128066-4
AMF-5F-22002650-35-10P	22–26.5	38	1.5	3.5	10	2:1	180	128061-5
AMF-6F-22002650-35-10P	22–26.5	45	1.5	3.5	10	2:1	220	128061-6
AMF-3F-22002650-50-8P	22–26.5	22	1.5	5	8	2:1	100	128066-3
AMF-4F-22002650-50-10P	22–26.5	30	1.5	5	10	2:1	140	128066-4
AMF-5F-22002650-50-10P	22–26.5	38	1.5	5	10	2:1	180	128061-5
AMF-6F-22002650-50-10P	22–26.5	45	1.5	5	10	2:1	220	128061-6
AMF-3F-26003300-29-8P	26–33	18	2	2.9	8	2.3:1	100	128066-3
AMF-4F-26003300-29-10P	26–33	27	2	2.9	10	2.3:1	140	128066-4
AMF-5F-26003300-29-10P	26–33	35	2	2.9	10	2.3:1	180	128061-5
AMF-6F-26003300-29-10P	26–33	40	2	2.9	10	2.3:1	220	128061-6
AMF-3F-26003300-40-8P	26–33	18	2	4	8	2.3:1	100	128066-3
AMF-4F-26003300-40-10P	26–33	27	2	4	10	2.3:1	140	128066-4
AMF-5F-26003300-40-10P	26–33	35	2	4	10	2.3:1	180	128061-5
AMF-6F-26003300-40-10P	26–33	40	2	4	10	2.3:1	220	128061-6
AMF-3F-26003300-50-8P	26–33	18	2	5	8	2.3:1	100	128066-3
AMF-4F-26003300-50-10P	26–33	27	2	5	10	2.3:1	140	128066-4
AMF-5F-26003300-50-10P	26–33	35	2	5	10	2.3:1	180	128061-5
AMF-6F-26003300-50-10P	26–33	40	2	5	10	2.3:1	220	128061-6
AMF-3F-27503100-28-8P	27.5–31	18	1.5	2.8	8	2.3:1	100	128066-3
AMF-4F-27503100-28-10P	27.5–31	27	1.5	2.8	10	2.3:1	140	128066-4
AMF-5F-27503100-28-10P	27.5–31	35	1.5	2.8	10	2.3:1	180	128061-5
AMF-6F-27503100-28-10P	27.5–31	40	1.5	2.8	10	2.3:1	220	128061-6
AMF-3F-27503100-40-8P	27.5–31	18	1.5	4	8	2.3:1	100	128066-3
AMF-4F-27503100-40-10P	27.5–31	27	1.5	4	10	2.3:1	140	128066-4
AMF-5F-27503100-40-10P	27.5–31	35	1.5	4	10	2.3:1	180	128061-5
AMF-6F-27503100-40-10P	27.5–31	40	1.5	4	10	2.3:1	220	128061-6
AMF-3F-27503100-50-8P	27.5–31	18	1.5	5	8	2.3:1	100	128066-3
AMF-4F-27503100-50-10P	27.5–31	27	1.5	5	10	2.3:1	140	128066-4
AMF-5F-27503100-50-10P	27.5–31	35	1.5	5	10	2.3:1	180	128061-5
AMF-6F-27503100-50-10P	27.5–31	40	1.5	5	10	2.3:1	220	128061-6
AMF-3F-28003000-25-8P	28–30	18	1.5	2.5	8	2.3:1	100	128066-3
AMF-4F-28003000-25-10P	28–30	27	1.5	2.5	10	2.3:1	140	128066-4
AMF-5F-28003000-25-10P	28–30	35	1.5	2.5	10	2.3:1	180	128061-5
AMF-6F-28003000-25-10P	28–30	40	1.5	2.5	10	2.3:1	220	128061-6
AMF-3F-28003000-30-8P	28–30	18	1.5	3	8	2.3:1	100	128066-3
AMF-4F-28003000-30-10P	28–30	27	1.5	3	10	2.3:1	140	128066-4
AMF-5F-28003000-30-10P	28–30	35	1.5	3	10	2.3:1	180	128061-5
AMF-6F-28003000-30-10P	28–30	40	1.5	3	10	2.3:1	220	128061-6
AMF-3F-28003000-40-8P	28–30	18	1.5	4	8	2.3:1	100	128066-3
AMF-4F-28003000-40-10P	28–30	27	1.5	4	10	2.3:1	140	128066-4
AMF-5F-28003000-40-10P	28–30	35	1.5	4	10	2.3:1	180	128061-5
AMF-6F-28003000-40-10P	28–30	40	1.5	4	10	2.3:1	220	128061-6

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-3F-28003000-50-8P	28-30	18	1.5	5	8	2.3:1	100	128066-3
AMF-4F-28003000-50-10P	28-30	27	1.5	5	10	2.3:1	140	128066-4
AMF-5F-28003000-50-10P	28-30	35	1.5	5	10	2.3:1	180	128061-5
AMF-6F-28003000-50-10P	28-30	40	1.5	5	10	2.3:1	220	128061-6
AMF-3F-30003300-28-8P	30-33	18	1.5	2.8	8	2.5:1	100	128066-3
AMF-4F-30003300-28-10P	30-33	27	1.5	2.8	10	2.5:1	140	128066-4
AMF-5F-30003300-28-10P	30-33	35	1.5	2.8	10	2.5:1	180	128061-5
AMF-6F-30003300-28-10P	30-33	40	1.5	2.8	10	2.5:1	220	128061-6
AMF-3F-30003300-40-8P	30-33	18	1.5	4	8	2.5:1	100	128066-3
AMF-4F-30003300-40-10P	30-33	27	1.5	4	10	2.5:1	140	128066-4
AMF-5F-30003300-40-10P	30-33	35	1.5	4	10	2.5:1	180	128061-5
AMF-6F-30003300-40-10P	30-33	40	1.5	4	10	2.5:1	220	128061-6
AMF-3F-30003300-50-8P	30-33	18	1.5	5	8	2.5:1	100	128066-3
AMF-4F-30003300-50-10P	30-33	27	1.5	5	10	2.5:1	140	128066-4
AMF-5F-30003300-50-10P	30-33	35	1.5	5	10	2.5:1	180	128061-5
AMF-6F-30003300-50-10P	30-33	40	1.5	5	10	2.5:1	220	128061-6
AMF-3F-30004000-33-8P	30-40	17	2	3.3	8	2.5:1	100	128066-3
AMF-4F-30004000-33-8P	30-40	26	2	3.3	8	2.5:1	140	128066-4
AMF-5F-30004000-33-8P	30-40	34	2	3.3	8	2.5:1	180	128061-5
AMF-6F-30004000-33-8P	30-40	39	2	3.3	8	2.5:1	220	128061-6
AMF-3F-30004000-40-8P	30-40	17	2	4	8	2.5:1	100	128066-3
AMF-4F-30004000-40-8P	30-40	26	2	4	8	2.5:1	140	128066-4
AMF-5F-30004000-40-8P	30-40	34	2	4	8	2.5:1	180	128061-5
AMF-6F-30004000-40-8P	30-40	39	2	4	8	2.5:1	220	128061-6
AMF-3F-30004000-50-8P	30-40	17	2	5	8	2.5:1	100	128066-3
AMF-4F-30004000-50-8P	30-40	26	2	5	8	2.5:1	140	128066-4
AMF-5F-30004000-50-8P	30-40	34	2	5	8	2.5:1	180	128061-5
AMF-6F-30004000-50-8P	30-40	39	2	5	8	2.5:1	220	128061-6
AMF-3F-32003600-29-8P	32-36	17	1.5	2.9	8	2.5:1	100	128066-3
AMF-4F-32003600-29-8P	32-36	26	1.5	2.9	8	2.5:1	140	128066-4
AMF-5F-32003600-29-8P	32-36	34	1.5	2.9	8	2.5:1	180	128061-5
AMF-6F-32003600-29-8P	32-36	39	1.5	2.9	8	2.5:1	220	128061-6
AMF-3F-32003600-40-8P	32-36	17	1.5	4	8	2.5:1	100	128066-3
AMF-4F-32003600-40-8P	32-36	26	1.5	4	8	2.5:1	140	128066-4
AMF-5F-32003600-40-8P	32-36	34	1.5	4	8	2.5:1	180	128061-5
AMF-6F-32003600-40-8P	32-36	39	1.5	4	8	2.5:1	220	128061-6
AMF-3F-32003600-50-8P	32-36	17	1.5	5	8	2.5:1	100	128066-3
AMF-4F-32003600-50-8P	32-36	26	1.5	5	8	2.5:1	140	128066-4
AMF-5F-32003600-50-8P	32-36	34	1.5	5	8	2.5:1	180	128061-5
AMF-6F-32003600-50-8P	32-36	39	1.5	5	8	2.5:1	220	128061-6
AMF-3F-36004000-30-8P	36-40	17	1.5	3	8	2.5:1	100	128066-3
AMF-4F-36004000-30-8P	36-40	26	1.5	3	8	2.5:1	140	128066-4
AMF-5F-36004000-30-8P	36-40	34	1.5	3	8	2.5:1	180	128061-5
AMF-6F-36004000-30-8P	36-40	39	1.5	3	8	2.5:1	220	128061-6
AMF-3F-36004000-40-8P	36-40	17	1.5	4	8	2.5:1	100	128066-3
AMF-4F-36004000-40-8P	36-40	26	1.5	4	8	2.5:1	140	128066-4
AMF-5F-36004000-40-8P	36-40	34	1.5	4	8	2.5:1	180	128061-5
AMF-6F-36004000-40-8P	36-40	39	1.5	4	8	2.5:1	220	128061-6

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MODERATE BAND (CONT.)</b>								
AMF-3F-36004000-50-8P*	36–40	17	1.5	5	8	2.5:1	100	128066-3
AMF-4F-36004000-50-8P*	36–40	26	1.5	5	8	2.5:1	140	128066-4
AMF-5F-36004000-50-8P*	36–40	34	1.5	5	8	2.5:1	180	128061-5
AMF-6F-36004000-50-8P*	36–40	39	1.5	5	8	2.5:1	220	128061-6
AMF-6F-38004200-40-13P	38–42	23	2.5	4	13	2.5:1	250	129530
AMF-7F-38004200-40-13P	38–42	29	2.5	4	13	2.5:1	300	129530
AMF-6F-38004200-50-13P	38–42	23	2.5	5	13	2.5:1	250	129530
AMF-7F-38004200-50-13P	38–42	29	2.5	5	13	2.5:1	300	129530
AMF-6F-38004200-60-13P	38–42	23	2.5	6	13	2.5:1	250	129530
AMF-7F-38004200-60-13P	38–42	29	2.5	6	13	2.5:1	300	129530
AMF-6F-38004400-40-13P	38–44	23	3	4	13	3:1	250	129530
AMF-7F-38004400-40-13P	38–44	29	3	4	13	3:1	300	129530
AMF-6F-38004400-50-13P	38–44	23	3	5	13	3:1	250	129530
AMF-7F-38004400-50-13P	38–44	29	3	5	13	3:1	300	129530
AMF-6F-38004400-60-13P	38–44	23	3	6	13	3:1	250	129530
AMF-7F-38004400-60-13P	38–44	29	3	6	13	3:1	300	129530
AMF-6F-40004200-40-13P	40–42	23	2	4	13	2.5:1	250	129530
AMF-7F-40004200-40-13P	40–42	29	2	4	13	2.5:1	300	129530
AMF-6F-40004200-50-13P	40–42	23	2	5	13	2.5:1	250	129530
AMF-7F-40004200-50-13P	40–42	29	2	5	13	2.5:1	300	129530
AMF-6F-40004200-60-13P	40–42	23	2	6	13	2.5:1	250	129530
AMF-7F-40004200-60-13P	40–42	29	2	6	13	2.5:1	300	129530
AMF-6F-40004400-40-13P	40–44	23	2.5	4	13	2.5:1	250	129530
AMF-7F-40004400-40-13P	40–44	29	2.5	4	13	2.5:1	300	129530
AMF-6F-40004400-50-13P	40–44	23	2.5	5	13	2.5:1	250	129530
AMF-7F-40004400-50-13P	40–44	29	2.5	5	13	2.5:1	300	129530
AMF-6F-40004400-60-13P	40–44	23	2.5	6	13	2.5:1	250	129530
AMF-7F-40004400-60-13P	40–44	29	2.5	6	13	2.5:1	300	129530
AMF-6F-40004500-45-13P	40–45	23	3	4.5	13	2.5:1	250	129530
AMF-7F-40004500-45-13P	40–45	29	3	4.5	13	2.5:1	300	129530
AMF-6F-40004500-50-13P	40–45	23	3	5	13	2.5:1	250	129530
AMF-7F-40004500-50-13P	40–45	29	3	5	13	2.5:1	300	129530
AMF-6F-40004500-60-13P	40–45	23	3	6	13	2.5:1	250	129530
AMF-7F-40004500-60-13P	40–45	29	3	6	13	2.5:1	300	129530
AMF-6F-41004300-40-13P	41–43	23	2	4	13	2.5:1	250	129530
AMF-7F-41004300-40-13P	41–43	29	2	4	13	2.5:1	300	129530
AMF-6F-41004300-50-13P	41–43	23	2	5	13	2.5:1	250	129530
AMF-7F-41004300-50-13P	41–43	29	2	5	13	2.5:1	300	129530
AMF-6F-41004300-60-13P	41–43	23	2	6	13	2.5:1	250	129530
AMF-7F-41004300-60-13P	41–43	29	2	6	13	2.5:1	300	129530
AMF-6F-42004400-40-13P	42–44	23	2	4	13	2.5:1	250	129530
AMF-7F-42004400-40-13P	42–44	29	2	4	13	2.5:1	300	129530
AMF-6F-42004400-50-13P	42–44	23	2	5	13	2.5:1	250	129530
AMF-7F-42004400-50-13P	42–44	29	2	5	13	2.5:1	300	129530
AMF-6F-42004400-60-13P	42–44	23	2	6	13	2.5:1	250	129530
AMF-7F-42004400-60-13P	42–44	29	2	6	13	2.5:1	300	129530
AMF-6F-43004500-45-13P	43–45	23	2	4.5	13	2.5:1	250	129530
AMF-7F-43004500-45-13P	43–45	29	2	4.5	13	2.5:1	300	129530
AMF-6F-43004500-50-13P	43–45	23	2	5	13	2.5:1	250	129530
AMF-7F-43004500-50-13P	43–45	29	2	5	13	2.5:1	300	129530
AMF-6F-43004500-60-13P	43–45	23	2	6	13	2.5:1	250	129530
AMF-7F-43004500-60-13P	43–45	29	2	6	13	2.5:1	300	129530

NOTE: All models listed above will require an additional negative supply of at least -8 VDC @ 50 mA nominal.

\* Above note does not apply to these models.

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS ( $\pm$ dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>ULTRA-BROADBAND</b>								
AMF-1D-00010500-60-10P	0.01–5	10	2	6*	10	2.2:1	100	114293-1
AMF-3D-00010200-16-10P	0.01–2	40	1.5	1.6*	10	2:1	200	114293-3
AMF-3D-00011000-30-10P	0.01–10	24	2	3*	10	2:1	200	121622
AMF-1D-00020200-40-10P	0.02–2	12	1.5	4*	13	2:1	100	114293-1
AMF-4D-00030800-20-13P	0.03–8	40	2	2*	13	2:1	275	114293-4
AMF-2D-00040200-14-11P	0.04–2	20	1.5	1.4*	11	2:1	125	110699-2
AMF-2D-00100100-11-13P	0.1–1	28	1	1.1	13	2:1	120	110699-2
AMF-2D-00100100-21-13P	0.1–1	25	1	2.1	13	2:1	120	114293-2
AMF-3D-00100100-11-13P	0.1–1	38	1	1.1	13	2:1	160	110699-3
AMF-3D-00100100-21-13P	0.1–1	36	1	2.1	13	2:1	160	114293-3
AMF-4D-00100100-11-13P	0.1–1	48	1	1.1	13	2:1	200	110699-4
AMF-4D-00100100-21-13P	0.1–1	46	1	2.1	13	2:1	200	114293-4
AMF-2D-00100200-12-13P	0.1–2	27	1	1.2	13	2:1	120	110699-2
AMF-2D-00100200-22-13P	0.1–2	24	1	2.2	13	2:1	120	114293-2
AMF-3D-00100200-12-13P	0.1–2	37	1	1.2	13	2:1	160	110699-3
AMF-3D-00100200-22-13P	0.1–2	35	1	2.2	13	2:1	160	114293-3
AMF-4D-00100200-12-13P	0.1–2	47	1	1.2	13	2:1	200	110699-4
AMF-4D-00100200-22-13P	0.1–2	45	1	2.2	13	2:1	200	114293-4
AMF-2D-00100400-14-13P	0.1–4	26	1.5	1.4	13	2:1	120	110699-2
AMF-2D-00100400-25-13P	0.1–4	23	1.5	2.5	13	2:1	120	114293-2
AMF-3D-00100400-14-13P	0.1–4	35	1.5	1.4	13	2:1	160	110699-3
AMF-3D-00100400-25-13P	0.1–4	35	1.5	2.5	13	2:1	160	114293-3
AMF-4D-00100400-14-13P	0.1–4	47	1.5	1.4	13	2:1	200	110699-4
AMF-4D-00100400-25-13P	0.1–4	47	1.5	2.5	13	2:1	200	114293-4
AMF-2D-00100800-19-10P	0.1–8	22	1.5	1.9	10	2:1	120	114293-2
AMF-2D-00100800-32-13P	0.1–8	22	1.5	3.2	13	2:1	120	114293-2
AMF-3D-00100800-18-13P	0.1–8	33	1.5	1.8	13	2:1	160	114293-3
AMF-3D-00100800-32-13P	0.1–8	33	1.5	3.2	13	2:1	160	114293-3
AMF-4D-00100800-18-13P	0.1–8	44	1.5	1.8	13	2:1	200	114293-4
AMF-4D-00100800-32-13P	0.1–8	44	1.5	3.2	13	2:1	200	114293-4
AMF-3D-00101200-21-10P	0.1–12	27	1.5	2.1*	10	2:1	125	121622
AMF-3D-00101200-24-10P	0.1–12	27	1.5	2.4*	10	2:1	125	121622
AMF-3D-00101200-34-13P	0.1–12	25	1.5	3.4*	13	2:1	125	121622
AMF-4D-00101200-22-10P	0.1–12	36	1.5	2.2*	10	2:1	170	121623-4
AMF-4D-00101200-24-10P	0.1–12	36	1.5	2.4*	10	2:1	170	121623-4
AMF-4D-00101200-34-13P	0.1–12	33	1.5	3.4*	13	2:1	170	121623-4
AMF-5D-00101200-23-10P	0.1–12	43	1.5	2.3*	10	2:1	200	121623-5
AMF-2D-00101800-32-10P	0.1–18	15	2	3.2*	10	2.3:1	80	121622
AMF-3D-00101800-24-10P	0.1–18	22	1.5	2.4*	10	2.2:1	125	121622
AMF-3D-00101800-40-10P	0.1–18	21	1.5	4*	10	2.5:1	125	121622
AMF-4D-00101800-24-10P	0.1–18	30	1.5	2.4*	10	2.2:1	170	121623-4
AMF-4D-00101800-40-10P	0.1–18	28	1.5	4*	10	2.5:1	170	121623-4
AMF-7D-00101800-30-10P	0.1–18	55	2	3	10	2.2:1	350	121681
AMF-4D-00102000-34-10P	0.1–20	27	2	3.4	10	2.2:1	175	121623-4

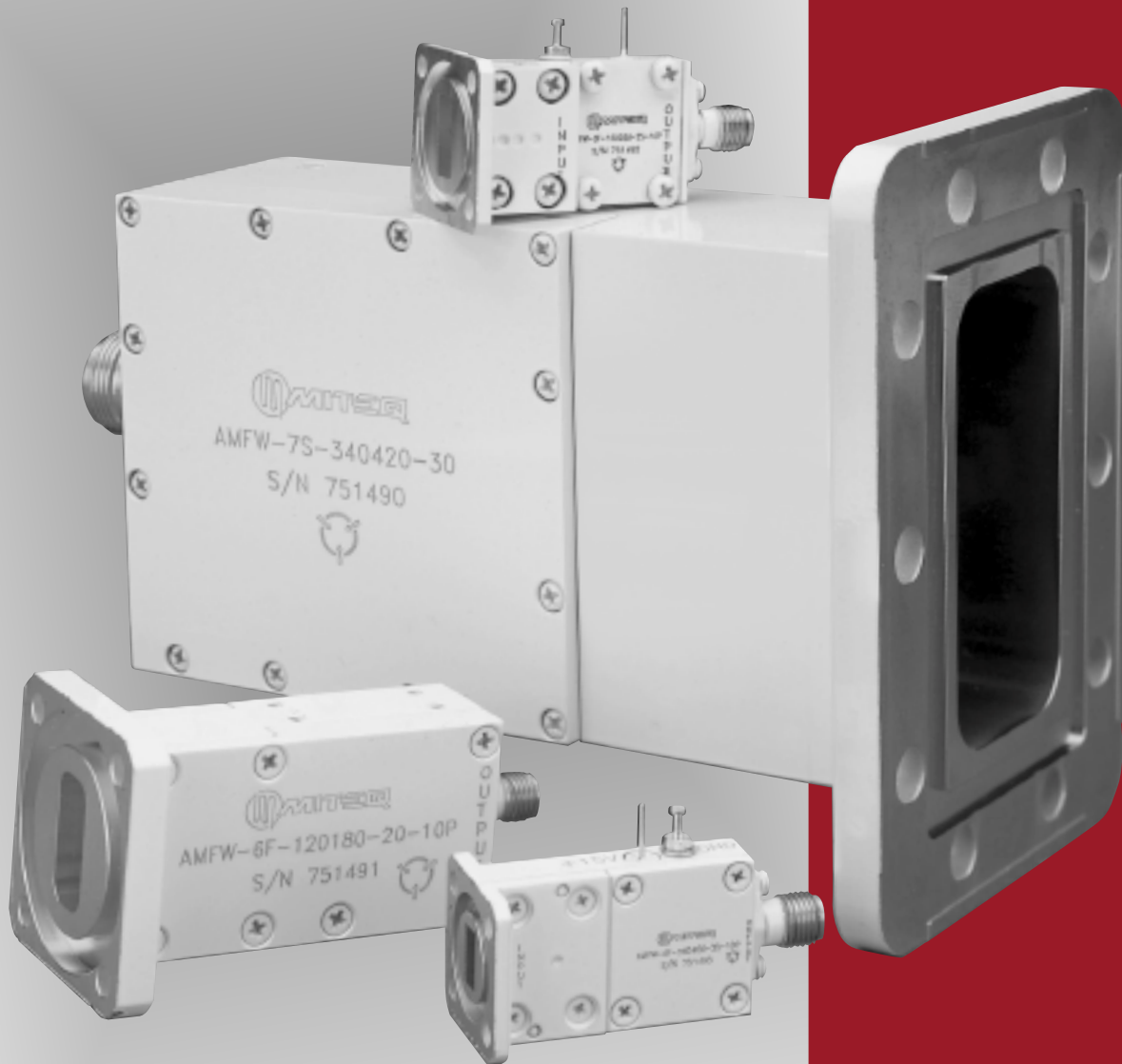
\* Noise figures unspecified below 0.1 GHz.

## LOW-NOISE AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS ( $\pm$ dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>ULTRA-BROADBAND (CONT.)</b>								
AMF-3D-00102650-50-10P	0.1–26.5	14	3	5	10	2.5:1	165	121622
AMF-3D-00102650-70-10P	0.1–26.5	14	3	7	10	2.5:1	165	121622
AMF-4D-00102650-47-10P	0.1–26.5	19	3	4.7	10	2.2:1	200	121623-4
AMF-3D-00501800-24-10P	0.5–18	22	1.5	2.4	10	2.2:1	115	121622
AMF-3D-00501800-40-10P	0.5–18	21	1.5	4	10	2.5:1	115	121622
AMF-4D-00501800-24-10P	0.5–18	30	1.5	2.4	10	2.2:1	150	121623-4
AMF-4D-00501800-40-10P	0.5–18	28	1.5	4	10	2.5:1	150	121623-4
AMF-5D-00501800-28-13P	0.5–18	36	2	2.8	13	2.5:1	250	121623-5
AMF-4D-00502000-40-15P	0.5–20	32	2	4	15	2.2:1	275	121623-4
AMF-3D-00502650-50-10P	0.5–26.5	14	3	5	10	2.2:1	165	121622
AMF-3D-00502650-70-10P	0.5–26.5	14	3	7	10	2.5:1	165	121622
AMF-4D-00502650-47-10P	0.5–26.5	19	3	4.7	10	2.2:1	200	121623-4
AMF-4D-00502650-67-10P	0.5–26.5	19	3	6.7	10	2.5:1	200	121623-4
AMF-4D-02001800-23-10P	2–18	31	1.5	2.3	10	2.2:1	175	121623-4
AMF-3D-02002650-60-8P	2–26.5	14	3	6	8	2.5:1	175	121622
AMF-4D-02002650-50-8P	2–26.5	18	3	5	8	2.5:1	200	121623-4
AMF-4D-02002650-60-10P	2–26.5	19	3	6	10	2.5:1	200	121623-4
AMF-5D-02002650-50-10P	2–26.5	25	3	5	10	2.5:1	220	121623-5
AMF-5D-02002650-60-10P	2–26.5	25	3	6	10	2.5:1	220	121623-5
AMF-5D-04002850-60-6P	4–28.5	25	3	6	6	2.3:1	225	121623-5

# LOW-NOISE SATCOM AMPLIFIERS

The amplifiers listed within this section represent only a sample of the design capability of the AMF Amplifier Department. For variations to the models listed within this section, please contact MITEQ for technical assistance.





## LOW-NOISE SATCOM AMPLIFIERS

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE TEMP. (Degrees K)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>S-BAND WAVEGUIDE INPUT</b>								
AMFW-5S-02200230-30	2.2–2.3	40	0.5	30	10	1.25:1/1.5:1	250	159554
AMFW-5S-02200230-35	2.2–2.3	40	0.5	35	10	1.25:1/1.5:1	250	159554
AMFW-5S-02200230-40	2.2–2.3	40	0.5	40	10	1.25:1/1.5:1	250	159554
AMFW-5S-02200230-45	2.2–2.3	40	0.5	45	10	1.25:1/1.5:1	250	159554
AMFW-5S-02200230-50	2.2–2.3	40	0.5	50	10	1.25:1/1.5:1	250	159554
AMFW-6S-02200230-30	2.2–2.3	50	0.5	30	10	1.25:1/1.5:1	275	159554
AMFW-6S-02200230-35	2.2–2.3	50	0.5	35	10	1.25:1/1.5:1	275	159554
AMFW-6S-02200230-40	2.2–2.3	50	0.5	40	10	1.25:1/1.5:1	275	159554
AMFW-6S-02200230-45	2.2–2.3	50	0.5	45	10	1.25:1/1.5:1	275	159554
AMFW-6S-02200230-50	2.2–2.3	50	0.5	50	10	1.25:1/1.5:1	275	159554
AMFW-7S-02200230-30	2.2–2.3	60	0.5	30	10	1.25:1/1.5:1	300	159554
AMFW-7S-02200230-35	2.2–2.3	60	0.5	35	10	1.25:1/1.5:1	300	159554
AMFW-7S-02200230-40	2.2–2.3	60	0.5	40	10	1.25:1/1.5:1	300	159554
AMFW-7S-02200230-45	2.2–2.3	60	0.5	45	10	1.25:1/1.5:1	300	159554
AMFW-7S-02200230-50	2.2–2.3	60	0.5	50	10	1.25:1/1.5:1	300	159554

### AVAILABLE SATCOM OPTIONS

- Add suffix F\* ..... Fault alarm
- Add suffix C ..... DC bias through the RF output
- Add suffix B ..... Solder bias pin
- Add suffix O\* ..... 110 VAC/220 VAC operation
- Add suffix NEG\* ..... DC power supply at -24 VDC
- Add suffix P1 ..... Output P1dB of +15 dBm
- Add suffix P2 ..... Output P1 dB of +20 dBm
- Add suffix 23P ..... Output P1 dB of +23 dBm
- Add suffix TC ..... Gain change vs. temperature at 3 dB peak-to-peak
- Add suffix N ..... N-type female output connector
- Add suffix 430F ..... CPR430F input waveguide

\* Specifications compliant temperature range limited to -15 to +60°C.

Note: Outline drawing changes to MITEQ 148029.

### OTHER AVAILABLE OPTIONS (Call MITEQ for details)

- Customer specified frequency ranges
- Customer specified gain window
- Phase matching
- Amplitude matching
- Front-end protection (input limiter)

## LOW-NOISE SATCOM AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE TEMP. (Degrees K)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>C-BAND WAVEGUIDE INPUT</b>								
AMFW-5S-03400420-28	3.4-4.2	40	0.5	28	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03400420-30	3.4-4.2	40	0.5	30	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03400420-35	3.4-4.2	40	0.5	35	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03400420-40	3.4-4.2	40	0.5	40	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03400420-50	3.4-4.2	40	0.5	50	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03400420-60	3.4-4.2	40	0.5	60	10	1.25:1/1.5:1	175	125063-1
AMFW-6S-03400420-28	3.4-4.2	50	0.5	28	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03400420-30	3.4-4.2	50	0.5	30	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03400420-35	3.4-4.2	50	0.5	35	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03400420-40	3.4-4.2	50	0.5	40	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03400420-50	3.4-4.2	50	0.5	50	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03400420-60	3.4-4.2	50	0.5	60	10	1.25:1/1.5:1	200	125063-1
AMFW-7S-03400420-28	3.4-4.2	60	0.5	28	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03400420-30	3.4-4.2	60	0.5	30	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03400420-35	3.4-4.2	60	0.5	35	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03400420-40	3.4-4.2	60	0.5	40	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03400420-50	3.4-4.2	60	0.5	50	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03400420-60	3.4-4.2	60	0.5	60	10	1.25:1/1.5:1	225	125063-1
AMFW-6S-03400500-35	3.4-5	50	1	35	10	2:1	200	125063-1
AMFW-7S-03400500-35	3.4-5	60	1	35	10	2:1	225	125063-1
AMFW-5S-03600420-28	3.6-4.2	40	0.5	28	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03600420-30	3.6-4.2	40	0.5	30	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03600420-35	3.6-4.2	40	0.5	35	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03600420-40	3.6-4.2	40	0.5	40	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03600420-50	3.6-4.2	40	0.5	50	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03600420-60	3.6-4.2	40	0.5	60	10	1.25:1/1.5:1	175	125063-1
AMFW-6S-03600420-28	3.6-4.2	50	0.5	28	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03600420-30	3.6-4.2	50	0.5	30	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03600420-35	3.6-4.2	50	0.5	35	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03600420-40	3.6-4.2	50	0.5	40	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03600420-50	3.6-4.2	50	0.5	50	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03600420-60	3.6-4.2	50	0.5	60	10	1.25:1/1.5:1	200	125063-1
AMFW-7S-03600420-28	3.6-4.2	60	0.5	28	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03600420-30	3.6-4.2	60	0.5	30	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03600420-35	3.6-4.2	60	0.5	35	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03600420-40	3.6-4.2	60	0.5	40	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03600420-50	3.6-4.2	60	0.5	50	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03600420-60	3.6-4.2	60	0.5	60	10	1.25:1/1.5:1	225	125063-1
AMFW-5S-03700420-28	3.7-4.2	40	0.5	28	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03700420-30	3.7-4.2	40	0.5	30	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03700420-35	3.7-4.2	40	0.5	35	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03700420-40	3.7-4.2	40	0.5	40	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03700420-50	3.7-4.2	40	0.5	50	10	1.25:1/1.5:1	175	125063-1
AMFW-5S-03700420-60	3.7-4.2	40	0.5	60	10	1.25:1/1.5:1	175	125063-1
AMFW-6S-03700420-28	3.7-4.2	50	0.5	28	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03700420-30	3.7-4.2	50	0.5	30	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03700420-35	3.7-4.2	50	0.5	35	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03700420-40	3.7-4.2	50	0.5	40	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03700420-50	3.7-4.2	50	0.5	50	10	1.25:1/1.5:1	200	125063-1
AMFW-6S-03700420-60	3.7-4.2	50	0.5	60	10	1.25:1/1.5:1	200	125063-1

## LOW-NOISE SATCOM AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE TEMP. (Degrees K)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>C-BAND WAVEGUIDE INPUT (CONT.)</b>								
AMFW-7S-03700420-28	3.7–4.2	60	0.5	28	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03700420-30	3.7–4.2	60	0.5	30	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03700420-35	3.7–4.2	60	0.5	35	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03700420-40	3.7–4.2	60	0.5	40	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03700420-50	3.7–4.2	60	0.5	50	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-03700420-60	3.7–4.2	60	0.5	60	10	1.25:1/1.5:1	225	125063-1
AMFW-7S-04000480-50	4–4.8	60	1	50	10	1.5:1	225	125063-1
AMFW-2F-05400590-45	5.4–5.9	20	0.5	45	7	1.5:1	125	126487
AMFW-3F-05400590-45	5.4–5.9	30	0.5	45	10	1.5:1	150	126487

### ADDITIONAL SPECIFICATIONS

- Operating temperature range ..... -40 to +60°C (unless using an integrated fault alarm or power supply)
- Gain variation vs. temperature ..... (-40 to +60°C) 5 dB maximum
- Output third order intercept ..... (at 23°C) 20 dBm minimum

### AVAILABLE SATCOM OPTIONS

- Add suffix B ..... Solder bias pin
- Add suffix C ..... Bias-tee (DC bias applied through the RF output connector)
- Add suffix F ..... Fault alarm circuitry (Form-C contact closure; operation limited to -15°C)
- Add suffix NEG ..... -24 VDC bias required
- Add suffix O ..... Integrated power supply (110/220 VAC; operation limited to -15°C; use Outline 125063-2)
- Add suffix P1 ..... 15 dBm output power at 1 dB compression (OIP<sup>3</sup> = 25 dBm; adds approximately 75 mA of current)
- Add suffix P2 ..... 20 dBm output power at 1 dB compression (OIP<sup>3</sup> = 30 dBm; adds approximately 150 mA of current)
- Add suffix SMA ..... SMA-female output connector
- Add suffix TC ..... Gain variation vs. temperature at 3 dB peak-to-peak
- Add suffix TRF ..... Lowpass filter (with >20 dB rejection at 5.2 GHz; operation limited to -15°C)

<b>X-BAND WAVEGUIDE INPUT</b>								
AMFW-7S-06700775-60	6.70–7.75	62	0.75	60	10	1.5:1	200	138968-1
AMFW-5F-07000900-60	7–9	40	1	60	10	2:1	200	127534-2
AMFW-5S-07100840-50	7.1–8.4	40	1	50	10	1.5:1	100	138968-1
AMFW-5S-07100840-55	7.1–8.4	40	1	55	10	1.5:1	100	138968-1
AMFW-5S-07100840-60	7.1–8.4	40	1	60	10	1.5:1	100	138968-1
AMFW-5S-07100840-65	7.1–8.4	40	1	65	10	1.5:1	100	138968-1
AMFW-6S-07100840-50	7.1–8.4	50	1	50	10	1.5:1	125	138968-1
AMFW-6S-07100840-55	7.1–8.4	50	1	55	10	1.5:1	125	138968-1
AMFW-6S-07100840-60	7.1–8.4	50	1	60	10	1.5:1	125	138968-1
AMFW-6S-07100840-65	7.1–8.4	50	1	65	10	1.5:1	125	138968-1
AMFW-7S-07100840-50	7.1–8.4	60	1	50	10	1.5:1	150	138968-1
AMFW-7S-07100840-55	7.1–8.4	60	1	55	10	1.5:1	150	138968-1
AMFW-7S-07100840-60	7.1–8.4	60	1	60	10	1.5:1	150	138968-1
AMFW-7S-07100840-65	7.1–8.4	60	1	65	10	1.5:1	150	138968-1
AMFW-4F-07200780-65	7.2–7.8	45	0.5	65	10	1.5:1	150	127534-2
AMFW-6S-07200840-60	7.2–8.4	50	1	60	10	1.5:1/1.8:1	170	138968-1

## LOW-NOISE SATCOM AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE TEMP. (Degrees K)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>X-BAND WAVEGUIDE INPUT (CONT.)</b>								
AMFW-5S-07250775-45	7.25–7.75	40	1	45	10	1.25:1/1.5:1	100	138968-1
AMFW-5S-07250775-50	7.25–7.75	40	1	50	10	1.25:1/1.5:1	100	138968-1
AMFW-5S-07250775-50-UG138	7.25–7.75	40	0.5	50	10	1.25:1/1.5:1	130	127534-1
AMFW-5S-07250775-55	7.25–7.75	40	1	55	10	1.25:1/1.5:1	100	138968-1
AMFW-5S-07250775-60	7.25–7.75	40	1	60	10	1.25:1/1.5:1	100	138968-1
AMFW-5S-07250775-65	7.25–7.75	40	1	65	10	1.25:1/1.5:1	100	138968-1
AMFW-6S-07250775-45	7.25–7.75	50	1	45	10	1.25:1/1.5:1	125	138968-1
AMFW-6S-07250775-50	7.25–7.75	50	1	50	10	1.25:1/1.5:1	125	138968-1
AMFW-6S-07250775-55	7.25–7.75	50	1	55	10	1.25:1/1.5:1	125	138968-1
AMFW-6S-07250775-60	7.25–7.75	50	1	60	10	1.25:1/1.5:1	125	138968-1
AMFW-6S-07250775-65	7.25–7.75	50	1	65	10	1.25:1/1.5:1	125	138968-1
AMFW-7S-07250775-45	7.25–7.75	60	1	45	10	1.25:1/1.5:1	150	138968-1
AMFW-7S-07250775-50	7.25–7.75	60	1	50	10	1.25:1/1.5:1	150	138968-1
AMFW-7S-07250775-55	7.25–7.75	60	1	55	10	1.25:1/1.5:1	150	138968-1
AMFW-7S-07250775-60	7.25–7.75	60	1	60	10	1.25:1/1.5:1	150	138968-1
AMFW-7S-07250775-65	7.25–7.75	60	1	65	10	1.25:1/1.5:1	150	138968-1
AMFW-5S-08000840-50	8–8.4	40	1	50	10	1.5:1	100	138968-1
AMFW-5S-08000840-55	8–8.4	40	1	55	10	1.5:1	100	138968-1
AMFW-5S-08000840-60	8–8.4	40	1	60	10	1.5:1	100	138968-1
AMFW-5S-08000840-65	8–8.4	40	1	65	10	1.5:1	100	138968-1
AMFW-6S-08000840-50	8–8.4	50	1	50	10	1.5:1	125	138968-1
AMFW-6S-08000840-55	8–8.4	50	1	55	10	1.5:1	125	138968-1
AMFW-6S-08000840-60	8–8.4	50	1	60	10	1.5:1	125	138968-1
AMFW-6S-08000840-65	8–8.4	50	1	65	10	1.5:1	125	138968-1
AMFW-7S-08000840-50	8–8.4	60	1	50	10	1.5:1	150	138968-1
AMFW-7S-08000840-55	8–8.4	60	1	55	10	1.5:1	150	138968-1
AMFW-7S-08000840-60	8–8.4	60	1	60	10	1.5:1	150	138968-1
AMFW-7S-08000840-65	8–8.4	60	1	65	10	1.5:1	150	138968-1
AMFW-5S-08000840-50-UG138	8–8.4	40	0.5	50	10	1.5:1	130	127534-1
AMFW-3F-09001000-80	9–10	30	0.75	80	10	1.75:1	125	126133-2
AMFW-3F-09600980-120	9.6–9.8	25	0.75	120	10	1.75:1	150	126133-2

### ADDITIONAL SPECIFICATIONS

- Operating temperature range ..... -40 to +60°C (unless using an integrated fault alarm or power supply)
- Gain variation vs. temperature ..... (-40 to +60°C) 5 dB maximum
- Output third order intercept ..... (at 23°C) 20 dBm minimum

### AVAILABLE SATCOM OPTIONS

- Add suffix B ..... Solder bias pin
- Add suffix C ..... Bias-tee (DC bias applied through the RF output connector)
- Add suffix F ..... Fault alarm circuitry (Form-C contact closure; operation limited to -15°C)
- Add suffix N ..... N-female output connector
- Add suffix NEG ..... -24 VDC bias required
- Add suffix O ..... Integrated power supply (110/220 VAC; operation limited to -15°C; use Outline 138968-2)
- Add suffix P1 ..... 15 dBm output power at 1 dB compression (OIP<sup>3</sup> = 25 dBm; adds approximately 75 mA of current)
- Add suffix P2 ..... 20 dBm output power at 1 dB compression (OIP<sup>3</sup> = 30 dBm; adds approximately 150 mA of current)
- Add suffix TC ..... Gain variation vs. temperature at 3 dB peak-to-peak
- Add suffix TRF ..... Bandpass filter (passes 7.25–7.75 GHz; >30 dB rejection at 7 and 7.9 GHz; operation limited to -15°C; use Outline 135805)

## LOW-NOISE SATCOM AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE TEMP. (Degrees K)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>Ku-BAND WAVEGUIDE INPUT</b>								
AMFW-4S-10001200-170	10–12	30	1	170	10	1.5:1/2:1	160	126133-1
AMFW-5S-10001500-250	10–15	30	1.5	250	15	2:1	250	138966-1
AMFW-5S-10701275-65	10.7–12.75	40	1	65	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10701275-70	10.7–12.75	40	1	70	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10701275-80	10.7–12.75	40	1	80	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10701275-85	10.7–12.75	40	1	85	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10701275-100	10.7–12.75	40	1	100	10	1.25:1/1.5:1	130	138966-1
AMFW-6S-10701275-65	10.7–12.75	50	1	65	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10701275-70	10.7–12.75	50	1	70	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10701275-80	10.7–12.75	50	1	80	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10701275-85	10.7–12.75	50	1	85	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10701275-100	10.7–12.75	50	1	100	10	1.25:1/1.5:1	160	138966-1
AMFW-7S-10701275-65	10.7–12.75	60	1	65	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10701275-70	10.7–12.75	60	1	70	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10701275-80	10.7–12.75	60	1	80	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10701275-85	10.7–12.75	60	1	85	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10701275-100	10.7–12.75	60	1	100	10	1.25:1/1.5:1	190	138966-1
AMFW-6S-10701450-130	10.7–14.5	50	1.5	130	10	2:1	200	138966-1
AMFW-5S-10951170-60	10.95–11.7	40	1	60	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10951170-65	10.95–11.7	40	1	65	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10951170-70	10.95–11.7	40	1	70	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10951170-80	10.95–11.7	40	1	80	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10951170-85	10.95–11.7	40	1	85	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10951170-100	10.95–11.7	40	1	100	10	1.25:1/1.5:1	130	138966-1
AMFW-6S-10951170-60	10.95–11.7	50	1	60	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10951170-65	10.95–11.7	50	1	65	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10951170-70	10.95–11.7	50	1	70	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10951170-80	10.95–11.7	50	1	80	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10951170-85	10.95–11.7	50	1	85	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10951170-100	10.95–11.7	50	1	100	10	1.25:1/1.5:1	160	138966-1
AMFW-7S-10951170-60	10.95–11.7	60	1	60	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10951170-65	10.95–11.7	60	1	65	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10951170-70	10.95–11.7	60	1	70	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10951170-80	10.95–11.7	60	1	80	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10951170-85	10.95–11.7	60	1	85	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10951170-100	10.95–11.7	60	1	100	10	1.25:1/1.5:1	190	138966-1
AMFW-5S-10951220-60	10.95–12.2	40	1	60	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10951220-65	10.95–12.2	40	1	65	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10951220-70	10.95–12.2	40	1	70	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10951220-80	10.95–12.2	40	1	80	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10951220-85	10.95–12.2	40	1	85	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10951220-100	10.95–12.2	40	1	100	10	1.25:1/1.5:1	130	138966-1
AMFW-6S-10951220-60	10.95–12.2	50	1	60	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10951220-65	10.95–12.2	50	1	65	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10951220-70	10.95–12.2	50	1	70	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10951220-80	10.95–12.2	50	1	80	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10951220-85	10.95–12.2	50	1	85	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10951220-100	10.95–12.2	50	1	100	10	1.25:1/1.5:1	160	138966-1

## LOW-NOISE SATCOM AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE TEMP. (Degrees K)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>Ku-BAND WAVEGUIDE INPUT (CONT.)</b>								
AMFW-7S-10951220-60	10.95–12.2	60	1	60	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10951220-65	10.95–12.2	60	1	65	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10951220-70	10.95–12.2	60	1	70	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10951220-80	10.95–12.2	60	1	80	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10951220-85	10.95–12.2	60	1	85	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10951220-100	10.95–12.2	60	1	100	10	1.25:1/1.5:1	190	138966-1
AMFW-5S-10951275-65	10.95–12.75	40	1	65	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10951275-70	10.95–12.75	40	1	70	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10951275-80	10.95–12.75	40	1	80	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10951275-85	10.95–12.75	40	1	85	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-10951275-100	10.95–12.75	40	1	100	10	1.25:1/1.5:1	130	138966-1
AMFW-6S-10951275-65	10.95–12.75	50	1	65	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10951275-70	10.95–12.75	50	1	70	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10951275-80	10.95–12.75	50	1	80	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10951275-85	10.95–12.75	50	1	85	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-10951275-100	10.95–12.75	50	1	100	10	1.25:1/1.5:1	160	138966-1
AMFW-7S-10951275-65	10.95–12.75	60	1	65	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10951275-70	10.95–12.75	60	1	70	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10951275-80	10.95–12.75	60	1	80	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10951275-85	10.95–12.75	60	1	85	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-10951275-100	10.95–12.75	60	1	100	10	1.25:1/1.5:1	190	138966-1
AMFW-5S-11401220-60	11.4–12.2	40	1	60	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-11401220-65	11.4–12.2	40	1	65	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-11401220-70	11.4–12.2	40	1	70	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-11401220-80	11.4–12.2	40	1	80	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-11401220-85	11.4–12.2	40	1	85	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-11401220-100	11.4–12.2	40	1	100	10	1.25:1/1.5:1	130	138966-1
AMFW-6S-11401220-60	11.4–12.2	50	1	60	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-11401220-65	11.4–12.2	50	1	65	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-11401220-70	11.4–12.2	50	1	70	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-11401220-80	11.4–12.2	50	1	80	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-11401220-85	11.4–12.2	50	1	85	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-11401220-100	11.4–12.2	50	1	100	10	1.25:1/1.5:1	160	138966-1
AMFW-7S-11401220-60	11.4–12.2	60	1	60	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-11401220-65	11.4–12.2	60	1	65	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-11401220-70	11.4–12.2	60	1	70	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-11401220-80	11.4–12.2	60	1	80	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-11401220-85	11.4–12.2	60	1	85	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-11401220-100	11.4–12.2	60	1	100	10	1.25:1/1.5:1	190	138966-1
AMFW-5S-11701275-65	11.7–12.75	40	1	65	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-11701275-70	11.7–12.75	40	1	70	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-11701275-80	11.7–12.75	40	1	80	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-11701275-85	11.7–12.75	40	1	85	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-11701275-100	11.7–12.75	40	1	100	10	1.25:1/1.5:1	130	138966-1
AMFW-6S-11701275-65	11.7–12.75	50	1	65	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-11701275-70	11.7–12.75	50	1	70	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-11701275-80	11.7–12.75	50	1	80	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-11701275-85	11.7–12.75	50	1	85	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-11701275-100	11.7–12.75	50	1	100	10	1.25:1/1.5:1	160	138966-1

## LOW-NOISE SATCOM AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE TEMP. (Degrees K)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>Ku-BAND WAVEGUIDE INPUT (CONT.)</b>								
AMFW-7S-11701275-65	11.7–12.75	60	1	65	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-11701275-70	11.7–12.75	60	1	70	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-11701275-80	11.7–12.75	60	1	80	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-11701275-85	11.7–12.75	60	1	85	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-11701275-100	11.7–12.75	60	1	100	10	1.25:1/1.5:1	190	138966-1
AMFW-5S-12201275-65	12.2–12.75	40	1	65	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-12201275-70	12.2–12.75	40	1	70	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-12201275-80	12.2–12.75	40	1	80	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-12201275-85	12.2–12.75	40	1	85	10	1.25:1/1.5:1	130	138966-1
AMFW-5S-12201275-100	12.2–12.75	40	1	100	10	1.25:1/1.5:1	130	138966-1
AMFW-6S-12201275-65	12.2–12.75	50	1	65	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-12201275-70	12.2–12.75	50	1	70	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-12201275-80	12.2–12.75	50	1	80	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-12201275-85	12.2–12.75	50	1	85	10	1.25:1/1.5:1	160	138966-1
AMFW-6S-12201275-100	12.2–12.75	50	1	100	10	1.25:1/1.5:1	160	138966-1
AMFW-7S-12201275-65	12.2–12.75	60	1	65	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-12201275-70	12.2–12.75	60	1	70	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-12201275-80	12.2–12.75	60	1	80	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-12201275-85	12.2–12.75	60	1	85	10	1.25:1/1.5:1	190	138966-1
AMFW-7S-12201275-100	12.2–12.75	60	1	100	10	1.25:1/1.5:1	190	138966-1
AMFW-4S-13601390-70	13.6–13.9	30	0.5	70	10	1.3:1/1.8:1	200	138966-1
AMFW-4F-14501550-130	14.5–15.5	30	1	130	10	1.5:1	200	127539-1

### ADDITIONAL SPECIFICATIONS

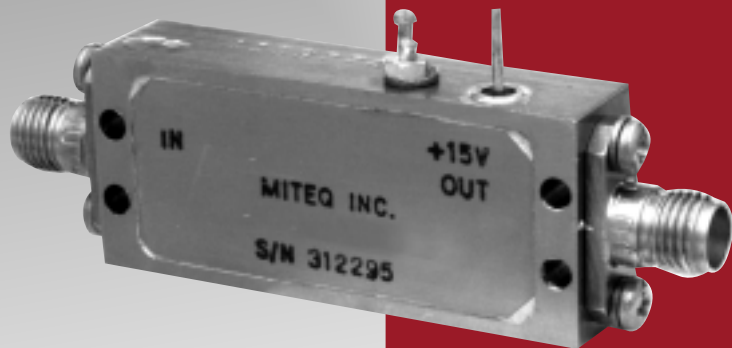
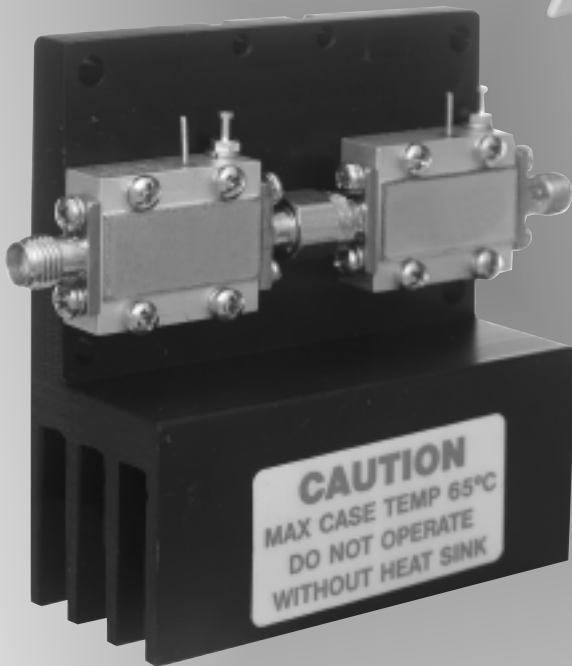
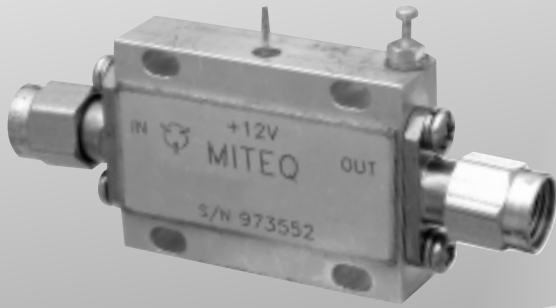
- Operating temperature range ..... -40 to +60°C (unless using an integrated fault alarm or power supply)
- Gain variation vs. temperature ..... (-40 to +60°C) 5 dB maximum
- Output third order intercept ..... (at 23°C) 20 dBm minimum

### AVAILABLE SATCOM OPTIONS

- Add suffix B ..... Solder bias pin
- Add suffix C ..... Bias-tee (DC bias applied through the RF output connector)
- Add suffix F ..... Fault alarm circuitry (Form-C contact closure; operation limited to -15°C)
- Add suffix N ..... N-female output connector
- Add suffix NEG ..... -24 VDC bias required
- Add suffix O ..... Integrated power supply (110/220 VAC; operation limited to -15°C; use Outline 138966-2)
- Add suffix P1 ..... 15 dBm output power at 1 dB compression (OIP<sup>3</sup> = 25 dBm; adds approximately 75 mA of current)
- Add suffix P2 ..... 20 dBm output power at 1 dB compression (OIP<sup>3</sup> = 30 dBm; adds approximately 150 mA of current)
- Add suffix TC ..... Gain variation vs. temperature at 3 dB peak-to-peak
- Add suffix TRF ..... Lowpass filter (with >20 dB rejection at 13.5 GHz; operation limited to -15°C)

## MEDIUM POWER AMPLIFIERS

The amplifiers listed within this section represent only a sample of the design capability of the AMF Amplifier Department. For variations to the models listed within this section, please contact MITEQ for technical assistance.





## MEDIUM POWER AMPLIFIERS

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>COAXIAL MILLIMETER WAVE</b>								
AMF-3F-17702200-60-17P	17.7–22	15	1.5	6	17	2:1	150	128066-3
AMF-4F-17702200-50-17P	17.7–22	20	1.5	5	17	2:1	200	128066-4
AMF-5F-17702200-50-17P	17.7–22	25	1.5	5	17	2:1	250	128061-5
AMF-6F-17702200-50-17P	17.7–22	30	1.5	5	17	2:1	300	128061-6
AMF-3F-17702200-60-20P	17.7–22	15	1.5	6	20	2:1	200	128066-3
AMF-4F-17702200-50-20P	17.7–22	20	1.5	5	20	2:1	250	128066-4
AMF-5F-17702200-50-20P	17.7–22	25	1.5	5	20	2:1	300	128061-5
AMF-6F-17702200-50-20P	17.7–22	30	1.5	5	20	2:1	350	128061-6
AMF-3F-17702200-60-22P	17.7–22	15	1.5	6	22	2:1	500	161196
AMF-5F-17702200-50-22P	17.7–22	25	1.5	5	22	2:1	600	161196
AMF-3F-18002650-60-17P	18–26.5	15	2	6	17	2:1/2.5:1	150	128066-3
AMF-4F-18002650-50-17P	18–26.5	20	2	5	17	2:1/2.5:1	200	128066-4
AMF-5F-18002650-50-17P	18–26.5	25	2	5	17	2:1/2.5:1	250	128061-5
AMF-6F-18002650-50-17P	18–26.5	30	2	5	17	2:1/2.5:1	300	128061-6
AMF-3F-18002650-60-20P	18–26.5	13	2	6	20	2:1/2.5:1	200	128066-3
AMF-4F-18002650-50-20P	18–26.5	18	2	5	20	2:1/2.5:1	250	128066-4
AMF-5F-18002650-50-20P	18–26.5	23	2	5	20	2:1/2.5:1	300	128061-5
AMF-6F-18002650-50-20P	18–26.5	28	2	5	20	2:1/2.5:1	350	128061-6
AMF-3F-18002650-60-22P	18–26.5	15	2	6	22	2:1/2.5:1	500	161196
AMF-5F-18002650-50-22P	18–26.5	25	2	5	22	2:1/2.5:1	600	161196
AMF-4F-18002650-90-23P*	18–26.5	20	2	9	23	2.5:1	400	139732
AMF-6F-18002650-80-23P*	18–26.5	30	2	8	23	2.5:1	500	139732
AMF-4F-18004000-90-20P*	18–40	18	3	9	20	3:1	600	161196
AMF-4F-20003000-90-20P*	20–30	15	2.5	9	20	2.5:1	450	161196
AMF-6F-20003000-90-20P*	20–30	25	2.5	9	20	2.5:1	550	161196
AMF-4F-20003000-90-22P*	20–30	15	2.5	9	22	2.5:1	500	161196
AMF-6F-20003000-90-22P*	20–30	25	2.5	9	22	2.5:1	600	161196
AMF-4F-20004000-90-20P*	20–40	15	3	9	20	3:1	450	161196
AMF-6F-20004000-90-20P*	20–40	25	3	9	20	3:1	550	161196
AMF-4F-20004000-90-22P*	20–40	15	3	9	22	3:1	500	161196
AMF-6F-20004000-90-22P*	20–40	25	3	9	22	3:1	600	161196
AMF-3F-27503100-60-15P	27.5–31	15	2	6	15	2.5:1	100	128066-3
AMF-4F-27503100-50-15P	27.5–31	20	2	5	15	2.5:1	150	128066-4
AMF-5F-27503100-50-15P	27.5–31	25	2	5	15	2.5:1	200	128061-5
AMF-6F-27503100-50-15P	27.5–31	30	2	5	15	2.5:1	250	128061-6
AMF-3F-27503100-60-17P	27.5–31	15	2	6	17	2.5:1	150	128066-3
AMF-4F-27503100-50-17P	27.5–31	20	2	5	17	2.5:1	200	128066-4
AMF-5F-27503100-50-17P	27.5–31	25	2	5	17	2.5:1	250	128061-5
AMF-6F-27503100-50-17P	27.5–31	30	2	5	17	2.5:1	300	128061-6
AMF-3F-27503100-60-19P	27.5–31	15	2	6	19	2.5:1	200	128066-3
AMF-4F-27503100-50-19P	27.5–31	20	2	5	19	2.5:1	250	128066-4
AMF-5F-27503100-50-19P	27.5–31	25	2	5	19	2.5:1	300	128061-5
AMF-6F-27503100-50-19P	27.5–31	30	2	5	19	2.5:1	350	128061-6
AMF-4F-27503100-90-20P*	27.5–31	15	2	9	20	2.5:1	450	161196
AMF-6F-27503100-90-20P*	27.5–31	30	2	9	20	2.5:1	450	139732

\* These models will require a -12 VDC @ 50 mA nominal in addition to the +12 VDC.

## MEDIUM POWER AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>COAXIAL MILLIMETER WAVE (CONT.)</b>								
AMF-4F-27503100-90-22P*	27.5–31	15	2	9	22	2.5:1	500	161196
AMF-6F-27503100-90-23P*	27.5–31	30	2	9	23	2.5:1	500	139732
AMF-6F-27503100-90-25P*	27.5–31	18	2	9	25	2.5:1	750	138002
AMF-8F-27503100-90-25P*	27.5–31	30	2	9	25	2.5:1	850	138002
AMF-6F-27503100-90-27P*	27.5–31	18	2	9	27	2.5:1	800	138002
AMF-8F-27503100-90-27P*	27.5–31	30	2	9	27	2.5:1	900	138002
AMF-6F-27503100-90-29P*	27.5–31	18	2	9	29	2.5:1	900	138002
AMF-8F-27503100-90-29P*	27.5–31	30	2	9	29	2.5:1	1000	138002
AMF-5F-34003700-90-20P*	34–37	15	1.5	9	20	2.5:1	450	161196
AMF-7F-34003700-90-20P*	34–37	25	1.5	9	20	2.5:1	550	161196
AMF-5F-34003700-90-22P*	34–37	15	1.5	9	22	2.5:1	400	161196
AMF-7F-34003700-90-22P*	34–37	25	1.5	9	22	2.5:1	500	161196
AMF-5F-37004000-90-20P*	37–40	15	1.5	9	20	2.5:1	450	161196
AMF-7F-37004000-90-20P*	37–40	25	1.5	9	20	2.5:1	550	161196
AMF-5F-37004000-90-22P*	37–40	15	1.5	9	22	2.5:1	500	161196
AMF-7F-37004000-90-22P*	37–40	25	1.5	9	22	2.5:1	600	161196
AMF-8F-37004100-90-25P*	37–41	20	2.5	9	25	2.5:1	1300	138002
AMF-10F-37004100-90-25P*	37–41	30	2.5	9	25	2.5:1	1400	138002
AMF-8F-37004100-90-27P*	37–41	20	2.5	9	27	2.5:1	1400	138002
AMF-10F-37004100-90-27P*	37–41	30	2.5	9	27	2.5:1	1500	138002
AMF-8F-37004100-90-29P*	37–41	20	2.5	9	29	2.5:1	1600	138002
AMF-10F-37004100-90-29P*	37–41	30	2.5	9	29	2.5:1	1700	138002
AMF-10F-40004200-90-24P*	40–42	25	3	9	24	3:1	1500	138002
AMF-10F-40004200-90-27P*	40–42	25	3	9	27	3:1	1700	138002
* These models will require a -12 VDC @ 50 mA nominal in addition to the +12 VDC.								
<b>MULTIOCTAVE BAND</b>								
AMF-2D-00010200-30-23P	0.01–2	19	2	3*	23	2:1	500	118406-2
AMF-3D-00010300-40-16P	0.01–3	30	1.5	4*	16	2:1	300	114293-3
AMF-4D-00010300-25-20P	0.01–3	45	2	2.5*	20	2:1	500	118406-4
AMF-2D-00010400-32-22P	0.01–4	18	2.5	3.2*	22	2.2:1	500	118406-2
AMF-4D-00100600-50-25P	0.01–6	34	2	5*	25	2.2:1	1100	114293-4
AMF-2D-00100200-16-15P	0.1–2	24	1	1.6	15	2:1	135	114293-2
AMF-3D-00100200-14-15P	0.1–2	37	1	1.4	15	2:1	180	114293-3
AMF-2D-00100200-18-18P	0.1–2	24	1	1.8	18	2:1	145	114293-2
AMF-3D-00100200-14-18P	0.1–2	37	1	1.4	18	2:1	190	110699-3
AMF-1D-00100200-70-23P	0.1–2	10	1	7	23	2:1/2.3:1	240	114293-1
AMF-2D-00100200-47-23P	0.1–2	22	1	4.7	23	2:1/2.3:1	275	114293-2
AMF-3D-00100200-24-23P	0.1–2	35	1	2.4	23	2:1/2.3:1	375	114293-3
* Noise figures unspecified below 0.1 GHz.								

## MEDIUM POWER AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS ( $\pm$ dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MULTIOCTAVE BAND (CONT.)</b>								
AMF-2D-00100200-48-25P	0.1–2	20	1	4.8	25	2:1/2.3:1	300	118406-2
AMF-3D-00100200-24-25P	0.1–2	32	1	2.4	25	2:1/2.3:1	380	118406-3
AMF-4D-00100200-17-25P	0.1–2	42	1	1.7	25	2:1/2.3:1	450	118406-4
AMF-3D-00100200-60-27P	0.1–2	25	2	6	27	2:1/2.3:1	475	118406-3
AMF-4D-00100200-40-27P	0.1–2	40	1.5	4	27	2:1/2.3:1	750	118406-4
AMF-2D-00100400-48-24P	0.1–4	18	1.5	4.8	24	2:1/2.3:1	300	118406-2
AMF-3D-00100400-28-24P	0.1–4	29	1.5	2.8	24	2:1/2.3:1	380	118406-3
AMF-4D-00100400-21-24P	0.1–4	40	1.5	2.1	24	2:1/2.3:1	450	118406-4
AMF-2D-00100600-50-23P	0.1–6	18	1.5	5	23	2.3:1	340	118406-2
AMF-3D-00100600-37-23P	0.1–6	28	1.5	3.7	23	2.3:1	385	118406-3
AMF-4D-00100600-27-23P	0.1–6	38	1.5	2.7	23	2.3:1	430	118406-4
AMF-2D-00100800-70-23P	0.1–8	17	1.5	7	23	2.3:1	380	118406-2
AMF-3D-00100800-40-23P	0.1–8	28	1.5	4	23	2.3:1	440	118406-3
AMF-4D-00100800-50-23P	0.1–8	38	1.5	5	23	2.3:1	440	118406-4
AMF-2D-00101000-55-21P	0.1–10	16	1.5	5.5	21	2:1/2.3:1	240	114293-2
AMF-3D-00101000-40-21P	0.1–10	27	1.5	4	21	2:1/2.3:1	285	114293-3
AMF-4D-00101000-32-21P	0.1–10	37	1.5	3.2	21	2:1/2.3:1	330	114293-4
AMF-3D-00101200-47-20P	0.1–12	20	1.5	4.7	20	2:1/2.3:1	250	121622
AMF-4D-00101200-42-20P	0.1–12	28	1.5	4.2	20	2:1/2.3:1	290	121623-4
AMF-5D-00101200-30-20P	0.1–12	34	1.5	3	20	2:1/2.3:1	330	121623-5
AMF-3D-00101800-70-20P	0.1–18	14	2	7	20	2.3:1/2.5:1	295	121622
AMF-4D-00101800-60-20P	0.1–18	21	2	6	20	2.3:1/2.5:1	340	121623-4
AMF-5D-00101800-45-20P	0.1–18	29	2	4.5	20	2.3:1/2.5:1	375	121623-5
AMF-6D-00101800-35-20P	0.1–18	37	2	3.5	20	2.3:1/2.5:1	410	121623-6
AMF-4D-00102000-70-18P	0.1–20	20	2.25	7	18	2.3:1/2.5:1	340	121623-4
AMF-5D-00102000-55-18P	0.1–20	28	2.25	5.5	18	2.3:1/2.5:1	375	121623-5
AMF-6D-00102000-40-18P	0.1–20	36	2.25	4	18	2.3:1/2.5:1	410	121623-6
AMF-4D-00102000-50-20P	0.1–20	18	2.25	5	20	2.3:1/2.3:1	375	121623-4
AMF-2D-00500200-22-21P	0.5–2	23	1	2.2	21	2:1/2.3:1	195	114293-2
AMF-1D-00500200-60-23P	0.5–2	10	1	6	23	2:1/2.3:1	240	114293-1
AMF-2D-00500200-45-23P	0.5–2	22	1	4.5	23	2:1/2.3:1	330	114293-2
AMF-3D-00500200-22-23P	0.5–2	34	1	2.2	23	2:1/2.3:1	375	114293-3
AMF-2D-00500800-53-26P	0.5–8	15	1.5	5.3	26	2:1/2.3:1	560	118406-2
AMF-3D-00500800-57-26P	0.5–8	25	1.5	5.7	26	2:1/2.3:1	660	118406-3
AMF-4D-00500800-47-26P	0.5–8	36	1.5	4.7	26	2:1/2.3:1	720	118406-4
AMF-2D-00501800-70-17P	0.5–18	10	2	7	17	2.3:1	200	122686
AMF-4D-00501800-50-21P	0.5–18	24	2	5	21	2:1/2.3:1	375	121623-4
AMF-4D-00800300-15-24P	0.8–3	40	0.75	1.5	24	2:1	500	118406-4
AMF-3D-01001800-80-20P	1–18	14	2	8	20	2.3:1	295	121622
AMF-4D-01001800-50-20P	1–18	22	2	5	20	2:1/2.3:1	340	121623-4
AMF-5D-01001800-40-20P	1–18	30	1.5	4	20	2:1/2.3:1	375	121623-5
AMF-5D-01001800-50-22P	1–18	30	2	5	22	2.2:1	700	128871

## MEDIUM POWER AMPLIFIERS (CONT.)

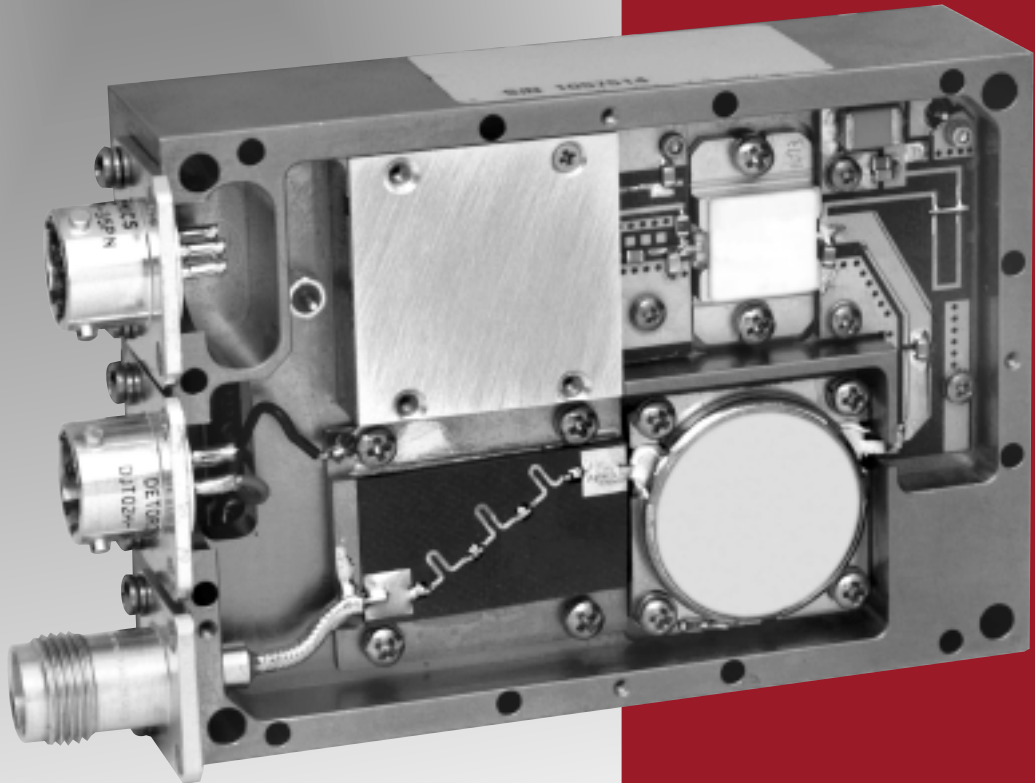
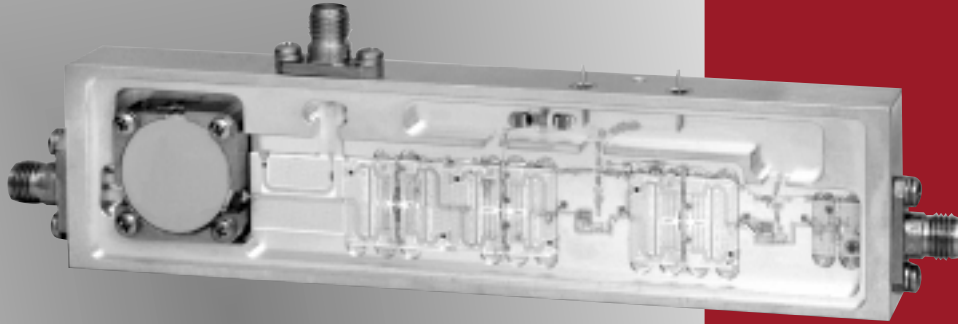
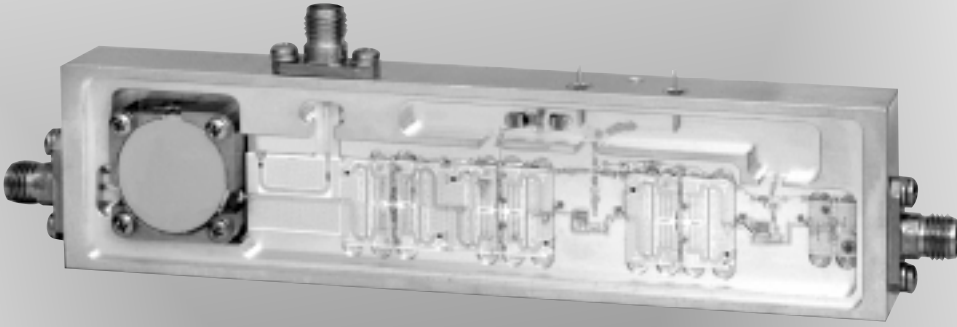
MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>MULTIOCTAVE BAND (CONT.)</b>								
AMF-2D-02000600-34-25P	2-6	18	1.5	3.4	25	2:1	400	114293-2
AMF-2D-02000800-51-21P	2-8	19	1.5	5.1	21	2:1/2.3:1	240	114293-2
AMF-3D-02000800-36-21P	2-8	30	1.5	3.6	21	2:1/2.3:1	283	114293-3
AMF-4D-02000800-27-21P	2-8	41	1.5	2.7	21	2:1/2.3:1	330	114293-4
AMF-2D-02000800-70-27P	2-8	16	1.5	7	27	2:1/2.3:1	500	118406-2
AMF-3D-02000800-50-27P	2-8	26	1.5	5	27	2:1/2.3:1	650	118406-3
AMF-4D-02000800-40-27P	2-8	37	1.5	4	27	2:1/2.3:1	750	118406-4
AMF-2B-02000800-70-27P	2-8	15	1.5	7	27	2:1	560	145393-2
AMF-3B-02000800-55-27P	2-8	25	1.5	5.5	27	2:1	660	145393-3
AMF-4B-02000800-45-27P	2-8	36	1.5	4.5	27	2:1	720	145393-4
AMF-2D-02001200-60-20P	2-12	14	1.5	6	20	2:1/2.3:1	205	121622
AMF-3D-02001200-43-20P	2-12	22	1.5	4.3	20	2:1/2.3:1	265	121622
AMF-4D-02001200-33-20P	2-12	31	1.5	3.3	20	2:1/2.3:1	300	121623-4
AMF-5D-02001200-40-25P	2-12	32	1.5	4	25	2:1	700	128871
AMF-3D-02001800-53-18P	2-18	18	2	5.3	18	2:1/2.3:1	245	121622
AMF-4D-02001800-38-18P	2-18	26	1.5	3.8	18	2:1/2.3:1	280	121623-4
AMF-6D-02001800-31-18P	2-18	38	1.5	3.1	18	2.2:1	475	121623-6
AMF-3D-02001800-60-20P	2-18	15	2	6	20	2.3:1/2.5:1	275	121622
AMF-4D-02001800-55-20P	2-18	23	1.5	5.5	20	2:1/2.3:1	340	121623-4
AMF-5D-02001800-40-20P	2-18	30	1.5	4	20	2:1/2.3:1	375	121623-5
AMF-6D-02001800-29-20P	2-18	38	1.5	2.9	20	2:1/2.3:1	445	121623-6
AMF-5D-02001800-50-22P	2-18	30	2	5	22	2.2:1	700	128871
AMF-2B-08001800-80-27P	8-18	7	1.5	8	27	2:1	800	117469-1
AMF-3B-08001800-80-27P	8-18	11	1.5	8	27	2:1	1000	117469-2
AMF-4B-08001800-80-27P	8-18	17	1.5	8	27	2:1	1150	117469-3
AMF-5B-08001800-80-27P	8-18	20	2	8	27	2:1	1200	117469-4
AMF-6B-08001800-70-27P	8-18	25	2	7	27	2:1	1300	117469-5
AMF-7B-08001800-60-27P	8-18	30	2	6	27	2:1	1400	117469-6
AMF-9B-08001800-70-29P	8-18	30	2.5	7	29	2/2.3:1	3000	119683
AMF-3D-02002650-80-19P	2-26.5	20	3	8	19	2.3:1	+15 V/+750 -15/-50	137141
AMF-3D-20003000-90-20P	20-30	12	2	9	20	2.5:1	+15 V/+550 -15/-50	125294
AMF-5D-20004000-90-16P	20-40	24	3	9	16	2.5:1	+15 V/+450 -15/-50	125294
<b>OCTAVE BAND</b>								
AMF-1B-00500100-40-25P	0.5-1	12	1	4	25	2:1	250	143477-1
AMF-2B-00500100-12-25P	0.5-1	28	1	1.2	25	2:1	300	143477-2
AMF-3B-00500100-12-25P	0.5-1	42	1	1.2	25	2:1	360	143477-3
AMF-4B-00500100-10-25P	0.5-1	56	1	1	25	2:1	400	143477-4
AMF-2F-00500100-13-27P	0.5-1	30	1	1.3	27	2:1	425	118987-2
AMF-3F-00700170-25-26P	0.7-1.7	30	1	2.5	26	2:1	380	118987-3
AMF-1B-01000200-40-25P	1-2	10	1	4	25	2:1	250	143477-1
AMF-2B-01000200-13-25P	1-2	30	1	1.3	25	2:1	300	143477-2
AMF-3B-01000200-10-25P	1-2	42	1	1	25	2:1	360	143477-3
AMF-4B-01000200-10-25P	1-2	54	1	1	25	2:1	400	143477-4
AMF-2F-01000200-13-25P	1-2	28	1	1.3	25	2:1	280	118987-2

## MEDIUM POWER AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS ( $\pm$ dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (mA, Nom.)	OUTLINE DRAWING
<b>OCTAVE BAND</b>								
AMF-2F-01200250-15-27P	1.2–2.5	22	1.5	1.5	27	2:1	325	118987-2
AMF-1B-02000400-40-25P	2–4	11	1	4	25	2:1	250	143477-1
AMF-2B-02000400-30-25P	2–4	22	1	3	25	2:1	330	143477-2
AMF-3B-02000400-15-25P	2–4	35	1	1.5	25	2:1	400	143477-3
AMF-4B-02000400-13-25P	2–4	47	1	1.3	25	2:1	440	143477-4
AMF-2B-04000800-45-25P	4–8	14	1	4.5	25	2:1	380	118406-2
AMF-3B-04000800-25-25P	4–8	25	1	2.5	25	2:1	450	118406-3
AMF-4B-04000800-15-25P	4–8	36	1	1.5	25	2:1	490	118406-4
AMF-5B-04000800-15-25P	4–8	47	1	1.5	25	2:1	540	118987-5
AMF-6B-04000800-15-25P	4–8	59	1	1.5	25	2:1	580	118987-6
AMF-2B-04000800-40-27P	4–8	25	1	4	27	2:1	300	163639-14
AMF-2B-04000800-70-27P	4–8	16	1	7	27	2:1	600	145393-2
AMF-1B-04000800-80-28P	4–8	6	1.5	8	28	2:1	450	145393-2
AMF-2B-08001200-45-24P	8–12	16	1	4.5	24	2:1	330	118406-2
AMF-3B-08001200-55-25P	8–12	20	1	5.5	25	2:1	450	118406-3
AMF-4B-08001200-30-25P	8–12	30	1	3	25	2:1	520	118406-4
AMF-5B-08001200-30-25P	8–12	40	1.5	3	25	2:1	450	118987-5
AMF-6B-08001200-30-25P	8–12	50	1	3	25	2:1	490	118987-6
AMF-1B-08001200-100-27P	8–12	4	2	10	27	2:1	450	145393-2
AMF-2B-08001200-80-27P	8–12	9	1.5	8	27	2:1	680	145393-2
AMF-3B-08001200-100-29P	8–12	12	1.5	10	29	2:1	1300	145393-3
AMF-4B-08001200-90-29P	8–12	20	1.5	9	29	2:1	1300	145393-4
AMF-2B-12001800-90-25P	12–18	9	1	9	25	2:1	500	117469-1
AMF-3B-12001800-50-25P	12–18	15	1	5	25	2:1	580	117469-2
AMF-4B-12001800-45-25P	12–18	21	1.5	4.5	25	2:1	650	117469-3
AMF-5B-12001800-45-25P	12–18	27	1.5	4.5	25	2:1	700	117469-4
AMF-6B-12001800-45-25P	12–18	33	1.5	4.5	25	2:1	740	117469-5
AMF-2B-12001800-80-27P	12–18	7	1.5	8	27	2:1	800	117469-3
AMF-3B-12001800-70-27P	12–18	11	1.5	7	27	2:1	1000	117469-3
AMF-4B-12001800-70-27P	12–18	17	1.5	7	27	2:1	1150	117469-4
AMF-5B-12001800-60-28P	12–18	18	2	6	28	2:1	1600	117469-5
AMF-6B-12001800-50-28P	12–18	24	2	5	28	2:1	1700	117469-6
AMF-8B-12001800-60-29P	12–18	32	2.5	6	29	2:1	2400	115800-8
AMF-7B-18002150-80-23P	18–21.5	30	1.5	8	23	2:1	900	117469-6

## POWER AMPLIFIERS

The amplifiers listed within this section represent only a sample of the design capability of the AMF Amplifier Department. For variations to the models listed within this section, please contact MITEQ for technical assistance.



## POWER AMPLIFIERS

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (A, Nom.)	OUTLINE DRAWING
AMF-4D-00100100-30-30P	0.1-1	44	1	3	30	2.2:1	0.85	118406-4
AMF-1B-00500100-60-30P	0.5-1	12	1	6	30	2:1	0.5	143477-1
AMF-2B-00500100-45-33P	0.5-1	25	1.5	4.5	33	2:1	1.3	143477-2
AMF-3B-00500100-13-33P	0.5-1	43	1.5	1.3	33	2:1	1.7	143477-3
AMF-4B-00500100-13-33P	0.5-1	55	1.5	1.3	33	2:1	1.8	143477-4
AMF-1D-00500200-70-30P	0.5-2	8	1	7	30	2:1/2.3:1	0.4	114293-1
AMF-2D-00500200-60-30P	0.5-2	18	1	6	30	2:1/2.3:1	0.65	118406-2
AMF-3D-00500200-45-30P	0.5-2	29	1	4.5	30	2:1/2.3:1	0.8	118406-3
AMF-4D-00500200-35-30P	0.5-2	41	1	3	30	2:1/2.3:1	0.9	118406-4
AMF-3D-00500200-50-31P	0.5-2	36	1.5	5	31	2.2:1	0.9	118406-3
AMF-4D-00500200-25-33P	0.5-2	40	2	2.5	33	2:1/2.3:1	1.4	125420
AMF-1B-02703800-70-34P	0.8-2.5	30	3	7	34	2.3:1	1.6	117558-4
AMF-1B-01000200-60-30P	1-2	11	1	6	30	2:1	0.5	143477-1
AMF-3B-01000200-20-33P	1-2	35	1	2	33	1.5:1	1.2	143477-4
AMF-2B-01000200-70-33P	1-2	13	1	7	33	2:1	1.3	143477-2
AMF-3B-01000200-45-33P	1-2	23	1	4.5	33	2:1	1.6	143477-3
AMF-5D-01000200-15-33P	1-2	50	1.5	1.5	33	2:1/2.3:1	1.5	125420
AMF-4B-01000200-20-33P	1-2	33	1	2	33	2:1	1.7	143477-4
AMF-2B-01201400-70-32P	1.2-1.4	21	0.5	7	32	1.5:1	1.2	143477-5
AMF-3B-01200140-60-34P	1.2-1.4	30	1	6	34	2:1/1.5:1	2	117558-4
AMF-1D-01000400-80-30P	1-4	8	1.5	8	30	2:1/2.3:1	0.4	114293-1
AMF-2D-01000400-60-30P	1-4	18	1.5	6	30	2:1/2.3:1	0.65	118406-2
AMF-3D-01000400-45-30P	1-4	28	1.5	4.5	30	2:1/2.3:1	0.8	118406-3
AMF-4D-01000400-35-30P	1-4	39	1.5	3.5	30	2:1/2.3:1	0.9	118406-4
AMF-1B-02000400-55-30P	2-4	10	1	5.5	30	1.5:1	0.5	143477-1
AMF-2B-02000400-40-30P	2-4	20	1	4	30	2:1	0.75	143477-2
AMF-3B-02000400-20-30P	2-4	35	1	2	30	2:1	0.95	143477-3
AMF-4B-02000400-20-33P	2-4	40	1.5	2	33	2:1	1.6	143477-4
AMF-2B-02000600-70-30P	2-6	13	1.5	7	30	2:1	0.72	145393-2
AMF-3B-02000600-80-33P	2-6	11	2	8	33	2:1	1.8	145393-3
AMF-4B-02000600-70-33P	2-6	20	2	7	33	2:1	2.1	117558-3
AMF-5B-02000600-70-33P	2-6	34	2	7	33	2:1	2.2	117558-4
AMF-6B-02000600-80-33P	2-6	40	2.5	8	33	2:1	3.2	145393-6
AMF-5B-02000800-55-30P	2-8	32	2	5.5	30	2:1	1.3	145393-5
AMF-6B-02000800-80-33P	2-8	40	3	8	33	2:1	3.2	117558-5
AMF-3B-02001800-60-30P	2-18	35	2.5	6	30	2:1/2.3:1	2.2	163559
AMF-3B-02001800-60-32P	2-18	33	2.5	6	32	2:1/2.3:1	4.5	162486
AMF-6B-02500270-30-40P	2.5-2.7	40	1	3	40	1.5:1	5	127402
AMF-6B-02700290-40-37P	2.7-2.9	40	1	4	37	1.5:1	4	127402

## POWER AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS ( $\pm$ dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (A, Nom.)	OUTLINE DRAWING
AMF-1B-02803400-40-30P	2.7–3.8	12	0.5	4	30	2:1	0.6	157210
AMF-5F-02800900-50-25P-DET-3	2.8–9	35	0.7	5	25	2:1	0.55	163190
AMF-4B-03100350-50-36P	3.1–3.5	35	1	5	36	2:1/1.5:1	2.2	117251
AMF-4B-03100350-50-39P	3.1–3.5	35	1	5	39	2:1/1.5:1	3.3	117251
AMF-4B-03400390-50-36P	3.4–3.9	35	1	5	36	2:1/1.5:1	2.2	117251
AMF-4B-03400390-50-39P	3.4–3.9	35	1	5	39	2:1/1.5:1	3.3	117251
AMF-4B-03700420-50-36P	3.7–4.2	35	1	5	36	2:1/1.5:1	2.2	117251
AMF-4B-03700420-50-39P	3.7–4.2	35	1	5	39	2:1/1.5:1	3.3	117251
AMF-5B-04400500-50-33P	4.4–5	30	1	5	33	2:1/1.5:1	1.5	117558-5
AMF-4B-04400500-50-36P	4.4–5	35	1	5	36	2:1/1.5:1	2.2	117251
AMF-4B-04400500-50-39P	4.4–5	35	1	5	39	2:1/1.5:1	3.3	117251
AMF-3B-04000800-70-30P	4–8	19	1.5	7	30	2:1	1.1	145393-3
AMF-4B-04000800-70-30P	4–8	25	1.5	7	30	2:1	1.2	145393-4
AMF-5B-04000800-60-30P	4–8	33	1.5	6	30	2:1	1.4	145393-5
AMF-4B-04000800-50-33P	4–8	36	1	5	33	2:1	1.5	117558-4
AMF-5B-04000800-70-33P	4–8	33	1.5	5	33	2:1	2.2	116348-1
AMF-6B-04000800-60-33P	4–8	40	1	6	33	2:1	2.4	116348-1
AMF-4B-05000530-50-36P	5–5.3	35	1	5	36	2:1/1.5:1	2.2	117251
AMF-4B-05000530-50-39P	5–5.3	35	1	5	39	2:1/1.5:1	3.3	117251
AMF-4B-05300590-50-36P	5.3–5.9	35	1	5	36	2:1/1.5:1	2.2	117251
AMF-4B-05300590-50-39P	5.3–5.9	35	1	5	39	2:1/1.5:1	3.3	117251
AMF-5B-05400590-50-37P	5.4–5.9	35	1	5	37	2:1/1.5:1	3.5	118214
AMF-4B-05900640-50-33P	5.9–6.4	30	1	5	33	2:1/1.5:1	1.5	116879-1
AMF-4B-05900640-50-36P	5.9–6.4	35	1	5	36	2:1/1.5:1	2.1	117251
AMF-4B-05900640-50-38P	5.9–6.4	35	1	5	38	2:1/1.5:1	2.7	117251
AMF-4B-05900640-50-39P	5.9–6.4	35	1	5	39	2:1/1.5:1	3.3	117251
AMF-4B-05900720-50-36P	5.9–7.2	35	1	5	36	2:1/1.5:1	2.1	117251
AMF-4B-05900720-50-38P	5.9–7.2	35	1	5	38	2:1/1.5:1	3.3	127202
AMF-4B-06400720-50-36P	6.4–7.2	35	1	5	36	2:1/1.5:1	2.1	117251
AMF-4B-06400720-50-38P	6.4–7.2	35	1	5	38	2:1/1.5:1	2.7	127202
AMF-4B-06400720-50-39P	6.4–7.2	35	1	5	39	2:1/1.5:1	3.3	127202
AMF-5B-06001200-50-35P	6–12	35	2	5	35	2:1	2.8	127465
AMF-5B-06001300-50-35P	6–13	35	2	5	35	2:1	2.8	127465



## POWER AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (A, Nom.)	OUTLINE DRAWING
AMF-8B-06001800-60-31P	6–18	31	2	6	31	2:1	2	127465
AMF-6B-06001800-80-33P	6–18	35	2.5	8	33	2.2:1	2.8	127465
AMF-2B-06001800-80-35P	6–18	35	2.5	8	35	2.2:1	6.5	163559
AMF-3B-06001800-60-40P	6–18	33	3	6	40	2:1/2.4:1	12	162486
AMF-5B-07100790-50-36P	7.1–7.9	35	1	5	36	2:1/1.5:1	2.1	117251
AMF-5B-07100790-50-38P	7.1–7.9	35	1	5	38	2:1/1.5:1	2.7	127202
AMF-5B-07100790-50-39P	7.1–7.9	35	1	5	39	2:1/1.5:1	3.3	127202
AMF-5B-07100850-50-37P	7.1–8.5	35	1	5	37	2:1/1.5:1	2.7	127202
AMF-5B-07700850-50-36P	7.7–8.5	35	1	5	36	2:1/1.5:1	2.1	117251
AMF-5B-07700850-50-38P	7.7–8.5	35	1	5	38	2:1/1.5:1	2.7	127202
AMF-5B-07700850-50-39P	7.7–8.5	35	1	5	39	2:1/1.5:1	3.3	127202
AMF-6B-07900840-50-33P	7.9–8.4	35	1	5	33	2:1/1.5:1	1.5	115420-1
AMF-5B-08001200-80-30P	8–12	24	1.5	8	30	2:1	1.2	116348-1
AMF-6B-08001200-35-30P	8–12	35	1.5	3.5	30	2:1	1.8	145393-4
AMF-6B-08001200-50-33P	8–12	33	1.5	5	33	2:1	2	116348-1
AMF-5B-08001200-50-35P	8–12	35	2	5	35	2:1	2.8	127465
AMF-3B-08001200-60-40P	8–12	33	2	6	40	2:1/2.3:1	12	162486
AMF-8B-08001800-60-31P	8–18	31	2	6	31	2:1	2	127465
AMF-6B-08001800-80-33P	8–18	35	2.5	8	33	2:1	2.8	127465
AMF-5B-08500960-50-38P	8.5–9.6	35	1	5	38	2:1/1.5:1	3.3	127202
AMF-5B-08500960-50-40P	8.5–9.6	35	1	5	40	2:1/1.5:1	4.7	127202
AMF-5B-08500960-50-41P	8.5–9.6	35	1	5	41	2:1/1.5:1	4.8	127202
AMF-6B-09501050-50-38P	9.5–10.5	35	1	5	38	2:1/1.5:1	3.3	127202
AMF-6B-09501050-50-40P	9.5–10.5	35	1	5	40	2:1/1.5:1	4.1	127202
AMF-3B-09501150-60-41P	9.5–11.5	33	1.5	6	41	2:1/2.3:1	12	162486
AMF-5B-09701020-60-33P	9.7–10.2	30	1	6	33	2:1/1.5:1	1.6	115420-1
AMF-6B-10701170-50-38P	10.7–11.7	35	1	5	38	2:1/1.5:1	3.3	127202
AMF-6B-10701170-50-40P	10.7–11.7	35	1	5	40	2:1/1.5:1	4.7	127202
AMF-6B-10701170-50-41P	10.7–11.7	35	1	5	41	2:1/1.5:1	4.8	127202
AMF-8B-12001800-60-31P	12–18	33	2	6	31	2:1	2	127465
AMF-6B-12001800-70-33P	12–18	35	2	7	33	2:1	2.8	127465

## POWER AMPLIFIERS (CONT.)

MODEL NUMBER	OPERATING FREQUENCY (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (±dB, Max.)	NOISE FIGURE (dB, Max.)	OUTPUT POWER (dBm, Min.)	VSWR IN/OUT (Max.)	DC POWER @ +15 V (A, Nom.)	OUTLINE DRAWING
AMF-6B-12701320-50-40P	12.7–13.2	35	1	5	40	2:1/1.5:1	4.7	127202
AMF-6B-13751450-50-40P	13.75–14.5	35	1	5	40	2:1/1.5:1	5.4	127202
AMF-9B-14001450-70-37P-WG	14–14.5	50	1	7	37	1.5:1	7	118209
AMF-6B-14001450-50-40P	14–14.5	35	1	5	40	2:1/1.5:1	4.7	127202
AMF-6B-14001450-50-41P	14–14.5	35	1	5	41	2:1/1.5:1	5.5	127202
AMF-7B-14001600-80-30P	14–16	30	1.5	8	30	2:1	2.3	115420-1
AMF-6F-27503100-90-30P*	27.5–31	18	2	9	30	2.5:1	0.95	138002
AMF-8F-27503100-90-30P*	27.5–31	30	2	9	30	2.5:1	1.05	138002
AMF-8F-37004100-90-30P*	37–41	20	2.5	9	30	2.5:1	1.65	138002
AMF-10F-37004100-90-30P*	37–41	30	2.5	9	30	2.5:1	1.75	138002

\* These models will require a -12 VDC @ 50 mA nominal in addition to the +12 VDC.

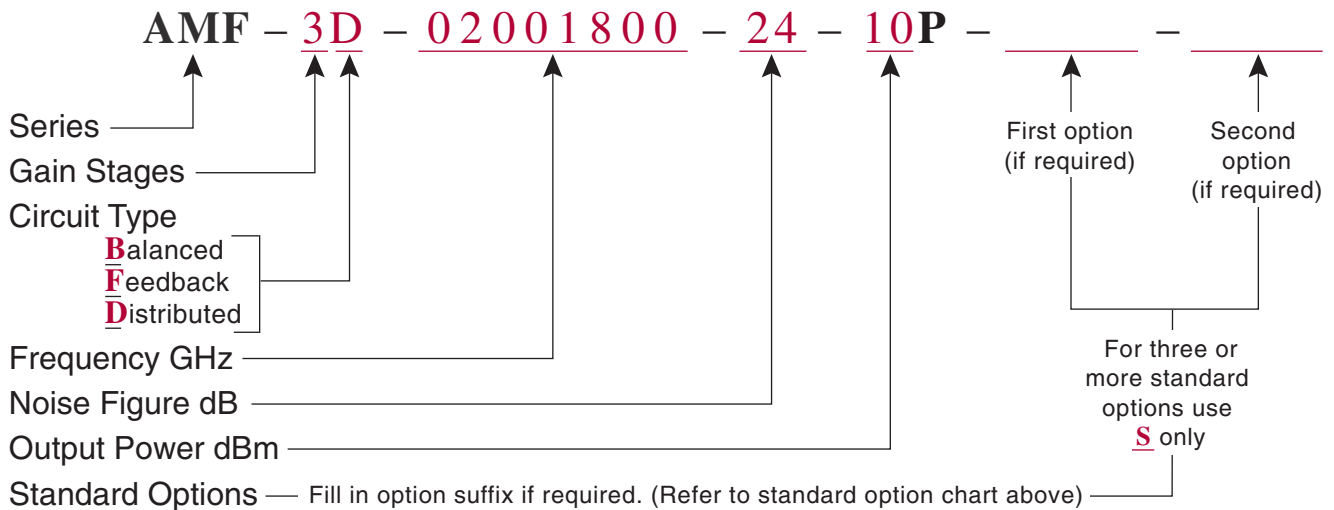
## GENERAL AMPLIFIER OPTIONS

Options for a variety of special performance and testing requirements as well as connector types can be identified by adding a suffix to the part number. The table below lists the most commonly requested options. Option requests should be accompanied by a description of the required performance details as applicable.

STANDARD OPTIONS	SUFFIX	STANDARD CONNECTOR OPTIONS	SUFFIX
Input Limiter	-L	K Type Connector	-K
Gain Window	-GW	V Type Connector	-V
Gain Flatness	-GF	N Type Connector	-N
Temperature Compensation	-TC	TNC Type Connector	-T
Phase Match	-PM	SMA Male Connector	-M
Amplitude Match	-AM	Waveguide Input	-WG
Amplitude/Phase Match	-APM		
Gain Control	-GC		
Hermetic	-H		
Bias Through Output	-BTO		
Bias Through Input	-BTI		
Specific Operating Voltage	-XXDC*		
Gain Slope	-GS		
Power Supply	-PS		
Fault Alarm	-F		
Combination of three or more standard options	-S		

Notes: When specifying these options, please include applicable detailed information.  
 \* XX is the DC operating voltage

## ORDERING INFORMATION



## GENERAL SPECIFICATIONS

MITEQ's standard amplifiers have been designed to typically meet the following conditions:

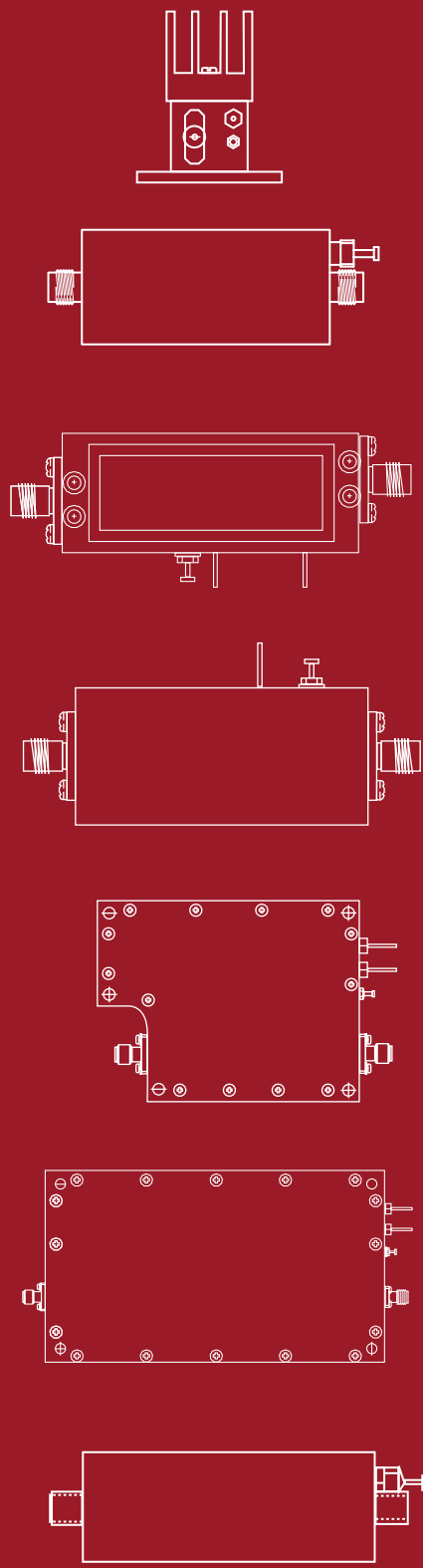
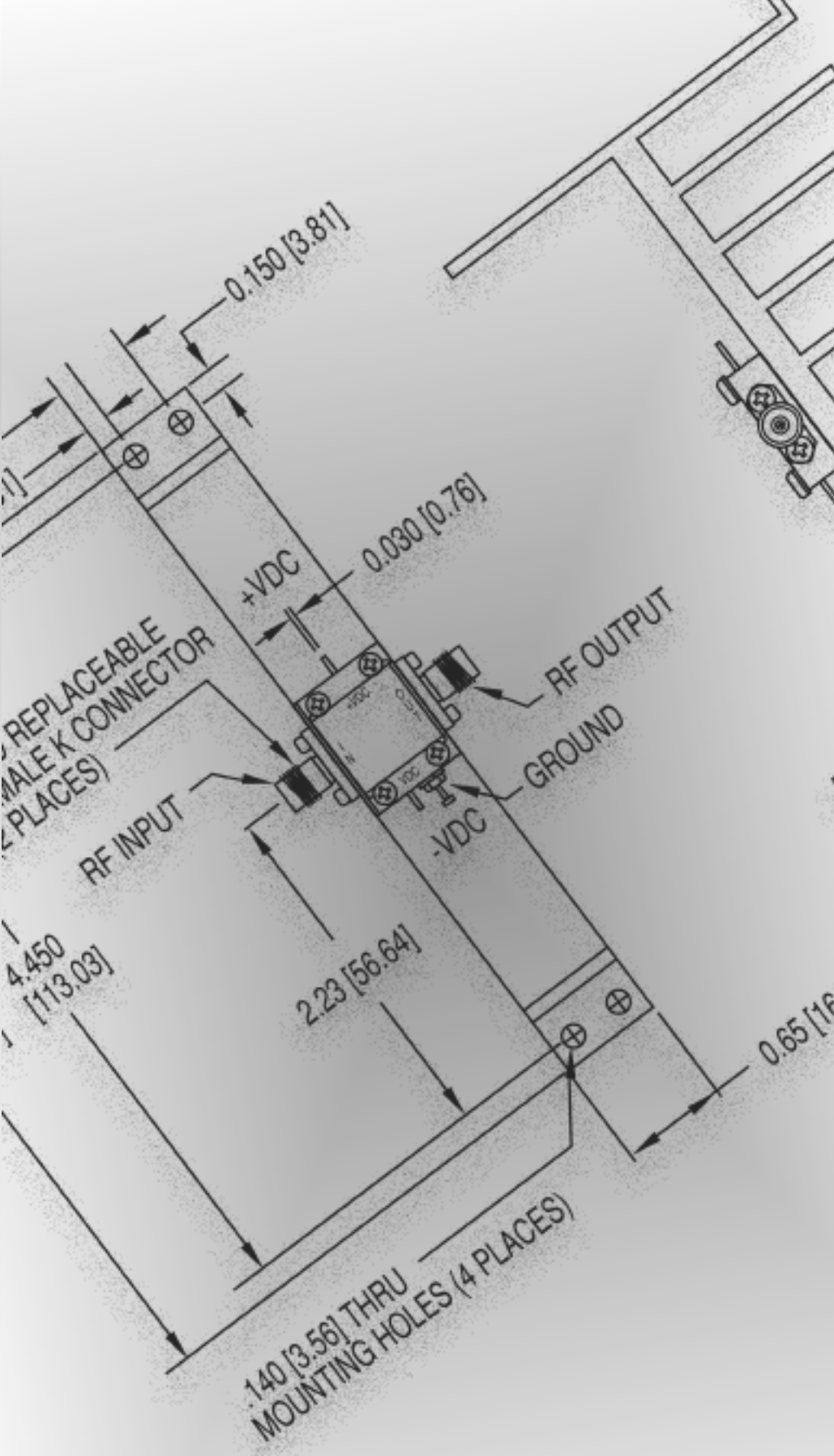
Operating temperature..... -30 to +75°C  
 Storage temperature..... -40 to +85°C  
 Humidity ..... 95% relative humidity, noncondensing

Vibration..... 7.3 g's rms, 20-2000 CPS, per MIL-STD-810B, Method 514, Procedure 5

Data curves are at 25°C..... There will be some variation in the typical data shown as a function of temperature

Out of band gain ..... Unless otherwise specified <5 dB above in band gain

# OUTLINE DRAWINGS

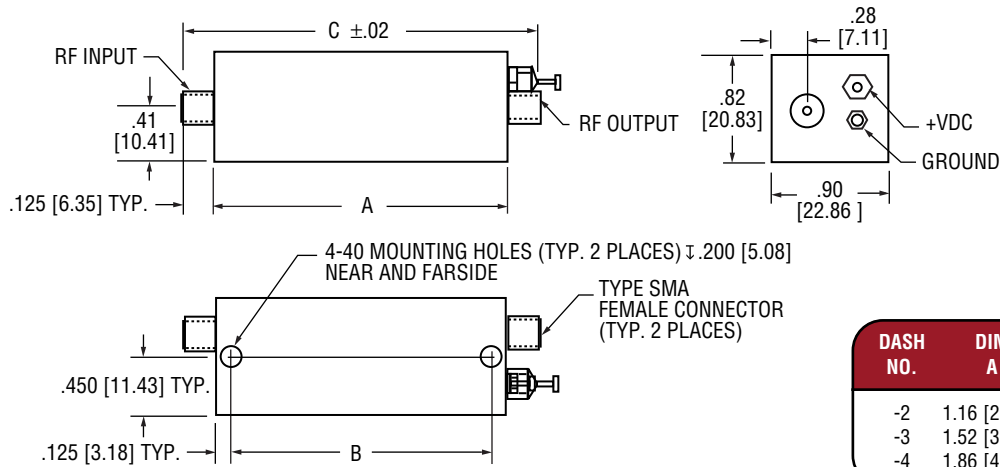


## GENERAL NOTE

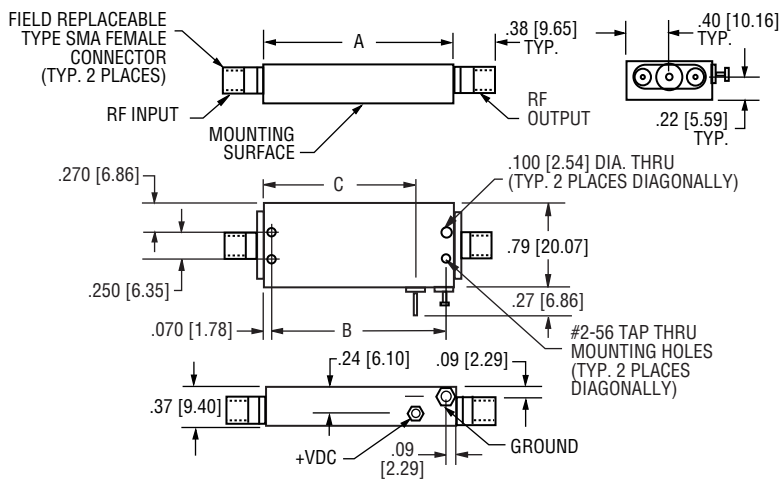
- 1. DIMENSIONS ARE IN INCHES [MILLIMETERS]
- TOLERANCE AS FOLLOWS:
- .XX =  $\pm 0.01$  [.XX =  $\pm 0.25$ ]
- .XXX =  $\pm 0.005$  [.XXX =  $\pm 0.13$ ]

# OUTLINE DRAWINGS

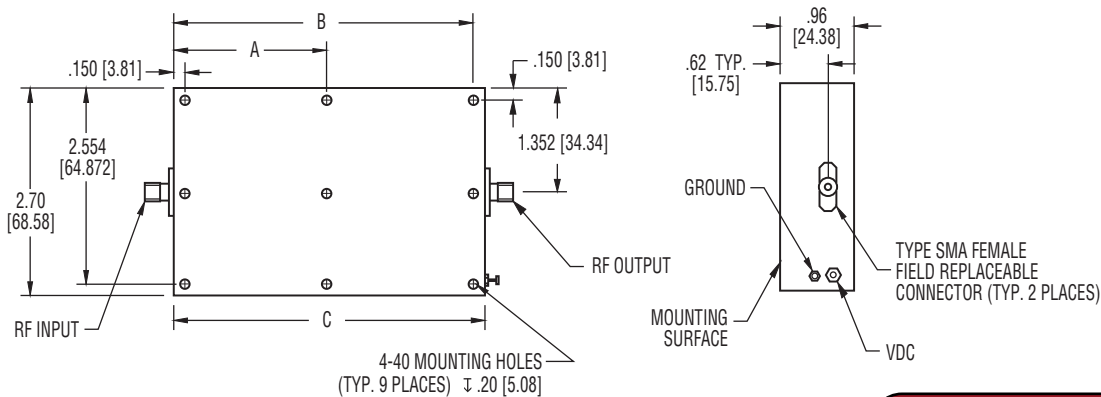
110699



114293

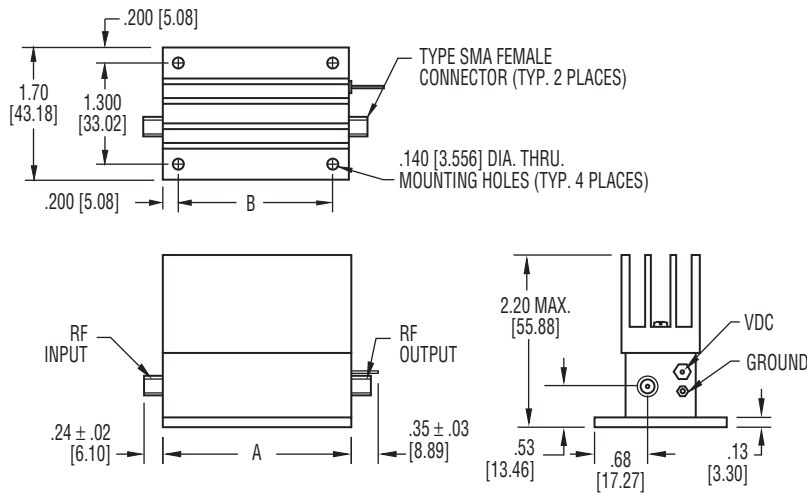


115420



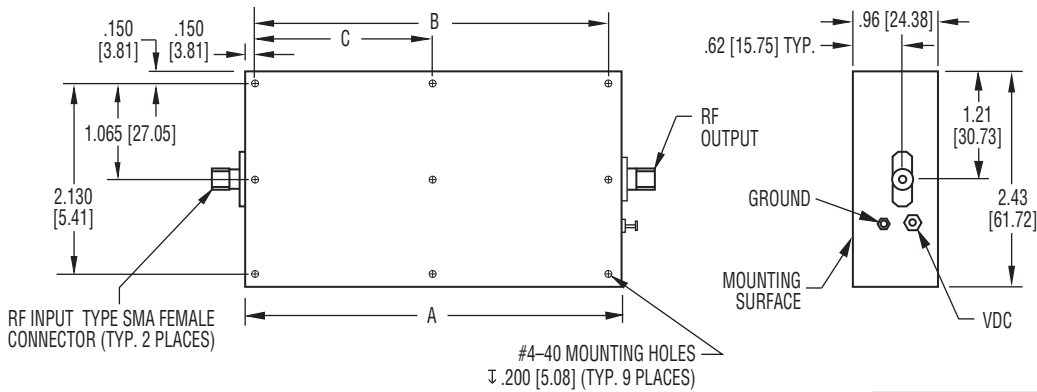
# OUTLINE DRAWINGS (CONT.)

**115800**



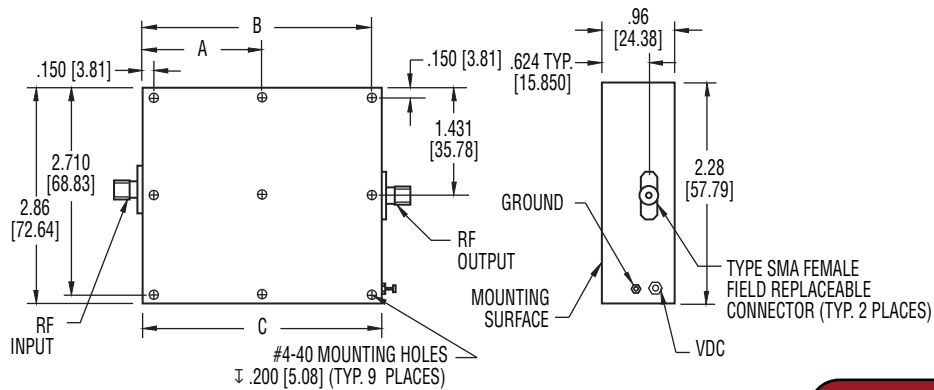
DASH NO.	DIM A	DIM B
-1	1.16 [29.46]	.756 [19.20]
-2	1.48 [37.59]	1.084 [27.53]
-3	1.81 [45.97]	1.412 [35.87]
-4	2.14 [54.36]	1.740 [44.20]
-5	2.47 [62.74]	2.068 [52.53]
-6	2.80 [71.12]	2.396 [60.86]
-7	3.12 [79.25]	2.224 [56.49]
-8	3.49 [88.65]	3.092 [78.54]
-9	3.82 [97.03]	3.420 [86.87]

**116348**



DASH NO.	DIM A	DIM B	DIM C
-1	4.26 [108.20]	3.956 [100.48]	1.978 [50.24]
-2	2.98 [75.69]	1.338 [33.99]	2.676 [67.97]

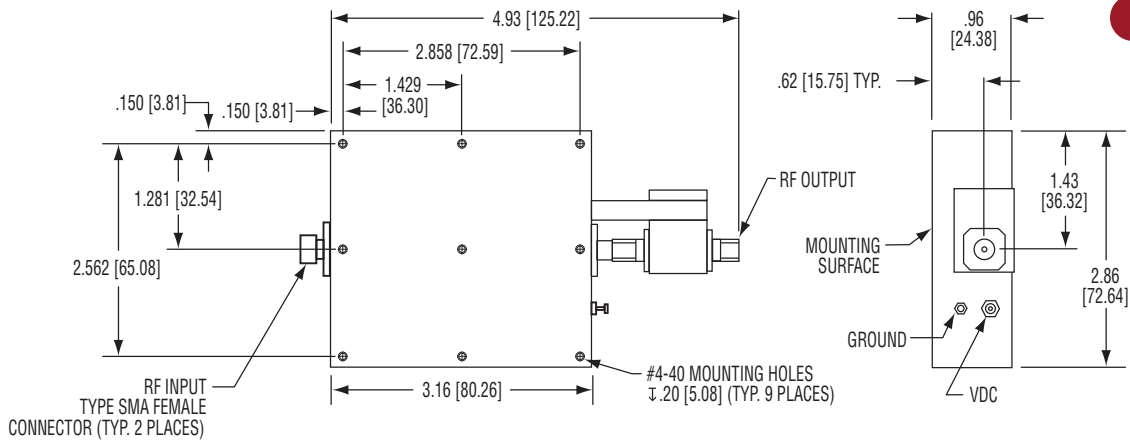
**116879**



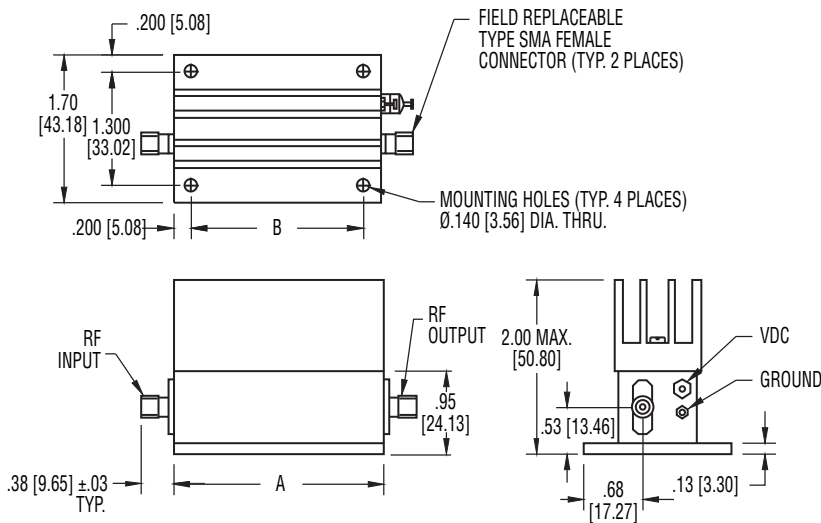
DASH NO.	DIM A	DIM B	DIM C
-1	1.579 [40.11]	3.008 [76.40]	3.16 [80.26]
-2	1.899 [42.24]	3.648 [92.66]	3.80 [96.52]

# OUTLINE DRAWINGS (CONT.)

**117251**



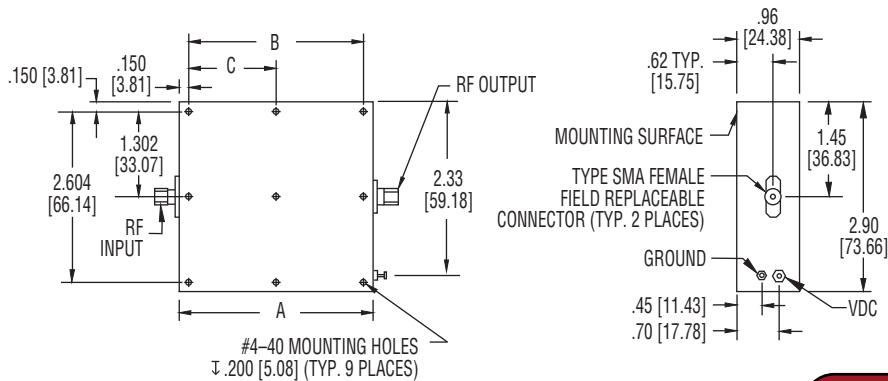
**117469**



DASH NO.	DIM A	DIM B
-1	1.13 [28.70]	.729 [18.52]
-2	1.36 [34.54]	.956 [24.28]
-3	1.68 [42.67]	1.283 [32.59]
-4	2.01 [51.05]	1.610 [40.89]
-5	2.34 [59.44]	1.937 [49.20]
-6	2.66 [67.56]	2.264 [57.51]
-7	2.99 [75.95]	2.591 [65.81]
-8	3.32 [84.33]	2.918 [74.12]
-9	3.64 [92.46]	3.245 [82.42]

NOTE: HEATSINK AND BASE PLATE ARE FIELD REMOVABLE.

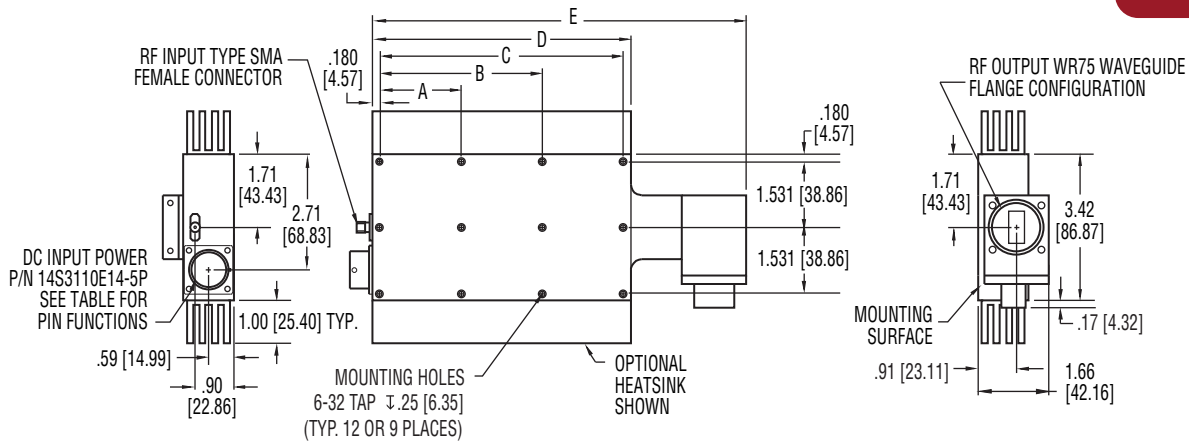
**117558**



DASH NO.	DIM A	DIM B	DIM C
-3	2.34 [59.44]	2.036 [51.71]	1.018 [25.86]
-4	2.98 [75.69]	2.676 [67.97]	1.338 [33.99]
-5	3.62 [91.95]	3.316 [84.23]	1.658 [42.11]

# OUTLINE DRAWINGS (CONT.)

118209

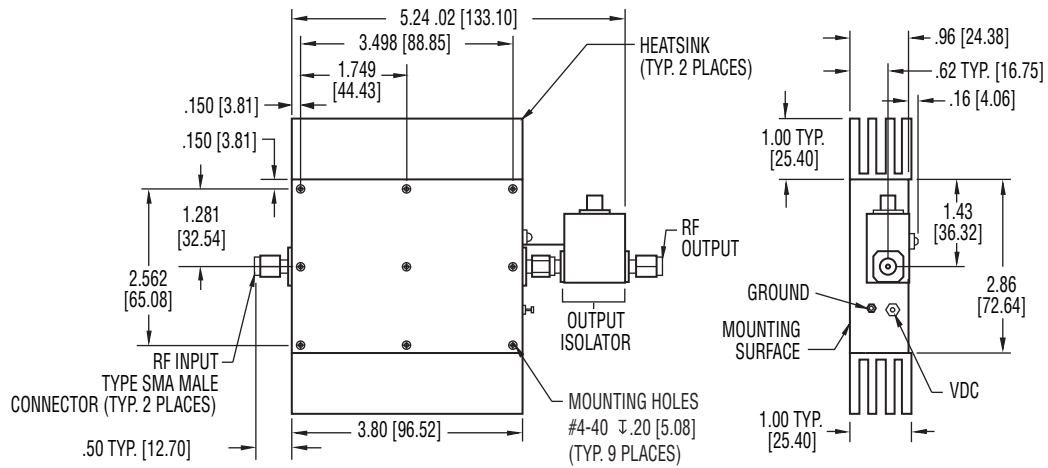


CONNECTOR PIN ASSIGNMENTS:

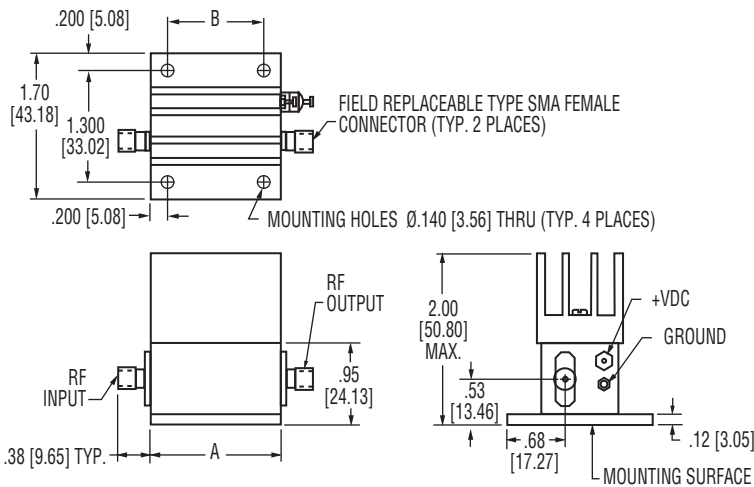
PIN	FUNCTION
A	+ 12 VDC
B	MONITOR OUTPUT
C	GROUND
D	GROUND
E	GROUND

OUTPUT POWER	DASH NO.	DIM A	DIM B	DIM C	DIM D	DIM E
1 WATT	1	2.012 [51.11]	4.023 [102.18]	-	4.38 [111.25]	7.07 [179.58]
2 WATTS	2	2.433 [61.80]	4.865 [123.57]	-	5.23 [132.84]	7.92 [201.17]
5 WATTS	5	1.894 [48.11]	3.789 [96.24]	5.683 [144.35]	6.04 [153.42]	8.73 [221.74]

118214



118406



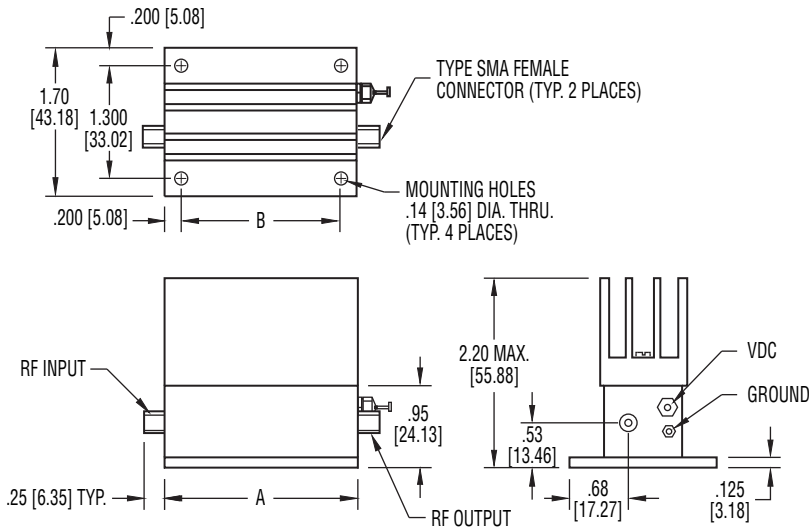
DASH NO.	DIM A	DIM B
-2	1.16 [29.46]	.762 [19.30]
-3	1.40 [35.56]	1.000 [25.40]
-4	1.74 [44.20]	1.340 [34.04]
-5	2.11 [53.59]	1.710 [43.43]
-6	2.45 [62.23]	2.050 [52.07]

NOTE: BASE PLATE AND HEATSINK ARE FIELD REMOVABLE.



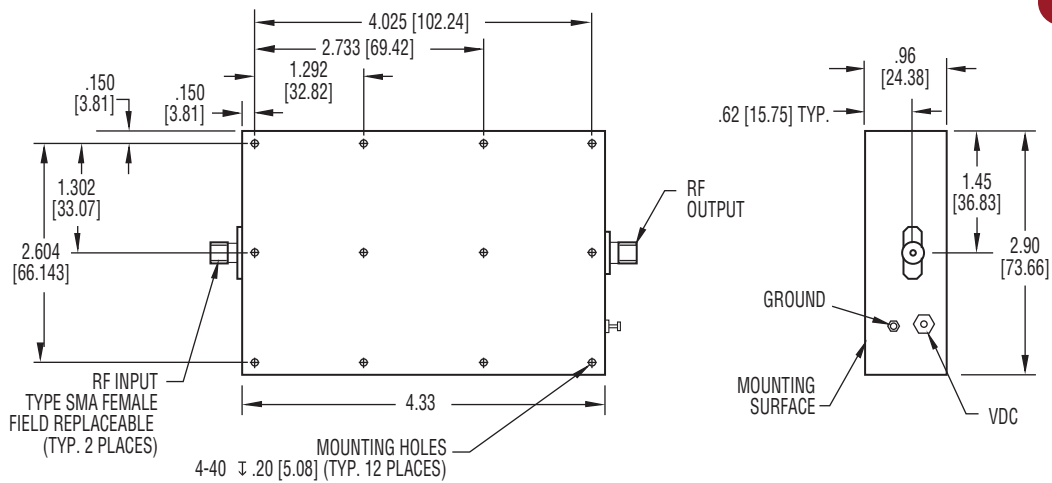
# OUTLINE DRAWINGS (CONT.)

**118987**

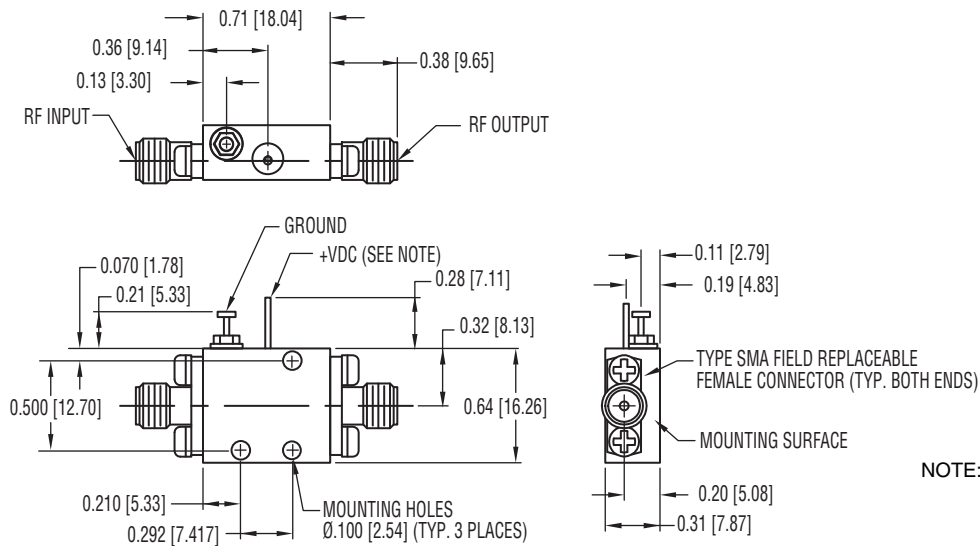


DASH NO.	DIM A	DIM B
-1	.84 [26.34]	.440 [11.18]
-2	1.18 [29.97]	.780 [19.81]
-3	1.52 [38.61]	1.120 [28.45]
-4	1.86 [47.24]	1.460 [37.08]
-5	2.23 [56.64]	1.830 [46.48]
-6	2.57 [65.28]	2.170 [55.12]
-7	2.91 [73.91]	2.510 [63.75]
-8	3.25 [82.55]	2.850 [72.39]

**119683**



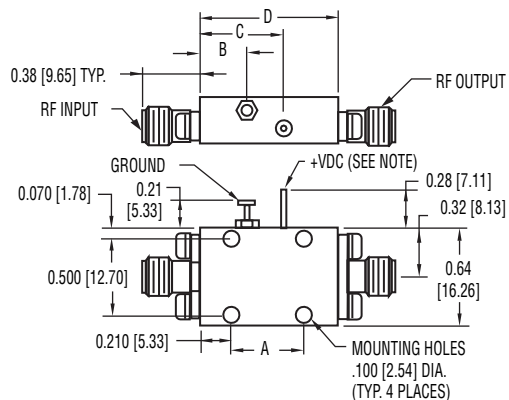
**121622**



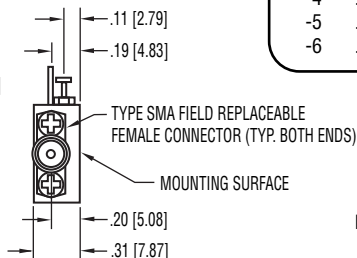
NOTE: DC POWER PIN MAY BE TRIMMED TO SUIT CUSTOMER REQUIREMENTS.

# OUTLINE DRAWINGS (CONT.)

121623

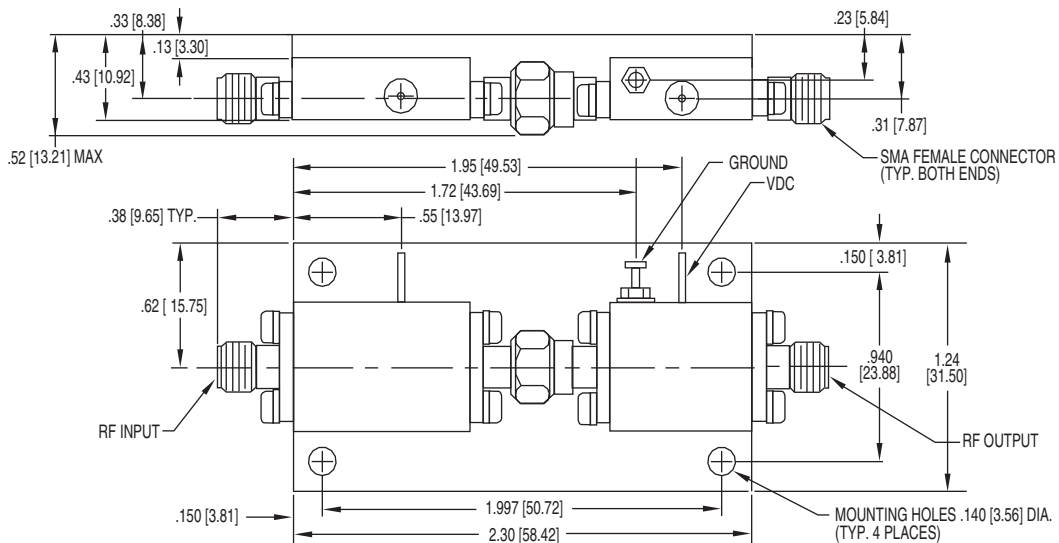


DASH NO.	DIM A	DIM B	DIM C	DIM D
-4	.473 [12.01]	.31 [7.87]	.55 [13.97]	.89 [22.61]
-5	.654 [16.61]	.49 [12.45]	.73 [18.54]	1.07 [27.18]
-6	.835 [21.21]	.68 [17.27]	.91 [23.11]	1.26 [32.00]

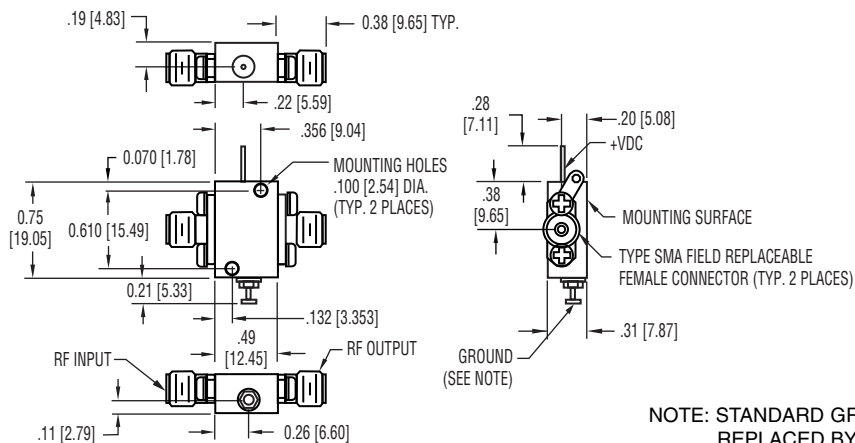


NOTE: DC POWER PIN MAY BE TRIMMED TO SUIT CUSTOMER REQUIREMENTS.

121681



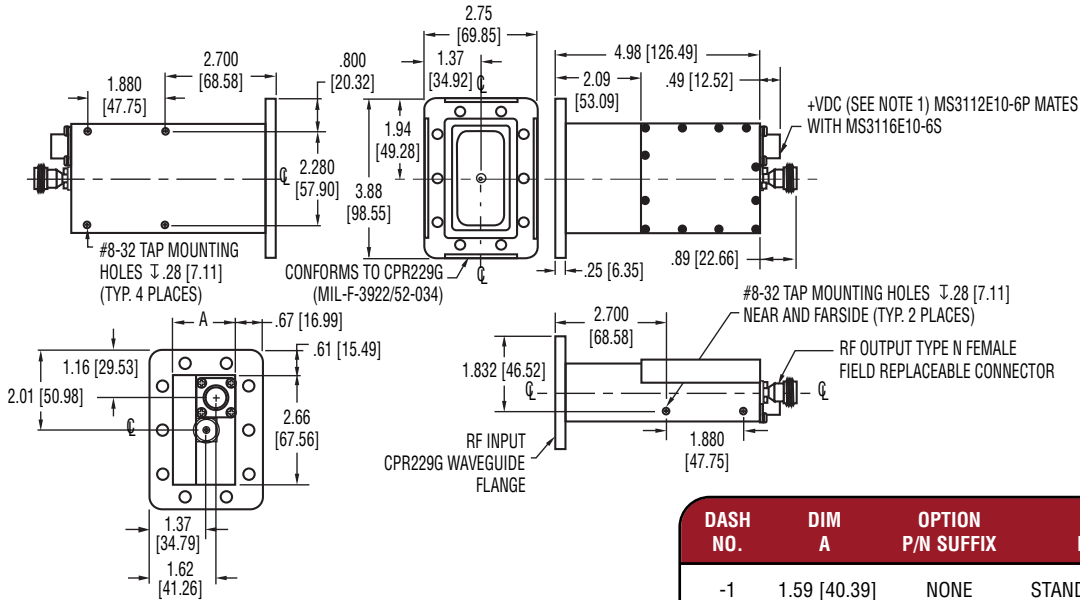
122686



NOTE: STANDARD GROUND TERMINAL SHOWN. MAY BE REPLACED BY GROUND LUG SHOWN ON OUTPUT CONNECTOR AT CUSTOMER OPTION.

# OUTLINE DRAWINGS (CONT.)

**125063**

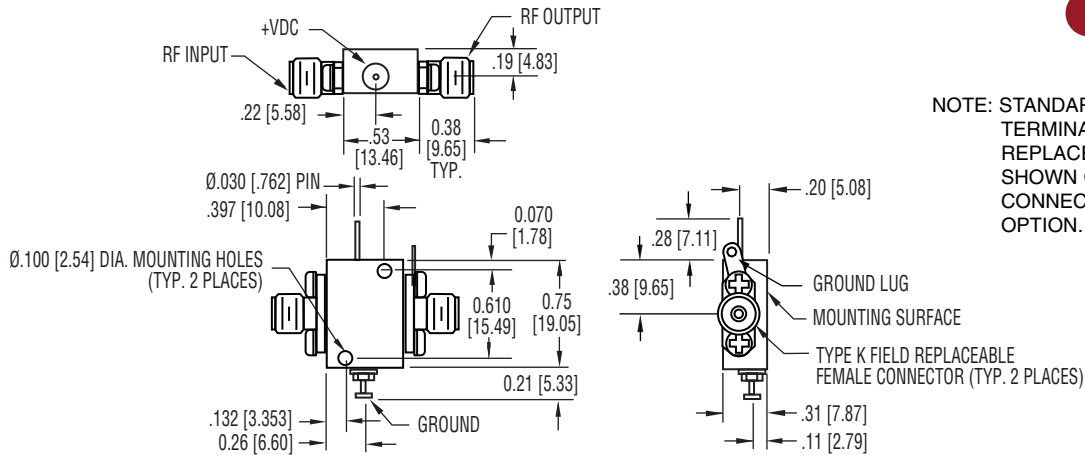


**NOTES:**

1. CONTACT MITEQ FOR VARIOUS PIN OUT CONFIGURATIONS.
2. STANDARD UNIT AS SHOWN. FLAT FLANGE IS OPTIONAL.
3. SMA FIELD REPLACEABLE CONNECTOR OPTION AVAILABLE.

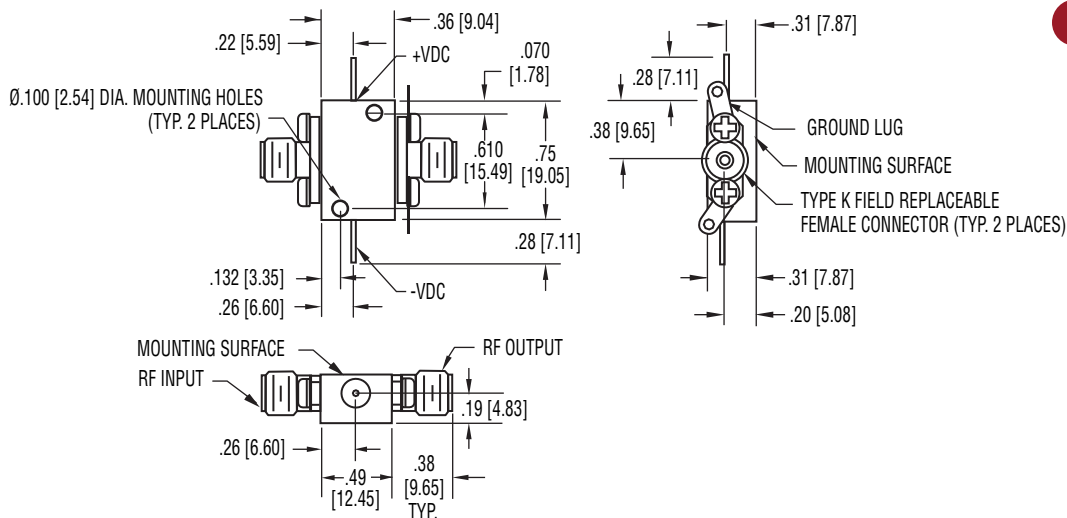
DASH NO.	DIM A	OPTION P/N SUFFIX	DESCRIPTION
-1	1.59 [40.39]	NONE	STANDARD LNA
-1	1.59 [40.39]	-F	LNA WITH OPTIONAL FAULT ALARM
-2	2.30 [58.42]	-O	LNA WITH OPTIONAL 100-240 VAC POWER SUPPLY
-2	2.30 [58.42]	-O, -F	LNA WITH OPTIONAL FAULT ALARM AND 100-240 VAC POWER SUPPLY

**125292**



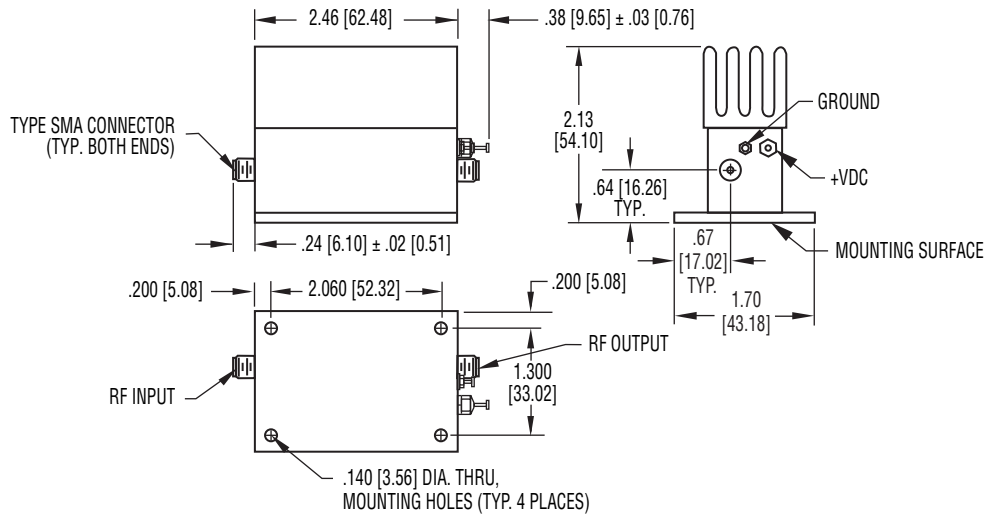
NOTE: STANDARD GROUND TERMINAL SHOWN. MAY BE REPLACED BY GROUND LUG SHOWN ON OUTPUT CONNECTOR AT CUSTOMER OPTION.

**125294**

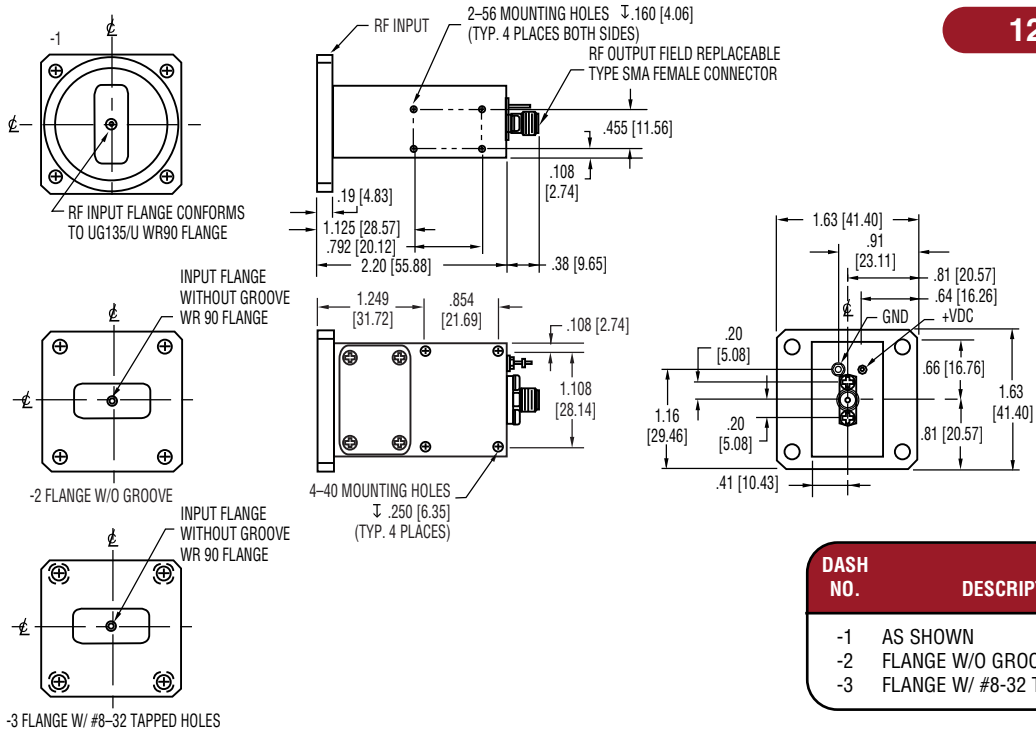


# OUTLINE DRAWINGS (CONT.)

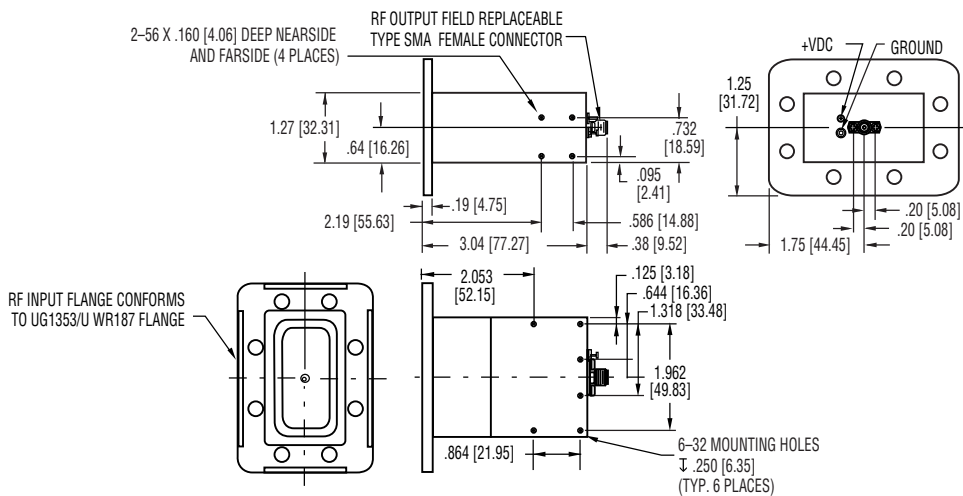
125420



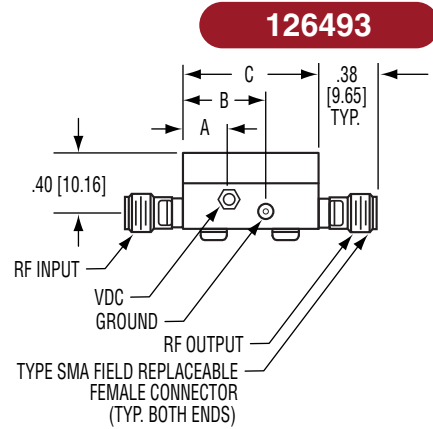
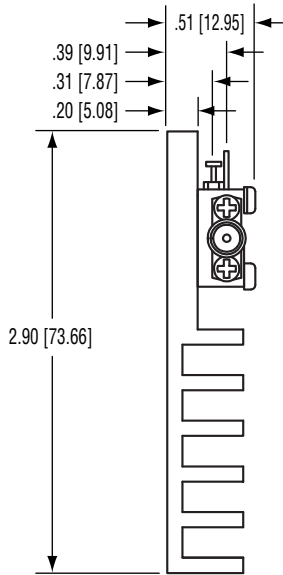
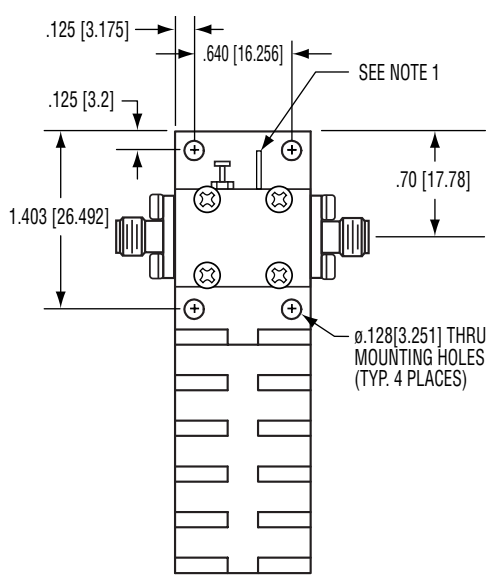
126133



126487



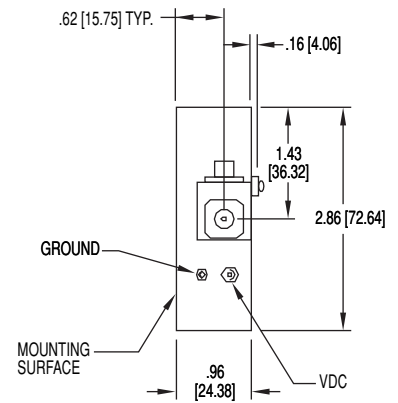
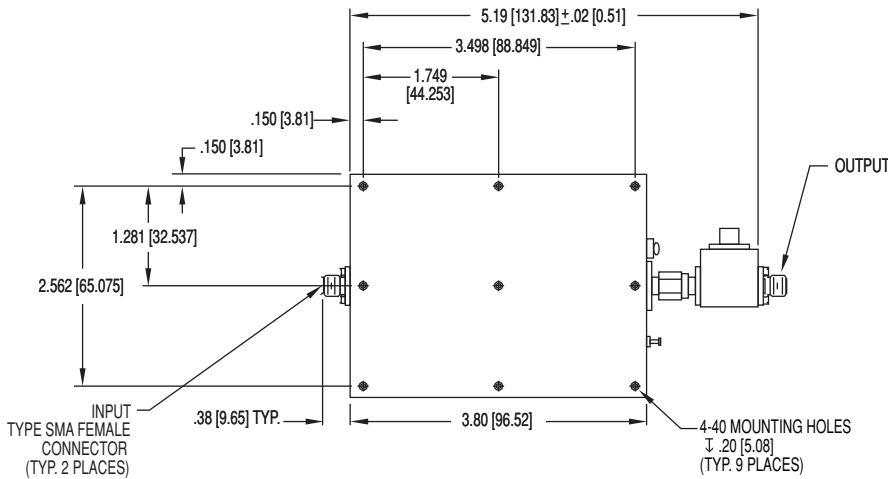
# OUTLINE DRAWINGS (CONT.)



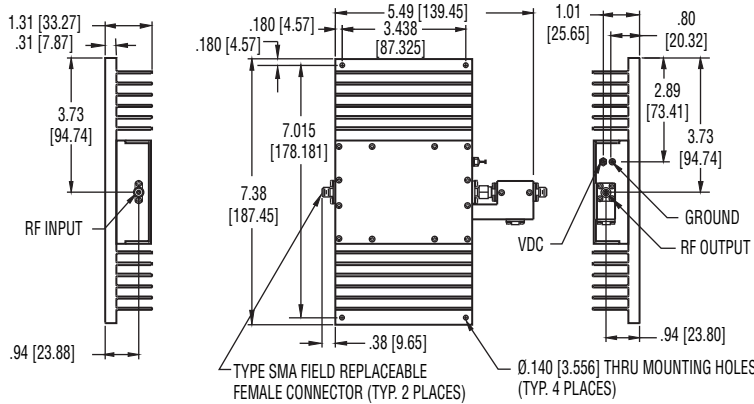
**126493**

NOTE 1:  
DC POWER PIN MAY BE TRIMMED TO SUIT CUSTOMER REQUIREMENTS.

DASH NO.	DIM A	DIM B	DIM C
-3	.13 [3.30]	.36 [9.14]	.71 [18.03]
-4	.31 [7.87]	.55 [13.97]	.89 [22.61]
-5	.49 [12.44]	.73 [18.54]	1.07 [27.18]
-6	.68 [17.27]	.91 [23.11]	1.26 [32.00]



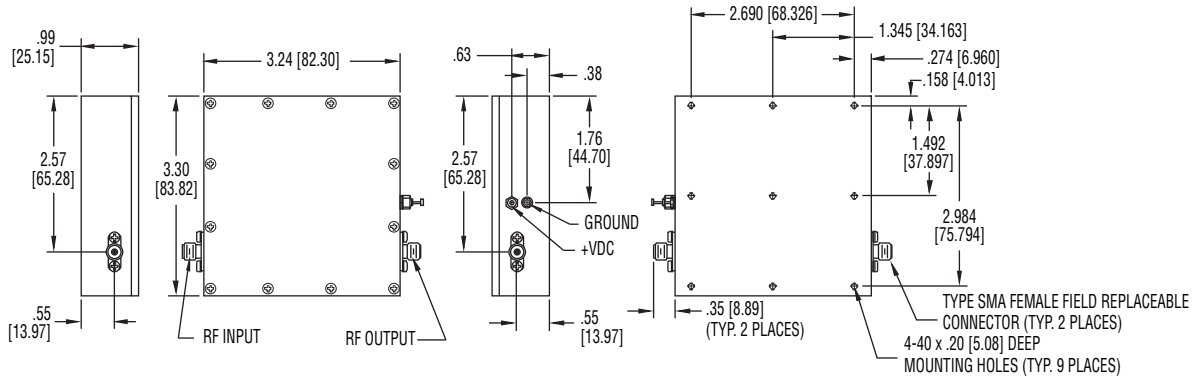
**127202**



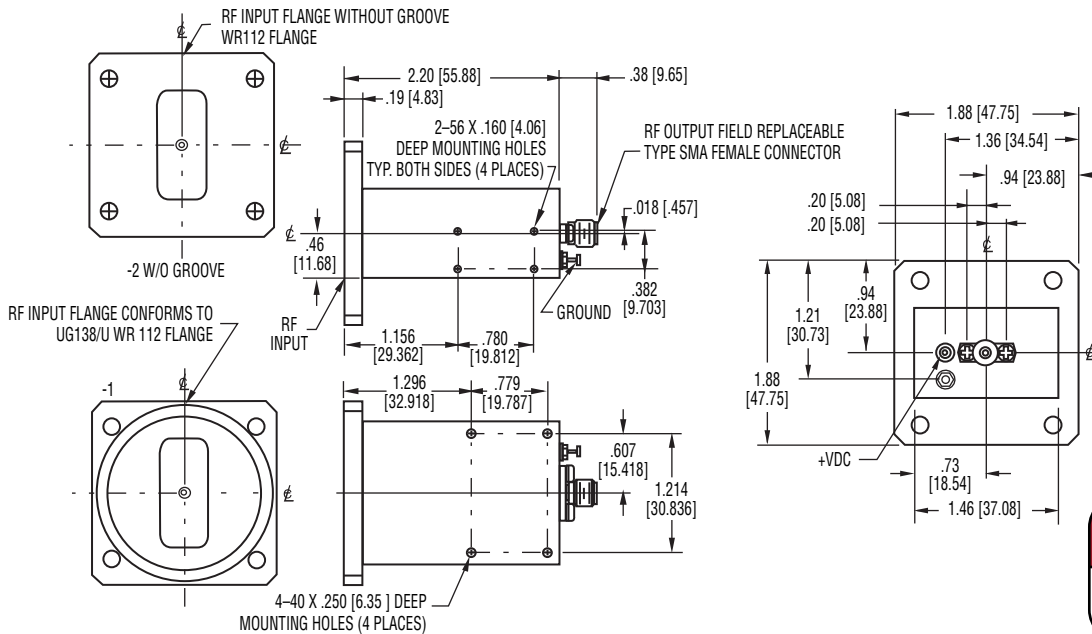
**127402**

# OUTLINE DRAWINGS (CONT.)

127465

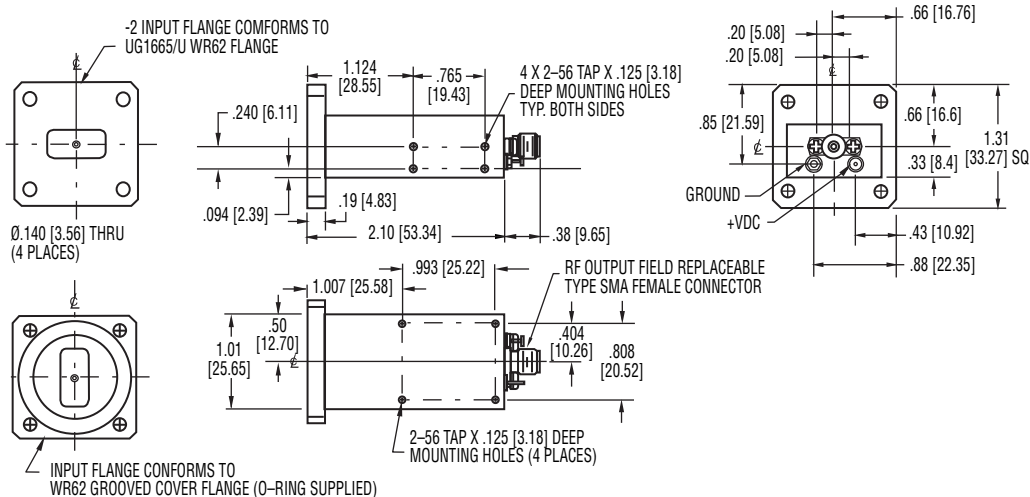


127534



DASH NO.	DESCRIPTION
-1	AS SHOWN
-2	FLANGE W/O GROOVE

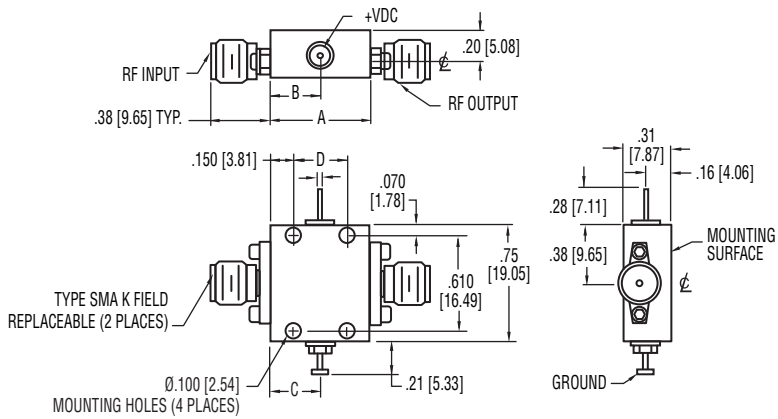
127539



DASH NO.	DESCRIPTION
-1	AS SHOWN
-2	FLANGE W/O GROOVE

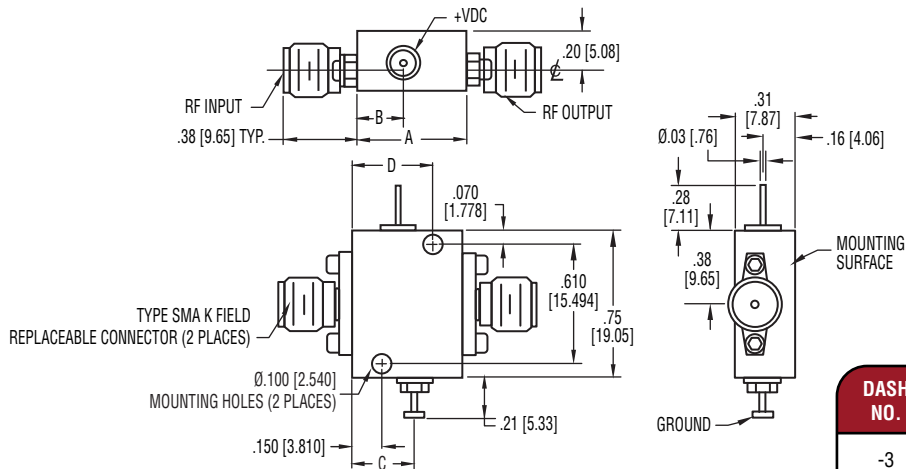
# OUTLINE DRAWINGS (CONT.)

128061



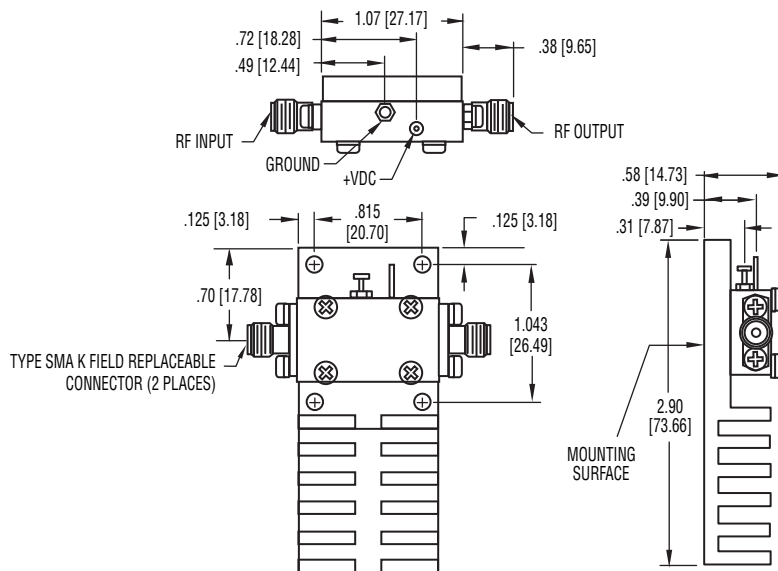
DASH NO.	DIM A	DIM B	DIM C	DIM D
-5	.64[16.26]	.32[8.13]	.32[8.13]	.340[8.64]
-6	.72[18.28]	.40[10.16]	.36[9.14]	.421[10.69]

128066



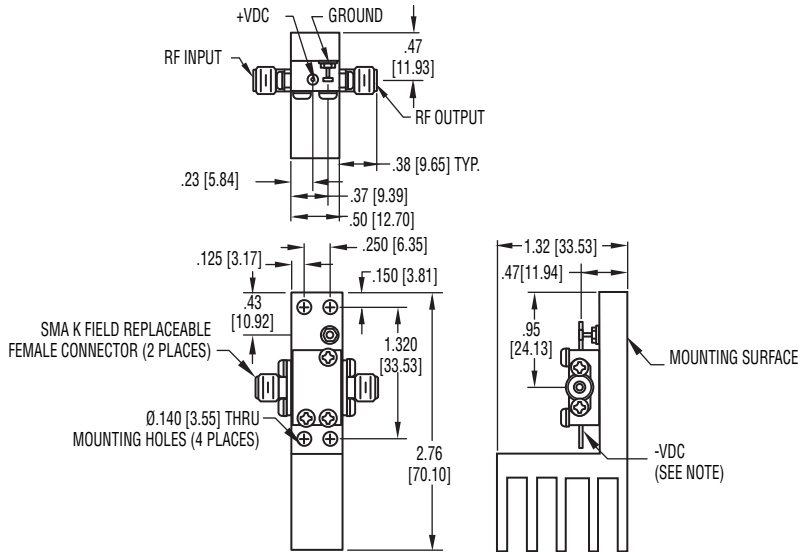
DASH NO.	DIM A	DIM B	DIM C	DIM D
-3	.48[12.19]	.18[4.57]	.28[7.11]	.328[8.331]
-4	.56[14.22]	.23[5.84]	.32[8.13]	.409[10.389]

128871

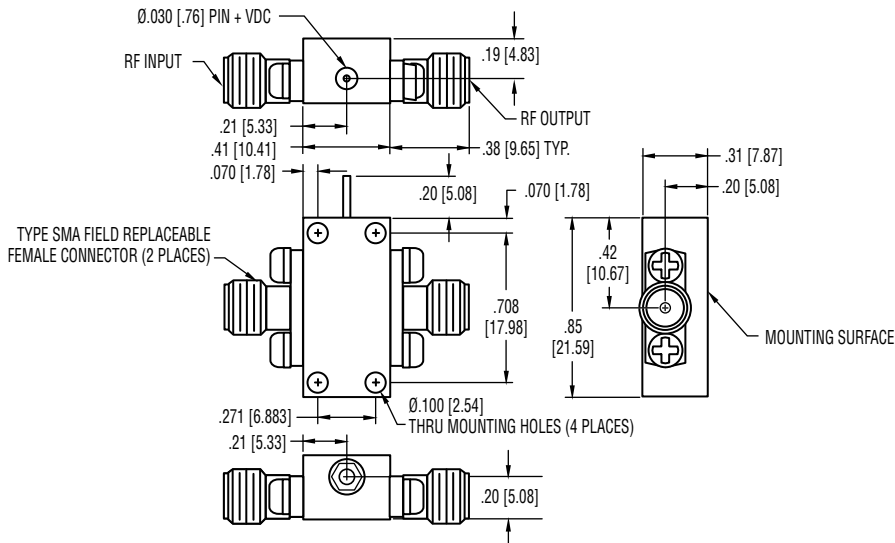


# OUTLINE DRAWINGS (CONT.)

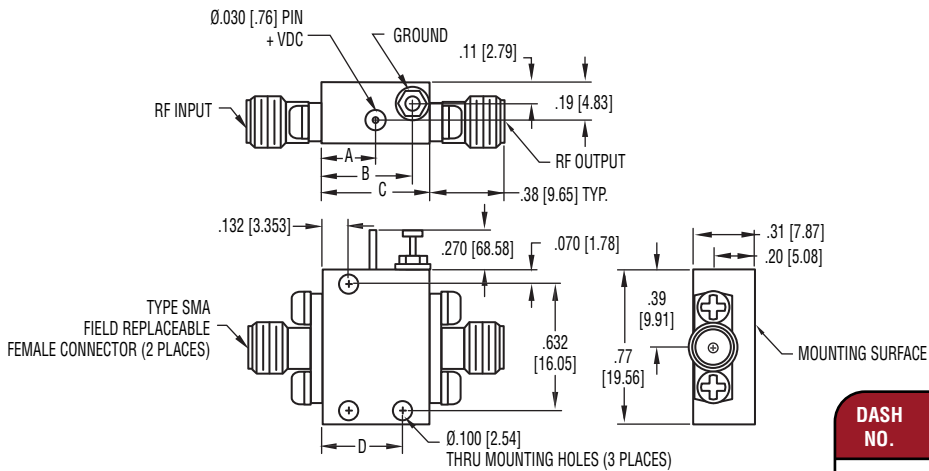
129530



131580



131581

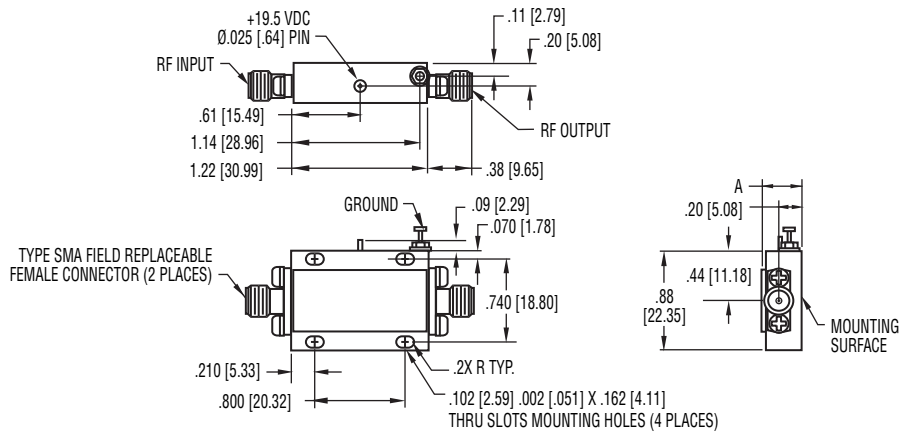


DASH NO.	DIM A	DIM B	DIM C	DIM D
-3	.27 [6.86]	.45 [11.43]	.54 [13.72]	.404 [10.26]
-4	.34 [8.64]	.58 [14.73]	.66 [16.76]	.529 [13.44]
-5	.44 [11.18]	.70 [17.78]	.79 [20.07]	.654 [16.61]



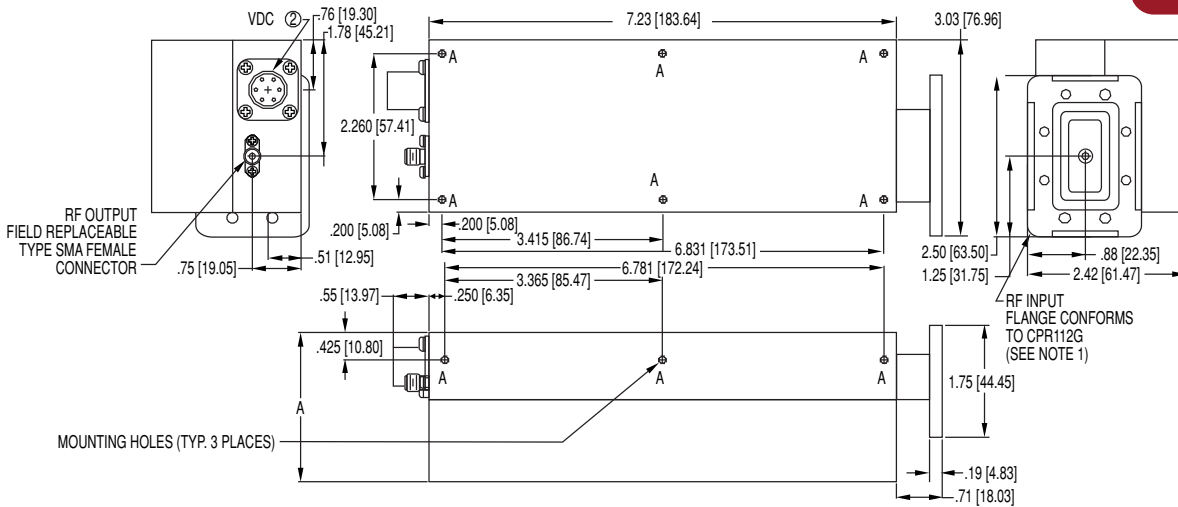
# OUTLINE DRAWINGS (CONT.)

**132513**



DASH NO.	DIM A
-1	.34 [8.72]
-2	.35 [8.89]

**135805**



**CONNECTOR PIN ASSIGNMENTS:**

PIN	FUNCTION
A	+15 VDC
B	GROUND
C	GROUND
D*	NORMALLY OPEN (FAULT)
E*	COMMON
F*	NORMALLY CLOSED (OPERATE)

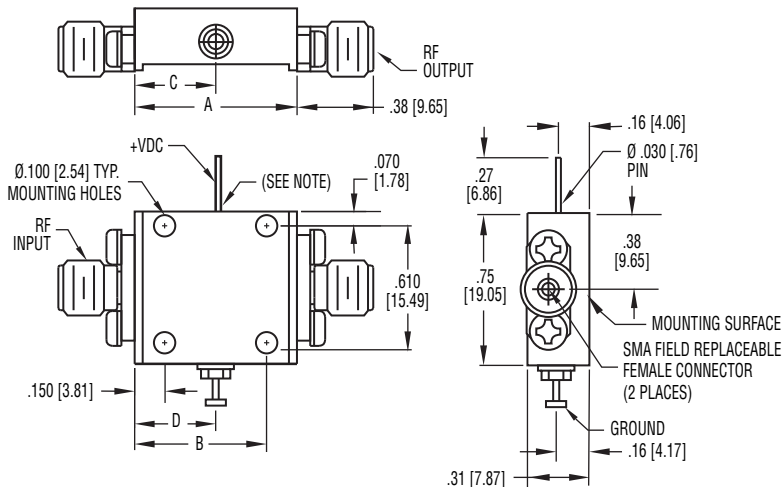
\*THESE FUNCTIONS ARE USED ONLY WITH FAULT ALARM OPTION.

DASH NO.	DIM A	DESCRIPTION
-1	2.30 [58.42]	AS SHOWN
-2	3.02 [76.71]	WITH POWER SUPPLY

**NOTES:**

- STANDARD UNIT AS SHOWN, FLAT FLANGE IS OPTIONAL
- MS3112E-106P MATES WITH MS3116E10-6S

**137138**

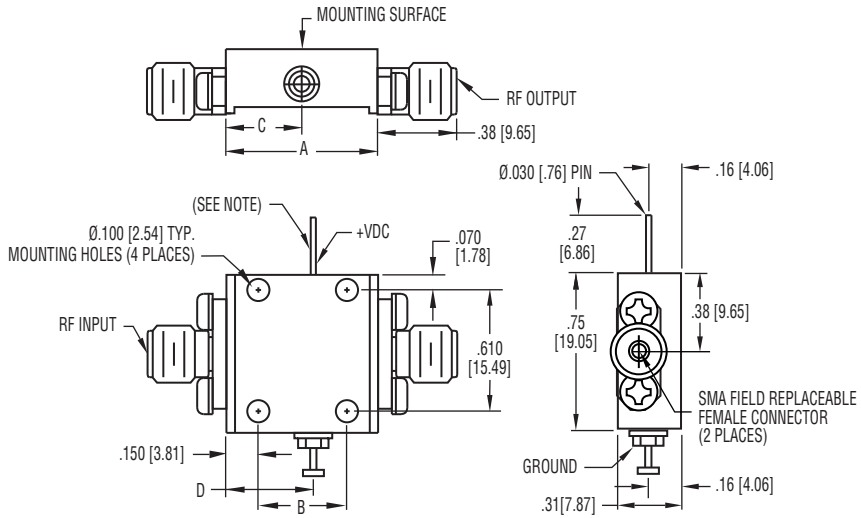


DASH NO.	DIM A	DIM B	DIM C&D
-4	.68 [17.27]	.529 [13.44]	.34 [8.64]
-5	.80 [20.32]	.650 [16.51]	.40 [10.16]
-6	.92 [23.37]	.771 [19.58]	.46 [11.68]

NOTE: DC POWER PIN MAY BE TRIMMED TO SUIT CUSTOMER REQUIREMENTS.

# OUTLINE DRAWINGS (CONT.)

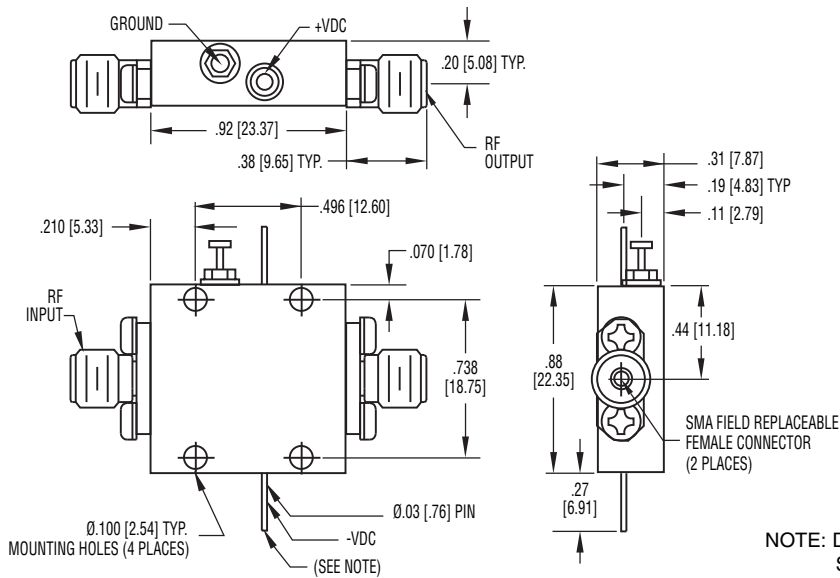
**137139**



DASH NO.	DIM A	DIM B	DIM C
-4	.62 [15.75]	.319 [8.10]	.31 [7.87]
-5	.72 [18.29]	.420 [10.67]	.36 [9.14]
-6	.82 [20.83]	.521 [13.23]	.41 [10.41]

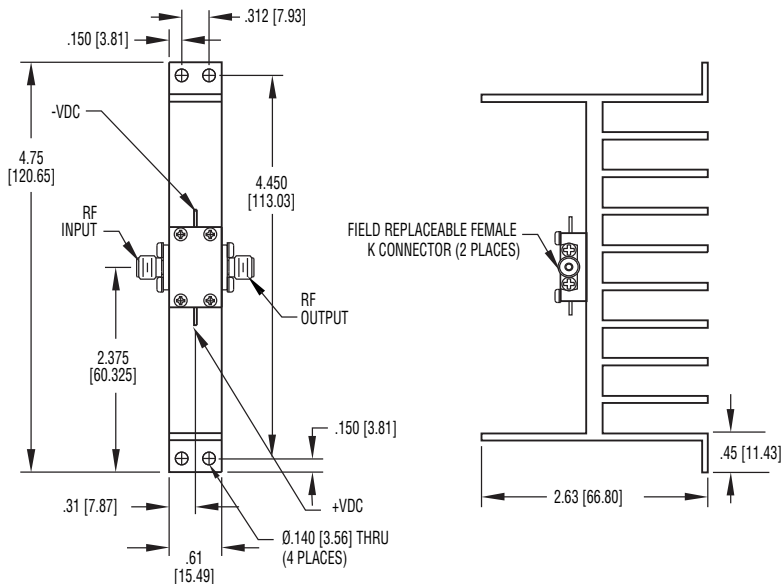
NOTE: DC POWER PIN MAY BE TRIMMED TO SUIT CUSTOMER REQUIREMENTS.

**137141**



NOTE: DC POWER PIN MAY BE TRIMMED TO SUIT CUSTOMER REQUIREMENTS.

**138002**

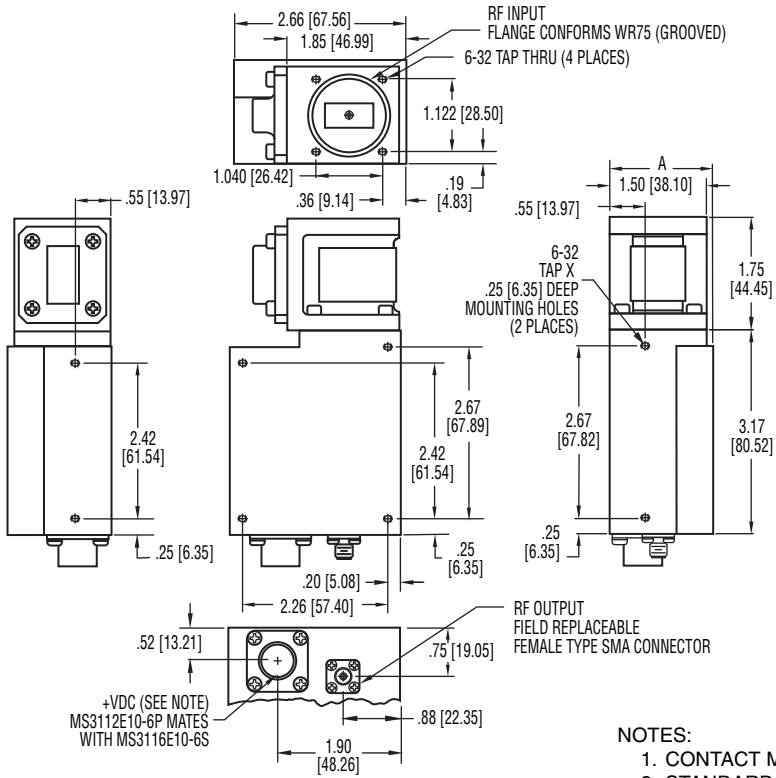


NOTES:

1. HEATSINK AND BASE PLATE ARE FIELD REMOVABLE, BUT NOT RECOMMENDED.
2. PLUS AND MINUS VDC TERMINAL MAY BE SWITCHED. CONTACT MITEQ FOR DETAILS.

# OUTLINE DRAWINGS (CONT.)

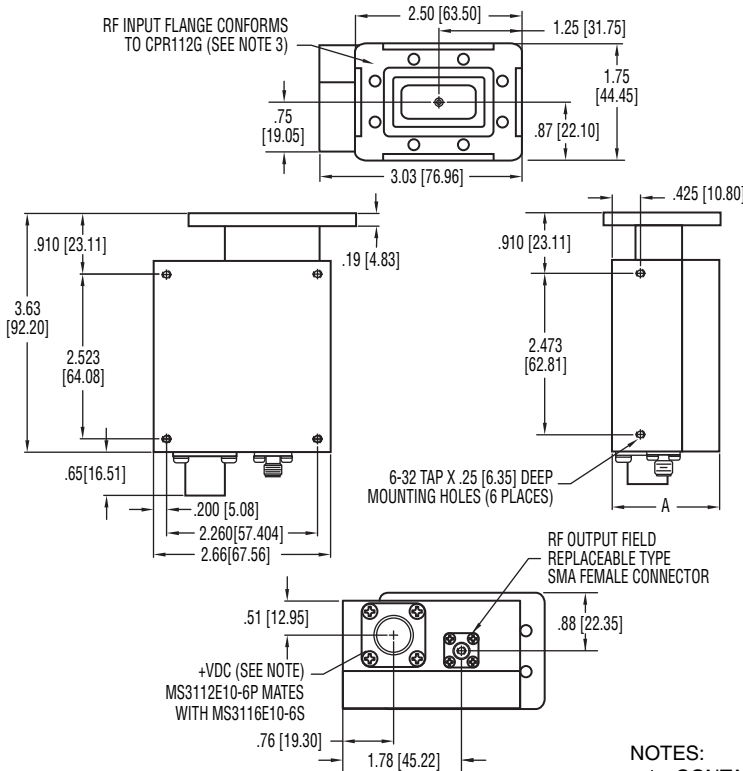
138966



DASH NO.	DIM A	OPTION P/N SUFFIX	DESCRIPTION
-1	1.68 [42.67]	NONE	STANDARD LNA
-1	1.68 [40.67]	-F	LNA WITH OPTIONAL FAULT ALARM
-2	2.30 [58.42]	-0	LNA WITH OPTIONAL 100-240 VAC POWER SUPPLY
-2	2.30 [58.42]	-0, -F	LNA WITH OPTIONAL FAULT ALARM AND 100-240 VAC POWER SUPPLY

- NOTES:
1. CONTACT MITEQ FOR VARIOUS PIN OUT CONFIGURATIONS.
  2. STANDARD UNIT IS AS SHOWN. COVER FLANGE IS OPTIONAL.
  3. TYPE N FIELD REPLACEABLE CONNECTOR AVAILABLE AS AN OPTION.

138968

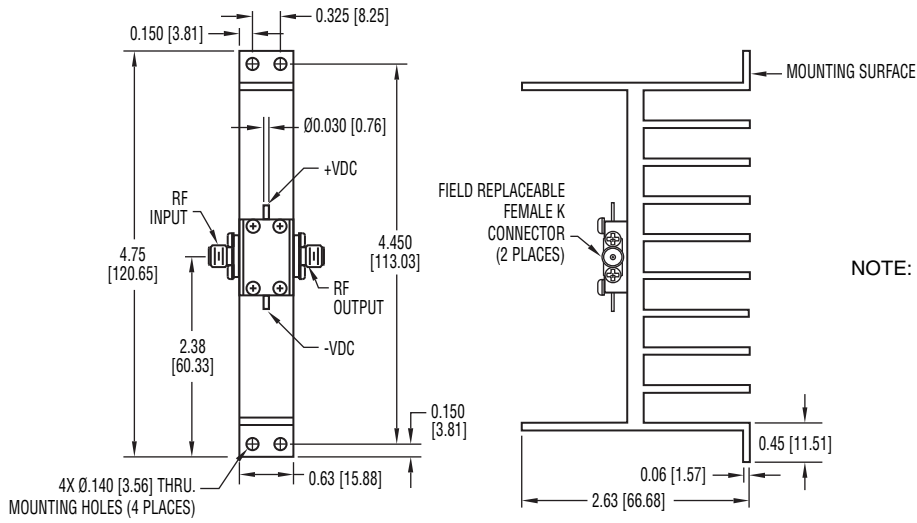


DASH NO.	DIM A	OPTION P/N SUFFIX	DESCRIPTION
-1	1.69 [42.93]	NONE	STANDARD LNA
-1	1.69 [42.93]	-F	LNA WITH OPTIONAL FAULT ALARM
-2	2.40 [60.96]	-0	LNA WITH OPTIONAL 100-240 VAC POWER SUPPLY
-2	2.40 [60.96]	-0, -F	LNA WITH OPTIONAL FAULT ALARM AND 100-240 VAC POWER SUPPLY

- NOTES:
1. CONTACT MITEQ FOR VARIOUS PIN OUT CONFIGURATIONS.
  2. STANDARD UNIT IS AS SHOWN. COVER FLANGE IS OPTIONAL.
  3. TYPE N FIELD REPLACEABLE CONNECTOR AVAILABLE AS AN OPTION.

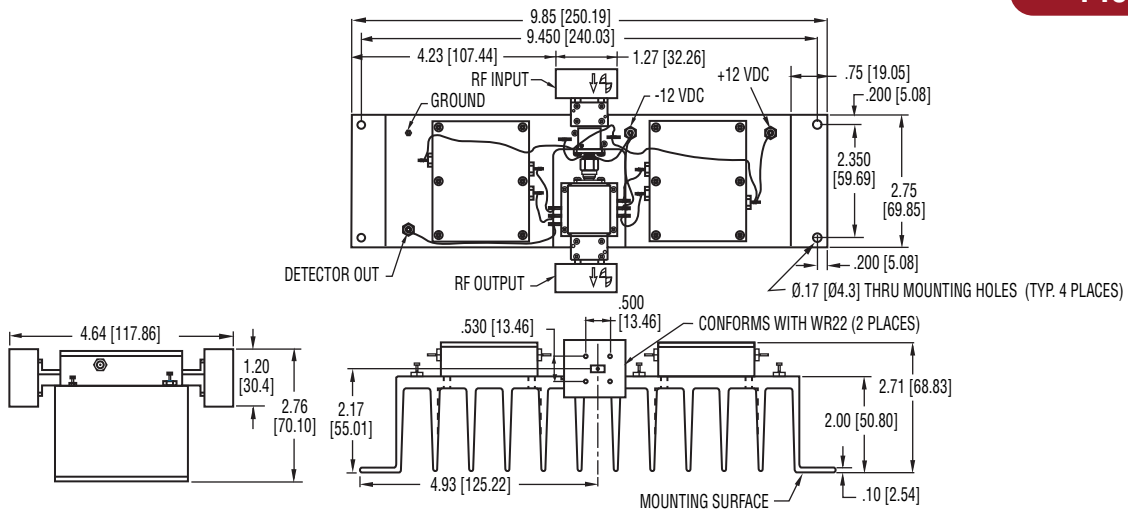
# OUTLINE DRAWINGS (CONT.)

139732

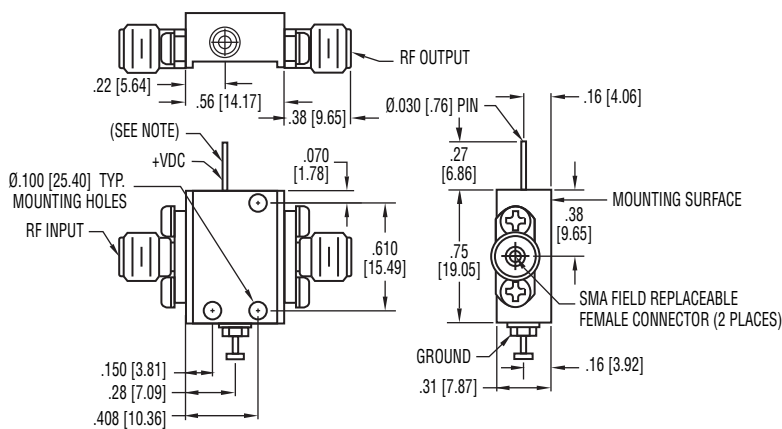


NOTE: HEATSINK AND BASE PLATE ARE FIELD REMOVABLE, BUT NOT RECOMMENDED.

140072



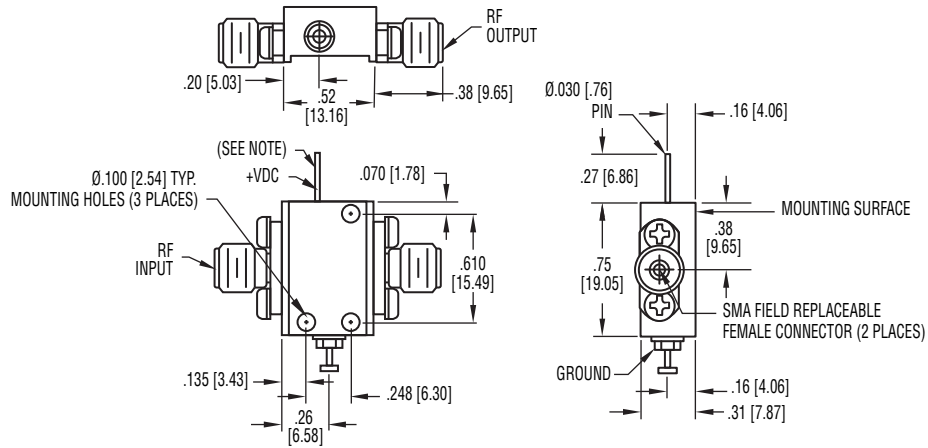
141132



NOTE: DC POWER PIN MAY BE TRIMMED TO SUIT CUSTOMER REQUIREMENTS.

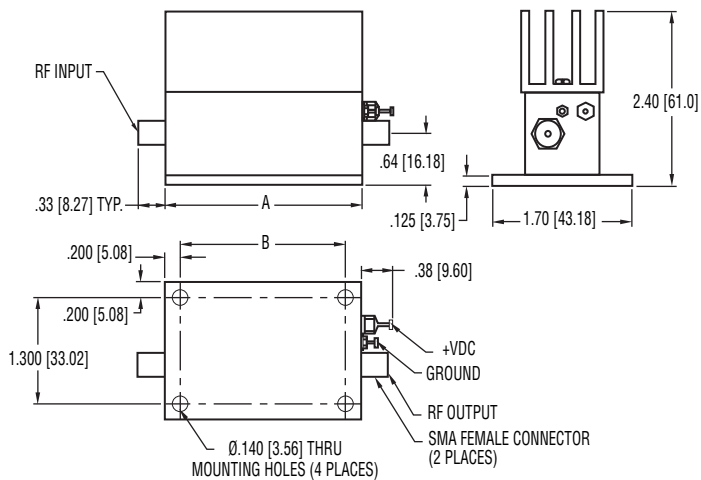
# OUTLINE DRAWINGS (CONT.)

141381



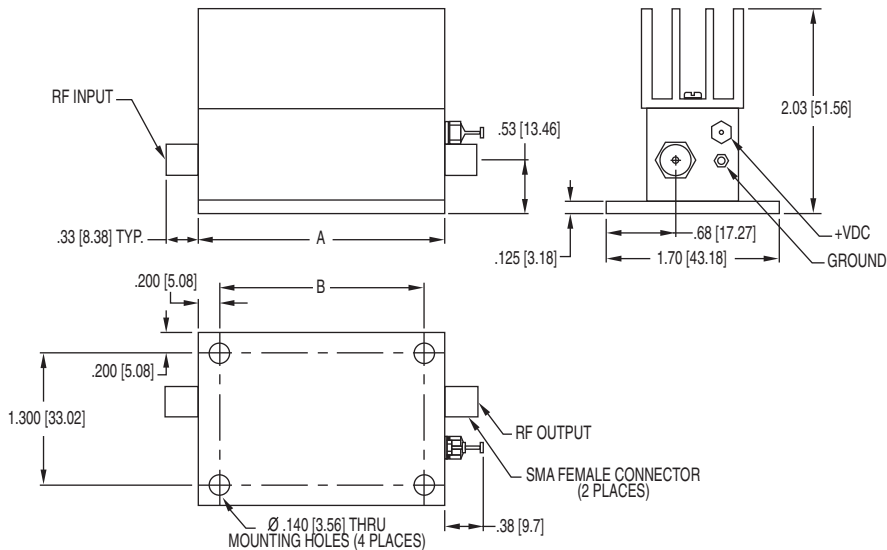
NOTE: DC POWER PIN MAY BE TRIMMED TO SUIT CUSTOMER REQUIREMENTS.

143477



DASH NO.	DIM A	DIM B
-1	1.136 [28.85]	.736 [18.69]
-2	1.776 [45.11]	1.376 [34.95]
-3	2.416 [61.37]	2.016 [51.21]
-4	3.056 [77.62]	2.656 [67.46]

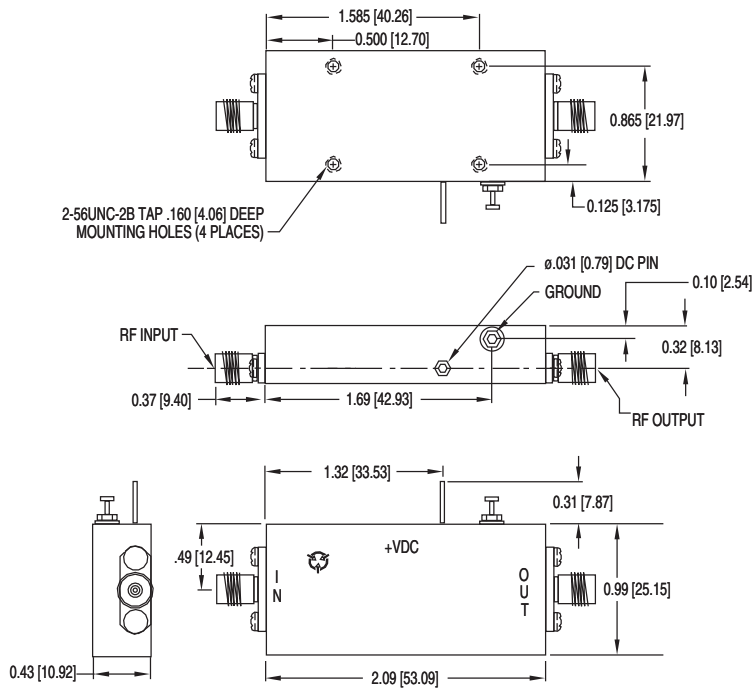
145393



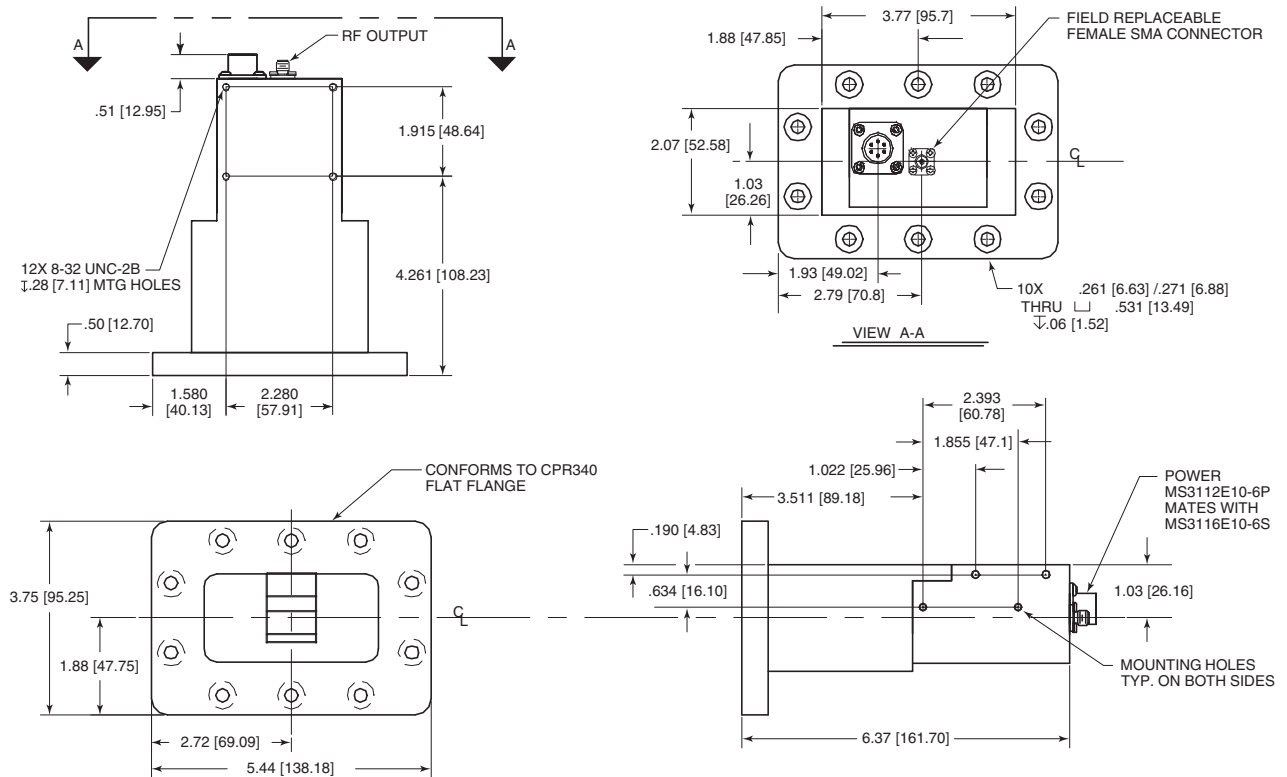
DASH NO.	DIM A	DIM B
-2	1.776 [45.11]	1.376 [34.95]
-3	2.416 [61.37]	2.016 [51.21]
-4	3.056 [77.62]	2.656 [67.46]
-5	3.696 [93.88]	3.296 [83.72]
-6	4.336 [110.13]	3.936 [99.97]

# OUTLINE DRAWINGS (CONT.)

157210

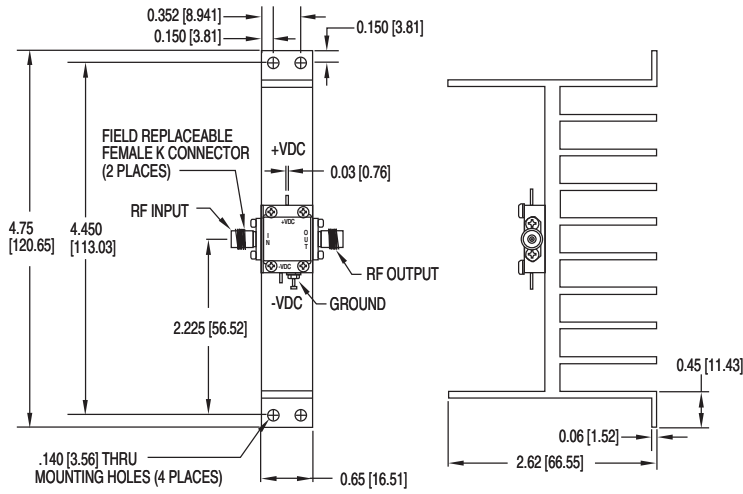


159554

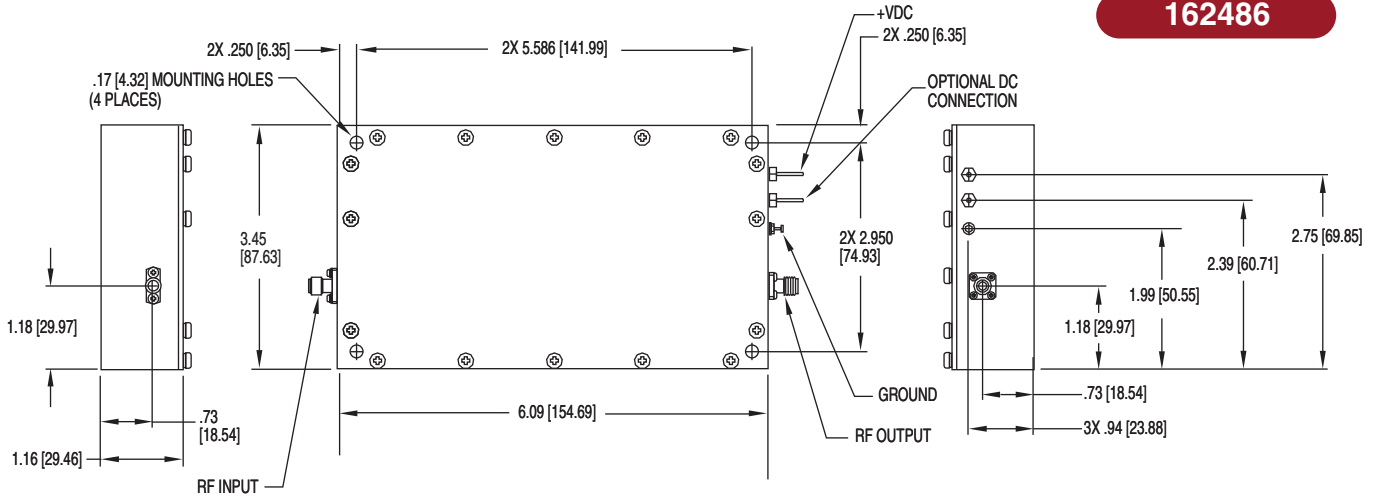


# OUTLINE DRAWINGS (CONT.)

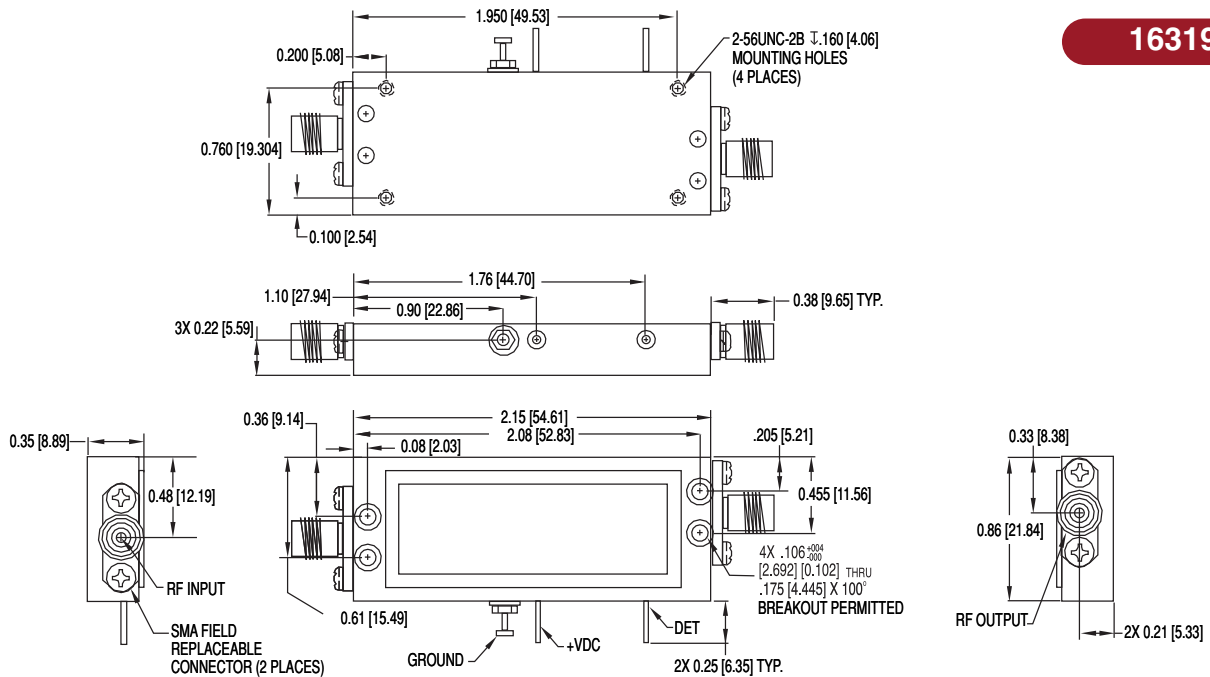
161196



162486

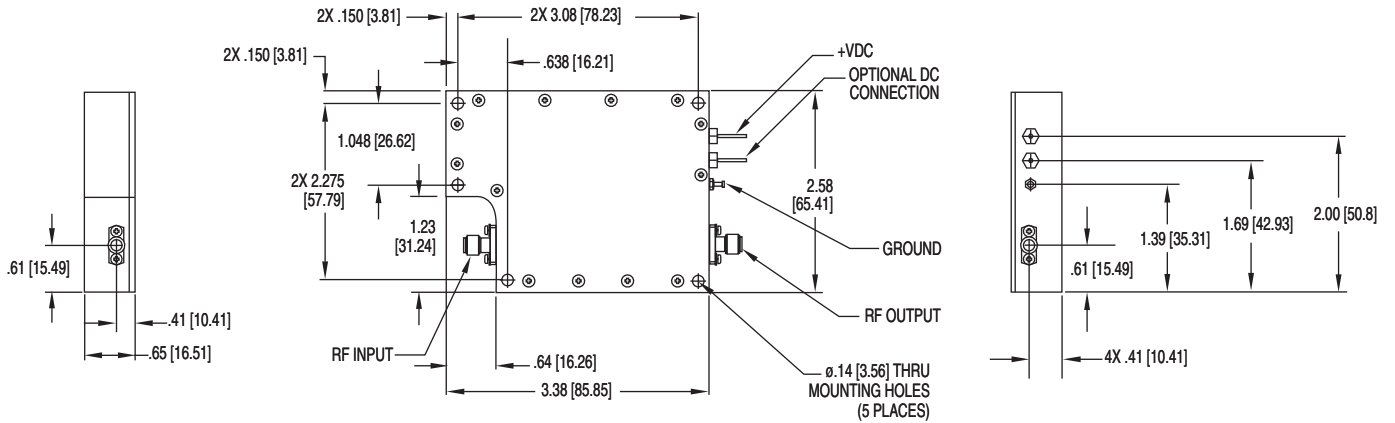


163190

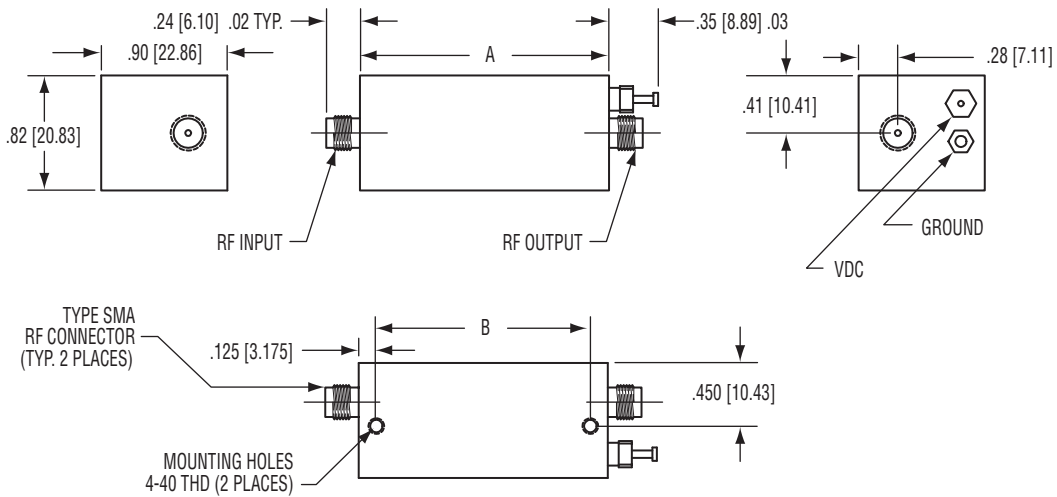


# OUTLINE DRAWINGS (CONT.)

163559



163639



DASH NO.	DIM A	DIM B
-14	1.776 [45.10]	1.526 [38.76]
-15	2.416 [61.37]	2.166 [55.02]
-16	3.056 [77.62]	2.806 [71.27]
-17	3.696 [93.88]	3.446 [87.53]



## ISO 9001:2000 CERTIFIED

MITEQ attained its original ISO 9001 registration in June 1993, when fewer than 1500 companies were registered. ISO 9001 has since become a recognized standard for quality in over 90 countries. Nationally, it is accepted by an ever-increasing number of government agencies in place of longstanding military specifications covering quality and inspection criteria. Among those are MIL-Q-9858 and MIL-I-45208.

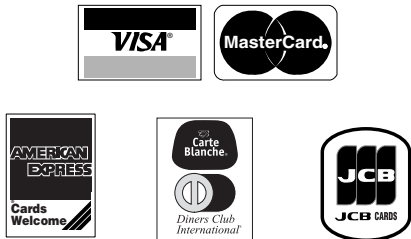


MITEQ's quality system is certified to ISO 9001 by National Quality Assurance USA (NQA), an accredited registrar of the American National Standards Institute - Registration Accreditation Board (ANSI-RAB). NQA performs a quality audit at MITEQ every six months to assure continued compliance to the standard. Additionally, MITEQ's internal auditing system, coupled with regular management reviews, assures that the quality system is effective, updated and constantly improved.

## ORDERING INFORMATION

### PRICING AND TERMS

A quotation on any item in the catalog is available by contacting the factory. All quotations, unless otherwise noted, are valid for 60 days from the date of issue, F.O.B. (FCA) Hauppauge, NY 11788. Pricing does not include customer or government source inspection unless otherwise noted. On international orders, an irrevocable letter of credit may be required. MITEQ accepts these credit cards:



### QUANTITY DISCOUNTS

A quantity discount is generally available on most catalog items. Due to the wide variety of devices in the catalog, it is not possible to provide a standard discount schedule. When quantities are involved, please contact the factory and the appropriate information will be provided.

### SHIPPING INFORMATION

Unless instructed otherwise by the customer, we will ship UPS in the U.S. F.O.B. (FCA) Hauppauge. Air freight will be used as the primary international means of shipment. Please indicate at time of purchase what method of shipment you require.

### DRAWINGS AND SPECIFICATIONS

The material presented in this catalog was current at the time of publication. MITEQ Inc.'s continuing product improvement program makes it necessary to reserve the right to change our mechanical and electrical specifications without notice. If either of these parameters is critical, please contact the factory to verify that the information is current.

### APPLICATION ENGINEERING

We maintain a large support staff of engineers who are experts in specific areas of microwave technology. Each has an engineering background that combines both a formal engineering education with training and experience in product design. As further technical support, we make available the services of our engineering and scientific staff, who may be consulted on more advanced circuit designs or application problems.

### RETURNED MATERIAL

When returning material for repair or replacement, please ensure that there is complete information included with the shipment, giving a detailed description of the reason for its return, the date and purchase order on which it was obtained, and the exact address to which the material is to be reshipped. All returns must arrive freight, postage, duties and handling prepaid.

### SOURCE INSPECTION

Government / customer source inspection is available on any item upon receipt of the complete written confirmation of purchase order items, including the prime government contract number. Source inspection with respect to some products increases the unit price and extends delivery because of duplicate standard final inspection and testing. It is recommended wherever possible that a Certificate of Compliance be substituted for source inspection to minimize price and delivery delays.

### REPAIR COSTS

Warranty repairs will be made at no cost to the customer. Units out of warranty, or those which have been mishandled, will require approval by the customer for the charges involved before the repairs can be accomplished. We will provide an estimate for the cost of the repair, which can be applied to the repair, if approval is granted. For those items that are deemed beyond repair, or where the customer may decide not to repair the unit, an evaluation fee and handling charge will be applicable.

## WARRANTY

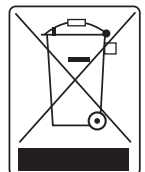
1. MITEQ, Inc. warrants to the purchaser that each of its products, when shipped will be free from defects in material and workmanship and will perform in full accordance with applicable specifications. The limit of liability under this warranty is at MITEQ, Inc.'s option to repair or replace any product or part thereof which shall within: (a) three years of delivery for indoor equipment, (b) two years of delivery for outdoor equipment and (c) one year of delivery for integrated assemblies or equipment having RF output powers equal to or greater than +24 dBm, be returned by the purchaser to MITEQ, Inc., at 100 Davids Drive, Hauppauge, New York, 11788, and shall, as determined by examination by MITEQ, Inc., prove defective in material and/or workmanship. Warranty returns must first be authorized in writing by MITEQ, Inc. Disassembly of any MITEQ, Inc. product by anyone other than an authorized representative of MITEQ, Inc. voids this warranty in its entirety. MITEQ, Inc. reserves the right to make changes in any of its products without incurring any obligation to make the same changes on previously delivered products.
2. Components and subsystems having been repaired by MITEQ, Inc. shall be warranted for that repair for ninety (90) days. For products that are still within the original warranty period as described above, the original warranty (if longer) will take precedence. For all SATCOM products, that portion of the system that is repaired, will be warranted for one year.
3. As a condition to the warranties provided for herein, the Buyer will prepay the shipping charges for all products returned to MITEQ, Inc. for repair and MITEQ, Inc. will pay the return shipping with the exception of rack mountable hardware returned from outside the United States in which case the buyer will pay the shipping charges.
4. The buyer will pay the cost of inspecting and testing any goods returned under the warranty or otherwise which are found to meet the applicable specifications or which are not defective or not covered by the warranty.
5. Products sold by MITEQ, Inc. shall not be considered defective or non-conforming to the Buyers' order if they (a) satisfactorily fulfill the performance requirements that were (i) provided by the Buyer to MITEQ, Inc. or (ii) as published in the Sellers' product specification literature, or (b) or in accordance with any written or verbal agreement between the Buyer and MITEQ, Inc., or (c) are in accordance with samples approved by the Buyer. This warranty shall not apply to any products or parts thereof which have been subject to accident, negligence, alteration, abuse or misuse. MITEQ, Inc. makes no warranty whatsoever in respect to accessories or parts not supplied by it.
6. Limitations of Warranty, Damages and Liability

EXCEPT AS EXPRESSLY SET FORTH HEREIN, THERE ARE NO WARRANTIES, CONDITIONS, GUARANTEES OR REPRESENTATIONS AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTIES, CONDITIONS, GUARANTEES OR REPRESENTATIONS, WHETHER EXPRESSED OR IMPLIED, IN LAW OR IN FACT, ORAL OR IN WRITING.

MITEQ, INC.'S AGGREGATE LIABILITY IN DAMAGES OR OTHERWISE SHALL NOT EXCEED THE PAYMENT, IF ANY, RECEIVED BY MITEQ, INC. FOR THE UNIT OF PRODUCT OR SERVICE FURNISHED OR TO BE FURNISHED, AS THE CASE MAY BE, WHICH IS THE SUBJECT OF CLAIM OR DISPUTE. IN NO EVENT SHALL MITEQ, INC. BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES, HOWSOEVER CAUSED.

7. All matters regarding this warranty shall be interpreted in accordance with the laws of the State of New York and any controversy that cannot be settled directly shall be settled by arbitration in New York, New York in accordance with the rules then prevailing of the American Arbitration Association, and judgement upon the award rendered may be entered in any court having jurisdiction thereof.
8. As required by Article 10(3) and Article 11(2) of Directive 2002/96/EC (WEEE Directive) of the European Parliament and the Council of the European Union, and in accordance with European Standard EN 50419, MITEQ Inc. labels its products with the following symbol:

This symbol indicates that the product cannot be thrown into the trash, and must be collected and treated in accordance with Directive 2002/96/EC and local regulations.



**MITEQ FEDERAL SUPPLY CODE**

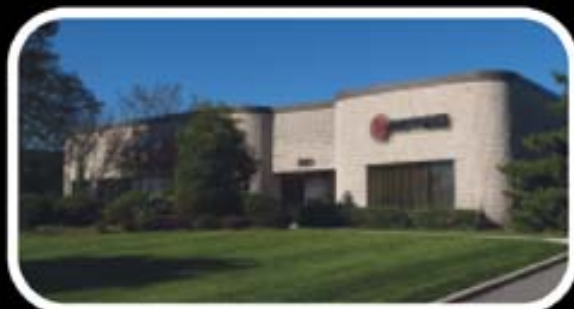
**Our Federal Supply Code is: 33592**



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320 Oser Avenue • Hauppauge, NY



380 Oser Avenue • Hauppauge, NY



330 Oser Avenue • Hauppauge, NY

