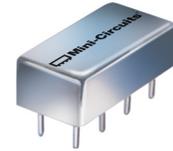


# Plug-In Amplifier

## MAN-1AD

50Ω High Isolation 5 to 500 MHz



CASE STYLE: A05  
PRICE: \$28.70 ea. QTY (1-9)

### Features

- wideband, 5 to 500 MHz
- active directivity (isolation-gain), 35 dB typ.
- hermetic, metal case
- protected by US Patent, 6,943,629

### Applications

- military, hi-rel applications
- two-tone 3rd order IM testing
- VHF/UHF
- laboratory

### Amplifier Electrical Specifications

MODEL NO.	FREQUENCY (MHz)		GAIN (dB)			MAXIMUM POWER (dBm)			DYNAMIC RANGE		VSWR (:1) Typ.		ACTIVE DIRECTIVITY* (dB)				DC POWER	
	$f_L$	$f_U$	Min.	m	Flatness Max. Total Range	L	U	Input (no damage)	NF (dB) Typ.	IP3 (dBm) Typ.	In	Out	L		U		Volt (V) Nom.	Current (mA) Max.
MAN-1AD	5	500	16	±0.5	±1.0	+7	+6	+15	7.2	+20	1.6	1.7	35	25	30	20	12	85

\*Active Directivity(dB)= Isolation (dB)- Gain (dB)

Open load is not recommended, potentially can cause damage.  
With no load derate max input power by 20 dB.

L= low range ( $f_L$  to  $f_U/2$ ) m= mid range ( $2f_L$  to  $f_U/2$ ) U= upper range ( $f_U/2$  to  $f_U$ )

### Pin Connections

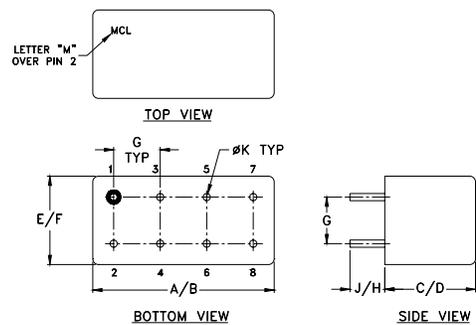
RF IN	1
RF OUT	8
DC	5
GROUND	2,3,4,6
CASE GROUND	2,3,4,6
NOT USED	7

### Maximum Ratings

Operating Temperature	-54°C to 85°C
Storage Temperature	-55°C to 100°C
DC Voltage	+14V Max.

Permanent damage may occur if any of these limits are exceeded.

### Outline Drawing



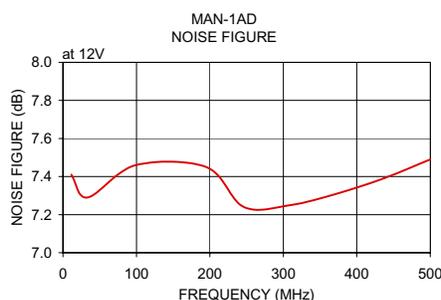
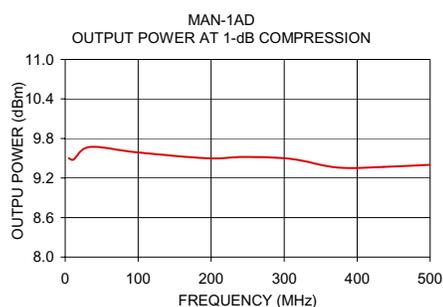
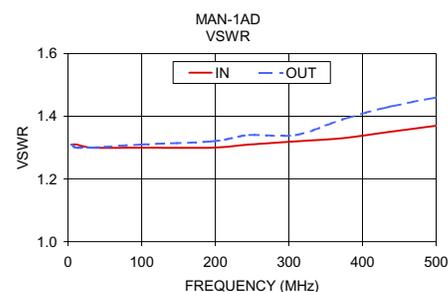
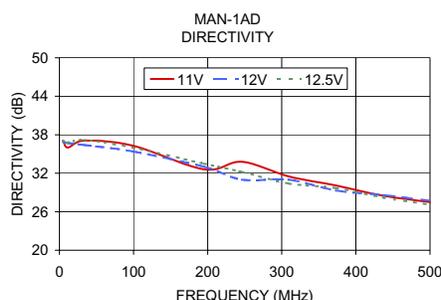
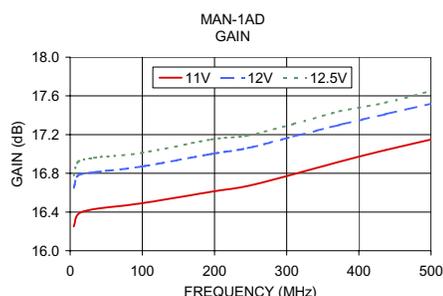
### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	wt
.770	.800	.240	.250	.370	.400	.200	.20	.14	.031	grams
19.558	20.32	6.096	6.35	9.398	10.16	5.08	5.08	3.556	0.7874	3.7

#### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits' standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

FREQUENCY (MHz)	GAIN (dB)			DIRECTIVITY (dB)			VSWR (:1)		NOISE FIGURE (dB)	P <sub>OUT</sub> at 1 dB COMPR. (dBm)
	11V	12V	12.5V	11V	12V	12.5V	IN	OUT		
5.00	16.25	16.65	16.78	37.10	36.90	37.10	1.31	1.31	—	9.50
11.30	16.38	16.78	16.92	36.00	36.70	36.80	1.31	1.30	7.41	9.48
33.40	16.43	16.81	16.96	37.10	36.40	37.20	1.30	1.30	7.29	9.67
98.80	16.49	16.87	17.01	36.30	35.40	36.00	1.30	1.31	7.46	9.59
195.40	16.61	17.00	17.15	32.60	33.00	33.50	1.30	1.32	7.45	9.50
246.20	16.67	17.06	17.19	33.80	31.00	32.20	1.31	1.34	7.24	9.52
309.60	16.79	17.18	17.31	31.50	31.00	30.40	1.32	1.34	7.25	9.49
373.10	16.92	17.30	17.44	30.10	29.30	29.70	1.33	1.39	7.31	9.36
436.50	17.04	17.41	17.53	28.50	28.60	28.20	1.35	1.43	7.39	9.37
500.00	17.15	17.52	17.65	27.50	27.70	27.10	1.37	1.46	7.49	9.40



**Notes**

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

