

High Performance Amplifier, 21 dB Gain 10 - 500 MHz

AM-/AMC-146

V2.00

Features

- 4 dB Typical Midband Noise Figure
- + 38 dBm Typical Midband Third Order Intercept
- +24 dBm Typical Midband 1 dB Compression

Guaranteed Specifications* (From -55°C to +85°C Case Temp)

Frequency Range	10-500 MHz
Gain (+25°C) @ 50 MHz	21 ± 0.7 dB
Frequency Response	± 1 dB
Gain Variation with Temperature	+ 0.8, - 1.2 dB
Output Power (1 dB Compression)	+ 20.0 dBm Min
Noise Figure	
10-500 MHz	7 dB Max
10-300 MHz	5.5 dB Max
Reverse Transmission	
	- 30 dB Max
	- 35 dB Typ
VSWR	2:1 Max
Intermodulation Intercept Point (for two-tone output power up to +10 dBm)	
Second Order	+ 40 dBm Min
Third Order	+ 30 dBm Min
Bias Power	+ 15 VDC @ 140 mA Max (130 mA, 2W Typical)

Operating Characteristics

Impedance	50 Ohms Nominal
Maximum Rating	
RF Input	+ 10 dBm Max
Environmental	
MIL-STD-883 screening available.	
Pin Configuration	IN, P6; OUT, P1; VDC, P5, P10

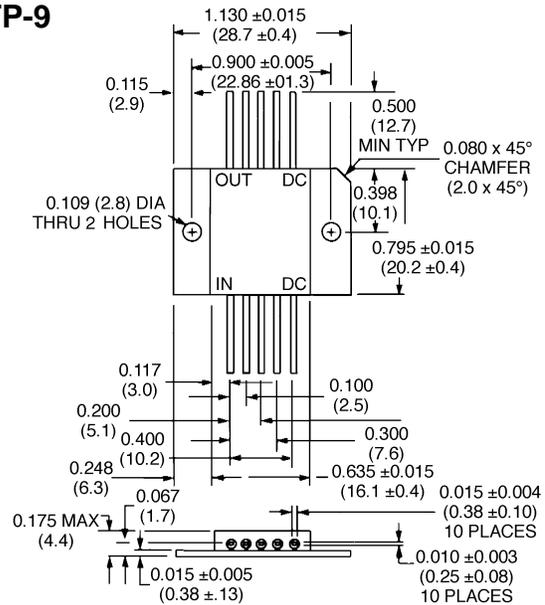
*All specifications apply when operated at +15 VDC with 50 ohm source and load impedance. This product contains elements protected by United States Patent Number 3,624,536.

Heat Sinking: Operation at case temperature above 95°C is not recommended. Heat sinking adequate to dissipate 2 W. Must be provided in use.

Ordering Information

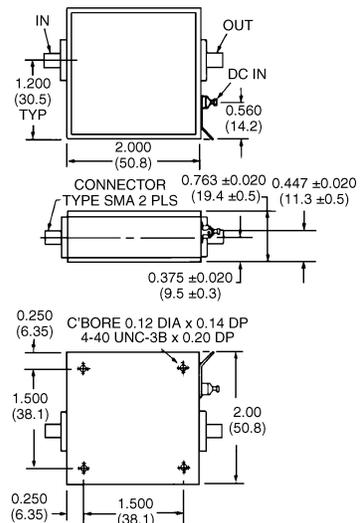
Model No.	Package
AM-146 PIN	Flatpack
AMC-146 SMA	Connectorized

FP-9



Dimensions in () are in mm.
Unless Otherwise Noted: .x = ±0.04 (1.00)
.xx = ±0.02 (0.50)
.xxx = ±0.010 (0.250)
WEIGHT (APPROX.): 0.18 OUNCES 5 GRAMS

C-25



Dimensions in () are in mm.
Unless Otherwise Noted: .x = ±0.04 (1.00)
.xx = ±0.02 (0.50)
.xxx = ±0.010 (0.250)
WEIGHT (APPROX.): 3.2 OUNCES 90 GRAMS

Specifications Subject to Change Without Notice.

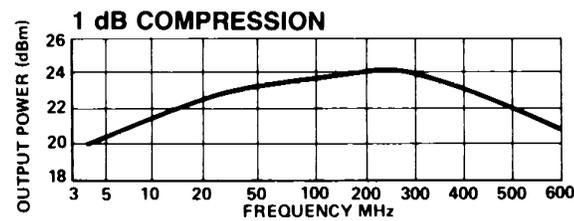
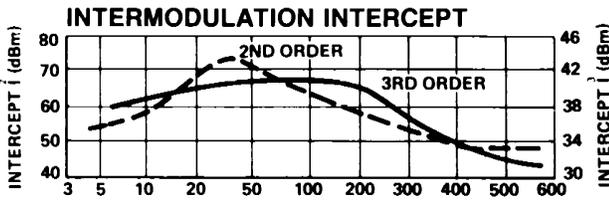
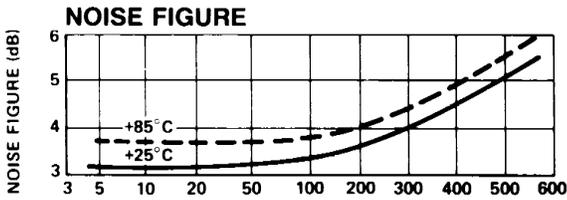
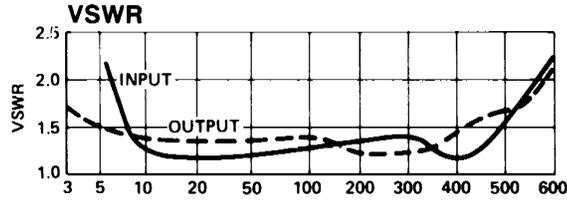
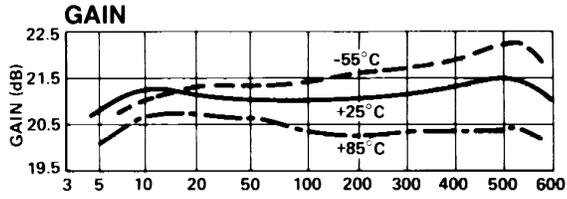
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Typical Performance



Typical S-Parameter Data

AM-146		S11		S21		S12		S22	
FREQUENCY	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG	
10.0	0.13	-118.5	11.44	16.8	0.02	7.1	0.14	164.6	
20.0	0.12	-144.0	11.63	-1.0	0.02	-4.0	0.16	168.2	
50.0	0.13	-175.5	11.56	-27.1	0.02	-25.3	0.15	155.9	
75.0	0.14	169.0	11.49	-44.3	0.02	-41.3	0.13	143.8	
100.0	0.15	163.8	11.45	-59.9	0.02	-55.7	0.08	132.5	
200.0	0.16	121.4	11.24	-120.3	0.02	-113.3	0.05	160.6	
300.0	0.18	86.3	11.34	176.4	0.02	-170.1	0.07	167.7	
400.0	0.20	55.2	11.33	110.4	0.02	133.3	0.12	159.2	
500.0	0.23	13.1	10.84	31.1	0.01	75.6	0.23	174.8	

Frequency in MHz.

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