

Cascadable Thin Film Amplifier, 20 dB Gain, 10 - 2000 MHz

**AM-184/AMC-184
V3**

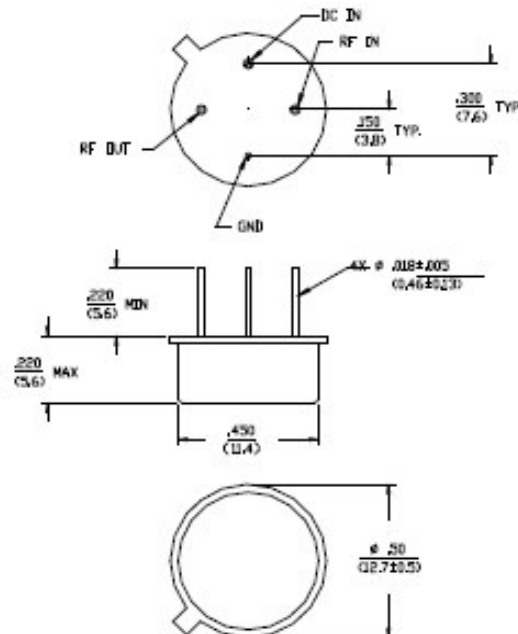
Features

- 20 dB High Gain
- 60 mA Maximum Low Power

Description

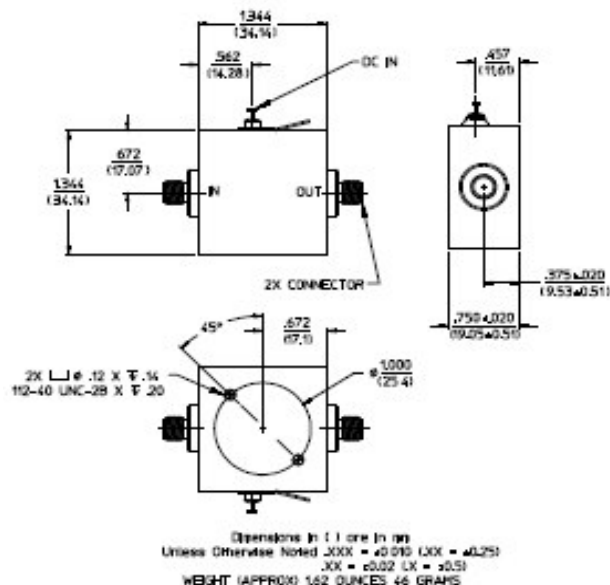
M/A-COM's AM-184 is a feedback amplifier with high intercept and compression points. This amplifier is packaged in a TO-8 package. Due to the internal power dissipation the thermal rise should be minimized. The ground plane on the PC board should be configured to remove heat from under the package. AM-184 is ideally suited for use where a high intercept, high reliability amplifier is required.

TO-8-1



Dimensions in ϕ are in mm
Unless Otherwise Noted .XXX = ± 0.010 (.XX = ± 0.25)
.XX = ± 0.02 (.X = ± 0.5)
WEIGHT (APPROX) 0.00 OUNCES 0.0 GRAMS

C-32



Absolute Maximum Ratings¹

Parameter	Absolute Maximum
Max. Input Power	+13 dBm
V _{bias}	+15.75 V
Operating Temperature	-55°C to +85°C
Storage Temperature	-65°C to +125°C

1. Operation of this device above any one of these parameters may cause permanent damage.

**Cascadable Thin Film Amplifier,
 20 dB Gain, 10 - 2000 MHz**
**AM-184/AMC-184
 V3**
Electrical Specifications: ^{2,3} T_A = -55°C to +85°C Case Temperature

Parameter	Test Conditions	Frequency	Units	Min.	Typ.	Max.
Gain	@+25°C	1000 MHz	dB	19.0	20.0	21.0
Frequency Response	—	10 - 2000 MHz	dB	—	—	±1.5
Gain Variation with Temperature	—	10 - 2000 MHz	dB	—	—	±1.5
1 dB Compression	Output Power	10 - 2000 MHz	dBm	+10	—	—
Noise Figure	—	10 - 2000 MHz	dB	—	—	6.0
Reverse Transmission	—	10 - 2000 MHz	dB	—	-30	-27
VSWR	—	10 - 2000 MHz	Ratio	—	—	2.0:1
Output IP ₂	Two-Tone inputs up to 0 dBm	10 - 2000 MHz	dBm	+30	—	—
Output IP ₃	Two-Tone inputs up to 0 dBm	10 - 2000 MHz	dBm	+20	—	—
Vbias	—	—	VDC	+14.5	+15.0	+15.5
Ibias	Vbias = +15.0 VDC	—	mA	—	52	60
Power Dissipation	@ +15 V Bias	—	mW	—	780	—

2. All specifications apply when operated at +15 VDC, with 50 ohms source and load impedance.

3. Heat Sinking: Operation at case temperature above 95°C is not recommended. Heat sinking adequate to dissipate 1.0 W must be provided in use.

S-Parameter Data

Frequency (MHz)	S11 MAG/ANG	S21 MAG/ANG	S12 MAG/ANG	S22 MAG/ANG
10	0.13/-171.5	10.33/6.2	0.03/4.5	0.10/80.7
20	0.12/-175.9	10.18/0.3	0.03/2.8	0.08/47.2
40	0.12/174.6	10.48/-4.6	0.03/1.4	0.08/7.2
100	0.12/165.0	10.51/-15.7	0.03/-1.8	0.06/-38.9
200	0.12/149.1	10.42/-32.4	0.03/-4.8	0.05/-76.4
500	0.12/105.1	10.13/-79.8	0.03/-12.1	0.10/-131.1
1000	0.12/9.8	9.60/-156.4	0.03/-27.2	0.12/173.5
1500	0.14/-99.8	9.53/126.5	0.02/-51.5	0.14/-89.3
2000	0.28/176.9	9.63/53.4	0.01/-75.0	0.30/-142.7

2

M/A-COM Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. M/A-COM makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does M/A-COM assume any liability whatsoever arising out of the use or application of any product(s) or information.

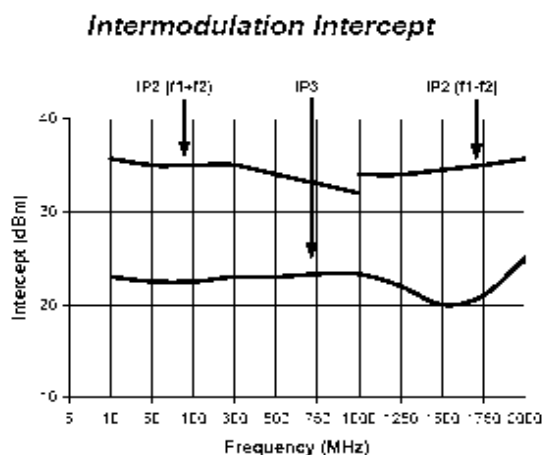
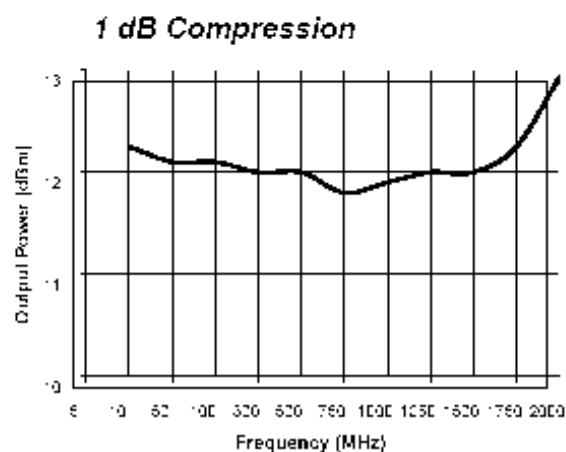
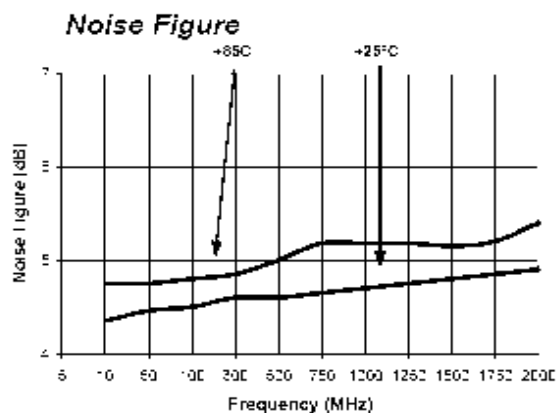
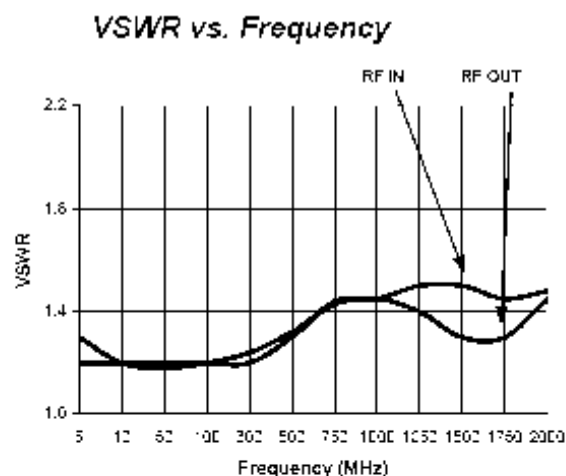
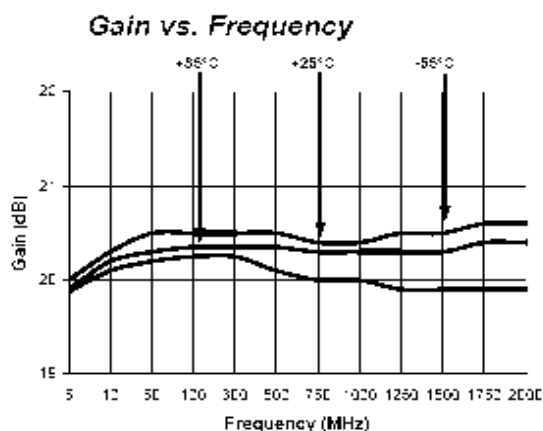
• **North America** Tel: 800.366.2266 / Fax: 978.366.2266
 • **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
 • **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

Visit www.macom.com for additional data sheets and product information.

**Cascadable Thin Film Amplifier,
20 dB Gain, 10 - 2000 MHz**

**AM-184/AMC-184
V3**

Typical Performance Curves



Ordering Information

Part Number	Package
AM-184 PIN ⁴	TO-8-1
AMC-184 SMA	C-32

4. Mounting kit part number AU00071 required for PCB applications.