

Surface Mount Monolithic Amplifier

MAV-11SM+ MAV-11SM

50Ω 50 to 1000 MHz



CASE STYLE: RRR137
PRICE: \$1.62 ea. QTY. (30)

+ RoHS compliant in accordance
with EU Directive (2002/95/EC)

The +Suffix identifies RoHS Compliance. See our web site
for RoHS Compliance methodologies and qualifications.

Features

- wideband, 50 to 1000MHz
- high output power, up to +17.5 dBm typ.
- low noise, 3.6 dB typ.

Applications

- UHF - TV
- cellular
- defense communication
- UHF/VHF receivers/transmitters

Electrical Specifications at 25°C

FREQ ¹ (MHz)		GAIN (dB) Typical at MHz			MAXIMUM POWER (dBm)		DYNAMIC RANGE		VSWR (:1) Typ.		ABSOLUTE MAXIMUM RATING ⁵		DC OPERATING POWER ⁶ at Pin 3		THERMAL RESISTANCE ⁴
f _L	f _u	100	1000	Min. ²	Output (1 dB Compr.) Typ.	Input (no damage)	NF (dB) Typ.	IP3 (dBm) Typ.	In	Out	I (mA)	P (mW)	Current (mA)	Device Volt Typ.	θ _{jc} , Typ. °C/W
50	1000	12.7	10.5	9.0	+17.5	+13	3.6	+30.0	1.5	1.7	80	550	60	5.50	125

1. Low frequency cutoff determined by external coupling capacitors.
2. Minimum gain at highest frequency at full temperature range.
3. Frequency at which output power, NF and IP3 are specified: 500 MHz
4. Thermal resistance θ_{jc} is from hottest junction in device to mounting surface of leads.
5. Permanent damage may occur if any of these limits are exceeded. These ratings are not intended for continuous normal operation.
6. Supply voltage must be connected to pin 3 through a bias resistor in order to prevent damage. See "Biasing MMIC Amplifiers" in minicircuits.com/application.html. Reliability predictions are applicable at specified current & normal operating conditions.

Maximum Ratings

Operating Temperature	-20°C to 85°C
Storage Temperature	-55°C to 100°C

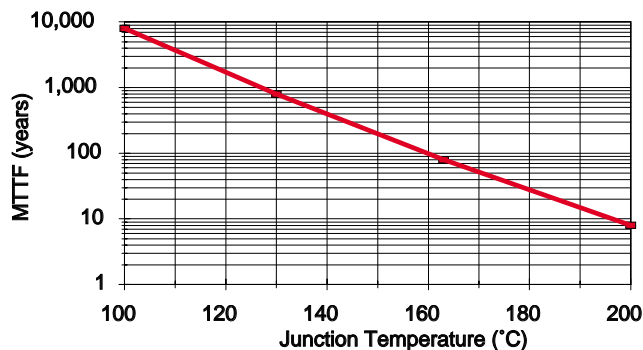
Pin Connections

RF IN	1
RF OUT	3
DC	3
GROUND	2,4

Model Identification

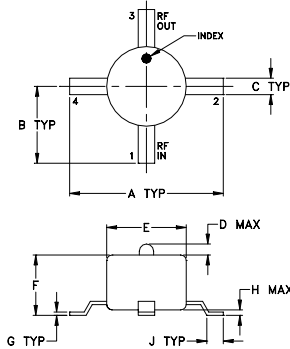
MAV-11SM(+)	A
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MTTF vs. Junction Temp.

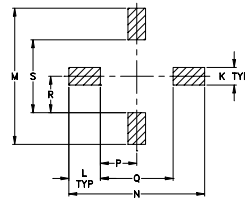


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Outline Drawing

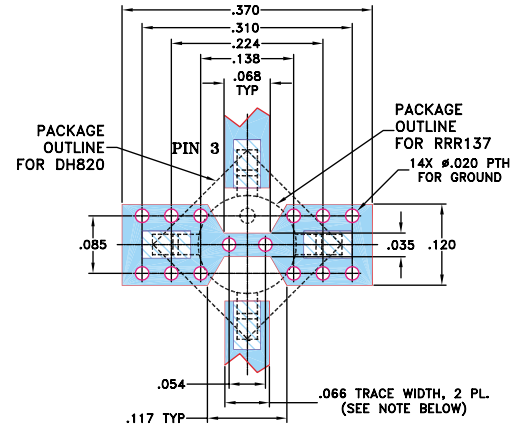


PCB Land Pattern



Suggested Layout,
Tolerance to be within ± 0.002

Demo Board MCL P/N: MAV-TB-411-11+ Suggested PCB Layout (PL-169)



- NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS $.030 \pm .002$ "; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	
.28	.14	.030	.020	.145	.110	.007	.020	.03	
7.11	3.56	0.76	0.51	3.68	2.79	0.18	0.51	0.76	
K	L	M	N	P	Q	R	S	wt.	
.040	.072	.310	.310	.084	.167	.084	.167	grams	
1.02	1.83	7.87	7.87	2.13	4.24	2.13	4.24	.015	

Typical Biasing Configuration

