

Drop-In

NON-CATALOG

# Monolithic Amplifier

## MAR-7+

50Ω

DC to 2000 MHz



CASE STYLE: VV105

### Features

- wideband, DC to 2000 MHz
- high gain, up to 32.5 dB @ 100 MHz
- low noise
- MAR-7+ is equivalent to MSA-0785
- cascadable
- protected by US Patent, 6,943,629 (except MAR-6+)

### Applications

- cellular
- PCN instrumentation

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

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

### Electrical Specifications \*

MODEL NO.	FREQ. <sup>2</sup> (MHz)		GAIN (dB) Typical at MHz				MAXIMUM POWER (dBm)		DYNAMIC RANGE		VSWR (∓1) Typ.		ABSOLUTE MAXIMUM RATING <sup>5</sup> (25°C)		DC OPERATING POWER <sup>7</sup> at Pin 3		THERMAL RESISTANCE <sup>5</sup>
	f <sub>L</sub>	f <sub>U</sub>	100	1000	2000	Note 1 Min.	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.	°C/W
MAR-7+	DC	2000	13.5	12.5	11.0	8.5	+7.0	+13	5.0	+19.0	1.7	1.7	60	275	22	4.0	120

\* Test data based on models tested with bent leads per case style WW107

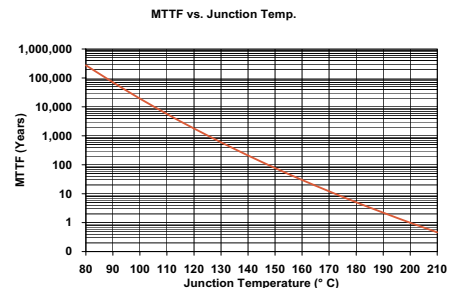
#### NOTES:

1. Minimum gain over the full frequency range and temperature range.
2. Low frequency cutoff determined by external coupling capacitors.
5. Thermal resistance (tj-c) is from hottest junction in device to mounting surface of leads.
6. Permanent damage may occur if any of these limits are exceeded. These ratings are not intended for continuous normal operation.
7. 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](http://minicircuits.com/application.html). Reliability predictions are applicable at specified current & normal operating conditions.

### Maximum Ratings

Operating Temperature -40°C to 85°C

Storage Temperature -55°C to 100°C



### Pin Connections

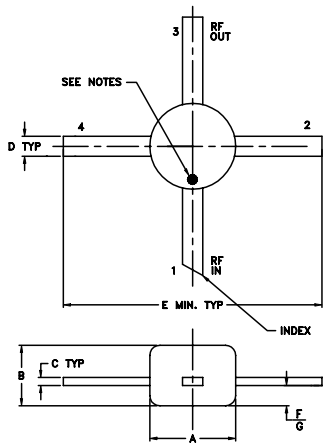
RF IN	1
RF OUT	3
DC	3
GROUND	2,4

### Model Identification

Model No.	Marking†
MAR-7+	A07

†Prefix letter (optional) designates assembly location

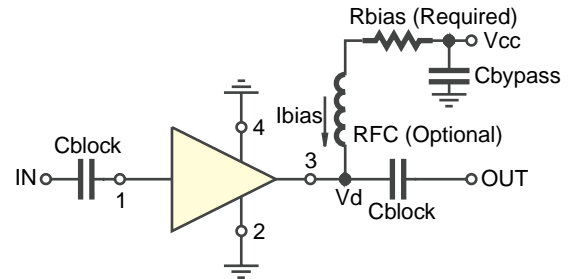
## Outline Drawing



## Outline Dimensions (inch mm)

A	B	C	D	E	F	G	wt
.085	.060	.008	.020	.250	.012	.025	grams
2.16	1.52	0.20	0.51	6.35	0.30	0.64	.015

## Typical Biasing Configuration



Resistor Values ("1%" Res.)	
Vcc	MAR-7+
7	137
8	182
9	226
10	274
11	316
12	365
13	412
14	456
15	499