

Drop-In

NON-CATALOG

Monolithic Amplifier

MAR-7+

50Ω

DC to 2000 MHz



CASE STYLE: VV105

+ 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.

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

Electrical Specifications *

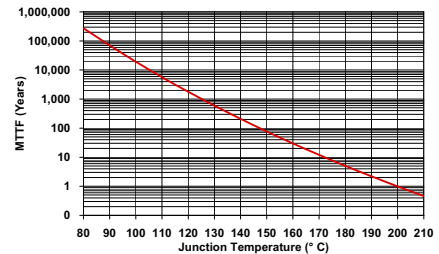
MODEL NO.	FREQ. ² (MHz)		GAIN (dB) Typical at MHz				MAXIMUM POWER (dBm)		DYNAMIC RANGE		VSWR (:1) Typ.		ABSOLUTE MAXIMUM RATING ⁵ (25°C)		DC OPERATING POWER ⁷ at Pin 3		THERMAL RESISTANCE ⁵
	f _L	f _U	100	1000	2000	Note 1 Min.	Output (1 dB Compr.) Typ.	Input (no damage)	NF (dB) Typ.	IP3 (dBm) Typ.	In	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 (t_{jc}) 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. Reliability predictions are applicable at specified current & normal operating conditions.

MTTF vs. Junction Temp.



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+	07

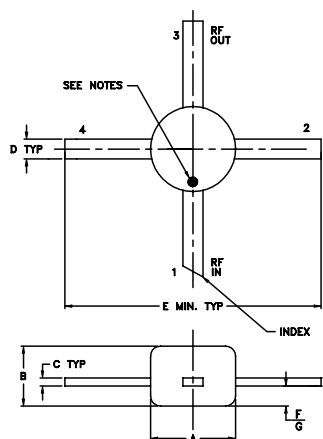


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For detailed performance specs & shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.

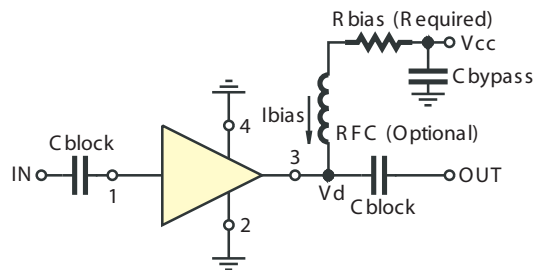
Outline Drawing



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.)	
V_{cc}	MAR-7+
7	137
8	182
9	226
10	274
11	316
12	365
13	412
14	456
15	499