

Drop-In

# Monolithic Amplifier

50Ω, DC to 1000 MHz

**NEW!**

**MAR-8A**



CASE STYLE: VV105

## Features

- exact footprint substitute\*\* MAR-8 and MSA-0885
- high gain, 31.5 dB at 100 MHz, reduces component count
- high power output, +12.5 dBm typ.
- low noise
- improved stability
- protection against power supply transients
- patent pending

## Applications

- cellular
- PCN & instrumentation

## Electrical Specifications @ 25°C

MODEL NO.	FREQ. (MHz) $f_L - f_U$	GAIN, dB Typical @MHz			MAXIMUM POWER, dBm Output (1 dB Comp.) Typ. Input (no dmg.) Typ.	DYNAMIC RANGE		VSWR (:1) Typ.		ABSOLUTE MAXIMUM RATING*		DC POWER @ Pin 3				THERMAL RESISTANCE θjc, typ. °C/W	PRICE \$ Qty. (30)	
		100	1000	Min.		NF dB Typ.	IP3 dBm Typ.	In	Out	I (mA)	P (mW)	Current (mA)	Device Volt					
MAR-8A	DC-1000	31.5	25	20	12.5	13	3.1	25	1.4	1.8	65	250	36	3.2	3.7	4.2	140	1.32

\*Permanent damage may occur if any of these limits are exceeded.  
Min. gain at 1000 MHz  
Output power, NF, and IP3 at 1000 MHz.

\*\* See Bias resistor table; resistor values are higher than MAR-8/MSA-0885  
how to replace: increase bias resistor (Rbias) by 110 ohms  
benefits: • lower device voltage, 3.7V typ.  
• lower power dissipation in the MMIC  
• may eliminate need for choke (RFC)

## Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Junction Temperature	150°C

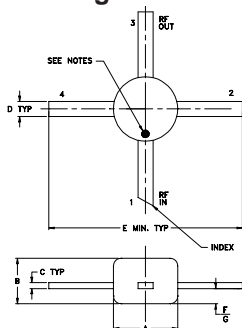
## Pin Configuration

RF IN	1
RF OUT	3
DC	3
GND EXT.	2,4

## Model Identification

Model	marking
MAR-8A	8A

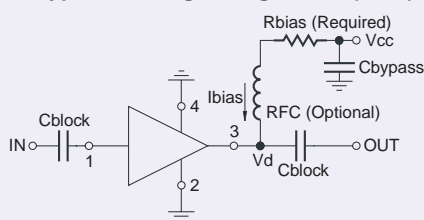
## Outline Drawing



## Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	wt.
.085	.060	.008	.020	.250	.012	.025	grams
2.16	1.52	.20	.51	6.35	.30	.64	.015

## Typical Biasing Configuration (MAR)



## Resistor Values

Vcc	"1%" Res.
7	88.7
8	118
9	143
10	174
11	200
12	226
13	255
14	280
15	309

**Mini-Circuits®**

INTERNET <http://www.minicircuits.com>

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

ISO 9001 CERTIFIED

REV. OR  
M85463  
ED-9366/14  
MAR-8A  
MM/FL/CP  
030212