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)	GAIN, dB Typical @MHz			MAXIMUM POWER, dBm		DYNAMIC RANGE		VSWR (:1) Typ.		ABSOLUTE MAXIMUM RATING*		DC POWER @ Pin 3				THERMAL RESIS-TANCE	PRICE $
					Output (1 dB Comp.)	Input (no dmg.)	NF	IP3			I	P	Current	Device Volt			θjc, typ.	Qty.
	f_L - f_U	100	1000	Min.	Typ.		dB Typ.	dBm Typ.	In	Out	(mA)	(mW)	(mA)	Min.	Typ.	Max.	°C/W	(30)
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

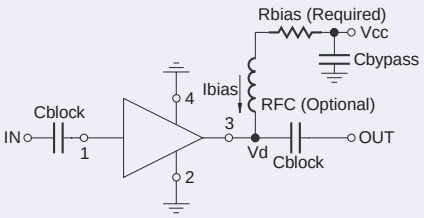
Pin Configuration

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

Model Identification

Model	marking
MAR-8A	8A

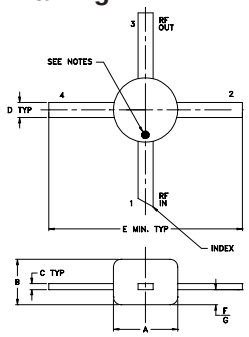
Typical Biasing Configuration (MAR)



Resistor Values

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

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

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

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