

Drop-In Monolithic Amplifier

MAR-8A+ MAR-8A

50Ω DC to 1000 MHz



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.
- Internally Matched to 50 Ohms
- low noise
- improved stability
- protection against power supply transients
- patent pending

Applications

- cellular
- PCN & instrumentation

CASE STYLE: VV105
PRICE: \$1.32 ea. QTY. (30)

**+ 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 at 25°C

FREQ. (MHz)	GAIN (dB) Typical at MHz			MAXIMUM POWER (dBm)		DYNAMIC RANGE		VSWR (:1) Typ.		ABSOLUTE MAXIMUM RATING*		DC POWER at Pin 3				THERMAL RESISTANCE	
	f_L - f_U	100	1000	Min.	Output (1 dB Compr.) Typ.	Input (no damage)	NF (dB) Typ.	IP3 (dBm) Typ.	In	Out	I (mA)	P (mW)	Current (mA)	Min.	Typ.	Max.	θ_{jc} , °C/W Typ.
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

* 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 (R_{bias}) by 110 ohms
benefits:

- lower device voltage, 3.7 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 Connections

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

Model Identification

Model	marking
MAR-8A (+)	8A

Notes

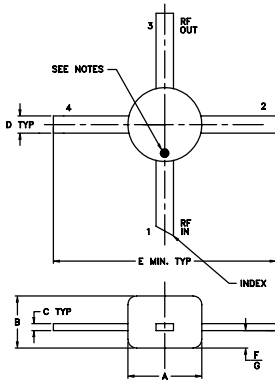
- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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MAR-8A+

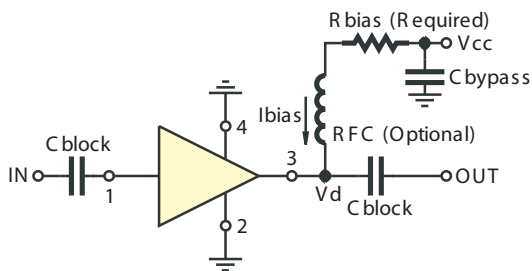
MAR-8A

Outline Drawing



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

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

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