Amplifier



Pin Connections





Case Style - VV105 (inch,mm) weight: 0.015

grams.

А	В	С	D	Е	F	G	Н	J
.085	.060	.008	.020	.250 6.350	.012 0.305	.025 0.635		
K	L	M	N	P	Q	R	S	Т

Tolerance: $x \pm .1$ $.xx \pm .03$ $.xxx \pm .015$ inch. Material and Finish:

Case material: plastic. Lead finish: tin-lead plate or tin plate. Marking:

MAR-3

Frequency MHz	GAIN, dB	Maximum Power, dBm		Dynamic Range		VSWR		Absolute Maximum Rating		DC Power		Thermal resistance
f _L - f _U	Min.	Output (1 dB Comp.)	Input (no damage)	NF dB Typ.	IP3 dBm Typ.	ln Typ.	Out Typ.	l (mA)	P (mW)	Cur- rent (mA)	Device Volt(V.)	Øjc °C/W
DC-2000	8.00	+10.00	+13.00	6.00	23.00	1.50	1.70	70.00	400.00	35.00	5.00	105.00
$L_w = low range(f_1 to f_1/2) U = upper range(f_1/2 to f_1)$												

Notes:

- Minimum gain at highest frequency. Full temperature range, except room temperature for Dash-4 models.
- Thermal resistance Øjc is from hottest junction in the device to the mounting surface of the leads.
- Model number designated by alphanumeric code marking.
- Permanent damage may occur if any of these limits are exceeded. These ratings are not intended for continuous normal operation.
- For Amplifier Selection Guide, please click <u>here</u>.
 For Amplifier Environmental Specifications, please click <u>here</u>.
- For Surface Mount Environmental Specifications, please click <u>here</u>.
 Re-flow soldering information is available in <u>"Surface Mount"</u> article.
- Low frequency cutoff determined by external coupling capacitors.
- Frequency at which output power, NF and IP3 are specified: 500 MHz.
- Typical Biasing Configuration ERA/MAR/MAV/RAM/VAM



*** For RAM models, Pin 1 is identified by a diagonally cut lead.

- Prefix letter (optional) designates assembly location.
- Supply voltage must be connected to pin 3 through a bias resistor in order to prevent damage. See <u>Biasing MMIC Amplifiers</u>. Reliability predictions are applicable at specified current and normal operating conditions.
- Aqueous washable.
- General Quality Control Procedures and Environmental Specifications are given in <u>Mini- Circuits Guarantees Quality</u>.
 Hi-Rel, MIL description are given in Hi-Rel and MIL
- Prices and Specifications subjects to change without notice.

RF input lead (1) identified by one or both of the following at factory option:

(a) diagonally cut lead, which may be 45°(ref) in either direction;

(b) orientation mark on the case. Model dash number identified by color dot or alphanumeric code on case. See specification data sheet.

Special Tolerances:

Lead width ±.010 inch; lead thickness ±.003 inch

Typical Performance Data

odel		S ₁₁ (Input Return		S 21 (Power		S ₁₂ (Is	solatio	on Out-	S ₂₂ (Output Return			
	data (MHz)	Loss)			Gain)		in)			Loss)		
on data		dB	Mag	Ang	dB	Ang	dB	Mag	Ang	dB	Mag	Ang
	100.00	-23.10	0.07	172.00	13.00	174.00	-18.42	0.12	1.00	-16.48	0.15	-11.00
inch	500.00	-24.44	0.06	156.00	12.80	152.00	-18.42	0.12	5.00	-15.92	0.16	-45.00
inton.	1000.00	-26.02	0.50	146.00	12.50	128.00	-17.72	0.13	10.00	-14.98	0.18	-88.00
	1500.00	-27.96	0.40	172.00	11.80	103.00	-17.08	0.14	12.00	-13.56	0.21	-120.00
	2000.00	-24.44	0.06	173.00	10.50	83.00	-14.98	0.18	11.00	-12.04	0.25	-142.00
	2500.00	-15.39	0.17	175.00	10.30	59.00	-14.42	0.19	5.00	-11.70	0.26	-173.00
	3000.00	-12.40	0.24	157.00	9.10	38.00	-13.98	0.20	0.00	-12.04	0.25	168.00
	3500.00	-9.90	0.32	140.00	7.80	21.00	-13.56	0.21	-6.00	-12.04	0.25	152.00
	4000.00	-8.18	0.39	124.00	6.50	3.00	-13.15	0.22	-14.00	-12.04	0.25	138.00



INTERNET http://www.minicircuits.com

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