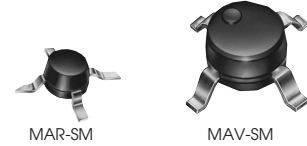


MONOLITHIC AMPLIFIERS 50 Ω

BROADBAND DC to 2.5 GHz



up to +17.5 dBm output

MODEL NO.	FREQ. MHz	GAIN, dB Typical (at MHz)				MAXIMUM POWER, dBm		DYNAMIC RANGE		VSWR Typ.		ABSOLUTE MAXIMUM RATING ⁷ (25°C)		DC OPERATING POWER at Pin 3		THERMAL RESISTANCE ⁶ θjc °C/W	CAPD DATA	Case Style Note B	CONNECTION	Price \$ Qty. 30
		100	1000	2000	note 1 Min.	Output (1 dB Comp.) Typ.	Input (no damage)	NF dB Typ.	IP3 dBm Typ.	In	Out	I (mA)	P (mW)	Current (mA)	Volt Typ.					
MAR-1SM	DC-1000	18.5	15.5	—	13.0	+1.5	+13	5.5	+14.0	1.3	1.2	40	200	17	5.00	115		WW107	cb	1.04
MAR-2SM	DC-2000	12.5	12.0	11.0	8.5	+4.5	+13	6.5	+17.0	1.5	1.4	60	325	25	5.00	105		WW107	cb	1.17
MAR-3SM	DC-2000	12.5	12.0	10.5	8.0	+10.0	+13	6.0	+23.0	1.5	1.7	70	400	35	5.00	115		WW107	cb	1.24
MAR-4SM	DC-1000	8.3	8.0	—	7.0	+12.5	+13	7.0	+25.5	1.5	1.9	85	500	50	5.25	100		WW107	cb	1.34
MAR-6SM	DC-2000	20.0	16.0	11.0	9.0	+2.0	+13	3.0	+14.5	1.7	1.7	50	200	16	3.50	120	(see YONI on our website)	WW107	cb	1.21
MAR-7SM	DC-2000	13.5	12.5	11.0	8.5	+5.5	+13	5.0	+19.0	1.7	1.7	60	275	22	4.00	120		WW107	cb	1.36
MAR-8SM	DC-1000	32.5	22.5	—	19.0	+12.5	+13	3.3	+27.0	#	#	65	500	36	7.80	140		WW107	cb	1.32
MAV-11SM	50-1000	12.7	10.5	—	9.0	+17.5	+13	3.6	+30.0	1.5	1.7	80	550	60	5.50	125		RRR137	cb	1.62

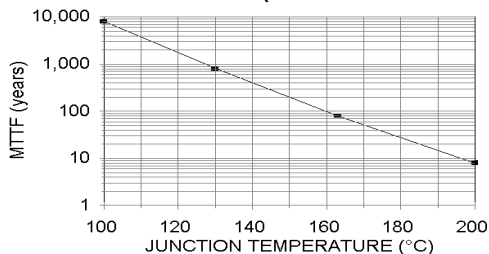
NOTES:

- ☆ Increases below 1500 MHz.
- * RAM models are hermetically sealed.
- Max. Voltage 7V at pin 1 (DC power). Max. voltage 10V at pins 3,6, DC or transient.
- ❖ Price of RAM models is for 1-9 quantity.
- # Dash-8 models input and output impedances are not 50 ohms, see S-parameter data. Conditionally stable, source and load VSWR<3:1 required. Dash-6 models conditionally stable, source and load VSWR<5:1 required.
- ⊕ Low frequency cutoff determined by external coupling capacitors.
- * Specification at 500 MHz.
- ** Specification at 2500 MHz.
- A. Environmental specifications and re-flow soldering information available in General Information Section.
- B. Units are non-hermetic unless otherwise noted. For details on case dimensions & finishes see "Case Styles & Outline Drawings".
- C. Prices and Specifications subject to change without notice.
 1. Minimum gain at highest frequency. Full temperature range, except room temperature for Dash-4 models.
 2. Model number designated by color dot or alphanumeric code marking.
 3. Frequency at which output power, NF and IP3 are specified: 500 MHz for MAR-1SM, MAR-6SM, RAM-1, RAM-6, MAV-11SM, VAM-6, 1000 MHz for all other models.
 4. Dash-6 models potentially unstable with very high VSWR terminations.
 6. Thermal resistance θjc is from hottest junction in the device to the mounting surface of the leads.
 7. Permanent damage may occur if any of these limits are exceeded.
 8. For internal control an additional character may be present.

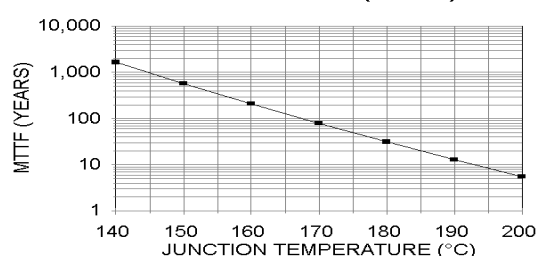
marking identification

Model	Alphanumeric Code	OR	Color Dot
MAR-1SM	A01		Brown
MAR-2SM	A02		Red
MAR-3SM	A03		Orange
MAR-4SM	A04		Yellow
MAR-6SM	A06		White
MAR-7SM	A07		Violet
MAR-8SM	A08		Blue
RAM-1	1 or A01		—
RAM-2	2 or A02		—
RAM-3	3 or A03		—
RAM-4	4 or A04		—
RAM-6	6 or A06		—
RAM-7	7 or A07		—
RAM-8	8 or A08		—
MAV-11SM	A		—
VAM-3	A03 (note 8)		—
VAM-6	A06 (note 8)		—
VAM-7	A07 (note 8)		—

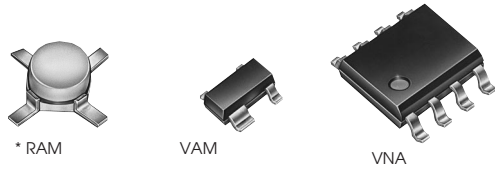
MTTF VS JUNCT TEMP (MAR MAV RAM VAM)



MTTF vs JUNCTION TEMP (VNA-25)



Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-835094 • Fax 44-1252-837010



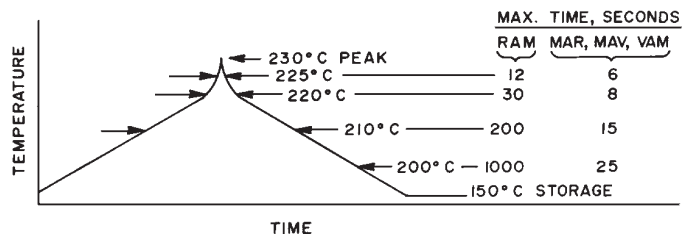
up to +18.2 dBm output

MODEL NO.	FREQ. MHz	GAIN, dB Typical (at MHz)				MAXIMUM POWER, dBm		DYNAMIC RANGE		VSWR Typ.		ABSOLUTE MAXIMUM RATING ⁷ (25°C)		DC OPERATING POWER at Pin 3		THERMAL RESISTANCE ⁶ θjc °C/W	CAPD DATA	Case Style Note B	CONNECTION	Price \$ Qty. 30
		100	1000	2000	note 1 Min.	Output (1 dB Comp.) Typ.	Input (no damage)	NF dB Typ.	IP3 dBm Typ.	In	Out	I (mA)	P (mW)	Current (mA)	Volt Typ.					
* RAM-1	DC-1000	19.0	15.5	—	13.0	+1.5	+13	5.5	+14.0	1.3	1.3	40	200	17	5.00	150		AF190	cb	4.95
* RAM-2	DC-2000	12.5	11.8	11.0	8.5	+4.5	+13	6.5	+17.0	1.2	1.4	60	325	25	5.00	145		AF190	cb	4.95
* RAM-3	DC-2000	12.5	12.0	10.5	8.0	+10.0	+13	6.0	+23.0	1.6	1.7	80	425	35	5.00	150		AF190	cb	4.95
* RAM-4	DC-1000	8.5	8.0	—	7.0	+12.5	+13	6.5	+25.5	1.4	1.9	100	540	50	5.25	140		AF190	cb	4.95
* RAM-6	DC-2000	20.0	16.0	11.0	9.0	+2.0	+13	2.8	+14.5	1.4	1.3	50	200	16	3.50	155	(see YON on our website)	AF190	cb	4.95
* RAM-7	DC-2000	13.5	12.5	11.0	8.5	+5.5	+13	4.5	+19.0	2.0	1.8	60	275	22	4.00	155		AF190	cb	4.95
* RAM-8	DC-1000	32.5	23.0	—	19.0	+12.5	+13	3.0	+27.0	#	#	65	420	36	7.80	175		AF190	cb	4.95
VAM-3	DC-2000	11.5	11.0	9.5	7.5	+9.0	+13	6.0	+22.0	1.5	1.7	60	240	35	4.70	500		MMM168	cb	1.19
VAM-6	DC-2000	19.5	15.0	10.0	8.0	+2.0	+13	3.0	+14.0	1.6	1.5	40	125	16	3.30	505		MMM168	cb	1.16
VAM-7	DC-2000	13.0	12.0	9.8	7.8	+5.5	+13	5.0	+18.0	1.5	1.5	50	175	22	3.80	505		MMM168	cb	1.31
VNA-25	500-2500	14.0*	18.0	16.0**	11.5	+18.2	+10	5.5	+27.0	1.5*	1.6	105	1000	85	5.0	125		XX211	hj	4.25

features

- cascadable
- excellent repeatability
- wide bandwidth, DC to 2500 MHz
- unconditionally stable, most models
- low cost
- hermetically sealed, RAM models
- low noise figure, 2.8 dB typ
- high output power, up to +18 dBm typ

REFLOW - SOLDERING PROFILE



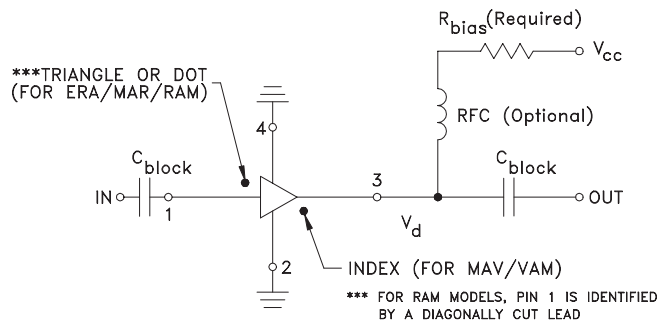
pin connections

PORT	cb	hj
RF IN	1	3
RF OUT	3	6
DC	3	1
GND EXT	2,4	2,4,5,7,8
NOT USED	—	—

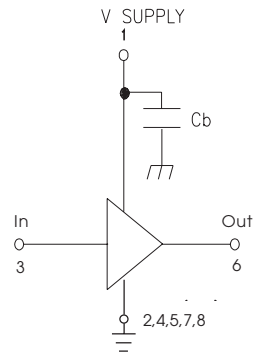
NSN GUIDE

MCL NO.	NSN
MAR-1SM	5962-01-414-8635
MAR-3SM	5962-01-423-1569
RAM-6	5996-01-450-5504

Typical Biasing Configuration
ERA/MAR/MAV/RAM/VAM



Biasing Configuration
VNA



DESIGNERS KITS AVAILABLE
SEE PAGES 16&17

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