



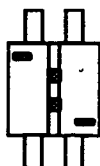
MwT - 2123S-3P1/MwT-2123Z-3P1

21.2 – 23.6 GHz
AMPLIFIER MODULE

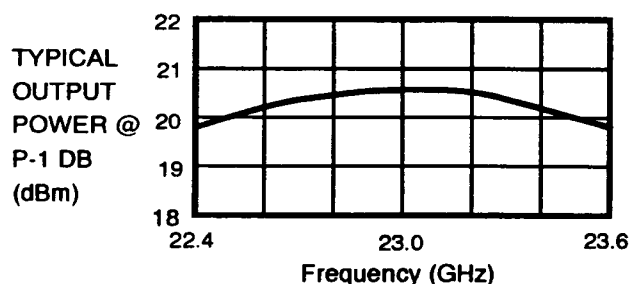
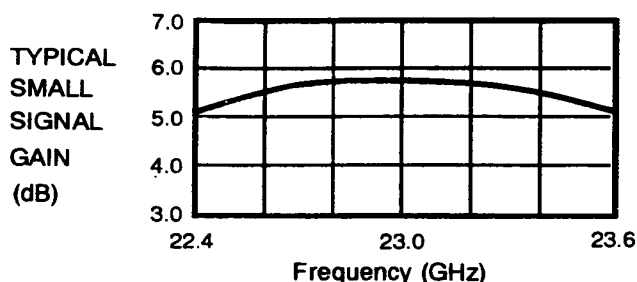
MICROWAVE TECHNOLOGY

4268 Solar Way Fremont, CA 94538 510-651-6700 FAX 510-651-2208

TYPICAL SPECIFICATIONS @ 25°C



- +20 dBm P-1dB
- 5 dB SMALL SIGNAL GAIN
- 15 dB INPUT/OUTPUT RETURN LOSS
- 100 mA @ +8V



ELECTRICAL SPECIFICATIONS OVER ANY 1.2 GHz BANDWIDTH (Ta=25°C)

SYMBOL	PARAMETERS	UNITS	MIN	TYP	MAX
FREQ	Frequency Range (1)	GHz	21.2		23.6
SSG	Small Signal Gain	dB	4.5	5.0	
$\Delta G/\Delta F$	SSG Flatness	$\pm$ dB		0.3	0.4
$\Delta G/\Delta T$	SSG Variation over Temperature	dB/°C		-0.012	
P-1dB	Output Power at 1 dB Compression	dBm	19.0	20.0	
PSAT	Output Power at 6 dB Compression	dBm		20.5	
$\Delta P-1/\Delta T$	P-1dB Variation over Temperature	dB/°C		-0.008	
IP3	Third Order Intercept Point	dBm		+32.0	
2nd HAR	2nd Harmonic at Pout = 20.0 dBm	dBc		-21.0	
2nd HAR	2nd Harmonic at Pout = 20.5 dBm	dBc		-16.0	
NF	Noise Figure	dB		9.0	
VSWR,IN	Input VSWR	---		1.4:1	1.6:1
VSWR,OUT	Output VSWR	---		1.4:1	1.6:1
ISO	Reverse Isolation	dB		-18.0	
VDD	Power Supply Voltage	+V	7.9	8.0	8.1
IDD	Small Signal Module Current	mA		100.0	130.0
RTH	Thermal Resistance Including FET*	°C/W		166.0	

* When calculating T_{ch}, use FET V_{ds} = 6.0 volts and FET I_{ds} = 50 mA.

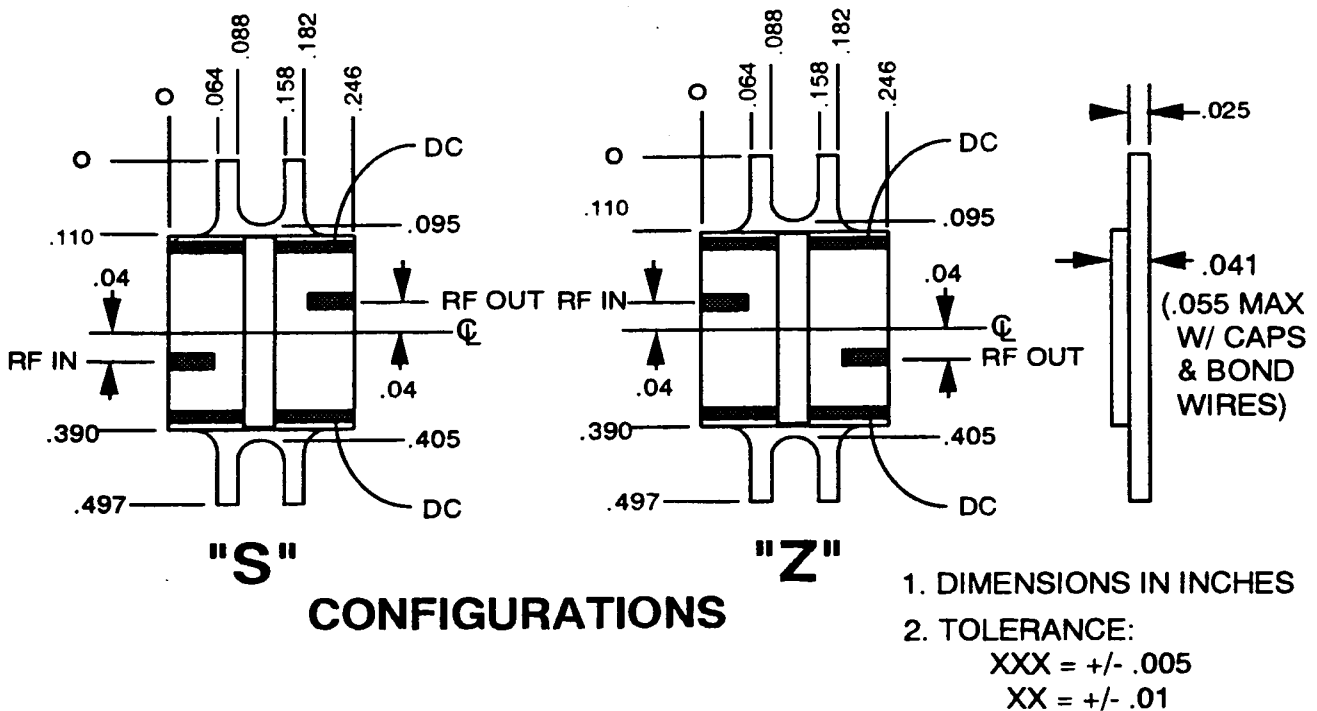
(1) Select any bandwidth ≤ 1.2 GHz in this range.

Specifications subject to change without notice.

MwT-2123-3P1 8/92

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MODULE OUTLINES



CONSTRUCTION:

The 15 mil alumina substrates and 10 mil copper FET ridge are brazed onto the 25 mil Cu-W carrier using AuGe preform. The GaAs FETs (standard 5 mil thickness) are attached to the Cu ridge using AuSn preform. All capacitors are attached using AuSn preforms. The flanges are designed to accommodate 0-80 UNF-2A socket or Fillister head screws on .400 center-to-center hole spacing. The modules are mechanically and electrically designed to be cascaded.

NOTES:

1. Custom module specifications and/or custom module mechanical configurations are available.
2. OPERATING TEMPERATURE RANGE IS -55°C to +105°C.
3. All modules are serialized and shipped with data measured at 25°C. Data includes swept small signal gain, swept input and output return loss. Noise figure and P-1dB are measured in 1 GHz increments. Special module testing is available.
4. Test fixtures are available.
5. Microwave Technology reserves the right to ship modules with gain and/or power above the typical specifications.

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