

## Wide Band Termination Insensitive Mixer

Rev. V2

### Features

- LO & RF 50 TO 4800 MHz
- IF 50 TO 3000 MHz
- LO DRIVE +23 dBm (NOMINAL)
- SURFACE MOUNT
- HIGH INTERCEPT +28 dBm (TYP.)

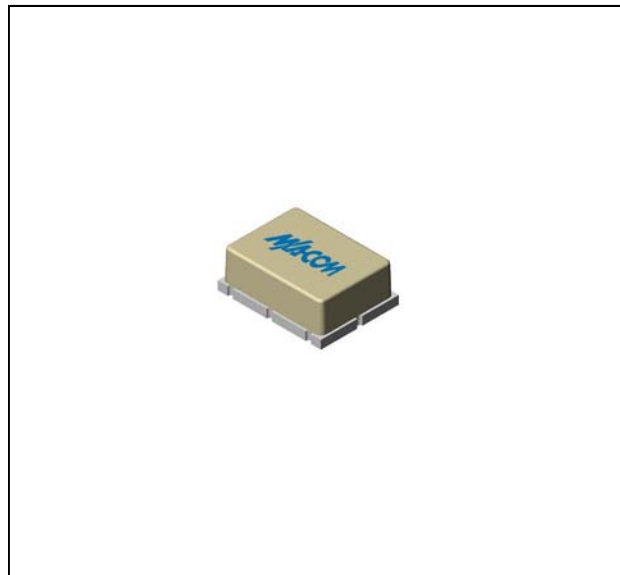
### Description

The CSM5TH is a termination insensitive mixer, designed for use in military, wireless, and test equipment applications. The design utilizes Schottky bridge quad diodes, broadband ferrite baluns and internal loads to provide excellent performance without degradation due to external VSWR mismatches. The use of high temperature solder and welded assembly processes used internally makes it ideal for use in semi-automated and automated assembly. Environmental screening available to MIL-STD-883, MIL-STD-202, or MIL-DTL-28837, consult factory.

### Ordering Information

Part Number	Package
CSM5TH	Surface Mount

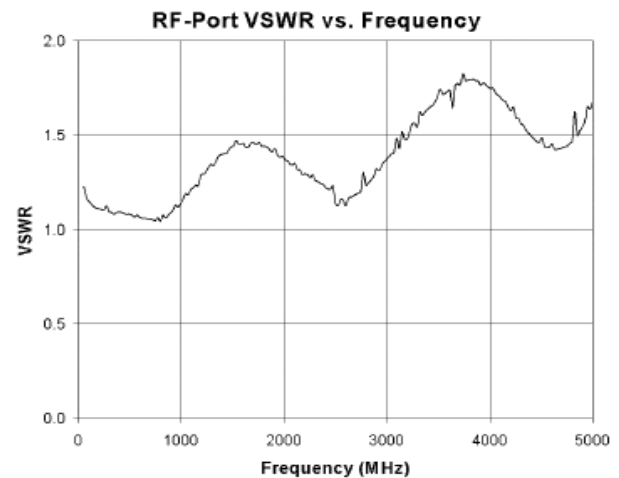
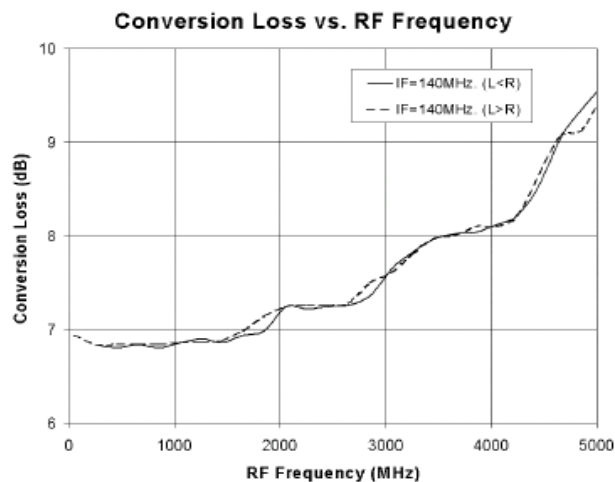
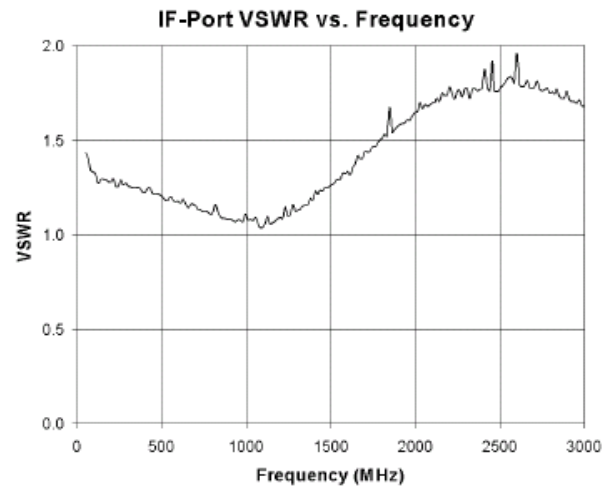
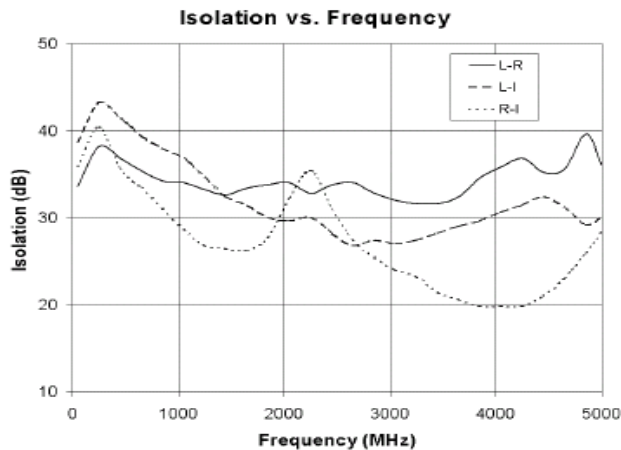
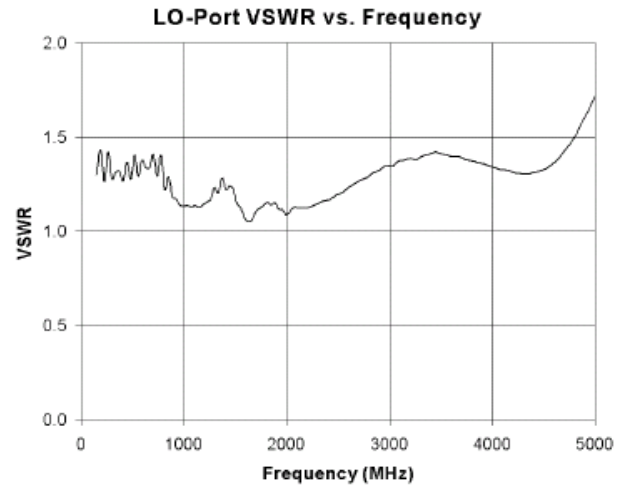
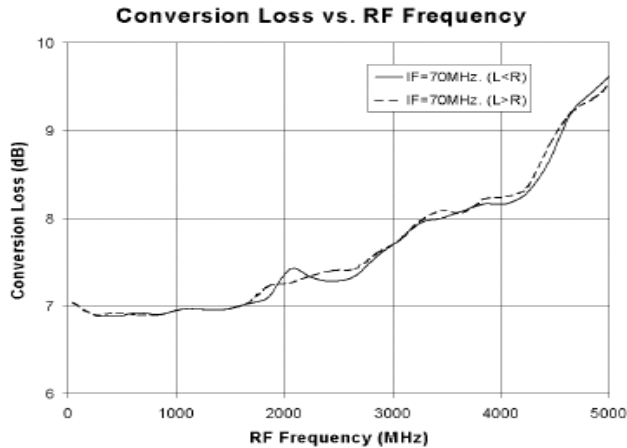
### Product Image



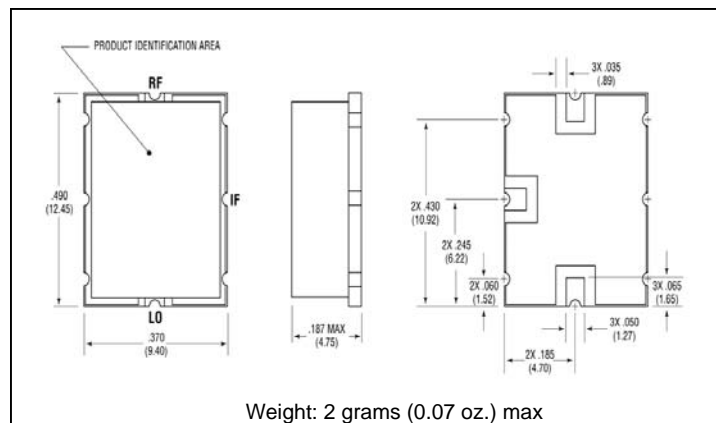
### Electrical Specifications: $Z_0 = 50\Omega$ $Lo = +23$ dBm (Downconverter application only)

Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25°C	-40° to +85°C
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 50 to 1500 MHz, fL = 50 to 1500 MHz, fI = 50 to 1500 MHz	dB	7.0	8.3	8.8
	fR = 1500 to 3000 MHz, fL = 1500 to 3000 MHz, fI = 50 to 3000 MHz	dB	7.8	9.2	9.7
	fR = 3000 to 4800 MHz, fL = 3000 to 4800 MHz, fI = 50 to 3000 MHz	dB	8.8	11.5	12.0
L - R Isolation (min)	fL = 50 to 1000 MHz	dB	35	25	23
	fL = 1000 to 4800 MHz	dB	32	23	21
L - I Isolation (min)	fL = 50 to 1000 MHz	dB	40	30	28
	fL = 1000 to 4800 MHz	dB	35	22	20
R - I Isolation (min)	fR = 50 to 2000 MHz	dB	30		
	fR = 2000 to 4800 MHz	dB	22		
1 dB Conversion Comp.	fL = +23 dBm	dBm	+17		
Input IP3	fL = 500 to 4800 MHz, fI = 50 to 2500 MHz, fR = 500 to 4800 MHz	dBm	+28		
R-Port VSWR	fR = 50 to 4800 MHz		2.0:1		
L-Port VSWR	fL = 50 to 4800 MHz		2.0:1		
I-Port VSWR	fI = 50 to 3000 MHz		2.0:1		

### Typical Performance Curves



### Outline Drawing: Surface Mount \*



\* Dimensions are inches (millimeters)  $\pm 0.015$  (0.38) unless otherwise specified.

### Absolute Maximum Ratings

Parameter	Absolute Maximum
Operating Temperature	-54°C to +85°C
Storage Temperature	-65°C to +100°C
Peak Input Power	+27 dBm max @ -25°C +23 dBm max @ +85°C
Peak Input Current	50 mA DC