

Wide Band Termination Insensitive Mixer

Rev. V2

Features

- LO 50 TO 4800 MHz
- RF 50 TO 4800 MHz
- IF 50 TO 3000 MHz
- LO DRIVE +10 dBm (NOMINAL)
- HIGH INTERCEPT +18 dBm (TYP.)

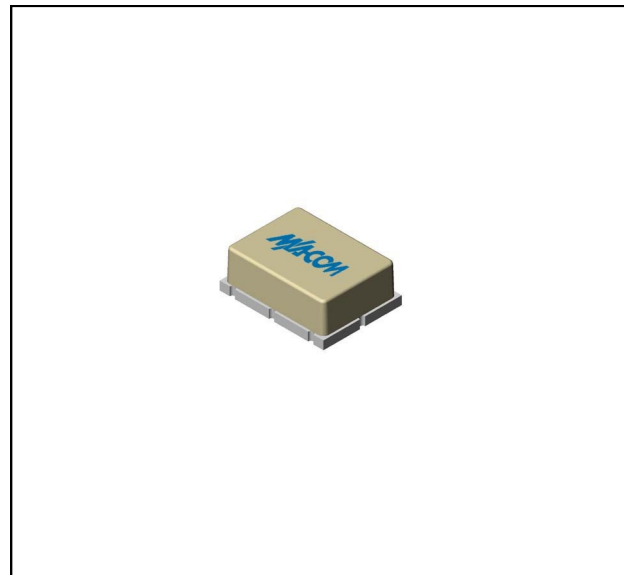
Description

The CSM5T 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

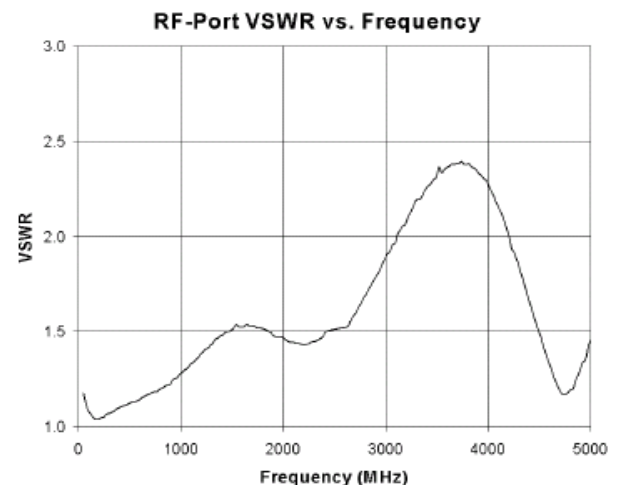
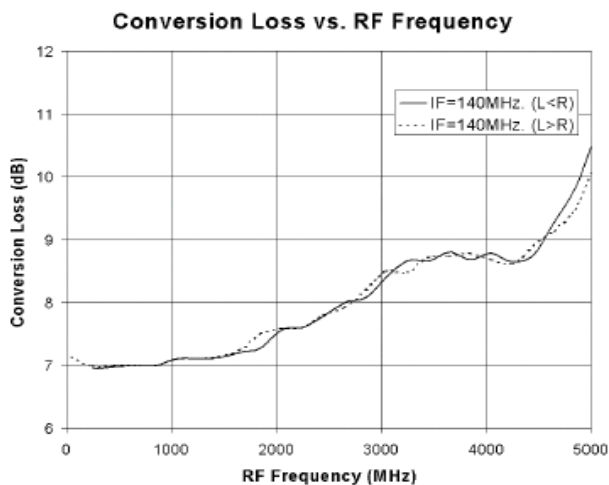
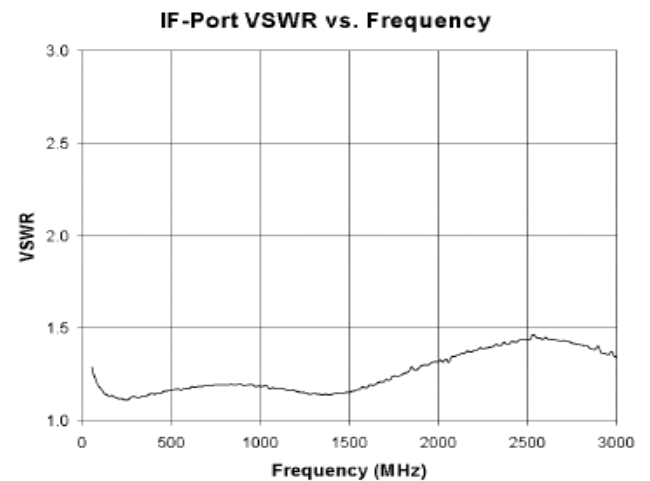
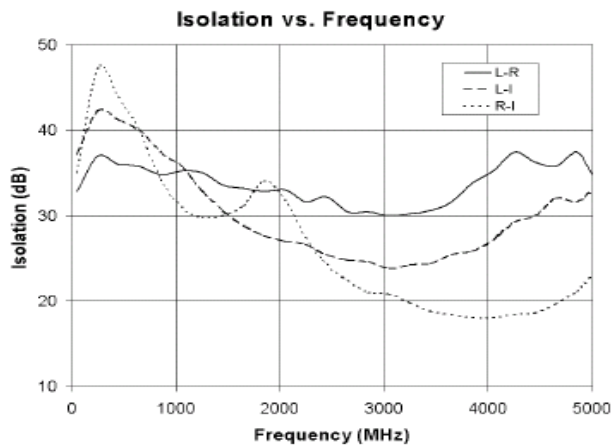
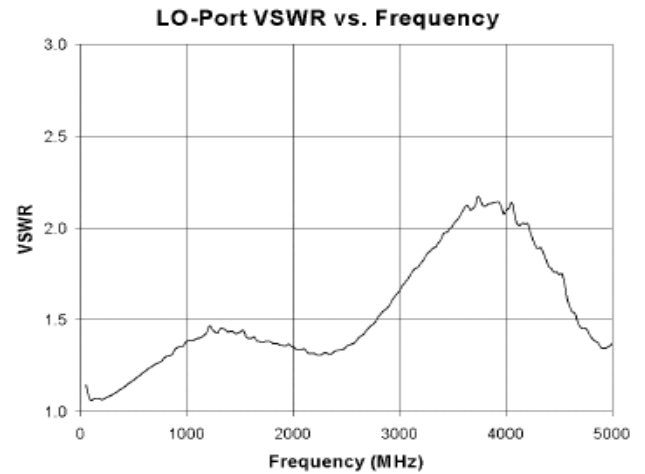
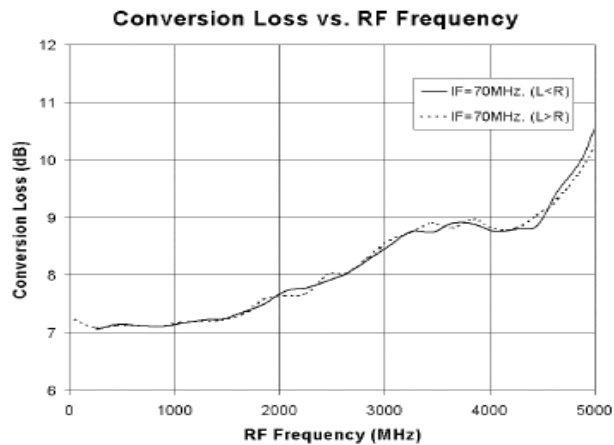
Part Number	Package
CSM5T	Surface Mount

Product Image

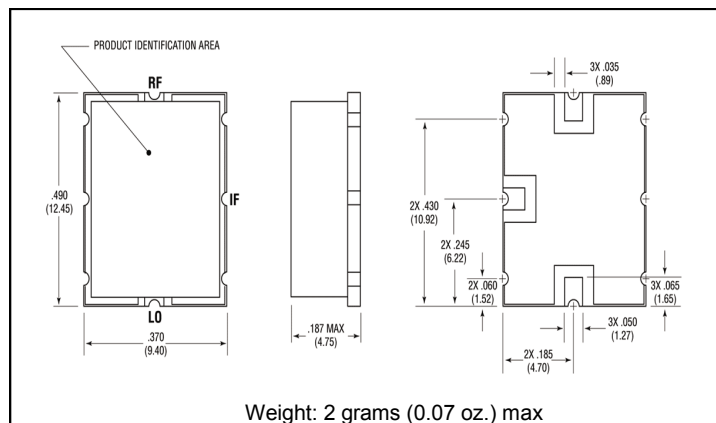
Electrical Specifications: $Z_0 = 50\Omega$ $Lo = +10$ dBm (Downconverter application only)

Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25°C	-40° to +85°C
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 0.05 to 1.5 GHz, fL = 0.05 to 1.5 GHz, fl = 0.05 to 1.5 GHz	dB	7.2	8.5	9.0
	fR = 1.5 to 3.0 GHz, fL = 1.5 to 3.0 GHz, fl = 0.05 to 3.0 GHz	dB	8.0	9.3	9.8
	fR = 3.0 to 4.8 GHz, fL = 3.0 to 4.8 GHz, fl = 0.05 to 3.0 GHz	dB	8.8	11.5	12.0
L - R Isolation (min)	fL = 0.05 to 1.0 GHz	dB	35	25	23
	fL = 1.0 to 4.8 GHz	dB	32	23	21
L - I Isolation (min)	fL = 0.05 to 1.0 GHz	dB	40	32	30
	fL = 1.0 to 4.8 GHz	dB	35	22	20
R - I Isolation (min)	fR = 0.05 to 2.0 GHz	dB	30		
	fR = 2.0 to 4.8 GHz	dB	20		
1 dB Conversion Comp.	fL = +10 dBm	dBm	+7		
Input IP3	fL = 0.5 to 4.8 GHz, fl = 0.05 to 2.5 GHz, fR = 0.5 to 4.8 GHz	dBm	+18		
R-Port VSWR	fR = 0.05 to 4.8 GHz		2.0:1		
L-Port VSWR	fL = 0.05 to 4.8 GHz		2.0:1		
I-Port VSWR	fl = 0.05 to 3.0 GHz		2.0:1		

Typical Performance Curves



Outline Drawing: Surface Mount *



* Dimensions are inches (millimeters) ± 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	+20 dBm max @ +25°C +17 dBm max @ +85°C
Peak Input Current	50 mA DC

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