

Wide Band Termination Insensitive Mixer

Rev. V2

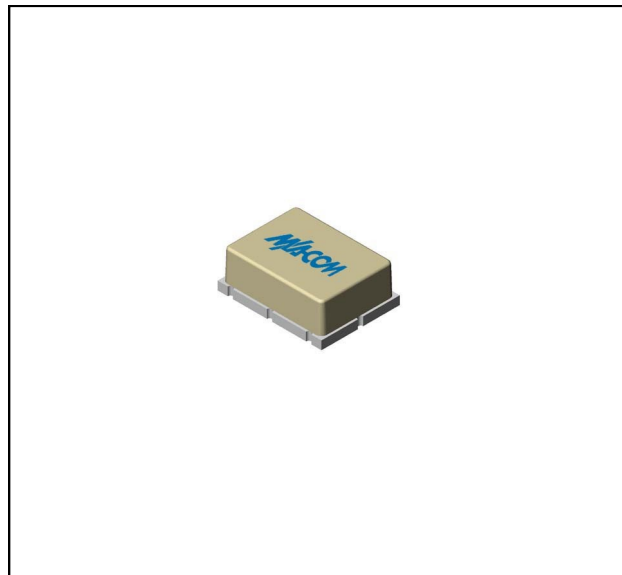
Features

- LO 50 TO 4800 MHz
- RF 50 TO 4800 MHz
- IF 50 TO 3000 MHz
- LO DRIVE +17 dBm (NOMINAL)
- HIGH INTERCEPT +23 dBm (TYP.)

Description

The CSM5T17 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.

Product Image



Ordering Information

Part Number	Package
CSM5T17	Surface Mount

Electrical Specifications: $Z_0 = 50\Omega$ $Lo = +17$ 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 3.4 GHz, fL = 0.05 to 3.4 GHz, fI = 0.05 to 3.0 GHz fR = 3.4 to 4.8 GHz, fL = 3.4 to 4.8 GHz, fI = 0.05 to 3.0 GHz	dB	7.8	8.5	11.5
			10.0	11.5	12.5
L - R Isolation (min)	fL = 0.05 to 4.8 GHz	dB	33	23	21
L - I Isolation (min)	fL = 0.05 to 4.8 GHz	dB	37	22	20
R - I Isolation (min)	fR = 0.05 to 2.0 GHz fR = 2.0 to 4.8 GHz	dB	30		
		dB	22		
1 dB Conversion Comp.	fL = +17 dBm	dBm	+14		
Input IP3	fL = 0.5 to 4.8 GHz, fI = 0.05 to 3.0 GHz, fR = 0.5 to 4.8 GHz	dBm	+23		
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	fI = 0.05 to 3.0 GHz		2.0:1		

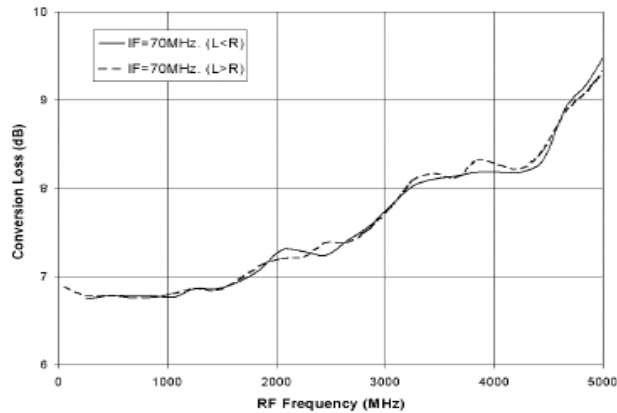
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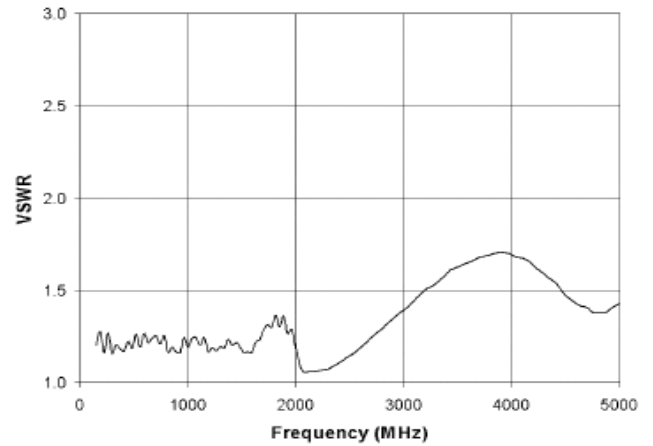
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Typical Performance Curves

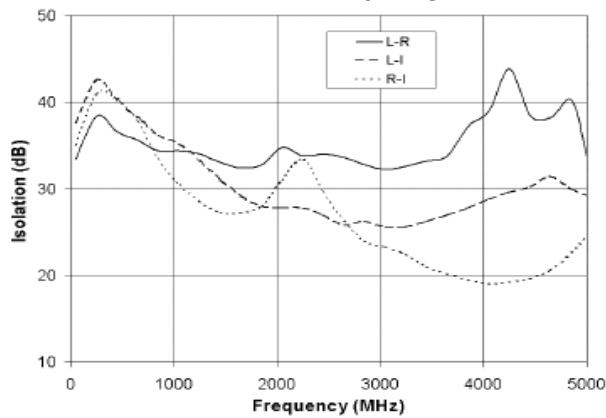
Conversion Loss vs. RF Frequency



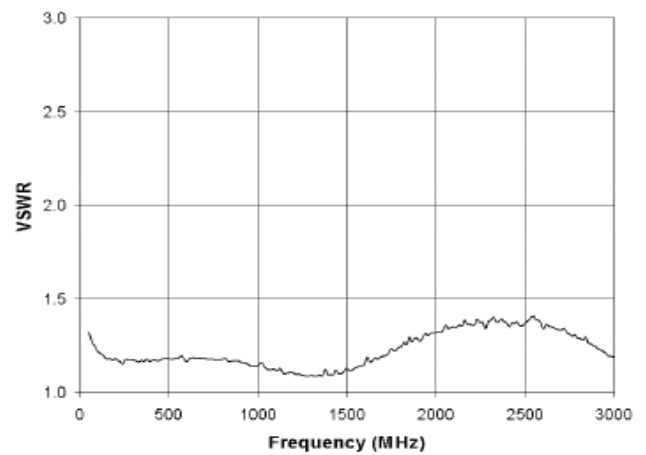
LO-Port VSWR vs. Frequency



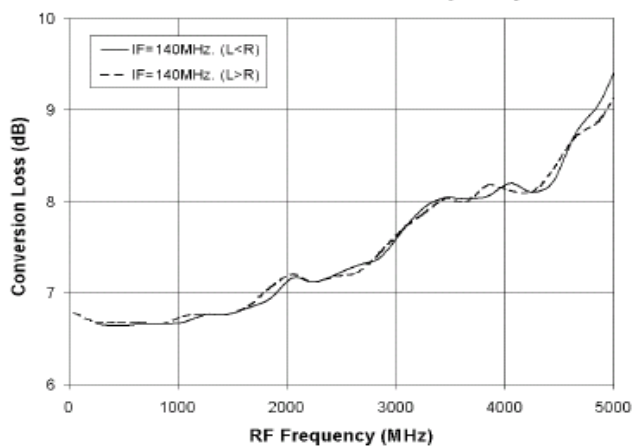
Isolation vs. Frequency



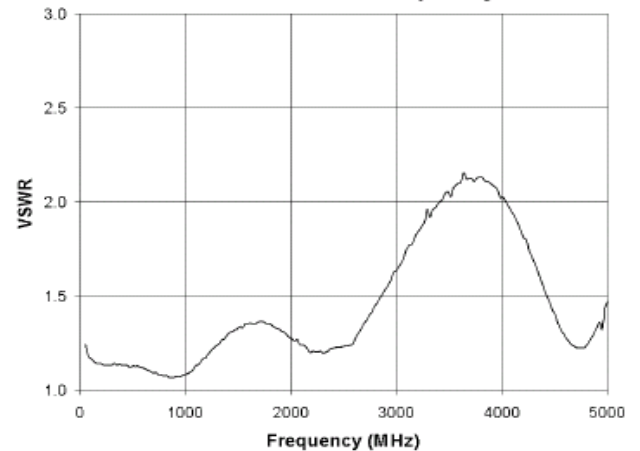
IF-Port VSWR vs. Frequency



Conversion Loss vs. RF Frequency



RF-Port VSWR vs. Frequency



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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