CSM5TH

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.

Product Image



Ordering Information

Part Number	Package
CSM5TH	Surface Mount

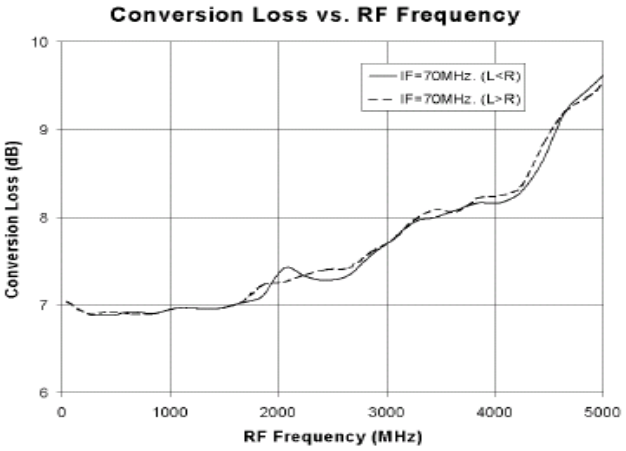
Electrical Specifications: $Z_0 = 50\Omega$ Lo = +23 dBm (Downconverter application only)

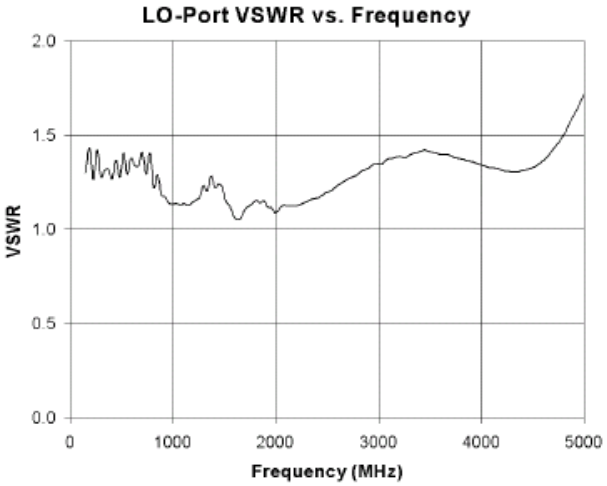
Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25ºC	-40º to +85ºC
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 50 to 1500 MHz, fL = 50 to 1500 MHz, fI = 50 to 1500 MHz fR = 1500 to 3000 MHz, fL = 1500 to 3000 MHz, fI = 50 to 3000 MHz fR = 3000 to 4800 MHz, fL = 3000 to 4800 MHz, fI = 50 to 3000 MHz	dB dB dB	7.0 7.8 8.8	8.3 9.2 11.5	8.8 9.7 12.0
L - R Isolation (min)	fL = 50 to 1000 MHz fL = 1000 to 4800 MHz	dB dB	35 32	25 23	23 21
L - I Isolation (min)	fL = 50 to 1000 MHz fL = 1000 to 4800 MHz	dB dB	40 35	30 22	28 20
R - I Isolation (min)	fR = 50 to 2000 MHz fR = 2000 to 4800 MHz	dB dB	30 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		

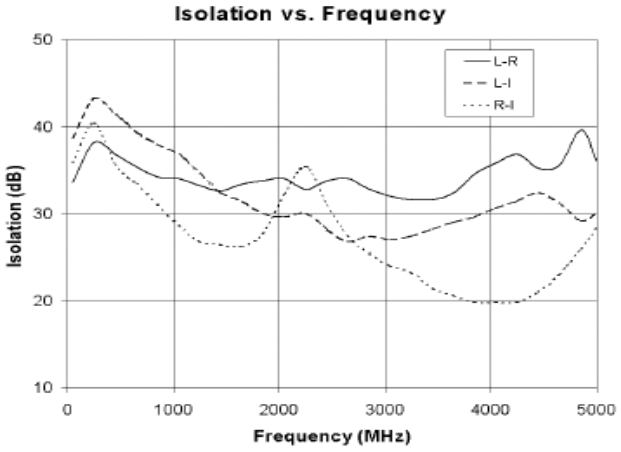
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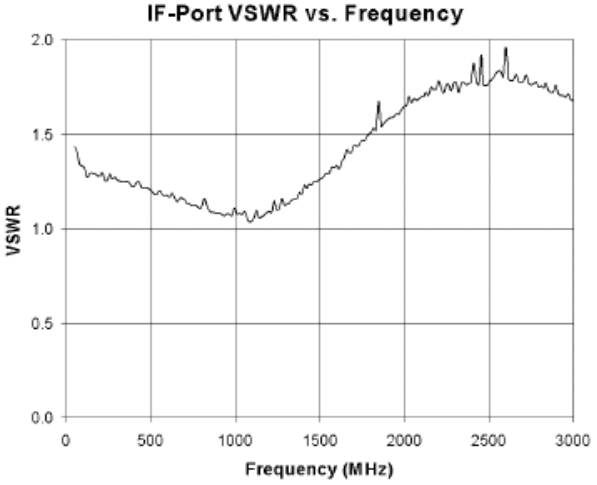
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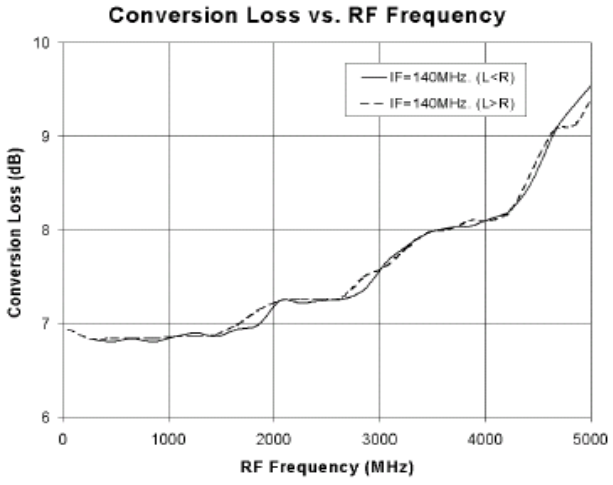
Typical Performance Curves

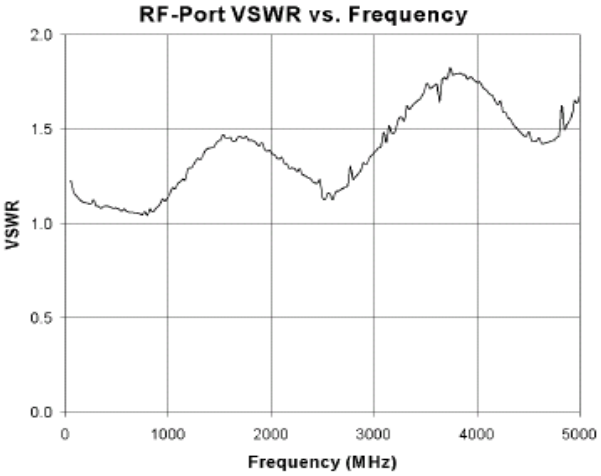








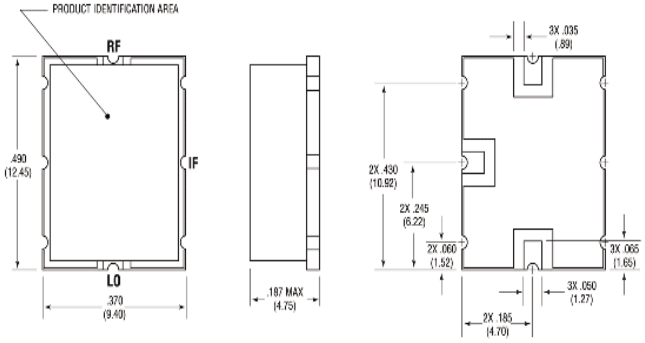




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Outline Drawing: Surface Mount *



Weight: 2 grams (0.07 oz.) max

* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

Absolute Maximum Ratings

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

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