CSM4T17

Termination Insensitive Mixer

Rev. V5

Features

- LO 1 to 3400 MHz
- RF 1 to 3400 MHz
- IF 1 to 2000 MHz
- LO Drive +17 dBm (nominal)
- High Intercept +25 dBm (typ)
- +260° Reflow Compatible

Description

The CSM4T17 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.

Product Image



Ordering Information

Part Number	Package
CSM4T17	Surface Mount

Electrical Specifications: Z_0 = 50Ω Lo = +17 dBm (Downconverter application only)

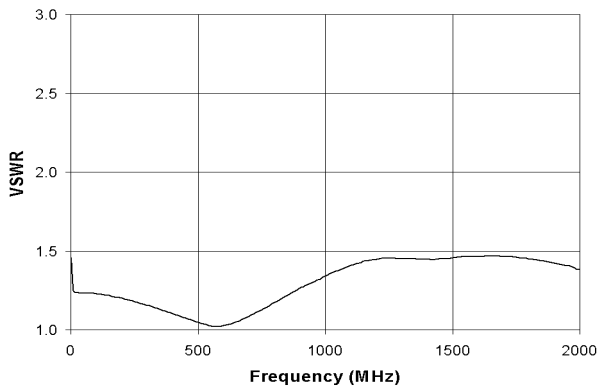
Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25ºC	-40º to +85ºC
SSB Conversion Loss(max)	fR = 1 to 2400 MHz, fL = 1 to 2400 MHz, fI = 1 to 2000 MHz fR = 1 to 3400 MHz , fL = 1 to 3400 MHz , fI = 1 to 2000 MHz	dB	8.0 dB 9.0 dB	9.0 10.0	10.5 11.5
SSB Noise Figure		dB	Within 1 dB of conversion loss		
L - R Isolation (min)	fL = 1 to 2400 MHz fL = 2400 to 3400 MHz	dB	35 25	25 20	23 18
L - I Isolation (min)	fL = 1 to 2400 MHz fL = 2400 to 3400 MHz	dB	35 25	25 20	23 18
R - I Isolation (min)	fR = 1 to 3400 MHz	dB	30		
1 dB Conversion Comp.	fL= +17 dBm	dBm	+14		
Input IP3	fR1 = 100 to 3400 MHz, fR2 = 100 to 3400 MHz, fL = 50 to 2000 MHz	dBm	+25		
R-Port VSWR	fR = 1 to 3400 MHz		2.0:1		
L-Port VSWR	fL = 1 to 3400 MHz		2.0:1		
I-Port VSWR	fI = 1 to 2000 MHz		2.0:1		

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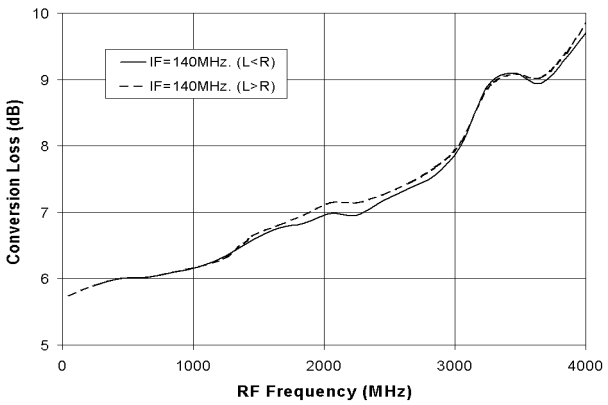
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Typical Performance Curves

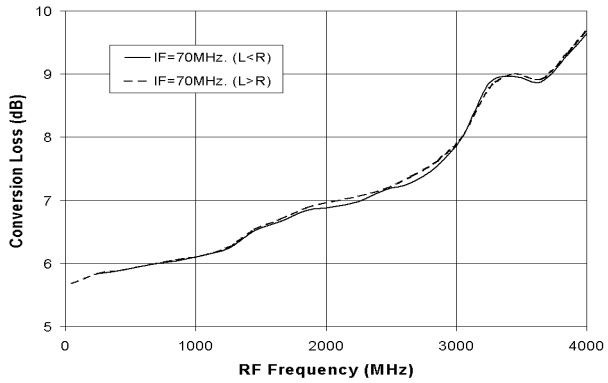
IF-Port VSWR vs. Frequency



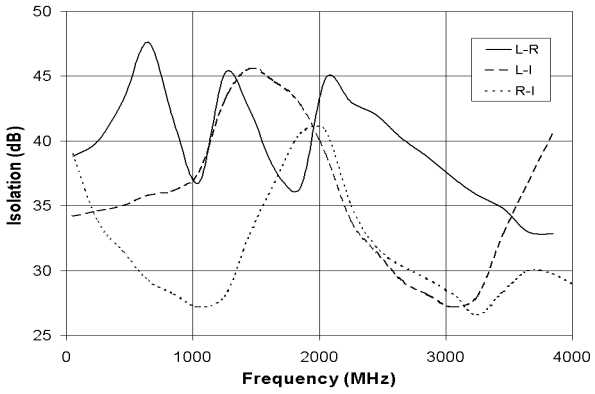
Conversion Loss vs. RF Frequency



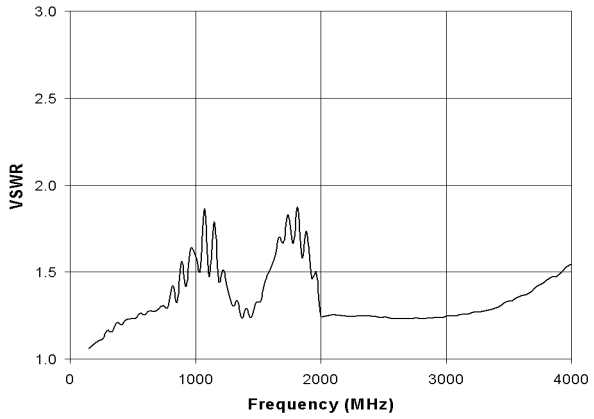
Conversion Loss vs. RF Frequency



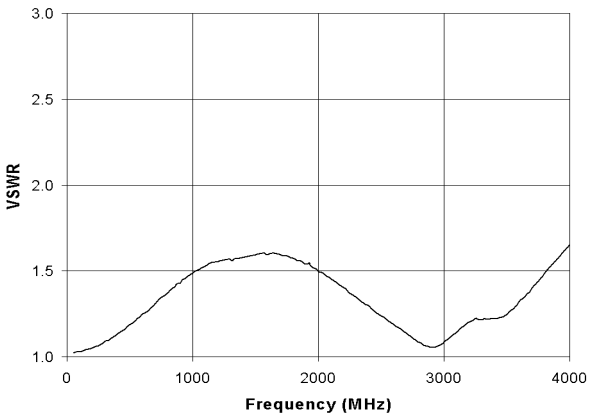
Isolation vs. Frequency



LO-Port VSWR vs. Frequency



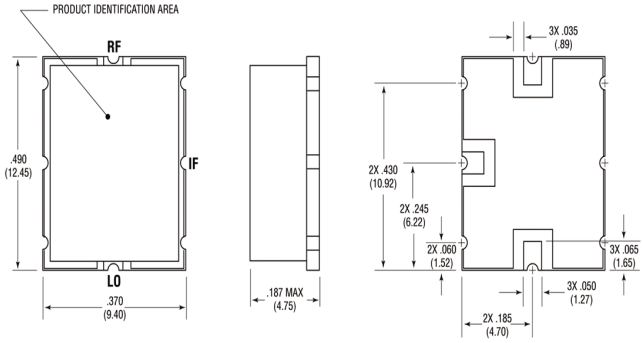
RF-Port VSWR vs. Frequency



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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	-40ºC to +85ºC
Storage Temperature	-65ºC to +100ºC
Peak Input Power	+20 dBm max @ +25ºC +17 dBm max @ +85ºC
Peak Input Current	50 mA DC

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