

Termination Insensitive Mixer

Rev. V3

Features

- LO 1 TO 3400 MHz
- RF 1 TO 3400 MHz
- IF 1 TO 2000 MHz
- LO DRIVE +23 dBm (NOMINAL)
- HIGH INTERCEPT +29 dBm (TYP.)

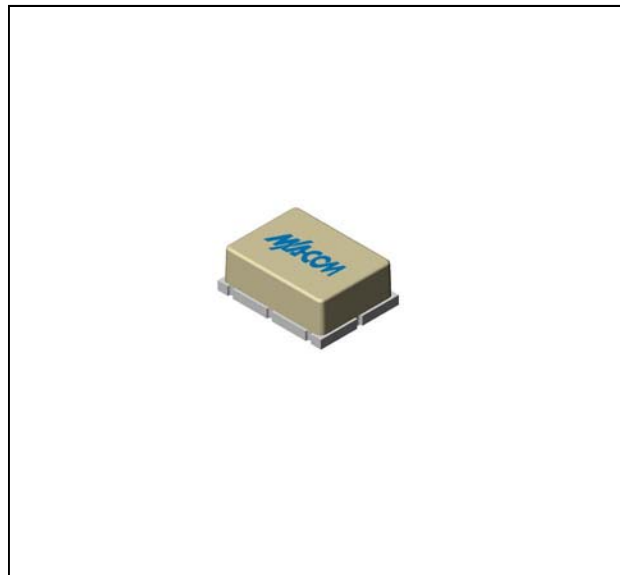
Description

The CSM4TH 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

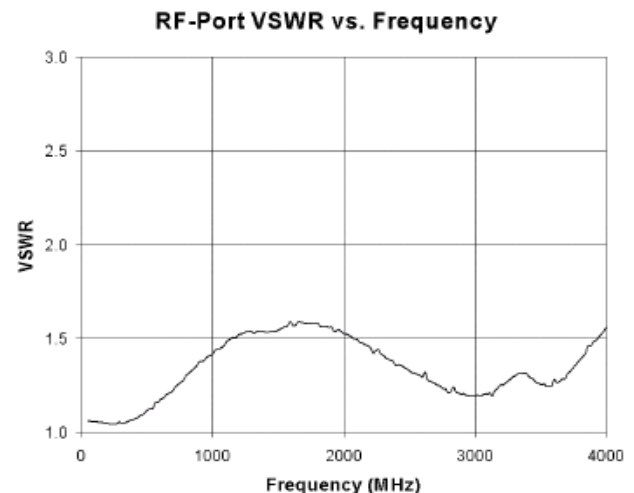
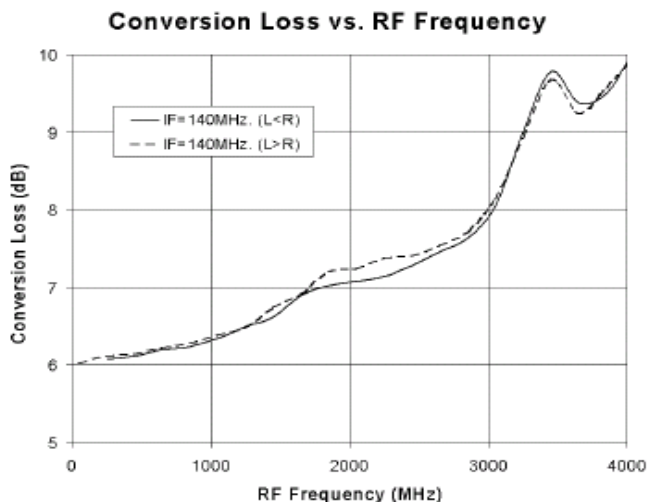
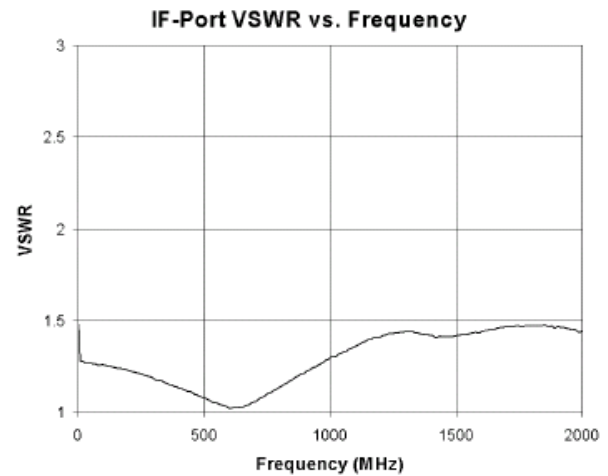
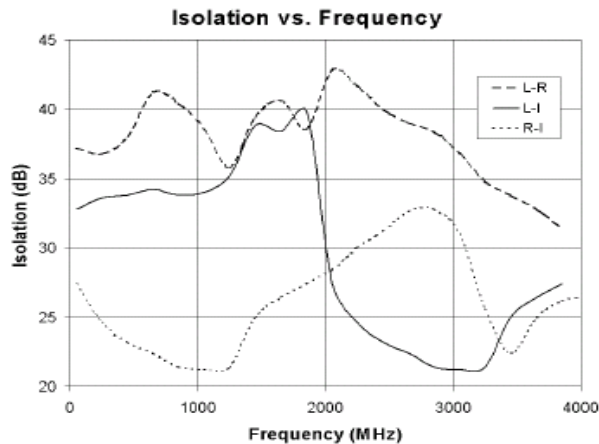
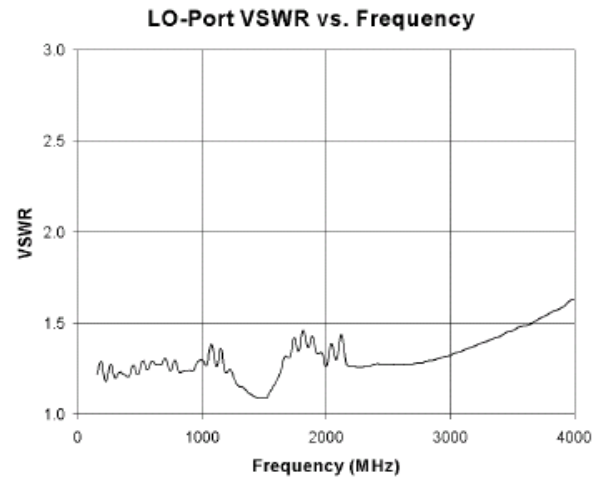
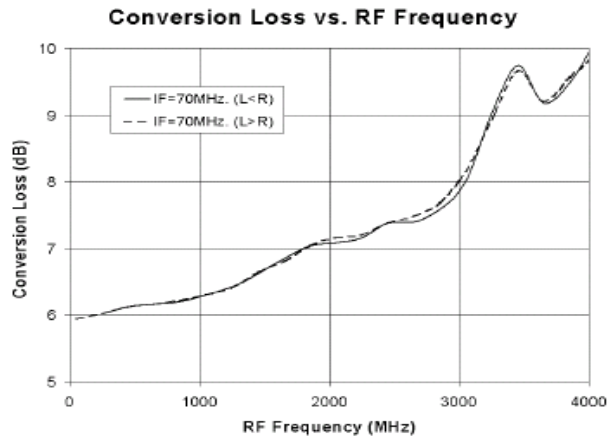
Part Number	Package
CSM4TH	Surface Mount

Product Image

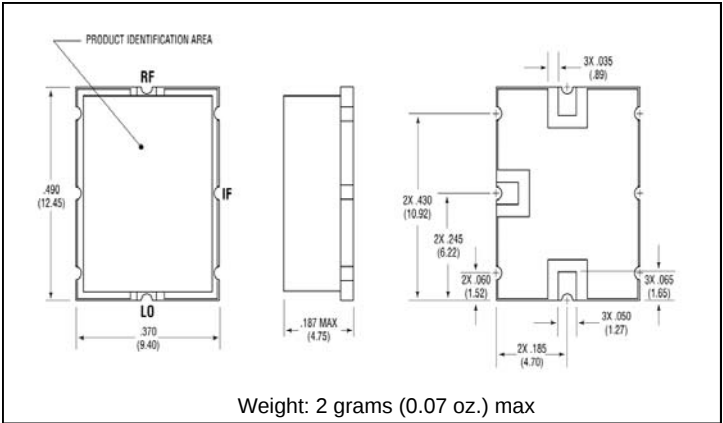
Electrical Specifications: $Z_0 = 50\Omega$ $Lo = +23$ dBm (Downconverter application only)

Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25°C	-40° to +85°C
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 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 9.0	9.5 10.5	10.0 11.0
L - R Isolation (min)	fL = 1 to 2400 MHz fL = 2400 to 3400 MHz	dB	35 25	26 20	24 18
L - I Isolation (min)	fL = 1 to 2400 MHz fL = 2400 to 3400 MHz	dB	38 25	27 20	25 18
R - I Isolation (min)	fR = 1 to 3400 MHz	dB	25		
1 dB Conversion Comp.	fL = +23 dBm	dBm	+19		
Input IP3	fL = 100 to 3400 MHz, fI = 50 to 2000 MHz, fR = 100 to 3400 MHz	dBm	+28		
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		

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	+26 dBm max @ +25°C +23 dBm max @ +85°C
Peak Input Current	50 mA DC