CSM4TH

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.

Product Image



Ordering Information

Part Number	Package
CSM4TH	Surface Mount

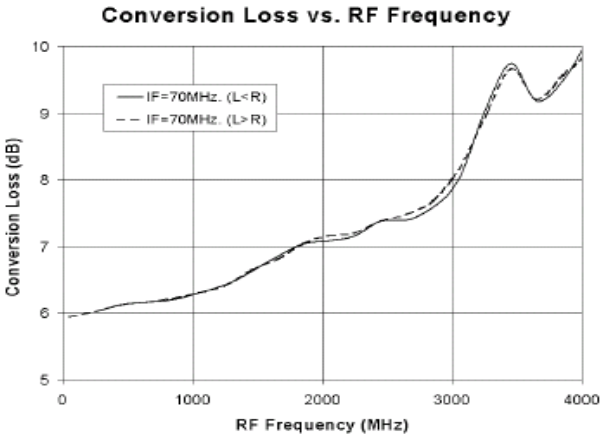
Electrical Specifications: $Z_0 = 50\Omega$ Lo = +23 dBm (Downconverter application only)

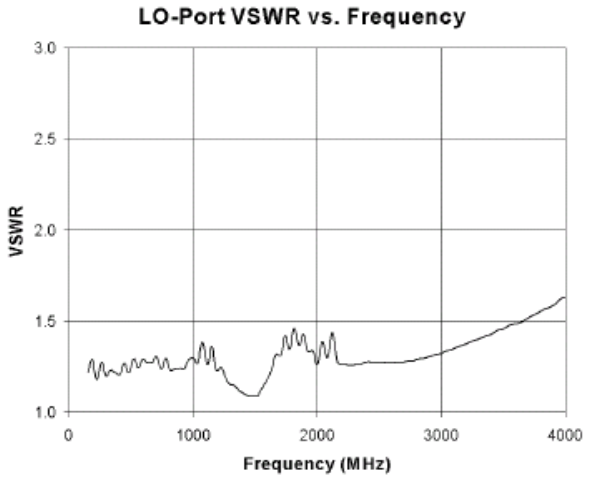
Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25ºC	-40º to +85ºC
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 1 to 2400 MHz, fL = 1 to 2400 MHz, fI = 1 to 2000 MHz fR = 1 to 3400 MHz , fL = 1 to 3400 MHz , fI = 1 to 2000 MHz	dB dB	8.0 9.0	9.5 10.5	10.0 11.0
L - R Isolation (min)	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		

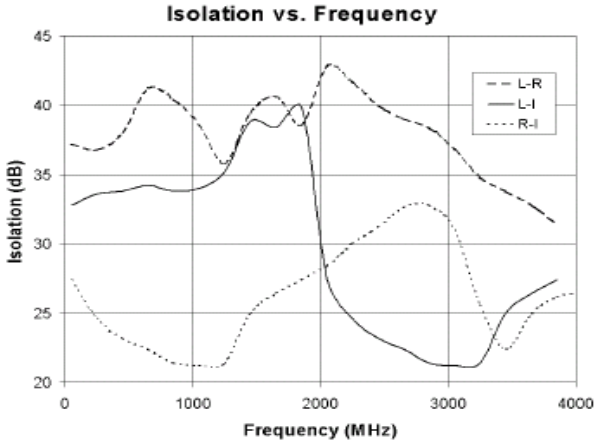
M/A-COM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.
Visit www.macom.com for additional data sheets and product information.

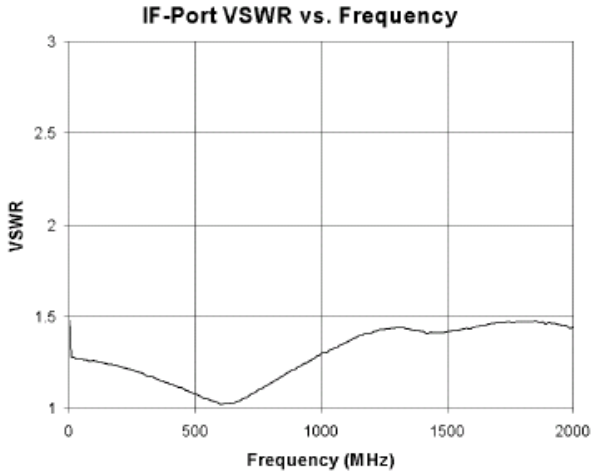
For further information and support please visit:
https://www.macom.com/support

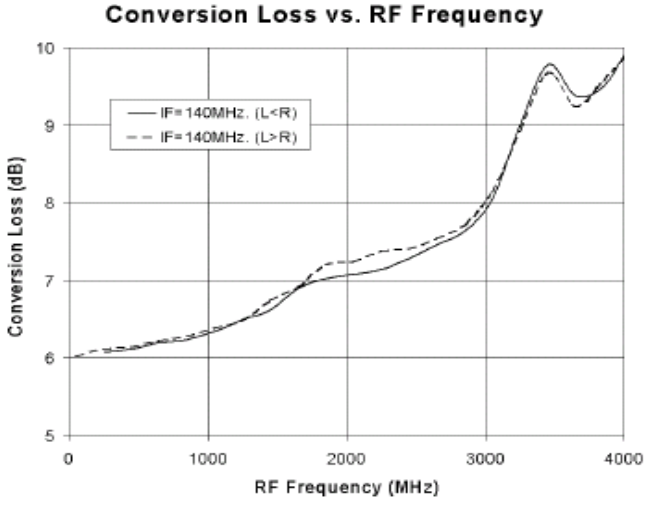
Typical Performance Curves

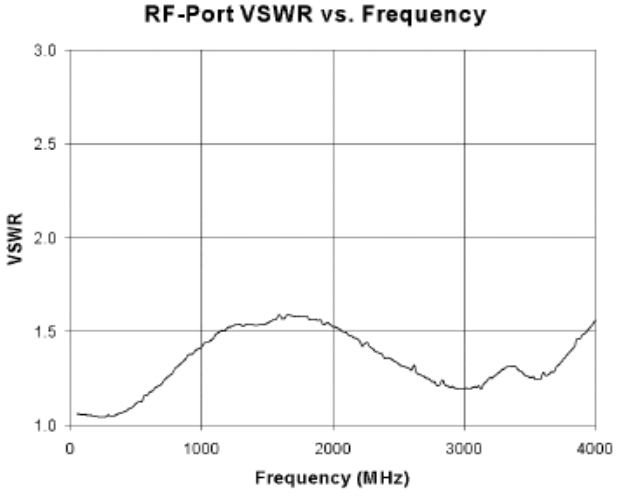








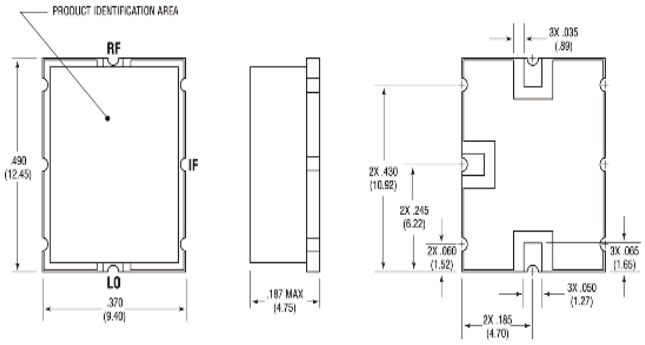




M/A-COM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.
Visit www.macom.com for additional data sheets and product information.

For further information and support please visit:
https://www.macom.com/support

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

M/A-COM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.
Visit www.macom.com for additional data sheets and product information.

For further information and support please visit:
https://www.macom.com/support

M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppels or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.