

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.)

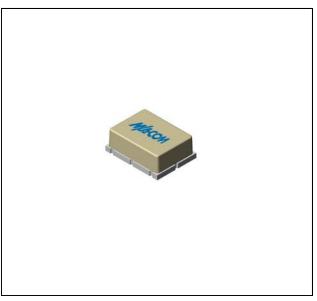
Description

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.

Ordering Information

Part Number	Package
CSM5TH	Surface Mount

Product Image



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

Devementer	Parameter Test Conditions		Typical	Guaranteed	
Parameter	lest Conditions	Units		+25°C	-40° to +85°C
SSB Conversion Loss (max) & SSB Noise Figure (max)	$fR = 50 \text{ to } 1500 \text{ MHz}, fL = 50 \text{ to } 1500 \text{ MHz}, fl = 50 \text{ to } 1500 \text{ MHz} \\ fR = 1500 \text{ to } 3000 \text{ MHz}, fL = 1500 \text{ to } 3000 \text{ MHz}, fl = 50 \text{ to } 3000 \text{ MHz} \\ fR = 3000 \text{ to } 4800 \text{ MHz}, fL = 3000 \text{ to } 4800 \text{ MHz}, fl = 50 \text{ to } 3000 \text{ MHz} \\ \end{cases}$	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	fl = 50 to 3000 MHz		2.0:1		

Commitment to produce in volume is not guaranteed.

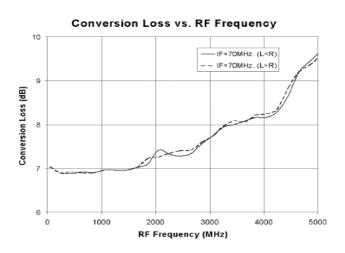
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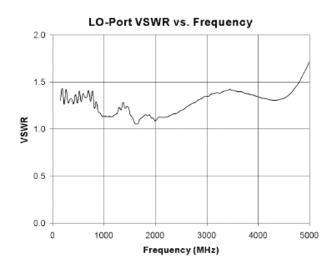


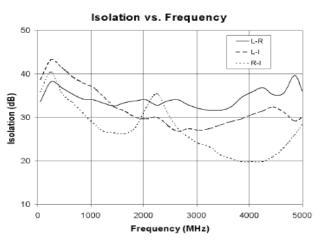
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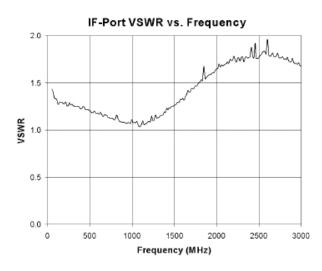
Rev. V2

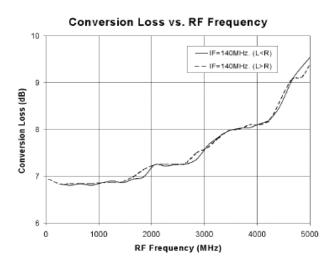
Typical Performance Curves

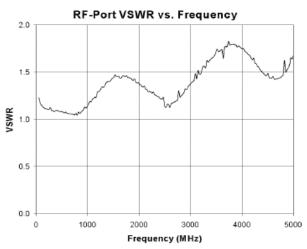












- ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

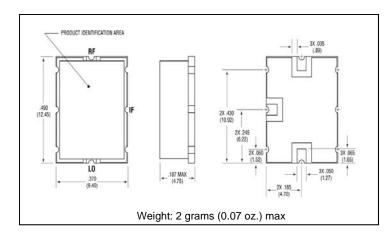
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- PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.
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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	+27 dBm max @ -25°C +23 dBm max @ +85°C	
Peak Input Current	50 mA DC	

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