

Low Cost High IP3 Mixer for **Cellular Applications**

Rev. V3

Features

- LO & RF 10 TO 1500 MHz
- IF 1 TO 500 MHz
- LO DRIVE +13 dBm (NOMINAL)
- SURFACE MOUNT
- HIGH INTERCEPT +22 dBm (TYP.)
- +260°C REFLOW COMPATIBLE

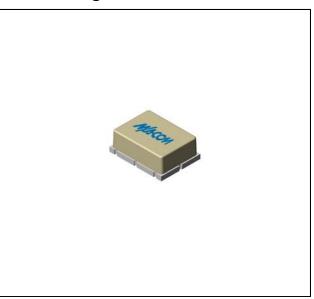
Description

The CSM1-13 is a double balanced mixer, designed for use in the high volume wireless applications. The design utilizes Schottky ring quad diodes and broadband baluns to attain excellent performance.

Ordering Information

Part Number	Package
CSM1-13	Surface Mount

Product Image



Electrical Specifications: $Z_0 = 50\Omega$ Lo = +13 dBm (Downconverter application only)

Dovementor	December Test Conditions		Typical	Guaranteed	
Parameter Test Conditions		Units		+25°C	-40° to +85°C
SSB Conversion Loss (max)	fR = 10 to 1000 MHz, fL = 10 to 1000 MHz, fI = 1 to 500 MHz fR = 1000 to 1500 MHz, fL = 1000 to 1500 MHz, fI = 1 to 500 MHz	dB dB	6.5 7.5	7.0 8.0	7.5 8.5
SSB Noise Figure	dB Within 1 dB of conversion loss		sion loss		
L - R Isolation (min)	fL = 10 to 1500 MHz	dB	40	35	33
L - I Isolation (min)	fL = 10 to 1500 MHz	dB	30	25	23
R - I Isolation (min)	fR = 10 to 1500 MHz	dB	27		
1 dB Conversion Comp	fL = +13 dBm	dBm	+9		
Input IP3	fL = 10 to 1500 MHz, fI = 1 to 500 MHz, fR = 10 to 1500 MHz	dBm	+22		
R-Port VSWR	fR = 10 to 1500 MHz		1.50:1		
L-Port VSWR	fL = 10 to 1500 MHz		2.00:1		
I-Port VSWR	fI = 10 to 500 MHz		1.50:1		

Commitment to produce in volume is not guaranteed.

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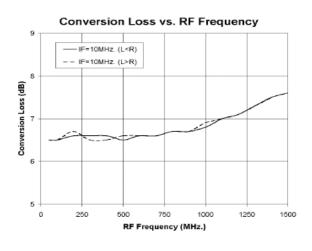
[•] India Tel: +91.80.4155721 • China Tel: +86.21.2407.1588 Visit www.macomtech.com for additional data sheets and product information.

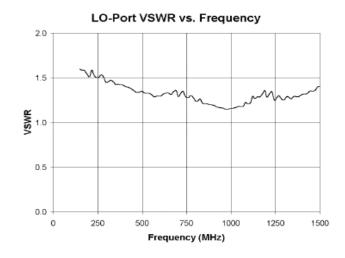


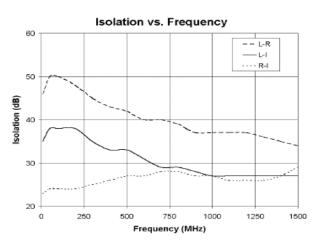
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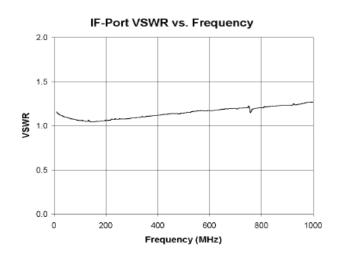
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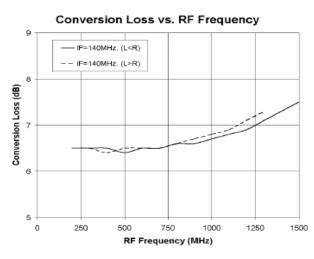
Typical Performance Curves



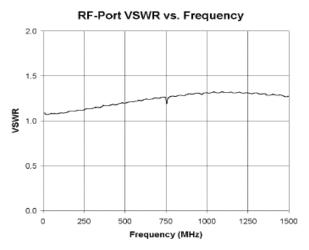








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ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not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

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology.

and/or prototype measurements. Commitment to develop is not guaranteed.

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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.

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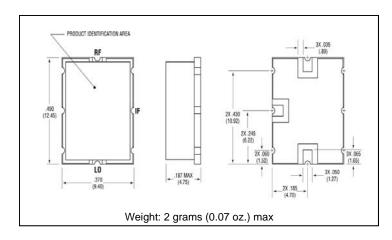
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Outline Drawing: Surface Mount *



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	+20 dBm max @ -25°C +17 dBm max @ +85°C		
Peak Input Current	50 mA DC		

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