

Low Cost High IP3 Mixer for PCS/WLL Applications

Rev. V3

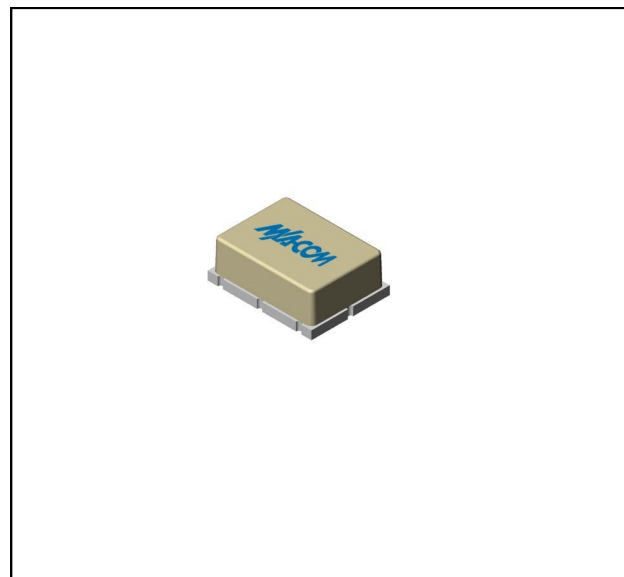
Features

- LO & RF 10 TO 2800 MHz
- IF 10 TO 2000 MHz
- LO DRIVE +13 dBm (NOMINAL)
- SURFACE MOUNT
- HIGH INTERCEPT +22 dBm (TYP.)
- +260°C REFLOW COMPATIBLE

Description

The CSM2-13 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.

Product Image



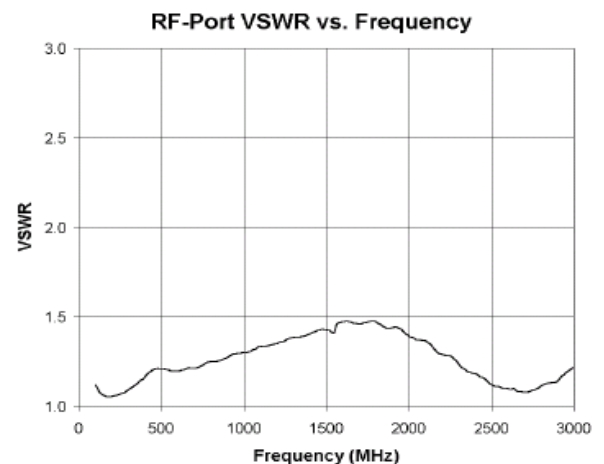
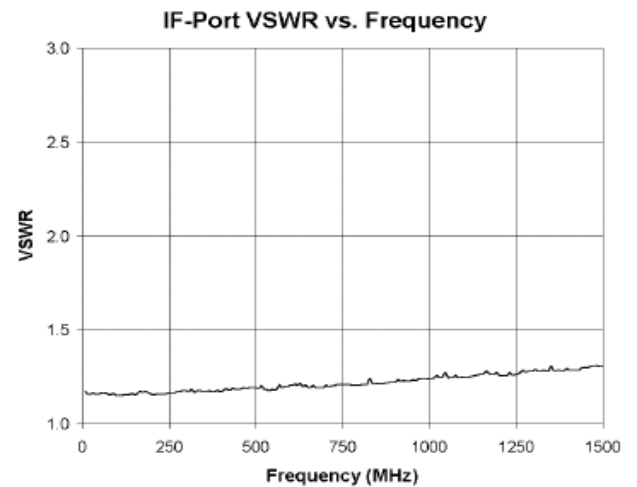
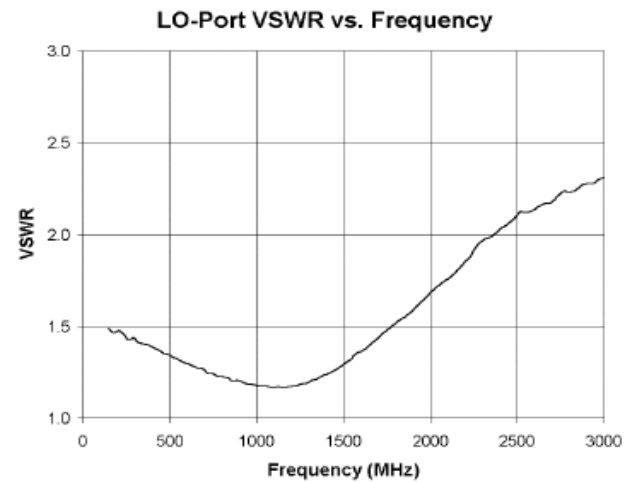
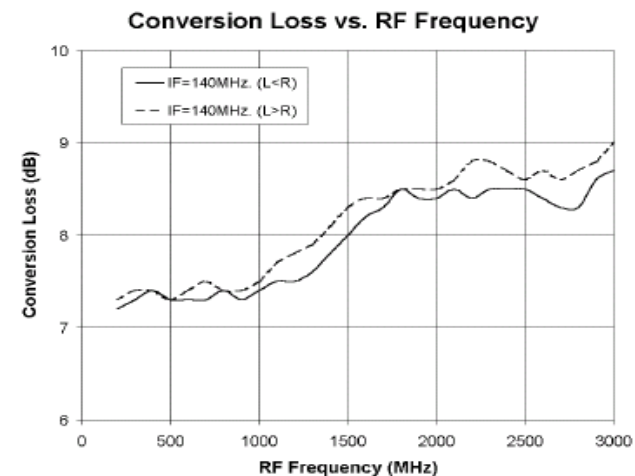
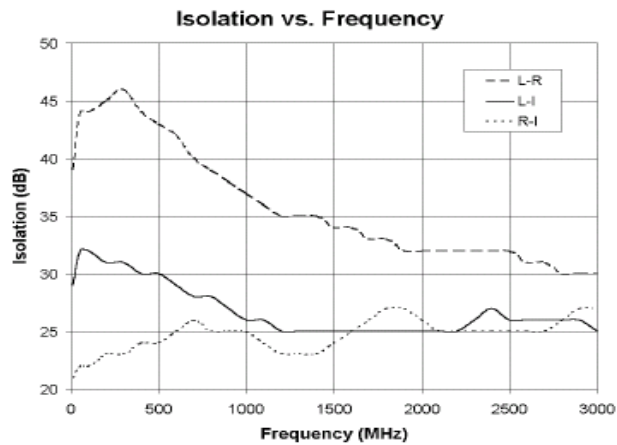
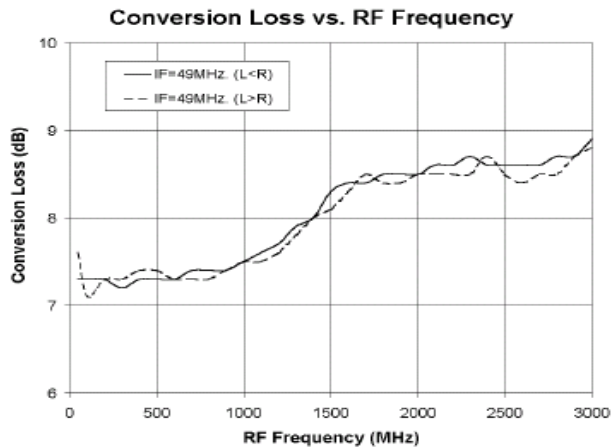
Ordering Information

Part Number	Package
CSM2-13	Surface Mount

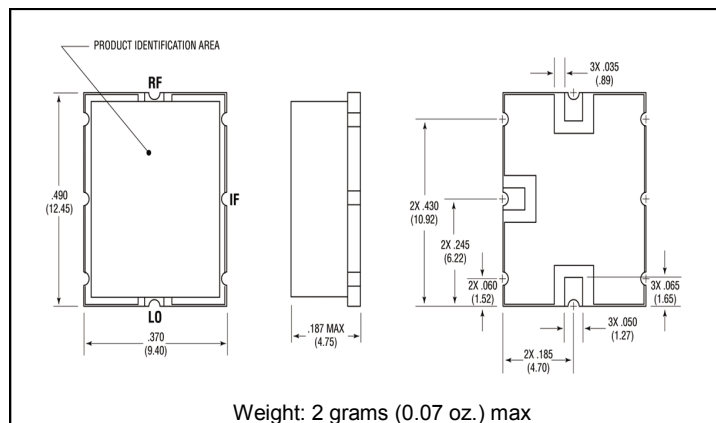
Electrical Specifications: $Z_0 = 50\Omega$ $Lo = +13$ dBm (Downconverter application only)

Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25°C	-40° to +85°C
SSB Conversion Loss(max)	$f_R = 10$ to 1200 MHz, $f_L = 10$ to 1200 MHz, $f_I = 10$ to 1000 MHz $f_R = 1200$ to 2800 MHz, $f_L = 1200$ to 2800 MHz, $f_I = 10$ to 2000 MHz	dB dB	7.5 9.0	8.0 10.0	8.5 10.5
SSB Noise Figure		dB	Within 1 dB of conversion loss		
L - R Isolation (min)	$f_L = 10$ to 1200 MHz $f_L = 1200$ to 2800 MHz	dB dB	35 30	32 28	30 26
L - I Isolation (min)	$f_L = 10$ to 2800 MHz	dB	25	23	21
R - I Isolation (min)	$f_R = 10$ to 2800 MHz	dB	21		
1 dB Conversion Comp.	$f_L = +13$ dBm	dBm	+10		
Input IP3	$f_L = 10$ to 2000 MHz, $f_I = 10$ to 1000 MHz, $f_R = 10$ to 2000 MHz $f_L = 2000$ to 2800 MHz, $f_I = 10$ to 2000 MHz, $f_R = 2000$ to 2800 MHz	dBm dBm	+22 +20		
R-Port VSWR	$f_R = 10$ to 2800 MHz		1.7:1		
L-Port VSWR	$f_L = 10$ to 2000 MHz $f_L = 2000$ to 2800 MHz		2.0:1 2.5:1		
I-Port VSWR	$f_I = 10$ to 2000 MHz		1.8:1		

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

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