

**Low Cost High IP3 Mixer for  
PCS/WLL Applications**

**CSM2-13**  
V3

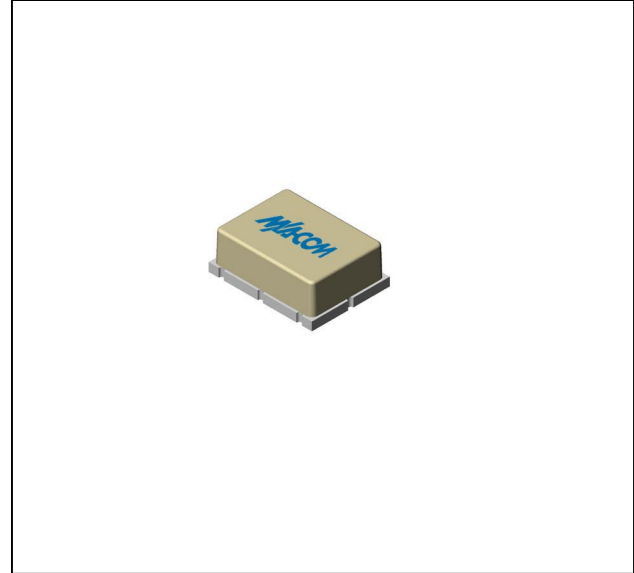
**Features**

- 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

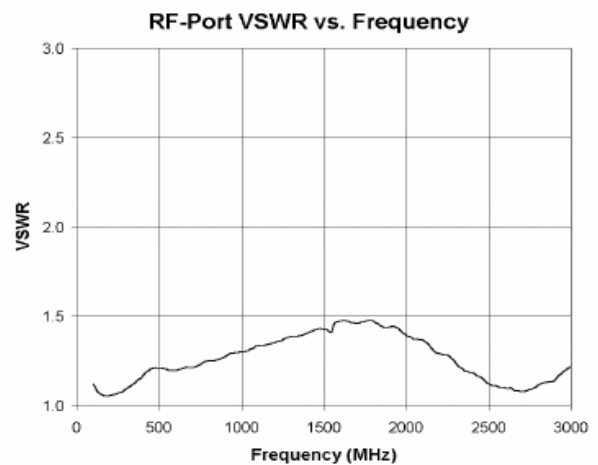
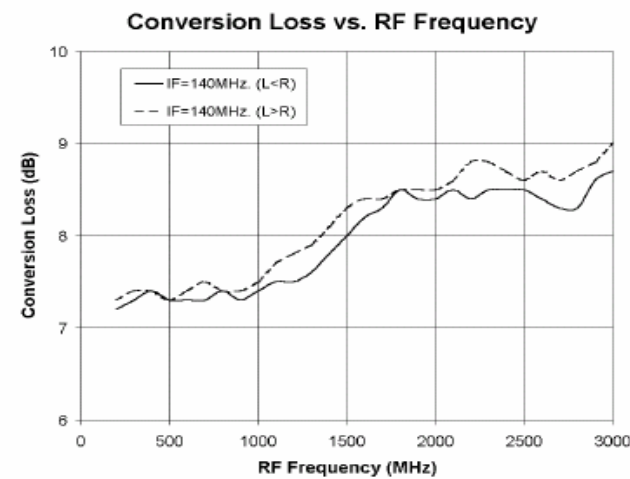
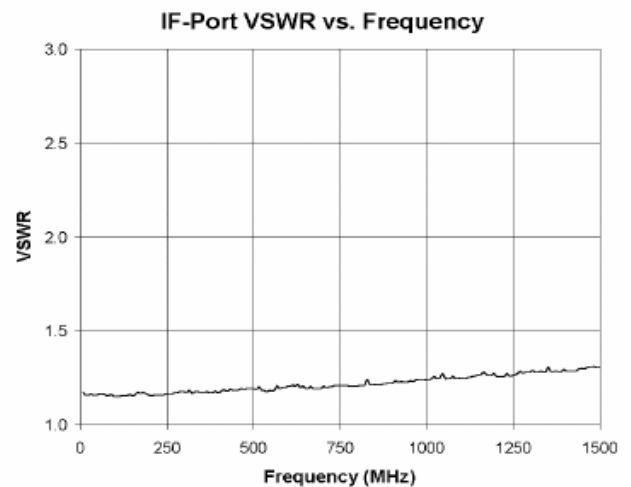
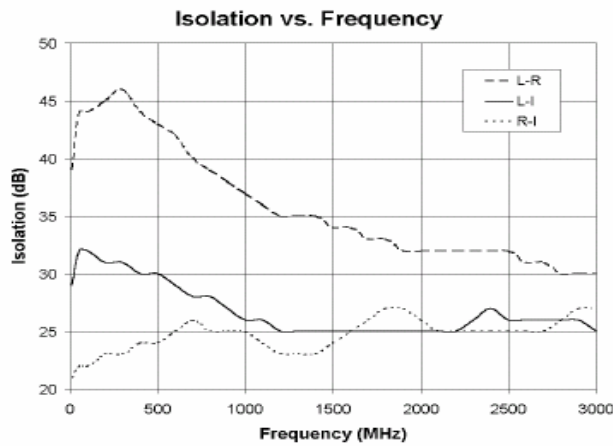
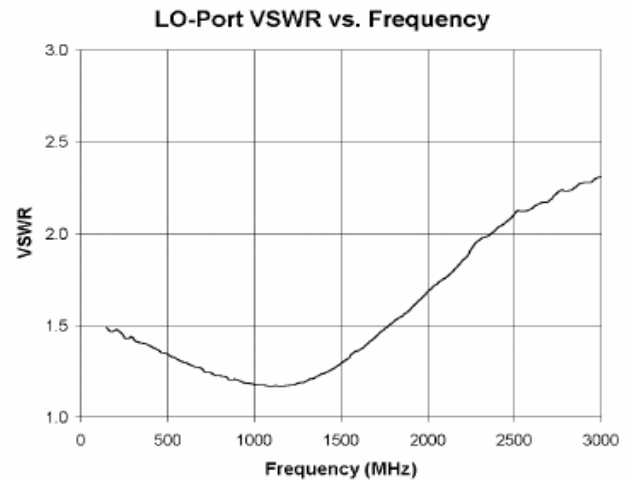
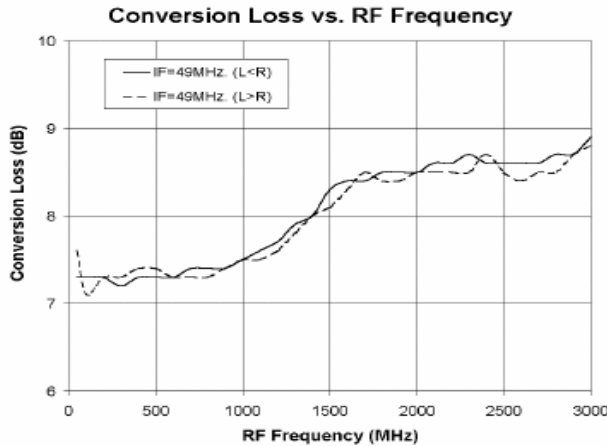
**Electrical Specifications:  $Z_0 = 50\Omega$   $Lo = +13$  dBm (Downconverter application only)**

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

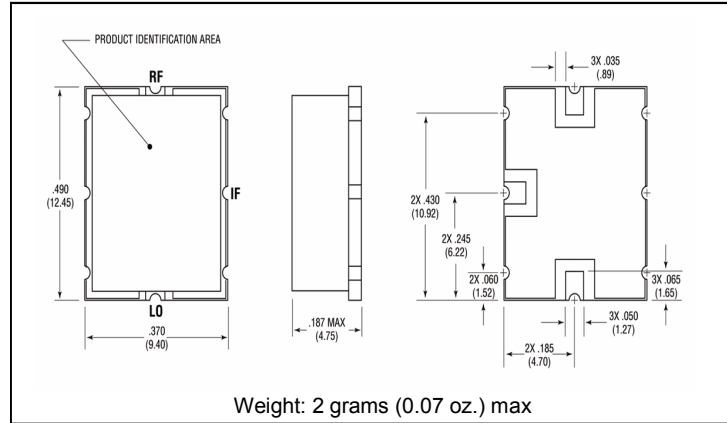
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**Typical Performance Curves**



**Outline Drawing: Surface Mount \***



\* Dimensions are inches (millimeters)  $\pm 0.015$  (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