

## 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 +10 dBm (NOMINAL)
- SURFACE MOUNT
- HIGH INTERCEPT +20 dBm (TYP.)
- +260°C REFLOW COMPATIBLE

### Description

The CSM2-10 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



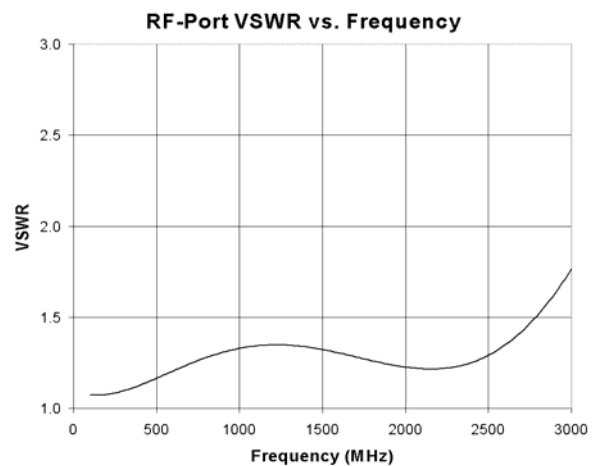
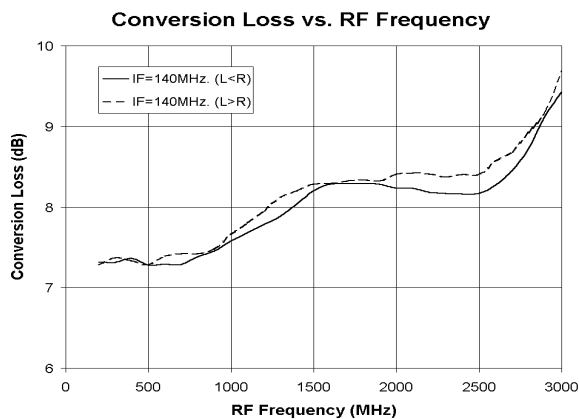
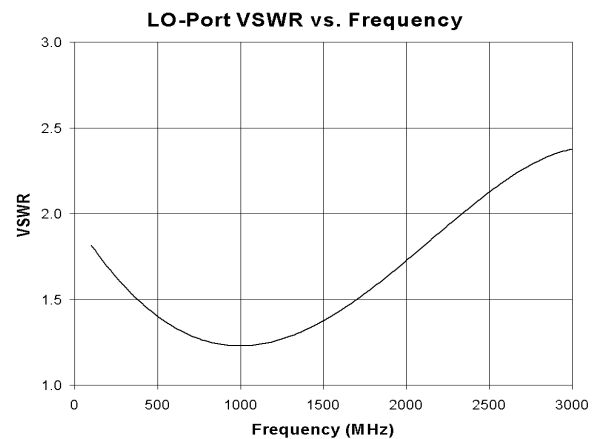
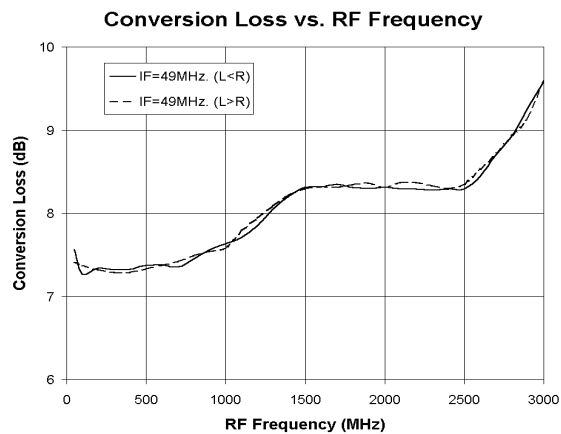
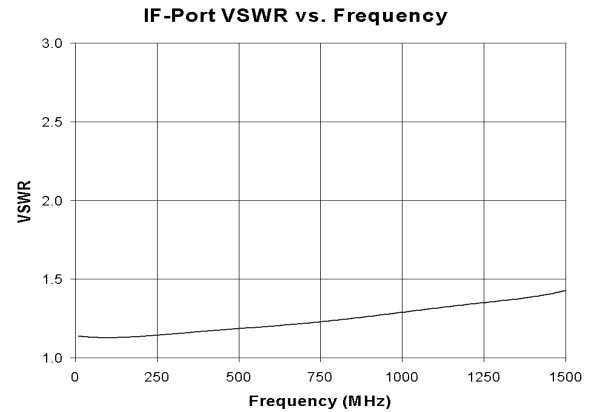
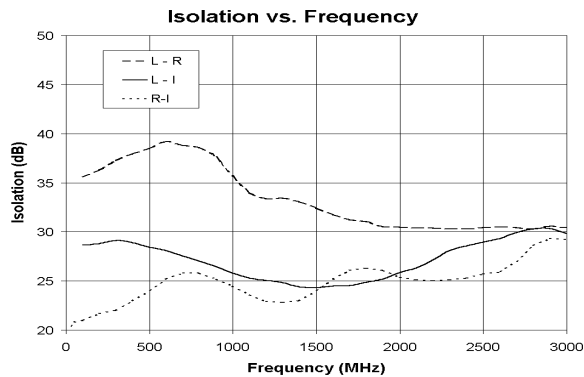
### Ordering Information

Part Number	Package
CSM2-10	Surface Mount

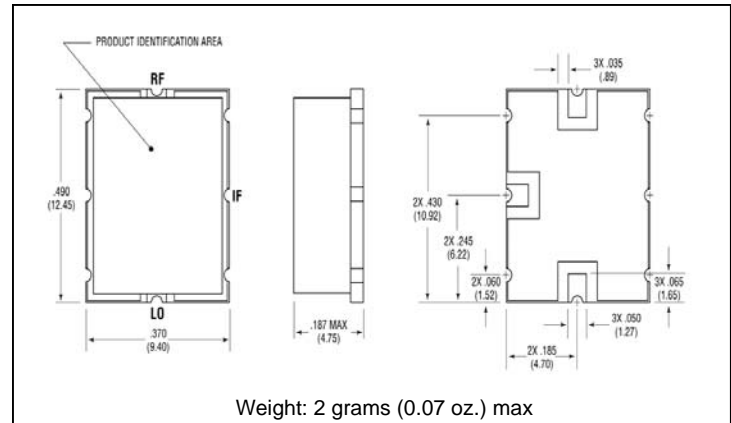
### Electrical Specifications: $Z_0 = 50\Omega$ $Lo = +10$ dBm (Downconverter application only)

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 dB	8.0 9.0	8.5 10.0	9.0 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 dB	35 30	32 28	30 26
L - I Isolation (min)	fL = 10 to 2800 MHz	dB	27	23	21
R - I Isolation (min)	fR = 10 to 2800 MHz	dB	27		
1 dB Conversion Comp.	fL = +10 dBm	dBm	+7		
Input IP3	fL = 10 to 2800 MHz, fi = 10 to 1000 MHz, fR = 10 to 2800 MHz fL = 2000 to 2800 MHz, fi = 10 to 2000 MHz, fR = 2000 to 2800 MHz	dBm dBm	+20 +17		
R-Port VSWR	fR = 10 to 2800 MHz		1.80:1		
L-Port VSWR	fL = 10 to 2000 MHz fL = 2000 to 2800 MHz		1.90:1 2.50:1		
I-Port VSWR	fi = 10 to 2200 MHz		1.80:1		

## 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

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