CSM1-10

Low Cost High IP3 Mixer For Cellular Applications

Rev. V3

Features

- LO & RF 10 TO 1500 MHz
- IF 1 TO 500 MHz
- LO DRIVE +10 dBm (NOMINAL)
- SURFACE MOUNT
- HIGH INTERCEPT +19dBm (TYP.)
- +260°C REFLOW COMPATIBLE

Description

The CSM1-10 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
CSM1-10	Surface Mount

Electrical Specifications: Z_0 = 50Ω Lo = +10 dBm (Downconverter application only)

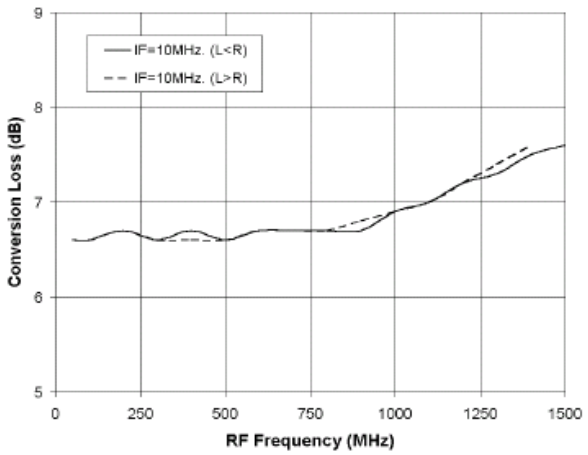
Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25ºC	-40º to +85ºC
SSB Conversion Loss(max)	fR = 10 to 1000 MHz, fL = 10 to 1000 MHz, fI = 1 to 500 MHz fR = 1000 to 1500 MHz, fL = 1000 to 1500 MHz, fI = 1 to 500 MHz	dB dB	6.5 7.5	7.0 8.0	7.5 8.5
SSB Noise Figure		dB	Within 1 dB of conversion loss		
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 = +10 dBm	dBm	+6		
Input IP3	fL = 10 to 1500 MHz, fI = 1 to 500 MHz, fR = 10 to 1500 MHz	dBm	+19		
R-Port VSWR	fR = 10 to 1500 MHz		1.50:1		
L-Port VSWR	fL = 10 to 1500 MHz		1.75:1		
I-Port VSWR	fI = 10 to 500 MHz		1.50:1		

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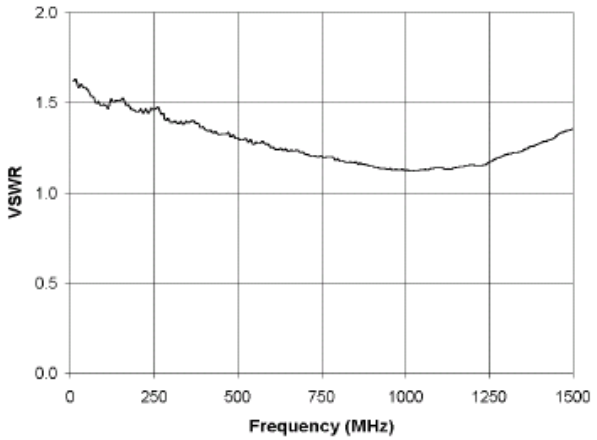
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Typical Performance Curves

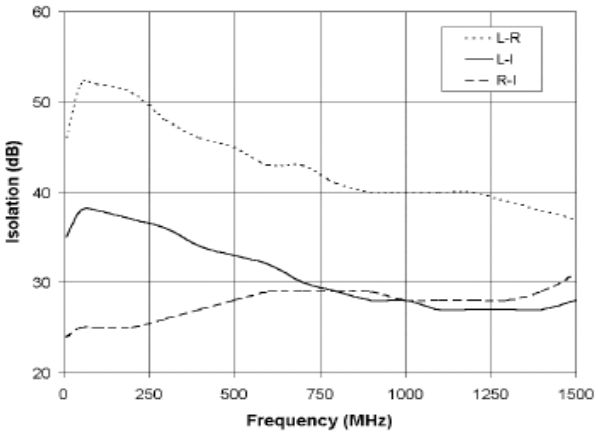
Conversion Loss vs. RF Frequency



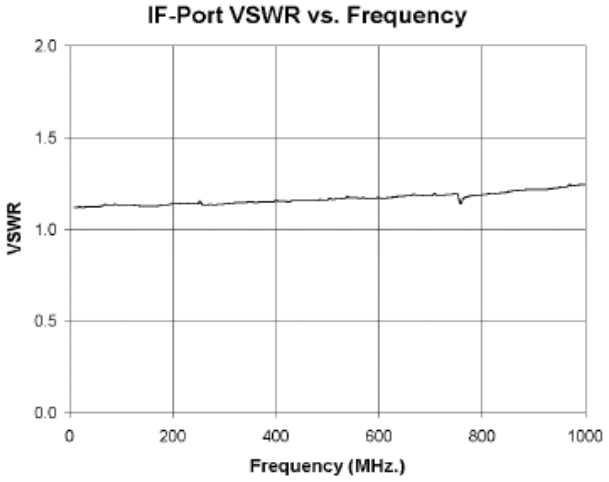
LO-Port VSWR vs. Frequency



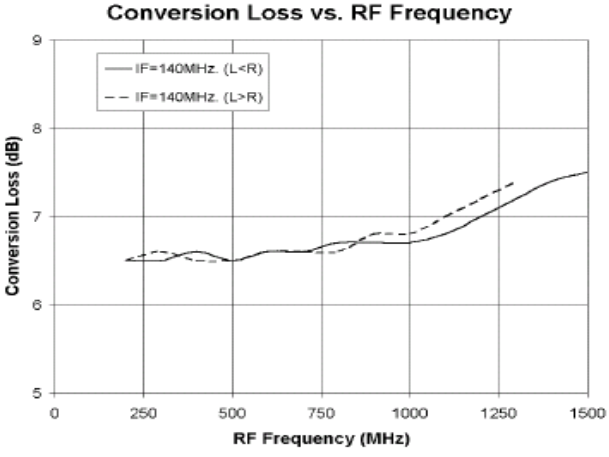
Isolation vs. Frequency



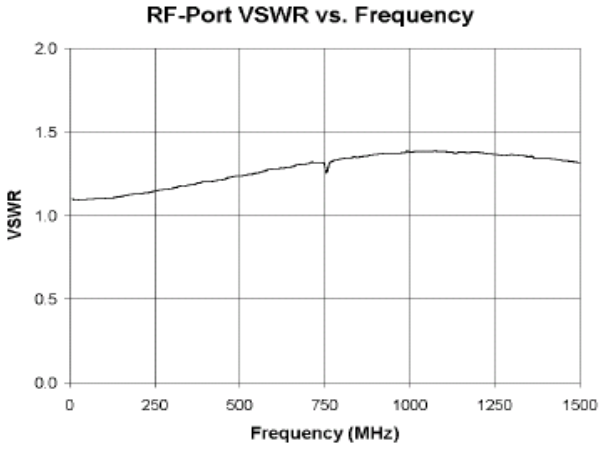
IF-Port VSWR vs. Frequency



Conversion Loss vs. RF Frequency



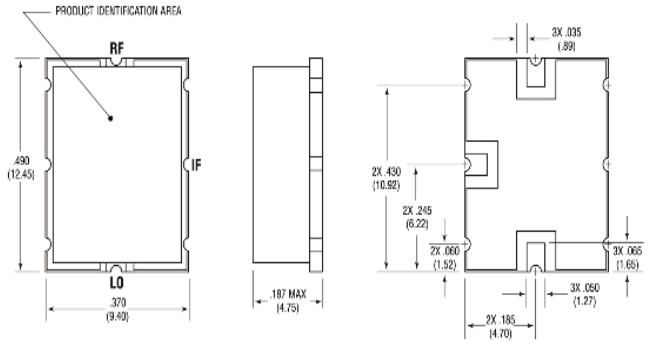
RF-Port VSWR vs. Frequency



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Outline Drawing: Surface Mount *



Weight: 2 grams (0.07 oz.) max

* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

Absolute Maximum Ratings

Parameter	Absolute Maximum
Operating Temperature	-54ºC to +85ºC
Storage Temperature	-65ºC to +100ºC
Peak Input Power	+20 dBm max @ -25ºC +17 dBm max @ +85ºC
Peak Input Current	50 mA DC

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