

# Double Balanced Mixer

# Model MC53SMC-13

Communications Band

RF 4.0 to 8.0 GHz

## Electrical Specifications <sup>(1)</sup>:

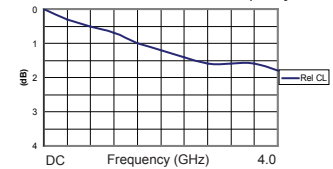
Parameter	Conditions			Specifications		
	RF (GHz)	LO (GHz)	IF (MHz)	Min	Typical	Max
<b>SSB Conversion loss:</b> <sup>(2)</sup> <sup>(3)</sup>	4.0-8.0	4.0-8.0	DC-1000		5.5 dB	7.0 dB
	4.0-8.0	4.0-8.0	DC-3000		6.5 dB	8.0 dB
	4.0-8.0	4.0-8.0	DC-4000		7.5 dB	9.0 dB
<b>Isolation</b> LO to RF: LO to IF: RF to IF:		4.0-8.0		25 dB	35 dB	
		4.0-8.0			19 dB	
	4.0-8.0				25 dB	
<b>Input 1 dB Compression Point:</b>	4.0-8.0	4.0-8.0	DC-4000		+2 dBm	
<b>Input Third Order Intercept Point:</b>	4.0-8.0	4.0-8.0	DC-4000		+12 dBm	
<b>LO Power:</b> <sup>(4)</sup>	4.0-8.0	4.0-8.0	DC-4000		+7 dBm	

**Notes:**

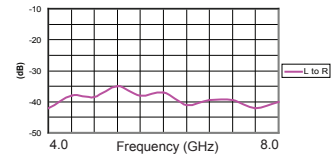
- Specifications are guaranteed when tested as a downconverter in a 50 Ohm system at +25°C with the nominal LO power. Specifications indicated as typical are not guaranteed.
- Noise figure is typically within ±0.5 dB of conversion loss if IF frequencies greater than 10 MHz.
- Conversion loss typically degrades less than 0.5 dB at +100°C and improves less than 0.5 dB at -55°C.
- Usable LO drives are up to 2 dB below and 3 dB above nominal.

## Typical Performance at +25° C

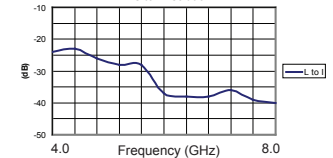
Relative Conversion Loss VS. IF Frequency



LO to RF Isolation



LO to IF Isolation



Conversion Loss (1 GHz)

