DOUBLE BALANCE MIXER

4.5 to 14.5 GHz

MODEL NO: MG35TC-28

PRODUCT FEATURE

†Broadband Frequency Application
†Excellent Conversion Loss
†High Isolation
†Frequency Converter Application

ABSOLUTE MAXIMUM RATING:

Operating Temperature:	-54ºC to +100ºC
Storage Temperature:	-65ºC to +100ºC
Peak Input Power for any Single Port:	+23 dBm Peak
Max RF Input Power:	200mWCW@+25ºC
Peak Input Current @ 25ºC:	100 mA

Parameters	SPECIFICATION				
	FREQ. (GHz)	MIN (dB)	TYPICAL (dB)	MAX (dB)	CONDITONS
CONVERSION LOSS RF INPUT LO INPUT IF OUTPUT	 4.5 to14.5 4.9,7.0,12.8,13.05 0.950 to 1.7		 6.0	 8.0	 LO = +10dBm
CONVERSION FLATNESS				±0.5	
ISOLATION LO-RF LO-IF RF-IF	 4.5 to 14.5 4.5 to 14.5 0.950 to 1.7	 20 18 25	 25 25 30		
1 dB Compression Point			+5 dBm		
LO Drive	4.5 to 14.5	+7dBm		+10dBm	
Third-Order Input Intercept Point			+11 dBm		RF1: 9.00 GHz @-6 dBm RF2: 9.01 GHz @-6 dBm LO: 9.25 GHz @+10 dBm

NOTES:
1. Measured in a 50-ohm system with nominal LO drive and downconverter application only, unless otherwise specified. The I-Port frequency range extends to DC for phase detection, pulse modulation, or attenuator applications. I-Port VSWR degrades from a 50-ohm system at lo IF frequencies.
2. Typical values are measured at +25ºC and are not guaranteed

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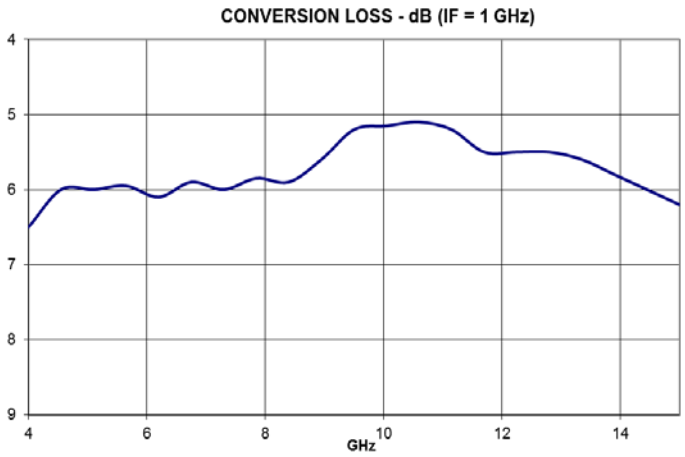
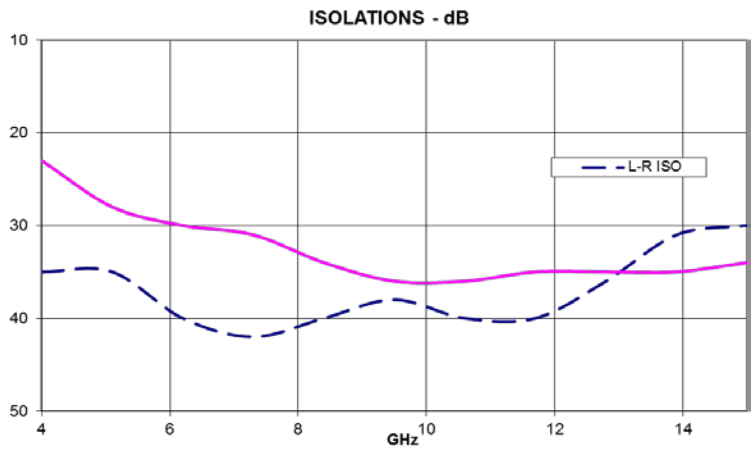
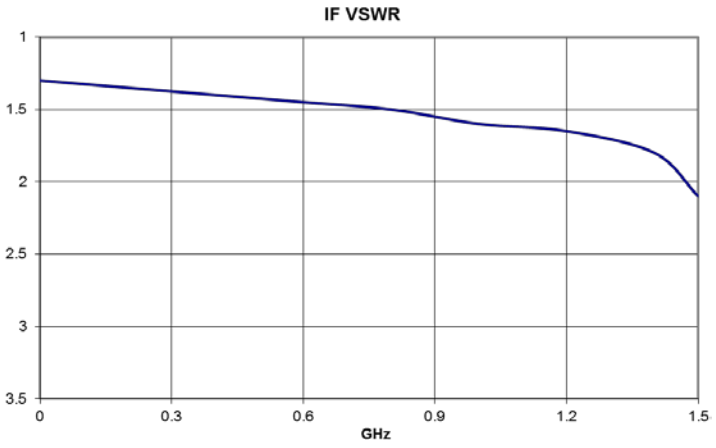
Typical Performance @ 25°c , LO Drive = +10 dBm







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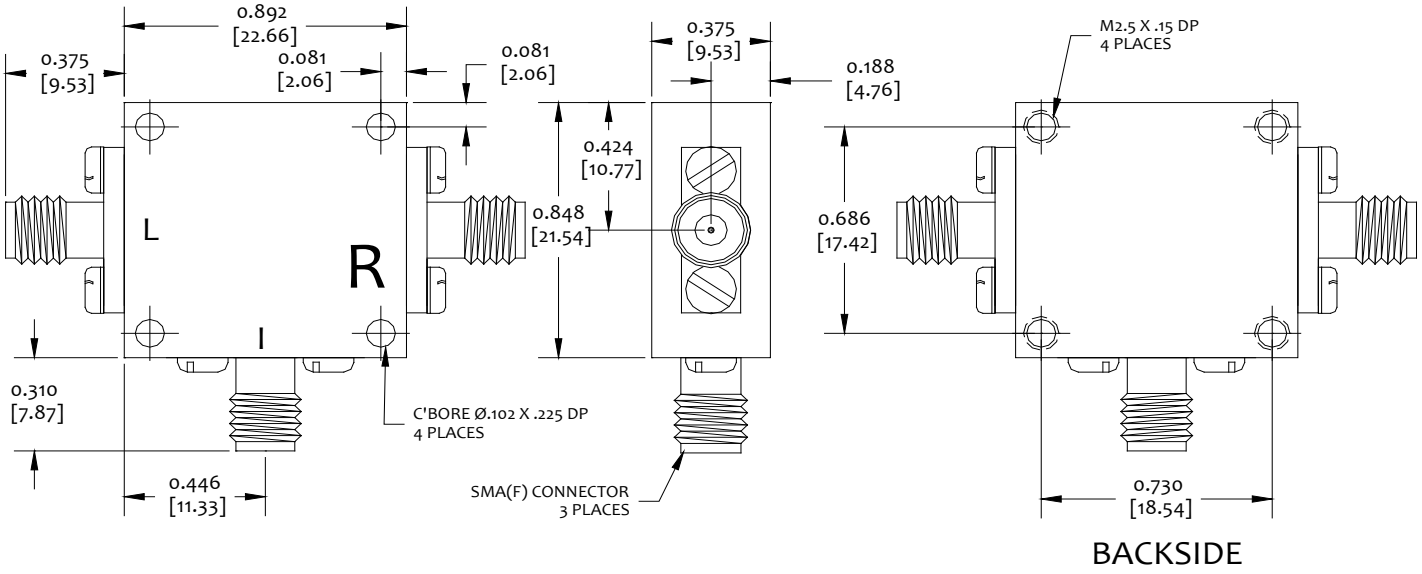

BACKSIDE

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SINGLE-TONE SPURIOUS

SPUR LEVEL (-dBc): nRF x mLO

Spurious suppression is decreased (increased) for lower (higher) RF power levels by (n-1). Adjusting LO drive level may not affect the spurious level of the mixer.
Example:

RF = -10 dBm, 2RFx1LO spur of mixer = -45 dBc
RF = -20 dBm, 2RFx1LO spur of mixer = -55 dBc
RF = 0 dBm, 2RFx1LO spur of mixer = -35 dBc

Test Conditions:

- Downconversion Application
- Frequencies: Mid-band RF, LO, IF
- RF Input = -10 dBm, LO Drive = +10 dBm

Spurious Suppression (Typical) for Double Balanced Mixer

n \ m	1	2	3	4	5
1		**35**	**14**	**25**	**20**
2	**45**	**55**	**45**	**50**	**50**
3	**50**	**60**	**55**	**70**	**60**
4	**80**	**95**	**95**	**>95**	**90**
5	**>95**	**>95**	**90**	**>95**	**95**

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