DOUBLE-BALANCED MIXERS M8-0420

Features

- LO/RF 4.0 to 20.0 GHz
- IF DC to 2.0 GHz
- 6.5 dB Typical Conversion Loss
- 40 dB Typical LO to RF Isolation
- Multi-Octave Band RF and LO
- Superior Bi-Phase Performance
- For a list of recommended LO driver amps for all mixers and IQ mixers, see here.

Electrical Specifications - Specifications guaranteed from -55 to +100°C, measured in a 50-Ohm system.

Parameter	LO (GHz)	RF (GHz)	IF (GHz)	Min	Typ	Max	Diode Option LO drive level (dBm)
Conversion Loss (dB)	4.0-20.0 4.0-20.0	4.0-20.0 4.0-20.0	DC-1.0 1.0-2.0		6.0 7.0	8.0 9.0	
Isolation (dB) LO-RF LO-IF RF-IF	 4.0-20.0 4.0-20.0 4.0-20.0	 4.0-20.0 4.0-20.0 4.0-20.0			 40 30 25		
Input 1 dB Compression (dBm)	4.0-20.0	4.0-20.0			+2 +5 +8 +11 +14		L (+7 to +10) M (+10 to +13) N (+13 to +16) H (+16 to +19) S (+19 to +22)
Input Two-Tone Third Order Intercept Point (dBm)	4.0-20.0	4.0-20.0			+12 +15 +18 +21 +24		L (+7 to +10) M (+10 to +13) N (+13 to +16) H (+16 to +19) S (+19 to +22)

Part Number Options

Please specify diode level and package style by adding to model number.	
Package Style(s)	**Example**
R, S, Z	M8-0420 L R

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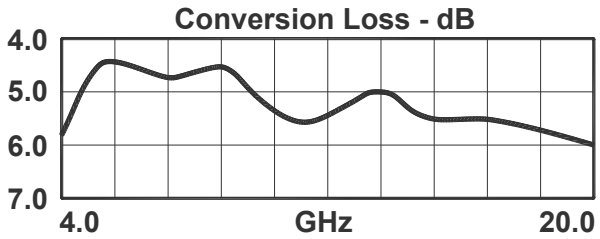
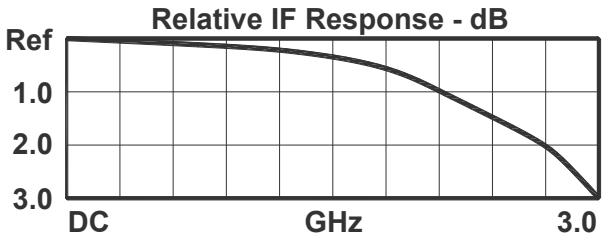
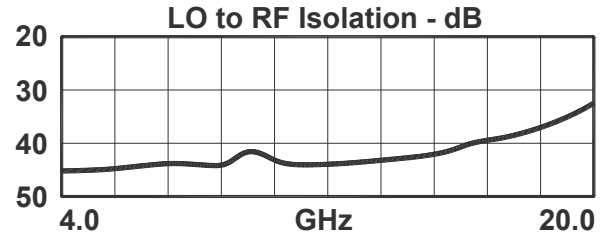
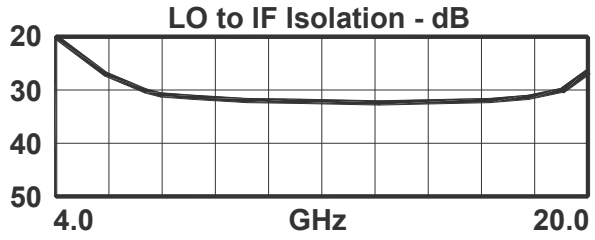
LO/RF 4.0 to 20.0 GHz
IF DC to 2.0 GHz

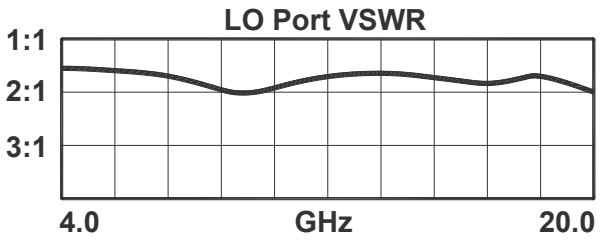
Typical Performance

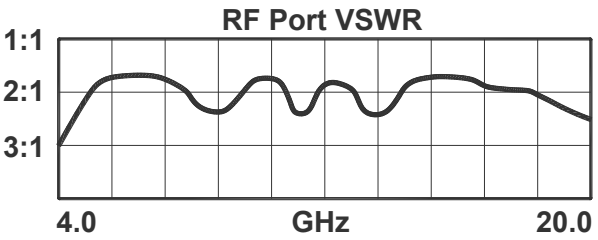












DATA SHEET NOTES:

1. Mixer Conversion Loss Plot is done with an IF frequency of 100 MHz.
2. Mixer Noise Figure typically measures within +0.5 dB of conversion loss for IF frequencies greater than 5 MHz.
3. Conversion Loss typically degrades less than 0.5 dB for LO drives 2 dB below the lowest and 3 dB above highest nominal LO drive levels.
4. Conversion Loss typically degrades less than 0.5 dB at +100°C and improves less than 0.5 dB at -55°C.
5. Maximum input power is +23 dBm at +25°C, derated linearly to +20 dBm at +100°C.
6. Specifications are subject to change without notice. Contact Marki Microwave for the most recent specifications and data sheets.
7. Catalog mixer circuits are continually improved. Configuration control requires custom mixer model numbers and specifications.

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