

# Triple Balanced Mixer

# Model MM9xxL-1

Ultra-Broadband

RF 2.0 to 18.0 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) (3)</sup>	2.0-18.0	2.0-18.0	10-4000		7.3 dB	9.5 dB
<b>Isolation</b>						
<b>LO to RF:</b>		2.0-4.0		15 dB	20 dB	
<b>LO to IF:</b>		4.0-18.0		20 dB	27 dB	
<b>RF to IF:</b>	2.0-18.0	2.0-18.0		20 dB	28 dB	
<b>RF to IF:</b>	2.0-18.0	2.0-18.0			22 dB	
<b>Input 1 dB Compression Point:</b>	2.0-18.0	2.0-18.0	10-4000		+2 dBm +5 dBm +8 dBm +12 dBm +15 dBm	MM93 MM94 MM96 MM97 MM98
<b>Input Third Order Intercept Point:</b>	2.0-18.0	2.0-18.0	10-4000		+11 dBm +14 dBm +17 dBm +21 dBm +24 dBm	MM93 MM94 MM96 MM97 MM98
<b>LO Power:</b> <sup>(4)</sup>	2.0-18.0	2.0-18.0	10-4000		+7 dBm +10 dBm +13 dBm +17 dBm +21 dBm	MM93 MM94 MM96 MM97 MM98

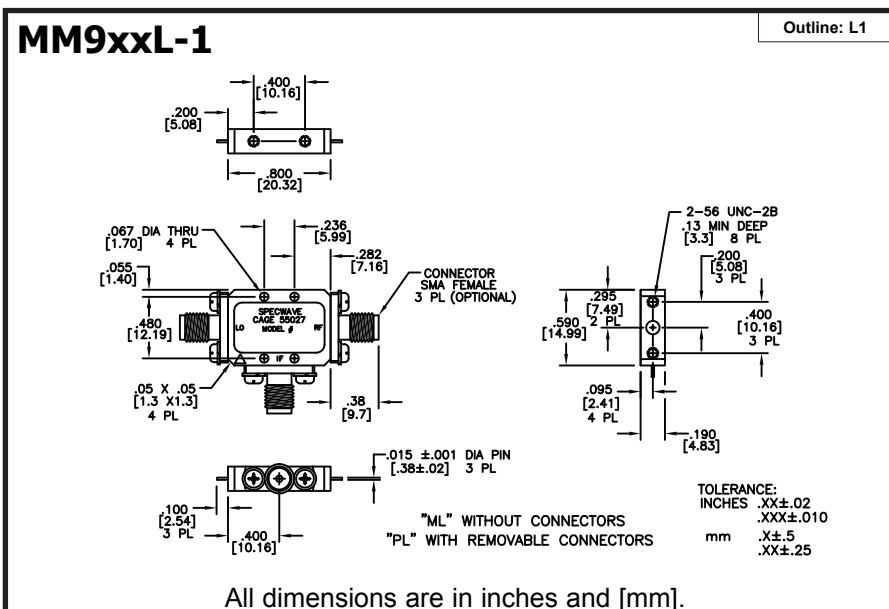
Model MM9xxL-1

**LO Power** ←  
 3 = +7 dBm  
 4 = +10 dBm  
 6 = +13 dBm  
 7 = +17 dBm  
 8 = +21 dBm

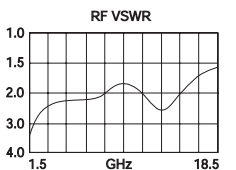
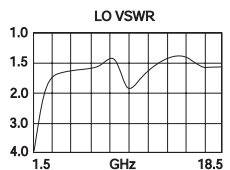
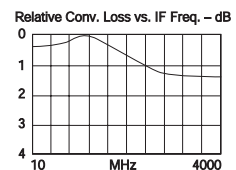
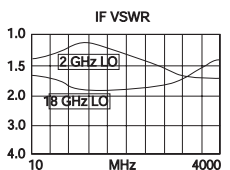
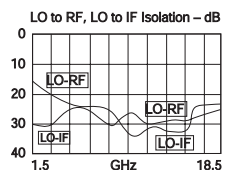
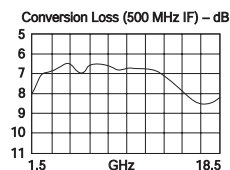
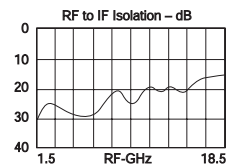
**Drop-In Module or With SMA(F) Connectors**

M = Module  
 P = With Connectors

- Notes:**
- Specifications are guaranteed when tested as a downconverter in a 50 Ohm system from -55°C to +100°C with the nominal LO power. Specifications indicated as typical are not guaranteed.
  - Noise figure is typically within ±0.5 dB of conversion loss.
  - 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



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, FL 32905 · PH (888) 553-7531 · Fax (888) 553-7532

www.SpectrumMicrowave.com · Spectrum Microwave · 2707 Black Lake Place · Philadelphia, PA 19154 · PH (215) 464-4000 · Fax (215) 464-4001

REV A  
 1/3/11