

# Double Balanced Mixer

## Multi-Octave Band

# Model MM4xSMx-10

# Model MM4xSMx-14

## RF 2.0 to 8.0 GHz

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

Parameter	Conditions			Specifications		
	RF(GHz)	LO(GHz)	IF(MHz)	Min	Typical	Max
SSB Conversion loss: <sup>(2) (3)</sup>	2.0-8.0	2.0-8.0	DC-500		5.0 dB	7.0 dB
	2.0-8.0	2.0-8.0	DC-1000		6.0 dB	8.0 dB
	2.0-8.0	2.0-8.0	DC-1500		7.0 dB	9.5 dB
Isolation						
	LO to RF:	2.0-8.0			33 dB	
	LO to IF:	2.0-8.0			37 dB	
RF to IF:	2.0-8.0			22 dB		
Input 1-dB Compression Point:	2.0-8.0	2.0-8.0	DC-1500		+1 dBm	MM43
					+4 dBm	MM44
					+8 dBm	MM46
					+12 dBm	MM47
Input Third Order Intercept Point:	2.0-8.0	2.0-8.0	DC-1500		+11 dBm	MM43
					+14 dBm	MM44
					+18 dBm	MM46
					+22 dBm	MM47
LO Power: <sup>(4)</sup>	2.0-8.0	2.0-8.0	DC-1500		+7 dBm	MM43
					+10 dBm	MM44
					+13 dBm	MM46
					+18 dBm	MM47

→ **LO Power**  
 3 = +7 dBm  
 4 = +10 dBm  
 6 = +13 dBm  
 7 = +18 dBm

→ D = No Cover  
 H = With Cover

#### 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 for 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.
- See Application Note M112, for aid in selecting the outline and for mounting and installation information.

### MM4xSMD-10

Outline: SMMC5A: AS SHOWN  
SMMC5B: RF & LO REVERSED

### MM4xSMx-10: AS SHOWN

MM4xSMx-14: RF & LO REVERSED

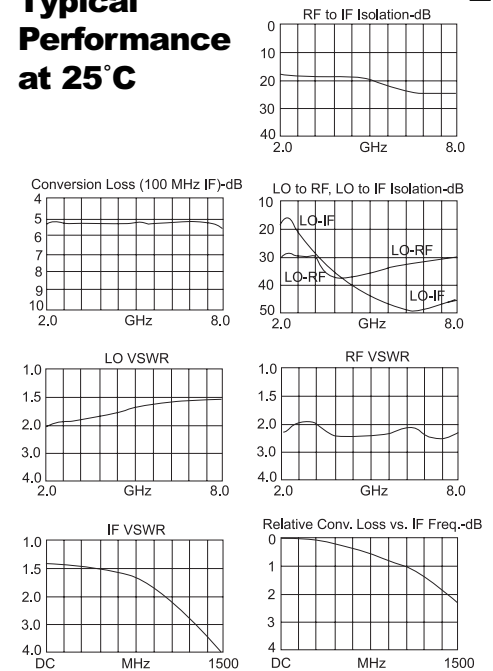
### MM4xSMH-10

Outline: SMMT5A: AS SHOWN  
SMMT5B: RF & LO REVERSED

**NOTE: See PC board footprint - FP2 on page 3-64**

All dimensions are in inches and [mm].

### Typical Performance at 25°C



Mixers