Double Balanced Mixer
Model MM9xSMx
Model MM9xSMx-14

Multi-Octave Band
RF 6.0 to 18.0 GHz

Electrical Specifications:[1]

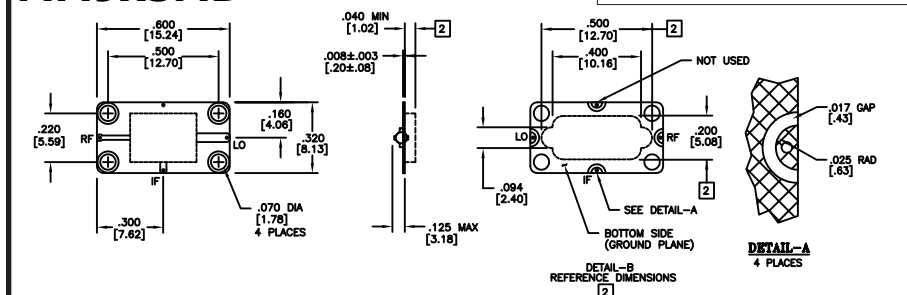| Parameter	Conditions			Specifications			Model MM9xSMx / Model MM9xSMx-14
	RF (GHz)	LO (GHz)	IF (MHz)	Min	Typical	Max	
SSB Conversion loss: [2] [3]	6.0-18.0	6.0-18.0	DC-1300		5.7 dB	8.0 dB	
	6.0-18.0	6.0-18.0	DC-2500		6.9 dB	9.0 dB	
Isolation							
LO to RF:		6.0-13.0		28 dB	32 dB		
		13.0-18.0		24 dB	28 dB		
LO to IF:		6.0-18.0			30 dB		
RF to IF:	6.0-18.0				30 dB		
Input 1 dB Compression Point:	6.0-18.0	6.0-18.0	DC-2500		+1 dBm	MM93	
					+4 dBm	MM94	
					+8 dBm	MM96	
Input Third Order Intercept Point:	6.0-18.0	6.0-18.0	DC-2500		+11 dBm	MM93	
					+14 dBm	MM94	
					+18 dBm	MM96	
LO Power: [4]	6.0-18.0	6.0-18.0	DC-2500		+7 dBm	MM93	
					+10 dBm	MM94	
					+14 dBm	MM96	

LO Power
3 = +7 dBm
4 = +10 dBm
6 = +14 dBm

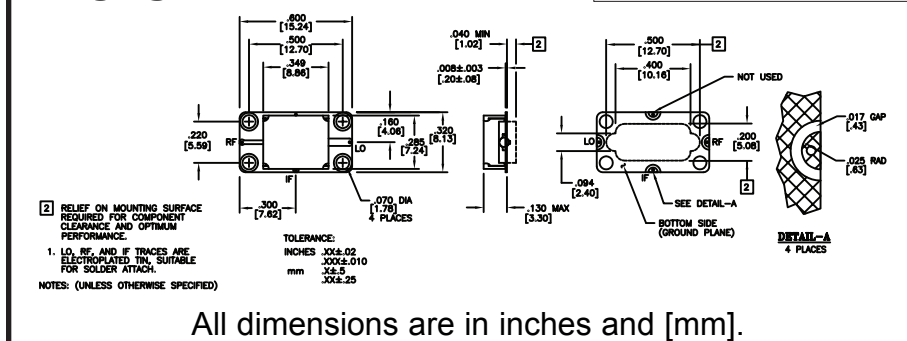**Drop-In Module or With SMA(F) Connectors**
D = No Cover
H = With Cover

Notes:
1. 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.
2. Noise figure is typically within ±0.5 dB of conversion loss for IF frequencies greater than 10 MHz.
3. Conversion loss typically degrades less than 0.5 dB at +100°C and improves less than 0.5 dB at -55°C.
4. Usable LO drives are up to 2 dB below and 3 dB above nominal.
5. See Application Note M112, for aid in selecting the outline and for mounting and installation information.
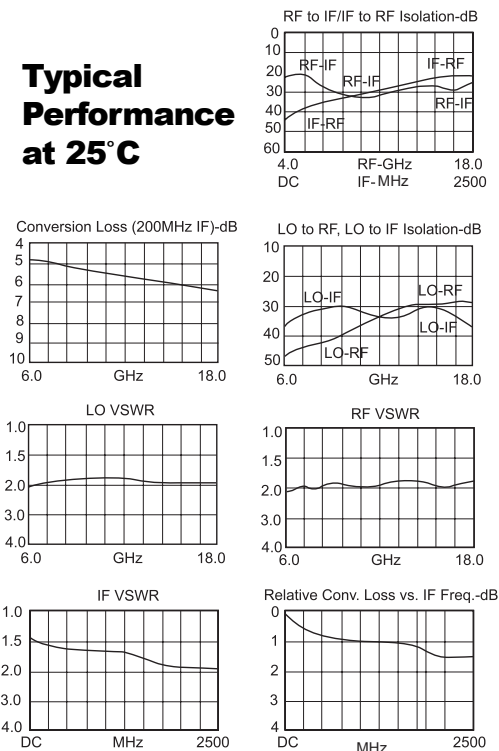
MM9xSMD

Outline: SMMD3A: AS SHOWN
SMMD3B: RF & LO REVERSED

MM9xSMx: AS SHOWN
MM9xSMx-14: RF & LO REVERSED

MM9xSMH

Outline: SMMH3A: AS SHOWN
SMMH3B: RF & LO REVERSED

All dimensions are in inches and [mm].

Typical Performance at 25°C

RF to IF/IF to RF Isolation-dB

Conversion Loss (200MHz IF)-dB

LO to RF, LO to IF Isolation-dB

LO VSWR

RF VSWR

IF VSWR

Relative Conv. Loss vs. IF Freq.-dB