Image Reject Mixer / SSB Modulator
Communications Band

Model IRM5xMS-1
RF 5.6 to 9.0 GHz

Electrical Specifications [1]:

Parameter	Conditions RF(GHz)	LO(GHz)	IF(MHz)	Specifications Min	Typical	Max
SSB Conversion loss:[2] [3]	5.6-9.0	5.6-9.0	50-90		5.0 dB	6.0 dB
Image Rejection Sideband Suppression:[4]	5.8-8.8 5.6-9.0	5.8-8.8 5.6-9.0	70 50-90	17 dB 16 dB	26 dB 23 dB	
Isolation						
LO to RF:		5.6-9.0		25 dB	31 dB	
LO to I/Q:		5.6-9.0		25 dB	40 dB	
RF to I/Q:	5.6-9.0				26 dB	
I/Q to RF:			50-90		40 dB	
Input 1 dB Compression Point:	5.6-9.0	5.6-9.0	50-90		+5 dBm +8 dBm +12 dBm	MIQ54 MIQ56 MIQ57
Input Third Order Intercept Point:	5.6-9.0	5.6-9.0	50-90		+14 dBm +17 dBm +21 dBm	MIQ54 MIQ56 MIQ57
LO Power: [5]	5.6-9.0	5.6-9.0	50-90		+10 dBm +13 dBm +17 dBm	MIQ54 MIQ56 MIQ57

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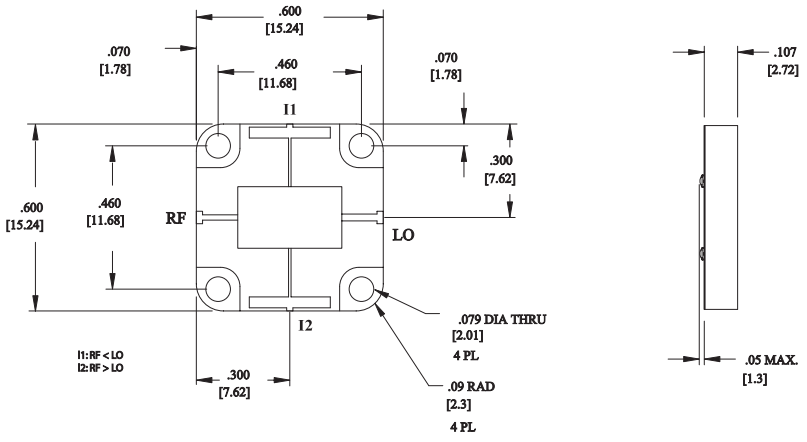
LO Power
4 = +10 dBm
6 = +13 dBm
7 = +17 dBm

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.
3. Conversion loss typically degrades less than 0.5 dB at +100˚C and improves less than 0.5 dB at -55˚C.
4. Measured with an IF quadrature hybrid whose amplitude and phase errors are 0.5 dB and 3 degrees maximum.
5. Usable LO drives are up to 2 dB below to 3 dB above nominal.
6. See Application notes M112, for aid in selecting the outline and for mounting and installation information.

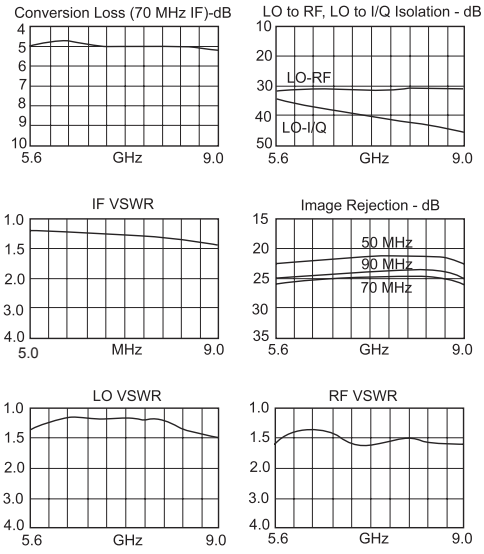
IRM5xMS-1

Outline: MSR7



All dimensions are in inches and [mm].

Typical Performance at 25˚C



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