I/Q Mixer / Modulator — Model MIQ6xMS-1

Communications Band — RF 5.5 to 13.5 GHz

Electrical Specifications:[1]

Parameter	Conditions RF (GHz)	LO (GHz)	IF (MHz)	Specifications Min	Typical	Max
SSB Conversion loss:[2][3]	7.0-12.7 5.5-13.5	7.0-12.7 5.5-13.5	DC-500 DC-500		5.0 dB 5.3 dB	6.5 dB 7.0 dB
Image Rejection Side-band Suppression:[4]	9.5-12.7 5.5-13.5	9.5-12.7 5.5-13.5	DC-500 DC-500	20 dB 16 dB	28 dB 25 dB	
Amplitude Match	5.5-13.5	5.5-13.5	DC-500		0.2 dB	
Phase Match	5.5-13.5	5.5-13.5	DC-500		5 deg	
Isolation						
LO to RF:		5.5-13.5		20 dB	25 dB	
LO to I/Q:		5.5-13.5		25 dB	35 dB	
RF to I/Q:	5.5-13.5				28 dB	
I/Q to RF:			DC-500		40 dB	
Input 1 dB Compression Point:	5.5-13.5	5.5-13.5	DC-500		+5 dBm +8 dBm +12 dBm	MIQ64 MIQ66 MIQ67
Input Third Order Intercept Point:	5.5-13.5	5.5-13.5	DC-500		+14 dBm +17 dBm +21 dBm	MIQ64 MIQ66 MIQ67
LO Power:[5]	5.5-13.5	5.5-13.5	DC-500		+10 dBm +13 dBm +17 dBm	MIQ64 MIQ66 MIQ67

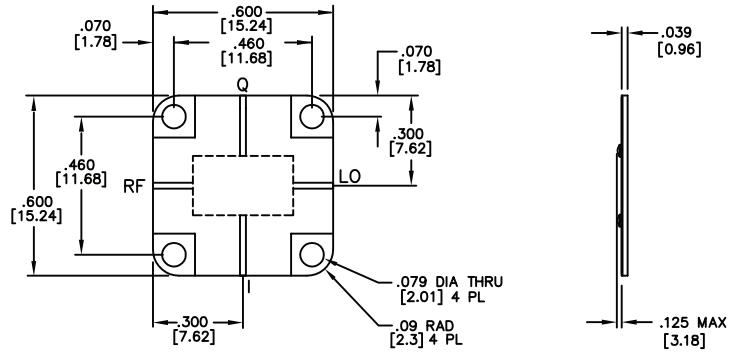
Model MIQ6xMS-1

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 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. Conversion loss is the combined value.
4. Measured with an IF quadrature hybrid whose amplitude and phase errors are 0.5 dB and 3 degrees maximum. An IF quadrature hybrid is not included.
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.

MIQ6xMS-1

Outline: MSQ7



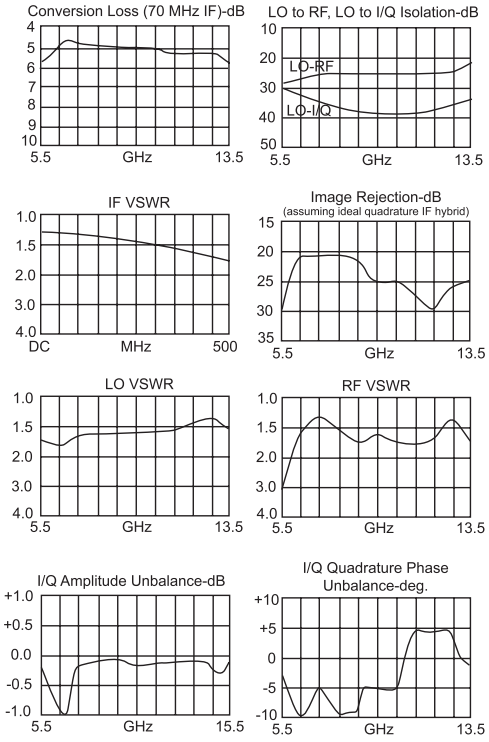
1. LO, RF, AND IF TRACES ARE .02[0.5] WIDE SOLDER TINNED SUITABLE FOR SOLDER ATTACH.

NOTES: (UNLESS OTHERWISE SPECIFIED)

TOLERANCE:
INCHES .XX±.02
.XXX±.010
mm .X±.5
.XX±.25

All dimensions are in inches and [mm].

Typical Performance at 25˚C



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Rev. 7/24/07

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