

# I/Q Mixer / Modulator

# Model MIQ2xMS-1

Communications Band

RF 1.4 to 2.8 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>	1.4-2.8	1.4-2.8	DC-500		6.0 dB	8.0 dB
<b>Image Rejection Side-band Suppression:</b> <sup>(4)</sup>	1.4-1.7	1.4-1.7	DC-500	18 dB	22 dB	
	1.7-2.8	1.7-2.8	DC-500	20 dB	30 dB	
<b>Amplitude Match</b>	1.4-2.8	1.4-2.8	DC-500		0.2 dB	
<b>Phase Match</b>	1.4-2.8	1.4-2.8	DC-500		3 deg	
<b>Isolation</b>	1.4-2.8	1.4-2.8	DC-500	LO to RF:	34 dB	42 dB
				LO to I/Q:	20 dB	40 dB
				RF to I/Q:		30 dB
				I/Q to RF:		45 dB
<b>Input 1 dB Compression Point:</b>	1.4-2.8	1.4-2.8	DC-500		+6 dBm +9 dBm +13 dBm	MIQ24 MIQ26 MIQ27
<b>Input Third Order Intercept Point:</b>	1.4-2.8	1.4-2.8	DC-500		+14 dBm +17 dBm +21 dBm	MIQ24 MIQ26 MIQ27
<b>LO Power:</b> <sup>(5)</sup>	1.4-2.8	1.4-2.8	DC-500		+10 dBm +13 dBm +17 dBm	MIQ24 MIQ26 MIQ27

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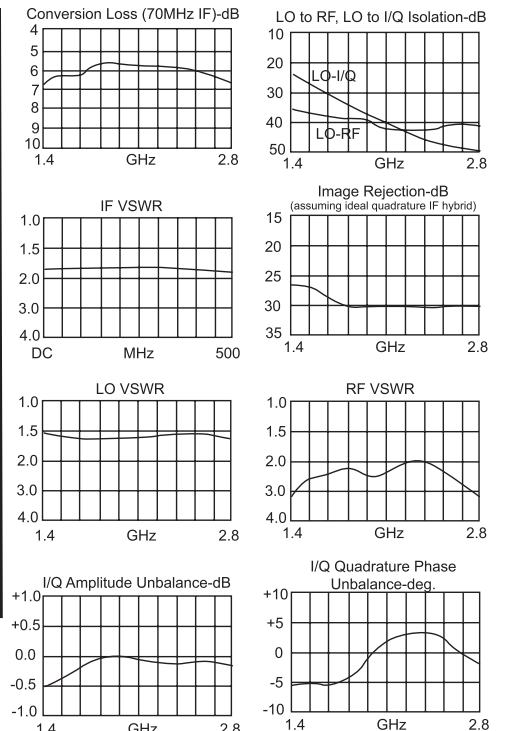
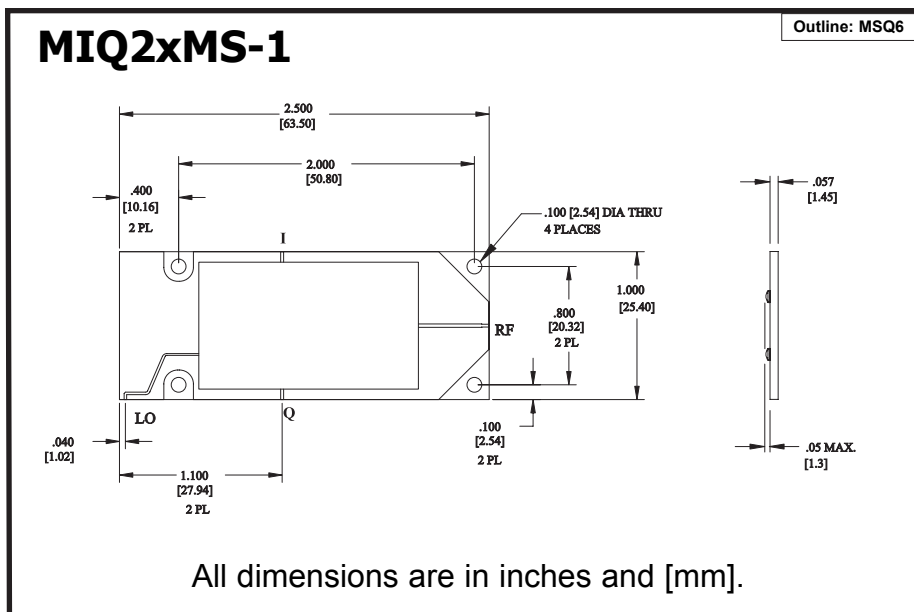
**LO Power**

- 4 = +10 dBm
- 6 = +13 dBm
- 7 = +17 dBm

**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. Conversion loss is the combined value.
- 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.
- Usable LO drives are up to 2 dB below to 3 dB above nominal.
- See Application notes M112, for aid in selecting the outline and for mounting and installation information.

## Typical Performance at 25°C



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