

# Double Balanced Mixer

# Model MC5xMS-5 Model MC5xMS-14

Communications Band

RF 3.5 to 12.0 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>	5.0-10.0	5.0-10.0	DC-500		4.8 dB	7.0 dB
	5.0-10.0	5.0-10.0	DC-2000		5.8 dB	8.0 dB
	3.5-12.0	3.5-12.0	DC-4000		7.0 dB	9.5 dB
Isolation LO to RF: LO to IF: RF to IF: IF to RF:	3.5-12.0	3.5-12.0	DC-2000 DC-4000	30 dB	40 dB	
		3.5-12.0			32 dB	
Input 1 dB Compression Point:	3.5-12.0	3.5-12.0	DC-4000		+1 dBm	MC53 MC54 MC56 MC57
					+4 dBm	
Input Third Order Intercept Point:	3.5-12.0	3.5-12.0	DC-4000		+8 dBm	MC53 MC54 MC56 MC57
					+12 dBm	
LO Power: <sup>(4)</sup>	3.5-12.0	3.5-12.0	DC-4000		+7 dBm +10 dBm +14 dBm +18 dBm	MC53 MC54 MC56 MC57

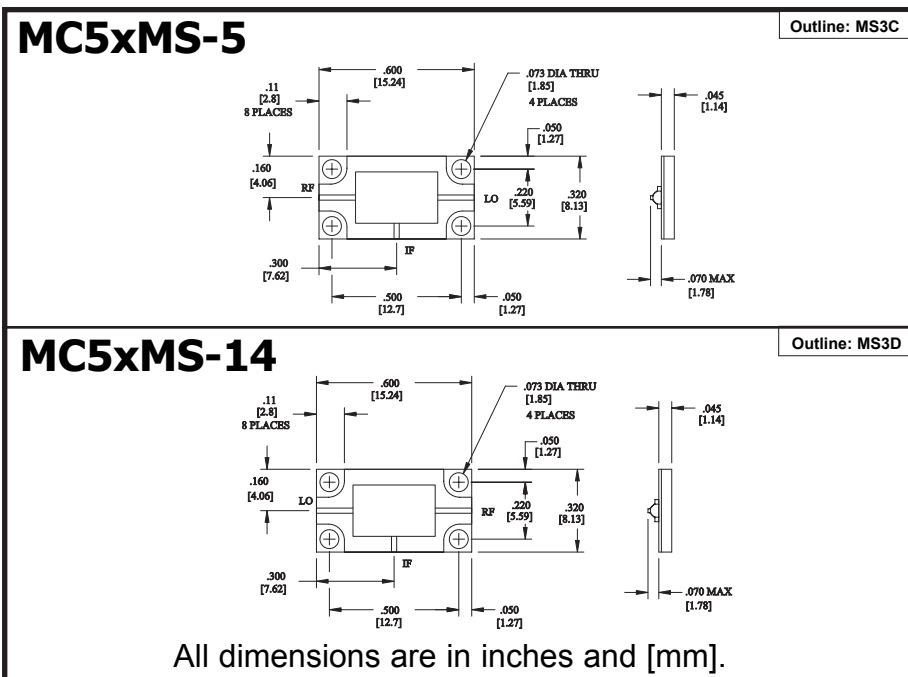
Model MC5xMS-5  
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### LO Power

3 = +7 dBm  
4 = +10 dBm  
6 = +14 dBm  
7 = +18 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.
- 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.



## Typical Performance at 25°C

