

# Double Balanced Mixer: Models MC5xMS-7 & MC5xMS-15

Communications Band

RF 3.5 to 15.0 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>	3.7-14.5	3.7-14.5	DC-500		5.0 dB	7.0 dB
	3.7-14.5	3.7-14.5	DC-2000		5.5 dB	7.5 dB
	3.5-15.0	3.5-15.0	DC-4000		7.5 dB	9.5 dB
Isolation LO to RF: LO to IF: RF to IF: IF to RF:	3.5-15.0	3.5-15.0	DC-2000 DC-4000	27 dB	35 dB	
				23 dB	38 dB	
					23 dB	
					20 dBm	14 dBm
Input 1-dB Compression Point:	3.5-15.0	3.5-15.0	DC-4000	+1 dBm	MC53	
				+4 dBm	MC54	
				+8 dBm	MC56	
				+12 dBm	MC57	
Input Third Order Intercept Point:	3.5-15.0	3.5-15.0	DC-4000	+11 dBm	MC53	
				+14 dBm	MC54	
				+18 dBm	MC56	
				+22 dBm	MC57	
LO Power: <sup>(4)</sup>	3.5-15.0	3.5-15.0	DC-4000	+7 dBm	MC53	
				+10 dBm	MC54	
				+13 dBm	MC56	
				+18 dBm	MC57	

**Model MC5xMS-7**  
**Model MC5xMS-15**

→ **LO Power**

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

## Typical Performance at 25°C

