



MC1502

10 TO 1500 MHz TO-8 DOUBLE-BALANCED MIXER

Typical Values

LO & RF	10-1500 MHz
IF	DC to 800
Third Order I.P.	+12.0 dBm
Conversion Loss	6.0 dB
LO Drive (nominal)	+7.0 dBm
High Isolation (LO to RF)	40.0 dB

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SPECIFICATIONS*

Guaranteed
-55° to +85° C

Parameter	Port	Frequency (MHz)	Typ. (dB)	Max. (dB)
SSB Conversion Loss and SSB Noise Figure	f _R	20 to 600	6.0	7.5
	f _L	10 to 800	6.0	7.5
	f _I	1 to 200	6.0	7.5
	f _R	10 to 1200	7.0	8.0
	f _L	10 to 1400	7.0	8.0
	f _I	1 to 200	7.0	8.0
	f _R	10 to 1500	7.5	8.5
	f _L	10 to 1500	7.5	8.5
	f _I	1 to 200	7.5	8.5
Conversion Comp. Desensitization Level	f _R	Level = 0 dBm	—	1.0
	f _{R2}	Level = -2 dBm	—	1.0
Isolation	f _L	10 to 800	Typ. (dB)	Min. (dB)
			40	35
			32	25
	f _L	800 to 1200	35	25
			25	18
			30	25
Third Order Intercept	LO = +7.0 dBm	+12.0 dBm	—	—

- * 1) Measured in a 50-ohm system with nominal LO drive of +7.0 dBm as a downconverter.
 2) Guaranteed conversion loss increases 0.5 dB for -55°C to +85°C temperature range.
 3) The I-port frequency range extends to DC for phase detection, pulse modulation, or attenuation applications.
 4) Noise figure is specified only down to 1 MHz for the IF frequency to avoid 1/F contributions.

ABSOLUTE MAXIMUM RATINGS

Storage Temperature	-65 to 125° C
Peak Input Power	+23 dBm @ 25°C derate to +17 dBm @ 100°C
Peak Input Current @ 25°C	50 mA DC

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TO-8 Package for Mixer



