

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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2 TO 8 GHz DOUBLE-BALANCED MIXER

MODELS: DM0208LW2 AND DM0208LA1

FEATURES

- RF/LO coverage..... 2 to 8 GHz
- IF operation..... DC to 2 GHz
- LO power range..... +7 to +13 dBm
- Conversion loss 7 dB typical
- LO-to-RF isolation 40 dB typical



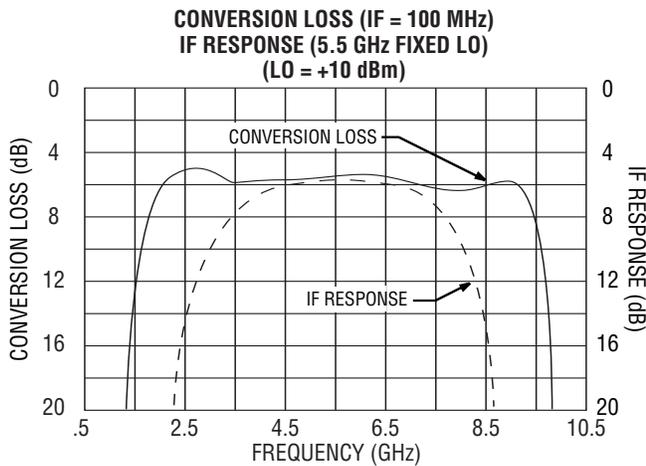
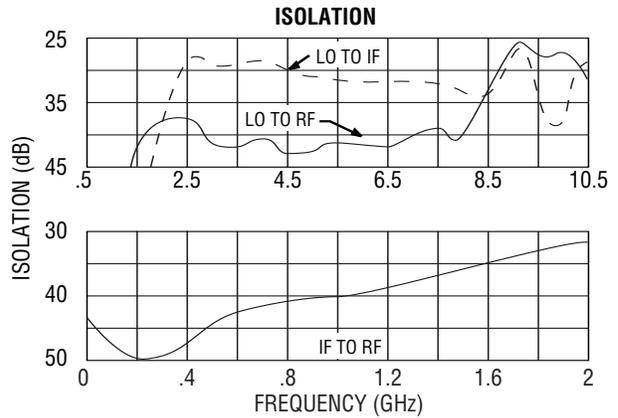
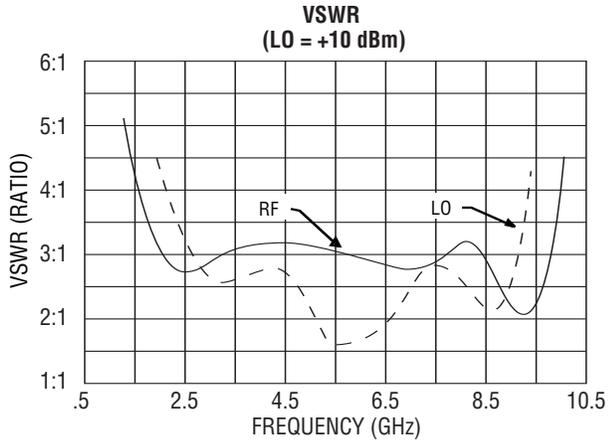
MITEQ's DM Series of mixers is constructed using double-tuned microstrip RF and LO baluns with a DC-coupled IF structure. The construction, coupled with the hermetic packaging, provides for high inherent reliability and isolation over an extremely broad frequency range. This device performs as an up- or downconverter covering most EW bands and communication applications. This mixer is also available with medium or high forward voltage diodes (M, H) yielding proportional changes in LO power and spurious performance.

ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	2		8
RF VSWR (RF = -10 dBm, LO = +10 dBm)	2 to 8 GHz	Ratio		3:1	
LO frequency range		GHz	2		8
LO power range		dBm	+7		+13
LO VSWR (LO = +10 dBm)	2 to 8 GHz	Ratio		3:1	
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion loss (IF = 100 MHz, LO = +10 dBm)	2 to 8 GHz	dB		7	8
Single-sideband noise figure	2 to 8 GHz	dB			8.5
LO-to-RF isolation	2 to 8 GHz	dB	30	40	
LO-to-IF isolation	2 to 8 GHz	dB	20	30	
IF-to-RF isolation	DC to 2 GHz	dB		40	
Input power at 1 dB compression	LO = +10 dBm	dBm	0	+3	
Input two-tone third-order intercept point	LO = +13 dBm	dBm	+10	+13	
OUTPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
IF frequency range	3 dB bandwidth	GHz	DC		2
IF VSWR (IF = -10 dBm, LO = +10 dBm)		Ratio		2:1	



DM0208LW2/A1 TYPICAL TEST DATA



SINGLE-TONE (m) RF x (n) LO RELATIVE SPUR LEVEL (dBc)
(AVERAGE MIDBAND RF, LO, IF FREQUENCIES,
RF = -10 dBm, LO = +10 dBm)

SPUR (m) RF x (n) LO	RF TEST FREQ. (GHz)	LO TEST FREQ. (GHz)	SPUR LEVEL (dBc)
1 x 1	4.5	5.5	0
1 x 2	6.32	3.66	-38
1 x 3	7.24	2.74	-15
2 x 1	3	7	-53
2 x 2	4.76	5.24	-65
2 x 3	5.8	4.2	-50
3 x 1	2.24	7.72	-47
3 x 2	3.8	6.2	-65
3 x 3	4.82	5.16	-53

MAXIMUM RATINGS

Specification temperature +25°C
 Operating temperature -54 to +85°C
 Storage temperature -65 to +125°C

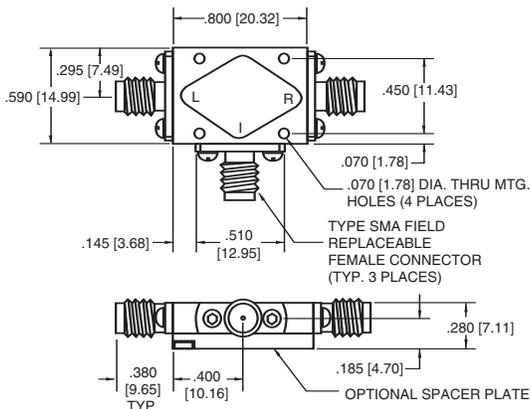
AVAILABLE OPTION

Medium/high dynamic range options
 M (LO = +13 to +17 dBm), (IP³ = +18 dBm typ.)
 H (LO = +17 to +20 dBm), (IP³ = +22 dBm typ.)
 Conversion loss = 9 dB max.

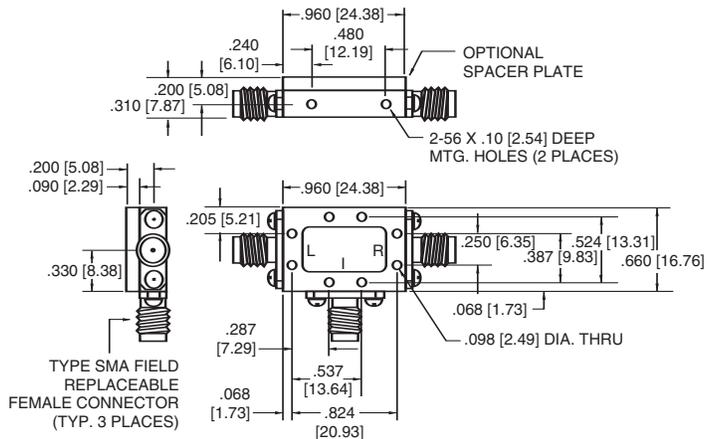
NOTE: Test data supplied at 25°C; conversion loss and LO-to-RF isolation.

OUTLINE DRAWINGS

W2 HOUSING



A1 HOUSING



NOTE: All dimensions shown in brackets [] are in millimeters.

