

4 TO 26 GHz DOUBLE-BALANCED MIXER

MODEL: DB0426LW1

FEATURES

- RF/LO coverage 4 to 26 GHz
- IF operation DC to 2 GHz
- LO power range +7 to +13 dBm
- Input 1 dB comp. +5 dBm typical
- Packaging Hermetically sealed

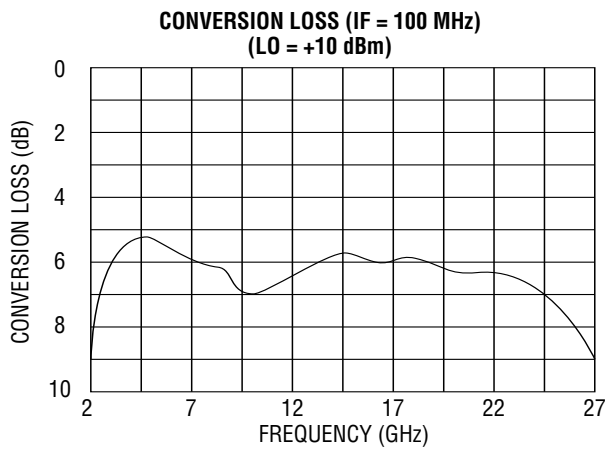
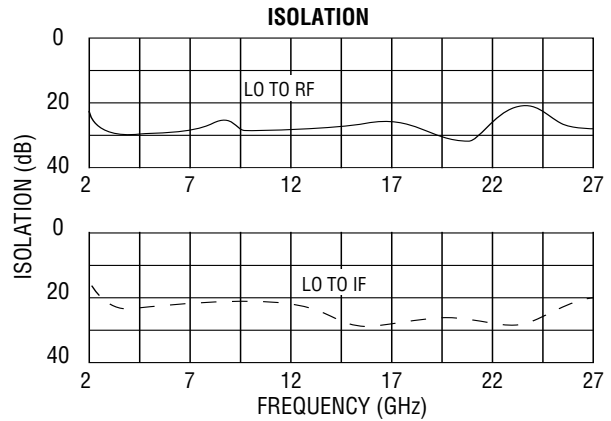
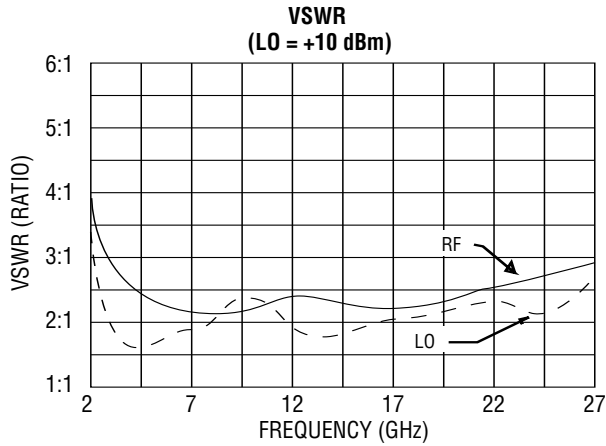


MITEQ's double-balanced DB0426 Series provides multioctave RF and LO coverage with high IF frequency operation. The miniature coaxial package is ideal for dense integration or drop-in interface. This device performs as an up- or downconverter.

ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	4		26
RF VSWR (RF = -10 dBm, LO = +10 dBm)	4 to 26 GHz	Ratio		2.75:1	
LO frequency range		GHz	4		26
LO power range		dBm	+7	+10	+13
LO VSWR (LO = +10 dBm)	4 to 26 GHz	Ratio		2.5:1	
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion loss (IF = 100 MHz, LO = +10 dBm)	4 to 26 GHz	dB		7.5	9.5
Single-sideband noise figure	4 to 26 GHz	dB			10.5
LO-to-RF isolation	4 to 26 GHz	dB	20	25	
LO-to-IF isolation	4 to 26 GHz	dB		20	
RF-to-IF isolation	4 to 26 GHz	dB		20	
Input power at 1 dB compression	LO = +10 dBm	dBm		+5	
Input two-tone third-order intercept point	LO = +10 dBm	dBm		+15	
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		2.5:1	

DB0426LW1 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	18	17.9	0
1 x 2	18	8.95	30
1 x 3	18	5.97	10
2 x 1	9	17.9	43
2 x 2	9	8.95	54
2 x 3	9	5.97	43
3 x 1	6	17.9	59
3 x 2	6	8.95	72
3 x 3	6	5.97	57

MAXIMUM RATINGS

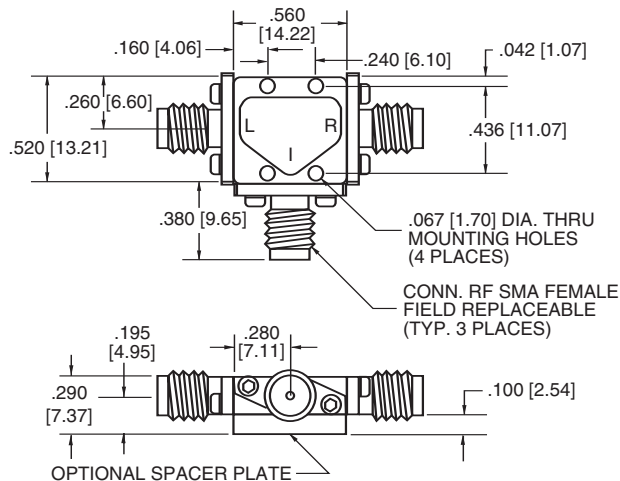
Specification temperature +25°C
 Operating temperature -54 to +85°C
 Storage temperature -65 to +125°C

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.)
 M, H (Conversion loss = 10.5 dB)

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

OUTLINE DRAWING



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

