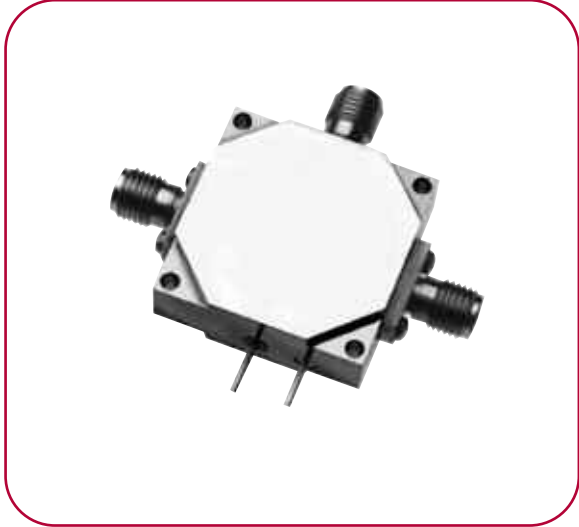


2 TO 18 GHz BIASABLE BRIDGE QUAD MIXER

MODEL: SBB0218LR5

FEATURES

- RF/LO coverage..... 2 to 18 GHz
(usable 2 to 20 GHz)
- LO power range..... -10 to +10 dBm
- Packaging Hermetically sealed
- Low RF/LO VSWR
(nearly independent of LO power)

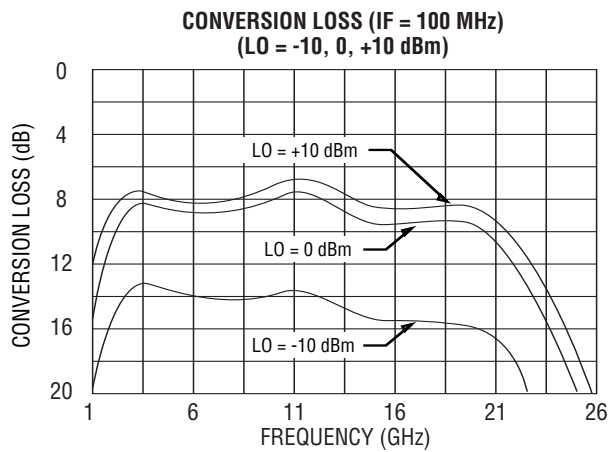
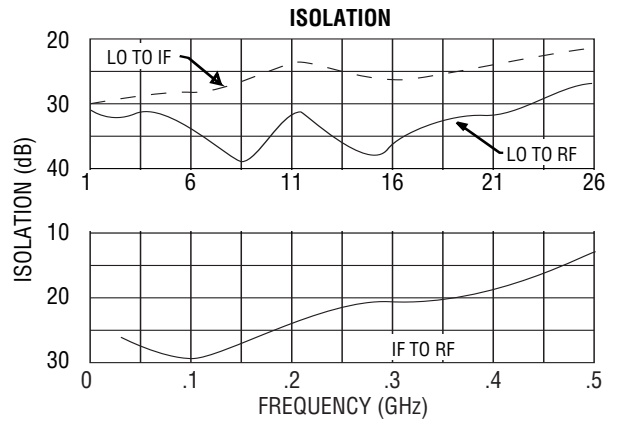
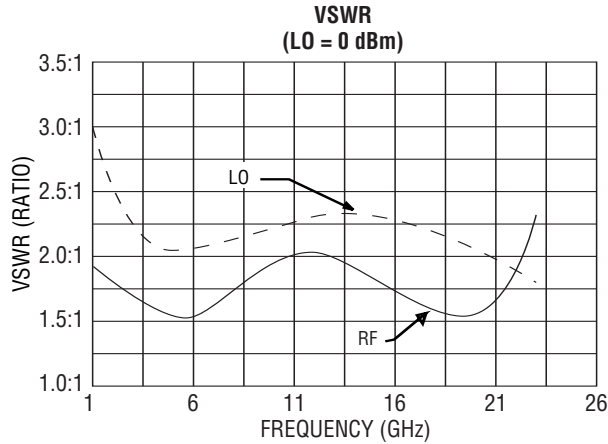


This mixer employs a bridge quad of Schottky diodes to isolate the LO and RF signals. The RF and IF are separated by a double-tuned diplexer. The self-optimizing DC bias circuit makes this mixer ideally suited to wide bandwidth operation with low and highly variable LO power.

ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	2		18
RF VSWR (RF = -10 dBm, LO = 0 dBm)		Ratio		2:1	
LO frequency range		GHz	2		18
LO power range		dBm	-10		+10
LO VSWR (LO = 0 dBm)		Ratio		2.5:1	
DC bias +15 V		mA		8	
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion loss (IF = 100 MHz, LO = 0 dBm)		dB		9	11
Single-sideband noise figure		dB		10	
LO-to-RF isolation		dB	20	25	
LO-to-IF isolation		dB		25	
IF-to-RF isolation	DC to 0.5 GHz	dB		15	
Input power at 1 dB compression	LO = 0 dBm	dBm		-5	
Input two-tone third-order intercept point	LO = 0 dBm	dBm	-3	0	
OUTPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
IF frequency range	2 dB bandwidth	MHz	10		500
IF VSWR (IF = -10 dBm, LO = 0 dBm)		Ratio		2:1	

SBB0218LR5 TYPICAL TEST DATA



SINGLE-TONE (m) RF x (n) LO RELATIVE SPUR LEVEL (dBc)
(AVERAGE MIDBAND RF, LO, IF FREQUENCIES,
RF = -10 dBm, LO = 0 dBm)

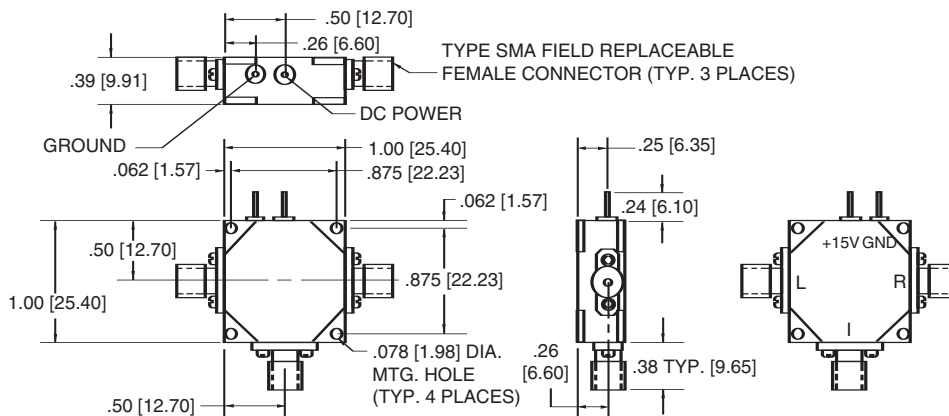
SPUR (m) RF x (n) LO	RF TEST FREQ. (GHz)	LO TEST FREQ. (GHz)	SPUR LEVEL (dBc)
1 x 1	10.1	10	0
1 x 2	13.36	6.63	21
1 x 3	15.02	4.97	23
2 x 1	6.63	13.36	55
2 x 2	10.25	9.75	56
2 x 3	12.02	7.98	55
3 x 1	5.02	14.9	52
3 x 2	8.02	11.98	54
3 x 3	10.01	9.98	59

MAXIMUM RATINGS

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

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.

