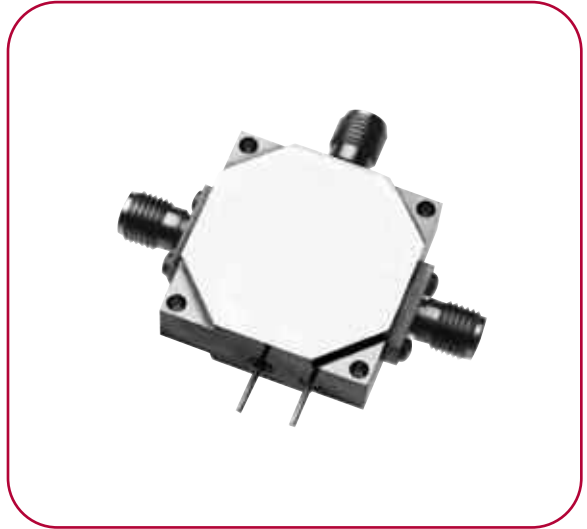


## 2 TO 26 GHz BIASABLE BRIDGE QUAD MIXER

**MODEL: SBB0226LR5**

### FEATURES

- RF/LO coverage ..... 2 to 26 GHz
- LO power range ..... -10 to +10 dBm
- Packaging ..... Hermetically sealed
- Low RF/LO VSWR  
(nearly independent of LO power)



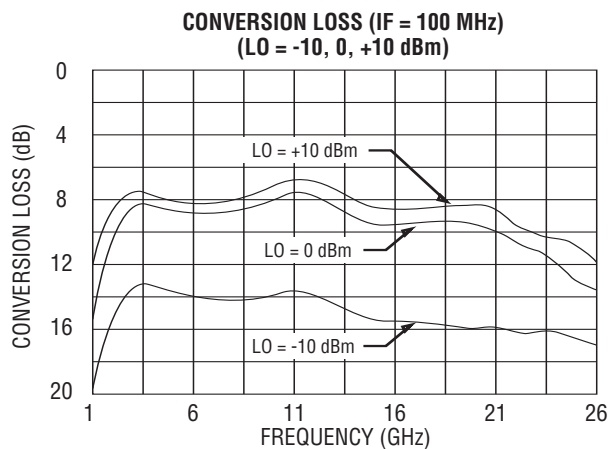
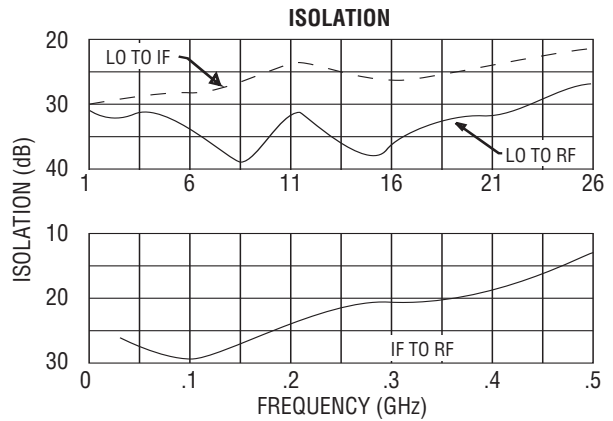
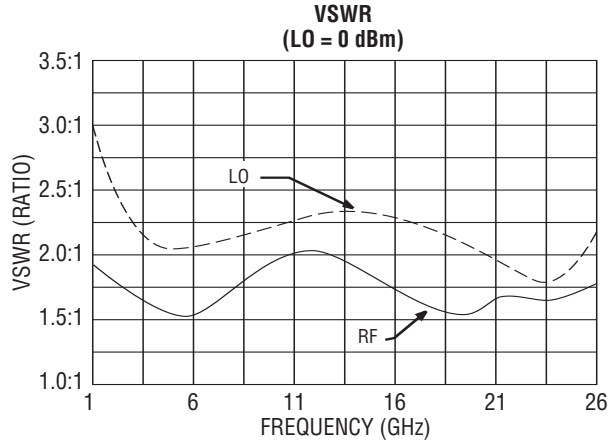
This mixer employs a bridge quad of Schottky diodes to isolate the LO and RF signals. The RF and IF are separated by a double-tuned diplexer. The self-optimizing DC bias circuit makes this mixer ideally suited to wide bandwidth operation with low and highly variable LO power.

### ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	2		26
RF VSWR (RF = -10 dBm, LO = 0 dBm)		Ratio		2.5:1	
LO frequency range		GHz	2		26
LO power range		dBm	-10		+10
LO VSWR (LO = 0 dBm)	50 ohm reference	Ratio		2.5:1	
DC bias +15 V		mA		9	
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion loss (IF = 100 MHz, LO = 0 dBm)		dB		10	14.5
Single-sideband noise figure		dB		15	
LO-to-RF isolation		dB	20	25	
LO-to-IF isolation		dB		23	
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	



# SBB0226LR5 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)

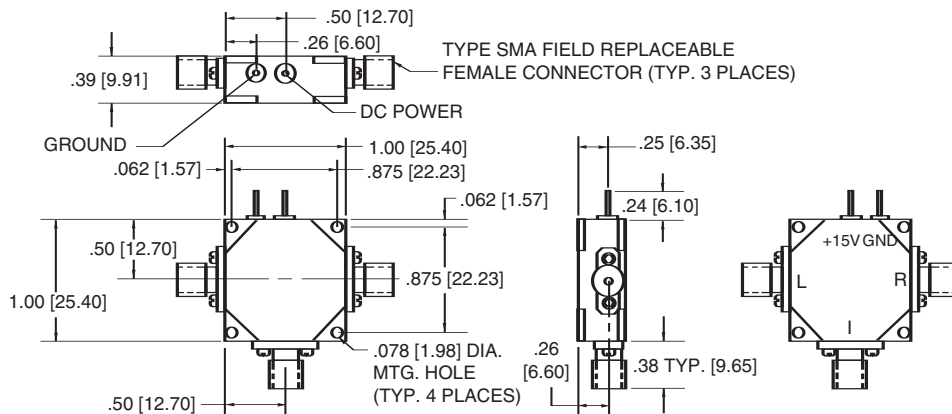
SPUR (m) RF x (n) LO	RF TEST FREQ. (GHz)	LO TEST FREQ. (GHz)	SPUR LEVEL (dBc)
1 x 1	10.1	10	0
1 x 2	13.36	6.63	21
1 x 3	15.02	4.97	23
2 x 1	6.63	13.36	55
2 x 2	10.25	9.75	56
2 x 3	12.02	7.98	55
3 x 1	5.02	14.9	52
3 x 2	8.02	11.98	54
3 x 3	10.01	9.98	59

## 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.

