

# DOUBLE BALANCED MIXER

## MODEL ADX158L-3

Available as: ADX158L-3, SMA  
Connectorized Housing (ADX3)

### Features

- Conversion Loss: 5.5 dB Typical
- LO to RF Isolation: 30 dB Typical

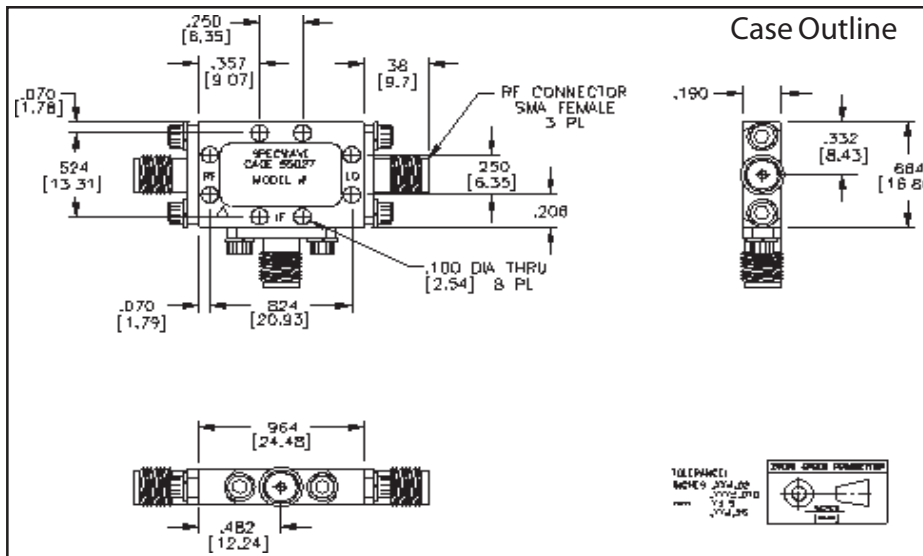
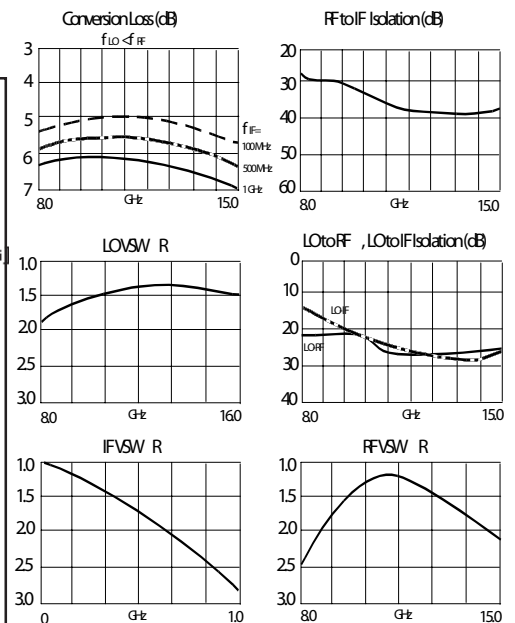
**RF: 8 to 15 GHz**  
**LO: 8 to 15 GHz**  
**IF: DC to 1 GHz**

### Electrical Specifications <sup>(1)</sup>:

Parameter	Conditions			Specifications		
	RF (GHz)	LO (GHz)	IF (GHz)	Min	Typical Ta=25°C	Max
SSB (IF) Conversion loss:	8.0 - 15.0	8.0 - 15.0	DC to 0.5	—	5.5 dB	7.0 dB
	8.0 - 15.0	8.0 - 15.0	DC to 1.0	—	6.0 dB	7.5 dB
Isolation	—	8.0 - 15.0	—	20 dB	30 dB	—
	—	8.0 - 12.0	—	12 dB	15 dB	—
	—	12.0 - 15.0	—	20 dB	25 dB	—
Input 1 dB Compression Point	8.0 - 15.0	8.0 - 15.0	DC to 1.0	—	+2 dBm	—
Input Third Order Intercept Point	8.0 - 15.0	8.0 - 15.0	DC to 1.0	—	+7 dBm	—
LO Power Input:	8.0 - 15.0	8.0 - 15.0	DC to 1.0	7.0 dBm	+10 dBm	+13 dBm

- Notes:**
1. Specifications are guaranteed when tested as a downconverter in a 50 Ohm system.
  2. Noise figure is typically within  $\pm 0.5$  dB of the SSB conversion loss for IF frequencies greater than 10 MHz.
  3. Case material is a corrosion resistant copper-nickel alloy (no finish required) per MIL-C-15726F.
  4. Units are metal-to-metal hermetically sealed using resistance welding.
  5. Operating Temperature Range: -55°C to +100°C

### Typical Performance at 25°C



Connector Configuration Dash Numbering			
Dash	Connectors		
Number	R Port	I Port	L Port
-1	All SMA Female with Spacer Plate		
-2	Pins only (no connectors supplied)		
-3	All SMA female. No spacer plate supplied.		

Spacer plate is a .110 in (2.8 mm) thick plate mounted to the mixer mounting surface which increases connector height to allow for mating connector clearance. Plate is secured to the mixer by screws using the hole pairs adjacent to the LO and RF connectors.

