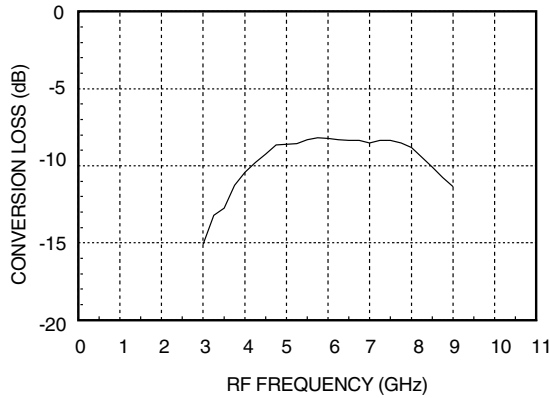
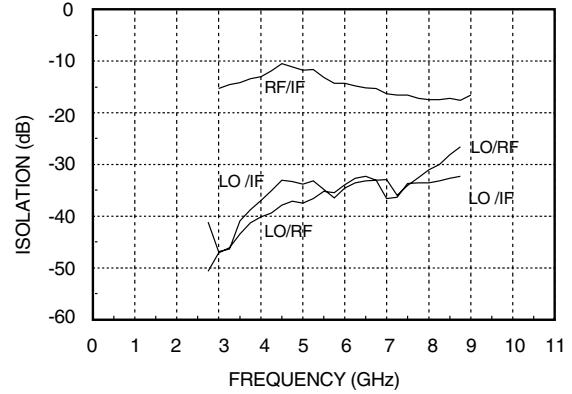


## GaAs MMIC SMT DOUBLE-BALANCED MIXER, 4.5 - 8 GHz

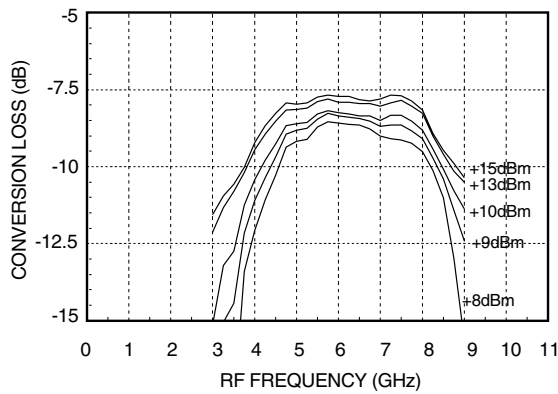
**Conversion Loss**



**Isolation**



**Conversion Loss vs LO Power**

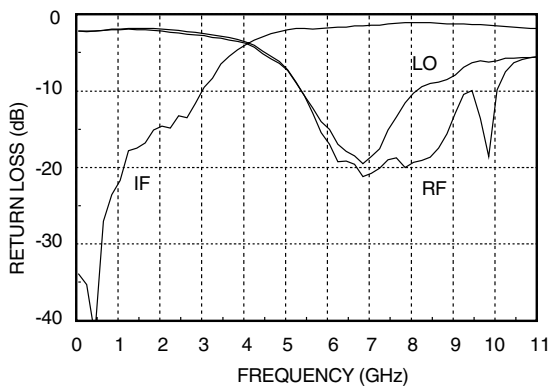


**Distortion and 1dB**

**Compression vs. LO Drive Level**

LO Drive (dBm)	Distortion		
	IP3 (dBm)	IP2 (dBm)	P1dB (dBm)
+7	14	59	8.5
+10	16	62	10
+13	18	65	11
+15	19	65	11

**Return Loss**



S - Parameters for the RF, LO, IF Ports are Available On-Line at [www.hittite.com](http://www.hittite.com)

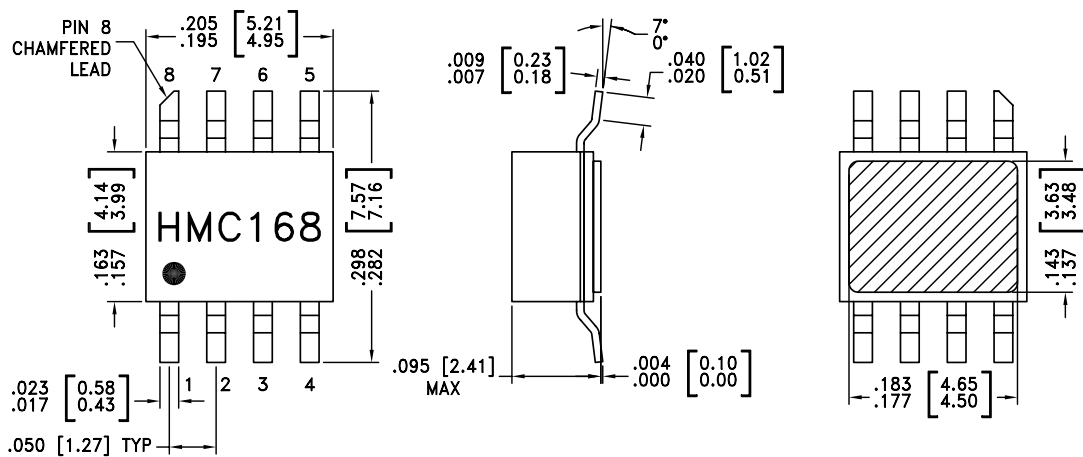
## GaAs MMIC SMT DOUBLE-BALANCED MIXER, 4.5 - 8 GHz

### Absolute Maximum Ratings

RF / IF Input	+13 dBm
LO Drive	+27 dBm
Storage Temperature	-65 to +150 °C
Operating Temperature	-55 to +85 °C

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### Outline Drawing

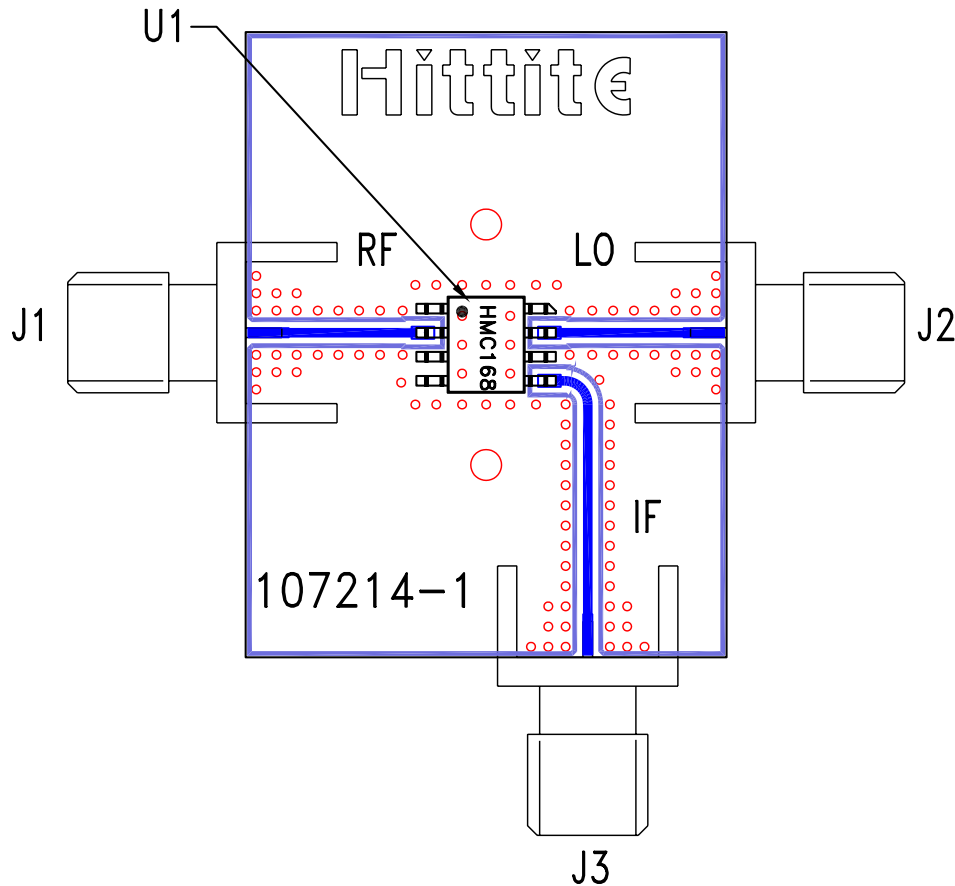


NOTES:

1. PACKAGE BODY MATERIAL: WHITE ALUMINA 92%
2. LEAD, PACKAGE BOTTOM MATERIAL: COPPER
3. PLATING: ELECTROLYTIC GOLD 100-200 MICROINCHES, OVER ELECTROLYTIC NICKEL 100-250 MICROINCHES.
4. DIMENSIONS ARE IN INCHES [MILLIMETERS].
5. PACKAGE LENGTH AND WIDTH DIMENSIONS DO NOT INCLUDE LID SEAL PROTRUSION .005 PER SIDE.
6. ALL GROUND LEADS AND GROUND PADDLE MUST BE SOLDERED TO PCB RF GROUND.

## GaAs MMIC SMT DOUBLE-BALANCED MIXER, 4.5 - 8 GHz

### Evaluation PCB



### List of Material

Item	Description
J1 - J3	PC Mount SMA RF Connector
U1	HMC168C8 Mixer
PCB*	107214 Evaluation Board
* Circuit Board Material: Rogers 4350	

The circuit board used in the final application should use RF circuit design techniques. Signal lines should have 50 ohm impedance while the package ground leads and exposed paddle should be connected directly to the ground plane similar to that shown. A sufficient number of VIA holes should be used to connect the top and bottom ground planes. The evaluation circuit board shown is available from Hittite upon request.