Features:

RF/LO Frequency: 24-40GHz

IF Frequency: DC-10GHz

Frequency Conversion Loss:8dB

LO-RF Isolation: 30dB

LO-IF Isolation:25dB

RF-IF Isolation: 28dB

Local oscillator power: +15dBm

Chip Size: 1.05 x 0.70 x 0.1mm

Description:

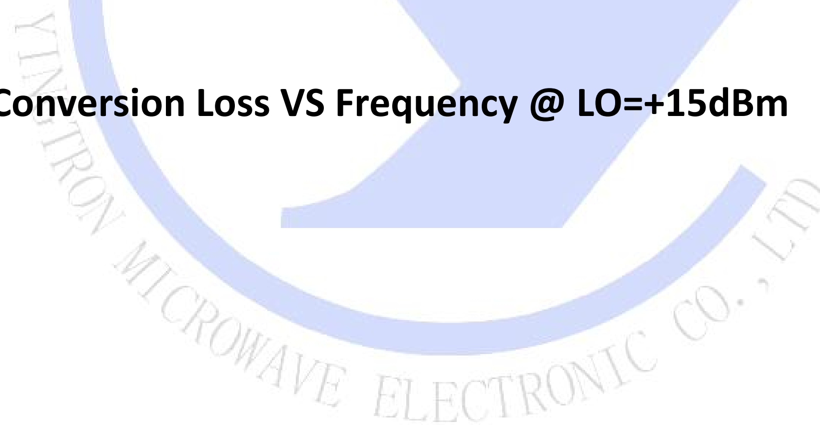
The YTMX-2440 is a GaAs MMIC double balance mixer which operates betwee 24～40GHz with mediate frequency coverage DC-10GHz， The chip is back-metallized and can be die mounted with AuSn eutectic preforms or with electrically conductive epoxy.The mounting surface should be clean and flat.!

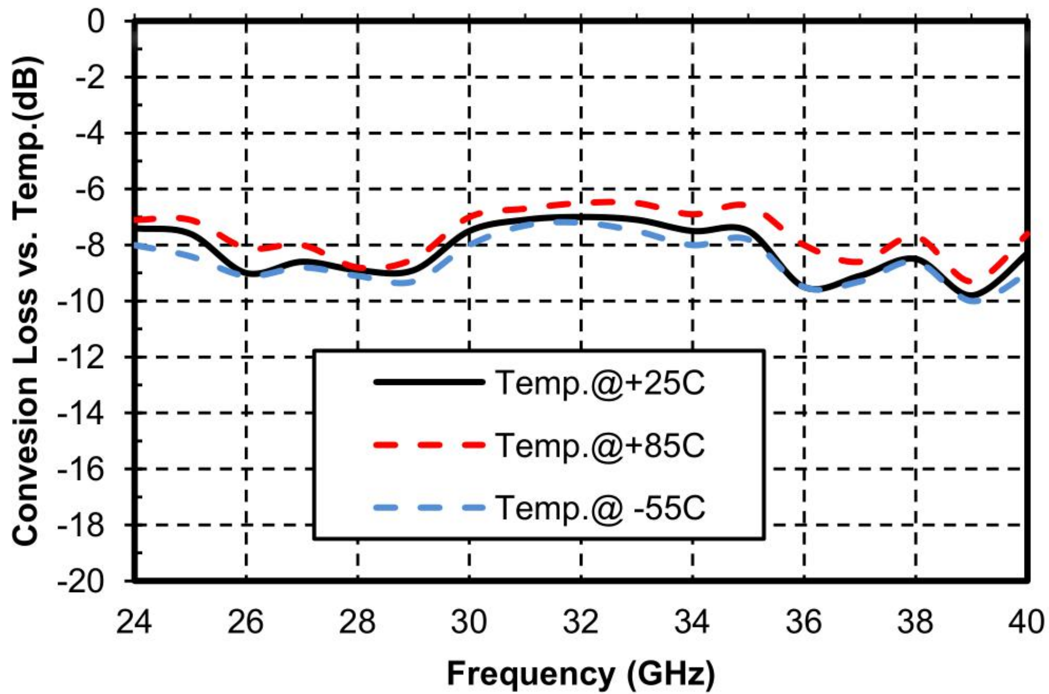
Limited Parameter	
Max RF Input Power	+20dBm

Max Local oscillator input power	+20dBm
Working Temperature	-55 ~ +85° C
Storage Temperature	-65 ~ +150° C

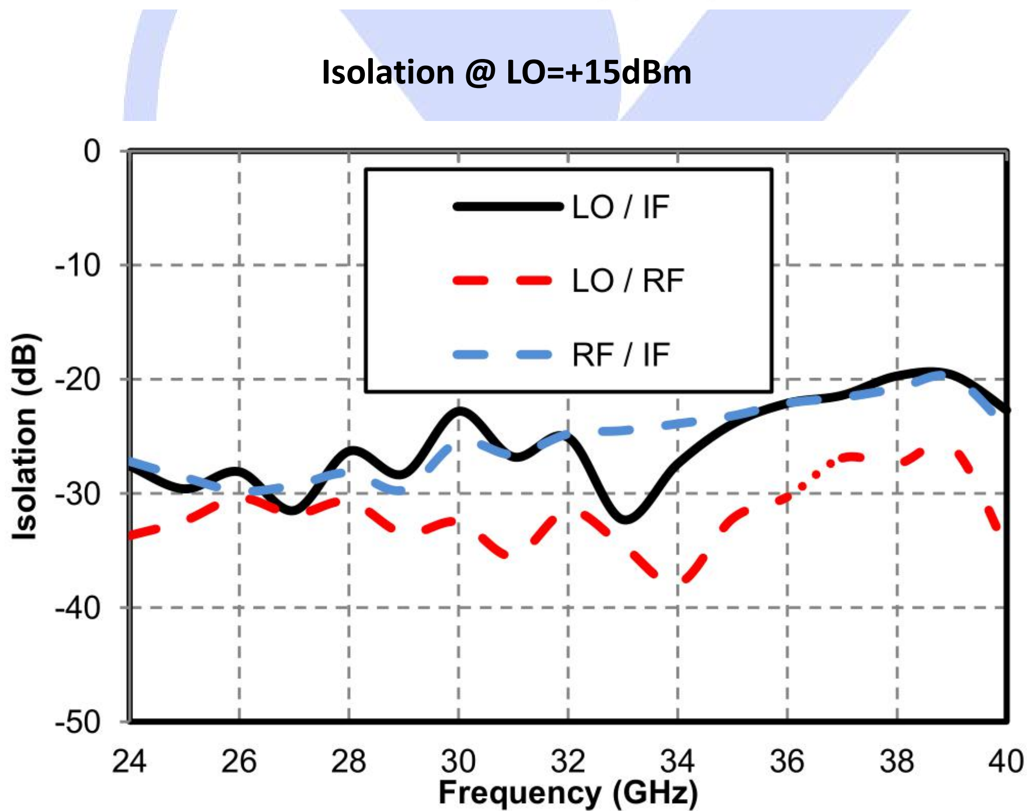
Features	Min	Typical	Max	Unite
RF Frequency		24-40G		GHz
Local frequency range		24-40G		GHz
Intermediate Frequency		DC-10GHz		GHz
Conversion Loss	7	8	10	dB
LO-RF Isolation	27	30	35	dB
LO-IF Isolation	20	25	32	dB
RF-IF Isolation	20	28	31	dB
RF Input P-1dB		12	-	dBm
The above parameters are measured in downconversion mode. Intermediate Frequency 1GHz, Local Osciallator frequency +13dBm~+15dBm				

Conversion Loss VS Frequency @ LO=+15dBm

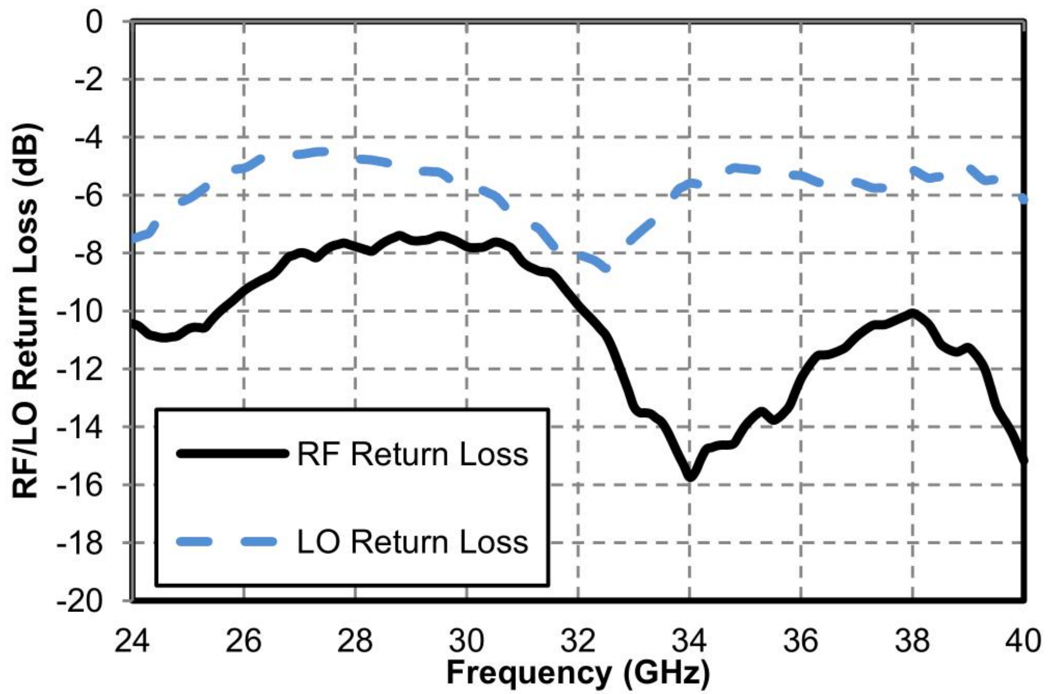




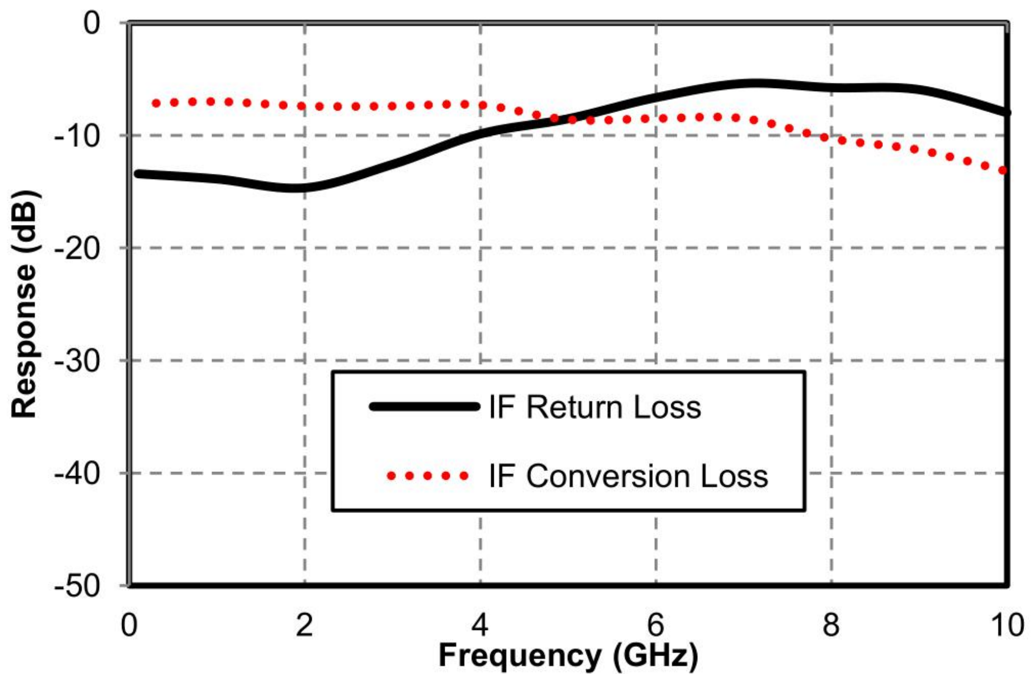
Isolation @ LO=+15dBm



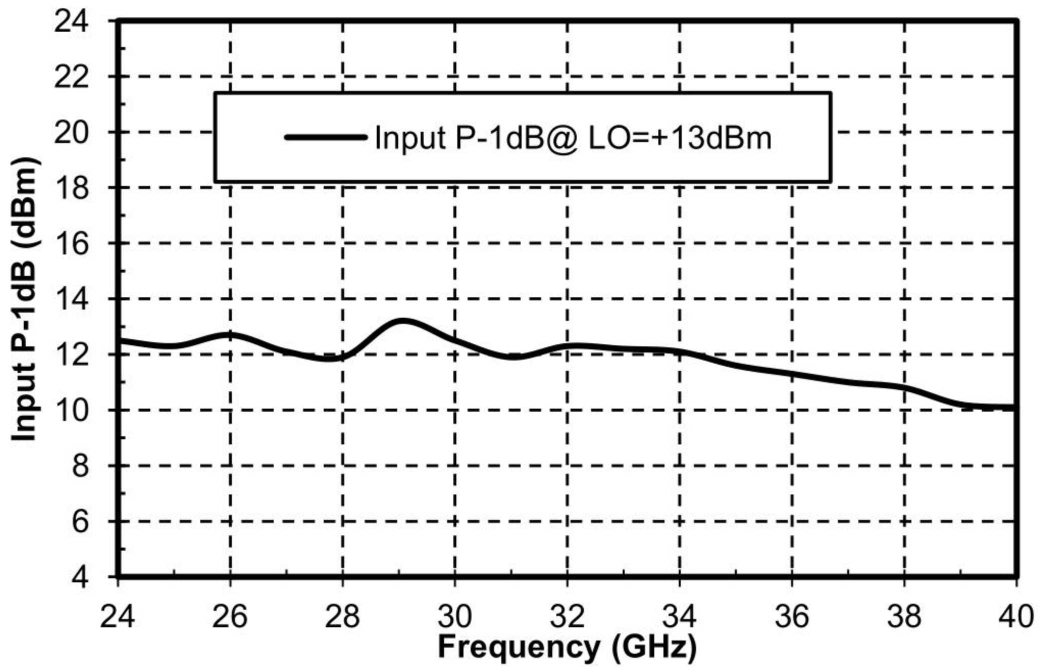
RF/LO Return Loss VS Frequency



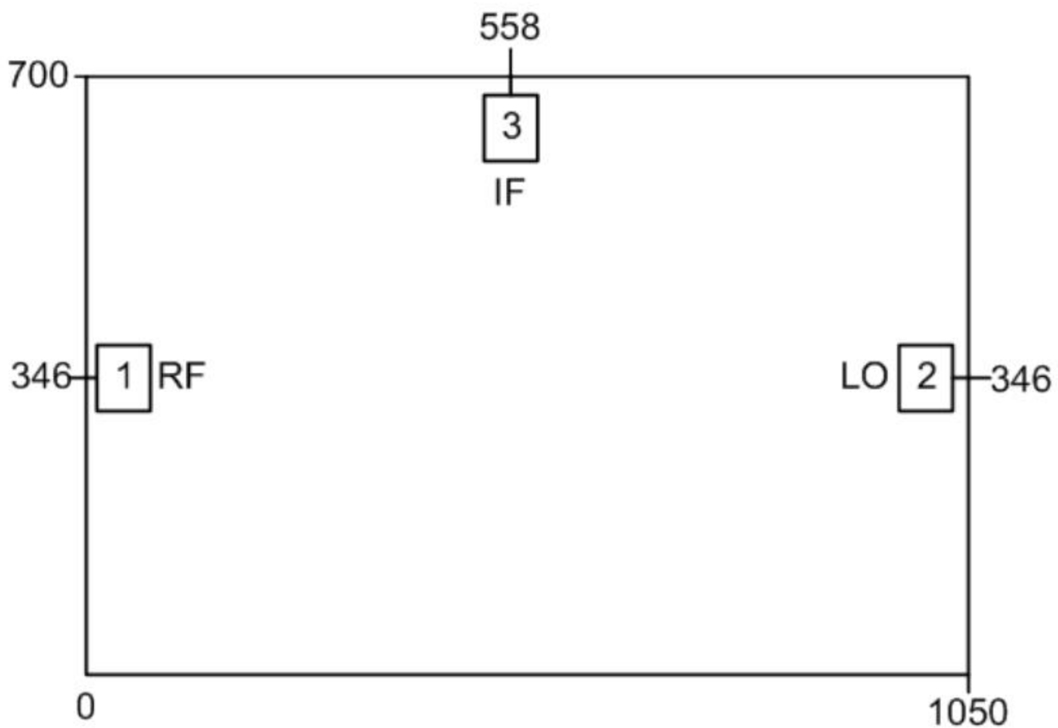
Intermediate Frequency @ LO=10G/+13dBm



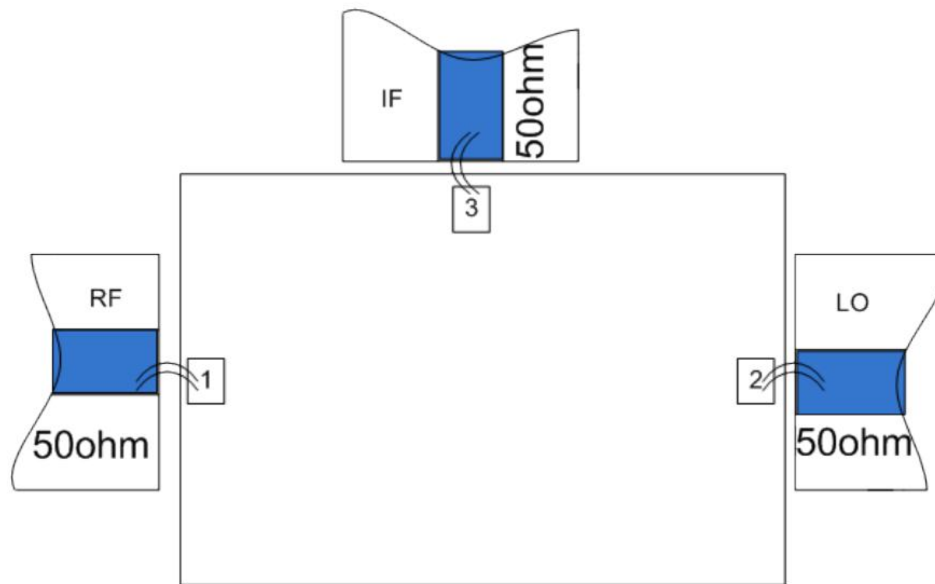
Input P-1dB VS Frequency



Outline Drawing:(μ m)



Assembly Diagram:



Handling Precautions

1.All bare die are placed in either Waffle or Gel based ESD protective containers,all die should be stored in a dry nitrogen environment.
2.Cleanliness: Handle the chips in a clean environment. DO NOT attempt to clean the chip using liquid cleaning systems
3.Follow ESD precautions to protect against ESD strikes
Handle the chip along the edges with a vacuum collet or with a sharp pair of bent tweezers. The surface of the chip has fragile air bridges and should not be touched with vacuum collet, tweezers, or fingers
4.Eutectic Die Attach: A 80/20 gold tin preform is recommended with a work surface temperature of 255 °C and a tool temperature of 265 °C. When hot 90/10 nitrogen/hydrogen gas is applied, tool tip temperature should
5.Epoxy Die Attach: Apply a minimum amount of epoxy to the mounting surface so that a thin epoxy fillet is observed around the perimeter of the chip once it is placed into position. Cure epoxy per the manufacturer's schedule
6.Ball or wedge bond with 0.025mm (1 mil) diameter pure gold wire. Thermosonic wirebonding with a nominal stage temperature of 150 °C and a ball bonding force of 40 to 50 grams or wedge bonding force of 18 to 22 grams is recommended. Use the minimum level of ultrasonic energy to achieve reliable wirebonds. Wirebonds should be started on the chip and terminated on the package or substrate. All bonds should be as short as possible <0.31mm (12 mils).