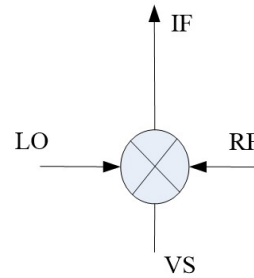


Performance

- 0.7um InP HBT
- LO & RF Frequency: 0.1~50GHz
- IF Frequency: DC~5GHz
- Conversion Loss: 6.5dB
- LO/RF Isolation: 40dB
- LO/IF Isolation: 30dB
- Application: Down converter
- Chip size: 0.84*0.65*0.1mm

Function Diagram

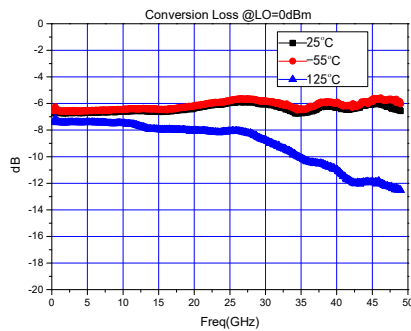


Electrical specifications (TA=+25°C, IF=1GHz, LO=0dBm, 50Ω system)

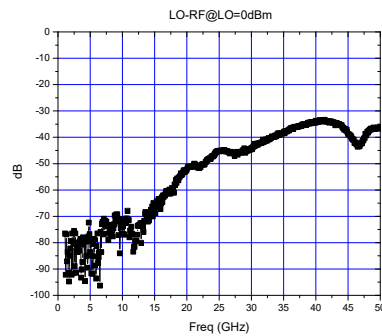
Parameter	Min	Typical	Max	Unit
LO/RF Frequency Range		0.01~50		GHz
IF Frequency Range		DC-5		GHz
Conversion Loss	-	6.5	-	dB
Input P-1dB	-	0	-	dBm
LO/RF Isolation	-	40	-	dB
LO/IF Isolation	-	30	-	dB
RF/IF Isolation	-	22	-	dB

Test Curves (Die chip test)

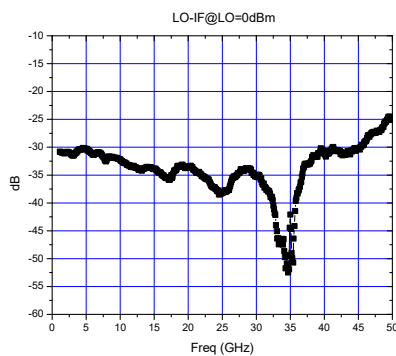
Conversion loss @ LO=0dBm



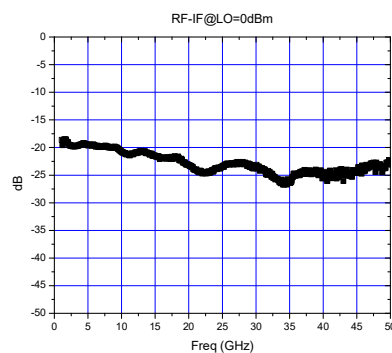
LO-RF Isolation @ LO=0dBm



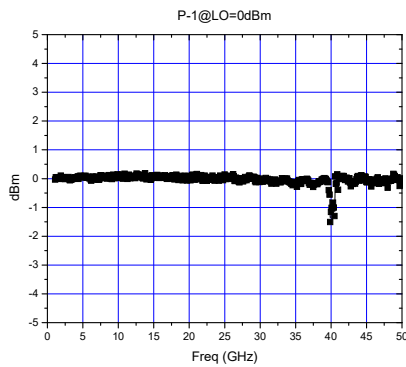
LO-IF Isolation @ LO=0dBm



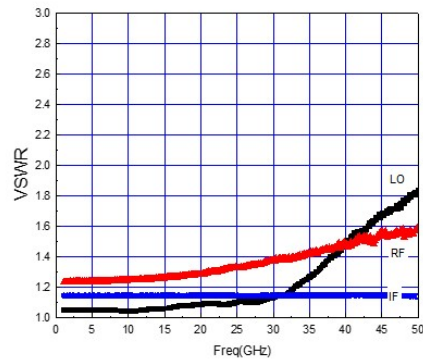
RF-IF Isolation @ LO=0dBm



Input P-1 @ LO=0dBm



VSWR @ LO=0dBm

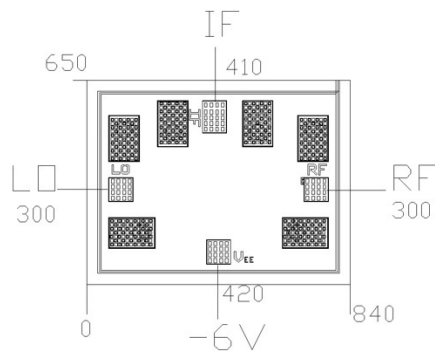


Absolute Max Ratings (TA=25°C)

LO Drive Power	15dBm
RF & IF Input Power	15dBm
Operating Temperature	-55 ~ 155°C

Exceeding any one or combination of these limits may cause permanent damage.

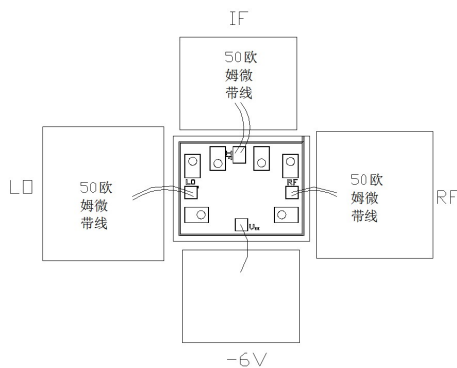
Outline Size



Pads Definition

Number	Description
LO	LO input, connect to 50ohm system, block capacitor is needed
RF	RF input, connect to 50ohm system, block capacitor is needed
IF	IF output, connect to 50ohm system, block capacitor is needed
VS	Mixer DC port

Assembly



Notes

1. Limit the gold wire at LO and RF ports is less than 250um.
2. Pay attention to static protection at all ports.
3. Series block capacitors are needed at LO, RF, IF ports, capacitance is chosen according to Freq.