

## Features

- RF/LO Frequency: 8~12GHz
- IF Frequency: DC~3GHz
- Conversion Gain: 15dB
- LO Power: 0dBm
- Die Size: 3.34mmX1.22mmX0.1mm

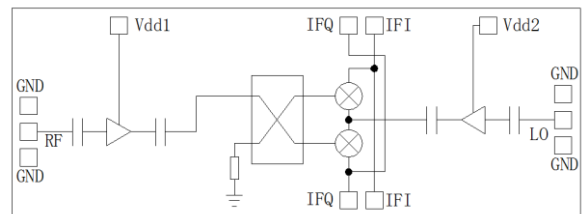
## Typical Applications

- Microwave radio including point to point communication
- Telecommunication
- Weather radar
- Optical communication
- Test instrumentation
- SatCom
- VSAT
- Military and Aerospace

## General Description

SAC3511 is a IQ mixer. This MMIC mixer is fabricated in a GaAs process and requires no external components or matching circuitry. The chip offers full passivation for increased reliability and moisture protection.

## Functional Diagram



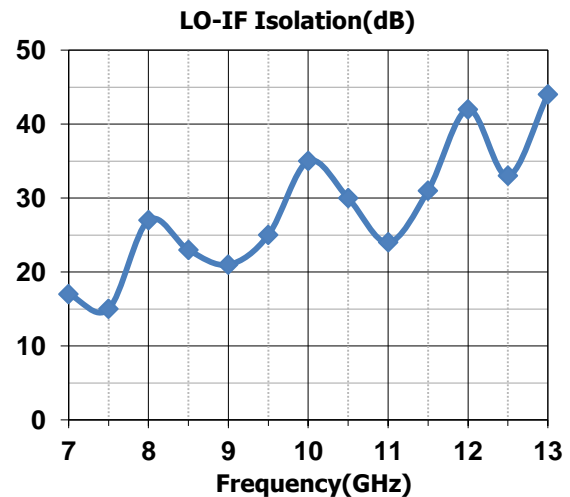
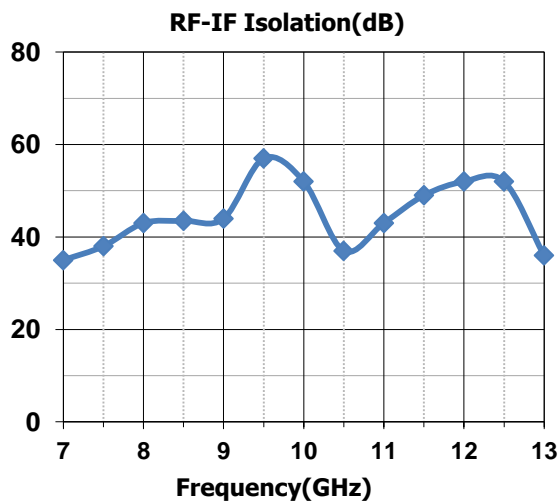
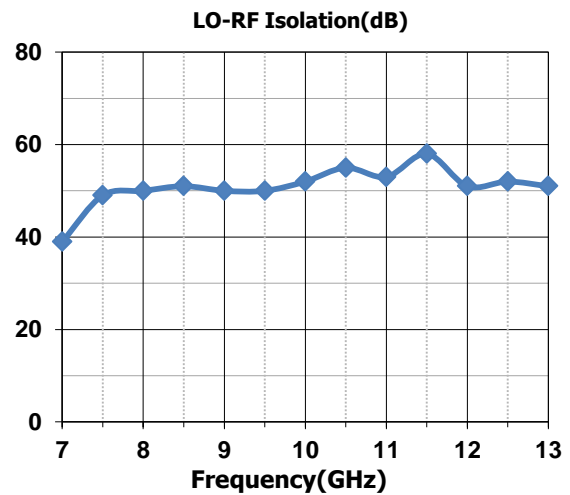
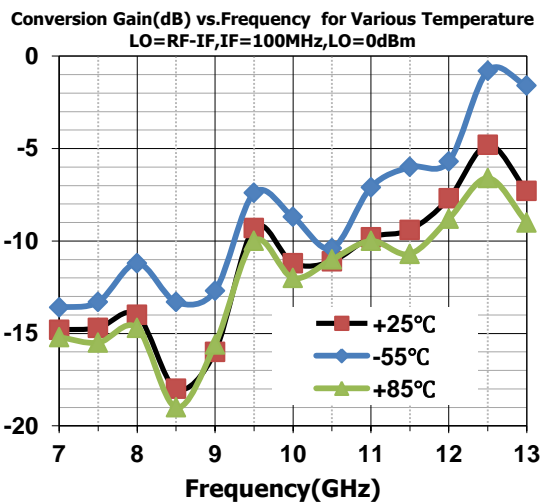
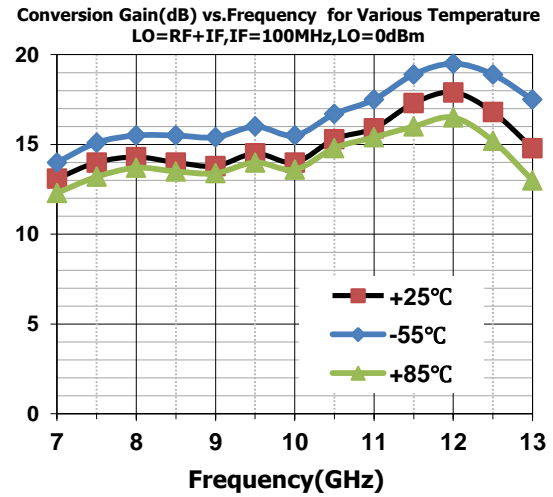
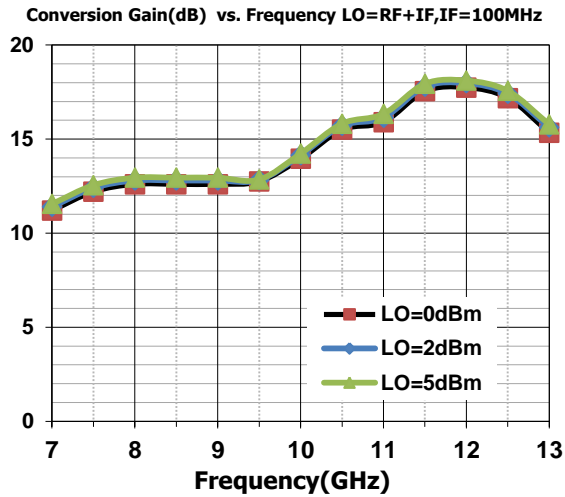
## Electrical Performance ( $T_A=25^{\circ}\text{C}$ , $\text{LO}=0\text{dBm}$ , $\text{IF}=100\text{MHz}$ )

Parameter	Min.	Typ.	Max.	Units
RF/LO Frequency Range	8~12			GHz
IF Frequency Range	DC~3			GHz
Conversion Gain	—	15	—	dB
LO to RF Isolation	—	-50	—	dB
LO to IF Isolation	—	-30	—	dB
RF to IF Isolation	—	-40	—	dB
LO VSWR	—	1.4	—	:1

## Absolute Maximum Ratings

Maximum RF/IF Input	+20dBm	Operating Temperature	-55°C~+85°C
Maximum LO Input	+20dBm	Storage Temperature	-65°C~+150°C

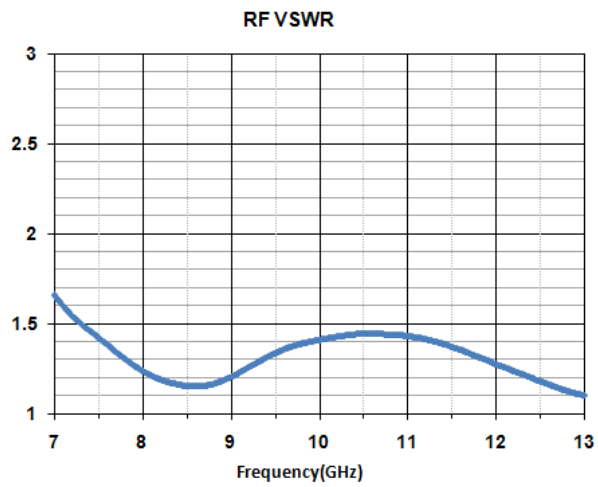
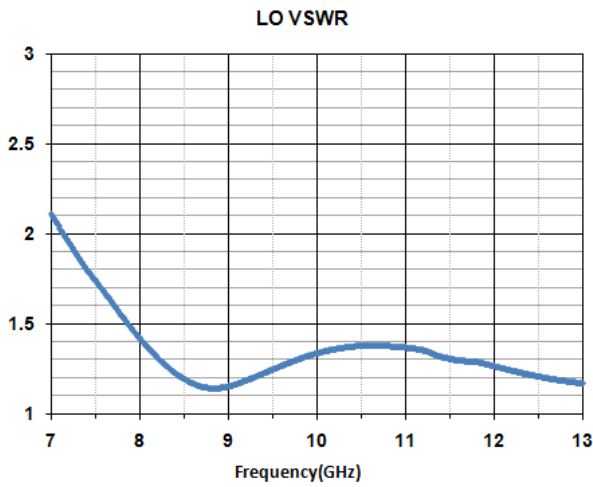
## Typical Performance Curve



# SAC3511

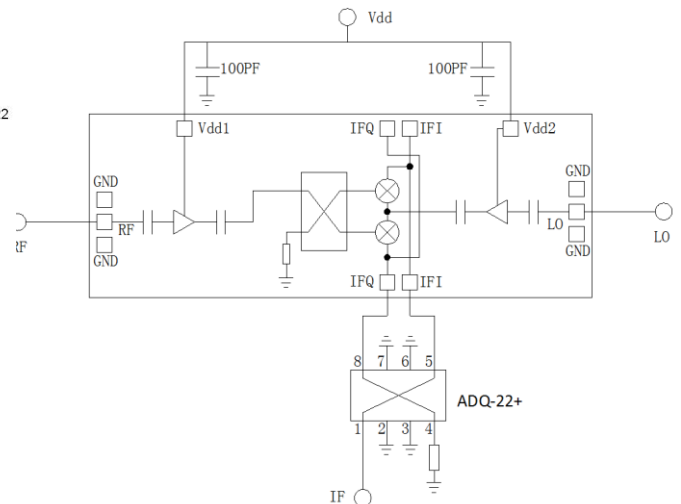
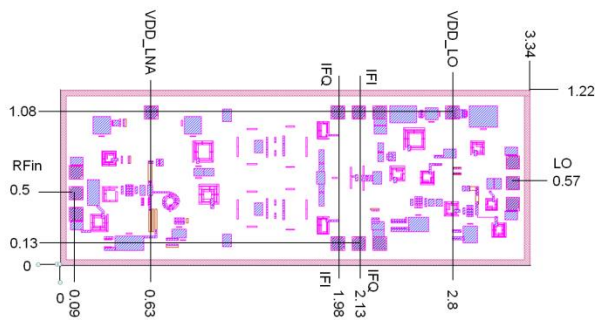
GaAs MMIC IQ Mixer  
8~12GHz

Rev 1.3



**Die Outline**  
(all dimensions in mm)

**Assembly Diagram**



**Attention:**

GaAs MMIC devices are susceptible to damage from electrostatic discharge. Proper precautions should be observed during handling, assembly and test.