

Features

- RF Frequency: 24~34GHz
- LO Frequency: 12~18GHz
- IF Frequency: DC ~ 4GHz
- Conversion Loss: -9dB
- LO Power: 4dBm
- Die Size: 1.78mm × 1.13mm × 0.1mm

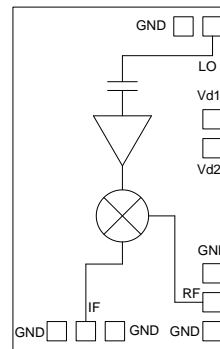
Typical Applications

- Microwave and very small aperture terminal (VSAT) radios
- Test equipment
- Point to point radios
- Satellite communications (SATCOM)
- Military electronic warfare (EW), electronic countermeasure (ECM), and command, control, communications and Intelligence (C3I)

General Description

SAC3516 is a 24 GHz to 34 GHz MMIC mixer. The SAC3516 can be used as an upconverter or downconverter between 24 GHz and 34 GHz. The 2 × LO to radio frequency (RF). The LO amplifier is single bias at a 5 V dc with a typical 4 dBm LO drive level requirement .

Functional Diagram



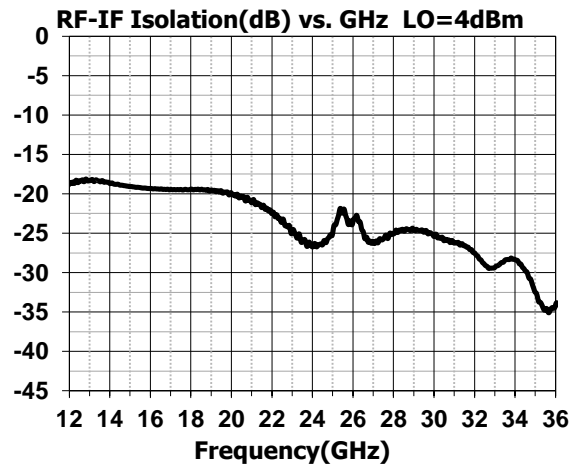
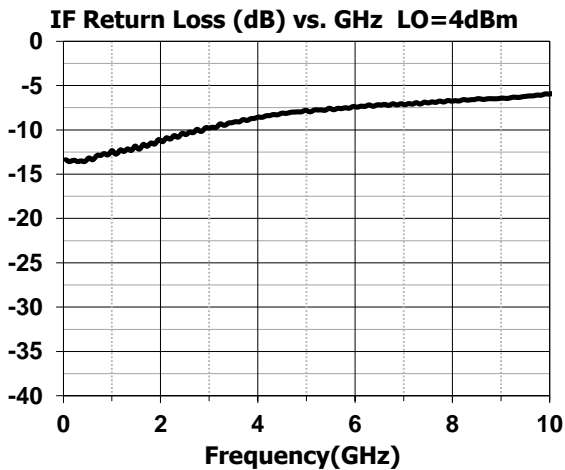
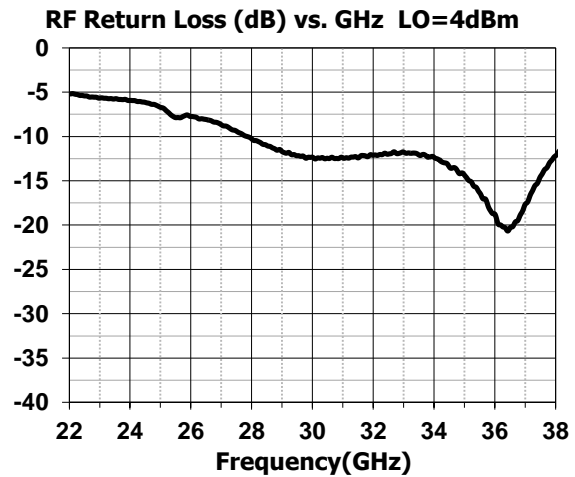
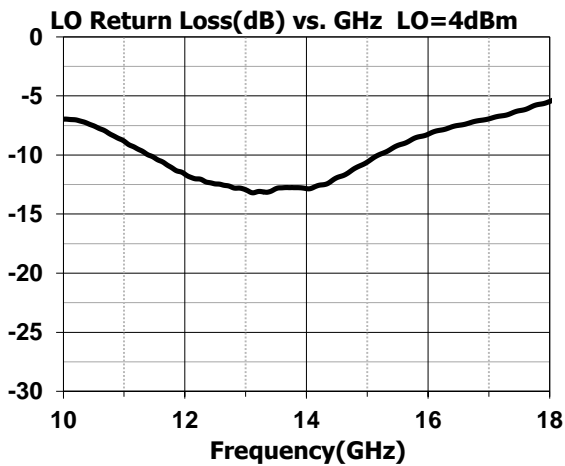
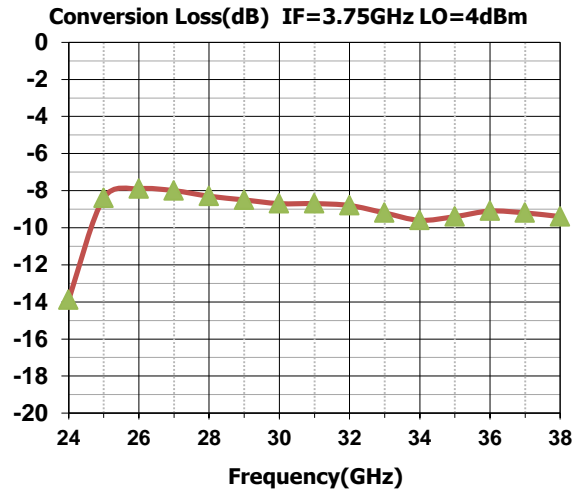
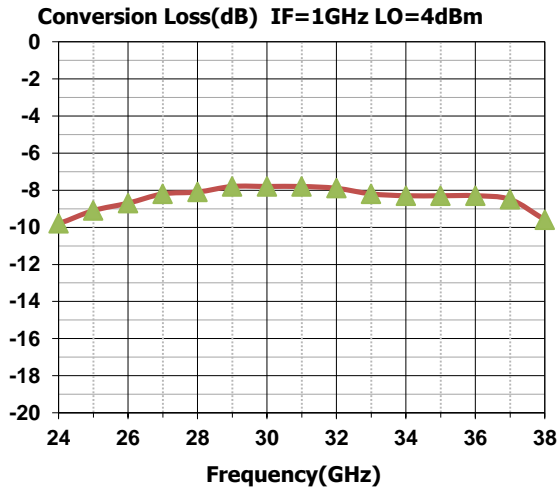
Electrical Performance (T_A=25°C, LO=4dBm)

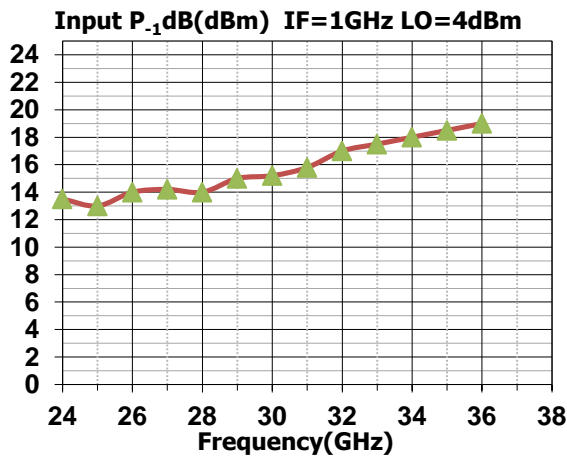
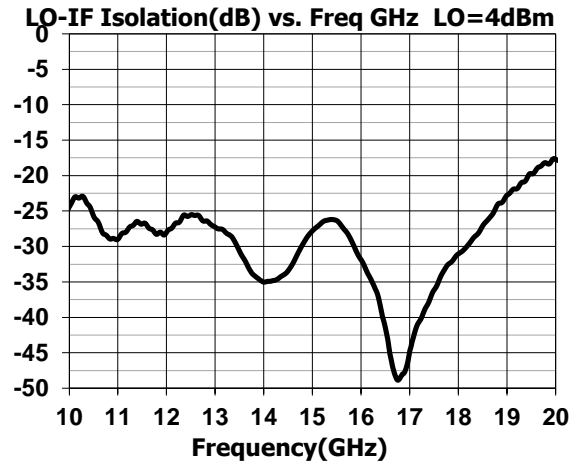
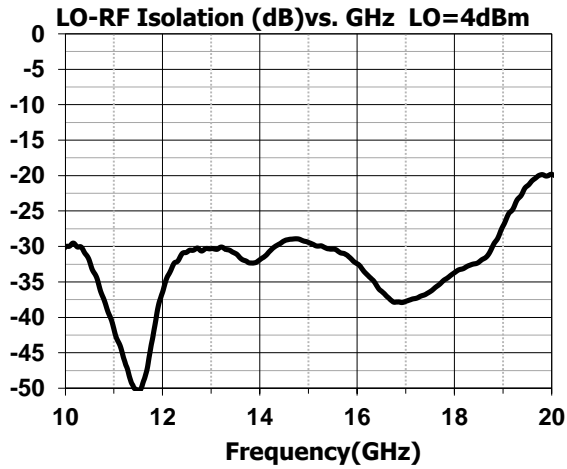
Parameter	Min.	Typ.	Max.	Units
RF Frequency Range	24 ~ 34			GHz
LO Frequency Range	12 ~ 18			GHz
IF Frequency Range	DC ~ 4			GHz
Conversion Loss		-9		dB
IF Return Loss		-10		dB
RF Return Loss		-10		dB
LO Return Loss		-10		dB
LO to RF Isolation		-35		dB
LO to IF Isolation		-30		dB
RF to IF Isolation		-25		dB
Supply Current		90		mA

Absolute Maximum Ratings

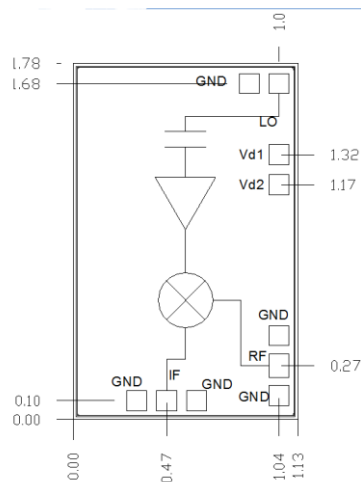
Maximum RF/IF Input	15dBm	Operating Temperature	-55°C~+85°C
Maximum LO Input	15dBm	Storage Temperature	-65°C~+150°C

Typical Performance Curve

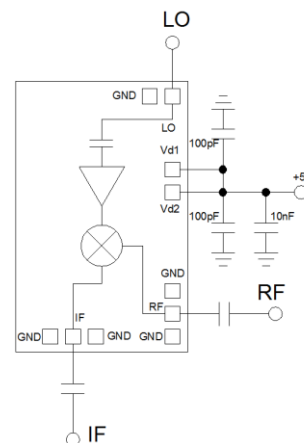




Die Outline (all dimensions in mm)



Assembly Diagram



Attention:

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