

Features

- RF Frequency: 18~36GHz
- LO Frequency: 9~16GHz
- IF Frequency: DC~7GHz
- Conversion Loss: -13dB
- LO Power: 0dBm
- Die Size: 1.44mm × 1.21mm × 0.1mm

Typical Applications

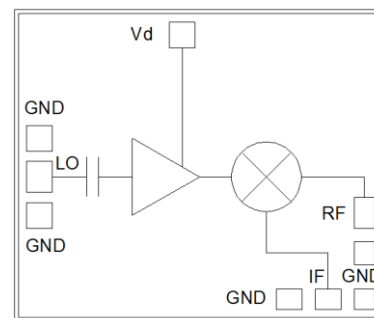
- VSAT
- Point-to-Point Radio
- Test Equipment & Sensors

General Description

SAC3518 is a Ka-Band sub-harmonic up converter with integrated LO buffer amplifier. The SAC3518 operates from an RF of 18 to 36 GHz.

The 2 × LO to radio frequency (RF). The LO amplifier is single bias at a 5 V dc with a typical 0 dBm LO drive level requirement .

Functional Diagram



Electrical Performance

(25°C, Vd = 5 V, Id = 65 mA Typical. IF = 500 MHz, LO = 0 dBm.)

Parameter	Min.	Typ.	Max.	Units
RF Frequency Range		18~36		GHz
LO Frequency Range		9~16		GHz
IF Frequency Range		DC~7		GHz
Conversion Loss		-13		dB
IF Return Loss		-20		dB
RF Return Loss		-8		dB
LO Return Loss		-25		dB
LO to RF Isolation		-30		dB
LO to IF Isolation		-15		dB
RF to IF Isolation		-35		dB
Supply Current		65		mA

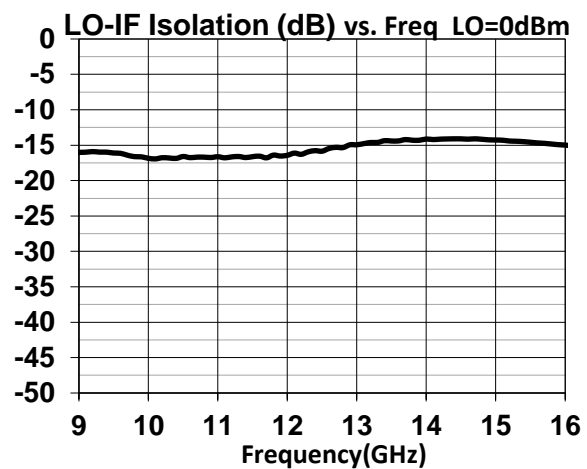
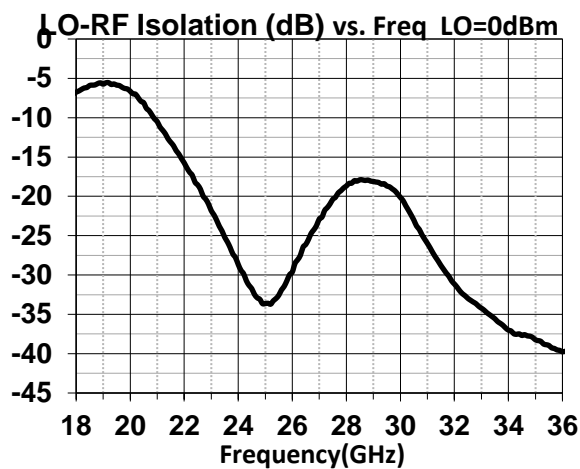
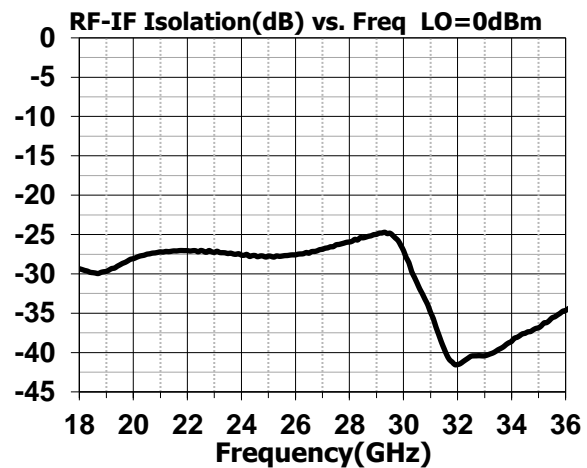
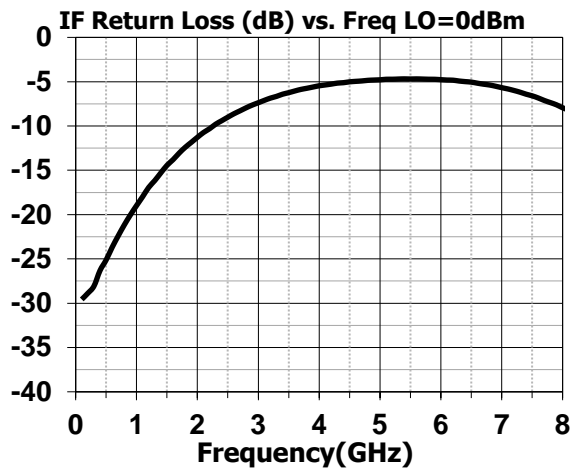
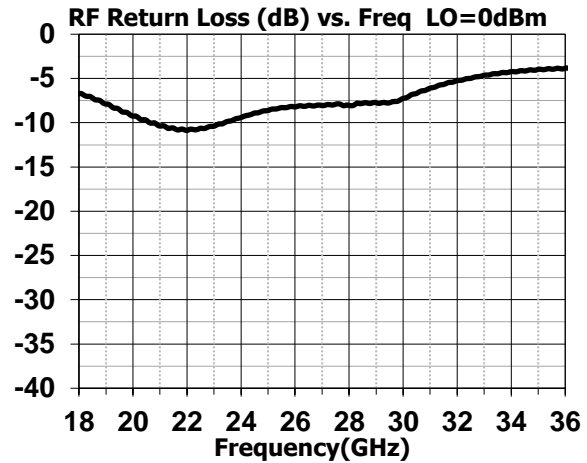
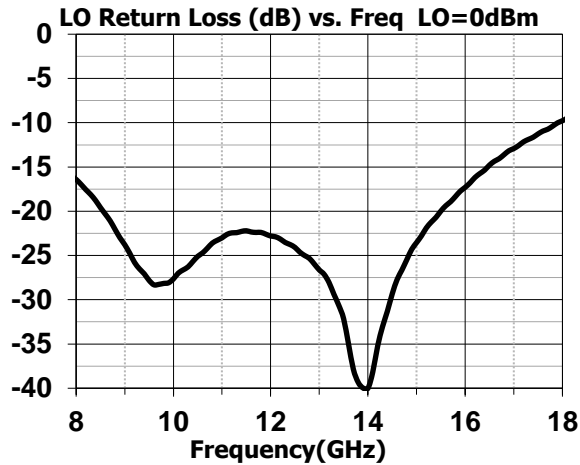
Absolute Maximum Ratings

Maximum RF/IF Input	10dBm	Operating Temperature	-55°C~+85°C
Maximum LO Input	10dBm	Storage Temperature	-65°C~+150°C

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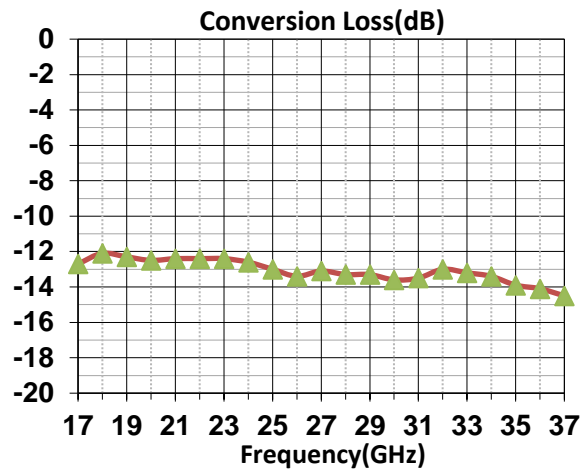
Typical Performance Curve



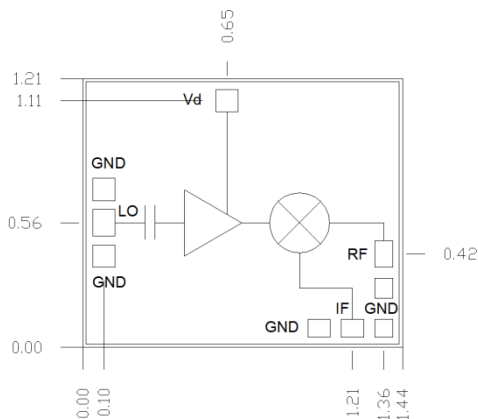
SAC3518

GaAs MMIC Subharmonic Mixer
18~36GHz

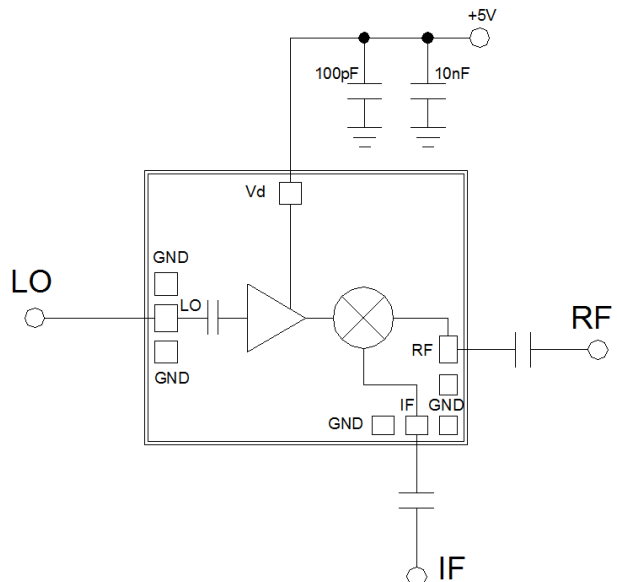
Rev 1.2



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.

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