

Features

- Frequency: 6GHz~18GHz
- Gain: 16dB
- Supply Power : +5V@52mA
- Die Size: 1.2mmx1.22mmx0.1mm

Typical Applications

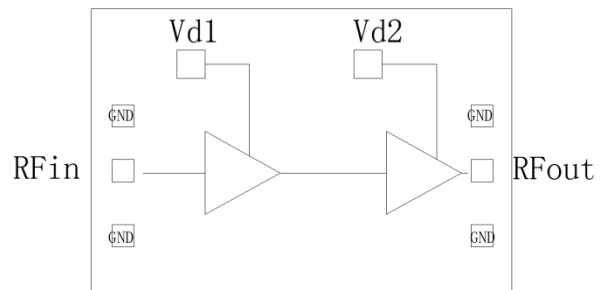
- Microwave radio including point to point communication
- Telecommunication
- Weather radar
- Optical communication
- Test instrumentation
- SatCom
- VSAT
- Military and Aerospace

General Description

SAC3917 is a GaAs MMIC driver amplifier which operates between 6GHz~18GHz. The amplifier provides 16dB of gain ,16dBm Output P_{-1dB} and 3.5dB noise figure while requiring 52 mA from a +5V supply voltage.

SAC3917 offers full passivation for increased reliability and moisture protection.

Functional Diagram



Electrical Performance (T_A=25°C, V_D= +5V, I_D=52mA, Z₀=50Ω)

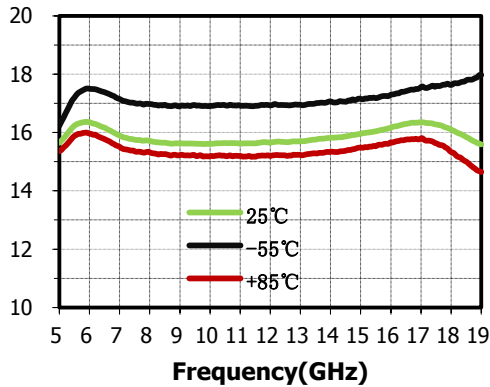
Parameter	Min.	Typ.	Max.	Units
Frequency Range	6~18			GHz
Small Signal Gain	—	16	—	dB
Reverse Isolation	—	-35	—	dB
Input Return Loss	—	-15	—	dB
Output Return Loss	—	-15	—	dB
Output P _{-1dB}	—	16	—	dBm
Noise Figure	—	3.5	—	dB
Supply Voltage(V _D)	—	5	—	V
Supply Current(I _D)	—	52	—	mA

Absolute Maximum Ratings

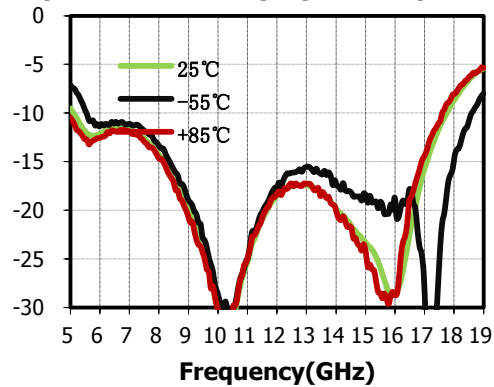
Maximum Input Power	+20dBm	Operating Temperature	-55°C~+85°C
Channel Temperature	+150°C	Storage Temperature	-65°C~+150°C

Typical Performance Curve

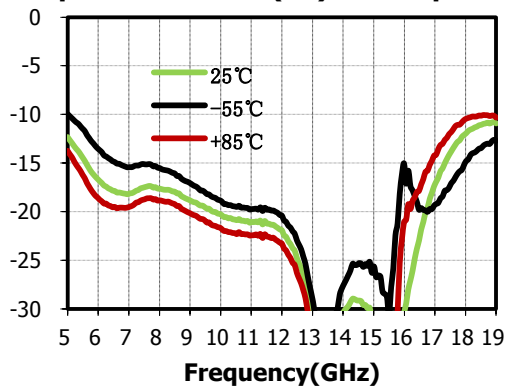
Small Signal Gain(dB) vs.Temperature



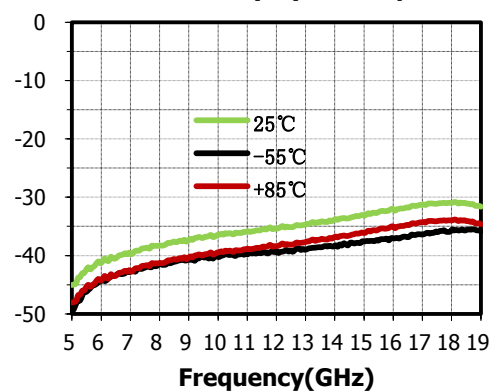
Input Return Loss(dB) vs.Temperature



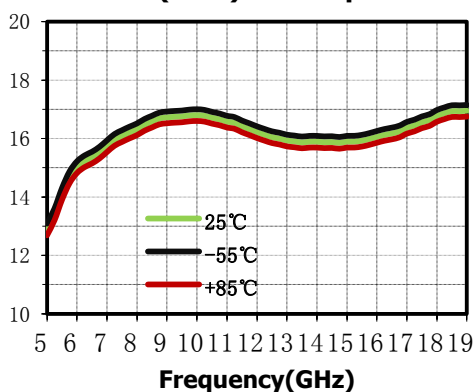
Output Return Loss(dB) vs.Temperature



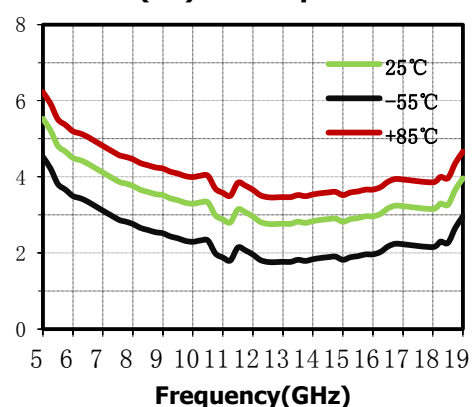
Reverse Isolation(dB) vs.Temperature



OP-1dB(dBm) vs.Temperature



NF(dB) vs.Temperature

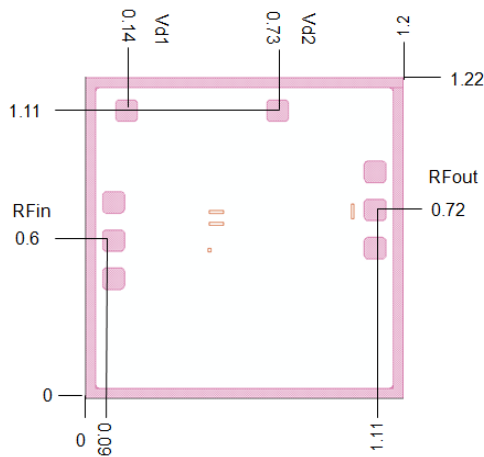


SAC3917

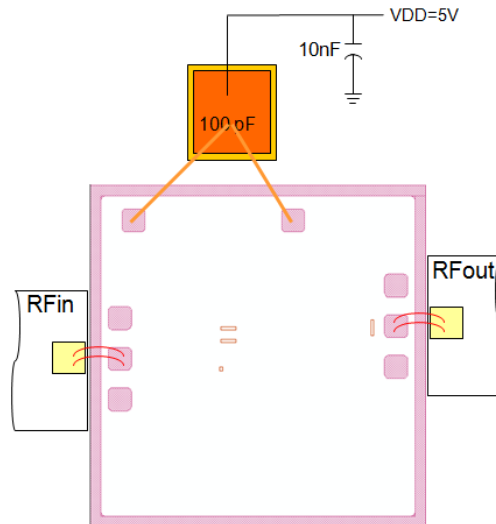
GaAs MMIC Driver Amplifier
6GHz~18GHz

Rev 2.1

Die Outline
(all dimensions in μm)



Assembly Diagram



Attention:

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