

## Features

- Frequency: DC~40GHz
- Gain: 11dB
- Output P<sub>-1dB</sub>: 18dBm
- Supply Voltage: +8V@100mA
- Die Size: 1.98mmx1.14mmx0.1mm

## Typical Applications

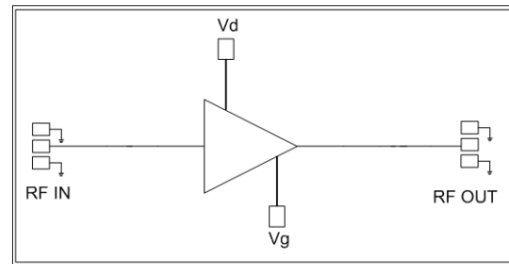
- Radar and ECM
- RF/ Microwave radio
- Military and Space
- Test and Measurement
- Fiber Optics

## General Description

SAC3065 is a GaAs MMIC distributed amplifier die which operates between DC~40GHz. The amplifier can provide 11dB gain, 18dBm Output P<sub>-1dB</sub> from a 100mA supply current.

The chip offers full passivation for increased reliability and moisture protection. This amplifier is the perfect alternative to higher cost hybrid amplifiers.

## Functional Diagram



## Electrical Performance (T<sub>A</sub>=25°C, V<sub>d</sub>=+8V, I<sub>D</sub>=100mA, Z<sub>0</sub>=50Ω)

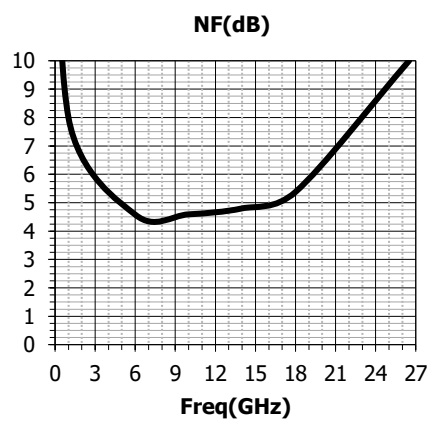
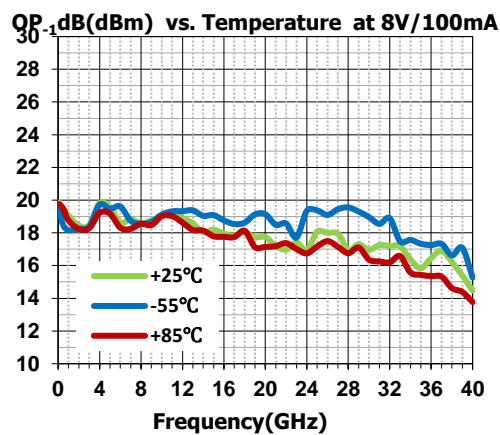
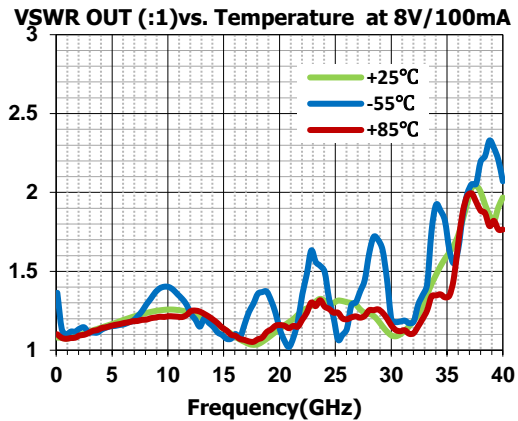
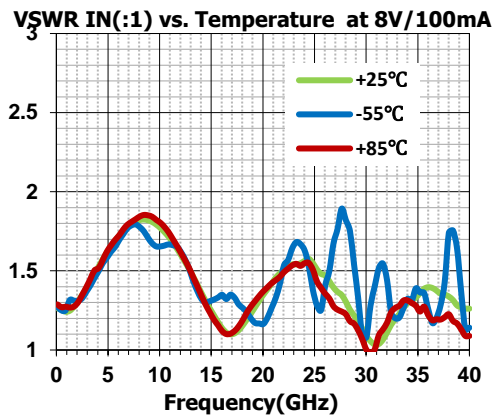
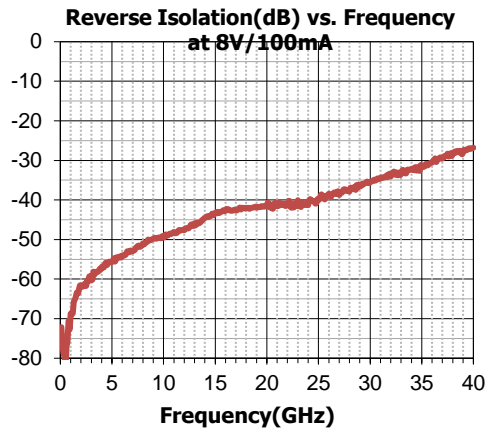
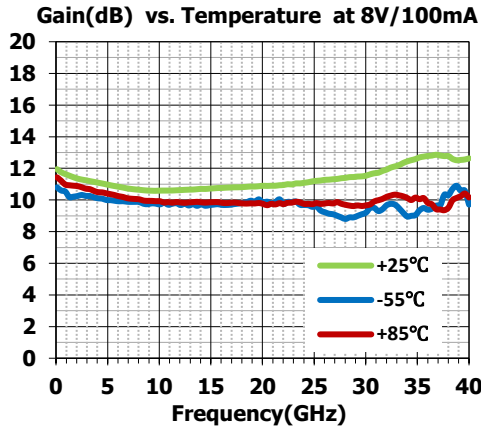
Parameter	Min.	Typ.	Max.	Units
Frequency Range	DC~40			GHz
Gain	—	11	—	dB
Gain Flatness	—	±1.0	—	dB
Reverse Isolation	—	-50	—	dB
Input VSWR	—	1.6	—	: 1
Output VSWR	—	1.4	—	: 1
Noise Figure	—	8	—	dB
Output P <sub>-1dB</sub>	—	18	—	dBm
Supply Current(I <sub>D</sub> )	—	100	—	mA

Adjust V<sub>g</sub>=-1~0V to achieve I<sub>D</sub>=100 mA typical

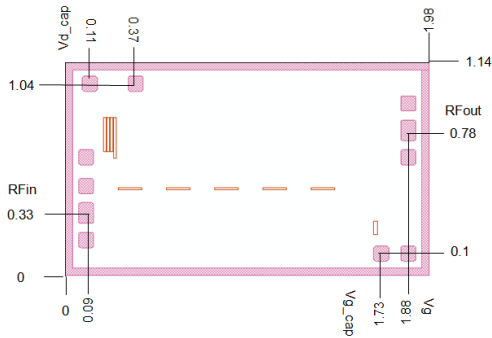
## Absolute Maximum Ratings

Maximum Input Power	+18dBm	Operating Temperature	-55°C~+85°C
Channel Temperature	+150°C	Storage Temperature	-65°C~+150°C

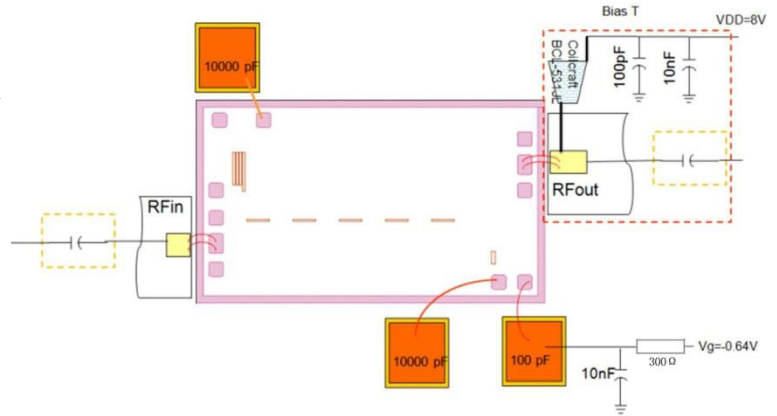
## Typical Performance Curve



## 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.