

# SAC1103

Ka Band Driver Amplifier Module  
26GHz~40GHz 15dBm

Rev 2.0

## Features

- Frequency: 26GHz~40GHz
- Good Power and Gain Flatness
- Gain: 11dB
- Output P<sub>-1dB</sub>: 15dBm
- Supply Voltage: +4~6V
- Integrated Gain vs. Temperature Compensating Circuit TB1103(Optional)
- Low Phase Noise Design

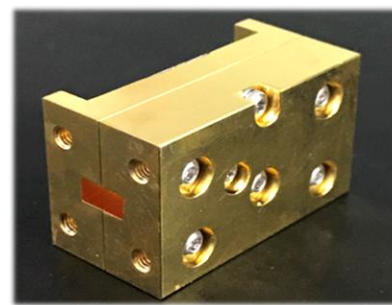
## Typical Applications

- VSAT
- P2P Radio
- Military and Space
- Test and Measurement

## General Description

SAC1103 is a Ka band driver amplifier module with a typical small signal gain of 11 dB and a nominal OP<sub>-1dB</sub> of +15dBm across the frequency range of 26 to 40GHz. The DC power requirement for the amplifier is +6 VDC/110 mA. The RF connectors are WR-28 waveguides.

## Image



## Electrical Performance (T<sub>A</sub>=25°C, V<sub>D</sub>= +5V, I<sub>D</sub>=100mA, Z<sub>0</sub>=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	26 ~ 40			GHz
Small Signal Gain	9	11	17	dB
Small Signal Gain Flatness	—	±1.5	—	dB
Reverse Isolation	—	-35	—	dB
Input /Output Return Loss	—	-10	-5	dB
Output Power for 1 dB Compression (OP <sub>-1dB</sub> )	12	15	—	dBm
Supply Voltage(V <sub>D</sub> )	4	6	6.5	V
Supply Current(I <sub>D</sub> )	—	100	140	mA
Gate Voltage	-0.7	-0.55	-0.2	V

## Mechanical Specifications

Parameter	
Input/Output	WR-28/WR-28 waveguides
Bias	Solder pin
Case Material	Aluminum
Finish	Gold Plated
Weight	50g

### SuperApex, LLC

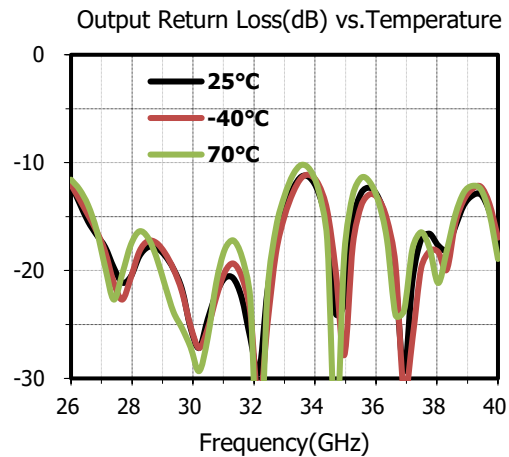
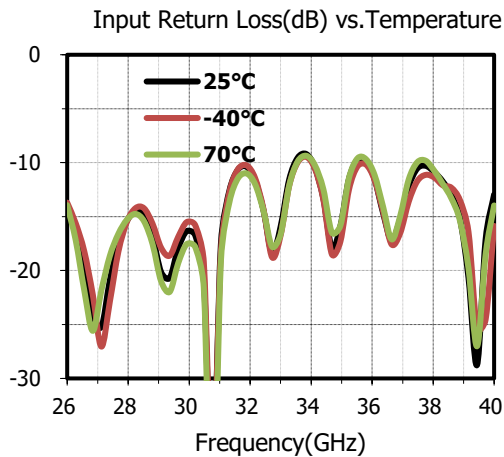
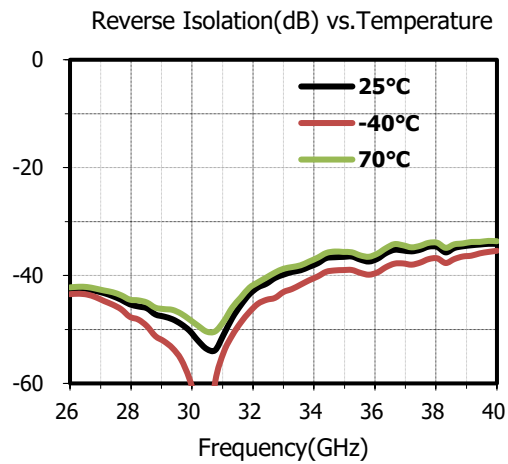
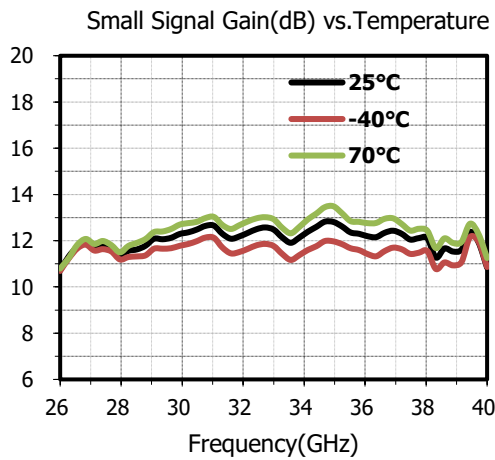
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## Absolute Maximum Ratings

Maximum Input Power	+8dBm	Operating Temperature	0°C~+70°C
Maximum V <sub>D</sub>	+6.5V	Storage Temperature	-65°C~+150°C

## Typical Performance Curve

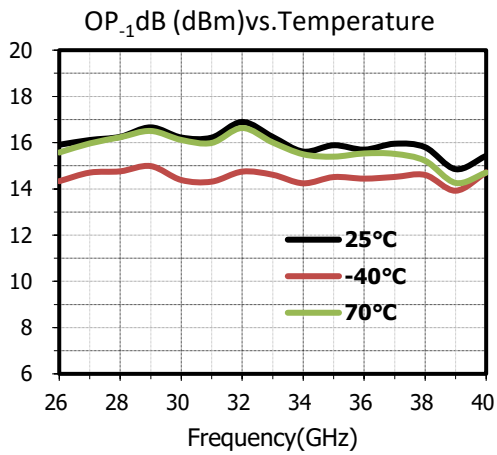
All data are measured with a Gain vs. Temperature Compensating Circuit (TB1103)



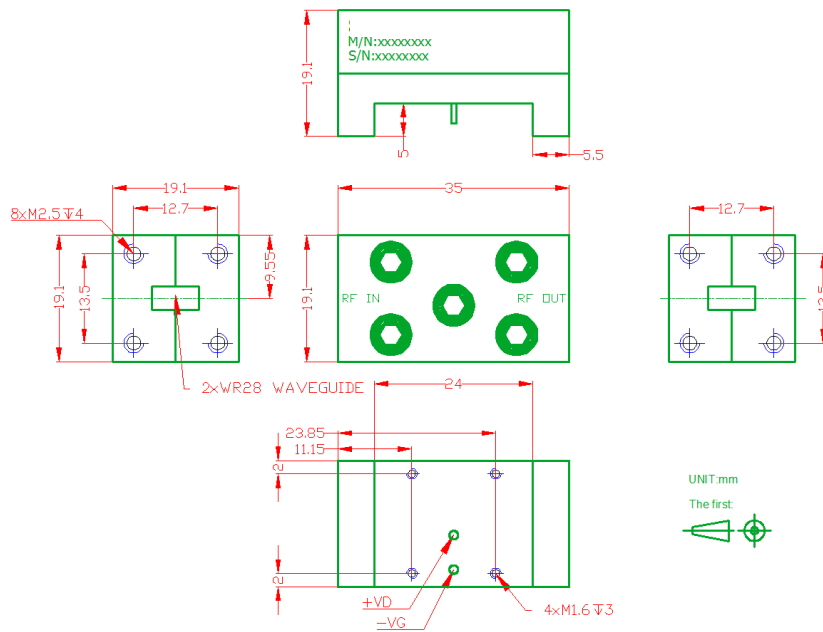
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## Mechanical Outline(mm)



### Attention:

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