SAC1104

Ka Band Driver Amplifier Module
28GHz～32GHz　28dBm

Rev 2.0

Features

- Frequency: 28GHz～32GHz
- Good Power and Gain Flatness
- Gain: 25dB
- Output P_{-1}dB: 28dBm
- Supply Voltage: +6V
- Integrated Gain vs. Temperature Compensating Circuit TB1104(Optional)
- Low Phase Noise Design

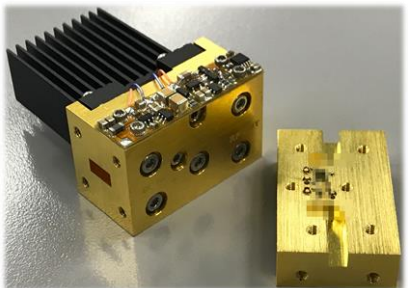
Typical Applications

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

General Description

SAC1104 is a Ka band driver amplifier module with a typical small signal gain of 25dB and a nominal OP_{-1}dB of +28dBm across the frequency range of 28 to 32GHz. The DC power requirement for the amplifier is +6VDC/800mA. The RF connectors are WR-28 waveguides.

Image



Electrical Performance (T_A=25℃,V_D=+6V, I_D=800mA, Z_0=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range		28 ~ 32		GHz
Small Signal Gain	22	25	29	dB
Small Signal Gain Flatness	—	±1.5	—	dB
Reverse Isolation	—	-55	—	dB
Input /Output Return Loss	—	-10	-8	dB
Output Power for 1 dB Compression (OP_{-1}dB)	26	28	—	dBm
Supply Voltage(V_D)	5.8	6	6.5	V
Supply Current(I_D)	—	800	1100	mA
Gate Voltage*	-0.7	-0.58	-0.3	V

*No Gate voltage need if Temperature Compensating Circuit TB1104 including

Mechanical Specifications

Parameter	
Input/Output	WR-28/WR-28 waveguides
Bias	Solder pin/pad
Case Material	Aluminum
Finish	Gold Plated
Weight	56g

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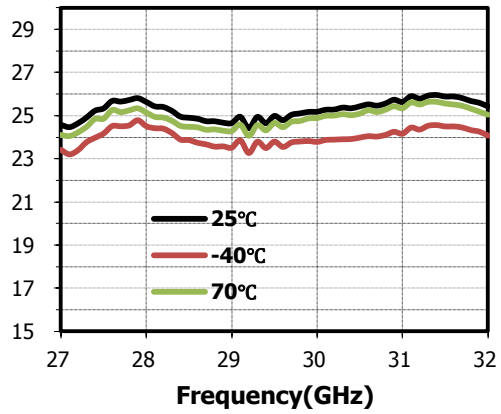
Absolute Maximum Ratings

Maximum Input Power	+8dBm	Operating Temperature	0˚C～+70˚C
Maximum V_D	+6.5V	Storage Temperature	-65˚C～+150˚C

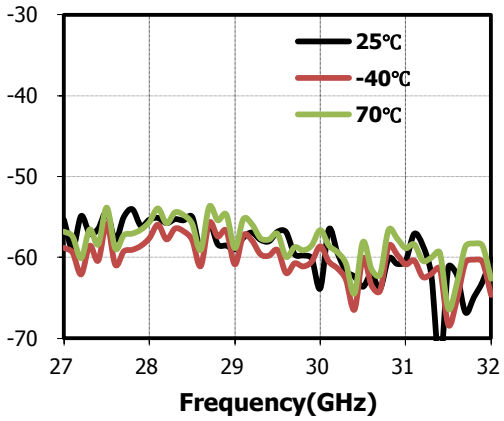
Typical Performance Curve

All data are measured with a Gain vs. Temperature Compensating Circuit (TB1104)

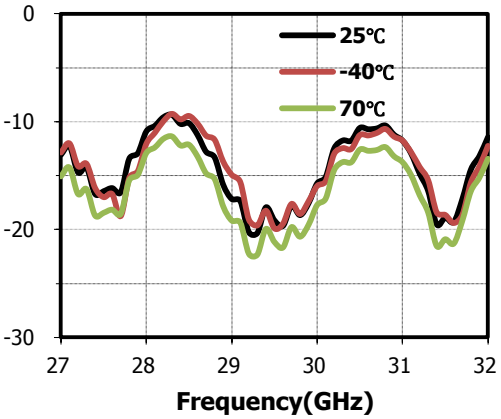
Small Signal Gain(dB) vs.Temperature



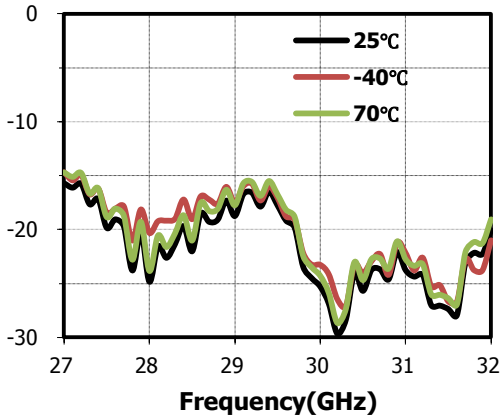
Reverse Isolation(dB) vs.Temperature



Input Return Loss(dB) vs.Temperature



Output Return Loss(dB) vs.Temperature



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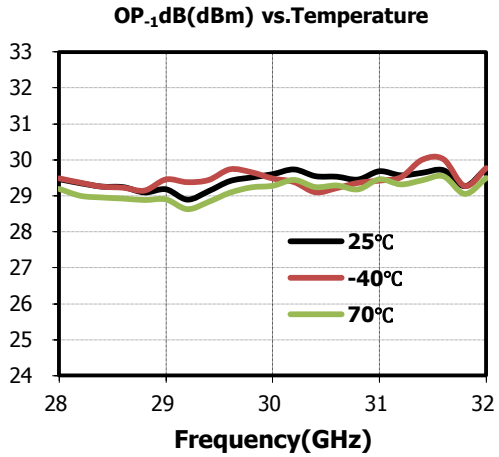
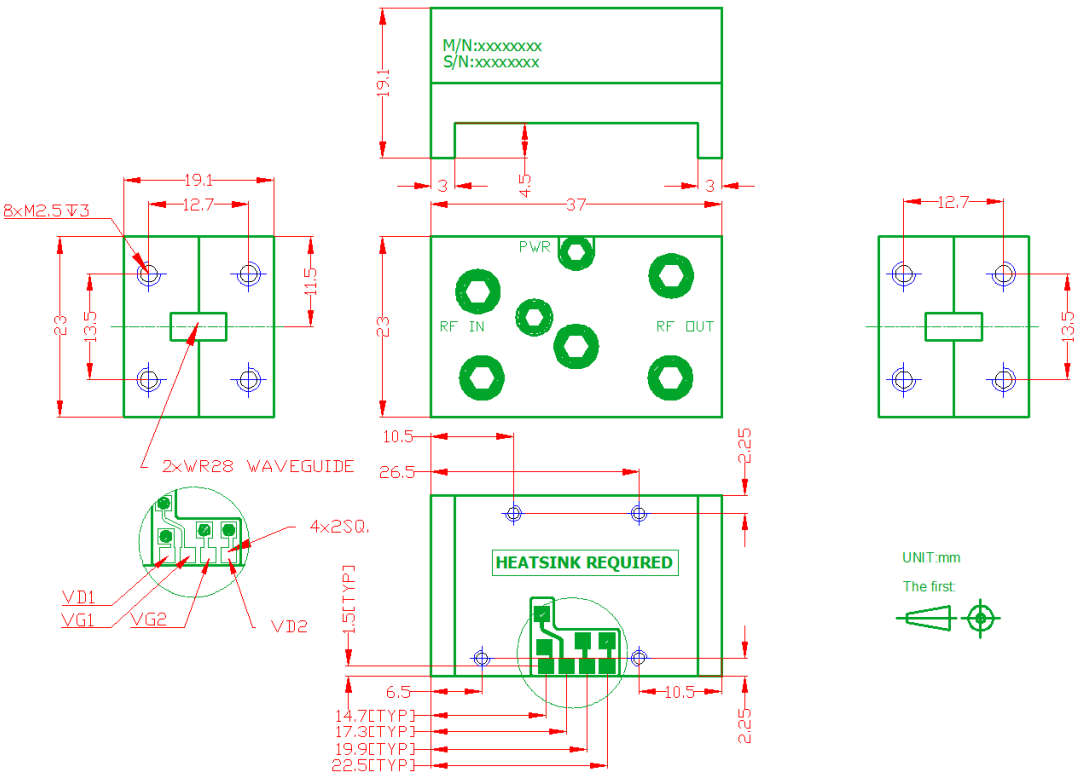


Mechanical Outline



Attention:

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