

SAC1140

GaAs MMIC Low Noise Amplifier Module 10~2000MHz NF=0.8dB

Rev 1.1

Features

- Frequency: 10~2000MHz
- Gain: 23dB
- OP_{-1dB}: 20dBm
- Supply Current: 100mA
- Size: 54mm×30mm×8mm

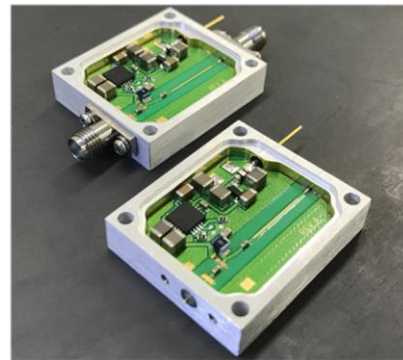
General Description

SAC1140 is a low noise amplifier module with a typical small signal gain of 23dB and a nominal OP_{-1dB} of +20dBm across the frequency range of 10 to 2000MHz.

Typical Applications

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

Image



Electrical Performance (T_A=25°C, I_D=100mA, Z_O=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	10~2000			MHz
Gain	20	23	26	dB
Noise Figure	—	0.8	1.1	dB
Output Power for 1 dB Compression (OP _{-1dB})	17	20	—	dBm
Input VSWR	—	1.5	2	:1
Output VSWR	—	1.5	2	:1
Reverse Isolation	—	-25	—	dB
Supply Voltage	4.8	5	15	V
Supply Current	—	100	150	mA

Mechanical Specifications

Parameter	
Input/Output	SMA/SMA
Bias	Pin/Case ground
Case Material	Aluminum alloy
Weight	85g

SuperApex, LLC

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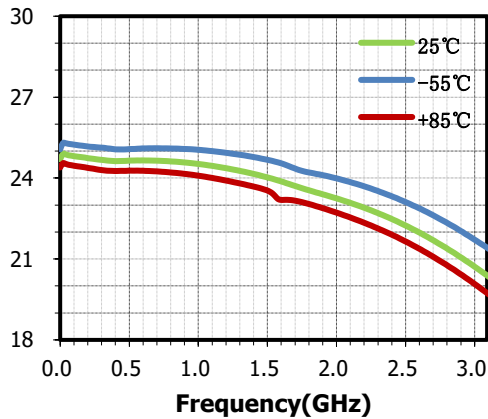


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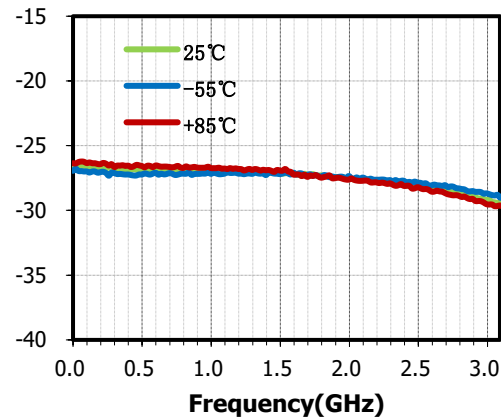
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Typical Performance Curve

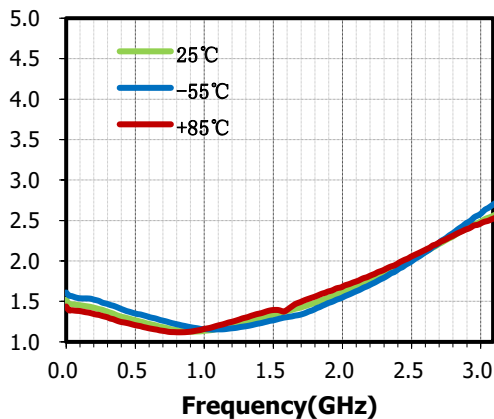
Small Signal Gain(dB) vs.Temperature



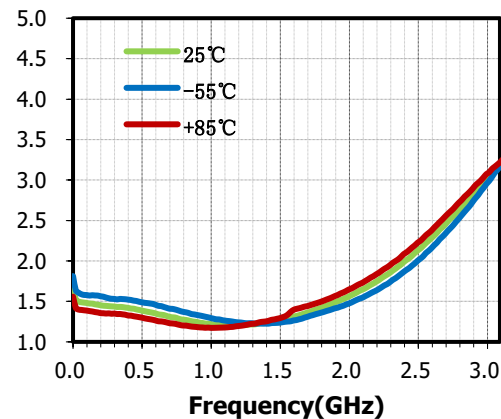
Reverse Isolation(dB) vs.Temperature



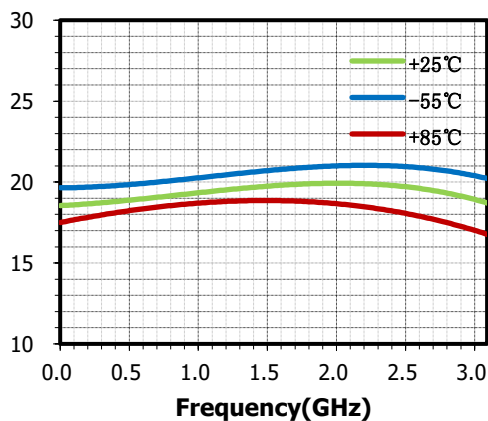
Input VSWR(:1) vs.Temperature



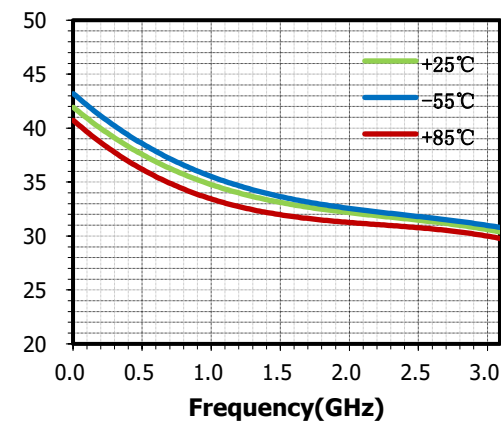
Output VSWR(:1) vs.Temperature



OP₁(dBm) vs.Temperature



OIP₃(dBm) vs.Temperature



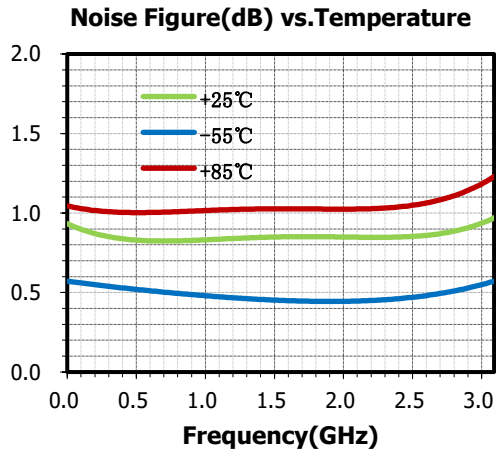
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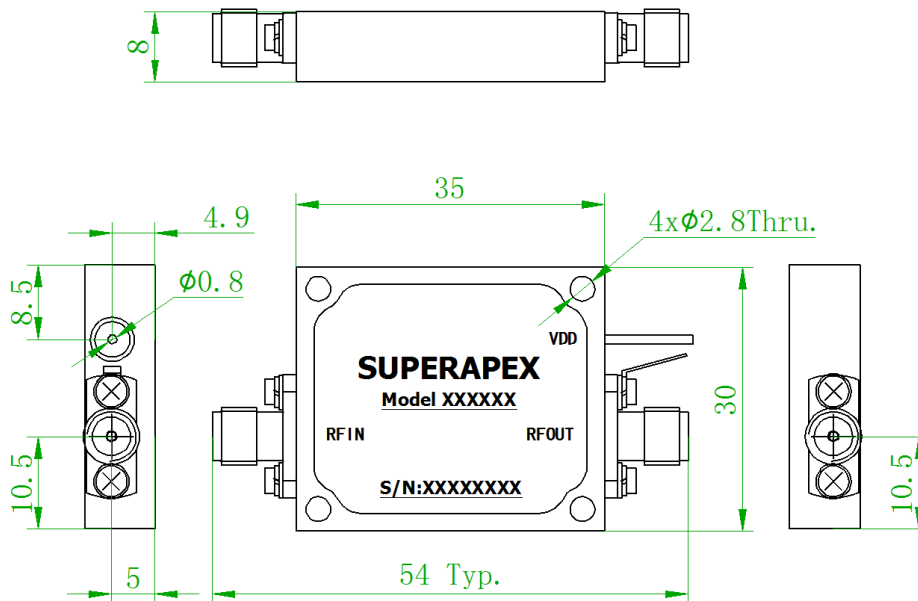
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Mechanical Outline:

All dimensions are in millimeters



Note:

1. Other mechanical configurations are available under different model numbers
2. Two SMA Connectors are field-replaceable

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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