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Features

- Frequency: 0.7GHz~1.3GHz
- Gain: 31dB
- OP₋₁dB: 36dBm
- Balanced Amplifier
- Supply Voltage: +8~8.5V
- PAE: 33%
- Size: 25.4mm×34mm×5.5mm

Typical Applications

- Microwave radio
- Telecommunication
- Test instrumentation

General Description

SAC1145 is a balanced power amplifier manufactured using microwave hybrid integration technology. The operating frequency from 0.7 to 1.3GHz with 31 dB of gain typ. and 36dBm Output P₋₁dB from a +8V supply.

Picture



Electrical Performance (T_A=25°C, V_D=+8V, I_D=1.2A, Z₀=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.7 ~ 1.3			GHz
Small Signal Gain	28	31	36	dB
Small Signal Gain Flatness	—	±1.5	—	dB
Reverse Isolation	—	-55	—	dB
Input VSWR	—	1.5	2	:1
Output VSWR	—	1.4	2	:1
PAE	—	33	—	%
Output P ₋₁ dB	35	36	—	dBm
Output IP ₃ *	—	45	—	dBm
Spurious	—	-65	—	dBc
Turn-on Time	—	2	—	μs
Turn-off Time	—	6	—	μs
Turn-ON	4.2	—	5	V
Turn-OFF	0	—	0.5	V
Supply Voltage(V _D)	8	—	8.5	V
Supply Current(I _D)	—	1.2	1.6	A

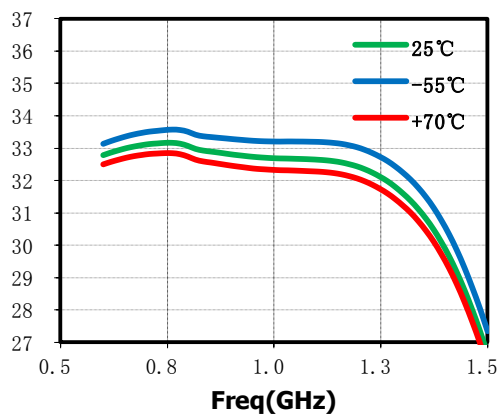
*Test conditions : P_{OUT}/T_{ONE}=+20dBm , separation:1MHz

Absolute Maximum Ratings

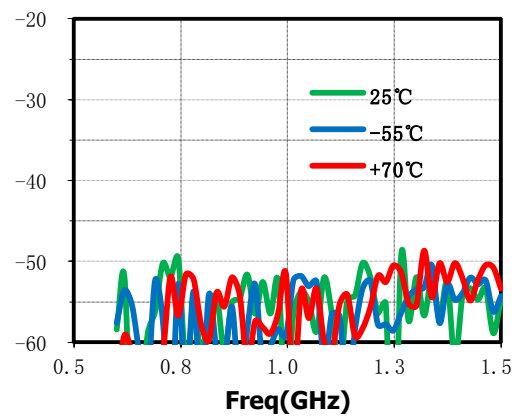
Maximum Input Power	+13dBm	Operating Temperature	-40°C ~ +70°C
Channel Temperature	+150°C	Storage Temperature	-65°C ~ +150°C

Typical Performance Curve

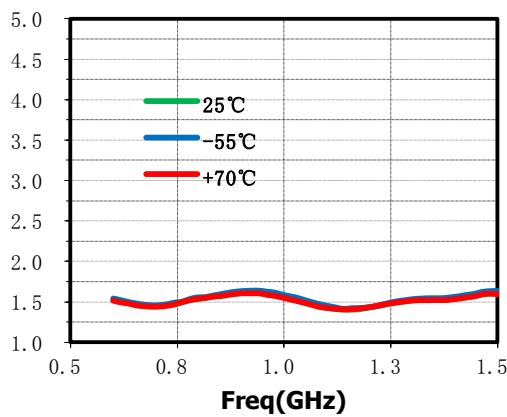
Small Signal Gain(dB) vs. Temperature



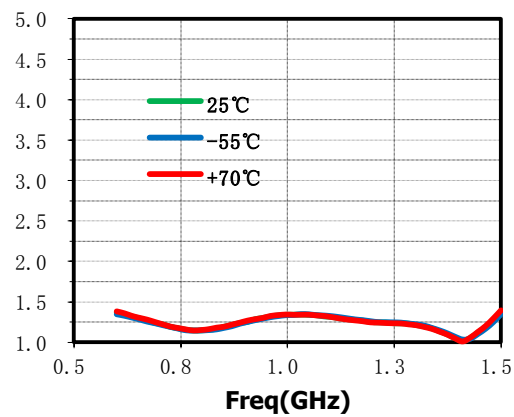
Reverse Isolation(dB) vs. Temperature



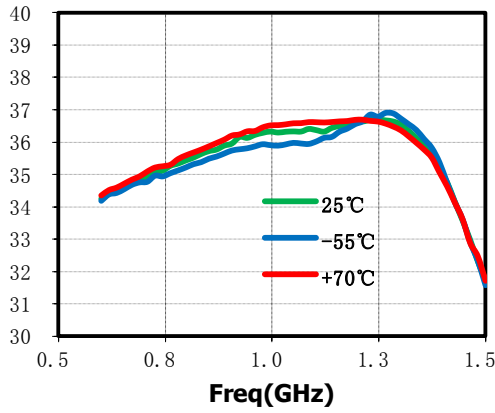
Input VSWR(:1) vs. Temperature



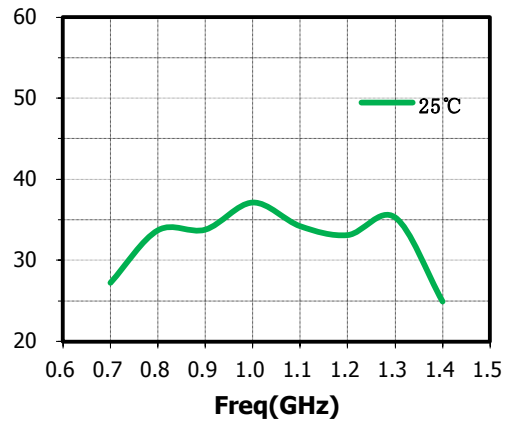
Output VSWR(:1) vs. Temperature



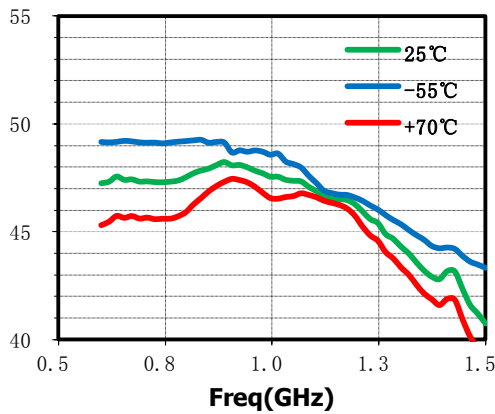
OP₁(dBm)vs. Temperature



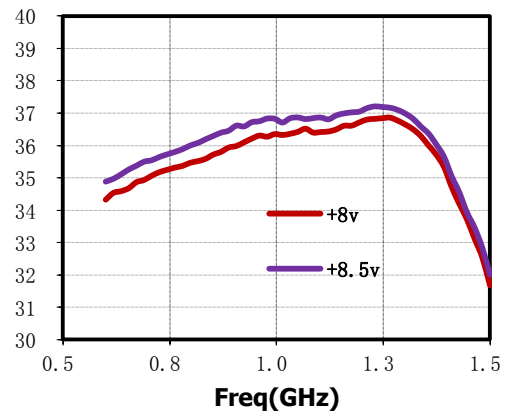
PAE(%)



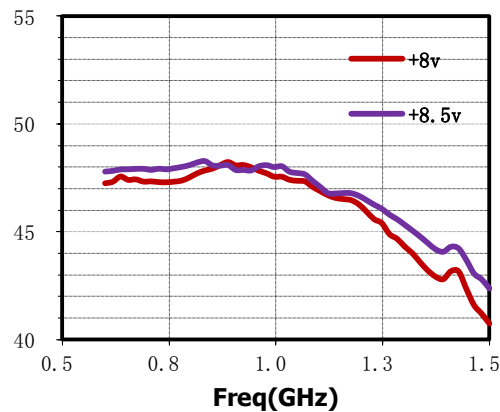
OIP₃(dBm)vs. Temperature



OP₁(dBm)vs. V_D T_A=25°C



OIP₃(dBm)vs. V_D T_A=25°C



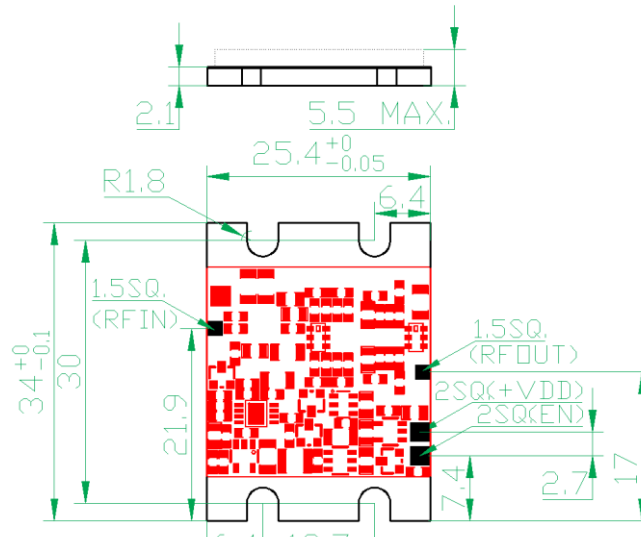
SAC1145

GaAs MMIC Power Amplifier Module
0.7GHz~1.3GHz 36dBm

Rev 1.4

Mechanical Outline

All dimensions are in millimeters



Note:

There are electrostatic sensitive GaAs devices inside the module, which is susceptible to damage from Electrostatic Discharge.