

SAC3918Q3



GaAs MMIC Driver Amplifier
2GHz~10GHz

Rev 1.2

Features

- Frequency: 2GHz~10GHz
- Gain: 18dB
- Output P-1dB: 19dBm
- Package Size: 3mm×3mm×1.2mm

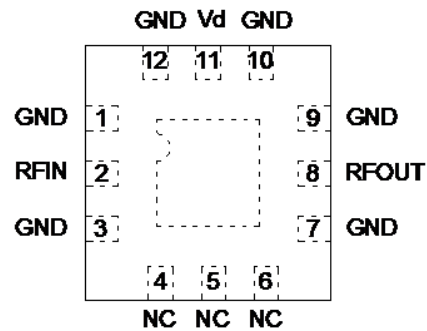
Typical Applications

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

General Description

SAC3918Q3 is a GaAs MMIC driver amplifier which operates between 2GHz~10GHz. The amplifier provides 18dB of gain ,19dBm Output P-1dB while requiring 80 mA from a +5V supply voltage.

Functional Diagram



Electrical Performance (T_A=25°C, V_d=+5V, I_b=80mA, Z₀=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	2~10			GHz
Small Signal Gain	—	18	—	dB
Gain Flatness	—	±1.5	—	dB
Reverse Isolation	—	-34	—	dB
Input VSWR	—	1.7	1.9	: 1
Output VSWR	—	1.3	1.6	: 1
Output P-1dB	17	19	—	dBm
Supply Current(I _b)	—	80	—	mA

Absolute Maximum Ratings

Maximum Input Power	+17dBm	Operating Temperature	-55°C~+85°C
Channel Temperature	+150°C	Storage Temperature	-65°C~+150°C
Maximum V _D	+6.3V		

SuperApex, LLC

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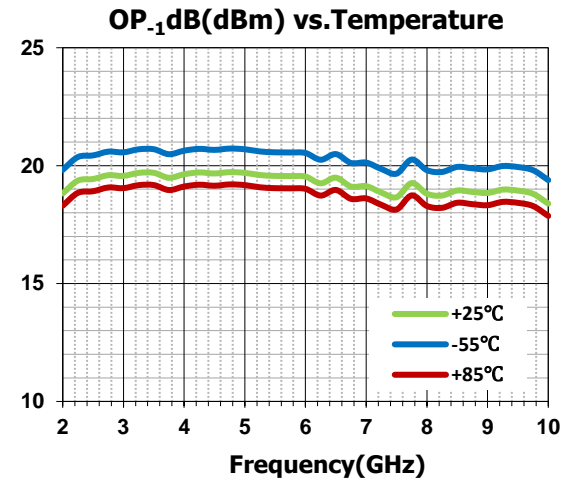
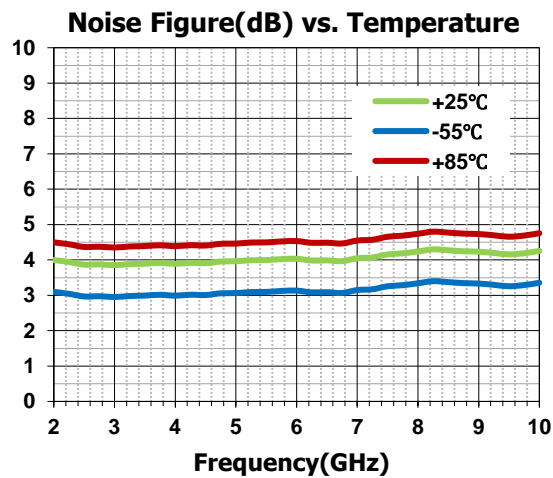
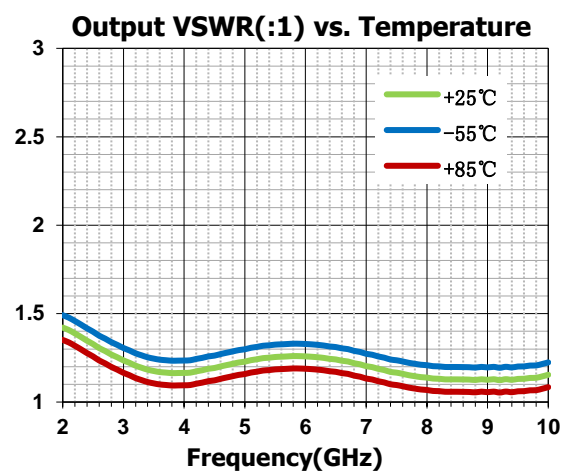
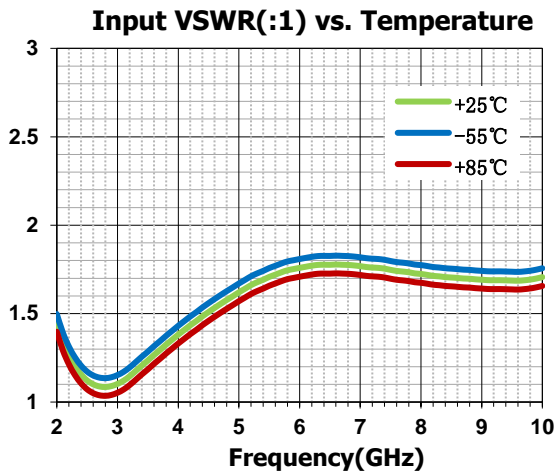
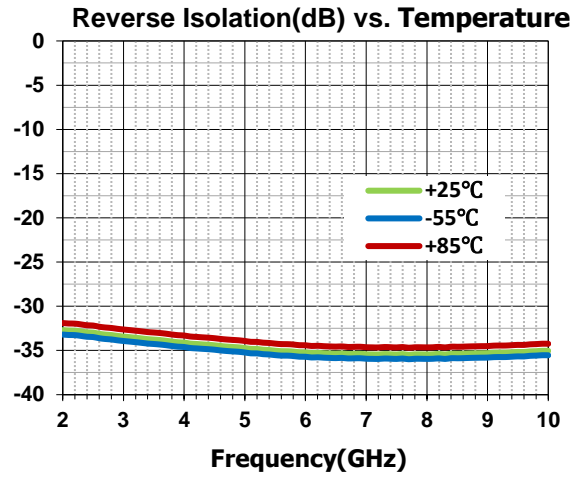
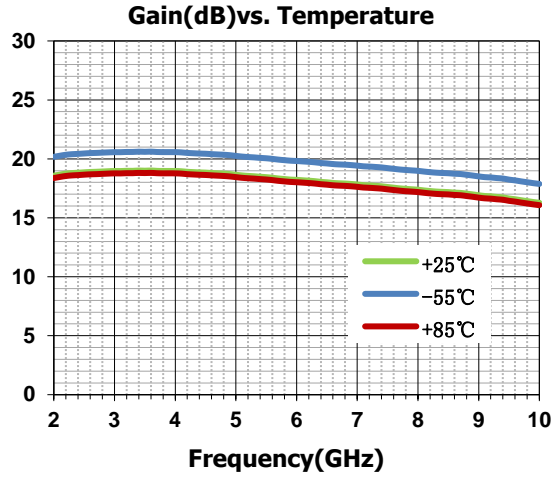
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Typical Performance Curve



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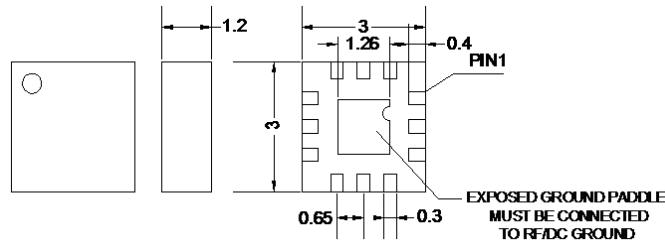
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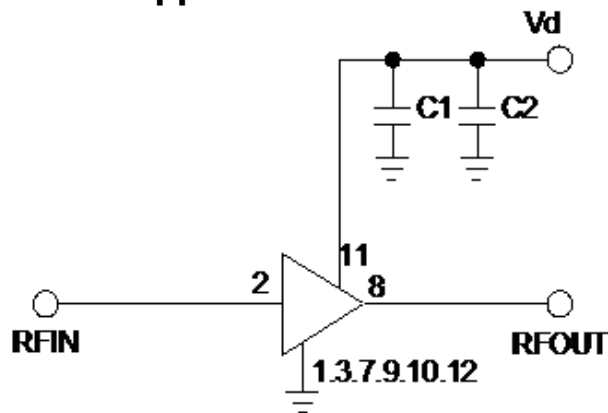
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Outline Drawing (All dimensions in mm)



Application Circuit



Components List

Reference Des.	Value	Part Number	Manuf.
C1	100pF	GRM188R61H101KA01	MURATA
C2	10nF	GRM1857U1A103JA44	MURATA

Attention:



Electrostatic discharge!

Attention:

1. The moisture resistant grade of products is 2A, the storage environment $\leq 30^{\circ} \text{C}/60\% \text{RH}$, The surrounding workshop Life is 4 weeks.
2. After un-packing, It is necessary to bake the parts for 6 hours in 125 ± 5 degree environment before soldering.

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