



RF-LAMBDA

The power beyond expectations

R02G20GSAGC

Low Noise Wideband With AGC Amplifier 2-20GHz NF: 2.5dB



- Point-to-Point Radios
- Point-to-Multi- Point Radios
- Military & Space
- Test Instrumentation
- Noise Figure: 2.5dB
- Gain: 14 dB
- P1dB Output power: +16dBm
- Supply Voltage: +8V @ 60mA
- Output IP3: +28dBm
- 50 Ohm Matched Input/Output
- 24 lead Plastic 4x4mm SMT Package:16mm²

Electrical Specifications, $T_A = +25^\circ \text{C}$, $V_{dd} = +5\text{V}$, $I_{dd} = 55 \text{ mA}$ ^[2]

Parameter	Min.	Typ.	Max.	Units
Frequency Range	2-20			GHz
Gain		14		dB
Noise Figure		2.5		dB
Output Power for 1 dB Compression		16		dBm
Output Third Order Intercept (IP ₃)		28		dBm
Supply Voltage		+8V		
Supply Current (I_{dd}) ($V_{dd} = 5\text{V}$, set $V_{gg2} = 1.5\text{V}$, $V_{gg1} = -0.8\text{V}$ Typ.)		45		mA

Absolute Maximum Ratings

Drain Bias Voltage	+6.0V
RF Input Power	12 dBm
Gate Bias Voltage, V_{gg1}	-1 to 0.3V
Gate Bias Voltage, V_{gg2}	0 to 2.5V
Channel Temperature	180 ° C
Continuous P_{diss} ($T = 85^\circ \text{C}$) (derate 8.4 mW/° C above 85 ° C)	0.8 W
Thermal Resistance (Channel to die bottom)	119 ° C/W
Storage Temperature	-65 to +150 ° C
Operating Temperature	-40 to +85 ° C



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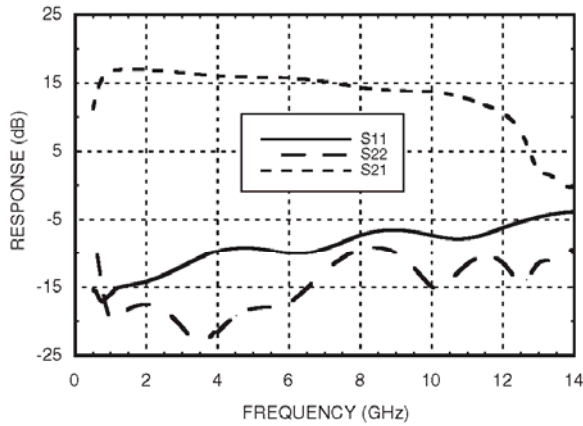
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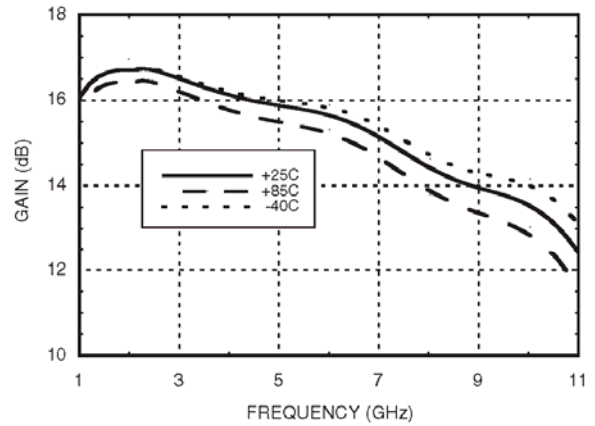
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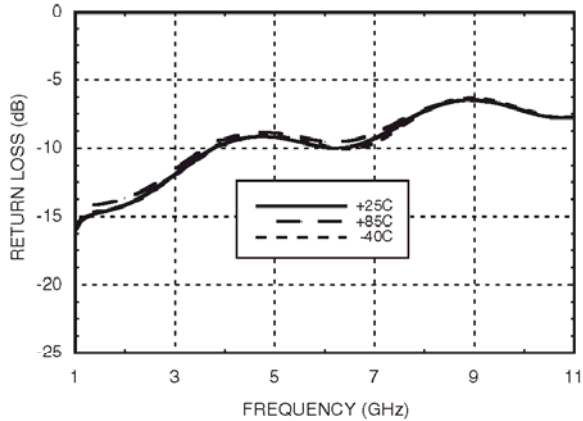
Broadband Gain & Return Loss ^[1]



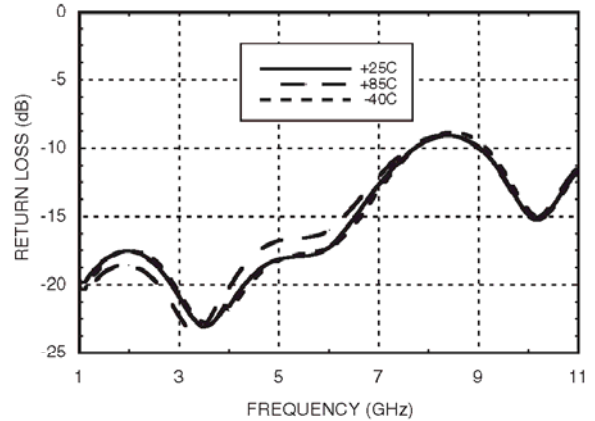
Gain vs. Temperature ^[1]



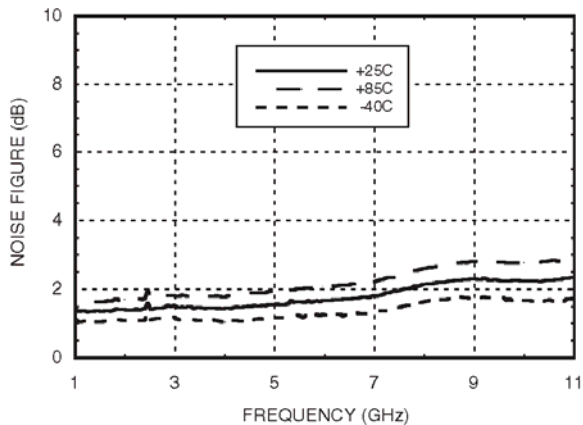
Input Return Loss vs. Temperature



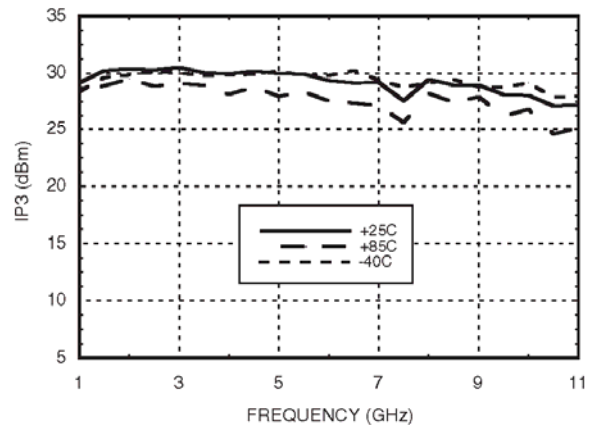
Output Return Loss vs. Temperature



Noise Figure vs. Temperature ^[1]



Output IP3 vs. Temperature





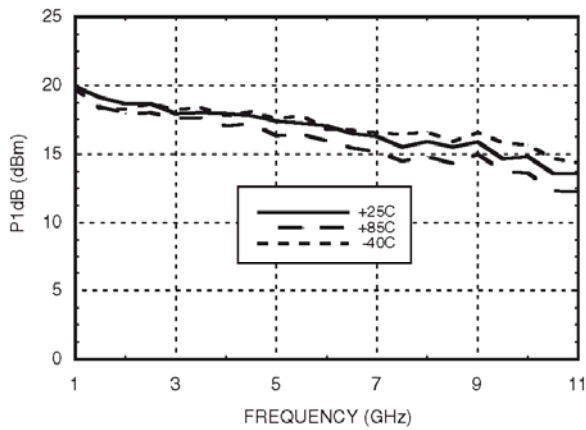
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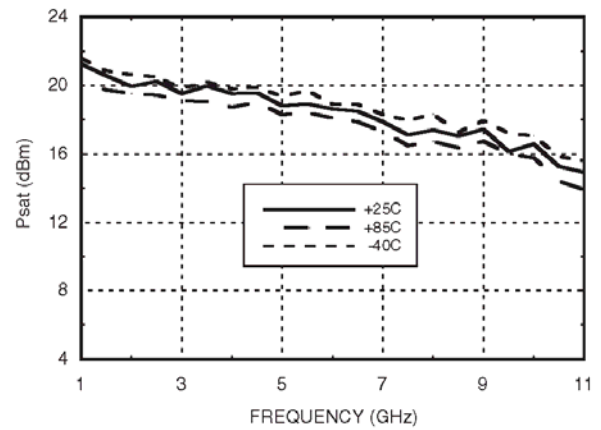
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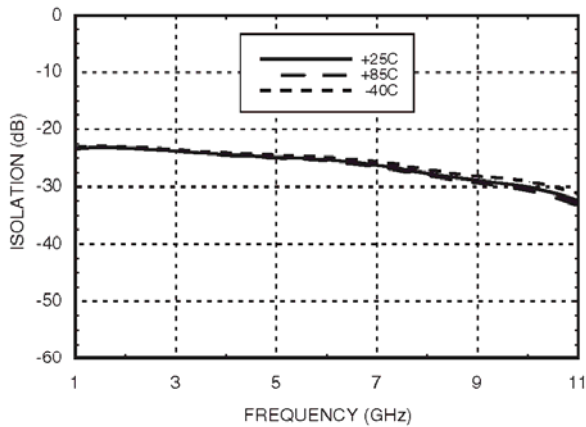
P1dB vs. Temperature ^[1]



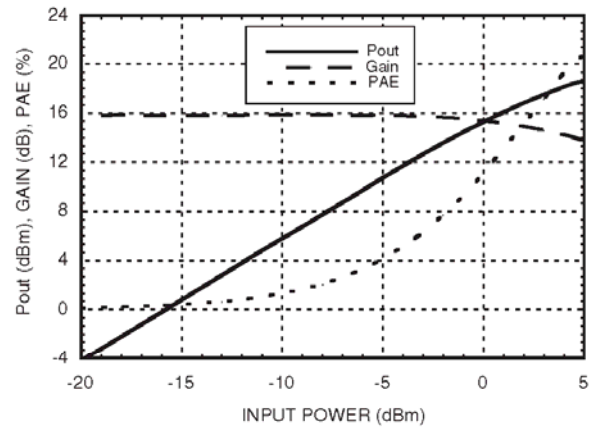
Psat vs. Temperature ^[1]



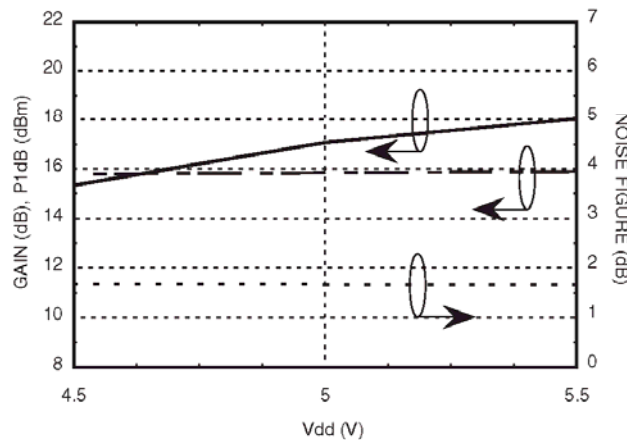
Reverse Isolation vs. Temperature



Power Compression @ 6 GHz ^[1]



Gain, Noise Figure & Power vs. Supply Voltage @ 6 GHz ^[1]

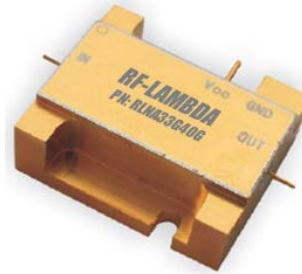
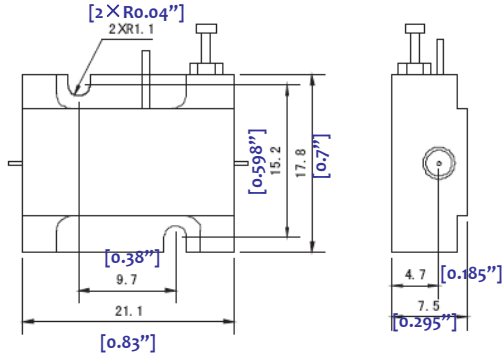




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Heat Sink required during operation. (Heat Sink sold separately)

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