



Low Noise Amplifier 7-13.5GHz NF: 1.8dB



- Point-to-Point Radios
- Point-to-Multi-Point Radios
- Test Equipment and Sensors
- Military & Space
- Noise Figure: 1.8 dB
- Gain: 17 dB
- OIP3: 24 dBm
- Single Supply: +3V @ 51 mA
- 50 Ohm Matched Input/Output
- Small Size: 1.96 x 0.98 x 0.10 mm

Electrical Specifications, $T_A = +25^\circ C$, $V_{dd 1, 2} = +3V$

Parameter	Min.	Typ.	Max.	Units
Frequency Range	7 - 13.5			GHz
Gain	14	17		dB
Gain Variation Over Temperature		0.02	0.03	dB/° C
Noise Figure		1.8	2.2	dB
Input Return Loss		15		dB
Output Return Loss		16		dB
Output Power for 1 dB Compression (P1dB)	9	12		dBm
Saturated Output Power (Psat)		14.5		dBm
Output Third Order Intercept (IP3)		24		dBm
Supply Current (Idd)(Vdd = +3V)		51		mA

Absolute Maximum Ratings

Drain Bias Voltage (Vdd1, Vdd2)	+3.5 Vdc
RF Input Power (RFIN)(Vdd = +3.0 Vdc)	+5 dBm
Channel Temperature	175 ° C
Continuous Pdiss (T= 85 ° C) (derate 12.97 mW/° C above 85 ° C)	1.17 W
Thermal Resistance (channel to die bottom)	77 ° C/W
Storage Temperature	-65 to +150 ° C
Operating Temperature	-55 to +85 ° C

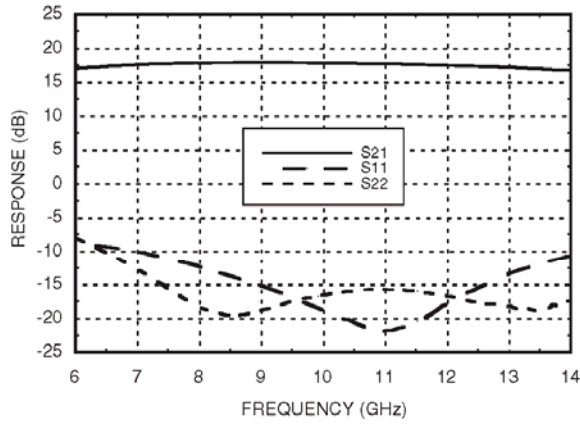
Typical Supply Current vs. Vdd

Vdd (Vdc)	Idd (mA)
+2.5	49
+3.0	51
+3.5	53

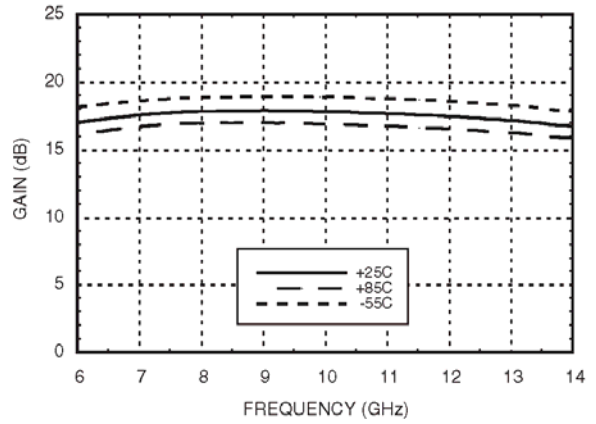




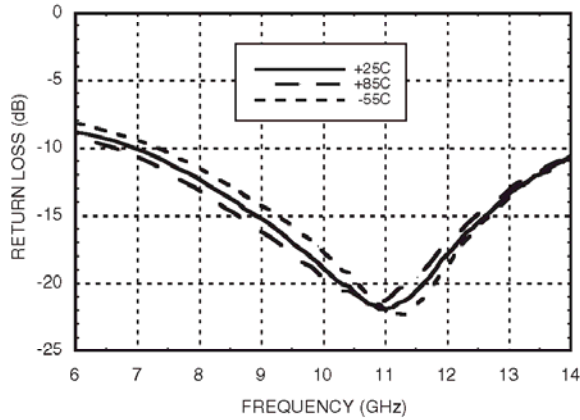
Broadband Gain & Return Loss



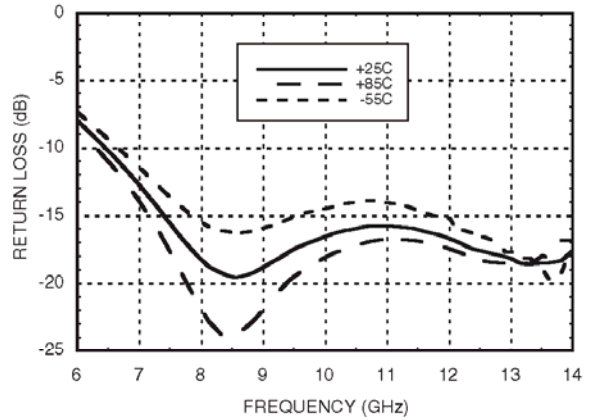
Gain vs. Temperature



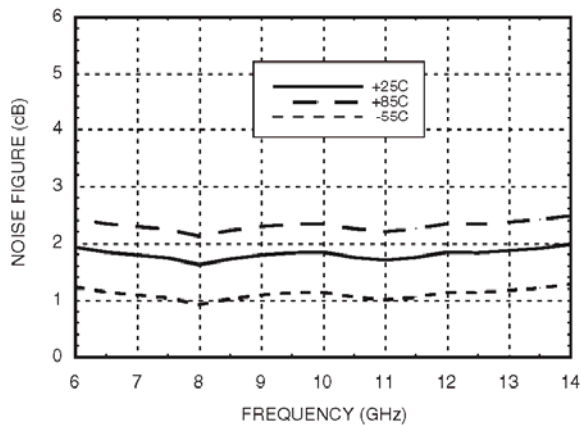
Input Return Loss vs. Temperature



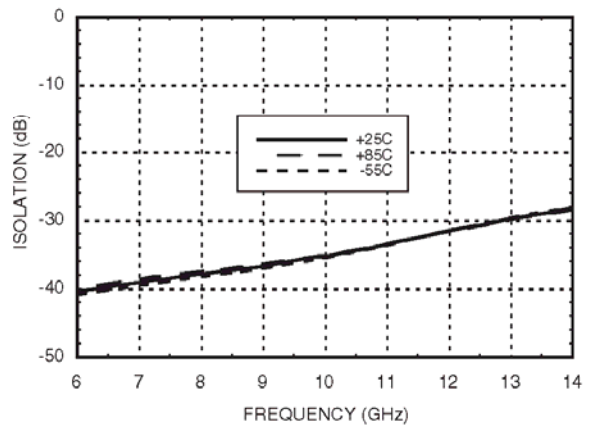
Output Return Loss vs. Temperature



Noise Figure vs. Temperature



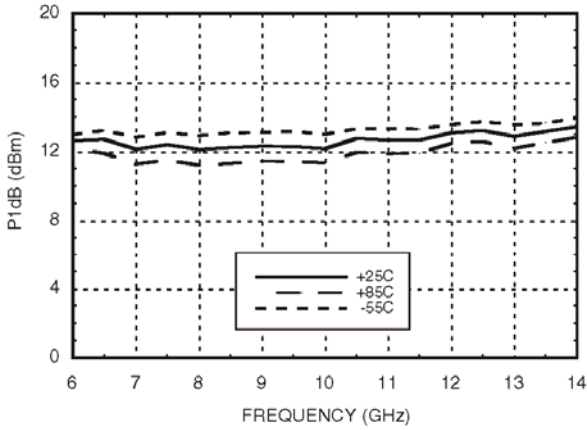
Reverse Isolation vs. Temperature



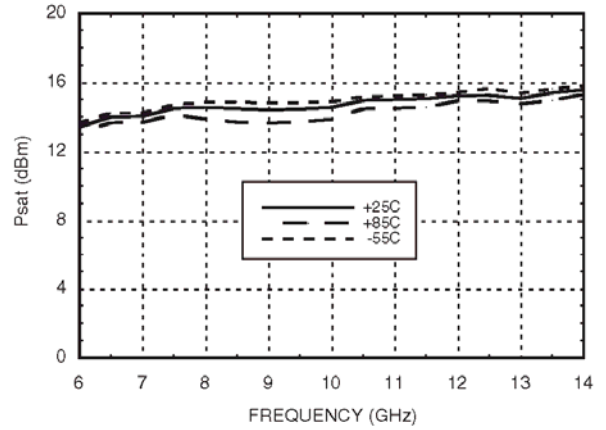
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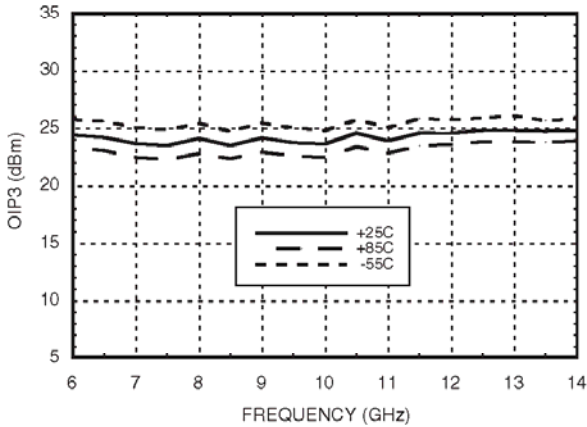
P1dB vs. Temperature



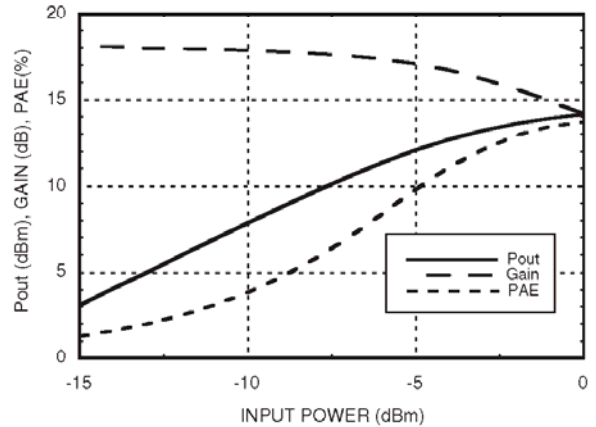
Psat vs. Temperature



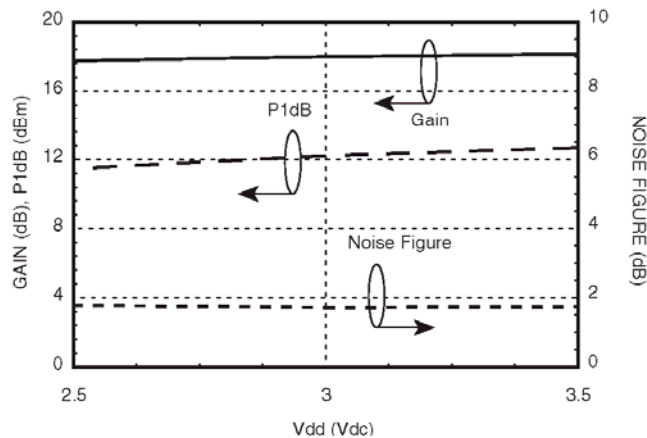
Output IP3 vs. Temperature



Power Compression @ 8 GHz



Gain, Noise Figure & Power vs. Supply Voltage @ 8 GHz

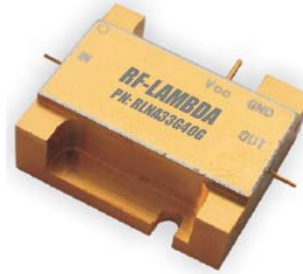
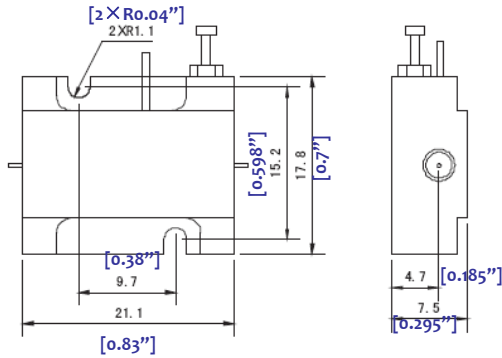




RF-LAMBDA

The power beyond expectations

R07G13GSA



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

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