



RF-LAMBDA

The power beyond expectations

R35M07GSC

Low Noise Amplifier 3.5-7.0GHz NF: 2.5dB



- Point-to-Point Radios
- VSAT
- LO Driver for HMC Mixers
- Military EW, ECM, C³I
- Space
- Gain: 16 dB
- Noise Figure: 2.5 dB
- Single Supply Voltage: +5V
- No External Matching Components Required
- 50 Ohm Matched Input/Output
- RoHS Compliant 4x4 mm SMT Package

Electrical Specifications , $T_A = +25^\circ \text{C}$, $V_{dd} = 5V$

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	4.0 - 6.0			3.5 - 7.0			GHz
Gain	13.5	16		12.5	14.5		dB
Gain Variation Over Temperature		0.018	0.025		0.018	0.025	dB/ $^\circ \text{C}$
Input Return Loss		15			12		dB
Output Return Loss		18			12		dB
Output Power for 1 dB Compression (P1dB)	13	16		12	16		dBm
Saturated Output Power (Psat)		20			20		dBm
Output Third Order Intercept (IP3)	25	30		23	30		dBm
Noise Figure		2.5	3.1		2.9	3.5	dB
Supply Current (Idd)		55	75		55	75	mA

Absolute Maximum Ratings

Drain Bias Voltage (V_{dd})	+7 Vdc
RF Input Power (RFIN)($V_{dd} = +5.0 \text{ Vdc}$)	+11 dBm
Channel Temperature	175 $^\circ \text{C}$
Continuous Pdiss ($T = 85^\circ \text{C}$) (derate 6.5 mW/ $^\circ \text{C}$ above 85 $^\circ \text{C}$)	0.42 W
Thermal Resistance (channel to ground paddle)	155 $^\circ \text{C/W}$
Storage Temperature	-65 to +150 $^\circ \text{C}$
Operating Temperature	-40 to +85 $^\circ \text{C}$

Typical Supply Current vs. V_{dd}

V_{dd} (Vdc)	Idd (mA)
+4.5	54
+5.0	55
+5.5	56



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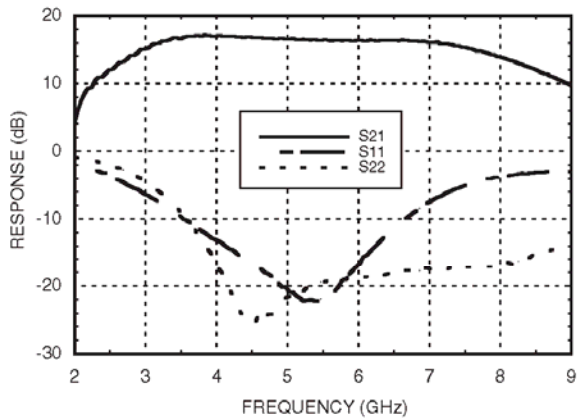
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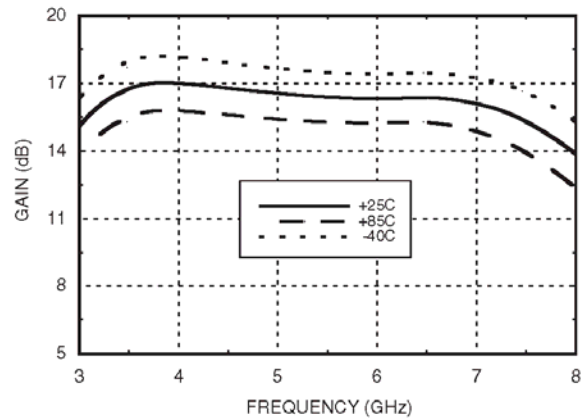
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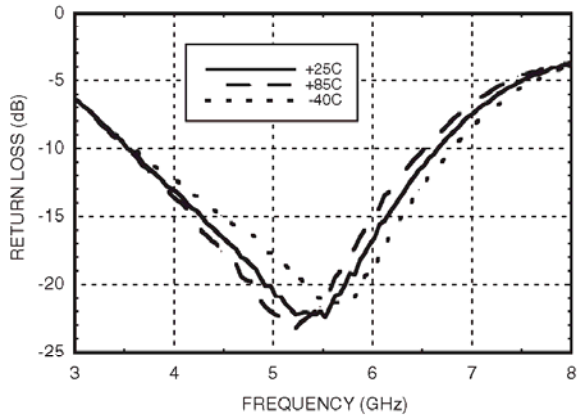
Broadband Gain & Return Loss



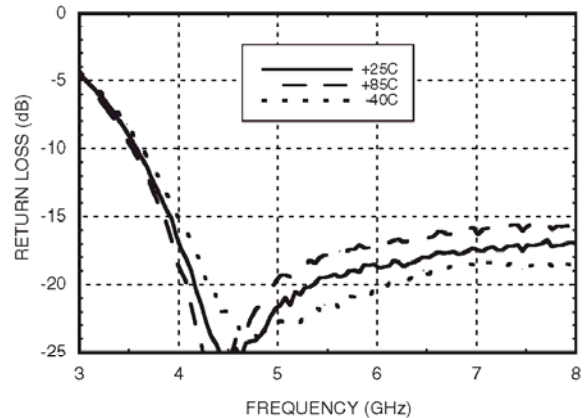
Gain vs. Temperature



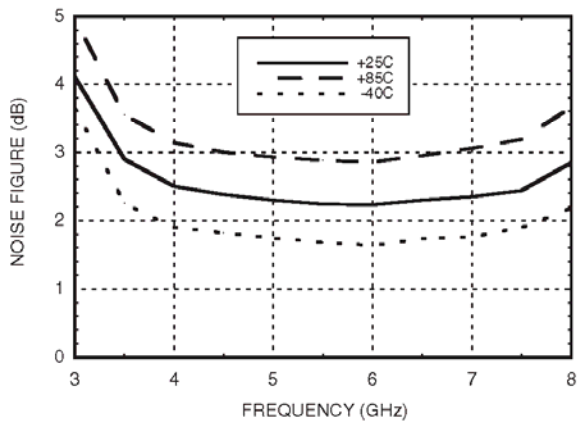
Input Return Loss vs. Temperature



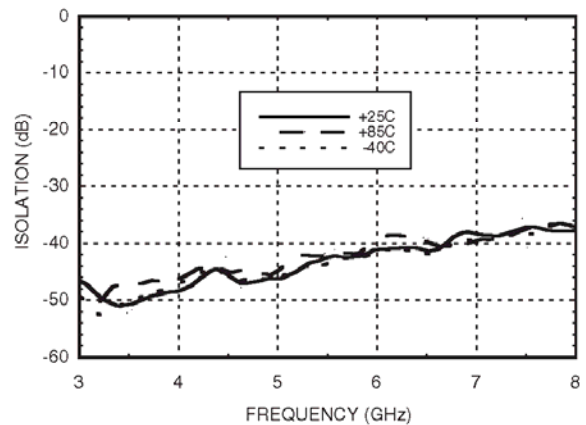
Output Return Loss vs. Temperature



Noise Figure vs. Temperature

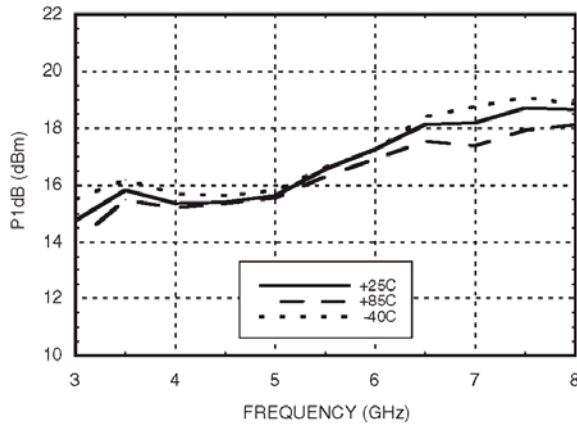


Reverse Isolation vs. Temperature

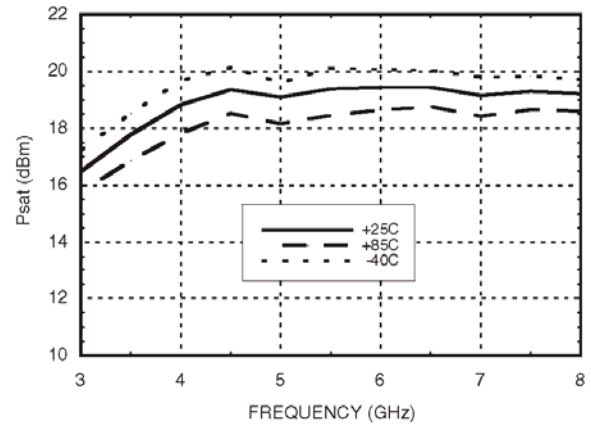




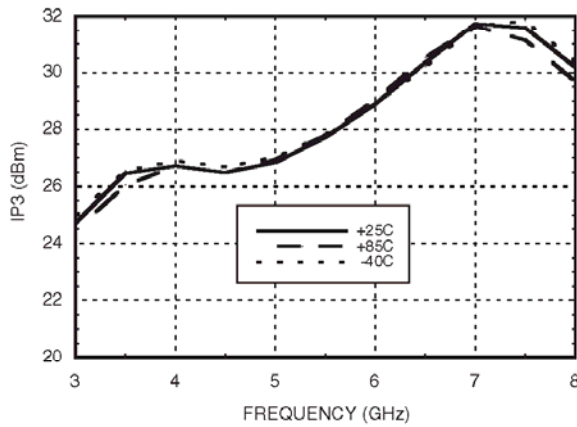
P1dB vs. Temperature



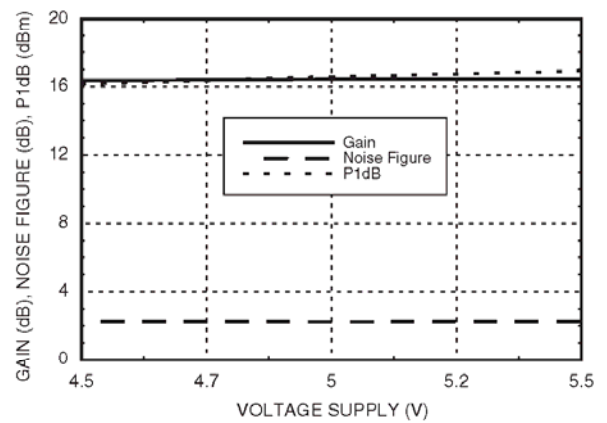
Psat vs. Temperature



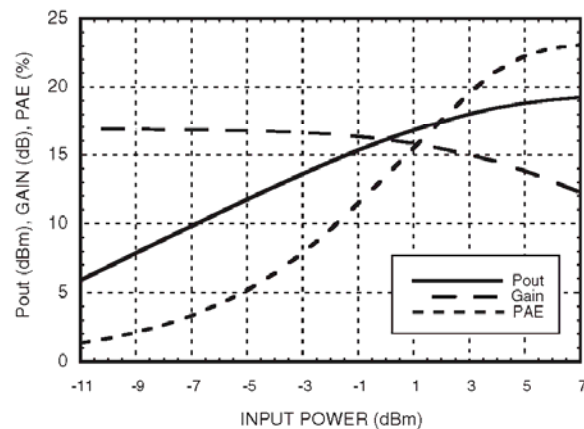
Output IP3 vs. Temperature



Gain, Noise Figure & Power vs. Supply Voltage @ 5.5 GHz



Power Compression @ 5.5 GHz

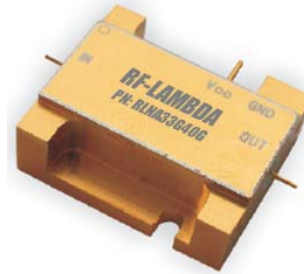
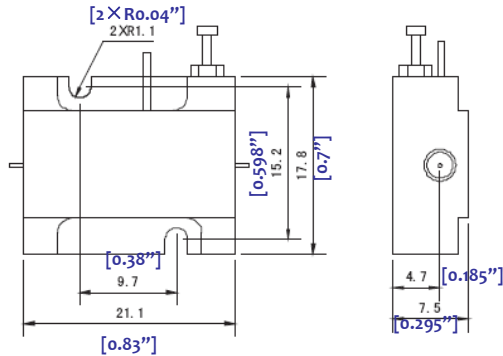




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Heat Sink required during operation. (Heat Sink sold separately)

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