



RF-LAMBDA

The power beyond expectations

R35M07GSB

Low Noise Amplifier 3.5-7.0GHz NF: 2.4dB



- Point-to-Point Radios
- VSAT
- LO Driver for HMC Mixers
- Military EW, ECM, C³I
- Space
- Gain: 15.5 dB
- Noise Figure: 2.4 dB
- Single Supply Voltage: +5V
- 50 Ohm Matched Input/Output
- No External Components Required
- Small Size: 1.3 x 1.0 x 0.1 mm

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	15.5	19	11.5	14	19	dB
Gain Variation Over Temperature		0.018	0.025		0.018	0.025	dB/ $^\circ \text{C}$
Noise Figure		2.4	3.0		2.8	3.4	dB
Input Return Loss		15			10		dB
Output Return Loss		15			10		dB
Output Power for 1 dB Compression (P1dB)	13	16		12	16		dBm
Saturated Output Power (Psat)		18			18		dBm
Output Third Order Intercept (IP3)	25	28		23	28		dBm
Supply Current (Idd)		50	66		50	66	mA

Absolute Maximum Ratings

Drain Bias Voltage (V_{dd})	7 Vdc
RF Input Power (RFIN)($V_{dd} = +5 \text{ Vdc}$)	+11 dBm
Channel Temperature	175 $^\circ \text{C}$
Continuous Pdiss ($T = 85^\circ \text{C}$) (derate 7.1 mW/ $^\circ \text{C}$ above 85 $^\circ \text{C}$)	0.64 W
Thermal Resistance (channel to die bottom)	140 $^\circ \text{C/W}$
Storage Temperature	-65 to +150 $^\circ \text{C}$
Operating Temperature	-55 to +85 $^\circ \text{C}$

Typical Supply Current vs. V_{dd}

V_{dd} (Vdc)	Idd (mA)
+4.5	49
+5.0	50
+5.5	51
(State 5 Depicted)	



ATTENTION
STATIC SENSITIVE DEVICES
HANDLE ONLY AT
STATIC SAFE WORK STATIONS

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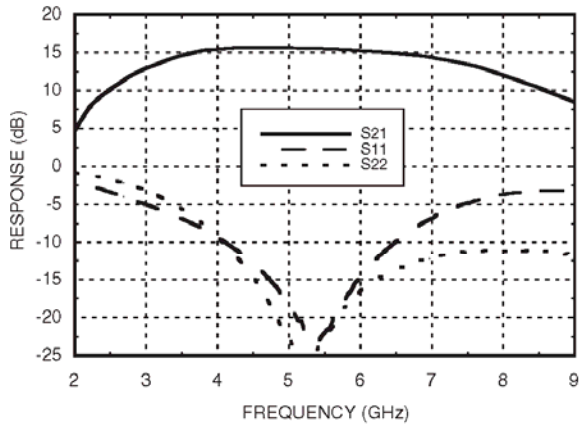
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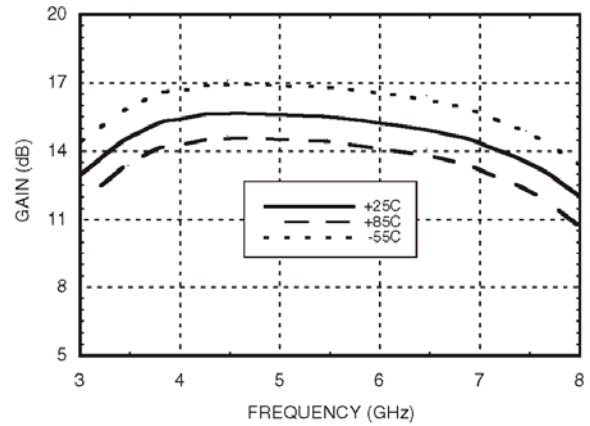
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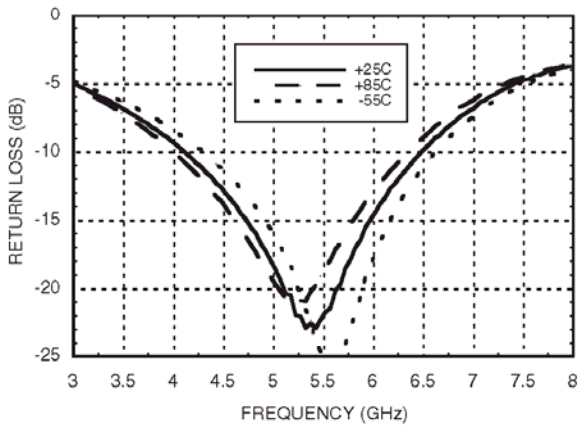
Broadband Gain & Return Loss



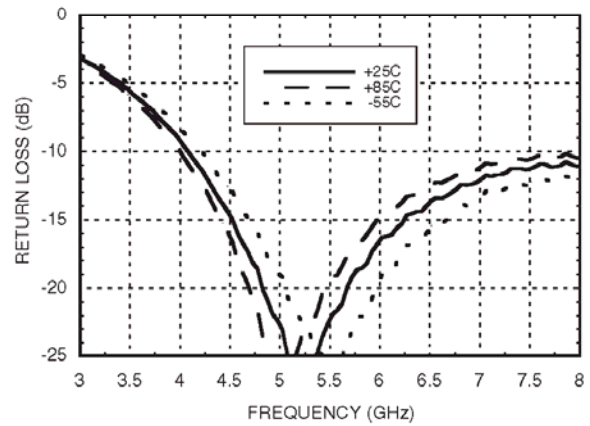
Gain vs. Temperature



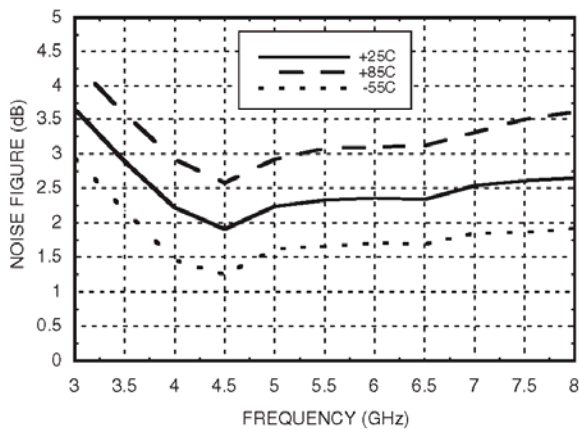
Input Return Loss vs. Temperature



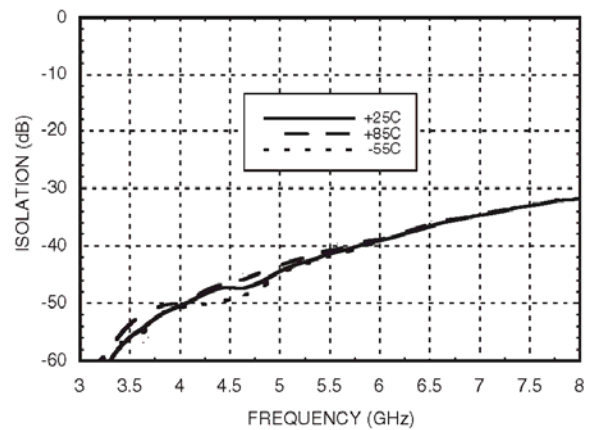
Output Return Loss vs. Temperature



Noise Figure vs. Temperature



Reverse Isolation vs. Temperature



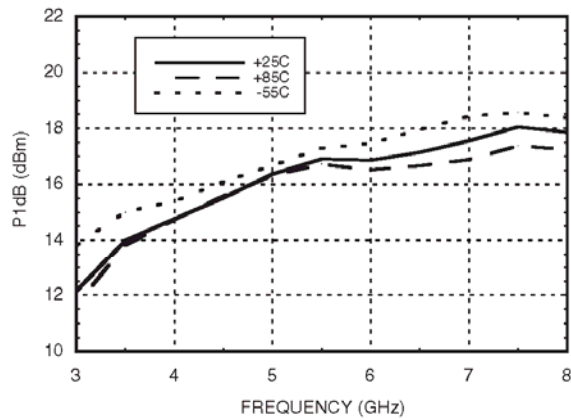


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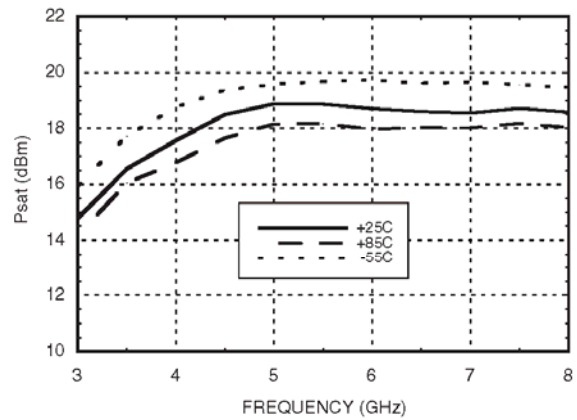
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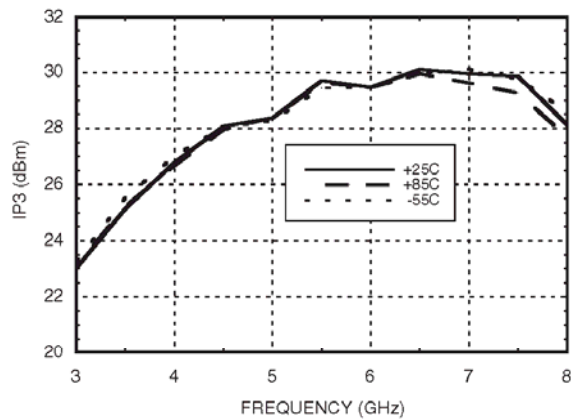
P1dB vs. Temperature



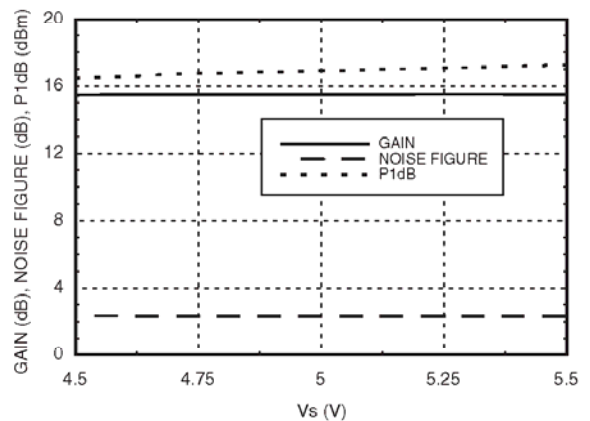
Psat vs. Temperature



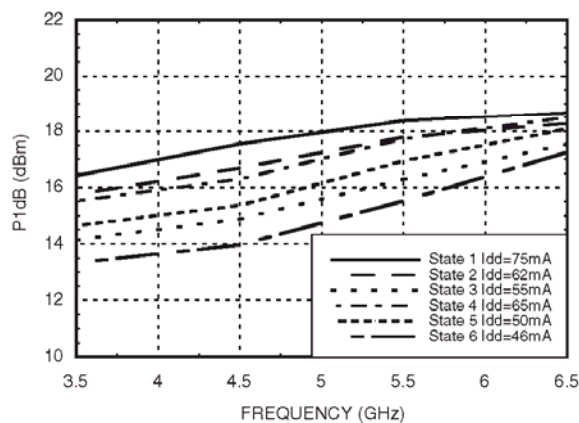
Output IP3 vs. Temperature



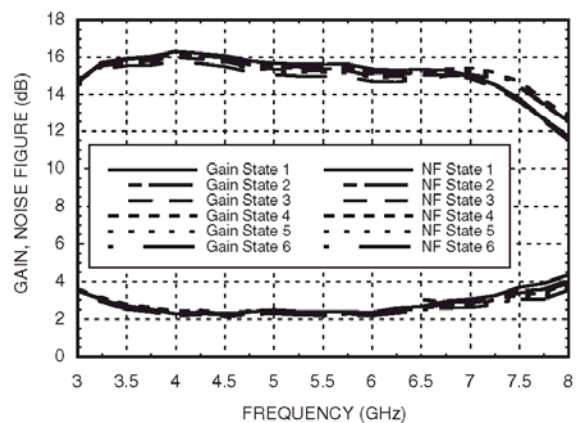
Gain, Noise Figure & Power vs. Supply Voltage @ 5.5 GHz



P1dB vs. Power Select State



Gain & Noise Figure vs. Power Select State



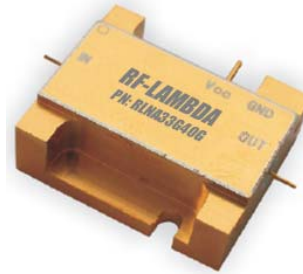
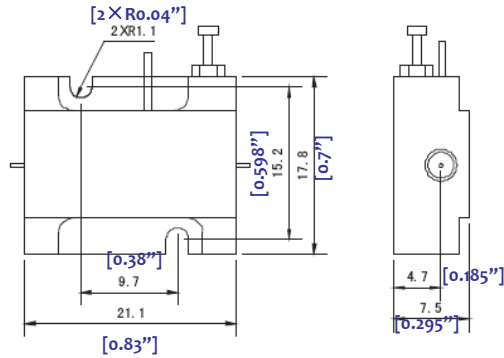
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Heat Sink required during operation. (Heat Sink sold separately)

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