Low Noise Amplifier 24-36GHz NF: 2.2dB

- Millimeterwave Point-to-Point Radios
- LMDS
- VSAT
- SATCOM
- Low Noise Figure: 2.2 dB
- High Gain: 20 dB
- Single Positive Supply: +3V or +5V
- DC Blocked RF I /O s
- No External Matching
- 24 Lead 4x4mm QFN Package: 16mm²

Electrical Specifications, TA = +25° C, Vdd = +3V

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range		24 - 27			27 - 32			32 - 36		GHz
Gain	19	21	27	17	19	23	15	17	20	dB
Gain Variation Over Temperature		0.03			0.03			0.03		dB/° C
Noise Figure		2.0	3.0		2.2	3.0		2.5	4.0	dB
Input Return Loss		12			9			11		dB
Output Return Loss		10			9			9		dB
Output Power for 1 dB Compression (P1dB)		6			8			9		dBm
Saturated Output Power (Psat)		9			11			12		dBm
Output Third Order Intercept (IP3)		16			18			20		dBm
Supply Current (Idd) (@ Vdd = +3.0V)		58	77		58	77		58	77	mA

Absolute Maximum Ratings

Drain Bias Voltage (Vdd1, Vdd2)	+5.5 Vdc
RF Input Power (RFIN)(Vdd = +3 Vdc)	-5 dBm
Channel Temperature	175 ° C
Continuous Pdiss (T = 85 ° C) (derate 7.7 mW/° C above 85 ° C)	0.7 W
Thermal Resistance (channel to ground paddle)	130 ° C/W
Storage Temperature	-65 to +150 ° C
Operating Temperature	-40 to +85 ° C

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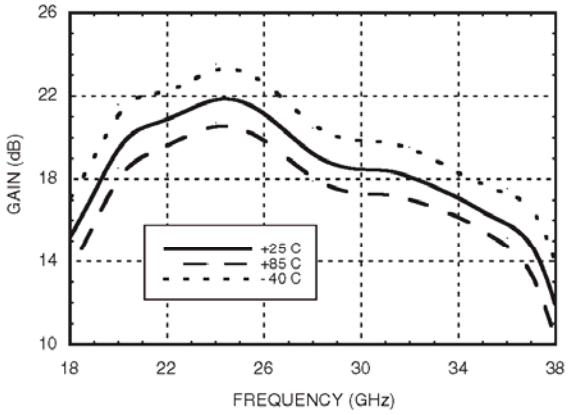
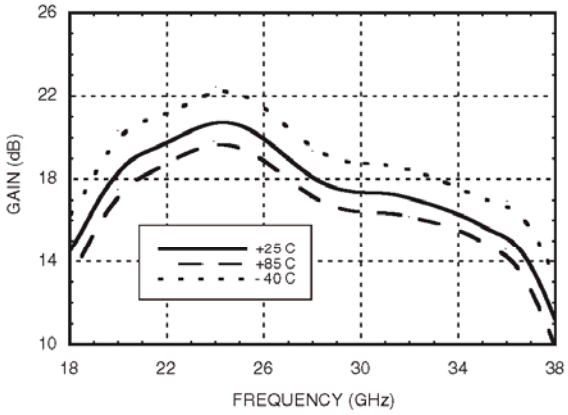
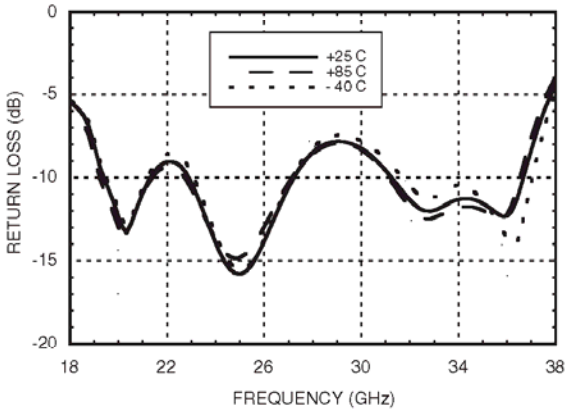
Gain vs. Temperature @ Vdd = +3V



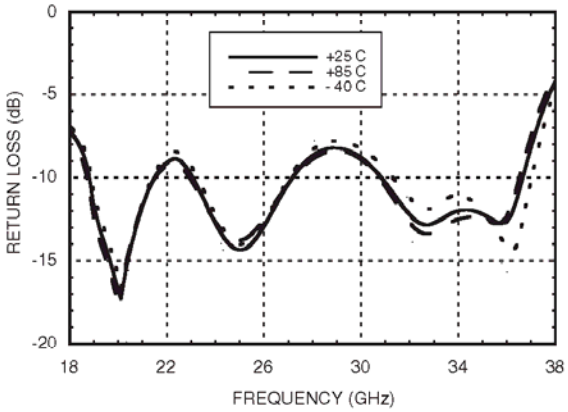
Gain vs. Temperature @ Vdd = +5V



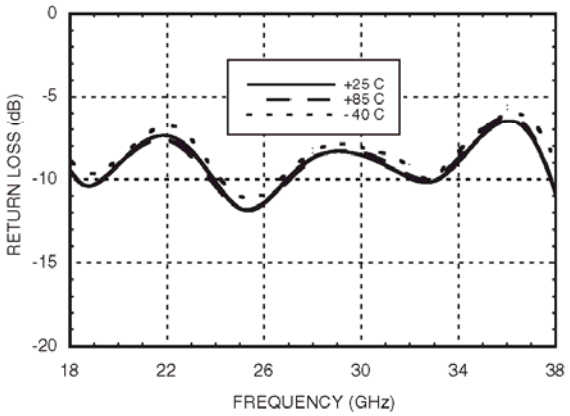
Input Return Loss @ Vdd = +3V



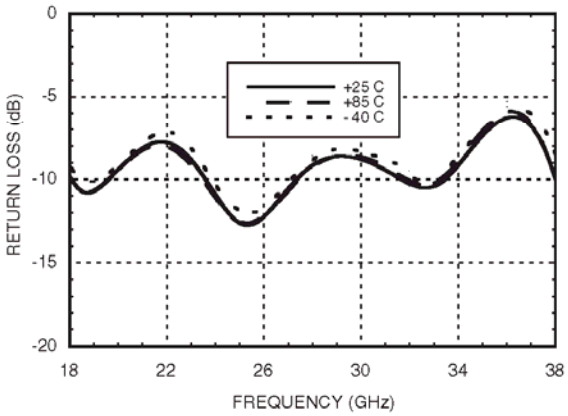
Input Return Loss @ Vdd = +5V



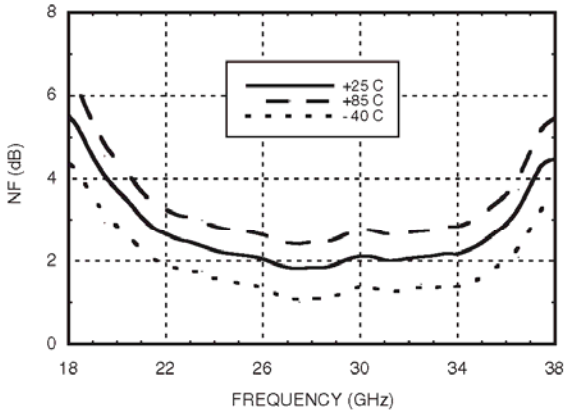
Output Return Loss @ Vdd = +3V



Output Return Loss @ Vdd = +5V



Noise Figure vs. Temperature @ Vdd = +3V



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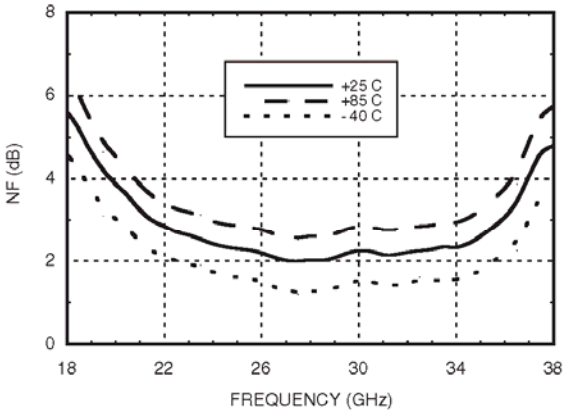
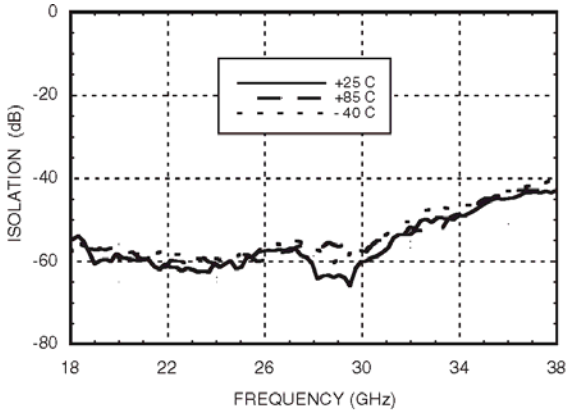
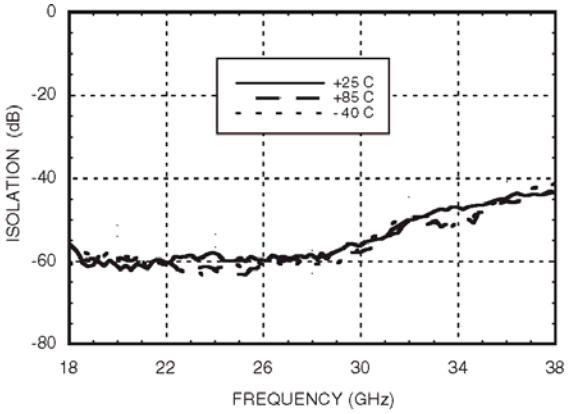


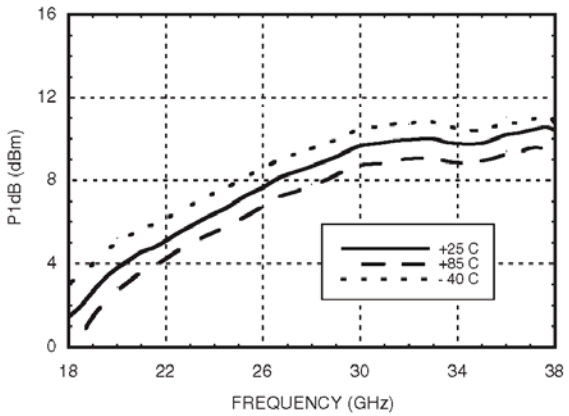
Isolation @ Vdd = +3V



Isolation @ Vdd = +5V



Output P1dB @ Vdd = +3V



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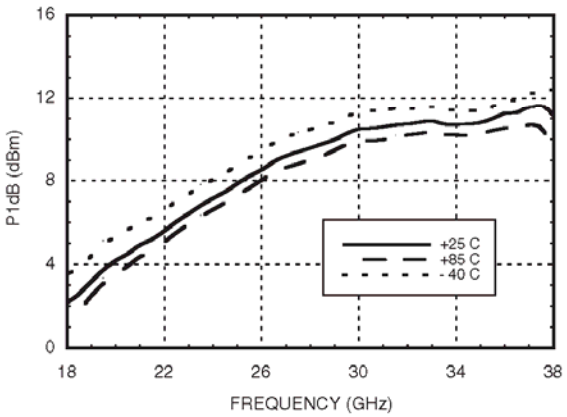

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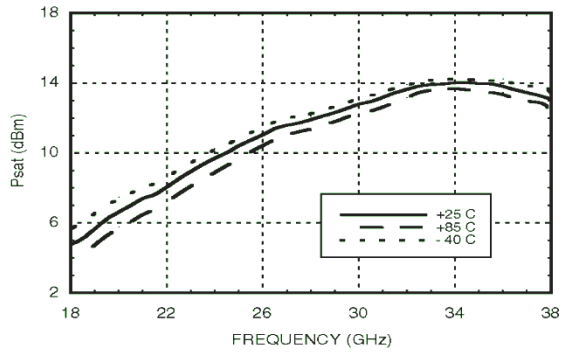
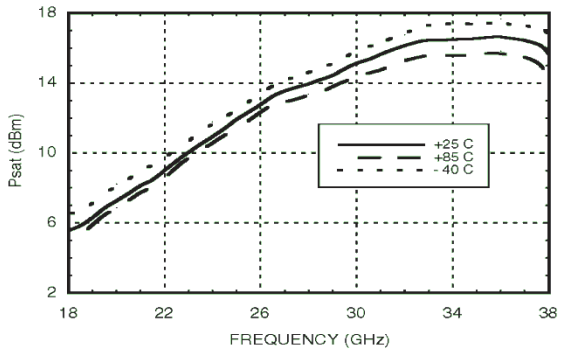
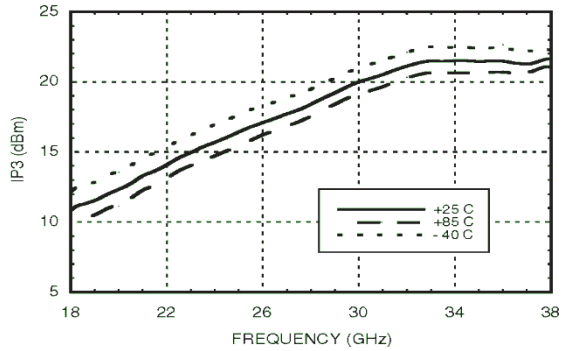
Psat @ Vdd = +3V



Psat @ Vdd = +5V



Output IP3 @ Vdd = +3V



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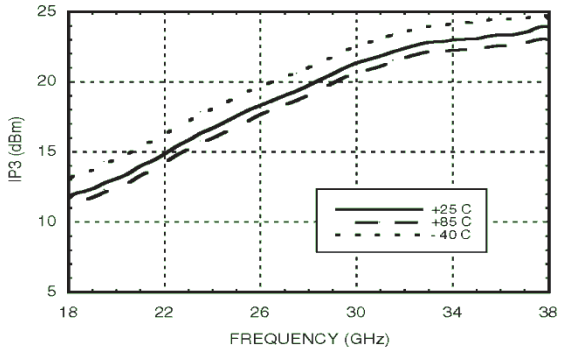

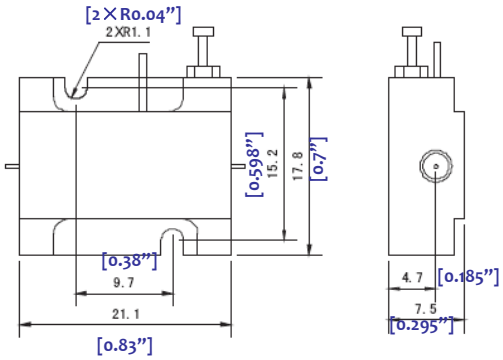

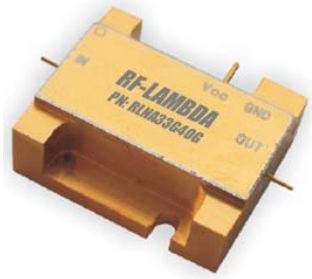

RoHS Compliant

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

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