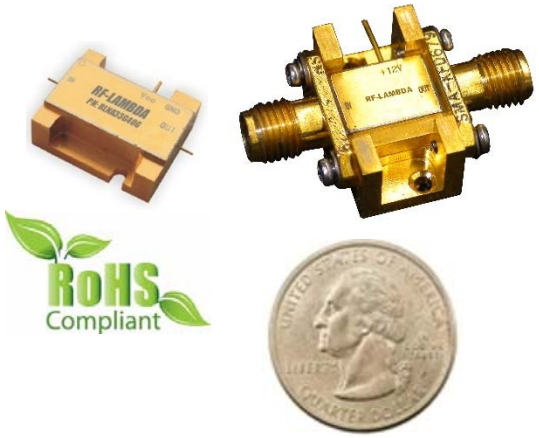
Low Noise Amplifier 1.2-3.0GHz NF: 1.3dB



- Automotive Telematics
- GPS Antenna Modules / Boosters
- Location Based Portables
- Satellite Navigation
- Single Supply: Vcc = +3 to +5V
- Low Noise Figure: 1.3 dB
- High Output IP 3: +21 dBm
- No External Matching Required
- External Filter Access
- 3x3 mm Leadless SM T Package

*Electrical Specifications, TA = +25 ° C**

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	1575						MHz
Vcc	+3			+5			V
Gain	20	23		23	26		dB
Gain Variation Over Temperature		0.04	0.05		0.04	0.05	dB/° C
Noise Figure		1.6	1.9		1.3	1.6	dB
Input Return Loss		8			8		dB
Output Return Loss		14			16		dB
Output 1 dB Compression (P1dB)		8			11		dBm
Saturated Output Power (Psat)		10.5			12		dBm
Output Third Order Intercept (IP3)		13			21		dBm
Supply Current (Icc)		10	15		21	30	mA

Absolute Maximum Ratings

Drain Bias Voltage (Vcc)	+7.0 Vdc
RF Input Power (RFIN)	-5 dBm
Junction Temperature	150 °C
Continuous Pdiss (T = 85 °C) (derate 14 mW/°C above 85 °C)	0.942 W
Thermal Resistance (junction to ground paddle)	69 °C/W
Storage Temperature	-65 to +150 °C
Operating Temperature	-40 to +85 °C
ESD Sensitivity (HBM)	Class 1B

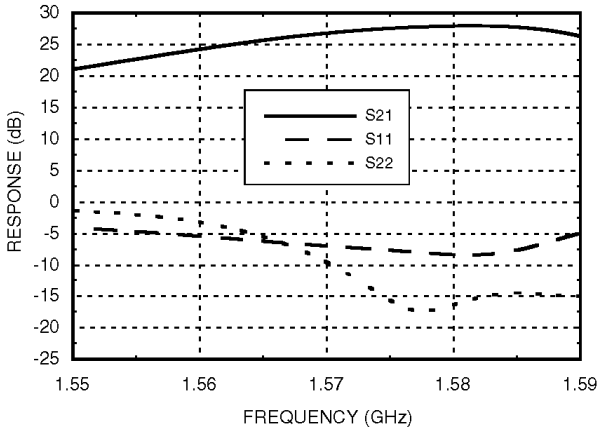
Typical Supply Current vs. Vcc

Vcc (Vdc)	Icc (mA)
3.0	10
4.5	17
5.0	21
5.5	24

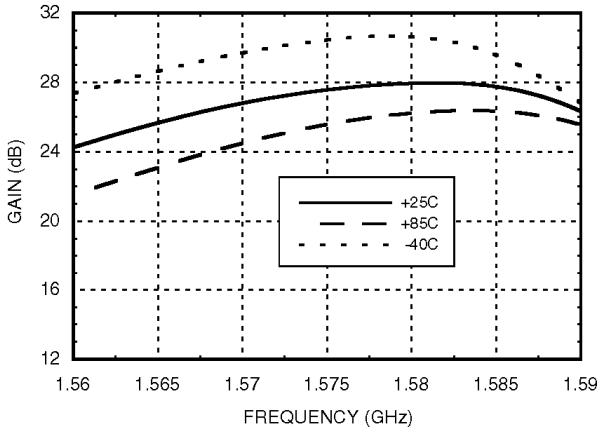
Low Noise Amplifier 1.2-3.0GHz NF: 1.3dB

Low Noise Amplifier 1.2-3.0GHz NF: 1.3dB

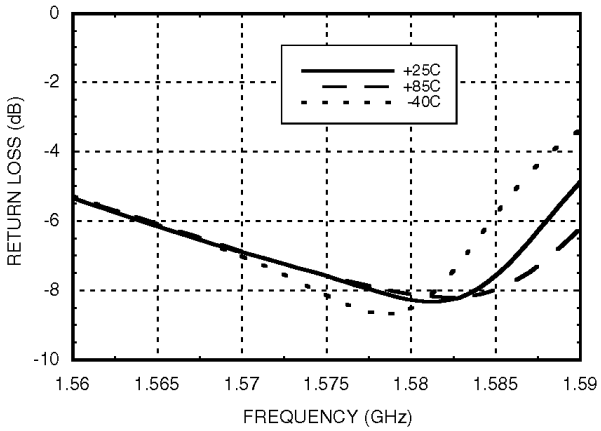
Gain & Return Loss [1]



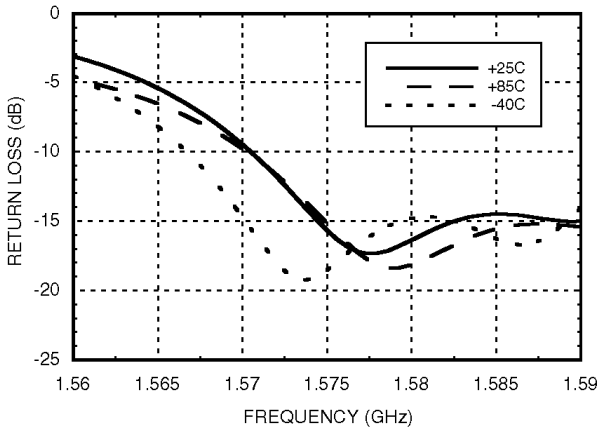
Gain vs. Temperature [1]



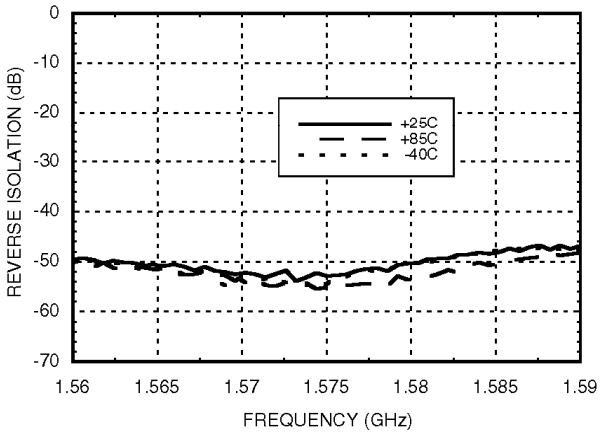
Input Return Loss vs. Temperature [1]



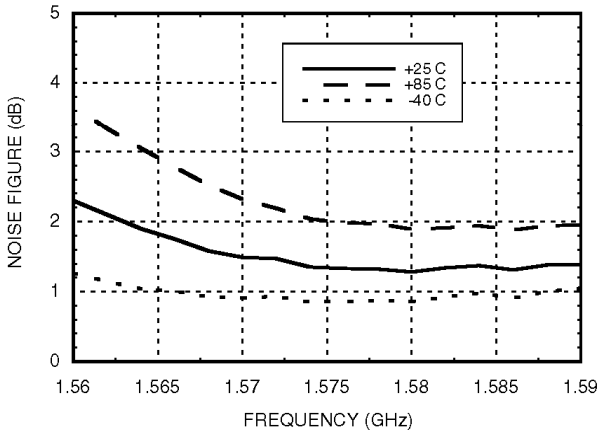
Output Return Loss vs. Temperature [1]



Reverse Isolation vs. Temperature [1]

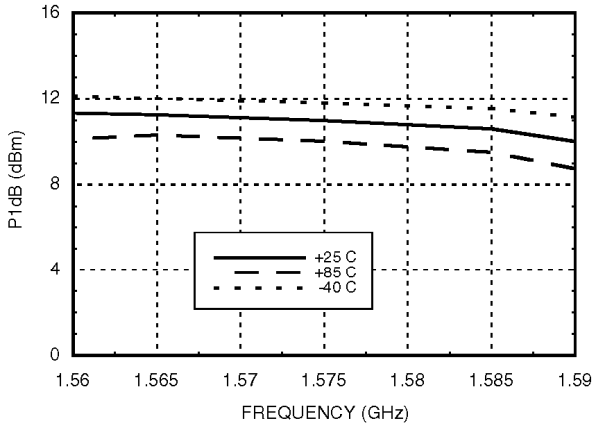


Noise Figure vs. Temperature [1]

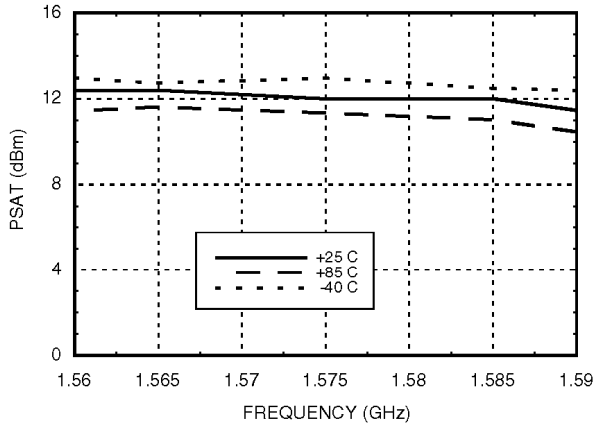


Low Noise Amplifier 1.2-3.0GHz NF: 1.3dB

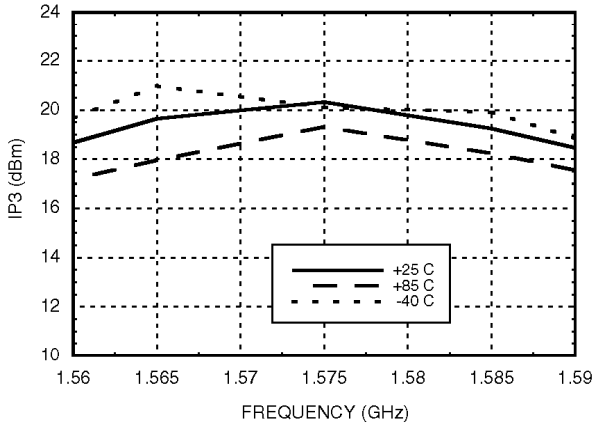
P1dB vs. Temperature [1]



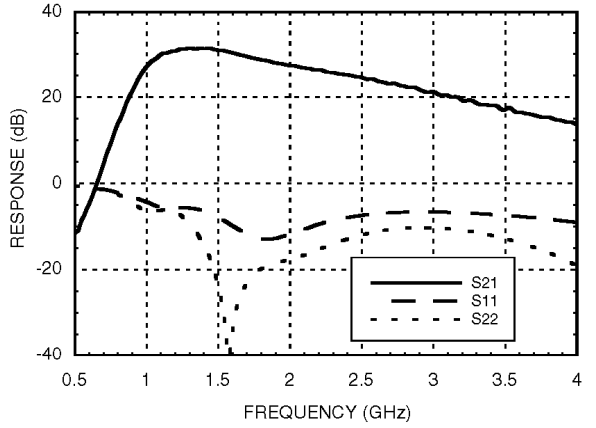
Psat vs. Temperature [1]



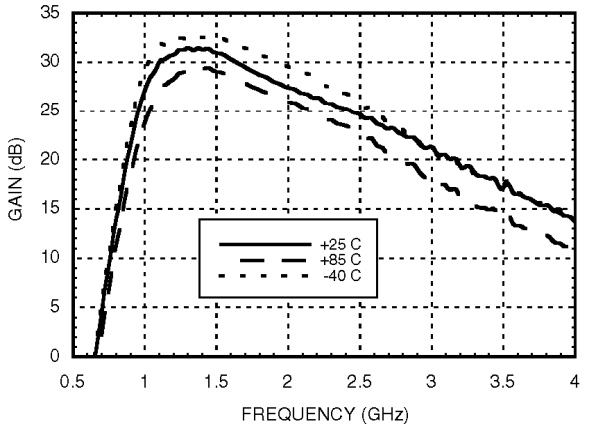
Output IP3 vs. Temperature [1]



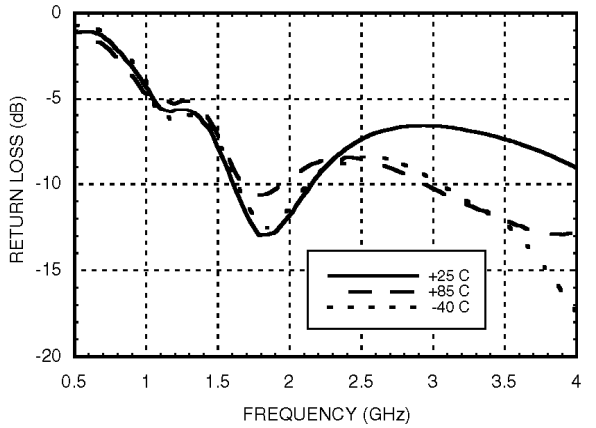
Broadband Gain & Return Loss [2]



Gain vs. Temperature [2]

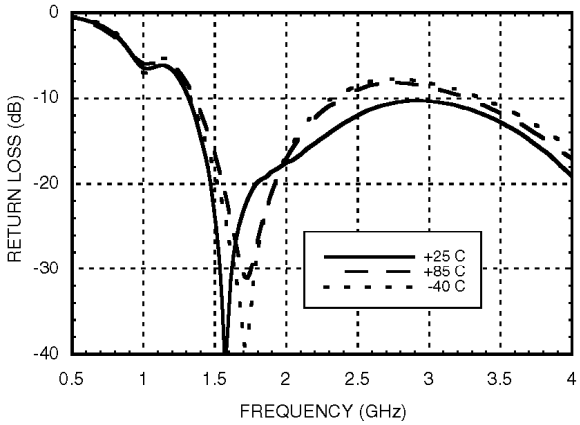


Input Return Loss vs. Temperature [2]

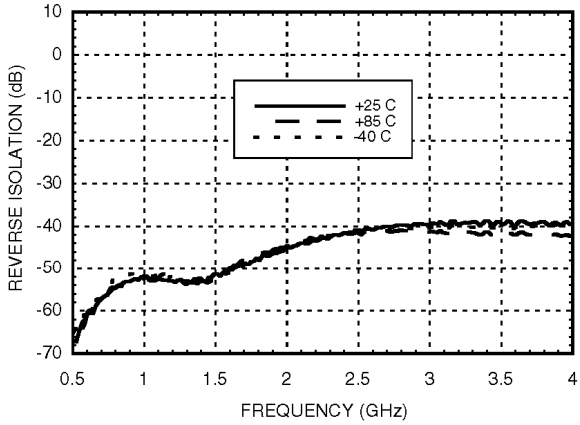


Low Noise Amplifier 1.2-3.0GHz NF: 1.3dB

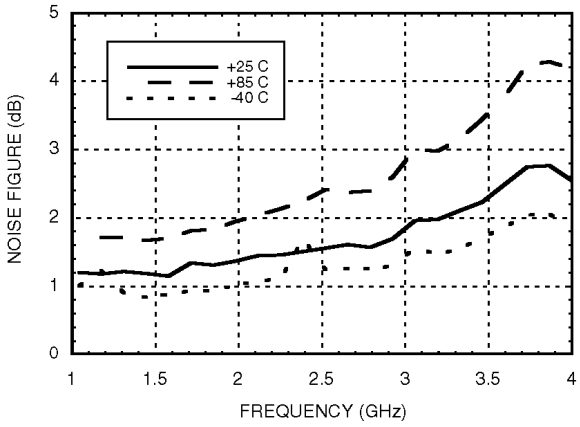
Output Return Loss vs. Temperature [2]



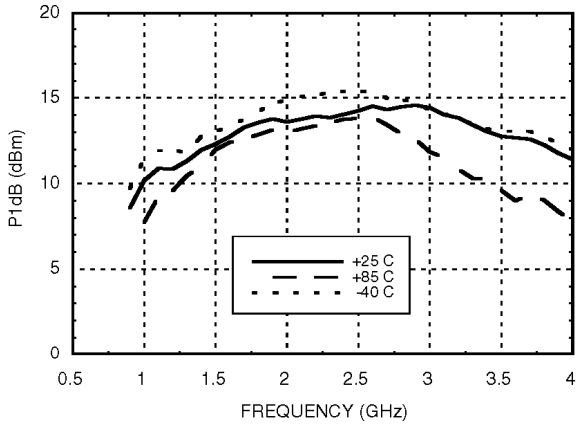
Reverse Isolation vs. Temperature [2]



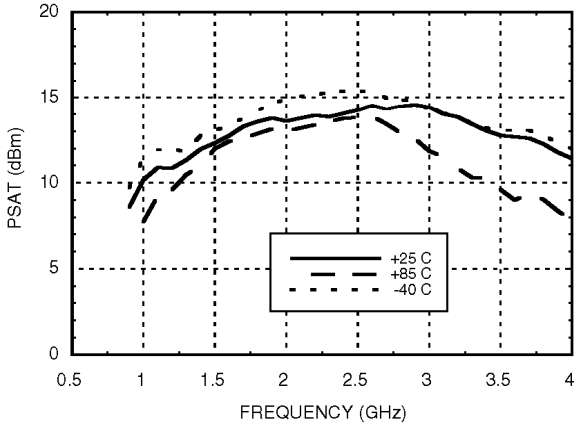
Noise Figure vs. Temperature [2]



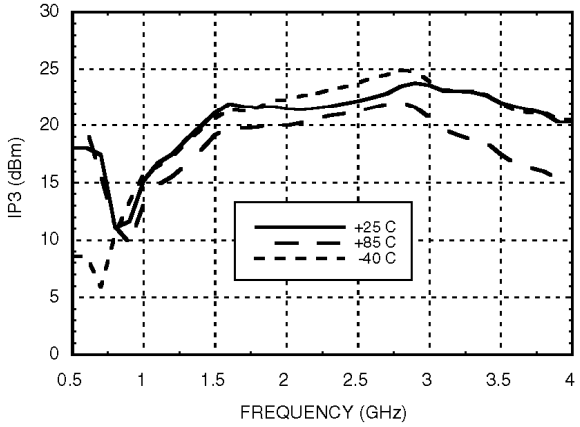
P1dB vs. Temperature [2]



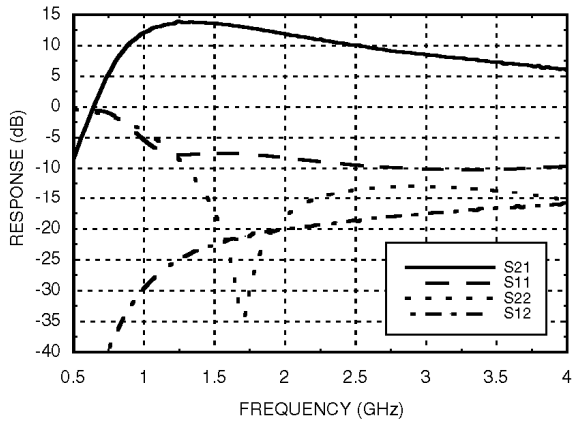
Psat vs. Temperature [2]



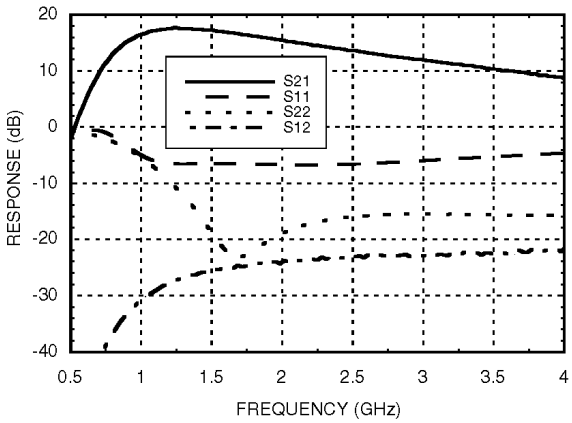
Output IP3 vs. Temperature [2]



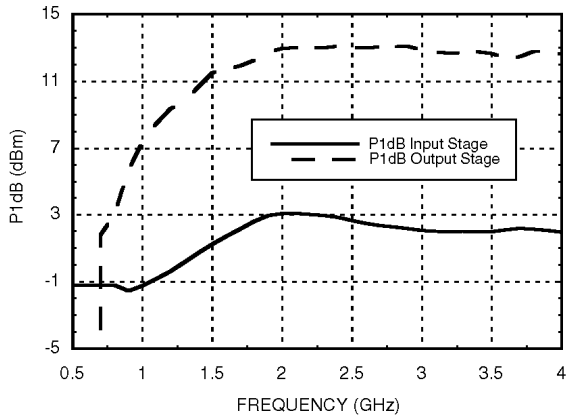
Small Signal Parameters Input Stage [3]



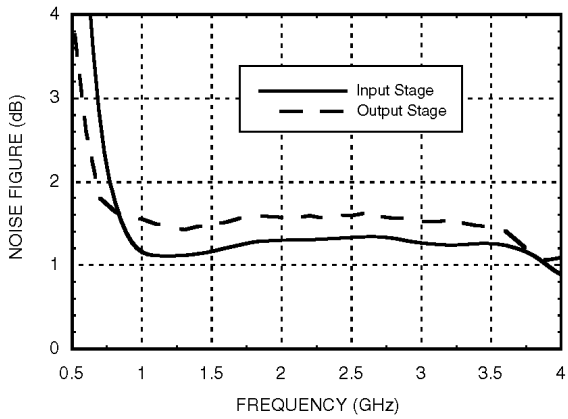
Small Signal Parameters Output Stage [3]



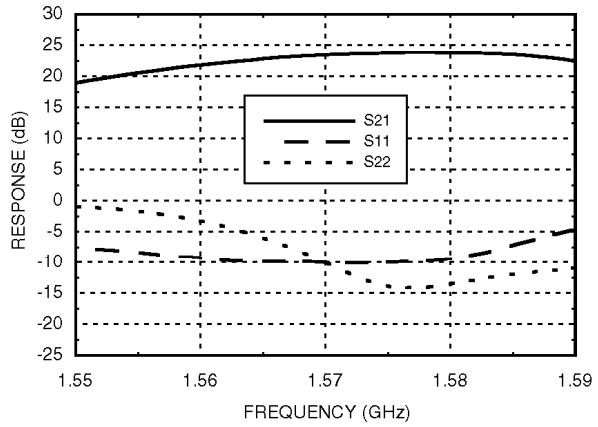
P1dB Individual Stages [3]



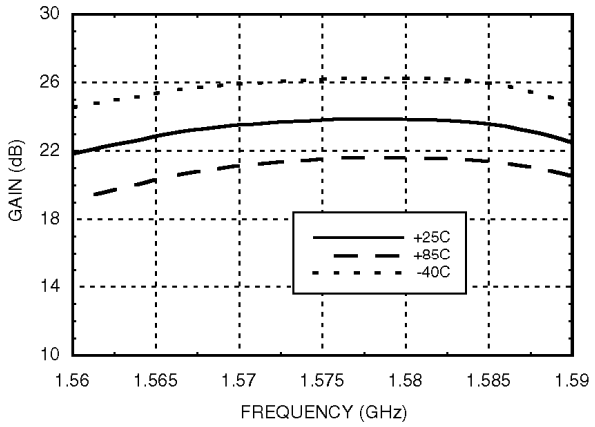
Noise Figure Individual Stages [3]



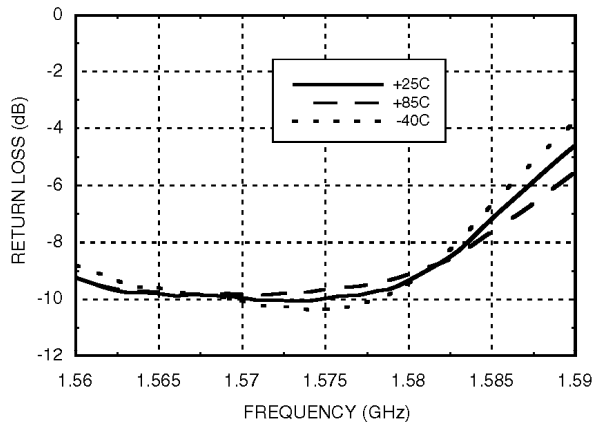
Gain & Return Loss [4]



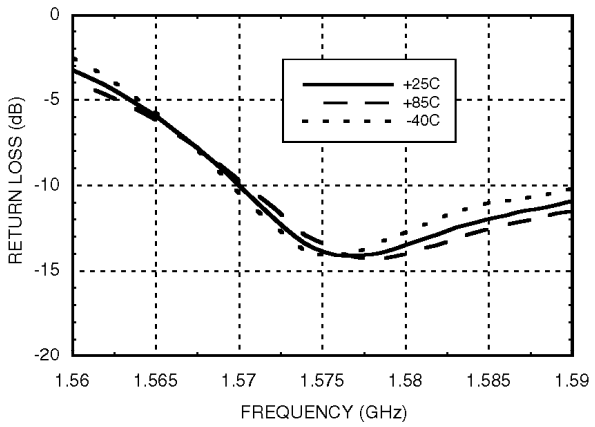
Gain vs. Temperature [4]



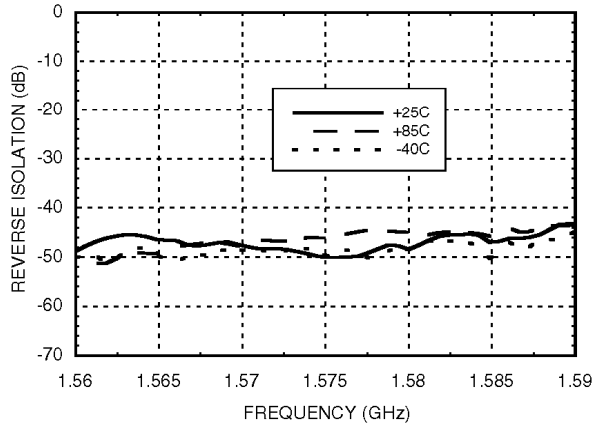
Input Return Loss vs. Temperature [4]



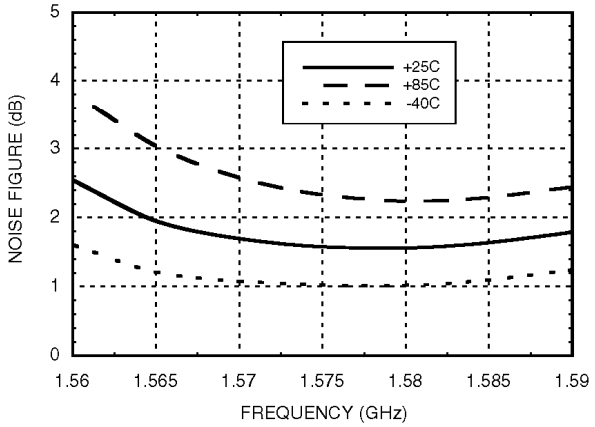
Output Return Loss vs. Temperature [4]



Reverse Isolation vs. Temperature [4]

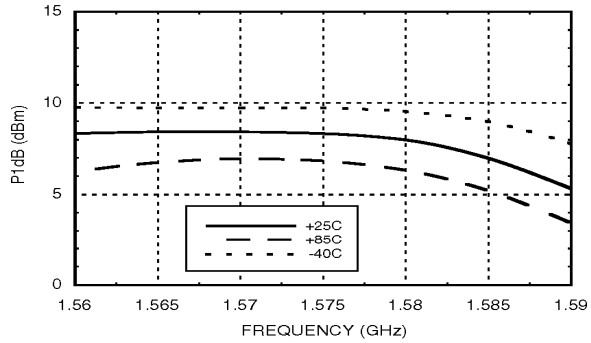


Noise Figure vs. Temperature [4]

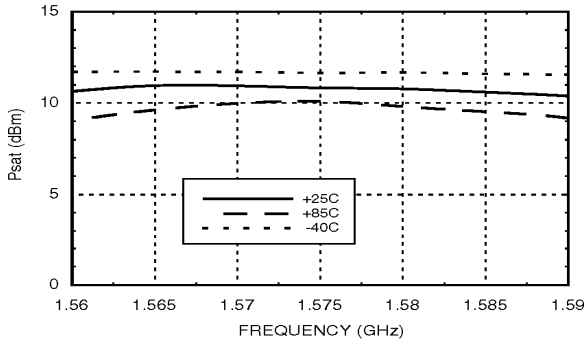


Low Noise Amplifier 1.2-3.0GHz NF: 1.3dB

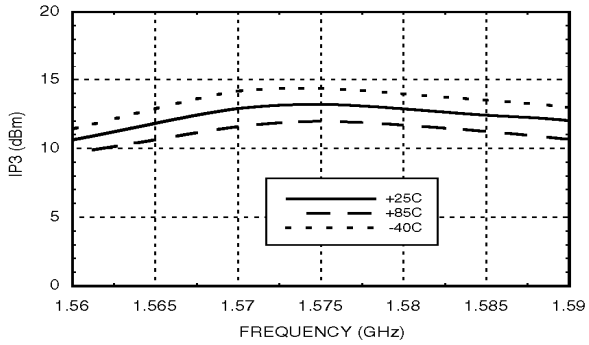
P1dB vs. Temperature [4]

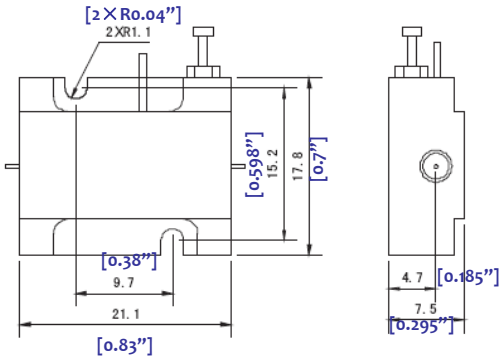


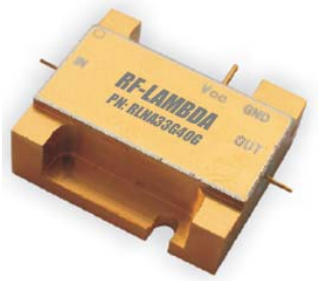
Psat vs. Temperature [4]



Output IP3 vs. Temperature [4]







RoHS Compliant

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

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