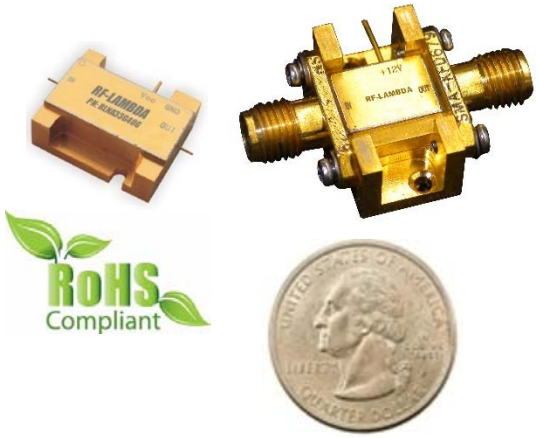
Low Noise Amplifier 3.3-3.8GMHz NF: 1.2dB



- Cellular/PCS/3G
- WCS, MMDS & ISM
- Fixed Wireless & WLAN
- Private Land Mobile Radio
- Single Supply: Vdd = +2.75 to +5.5V
- Low Noise Figure: 1.5 dB
- High Output IP3: +37 dBm
- No External Matching Required

Electrical Specifi cations, TA = +25 ° C

Parameter	Vdd = +3V						Vdd = +5V						Units
	LNA Mode			Bypass Mode			LNA Mode			Bypass Mode			
	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Frequency Range	3.3 - 3.8												GHz
Gain	14	17		-3	-2		16	19		-3	-2		dB
Gain Variation Over Temperature		0.011			0.002			0.011			0.002		dB / ° C
Noise Figure		1.4	1.8					1.2	1.6				dB
Input Return Loss		23			30			23			30		dB
Output Return Loss		12			25			13			25		dB
Reverse Isolation		39						36					dB
Power for 1dB Compression (P1dB)*	10	13			30		13	16			30		dBm
Saturated Output Power (Psat)		13.5						17					dBm
Third Order Intercept (IP3)* (-20 dBm Input Power per tone, 1 MHz tone spacing)		22						29					dBm
Supply Current (Idd)		20	25		0.01			40	50		0.01		mA
Switching Speed — LNA Mode to Bypass Mode		428						428					ns
Switching Speed — Bypass Mode to LNA Mode					343						343		ns

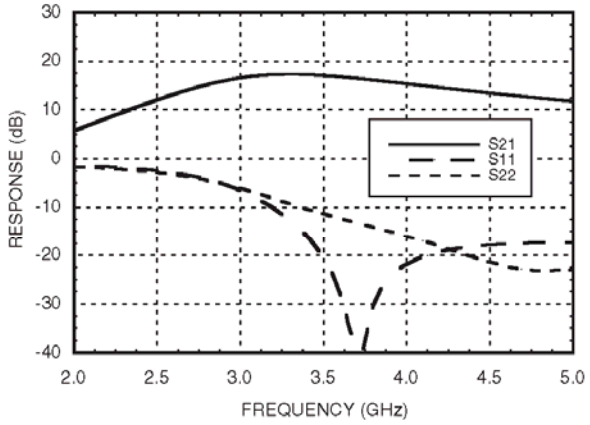
Absolute Maximum Ratings

Drain Bias Voltage (Vdd)	+8 V
RF Input Power (RFIN) (Vdd = +5.0 Vdc)	LNA Mode +15 dBm Bypass Mode +30 dBm
Channel Temperature	150 ° C
Continuous Pdiss (T = 85 ° C) (derate 13 mW/° C above 85 ° C)	850 mW
Thermal Resistance (channel to ground paddle)	76.9 ° C/W
Storage Temperature	-65 to +150° C
Operating Temperature	-40 to +85° C
ESD Sensitivity (HBM)	Class 1A

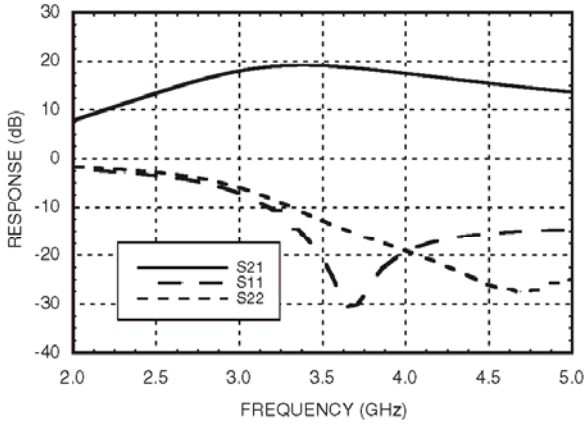
Low Noise Amplifier 3.3-3.8GHz NF: 1.2dB

Low Noise Amplifier 3.3-3.8GHz NF: 1.2dB

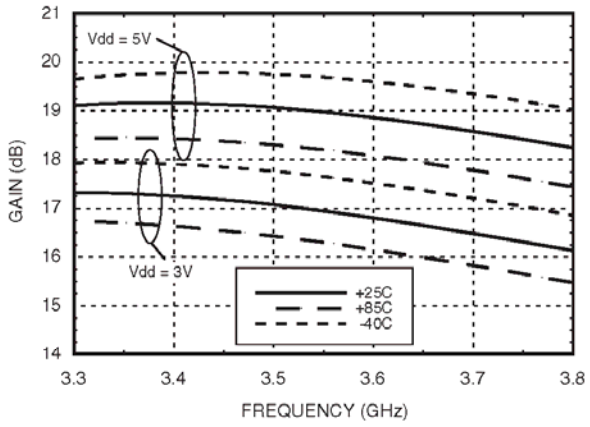
LNA Broadband Gain & Return Loss @ Vdd= 3V



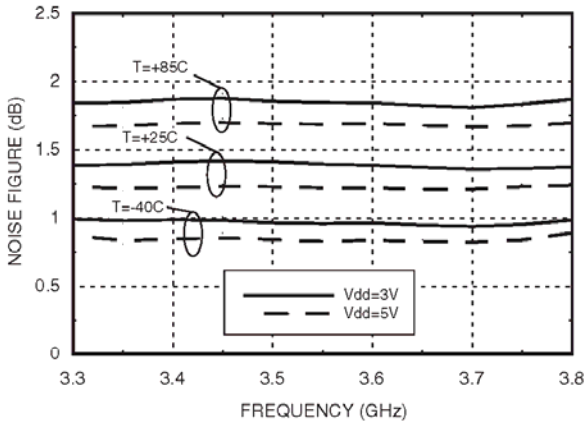
LNA Broadband Gain & Return Loss @ Vdd= 5V



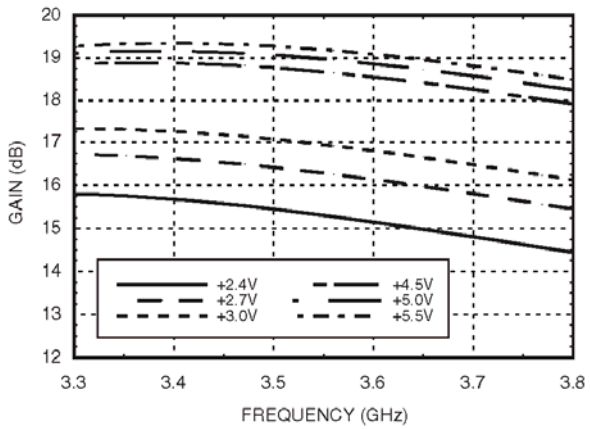
LNA Gain vs. Temperature



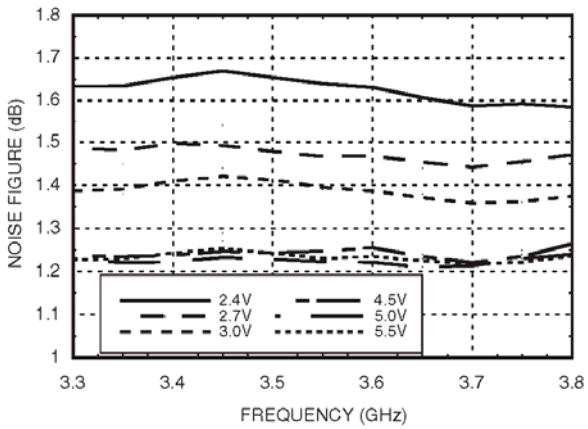
LNA Noise Figure vs. Temperature



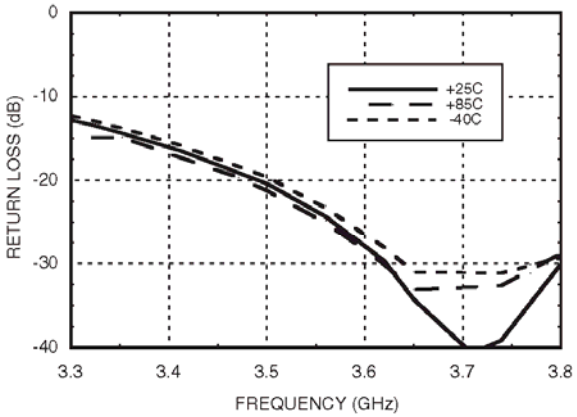
LNA Gain vs. Vdd



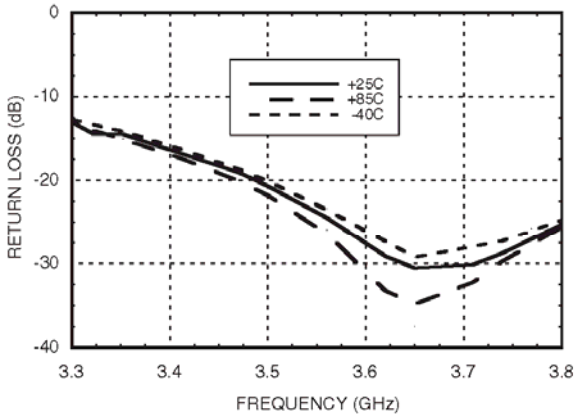
LNA Noise Figure vs. Vdd



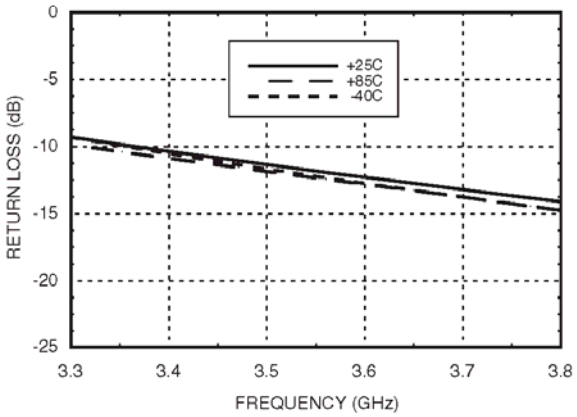
LNA Input Return Loss vs. Temperature @ Vdd= 3V



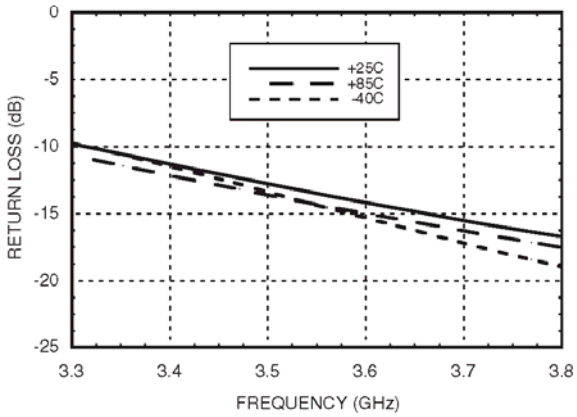
LNA Input Return Loss vs. Temperature @ Vdd= 5V



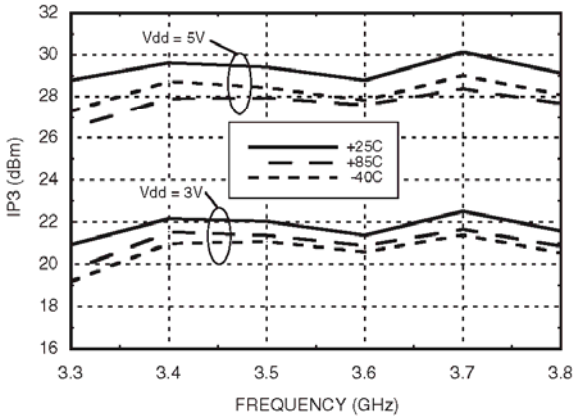
LNA Output Return Loss vs. Temperature @ Vdd= 3V



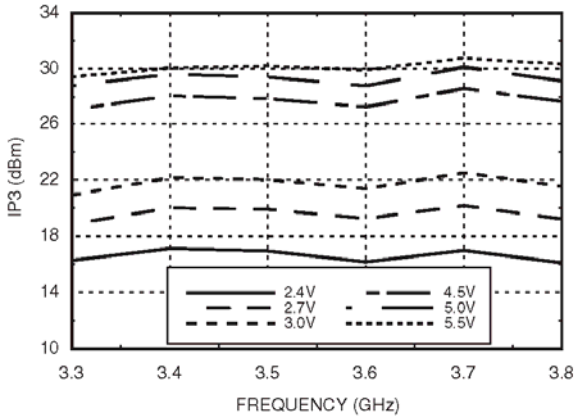
LNA Output Return Loss vs. Temperature @ Vdd= 5V



LNA Output IP3 vs. Temperature

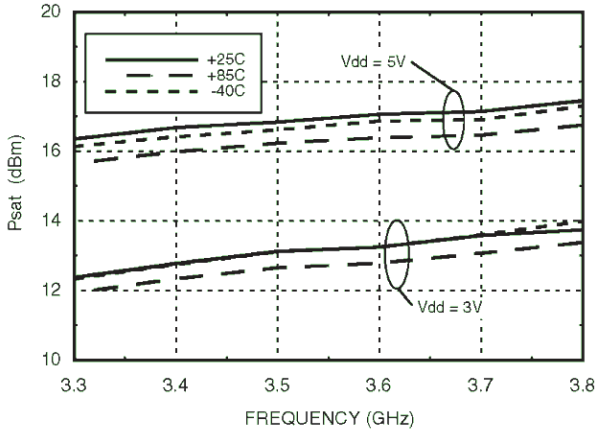


LNA Output IP3 vs. Vdd

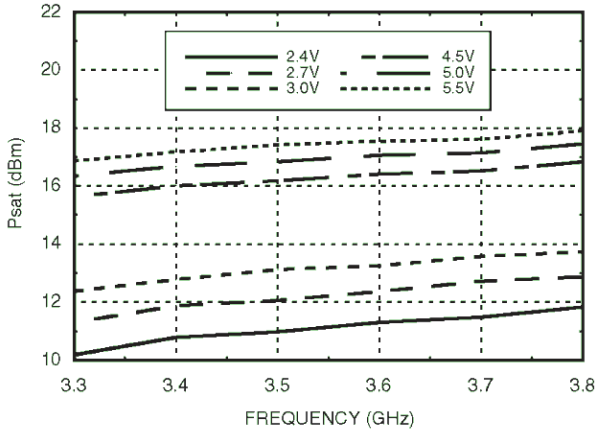


Low Noise Amplifier 3.3-3.8GHz NF: 1.2dB

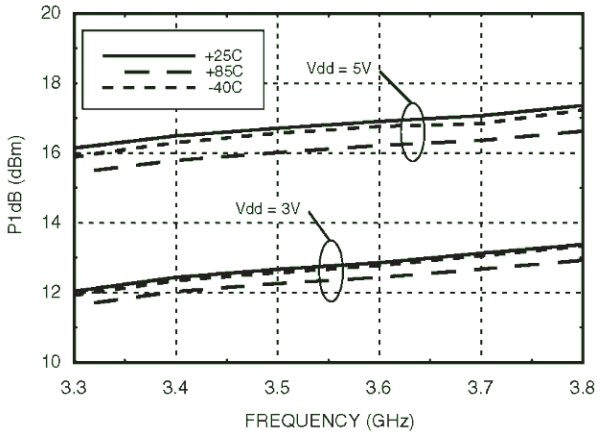
LNA Psat vs. Temperature



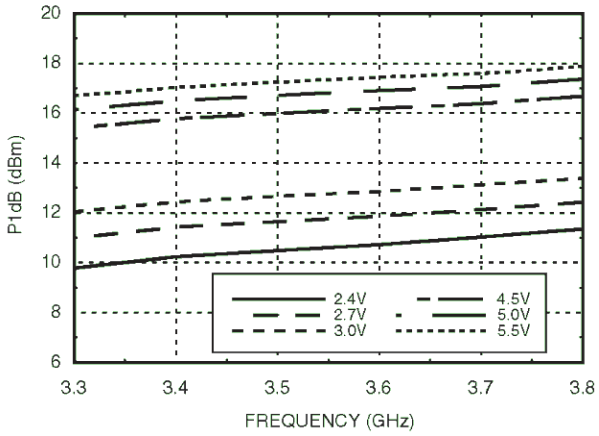
LNA Psat vs. Vdd



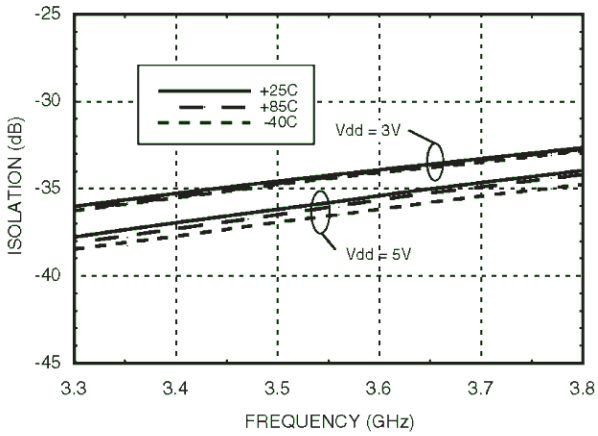
LNA Output P1dB vs. Temperature



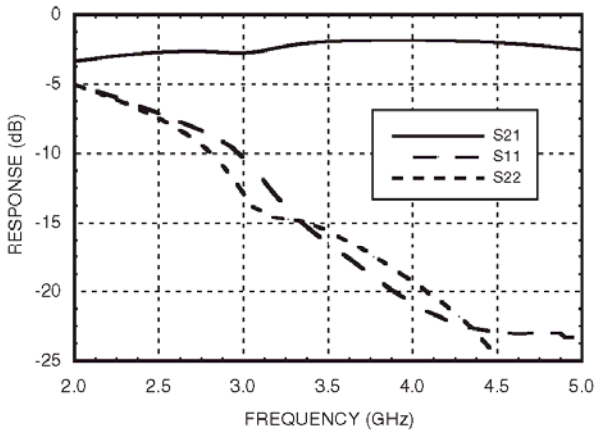
LNA Output P1dB vs. Vdd



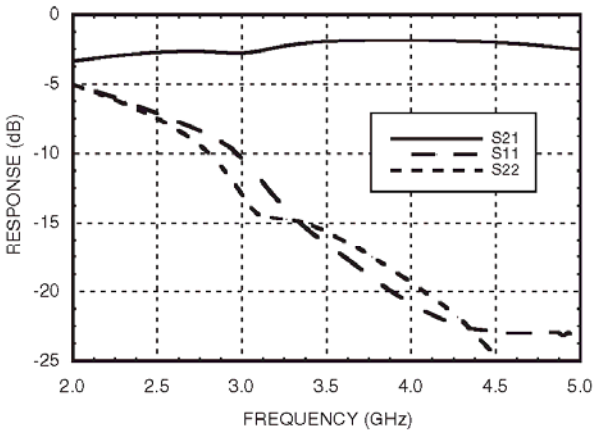
LNA Reverse Isolation vs. Temperature



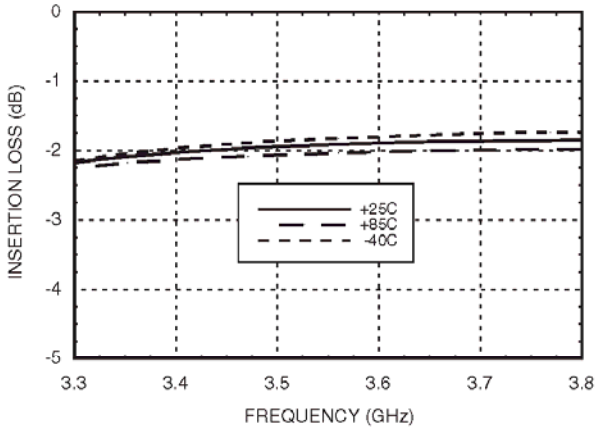
Bypass Mode
Broadband Gain & Return Loss [1]



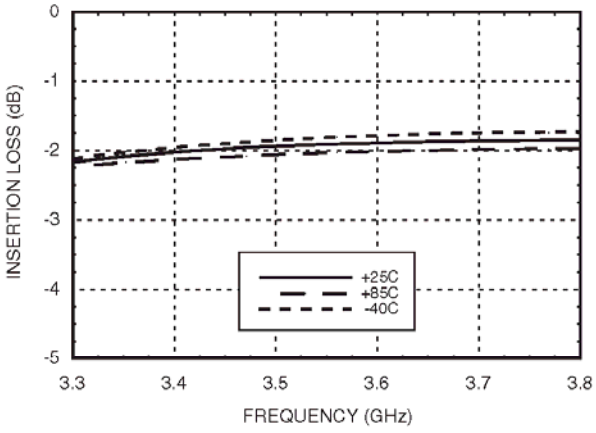
Bypass Mode
Broadband Gain & Return Loss [2]



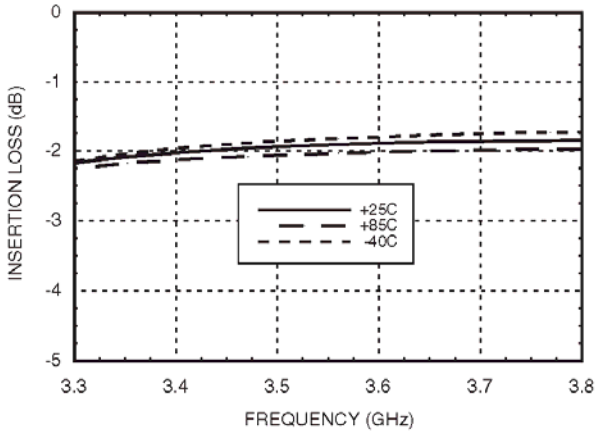
Bypass Mode
Insertion Loss vs. Temperature [1]



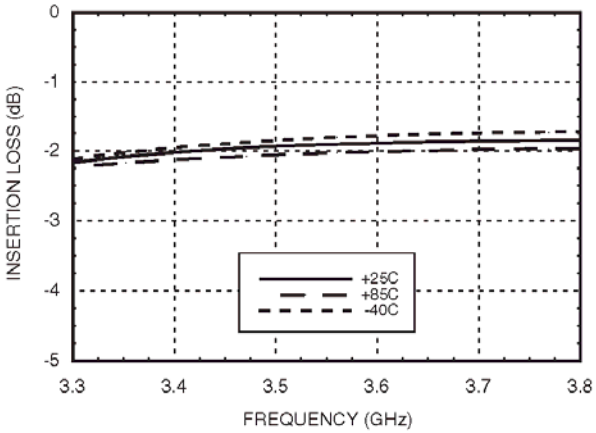
Bypass Mode
Insertion Loss vs. Temperature [2]



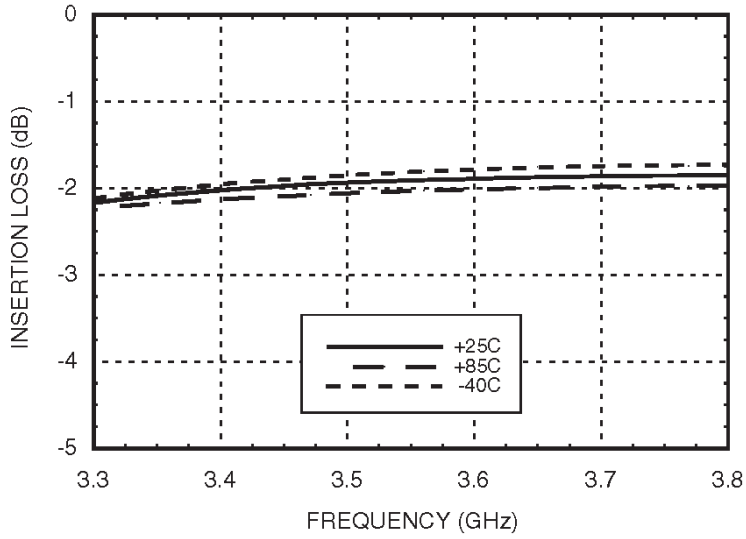
Bypass Mode, Input IP3 vs. Temperature

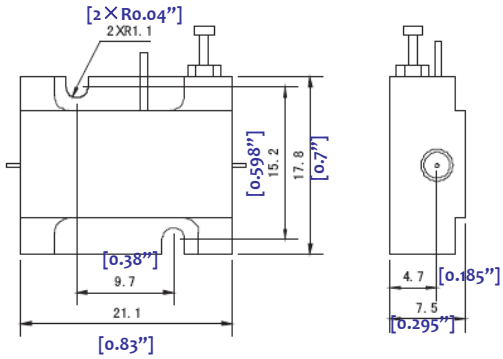


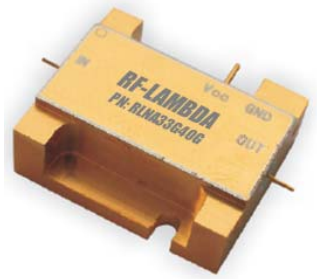
Bypass Mode, P1dB vs. Temperature



Bypass Mode, Psat vs. Temperature







RoHS Compliant

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

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