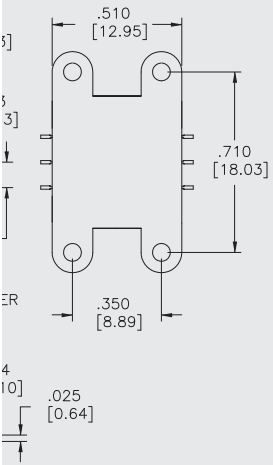


AFT3291 1.2 TO 3.2 GHz 6 LEADED MICROWAVE AMPLIFIER

Typical Values	AFT3291
Output Power @ 1 dB Compressed Point.	+31.0 dBm
Medium Gain	20.0 dB
6 Leaded Microwave Package	

AFT3291

6 Leaded Package for Amplifiers



Pin #1: V_D Pin #4: V_G
Pin #2: RF Output Pin #5: RF Input
Pin #3: V_D Pin #6: V_G

Biasing Instructions:

1. Make sure that no RF is being applied
2. Set drain voltage equal to zero volts
3. Turn gate voltage to -2.4 volts
4. Turn drain voltage to +8.0 volts
5. At this point, the drain current should be less than 100 mA
6. Adjust gate voltage up (closer to zero) until the current reaches 460 mA
7. RF may now be applied

To de-Bias:

1. Remove RF
2. Turn drain voltage to zero volts
3. Turn gate voltage to zero volts

SPECIFICATIONS*

Parameter	Typical	Guaranteed	
		0 to 50 °C	-55 to +85 °C
Frequency (Min.)	1.2 - 3.2 GHz	1.2 - 3.2 GHz	1.2 - 3.2 GHz
Small Signal Gain (Min.)	20.0 dB	16.5 dB	16.5 dB
Gain Flatness (Max.)	±1.5 dB	±2.0 dB	±2.0 dB
Noise Figure (Max.)	6.0 dB	6.7 dB	7.1 dB
SWR (Max.)	2.0:1	2.3:1	2.45:1
Power Output (Min.) @ 1dB comp.	+31.0 dBm	+29.3 dBm	+28.5 dBm
Reverse Isolation	55.0 dB	—	—
DC Current (Max.)	460 mA	502 mA	502 mA

* Measured in a 50-ohm system at +8 Vdc @ 460 mA unless otherwise specified.

INTERMODULATION PERFORMANCE

Typical @ 25 °C; 1200 MHz	AFT3291
Second Order Harmonic Intercept Point.	+50 dBm
Second Order Two Tone Intercept Point	+44 dBm
Third Order Two Tone Intercept Point	+40 dBm

ABSOLUTE MAXIMUM RATINGS

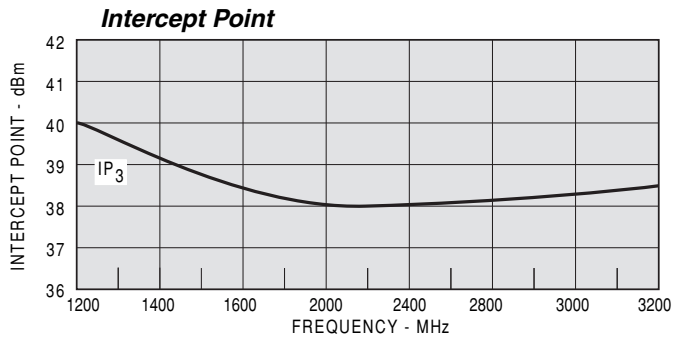
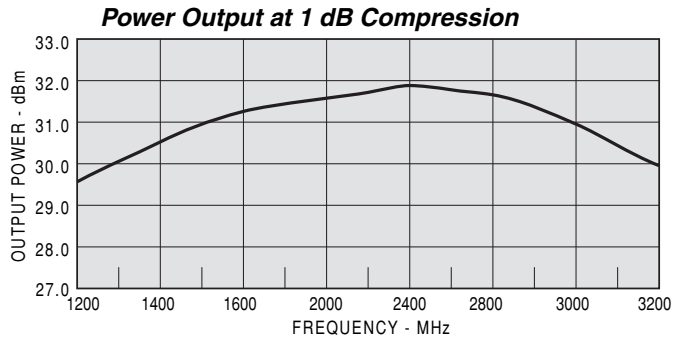
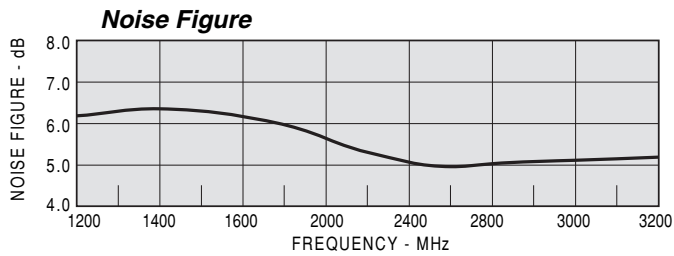
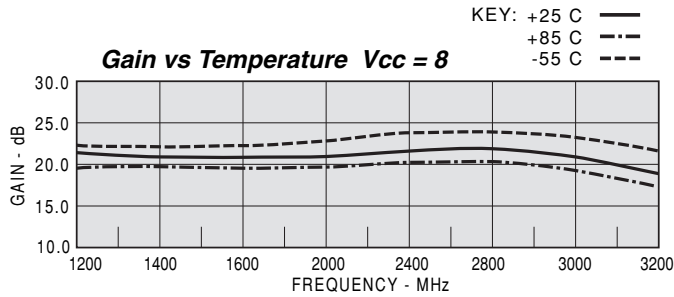
Storage Temperature	-55 to 150 °C
Maximum Case Temperature	+85 °C
Maximum DC Voltage	+12 Volts
Maximum Continuous RF Input Power	+23 dBm
Maximum Short Term Input Power (1 Minute Max.)	+23 dBm
Maximum Peak Power (3 μsec Max.)	+23 dBm
Thermal Resistance ¹ (θjc)	+14.5 °C/Watt
Junction Temperature Rise Above Case (Tjc)	+60 °C

¹ Thermal resistance is based on total power dissipation.

DIMENSIONS ARE IN INCHES [MILLIMETERS]

TYPICAL PERFORMANCE

TYPICAL AUTOMATIC TEST DATA



Model: AFT3291 Vcc=+8V Icc=460

FREQ	SWR	SWR	GAIN	PHASE	GROUP DELAY	REV/ISO
MHZ	IN	OUT	DB	DEG	NSEC	DB
1200	1.37	1.14	19.92	-46.39	0.724	-61.10
1300	1.36	1.17	19.99	-69.98	0.655	-55.71
1400	1.33	1.36	19.89	-90.78	0.578	-56.49
1500	1.27	1.56	19.89	-109.69	0.525	-56.93
1600	1.23	1.76	19.89	-127.83	0.504	-57.23
1700	1.20	1.93	19.98	-145.16	0.482	-57.73
1800	1.18	2.05	19.95	-162.61	0.485	-59.71
1900	1.19	2.12	20.12	-178.71	0.447	-57.01
2000	1.21	2.12	20.16	-163.96	0.481	-58.61
2100	1.23	2.05	20.16	-148.51	0.429	-60.73
2200	1.27	1.92	20.44	-132.57	0.443	-61.78
2300	1.34	1.81	20.73	-115.53	0.473	-62.83
2400	1.41	1.73	21.01	-98.11	0.484	-64.54
2500	1.47	1.65	21.44	-79.01	0.531	-63.91
2600	1.51	1.56	21.43	-57.85	0.588	-63.49
2700	1.52	1.43	21.43	-38.12	0.548	-60.00
2800	1.50	1.31	21.34	-15.97	0.615	-59.05
2900	1.46	1.20	20.84	-06.23	0.616	-57.13
3000	1.39	1.17	20.32	-28.36	0.615	-59.08
3100	1.31	1.29	19.58	-51.56	0.645	-55.53
3200	1.24	1.54	18.47	-76.50	0.693	-57.84