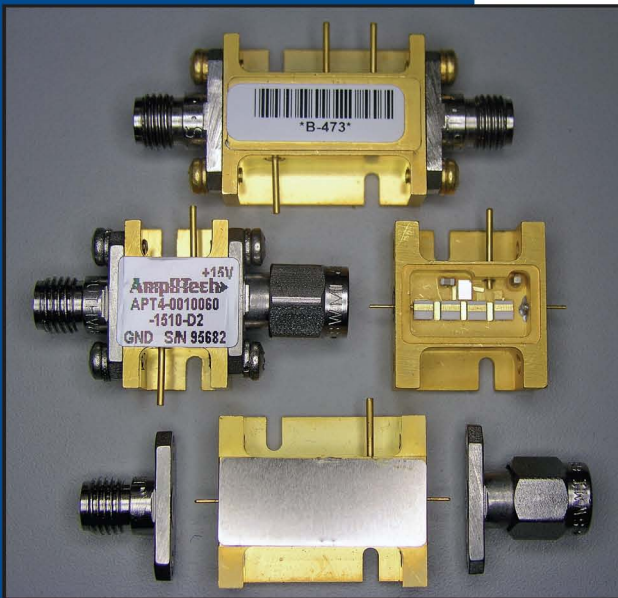


AmpliTech

"Amplify Your Potential"

LOW NOISE AMPLIFIERS

DESCRIPTION



AmpliTech's low noise amplifiers have been designed to have the lowest noise figures available in the industry. They are designed and manufactured using proven mature technology and processes that yield the best value and performance. The designs use the latest discrete transistors and MMICs.

Our designs are flexible enough to provide you with customized solutions for any specific application. Applications include telecom, satellite, space, military, and general lab purposes.

AmpliTech is very competitive and will provide you with the best prices and customer service. Our goal is to offer the best quality amplifier available and we show this by offering a standard 3 year warranty on all our amplifiers.

FEATURES

- Lowest noise temperatures
- Very stable, high gains
- State-of-the-Art Technology
- Flexible design for custom solutions
- Reverse polarity protection
- Operating temperature range of 0°C to +55°C
- Rugged, lightweight package
- Wide dynamic range
- Available for frequencies up to 40 GHz
- High reliability
- Hermetically sealable
- Internal regulator

OPTIONS

- Custom designs for all specifications
- Input power protection
- Temperature compensation
- Sloped gain options (for equalization gain)
- Designs for cryogenic cooling
- Higher dynamic range
- MIL-STD 883 and Space Level screening
- Multiple connector interfaces

LOW NOISE AMPLIFIER SPECIFICATIONS

NARROW BAND

MODEL NUMBER	FREQ. RANGE (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (dB, Max.)	NOISE FIGURE (dB, Max.)	VSWR INPUT (Max.)	VSWR OUTPUT (Max.)	P1dB (dBm, Min.)	NOM. DC POWER (+15V, mA)	AmpliTech OUTLINE DRAWING
APT3-00500060-0510-D4	.5-6	38	± 0.25	0.50	1.5 :1	1.5 :1	10	185	D4
APT3-00700080-0410-D4	.7-8	38	± 0.50	0.40	1.5 :1	1.5 :1	10	90	D4
APT3-00900120-0413-D4	.9-1.2	38	± 0.50	0.40	1.5 :1	1.5 :1	13	150	D4
APT2-00950122-0715-D2	.95-1.22	25	± 0.50	0.70	1.8 :1	1.8 :1	15	90	D4
APT3-00950145-0413-D4	.95-1.45	38	± 0.50	0.40	1.8 :1	1.8 :1	13	150	D4
APT1-00950160-1013-D4	.95-1.6	12	± 1.00	1.00	2.0 :1	2.0 :1	13	80	D4
APT3-00950175-0513-D4	.95-1.75	38	± 0.50	0.50	1.8 :1	1.8 :1	13	150	D4
APT5-09500105-0810-D6	0.95-1.05	44	± 0.50	0.80	2.0 :1	2.0 :1	10	125	D6
APT5-01000110-0810-D6	1.0-1.1	44	± 0.50	0.80	2.0 :1	2.0 :1	10	125	D6
APT3-01200160-02513-D4	1.2-1.6	40	± 0.50	0.25	1.5 :1	1.5 :1	13	125	D4
APT4-01300140-0410-D4	1.3-1.4	28	± 0.50	0.40	1.5 :1	1.5 :1	10	90	D4
APT6-01500160-03513-D6	1.5-1.6	60	± 0.50	0.35	1.5 :1	1.5 :1	13	250	D6
APT1-01500180-02510-D2	1.5-1.8	13	± 0.50	0.25	2.0 :1	2.0 :1	10	125	D2
APT3-01500180-02513-D4	1.5-1.8	40	± 0.50	0.25	1.5 :1	1.5 :1	13	175	D4
APT4-01700240-1010-D4	1.7-2.4	38	± 0.50	1.00	1.8:1	1.8 :1	10	200	D4
APT5-02100270-05510-D6	2.1-2.7	60	± 1.00	0.55	1.5 :1	1.5 :1	10	200	D6
APT4-02200230-0705-D4	2.2-2.3	40	± 0.50	0.70	1.5 :1	1.5 :1	5	175	D4
APT3-02300240-04510-D4	2.3-2.4	32	± 0.50	0.45	1.5 :1	1.5 :1	10	185	D4
APT2-02300270-04510-D2	2.3-2.7	26	± 0.50	0.45	1.5 :1	1.5 :1	10	90	D2
APT3-03000350-0510-D4	3-3.5	29	± 0.50	0.50	1.5 :1	1.5 :1	10	150	D4
APT3-03400420-0510-D4	3.4-4.2	28	± 1.00	0.50	1.8 :1	1.8 :1	10	175	D4
APT4-03600420-0413-D4	3.6-4.2	35	± 0.50	0.40	1.8 :1	1.8 :1	13	135	D4
APT4-04400510-0510-D4	4.4-5.1	36	± 0.50	0.50	1.5 :1	1.5 :1	10	125	D4
APT3-05000700-0610-D4	5-7	24	± 1.00	0.60	1.5 :1	1.5 :1	10	100	D4
APT3-05000700-0910-D4	5-7	25	± 1.00	0.90	1.5 :1	1.5 :1	10	100	D4
APT4-07100840-0810-D4	7.1-8.4	28	± 1.00	0.80	2.0 :1	2.0 :1	10	150	D4
APT4-07100840-0813-D4	7.1-8.4	34	± 0.5	0.80	1.8 :1	1.8 :1	13	200	D4
APT3-07250775-0710-D4	7.25-7.75	23	± 0.75	0.70	1.3 :1	1.5 :1	10	100	D4
APT3-07250775-05510-D4	7.25-7.75	23	± 0.75	0.55	1.3 :1	1.5 :1	10	100	D4
APT5-07700820-0915-D6	7.7-8.2	40	± 1.00	0.90	1.5 :1	1.5 :1	15	175	D6
APT3-07900840-2010-D4	7.9-8.4	28	± 0.50	2.00	2.0 :1	2.0 :1	10	100	D4
APT3-09001000-1010-D4	9.0 - 10.0	32	± 0.75	1.00	1.5 :1	1.5 :1	10	165	D4
APT2-10701120-1405-D4	10.70-11.20	16	± 1.50	1.40	1.5 :1	1.5 :1	5	125	D4
APT3-10701170-1010-D4	10.70-11.70	32	± 1.00	1.00	1.5 :1	1.5 :1	10	200	D4
APT4-10701270-1010-D4	10.70-12.70	40	± 1.50	1.00	1.5 :1	1.5 :1	10	160	D4
APT4-10701270-1010-D6	10.70-12.70	38	± 1.00	1.00	2.0 :1	2.0 :1	10	150	D6
APT4-10701275-1110-D4	10.70-12.75	28	± 1.00	1.10	1.8 :1	1.8 :1	10	175	D4
APT5-10701270-1010-D6	10.70-12.70	45	± 1.00	1.00	2.0 :1	2.0 :1	10	190	D6
APT6-10701270-1010-D6	10.70-12.70	52	± 1.00	1.00	2.0 :1	2.0 :1	10	225	D6
APT3-10951175-0910-D4	10.95-11.75	23	± 0.75	0.90	1.5 :1	1.5 :1	10	200	D4
APT3-11701220-0910-D4	11.7-12.2	23	± 0.75	0.90	1.5 :1	1.5 :1	10	200	D4
APT3-12701320-1010-D4	12.7-13.2	28	± 1.00	1.00	2.0 :1	2.0 :1	10	200	D4
APT4-12701530-1110-D4	12.7-15.3	40	± 1.00	1.10	1.8 :1	1.8 :1	10	200	D4
APT4-15101540-2010-D4	15.1-15.4	30	± 1.00	2.00	2.0 :1	2.0 :1	10	140	D4
APT6-14001450-1410-D6	14-14.5	34	± 0.75	1.40	1.5 :1	1.5 :1	10	225	D6
APT4-17001750-1610-D4	17-17.5	22	± 1.00	1.60	1.5 :1	1.5 :1	10	200	D4
APT8-17701970-2010-D8	17.7-19.7	40	± 1.25	2.10	1.5 :1	1.5 :1	14	225	D2+D2
APT4-20202120-1708-D4	20.2-21.2	22	± 1.75	1.70	1.5 :1	1.5 :1	8	200	D4
APT2-21002200-1910-D2	21.0-22.0	18	± 1.50	1.90	1.5 :1	1.5 :1	10	75	D2
APT4-21002400-2013-D4	21.0-24.0	28	± 1.75	2.00	2.0 :1	2.0 :1	13	200	D4
APT2-22002400-2510-D2	22.0-24.0	18	± 2.00	2.50	2.5 :1	2.5 :1	10	100	D2
APT4-24202530-2210-D4	24.2-25.3	20	± 1.50	2.20	1.8 :1	1.8 :1	10	200	D4
APT2-24002600-2510-D2	24.0-26.0	18	± 2.00	2.50	2.5 :1	2.5 :1	10	100	D2
APT2-23002750-4010-D2	23.0-27.5	16	± 1.75	4.00	2.0 :1	2.0 :1	10	125	D2
APT2-25002800-2510-D2	25.0-28.0	25	± 1.50	2.50	2.5 :1	2.5 :1	10	125	D2

LOW NOISE AMPLIFIER SPECIFICATIONS (cont.)

OCTAVE BAND

MODEL NUMBER	FREQ. RANGE (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (dB, Max.)	NOISE FIGURE (dB, Max.)	VSWR INPUT (Max.)	VSWR OUTPUT (Max.)	P1dB (dBm, Min.)	NOM. DC POWER (+15 V, mA)	AmpliTech OUTLINE DRAWING
APT2-00250050-0810-D4	.25-.50	25	± 0.50	0.80	2.0 :1	2.0 :1	10	100	D4
APT3-00250050-0810-D4	.25-.50	38	± 0.50	0.80	2.0 :1	2.0 :1	10	125	D4
APT2-00500100-0610-D6	.5-1.0	25	± 0.50	0.60	2.5 :1	2.0 :1	10	75	D6
APT3-00500100-0610-D4	.5-1.0	38	± 0.50	0.60	2.5 :1	2.0 :1	10	100	D4
APT2-01000200-0510-D4	1-2	24	± 1.00	0.50	2.0 :1	2.0 :1	10	100	D4
APT3-01000200-0510-D4	1-2	38	± 1.00	0.50	2.0 :1	2.0 :1	10	150	D4
APT3-01000200-0310-D4	1-2	38	± 1.00	0.30	2.0 :1	2.0 :1	10	150	D4
APT3-01000200-1010-D6	1-2	38	± 1.00	1.00	2.0 :1	2.0 :1	10	150	D6
APT2-01000200-1010-D2	1-2	22	± 1.00	1.00	2.0 :1	2.0 :1	10	100	D2
APT3-01000200-1310-D4	1-2	32	± 1.00	1.30	2.0 :1	2.0 :1	10	100	D4
APT2-01000200-1410-D2	1-2	24	± 1.00	1.40	2.0 :1	2.0 :1	10	100	D2
APT3-02000400-0610-D4	2-4	32	± 1.00	0.60	2.0 :1	2.0 :1	10	150	D4
APT5-02000400-0610-D6	2-4	46	± 1.50	0.60	2.0 :1	2.0 :1	10	150	D6
APT3-02000400-0510-D4	2-4	32	± 1.00	0.50	2.0 :1	2.0 :1	10	150	D4
APT3-02000400-1410-D4	2-4	32	± 1.00	1.40	2.0 :1	2.0 :1	10	120	D4
APT4-02000400-1014-D4	2-4	38	± 1.50	1.00	2.0 :1	2.0 :1	14	250	D4
APT4-02600520-1010-D4	2.6-5.2	28	± 1.00	1.00	2.0 :1	2.0 :1	10	175	D4
APT3-04000800-0710-D4	4-8	23	± 1.00	0.70	2.0 :1	2.0 :1	10	150	D4
APT4-04000800-0610-D4	4-8	28	± 1.00	0.60	2.0 :1	2.0 :1	10	150	D4
APT4-04000800-0710-D4	4-8	32	± 1.00	0.70	2.0 :1	2.0 :1	10	150	D4
APT4-04000800-1212-D4	4-8	38	± 1.50	1.20	2.0 :1	2.0 :1	12	150	D4
APT5-04000800-0710-D6	4-8	50	± 1.50	0.70	2.0 :1	2.0 :1	10	200	D6
APT2-06001200-1605-D2	6-12	14	± 2.00	1.60	2.0 :1	2.0 :1	5	100	D2
APT3-06001200-1208-D4	6-12	24	± 1.50	1.20	2.0 :1	2.0 :1	8	125	D4
APT3-06001200-1508-D4	6-12	24	± 1.50	1.50	2.0 :1	2.0 :1	8	150	D4
APT4-06001200-1208-D4	6-12	32	± 2.00	1.20	2.0 :1	2.0 :1	10	150	D4
APT4-06001200-1510-D4	6-12	34	± 1.50	1.50	2.0 :1	2.0 :1	10	175	D4
APT4-08001600-1410-D4	8-16	23	± 1.00	1.40	2.0 :1	2.0 :1	10	150	D4
APT4-12002400-2510-D4	12-24	20	± 2.00	2.50	2.0 :1	2.5 :1	10	150	D4

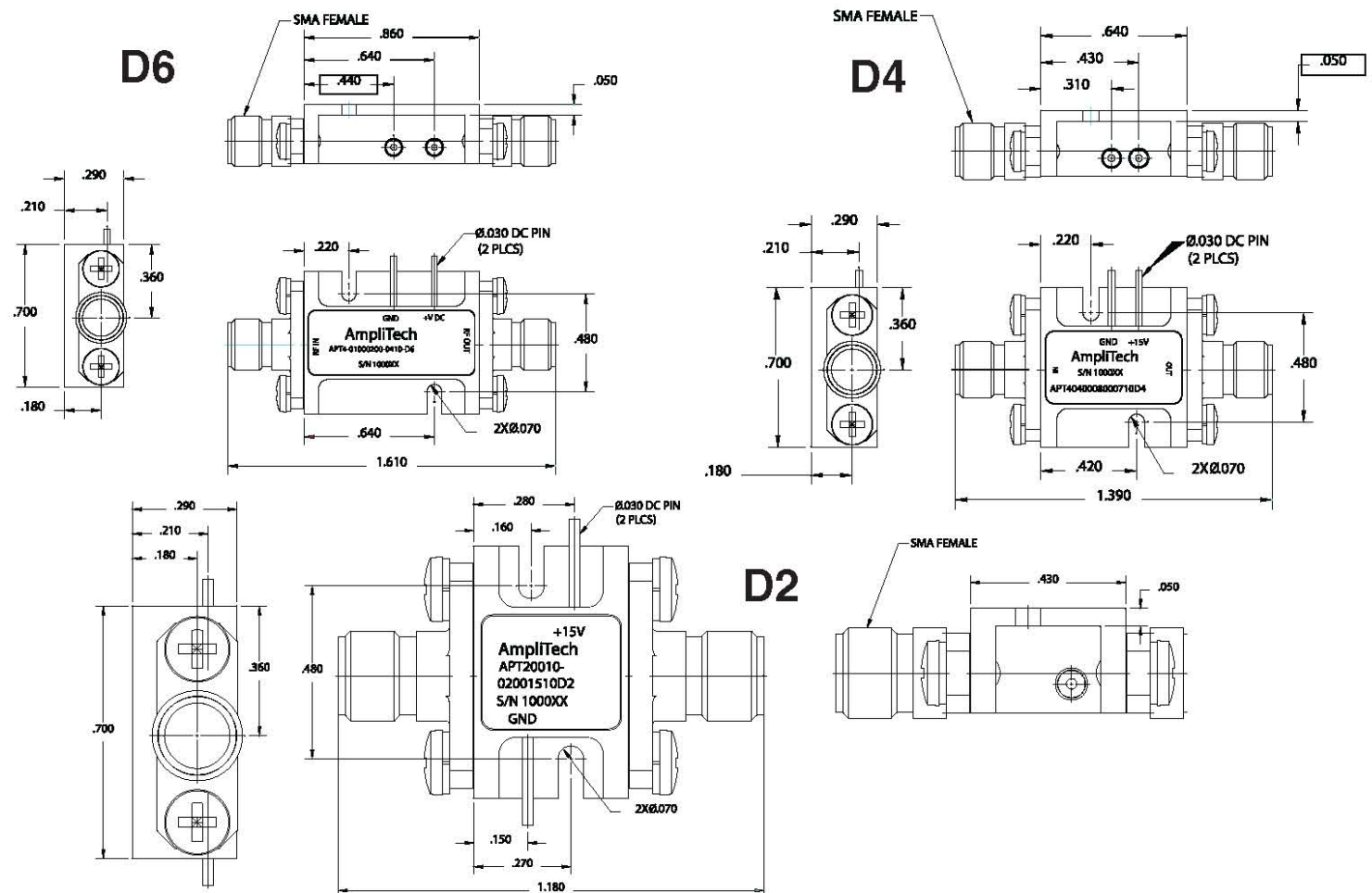
MULTI-OCTAVE WIDEBAND AMPLIFIERS

MODEL NUMBER	FREQ. RANGE (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (dB, Max.)	NOISE FIGURE (dB, Max.)	VSWR INPUT (Max.)	VSWR OUTPUT (Max.)	P1dB (dBm, Min.)	NOM. DC POWER (+15 V, mA)	AmpliTech OUTLINE DRAWING
APT2-00010100-1210-D4	0.01-1.0	14	± 1.0	1.20	2.3 :1	2.3 :1	10	165	D4
APT4-00010100-2510-D6	0.01-1.0	32	± 1.5	2.50	2.5 :1	2.5 :1	10	200	D6
APT2-00280060-0810-D4	0.28-0.60	25	± 0.75	0.80	2.0 :1	2.0 :1	10	125	D4
APT3-00200600-1310-D4	.2-6	28	± 1.25	1.30	2.0 :1	2.0 :1	10	125	D4
APT4-00200600-1310-D4	.2-6	42	± 1.00	1.30	2.0 :1	2.0 :1	10	200	D4
APT2-00300140-0810-D4	.3-1.4	18	± 1.00	0.80	2.0 :1	2.0 :1	10	70	D4
APT3-00400350-1010-D4	.4-3.5	30	± 1.00	1.00	2.0 :1	2.0 :1	10	110	D4
APT4-00500200-0815-D4	.5-2	38	± 1.00	0.80	2.0 :1	2.0 :1	15	125	D4
APT3-00500600-1010-D4	.5-6	28	± 1.25	1.00	2.0 :1	2.0 :1	10	125	D4
APT3-00501800-2508-D4	.5-18	20	± 2.50	2.50	2.5 :1	2.5 :1	8	150	D4
APT3-00501800-3008-D4	.5-18	20	± 2.50	3.00	2.5 :1	2.5 :1	8	150	D4
APT4-00501800-2410-D4	.5-18	25	± 2.50	2.40	2.5 :1	2.5 :1	10	225	D4
APT4-00501800-3010-D4	.5-18	35	± 2.00	3.00	2.5 :1	2.5 :1	10	250	D4
APT3-01000400-0910-D4	1-4	26	± 1.00	0.90	2.0 :1	2.0 :1	10	125	D4
APT4-01000800-5010-D4	1-8	34	± 1.50	5.00	2.5 :1	2.5 :1	10	225	D4
APT3-01001200-2510-D4	1-12	22	± 2.00	2.50	2.0 :1	2.0 :1	10	125	D4
APT2-02002000-4010-D2	2-20	12	± 1.00	4.00	2.0 :1	2.0 :1	10	100	D2
APT3-02000600-0910-D4	2-6	28	± 1.00	0.90	2.0 :1	2.0 :1	10	125	D4
APT4-02000600-1010-D4	2-6	32	± 1.00	1.00	2.0 :1	2.0 :1	10	150	D4
APT3-02000800-1210-D4	2-8	25	± 1.00	1.20	2.0 :1	2.0 :1	10	125	D4
APT4-02001800-2510-D4	2-18	23	± 2.00	2.50	2.5 :1	2.5 :1	10	150	D4
APT4-02001800-2410-D4	2-18	23	± 2.00	2.40	2.5 :1	2.5 :1	10	130	D4
APT4-02001800-3810-D4	2-18	23	± 2.00	3.80	2.5 :1	2.5 :1	10	120	D4
APT4-06001800-2210-D4	6-18	23	± 1.50	2.20	2.5 :1	2.0 :1	10	150	D4
APT5-06001800-1905-D6	6-18	33	± 2.00	1.90	2.5 :1	2.0 :1	5	200	D6
APT2-08001200-2510-D2	8-12	16	± 1.00	2.50	2.0 :1	2.0 :1	10	150	D2
APT3-08001200-1010-D4	8-12	29	± 1.00	1.00	2.0 :1	2.0 :1	10	125	D4
APT4-08001200-0910-D4	8-12	33	± 1.00	0.90	2.0 :1	2.0 :1	10	165	D4
APT5-08001200-1213-D6	8-12	40	± 1.5	1.20	2.0 :1	2.0 :1	13	200	D6
APT6-08001200-0910-D6	8-12	55	± 1.75	0.90	2.0 :1	2.0 :1	10	250	D6
APT3-08001800-2008-D4	8-18	20	± 1.50	2.00	2.0 :1	2.0 :1	8	125	D4
APT4-08001800-2010-D4	8-18	25	± 2.00	2.00	2.0 :1	2.0 :1	10	150	D4
APT4-08001800-5010-D4	8-18	34	± 1.50	5.00	2.5 :1	2.5 :1	10	250	D4
APT3-12001800-1710-D4	12-18	27	± 1.50	1.70	2.0 :1	2.0 :1	10	135	D4

ULTRA-WIDE BAND AMPLIFIERS

MODEL NUMBER	FREQ. RANGE (GHz)	GAIN (dB, Min.)	GAIN FLATNESS (dB, Max.)	NOISE FIGURE (dB, Max.)	VSWR INPUT (Max.)	VSWR OUTPUT (Max.)	P1dB (dBm, Min.)	NOM. DC POWER (+15 V, mA)	AmpliTech OUTLINE DRAWING
APT3-00100200-1015-D4	.1-2	38	± 1.00	1.00	2.0 :1	2.0 :1	15	175	D4
APT4-00100300-1115-D6	.1-3	30	± 2.00	1.10	2.5 :1	2.5 :1	15	275	D6
APT3-00100300-1010-D4	.1-3	28	± 1.00	1.00	2.2 :1	2.0 :1	10	150	D4
APT3-00100300-1210-D4	.1-3	30	± 1.00	1.20	2.0 :1	2.0 :1	10	100	D4
APT3-00100400-1210-D4	.1-4	30	± 1.00	1.20	2.0 :1	2.0 :1	10	100	D4
APT3-00100600-1510-D4	.1-6	28	± 1.25	1.50	2.0 :1	2.0 :1	10	125	D4
APT3-00100600-1310-D4	.1-6	28	± 1.25	1.30	2.0 :1	2.0 :1	10	125	D4
APT3-00100600-1010-D4	.1-6	28	± 1.25	1.00	2.0 :1	2.0 :1	10	125	D4
APT4-00100600-1310-D6	.1-6	42	± 1.00	1.30	2.0 :1	2.0 :1	10	200	D6
APT3-00100850-4010-D4	.1-8.5	25	± 1.75	4.00	2.5 :1	2.5 :1	10	200	D4
APT4-00100800-1410-D4	.1-8	28	± 1.50	1.40	2.0 :1	2.0 :1	10	175	D4
APT3-00101200-2510-D4	.1-12	22	± 2.25	2.50	2.0 :1	2.0 :1	10	175	D4
APT3-00101800-2510-D4	.1-18	20	± 2.50	2.50	2.5 :1	2.5 :1	10	150	D4
APT4-00101800-2510-D4	.1-18	25	± 2.50	2.50	2.5 :1	2.5 :1	10	175	D4
APT3-00102000-3010-D4	.1-20	19	± 2.50	3.00	2.5 :1	2.5 :1	10	150	D4
APT4-00102000-2710-D4	.1-20	25	± 2.50	2.70	2.5 :1	2.5 :1	10	150	D4
APT3-00102000-2410-D4	.1-20	19	± 2.50	2.40	2.5 :1	2.5 :1	10	200	D4
APT4-00102400-4005-D4	.1-24	16	± 2.00	4.00	2.5 :1	2.5 :1	5	275	D4
APT4-00102650-4008-D4	.1-26.5	18	± 2.50	4.00	2.5 :1	2.5 :1	8	175	D4

NOTE: Noise figures increase below 500 MHz in bands wider than .1-10 GHz.



1373 Lincoln Ave. · Holbrook, NY 11741
 Tel: (631)521-7831 - Fax: (631)521-7871
 E-mail: sales@amplitechinc.com
 Web: www.amplitechinc.com