

AmpliTech

"Amplify Your Potential"

CRYOGENIC LNA AMPLIFIERS

DESCRIPTION

Due to the increased demand for even lower Noise Figures, AmpliTech introduces its line of cryogenic amplifiers. These amplifiers are designed to operate at extremely low temperatures - as low as the Liquid Helium temperature of 16K (-273C). The lower temperature operation further decreases the already low noise figures that AmpliTech provides.



Efficiency is key for Cryogenic amplifiers so we offer very low DC Power options (as low as +3 VDC), very low current consumption, and a very lightweight, compact housing. These amplifiers are very useful for applications that require the absolute minimum amounts of noise injection - such as Medical Applications, RF Imaging, Research & Development, Space Communications, Accelerators, Radiometry and Telephony. Noise figures as low as 0.07 dB (5° K) are possible at L band frequencies. These amplifiers have been tested, operated and approved by the National Institute of Standards and Technology.

These amps are extremely stable and highly reliable at these operating temperatures. Custom solutions are always an option. Cooling systems are also available for all our Cryogenic Amplifiers. Cryogenic amplifiers can be supplied with waveguide or SMA connector interfaces.

FEATURES

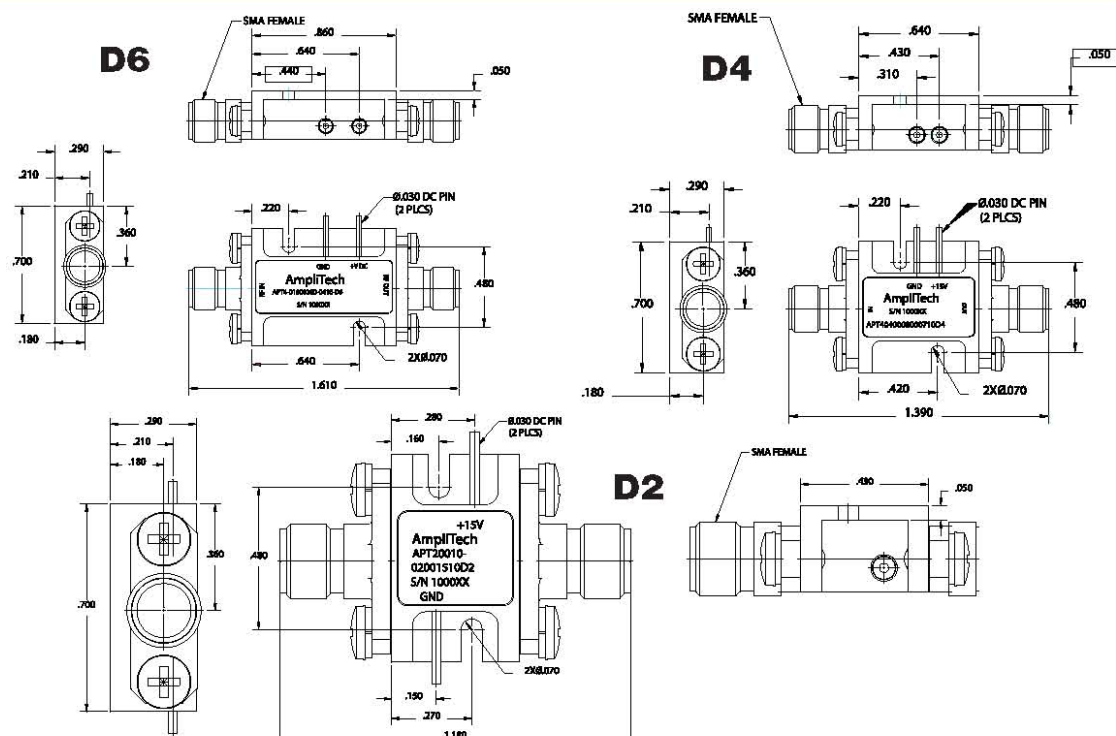
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| <ul style="list-style-type: none">· Unconditionally Stable· State-of-the-Art Technology· Flexible design for custom solutions· Operating temperatures well below 16°K (237°C)· Very lightweight, compact package | <ul style="list-style-type: none">· High reliability· Multiple connector and waveguide interface options· Ultra-Low Current Consumption· High Efficiency· Industry Leading Ultra-Low Noise Figures |
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OPTIONS

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| <ul style="list-style-type: none">· Custom designs for all specifications· MIL-STD 883 and Space Level screening· Hermetic Laser Sealing | <ul style="list-style-type: none">· +3 to +8 VDC power options· Special Testing options |
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CRYOGENIC LNA SPECIFICATIONS

MODEL NUMBER	FREQ.		GAIN		NOISE	VSWR	VSWR	POWER	NOM. DC	AmpliTech OUTLINE DRAWING
	RANGE	GAIN	FLATNESS	FIGURE	INPUT	OUTPUT	@ 1dB C.P.	POWER		
	(GHz)	(dB, Min.)	(dB, Max.)	(dB, Max.)	(Max.)	(Max.)	(dBm, Min.)	(V, mA)		
APTC3-00100200-0900-D4	0.1-2	38	± 1.00	0.90	2.0:1	2.0:1	0	+6, 50	D4	
Specs @ 77K	0.1-2	42	± 1.00	0.20	1.5:1	1.5:1	5	+6, 50		
APTC3-02000600-1000-D4	2-6	25	± 1.00	1.00	2.0:1	2.0:1	0	+6, 50	D4	
Specs @ 77K	2-6	30	± 1.00	0.35	1.5:1	1.5:1	5	+6, 50		
APTC2-02200230-0400-D2	2.2-2.3	26	± 1.00	0.40	2.0:1	2.0:1	0	+6, 55	D2	
Specs @ 77K	2.2-2.3	31	± 1.00	0.15	1.5:1	1.5:1	5	+6, 55		
APTC3-02000600-0900-D4	2-6	29	± 1.00	0.90	2.0:1	2.0:1	0	+6, 60	D4	
Specs @ 77K	2-6	33	± 1.00	0.30	1.5:1	1.5:1	5	+6, 60		
APTC4-04000800-0700-D4	4-8	23	± 1.00	0.70	2.0:1	2.0:1	0	+6, 50	D4	
Specs @ 77K	4-8	28	± 1.00	0.20	1.5:1	1.5:1	5	+6, 50		
APTC3-01000200-0300-D4	1-2	38	± 1.00	0.30	2.0:1	2.0:1	0	+6, 45	D4	
Specs @ 77K	1-2	43	± 1.00	0.10	1.5:1	1.5:1	5	+6, 45		
APTC3-01200160-02505-D4	1.2-1.6	40	± 1.00	0.25	2.0:1	2.0:1	5	+6, 55	D4	
Specs @ 77K	1.2-1.6	45	± 1.00	0.10	1.5:1	1.5:1	10	+6, 55		
APTC4-08001200-0905-D4	8-12	32	± 1.00	0.90	2.0:1	2.0:1	5	+9, 110	D4	
Specs @ 77K	8-12	34	± 1.00	0.35	1.65	1.5:1	10	+9, 110		
APTC4-12001800-1805-D4	12-18	30	± 1.50	1.80	2.0:1	2.0:1	5	+9, 125	D4	
Specs @ 77K	12-18	35	± 1.50	1.30	2.0:1	2.0:1	10	+9, 125		
APTC4-00101800-2510-D4	0.1-18	23	± 2.50	2.50	2.5:1	2.5:1	10	+9, 135	D4	
Specs @ 77K	0.1-18	25	± 2.50	1.90	2.5:1	2.5:1	10	+9, 135		



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