CLNA-30-0500-1000-5P

Revision 1.1

FEATURES

- Ultra Low Noise Performance
- Low DC Power Consumption
- Built with Non-Magnetic Materials
- Wide Operating Temperature Range: 4 K to +75 °C
- RoHS Compliant
- RF Ports Matched to 50 Ohms

TYPICAL APPLICATIONS

- Quantum Computing
- Radio Astronomy
- Deep Space Communication
- Satellite Communications
- SIGINT
- Low Temperature Physics

ELECTRICAL SPECIFICATIONS (@ 4K)[1]

Parameter	Min	Max	Typ	Units
Frequency Range	5.0	10.0	-	GHz
Noise Temperature	-	10	6	K
Gain (S21)	30	-	35	dB
Gain Flatness	-	2.0	1.2	± dB
Output Power @ 1dB Compression Point (P1dB)	-5	-	0	dBm
Input VSWR (S11)	-	2.0	1.8	-
Output VSWR (S22)	-	2.0	1.8	-
DC Supply Voltage	+0.3	+0.4	+0.35	VDC
Typical DC Supply Current	5.3	8.0	6.4	mA
Typical DC Power Consumption	1.6	3.0	2.2	mW

[1]DC Specs vary per Gain and P1dB version, see individual datasheet for details

Absolute Maximum Ratings

Parameter	Rating
DC Supply Voltage	+1 V
RF Input Power	+10 dBm
Operating Temperature	4K to +75°C
Non-Operating Temperature	4K to +105°C
RF Port Coupling (In/Out)	DC Coupled / DC Coupled

Mechanical Specifications

Parameter	Value
Length	0.45 in [11.4 mm]
Width	0.65 in [16.5 mm]
Height	0.30 in [7.6 mm]
Connectors (In/Out)	SMA(F) / SMA(F)
Approx. Weight	7.8 g

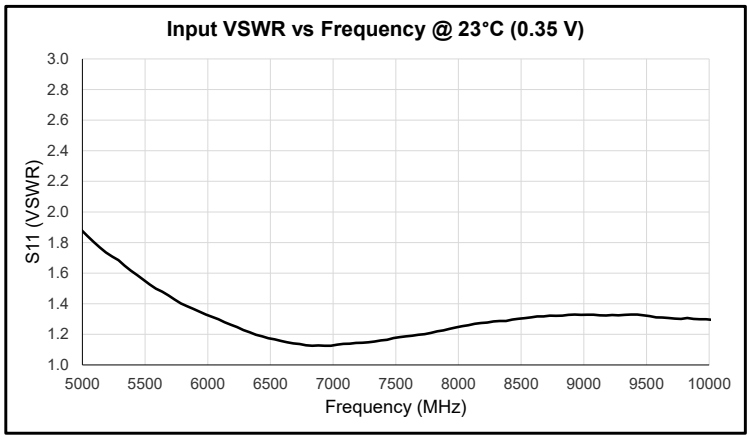
The information above is relative to the sale of a COTS product as depicted. For information regarding other features available in this amplifier family, please review page 3 of this document or contact your local representative for specific inquiries.

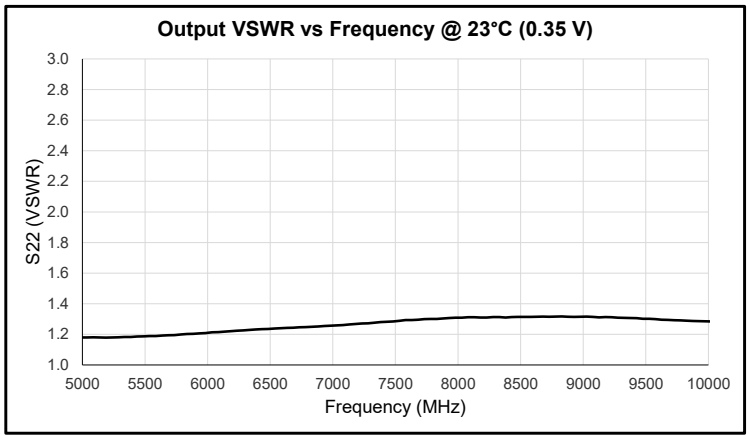
The material presented in this datasheet was current at the time of publication. Narda-MITEQ's continuing product improvement program makes it necessary to reserve the right to change our mechanical and electrical specifications without notice. If either of these parameters is critical, please contact the factory to verify that the information is current.

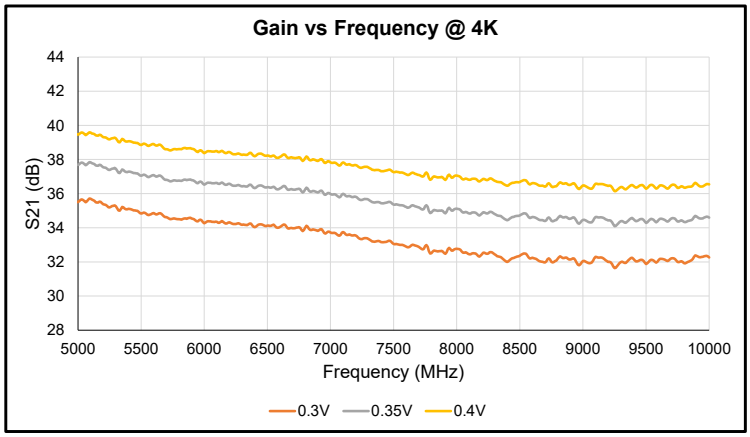
This material consists of Narda-MITEQ general capabilities information and does not contain controlled technical data as defined within the International Traffic in Arms (ITAR) Part 120.10 or Export Administration Regulations (EAR) Part 734.7-11. D-405/05.01.18

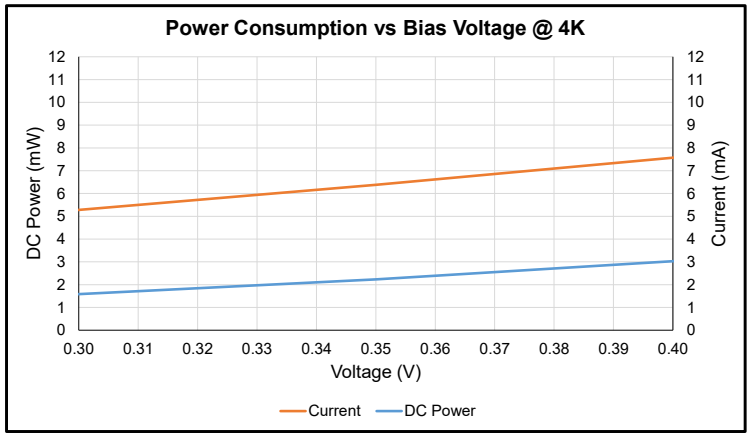
435 Moreland Road
Hauppauge, NY 11788
Tel : 631-231-1700
Fax : 631-231-1711
Email : componentsnm@nardamiteq.com
www.nardamiteq.com

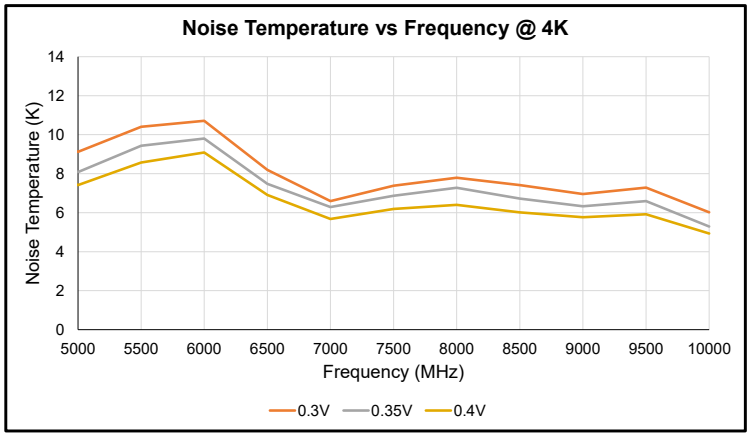
Typical Performance:

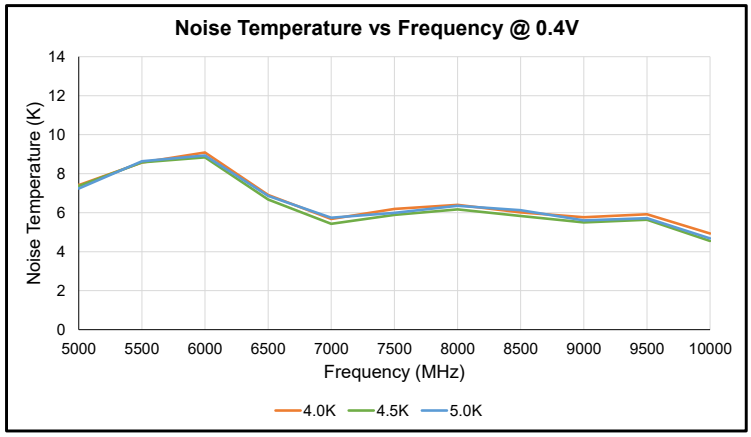












Environmental Specifications		
Parameter	**Standard**	**Description**
Operational Temperature		4K to +75°C
Storage Temperature		4K to +105°C
Random Vibration	MIL-STD-883K, Method 2026, Cond. 1B	50 - 2000 Hz, 7.3 Grms
Humidity	MIL-STD-202, Method 103B, Cond. B	95% RH Non-Condensing
Altitude	MIL-STD-883K, Method 1001, Cond. B	30,000 ft

This amplifier is designed to meet the above conditions. If ESS testing is required please contact factory.

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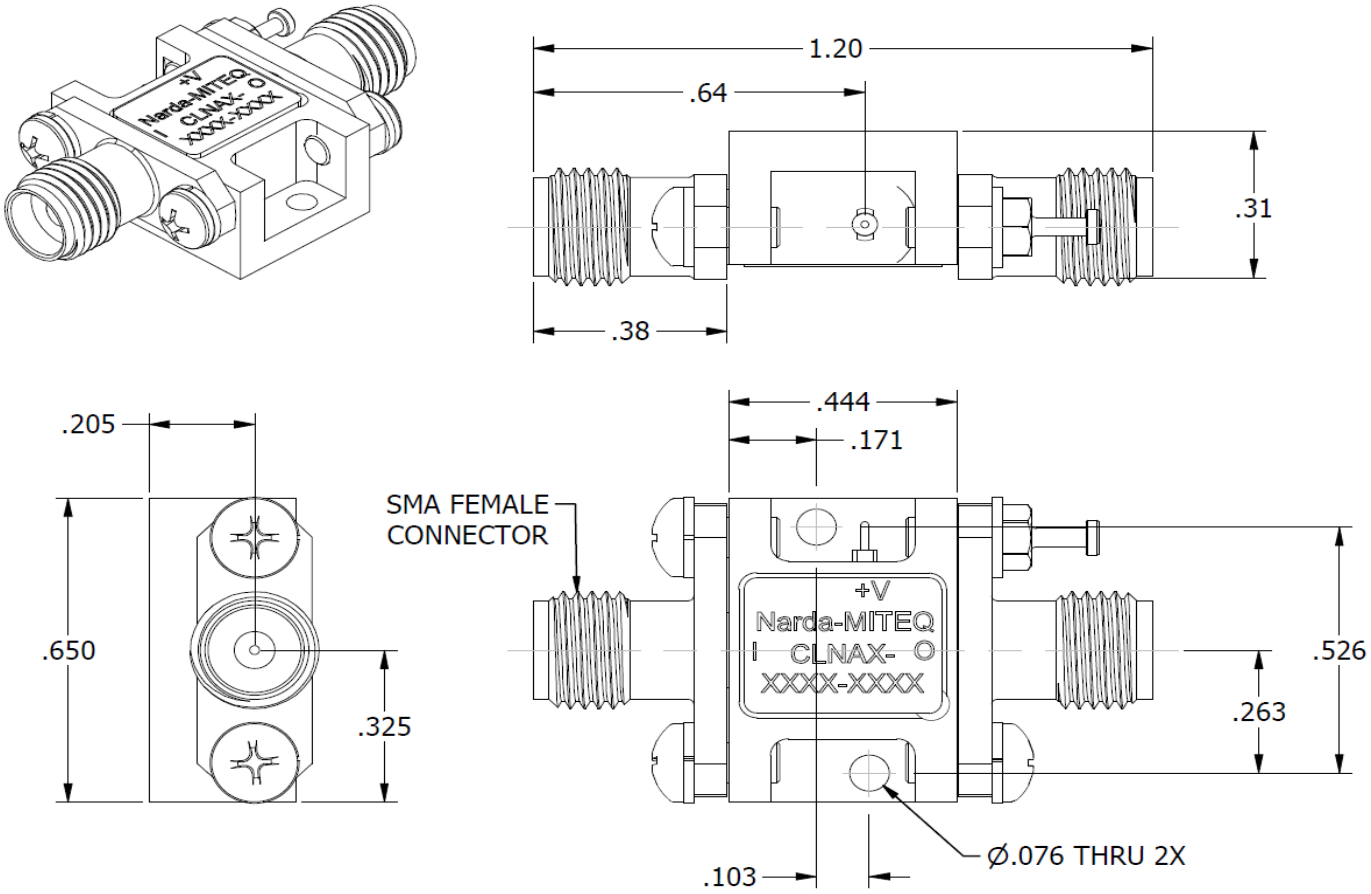
Outline 229293:



STEP file may be available upon request

Ordering Information²

C L N A – 3 0 – 0 5 0 0 – 1 0 0 0 – 5 P

Gain (dB) | Start - Stop Frequency (GHz) | P1dB (dBm)

Available Gains: 20, 30 or 40 dB Minimum
Available P1dBs: -5, 0 or +5 dBm Minimum
Available Options³: Adds One or More Suffixes

Option	Description	Connector Options (Input / Output)	
-ND	DC Bias Through Nano-D Connector	No Dash	SMA Female / Female
-BTO	DC Bias Through Output	-MF	SMA Male / Female
-DB	Dual Bias Control [No Dash = Single Bias]	-FM	SMA Female / Male
-NM	Non-Magnetic Construction	-MM	SMA Male / Male
-H	Hermetic (not compatible with -NM)	-GP	GPPO (SMPM) Male / Male
-TXX	Specific Minimum Operating Temperature	-G3	G3PO (SMPS) Male / Male
-S	Combine 3 or More Options		

²Other Gains and P1dBs may be available upon request. However, certain combinations of Gain, P1dB and/or other options may not be compatible

³Options -NM, -H, -GP and -G3 may require different package outline than shown herein, contact factory for more details

-TXX option offers customer selection of minimum operating temperature, but must be ≥ 4 Kelvin

Typical Current Table		Min P1dB (dBm)		
		-5	0	+5
Min Gain (dB)	20	6.0	16.0	32.0
	30	8.0	24.0	40.0
	40	12.0	36.0	52.0

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