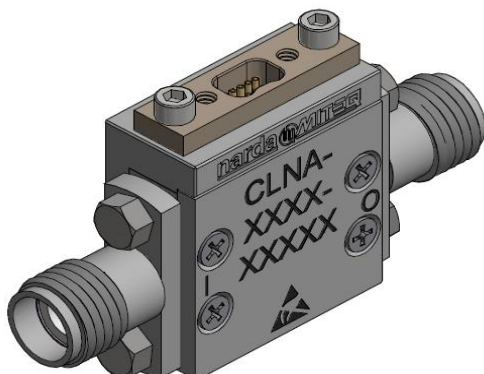




## FEATURES

- Ultra Low Noise Performance
- Low DC Power Consumption
- Operational Down to 4 Kelvin
- 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)

| Parameter                                   | Min  | Max  | Typ   | Units |
|---------------------------------------------|------|------|-------|-------|
| Frequency Range                             | 4.0  | 8.0  | -     | GHz   |
| Noise Temperature*                          | -    | 10   | 8     | 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   |
| DC Supply Current                           | 5.3  | 7.5  | 6.4   | mA    |
| DC Power Consumption                        | 1.6  | 3.0  | 2.2   | mW    |

\*Noise Temperature below 5 GHz is 12 K max

### 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              | 0.62 in [15.7 mm] |
| Width               | 0.67 in [17.0 mm] |
| Height              | 0.30 in [7.6 mm]  |
| Connectors (In/Out) | SMA(F) / SMA(F)   |
| Approx. Weight      | 7.8 g             |

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

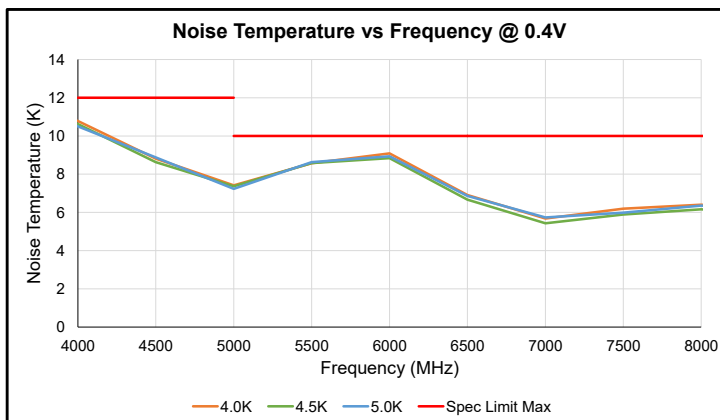
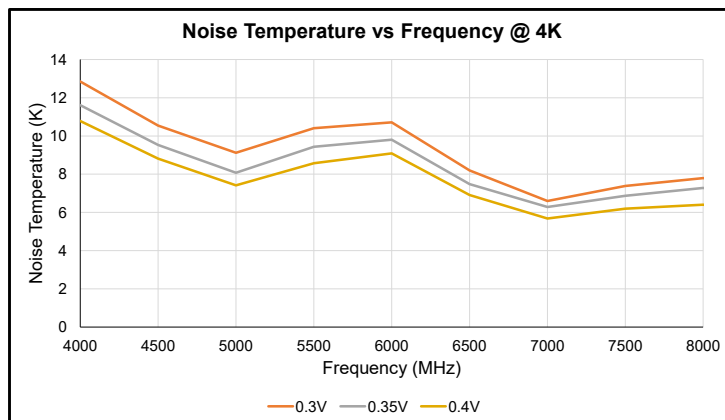
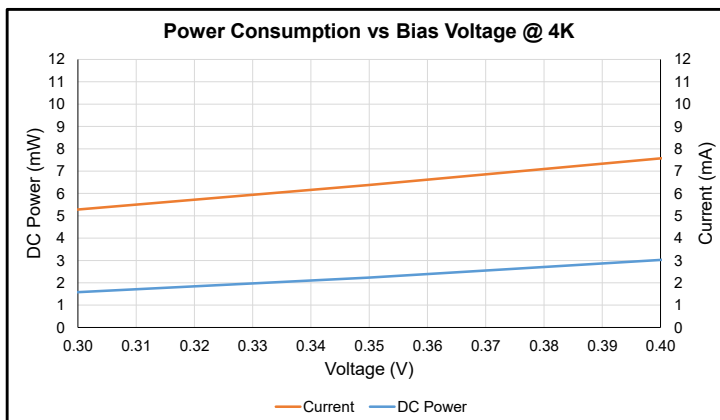
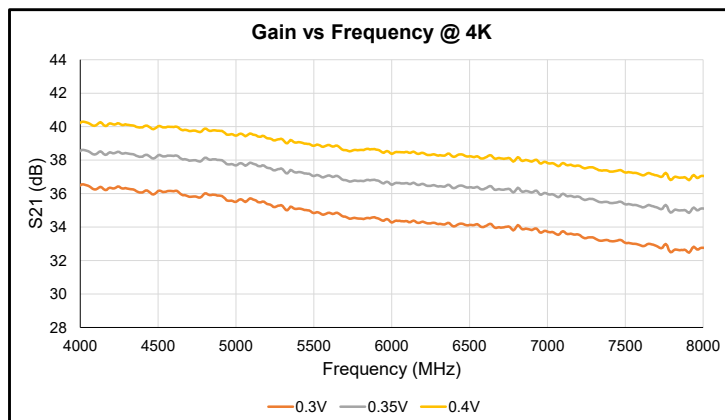
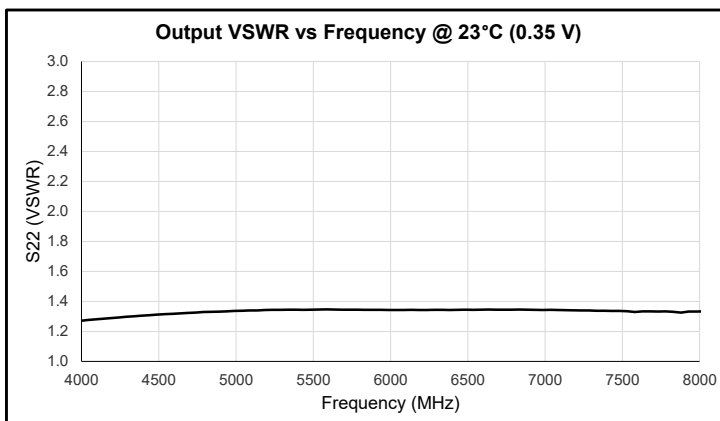
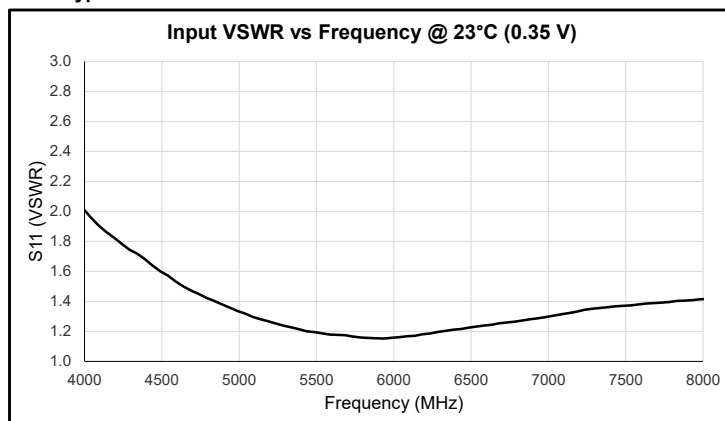


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Typical Performance:



| 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              |

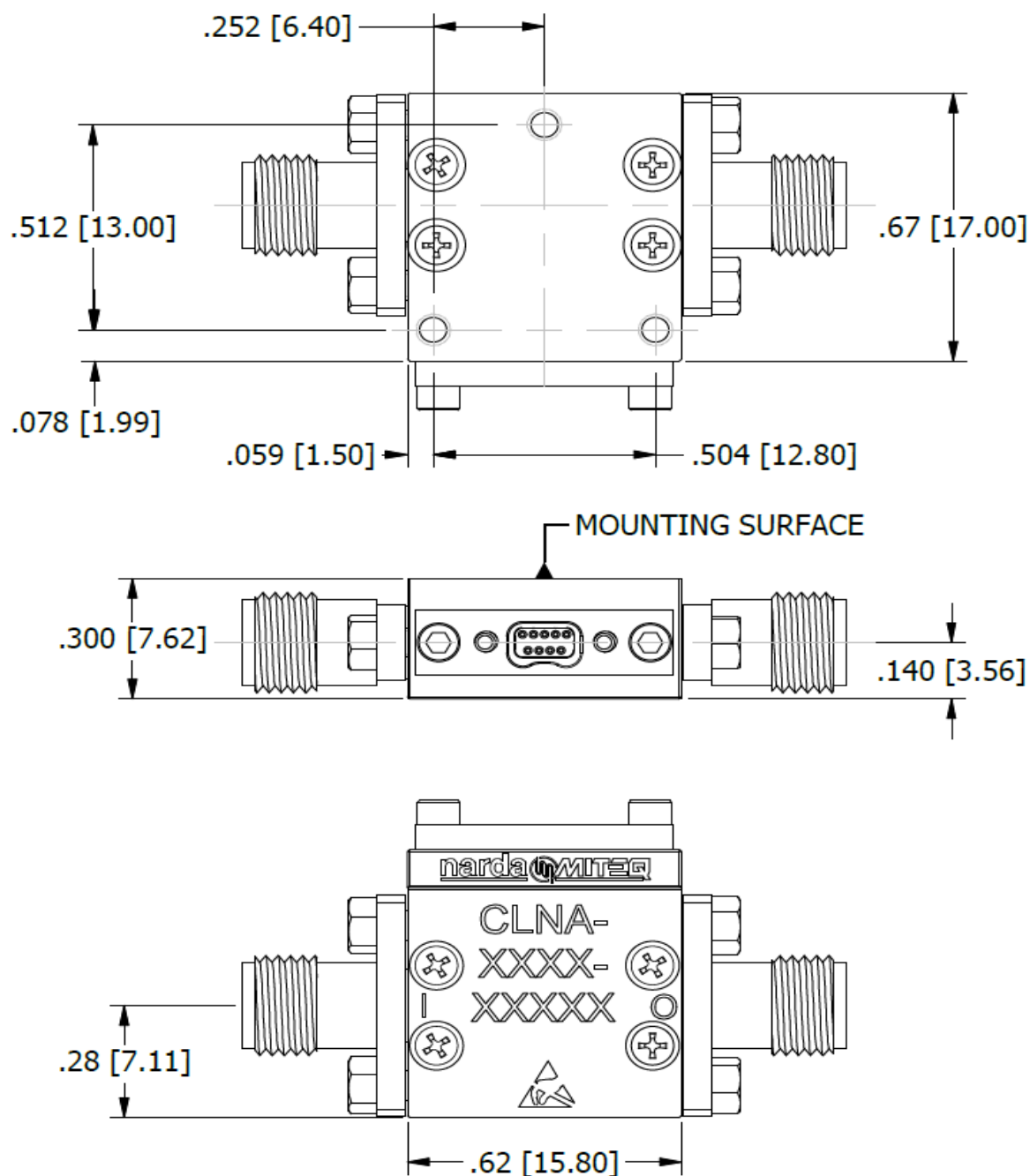
\*This amplifier is designed to meet the above conditions. If ESS testing is required please contact factory.\*

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