AM-224A • Automatic Switching LNA

DESCRIPTION
Low Noise Amplifier (LNA) is a multifunctional subassembly, featuring automatic receive to transmit switching. The LNA has three modes of operation. First mode is Bypass, obtained with unit turned OFF, or with no operating power applied. Second mode is very high dynamic range low noise amplifier, obtained when the unit is turned ON.

FEATURES
- Very High Dynamic Range LNA
- Very Low Noise Figure
- Automatic Switching From Receive Mode to Transmit Mode

Third mode is TRANSMIT when a transmit signal is detected. This feature allows a user transceiver to be operated in a DAMA, on half-duplex mode with no operator intervention required to transition the LNA to a transmit mode. The basic operating frequency range for this device is 225 to 400 MHz. The BYPASS mode frequency range is 0 to 512 MHz.
**AM-224A**

Automatic Transmit Mode Selection

**Automatic Switching LNA**

Bypass Mode with Power Off

---

**Receive Mode Performance**

- Gain, 243-270 MHz: 28 dB min/30.5 dB max.
- Passband Rolloff, 243-270 MHz: 0.5 dB max.
- VSWR, 243-270 MHz: 1.5:1 max.
- Noise Figure, 243-270 MHz: 1.4 dB max.
- Input @ 1 dB gain compression: 0 dBm min.
- Input signal (protection) 243-270 MHz: +30 dBm, CW
- Intercept point, third order: +39 dBm nominal
- Reverse Isolation: 55 dB min.

**Bypass Mode Performance**

- Passband: 0-512 MHz
- Insertion Loss: 0.5 dB max.
- VSWR: 1.4:1 max.

**Transmit Mode Performance**

- Passband: 225-400 MHz
- Insertion Loss, 225-318 MHz: 0.8 dB max.
- Insertion Loss, 318-400 MHz: 1.0 dB max.
- Input Power: +21 dBw max.
- VSWR over passband: 1.5:1 max.

**General Characteristics**

- Environment: Shipboard/Airborne
- Size: 13" long x 7" wide x 3.9" high
- Weight: 8 pounds
- Operating Current @ 28 VDC nom.: 0.8A max.
- Connectors RF: Type N Female
- DC: MS3112E10-6P

---

**Metropole Products, Inc.**

[THE FREQUENCY OF INNOVATION]

P: 540.659.2132 F: 540.659.2133

sales@metropoleproducts.com

2040 Jefferson Davis Highway, Stafford, Virginia 22554

www.MetropoleProducts.com