



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.

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.

FEATURES

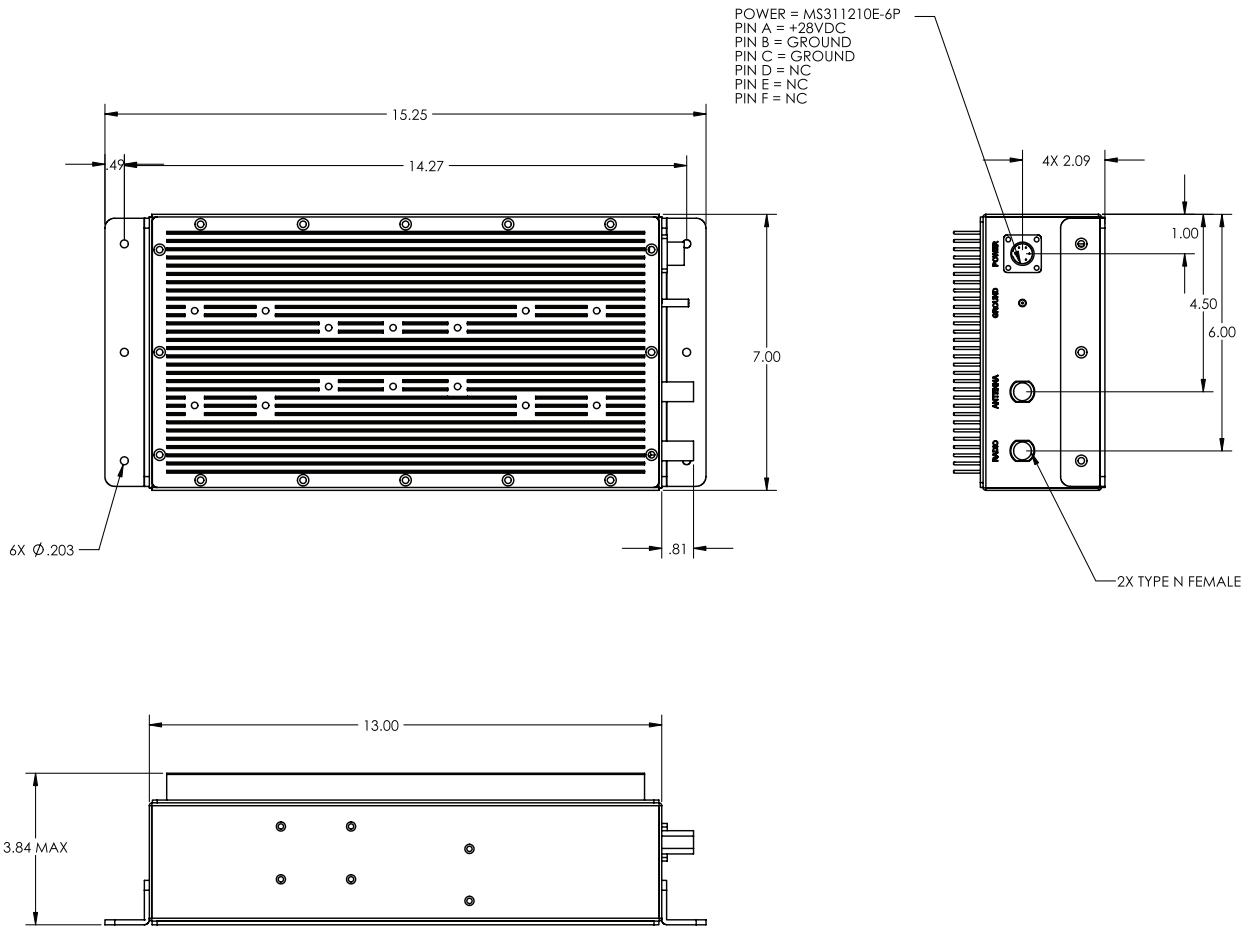
- ▶ Very High Dynamic Range LNA
- ▶ Very Low Noise Figure
- ▶ Automatic Switching From Receive Mode to Transmit Mode

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

GENERAL CHARACTERISTICS

Environment	Shipboard/Airborne
Size	13" long x 7" wide x 3.9" high
Weight8 pounds
Operating Current @ 28 VDC nom.	0.8A max.
Connectors RF.....	Type N Female
DC	MS3112E10-6P