# Low Noise UHF Band

*Solid State Amplifier*

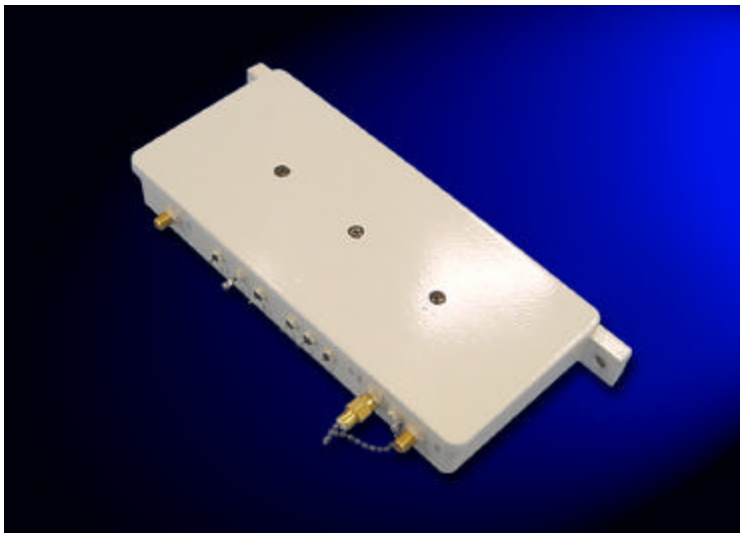
Aethercomm P/N LNA 0.28-0.30-2.0 is a low noise solid state amplifier for use in the USMC TPN22 Radar. This is a direct replacement for the original unit designed over 30 years ago. Aethercomm uses state of the art technologies to deliver a better performing and lower cost unit for the Marines. This LNA has a 3 dB BW of 280 to 300 MHz. Internal pre-selection filtering delivers a 60 dB bandwidth of ± 90 MHz from a 290 MHz center frequency. Nominal gain is 50 dB with internal gain control that has a minimum of 60 dB dynamic range. Noise figure is 2.0 dB maximum at 25C. Input/output VSWR is 1.5:1 max. AGC voltage is applied externally with a level of 0 to 10 Vdc.

This PA operates from a ± 12.0 Vdc supply. Standard protection features include open/short circuit output protection, over voltage protection, reverse polarity protection and over temperature protection. This unit operates across the full mil-temp range. Input/output RF connectors are SMA female standard. This LNA has the same form, fit and function as the original unit and has the approximate dimensions of 3" x 7" x 1".

### Typical Performance at 290 MHz at 25° C

| Parameter | +25°C |
|---|---|
| Noise Figure (dB) | 2.0 |
| 3 dB Bandwidth (MHz) | ± 12.5 MHz |
| 60 dB Bandwidth (MHz) | ± 90 MHz |
| Input Return Loss (dB) | -14.9 |
| Output Return Loss (dB) | -14.9 |
| Nominal Gain (dB) | 60 |
| Adjustable Gain Range (dB) | 60 dB |
| 1 dB Compression Point (dBm) | 10 |

- **Noise figure is 1.8 dB typical**
- **Nominal gain is 50 dB**
- **Internal pre-selection filtering**
- **AGC circuitry provides 60 dB dynamic range**
- **P1dB > 10 dBm**



This is an example of an Aethercomm standard product. Aethercomm designs and manufactures high performance, high power CW or pulsed SSPAs for commercial, military and satellite communications customers.

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