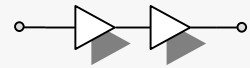
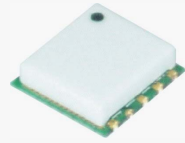


Features

- 37.5 dB Gain at 859 MHz
- 18 dBm P1dB
- 37 dBm Output IP3
- 0.65 dB Noise Figure
- Operating at Single 5 V Supply
- 110 mA Current Consumption

Description

The plerow™ ALN-series is the compactly designed surface-mount module for the use of the LNA with or without the following gain blocks in the infrastructure equipment of the mobile wirelss (CDMA, GSM, PCS, PHS, WCDMA, DMB, WLAN, WiBro, WiMAX), GPS, satellite communication terminals and so on. It has an exceptional performance of low noise figure, high gain, high OIP3, and low bias current. The stability factor is always kept less than unity over the application band in order to confirm its unconditionally stable implementation to the application system environment. The surface-mount module package including the completed matching circuit and other components necessary just in case allows very simple and convenient implementation onto the system board in mass production level.



2-stage Single Type

Specifications

| Parameter | Unit | Specification |
|---------------------------------|------|-------------------|
| Frequency Range | MHz | 824 ~ 894 |
| Gain | dB | 37.5 |
| Gain Flatness | dB | ± 0.5 |
| Noise Figure | dB | 0.65 |
| Output IP3 | dBm | 37 |
| S11 / S22 | dB | -14 / -14 |
| Output P1dB | dBm | 18 |
| Supply Current | mA | 110 |
| Supply Voltage | V | 5 |
| Impedance | Ω | 50 |
| Max. RF Input Power @ CDMA 20FA | dBm | 5 |
| Package Type & Size | mm | SMT, 13Wx13Lx3.8H |

1) Measurement conditions are as follows: T = 25°C, V_{CC} = 5 V, Freq. = 859 MHz, 50 ohm system.

2) OIP3 is measured with two tones at an output power of +8 dBm / tone separated by 1 MHz.

3) Note: We recommend that the VSWR toward a source and load be less than 1:4 to avoid an unwanted oscillation.

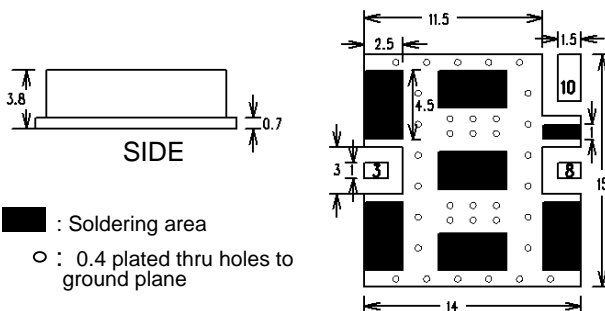
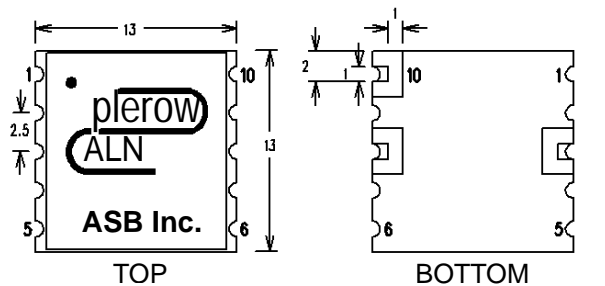
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Outline Drawing



(Unit: mm)

SUGGESTED FOOTPRINT

| Pin Number | Function |
|------------|----------|
| 3 | RF In |
| 8 | RF Out |
| 10 | +Vcc |
| Others | Ground |

Note: 1. The number and size of ground via holes in a circuit board is critical for thermal RF grounding considerations.

2. We recommend that the ground via holes be placed on the bottom of all ground pins for better RF and thermal performance, as shown in the drawing at the left side.