

### 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

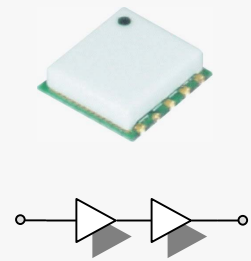
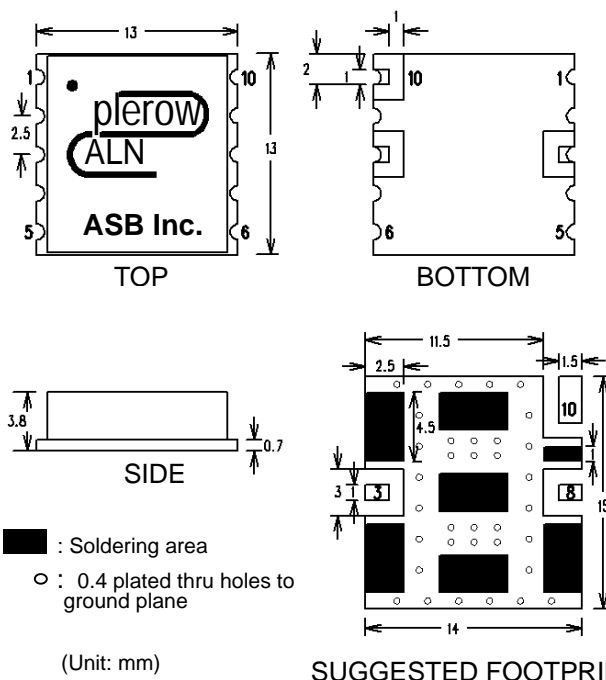
The plerow™ ALN-series is the compactly designed surface-mount module for the use of the LNA with or without the following gain blocks in the infrastructure equipment of the mobile wireless (CDMA, GSM, PCS, PHS, WCDMA, DMB, WLAN, WiBro, WiMAX), GPS, satellite communication terminals and so on. It has 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.

### 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<sub>CC</sub> = 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.

### Outline Drawing



2-stage Single Type

### More Information

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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.