

Features

- 50 dB Gain at 2642.5 MHz
- +12 ~ +17 dBm P1dB
- +24 dBm Output IP3
- 1.2 dB Noise Figure
- 25 dB Gain Control Range
- Power-detecting Function
- Power Shutdown Available

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

@ T = 25°C, V_{CC} = 5 V, Freq. = 2642 MHz, 50 ohm

Parameter	Unit	Specifications		
		Min	Typ	Max
Frequency Range	MHz	2630		2655
Gain	dB	48	50	
Gain Flatness	dB		± 0.5	± 0.7
Noise Figure	dB		1.2	1.3
Output IP3	dBm		24	
S11 / S22	dB			-14 / -14
Output P1dB	dBm		12 ~ 17	
Power-detecting Range	dBm		-5 ~ +15	
Power-detecting DC Output	V		0.3 ~ 2.9	
Switching Time	μsec		-	
Supply Current	mA			250
Supply Voltage	V		5	
Impedance	Ω		50	
Max. RF Input Power	dBm		C.W 29 ~ 31 (before fail)	
Package Type & Size	mm		Surface Mount Type, 36Wx36Lx4.0H	

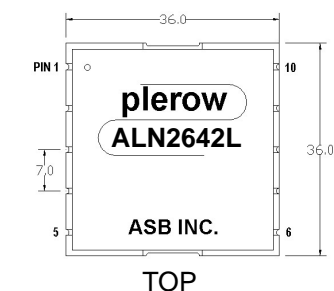
1) Operating temperature is -40°C to +85°C.

2) OIP3 is measured with two tones at an output power of 3 dBm / tone separated by 1 MHz.

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

4) S11/S22 (max) is the worst value within the frequency band.

Outline Drawing



TOP

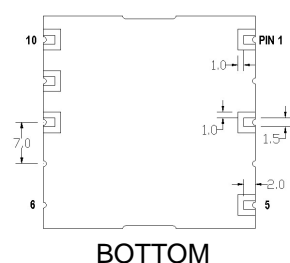


SIDE

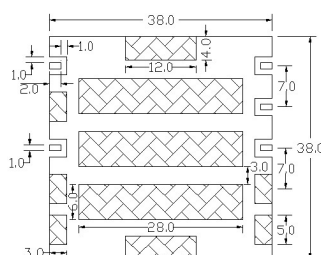
; soldering area

○ ; 0.5 plated thru hole to ground plane

(unit ; mm)



BOTTOM



SUGGESTED FOOTPRINT

Pin Number	Function
1	Shutdown
3	RF In
5	ATT. Cont.
8	RF Out
9	RF Detect
10	+Vcc
All Other Pins	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.