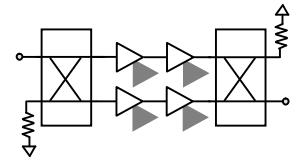
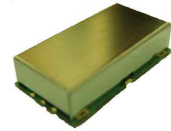


Features

- S<sub>21</sub> = 27.2 dB@1880 MHz  
= 26.8 dB@1920 MHz
- NF of 0.65 dB over Frequency
- Unconditionally Stable
- Single 5 V Supply
- High OIP3@Low Current
- 2-stage Balanced Type



Specifications (in Production)

Typ.@T = 25 °C, V<sub>s</sub> = 5 V, Freq. = 1900 MHz, Z<sub>o,sys</sub> = 50 ohms

| Parameter                                       | Unit | Specifications                 |      |         |
|-------------------------------------------------|------|--------------------------------|------|---------|
|                                                 |      | Min                            | Typ  | Max     |
| Frequency Range                                 | MHz  | 1880                           |      | 1920    |
| Gain                                            | dB   | 26                             | 27   |         |
| Gain Flatness                                   | dB   |                                | ±0.2 | ±0.3    |
| Noise Figure                                    | dB   |                                | 0.65 | 0.70    |
| Output IP3 <sup>(1)</sup>                       | dBm  | 39                             | 40.5 |         |
| S <sub>11</sub> /S <sub>22</sub> <sup>(2)</sup> | dB   |                                |      | -20/-20 |
| Output P1dB                                     | dBm  | 23                             | 24   |         |
| Switching Time <sup>(3)</sup>                   | µsec |                                | -    |         |
| Supply Current                                  | mA   |                                | 240  | 280     |
| 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, 22Wx12Lx5H |      |         |

More Information

Website: [www.asb.co.kr](http://www.asb.co.kr)  
 E-mail: [sales@asb.co.kr](mailto:sales@asb.co.kr)  
 Tel: (82) 42-528-7223  
 Fax: (82) 42-528-7222

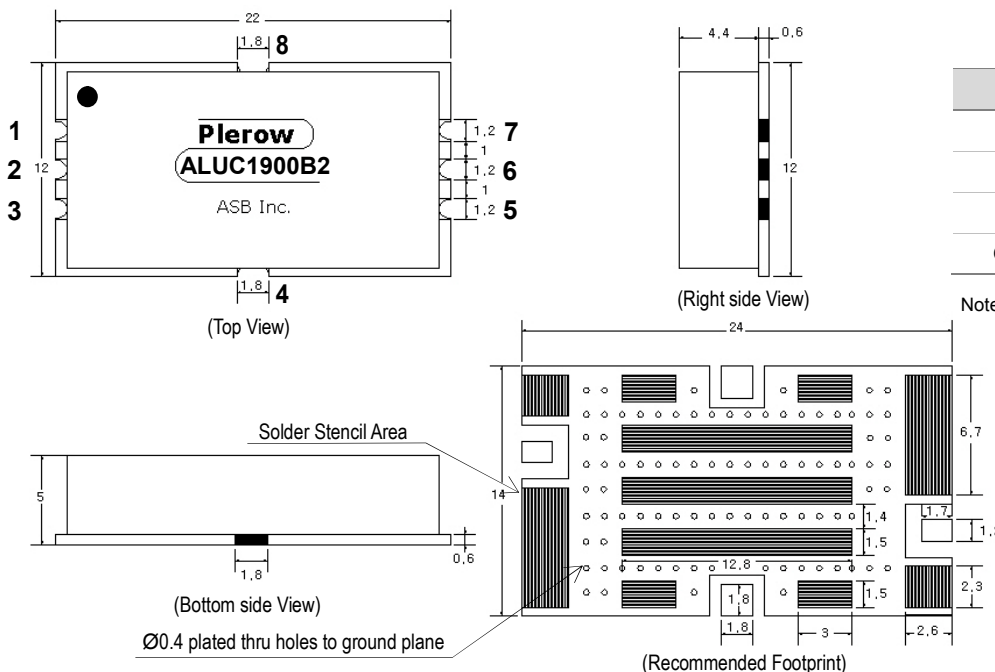
Operating temperature is -40 °C to +85 °C.

1) OIP3 is measured with two tones at an output power of +4 dBm/tone separated by 1 MHz.

2) S<sub>11</sub>, S<sub>22</sub>(max) is the worst value within the frequency band.

3) Switching time means the time that takes for output power to get stabilized to its final level after switching DC voltage from 0 V to V<sub>s</sub>.

Outline Drawing (Unit: mm)



| Port Number    | Function       |
|----------------|----------------|
| 1              | RF In          |
| 5              | RF Out         |
| 4, 8           | V <sub>s</sub> |
| Others, Bottom | GND            |

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.

**Typical Performance  
(Measured)**

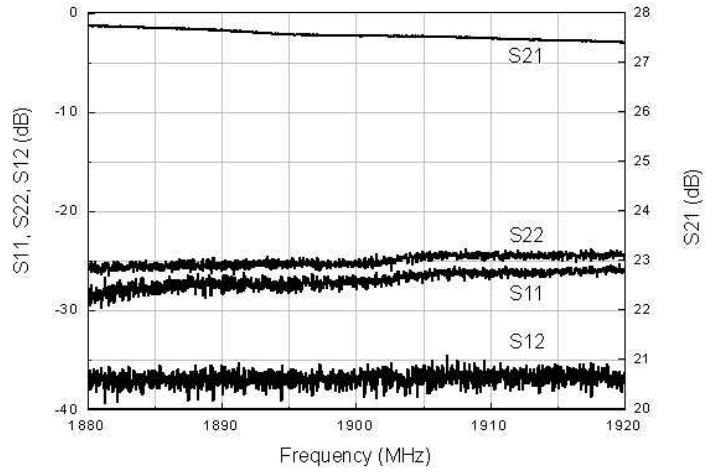
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**1880~1920 MHz**

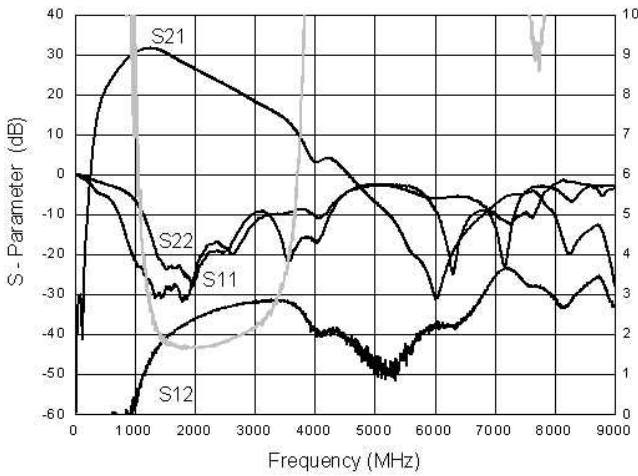
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**+5 V**

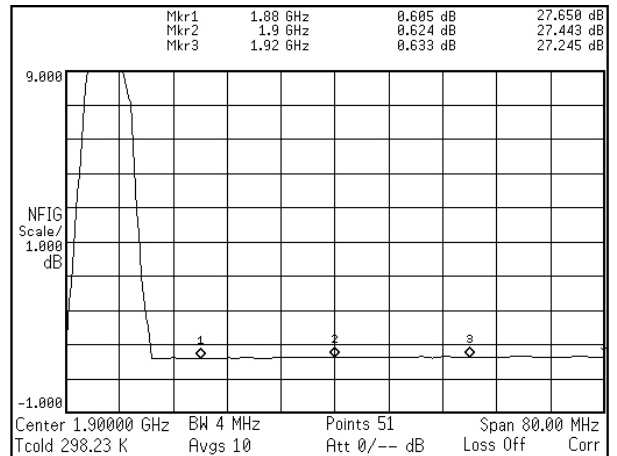
**S-parameters**



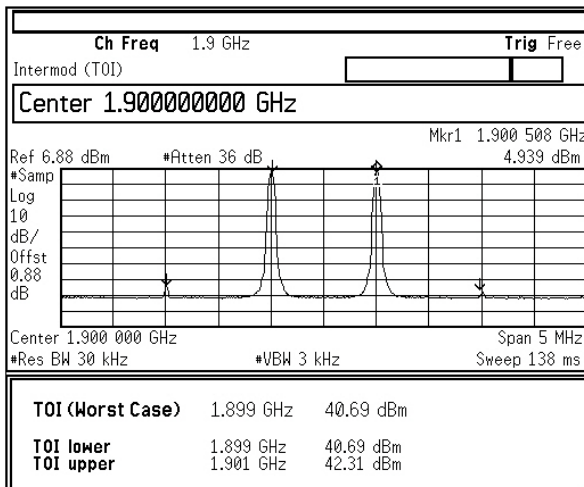
**S-parameters & K Factor**



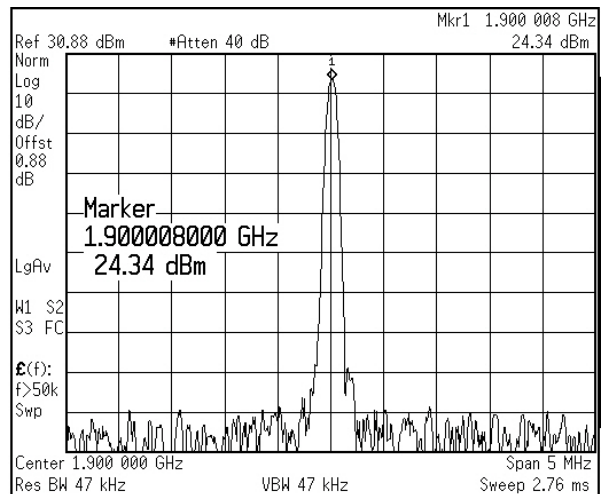
**Noise Figure**



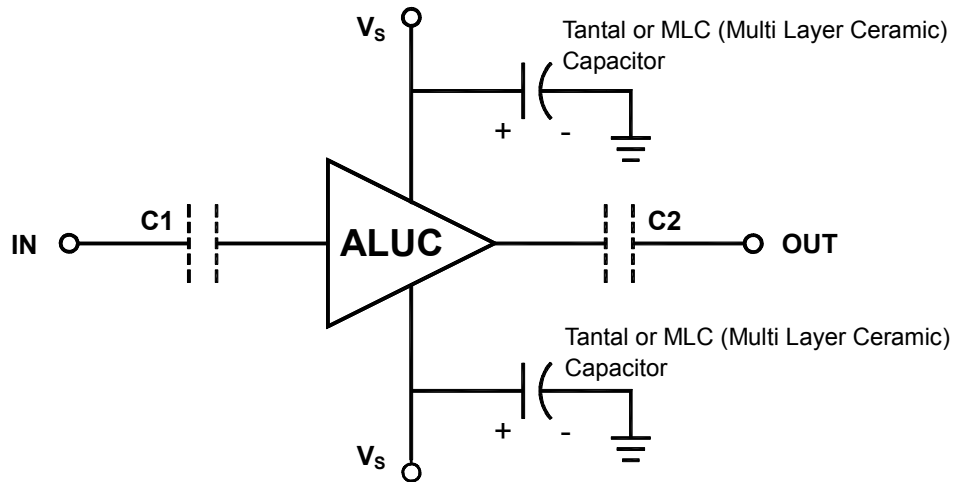
**OIP3**



**P1dB**

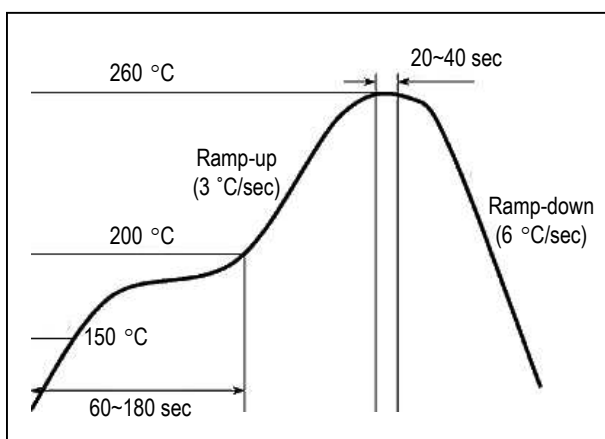


**Application Circuit**



- 1) The tantalum or MLC (Multi Layer Ceramic) capacitor is optional and for bypassing the AC noise introduced from the DC supply. The capacitance value may be determined by customer's DC supply status. The capacitor should be placed as close as possible to Vs pin and be connected directly to the ground plane for the best electrical performance.
- 2) DC blocking capacitors are always necessarily placed at the input and output port for allowing only the RF signal to pass and blocking the DC component in the signal. The DC blocking capacitors are included inside the ALUC module. Therefore, C1 & C2 capacitors may not be necessary, but can be added just in case that the customer wants. The value of C1 & C2 is determined by considering the application frequency.

**Recommended Soldering Reflow Process**



**Evaluation Board Layout**

