# Linear Amplifier GLM2123-L

RFHIC

## Product Features

- GaAs MESFET + InGaP HBT
- No matching circuit needed
- High IP3
- Surface Mount Hybrid Type & Reel Packing
- Small Size
- Alumina Substrate
- Pb Free / RoHS Standard

## Applications

- PCS Repeater
- RF Sub-Systems
- Base Station




Package : CP-16B

## Descriptions

It is one of the smallest matched Amplifiers.
This family of High gain Linear Amplifier has superior performance comes with a modest price tag

# Electrical Characteristics

### Absolute Minimum and Maximum Ratings

| PARAMETER | UNIT | MIN | MAX |
|---|---|---|---|
| Device Voltage | VDC | | |
| RF Input Power | dBm | | +7 |
| Storage Temperature | ℃ | -40 | +125 |

### Operating Ranges

| PARAMETER | UNIT | MIN | TYP | MAX |
|---|---|---|---|---|
| Operating Frequency | MHz | 1800 | - | 2200 |
| Device Voltage | VDC | - | +5 | |
| Case Temperature | ℃ | | | |

### Electrical Specifications

**(Ta=+25℃, $V_{DD}$=+5V, F=2140MHz)**

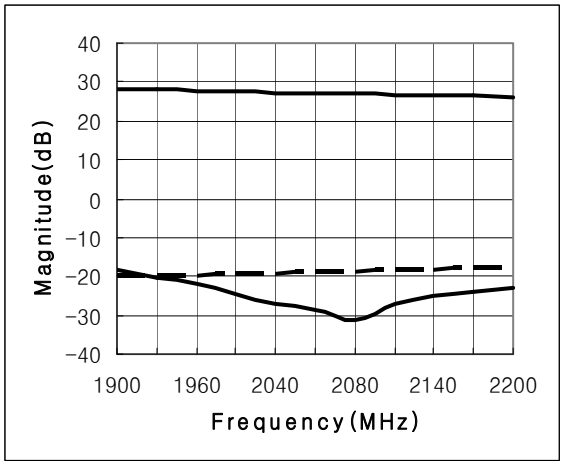
| PARAMETER | UNIT | MIN | TYP | MAX |
|---|---|---|---|---|
| Gain | dB | | 26.6 | |
| Input Return Loss | dB | | -25 | |
| Output Return Loss | dB | | -18 | |
| Output IP3 | dBm | 38 | 42 | |
| 1dB Compression Point | dBm | | 22 | |
| Noise Figure | dB | | 5.9 | |
| DC Current | mA | | 200 | |
| Supply Voltage | VDC | | +5 | |
| Thermal Resistance(Rth) | ℃/W | | | |

OIP3 is measured with two tones, at an output power of 10dBm/tone separated by 1MHz

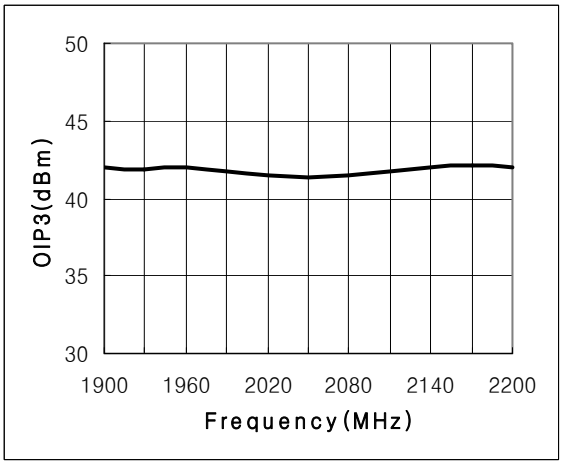
## Performance Charts ($V_d$=5V, $I_d$=200mA, $T_c$=25℃)

| Frequency | MHz | 1900 | 1960 | 2020 | 2080 | 2140 | 2200 |
|---|---|---|---|---|---|---|---|
| Gain | dB | 28.2 | 27.6 | 27.1 | 26.9 | 26.6 | 26.1 |
| S11 | dB | -18 | -22 | -27 | -31 | -25 | -23 |
| S22 | dB | -20 | -20 | -19 | -18 | -18 | -17 |
| OIP3 | dBm | 42 | 42 | 41.5 | 41.5 | 42 | 42 |
| P1dB | dBm | 22 | 21.9 | 22 | 22 | 22 | 22.1 |
| Noise Figure | dB | 5.9 | 5.8 | 5.8 | 5.9 | 5.9 | 5.9 |

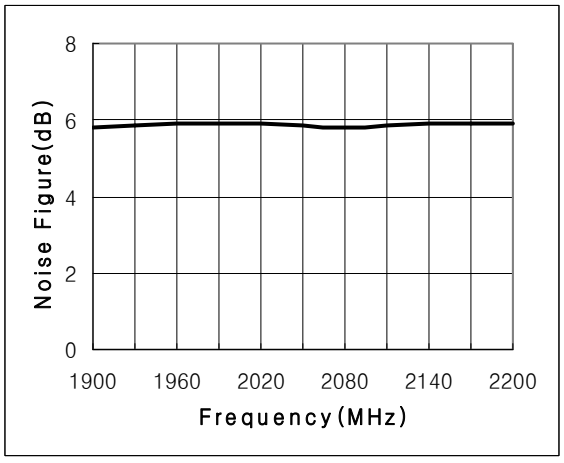
### S-Parameter vs. Frequency



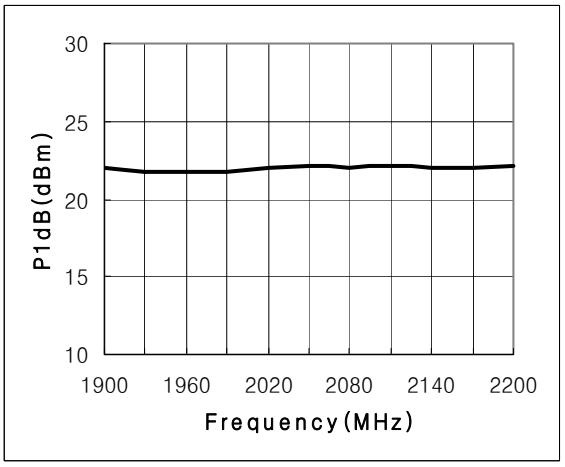

### OIP3 vs. Frequency



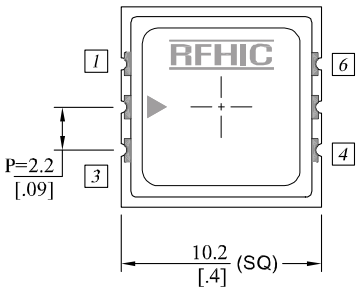

### Noise Figure vs. Frequency




### P1dB vs. Frequency



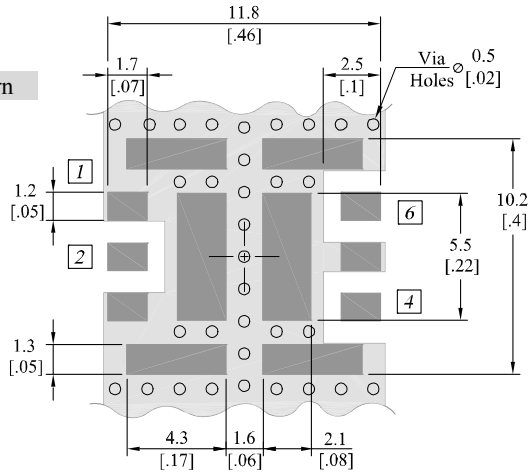
**Package Dimensions** (Type: CP-16B)




Unit : mm [inch] | Tolerance : ±0.2 .008

| Pin No. | Function |
|---|---|
| ***1, 3, 5*** | Ground |
| ***2*** | Input |
| ***4*** | Vcc |
| ***6*** | Output |

Recommended Pattern




Same Package Platform for Below Part Numbers

GLM0921-L / GLM1521-L / GBM1821-L / GLM2121-L
GLM2521-L / GLM2123-L / GLM2723-L / GLM3623-L
2LM0905-L / 2LM2105-L

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