SANLAND

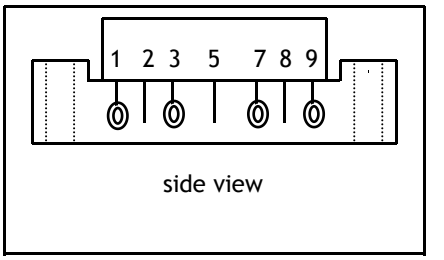
# GaAs Push-Pull Module SMG1022/CATV

## FEATURES

- GaAs active devices
- Power gain @22dB
- Low distortion
- Excellent linear gain
- Low noise figure
- High reliability
- Low cost

## OUTLINE

PIN CONFIGURATION




| Pin | Description |
|---|---|
| 1 | Input |
| 5 | $+V_B$ |
| 9 | Output |
| 2、3、7、8 | GND |

## DESCRIPTION

The SMG1022 is a GaAs hybrid push-pull amplifier module. The part employs GaAs dies and is operated from 50 MHz to 1000MHz with supply voltage +24V( DC)

## QUICK REFERENCE DATA

| SYMBOL | PARAMETER | CONDITIONS | MIN. | MAX. | UNITS |
|---|---|---|---|---|---|
| $G_p$ | Power Gain | f=50 MHz | 22 | 23.5 | dB |
| $I_{tot}$ | Total current consumption(DC) | $V_B$=24V | 250 | 330 | mA |

SANLAND TECHNOLOGY

·Tel：86-0755-28968333
·Fax：86-0755-89724455
·2021.3

·Http：www.sanlandtech.com
·E-mail：info@sanlandtech.com

## LIMITING VALUES

In accordance with the Absolute Maximum Rating System

| SYMBOL | PARAMETER | MIN. | MAX. | UNITS |
|---|---|---|---|---|
| $V_i$ | RF input voltage | - | 50 | dBmV |
| $T_{stg}$ | Storage temperature | -40 | +100 | ℃ |
| $T_{mb}$ | Operating mounting base temperature | -20 | +90 | ℃ |

## CHARACTERISTICS

(Bandwidth 50 to 1000MHz; $T_{mb}$=25℃, $V_B$=24V, $Z_S$=$Z_L$=75Ω)

| SYMBOL | PARAMETER | UNIT | MIN. | TYP. | MAX. | CONDITIONS |
|---|---|---|---|---|---|---|
| $G_p$ | Power Gain | dB | 22 | - | 23.5 | f=50MHz |
| SL | Slope cable equivalent | dB | 0.5 | 1.5 | 2.5 | f=50 to 1000 MHz |
| FL | Flatness of frequency response | dB | - | - | ±0.5 | f=50 to 1000 MHz |
| S11＆S22 | Input ＆output return loss | dB | - | - | -16 | f=50 to 860 MHz |
| | | dB | | | -14 | f=861 to 1000 MHz |
| CTB | Composite Triple Beat | dB | - | - | -62 | PAL 60 channel; Vo=44dBmV; CTB measured at 543.25 MHz; CSO measured at 544.5 MHz; |
| CSO | Composite Second Order distortion | dB | - | - | -63 | |
| $X_{mod}$ | Cross Modulation | dB | - | - | -55 | |
| $V_o$ | Output Voltage | dBmV | 60 | - | - | $d_{im}$=-60dB |
| F | Noise Figure | dB | - | 4.0 | - | f=860 MHz |
| $I_{tot}$ | Total Current Consumption | mA | 250 | 330 | | $V_B$=+24V |

**The module normally operates at $V_B$=24 V(±0.5),**

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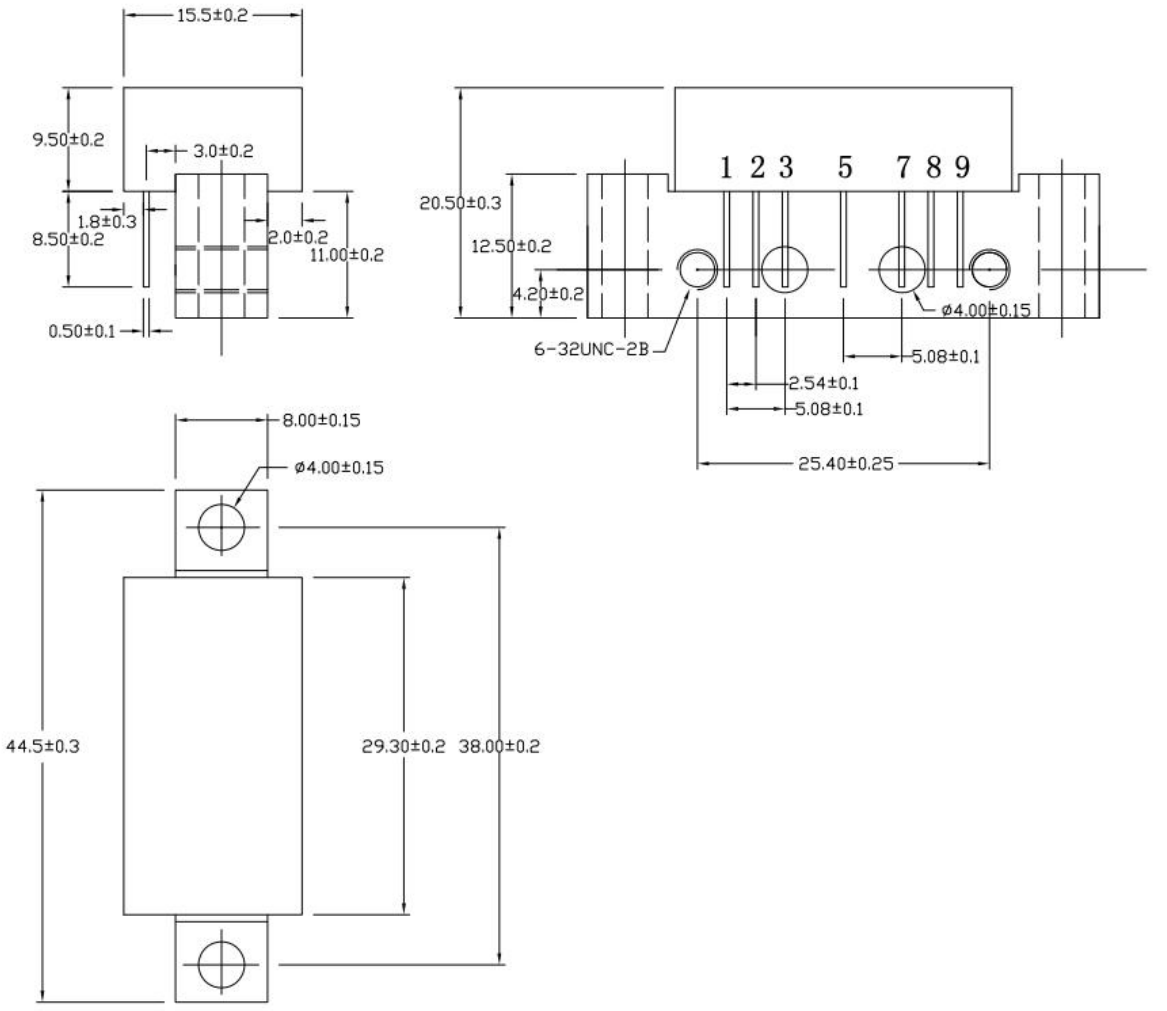
## MODULE DIMENSIONS

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