

# GN1021

## GaAs N Channel MES Type IC

For SHF band IF amplification and UHF band general-purpose amplification

### ■ Features

- Bias resistor built-in
- Low noise
- High gain

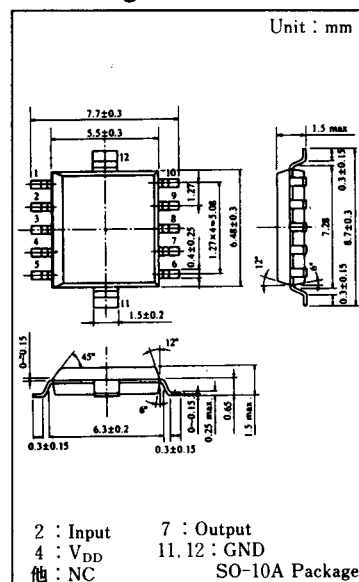
### ■ Absolute Maximum Ratings (Ta=25°C)

| Item                 | Symbol    | Value      | Unit |
|----------------------|-----------|------------|------|
| Power Supply Voltage | $V_{DD}$  | 15         | V    |
| Circuit Current      | $I_{DD}$  | 80         | mA   |
| Power Dissipation    | $P_D$     | 500        | mW   |
| Channel Temperature  | $T_{ch}$  | 150        | °C   |
| Storage Temperature  | $T_{stg}$ | -55 ~ +150 | °C   |

### ■ Electrical Characteristics (Ta=25°C)

| Item                              | Symbol     | Condition                                                                | min. | typ. | max. | Unit |
|-----------------------------------|------------|--------------------------------------------------------------------------|------|------|------|------|
| Circuit Current                   | $I_{DD}$   | $V_{DD}=8V, Z_S=Z_L=50\Omega$                                            | 20   | 40   | 70   | mA   |
| Power Gain                        | PG         | $V_{DD}=8V, f=1.5GHz, Z_S=Z_L=50\Omega$                                  | 16   | 19   | 22   | dB   |
| Noise Figure                      | NF         | $V_{DD}=8V, f=1.5GHz, Z_S=Z_L=50\Omega$                                  |      | 3    | 4    | dB   |
| Isolation                         | $I_{SO}$   | $V_{DD}=8V, f=1.5GHz, Z_S=Z_L=50\Omega$                                  | 24   | 35   |      | dB   |
| $I_{dB}$ Compression Output Level | $P_O$      | $V_{DD}=8V, f=1.5GHz, Z_S=Z_L=50\Omega$                                  |      | 10   |      | dBm  |
| Input $V_{SWR}$                   | $V_{SWRI}$ | $V_{DD}=8V, f=0.9\sim 1.5GHz, Z_S=Z_L=50\Omega$                          |      | 2.5  | 3.5  |      |
| Output $V_{SWR}$                  | $V_{SWRO}$ | $V_{DD}=8V, f=0.9\sim 1.5GHz, Z_S=Z_L=50\Omega$                          |      | 2    | 3    |      |
| Tertiary Distortion               | $IM_3$     | $V_{DD}=8V, Z_S=Z_L=50\Omega, f_1=0.988GHz, f_2=1GHz$<br>Intercept point |      | 18   |      | dBm  |

### ■ Package Dimensions



### (Equivalent Circuit)

