

## NMSD22

### DC~50GHz, DPDT

#### Features:

- \* Low VSWR
- \* Low Insertion Loss
- \* High Isolation

#### Applications:

- \* Wireless
- \* Transmitter
- \* Laboratory Test
- \* Radar

#### Electrical

Frequency: DC~50GHz  
Impedance: 50Ω

| Frequency range (GHz) | Insertion Loss (dB) | Isolation (dB) | VSWR |
|-----------------------|---------------------|----------------|------|
| DC-6                  | 0.3                 | 70             | 1.3  |
| 6-12                  | 0.4                 | 60             | 1.4  |
| 12-18                 | 0.5                 | 55             | 1.5  |
| 18-26.5               | 0.7                 | 50             | 1.7  |
| 26.5-32               | 0.8                 | 50             | 1.8  |
| 32-40                 | 0.9                 | 50             | 1.9  |
| 40-50                 | 1.0                 | 45             | 2.0  |

| Voltage*1 (V) |          | +12 | +24 | +28 |
|---------------|----------|-----|-----|-----|
| Current (mA)  | Failsafe | 350 | 200 | 180 |
|               | Latching | 400 | 200 | 185 |

[1] The voltage can be selected according to user requirements.

#### Mechanical

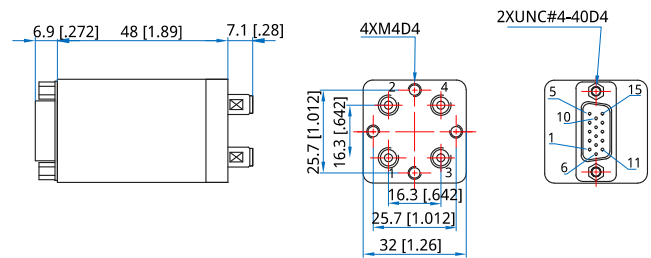
|                                              |                                 |
|----------------------------------------------|---------------------------------|
| Size*2:                                      | 32*32*62mm<br>1.26*1.26*2.441in |
| Switching Sequence:                          | Break before Make               |
| Switching Time:                              | 15mS max.                       |
| Operation Life:                              | 2M Cycles                       |
| Vibration (operating):                       | 20-2000Hz, 10G RMS              |
| Mechanical Shock (non-operating):            | 30G, 1/2sine, 11mS              |
| RF Connectors:                               | 2.4mm Female                    |
| Power Supply & Control Interface Connectors: | D-Sub 15                        |
| Mounting:                                    | 4-Φ4mm through-hole             |

[2] Exclude connectors.

#### Environmental

|                       |           |
|-----------------------|-----------|
| Temperature:          | -25~+65°C |
| Extended Temperature: | -45~+85°C |

#### Outline Drawings



Unit: mm [in]

Tolerance: ±0.5mm [±0.02in]

#### Additional Options

TTL: T

Indicators: I

Extended Temperature: Z

Positive Common

Waterproof Sealing Type

#### How To Order

**NMSD22-F-WXYZ**

F: Frequency in GHz

W: Actuator Type. Failsafe: 0, Latching: 1.

X: Voltage. +12V: E, +24V: K, +28V: M.

Y: Power Interface. Pin: 0, D-Sub: 1.

Z: Additional Options.

#### Examples:

To order a DPDT switch, DC-18GHz, Failsafe, +12V, D-Sub, TTL, Indicators, specify NMSD22-18-0E1TI.

Customization is available upon request.

## Pin Numbering

### Failsafe

| Pin  | Function        | Pin   | Function        |
|------|-----------------|-------|-----------------|
| 1    | COM(RF: 1 to 3) | 13~14 | Indicator (1~2) |
| 2    | VDC(RF: 1 to 3) | 15    | Indicator (COM) |
| 3~12 | NC              |       |                 |

### Failsafe&TTL

| Pin | Function        | Pin   | Function        |
|-----|-----------------|-------|-----------------|
| 1   | VDC(RF: 1 to 3) | 4~12  | NC              |
| 2   | COM(RF: 1 to 3) | 13~14 | Indicator (1~2) |
| 3   | A1(RF: 1 to 3)  | 15    | Indicator (COM) |

### Latching

| Pin | Function       | Pin   | Function        |
|-----|----------------|-------|-----------------|
| 1   | V1(RF: 1 to 2) | 4~12  | NC              |
| 2   | V2(RF: 1 to 3) | 13~14 | Indicator (1~2) |
| 3   | COM            | 15    | Indicator (COM) |

### Latching&TTL

| Pin | Function       | Pin   | Function        |
|-----|----------------|-------|-----------------|
| 1   | VDC            | 5~12  | NC              |
| 2   | COM            | 13~14 | Indicator (1~2) |
| 3   | A1(RF: 1 to 2) | 15    | Indicator (COM) |
| 4   | A2(RF: 1 to 3) |       |                 |

## Driving Schematic Diagram

