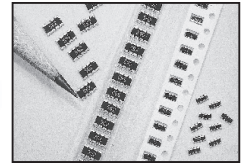


### FEATURES

- ULTRA MINIATURE SIZE AND LOW PROFILE
- THICK FILM CONSTRUCTION
- HIGH DENSITY PACKAGING OFFERS SIGNIFICANT SPACE SAVINGS
- REFLOW SOLDERING COMPATIBLE

**RoHS  
Compliant**  
includes all homogeneous materials



\*See Part Number System for Details

### SPECIFICATIONS

| Type                              | NRSNE2I2       | NRSNE2I4             |
|-----------------------------------|----------------|----------------------|
| Termination Type                  | Flat           | Flat                 |
| Size W x L (mm)                   | 0.6 x 0.8      | 0.6 x 1.4            |
| No. of Resistors & Circuit        | 2R Isolated    | 4R Isolated          |
| Power Rating per Resistor @ +70°C | 1/32 (.031W)   | 1/32 (.031W)         |
| Resistance Tolerance*             | J (±5%)        |                      |
| Resistance Range                  | 10Ω ~ 1MΩ      | 10Ω ~ 1MΩ            |
| Jumper                            | Under 50mΩ     |                      |
| Current Ratings                   | Rated - 0.5A   | Max. Overload - 1.0A |
| Temperature Coefficient           | ±200ppm        |                      |
| Maximum Working Voltage**         | 12.5V          |                      |
| Maximum Overload Voltage          | 25V            |                      |
| Operating Temperature Range       | -55°C ~ +125°C |                      |

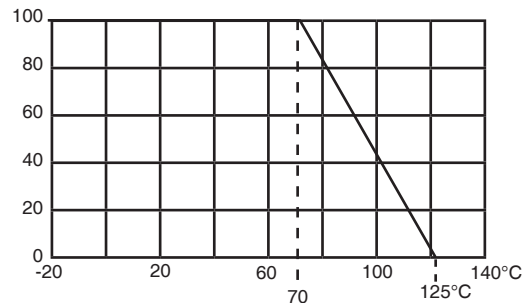
\*1% (F) tolerance available special order. Contact NIC regarding availability.

\*\* Maximum allowable continuous voltage for all resistors is the lower of the two values: "MAXIMUM WORKING VOLTAGE" as specified, or

$$\sqrt{\text{Power rating (WATTS)} \times \text{Resistance (OHMS)}}$$

### Power Derating Curve:

For operation above 70°C, power rating must be derated according to the following chart:



### PART NUMBER SYSTEM (5% TOLERANCE, E-24 VALUES)

NRSN E 2I2 J 103 TR F

- Series
- Termination Type (E = Flat Termination)
- Configuration Designator (See circuit schematics and component diagrams for explanation)
- Tolerance Code: J=5%
- Resistance Code: First 2 figures are significant, 3rd digit is the multiplier, "R" indicates a decimal point.
- Tape & Reel Packaging
- RoHS compliant

### PART NUMBER SYSTEM (1% TOLERANCE, E-24 VALUES)

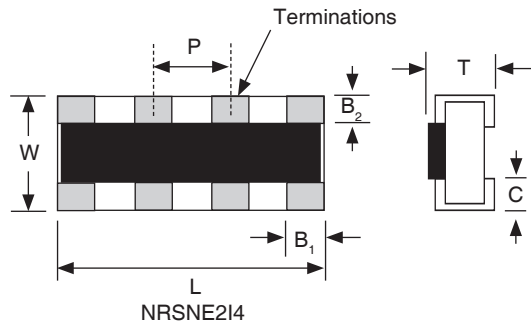
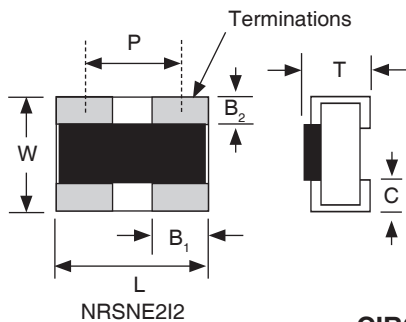
NRSN E 2I2 F 1002 TR F

- Series
- Termination Type (E = Flat Termination)
- Configuration Designator (See circuit schematics and component diagrams for explanation)
- Tolerance Code: F=1%
- Resistance Code: First 3 figures are significant, 4th digit is the multiplier, "R" indicates a decimal point.
- Tape & Reel Packaging
- RoHS compliant

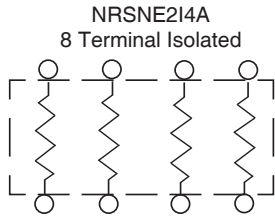
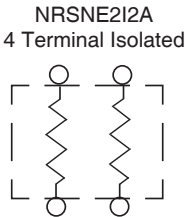


COMPONENT DIMENSIONS (mm)

| Type     | W           | L           | P         | T           | B <sub>1</sub> | B <sub>2</sub> | C           |
|----------|-------------|-------------|-----------|-------------|----------------|----------------|-------------|
| NRSNE2I2 | 0.60 ± 0.10 | 0.80 ± 0.10 | 0.50 nom. | 0.35 ± 0.10 | 0.30 ± 0.10    | 0.15 ± 0.10    | 0.15 ± 0.10 |
| NRSNE2I4 | 0.60 ± 0.10 | 1.40 ± 0.10 | 0.40 nom. | 0.35 ± 0.10 | 0.20 ± 0.10    | 0.15 ± 0.07    | 0.15 ± 0.05 |

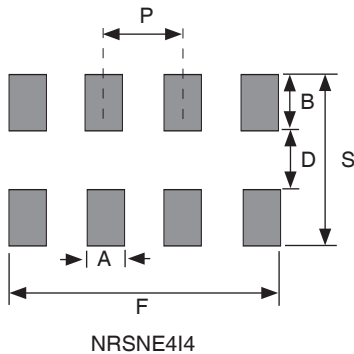
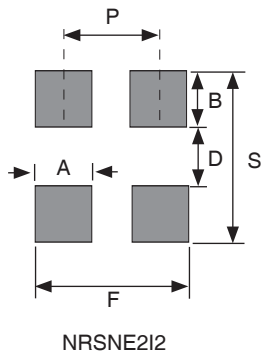


CIRCUIT SCHEMATICS



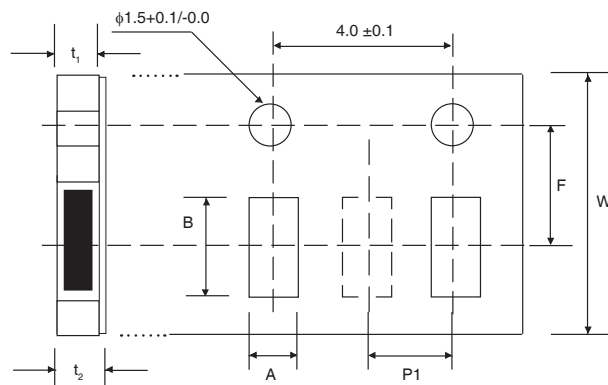
RECOMMENDED LAND PATTERN DIMENSIONS (mm)

| Type     | Reflow Soldering |      |      |      |      |      |
|----------|------------------|------|------|------|------|------|
|          | A                | B    | D    | P    | S    | F    |
| NRSNE2I2 | 0.30             | 0.30 | 0.30 | 0.50 | 0.90 | 0.80 |
| NRSNE2I4 | 0.20             | 0.30 | 0.30 | 0.40 | 0.90 | 1.40 |



### TAPE DIMENSIONS (mm)

| Type     | Material | A ± 0.15 | B ± 0.15 | F ± 0.05 | p1 ± 0.05 | W ± 0.30 | t <sub>1</sub> ± 0.05 | t <sub>2</sub> ± 0.10 |
|----------|----------|----------|----------|----------|-----------|----------|-----------------------|-----------------------|
| NRSNE2I2 | Paper    | 0.70     | 0.90     | 3.50     | 2.00      | 8.00     | 0.43                  | 0.50                  |
| NRSNE2I4 |          | 0.70     | 1.60     | 3.50     | 2.00      | 8.00     | 0.43                  | 0.50                  |



### REEL DIMENSIONS (mm)

| Type     | A         | B         | C     | D     | E    | W    | Qty/Reel |
|----------|-----------|-----------|-------|-------|------|------|----------|
| NRSNE2I2 | φ180      | φ60       | φ13.0 | φ21.0 | 2.0  | 9.0  | 10,000   |
| NRSNE2I4 | -3.0/+0.0 | -0.0/+1.0 | ±2.0  | ±0.8  | ±0.5 | ±0.3 |          |

