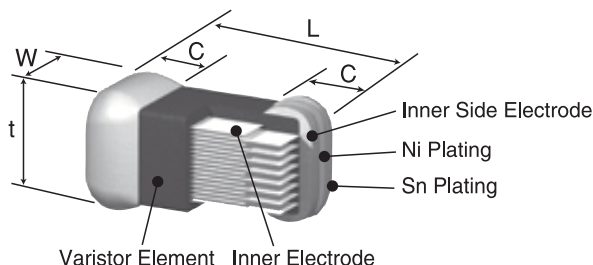




## features

- Symmetrical non-linearity V-I characteristics absorb positive and negative surge
- Suitable for protection of automotive applications from load dump surge on electronic components
- Meets JASO load dump surge test requirements
- Operating temperatures up to 125°C
- High resistance to cyclic temperature stress
- Suitable for both flow and reflow solderings
- Products meet EU RoHS requirements
- AEC-Q200 Qualified

## dimensions and construction



| Type<br>(Inch Size Code) | Dimensions inches (mm)  |                         |                         |                         |
|--------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|                          | L                       | W                       | t                       | C                       |
| NV73DS 2L<br>(2420)      | .240±.014<br>(6.1±0.35) | .201±.014<br>(5.1±0.35) | .146 max.<br>(3.7 max.) | .041±.008<br>(1.05±0.2) |

## ordering information

| NV73 | DS          | 2L              | T                    | TE                      | 27               |
|------|-------------|-----------------|----------------------|-------------------------|------------------|
| Type | Energy Code | Size            | Termination Material | Packaging               | Varistor Voltage |
|      | A<br>B      | 2L: 6.1 x 5.1mm | T: Sn                | TE: 7" embossed plastic |                  |

## applications and ratings

| Part Designation | Varistor Voltage (Range) (V) | Maximum Allowable Voltage  |         | Clamping Voltage (V) | Maximum Load Dump Surge Energy | Maximum Peak Current | Short-Time Applied Voltage (5 min) |
|------------------|------------------------------|----------------------------|---------|----------------------|--------------------------------|----------------------|------------------------------------|
|                  | V <sub>1mA</sub>             | A.C.(V <sub>r.m.s.</sub> ) | D.C.(V) | V <sub>20A</sub>     | J                              | 8/20μs (A) 1 time    | (V <sub>DC</sub> )                 |
| NV73DSA2LTTE27   | 20~25                        | 14                         | 16      | 40                   | 70                             | 200                  | 24.5                               |
| NV73DSB2LTTE27   | 20~25                        | 14                         | 16      | 40                   | 63                             | 200                  | 24.5                               |
| NV73DSB2LTTE47   | 40~45                        | 30                         | 34      | 60                   | 65                             | 200                  | 38                                 |

Operating temperature range: -40°C to +125°C  
Storage temperature range: -40°C to +150°C

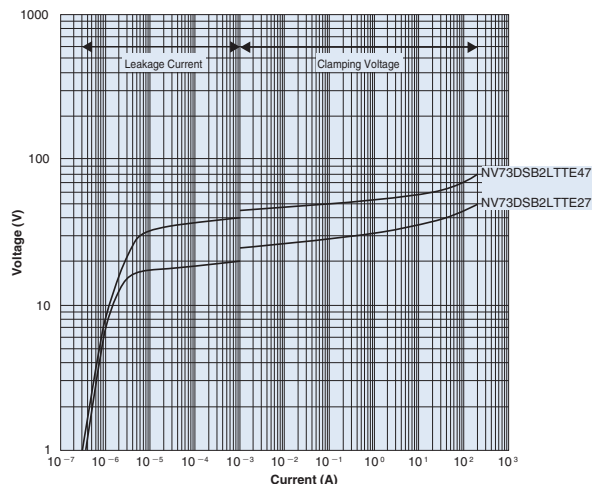
For further information on packaging, please refer to Appendix A.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

12/19/17

## environmental applications

### Voltage Current Curves (Ta = +25°C)



### Performance Characteristics

| Parameter                                       | Requirement $\Delta V_{1mA}$                       | Test Method                                                                                                                 |
|-------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Varistor Voltage                                | Within specified tolerance                         | Voltage between terminals when 1mA is flowed                                                                                |
| Resistance to Solder Heat                       | $\pm 10\%$                                         | $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ , 10 seconds $\pm 0.5$ second                                                   |
| Solderability                                   | 95% coverage minimum                               | $230^{\circ}\text{C} \pm 5^{\circ}\text{C}$ , 5 seconds $\pm 0.5$ second                                                    |
| Rapid Change of Temperature                     | $\pm 10\%$                                         | $-40^{\circ}\text{C}$ (30 minutes)/ $+125^{\circ}\text{C}$ (30 minutes), 1000 cycles                                        |
| Short-Time Applied Voltage                      | $\pm 10\%$                                         | Maximum value of D.C. voltage that can be applied for a short period of time (5 min.)                                       |
| Maximum Peak Current                            | $\pm 10\%$                                         | A single standard impulse current of 8/20 $\mu$ seconds is applied                                                          |
| Maximum Energy                                  | $\pm 10\%$                                         | A single standard impulse of 2m second, once                                                                                |
| Electrostatic Discharge                         | $\pm 10\%$                                         | 25kV (Non contact)                                                                                                          |
| Vibration Resistance                            | No visible damage. No remarkable mechanical damage | Vibration frequency: 10Hz~2000Hz; Full amplitude: 1.5mm, 10Hz~2000Hz~10Hz 20 min. XYZ direction 4 hrs for each total 12 hrs |
| High Temperature & High Humidity Life with Bias | $\pm 10\%$                                         | $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , 85% RH, 1000h, Applied voltage: Varistor voltage ( $V_{1ma}$ ) x 0.85          |
| High Temperature Life with d.c. Bias            | $\pm 10\%$                                         | $125^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , 1000h, Applied voltage: Varistor voltage ( $V_{1ma}$ ) x 0.85                 |
| Thermal Shock                                   | $\pm 10\%$                                         | $-55^{\circ}\text{C}$ (15 min.)/ $+125^{\circ}\text{C}$ (15 min.) 300 cycles                                                |
| Shock                                           | $\pm 10\%$                                         | Half sine wave, Applied time: 1m second, Applied cycle: 500m/s <sup>2</sup> , 5 cycles                                      |
| High Temperature Storage                        | $\pm 10\%$                                         | $150^{\circ}\text{C}$ , 1000h                                                                                               |
| Low Temperature Storage                         | $\pm 10\%$                                         | $-40^{\circ}\text{C}$ , 1000h                                                                                               |

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