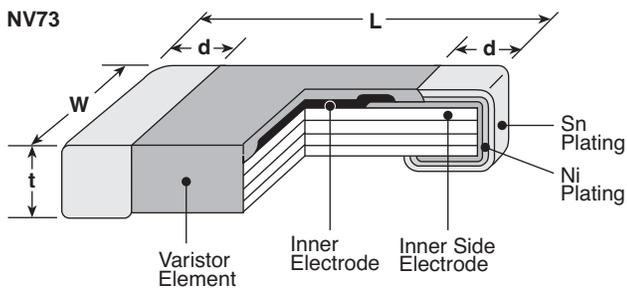


features

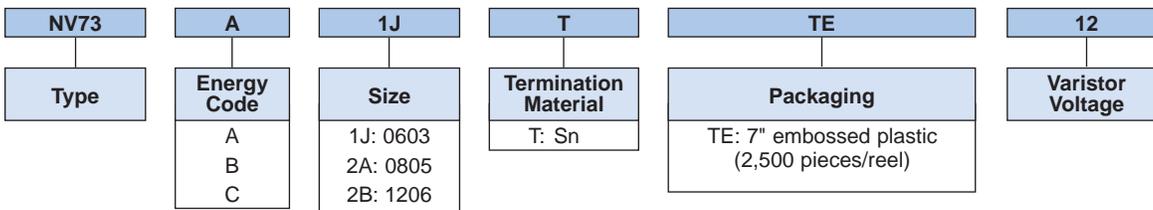
- Varistors own two-way symmetries and can absorb positive and negative surges
- Multilayer construction allows its small size to absorb a large surge
- Small space and high density mounting available due to the small package
- Suitable for both flow and reflow solderings
- Products with lead free termination meet EU RoHS requirements

dimensions and construction



| Type (Inch Size Code) | Dimensions inches (mm) | | | |
|--------------------------|-------------------------|-------------------------|--------------------------|--|
| | L | W | t | d |
| 1J (0603) | .063±.006 (1.6±0.15) | .031±.006 (0.8±0.15) | .031±.006 (0.8±0.15) | .016 ^{+0.006} _{-.008} (0.4 ^{+0.15} _{-0.2}) |
| 2A (0805) | .079±.008 (2.0±0.2) | .049±.008 (1.25±0.2) | .051 max. (1.3 max.) | .02±.010 (0.5±0.25) |
| 2B (1206) | .126±.008 (3.2±0.2) | .063±.008 (1.6±0.2) | .065 max. (1.65 max.) | .02 ^{+0.14} _{-.010} (0.5 ^{+0.35} _{-0.25}) |

ordering information



The terminal surface material lead free is standard.
 Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.
 For further information on packaging, please refer to Appendix A.

applications and ratings

| Part Designation | Varistor Voltage Vc | Maximum Allowable Voltage | | Clamping Voltage | | Maximum Energy E (J) | Maximum Peak Current I _p (A) (2 times) | Operating Temp. T _{opt} (°C) | Storage Temp. T _{stg} (°C) | | |
|------------------|--------------------------|---------------------------|---------|------------------|-----------------|----------------------|---|---------------------------------------|-------------------------------------|----------------|-----------------|
| | I _c = 1mA (V) | a.c rms (V) | d.c (V) | V _{1A} | V _{2A} | | | | | | |
| NV73A1JTTE8.2 | 6.8 - 9.8 | 4.2 | 6.0 | — | 21 | 0.1 | 30 | -40°C to +85°C | -40°C to +125°C | | |
| NV73A1JTTE12 | 10 - 14.4 | 6.1 | 8.6 | — | 29 | | | | | | |
| NV73A1JTTE15 | 12.5 - 18 | 7.6 | 10.8 | — | 35 | | | | | | |
| NV73A1JTTE18 | 16 - 20 | 9.1 | 12.8 | — | 37 | | | | | | |
| NV73A1JTTE20 | 18 - 22 | 10.6 | 15.0 | — | 40 | | | | | | |
| NV73A1JTTE22 | 19 - 24 | 12.0 | 16.5 | — | 42 | | | | | | |
| NV73A1JTTE24 | 21.8 - 26.5 | 14.0 | 18.0 | — | 46 | | | | | | |
| NV73A1JTTE27 | 25 - 32 | 17.0 | 22.0 | — | 49 | | | | | | |
| NV73A2ATTE8.2 | 6.8 - 9.8 | 4.2 | 6.0 | 18 | — | 0.01 | 10 | | | -40°C to +85°C | -40°C to +125°C |
| NV73A2ATTE12 | 10 - 14.4 | 6.1 | 8.6 | 24 | — | 0.03 | 20 | | | | |
| NV73A2ATTE15 | 12.5 - 18 | 7.6 | 10.8 | 29 | — | 0.04 | | | | | |
| NV73A2ATTE18 | 16 - 20 | 9.1 | 12.8 | 29 | — | | | | | | |
| NV73A2ATTE20 | 18 - 22 | 10.6 | 15.0 | 33 | — | 0.05 | | | | | |
| NV73A2ATTE22 | 19 - 24 | 12.0 | 16.5 | 39 | — | | | | | | |
| NV73A2ATTE24 | 21.8 - 26.5 | 14.0 | 18.0 | 42 | — | 0.06 | | | | | |
| NV73A2ATTE27 | 25 - 32 | 17.0 | 22.0 | 50 | — | 0.07 | | | | | |
| NV73A2ATTE33 | 30 - 39 | 20.0 | 26.0 | 60 | — | 0.12 | 25 | | | | |
| NV73A2ATTE39 | 37 - 47 | 25.0 | 31.0 | 72 | — | 0.14 | | | | | |
| NV73A2ATTE47 | 45 - 54 | 30.0 | 38.0 | 86 | — | 0.16 | | | | | |
| NV73B2ATTE8.2 | 6.8 - 9.8 | 4.2 | 6.0 | — | 18 | 0.03 | 20 | | | -40°C to +85°C | -40°C to +125°C |
| NV73B2ATTE12 | 10 - 14.4 | 6.1 | 8.6 | — | 24 | 0.05 | 35 | | | | |
| NV73B2ATTE15 | 12.5 - 18 | 7.6 | 10.8 | — | 30 | 0.07 | | | | | |
| NV73B2ATTE18 | 16 - 20 | 9.1 | 12.8 | — | 32 | 0.08 | | | | | |
| NV73B2ATTE20 | 18 - 22 | 10.6 | 15.0 | — | 36 | 0.09 | | | | | |
| NV73B2ATTE22 | 19 - 24 | 12.0 | 16.5 | — | 40 | 0.11 | | | | | |
| NV73B2ATTE24 | 21.8 - 26.5 | 14.0 | 18.0 | — | 42 | 0.12 | | | | | |
| NV73B2ATTE27 | 25 - 32 | 17.0 | 22.0 | — | 58 | 0.24 | | | | | |
| NV73B2ATTE33 | 30 - 39 | 20.0 | 26.0 | — | 66 | 0.25 | 50 | | | 50 | |
| NV73C2ATTE8.2 | 6.8 - 9.8 | 4.2 | 6.0 | — | 18 | 0.04 | 25 | | | | |
| NV73C2ATTE12 | 10 - 14.4 | 6.1 | 8.6 | — | 24 | 0.09 | 50 | | | | |
| NV73C2ATTE15 | 12.5 - 18 | 7.6 | 10.8 | — | 29 | 0.11 | | | | | |
| NV73C2ATTE18 | 16 - 20 | 9.1 | 12.8 | — | 32 | 0.13 | | | | | |
| NV73C2ATTE20 | 18 - 22 | 10.6 | 15.0 | — | 35 | 0.14 | | | | | |
| NV73C2ATTE22 | 19 - 24 | 12.0 | 16.5 | — | 40 | 0.17 | | | | | |
| NV73C2ATTE24 | 21.8 - 26.5 | 14.0 | 18.0 | — | 42 | 0.18 | | | | | |
| NV73A2BTTE27 | 25 - 32 | 17.0 | 22.0 | — | 55 | 0.13 | | 40 | | | |
| NV73A2BTTE33 | 30 - 39 | 20.0 | 26.0 | — | 60 | 0.15 | | | | | |
| NV73A2BTTE39 | 37 - 47 | 25.0 | 31.0 | — | 72 | 0.18 | | | | | |
| NV73A2BTTE47 | 45 - 54 | 30.0 | 38.0 | — | 85 | 0.22 | | | | | |
| NV73A2BTTE56 | 52 - 62 | 35.0 | 45.0 | — | 100 | 0.26 | | | | | |

circuit protection

applications and ratings (continued)

| Part Designation | Varistor Voltage Vc | Maximum Allowable Voltage | | Clamping Voltage | | Maximum Energy E (J) | Maximum Peak Current I _p (A) (2 times) | Operating Temp. T _{opt} (°C) | Storage Temp. T _{stg} (°C) |
|------------------|--------------------------|---------------------------|---------|------------------|-----------------|----------------------|---|---------------------------------------|-------------------------------------|
| | I _c = 1mA (V) | a.c rms (V) | d.c (V) | V _{1A} | V _{2A} | | | | |
| NV73B2BTTE8.2 | 6.8 - 9.8 | 4.2 | 6.0 | — | 18 | 0.03 | 50 | -40°C to +85°C | -40°C to +125°C |
| NV73B2BTTE12 | 10 - 14.4 | 6.1 | 8.6 | — | 24 | 0.07 | | | |
| NV73B2BTTE15 | 12.5 - 18 | 7.6 | 10.8 | — | 29 | 0.09 | | | |
| NV73B2BTTE18 | 16 - 20 | 9.1 | 12.8 | — | 32 | 0.1 | | | |
| NV73B2BTTE20 | 18 - 22 | 10.6 | 15.0 | — | 35 | 0.11 | | | |
| NV73B2BTTE22 | 19 - 24 | 12.0 | 16.5 | — | 40 | 0.12 | | | |
| NV73B2BTTE24 | 21.8 - 26.5 | 14.0 | 18.0 | — | 42 | 0.14 | | | |
| NV73B2BTTE27 | 25 - 32 | 17.0 | 22.0 | — | 52 | 0.16 | | | |
| NV73C2BTTE8.2 | 6.8 - 9.8 | 4.2 | 6.0 | — | 18 | 0.06 | 40 | | |
| NV73C2BTTE12 | 10 - 14.4 | 6.1 | 8.6 | — | 24 | 0.1 | 70 | | |
| NV73C2BTTE15 | 12.5 - 18 | 7.6 | 10.8 | — | 29 | 0.13 | | | |
| NV73C2BTTE18 | 16 - 20 | 9.1 | 12.8 | — | 29 | 0.15 | | | |
| NV73C2BTTE20 | 18 - 22 | 10.6 | 15.0 | — | 31 | 0.17 | | | |
| NV73C2BTTE22 | 19 - 24 | 12.0 | 16.5 | — | 35 | 0.19 | | | |
| NV73C2BTTE24 | 21.8 - 26.5 | 14.0 | 18.0 | — | 38 | 0.2 | | | |
| NV73C2BTTE27 | 25 - 32 | 17.0 | 22.0 | — | 48 | 0.24 | | | |

environmental applications

Performance Characteristics

| Parameter | Requirement Δ V±% | Test Method |
|--|----------------------------|---|
| Varistor Voltage | Within specified tolerance | Voltage between terminals when 1mA is flowed |
| Solderability | 95% coverage minimum | 230°C ± 5°C, 4 seconds ± 1 second |
| Resistance to Solder Heat | ±10% | 270°C ± 5°C, 3 seconds ± 0.5 second |
| Rapid Change of Temperature | ±10% | -40°C (30 minutes), +125°C (30 minutes), 30 cycles |
| Maximum Peak Current | ±10% | A single standard impulse of 8/20μ seconds, positive/negative applied once each |
| Maximum Energy | ±10% | A single standard impulse of 2ms, once |
| High Temperature Life with d.c. Bias | ±10% | 85°C ± 5°C, 1000h, Load: Maximum allowable circuit voltage (d.c.) |
| High Temperature Life with a.c. Bias** | ±10% | 85°C ± 5°C, 1000h, Load: Maximum allowable circuit voltage (V _{a.c.r.m.s.}) |
| High Temperature & High Humidity Life with d.c. Bias | ±10% | 40°C ± 5°C, 95% RH, 500h, Load: Maximum allowable voltage (d.c.) |
| High Temperature Storage Life | ±10% | 125°C ± 5°C, 1000h |
| Low Temperature Storage Life | ±10% | -40°C ± 5°C, 1000h |

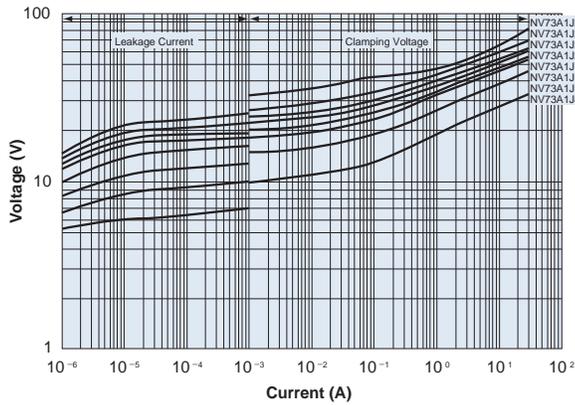
For Voltage Current Curves Graphs see Environmental Applications. Additional environmental applications can also be found at www.koaspeer.com

circuit protection

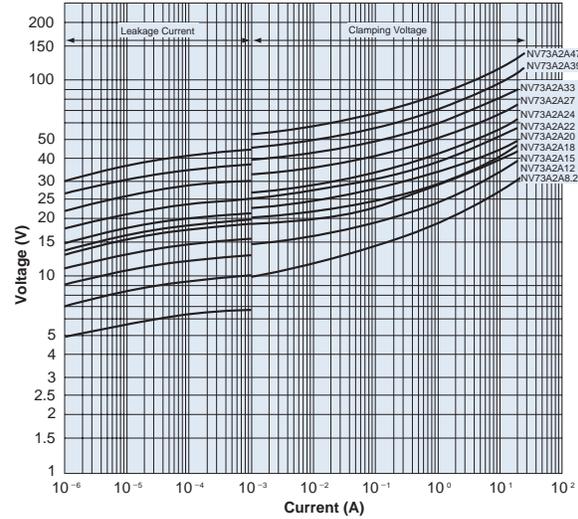
environmental applications (continued)

Voltage-Current Curves (Ta = 25°C)

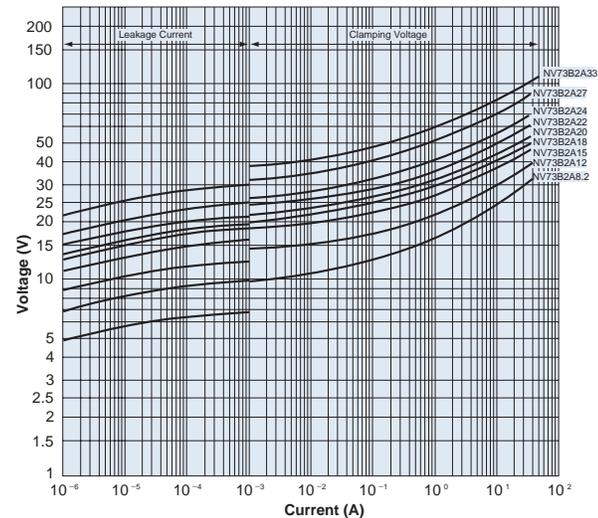
NV73A 1J



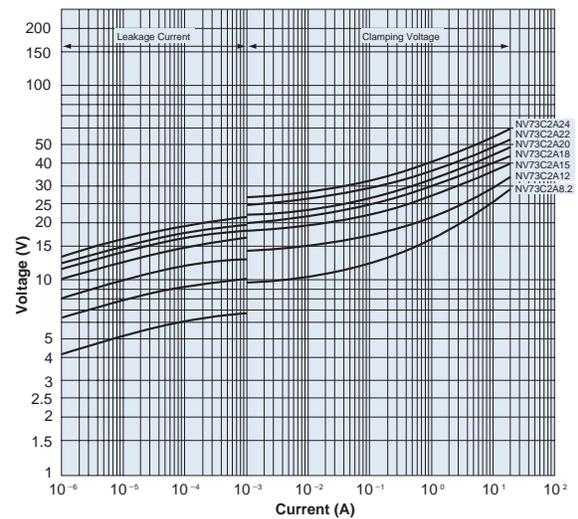
NV73A 2A



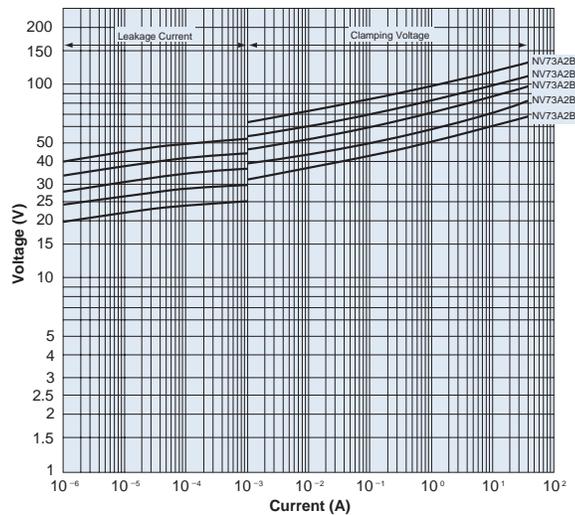
NV73B 2A



NV73C 2A



NV73A 2B



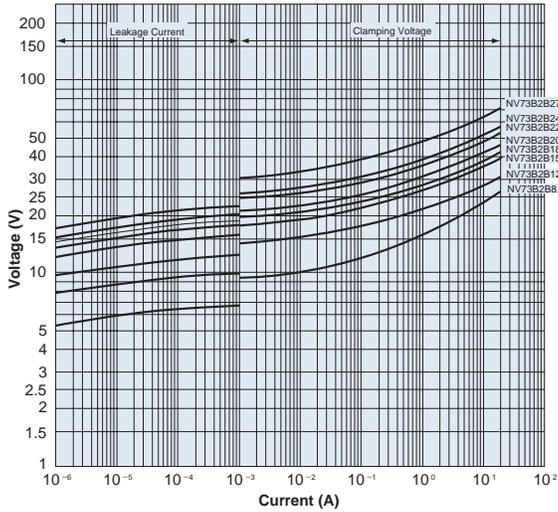
Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

3/28/25

environmental applications (continued)

Voltage-Current Curves (Ta = 25°C)

NV73B 2B



NV73C 2B

