



**RATING AND CHARACTERISTICS**

**Standard Varistor - 5mm**

| Ordering Code   | Varistor Voltage at 1 mA |           | Maximum Allowable Voltage |        | Maximum Clamping Voltage | Withstanding Surge Current (8/20 μs) |             | Rated Wattage (W) | Energy (10/1000 μs) (J) | Certification |
|-----------------|--------------------------|-----------|---------------------------|--------|--------------------------|--------------------------------------|-------------|-------------------|-------------------------|---------------|
|                 | DC (V)                   | Tolerance | ACrms (V)                 | DC (V) | V@5A (V)                 | 1 Time (A)                           | 2 Times (A) |                   |                         |               |
| JV◇05N180M65□△△ | 18                       | ± 20%     | 11                        | 14     | ※ 40                     | 100                                  | 50          | 0.01              | 0.6                     | ☆ ☆           |
| JV◇05N220L65□△△ | 22                       | ± 15%     | 14                        | 18     | ※ 48                     |                                      |             |                   | 0.7                     | ☆ ☆           |
| JV◇05N270K65□△△ | 27                       |           | 17                        | 22     | ※ 60                     |                                      |             |                   | 0.9                     | ☆ ☆           |
| JV◇05N330K65□△△ | 33                       | 20        | 26                        | ※ 73   | 1.1                      |                                      |             |                   | ☆ ☆                     |               |
| JV◇05N390K65□△△ | 39                       | 25        | 31                        | ※ 86   | 1.2                      |                                      |             |                   | ☆ ☆                     |               |
| JV◇05N470K65□△△ | 47                       | 30        | 38                        | ※104   | 1.5                      |                                      |             |                   | ☆ ☆                     |               |
| JV◇05N560K65□△△ | 56                       | 35        | 45                        | ※123   | 1.8                      |                                      |             |                   | ☆ ☆                     |               |
| JV◇05N680K65□△△ | 68                       | 40        | 56                        | ※150   | 2.1                      |                                      |             |                   | ☆ ☆                     |               |
| JV◇05N820K65□△△ | 82                       | 50        | 65                        | 145    | 2.8                      |                                      |             |                   | ☆ ☆                     |               |
| JV◇05N101K65□△△ | 100                      | ± 10%     | 60                        | 85     | 175                      | 400                                  | 200         | 0.1               | 3.5                     | ☆ ☆           |
| JV◇05N121K65□△△ | 120                      |           | 75                        | 100    | 210                      |                                      |             |                   | 4.0                     | ☆ ☆           |
| JV◇05N151K65□△△ | 150                      |           | 95                        | 125    | 260                      |                                      |             |                   | 5.5                     | ☆ ☆           |
| JV◇05N181K65□△△ | 180                      |           | 115                       | 150    | 320                      |                                      |             |                   | 6.5                     | ☆ ☆           |
| JV◇05N201K65□△△ | 200                      |           | 130                       | 170    | 355                      |                                      |             |                   | 7.1                     | ★ ☆ ☆ ☆       |
| JV◇05N221K65□△△ | 220                      |           | 140                       | 180    | 380                      |                                      |             |                   | 7.8                     | ★ ☆ ☆ ☆       |
| JV◇05N241K65□△△ | 240                      |           | 150                       | 200    | 415                      |                                      |             |                   | 8.4                     | ★ ☆ ☆ ☆       |
| JV◇05N271K65□△△ | 270                      |           | 175                       | 225    | 475                      |                                      |             |                   | 9.9                     | ★ ☆ ☆ ☆       |
| JV◇05N301K65□△△ | 300                      |           | 195                       | 250    | 525                      |                                      |             |                   | 10.5                    | ★ ☆ ☆ ☆       |
| JV◇05N331K65□△△ | 330                      |           | 210                       | 275    | 575                      |                                      |             |                   | 11.5                    | ★ ☆ ☆ ☆       |
| JV◇05N361K65□△△ | 360                      |           | 230                       | 300    | 620                      |                                      |             |                   | 13.0                    | ★ ☆ ☆ ☆       |
| JV◇05N391K65□△△ | 390                      |           | 250                       | 320    | 675                      |                                      |             |                   | 15.0                    | ★ ☆ ☆ ☆       |
| JV◇05N431K65□△△ | 430                      |           | 275                       | 350    | 745                      |                                      |             |                   | 16.5                    | ★ ☆ ☆ ☆       |
| JV◇05N471K65□△△ | 470                      |           | 300                       | 385    | 810                      |                                      |             |                   | 17.5                    | ★ ☆ ☆ ☆       |
| JV◇05N511K65□△△ | 510                      |           | 320                       | 418    | 880                      |                                      |             |                   | 18.5                    | ★ ☆ ☆ ☆       |
| JV◇05N561K65□△△ | 560                      | 350       | 460                       | 940    | 19.5                     | ★ ☆ ☆ ☆                              |             |                   |                         |               |
| JV◇05N621K65□△△ | 620                      | 385       | 505                       | 1050   | 20.5                     | ★ ☆ ☆ ☆                              |             |                   |                         |               |
| JV◇05N681K65□△△ | 680                      | 420       | 560                       | 1150   | 21.5                     | ★ ☆ ☆ ☆                              |             |                   |                         |               |
| JV◇05N751K65□△△ | 750                      | 460       | 615                       | 1290   | 22.5                     | ★ ☆ ☆ ☆                              |             |                   |                         |               |

※ The clamping voltage from 180M to 680K are tested at current 1A.

◇ : R=RoHS, H=RoHS+Halogen free +Non flammable

□ : Lead Style ( Y=Vertical kink, P=Straight )

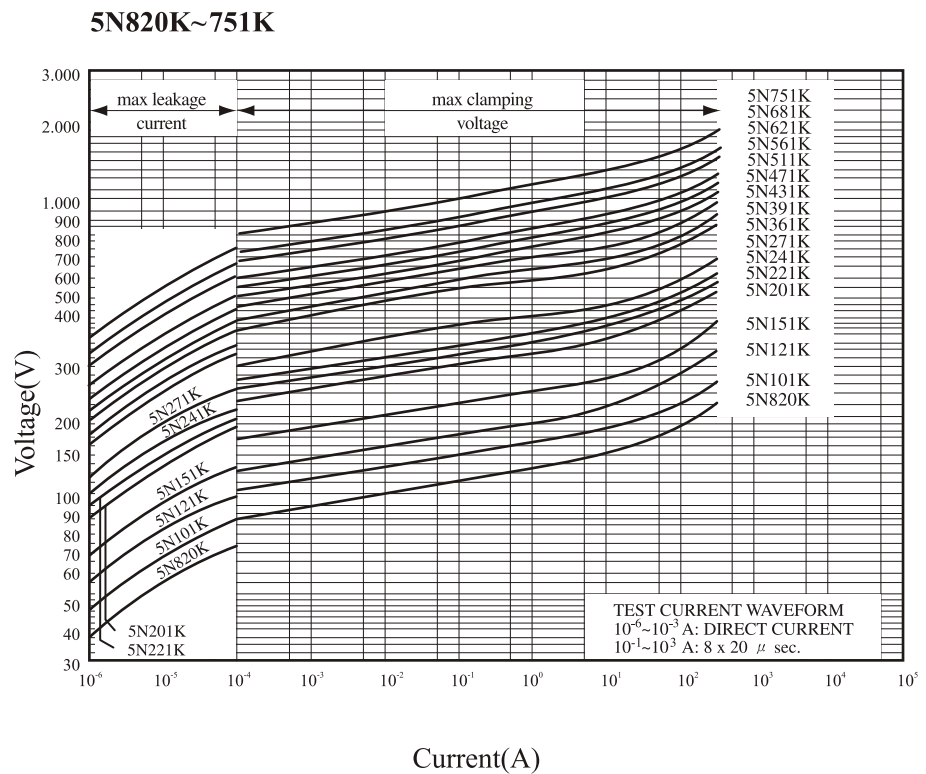
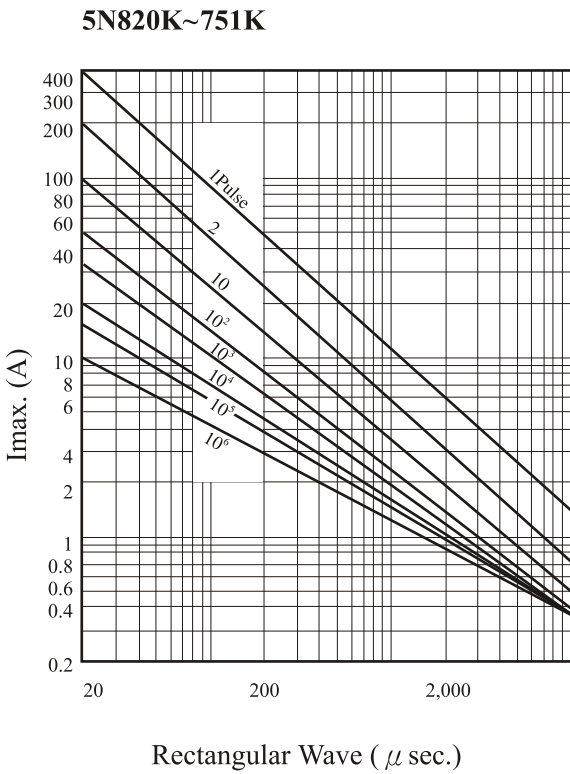
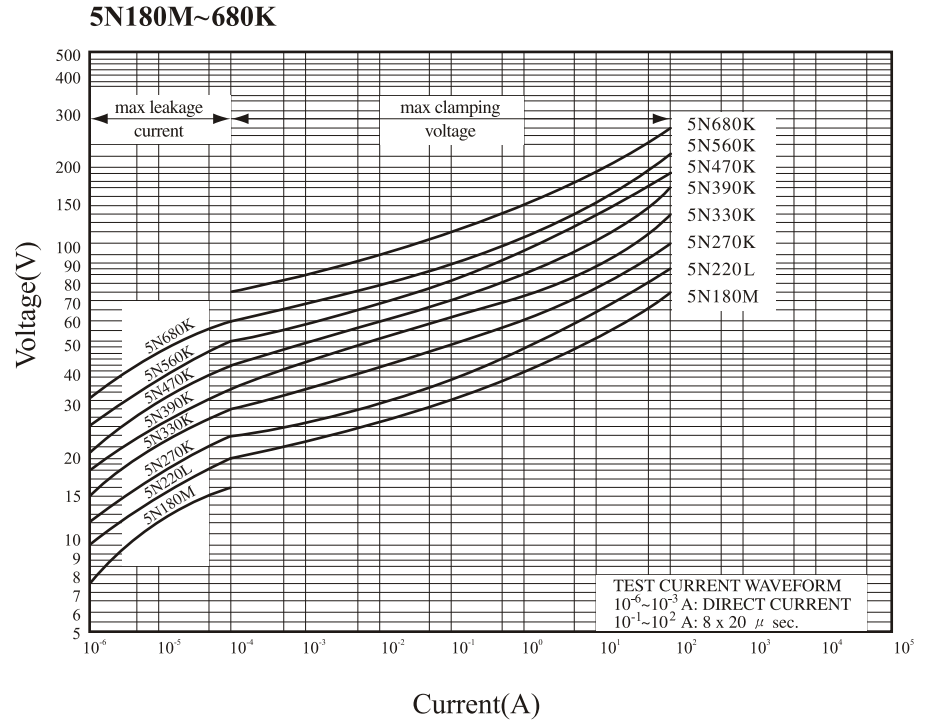
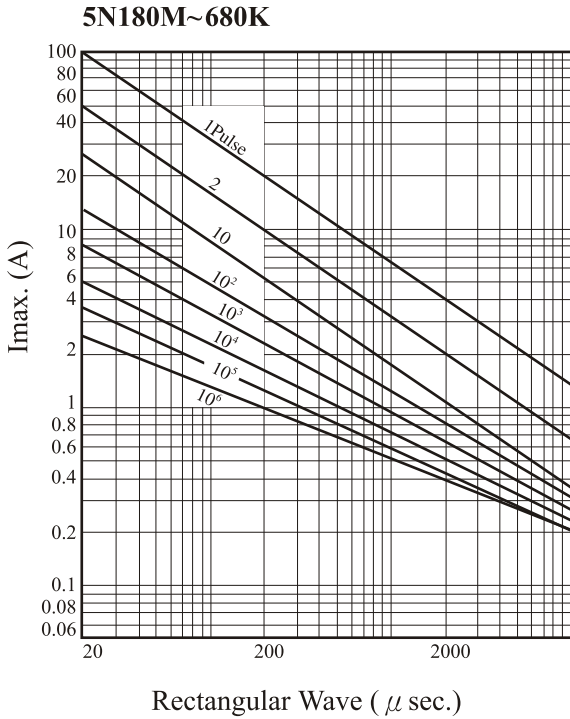
△ △ : Lead Length & Packaging (see p.18)

**Application notes for UL , CSA and VDE recongnized components related standards**

| Standard No. | UL1414                       | UL1449(3 <sup>rd</sup> Edition)     | CSA C22.2                                      | IEC61051-1<br>VDE IEC61051-2<br>IEC61051-2-2 |
|--------------|------------------------------|-------------------------------------|--|--|
| Title        | Across- the- line Components | Transient Voltage Surge Suppressors | Accessories and parts for electronic equipment | Varistors for use in electronic equipment    |
| File No.     | E154922                      | E325508                             | LR101867-1/-8/-15                              | 19006-4790-0002                              |
| Symbols      | ★                            | ☆                                   | ★  | ★  |

**PULSE LIFETIME RATINGS - 5mm**

**V-I CHARACTERISTIC CURVE - 5mm**





**RATING AND CHARACTERISTICS**

**Standard Varistor - 7mm**

| Ordering Code   | Varistor Voltage at 1 mA |           | Maximum Allowable Voltage |        | Maximum Clamping Voltage | Withstanding Surge Current (8/20 μs) |             | Rated Wattage (W) | Energy (10/1000 μs) (J) | Certification (ref to p.20) |
|-----------------|--------------------------|-----------|---------------------------|--------|--------------------------|--------------------------------------|-------------|-------------------|-------------------------|-----------------------------|
|                 | DC (V)                   | Tolerance | ACrms (V)                 | DC (V) | V@10A (V)                | 1 Time (A)                           | 2 Times (A) |                   |                         |                             |
| JV◇07N180M65□△△ | 18                       | ± 20%     | 11                        | 14     | ※ 36                     | 250                                  | 125         | 0.02              | 1.2                     | ☆ ☆                         |
| JV◇07N220L65□△△ | 22                       | ± 15%     | 14                        | 18     | ※ 43                     |                                      |             |                   | 1.4                     | ☆ ☆                         |
| JV◇07N270K65□△△ | 27                       | ± 10%     | 17                        | 22     | ※ 53                     |                                      |             |                   | 1.7                     | ☆ ☆                         |
| JV◇07N330K65□△△ | 33                       |           | 20                        | 26     | ※ 65                     |                                      |             |                   | 2.2                     | ☆ ☆                         |
| JV◇07N390K65□△△ | 39                       |           | 25                        | 31     | ※ 77                     |                                      |             |                   | 2.4                     | ☆ ☆                         |
| JV◇07N470K65□△△ | 47                       |           | 30                        | 38     | ※ 93                     |                                      |             |                   | 3.0                     | ☆ ☆                         |
| JV◇07N560K65□△△ | 56                       |           | 35                        | 45     | ※ 110                    |                                      |             |                   | 3.5                     | ☆ ☆                         |
| JV◇07N680K65□△△ | 68                       |           | 40                        | 56     | ※ 135                    |                                      |             |                   | 4.3                     | ☆ ☆                         |
| JV◇07N820K65□△△ | 82                       |           | 50                        | 65     | 135                      | 5.5                                  | ☆ ☆         |                   |                         |                             |
| JV◇07N101K65□△△ | 100                      |           | 60                        | 85     | 165                      | 7.0                                  | ☆ ☆         |                   |                         |                             |
| JV◇07N121K65□△△ | 120                      | 75        | 100                       | 200    | 8.0                      | ☆ ☆                                  |             |                   |                         |                             |
| JV◇07N151K65□△△ | 150                      | 95        | 125                       | 250    | 11.0                     | ☆ ☆                                  |             |                   |                         |                             |
| JV◇07N181K65□△△ | 180                      | 115       | 150                       | 300    | 13.0                     | ☆ ☆                                  |             |                   |                         |                             |
| JV◇07N201K65□△△ | 200                      | 130       | 170                       | 340    | 14.3                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N221K65□△△ | 220                      | 140       | 180                       | 360    | 15.5                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N241K65□△△ | 240                      | 150       | 200                       | 395    | 16.8                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N271K65□△△ | 270                      | 175       | 225                       | 455    | 19.8                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N301K65□△△ | 300                      | 195       | 250                       | 505    | 21.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N331K65□△△ | 330                      | 210       | 275                       | 550    | 23.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N361K65□△△ | 360                      | 230       | 300                       | 595    | 26.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N391K65□△△ | 390                      | 250       | 320                       | 650    | 30.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N431K65□△△ | 430                      | 275       | 350                       | 710    | 33.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N471K65□△△ | 470                      | 300       | 385                       | 775    | 35.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N511K65□△△ | 510                      | 320       | 418                       | 842    | 37.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N561K65□△△ | 560                      | 350       | 460                       | 920    | 39.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N621K65□△△ | 620                      | 385       | 505                       | 1025   | 41.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N681K65□△△ | 680                      | 420       | 560                       | 1120   | 43.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N751K65□△△ | 750                      | 460       | 615                       | 1240   | 45.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N781K65□△△ | 780                      | 485       | 640                       | 1290   | 46.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇07N821K65□△△ | 820                      | 510       | 670                       | 1355   | 47.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |

※ The clamping voltage from 180M to 680K are tested at current 2.5 A.

◇ : R=RoHS, H=RoHS+Halogen free +Non flammable

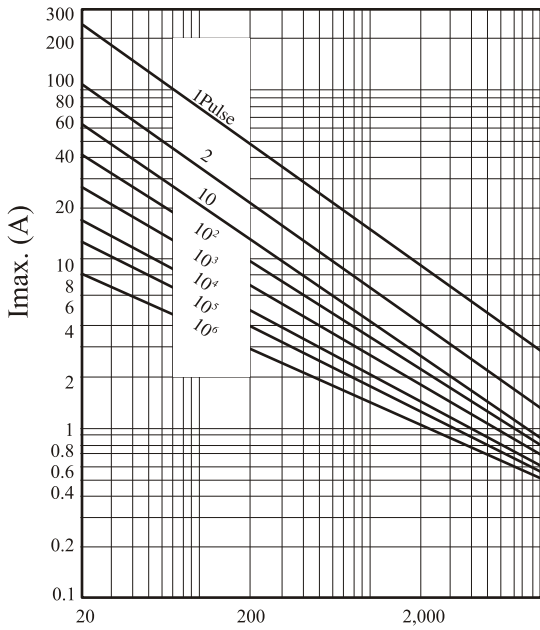
□ : Lead Style ( Y=Vertical kink, P=Straight )

△△ : Lead Length & Packaging (see p.18)

**PULSE LIFETIME RATINGS -7mm**

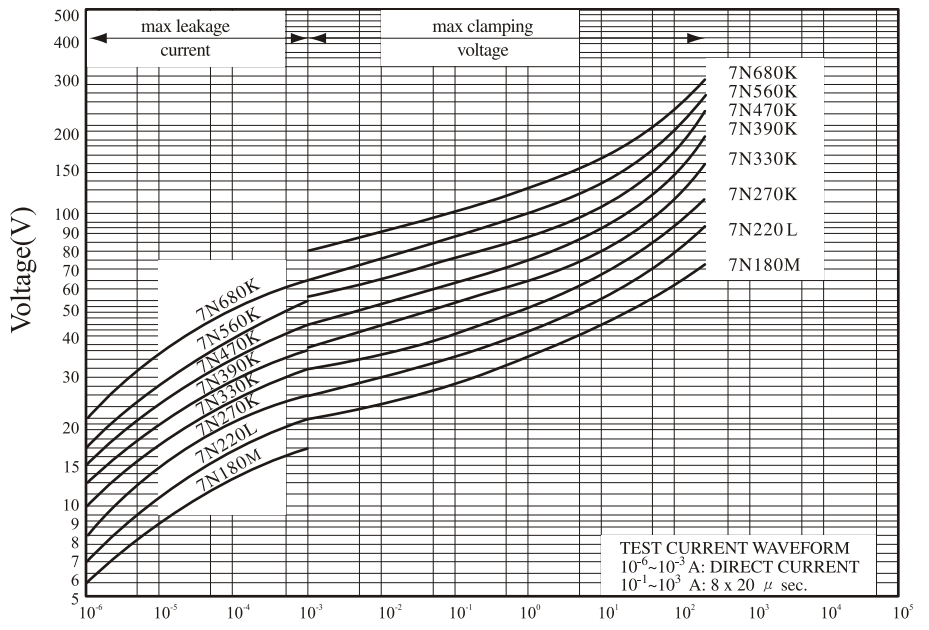
**V-I CHARACTERISTIC CURVE -7mm**

**7N180M~680K**



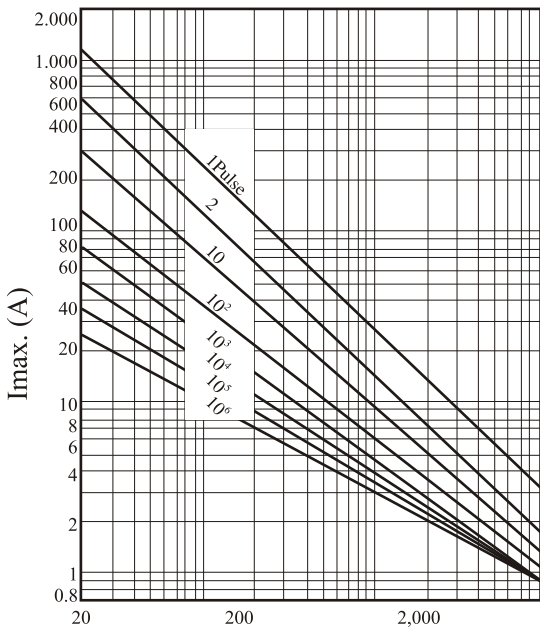
Rectangular Wave ( $\mu$  sec.)

**7N180M~680K**



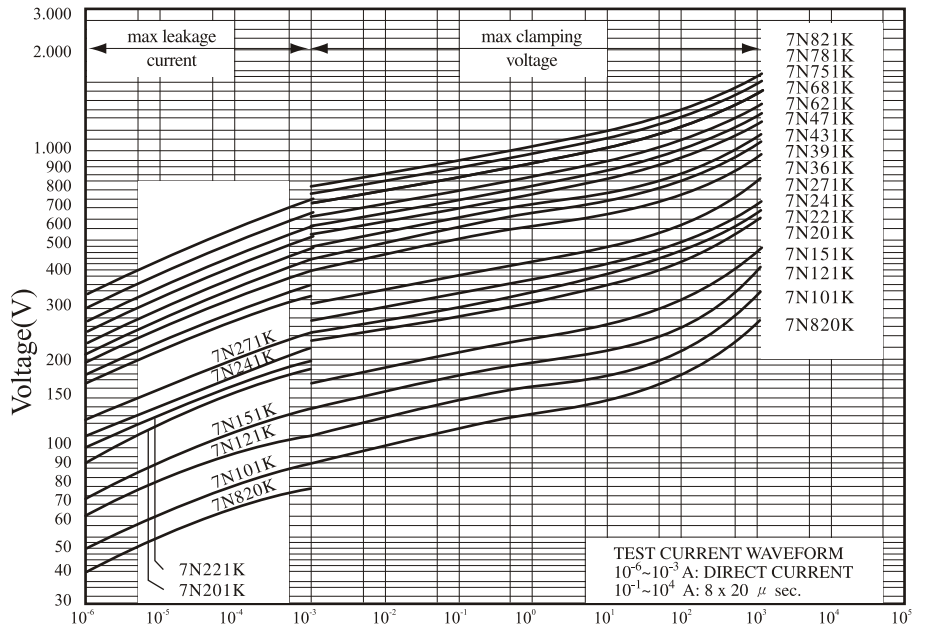
Current(A)

**7N820K~821K**



Rectangular Wave ( $\mu$  sec.)

**7N820K~821K**



Current(A)



**RATING AND CHARACTERISTICS**

**Standard Varistor - 10mm**

| Ordering Code    | Varistor Voltage at 1 mA |           | Maximum Allowable Voltage |        | Maximum Clamping Voltage | Withstanding Surge Current (8/20 μs) |             | Rated Wattage (W) | Energy (10/1000 μs) (J) | Certification (ref to p.20) |
|------------------|--------------------------|-----------|---------------------------|--------|--------------------------|--------------------------------------|-------------|-------------------|-------------------------|-----------------------------|
|                  | DC (V)                   | Tolerance | ACrms (V)                 | DC (V) | V@25A (V)                | 1 Time (A)                           | 2 Times (A) |                   |                         |                             |
| JV◇10N180M87□△△  | 18                       | ± 20%     | 11                        | 14     | ※ 36                     | 500                                  | 250         | 0.05              | 2.4                     | ☆ ☆                         |
| JV◇10N220L87 □△△ | 22                       | ± 15%     | 14                        | 18     | ※ 43                     |                                      |             |                   | 2.7                     | ☆ ☆                         |
| JV◇10N270K87□△△  | 27                       | ± 10%     | 17                        | 22     | ※ 53                     |                                      |             |                   | 3.5                     | ☆ ☆                         |
| JV◇10N330K87□△△  | 33                       |           | 20                        | 26     | ※ 65                     |                                      |             |                   | 4.4                     | ☆ ☆                         |
| JV◇10N390K87□△△  | 39                       |           | 25                        | 31     | ※ 77                     |                                      |             |                   | 4.7                     | ☆ ☆                         |
| JV◇10N470K87□△△  | 47                       |           | 30                        | 38     | ※ 93                     |                                      |             |                   | 6.0                     | ☆ ☆                         |
| JV◇10N560K87□△△  | 56                       |           | 35                        | 45     | ※ 110                    |                                      |             |                   | 7.0                     | ☆ ☆                         |
| JV◇10N680K87□△△  | 68                       |           | 40                        | 56     | ※ 135                    |                                      |             |                   | 8.5                     | ☆ ☆                         |
| JV◇10N820K87□△△  | 82                       |           | 50                        | 65     | 135                      | 11.0                                 | ☆ ☆         |                   |                         |                             |
| JV◇10N101K87□△△  | 100                      |           | 60                        | 85     | 165                      | 14.0                                 | ☆ ☆         |                   |                         |                             |
| JV◇10N121K87□△△  | 120                      | 75        | 100                       | 200    | 16.0                     | ☆ ☆                                  |             |                   |                         |                             |
| JV◇10N151K87□△△  | 150                      | 95        | 125                       | 250    | 22.0                     | ☆ ☆                                  |             |                   |                         |                             |
| JV◇10N181K87□△△  | 180                      | 115       | 150                       | 300    | 26.0                     | ☆ ☆                                  |             |                   |                         |                             |
| JV◇10N201K87□△△  | 200                      | 130       | 170                       | 340    | 28.5                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N221K87□△△  | 220                      | 140       | 180                       | 360    | 31.0                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N241K87□△△  | 240                      | 150       | 200                       | 395    | 33.5                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N271K87□△△  | 270                      | 175       | 225                       | 455    | 39.5                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N301K87□△△  | 300                      | 195       | 250                       | 505    | 42.0                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N331K87□△△  | 330                      | 210       | 275                       | 550    | 46.0                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N361K87□△△  | 360                      | 230       | 300                       | 595    | 52.0                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N391K87□△△  | 390                      | 250       | 320                       | 650    | 60.0                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N431K87□△△  | 430                      | 275       | 350                       | 710    | 66.0                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N471K87□△△  | 470                      | 300       | 385                       | 775    | 70.0                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N511K87□△△  | 510                      | 320       | 418                       | 842    | 74.0                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N561K87□△△  | 560                      | 350       | 460                       | 920    | 78.0                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N621K87□△△  | 620                      | 385       | 505                       | 1025   | 82.0                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N681K87□△△  | 680                      | 420       | 560                       | 1120   | 86.0                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N751K87□△△  | 750                      | 460       | 615                       | 1240   | 90.0                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N781K87□△△  | 780                      | 485       | 640                       | 1290   | 92.0                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N821K87□△△  | 820                      | 510       | 670                       | 1355   | 94.0                     | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N911K87□△△  | 910                      | 550       | 745                       | 1500   | 102.0                    | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N102K87□△△  | 1000                     | 625       | 825                       | 1650   | 112.0                    | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N112K87□△△  | 1100                     | 680       | 895                       | 1815   | 124.0                    | ★ ☆ ☆ ☆                              |             |                   |                         |                             |
| JV◇10N182K87□△△  | 1800                     | 1000      | 1465                      | 2970   | 174.0                    | ★ ☆ ☆                                |             |                   |                         |                             |

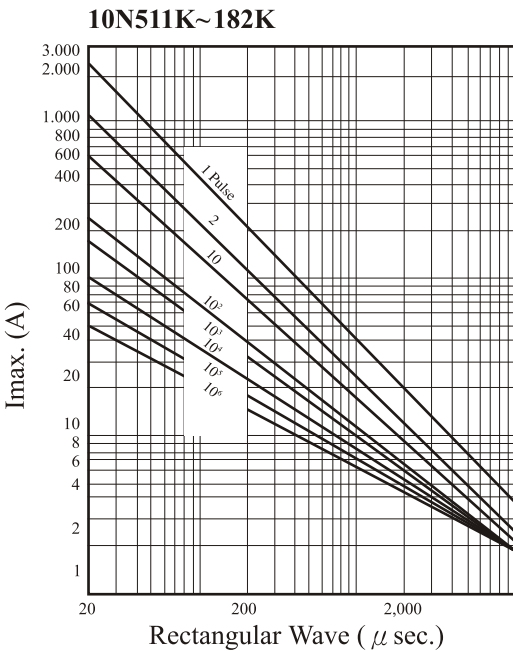
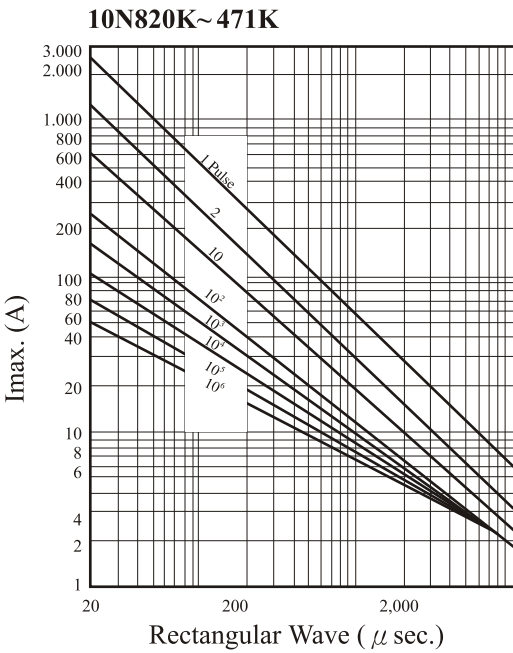
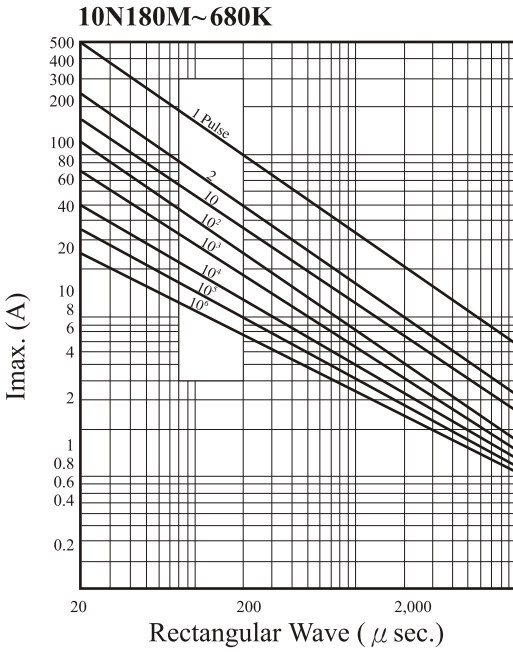
※ The clamping voltage from 180M to 680K are tested at current 5A.

◇ : R=RoHS, H=RoHS+Halogen free +Non flammable

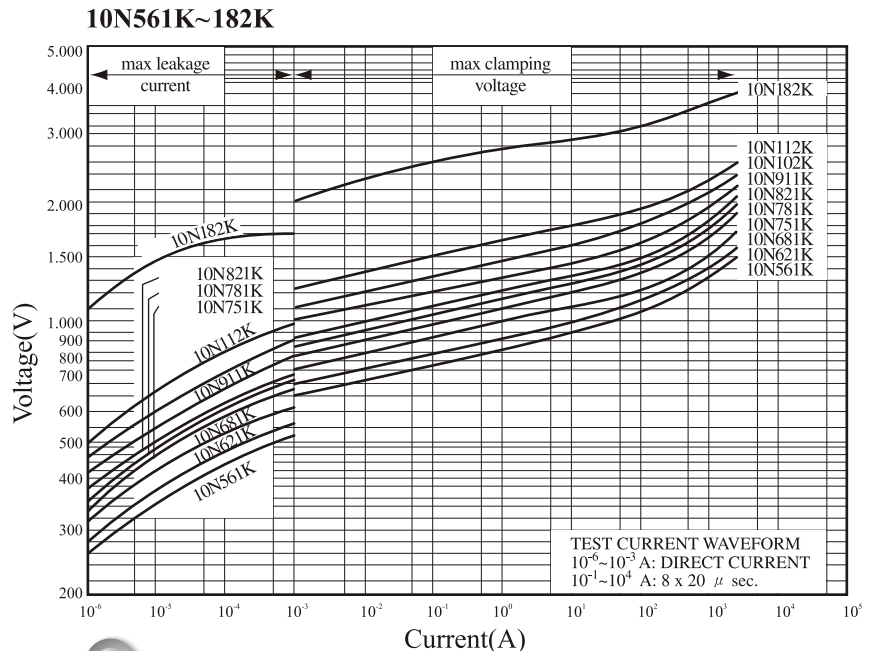
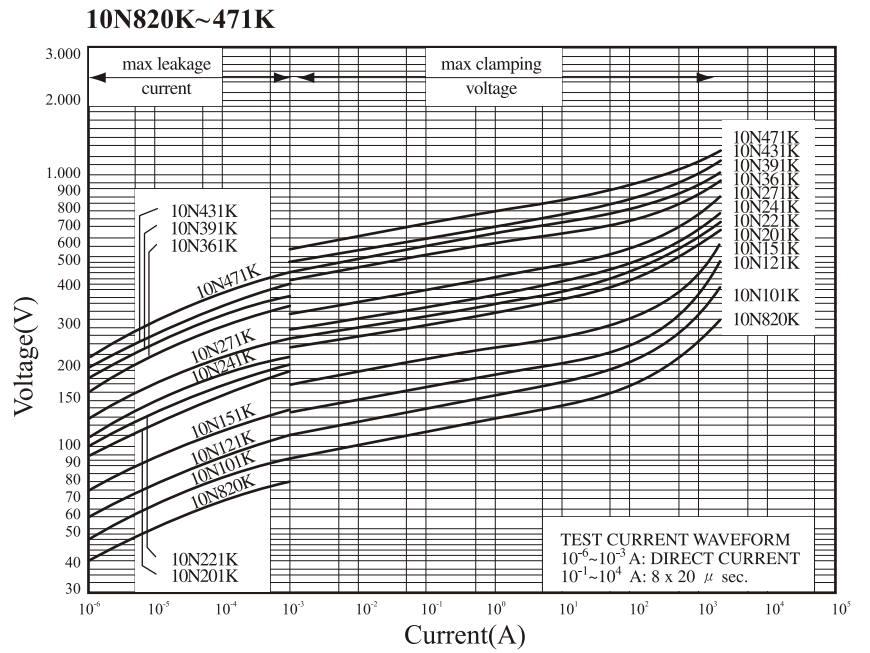
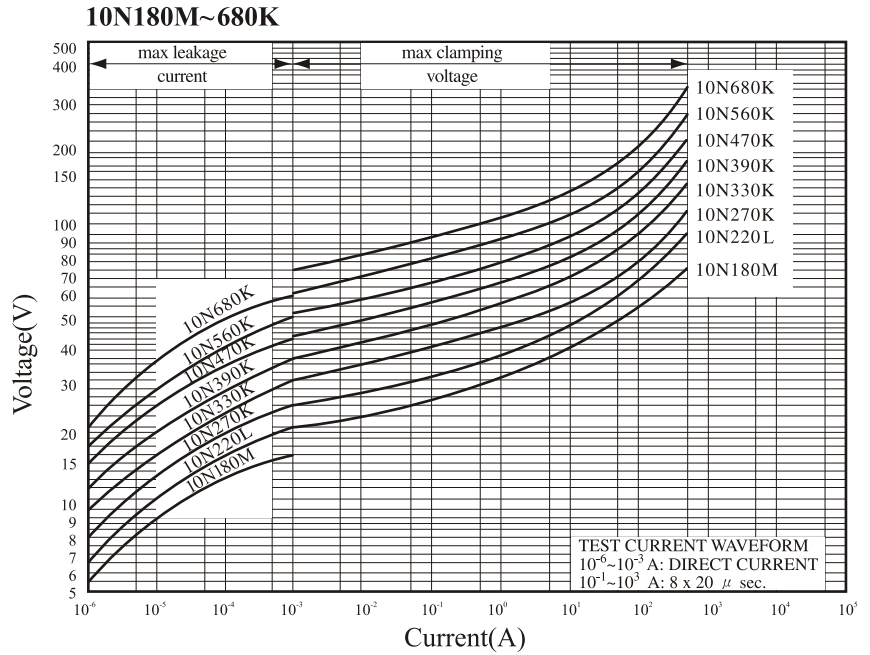
□ : Lead Style ( Y=Vertical kink, P=Straight )

△ △ : Lead Length & Packaging (see p.18)

**PULSE LIFETIME RATINGS - 10mm**



**V-I CHARACTERISTIC CURVE - 10mm**





RATING AND CHARACTERISTICS

Standard Varistor - 14mm

| Ordering Code    | Varistor Voltage at 1 mA |           | Maximum Allowable Voltage |        | Maximum Clamping Voltage | Withstanding Surge Current (8/20 μs) |             | Rated Wattage (W) | Energy (10/1000 μs) (J) | Certification (ref to p.20) |
|------------------|--------------------------|-----------|---------------------------|--------|--------------------------|--------------------------------------|-------------|-------------------|-------------------------|-----------------------------|
|                  | DC (V)                   | Tolerance | ACrms (V)                 | DC (V) | V@50A (V)                | 1 Time (A)                           | 2 Times (A) |                   |                         |                             |
| JV◇14N180M87□△△  | 18                       | ± 20%     | 11                        | 14     | ※ 36                     | 1000                                 | 500         | 0.1               | 4.7                     | ☆ ☆                         |
| JV◇14N220L87 □△△ | 22                       | ± 15%     | 14                        | 18     | ※ 43                     |                                      |             |                   | 5.4                     | ☆ ☆                         |
| JV◇14N270K87□△△  | 27                       | ± 10%     | 17                        | 22     | ※ 53                     |                                      |             |                   | 6.9                     | ☆ ☆                         |
| JV◇14N330K87□△△  | 33                       |           | 20                        | 26     | ※ 65                     |                                      |             |                   | 8.8                     | ☆ ☆                         |
| JV◇14N390K87□△△  | 39                       |           | 25                        | 31     | ※ 77                     |                                      |             |                   | 9.4                     | ☆ ☆                         |
| JV◇14N470K87□△△  | 47                       |           | 30                        | 38     | ※ 93                     |                                      |             |                   | 12.0                    | ☆ ☆                         |
| JV◇14N560K87□△△  | 56                       |           | 35                        | 45     | ※ 110                    |                                      |             |                   | 14.0                    | ☆ ☆                         |
| JV◇14N680K87□△△  | 68                       |           | 40                        | 56     | ※ 135                    |                                      |             |                   | 17.0                    | ☆ ☆                         |
| JV◇14N820K87□△△  | 82                       |           | 50                        | 65     | 135                      | 22.0                                 | ☆ ☆         |                   |                         |                             |
| JV◇14N101K87□△△  | 100                      |           | 60                        | 85     | 165                      | 28.0                                 | ☆ ☆         |                   |                         |                             |
| JV◇14N121K87□△△  | 120                      | 75        | 100                       | 200    | 32.0                     | ☆ ☆                                  |             |                   |                         |                             |
| JV◇14N151K87□△△  | 150                      | 95        | 125                       | 250    | 44.0                     | ☆ ☆                                  |             |                   |                         |                             |
| JV◇14N181K87□△△  | 180                      | 115       | 150                       | 300    | 52.0                     | ☆ ☆                                  |             |                   |                         |                             |
| JV◇14N201K87□△△  | 200                      | 130       | 170                       | 340    | 57.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N221K87□△△  | 220                      | 140       | 180                       | 360    | 62.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N241K87□△△  | 240                      | 150       | 200                       | 395    | 67.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N271K87□△△  | 270                      | 175       | 225                       | 455    | 79.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N301K87□△△  | 300                      | 195       | 250                       | 505    | 84.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N331K87□△△  | 330                      | 210       | 275                       | 550    | 92.0                     | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N361K87□△△  | 360                      | 230       | 300                       | 595    | 104.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N391K87□△△  | 390                      | 250       | 320                       | 650    | 120.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N431K87□△△  | 430                      | 275       | 350                       | 710    | 132.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N471K87□△△  | 470                      | 300       | 385                       | 775    | 140.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N511K87□△△  | 510                      | 320       | 418                       | 842    | 148.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N561K87□△△  | 560                      | 350       | 460                       | 920    | 156.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N621K87□△△  | 620                      | 385       | 505                       | 1025   | 164.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N681K87□△△  | 680                      | 420       | 560                       | 1120   | 172.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N751K87□△△  | 750                      | 460       | 615                       | 1240   | 180.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N781K87□△△  | 780                      | 485       | 640                       | 1290   | 184.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N821K87□△△  | 820                      | 510       | 670                       | 1355   | 188.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N911K87□△△  | 910                      | 550       | 745                       | 1500   | 204.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N102K87□△△  | 1000                     | 625       | 825                       | 1650   | 224.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N112K87□△△  | 1100                     | 680       | 895                       | 1815   | 248.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |
| JV◇14N182K87□△△  | 1800                     | 1000      | 1465                      | 2970   | 348.0                    | ★ ☆ ★ ☆                              |             |                   |                         |                             |

※ The clamping voltage from 180M to 680K are tested at current 10A.

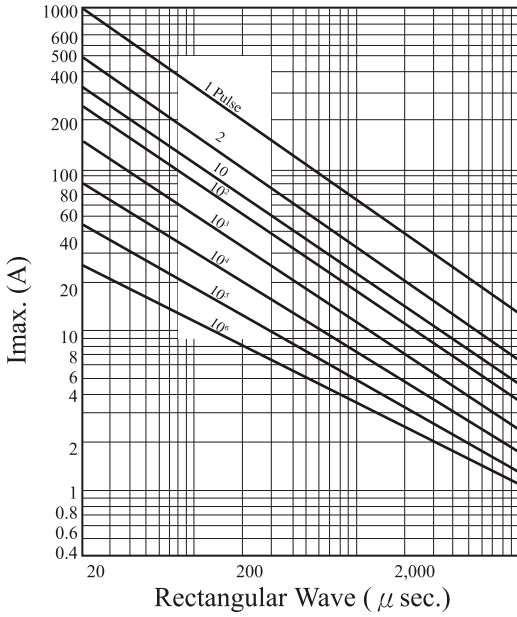
◇ : R=RoHS, H=RoHS+Halogen free +Non flammable

□ : Lead Style ( Y=Vertical kink, P=Strait )

△△ : Lead Length & Packaging (see p.18)

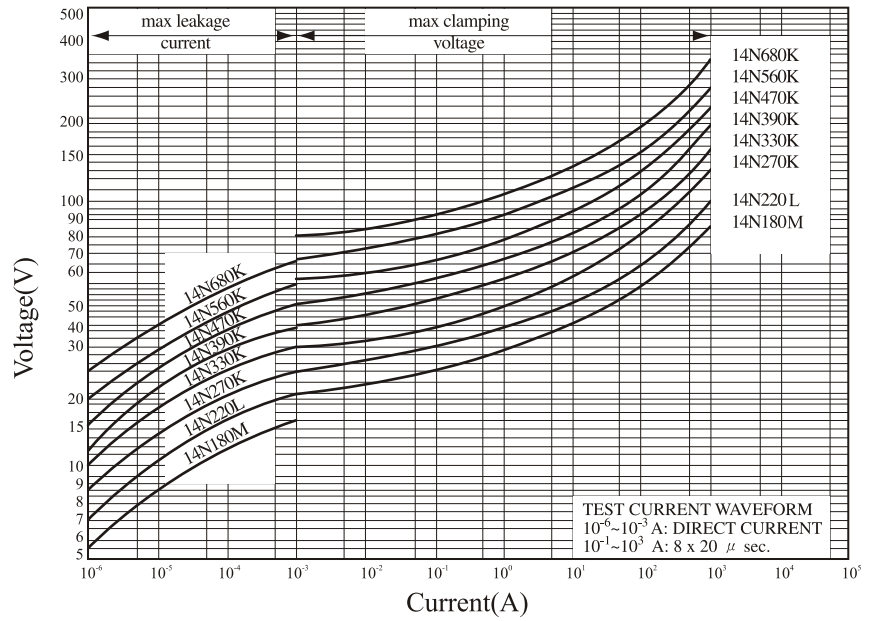
**PULSE LIFETIME RATINGS - 14mm**

**14N180M~680K**

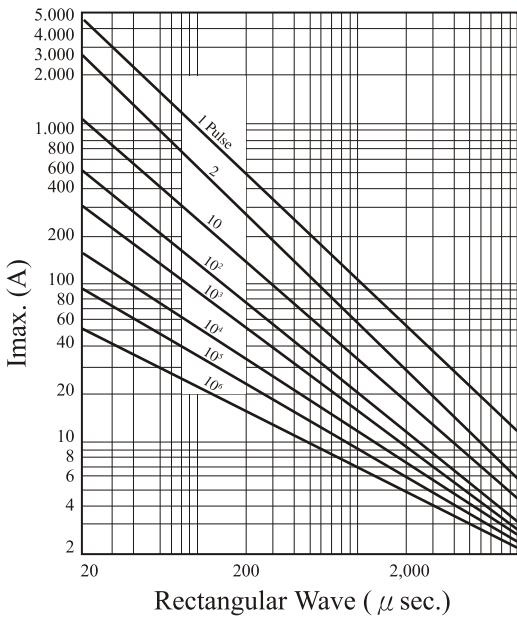


**V-I CHARACTERISTIC CURVE - 14mm**

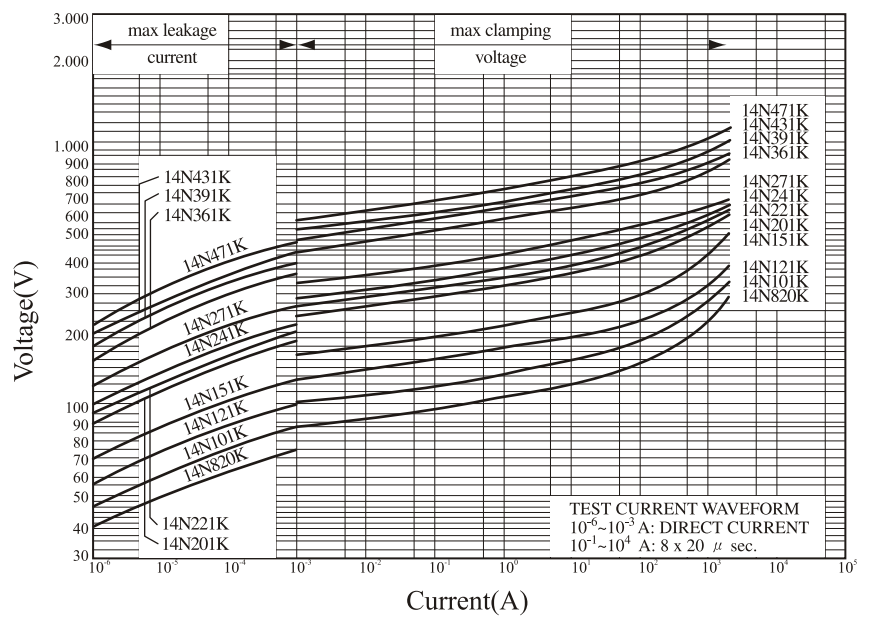
**14N180M~680K**



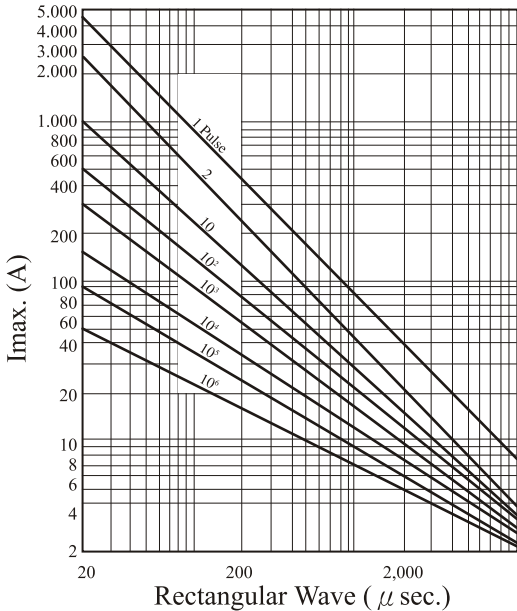
**14N820K~471K**



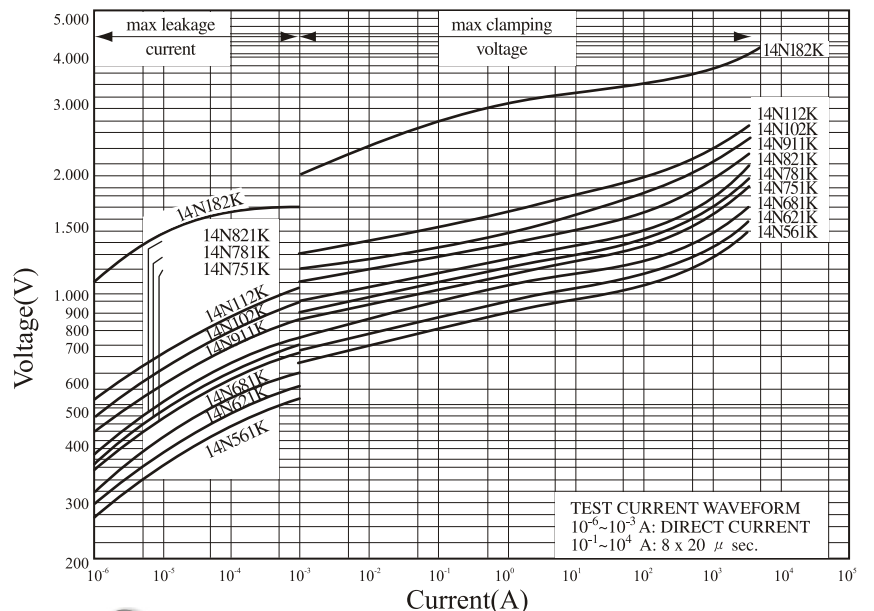
**14N820K~471K**



**14N511K~182K**



**14N561K~182K**







RATING AND CHARACTERISTICS

Standard Varistor - 20mm

| Ordering Code   | Varistor Voltage at 1 mA |           | Maximum Allowable Voltage |        | Maximum Clamping Voltage | Withstanding Surge Current (8/20 μs) |             | Rated Wattage (W) | Energy (10/1000 μs) (J) | Certification (ref to p.20) |     |       |         |
|-----------------|--------------------------|-----------|---------------------------|--------|--------------------------|--------------------------------------|-------------|-------------------|-------------------------|-----------------------------|-----|-------|---------|
|                 | DC (V)                   | Tolerance | ACrms (V)                 | DC (V) | V@100A (V)               | 1 Time (A)                           | 2 Times (A) |                   |                         |                             |     |       |         |
| JV◇20N220M11□△△ | 22                       | ± 20%     | 14                        | 18     | ※ 43                     | 2000                                 | 1000        | 0.2               | 8.0                     | ☆ ☆                         |     |       |         |
| JV◇20N270M11□△△ | 27                       |           | 17                        | 22     | ※ 53                     |                                      |             |                   | 10.0                    | ☆ ☆                         |     |       |         |
| JV◇20N330M11□△△ | 33                       |           | 20                        | 26     | ※ 65                     |                                      |             |                   | 12.0                    | ☆ ☆                         |     |       |         |
| JV◇20N390L11□△△ | 39                       | ± 15%     | 25                        | 31     | ※ 77                     |                                      |             |                   | 6500                    | 4000                        | 1.0 | 14.0  | ☆ ☆     |
| JV◇20N470L11□△△ | 47                       |           | 30                        | 38     | ※ 93                     |                                      |             |                   |                         |                             |     | 17.0  | ☆ ☆     |
| JV◇20N560L11□△△ | 56                       |           | 35                        | 45     | ※ 110                    |                                      |             |                   |                         |                             |     | 20.0  | ☆ ☆     |
| JV◇20N680L11□△△ | 68                       |           | 40                        | 56     | ※ 135                    |                                      |             |                   |                         |                             |     | 24.0  | ☆ ☆     |
| JV◇20N101K11□△△ | 100                      | ± 10%     | 60                        | 85     | 165                      | 6500                                 | 4000        | 1.0               |                         |                             |     | 56.0  | ☆ ☆     |
| JV◇20N121K11□△△ | 120                      |           | 75                        | 100    | 200                      |                                      |             |                   |                         |                             |     | 64.0  | ☆ ☆     |
| JV◇20N151K11□△△ | 150                      |           | 95                        | 125    | 250                      |                                      |             |                   |                         |                             |     | 88.0  | ☆ ☆     |
| JV◇20N181K11□△△ | 180                      |           | 115                       | 150    | 300                      |                                      |             |                   |                         |                             |     | 104.0 | ☆ ☆     |
| JV◇20N201K11□△△ | 200                      |           | 130                       | 170    | 340                      |                                      |             |                   |                         |                             |     | 114.0 | ☆ ☆ ☆ ☆ |
| JV◇20N221K11□△△ | 220                      |           | 140                       | 180    | 360                      |                                      |             |                   |                         |                             |     | 124.0 | ☆ ☆ ☆ ☆ |
| JV◇20N241K11□△△ | 240                      |           | 150                       | 200    | 395                      |                                      |             |                   |                         |                             |     | 134.0 | ☆ ☆ ☆ ☆ |
| JV◇20N271K11□△△ | 270                      |           | 175                       | 225    | 455                      |                                      |             |                   |                         |                             |     | 158.0 | ☆ ☆ ☆ ☆ |
| JV◇20N301K11□△△ | 300                      |           | 195                       | 250    | 505                      |                                      |             |                   |                         |                             |     | 168.0 | ☆ ☆ ☆ ☆ |
| JV◇20N331K11□△△ | 330                      |           | 210                       | 275    | 550                      |                                      |             |                   |                         |                             |     | 184.0 | ☆ ☆ ☆ ☆ |
| JV◇20N361K11□△△ | 360                      |           | 230                       | 300    | 595                      |                                      |             |                   |                         |                             |     | 208.0 | ☆ ☆ ☆ ☆ |
| JV◇20N391K11□△△ | 390                      |           | 250                       | 320    | 650                      |                                      |             |                   |                         |                             |     | 240.0 | ☆ ☆ ☆ ☆ |
| JV◇20N431K11□△△ | 430                      |           | 275                       | 350    | 710                      |                                      |             |                   |                         |                             |     | 264.0 | ☆ ☆ ☆ ☆ |
| JV◇20N471K11□△△ | 470                      |           | 300                       | 385    | 775                      |                                      |             |                   |                         |                             |     | 280.0 | ☆ ☆ ☆ ☆ |
| JV◇20N511K11□△△ | 510                      |           | 320                       | 418    | 842                      |                                      |             |                   |                         |                             |     | 296.0 | ☆ ☆ ☆ ☆ |
| JV◇20N561K11□△△ | 560                      |           | 350                       | 460    | 920                      |                                      |             |                   |                         |                             |     | 312.0 | ☆ ☆ ☆ ☆ |
| JV◇20N621K11□△△ | 620                      |           | 385                       | 505    | 1025                     |                                      |             |                   |                         |                             |     | 328.0 | ☆ ☆ ☆ ☆ |
| JV◇20N681K11□△△ | 680                      |           | 420                       | 560    | 1120                     |                                      |             |                   | 344.0                   | ☆ ☆ ☆ ☆                     |     |       |         |
| JV◇20N751K11□△△ | 750                      |           | 460                       | 615    | 1240                     |                                      |             |                   | 360.0                   | ☆ ☆ ☆ ☆                     |     |       |         |
| JV◇20N781K11□△△ | 780                      |           | 485                       | 640    | 1290                     |                                      |             |                   | 368.0                   | ☆ ☆ ☆ ☆                     |     |       |         |
| JV◇20N821K11□△△ | 820                      |           | 510                       | 670    | 1355                     |                                      |             |                   | 376.0                   | ☆ ☆ ☆ ☆                     |     |       |         |
| JV◇20N911K11□△△ | 910                      | 550       | 745                       | 1500   | 408.0                    | ☆ ☆ ☆ ☆                              |             |                   |                         |                             |     |       |         |
| JV◇20N102K11□△△ | 1000                     | 625       | 825                       | 1650   | 448.0                    | ☆ ☆ ☆ ☆                              |             |                   |                         |                             |     |       |         |
| JV◇20N112K11□△△ | 1100                     | 680       | 895                       | 1815   | 496.0                    | ☆ ☆ ☆ ☆                              |             |                   |                         |                             |     |       |         |
| JV◇20N182K11□△△ | 1800                     | 1000      | 1465                      | 2970   | 695.0                    | ☆ ☆ ☆ ☆                              |             |                   |                         |                             |     |       |         |

※ The clamping voltage from 220M to 680L are tested at current 20A.

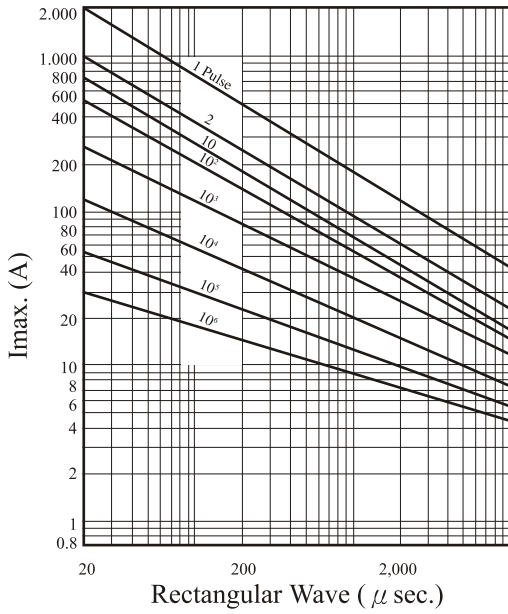
◇ : R=RoHS, H=RoHS+Halogen free +Non flammable

□ : Lead Style ( Y=Vertical kink, P=Straight )

△△ : Lead Length & Packaging (see p.18)

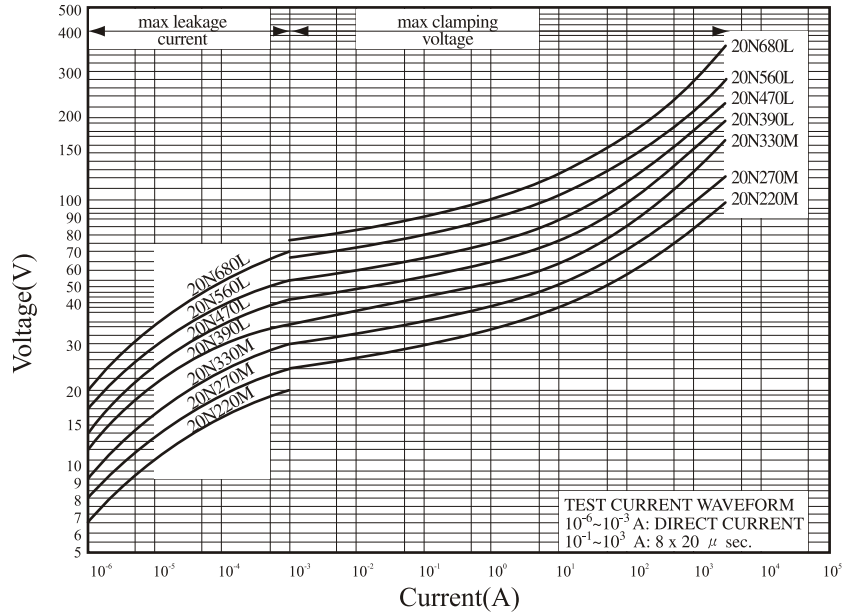
**PULSE LIFETIME RATINGS - 20mm**

20N220M ~ 680L

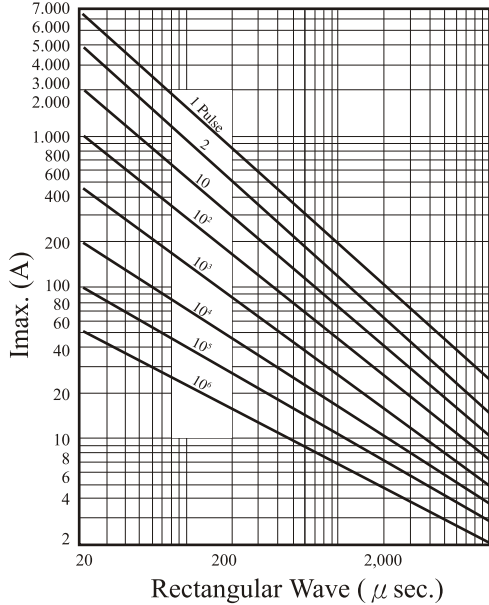


**V-I CHARACTERISTIC CURVE - 20mm**

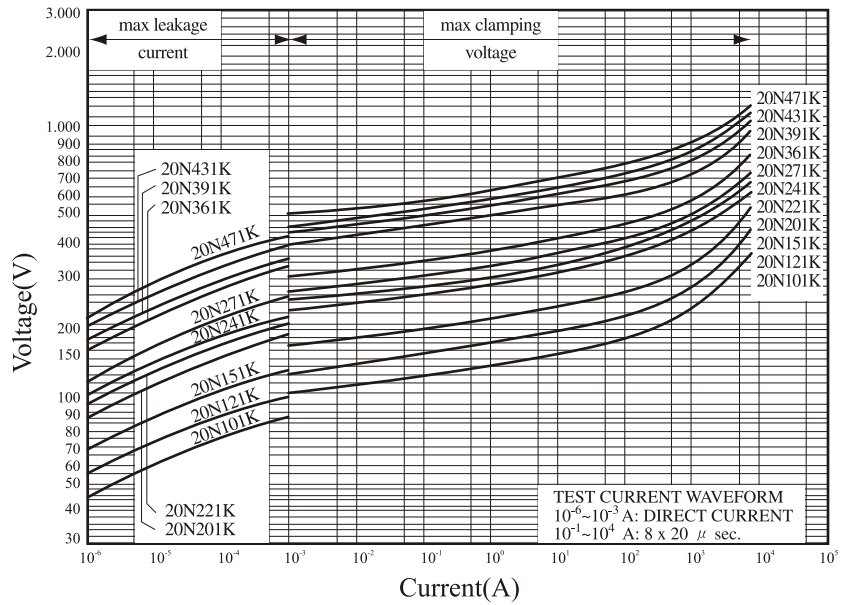
20N220M ~ 680L



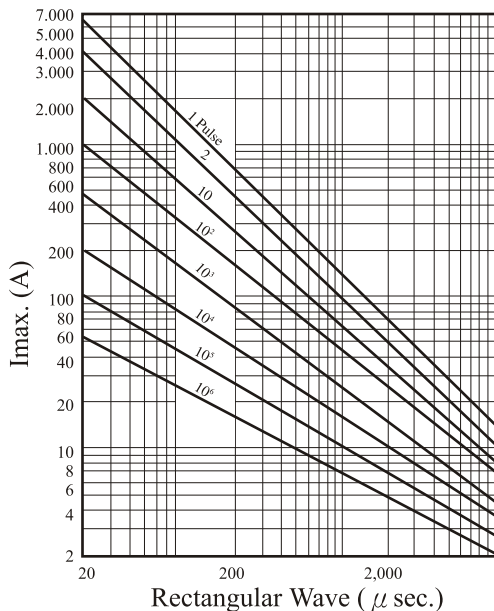
20N101K ~ 471K



20N101K ~ 471K



20N511K ~ 182K



20N561K ~ 182K

