

# MOV

Metal Oxide Varistor

SFV14D Series



## Description

Metal Oxide Varistor (MOV) as one nonlinear resistance element is mainly made of zinc oxide (ZnO), which has very high surge capacity and big nonlinear coefficient. Below the threshold voltage, its resistance is very high, nearly no current flows through, but above the threshold voltage, the resistance reduces sharply, huge current can be discharged. Due to this characteristic, varistor as a protection component in electronic and electrical equipment can absorb abnormal over-voltage and lightning surge.

SETsafe | SETfuse varistor is with High Surge Current Density, Low Clamping Voltage, and Good Surge Capacity. It can also be customized as required.

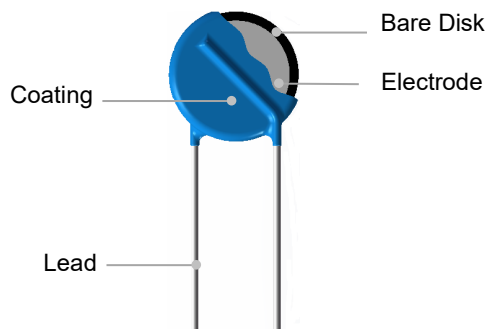
## Features

- Epoxy Resin Coating
- Silicone Resin Coating
- Low Leakage Current
- Bidirectional and Symmetrical V/I Characteristics
- RoHS & REACH Compliant
- Operating Temperature Range  
Low Temperature: -40 °C  
High Temperature: +85 °C / +105 °C

## Applications

- Power Supplies
- Home Electrical Appliances
- Industrial Devices
- Surge Protectors
- Telecom Devices

## Product Structure



## Lead Types

| Lead Types |                      | Codes |
|------------|----------------------|-------|
|            | Straight Lead        | A     |
|            | Inward Crimp Lead    | B     |
|            | Outward Crimp Lead   | C     |
|            | Inline Crimp Lead    | D     |
|            | Little Straight Lead | I     |

## Agency Approvals

| Agency | Standards                                                                                                           | No.            |
|--------|---------------------------------------------------------------------------------------------------------------------|----------------|
|        | UL 1449 4 <sup>th</sup> Edition                                                                                     | E322662        |
|        | CSA C22.2 NO.269.5-17                                                                                               | E322662        |
|        | EN 61051-1:2008<br>IEC 61051-1:2007<br>IEC 61051-2:1991+A1<br>IEC 61051-2-2:1991<br>Annex G.8.1 of IEC 62368-1:2018 | J 50234703     |
|        | GB/T 10193-1997<br>GB/T 10194-1997<br>GB 4943.1-2011<br>GB 8898-2011                                                | CQC12001084354 |

Marking

Trademark

Model

Agency Marks

SET

SFV14DxxxK

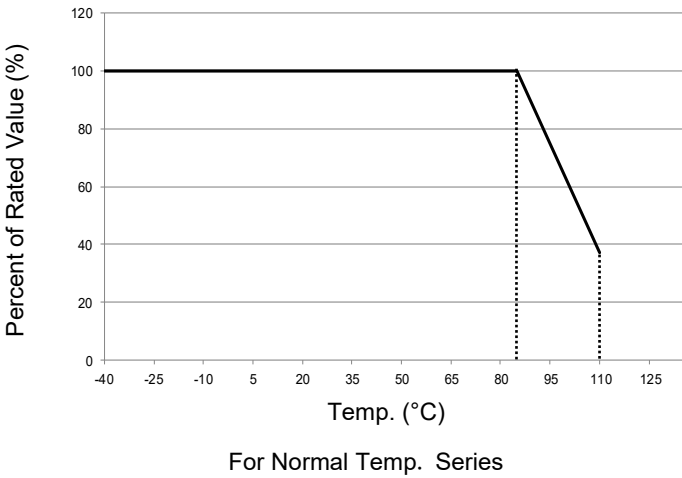
W K 0001




Internal code

|             |                                                                               |
|-------------|-------------------------------------------------------------------------------|
| Year Code   | 2000—A                                                                        |
|             | .....                                                                         |
|             | 2022—W                                                                        |
| Surge Level | S: Normal Type<br>K: Standard Type<br>H: High Energy Type<br>Q: Advanced Type |
| Serial No.  | (E.G.: 0001)                                                                  |

Temp. Derating Curve



Note:

When ambient Temp. exceeds 85 °C, the peak surge current and energy rating should be reduced as shown in left curve.

General Technical Data

| Item                  | Value       | Unit            |
|-----------------------|-------------|-----------------|
| Operating Temperature | -40 to +85  | °C              |
| Storage Temperature   | -40 to +125 | °C              |
| Voltage Proof         | ≥2500       | V <sub>ac</sub> |
| Insulation Resistance | ≥100        | MΩ              |

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## Part Numbering System

SFV 14 D 471 - K T K A BUL - 001

### Other Options

#### \*Packaging & Lead Length

BUL: Bulk + Standard Lead Length (Normal L28)  
 C35: Bulk + Cut to 3.5 mm  
 (Range:2.5 mm to 6 mm)  
 L30: Bulk + Special Lead Length 30 mm  
 (28 mm to 32 mm)  
 (0/1)AB: Taping + Box (Hole Pitch 12.7 mm)  
 (0/1)EB: Taping + Box (Hole Pitch 15.0 mm)  
 (0/1)AR: Taping + Reel (Hole Pitch 12.7 mm)  
 (0/1)ER: Taping + Reel (Hole Pitch 15.0 mm)  
 Note:0/1 Means Product Position  
 0: In Middle of Two Holes; 1: Across the Hole

#### Lead Types

A: Straight Lead  
 B: Inward Crimp Lead  
 C: Outward Crimp Lead  
 D: Inline Crimp Lead  
 I: Little Straight Lead

#### Surge Level

S: Normal Type  
 K: Standard Type  
 Q: Advanced Type  
 H: High Energy Type

#### Operating Temp.

N: Epoxy Coating 85 °C  
 P: Epoxy Coating 105 °C  
 M: Epoxy Coating 125 °C  
 T: Silicone Coating 125 °C

#### Voltage Tolerance

K: ±10%  
 J: ±5%  
 S: Special Tolerance

#### Nominal Varistor Voltage

220:  $22 \times 10^0 = 22 \text{ V}$   
 471:  $47 \times 10^1 = 470 \text{ V}$   
 122:  $12 \times 10^2 = 1200 \text{ V}$

#### Disk Shape

D: Round

#### Bare Disk Dimension

14: 14 mm

#### Product Category

SETfuse Varistor

\*For more details refer to packaging information.

Glossary

| Item              | Description                                                                                                                                                                                                                           |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $V_N$             | <b>Nominal Varistor Voltage</b><br>Voltage, at specified D.C. current used as a reference point in the component characteristics.                                                                                                     |
| $I_L$             | <b>Leakage Current</b><br>Measuring at 75% of varistor voltage.                                                                                                                                                                       |
| UCT               | <b>Upper Category Temp.</b><br>Max. ambient temp. for which a varistor has been designed to operate continuously.                                                                                                                     |
| LCT               | <b>Lower Category Temp.</b><br>Minimum ambient temp. at which a varistor has been designed to operate continuously.                                                                                                                   |
| Max. Peak Current | <b>Max. Peak Current</b><br>Max. current per pulse, which may be passed by a varistor at an ambient temp. of 25 °C, for a given number of pulses.                                                                                     |
| $V_C$             | <b>Clamping Voltage</b><br>Peak voltage developed across the varistor terminations under standard atmospheric conditions, when passing an 8/20 $\mu$ s class current pulse.                                                           |
| Voltage Proof     | <b>Voltage Proof</b><br>Max. peak voltage, which may be applied under continuous operating conditions between the varistor terminations and any conducting mounting surface (Applicable only to insulated varistors).                 |
| $C_V$             | <b>Capacitance</b><br>Capacitance across the MOV measured at a specified frequency and voltage.                                                                                                                                       |
| $V_{ac}$          | <b>Max. Continuous a.c. Voltage</b><br>Max. a.c. r.m.s. voltage of a substantially sinusoidal waveform (less than 5% total harmonic distortion) which can be applied to the component under continuous operating conditions at 25 °C. |
| $V_{dc}$          | <b>Max. Continuous d.c. Voltage</b><br>Max. d.c. voltage (with less than 5% ripple) which can be applied to the component under continuous operating conditions at an ambient temp. of 25 °C.                                         |

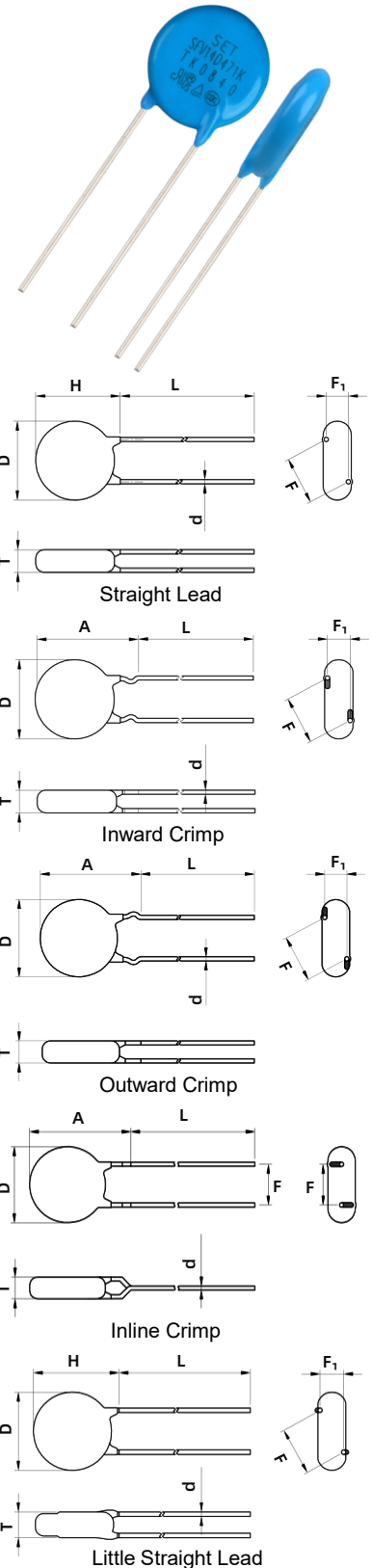
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## Dimensions (mm)

| Model      | L<br>(Min.) | H<br>(Max.) | T<br>(Max.) | D<br>(Max.) | d         | F       | F <sub>1</sub> | A<br>(Max.) |
|------------|-------------|-------------|-------------|-------------|-----------|---------|----------------|-------------|
| SFV14D220K | 20          | 18.5        | 4.7         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.1 - 2.5      | 21.5        |
| SFV14D270K | 20          | 18.5        | 5.0         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.2 - 2.7      | 21.5        |
| SFV14D330K | 20          | 18.5        | 5.3         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.3 - 2.9      | 21.5        |
| SFV14D390K | 20          | 18.5        | 5.6         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.4 - 3.1      | 21.5        |
| SFV14D470K | 20          | 18.5        | 4.8         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.2 - 2.7      | 21.5        |
| SFV14D560K | 20          | 18.5        | 5.0         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.3 - 2.9      | 21.5        |
| SFV14D680K | 20          | 18.5        | 5.3         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.5 - 3.2      | 21.5        |
| SFV14D820K | 20          | 18.5        | 4.4         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.2 - 2.6      | 21.5        |
| SFV14D101K | 20          | 18.5        | 4.6         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.3 - 2.8      | 21.5        |
| SFV14D121K | 20          | 18.5        | 4.8         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.4 - 3.0      | 21.5        |
| SFV14D151K | 20          | 18.5        | 5.1         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.6 - 3.3      | 21.5        |
| SFV14D181K | 20          | 18.5        | 4.5         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.3 - 2.8      | 21.5        |
| SFV14D201K | 20          | 18.5        | 4.6         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.3 - 2.9      | 21.5        |
| SFV14D221K | 20          | 18.5        | 4.7         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.4 - 3.0      | 21.5        |
| SFV14D241K | 20          | 18.5        | 4.9         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.4 - 3.1      | 21.5        |
| SFV14D271K | 20          | 18.5        | 5.0         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.5 - 3.3      | 21.5        |
| SFV14D301K | 20          | 18.5        | 5.2         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.7 - 3.5      | 21.5        |
| SFV14D331K | 20          | 18.5        | 5.4         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.8 - 3.6      | 21.5        |
| SFV14D361K | 20          | 18.5        | 5.6         | 16.5        | 0.80±0.05 | 7.5±0.6 | 1.9 - 3.8      | 21.5        |
| SFV14D391K | 20          | 18.5        | 5.7         | 16.5        | 0.80±0.05 | 7.5±0.6 | 2.0 - 4.0      | 21.5        |
| SFV14D431K | 20          | 18.5        | 6.0         | 16.5        | 0.80±0.05 | 7.5±0.6 | 2.2 - 4.2      | 21.5        |
| SFV14D471K | 20          | 18.5        | 6.2         | 16.5        | 0.80±0.05 | 7.5±0.6 | 2.4 - 4.4      | 21.5        |
| SFV14D511K | 20          | 18.5        | 6.4         | 16.5        | 0.80±0.05 | 7.5±0.6 | 2.6 - 4.6      | 21.5        |
| SFV14D561K | 20          | 18.5        | 6.7         | 16.5        | 0.80±0.05 | 7.5±0.6 | 2.9 - 4.9      | 21.5        |
| SFV14D621K | 20          | 18.5        | 7.1         | 16.5        | 0.80±0.05 | 7.5±0.6 | 3.2 - 5.2      | 21.5        |
| SFV14D681K | 20          | 18.5        | 7.4         | 16.5        | 0.80±0.05 | 7.5±0.6 | 3.6 - 5.6      | 21.5        |
| SFV14D751K | 20          | 18.5        | 7.9         | 16.5        | 0.80±0.05 | 7.5±0.6 | 4.0 - 6.0      | 21.5        |
| SFV14D821K | 20          | 18.5        | 8.3         | 16.5        | 0.80±0.05 | 7.5±0.6 | 4.4 - 6.4      | 21.5        |
| SFV14D911K | 20          | 18.5        | 8.8         | 16.5        | 0.80±0.05 | 7.5±0.6 | 4.9 - 6.9      | 21.5        |
| SFV14D102K | 20          | 18.5        | 9.3         | 16.5        | 0.80±0.05 | 7.5±0.6 | 5.4 - 7.4      | 21.5        |
| SFV14D112K | 20          | 18.5        | 9.9         | 16.5        | 0.80±0.05 | 7.5±0.6 | 5.9 - 7.9      | 21.5        |
| SFV14D122K | 20          | 18.5        | 10.5        | 16.5        | 0.80±0.05 | 7.5±0.6 | 6.5 - 8.5      | 21.5        |



Note:

The above data is for reference only.

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### Specification

| Model      | Surge Level | Max. Continuous Operating Voltage |     | Varistor Voltage @1 mA DC |      | Clamping Voltage (Max.) |                | Max. Peak Current (1 time, 8/20 μs) | Max. Energy (10/1000 μs) | Typical Capacitance (For reference only ) @1 kHz | Agency Approvals                                                                                                                                                                                                                                                                                                                                             |     |     |     |
|------------|-------------|-----------------------------------|-----|---------------------------|------|-------------------------|----------------|-------------------------------------|--------------------------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|
|            |             | Vac                               | Vdc | Min.                      | Max. | V <sub>C</sub>          | I <sub>P</sub> |                                     |                          |                                                  | <div>     </div> |     |     |     |
|            |             | (V)                               | (V) | (V)                       | (V)  | (V)                     | (A)            | (kA)                                | (J)                      | (pF)                                             | UL                                                                                                                                                                                                                                                                                                                                                           | cUL | TUV | CQC |
| SFV14D220K | S           | 14                                | 18  | 20                        | 24   | 43                      | 10             | 1.0                                 | 5.0                      | 9100                                             | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D270K | S           | 17                                | 22  | 24                        | 31   | 53                      | 10             | 1.0                                 | 6.0                      | 7400                                             | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D330K | S           | 20                                | 26  | 30                        | 36   | 65                      | 10             | 1.0                                 | 7.5                      | 6100                                             | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D390K | S           | 25                                | 31  | 35                        | 43   | 77                      | 10             | 1.0                                 | 8.6                      | 5100                                             | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D470K | S           | 30                                | 38  | 42                        | 52   | 93                      | 10             | 1.0                                 | 10                       | 4300                                             | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D560K | S           | 35                                | 45  | 50                        | 62   | 110                     | 10             | 1.0                                 | 11                       | 3600                                             | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D680K | S           | 40                                | 56  | 61                        | 75   | 135                     | 10             | 1.0                                 | 14                       | 2900                                             | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D820K | S           | 50                                | 65  | 74                        | 90   | 135                     | 50             | 4.5                                 | 22                       | 2400                                             | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D101K | S           | 60                                | 85  | 90                        | 110  | 165                     | 50             | 4.5                                 | 28                       | 2000                                             | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D121K | S           | 75                                | 100 | 108                       | 132  | 200                     | 50             | 4.5                                 | 32                       | 1700                                             | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D151K | S           | 95                                | 125 | 135                       | 165  | 250                     | 50             | 4.5                                 | 40                       | 1300                                             | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D181K | S           | 115                               | 150 | 162                       | 198  | 300                     | 50             | 4.5                                 | 50                       | 1100                                             | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D201K | S           | 130                               | 170 | 180                       | 220  | 340                     | 50             | 4.5                                 | 57                       | 1000                                             | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D221K | S           | 140                               | 180 | 198                       | 242  | 360                     | 50             | 4.5                                 | 60                       | 900                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D241K | S           | 150                               | 200 | 216                       | 264  | 395                     | 50             | 4.5                                 | 63                       | 830                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D271K | S           | 175                               | 225 | 243                       | 297  | 455                     | 50             | 4.5                                 | 70                       | 740                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D301K | S           | 190                               | 250 | 270                       | 330  | 500                     | 50             | 4.5                                 | 77                       | 670                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D331K | S           | 210                               | 275 | 297                       | 363  | 550                     | 50             | 4.5                                 | 85                       | 610                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D361K | S           | 230                               | 300 | 324                       | 396  | 595                     | 50             | 4.5                                 | 93                       | 560                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D391K | S           | 250                               | 320 | 351                       | 429  | 650                     | 50             | 4.5                                 | 100                      | 510                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D431K | S           | 275                               | 350 | 387                       | 473  | 710                     | 50             | 4.5                                 | 115                      | 460                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D471K | S           | 300                               | 385 | 423                       | 517  | 775                     | 50             | 4.5                                 | 125                      | 430                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D511K | S           | 320                               | 415 | 459                       | 561  | 845                     | 50             | 4.5                                 | 125                      | 390                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D561K | S           | 350                               | 460 | 504                       | 616  | 925                     | 50             | 4.5                                 | 125                      | 360                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D621K | S           | 385                               | 505 | 558                       | 682  | 1025                    | 50             | 4.5                                 | 125                      | 320                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D681K | S           | 420                               | 560 | 612                       | 748  | 1120                    | 50             | 4.5                                 | 130                      | 290                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D751K | S           | 460                               | 615 | 675                       | 825  | 1240                    | 50             | 4.5                                 | 143                      | 270                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D821K | S           | 510                               | 670 | 738                       | 902  | 1355                    | 50             | 4.5                                 | 157                      | 240                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ●   | ●   |
| SFV14D911K | S           | 550                               | 745 | 819                       | 1001 | 1500                    | 50             | 4.5                                 | 175                      | 220                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ○   | ●   |
| SFV14D102K | S           | 625                               | 825 | 900                       | 1100 | 1650                    | 50             | 4.5                                 | 190                      | 200                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ○   | ●   |
| SFV14D112K | S           | 680                               | 895 | 990                       | 1210 | 1815                    | 50             | 4.5                                 | 213                      | 180                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ○   | ●   |
| SFV14D122K | S           | 750                               | 990 | 1080                      | 1320 | 1980                    | 50             | 4.5                                 | 213                      | 150                                              | ●                                                                                                                                                                                                                                                                                                                                                            | ●   | ○   | ●   |

● : Approved      ○ : No application for certification

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### Specification

| Model      | Surge Level | Max. Continuous Operating Voltage |     | Varistor Voltage @1 mA DC |      | Clamping Voltage (Max.) |                | Max. Peak Current (1 time, 8/20 μs) | Max. Energy (10/1000 μs) | Typical Capacitance (For reference only ) @1 kHz | Agency Approvals                                                                                                                                                                                                                                                                                                                                |     |     |     |
|------------|-------------|-----------------------------------|-----|---------------------------|------|-------------------------|----------------|-------------------------------------|--------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|
|            |             | Vac                               | Vdc | Min.                      | Max. | V <sub>C</sub>          | I <sub>P</sub> |                                     |                          |                                                  |     |     |     |     |
|            |             | (V)                               | (V) | (V)                       | (V)  | (V)                     | (A)            | (kA)                                | (J)                      | (pF)                                             | UL                                                                                                                                                                                                                                                                                                                                              | cUL | TUV | CQC |
| SFV14D220K | K           | 14                                | 18  | 20                        | 24   | 43                      | 10             | 2                                   | 6.3                      | 9100                                             | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D270K | K           | 17                                | 22  | 24                        | 31   | 53                      | 10             | 2                                   | 7.8                      | 7400                                             | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D330K | K           | 20                                | 26  | 30                        | 36   | 65                      | 10             | 2                                   | 9.5                      | 6100                                             | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D390K | K           | 25                                | 31  | 35                        | 43   | 77                      | 10             | 2                                   | 11                       | 5100                                             | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D470K | K           | 30                                | 38  | 42                        | 52   | 93                      | 10             | 2                                   | 14                       | 4300                                             | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D560K | K           | 35                                | 45  | 50                        | 62   | 110                     | 10             | 2                                   | 16                       | 3600                                             | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D680K | K           | 40                                | 56  | 61                        | 75   | 135                     | 10             | 2                                   | 20                       | 2900                                             | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D820K | K           | 50                                | 65  | 74                        | 90   | 135                     | 50             | 6                                   | 28                       | 2400                                             | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D101K | K           | 60                                | 85  | 90                        | 110  | 165                     | 50             | 6                                   | 35                       | 2000                                             | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D121K | K           | 75                                | 100 | 108                       | 132  | 200                     | 50             | 6                                   | 42                       | 1700                                             | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D151K | K           | 95                                | 125 | 135                       | 165  | 250                     | 50             | 6                                   | 53                       | 1300                                             | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D181K | K           | 115                               | 150 | 162                       | 198  | 300                     | 50             | 6                                   | 60                       | 1100                                             | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D201K | K           | 130                               | 170 | 180                       | 220  | 340                     | 50             | 6                                   | 70                       | 1000                                             | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D221K | K           | 140                               | 180 | 198                       | 242  | 360                     | 50             | 6                                   | 78                       | 900                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D241K | K           | 150                               | 200 | 216                       | 264  | 395                     | 50             | 6                                   | 84                       | 830                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D271K | K           | 175                               | 225 | 243                       | 297  | 455                     | 50             | 6                                   | 99                       | 740                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D301K | K           | 190                               | 250 | 270                       | 330  | 500                     | 50             | 6                                   | 108                      | 670                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D331K | K           | 210                               | 275 | 297                       | 363  | 550                     | 50             | 6                                   | 115                      | 610                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D361K | K           | 230                               | 300 | 324                       | 396  | 595                     | 50             | 6                                   | 130                      | 560                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D391K | K           | 250                               | 320 | 351                       | 429  | 650                     | 50             | 6                                   | 140                      | 510                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D431K | K           | 275                               | 350 | 387                       | 473  | 710                     | 50             | 6                                   | 155                      | 460                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D471K | K           | 300                               | 385 | 423                       | 517  | 775                     | 50             | 6                                   | 175                      | 430                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D511K | K           | 320                               | 415 | 459                       | 561  | 845                     | 50             | 6                                   | 180                      | 390                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D561K | K           | 350                               | 460 | 504                       | 616  | 925                     | 50             | 6                                   | 185                      | 360                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D621K | K           | 385                               | 505 | 558                       | 682  | 1025                    | 50             | 6                                   | 190                      | 320                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D681K | K           | 420                               | 560 | 612                       | 748  | 1120                    | 50             | 6                                   | 200                      | 290                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D751K | K           | 460                               | 615 | 675                       | 825  | 1240                    | 50             | 6                                   | 210                      | 270                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D821K | K           | 510                               | 670 | 738                       | 902  | 1355                    | 50             | 6                                   | 235                      | 240                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ●   | ●   |
| SFV14D911K | K           | 550                               | 745 | 819                       | 1001 | 1500                    | 50             | 6                                   | 255                      | 220                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ○   | ●   |
| SFV14D102K | K           | 625                               | 825 | 900                       | 1100 | 1650                    | 50             | 6                                   | 270                      | 200                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ○   | ●   |
| SFV14D112K | K           | 680                               | 895 | 990                       | 1210 | 1815                    | 50             | 6                                   | 280                      | 180                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ○   | ●   |
| SFV14D122K | K           | 750                               | 990 | 1080                      | 1320 | 1980                    | 50             | 6                                   | 310                      | 150                                              | ●                                                                                                                                                                                                                                                                                                                                               | ●   | ○   | ●   |

● : Approved      ○ : No application for certification

# MOV

Metal Oxide Varistor

SFV14D Series

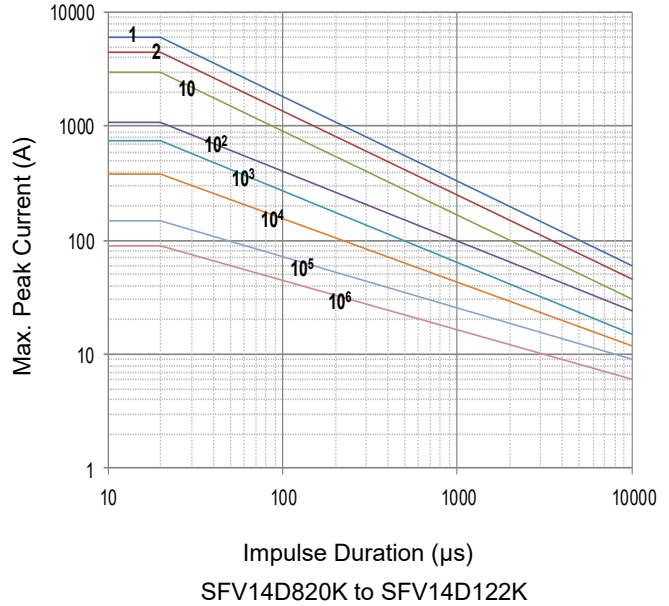
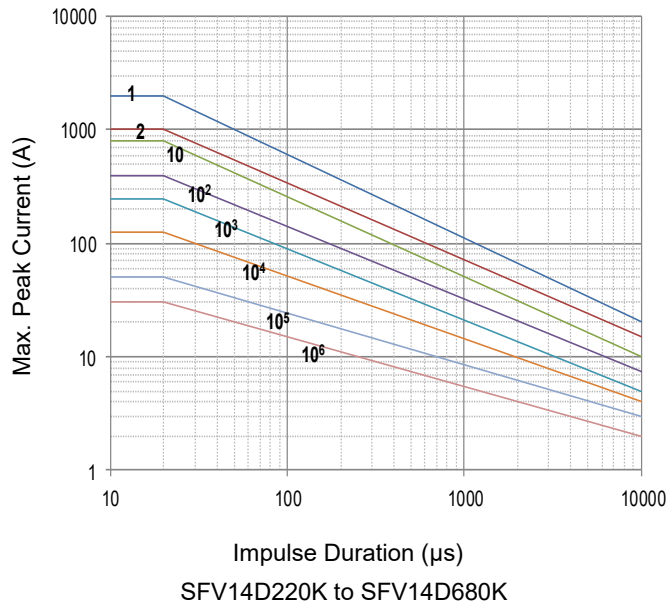
## Specification

| Model      | Surge Level | Max. Continuous Operating Voltage |     | Varistor Voltage @1 mA DC |      | Clamping Voltage (Max.) |                | Max. Peak Current (1 time, 8/20 μs) | Max. Energy (8/20 μs) | Typical Capacitance (For reference only ) @1 kHz | Agency Approvals                                                                    |                                                                                     |                                                                                     |                                                                                     |
|------------|-------------|-----------------------------------|-----|---------------------------|------|-------------------------|----------------|-------------------------------------|-----------------------|--------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|            |             | Vac                               | Vdc | Min.                      | Max. | V <sub>C</sub>          | I <sub>P</sub> | H                                   |                       | (pF)                                             |  |  |  |  |
|            |             | (V)                               | (V) | (V)                       | (V)  | (V)                     | (A)            | (kA)                                | (J)                   |                                                  | UL                                                                                  | cUL                                                                                 | TUV                                                                                 | CQC                                                                                 |
|            |             |                                   |     |                           |      |                         |                |                                     |                       |                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| SFV14D201K | H           | 130                               | 170 | 180                       | 220  | 340                     | 50             | 8                                   | 150                   | 1000                                             | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   |
| SFV14D221K | H           | 140                               | 180 | 198                       | 242  | 360                     | 50             | 8                                   | 160                   | 900                                              | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   |
| SFV14D241K | H           | 150                               | 200 | 216                       | 264  | 395                     | 50             | 8                                   | 180                   | 830                                              | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   |
| SFV14D271K | H           | 175                               | 225 | 243                       | 297  | 455                     | 50             | 8                                   | 200                   | 740                                              | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   |
| SFV14D301K | H           | 190                               | 250 | 270                       | 330  | 500                     | 50             | 8                                   | 220                   | 670                                              | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   |
| SFV14D331K | H           | 210                               | 275 | 297                       | 363  | 550                     | 50             | 8                                   | 245                   | 610                                              | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   |
| SFV14D361K | H           | 230                               | 300 | 324                       | 396  | 595                     | 50             | 8                                   | 260                   | 560                                              | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   |
| SFV14D391K | H           | 250                               | 320 | 351                       | 429  | 650                     | 50             | 8                                   | 290                   | 510                                              | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   |
| SFV14D431K | H           | 275                               | 350 | 387                       | 473  | 710                     | 50             | 8                                   | 320                   | 460                                              | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   |
| SFV14D471K | H           | 300                               | 385 | 423                       | 517  | 775                     | 50             | 8                                   | 350                   | 430                                              | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   |
| SFV14D511K | H           | 320                               | 415 | 459                       | 561  | 845                     | 50             | 8                                   | 380                   | 390                                              | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   |
| SFV14D561K | H           | 350                               | 460 | 504                       | 616  | 925                     | 50             | 8                                   | 400                   | 360                                              | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   |
| SFV14D621K | H           | 385                               | 505 | 558                       | 682  | 1025                    | 50             | 8                                   | 400                   | 320                                              | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   |
| SFV14D681K | H           | 420                               | 560 | 612                       | 748  | 1120                    | 50             | 8                                   | 400                   | 290                                              | ●                                                                                   | ●                                                                                   | ●                                                                                   | ●                                                                                   |

| Model      | Surge Level | Max. Continuous Operating Voltage |     | Varistor Voltage @1 mA DC |      | Clamping Voltage (Max.) |                | Pulse Impact Performance (40 times) (1.2/50 μs & 8/20 μs) | Max. Energy (10/1000 μs) | Typical Capacitance (For reference only ) @1 kHz | Agency Approvals                                                                      |                                                                                       |                                                                                       |                                                                                       |
|------------|-------------|-----------------------------------|-----|---------------------------|------|-------------------------|----------------|-----------------------------------------------------------|--------------------------|--------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|            |             |                                   |     |                           |      |                         |                |                                                           |                          |                                                  |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|            |             | Vac                               | Vdc | Min.                      | Max. | V <sub>C</sub>          | I <sub>P</sub> | Q                                                         |                          | (pF)                                             |  |  |  |  |
|            |             | (V)                               | (V) | (V)                       | (V)  | (V)                     | (A)            | (kV)                                                      | (J)                      |                                                  | UL                                                                                    | cUL                                                                                   | TUV                                                                                   | CQC                                                                                   |
| SFV14D201K | Q           | 130                               | 170 | 180                       | 220  | 340                     | 50             | 6.6                                                       | 70                       | 1000                                             | ●                                                                                     | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| SFV14D221K | Q           | 140                               | 180 | 198                       | 242  | 360                     | 50             | 6.6                                                       | 78                       | 900                                              | ●                                                                                     | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| SFV14D241K | Q           | 150                               | 200 | 216                       | 264  | 395                     | 50             | 6.6                                                       | 84                       | 830                                              | ●                                                                                     | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| SFV14D271K | Q           | 175                               | 225 | 243                       | 297  | 455                     | 50             | 6.6                                                       | 99                       | 740                                              | ●                                                                                     | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| SFV14D301K | Q           | 190                               | 250 | 270                       | 330  | 500                     | 50             | 6.6                                                       | 108                      | 670                                              | ●                                                                                     | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| SFV14D331K | Q           | 210                               | 275 | 297                       | 363  | 550                     | 50             | 6.6                                                       | 115                      | 610                                              | ●                                                                                     | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| SFV14D361K | Q           | 230                               | 300 | 324                       | 396  | 595                     | 50             | 6.6                                                       | 130                      | 560                                              | ●                                                                                     | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| SFV14D391K | Q           | 250                               | 320 | 351                       | 429  | 650                     | 50             | 6.6                                                       | 140                      | 510                                              | ●                                                                                     | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| SFV14D431K | Q           | 275                               | 350 | 387                       | 473  | 710                     | 50             | 6.6                                                       | 155                      | 460                                              | ●                                                                                     | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| SFV14D471K | Q           | 300                               | 385 | 423                       | 517  | 775                     | 50             | 6.6                                                       | 175                      | 430                                              | ●                                                                                     | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| SFV14D511K | Q           | 320                               | 415 | 459                       | 561  | 845                     | 50             | 6.6                                                       | 180                      | 390                                              | ●                                                                                     | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| SFV14D561K | Q           | 350                               | 460 | 504                       | 616  | 925                     | 50             | 6.6                                                       | 185                      | 360                                              | ●                                                                                     | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| SFV14D621K | Q           | 385                               | 505 | 558                       | 682  | 1025                    | 50             | 6.6                                                       | 190                      | 320                                              | ●                                                                                     | ●                                                                                     | ●                                                                                     | ●                                                                                     |
| SFV14D681K | Q           | 420                               | 560 | 612                       | 748  | 1120                    | 50             | 6.6                                                       | 200                      | 290                                              | ●                                                                                     | ●                                                                                     | ●                                                                                     | ●                                                                                     |

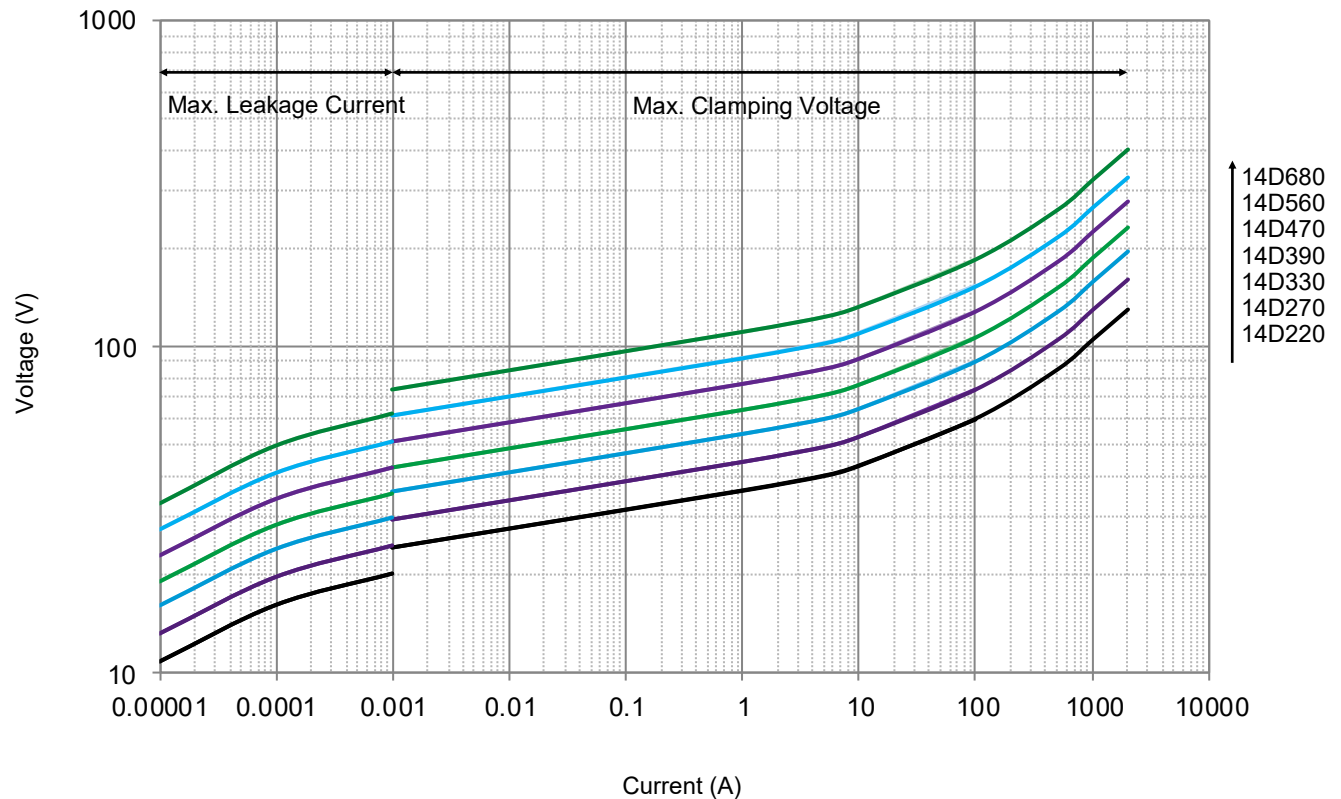
## Performance Curve (For reference only )

### • Max. Peak Current Derating Curves

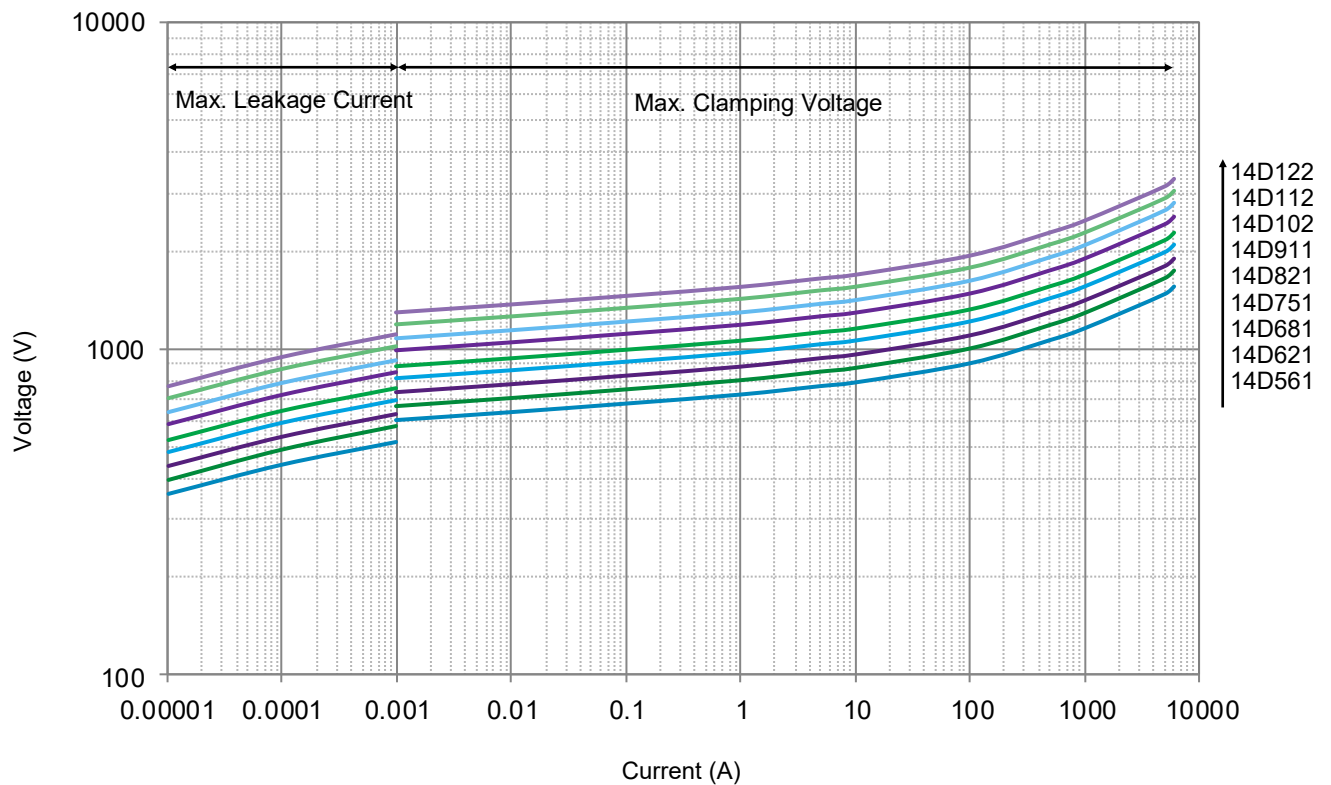
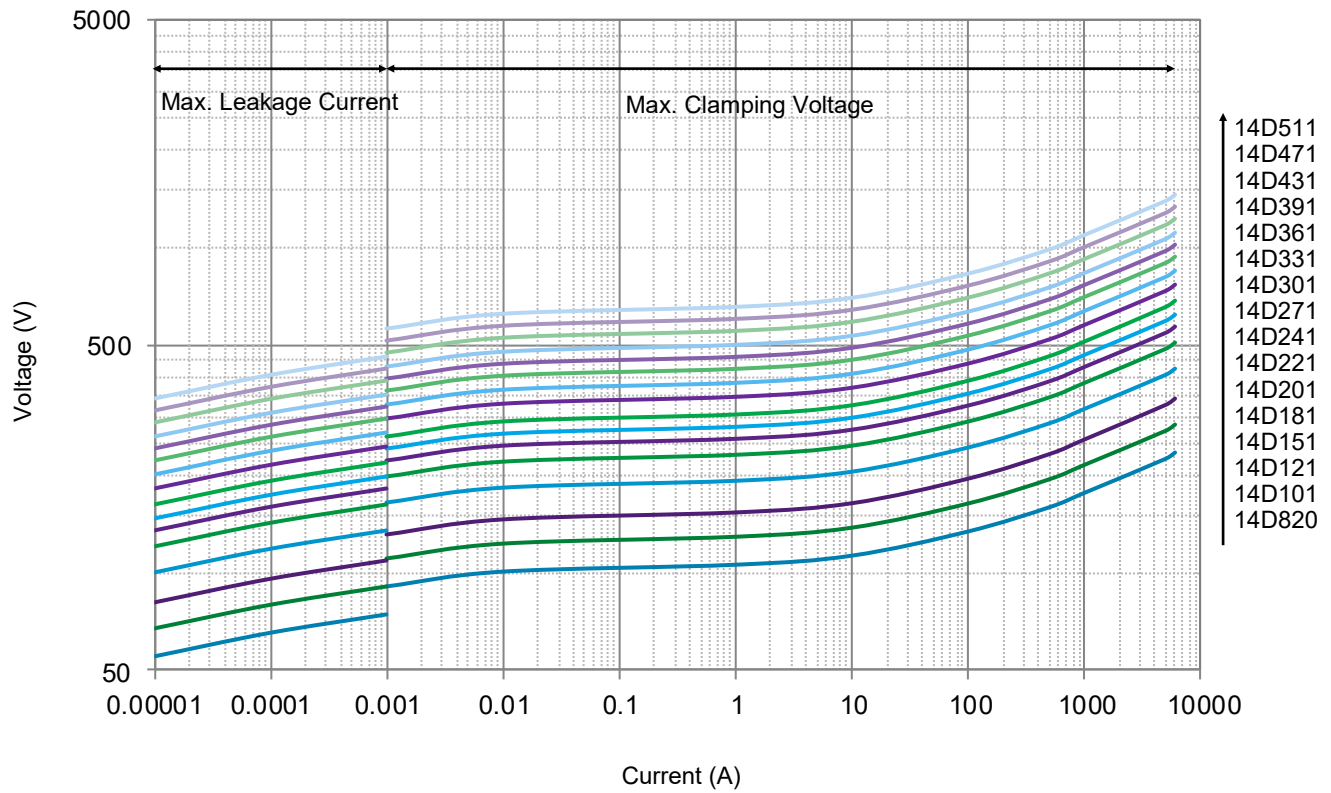


Note: 1, 2, 10, 10<sup>2</sup>, 10<sup>3</sup>, 10<sup>4</sup>, 10<sup>5</sup>, 10<sup>6</sup> Stand for Repetitions.

### • Voltage-Current Characteristic Curves



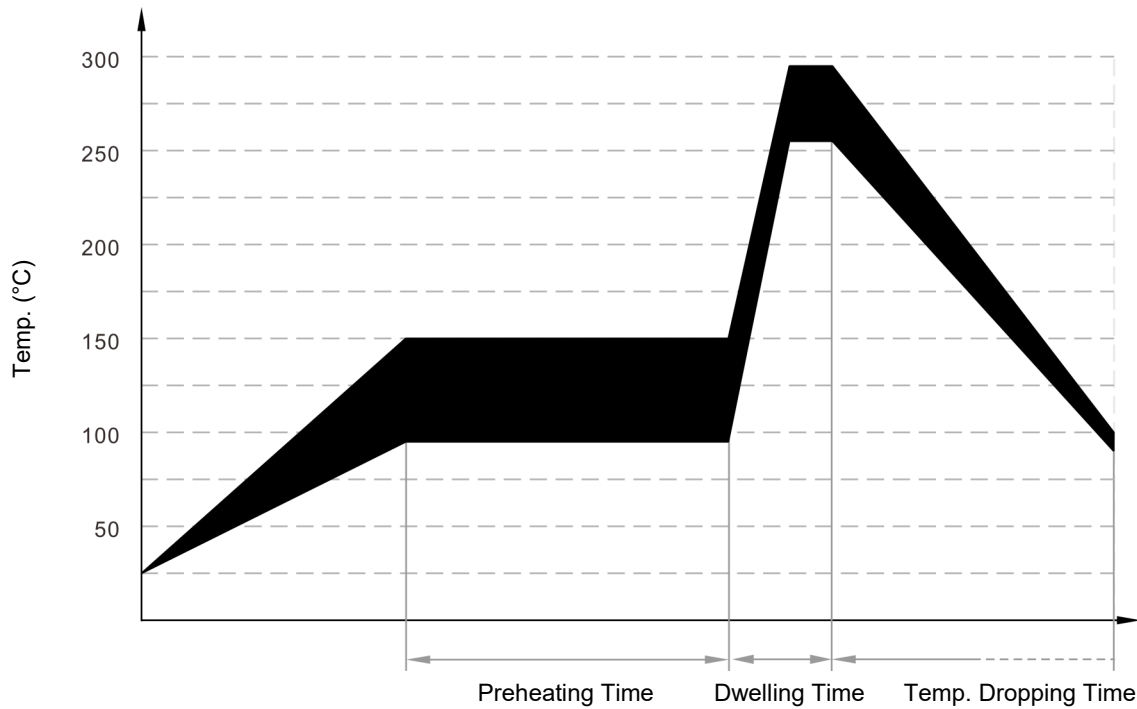
• Voltage-Current Characteristic Curves



# Soldering Parameters

## Wave Soldering Parameters

The wave soldering parameters are for reference only. When MOV is for practice use, some related validation is recommended.



Wave Soldering Curve

| Item       | Temp. (°C) | Time (s) |
|------------|------------|----------|
| Preheating | 90 to 150  | <150     |
| Dwelling   | 255 to 290 | 3 to 10  |

# Recommended Hand-Soldering Parameters

| Item                 | Condition        |
|----------------------|------------------|
| Temp. of Solder Head | 350 °C (max.)    |
| Soldering Time       | 4 seconds (max.) |

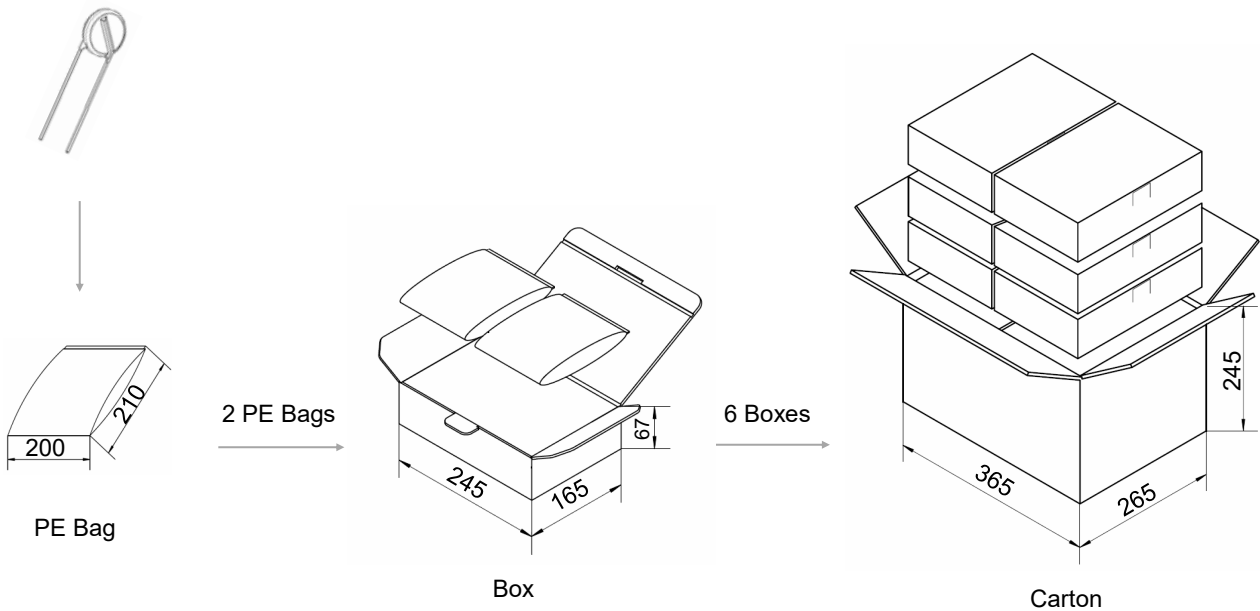
Packaging Information

- Bulk Packaging (Code: BUL)
- Bulk Packaging Quantity & Weight.

| Series | Nominal Varistor Voltage | PE Bag | Box   | Carton | G. W / Carton<br>(365 × 265 × 245) |
|--------|--------------------------|--------|-------|--------|------------------------------------|
| 14D    | (V)                      | (PCS)  | (PCS) | (PCS)  | (kg)±10%                           |
|        | 220 - 361                | 500    | 1000  | 6000   | 8 - 15                             |
|        | 391 - 621                | 400    | 800   | 4800   | 13 - 18                            |
|        | 681 - 122                | 250    | 500   | 3000   | 12 - 20                            |

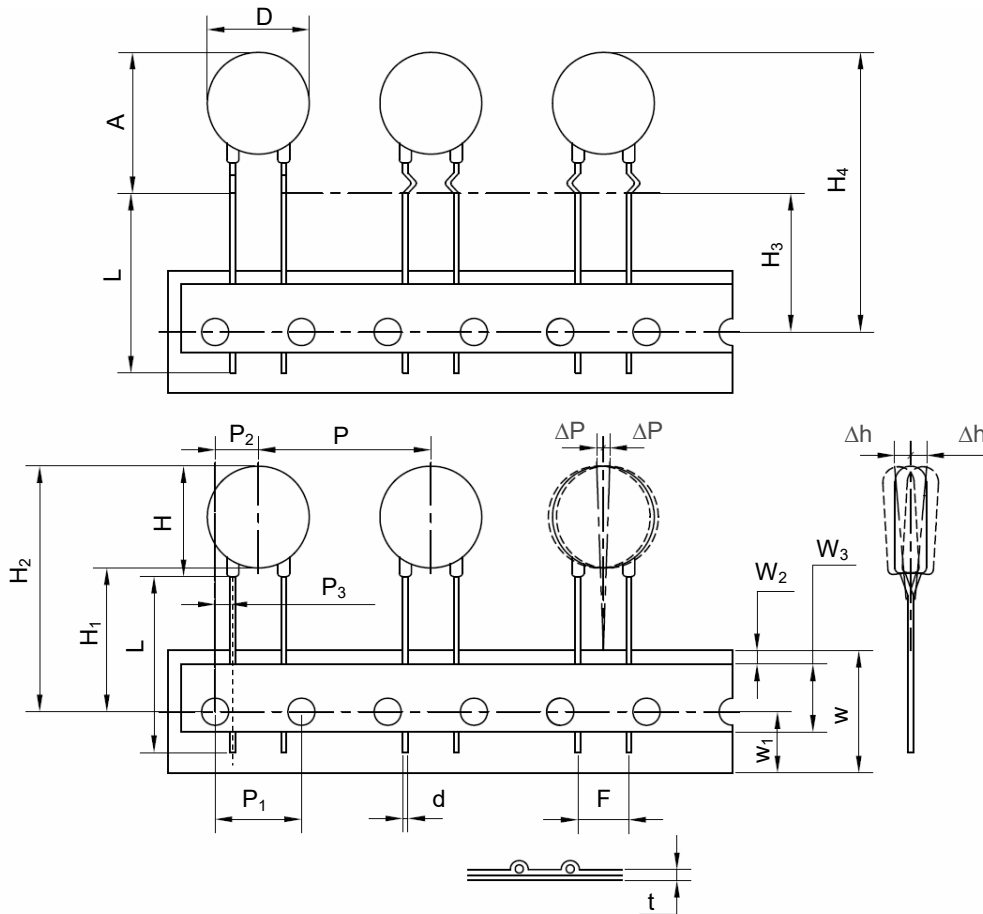
Note:  
Other lead length packaging information, please contact SETsafe | SETfuse.

All Dimensions in mm



## Packaging Information

- Tape Packaging (Code: 0AB)

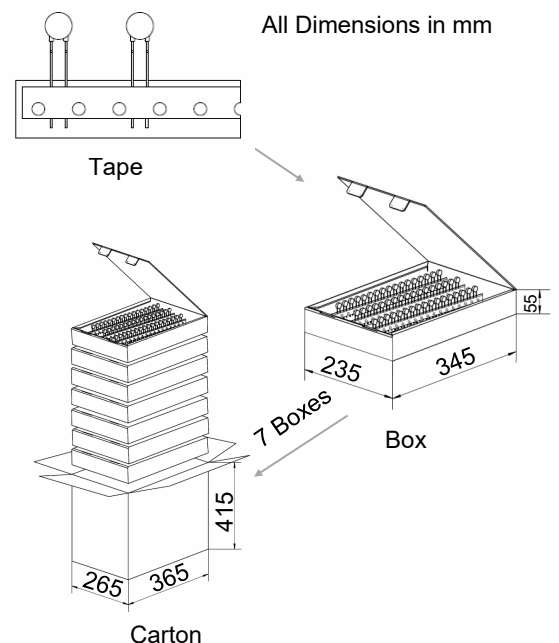


## Dimensions (mm)

| Symbol                | Dimensions                         |
|-----------------------|------------------------------------|
| P                     | 25.4±1.0                           |
| P <sub>1</sub>        | 12.7±0.3                           |
| P <sub>2</sub>        | 6.35±1.3                           |
| P <sub>3</sub>        | 2.6±0.7                            |
| ΔP(max.)              | 1.0                                |
| W                     | 18.0±1.0                           |
| W <sub>1</sub>        | 9.0±1.0                            |
| W <sub>2</sub> (max.) | 3.0                                |
| W <sub>3</sub>        | 10.0±2.0                           |
| H(max.)               | 18.5                               |
| H <sub>1</sub>        | 18.0 <sup>+2.0</sup> <sub>-0</sub> |
| H <sub>2</sub> (max.) | 40.0                               |
| H <sub>3</sub>        | 18.0 <sup>+2.0</sup> <sub>-0</sub> |
| H <sub>4</sub> (max.) | 42.0                               |
| Δh(max.)              | 2.0                                |
| t(max.)               | 0.6                                |
| D(max.)               | 16.5                               |
| D <sub>0</sub>        | 4.0±0.2                            |
| d                     | 0.80±0.05                          |
| A(max.)               | 21.5                               |
| F                     | 7.5±1.0                            |
| L(min.)               | Taping                             |

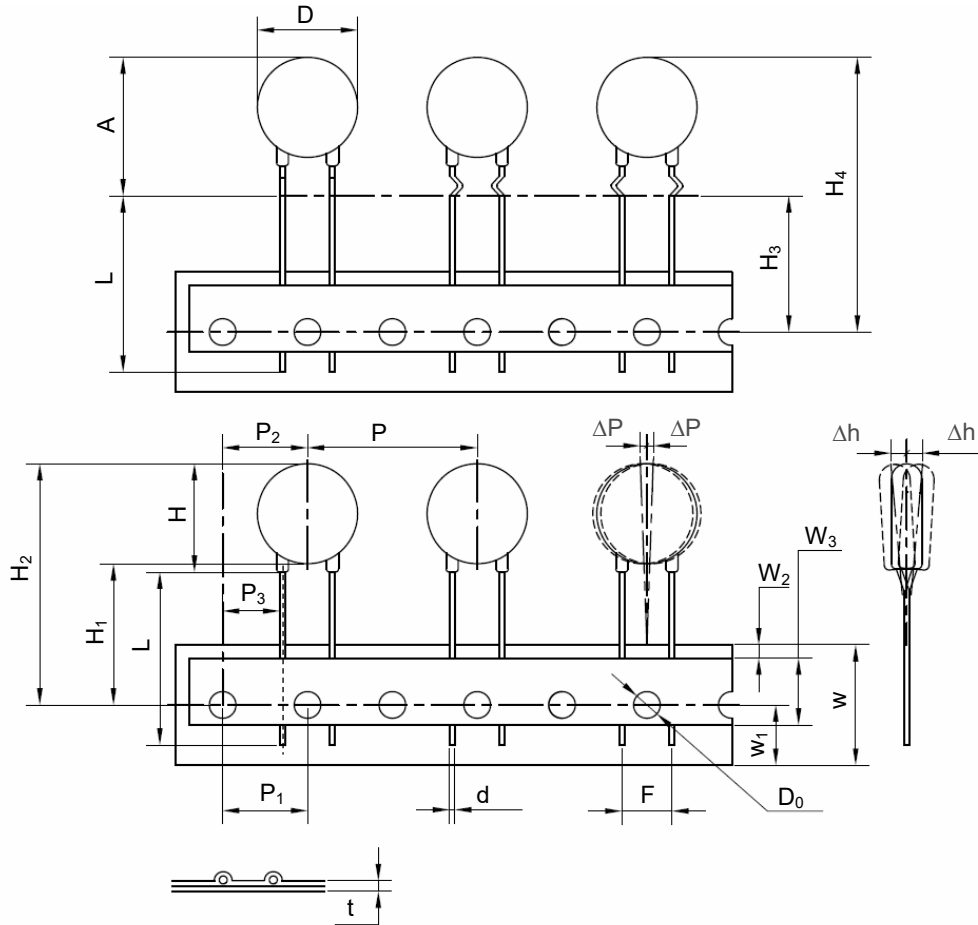
- Tape Packaging Quantity & Weight.

| Series | Nominal Varistor Voltage | Box   | Carton | G. W / Carton<br>(365 × 265 × 415) |
|--------|--------------------------|-------|--------|------------------------------------|
|        | (V)                      | (PCS) | (PCS)  | (kg)±10%                           |
| 14D    | 112 - 122                | 250   | 1750   | 10 - 12                            |
|        | 681 - 102                | 300   | 2100   | 9 - 12                             |
|        | 471 - 621                | 400   | 2800   | 9 - 11                             |
|        | 301 - 431                | 500   | 3500   | 8 - 10                             |
|        | 680                      |       |        | 9                                  |
|        | 390 - 560                | 600   | 4200   | 7 - 9                              |
|        | 820 - 271                |       |        | 6 - 9                              |
|        | 220 - 330                | 700   | 4900   | 6 - 8                              |



## Packaging Information

- Tape Packaging (Code: 1AB)

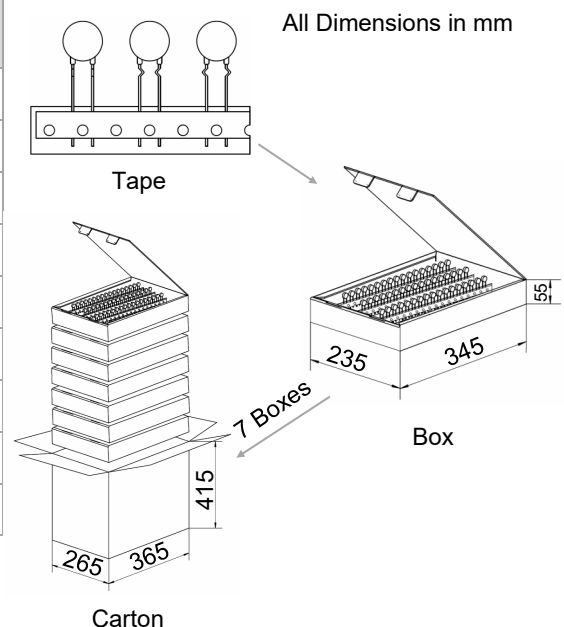


## Dimensions (mm)

| Symbol                | Dimensions                         |
|-----------------------|------------------------------------|
| P                     | 25.4±1.0                           |
| P <sub>1</sub>        | 12.7±0.3                           |
| P <sub>2</sub>        | 12.7±1.3                           |
| P <sub>3</sub>        | 8.95±0.7                           |
| ΔP(max.)              | 1.0                                |
| W                     | 18.0±1.0                           |
| W <sub>1</sub>        | 9.0±1.0                            |
| W <sub>2</sub> (max.) | 3.0                                |
| W <sub>3</sub>        | 10.0±2.0                           |
| H(max.)               | 18.5                               |
| H <sub>1</sub>        | 18.0 <sup>+2.0</sup> <sub>-0</sub> |
| H <sub>2</sub> (max.) | 40.0                               |
| H <sub>3</sub>        | 18.0 <sup>+2.0</sup> <sub>-0</sub> |
| H <sub>4</sub> (max.) | 42.0                               |
| Δh(max.)              | 2.0                                |
| t(max.)               | 0.6                                |
| D(max.)               | 16.5                               |
| D <sub>0</sub>        | 4.0±0.2                            |
| d                     | 0.80±0.05                          |
| A(max.)               | 21.5                               |
| F                     | 7.5±1.0                            |
| L(min.)               | Taping                             |

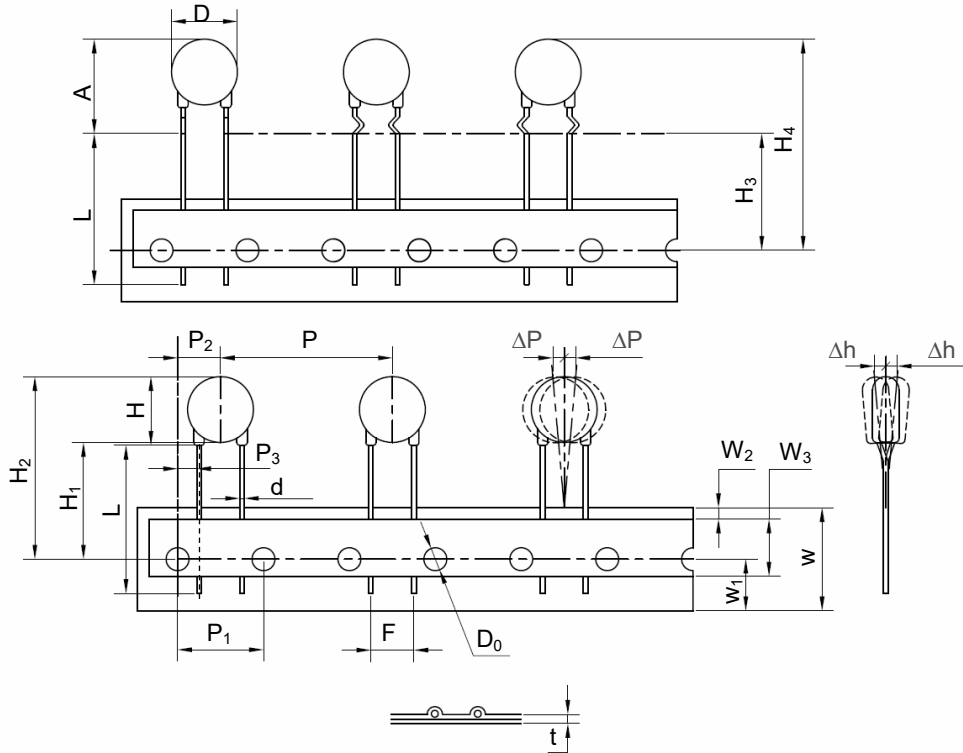
- Tape Packaging Quantity & Weight.

| Series | Nominal Varistor Voltage | Box   | Carton | G. W / Carton<br>(365 × 265 × 415) |
|--------|--------------------------|-------|--------|------------------------------------|
|        | (V)                      | (PCS) | (PCS)  | (kg)±10%                           |
| 14D    | 112 - 122                | 250   | 1750   | 10 - 12                            |
|        | 681 - 102                | 300   | 2100   | 9 - 12                             |
|        | 471 - 621                | 400   | 2800   | 9 - 11                             |
|        | 301 - 431                | 500   | 3500   | 8 - 10                             |
|        | 680                      |       |        | 9                                  |
|        | 390 - 560                | 600   | 4200   | 7 - 9                              |
|        | 820 - 271                |       |        | 6 - 9                              |
|        | 220 - 330                | 700   | 4900   | 6 - 8                              |



## Packaging Information

- Tape Packaging (Code: 0EB)

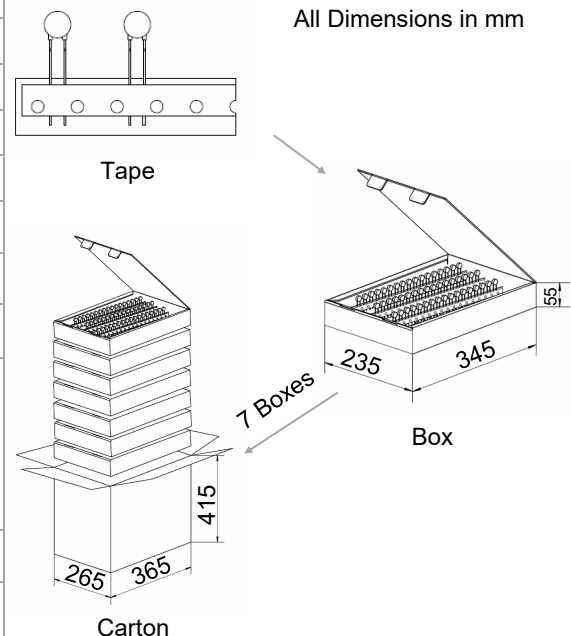


### Dimensions (mm)

| Symbol                | Dimensions                         |
|-----------------------|------------------------------------|
| P                     | 30.0±1.0                           |
| P <sub>1</sub>        | 15.0±0.3                           |
| P <sub>2</sub>        | 7.5±1.3                            |
| P <sub>3</sub>        | 3.75±1.0                           |
| ΔP(max.)              | 1.0                                |
| W                     | 18.0±1.0                           |
| W <sub>1</sub>        | 9.0±1.0                            |
| W <sub>2</sub> (max.) | 3.0                                |
| W <sub>3</sub>        | 10.0±2.0                           |
| H(max.)               | 18.5                               |
| H <sub>1</sub>        | 18.0 <sup>+2.0</sup> <sub>-0</sub> |
| H <sub>2</sub> (max.) | 40.0                               |
| H <sub>3</sub>        | 18.0 <sup>+2.0</sup> <sub>-0</sub> |
| H <sub>4</sub> (max.) | 42.0                               |
| Δh(max.)              | 2.0                                |
| t(max.)               | 0.6                                |
| D(max.)               | 16.5                               |
| D <sub>0</sub>        | 4.0±0.2                            |
| d                     | 0.80±0.05                          |
| A(max.)               | 21.5                               |
| F                     | 7.5±1.0                            |
| L(min.)               | Taping                             |

- Tape Packaging Quantity & Weight.

| Series | Nominal Varistor Voltage | Box   | Carton | G. W / Carton (365 × 265 × 415) |
|--------|--------------------------|-------|--------|---------------------------------|
|        | (V)                      | (PCS) | (PCS)  | (kg)±10%                        |
| 14D    | 112 - 122                | 200   | 1400   | 8 - 9                           |
|        | 821 - 102                | 250   | 1750   | 8 - 9                           |
|        | 681 - 751                | 300   | 2100   | 8 - 9                           |
|        | 511 - 621                | 350   | 2450   | 8 - 9                           |
|        | 391 - 471                | 400   | 2800   | 7 - 9                           |
|        | 301 - 361                | 450   | 3150   | 7 - 9                           |
|        | 680                      |       |        | 9                               |
|        | 241 - 271                | 500   | 3500   | 6 - 7                           |
|        | 151                      |       |        | 7                               |
|        | 470 - 560                |       |        | 6 - 8                           |
|        | 181 - 221                | 550   | 3850   | 6 - 7                           |
|        | 101 - 121                |       |        |                                 |
|        | 330 - 390                |       |        |                                 |
|        | 820                      | 600   | 4200   | 6                               |
|        | 220 - 270                |       |        | 5 - 6                           |



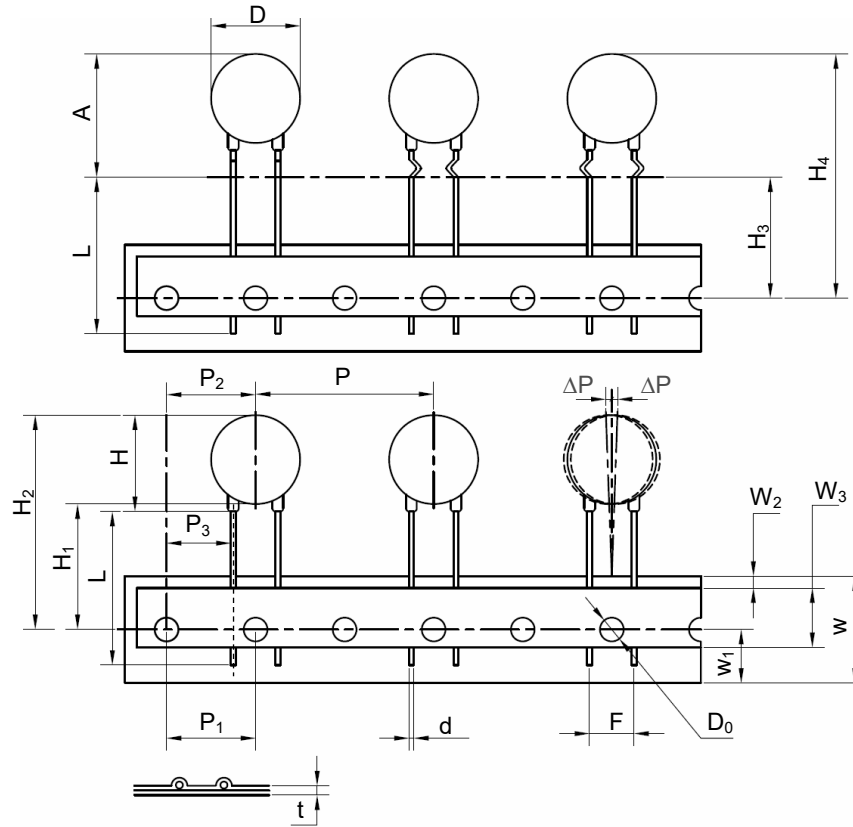
# MOV

Metal Oxide Varistor

SFV14D Series

## Packaging Information

- Tape Packaging (Code: 1EB)

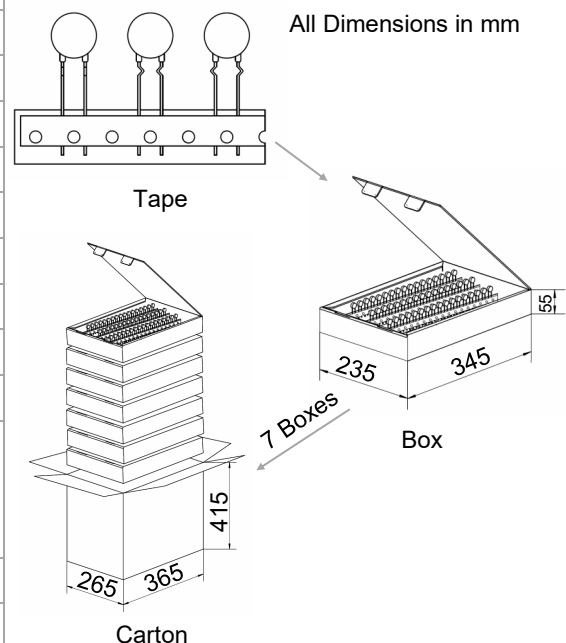


## Dimensions (mm)

| Symbol                | Dimensions                         |
|-----------------------|------------------------------------|
| P                     | 30.0±1.0                           |
| P <sub>1</sub>        | 15.0±0.3                           |
| P <sub>2</sub>        | 15.0±1.3                           |
| P <sub>3</sub>        | 11.25±1.0                          |
| ΔP(max.)              | 1.0                                |
| W                     | 18.0±1.0                           |
| W <sub>1</sub>        | 9.0±1.0                            |
| W <sub>2</sub> (max.) | 3.0                                |
| W <sub>3</sub>        | 10.0±1.0                           |
| H(max.)               | 18.5                               |
| H <sub>1</sub>        | 18.0 <sup>+2.0</sup> <sub>-0</sub> |
| H <sub>2</sub> (max.) | 40.0                               |
| H <sub>3</sub>        | 18.0 <sup>+2.0</sup> <sub>-0</sub> |
| H <sub>4</sub> (max.) | 42.0                               |
| Δh(max.)              | 2.0                                |
| t(max.)               | 0.55                               |
| D(max.)               | 16.5                               |
| D <sub>0</sub>        | 4.0±0.2                            |
| d                     | 0.80±0.05                          |
| A(max.)               | 21.5                               |
| F                     | 7.5±1.0                            |
| L(min.)               | Taping                             |

- Tape Packaging Quantity & Weight.

| Series | Nominal Varistor Voltage | Box   | Carton | G. W / Carton<br>(365 × 265 × 415) |
|--------|--------------------------|-------|--------|------------------------------------|
|        | (V)                      | (PCS) | (PCS)  | (kg)±10%                           |
| 14D    | 112 - 122                | 200   | 1400   | 8 - 9                              |
|        | 821 - 102                | 250   | 1750   | 8 - 9                              |
|        | 681 - 751                | 300   | 2100   | 8 - 9                              |
|        | 511 - 621                | 350   | 2450   | 8 - 9                              |
|        | 391 - 471                | 400   | 2800   | 7 - 9                              |
|        | 301 - 361                | 450   | 3150   | 7 - 9                              |
|        | 680                      |       |        | 9                                  |
|        | 241 - 271                | 500   | 3500   | 6 - 7                              |
|        | 151                      |       |        | 7                                  |
|        | 470 - 560                |       |        | 6 - 8                              |
|        | 181 - 221                |       |        | 6 - 7                              |
|        | 101 - 121                | 550   | 3850   | 6 - 7                              |
|        | 330 - 390                |       |        | 6 - 7                              |
|        | 820                      | 600   | 4200   | 6                                  |
|        | 220 - 270                |       |        | 5 - 6                              |



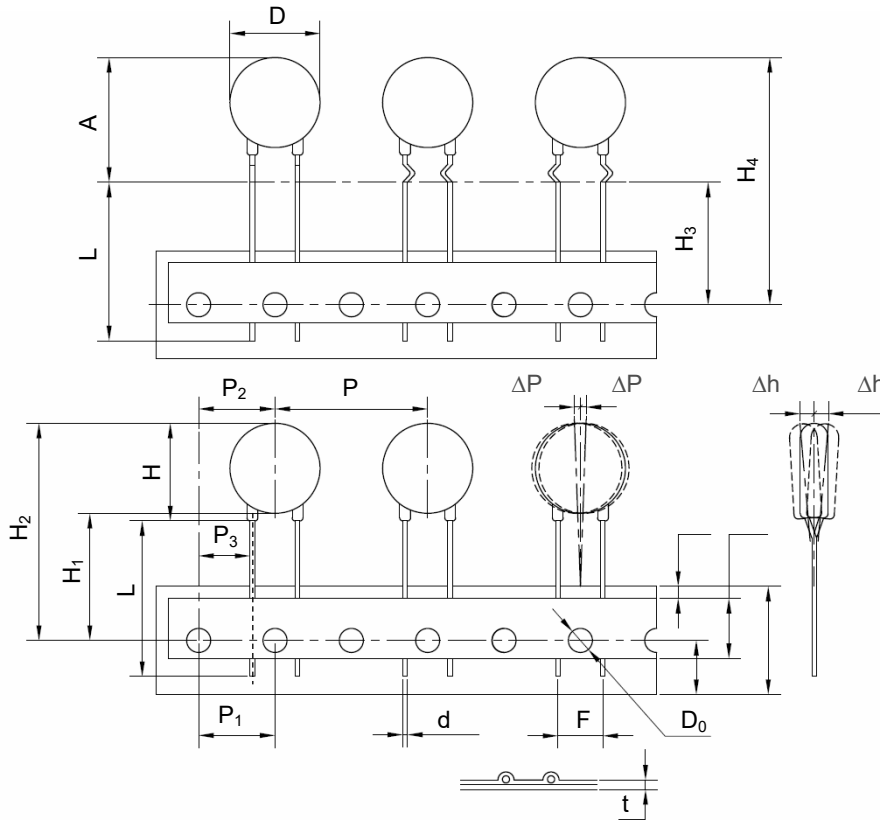
# MOV

Metal Oxide Varistor

SFV14D Series

## Packaging Information

- Reel Packaging (Code:1AR)

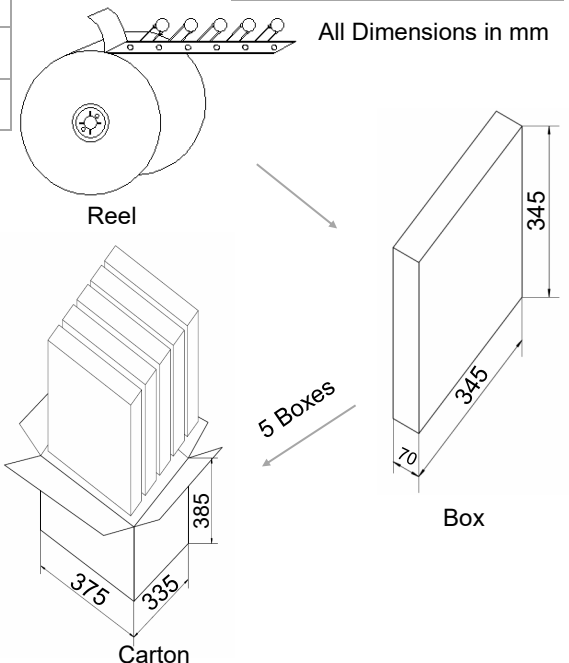
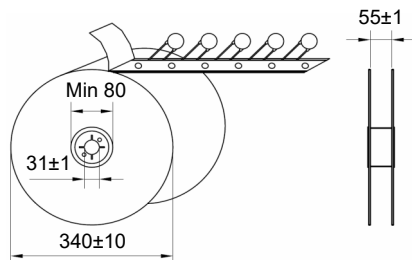


## Dimensions (mm)

| Symbol                | Dimensions                         |
|-----------------------|------------------------------------|
| P                     | 25.4±1.0                           |
| P <sub>1</sub>        | 12.7±0.3                           |
| P <sub>2</sub>        | 12.7±1.3                           |
| P <sub>3</sub>        | 8.95±0.7                           |
| ΔP(max.)              | 1.0                                |
| W                     | 18.0±1.0                           |
| W <sub>1</sub>        | 9.0±1.0                            |
| W <sub>2</sub> (max.) | 3.0                                |
| W <sub>3</sub>        | 10.0±2.0                           |
| H(max.)               | 18.5                               |
| H <sub>1</sub>        | 18.0 <sup>+2.0</sup> <sub>-0</sub> |
| H <sub>2</sub> (max.) | 40.0                               |
| H <sub>3</sub>        | 18.0 <sup>+2.0</sup> <sub>-0</sub> |
| H <sub>4</sub> (max.) | 42.0                               |
| Δh(max.)              | 2.0                                |
| t(max.)               | 0.6                                |
| D(max.)               | 16.5                               |
| D <sub>0</sub>        | 4.0±0.2                            |
| d                     | 0.80±0.05                          |
| A(max.)               | 21.5                               |
| F                     | 7.5±1.0                            |
| L(min.)               | Taping                             |

- Reel Packaging Quantity & Weight.

| Series | Nominal Varistor Voltage | Box   | Carton | G. W / Carton (375 × 335 × 385) |
|--------|--------------------------|-------|--------|---------------------------------|
|        | (V)                      | (PCS) | (PCS)  | (kg)±10%                        |
| 14D    | 220 - 301                | 650   | 3250   | 4 - 8                           |
|        | 331 - 681                | 400   | 2000   | 4 - 8                           |
|        | 751 - 122                | 250   | 1250   | 5 - 8                           |





# ATTENTION

## Usage

1. Varistor must operated in the specified ambient temp.
2. Do not clean the varistor with strong polar solvent such as ketone, esters, benzene and halogenated hydrocarbon.
3. Please do not apply severe vibration, shock or pressure to MOV.
4. Please fix lead wires when bending or cutting. The distance between the bending point and the sealing of MOV shall be greater than 2 mm.

## Replacement

If varistor is visually damaged, please replace it.

## Storage

1. Storage Temp. Range: (-40 to +125) °C
2. Relative Humidity : ≤75% RH
3. Altitude: <2000 m
4. Do not store the MOV at the high temp., high humidity or corrosive gas environment, to avoid influencing the solder-ability of the lead wires, the product shall be used up within 1 year after receiving the goods.

## Environmental Conditions

1. Varistor should neither be exposed to the open air, nor direct sunshine.
2. Varistor should avoid rain, water vapor or other condition of high temp. and high humidity.
3. Varistor should avoid sand dust, salt spray, or other harmful gases.

## Max. Typical Capacitance of Varistor

The typical capacitance of varistor is listed in the specifications. Designers may refer to it when designing MOV in high frequency circuit.

## Installation

### Mechanical Stress

Do not knock MOV when installing, to avoid mechanical damage.