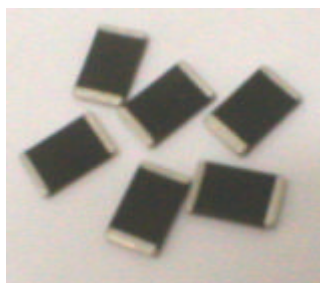
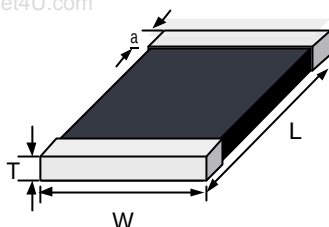


## JV 08CH SMD



## Dimensions

www.DataSheet4U.com



| SYMBOL | INCHES |       | MILLIMETERS |      |
|--------|--------|-------|-------------|------|
|        | MIN    | MAX   | MIN         | MAX  |
| T      | -      | 0.080 | -           | 2.03 |
| a      | 0.016  | 0.050 | 0.41        | 1.27 |
| L      | 0.311  | 0.335 | 7.90        | 8.51 |
| W      | 0.185  | 0.207 | 4.70        | 5.26 |

Surface Mount  
Metal Oxide Varistors

## Features

Monolayer Construction in a 5mm x 8mm  
Package Size.  
Leadless, Surface chip form  
Bi-directional clamping  
No derating up to 125°C ambient.  
Available with Nickel/Tin end termination

## Applications

- Surface-mount chip form intended for hybrid-circuit application
- PCs and peripherals
- Utility meters
- Proximity switches
- Consumer products
- Protection of various kinds of transistors, diodes, ICs, thyristors, triacs and semiconductors...etc.,

## Specifications

## Packaging

Tape and Reel

## Standard:

13 inch reel (4.000 pcs.)

Option: 7 inch reel (1.000 pcs.)

## Material

Body: Ceramic (ZnO)

Terminals: Ni/Sn plated (code "P")

## Operating Temperature

-55 to +125°C

## Solderability

acc. to IEC 60068-2-58

235°C, 2s

## Soldering Heat Resistance

260°C, 10 sec. (IEC 60068-2-58)

280°C, 5 sec. (IEC 60068-2-58)

## Response Time

&lt;0.5ns

Temperature coefficient ( $\alpha_V$ ) of clamping voltage ( $V_C$ ) @ specified test current

&lt;0.01%/°C

## Power dissipation

0.25W max.

## Maximum Ratings (125°C)

## Specifications (25°C)

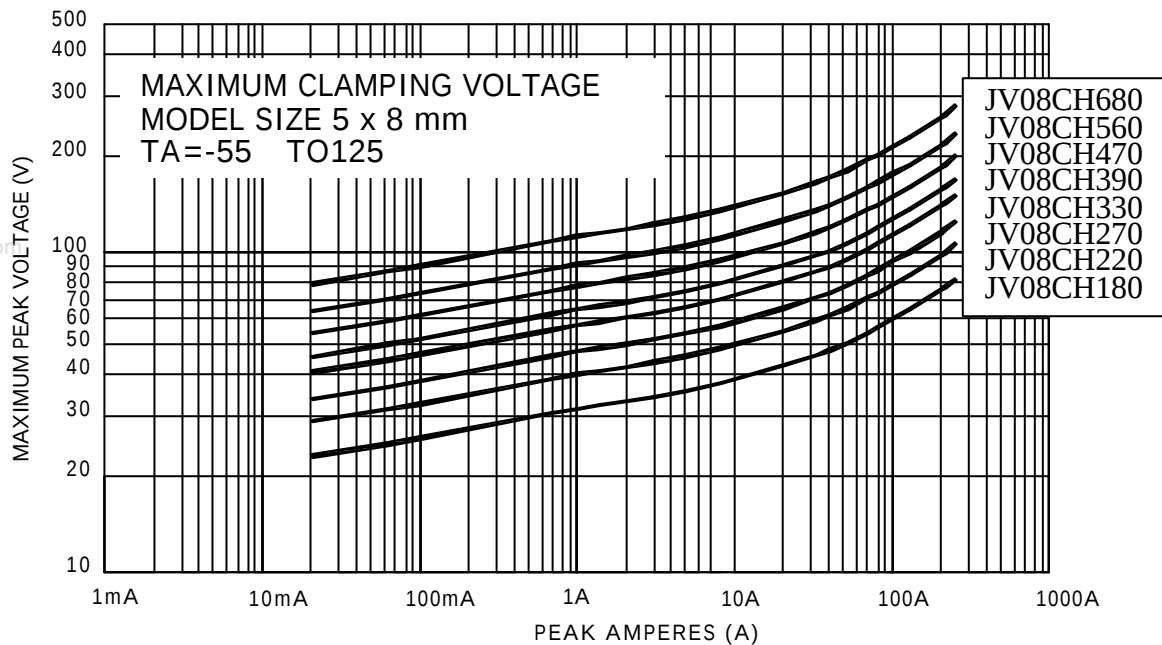
| Type      | max. cont. working voltage |                 | max. non-repetitive surge current (8/20 $\mu$ s) | max. non-repetitive surge energy (10/1000 $\mu$ s) | max. clamping voltage at spec. current (8/20 $\mu$ s) | nominal voltage at 1mA (DC) test current |                     | typ. capacitance     |                      | typ. inductance |
|-----------|----------------------------|-----------------|--------------------------------------------------|----------------------------------------------------|-------------------------------------------------------|------------------------------------------|---------------------|----------------------|----------------------|-----------------|
|           | $V_{M(DC)}$ (V)            | $V_{M(AC)}$ (V) | $I_{TM}$ (A)                                     | $W_{TM}$ (J)                                       | $V_C$ (V@A)                                           | $V_{N(DC)min.}$ (V)                      | $V_{N(DC)max.}$ (V) | 1KHz $C_{typ.}$ (pF) | 1MHz $C_{typ.}$ (pF) | $L_{typ.}$ (nH) |
|           |                            |                 |                                                  |                                                    |                                                       |                                          |                     |                      |                      |                 |
| JV08CH180 | 14,0                       | 11,0            | 250                                              | 0,80                                               | 36,0 @ 5                                              | 16,0                                     | 20,0                | 3805                 | 3100                 | 3,0             |
| JV08CH220 | 18,0                       | 14,0            | 250                                              | 0,80                                               | 46,0 @ 5                                              | 18,7                                     | 26,0                | 1835                 | 1600                 | 3,0             |
| JV08CH270 | 22,0                       | 17,0            | 250                                              | 1,00                                               | 54,0 @ 5                                              | 23,0                                     | 31,0                | 1590                 | 1350                 | 3,0             |
| JV08CH330 | 26,0                       | 20,0            | 250                                              | 1,20                                               | 67,0 @ 5                                              | 30,0                                     | 36,0                | 1250                 | 1070                 | 3,0             |
| JV08CH390 | 31,0                       | 25,0            | 250                                              | 1,50                                               | 75,0 @ 5                                              | 35,0                                     | 43,0                | 1050                 | 900                  | 3,0             |
| JV08CH470 | 38,0                       | 30,0            | 250                                              | 1,80                                               | 89,0 @ 5                                              | 42,0                                     | 52,0                | 970                  | 820                  | 3,0             |
| JV08CH560 | 45,0                       | 35,0            | 250                                              | 2,30                                               | 106 @ 5                                               | 50,0                                     | 62,0                | 838                  | 710                  | 3,0             |
| JV08CH680 | 56,0                       | 40,0            | 250                                              | 3,00                                               | 135 @ 5                                               | 62,0                                     | 74,0                | 800                  | 680                  | 3,0             |
| JV08CH820 | 65,0                       | 50,0            | 500                                              | 4,20                                               | 135 @ 10                                              | 74,0                                     | 90,0                | 625                  | 530                  | 3,0             |
| JV08CH101 | 85,0                       | 65,0            | 500                                              | 4,80                                               | 165 @ 10                                              | 90,0                                     | 110                 | 565                  | 480                  | 3,0             |
| JV08CH121 | 102                        | 75,0            | 500                                              | 6,00                                               | 197 @ 10                                              | 108                                      | 132                 | 340                  | 300                  | 3,0             |
| JV08CH151 | 127                        | 95,0            | 500                                              | 8,00                                               | 250 @ 10                                              | 135                                      | 165                 | 270                  | 250                  | 3,0             |
| JV08CH181 | 153                        | 115             | 500                                              | 10,0                                               | 290 @ 10                                              | 162                                      | 198                 | 230                  | 200                  | 3,0             |
| JV08CH201 | 175                        | 130             | 500                                              | 11,0                                               | 340 @ 10                                              | 184                                      | 228                 | 200                  | 180                  | 3,0             |
| JV08CH221 | 180                        | 140             | 500                                              | 12,0                                               | 356 @ 10                                              | 198                                      | 242                 | 180                  | 160                  | 3,0             |
| JV08CH241 | 200                        | 150             | 500                                              | 13,0                                               | 389 @ 10                                              | 216                                      | 268                 | 165                  | 150                  | 3,0             |
| JV08CH271 | 220                        | 180             | 500                                              | 14,0                                               | 437 @ 10                                              | 245                                      | 270                 | 130                  | 120                  | 3,0             |
| JV08CH331 | 270                        | 200             | 500                                              | 16,0                                               | 520 @ 10                                              | 300                                      | 330                 | 110                  | 100                  | 3,0             |
| JV08CH361 | 300                        | 230             | 500                                              | 20,0                                               | 593 @ 10                                              | 324                                      | 396                 | 110                  | 100                  | 3,0             |
| JV08CH391 | 330                        | 250             | 500                                              | 21,0                                               | 647 @ 10                                              | 351                                      | 429                 | 100                  | 90                   | 3,0             |
| JV08CH431 | 369                        | 275             | 500                                              | 23,0                                               | 705 @ 10                                              | 387                                      | 473                 | 100                  | 90                   | 3,0             |

Order  
Information

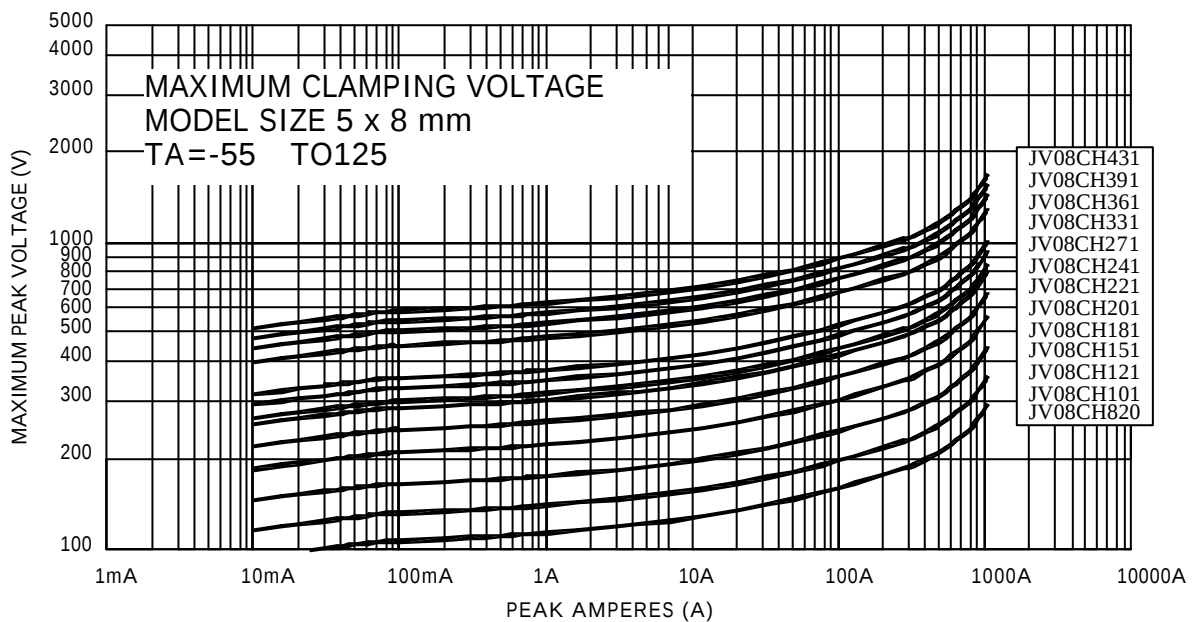
| Qty. | Order-<br>Number | Type       | Terminal Code | Packaging |
|------|------------------|------------|---------------|-----------|
|      |                  | JV 08CH361 | P             | T         |

Specifications are subject  
to change without notice

## JV 08CH SMD

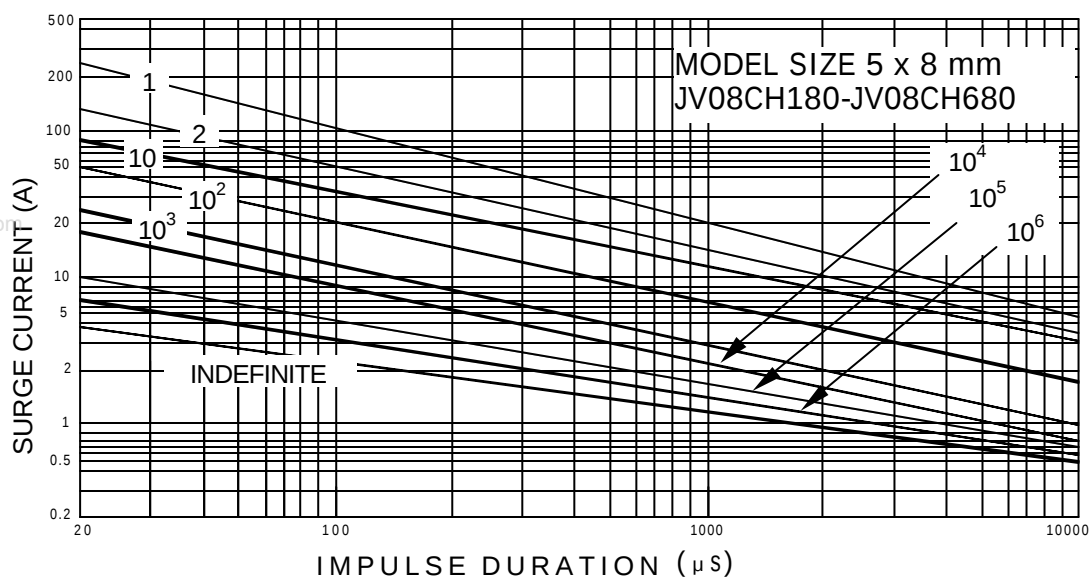
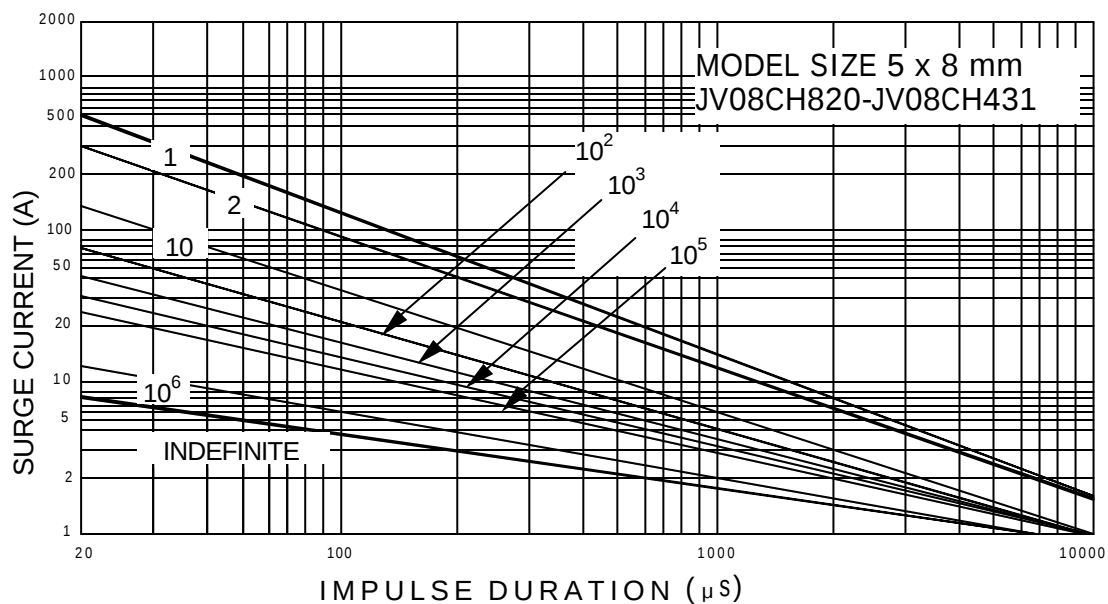


Transient V/I Characteristics Curves: **JV08CH180- JV08CH680**



Transient V/I Characteristics Curves: **JV08CH820- JV08CH431**

## JV 08CH SMD

Pulse Rating Curves: **JV08CH180- JV08CH680**Pulse Rating Curves: **JV08CH820- JV08CH431**

## JV 08CH SMD

### Absolute Maximum Ratings

#### Continuous:

Steady State Applied Voltage:

AC Voltage Range ( $V_{M(AC)RMS}$ ) .....

DC Voltage Range ( $V_{M(DC)}$ ) .....

#### Transient:

Peak Pulse Current ( $I_{TM}$ )

For 8/20 $\mu$ s Current Wave (See Figure2) .....

Single Pulse Energy Range

For 10/1000 $\mu$ s Current Wave ( $W_{TM}$ ) .....

Operating Ambient Temperature Range( $T_A$ ) .....

Storage Temperature Range ( $T_{STG}$ ) .....

Temperature Coefficient (av) of Clamping Voltage ( $V_C$ ) at Specified Test Current ....

#### CH SERIES

#### UNITS

11 to 275 V

14 to 369 V

250 to 500 A

0.8 to 23 J

-55 to 125

-55 to 150

< 0.01 % /

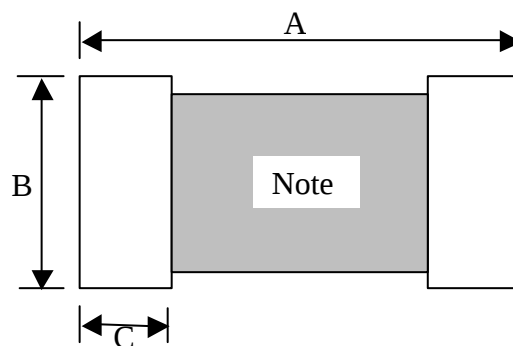
### Standard Shipping Quantities

Tape and reel is the standard packaging method of the CH series. There are 1,000 pcs /reel/7 inch.

Less than 100 pieces sample quantity, the units are shipped bulk pack.

### Recommended Pad Outline

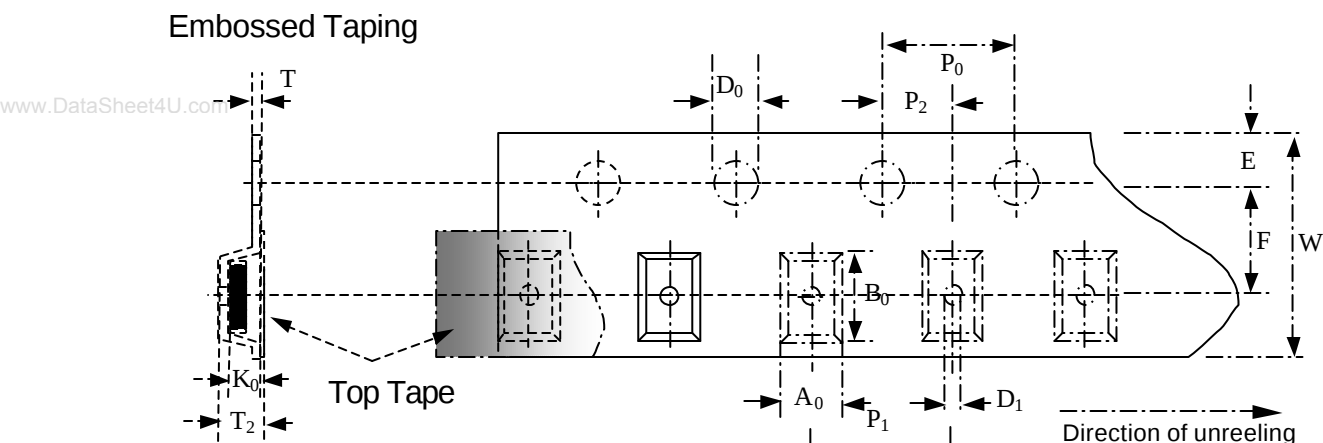
Note : Avoid metal runs in this area



| SYMBOL   | INCHES | MILLIMETERS |
|----------|--------|-------------|
| <b>A</b> | 0.402  | 10.21       |
| <b>B</b> | 0.216  | 5.50        |
| <b>C</b> | 0.087  | 2.21        |

## JV 08CH SMD

### Tape and Reel Specifications



Tape in accordance can be supplied to IEC publication 286-3

| Symbol<br>Type | DIMENSIONS (mm)        |                        |           |           |           |                        |                        |                        |                              |           |                        |                        |
|----------------|------------------------|------------------------|-----------|-----------|-----------|------------------------|------------------------|------------------------|------------------------------|-----------|------------------------|------------------------|
|                | A <sub>0</sub><br>±0.1 | B <sub>0</sub><br>±0.1 | W<br>±0.3 | F<br>±0.1 | E<br>±0.1 | P <sub>1</sub><br>±0.1 | P <sub>2</sub><br>±0.1 | P <sub>0</sub><br>±0.1 | D <sub>0</sub><br>+0.1<br>-0 | T<br>Max. | T <sub>2</sub><br>Max. | D <sub>1</sub><br>Min. |
| 08CH           | 5.5                    | 8.5                    | 16        | 7.5       | 1.75      | 8.0                    | 2.0                    | 4.0                    | 1.5                          | 1.0       | 3.0                    | 1.5                    |

**K<sub>0</sub>** : Depth of Cavity: Dependent Chip Size to Minimize Rotation

### Precautions to the user for CH-series Surface mount MOV:

- Soldering recommendation:  
 Material: 62/36/2 Sn/Pb/Ag or equivalent  
 Reflow temperature/time: 230 max. /10 sec. max.  
 Flux: non-activated
- When mounting surface mount varistor on the PC board, the improper soldering temperature and time out of the limits may reduce the adhesive strength of their terminals.
- Put the proper volume of solder ( the height of fillet ) on PC board for installing surface mount varistors, because it directly affects the installed varistors. The design of copper pad patterns and dimensions should be set, so that the proper volume of solder can provide.
- Do not use solvents such as thinner and acetone, which dissolve or make the exterior covering of varistor deteriorate. Ultrasonic cleaning shall be so set that the vibration can not travel the assembly boards.
- For surface mount CH series MOV, use flux with a halogen content of less than 0.2 wt. Do not use strong acid flux.
- Store varistors at temperature of -10 to +40 and relative humidity of less than 75 % . Avoid storing in environment of rapid changes in temperature, direct sunlight, corrosive, gas or dust, and store with the varistors packaged.