# Metal Oxide Varistors (MOV)

## Features

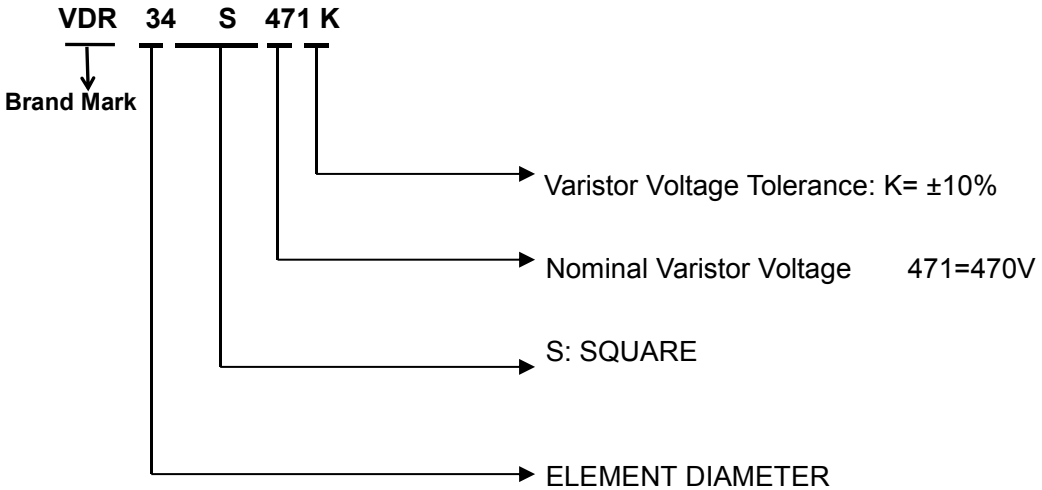
·Wide operating voltage (V1mA) range from 200V to 1800V
·Fast responding to transient over-voltage
·Large absorbing transient energy capability
·Low clamping ratio and no follow-on current
·Meets MSL level 1, per J-STD-020
·Operating Temperature：-40℃ ~ +85℃
·Storage Temperature：-40℃ ~ +125℃
·UL 1449 4th for SPD Type 5 application
·Safety certification:




## Applications

·Transistor, diode, IC, thyristor or triac semiconductor protection
·Surge protection in consumer electronics
·Surge protection in industrial electronics
·Surge protection in electronic home appliances, gas and petroleum appliances
·Relay and electromagnetic valve surge absorption

## Description of Part Number



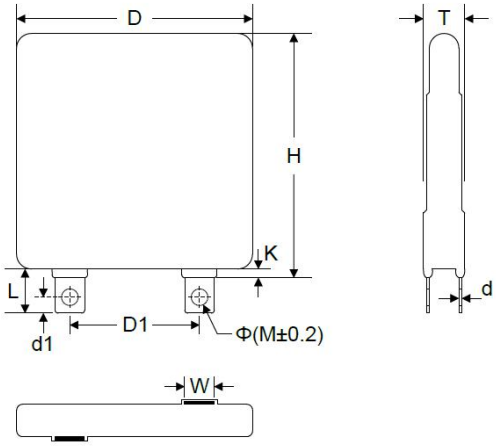

## Delivery Time

| Standard MOV | Delivery Time |
|---|---|
| VDR34S201K~VDR34S182K | 32days |

## Electrical Characteristics

| Part Number | Maximum Allowable Voltage | | Varistor Voltage | Maximum Clamping Voltage | | Max Surge Current 8/20μs | Surge Operating Duty Test IEC 61643-11 (8/20μs) | | Maximum Energy 10/1000 μs | Safety Certification |
|---|---|---|---|---|---|---|---|---|---|---|
| | $V_{AC}$ | $V_{DC}$ | $V_{1mA}$(V) | $I_P$(A) | Vc(V) | Imax | Imax | In | (J) | UL /CUL |
| VDR34S201K | 130V | 170V | 200(180~220) | 300 | 340 | 40KA | 40KA | 20KA | 330 | √ |
| VDR34S221K | 140V | 180V | 220(198~242) | 300 | 360 | 40KA | 40KA | 20KA | 360 | √ |
| VDR34S241K | 150V | 200V | 240(216~264) | 300 | 395 | 40KA | 40KA | 20KA | 390 | √ |
| VDR34S271K | 175V | 225V | 270(243~297) | 300 | 455 | 40KA | 40KA | 20KA | 420 | √ |
| VDR34S301K | 190V | 250V | 300(270~330) | 300 | 500 | 40KA | 40KA | 20KA | 460 | - |
| VDR34S331K | 210V | 275V | 330(297~363) | 300 | 550 | 40KA | 40KA | 20KA | 500 | √ |
| VDR34S361K | 230V | 300V | 360(324~396) | 300 | 595 | 40KA | 40KA | 20KA | 510 | √ |
| VDR34S391K | 250V | 320V | 390(351~429) | 300 | 650 | 40KA | 40KA | 20KA | 530 | √ |
| VDR34S431K | 275V | 350V | 430(387~473) | 300 | 710 | 40KA | 40KA | 20KA | 600 | √ |
| VDR34S471K | 300V | 385V | 470(423~517) | 300 | 775 | 40KA | 40KA | 20KA | 650 | √ |
| VDR34S511K | 320V | 415V | 510(459~561) | 300 | 845 | 40KA | 40KA | 20KA | 700 | √ |
| VDR34S561K | 350V | 460V | 560(504~616) | 300 | 925 | 40KA | 40KA | 20KA | 730 | √ |
| VDR34S621K | 385V | 505V | 620(558~682) | 300 | 1025 | 40KA | 40KA | 20KA | 780 | √ |
| VDR34S681K | 420V | 560V | 680(612~748) | 300 | 1120 | 40KA | 40KA | 20KA | 810 | √ |
| VDR34S751K | 460V | 615V | 750(675~825) | 300 | 1240 | 40KA | 40KA | 20KA | 850 | √ |
| VDR34S781K | 485V | 640V | 780(702~858) | 300 | 1290 | 40KA | 40KA | 20KA | 930 | √ |
| VDR34S821K | 510V | 670V | 820(738~902) | 300 | 1355 | 40KA | 40KA | 20KA | 970 | √ |
| VDR34S911K | 550V | 745V | 910(819~1001) | 300 | 1500 | 40KA | 40KA | 20KA | 1050 | √ |
| VDR34S102K | 625V | 825V | 1000(900~1100) | 300 | 1650 | 40KA | 40KA | 20KA | 1120 | √ |
| VDR34S112K | 680V | 895V | 1100(990~1210) | 300 | 1815 | 40KA | 40KA | 20KA | 1250 | √ |
| VDR34S122K | 750V | 980V | 1200(1080~1320) | 300 | 1980 | 40KA | 40KA | 20KA | 1250 | √ |
| VDR34S142K | 880V | 1140V | 1400(1260~1540) | 300 | 2310 | 40KA | 40KA | 20KA | 1400 | - |
| VDR34S162K | 1000V | 1280V | 1600(1440~1760) | 300 | 2640 | 40KA | 40KA | 20KA | 1500 | - |
| VDR34S182K | 1100V | 1465V | 1800(1620~1980) | 300 | 2970 | 40KA | 40KA | 20KA | 1600 | - |

## Dimension(mm)



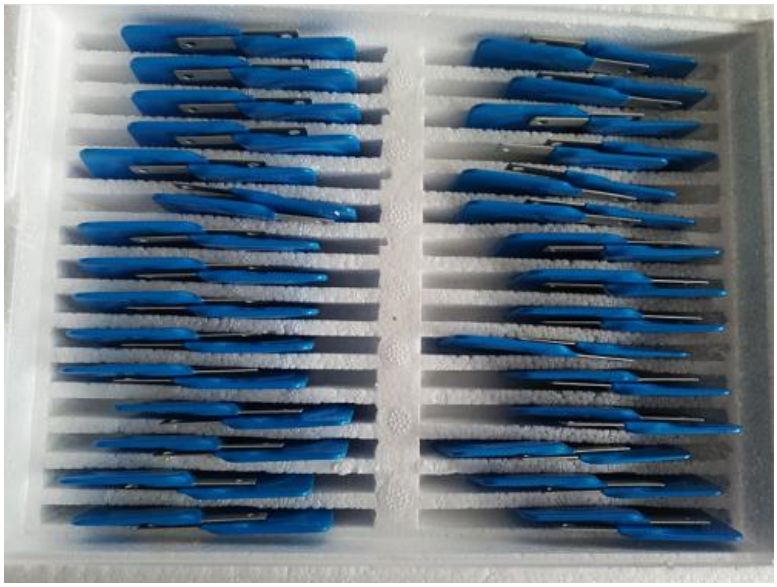

| TABLE1 | | TABLE2 | |
|---|---|---|---|
| Symbol | Dimensions | Part number | T(±1.0mm) |
| H(Max) | 40..0mm | VDR 34S130 | 3.7mm |
| L(Min) | 14.5mm | VDR 34S140 | 3.8mm |
| D(Max) | 38.0mm | VDR 34S150 | 3.9mm |
| D1(±1.0) | 25.4mm | VDR 34S175 | 4.1mm |
| T | TABLE2 | VDR 34S190 | 4.3mm |
| d(±0.25) | 0.5mm | VDR 34S210 | 4.4mm |
| d1(±0.3) | 3.7mm | VDR 34S230 | 4.6mm |
| K(Max) | 3.2mm | VDR 34S250 | 4.8mm |
| W(±0.5) | 7.0mm | VDR 34S275 | 4.9mm |
| ΦM(±0.2) | 3.2mm | VDR 34S300 | 5.3mm |
| | | VDR 34S320 | 5.5mm |
| | | VDR 34S350 | 5.8mm |
| | | VDR 34S385 | 6.2mm |
| | | VDR 34S420 | 6.5mm |
| | | VDR 34S460 | 6.9mm |
| | | VDR 34S480 | 7.1mm |
| | | VDR 34S510 | 7.3mm |
| | | VDR 34S550 | 7.9mm |
| | | VDR 34S625 | 8.7mm |
| | | VDR 34S680 | 9.3mm |
| | | VDR 34S750 | 9.8mm |
| | | VDR 34S880 | 10.5mm |
| | | VDR 34S1000 | 11.5mm |
| | | VDR 34S1100 | 12.5mm |

## Packing Information

| Part Number | Quantity | Packaging Option |
|---|---|---|
| VDR34S130 ~ VDR34S350 | 60PCS | Foam box |
| VDR34S385 ~ VDR34S1100 | 40PCS | Foam box |

# Foam Box Bulk Pack

**VDR34S130 ~ VDR34S350**



**VDR34S385 ~ VDR34S1100**



# Notice for use

To avoid damage to other equipment due to fire or deterioration caused by varistor, please refer to and observe the following principles:

1) When a high current or high voltage flows into the varistor, the varistor itself may be damaged, heated, smoke, catch fire and burst.

To avoid this, fuses or circuit breakers can be installed at both ends of the varistor or power supply;

The fuses of the following specifications are for reference only:

| Diameter | 05D | 07D | 10D | 14D | 20D |
|---|---|---|---|---|---|
| Rated current of fuse | 1-2A | 2-3A | 3-5A | 3-10A | 5-15A |

2) Do not allow the current and energy flowing into the varistor to exceed its rated value.

3) The marked VDR product brand names and marks are all patent applications of the company. Customers who use or sell VDR products that are not specifically designated for such applications are at their own risk.

4) All VDR products, product specifications and data are subject to change without notice, please improve. For any data sheet Or any other data sheet. Any errors included. Inaccurate or incomplete shall not be liable.

5) Regarding the suitability of products for specific applications. It is the customer's responsibility to confirm that products with the characteristics described in the product specifications application. The data provided in the parameter data sheets and / or specifications may vary for different applications and performance may vary over time Variety. All operating parameters, including typical parameters, must be provided by the customer ’s technical experts. Product specifications will not expand or Modify the VDR procurement terms and conditions in other ways, including but not limited to the guarantees described therein.

6) Do not place flammable substances near the varistor.

7) The varistor can only emit a small amount of heat energy, so it is not suitable for use in equipment that often generates sudden heat.

In addition, the higher the working environment of the varistor, the smaller the proportion of heat dissipated. Varistors can only dissipate a small amount of heat energy, so they are not suitable for use in equipment that often generates sudden heat.

If a large amount of heat acts on the varistor in an instant, it is possible that the heat energy cannot be dissipated within the pulse time And the varistor is damaged.

8) When welding, please be careful not to melt the welding points of the varistor and the resin coating.

## Material category policy

All products of VDR hereby certify that RoHS-compliant products are in accordance with the definitions and Restrictions on June 8, 2011 regarding restrictions on the use of certain hazardous substances (Reach) in electrical and electronic equipment. We confirm All VDR products comply with the IEC 61249-2-21 JEDEC JS709A standard.