

Description

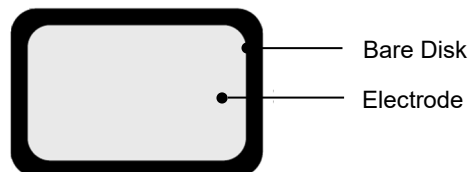
Metal Oxide Varistor (MOV) is a nonlinear resistance component with zinc oxide (ZnO) as its main constituent. The resistance of an MOV is sensitive to changes in the applied voltage. Below the threshold voltage, the MOV exhibits high resistance, allowing only a negligibly small leakage current to flow. Once the threshold voltage is exceeded, the resistance of the MOV drops sharply, enabling the conduction of a large current. This characteristic makes the MOV suitable for detecting and suppressing surge voltage and overvoltage, thereby protecting the circuit from damage caused by excessive voltage.

The Metal Oxide Varistor (MOV) finds wide application in various fields such as photovoltaics, communication, lightning protection, power supply, and power strips. It serves to suppress transient overvoltage and absorb surge energy within the circuit.



SETsafe | SETfuse offers Metal Oxide Varistors (MOV) with maximum peak current ratings ranging from 40 kA to 60 kA, and maximum continuous voltage ratings from 150VAC to 750 VAC. Safety certification includes UL, cUL, and complies with RoHS and REACH requirements.



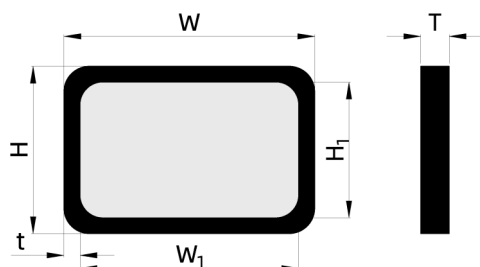
Product Structure



Agency Approvals

| Agency | Standards | No. |
|---|---------------------------------|----------|
|  | UL 1449 4 th Edition | On-going |
|  | CSA C22.2 NO.269.5-17 | On-going |

Dimensions (mm)



| W | W ₁ | H | H ₁ | t (min.) |
|----------|----------------|----------|----------------|----------|
| 44.2±0.8 | 38.5±0.5 | 29.5±0.8 | 23.9±0.5 | 0.8 |

*Various electrode shapes of uncoated MOV or coated MOV can be customized

Specification

| Model | Surge Level | Max. Continuous Operating Voltage | | Varistor Voltage @1 mA DC | | Clamping Voltage (Max.) | | Max. Discharge Current (8/20 μs) | | Impulse Discharge Current (10/350 μs) | Max. Energy (10/1000 μs) | Typical Capacitance (Reference) @1 kHz |
|------------|-------------|-----------------------------------|-----|---------------------------|------|-------------------------|----------------|----------------------------------|------------------|---------------------------------------|--------------------------|--|
| | | VAC | VDC | Min. | Max. | V _C | I _P | I _n | I _{max} | I _{imp} | (J) | (pF) |
| | | (V) | (V) | (V) | (V) | (V) | (A) | (kA) | (kA) | (kA) | | |
| YMJ36R241K | T | 150 | 200 | 216 | 264 | 395 | 200 | 25 | 50 | 8.5 | 575 | 5650 |
| YMJ36R271K | T | 175 | 225 | 243 | 297 | 455 | 200 | 25 | 50 | 8.5 | 650 | 5100 |
| YMJ36R301K | T | 190 | 250 | 270 | 330 | 500 | 200 | 25 | 50 | 8.5 | 720 | 4510 |
| YMJ36R331K | T | 210 | 275 | 297 | 363 | 550 | 200 | 25 | 50 | 8.5 | 780 | 4150 |
| YMJ36R361K | T | 230 | 300 | 324 | 396 | 595 | 200 | 25 | 50 | 8.5 | 900 | 3750 |
| YMJ36R391K | T | 250 | 320 | 351 | 429 | 650 | 200 | 25 | 50 | 8.5 | 1000 | 3500 |
| YMJ36R431K | T | 275 | 350 | 387 | 473 | 710 | 200 | 25 | 50 | 8.5 | 1100 | 2950 |
| YMJ36R471K | T | 300 | 385 | 423 | 517 | 775 | 200 | 25 | 50 | 8.5 | 1200 | 2880 |
| YMJ36R511K | T | 320 | 415 | 459 | 561 | 845 | 200 | 25 | 50 | 8.5 | 1250 | 2650 |
| YMJ36R561K | T | 350 | 460 | 504 | 616 | 925 | 200 | 25 | 50 | 7.5 | 1350 | 2450 |
| YMJ36R621K | T | 385 | 505 | 558 | 682 | 1025 | 200 | 25 | 50 | 7.5 | 1500 | 2200 |
| YMJ36R681K | T | 420 | 560 | 612 | 748 | 1120 | 200 | 25 | 50 | 7.0 | 1500 | 2000 |
| YMJ36R711K | T | 440 | 585 | 639 | 781 | 1170 | 200 | 25 | 50 | 7.0 | 1550 | 1900 |
| YMJ36R751K | T | 460 | 615 | 675 | 825 | 1240 | 200 | 25 | 50 | 7.0 | 1550 | 1820 |
| YMJ36R821K | T | 510 | 670 | 738 | 902 | 1355 | 200 | 25 | 50 | 6.0 | 1550 | 1800 |
| YMJ36R911K | T | 550 | 745 | 819 | 1001 | 1500 | 200 | 25 | 50 | 6.0 | 1750 | 1500 |
| YMJ36R951K | T | 575 | 760 | 855 | 1045 | 1565 | 200 | 20 | 50 | 5.0 | 1800 | 1400 |
| YMJ36R102K | T | 625 | 825 | 900 | 1100 | 1650 | 200 | 20 | 50 | 5.0 | 1850 | 1350 |
| YMJ36R112K | T | 680 | 895 | 990 | 1210 | 1815 | 200 | 20 | 50 | 5.0 | 2100 | 1230 |

★ The I_n/I_{max}/I_{imp} could be applied to the same varistor.

★ We have specified product for DC application, please make a note when purchasing.

MOV Disk-Lightning Protection Type For T1 Feature & Model List Overview

| Nominal Operating Voltage U_n (V) | | Model | | | | Maximum Continuous Operating Voltage U_n (V) | | Page | | |
|---------------------------------------|------|------------|------------|------------|------------|--|-----|------|-----|-----|
| | | YMJ34S | YMJ33R | YMJ36R | YMJ40R | AC | DC | AC | DC | |
| 500V | 480V | YMJ34S112K | YMJ33R112K | YMJ36R112K | YMJ40R112K | 750 | 990 | 680 | 895 | |
| | 415V | YMJ34S102K | YMJ33R102K | YMJ36R102K | YMJ40R102K | 625 | 825 | 625 | 825 | |
| | 380V | YMJ34S911K | YMJ33R911K | YMJ36R911K | YMJ40R911K | 550 | 745 | 550 | 745 | |
| | 100V | 240V | YMJ34S821K | YMJ33R821K | YMJ36R821K | YMJ40R821K | 510 | 670 | 510 | 670 |
| | | 240V | YMJ34S751K | YMJ33R751K | YMJ36R751K | YMJ40R751K | 460 | 615 | 460 | 615 |
| | 100V | 220V | YMJ34S681K | YMJ33R681K | YMJ36R681K | YMJ40R681K | 420 | 560 | 420 | 560 |
| | | 220V | YMJ34S621K | YMJ33R621K | YMJ36R621K | YMJ40R621K | 385 | 505 | 385 | 505 |
| | 100V | 200V | YMJ34S561K | YMJ33R561K | YMJ36R561K | YMJ40R561K | 350 | 460 | 350 | 460 |
| | | 200V | YMJ34S511K | YMJ33R511K | YMJ36R511K | YMJ40R511K | 320 | 415 | 320 | 415 |
| | 100V | 180V | YMJ34S471K | YMJ33R471K | YMJ36R471K | YMJ40R471K | 300 | 385 | 300 | 385 |
| 180V | | YMJ34S431K | YMJ33R431K | YMJ36R431K | YMJ40R431K | 275 | 350 | 275 | 350 | |
| 250V | 120V | YMJ34S391K | YMJ33R391K | YMJ36R391K | YMJ40R391K | 250 | 320 | 250 | 320 | |
| | 120V | YMJ34S361K | YMJ33R361K | YMJ36R361K | YMJ40R361K | 230 | 300 | 230 | 300 | |
| 125V | 120V | YMJ34S331K | YMJ33R331K | YMJ36R331K | YMJ40R331K | 210 | 275 | 210 | 275 | |
| | 120V | YMJ34S301K | YMJ33R301K | YMJ36R301K | YMJ40R301K | 190 | 250 | 190 | 250 | |
| 125V | 120V | YMJ34S271K | YMJ33R271K | YMJ36R271K | YMJ40R271K | 175 | 225 | 175 | 225 | |
| | 120V | YMJ34S241K | YMJ33R241K | YMJ36R241K | YMJ40R241K | 150 | 200 | 150 | 200 | |
| 48V | 12V | | | | | 140 | 180 | 140 | 180 | |
| | 12V | | | | | 130 | 170 | 130 | 170 | |
| 24V | 12V | | | | | 115 | 150 | 115 | 150 | |
| | 12V | | | | | 95 | 125 | 95 | 125 | |
| 12V | 12V | | | | | 75 | 100 | 75 | 100 | |
| | 12V | | | | | 60 | 85 | 60 | 85 | |
| 12V | 12V | | | | | 50 | 65 | 50 | 65 | |
| | 12V | | | | | 40 | 56 | 40 | 56 | |
| 12V | 12V | | | | | 35 | 45 | 35 | 45 | |
| | 12V | | | | | 30 | 38 | 30 | 38 | |
| 12V | 12V | | | | | 25 | 31 | 25 | 31 | |
| | 12V | | | | | 20 | 26 | 20 | 26 | |
| 12V | 12V | | | | | 17 | 22 | 17 | 22 | |
| | 12V | | | | | 14 | 18 | 14 | 18 | |