

Metal Oxide Varistors (MOV) Data sheet

Features

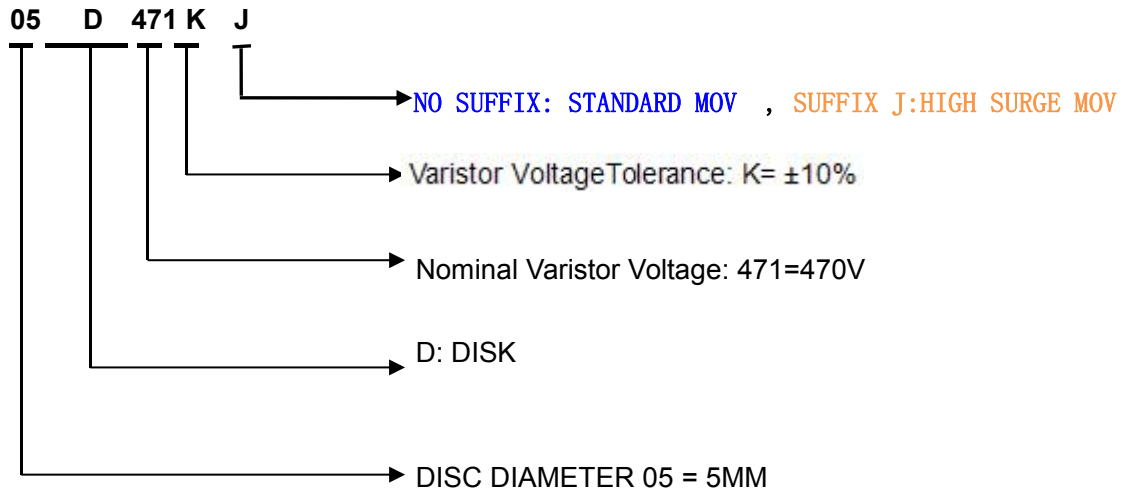
- Wide operating voltage (V1mA) range from 18V to 750V
- Fast responding to transient over-voltage
- Large absorbing transient energy capability
- Low clamping ratio and no follow-on current
- Meets MSL level 1, per J-STD-020
- Safety certification: UL,CSA,VDE
- Operating Temperature: -40°C ~ +85°C
- Storage Temperature: -40°C ~ +125°C



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



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Electrical Characteristics



| Part Number | | Maximum Allowable Voltage | | Varistor Voltage | Maximum Clamping Voltage | | Withstanding Surge Current 8/20uS | | Maximum Energy (10/1000µs) | | Rated Power | Typical Capacitance (Reference) |
|-------------|------------|---------------------------|---------------------|----------------------|--------------------------|--------------------|-----------------------------------|------------|----------------------------|------------|-------------|---------------------------------|
| Standard | High Surge | V _{AC} (V) | V _{DC} (V) | V _{1mA} (V) | I _P (A) | V _C (V) | I(A) | I(A) | (J) | (J) | (W) | 1KHz(pf) |
| | | | | | | | Standard | High Surge | Standard | High Surge | | |
| 05D180K | 05D180KJ | 11 | 14 | 18(15~21.6) | 1 | 40 | 100 | 250 | 0.4 | 0.6 | 0.01 | 1400 |
| 05D220K | 05D220KJ | 14 | 18 | 22(19.5~26) | 1 | 48 | 100 | 250 | 0.5 | 0.7 | 0.01 | 1150 |
| 05D270K | 05D270KJ | 17 | 22 | 27(24~30) | 1 | 60 | 100 | 250 | 0.6 | 0.9 | 0.01 | 930 |
| 05D330K | 05D330KJ | 20 | 26 | 33(29.5~36.5) | 1 | 73 | 100 | 250 | 0.8 | 1.1 | 0.01 | 760 |
| 05D390K | 05D390KJ | 25 | 31 | 39(35~43) | 1 | 80 | 100 | 250 | 0.9 | 1.2 | 0.01 | 640 |
| 05D470K | 05D470KJ | 30 | 38 | 47(42~54) | 1 | 104 | 100 | 250 | 1.1 | 1.5 | 0.01 | 530 |
| 05D560K | 05D560KJ | 35 | 45 | 56(50~62) | 1 | 123 | 100 | 250 | 1.3 | 1.8 | 0.01 | 450 |
| 05D680K | 05D680KJ | 40 | 56 | 68(61~75) | 1 | 145 | 100 | 250 | 1.6 | 2.2 | 0.01 | 370 |
| 05D820K | 05D820KJ | 50 | 65 | 82(74~90) | 5 | 150 | 400 | 800 | 2.5 | 4.0 | 0.1 | 300 |
| 05D101K | 05D101KJ | 60 | 85 | 100(90~110) | 5 | 177 | 400 | 800 | 3.0 | 4.1 | 0.1 | 250 |
| 05D121K | 05D121KJ | 75 | 100 | 120(108~132) | 5 | 210 | 400 | 800 | 4.0 | 4.9 | 0.1 | 210 |
| 05D151K | 05D151KJ | 95 | 125 | 150(135~165) | 5 | 260 | 400 | 800 | 4.1 | 6.5 | 0.1 | 165 |
| 05D181K | 05D181KJ | 115 | 150 | 180(162~198) | 5 | 320 | 400 | 800 | 4.9 | 7.5 | 0.1 | 140 |
| 05D201K | 05D201KJ | 130 | 170 | 200(180~220) | 5 | 355 | 400 | 800 | 6.5 | 8.5 | 0.1 | 125 |
| 05D221K | 05D221KJ | 140 | 180 | 220(198~242) | 5 | 380 | 400 | 800 | 7.5 | 9.0 | 0.1 | 110 |
| 05D241K | 05D241KJ | 150 | 200 | 240(216~264) | 5 | 415 | 400 | 800 | 8.0 | 10.5 | 0.1 | 100 |
| 05D271K | 05D271KJ | 175 | 225 | 270(243~297) | 5 | 475 | 400 | 800 | 8.5 | 11.0 | 0.1 | 95 |
| 05D301K | 05D301KJ | 190 | 250 | 300(270~330) | 5 | 520 | 400 | 800 | 9.0 | 12.0 | 0.1 | 85 |
| 05D331K | 05D331KJ | 210 | 275 | 330(297~363) | 5 | 570 | 400 | 800 | 9.5 | 13.0 | 0.1 | 75 |
| 05D361K | 05D361KJ | 230 | 300 | 360(324~396) | 5 | 620 | 400 | 800 | 10.0 | 16.0 | 0.1 | 70 |
| 05D391K | 05D391KJ | 250 | 320 | 390(351~429) | 5 | 675 | 400 | 800 | 12.0 | 17.0 | 0.1 | 65 |
| 05D431K | 05D431KJ | 275 | 350 | 430(387~473) | 5 | 745 | 400 | 800 | 13.0 | 20.0 | 0.1 | 60 |
| 05D471K | 05D471KJ | 300 | 385 | 470(423~517) | 5 | 810 | 400 | 800 | 15.0 | 21.0 | 0.1 | 55 |
| 05D511K | 05D511KJ | 320 | 415 | 510(459~561) | 5 | 845 | 400 | 800 | 16.0 | 22.5 | 0.1 | 50 |
| 05D561K | 05D561KJ | 350 | 460 | 560(504~616) | 5 | 920 | 400 | 800 | 16.0 | 24.0 | 0.1 | 45 |
| 05D621K | 05D621KJ | 385 | 505 | 620(558~682) | 5 | 1025 | 400 | 800 | 21.0 | 25.0 | 0.1 | 40 |
| 05D681K | 05D681KJ | 420 | 560 | 680(612~748) | 5 | 1120 | 400 | 800 | 21.0 | 29.0 | 0.1 | 35 |
| 05D751K | 05D751KJ | 460 | 615 | 750(675~825) | 5 | 1240 | 400 | 800 | 22.4 | 32.0 | 0.1 | 30 |

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Dimension(mm)

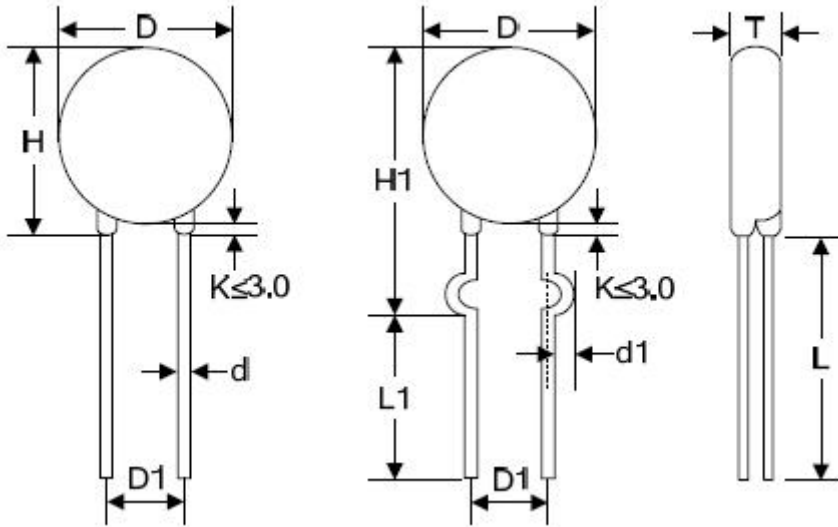


TABLE 1

| Symbol | Dimensions |
|-----------------|------------|
| H(max.) | 10.5 |
| H1(max.) | 13.0 |
| L(min.) | 20.0 |
| L1(min.) | 15.0 |
| D(max.) | 7.5 |
| D1(± 0.8) | 5.0 |
| T(max.) | TABLE 2 |
| d(± 0.05) | 0.6 |
| d1(± 0.4) | 1.2 |

TABLE 2

| Model | T(max.) | Model | T(max.) |
|-------|---------|-------|---------|
| 180K | 4.5 | 221K | 4.5 |
| 220K | 4.6 | 241K | 4.6 |
| 270K | 4.7 | 271K | 4.9 |
| 330K | 4.9 | 301K | 5.0 |
| 390K | 4.8 | 331K | 5.1 |
| 470K | 4.9 | 361K | 5.2 |
| 560K | 5.0 | 391K | 5.4 |
| 680K | 5.2 | 431K | 5.7 |
| 820K | 4.1 | 471K | 6.0 |
| 101K | 4.3 | 511K | 6.2 |
| 121K | 4.5 | 561K | 6.5 |
| 151K | 4.8 | 621K | 6.5 |
| 181K | 4.3 | 681K | 6.87 |
| 201K | 4.4 | 751K | 6.9 |

Packing Information

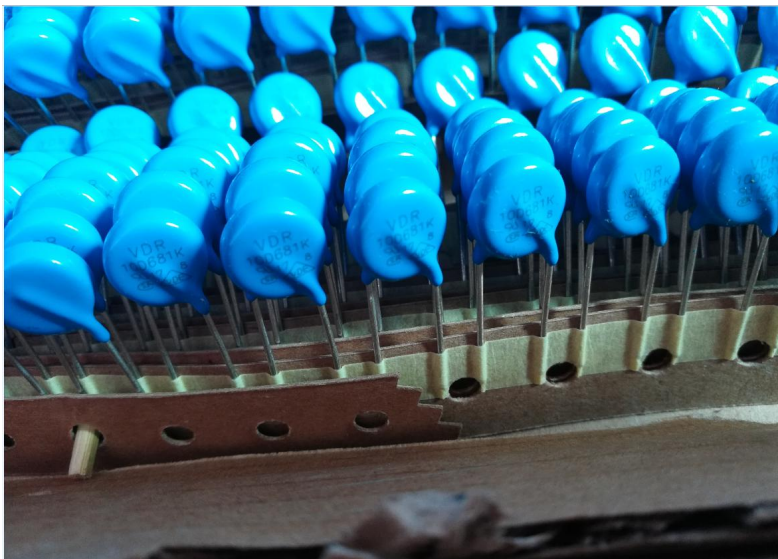
| Part Number | Quantity | Packaging Option | Packaging Specification |
|-------------|----------|------------------|-------------------------|
| 05DxxxK | 1000PCS | Plastic bag | Bulk Pack |

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Bulk Pack



Ammo Pack



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