



05D Specification

Put "J" in Free Code Stands For High Surge Series



| VCR | | Maximum Allowable Voltage | | Varistor Voltage | Clamping Voltage (Max.) | | Maximum Peak Current (8/20 μ s) | | Maximum Energy (10/1000 μ s) | | RATED POWER | Typical Capacitance (Reference) | | |
|----------|------------|---------------------------|-----|--------------------|-------------------------|------|-------------------------------------|------------|----------------------------------|------------|-------------|---------------------------------|---|---|
| P/N | | AC.rms | DC | V _{1.0mA} | VC | IP | Standard | High Surge | Standard | High Surge | (W) | @1KHz |  |  |
| Standard | High Surge | (V) | | | (V) | (A) | (A) | | (JOULE) | | | (pf) | | |
| 05D180L | J | 11 | 14 | 18(15-21) | 40 | 1 | 100 | 250 | 0.4 | 0.6 | 0.01 | 1400 | * | * |
| 05D220K | J | 14 | 18 | 22(20-24) | 48 | | | | 0.5 | 0.7 | | 1150 | * | * |
| 05D270K | J | 17 | 22 | 27(24-30) | 60 | | | | 0.6 | 0.9 | | 930 | * | * |
| 05D330K | J | 20 | 26 | 33(30-36) | 73 | | | | 0.8 | 1.1 | | 760 | * | * |
| 05D390K | J | 25 | 31 | 39(35-43) | 80 | | | | 0.9 | 1.2 | | 640 | * | * |
| 05D470K | J | 30 | 38 | 47(42-52) | 104 | | | | 1.1 | 1.5 | | 530 | * | * |
| 05D560K | J | 35 | 45 | 56(50-62) | 123 | | | | 1.3 | 1.8 | | 450 | * | * |
| 05D680K | J | 40 | 56 | 68(61-75) | 150 | | | | 1.6 | 2.2 | | 370 | * | * |
| 05D820K | J | 50 | 65 | 82(74-90) | 146 | 5 | 400 | 800 | 2.5 | 4.0 | 0.10 | 300 | * | * |
| 05D101K | J | 60 | 85 | 100(90-110) | 175 | | | | 3.0 | 4.1 | | 250 | * | * |
| 05D121K | J | 75 | 100 | 120(108-132) | 210 | | | | 4.0 | 4.9 | | 210 | * | * |
| 05D151K | J | 95 | 125 | 150(135-165) | 260 | | | | 4.8 | 6.5 | | 165 | * | * |
| 05D181K | J | 115 | 150 | 180(162-198) | 320 | | | | 5.9 | 7.5 | | 140 | * | * |
| 05D201K | J | 130 | 170 | 200(185-225) | 355 | | | | 6.5 | 8.5 | | 125 | * | * |
| 05D221K | J | 140 | 180 | 220(198-242) | 380 | | | | 7.0 | 9.0 | | 110 | * | * |
| 05D241K | J | 150 | 200 | 240(216-264) | 410 | | | | 8.0 | 10.5 | | 100 | * | * |
| 05D271K | J | 175 | 225 | 270(243-297) | 475 | | | | 8.5 | 11.0 | | 95 | * | * |
| 05D301K | J | 190 | 250 | 300(270-330) | 520 | | | | 9.0 | 12.0 | | 85 | * | * |
| 05D331K | J | 210 | 275 | 330(297-363) | 570 | | | | 9.5 | 13.0 | | 75 | * | * |
| 05D361K | J | 230 | 300 | 360(324-396) | 620 | | | | 10.0 | 16.0 | | 70 | * | * |
| 05D391K | J | 250 | 320 | 390(351-429) | 675 | | | | 12.0 | 17.0 | | 65 | * | * |
| 05D431K | J | 275 | 350 | 430(387-473) | 745 | | | | 13.0 | 20.0 | | 60 | * | * |
| 05D471K | J | 300 | 385 | 470(423-517) | 810 | | | | 15.0 | 21.0 | | 55 | * | * |
| 05D511K | J | 320 | 415 | 510(459-561) | 845 | | | | 16.0 | 22.5 | | 50 | * | |
| 05D561K | J | 350 | 460 | 560(504-616) | 920 | 16.0 | 24.0 | 45 | * | | | | | |
| 05D621K | J | 385 | 505 | 620(558-682) | 1025 | 17.7 | 25.0 | 40 | | | | | | |
| 05D681K | J | 420 | 560 | 680(612-748) | 1120 | 21.0 | 29.0 | 35 | | | | | | |
| 05D751K | J | 460 | 615 | 750(675-825) | 1240 | 22.4 | 32.0 | 30 | | | | | | |

Operating temperature range: - 40°C TO +105°C

Storage temperature range: - 40°C TO +125°C

07D Specification

Put "J" in Free Code Stands for High Surge series



| VCR | | Maximum Allowable Voltage | | Varistor Voltage | Clamping Voltage (Max.) | | Maximum Peak Current (8/20 μ s) | | Maximum Energy (10/1000 μ s) | | RATED POWER | Typical Capacitance (Reference) | | |
|----------|------------|---------------------------|-----|--------------------|-------------------------|------|-------------------------------------|------------|----------------------------------|------------|-------------|---------------------------------|---|---|
| P/N | | AC.rms | DC | V _{1.0mA} | VC | IP | Standard | High Surge | Standard | High Surge | (W) | @1KHz |  |  |
| Standard | High Surge | (V) | | (V) | (V) | (A) | (A) | | (JOULE) | | | (pf) | | |
| 07D180L | J | 11 | 14 | 18(15-21) | 36 | 2.5 | 250 | 500 | 0.9 | 2.0 | 0.02 | 2800 | * | * |
| 07D220K | J | 14 | 18 | 22(20-24) | 43 | | | | 1.1 | 2.4 | | 2300 | * | * |
| 07D270K | J | 17 | 22 | 27(24-30) | 53 | | | | 1.4 | 3.0 | | 1800 | * | * |
| 07D330K | J | 20 | 26 | 33(30-36) | 65 | | | | 1.7 | 3.5 | | 1500 | * | * |
| 07D390K | J | 25 | 31 | 39(35-43) | 77 | | | | 2.1 | 4.0 | | 1300 | * | * |
| 07D470K | J | 30 | 38 | 47(42-52) | 93 | | | | 2.5 | 5.0 | | 1100 | * | * |
| 07D560K | J | 35 | 45 | 56(50-62) | 110 | | | | 3.1 | 6.0 | | 890 | * | * |
| 07D680K | J | 40 | 56 | 68(61-75) | 135 | | | | 3.6 | 7.0 | | 740 | * | * |
| 07D820K | J | 50 | 65 | 82(74-90) | 135 | | | | 10 | 1200 | | 1750 | 5.5 | 10 |
| 07D101K | J | 60 | 85 | 100(90-110) | 165 | 6.5 | 12 | 500 | | | * | | * | |
| 07D121K | J | 75 | 100 | 120(108-132) | 200 | 7.8 | 13 | 420 | | | * | | * | |
| 07D151K | J | 95 | 125 | 150(135-165) | 250 | 9.7 | 13 | 330 | | | * | | * | |
| 07D181K | J | 115 | 150 | 180(162-198) | 300 | 11.7 | 16 | 280 | | | * | | * | |
| 07D201K | J | 130 | 170 | 200(185-225) | 340 | 13 | 17 | 250 | | | * | | * | |
| 07D221K | J | 140 | 180 | 220(198-242) | 360 | 14 | 19 | 230 | | | * | | * | |
| 07D241K | J | 150 | 200 | 240(216-264) | 395 | 15 | 21 | 210 | | | * | | * | |
| 07D271K | J | 175 | 225 | 270(243-297) | 455 | 18 | 24 | 185 | | | * | | * | |
| 07D301K | J | 190 | 250 | 300(270-330) | 500 | 20 | 26 | 165 | | | * | | * | |
| 07D331K | J | 210 | 275 | 330(297-363) | 550 | 23 | 28 | 150 | | | * | | * | |
| 07D361K | J | 230 | 300 | 360(324-396) | 595 | 25 | 32 | 140 | | | * | | * | |
| 07D391K | J | 250 | 320 | 390(351-429) | 650 | 25 | 35 | 130 | | | * | | * | |
| 07D431K | J | 275 | 350 | 430(387-473) | 710 | 28 | 40 | 115 | | | * | | * | |
| 07D471K | J | 300 | 385 | 470(423-517) | 775 | 30 | 42 | 105 | | | * | | * | |
| 07D511K | J | 320 | 415 | 510(459-561) | 845 | 30 | 45 | 100 | | | * | | * | |
| 07D561K | J | 350 | 460 | 560(504-616) | 925 | 30 | 49 | 90 | | | * | | * | |
| 07D621K | J | 385 | 505 | 620(558-682) | 1025 | 33 | 55 | 80 | | | * | | | |
| 07D681K | J | 420 | 560 | 680(612-748) | 1120 | 33 | 60 | 75 | | | * | | | |
| 07D751K | J | 460 | 615 | 750(675-825) | 1240 | 65 | 67 | 70 | | | * | | | |
| 07D781K | J | 485 | 640 | 780(702-858) | 1290 | 65 | 67 | 70 | | | * | | | |
| 07D821K | J | 510 | 670 | 820(738-902) | 1355 | 65 | 70 | 60 | * | | | | | |

Operating temperature range: - 40°C TO +105°C

Storage temperature range: - 40°C TO +125°C

10D Specification

Put "J" in Free Code Stands for High Surge Series

| VCR | | Maximum Allowable Voltage | | Varistor Voltage | Clamping Voltage (Max.) | | Maximum Peak Current (8/20 μ s) | | Maximum Energy (10/1000 μ s) | | RATED POWER | Typical Capacitance (Reference) | | |
|----------|------------|---------------------------|------|------------------|-------------------------|-----|-------------------------------------|------------|----------------------------------|------------|-------------|---------------------------------|---|---|
| P/N | | AC.rms | DC | $V_{1.0mA}$ | VC | IP | Standard | High Surge | Standard | High Surge | (W) | @1KHz |  |  |
| Standard | High Surge | (V) | | (V) | (V) | (A) | (A) | | (JOULE) | | | (pf) | | |
| 10D180L | J | 11 | 14 | 18(15-21) | 36 | 5.0 | 500 | 1000 | 2.1 | 3.0 | 0.05 | 5600 | * | * |
| 10D220K | J | 14 | 18 | 22(20-24) | 43 | | | | 2.5 | 5.0 | | 4500 | * | * |
| 10D270K | J | 17 | 22 | 27(24-30) | 53 | | | | 3.0 | 6.0 | | 3700 | * | * |
| 10D330K | J | 20 | 26 | 33(30-36) | 65 | | | | 4.0 | 7.0 | | 3000 | * | * |
| 10D390K | J | 25 | 31 | 39(35-43) | 77 | | | | 4.6 | 9.0 | | 2400 | * | * |
| 10D470K | J | 30 | 38 | 47(42-52) | 93 | | | | 5.5 | 11 | | 2100 | * | * |
| 10D560K | J | 35 | 45 | 56(50-62) | 110 | | | | 7.0 | 13 | | 1800 | * | * |
| 10D680K | J | 40 | 56 | 68(61-75) | 135 | | | | 8.2 | 15 | | 1500 | * | * |
| 10D820K | J | 50 | 65 | 82(74-90) | 135 | 25 | 2500 | 3500 | 12 | 17 | 0.40 | 1200 | * | * |
| 10D101K | J | 60 | 85 | 100(90-110) | 165 | | | | 15 | 18 | | 1000 | * | * |
| 10D121K | J | 75 | 100 | 120(108-132) | 200 | | | | 18 | 21 | | 830 | * | * |
| 10D151K | J | 95 | 125 | 150(135-165) | 250 | | | | 22 | 25 | | 670 | * | * |
| 10D181K | J | 115 | 150 | 180(162-198) | 300 | | | | 27 | 30 | | 560 | * | * |
| 10D201K | J | 130 | 170 | 200(185-225) | 340 | | | | 30 | 35 | | 500 | * | * |
| 10D221K | J | 140 | 180 | 220(198-242) | 360 | | | | 32 | 39 | | 450 | * | * |
| 10D241K | J | 150 | 200 | 240(216-264) | 395 | | | | 35 | 42 | | 420 | * | * |
| 10D271K | J | 175 | 225 | 270(243-297) | 455 | | | | 40 | 49 | | 370 | * | * |
| 10D301K | J | 190 | 250 | 300(270-330) | 500 | | | | 40 | 54 | | 330 | * | * |
| 10D331K | J | 210 | 275 | 330(297-363) | 550 | | | | 43 | 58 | | 300 | * | * |
| 10D361K | J | 230 | 300 | 360(324-396) | 595 | | | | 47 | 65 | | 280 | * | * |
| 10D391K | J | 250 | 320 | 390(351-429) | 650 | | | | 60 | 70 | | 260 | * | * |
| 10D431K | J | 275 | 350 | 430(387-473) | 710 | | | | 65 | 80 | | 230 | * | * |
| 10D471K | J | 300 | 385 | 470(423-517) | 775 | | | | 70 | 85 | | 210 | * | * |
| 10D511K | J | 320 | 415 | 510(459-561) | 845 | | | | 70 | 90 | | 200 | * | * |
| 10D561K | J | 350 | 460 | 560(504-616) | 925 | | | | 70 | 92 | | 180 | * | * |
| 10D621K | J | 385 | 505 | 620(558-682) | 1025 | | | | 70 | 95 | | 160 | * | * |
| 10D681K | J | 420 | 560 | 680(612-748) | 1120 | | | | 70 | 98 | | 150 | * | * |
| 10D751K | J | 460 | 615 | 750(675-825) | 1240 | | | | 75 | 100 | | 130 | * | * |
| 10D781K | J | 485 | 640 | 780(702-858) | 1290 | | | | 80 | 105 | | 130 | * | * |
| 10D821K | J | 510 | 670 | 820(738-902) | 1355 | | | | 85 | 110 | | 120 | * | * |
| 10D911K | J | 550 | 745 | 910(819-1001) | 1500 | | | | 93 | 130 | | 110 | * | * |
| 10D102K | J | 625 | 825 | 1000(900-1100) | 1650 | | | | 102 | 140 | | 100 | * | * |
| 10D112K | J | 680 | 895 | 1100(990-1210) | 1815 | 115 | 155 | 90 | * | * | | | | |
| 10D122K | J | 720 | 975 | 1200(1080-1320) | 1980 | 125 | 168 | 90 | * | * | | | | |
| 10D142K | J | 825 | 1135 | 1400(1260-1540) | 2310 | 145 | 195 | 85 | | | | | | |
| 10D152K | J | 860 | 1220 | 1500(1350-1650) | 2440 | 150 | 202 | 80 | | | | | | |
| 10D162K | J | 920 | 1300 | 1600(1440-1760) | 2640 | 165 | 222 | 75 | | | | | | |
| 10D182K | J | 1000 | 1465 | 1800(1620-1980) | 2970 | 185 | 250 | 70 | | | | | | |

Operating temperature range: - 40°C TO +105°C

Storage temperature range: - 40°C TO +125°C

14D Specification

Put "J" in Free Code Stands for High Surge Series



| VCR | | Maximum Allowable Voltage | | Varistor Voltage | Clamping Voltage (Max.) | | Maximum Peak Current (8/20µs) | | Maximum Energy (10/1000µs) | | RATED POWER | Typical Capacitance (Reference) | RoHS | DYE |
|----------|------------|---------------------------|------|------------------|-------------------------|------|-------------------------------|----------|----------------------------|----------|-------------|---------------------------------|------|-----|
| | | AC.rms | DC | | V _{1.0mA} | VC | IP | Standard | High Surge | Standard | | | | |
| Standard | High Surge | (V) | | (V) | | (V) | (A) | (A) | | (JOULE) | | | (pf) | |
| 14D180L | J | 11 | 14 | 18(15-21) | 36 | 10 | 1000 | 2000 | 4.0 | 7.0 | 0.1 | 11100 | * | |
| 14D220K | J | 14 | 18 | 22(20-24) | 43 | | | | 5.0 | 8.0 | | 9100 | * | |
| 14D270K | J | 17 | 22 | 27(24-30) | 53 | | | | 6.0 | 10.0 | | 7400 | * | * |
| 14D330K | J | 20 | 26 | 33(30-36) | 65 | | | | 7.5 | 12 | | 6100 | * | * |
| 14D390K | J | 25 | 31 | 39(35-43) | 77 | | | | 8.6 | 13 | | 5100 | * | * |
| 14D470K | J | 30 | 38 | 47(42-52) | 93 | | | | 10 | 17 | | 4300 | * | * |
| 14D560K | J | 35 | 45 | 56(50-62) | 110 | | | | 11 | 20 | | 3600 | * | * |
| 14D680K | J | 40 | 56 | 68(61-75) | 135 | | | | 14 | 24 | | 2900 | * | * |
| 14D820K | J | 50 | 65 | 82(74-90) | 135 | | | | 22 | 27 | | 2400 | * | * |
| 14D101K | J | 60 | 85 | 100(90-110) | 165 | | | | 28 | 33 | | 2000 | * | * |
| 14D121K | J | 75 | 100 | 120(108-132) | 200 | 32 | 40 | 1700 | * | * | | | | |
| 14D151K | J | 95 | 125 | 150(135-165) | 250 | 40 | 53 | 1300 | * | * | | | | |
| 14D181K | J | 115 | 150 | 180(162-198) | 300 | 50 | 60 | 1100 | * | * | | | | |
| 14D201K | J | 130 | 170 | 200(185-225) | 340 | 57 | 70 | 1000 | * | * | | | | |
| 14D221K | J | 140 | 180 | 220(198-242) | 360 | 60 | 78 | 900 | * | * | | | | |
| 14D241K | J | 150 | 200 | 240(216-264) | 395 | 63 | 84 | 830 | * | * | | | | |
| 14D271K | J | 175 | 225 | 270(243-297) | 455 | 70 | 99 | 740 | * | * | | | | |
| 14D301K | J | 190 | 250 | 300(270-330) | 500 | 77 | 108 | 670 | * | * | | | | |
| 14D331K | J | 210 | 275 | 330(297-363) | 550 | 85 | 115 | 610 | * | * | | | | |
| 14D361K | J | 230 | 300 | 360(324-396) | 595 | 93 | 130 | 560 | * | * | | | | |
| 14D391K | J | 250 | 320 | 390(351-429) | 650 | 100 | 140 | 510 | * | * | | | | |
| 14D431K | J | 275 | 350 | 430(387-473) | 710 | 115 | 155 | 460 | * | * | | | | |
| 14D471K | J | 300 | 385 | 470(423-517) | 775 | 125 | 175 | 430 | * | * | | | | |
| 14D511K | J | 320 | 415 | 510(459-561) | 845 | 125 | 180 | 390 | * | * | | | | |
| 14D561K | J | 350 | 460 | 560(504-616) | 925 | 125 | 185 | 360 | * | * | | | | |
| 14D621K | J | 385 | 505 | 620(558-682) | 1025 | 125 | 190 | 320 | * | * | | | | |
| 14D681K | J | 420 | 560 | 680(612-748) | 1120 | 130 | 200 | 290 | * | * | | | | |
| 14D751K | J | 460 | 615 | 750(675-825) | 1240 | 143 | 210 | 270 | * | * | | | | |
| 14D781K | J | 485 | 640 | 780(702-858) | 1290 | 148 | 220 | 260 | * | | | | | |
| 14D821K | J | 510 | 670 | 820(738-902) | 1355 | 157 | 235 | 240 | * | | | | | |
| 14D911K | J | 550 | 745 | 910(819-1001) | 1500 | 176 | 255 | 220 | * | | | | | |
| 14D102K | J | 625 | 825 | 1000(900-1100) | 1650 | 190 | 280 | 200 | * | | | | | |
| 14D112K | J | 680 | 895 | 1100(990-1210) | 1815 | 213 | 310 | 180 | * | | | | | |
| 14D122K | J | 720 | 980 | 1200(1080-1320) | 1980 | 232 | 324 | 160 | * | | | | | |
| 14D142K | J | 825 | 1135 | 1400(1260-1540) | 2310 | 238 | 327 | 150 | * | | | | | |
| 14D152K | J | 860 | 1220 | 1500(1350-1650) | 2440 | 240 | 320 | 150 | * | | | | | |
| 14D162K | J | 920 | 1300 | 1600(1440-1760) | 2640 | 243 | 331 | 140 | * | | | | | |
| 14D182K | J | 1100 | 1465 | 1800(1620-1980) | 2970 | 5000 | 250 | 335 | 130 | * | | | | |

Operating temperature range: - 40°C TO +105°C

Storage temperature range: - 40°C TO +125°C

20D Specification

Put "J" in Free Code Stands for High Surge Series

| VCR | | Maximum Allowable Voltage | | Varistor Voltage | Clamping Voltage (Max.) | | Maximum Peak Current (8/20µs) | | Maximum Energy (10/1000µs) | | RATED POWER | Typical Capacitance (Reference) | | | | |
|----------|------------|---------------------------|------|--------------------|-------------------------|-----|-------------------------------|------------------|----------------------------|------------|-------------|---------------------------------|---|---|---|---|
| P/N | | AC.rms | DC | V _{1.0mA} | VC | IP | I _n | I _{Max} | Standard | High Surge | (W) | @1KHz |  |  | | |
| Standard | High Surge | (V) | | | (V) | (A) | (A) | | (JOULE) | | | (pf) | | | | |
| 20D180L | J | 11 | 14 | 18(15-21) | 36 | 20 | 1000 | 2000 | 11 | 13 | 0.2 | 28500 | * | | | |
| 20D220K | J | 14 | 18 | 22(20-24) | 43 | | | | 14 | 16 | | 18500 | * | | | |
| 20D270K | J | 17 | 22 | 27(24-30) | 53 | | | | 16 | 19 | | 13000 | * | * | | |
| 20D330K | J | 20 | 26 | 33(30-36) | 65 | | | | 23 | 24 | | 11500 | * | * | | |
| 20D390K | J | 25 | 31 | 39(35-43) | 77 | | | | 26 | 28 | | 8500 | * | * | | |
| 20D470K | J | 30 | 38 | 47(42-52) | 93 | | 30 | 34 | 7400 | * | | * | | | | |
| 20D560K | J | 35 | 45 | 56(50-62) | 110 | | 2000 | 4000 | 41 | 41 | | 6500 | * | * | | |
| 20D680K | J | 40 | 56 | 68(61-75) | 135 | | | | 46 | 49 | | 5800 | * | * | | |
| 20D820K | J | 50 | 65 | 82(74-90) | 135 | | | | 3000 | 6000 | | 38 | 56 | 4900 | * | * |
| 20D101K | J | 60 | 85 | 100(90-110) | 165 | | | | | | | 45 | 70 | 4000 | * | * |
| 20D121K | J | 75 | 100 | 120(108-132) | 200 | 55 | | | | | 85 | 3300 | * | * | | |
| 20D151K | J | 95 | 125 | 150(135-165) | 250 | 70 | 106 | 2700 | | | * | * | | | | |
| 20D181K | J | 115 | 150 | 180(162-198) | 300 | 85 | 130 | 2200 | | | * | * | | | | |
| 20D201K | J | 130 | 170 | 200(185-225) | 340 | 95 | 140 | 2000 | * | * | | | | | | |
| 20D221K | J | 140 | 180 | 220(198-242) | 360 | 100 | 155 | 1800 | * | * | | | | | | |
| 20D241K | J | 150 | 200 | 240(216-264) | 395 | 108 | 168 | 1650 | * | * | | | | | | |
| 20D271K | J | 175 | 225 | 270(243-297) | 455 | 127 | 190 | 1500 | * | * | | | | | | |
| 20D301K | J | 190 | 250 | 300(270-330) | 500 | 136 | 210 | 1300 | * | * | | | | | | |
| 20D331K | J | 210 | 275 | 330(297-363) | 550 | 150 | 228 | 1200 | * | * | | | | | | |
| 20D361K | J | 230 | 300 | 360(324-396) | 595 | 163 | 255 | 1100 | * | * | | | | | | |
| 20D391K | J | 250 | 320 | 390(351-429) | 650 | 180 | 275 | 1000 | * | * | | | | | | |
| 20D431K | J | 275 | 350 | 430(387-473) | 710 | 190 | 305 | 930 | * | * | | | | | | |
| 20D471K | J | 300 | 385 | 470(423-517) | 775 | 220 | 350 | 850 | * | * | | | | | | |
| 20D511K | J | 320 | 415 | 510(459-561) | 845 | 220 | 360 | 780 | * | * | | | | | | |
| 20D561K | J | 350 | 460 | 560(504-616) | 925 | 100 | 6000 | 12000 | 220 | 380 | 710 | * | * | | | |
| 20D621K | J | 385 | 505 | 620(558-682) | 1025 | | | | 220 | 390 | 650 | * | * | | | |
| 20D681K | J | 420 | 560 | 680(612-748) | 1120 | | | | 230 | 400 | 600 | * | * | | | |
| 20D751K | J | 460 | 615 | 750(675-825) | 1240 | | | | 255 | 420 | 530 | * | * | | | |
| 20D781K | J | 485 | 640 | 780(702-858) | 1290 | | | | 265 | 440 | 510 | * | | | | |
| 20D821K | J | 510 | 670 | 820(738-902) | 1355 | | | | 282 | 460 | 500 | * | * | | | |
| 20D911K | J | 550 | 745 | 910(819-1001) | 1500 | | | | 310 | 510 | 440 | * | * | | | |
| 20D102K | J | 625 | 825 | 1000(900-1100) | 1650 | | | | 342 | 565 | 400 | * | | | | |
| 20D112K | J | 680 | 895 | 1100(990-1210) | 1815 | | | | 383 | 620 | 360 | * | | | | |
| 20D122K | J | 750 | 990 | 1200(1080-1320) | 1980 | | | | 408 | 660 | 350 | * | | | | |
| 20D142K | J | 825 | 1135 | 1400(1260-1540) | 2310 | | | | 532 | 784 | 340 | * | | | | |
| 20D152K | J | 860 | 1220 | 1500(1350-1650) | 2440 | | | | 569 | 840 | 330 | * | | | | |
| 20D162K | J | 920 | 1300 | 1600(1440-1760) | 2640 | | | | 606 | 896 | 330 | * | | | | |
| 20D182K | J | 1100 | 1465 | 1800(1620-1980) | 2970 | | | | 625 | 990 | 320 | * | | | | |

Operating temperature range: - 40°C TO +105°C


Storage temperature range: - 40°C TO +125°C

25D Specification

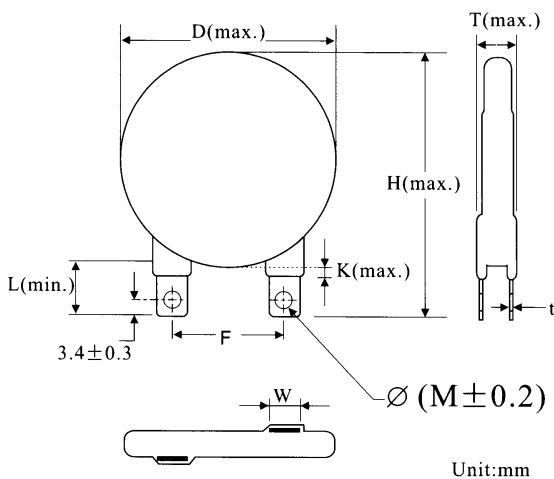
| VCR Φ25mm | Maximum Allowable Voltage | | Varistor Voltage | | Clamping Voltage (Max.) | | Rated Voltage | Maximum Peak Current (8/20μs) | | Maximum Energy (10/1000μs) | Typical Capacitance (Reference) | RI | | |
|------------------|---------------------------|-----------|------------------|------|-------------------------|-----|---------------|-------------------------------|-------|----------------------------|---------------------------------|------|-----|---|
| | AC.rms (V) | DC (V) | V1.0mA (V) | | VC | IP | Reference | In. 10 times | I Max | JOULE | @1KHz (pf) | | | |
| | | | min. | max. | (V) | (A) | (V) | (KA) | | | | | | |
| 25D820K | 50 | 65 | 74 | 90 | 135 | 150 | DC48 | 10 | 23 | 80 | 7700 | * | | |
| 25D101K | 60 | 85 | 90 | 110 | 165 | | DC60 | | | 100 | 6300 | * | | |
| 25D121K | 75 | 100 | 108 | 132 | 200 | | | | | AC100 | 120 | 5200 | * | |
| 25D151K | 95 | 125 | 135 | 165 | 250 | | AC125 | | | | 160 | 4300 | * | |
| 25D181K | 115 | 150 | 162 | 198 | 300 | | | | | 175 | 3500 | * | | |
| 25D201K | 130 | 170 | 185 | 225 | 340 | | | | | 190 | 3200 | * | | |
| 25D221K | 140 | 180 | 198 | 242 | 360 | | | | | 200 | 2900 | * | | |
| 25D241K | 150 | 200 | 216 | 264 | 395 | | | | | 220 | 2650 | * | | |
| 25D271K | 175 | 225 | 243 | 297 | 455 | | | | | 255 | 2400 | * | | |
| 25D301K | 190 | 250 | 270 | 330 | 500 | | | | | 275 | 2100 | * | | |
| 25D331K | 210 | 275 | 297 | 363 | 550 | | | | | AC250 Telephone Test | 300 | 1900 | * | |
| 25D361K | 230 | 300 | 324 | 396 | 595 | | | | | | 330 | 1750 | * | |
| 25D391K | 250 | 320 | 351 | 429 | 650 | | | | | AC250 | 360 | 1600 | * | |
| 25D431K | 275 | 350 | 387 | 473 | 710 | | 380 | | | | 1500 | * | | |
| 25D471K | 300 | 385 | 423 | 517 | 775 | | 400 | | | | 1400 | * | | |
| 25D511K | 320 | 415 | 459 | 561 | 845 | | 420 | | | | 1250 | * | | |
| 25D561K | 350 | 460 | 504 | 616 | 925 | | 440 | | | | 1150 | * | | |
| 25D621K | 385 | 505 | 558 | 682 | 1025 | | 450 | | | | 1050 | * | | |
| 25D681K | 420 | 560 | 612 | 748 | 1120 | | 460 | | | | 950 | * | | |
| 25D711K | 440 | 585 | 644 | 786 | 1180 | | 485 | | | | 900 | * | | |
| 25D751K | 460 | 615 | 675 | 825 | 1240 | | 510 | | | | 850 | * | | |
| 25D781K | 485 | 640 | 702 | 858 | 1290 | | 530 | | | | 800 | * | | |
| 25D821K | 510 | 670 | 738 | 902 | 1355 | | 570 | | | 750 | * | | | |
| 25D911K | 550 | 745 | 819 | 1001 | 1500 | | 620 | | | 700 | * | | | |
| 25D102K | 625 | 825 | 900 | 1100 | 1650 | | AC380 or G | | | 8 | 20 | 685 | 650 | * |
| 25D112K | 680 | 895 | 990 | 1210 | 1815 | | | | | | | 770 | 600 | * |
| 25D122K | 750 | 990 | 1080 | 1320 | 1980 | | | | | 7.5 | 18 | 770 | 550 | * |
| 25D142K | 880 | 1140 | 1260 | 1540 | 2310 | | | | | | | 820 | 500 | |
| 25D152K | 925 | 1200 | 1350 | 1650 | 2475 | | | | | | | 870 | 440 | * |
| 25D162K | 1000 | 1280 | 1440 | 1760 | 2640 | | | | | | | 970 | 450 | |
| 25D182K | 1100 | 1465 | 1620 | 1980 | 2970 | 900 | 370 | * | | | | | | |

| Clamping Voltage ± 10% (V) | | | | | | |
|----------------------------|------|-------|------|------|------|------|
| | 150A | 0.5KA | 3KA | 5KA | 10KA | 15KA |
| 25D101K | 150 | 170 | 210 | 250 | 320 | 340 |
| 25D241K | 350 | 380 | 420 | 470 | 575 | 640 |
| 25D431K | 600 | 640 | 760 | 840 | 1050 | 1200 |
| 25D511K | 700 | 770 | 910 | 965 | 1185 | 1275 |
| 25D621K | 860 | 930 | 1115 | 1260 | 1435 | 1560 |
| 25D911K | 1280 | 1360 | 1650 | 1770 | 2050 | 2285 |
| 25D112K | 1560 | 1665 | 2150 | 2315 | 2720 | 3150 |

32D Specification

| VCR Φ32mm | Maximum Allowable Voltage | | Varistor Voltage | | Clamping Voltage (Max.) | | Maximum Peak Current (8/20μs) | | Maximum Energy (10/1000μs) | Typical Capacitance (Reference) |  |
|------------------|---------------------------|--------|------------------|------|-------------------------|--------|-------------------------------|------------|----------------------------|---------------------------------|---|
| | AC.rms (V) | DC (V) | V1.0mA (V) | | VC (V) | IP (A) | In. 10 times (KA) | I Max (KA) | JOULE | @1KHz (pf) | |
| | | | min. | max. | | | | | | | |
| 32D201K | 130 | 170 | 185 | 225 | 340 | 200 | 15 | 30 | 250 | 5200 | * |
| 32D241K | 150 | 200 | 216 | 264 | 395 | | | | 290 | 5100 | * |
| 32D271K | 175 | 225 | 243 | 297 | 455 | | | | 300 | 4800 | * |
| 32D301K | 190 | 250 | 270 | 330 | 500 | | | | 330 | 4500 | * |
| 32D331K | 210 | 275 | 297 | 363 | 550 | | | | 360 | 4300 | * |
| 32D361K | 230 | 300 | 324 | 396 | 595 | | | | 380 | 3900 | * |
| 32D391K | 250 | 320 | 351 | 429 | 650 | | | | 400 | 3200 | * |
| 32D431K | 275 | 350 | 387 | 473 | 710 | | | | 430 | 3100 | * |
| 32D471K | 300 | 385 | 423 | 517 | 775 | | | | 460 | 2800 | * |
| 32D511K | 320 | 415 | 459 | 561 | 845 | | | | 510 | 2700 | * |
| 32D621K | 385 | 505 | 558 | 682 | 1025 | | | | 570 | 2400 | * |
| 32D681K | 420 | 560 | 612 | 748 | 1120 | | | | 600 | 2200 | * |
| 32D751K | 460 | 615 | 675 | 825 | 1240 | | | | 620 | 2000 | |
| 32D781K | 485 | 640 | 702 | 858 | 1290 | | | | 660 | 1900 | * |
| 32D821K | 510 | 670 | 738 | 902 | 1355 | | | | 700 | 1800 | * |
| 32D911K | 550 | 745 | 819 | 1001 | 1500 | | | | 750 | 1300 | * |
| 32D951K | 575 | 765 | 855 | 1045 | 1570 | | | | 780 | 1200 | * |
| 32D102K | 625 | 825 | 900 | 1100 | 1650 | | | | 810 | 1100 | * |
| 32D112K | 680 | 895 | 990 | 1210 | 1815 | | | | 910 | 1000 | * |
| 32D122K | 750 | 990 | 1080 | 1320 | 1980 | | | | 960 | 920 | * |

Dimensions



| | |
|-----------|----------|
| D (max.) | 35 |
| H (max.) | 56.3 |
| T (max.) | Ref.Tab1 |
| F (±1.0) | 25.4 |
| t (±0.1) | 0.5 |
| L (min.) | 16.5 |
| K (max.) | 3.18 |
| W (±0.5) | 7 |
| Ø (M±0.2) | 3.8 |

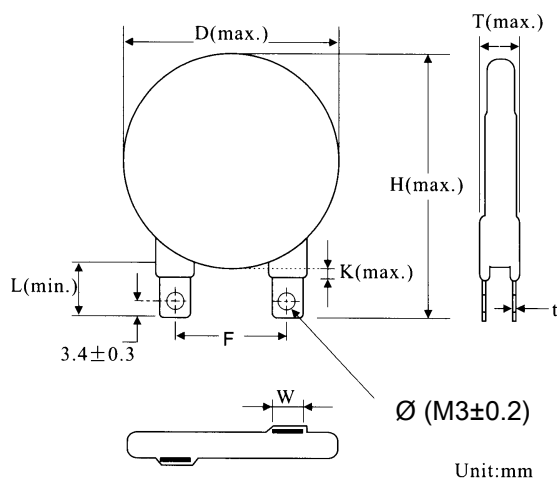
Tab1.

| Model | T (max.) | Model | T (max.) |
|-------|----------|-------|----------|
| 201K | 6.4 | 681K | 9.5 |
| 221K | 6.6 | 751K | 10.0 |
| 241K | 6.7 | 781K | 10.2 |
| 271K | 6.9 | 821K | 10.8 |
| 301K | 7.1 | 911K | 11.2 |
| 331K | 7.3 | 951K | 11.0 |
| 361K | 7.6 | 102K | 11.2 |
| 391K | 7.8 | 112K | 12.3 |
| 431K | 8.0 | 122K | 13.0 |
| 471K | 8.3 | 142K | 14.3 |
| 511K | 8.7 | 162K | 13.3 |
| 621K | 9.4 | | |

40D Specification

| VCR | Maximum Allowable Voltage | | Varistor Voltage | | Clamping Voltage (Max.) | | Maximum Peak Current (8/20μs) | | Maximum Energy (10/1000μs) | Typical Capacitance (Reference) | |
|---------|---------------------------|--------|------------------|--------|-------------------------|------|-------------------------------|------|----------------------------|---------------------------------|---|
| | Φ40mm | AC.rms | DC | V1.0mA | | VC | IP | In | I Max | @1KHz | |
| | | (V) | (V) | min. | max. | (V) | (A) | (KA) | | | |
| 40D201K | 130 | 170 | 185 | 225 | 340 | 250 | 20 | 45 | 400 | 6750 | * |
| 40D221K | 140 | 180 | 198 | 242 | 360 | | | | 450 | 6400 | * |
| 40D241K | 150 | 200 | 222 | 270 | 395 | | | | 480 | 5650 | * |
| 40D271K | 180 | 225 | 256 | 310 | 455 | | | | 540 | 5100 | * |
| 40D301K | 190 | 250 | 270 | 330 | 500 | | | | 600 | 4510 | * |
| 40D331K | 210 | 275 | 297 | 363 | 550 | | | | 656 | 4150 | * |
| 40D361K | 230 | 300 | 324 | 396 | 595 | | | | 745 | 3750 | * |
| 40D391K | 250 | 320 | 362 | 440 | 650 | | | | 830 | 3500 | * |
| 40D431K | 275 | 350 | 387 | 473 | 710 | | | | 920 | 2950 | * |
| 40D471K | 300 | 385 | 423 | 517 | 775 | | | | 1000 | 2880 | * |
| 40D511K | 320 | 415 | 459 | 561 | 845 | | | | 1060 | 2650 | * |
| 40D561K | 350 | 460 | 504 | 616 | 925 | | | | 1150 | 2450 | * |
| 40D621K | 385 | 505 | 558 | 682 | 1025 | | | | 1250 | 2200 | * |
| 40D681K | 420 | 560 | 612 | 748 | 1120 | | | | 1250 | 2000 | * |
| 40D751K | 460 | 615 | 675 | 825 | 1240 | | | | 1280 | 1820 | * |
| 40D781K | 485 | 640 | 702 | 858 | 1290 | | | | 1350 | 1750 | * |
| 40D821K | 510 | 670 | 738 | 902 | 1355 | | | | 1395 | 1650 | * |
| 40D911K | 550 | 745 | 819 | 1001 | 1500 | | | | 1475 | 1500 | * |
| 40D951K | 575 | 760 | 855 | 1045 | 1570 | | | | 1485 | 1430 | * |
| 40D102K | 625 | 825 | 900 | 1100 | 1650 | | | | 1550 | 1350 | * |
| 40D112K | 680 | 895 | 990 | 1210 | 1815 | 1700 | 1230 | * | | | |
| 40D122K | 750 | 980 | 1150 | 1320 | 1980 | 1750 | 1135 | * | | | |
| 40D142K | 850 | 1120 | 1315 | 1540 | 2310 | 1750 | 970 | | | | |

Dimensions




| | |
|------------|----------|
| D (max.) | 42 |
| H (max.) | 60.2 |
| T (max.) | Ref.Tab1 |
| F (±1.0) | 25.4 |
| t (±0.1) | 0.5 |
| L (min.) | 16.5 |
| K (max.) | 5 |
| W (±0.5) | 7 |
| Ø (M3±0.3) | 3.5 |

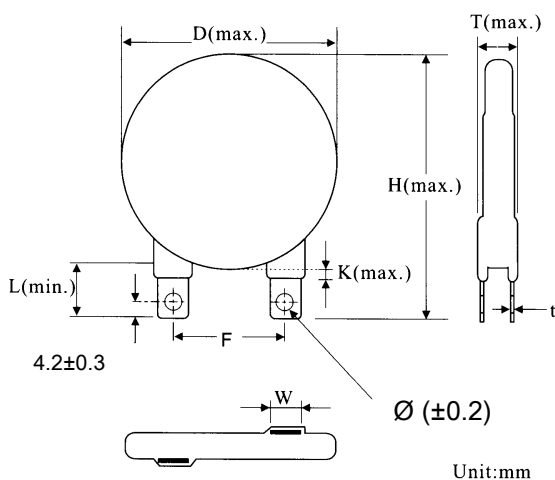
Tab1.

| Model | T (max.) | Model | T (max.) |
|-------|----------|-------|----------|
| 201K | 6.4 | 621K | 9.4 |
| 221K | 6.6 | 681K | 9.5 |
| 241K | 6.7 | 751K | 10.0 |
| 271K | 6.9 | 781K | 10.2 |
| 301K | 7.1 | 821K | 10.8 |
| 331K | 7.3 | 911K | 11.2 |
| 361K | 7.6 | 951K | 11.0 |
| 391K | 7.8 | 102K | 11.2 |
| 431K | 8.0 | 112K | 12.3 |
| 471K | 8.3 | 122K | 13.0 |
| 511K | 8.7 | 142K | 14.3 |
| 561K | 9.0 | | |

53D Specification

| VCR Φ53mm | Maximum Allowable Voltage | | Varistor Voltage | | Clamping Voltage (Max.) | | Maximum Peak Current (8/20μs) | | Maximum Energy (10/1000μs) | Typical Capacitance (Reference) |  |
|--------------|---------------------------|-----------|------------------|------|-------------------------|-----------|-------------------------------|-------|----------------------------|---------------------------------|---|
| | AC.rms (V) | DC (V) | V1.0mA (V) | | VC (V) | IP (A) | In.10 times (KA) | I Max | JOULE | @1KHz (pf) | |
| | | | min. | max. | | | | | | | |
| 53D201K | 130 | 170 | 185 | 225 | 340 | 500 | 30 | 60 | 600 | 12000 | |
| 53D221K | 140 | 180 | 198 | 242 | 360 | | | | 675 | 11400 | |
| 53D241K | 150 | 200 | 216 | 264 | 395 | | | | 720 | 10060 | * |
| 53D271K | 175 | 225 | 243 | 297 | 455 | | | | 810 | 9080 | * |
| 53D301K | 190 | 250 | 270 | 330 | 500 | | | | 900 | 8030 | * |
| 53D331K | 210 | 275 | 297 | 363 | 550 | | | | 990 | 7400 | * |
| 53D361K | 230 | 300 | 324 | 396 | 595 | | 1120 | 6680 | * | | |
| 53D391K | 250 | 320 | 351 | 429 | 650 | | 1250 | 6250 | * | | |
| 53D431K | 275 | 350 | 387 | 473 | 710 | | 1380 | 5250 | * | | |
| 53D471K | 300 | 385 | 423 | 517 | 775 | | 1500 | 5125 | * | | |
| 53D511K | 320 | 415 | 459 | 561 | 845 | | 1590 | 4720 | * | | |
| 53D561K | 350 | 460 | 504 | 616 | 925 | | 1725 | 4360 | * | | |
| 53D621K | 385 | 505 | 558 | 682 | 1025 | | 1880 | 3920 | * | | |
| 53D681K | 420 | 560 | 612 | 748 | 1120 | | 1880 | 3560 | * | | |
| 53D751K | 460 | 615 | 675 | 825 | 1240 | | 1920 | 3240 | * | | |
| 53D781K | 485 | 640 | 702 | 858 | 1290 | | 2025 | 3120 | * | | |
| 53D821K | 510 | 670 | 738 | 902 | 1355 | | 2100 | 2940 | * | | |
| 53D911K | 550 | 745 | 819 | 1001 | 1500 | | 2215 | 2670 | * | | |
| 53D951K | 575 | 765 | 855 | 1045 | 1570 | | 2230 | 2550 | * | | |
| 53D102K | 625 | 825 | 900 | 1100 | 1650 | | 2325 | 2400 | * | | |
| 53D112K | 680 | 895 | 990 | 1210 | 1815 | | 2550 | 2200 | * | | |
| 53D122K | 750 | 980 | 1150 | 1320 | 1980 | | 2625 | 2020 | * | | |
| 53D142K | 880 | 1120 | 1315 | 1540 | 2310 | | 2625 | 1730 | | | |
| 53D162K | 1000 | 1320 | 1550 | 1760 | 2640 | | 3000 | 1500 | | | |

Dimensions



| | |
|----------|-----------|
| D (max.) | 60 |
| H (max.) | 78.2 |
| T (max.) | Ref. Tab1 |
| F (±0.5) | 25.4 |
| t (±0.1) | 0.7 |
| L (min.) | 16.5 |
| K (max.) | 3.18 |
| W (±0.5) | 9.7 |
| Ø (±0.2) | 4.3 |

Tab1.

| Model | T (max.) | Model | T (max.) |
|-------|----------|-------|----------|
| 201K | 6.4 | 621K | 9.4 |
| 221K | 6.6 | 681K | 9.5 |
| 241K | 6.7 | 751K | 10.0 |
| 271K | 6.9 | 781K | 10.2 |
| 301K | 7.1 | 821K | 10.8 |
| 331K | 7.3 | 911K | 11.2 |
| 361K | 7.6 | 951K | 11.0 |
| 391K | 7.8 | 102K | 11.2 |
| 431K | 8.0 | 112K | 12.3 |
| 471K | 8.3 | 122K | 13.0 |
| 511K | 8.7 | 142K | 14.3 |
| 561K | 9.0 | | |