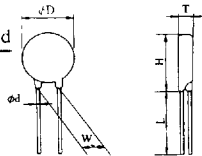




METAL OXIDE VARISTORS TNR[®]

G-SERIES

(Disk Type, Radial Lead)



unit: mm

| Model Number | φD | H Max | T Max | L Min | φd | W ± 1 |
|--------------|--------|-------|-------|-------|-----|-------|
| TNR7G180K | 7 ± 1 | 11 | 5 | 25 | 0.5 | 5 |
| TNR7G271K | | | 7 | | | |
| TNR7G331K | | | 7 | | | |
| TNR7G471K | | | 7 | | | |
| TNR9G150K | 9 ± 1 | 13 | 5 | 25 | 0.5 | 5 |
| TNR9G271K | | | 7 | | | |
| TNR9G331K | | | 7 | | | |
| TNR9G471K | | | 7 | | | |
| TNR12G150K | 13.5 | 16.5 | 5 | 25 | 0.5 | 5 |
| TNR12G271K | | | 7 | | | |
| TNR12G331K | | | 7 | | | |
| TNR12G681K | | | 7 | | | |
| TNR12G751K | 14 | 17.0 | 7 | 25 | 0.8 | 7.5 |
| TNR12G102K | | | 8.5 | | | |
| TNR12G112K | | | 9 | | | |
| TNR12G122K | | | 10 | | | |
| TNR12G152K | 15 | 18 | 9 | 25 | 0.8 | 7.5 |
| TNR12G182K | | | 10 | | | |
| TNR12G271K | | | 12 | | | |
| TNR12G331K | | | 14 | | | |
| TNR15G150K | 15 ± 1 | 19 | 5 | 25 | 0.8 | 7.5 |
| TNR15G271K | | | 7 | | | |
| TNR15G331K | | | 7 | | | |
| TNR15G681K | | | 7 | | | |
| TNR15G751K | 17Max | 20 | 7 | 25 | 0.8 | 7.5 |
| TNR15G102K | | | 8.5 | | | |
| TNR15G112K | | | 9 | | | |
| TNR15G122K | | | 10.5 | | | |
| TNR15G152K | 18Max | 21 | 9 | 25 | 0.8 | 10 |
| TNR15G182K | | | 10.5 | | | |
| TNR15G271K | | | 12.5 | | | |
| TNR15G331K | | | 14.5 | | | |
| TNR23G180K | 19Max | 22 | 12.5 | 25 | 0.8 | 10 |
| TNR23G271K | | | 14.5 | | | |
| TNR23G331K | | | 14.5 | | | |
| TNR23G681K | | | 14.5 | | | |
| TNR23G751K | 24 | 27 | 5 | 25 | 0.8 | 10 |
| TNR23G102K | | | 7 | | | |
| TNR23G112K | | | 7 | | | |
| TNR23G122K | | | 7 | | | |
| TNR23G152K | 25 | 28 | 7 | 25 | 0.8 | 10 |
| TNR23G182K | | | 8.5 | | | |
| TNR23G271K | | | 9.5 | | | |
| TNR23G331K | | | 11 | | | |
| TNR23G331K | 26 | 29 | 9.5 | 25 | 0.8 | 10 |
| TNR23G681K | | | 11 | | | |
| TNR23G751K | | | 13 | | | |
| TNR23G102K | | | 15 | | | |
| TNR23G112K | 27 | 30 | 13 | 25 | 0.8 | 10 |
| TNR23G122K | | | 15 | | | |
| TNR23G152K | | | 15 | | | |
| TNR23G182K | | | 15 | | | |

| Model Number | Maximum Applied Voltage (Continuous) | | Maximum Peak Current (8/20μs) | Maximum Energy 2msec (J) | Rated Wattage (W) | Clamping Voltage (V) | | Capacitance (Typical) 1kHz (pF) | Varistor Voltage (V1mA V) |
|--------------|--------------------------------------|--------|-------------------------------|--------------------------|-------------------|----------------------|-------|---------------------------------|---------------------------|
| | AC (Vrms) | DC (V) | | | | (A) | (A) | | |
| TNR12G150K | 8 | 12 | 1.0 | 1.0 | 0.05 | 5 | 30 | 10,500 | 150 13 - 170 |
| TNR12G180K | 10 | 14 | 1.5 | 1.5 | 0.05 | 5 | 35 | 9,000 | 180 16 - 200 |
| TNR12G220K | 14 | 18 | 2.0 | 2.0 | 0.05 | 5 | 43 | 8,200 | 220 20 - 240 |
| TNR12G270K | 17 | 22 | 2.5 | 2.5 | 0.05 | 5 | 53 | 6,900 | 270 24 - 300 |
| TNR12G330K | 20 | 26 | 3.0 | 3.0 | 0.05 | 5 | 65 | 5,900 | 330 30 - 360 |
| TNR12G390K | 25 | 30 | 3.5 | 3.5 | 0.05 | 5 | 77 | 5,100 | 390 35 - 430 |
| TNR12G470K | 30 | 37 | 4.5 | 4.5 | 0.05 | 5 | 93 | 4,400 | 470 42 - 520 |
| TNR12G560K | 30 | 44 | 5.5 | 5.5 | 0.05 | 5 | 110 | 3,800 | 560 50 - 620 |
| TNR12G680K | 40 | 55 | 6.5 | 6.5 | 0.05 | 5 | 135 | 3,200 | 680 61 - 750 |
| TNR12G820K | 55 | 65 | 8.0 | 8.0 | 0.05 | 5 | 135 | 2,200 | 820 74 - 900 |
| TNR12G101K | 65 | 85 | 10.0 | 10.0 | 0.05 | 5 | 165 | 1,050 | 1000 90 - 1100 |
| TNR12G121K | 70 | 100 | 12.0 | 12.0 | 0.05 | 5 | 195 | 910 | 1200 108 - 1320 |
| TNR12G151K | 90 | 125 | 16.0 | 16.0 | 0.05 | 5 | 245 | 770 | 1500 135 - 1650 |
| TNR12G181K | 110 | 145 | 18.0 | 18.0 | 0.05 | 5 | 295 | 670 | 1800 162 - 1980 |
| TNR12G201K | 130 | 170 | 20.0 | 20.0 | 0.05 | 5 | 330 | 620 | 2000 180 - 2200 |
| TNR12G221K | 145 | 180 | 25.0 | 25.0 | 0.05 | 5 | 360 | 570 | 2200 198 - 2420 |
| TNR12G241K | 150 | 200 | 25.0 | 25.0 | 0.05 | 5 | 390 | 530 | 2400 216 - 2640 |
| TNR12G271K | 170 | 225 | 30.0 | 30.0 | 0.05 | 5 | 440 | 490 | 2700 243 - 2970 |
| TNR12G331K | 210 | 270 | 35.0 | 35.0 | 0.05 | 5 | 540 | 420 | 3300 297 - 3630 |
| TNR12G361K | 235 | 300 | 35.0 | 35.0 | 0.05 | 5 | 590 | 400 | 3600 324 - 3960 |
| TNR12G391K | 250 | 320 | 40.0 | 40.0 | 0.05 | 5 | 640 | 370 | 3900 351 - 4290 |
| TNR12G431K | 270 | 350 | 45.0 | 45.0 | 0.05 | 5 | 700 | 340 | 4300 387 - 4730 |
| TNR12G471K | 305 | 385 | 45.0 | 45.0 | 0.05 | 5 | 765 | 320 | 4700 423 - 5170 |
| TNR12G561K | 350 | 460 | 45.0 | 45.0 | 0.05 | 5 | 910 | 280 | 5600 504 - 6160 |
| TNR12G621K | 380 | 505 | 45.0 | 45.0 | 0.05 | 5 | 1,015 | 260 | 6200 558 - 6820 |
| TNR12G681K | 420 | 560 | 45.0 | 45.0 | 0.05 | 5 | 1,110 | 240 | 6800 612 - 7480 |
| TNR12G751K | 460 | 615 | 50.0 | 50.0 | 0.05 | 5 | 1,230 | 225 | 7500 675 - 8250 |
| TNR12G821K | 515 | 670 | 55.0 | 55.0 | 0.05 | 5 | 1,340 | 210 | 8200 738 - 9020 |
| TNR12G911K | 550 | 745 | 60.0 | 60.0 | 0.05 | 5 | 1,500 | 200 | 9100 819 - 1,000 |
| TNR12G102K | 630 | 825 | 65.0 | 65.0 | 0.05 | 5 | 1,630 | 180 | 1,000 900 - 1,100 |
| TNR12G112K | 680 | 895 | 70.0 | 70.0 | 0.05 | 5 | 1,815 | 170 | 1,100 990 - 1,210 |
| TNR12G122K | 720 | 980 | 75.0 | 75.0 | 0.05 | 5 | 1,950 | 160 | 1,200 1,080 - 1,320 |
| TNR12G152K | 860 | 1,220 | 80.0 | 80.0 | 0.05 | 5 | 2,440 | 135 | 1,500 1,350 - 1,650 |
| TNR12G182K | 1,000 | 1,465 | 85.0 | 85.0 | 0.05 | 5 | 2,970 | 115 | 1,800 1,620 - 1,980 |
| TNR15G150K | 8 | 12 | 5.0 | 5.0 | 0.1 | 10 | 30 | 12,000 | 150 13 - 170 |
| TNR15G180K | 10 | 14 | 5.0 | 5.0 | 0.1 | 10 | 35 | 11,500 | 180 16 - 200 |
| TNR15G220K | 14 | 18 | 5.0 | 5.0 | 0.1 | 10 | 43 | 11,000 | 220 20 - 240 |
| TNR15G270K | 17 | 22 | 5.0 | 5.0 | 0.1 | 10 | 53 | 10,000 | 270 24 - 300 |
| TNR15G330K | 20 | 26 | 6.0 | 6.0 | 0.1 | 10 | 65 | 8,500 | 330 30 - 360 |
| TNR15G390K | 25 | 30 | 10.0 | 10.0 | 0.1 | 10 | 77 | 7,500 | 390 35 - 430 |
| TNR15G470K | 30 | 37 | 10.0 | 10.0 | 0.1 | 10 | 93 | 6,500 | 470 42 - 520 |
| TNR15G560K | 35 | 44 | 10.0 | 10.0 | 0.1 | 10 | 110 | 5,600 | 560 50 - 620 |
| TNR15G680K | 40 | 55 | 12.0 | 12.0 | 0.1 | 10 | 135 | 4,800 | 680 61 - 750 |
| TNR15G820K | 50 | 65 | 15.0 | 15.0 | 0.1 | 10 | 135 | 1,700 | 820 74 - 900 |
| TNR15G101K | 60 | 85 | 20.0 | 20.0 | 0.1 | 10 | 165 | 1,470 | 1000 90 - 1100 |
| TNR15G121K | 75 | 100 | 20.0 | 20.0 | 0.1 | 10 | 195 | 1,280 | 1200 108 - 1320 |
| TNR15G151K | 95 | 125 | 25.0 | 25.0 | 0.1 | 10 | 245 | 1,070 | 1500 135 - 1650 |
| TNR15G181K | 110 | 145 | 30.0 | 30.0 | 0.1 | 10 | 295 | 930 | 1800 162 - 1980 |
| TNR15G201K | 130 | 170 | 35.0 | 35.0 | 0.1 | 10 | 330 | 850 | 2000 180 - 2200 |
| TNR15G221K | 140 | 180 | 40.0 | 40.0 | 0.1 | 10 | 360 | 800 | 2200 198 - 2420 |
| TNR15G241K | 150 | 200 | 40.0 | 40.0 | 0.1 | 10 | 390 | 740 | 2400 216 - 2640 |
| TNR15G271K | 175 | 225 | 50.0 | 50.0 | 0.1 | 10 | 440 | 680 | 2700 243 - 2970 |
| TNR15G331K | 210 | 270 | 60.0 | 60.0 | 0.1 | 10 | 540 | 590 | 3300 297 - 3630 |
| TNR15G361K | 230 | 300 | 65.0 | 65.0 | 0.1 | 10 | 590 | 540 | 3600 324 - 3960 |
| TNR15G391K | 250 | 320 | 70.0 | 70.0 | 0.1 | 10 | 640 | 510 | 3900 351 - 4290 |
| TNR15G431K | 275 | 350 | 75.0 | 75.0 | 0.1 | 10 | 700 | 480 | 4300 387 - 4730 |
| TNR15G471K | 300 | 385 | 80.0 | 80.0 | 0.1 | 10 | 765 | 450 | 4700 423 - 5170 |
| TNR15G561K | 350 | 460 | 85.0 | 85.0 | 0.1 | 10 | 910 | 390 | 5600 504 - 6160 |
| TNR15G621K | 385 | 505 | 85.0 | 85.0 | 0.1 | 10 | 1,015 | 360 | 6200 558 - 6820 |
| TNR15G681K | 420 | 560 | 90.0 | 90.0 | 0.1 | 10 | 1,110 | 340 | 6800 612 - 7480 |
| TNR15G751K | 460 | 615 | 100.0 | 100.0 | 0.1 | 10 | 1,230 | 310 | 7500 675 - 8250 |
| TNR15G821K | 510 | 670 | 110.0 | 110.0 | 0.1 | 10 | 1,340 | 280 | 8200 738 - 9020 |
| TNR15G911K | 550 | 745 | 120.0 | 120.0 | 0.1 | 10 | 1,500 | 265 | 9100 819 - 1,000 |
| TNR15G102K | 625 | 825 | 130.0 | 130.0 | 0.1 | 10 | 1,630 | 250 | 1,000 900 - 1,100 |
| TNR15G112K | 680 | 895 | 140.0 | 140.0 | 0.1 | 10 | 1,815 | 230 | 1,100 990 - 1,210 |
| TNR15G122K | 720 | 980 | 150.0 | 150.0 | 0.1 | 10 | 1,950 | 215 | 1,200 1,080 - 1,320 |
| TNR15G152K | 860 | 1,220 | 160.0 | 160.0 | 0.1 | 10 | 2,440 | 185 | 1,500 1,350 - 1,650 |
| TNR15G182K | 1,000 | 1,465 | 170.0 | 170.0 | 0.1 | 10 | 2,970 | 150 | 1,800 1,620 - 1,980 |
| TNR23G180K | 10 | 14 | 10.0 | 10.0 | 0.2 | 20 | 35 | 31,000 | 180 16 - 200 |
| TNR23G220K | 14 | 18 | 13.0 | 13.0 | 0.2 | 20 | 43 | 30,000 | 220 20 - 240 |
| TNR23G270K | 17 | 22 | 15.0 | 15.0 | 0.2 | 20 | 53 | 27,000 | 270 24 - 300 |
| TNR23G330K | 20 | 26 | 20.0 | 20.0 | 0.2 | 20 | 65 | 23,000 | 330 30 - 360 |
| TNR23G390K | 25 | 30 | 24.0 | 24.0 | 0.2 | 20 | 77 | 20,000 | 390 35 - 430 |
| TNR23G470K | 30 | 37 | 30.0 | 30.0 | 0.2 | 20 | 93 | 17,500 | 470 42 - 520 |
| TNR23G560K | 35 | 44 | 35.0 | 35.0 | 0.2 | 20 | 110 | 15,000 | 560 50 - 620 |
| TNR23G680K | 40 | 55 | 40.0 | 40.0 | 0.2 | 20 | 135 | 13,000 | 680 61 - 750 |
| TNR23G820K | 50 | 65 | 27.0 | 27.0 | 0.2 | 20 | 135 | 4,600 | 820 74 - 900 |
| TNR23G101K | 60 | 85 | 30.0 | 30.0 | 0.2 | 20 | 165 | 3,900 | 1000 90 - 1100 |
| TNR23G121K | 75 | 100 | 40.0 | 40.0 | 0.2 | 20 | 195 | 3,400 | 1200 108 - 1320 |
| TNR23G151K | 95 | 125 | 50.0 | 50.0 | 0.2 | 20 | 245 | 2,900 | 1500 135 - 1650 |
| TNR23G181K | 110 | 145 | 60.0 | 60.0 | 0.2 | 20 | 295 | 2,500 | 1800 162 - 1980 |
| TNR23G201K | 130 | 170 | 70.0 | 70.0 | 0.2 | 20 | 330 | 2,300 | 2000 180 - 2200 |
| TNR23G221K | 140 | 180 | 75.0 | 75.0 | 0.2 | 20 | 360 | 2,150 | 2200 198 - 2420 |
| TNR23G241K | 150 | 200 | 80.0 | 80.0 | 0.2 | 20 | | | |