

Zinc Oxide Varistor



Standard Type

High Surge Type A

High Surge Type B

| Device Marking | Varistor Voltage V (1mA) | Maximum Allowable Voltage(V) | | Clamping Voltage (Max.) (V) (8/20μs) | Maximum Energy (J) (10/1000μs) | Maximum Peak Current (A) (8/20μs) |
|----------------|-----------------------------|------------------------------|------|--|-----------------------------------|--------------------------------------|
| | | AC.rms | DC | | | |
| WA 07N0018k | 18(16-20) | 11 | 14 | 36 | 0.9 | 250 |
| WA 07N0022k | 22(20-24) | 14 | 18 | 43 | 1.1 | 250 |
| WA 07N0027k | 27(24-30) | 17 | 22 | 53 | 1.4 | 250 |
| WA 07N0033k | 33(30-36) | 20 | 26 | 65 | 1.7 | 250 |
| WA 07N0039k | 39(35-43) | 25 | 31 | 77 | 2.1 | 250 |
| WA 07N0047k | 47(42-52) | 30 | 38 | 93 | 2.5 | 250 |
| WA 07N0056k | 56(50-62) | 35 | 45 | 110 | 3.1 | 250 |
| WA 07N0068k | 68(61-75) | 40 | 56 | 136 | 3.6 | 250 |
| WA 07N0082k | 82(74-90) | 50 | 65 | 136 | 5.5 | 1200 |
| WA 07N0100k | 100(90-110) | 60 | 85 | 165 | 6.5 | 1200 |
| WA 07N0120k | 120(108-132) | 75 | 100 | 200 | 7.8 | 1200 |
| WA 07N0150k | 150(135-165) | 95 | 125 | 250 | 9.7 | 1200 |
| WA 07N0180k | 180(162-198) | 115 | 150 | 300 | 11.7 | 1200 |
| WA 07N0200k | 200(185-225) | 130 | 170 | 340 | 13 | 1200 |
| WA 07N0220k | 220(198-242) | 140 | 180 | 360 | 14 | 1200 |
| WA 07N0240k | 240(216-264) | 150 | 200 | 395 | 15 | 1200 |
| WA 07N0270k | 270(243-297) | 175 | 225 | 455 | 18 | 1200 |
| WA 07N0300k | 300(270-330) | 190 | 250 | 500 | 20 | 1200 |
| WA 07N0330k | 330(297-363) | 210 | 275 | 550 | 23 | 1200 |
| WA 07N0360k | 360(324-396) | 230 | 300 | 595 | 24 | 1200 |
| WA 07N0390k | 390(351-429) | 250 | 320 | 650 | 26 | 1200 |
| WA 07N0430k | 430(387-473) | 275 | 350 | 710 | 28 | 1200 |
| WA 07N0470k | 470(423-517) | 300 | 385 | 775 | 29 | 1200 |
| WA 07N0510k | 510(459-561) | 320 | 410 | 845 | 31 | 1200 |
| WA 07N0560k | 560(504-616) | 350 | 455 | 930 | 35 | 1200 |
| WA 07N0620k | 620(558-682) | 385 | 505 | 1025 | | |
| WA 07N0680k | 680(612-748) | 420 | 560 | 1120 | | |
| WA 07N0750k | 750(675-825) | 460 | 615 | 1240 | | |
| WA 07N0820k | 820(738-902) | 510 | 670 | 1355 | | |
| WA 07N0910k | 910(819-1001) | 550 | 745 | 1500 | | |
| WA 07N1000k | 1000(900-1100) | 625 | 825 | 1650 | | |
| WA 07N1100k | 1100(990-1210) | 680 | 895 | 1815 | | |
| WA 07N1800k | 1800(1620-1980) | 1000 | 1465 | 2970 | | |

| Standard Type | Device Marking | Varistor Voltage V (1mA) | Maximum Allowable Voltage(V) | | Clamping Voltage (Max.) (V) (8/20μs) | Maximum Energy (J) (10/1000μs) | Maximum Peak Current (A) (8/20μs) |
|-------------------|-----------------|--------------------------|------------------------------|------|--------------------------------------|--------------------------------|-----------------------------------|
| | | | AC.rms | DC | | | |
| High Surge Type A | WA 10N0018k | 18(16-20) | 11 | 14 | 36 | 2.1 | 500 |
| | WA 10N0022k | 22(20-24) | 14 | 18 | 43 | 2.5 | 500 |
| | WA 10N0027k | 27(24-30) | 17 | 22 | 53 | 3.0 | 500 |
| | WA 10N0033k | 33(30-36) | 20 | 26 | 65 | 4.0 | 500 |
| | WA 10N0039k | 39(35-43) | 25 | 31 | 77 | 4.6 | 500 |
| | WA 10N0047k | 47(42-52) | 30 | 38 | 93 | 5.5 | 500 |
| | WA 10N0056k | 56(50-62) | 35 | 45 | 110 | 7.0 | 500 |
| | WA 10N0068k | 68(61-75) | 40 | 56 | 136 | 8.2 | 500 |
| | WA 10N0082k | 82(74-90) | 50 | 65 | 136 | 12 | 2500 |
| | WA 10N0100k | 100(90-110) | 60 | 85 | 165 | 15 | 2500 |
| High Surge Type B | WA 10N0120k | 120(108-132) | 75 | 100 | 200 | 18 | 2500 |
| | WA 10N0150k | 150(135-165) | 95 | 125 | 250 | 22 | 2500 |
| | WA 10N0180k | 180(162-198) | 115 | 150 | 300 | 27 | 2500 |
| | WA 10N0200k | 200(185-225) | 130 | 170 | 340 | 30 | 2500 |
| | WA 10N0220k | 220(198-242) | 140 | 180 | 360 | 32 | 2500 |
| | WA 10N0240k | 240(216-264) | 150 | 200 | 395 | 35 | 2500 |
| | WA 10N0270k | 270(243-297) | 175 | 225 | 455 | 37 | 2500 |
| | WA 10N0300k | 300(270-330) | 190 | 250 | 500 | 40 | 2500 |
| | WA 10N0330k | 330(297-363) | 210 | 275 | 550 | 43 | 2500 |
| | WA 10N0360k | 360(324-396) | 230 | 300 | 595 | 47 | 2500 |
| | WA 10N0390k | 390(351-429) | 250 | 320 | 650 | 60 | 2500 |
| | WA 10N0430k | 430(387-473) | 275 | 350 | 710 | 65 | 2500 |
| | WA 10N0470k | 470(423-517) | 300 | 385 | 775 | 67 | 2500 |
| | WA 10N0510k | 510(459-561) | 320 | 410 | 845 | 69 | 2500 |
| | WA 10N0560k | 560(504-616) | 350 | 455 | 930 | 70 | 2500 |
| | WA 10N0620k | 620(558-682) | 385 | 505 | 1025 | 72 | 2500 |
| | WA 10N0680k | 680(612-748) | 420 | 560 | 1120 | 75 | 2500 |
| | WA 10N0750k | 750(675-825) | 460 | 615 | 1240 | 77 | 2500 |
| WA 10N0820k | 820(738-902) | 510 | 670 | 1355 | 80 | 2500 | |
| WA 10N0910k | 910(819-1001) | 550 | 745 | 1500 | 85 | 2500 | |
| WA 10N1000k | 1000(900-1100) | 625 | 825 | 1650 | 93 | 2500 | |
| WA 10N1100k | 1100(990-1210) | 680 | 895 | 1815 | 102 | 2500 | |
| WA 10N1800k | 1800(1620-1980) | 1000 | 1465 | 2970 | | | |

| Standard Type | Device Marking | Varistor Voltage V (1mA) | Maximum Allowable Voltage(V) | | Clamping Voltage (Max.) (V) (8/20μs) | Maximum Energy (J) (10/1000μs) | Maximum Peak Current (A) (8/20μs) |
|-------------------|-----------------|-----------------------------|------------------------------|------|--|-----------------------------------|--------------------------------------|
| | | | AC.rms | DC | | | |
| High Surge Type A | WA 14N0018k | 18(16-20) | 11 | 14 | 36 | 4.0 | 1000 |
| | WA 14N0022k | 22(20-24) | 14 | 18 | 43 | 5.0 | 1000 |
| | WA 14N0027k | 27(24-30) | 17 | 22 | 53 | 6.0 | 1000 |
| | WA 14N0033k | 33(30-36) | 20 | 26 | 65 | 7.5 | 1000 |
| | WA 14N0039k | 39(35-43) | 25 | 31 | 77 | 8.6 | 1000 |
| | WA 14N0047k | 47(42-52) | 30 | 38 | 93 | 10. | 1000 |
| | WA 14N0056k | 56(50-62) | 35 | 45 | 110 | 11. | 1000 |
| | WA 14N0068k | 68(61-75) | 40 | 56 | 136 | 14. | 1000 |
| | WA 14N0082k | 82(74-90) | 50 | 65 | 136 | 22 | 4500 |
| | WA 14N0100k | 100(90-110) | 60 | 85 | 165 | 28 | 4500 |
| High Surge Type B | WA 14N0120k | 120(108-132) | 75 | 100 | 200 | 32 | 4500 |
| | WA 14N0150k | 150(135-165) | 95 | 125 | 250 | 40 | 4500 |
| | WA 14N0180k | 180(162-198) | 115 | 150 | 300 | 50 | 4500 |
| | WA 14N0200k | 200(185-225) | 130 | 170 | 340 | 57 | 4500 |
| | WA 14N0220k | 220(198-242) | 140 | 180 | 360 | 60 | 4500 |
| | WA 14N0240k | 240(216-264) | 150 | 200 | 395 | 63 | 4500 |
| | WA 14N0270k | 270(243-297) | 175 | 225 | 455 | 70 | 4500 |
| | WA 14N0300k | 300(270-330) | 190 | 250 | 500 | 77 | 4500 |
| | WA 14N0330k | 330(297-363) | 210 | 275 | 550 | 85 | 4500 |
| | WA 14N0360k | 360(324-396) | 230 | 300 | 595 | 93 | 4500 |
| | WA 14N0390k | 390(351-429) | 250 | 320 | 650 | 100 | 4500 |
| | WA 14N0430k | 430(387-473) | 275 | 350 | 710 | 115 | 4500 |
| | WA 14N0470k | 470(423-517) | 300 | 385 | 775 | 118 | 4500 |
| | WA 14N0510k | 510(459-561) | 320 | 410 | 845 | 121 | 4500 |
| | WA 14N0560k | 560(504-616) | 350 | 455 | 930 | 125 | 4500 |
| | WA 14N0620k | 620(558-682) | 385 | 505 | 1025 | 128 | 4500 |
| | WA 14N0680k | 680(612-748) | 420 | 560 | 1120 | 130 | 4500 |
| | WA 14N0750k | 750(675-825) | 460 | 615 | 1240 | 143 | 4500 |
| WA 14N0820k | 820(738-902) | 510 | 670 | 1355 | 157 | 4500 | |
| WA 14N0910k | 910(819-1001) | 550 | 745 | 1500 | 175 | 4500 | |
| WA 14N1000k | 1000(900-1100) | 625 | 825 | 1650 | 190 | 4500 | |
| WA 14N1100k | 1100(990-1210) | 680 | 895 | 1815 | 213 | 4500 | |
| WA 14N1800k | 1800(1620-1980) | 1000 | 1465 | 2970 | 250 | 4500 | |

| Standard Type | Device Marking | Varistor Voltage V (1mA) | Maximum Allowable Voltage(V) | | Clamping Voltage (Max.) (V) (8/20μs) | Maximum Energy (J) (10/1000μs) | Maximum Peak Current (A) (8/20μs) |
|-------------------|-----------------|--------------------------|------------------------------|------|--------------------------------------|--------------------------------|-----------------------------------|
| | | | AC.rms | DC | | | |
| High Surge Type A | WA 20N0018k | 18(16-20) | 11 | 14 | 36 | 11 | 2000 |
| | WA 20N0022k | 22(20-24) | 14 | 18 | 43 | 14 | 2000 |
| | WA 20N0027k | 27(24-30) | 17 | 22 | 53 | 16 | 2000 |
| | WA 20N0033k | 33(30-36) | 20 | 26 | 65 | 23 | 2000 |
| | WA 20N0039k | 39(35-43) | 25 | 31 | 77 | 26 | 2000 |
| | WA 20N0047k | 47(42-52) | 30 | 38 | 93 | 30 | 2000 |
| | WA 20N0056k | 56(50-62) | 35 | 45 | 110 | 38 | 2000 |
| | WA 20N0068k | 68(61-75) | 40 | 56 | 136 | 41 | 2000 |
| | WA 20N0082k | 82(74-90) | 50 | 65 | 136 | 45 | 6500 |
| | WA 20N0100k | 100(90-110) | 60 | 85 | 165 | 50 | 6500 |
| High Surge Type B | WA 20N0120k | 120(108-132) | 75 | 100 | 200 | 55 | 6500 |
| | WA 20N0150k | 150(135-165) | 95 | 125 | 250 | 70 | 6500 |
| | WA 20N0180k | 180(162-198) | 115 | 150 | 300 | 85 | 6500 |
| | WA 20N0200k | 200(185-225) | 130 | 170 | 340 | 95 | 6500 |
| | WA 20N0220k | 220(198-242) | 140 | 180 | 360 | 100 | 6500 |
| | WA 20N0240k | 240(216-264) | 150 | 200 | 395 | 108 | 6500 |
| | WA 20N0270k | 270(243-297) | 175 | 225 | 455 | 127 | 6500 |
| | WA 20N0300k | 300(270-330) | 190 | 250 | 500 | 136 | 6500 |
| | WA 20N0330k | 330(297-363) | 210 | 275 | 550 | 150 | 6500 |
| | WA 20N0360k | 360(324-396) | 230 | 300 | 595 | 163 | 6500 |
| | WA 20N0390k | 390(351-429) | 250 | 320 | 650 | 180 | 6500 |
| | WA 20N0430k | 430(387-473) | 275 | 350 | 710 | 190 | 6500 |
| | WA 20N0470k | 470(423-517) | 300 | 385 | 775 | 204 | 6500 |
| | WA 20N0510k | 510(459-561) | 320 | 410 | 845 | 210 | 6500 |
| WA 20N0560k | 560(504-616) | 350 | 455 | 930 | 215 | 6500 | |
| WA 20N0620k | 620(558-682) | 385 | 505 | 1025 | 224 | 6500 | |
| WA 20N0680k | 680(612-748) | 420 | 560 | 1120 | 230 | 6500 | |
| WA 20N0750k | 750(675-825) | 460 | 615 | 1240 | 255 | 6500 | |
| WA 20N0820k | 820(738-902) | 510 | 670 | 1355 | 282 | 6500 | |
| WA 20N0910k | 910(819-1001) | 550 | 745 | 1500 | 310 | 6500 | |
| WA 20N1000k | 1000(900-1100) | 625 | 825 | 1650 | 342 | 6500 | |
| WA 20N1100k | 1100(990-1210) | 680 | 895 | 1815 | 382 | 6500 | |
| WA 20N1800k | 1800(1620-1980) | 1000 | 1465 | 2970 | 625 | 6500 | |

Unit:mm

| Symbol | Ø7 | Ø 10 | Ø 14 | Ø 20 |
|--------|------|------|------|------|
| Dmax | 9.3 | 13.0 | 17.2 | 22.0 |
| Hmax | 12.0 | 15.0 | 19.0 | 26.0 |
| A | 5.0 | 7.5 | 7.5 | 10.0 |
| d | 0.6 | 0.8 | 0.8 | 1.0 |

