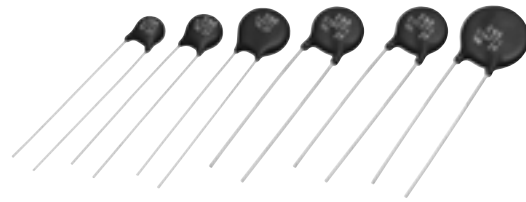


“ZNR” Transient/Surge Absorbers

Type: **D**

Series: **E**



“ZNR” Transient/Surge Absorber, Series E, Type D features large surge current and energy handling capability for absorbing transient overvoltage in a compact size.

■ Features

- Large withstanding surge current capability in compact sizes
- Large “Energy Handling Capability” absorbing transient overvoltages in compact sizes
- Wide range of varistor voltages
- RoHS compliant

■ Recommended Applications

- Transistor, diode, IC, thyristor or triac semiconductor protection
- Surge protection in consumer electronic equipment
- Surge protection in communication, measuring or controller electronics
- Surge protection in electronic home appliances, gas or petroleum appliances

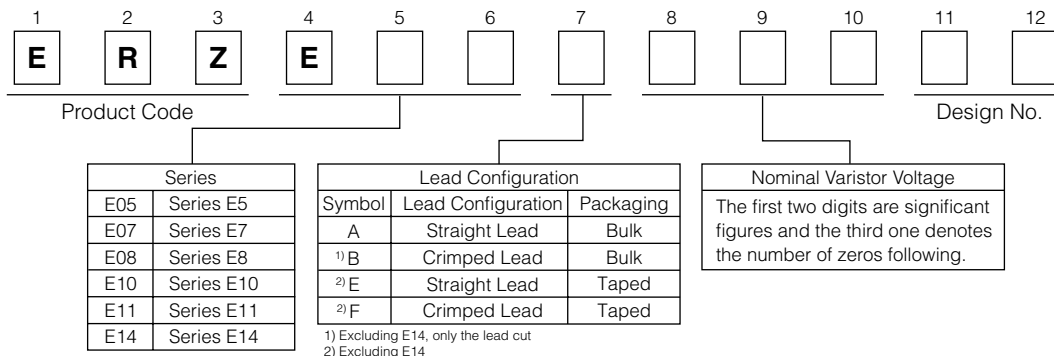
■ Applicable Standards

- UL1449 (VZCA2/UL, VZCA8/C-UL)
 - VDE IEC61051-1, -2, -2-2, IEC60950-1 Annex.Q
 - CQC(GB/T10193, GB/T10194, GB4943.1, GB8898)
- Refer to pages 2 to 3, and 19 for the details

■ Handling Precautions and Minimum Quantity / Packing Unit

Please see Related Information

■ Explanation of Part Numbers



NEW

■ Reference Guide to Standard Products

| Part No. | Applicable Standards | | Varistor Voltage at 1 mA (V) | Maximum Allowable Voltage | | Clamping Voltage at 8/20μs | | Maximum Peak Current at 8/20μs(A) | | Recommended Applications |
|------------|----------------------|-----------|------------------------------|---------------------------|--------|----------------------------|--------|-----------------------------------|---------|--|
| | Type Name | Approvals | | ACrms (V) | DC (V) | max.(V) | Ip (A) | 1 time | 2 times | |
| ERZE05A201 | E201 | ○☆◇ | 200 (185 to 225) | 130 | 170 | 340 | 10 | 1200 | 600 | AC 100 V Line-Line Applications |
| ERZE07A201 | E7201 | ○☆◇ | | | | 340 | 25 | 2500 | 1250 | |
| ERZE08A201 | E8201 | ○☆◇ | | | | 340 | 25 | 3500 | 2500 | |
| ERZE10A201 | E10201 | ○☆◇ | | | | 340 | 50 | 4500 | 3000 | |
| ERZE11A201 | E11201 | ○◎☆★◇◆ | | | | 340 | 50 | 6000 | 5000 | |
| ERZE14A201 | E14201 | ○◎☆★◇◆ | | | | 340 | 100 | 10000 | 7000 | |
| ERZE05A221 | E221 | ○☆◇ | 220 (198 to 242) | 140 | 180 | 360 | 10 | 1200 | 600 | |
| ERZE07A221 | E7221 | ○☆◇ | | | | 360 | 25 | 2500 | 1250 | |
| ERZE08A221 | E8221 | ○☆◇ | | | | 360 | 25 | 3500 | 2500 | |
| ERZE10A221 | E10221 | ○☆◇ | | | | 360 | 50 | 4500 | 3500 | |
| ERZE11A221 | E11221 | ○◎☆★◇◆ | | | | 360 | 50 | 6000 | 5000 | |
| ERZE14A221 | E14221 | ○◎☆★◇◆ | | | | 360 | 100 | 10000 | 7000 | |
| ERZE05A241 | E241 | ○☆◇ | 240 (216 to 264) | 150 | 200 | 395 | 10 | 1200 | 600 | AC 100 V to 120 V, Line-Line Applications |
| ERZE07A241 | E7241 | ○☆◇ | | | | 395 | 25 | 2500 | 1250 | |
| ERZE08A241 | E8241 | ○☆◇ | | | | 395 | 25 | 3500 | 2500 | |
| ERZE10A241 | E10241 | ○☆◇ | | | | 395 | 50 | 4500 | 3000 | |
| ERZE11A241 | E11241 | ○◎☆★◇◆ | | | | 395 | 50 | 6000 | 5000 | |
| ERZE14A241 | E14241 | ○◎☆★◇◆ | | | | 395 | 100 | 10000 | 7000 | |
| ERZE05A271 | E271 | ○☆◇ | 270 (247 to 303) | 175 | 225 | 455 | 10 | 1200 | 600 | |
| ERZE07A271 | E7271 | ○☆◇ | | | | 455 | 25 | 2500 | 1250 | |
| ERZE08A271 | E8271 | ○☆◇ | | | | 455 | 25 | 3500 | 2500 | |
| ERZE10A271 | E10271 | ○☆◇ | | | | 455 | 50 | 4500 | 3000 | |
| ERZE11A271 | E11271 | ○◎☆★◇◆ | | | | 455 | 50 | 6000 | 5000 | |
| ERZE14A271 | E14271 | ○◎☆★◇◆ | | | | 455 | 100 | 10000 | 7000 | |
| ERZE05A331 | E331 | ○☆◇ | 330 (297 to 363) | 210 | 270 | 545 | 10 | 1200 | 600 | AC 100 V to 120 V, Line-Line Applications Telephone Line Applications, (For DC 250 V Insulation Resistance Test) |
| ERZE07A331 | E7331 | ○☆◇ | | | | 545 | 25 | 2500 | 1250 | |
| ERZE08A331 | E8331 | ○☆◇ | | | | 545 | 25 | 3500 | 2500 | |
| ERZE10A331 | E10331 | ○☆◇ | | | | 545 | 50 | 4500 | 3000 | |
| ERZE11A331 | E11331 | ○◎☆★◇◆ | | | | 545 | 50 | 6000 | 4500 | |
| ERZE14A331 | E14331 | ○◎☆★◇◆ | | | | 545 | 100 | 10000 | 6500 | |
| ERZE05A361 | E361 | ○☆◇ | 360 (324 to 396) | 230 | 300 | 595 | 10 | 1200 | 600 | |
| ERZE07A361 | E7361 | ○☆◇ | | | | 595 | 25 | 2500 | 1250 | |
| ERZE08A361 | E8361 | ○☆◇ | | | | 595 | 25 | 3500 | 2500 | |
| ERZE10A361 | E10361 | ○☆◇ | | | | 595 | 50 | 4500 | 3000 | |
| ERZE11A361 | E11361 | ○◎☆★◇◆ | | | | 595 | 50 | 6000 | 4500 | |
| ERZE14A361 | E14361 | ○◎☆★◇◆ | | | | 595 | 100 | 10000 | 6500 | |
| ERZE05A391 | E391 | ○☆◇ | 390 (351 to 429) | 250 | 320 | 650 | 10 | 1200 | 600 | |
| ERZE07A391 | E7391 | ○☆◇ | | | | 650 | 25 | 2500 | 1250 | |
| ERZE08A391 | E8391 | ○☆◇ | | | | 650 | 25 | 3500 | 2500 | |
| ERZE10A391 | E10391 | ○☆◇ | | | | 650 | 50 | 4500 | 3000 | |
| ERZE11A391 | E11391 | ○◎☆★◇◆ | | | | 650 | 50 | 6000 | 4500 | |
| ERZE14A391 | E14391 | ○◎☆★◇◆ | | | | 650 | 100 | 10000 | 6500 | |
| ERZE05A431 | E431 | ○☆◇ | 430 (387 to 473) | 275 | 350 | 710 | 10 | 1200 | 600 | AC 100 V to 220 V, Line-Line and Line-Ground Applications |
| ERZE07A431 | E7431 | ○☆◇ | | | | 710 | 25 | 2500 | 1250 | |
| ERZE08A431 | E8431 | ○☆◇ | | | | 710 | 25 | 3500 | 2500 | |
| ERZE10A431 | E10431 | ○☆◇ | | | | 710 | 50 | 4500 | 3000 | |
| ERZE11A431 | E11431 | ○◎☆★◇◆ | | | | 710 | 50 | 6000 | 4500 | |
| ERZE14A431 | E14431 | ○◎☆★◇◆ | | | | 710 | 100 | 10000 | 6500 | |

○ : UL1449 (VZCA2/UL, VZCA8/C-UL), ● : UL1449 Type3 (or Code-Connected and Direct plug-in),
 ◎ : UL1449 Type2 (or Permanently Connected), ☆ : VDE (IEC61051-1, -2, -2-2), ★ : VDE (IEC60950-1 Annex.Q)
 ◇ : CQC (GB/T10193, GB/T10194), ◆ : CQC (GB4943.1, GB8898)
 ※ Approval number (File No.) of safety regulations are subject to revision without notice. Ask factory for a copy of the latest file No.

Reference Guide to Standard Products

| Part No. | Applicable Standards | | Varistor Voltage at 1 mA (V) | Maximum Allowable Voltage | | Clamping Voltage at 8/20μs | | Maximum Peak Current at 8/20μs(A) | | Recommended Applications |
|------------|----------------------|-----------|------------------------------|---------------------------|--------|----------------------------|--------|-----------------------------------|---------|---|
| | Type Name | Approvals | | ACrms (V) | DC (V) | max.(V) | Ip (A) | 1 time | 2 times | |
| ERZE05A471 | E471 | ○☆◇ | 470 (423 to 517) | 300 | 385 | 775 | 10 | 1200 | 600 | AC 100 V to 220 V, Line-Line and Line-Ground Applications |
| ERZE07A471 | E7471 | ○☆◇ | | | | 775 | 25 | 2500 | 1250 | |
| ERZE08A471 | E8471 | ○●☆★◇◆ | | | | 775 | 25 | 3500 | 2500 | |
| ERZE10A471 | E10471 | ○●☆★◇◆ | | | | 775 | 50 | 4500 | 3000 | |
| ERZE11A471 | E11471 | ○◎☆★◇◆ | | | | 775 | 50 | 6000 | 4500 | |
| ERZE14A471 | E14471 | ○◎☆★◇◆ | | | | 775 | 100 | 10000 | 6500 | |
| ERZE07A511 | E7511 | ○☆◇ | 510 (459 to 561) | 320 | 410 | 845 | 25 | 2500 | 1250 | |
| ERZE08A511 | E8511 | ○●☆★◇◆ | | | | 845 | 25 | 3500 | 2500 | |
| ERZE10A511 | E10511 | ○●☆★◇◆ | | | | 845 | 50 | 4500 | 3000 | |
| ERZE11A511 | E11511 | ○◎☆★◇◆ | | | | 845 | 50 | 6000 | 4500 | |
| ERZE14A511 | E14511 | ○◎☆★◇◆ | | | | 845 | 100 | 10000 | 6500 | |
| ERZE07A561 | E7561 | ○☆◇ | 560 (504 to 616) | 350 | 450 | 930 | 25 | 2500 | 1250 | AC 100 V to 240 V, Line-Line and Line-Ground Applications |
| ERZE08A561 | E8561 | ○●☆★◇◆ | | | | 930 | 25 | 3500 | 2500 | |
| ERZE10A561 | E10561 | ○●☆★◇◆ | | | | 930 | 50 | 4500 | 3000 | |
| ERZE11A561 | E11561 | ○◎☆★◇◆ | | | | 930 | 50 | 6000 | 4500 | |
| ERZE14A561 | E14561 | ○◎☆★◇◆ | | | | 930 | 100 | 10000 | 6500 | |
| ERZE07A621 | E7621 | ○☆◇ | 620 (558 to 682) | 385 | 505 | 1025 | 25 | 2500 | 1250 | |
| ERZE08A621 | E8621 | ○●☆★◇◆ | | | | 1025 | 25 | 3500 | 2500 | |
| ERZE10A621 | E10621 | ○●☆★◇◆ | | | | 1025 | 50 | 4500 | 3000 | |
| ERZE11A621 | E11621 | ○◎☆★◇◆ | | | | 1025 | 50 | 5000 | 4500 | |
| ERZE14A621 | E14621 | ○◎☆★◇◆ | | | | 1025 | 100 | 7500 | 6500 | |
| ERZE08A681 | E8681 | ○●☆★◇◆ | 680 (612 to 748) | 420 | 560 | 1120 | 25 | 3500 | 2500 | |
| ERZE10A681 | E10681 | ○●☆★◇◆ | | | | 1120 | 50 | 4500 | 3000 | |
| ERZE11A681 | E11681 | ○◎☆★◇◆ | | | | 1120 | 50 | 5000 | 4500 | |
| ERZE14A681 | E14681 | ○◎☆★◇◆ | | | | 1120 | 100 | 7500 | 6500 | |
| ERZE08A751 | E8751 | ○●☆★◇◆ | 750 (675 to 825) | 460 | 615 | 1240 | 25 | 3500 | 2500 | AC 380 V, Line-Line and Line-Ground Applications (For DC 500 V Insulating Test) |
| ERZE10A751 | E10751 | ○●☆★◇◆ | | | | 1240 | 50 | 4500 | 3000 | |
| ERZE11A751 | E11751 | ○◎☆★◇◆ | | | | 1240 | 50 | 5000 | 4500 | |
| ERZE14A751 | E14751 | ○◎☆★◇◆ | | | | 1240 | 100 | 7500 | 6500 | |
| ERZE10A821 | E10821 | ○●☆★◇◆ | 820 (738 to 902) | 510 | 670 | 1355 | 50 | 4500 | 3000 | |
| ERZE11A821 | E11821 | ○◎☆★◇◆ | | | | 1355 | 50 | 5000 | 4500 | |
| ERZE14A821 | E14821 | ○◎☆★◇◆ | | | | 1355 | 100 | 7500 | 6500 | |
| ERZE10A911 | E10911 | ○●☆★◇◆ | 910 (819 to 1001) | 550 | 745 | 1500 | 50 | 4500 | 3000 | AC 415 V, Line-Line and Line-Ground Applications (For DC 500 V Insulating Test) |
| ERZE11A911 | E11911 | ○◎☆★◇◆ | | | | 1500 | 50 | 5000 | 4500 | |
| ERZE14A911 | E14911 | ○◎☆★◇◆ | | | | 1500 | 100 | 7500 | 6500 | |
| ERZE10A102 | E10102 | ○●☆★◇◆ | 1000 (900 to 1100) | 625 | 825 | 1650 | 50 | 4500 | 3000 | AC 480 V, Line-Line and Line-Ground Applications (For DC 500 V Insulating Test) |
| ERZE11A102 | E11102 | ○◎☆★◇◆ | | | | 1650 | 50 | 5000 | 4500 | |
| ERZE14A102 | E14102 | ○◎☆★◇◆ | | | | 1650 | 100 | 7500 | 6500 | |
| ERZE10A112 | E10112 | ○●☆★◇◆ | 1100 (990 to 1210) | 680 | 895 | 1815 | 50 | 4500 | 3000 | |
| ERZE11A112 | E11112 | ○◎☆★◇◆ | | | | 1815 | 50 | 5000 | 4500 | |
| ERZE14A112 | E14112 | ○◎☆★◇◆ | | | | 1815 | 100 | 7500 | 6500 | |

○ : UL1449 (VZCA2/UL, VZCA8/C-UL), ● : UL1449 Type3 (or Code-Connected and Direct plug-in),
 ◎ : UL1449 Type2 (or Permanently Connected), ☆ : VDE (IEC61051-1, -2, -2-2), ★ : VDE (IEC60950-1 Annex.Q)
 ◇ : CQC (GB/T10193, GB/T10194), ◆ : CQC (GB4943.1, GB8898)
 ※ Approval number (File No.) of safety regulations are subject to revision without notice. Ask factory for a copy of the latest file No.

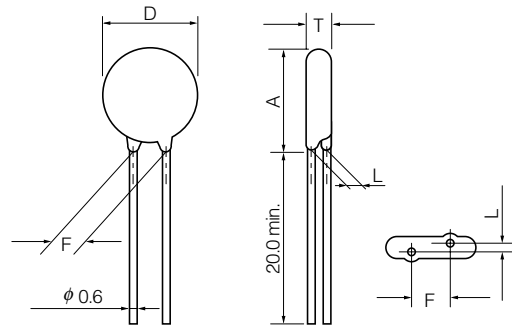
NEW**Series E5****■ Ratings and Characteristics**

● Operating Temperature Range : -40 to 85 °C ● Storage Temperature Range : -40 to 125 °C

| Part No. | Varistor Voltage | Maximum Allowable Voltage | | Clamping Voltage (max.) *I _p | Rated Power | Maximum Energy | | Maximum Peak Current (8/20 μs) | | Capacitance (max.) at 1 kHz (pF) |
|------------|-----------------------|---------------------------|--------|--|-------------|----------------|--------|--------------------------------|---------|-------------------------------------|
| | | | | | | (10/1000 μs) | (2 ms) | 1 time | 2 times | |
| | V _{1 mA} (V) | ACrms (V) | DC (V) | (V) | (W) | (J) | (J) | (A) | (A) | |
| ERZE05A201 | 200(185 to 225) | 130 | 170 | 340 | 0.25 | 13 | 9.5 | 1200 | 600 | 200 |
| ERZE05A221 | 220(198 to 242) | 140 | 180 | 360 | 0.25 | 14 | 10 | 1200 | 600 | 190 |
| ERZE05A241 | 240(216 to 264) | 150 | 200 | 395 | 0.25 | 15 | 11 | 1200 | 600 | 170 |
| ERZE05A271 | 270(247 to 303) | 175 | 225 | 455 | 0.25 | 18 | 13 | 1200 | 600 | 150 |
| ERZE05A331 | 330(297 to 363) | 210 | 270 | 545 | 0.25 | 21 | 15 | 1200 | 600 | 130 |
| ERZE05A361 | 360(324 to 396) | 230 | 300 | 595 | 0.25 | 23 | 17 | 1200 | 600 | 130 |
| ERZE05A391 | 390(351 to 429) | 250 | 320 | 650 | 0.25 | 26 | 19 | 1200 | 600 | 130 |
| ERZE05A431 | 430(387 to 473) | 275 | 350 | 710 | 0.25 | 29 | 21 | 1200 | 600 | 120 |
| ERZE05A471 | 470(423 to 517) | 300 | 385 | 775 | 0.25 | 32 | 23 | 1200 | 600 | 100 |

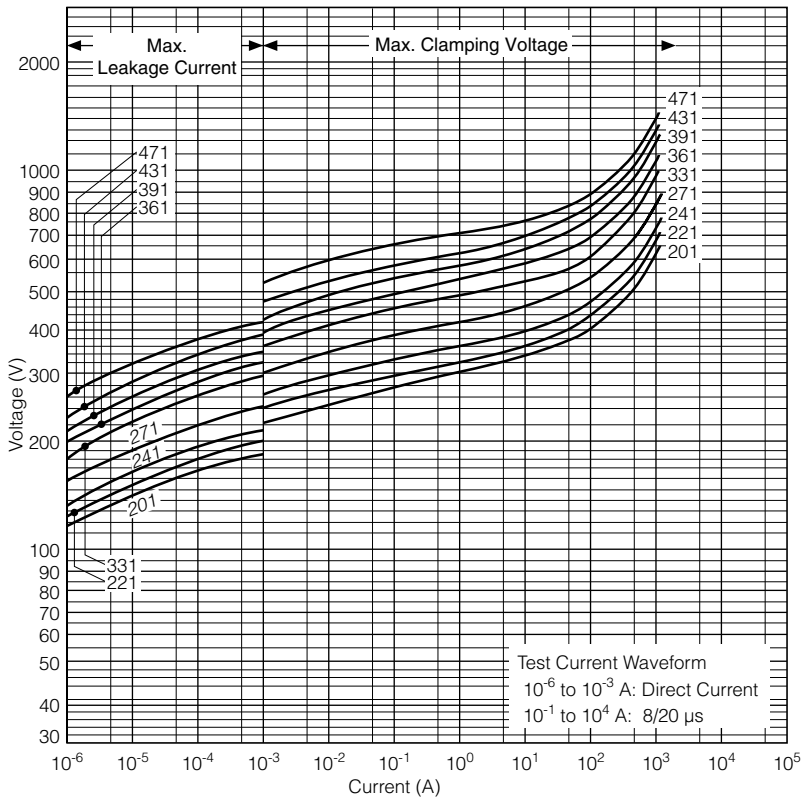
*I_p Measuring current of clamping voltage : 10 A**■ Dimensions in mm (not to scale)**

| Part No. | D max. | T max. | F±1.0 | A max. | L±1.0 |
|------------|--------|--------|-------|--------|-------|
| ERZE05A201 | 7.0 | 4.8 | 5.0 | 10.0 | 2.1 |
| ERZE05A221 | 7.0 | 4.9 | 5.0 | 10.0 | 2.3 |
| ERZE05A241 | 7.0 | 5.0 | 5.0 | 10.0 | 2.4 |
| ERZE05A271 | 7.0 | 5.2 | 5.0 | 10.0 | 2.5 |
| ERZE05A331 | 7.0 | 5.5 | 5.0 | 10.0 | 2.9 |
| ERZE05A361 | 7.0 | 5.8 | 5.0 | 10.0 | 3.1 |
| ERZE05A391 | 7.0 | 5.9 | 5.0 | 10.0 | 3.2 |
| ERZE05A431 | 7.0 | 6.1 | 5.0 | 10.0 | 3.3 |
| ERZE05A471 | 7.0 | 6.3 | 5.0 | 10.0 | 3.5 |



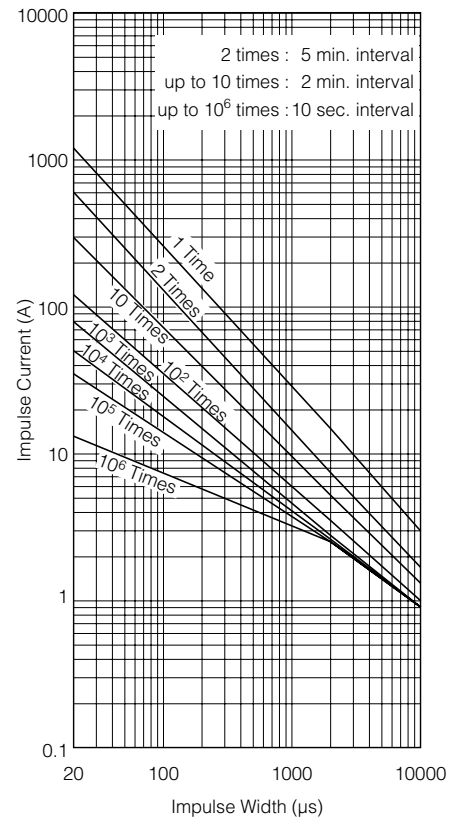
Typical Characteristics Voltage vs. Current

ERZE05A201 to ERZE05A471



Impulse Derating (Relation between impulse width and impulse current multiple)

ERZE05A201 to ERZE05A471



NEW

Series E7

■ Ratings and Characteristics

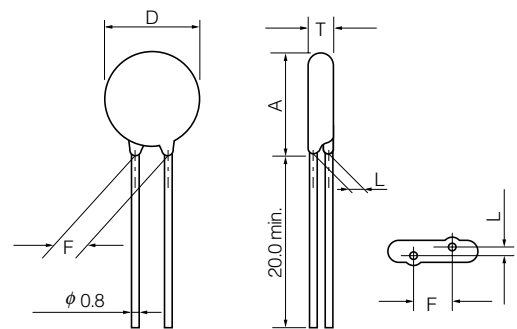
● Operating Temperature Range : -40 to 85 °C ● Storage Temperature Range : -40 to 125 °C

| Part No. | Varistor Voltage | Maximum Allowable Voltage | | Clamping Voltage (max.) *Ip | Rated Power | Maximum Energy | | Maximum Peak Current (8/20 μs) | | Capacitance (max.) at 1 kHz (pF) |
|------------|-----------------------|---------------------------|--------|-----------------------------|-------------|----------------|--------|--------------------------------|---------|-------------------------------------|
| | | ACrms (V) | DC (V) | | | (10/1000 μs) | (2 ms) | 1 time | 2 times | |
| | V _{1 mA} (V) | | | (V) | (W) | (J) | (J) | (A) | (A) | |
| ERZE07A201 | 200(185 to 225) | 130 | 170 | 340 | 0.3 | 26 | 19 | 2500 | 1250 | 360 |
| ERZE07A221 | 220(198 to 242) | 140 | 180 | 360 | 0.3 | 30 | 22 | 2500 | 1250 | 350 |
| ERZE07A241 | 240(216 to 264) | 150 | 200 | 395 | 0.3 | 33 | 24 | 2500 | 1250 | 340 |
| ERZE07A271 | 270(247 to 303) | 175 | 225 | 455 | 0.3 | 39 | 28 | 2500 | 1250 | 310 |
| ERZE07A331 | 330(297 to 363) | 210 | 270 | 545 | 0.3 | 44 | 32 | 2500 | 1250 | 280 |
| ERZE07A361 | 360(324 to 396) | 230 | 300 | 595 | 0.3 | 50 | 36 | 2500 | 1250 | 260 |
| ERZE07A391 | 390(351 to 429) | 250 | 320 | 650 | 0.3 | 53 | 38 | 2500 | 1250 | 240 |
| ERZE07A431 | 430(387 to 473) | 275 | 350 | 710 | 0.3 | 60 | 43 | 2500 | 1250 | 210 |
| ERZE07A471 | 470(423 to 517) | 300 | 385 | 775 | 0.3 | 65 | 47 | 2500 | 1250 | 170 |
| ERZE07A511 | 510(459 to 561) | 320 | 410 | 845 | 0.3 | 70 | 50 | 2500 | 1250 | 140 |
| ERZE07A561 | 560(504 to 616) | 350 | 450 | 930 | 0.3 | 75 | 55 | 2500 | 1250 | 140 |
| ERZE07A621 | 620(558 to 682) | 385 | 505 | 1025 | 0.3 | 80 | 60 | 2500 | 1250 | 135 |

*Ip Measuring current of clamping voltage : 25 A

■ Dimensions in mm (not to scale)

| Part No. | D max. | T max. | F±1.0 | A max. | L±1.0 |
|------------|--------|--------|-------|--------|-------|
| ERZE07A201 | 9.0 | 5.3 | 7.5 | 12.5 | 2.1 |
| ERZE07A221 | 9.0 | 5.4 | 7.5 | 12.5 | 2.3 |
| ERZE07A241 | 9.0 | 5.5 | 7.5 | 12.5 | 2.4 |
| ERZE07A271 | 9.0 | 5.7 | 7.5 | 12.5 | 2.5 |
| ERZE07A331 | 9.0 | 6.0 | 7.5 | 12.5 | 2.8 |
| ERZE07A361 | 9.0 | 6.2 | 7.5 | 12.5 | 2.9 |
| ERZE07A391 | 9.0 | 6.3 | 7.5 | 12.5 | 3.0 |
| ERZE07A431 | 9.0 | 6.5 | 7.5 | 12.5 | 3.1 |
| ERZE07A471 | 9.0 | 6.8 | 7.5 | 12.5 | 3.3 |
| ERZE07A511 | 9.0 | 7.0 | 7.5 | 12.5 | 3.5 |
| ERZE07A561 | 9.0 | 7.4 | 7.5 | 13.5 | 3.8 |
| ERZE07A621 | 10.0 | 7.8 | 7.5 | 13.5 | 4.0 |

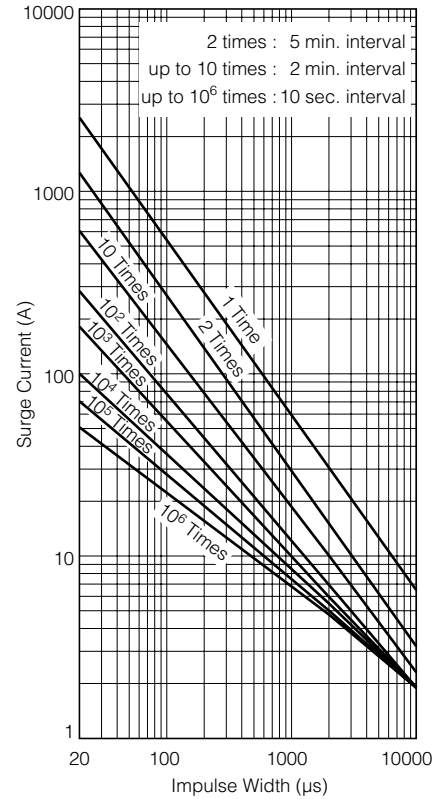
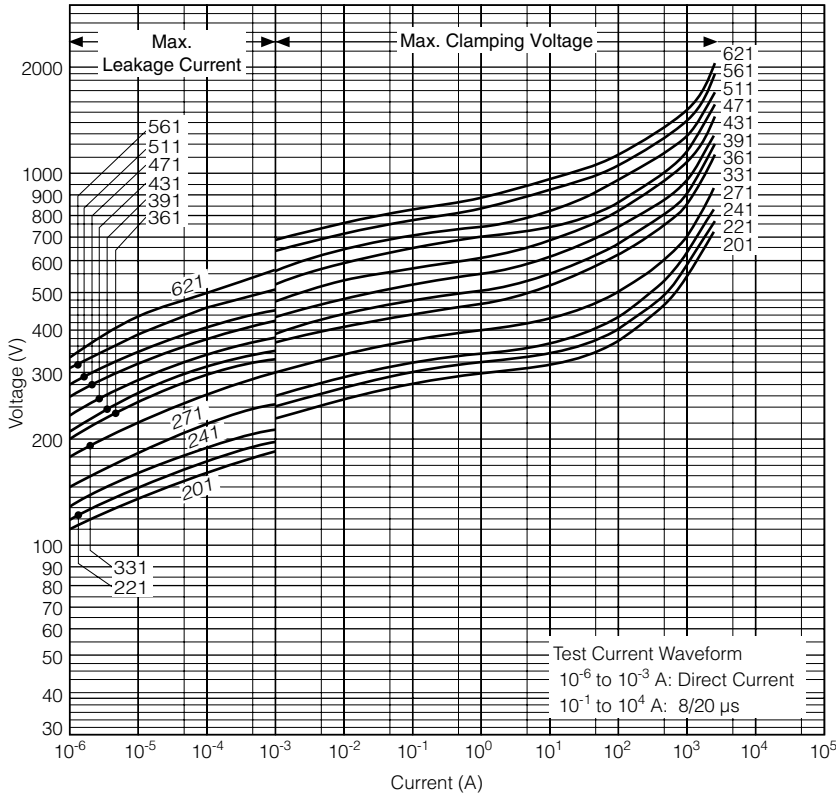


Typical Characteristics Voltage vs. Current

Impulse Derating (Relation between impulse width and impulse current multiple)

ERZE07A201 to ERZE07A621

ERZE07A201 to ERZE07A621



NEW

Series E8

■ Ratings and Characteristics

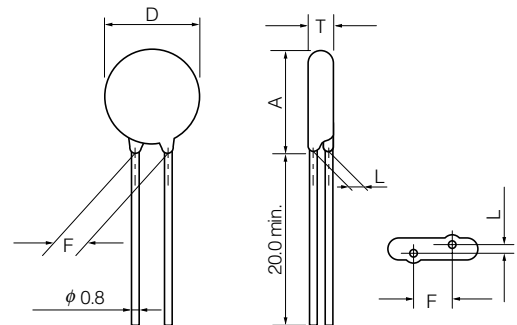
● Operating Temperature Range : -40 to 85 °C ● Storage Temperature Range : -40 to 125 °C

| Part No. | Varistor Voltage | Maximum Allowable Voltage | | Clamping Voltage (max.) *Ip | Rated Power | Maximum Energy | | Maximum Peak Current (8/20 μs) | | Capacitance (max.) at 1 kHz (pF) |
|------------|-----------------------|---------------------------|--------|-----------------------------|-------------|----------------|--------|--------------------------------|---------|-------------------------------------|
| | | | | | | (10/1000 μs) | (2 ms) | 1 time | 2 times | |
| | V _{1 mA} (V) | ACrms (V) | DC (V) | (V) | (W) | (J) | (J) | (A) | (A) | |
| ERZE08A201 | 200(185 to 225) | 130 | 170 | 340 | 0.4 | 35 | 25 | 3500 | 2500 | 390 |
| ERZE08A221 | 220(198 to 242) | 140 | 180 | 360 | 0.4 | 39 | 27.5 | 3500 | 2500 | 380 |
| ERZE08A241 | 240(216 to 264) | 150 | 200 | 395 | 0.4 | 42 | 30 | 3500 | 2500 | 360 |
| ERZE08A271 | 270(247 to 303) | 175 | 225 | 455 | 0.4 | 49 | 35 | 3500 | 2500 | 330 |
| ERZE08A331 | 330(297 to 363) | 210 | 270 | 545 | 0.4 | 58 | 42 | 3500 | 2500 | 300 |
| ERZE08A361 | 360(324 to 396) | 230 | 300 | 595 | 0.4 | 65 | 45 | 3500 | 2500 | 280 |
| ERZE08A391 | 390(351 to 429) | 250 | 320 | 650 | 0.4 | 70 | 50 | 3500 | 2500 | 260 |
| ERZE08A431 | 430(387 to 473) | 275 | 350 | 710 | 0.4 | 80 | 55 | 3500 | 2500 | 230 |
| ERZE08A471 | 470(423 to 517) | 300 | 385 | 775 | 0.4 | 85 | 60 | 3500 | 2500 | 180 |
| ERZE08A511 | 510(459 to 561) | 320 | 410 | 845 | 0.4 | 92 | 67 | 3500 | 2500 | 150 |
| ERZE08A561 | 560(504 to 616) | 350 | 450 | 930 | 0.4 | 92 | 67 | 3500 | 2500 | 150 |
| ERZE08A621 | 620(558 to 682) | 385 | 505 | 1025 | 0.4 | 92 | 67 | 3500 | 2500 | 140 |
| ERZE08A681 | 680(612 to 748) | 420 | 560 | 1120 | 0.4 | 92 | 67 | 3500 | 2500 | 130 |
| ERZE08A751 | 750(675 to 825) | 460 | 615 | 1240 | 0.4 | 100 | 70 | 3500 | 2500 | 130 |

*Ip Measuring current of clamping voltage : 25 A

■ Dimensions in mm (not to scale)

| Part No. | D max. | T max. | F±1.0 | A max. | L±1.0 |
|------------|--------|--------|-------|--------|-------|
| ERZE08A201 | 10.5 | 5.1 | 7.5 | 13.5 | 1.9 |
| ERZE08A221 | 10.5 | 5.2 | 7.5 | 13.5 | 2.0 |
| ERZE08A241 | 10.5 | 5.3 | 7.5 | 13.5 | 2.1 |
| ERZE08A271 | 10.5 | 5.5 | 7.5 | 13.5 | 2.3 |
| ERZE08A331 | 10.5 | 5.9 | 7.5 | 13.5 | 2.6 |
| ERZE08A361 | 10.5 | 6.1 | 7.5 | 13.5 | 2.8 |
| ERZE08A391 | 10.5 | 6.3 | 7.5 | 13.5 | 2.9 |
| ERZE08A431 | 10.5 | 6.5 | 7.5 | 13.5 | 3.1 |
| ERZE08A471 | 10.5 | 7.3 | 7.5 | 13.5 | 3.6 |
| ERZE08A511 | 10.5 | 7.8 | 7.5 | 13.5 | 4.0 |
| ERZE08A561 | 10.5 | 8.1 | 7.5 | 13.5 | 4.3 |
| ERZE08A621 | 11.5 | 8.7 | 7.5 | 14.5 | 4.7 |
| ERZE08A681 | 11.5 | 9.0 | 7.5 | 14.5 | 5.0 |
| ERZE08A751 | 11.5 | 9.7 | 7.5 | 14.5 | 5.6 |

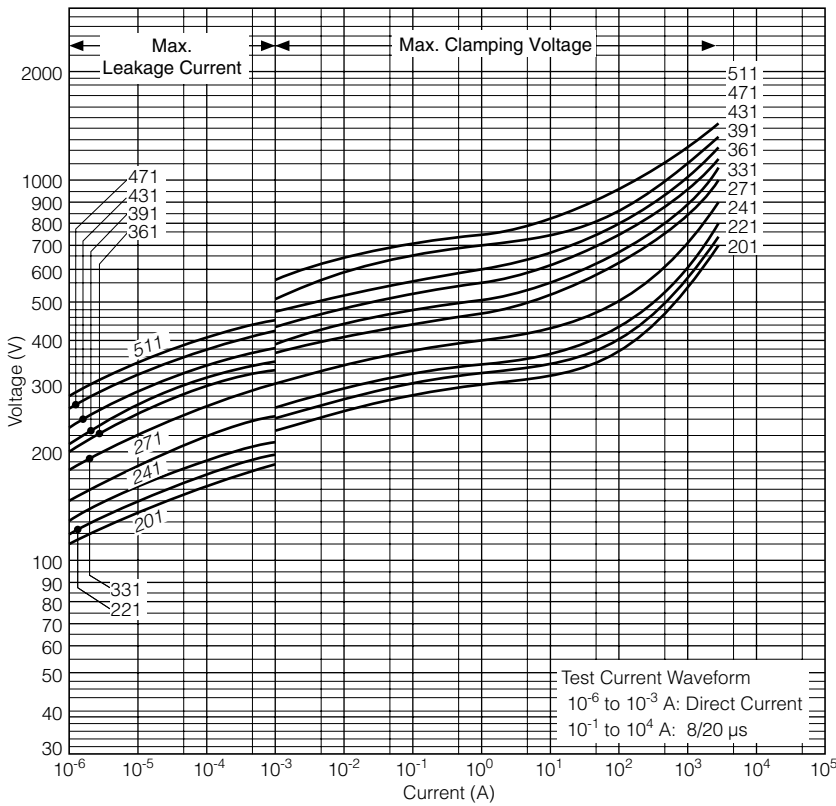


Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately.

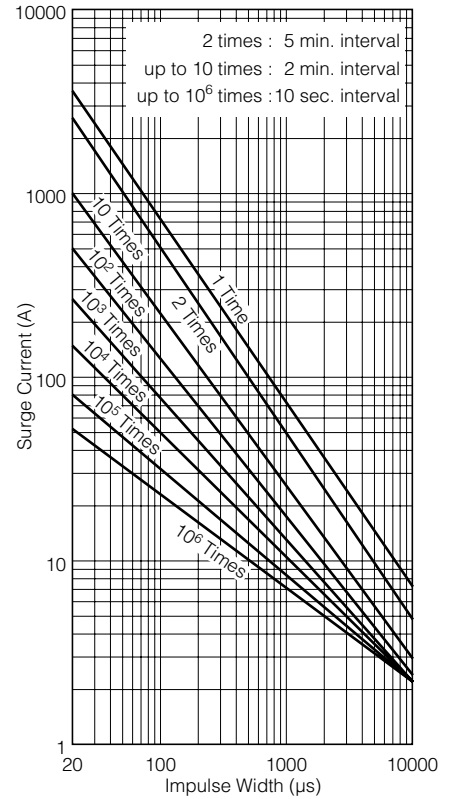
Typical Characteristics Voltage vs. Current

Impulse Derating (Relation between impulse width and impulse current multiple)

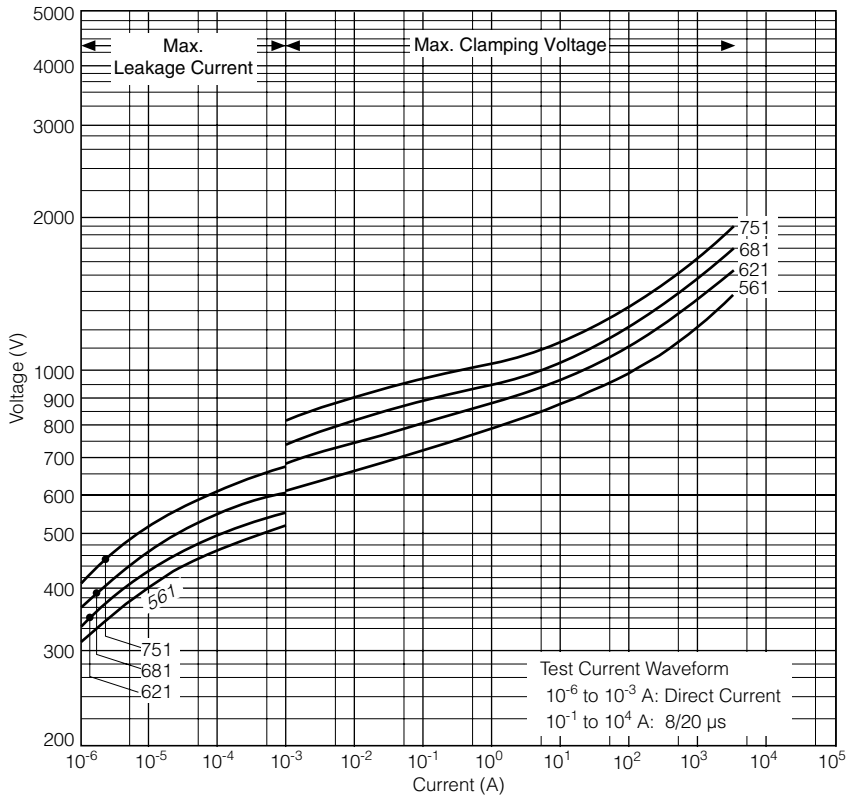
ERZE08A201 to ERZE08A511



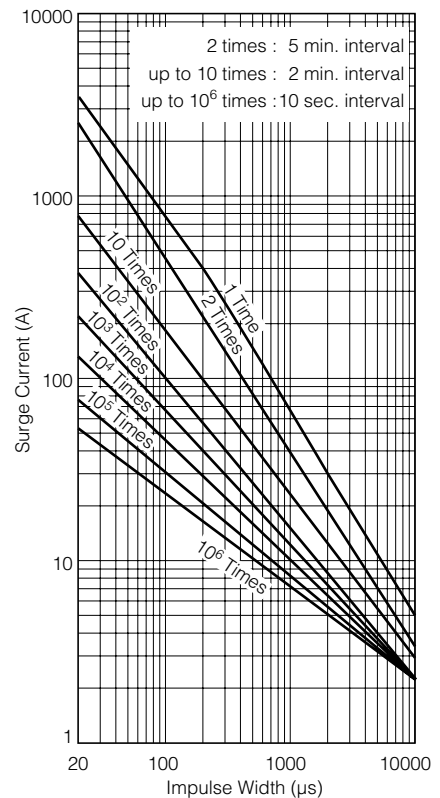
ERZE08A201 to ERZE08A511



ERZE08A561 to ERZE08A751



ERZE08A561 to ERZE08A751



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NEW

Series E10

■ Ratings and Characteristics

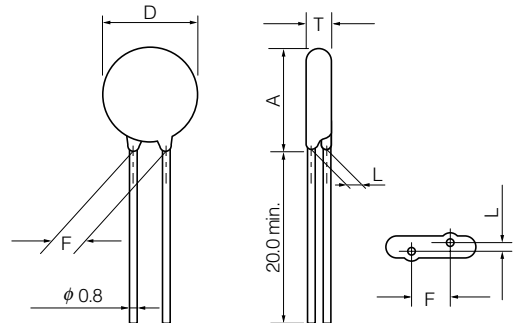
● Operating Temperature Range : -40 to 85 °C ● Storage Temperature Range : -40 to 125 °C

| Part No. | Varistor Voltage | Maximum Allowable Voltage | | Clamping Voltage (max.) *Ip | Rated Power | Maximum Energy | | Maximum Peak Current (8/20 μs) | | Capacitance (max.) at 1 kHz (pF) |
|------------|----------------------|---------------------------|--------|-----------------------------|-------------|----------------|--------|--------------------------------|---------|-------------------------------------|
| | | | | | | (10/1000 μs) | (2 ms) | 1 time | 2 times | |
| | V _{1mA} (V) | ACrms (V) | DC (V) | (V) | (W) | (J) | (J) | (A) | (A) | |
| ERZE10A201 | 200(185 to 225) | 130 | 170 | 340 | 0.5 | 47 | 34 | 4500 | 3000 | 630 |
| ERZE10A221 | 220(198 to 242) | 140 | 180 | 360 | 0.5 | 50 | 36 | 4500 | 3000 | 600 |
| ERZE10A241 | 240(216 to 264) | 150 | 200 | 395 | 0.5 | 56 | 40 | 4500 | 3000 | 570 |
| ERZE10A271 | 270(247 to 303) | 175 | 225 | 455 | 0.5 | 64 | 46 | 4500 | 3000 | 530 |
| ERZE10A331 | 330(297 to 363) | 210 | 270 | 545 | 0.5 | 72 | 52 | 4500 | 3000 | 470 |
| ERZE10A361 | 360(324 to 396) | 230 | 300 | 595 | 0.5 | 84 | 60 | 4500 | 3000 | 430 |
| ERZE10A391 | 390(351 to 429) | 250 | 320 | 650 | 0.5 | 91 | 65 | 4500 | 3000 | 400 |
| ERZE10A431 | 430(387 to 473) | 275 | 350 | 710 | 0.5 | 99 | 71 | 4500 | 3000 | 350 |
| ERZE10A471 | 470(423 to 517) | 300 | 385 | 775 | 0.5 | 106 | 76 | 4500 | 3000 | 320 |
| ERZE10A511 | 510(459 to 561) | 320 | 410 | 845 | 0.5 | 117 | 84 | 4500 | 3000 | 300 |
| ERZE10A561 | 560(504 to 616) | 350 | 450 | 930 | 0.5 | 120 | 86 | 4500 | 3000 | 290 |
| ERZE10A621 | 620(558 to 682) | 385 | 505 | 1025 | 0.5 | 126 | 88 | 4500 | 3000 | 280 |
| ERZE10A681 | 680(612 to 748) | 420 | 560 | 1120 | 0.5 | 133 | 95 | 4500 | 3000 | 260 |
| ERZE10A751 | 750(675 to 825) | 460 | 615 | 1240 | 0.5 | 140 | 100 | 4500 | 3000 | 250 |
| ERZE10A821 | 820(738 to 902) | 510 | 670 | 1355 | 0.5 | 154 | 110 | 4500 | 3000 | 230 |
| ERZE10A911 | 910(819 to 1001) | 550 | 745 | 1500 | 0.5 | 168 | 112 | 4500 | 3000 | 220 |
| ERZE10A102 | 1000(900 to 1100) | 625 | 825 | 1650 | 0.5 | 182 | 130 | 4500 | 3000 | 200 |
| ERZE10A112 | 1100(990 to 1210) | 680 | 895 | 1815 | 0.5 | 196 | 140 | 4500 | 3000 | 180 |

*Ip Measuring current of clamping voltage : 50 A

■ Dimensions in mm (not to scale)

| Part No. | D max. | T max. | F±1.0 | A max. | L±1.0 |
|------------|--------|--------|-------|--------|-------|
| ERZE10A201 | 11.5 | 5.3 | 7.5 | 15.0 | 2.1 |
| ERZE10A221 | 11.5 | 5.4 | 7.5 | 15.0 | 2.3 |
| ERZE10A241 | 11.5 | 5.5 | 7.5 | 15.0 | 2.4 |
| ERZE10A271 | 11.5 | 5.7 | 7.5 | 15.0 | 2.5 |
| ERZE10A331 | 11.5 | 6.0 | 7.5 | 15.0 | 2.8 |
| ERZE10A361 | 11.5 | 6.2 | 7.5 | 15.0 | 2.9 |
| ERZE10A391 | 11.5 | 6.3 | 7.5 | 15.0 | 3.0 |
| ERZE10A431 | 11.5 | 6.5 | 7.5 | 15.0 | 3.1 |
| ERZE10A471 | 11.5 | 6.8 | 7.5 | 15.0 | 3.3 |
| ERZE10A511 | 11.5 | 7.0 | 7.5 | 15.0 | 3.5 |
| ERZE10A561 | 11.5 | 7.4 | 7.5 | 15.0 | 3.8 |
| ERZE10A621 | 12.5 | 7.8 | 7.5 | 16.0 | 4.0 |
| ERZE10A681 | 12.5 | 8.1 | 7.5 | 16.0 | 4.2 |
| ERZE10A751 | 12.5 | 8.6 | 7.5 | 16.0 | 4.6 |
| ERZE10A821 | 12.5 | 8.9 | 7.5 | 16.0 | 5.0 |
| ERZE10A911 | 12.5 | 9.5 | 7.5 | 16.0 | 5.7 |
| ERZE10A102 | 12.5 | 10.0 | 7.5 | 16.0 | 6.2 |
| ERZE10A112 | 12.5 | 10.6 | 7.5 | 16.0 | 6.8 |

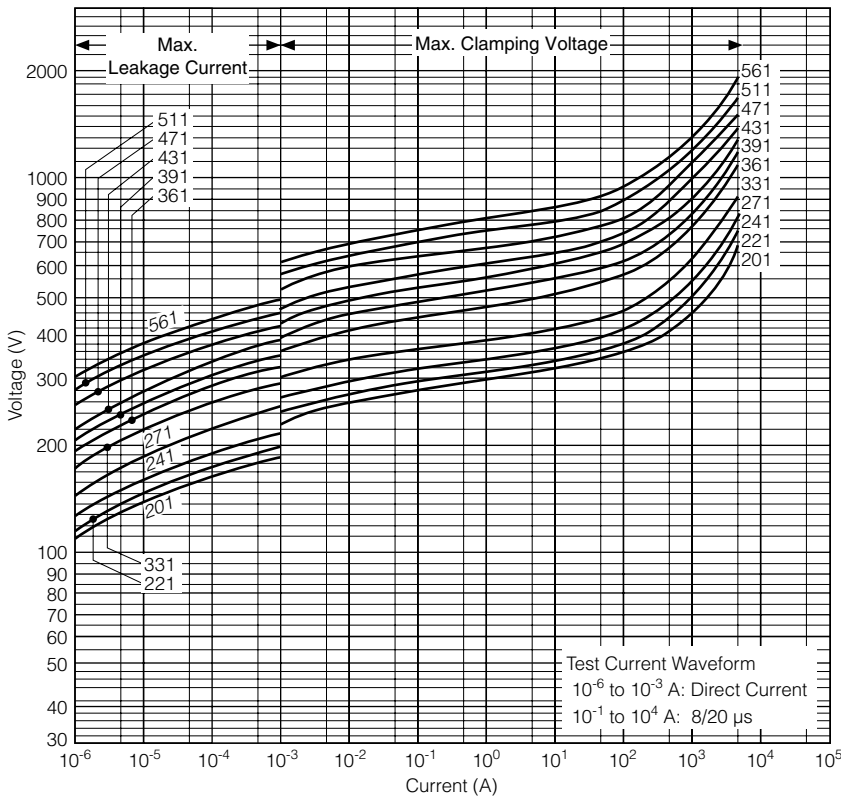


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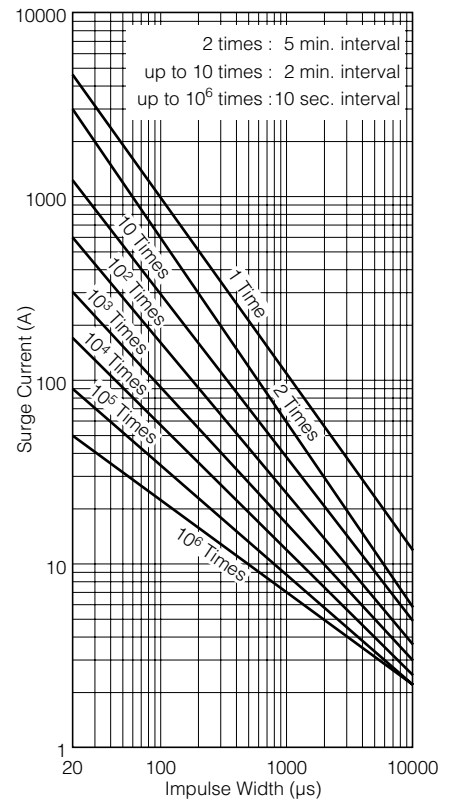
Typical Characteristics Voltage vs. Current

Impulse Derating (Relation between impulse width and impulse current multiple)

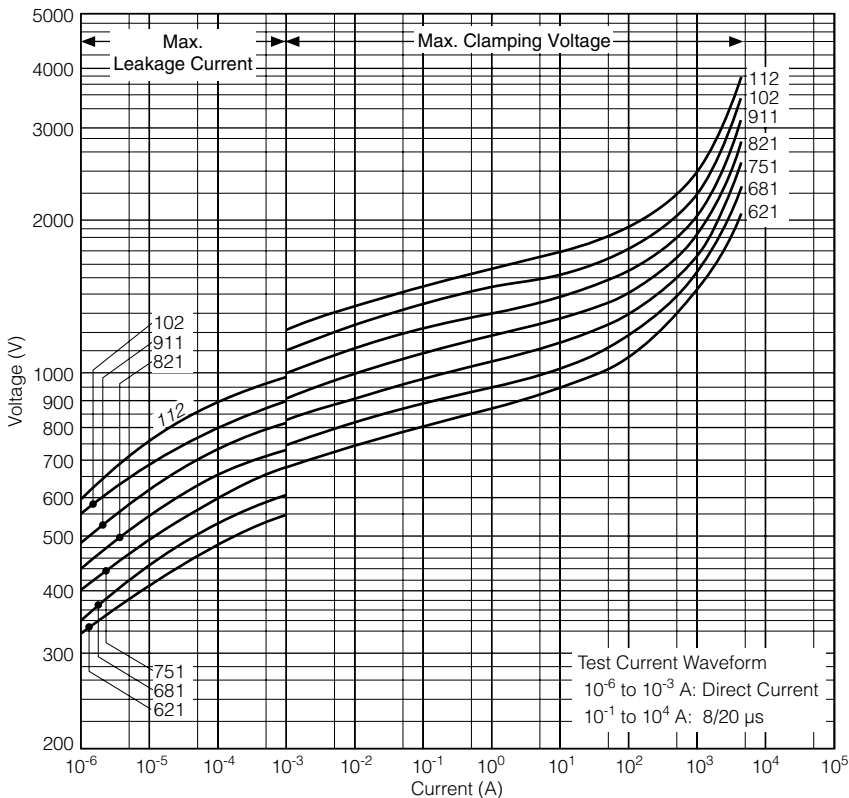
ERZE10A201 to ERZE10A561



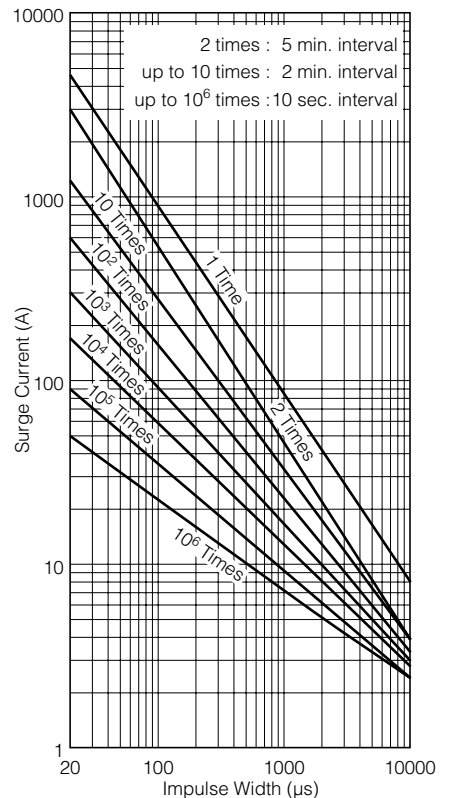
ERZE10A201 to ERZE10A561



ERZE10A621 to ERZE10A112



ERZE10A621 to ERZE10A112



NEW

Series E11

■ Ratings and Characteristics

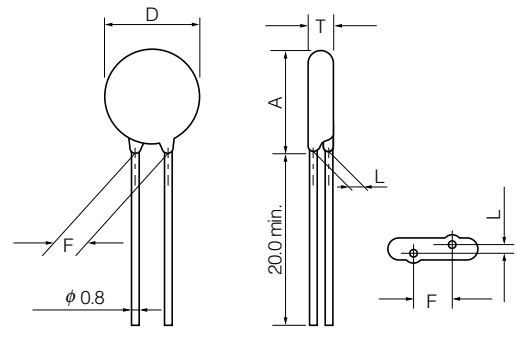
● Operating Temperature Range : -40 to 85 °C ● Storage Temperature Range : -40 to 125 °C

| Part No. | Varistor Voltage | Maximum Allowable Voltage | | Clamping Voltage (max.) *Ip | Rated Power | Maximum Energy | | Maximum Peak Current (8/20 μs) | | Capacitance (max.) at 1 kHz (pF) |
|------------|-------------------|---------------------------|-----|-----------------------------|-------------|----------------------|-----------|--------------------------------|---------|-------------------------------------|
| | | | | | | (10/1000 μs) | (2 ms) | 1 time | 2 times | |
| | | | | | | V _{1mA} (V) | ACrms (V) | DC (V) | (V) | |
| ERZE11A201 | 200(185 to 225) | 130 | 170 | 340 | 0.6 | 70 | 50 | 6000 | 5000 | 690 |
| ERZE11A221 | 220(198 to 242) | 140 | 180 | 360 | 0.6 | 78 | 55 | 6000 | 5000 | 660 |
| ERZE11A241 | 240(216 to 264) | 150 | 200 | 395 | 0.6 | 84 | 60 | 6000 | 5000 | 620 |
| ERZE11A271 | 270(247 to 303) | 175 | 225 | 455 | 0.6 | 99 | 70 | 6000 | 5000 | 580 |
| ERZE11A331 | 330(297 to 363) | 210 | 270 | 545 | 0.6 | 115 | 80 | 6000 | 4500 | 520 |
| ERZE11A361 | 360(324 to 396) | 230 | 300 | 595 | 0.6 | 130 | 90 | 6000 | 4500 | 480 |
| ERZE11A391 | 390(351 to 429) | 250 | 320 | 650 | 0.6 | 140 | 100 | 6000 | 4500 | 450 |
| ERZE11A431 | 430(387 to 473) | 275 | 350 | 710 | 0.6 | 155 | 110 | 6000 | 4500 | 400 |
| ERZE11A471 | 470(423 to 517) | 300 | 385 | 775 | 0.6 | 175 | 125 | 6000 | 4500 | 360 |
| ERZE11A511 | 510(459 to 561) | 320 | 410 | 845 | 0.6 | 190 | 136 | 6000 | 4500 | 310 |
| ERZE11A561 | 560(504 to 616) | 350 | 450 | 930 | 0.6 | 190 | 136 | 6000 | 4500 | 310 |
| ERZE11A621 | 620(558 to 682) | 385 | 505 | 1025 | 0.6 | 190 | 136 | 5000 | 4500 | 300 |
| ERZE11A681 | 680(612 to 748) | 420 | 560 | 1120 | 0.6 | 190 | 136 | 5000 | 4500 | 290 |
| ERZE11A751 | 750(675 to 825) | 460 | 615 | 1240 | 0.6 | 210 | 150 | 5000 | 4500 | 280 |
| ERZE11A821 | 820(738 to 902) | 510 | 670 | 1355 | 0.6 | 235 | 165 | 5000 | 4500 | 260 |
| ERZE11A911 | 910(819 to 1001) | 550 | 745 | 1500 | 0.6 | 255 | 180 | 5000 | 4500 | 240 |
| ERZE11A102 | 1000(900 to 1100) | 625 | 825 | 1650 | 0.6 | 280 | 200 | 5000 | 4500 | 220 |
| ERZE11A112 | 1100(990 to 1210) | 680 | 895 | 1815 | 0.6 | 310 | 220 | 5000 | 4500 | 200 |

*Ip Measuring current of clamping voltage : 50 A

■ Dimensions in mm (not to scale)

| Part No. | D max. | T max. | F±1.0 | A max. | L±1.0 |
|------------|--------|--------|-------|--------|-------|
| ERZE11A201 | 13.0 | 5.2 | 7.5 | 17.0 | 1.9 |
| ERZE11A221 | 13.0 | 5.3 | 7.5 | 17.0 | 2.0 |
| ERZE11A241 | 13.0 | 5.4 | 7.5 | 17.0 | 2.1 |
| ERZE11A271 | 13.0 | 5.6 | 7.5 | 17.0 | 2.3 |
| ERZE11A331 | 13.0 | 5.9 | 7.5 | 17.0 | 2.6 |
| ERZE11A361 | 13.0 | 6.1 | 7.5 | 17.0 | 2.8 |
| ERZE11A391 | 13.0 | 6.2 | 7.5 | 17.0 | 2.9 |
| ERZE11A431 | 13.0 | 6.4 | 7.5 | 17.0 | 3.1 |
| ERZE11A471 | 13.0 | 6.6 | 7.5 | 17.0 | 3.3 |
| ERZE11A511 | 13.0 | 6.8 | 7.5 | 17.0 | 3.5 |
| ERZE11A561 | 13.0 | 7.2 | 7.5 | 17.0 | 3.8 |
| ERZE11A621 | 14.0 | 7.5 | 7.5 | 18.0 | 4.2 |
| ERZE11A681 | 14.0 | 7.8 | 7.5 | 18.0 | 4.5 |
| ERZE11A751 | 14.0 | 8.2 | 7.5 | 18.0 | 4.9 |
| ERZE11A821 | 14.0 | 8.5 | 7.5 | 18.0 | 5.2 |
| ERZE11A911 | 14.0 | 9.0 | 7.5 | 18.0 | 5.7 |
| ERZE11A102 | 14.0 | 9.5 | 7.5 | 18.0 | 6.2 |
| ERZE11A112 | 14.0 | 10.1 | 7.5 | 18.0 | 6.8 |

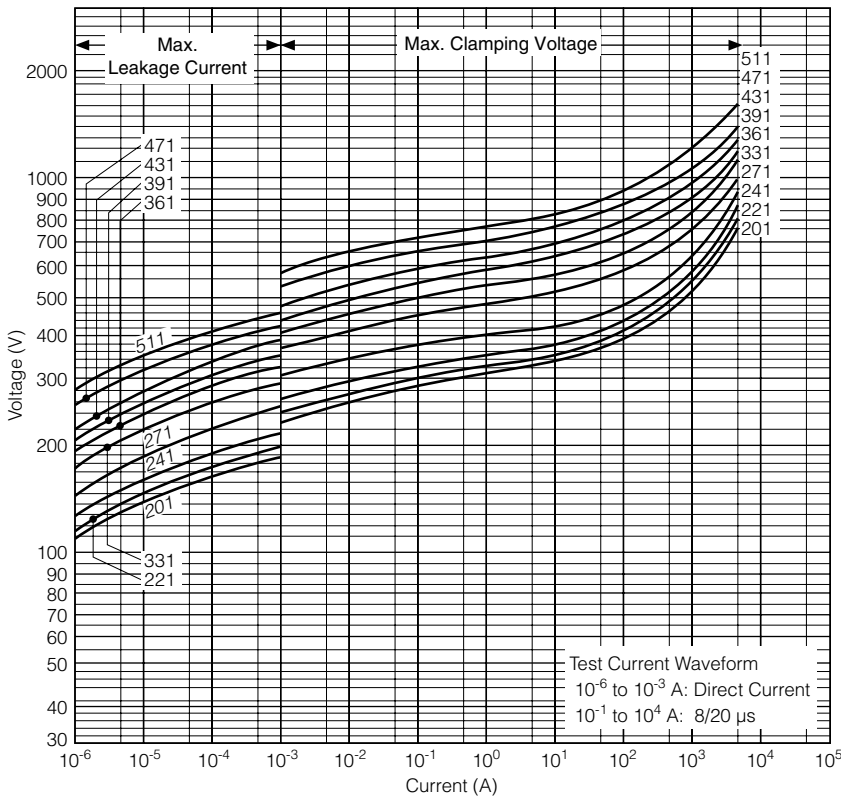


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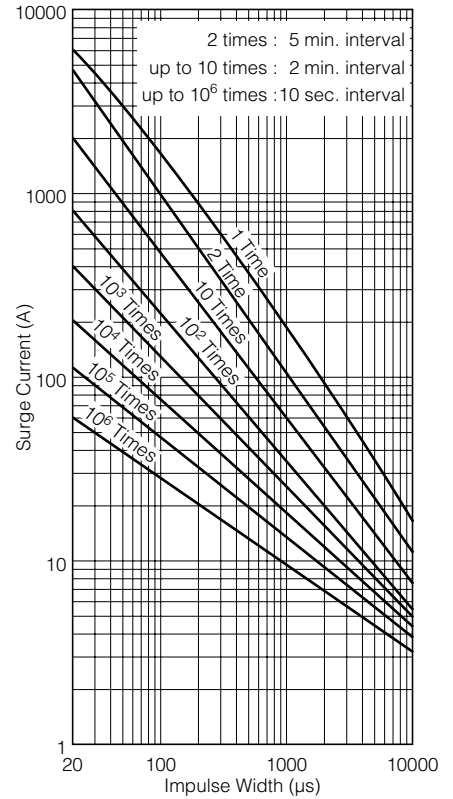
Typical Characteristics Voltage vs. Current

Impulse Derating (Relation between impulse width and impulse current multiple)

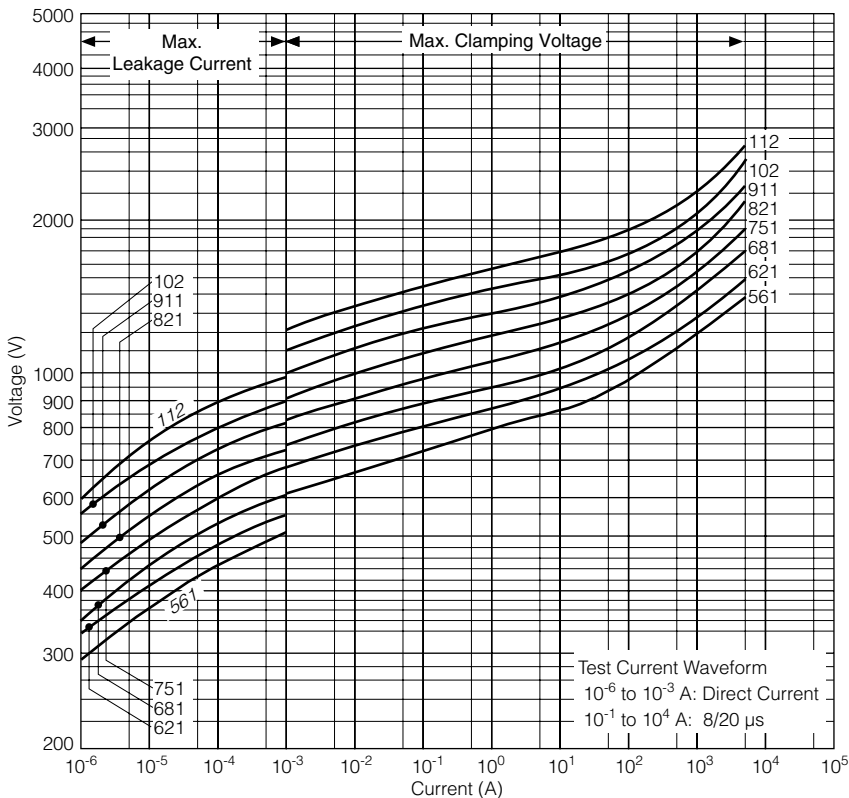
ERZE11A201 to ERZE11A511



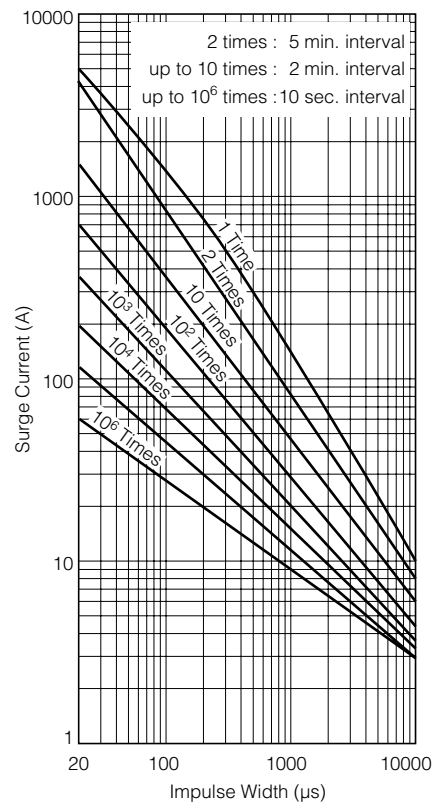
ERZE11A201 to ERZE11A511



ERZE11A561 to ERZE11A112



ERZE11A561 to ERZE11A112



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NEW

Series E14

■ Ratings and Characteristics

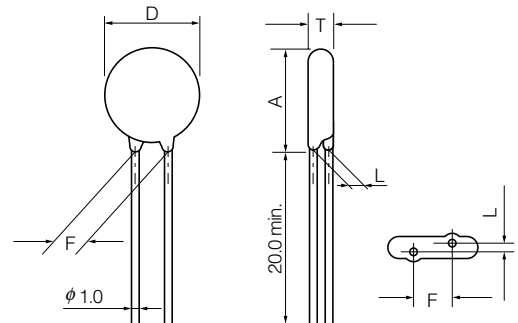
● Operating Temperature Range : -40 to 85 °C ● Storage Temperature Range : -40 to 125 °C

| Part No. | Varistor Voltage V _{1mA} (V) | Maximum Allowable Voltage | | Clamping Voltage (max.) *I _p (V) | Rated Power (W) | Maximum Energy | | Maximum Peak Current (8/20 μs) | | Capacitance (max.) at 1 kHz (pF) |
|------------|--|---------------------------|--------|--|-----------------|----------------|--------|--------------------------------|---------|---|
| | | ACrms (V) | DC (V) | | | (10/1000 μs) | (2 ms) | 1 time | 2 times | |
| | | | | | | (J) | (J) | (A) | (A) | |
| ERZE14A201 | 200(185 to 225) | 130 | 170 | 340 | 1.0 | 140 | 100 | 10000 | 7000 | 1300 |
| ERZE14A221 | 220(198 to 242) | 140 | 180 | 360 | 1.0 | 155 | 110 | 10000 | 7000 | 1200 |
| ERZE14A241 | 240(216 to 264) | 150 | 200 | 395 | 1.0 | 168 | 120 | 10000 | 7000 | 1100 |
| ERZE14A271 | 270(247 to 303) | 175 | 225 | 455 | 1.0 | 190 | 135 | 10000 | 7000 | 1000 |
| ERZE14A331 | 330(297 to 363) | 210 | 270 | 545 | 1.0 | 228 | 160 | 10000 | 6500 | 900 |
| ERZE14A361 | 360(324 to 396) | 230 | 300 | 595 | 1.0 | 255 | 180 | 10000 | 6500 | 900 |
| ERZE14A391 | 390(351 to 429) | 250 | 320 | 650 | 1.0 | 275 | 195 | 10000 | 6500 | 800 |
| ERZE14A431 | 430(387 to 473) | 275 | 350 | 710 | 1.0 | 303 | 215 | 10000 | 6500 | 800 |
| ERZE14A471 | 470(423 to 517) | 300 | 385 | 775 | 1.0 | 350 | 250 | 10000 | 6500 | 750 |
| ERZE14A511 | 510(459 to 561) | 320 | 410 | 845 | 1.0 | 382 | 273 | 10000 | 6500 | 700 |
| ERZE14A561 | 560(504 to 616) | 350 | 450 | 930 | 1.0 | 382 | 273 | 10000 | 6500 | 700 |
| ERZE14A621 | 620(558 to 682) | 385 | 505 | 1025 | 1.0 | 382 | 273 | 7500 | 6500 | 650 |
| ERZE14A681 | 680(612 to 748) | 420 | 560 | 1120 | 1.0 | 382 | 273 | 7500 | 6500 | 600 |
| ERZE14A751 | 750(675 to 825) | 460 | 615 | 1240 | 1.0 | 420 | 300 | 7500 | 6500 | 530 |
| ERZE14A821 | 820(738 to 902) | 510 | 670 | 1355 | 1.0 | 460 | 325 | 7500 | 6500 | 500 |
| ERZE14A911 | 910(819 to 1001) | 550 | 745 | 1500 | 1.0 | 510 | 360 | 7500 | 6500 | 400 |
| ERZE14A102 | 1000(900 to 1100) | 625 | 825 | 1650 | 1.0 | 565 | 400 | 7500 | 6500 | 400 |
| ERZE14A112 | 1100(990 to 1210) | 680 | 895 | 1815 | 1.0 | 620 | 440 | 7500 | 6500 | 350 |

*I_p Measuring current of clamping voltage : 100 A

■ Dimensions in mm (not to scale)

| Part No. | D max. | T max. | F±1.0 | A max. | L±1.0 |
|------------|--------|--------|-------|--------|-------|
| ERZE14A201 | 16.5 | 5.2 | 10.0 | 20.0 | 2.1 |
| ERZE14A221 | 16.5 | 5.3 | 10.0 | 20.0 | 2.2 |
| ERZE14A241 | 16.5 | 5.4 | 10.0 | 20.0 | 2.3 |
| ERZE14A271 | 16.5 | 5.6 | 10.0 | 20.0 | 2.5 |
| ERZE14A331 | 16.5 | 5.9 | 10.0 | 20.0 | 2.8 |
| ERZE14A361 | 16.5 | 6.1 | 10.0 | 20.0 | 3.0 |
| ERZE14A391 | 16.5 | 6.2 | 10.0 | 20.0 | 3.1 |
| ERZE14A431 | 16.5 | 6.4 | 10.0 | 20.0 | 3.3 |
| ERZE14A471 | 16.5 | 6.6 | 10.0 | 20.0 | 3.5 |
| ERZE14A511 | 16.5 | 6.8 | 10.0 | 20.0 | 3.7 |
| ERZE14A561 | 16.5 | 7.2 | 10.0 | 20.0 | 4.0 |
| ERZE14A621 | 17.5 | 7.5 | 10.0 | 20.5 | 4.4 |
| ERZE14A681 | 17.5 | 7.8 | 10.0 | 20.5 | 4.7 |
| ERZE14A751 | 17.5 | 8.2 | 10.0 | 20.5 | 5.1 |
| ERZE14A821 | 17.5 | 8.5 | 10.0 | 20.5 | 5.4 |
| ERZE14A911 | 17.5 | 9.0 | 10.0 | 20.5 | 5.9 |
| ERZE14A102 | 17.5 | 9.5 | 10.0 | 20.5 | 6.4 |
| ERZE14A112 | 17.5 | 10.1 | 10.0 | 20.5 | 7.2 |

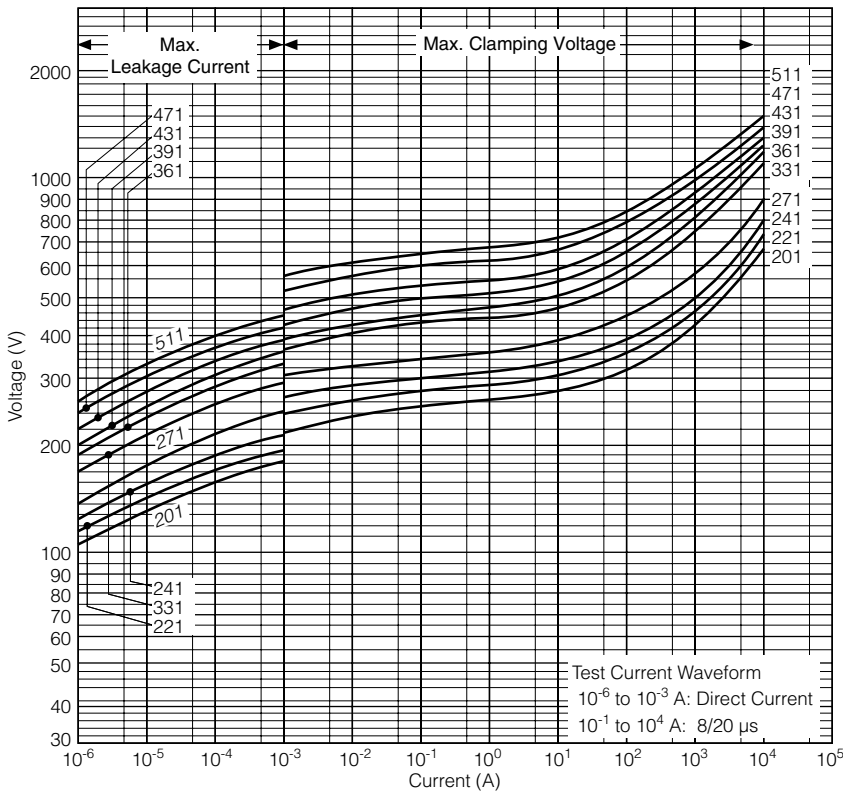


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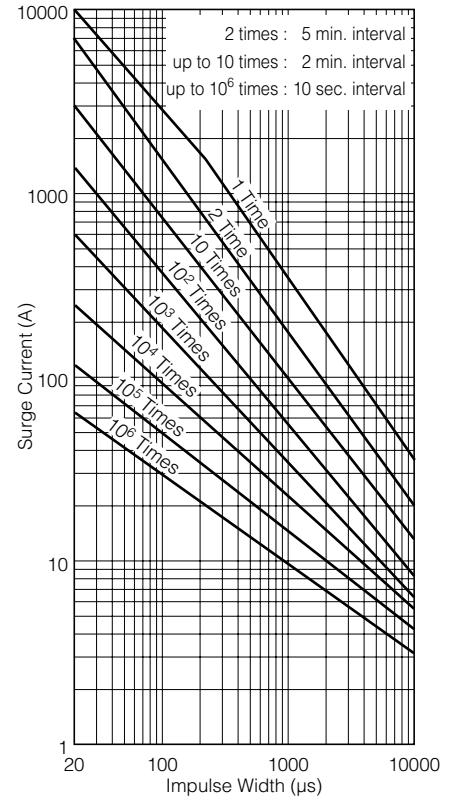
Typical Characteristics Voltage vs. Current

Impulse Derating (Relation between impulse width and impulse current multiple)

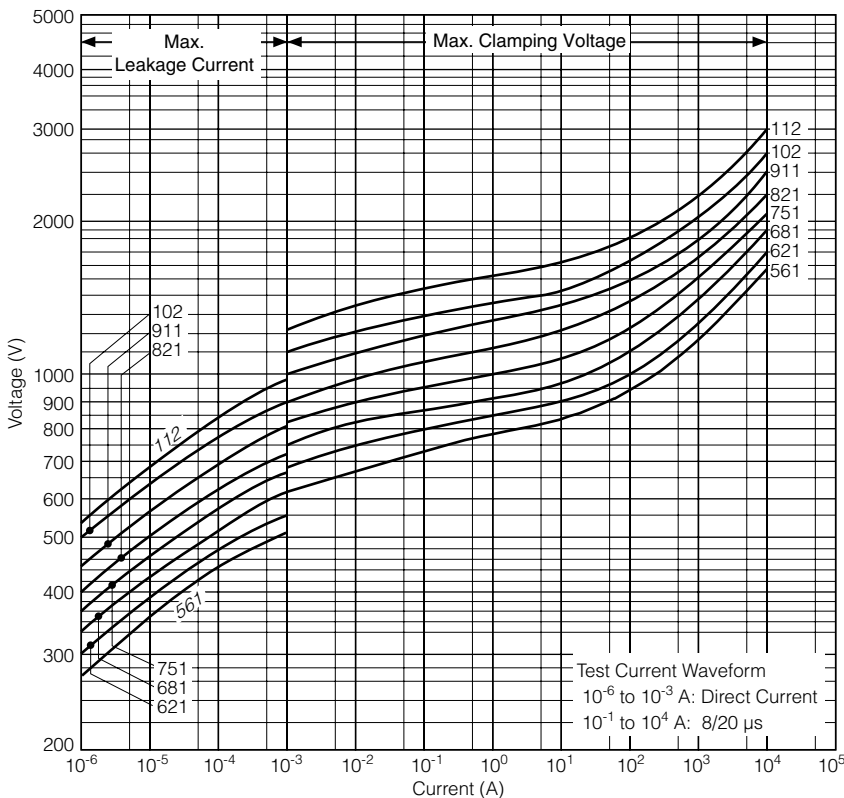
ERZE14A201 to ERZE14A511



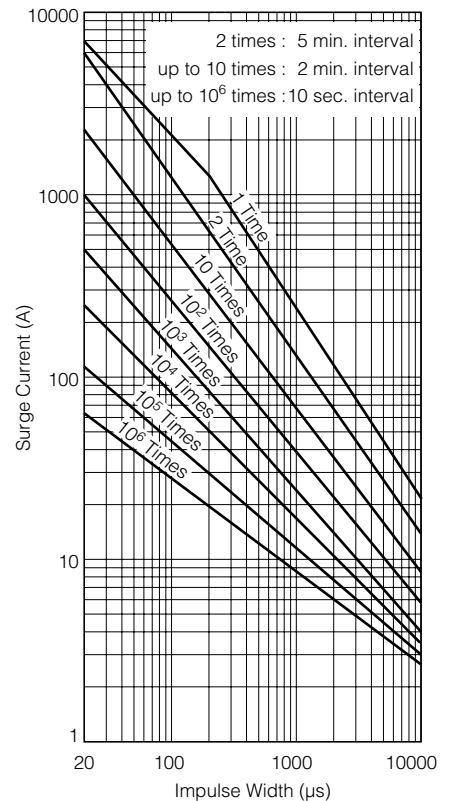
ERZE14A201 to ERZE14A511



ERZE14A561 to ERZE14A112



ERZE14A561 to ERZE14A112



Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately.

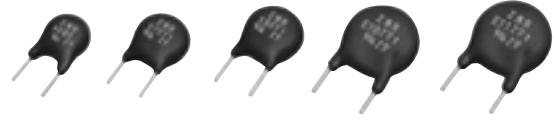
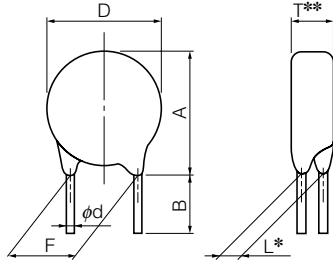
NEW

Straight Leads Cut Type (Bulk Type)

■ Ratings and Characteristics

* Refer to bulk standard type part no. (P4 to P13).

■ Dimensions in mm (not to scale)



notes * Dimension "L": Conforms to each individual specification.
 ** Dimension "T": Conforms to each individual specification.

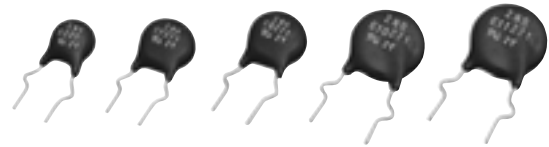
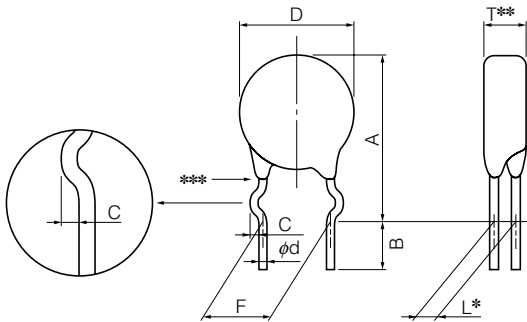
| | | Unit (mm) | | | | | | | | | |
|----------------------------|--|--|--|--|--|--|--|--|--|--|--|
| Series | E5 | E7 | | E8 | | E10 | | E11 | | | |
| Varistor Voltage | 201 to 471 | 201 to 511 | 561 | 621 | 201 to 561 | 621 to 751 | 201 to 561 | 621 to 112 | 201 to 561 | 621 to 112 | |
| Symbol | | | | | | | | | | | |
| D | 7.0 max. | 9.0 max. | 9.0 max. | 10.0 max. | 10.5 max. | 11.5 max. | 11.5 max. | 12.5 max. | 13.0 max. | 14.0 max. | |
| A | 10.0 max. | 12.5 max. | 13.5 max. | 13.5 max. | 13.5 max. | 14.5 max. | 15.0 max. | 16.0 max. | 17.0 max. | 18.0 max. | |
| F | 5.0±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 | |
| φd | 0.60 ^{+0.06} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} |
| B | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | |
| Standard Products Part No. | ERZE05A□□□CS | ERZE07A□□□CS | | ERZE08A□□□CS | | ERZE10A□□□CS | | ERZE11A□□□CS | | | |

Crimped Leads Cut Type (Bulk Type)

■ Ratings and Characteristics

* Refer to bulk standard type part no. (P4 to P13).

■ Dimensions in mm (not to scale)



notes * Dimension "L": Conforms to each individual specification.
 ** Dimension "T": Conforms to each individual specification.
 *** Resin extenytions : No resin below the center of the hook.

| | | Unit (mm) | | | | | | | | | |
|----------------------------|--|--|--|--|--|--|--|--|--|--|--|
| Series | E5 | E7 | | E8 | | E10 | | E11 | | | |
| Varistor Voltage | 201 to 471 | 201 to 511 | 561 | 621 | 201 to 561 | 621 to 751 | 201 to 561 | 621 to 681 | 751 to 112 | 201 to 561 | 621 to 112 |
| Symbol | | | | | | | | | | | |
| D | 7.0 max. | 9.0 max. | 9.0 max. | 10.0 max. | 10.5 max. | 11.5 max. | 11.5 max. | 12.5 max. | 12.5 max. | 13.0 max. | 14.0 max. |
| A | 13.0 max. | 15.5 max. | 16.5 max. | 16.5 max. | 17.0 max. | 18.0 max. | 18.0 max. | 19.5 max. | 20.5 max. | 20.5 max. | 21.5 max. |
| C | 1.2±0.4 | 1.4±0.4 | 1.4±0.4 | 1.4±0.4 | 1.4±0.4 | 1.4±0.4 | 1.4±0.4 | 1.4±0.4 | 1.4±0.4 | 1.4±0.4 | 1.4±0.4 |
| F | 5.0±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 | 7.5±1.0 |
| φd | 0.60 ^{+0.06} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} |
| B | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 | 4.0±1.0 |
| Standard Products Part No. | ERZE05B□□□CS | ERZE07B□□□CS | | ERZE08B□□□CS | | ERZE10B□□□CS | | ERZE11B□□□CS | | | |

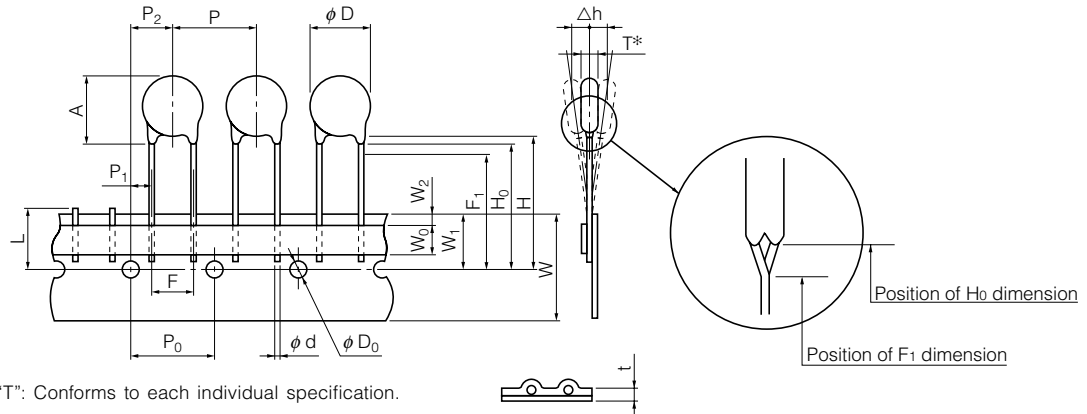
Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.
 Should a safety concern arise regarding this product, please be sure to contact us immediately.

Taping Specifications for Automated Assembly (Straight Leads and Taping)

■ Ratings and Characteristics

* Refer to bulk standard type part no. (P4 to P13).

■ Taping Dimensions in mm (not to scale)



* Dimension “T”: Conforms to each individual specification.

| | | Unit (mm) | | | | | | | | | | | | | |
|----------------------------|------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Series | | E5 | | E7 | | | E8 | | | E10 | | | E11 | | |
| Symbol | Varistor Voltage | 201 to 471 | 201 to 271 | 331 to 551 | 561 | 621 | 201 to 221 | 241 to 561 | 621 to 751 | 201 to 221 | 241 to 561 | 621 to 112 | 201 to 221 | 241 to 561 | 621 to 112 |
| P | | 12.7±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 |
| P0 | | 12.7±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 |
| P1 | | 3.85±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 |
| P2 | | 6.36±1.30 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 |
| φ d | | 0.60 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} |
| F | | 5.0±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 |
| Δ h | | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 |
| W | | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} |
| W0 | | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. |
| W1 | | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 |
| W2 | | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. |
| H | | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 |
| H0 | | 17.0±0.5 | 18.0 ^{+2.0} ₀ | — | — | — | 18.0 ^{+2.0} ₀ | — | — | — | 18.0 ^{+2.0} ₀ | — | — | — | 18.0 ^{+2.0} ₀ |
| F1 | | — | — | 16.00 ^{+0.75} _{-0.5} | 16.00 ^{+0.75} _{-0.5} | 16.00 ^{+0.75} _{-0.5} | — | 16.00 ^{+0.75} _{-0.5} | 16.00 ^{+0.75} _{-0.5} | 16.00 ^{+0.75} _{-0.5} | — | 16.00 ^{+0.75} _{-0.5} | 16.00 ^{+0.75} _{-0.5} | 16.00 ^{+0.75} _{-0.5} | 16.00 ^{+0.75} _{-0.5} |
| φ D0 | | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 |
| t | | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 |
| L | | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. |
| φ D | | 7.0 max. | 9.0 max. | 9.0 max. | 9.0 max. | 10.0 max. | 10.5 max. | 10.5 max. | 11.0 max. | 11.5 max. | 11.5 max. | 12.5 max. | 13.0 max. | 13.0 max. | 14.0 max. |
| A | | 10.0 max. | 12.5 max. | 12.5 max. | 13.5 max. | 13.5 max. | 13.5 max. | 13.5 max. | 14.5 max. | 15.0 max. | 15.0 max. | 16.0 max. | 17.0 max. | 17.0 max. | 18.0 max. |
| Standard Products Part No. | | ERZE05E□□□ | ERZE07E□□□□ | | | ERZE08E□□□□ | | | ERZE10E□□□□ | | | ERZE11E□□□□ | | | |

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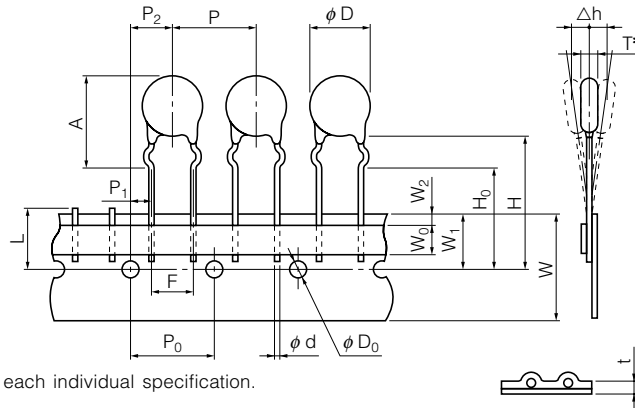
NEW

**Taping Specifications for Automated Assembly
(Crimped Leads and Taping)**

■ Ratings and Characteristics

* Refer to bulk standard type part no. (P4 to P13).

■ Taping Dimensions in mm
(not to scale)



* Dimension "T": Conforms to each individual specification.

Unit (mm)

| Series | E5 | E7 | | E8 | | | E10 | | | E11 | | | |
|----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Symbol | 201 to 471 | 201 to 511 | 561 | 621 | 201 to 221 | 241 to 561 | 621 to 751 | 201 to 561 | 621 to 681 | 751 to 112 | 201 to 221 | 241 to 561 | 621 to 112 |
| P | 12.7±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 | 15.0±1.0 |
| P ₀ | 12.7±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 | 15.0±0.3 |
| P ₁ | 3.85±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 | 3.75±0.70 |
| P ₂ | 6.35±1.30 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 | 7.5±1.3 |
| φ d | 0.60 ^{+0.06} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} | 0.80 ^{+0.08} _{-0.05} |
| F | 5.0±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 | 7.5±0.5 |
| Δ h | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 | 0±2 |
| W | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} | 18.0 ^{+1.0} _{-0.5} |
| W ₀ | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. | 5.0 min. |
| W ₁ | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 | 9.0±0.5 |
| W ₂ | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. | 3.0 max. |
| H | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 | Approx. 22 |
| H ₀ | 17.0±0.5 | 16.0±0.5 | 16.0±0.5 | 16.0±0.5 | 16.0±0.5 | 16.0±0.5 | 16.0±0.5 | 16.0±0.5 | 16.0±0.5 | 16.0±0.5 | 16.0±0.5 | 16.0±0.5 | 16.0±0.5 |
| φ D ₀ | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 | φ 4.0±0.2 |
| t | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 | 0.6±0.3 |
| L | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. | 11.0 max. |
| φ D | 7.0 max. | 9.0 max. | 9.0 max. | 10.0 max. | 10.5 max. | 10.5 max. | 11.5 max. | 11.5 max. | 12.5 max. | 12.5 max. | 13.0 max. | 13.0 max. | 14.0 max. |
| A | 13.0 max. | 15.5 max. | 16.5 max. | 16.5 max. | 17.0 max. | 17.0 max. | 18.0 max. | 18.0 max. | 19.5 max. | 20.5 max. | 20.5 max. | 20.5 max. | 21.5 max. |
| Standard Products Part No. | ERZE05F□□□ | ERZE07F□□□ | | ERZE08F□□□ | | | ERZE10F□□□ | | | ERZE11F□□□ | | | |

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