

Metal Oxide Varistor Plastic Encapsulated Type

MVS-P Series

MERITEK

FEATURE

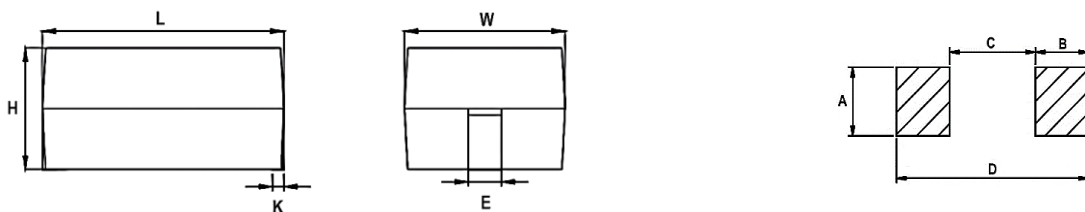
- AC Voltage Rating: 11 ~ 465 V_{AC (rms)}
- High Surge Current Withstanding Capability
- Low Inductance Construction with Excellent Response
- Low Profile and Space Saving
- Flammability Classification: UL94-V0
- UL/cUL safety approved: certification No: E326004



ELECTRICAL CHARACTERISTICS

| EIA Size | Varistor Voltage at 1mA DC | | Max Continuous Voltage | | | Max Clamping Voltage 8/20μs | | Max Surge Current 8/20μs | Max Energy 10/1Kμs | Rated Power | Operating Temperature |
|----------|----------------------------|-----------------------|------------------------|----------------|----------------|-----------------------------|------------------|--------------------------|--------------------|-------------|-----------------------|
| | V _{1mA} | V _{AC (rms)} | V _{DC} | V _P | I _P | I _{MAX} | W _{MAX} | P | (°C) | | |
| | (V) | (V) | (V) | (V) | (A) | (A) | (J) | (W) | | | |
| 3225 | 18~68 | 11~40 | 14~56 | 36~135 | 1.0 | 150 | 0.6~1.8 | 0.01 | -40~+85 | | |
| | 82~560 | 50~350 | 65~450 | 135~930 | 5.0 | 400 | 2.2~18.0 | 0.1 | | | |
| 4032 | 18~56 | 11~40 | 14~56 | 36~135 | 2.5 | 300 | 1.1~2.0 | 0.02 | -40~+85 | | |
| | 68~750 | 50~460 | 65~615 | 135~1235 | 10 | 1200 | 2.4~50.5 | 0.25 | | | |
| 5548 | 27~68 | 17~40 | 22~56 | 53~135 | 5.0 | 500 | 3.9~9.8 | 0.05 | -40~+105 | | |
| | 82~750 | 50~465 | 65~615 | 150~1235 | 25 | 3500 | 14~100 | 0.4 | | | |
| 6225 | 27~68 | 17~40 | 22~56 | 53~135 | 10 | 1000 | 6.0~15 | 0.1 | -40~+105 | | |
| | 82~750 | 50~460 | 65~615 | 150~1235 | 50 | 4500 | 21~134 | 0.6 | | | |

DIMENSION



Unit: mm

| EIA Size | L ±0.3 | W ±0.3 | H ±0.3 | K ±0.3 | E ±0.3 | A | B | C | D |
|----------|--------|--------|---|--------|--------|-----|-----|------|------|
| 3225 | 8.0 | 6.3 | See the Electrical Characteristic table | 1.5 | 3.0 | 3.5 | 2.8 | 4.5 | 10.1 |
| 4032 | 10.5 | 8.0 | | 1.5 | 3.0 | 3.5 | 2.8 | 6.5 | 12.1 |
| 5548 | 14.0 | 12.2 | | 2.0 | 3.0 | 3.5 | 3.3 | 8.4 | 15.0 |
| 6225 | 15.8 | 14.0 | | 2.0 | 4.0 | 4.5 | 3.3 | 10.2 | 16.8 |

PART NUMBERING SYSTEM

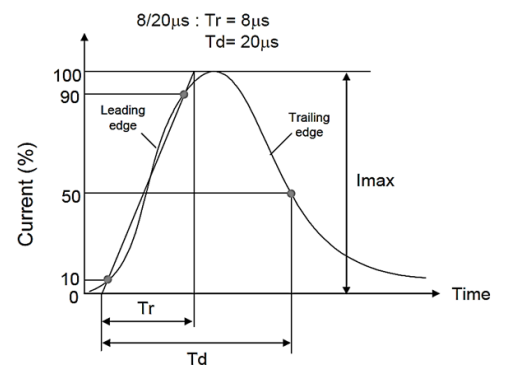
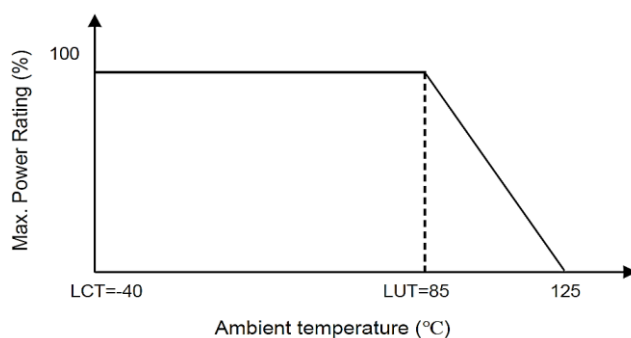
MVS (1) 6225P (2) 270 (3) K (4)

| No. | Item | Code | Description |
|-----|------------------|-------|--|
| (1) | Product Code | MVS | Metal Oxide Varistor series, SMD type |
| (2) | Series Code | 6225P | 6225: 15.8 x 14.0 mm (L x W), P: Plastic Encapsulated Type |
| (3) | Varistor Voltage | 270 | 270: 27V First two digits: Significant, Third: Multiplier |
| (4) | Tolerance | K | K: ± 10% |

ELECTRICAL CHARACTERISTICS – MVS3225P series

| Voltage Code | Varistor Voltage at 1mA DC | Max Continuous Voltage | | Max Clamping Voltage 8/20 μ s | | Max Surge Current 8/20 μ s | Max Energy 10/1K μ s | Rated Power | EIA 3225 Thickness |
|--------------|----------------------------|------------------------|----------|-----------------------------------|-------|--------------------------------|--------------------------|-------------|--------------------|
| | V_{1mA} | $V_{AC (rms)}$ | V_{DC} | V_P | I_P | I_{MAX} | W_{MAX} | P | H ± 0.3 |
| | (V) | (V) | (V) | (V) | (A) | (A) | (J) | (W) | (mm) |
| 180 | 18 (16~20) | 11 | 14 | 36 | 1.0 | 150 | 0.6 | 0.01 | 3.2 |
| 220 | 22 (20~24) | 14 | 18 | 43 | 1.0 | 150 | 0.7 | 0.01 | 3.2 |
| 270 | 27 (24~30) | 17 | 22 | 53 | 1.0 | 150 | 0.9 | 0.01 | 3.2 |
| 330 | 33 (30~36) | 20 | 26 | 65 | 1.0 | 150 | 1.1 | 0.01 | 3.2 |
| 390 | 39 (35~43) | 25 | 31 | 77 | 1.0 | 150 | 1.2 | 0.01 | 3.2 |
| 470 | 47 (42~52) | 30 | 38 | 93 | 1.0 | 150 | 1.5 | 0.01 | 3.2 |
| 560 | 56 (50~62) | 35 | 45 | 110 | 1.0 | 150 | 1.8 | 0.01 | 3.2 |
| 680 | 68 (61~75) | 40 | 56 | 135 | 1.0 | 150 | 2.2 | 0.01 | 3.2 |
| 820 | 82 (74~90) | 50 | 65 | 135 | 5.0 | 400 | 2.5 | 0.1 | 3.2 |
| 101 | 100 (90~110) | 60 | 85 | 165 | 5.0 | 400 | 3.0 | 0.1 | 3.2 |
| 121 | 120 (108~132) | 75 | 100 | 200 | 5.0 | 400 | 4.0 | 0.1 | 3.2 |
| 151 | 150 (135~165) | 95 | 125 | 250 | 5.0 | 400 | 6.0 | 0.1 | 3.2 |
| 181 | 180 (162~198) | 115 | 150 | 300 | 5.0 | 400 | 6.5 | 0.1 | 3.2 |
| 201 | 200 (180~220) | 130 | 170 | 340 | 5.0 | 400 | 7.0 | 0.1 | 3.2 |
| 221 | 220 (198~242) | 140 | 180 | 360 | 5.0 | 400 | 7.5 | 0.1 | 3.2 |
| 241 | 240 (216~264) | 150 | 200 | 395 | 5.0 | 400 | 9.0 | 0.1 | 3.2 |
| 271 | 270 (243~297) | 175 | 225 | 455 | 5.0 | 400 | 9.5 | 0.1 | 3.2 |
| 361 | 360 (324~396) | 230 | 300 | 595 | 5.0 | 400 | 10.0 | 0.1 | 4.5 |
| 391 | 390 (351~429) | 250 | 320 | 650 | 5.0 | 400 | 11.0 | 0.1 | 4.5 |
| 431 | 430 (387~473) | 275 | 350 | 710 | 5.0 | 400 | 13.0 | 0.1 | 4.5 |
| 471 | 470 (423~517) | 300 | 385 | 775 | 5.0 | 400 | 15.0 | 0.1 | 4.5 |
| 511 | 510 (459~561) | 320 | 410 | 845 | 5.0 | 400 | 16.5 | 0.1 | 4.5 |
| 561 | 560 (504~616) | 350 | 450 | 930 | 5.0 | 400 | 18.0 | 0.1 | 4.5 |

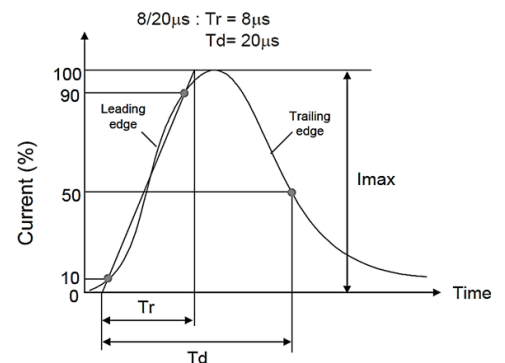
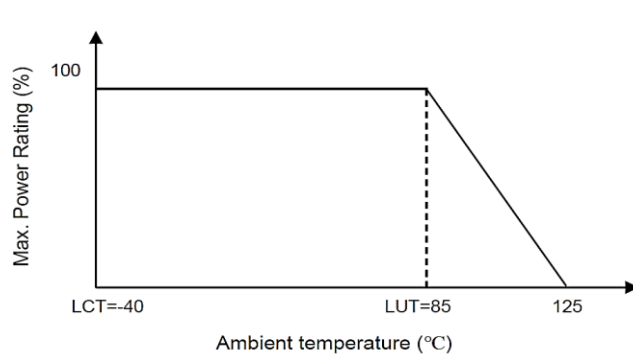
POWER DERATING and SURGE CURRENT WAVEFORM



ELECTRICAL CHARACTERISTICS – MVS4032P Series

| Voltage Code | Varistor Voltage at 1mA DC | Max Continuous Voltage | | Max Clamping Voltage 8/20 μ s | | Max Surge Current 8/20 μ s | Max Energy 10/1K μ s | Rated Power | EIA 4032 Thickness |
|--------------|----------------------------|------------------------|-----------------|-----------------------------------|----------------|--------------------------------|--------------------------|-------------|--------------------|
| | V _{1mA} | V _{AC (rms)} | V _{DC} | V _P | I _P | I _{MAX} | W _{MAX} | P | H \pm 0.3 |
| | (V) | (V) | (V) | (V) | (A) | (A) | (J) | (W) | (mm) |
| 180 | 18 (16~20) | 11 | 14 | 36 | 2.5 | 300 | 1.1 | 0.02 | 3.2 |
| 220 | 22 (20~24) | 14 | 18 | 43 | 2.5 | 300 | 1.3 | 0.02 | 3.2 |
| 270 | 27 (24~30) | 17 | 22 | 53 | 2.5 | 300 | 1.6 | 0.02 | 3.2 |
| 330 | 33 (30~36) | 20 | 26 | 65 | 2.5 | 300 | 2.0 | 0.02 | 3.2 |
| 390 | 39 (35~43) | 25 | 31 | 77 | 2.5 | 300 | 2.4 | 0.02 | 3.2 |
| 470 | 47 (42~52) | 30 | 38 | 93 | 2.5 | 300 | 2.8 | 0.02 | 3.2 |
| 560 | 56 (50~62) | 35 | 45 | 110 | 2.5 | 300 | 3.4 | 0.02 | 3.2 |
| 680 | 68 (61~75) | 40 | 56 | 135 | 2.5 | 300 | 4.1 | 0.02 | 3.2 |
| 820 | 82 (74~90) | 50 | 65 | 135 | 10 | 1200 | 6.5 | 0.25 | 3.2 |
| 101 | 100 (90~110) | 60 | 85 | 165 | 10 | 1200 | 7.0 | 0.25 | 3.2 |
| 121 | 120 (108~132) | 75 | 100 | 200 | 10 | 1200 | 9.0 | 0.25 | 3.2 |
| 151 | 150 (135~165) | 95 | 125 | 250 | 10 | 1200 | 11.0 | 0.25 | 3.2 |
| 181 | 180 (162~198) | 115 | 150 | 300 | 10 | 1200 | 13.0 | 0.25 | 3.2 |
| 201 | 200 (180~220) | 130 | 170 | 340 | 10 | 1200 | 15.0 | 0.25 | 3.2 |
| 221 | 220 (198~242) | 140 | 180 | 360 | 10 | 1200 | 18.0 | 0.25 | 3.2 |
| 241 | 240 (216~264) | 150 | 200 | 395 | 10 | 1200 | 18.5 | 0.25 | 3.2 |
| 271 | 270 (243~297) | 175 | 225 | 455 | 10 | 1200 | 21.0 | 0.25 | 3.2 |
| 301 | 300 (270~330) | 195 | 250 | 500 | 10 | 1200 | 21.5 | 0.25 | 4.5 |
| 331 | 330 (297~363) | 215 | 275 | 550 | 10 | 1200 | 22.0 | 0.25 | 4.5 |
| 361 | 360 (324~396) | 230 | 300 | 595 | 10 | 1200 | 23.0 | 0.25 | 4.5 |
| 391 | 390 (351~429) | 250 | 320 | 650 | 10 | 1200 | 25.0 | 0.25 | 4.5 |
| 431 | 430 (387~473) | 275 | 350 | 710 | 10 | 1200 | 29.0 | 0.25 | 4.5 |
| 471 | 470 (423~517) | 300 | 385 | 775 | 10 | 1200 | 30.0 | 0.25 | 4.5 |
| 511 | 510 (459~561) | 320 | 410 | 845 | 10 | 1200 | 33.0 | 0.25 | 4.5 |
| 561 | 560 (504~616) | 350 | 450 | 930 | 10 | 1200 | 33.0 | 0.25 | 4.5 |
| 621 | 620 (558~682) | 395 | 510 | 1020 | 10 | 1200 | 35.0 | 0.25 | 4.5 |
| 681 | 680 (612~748) | 420 | 560 | 1120 | 10 | 1200 | 35.0 | 0.25 | 4.5 |
| 751 | 750 (675~825) | 460 | 615 | 1235 | 10 | 1200 | 50.5 | 0.25 | 4.5 |

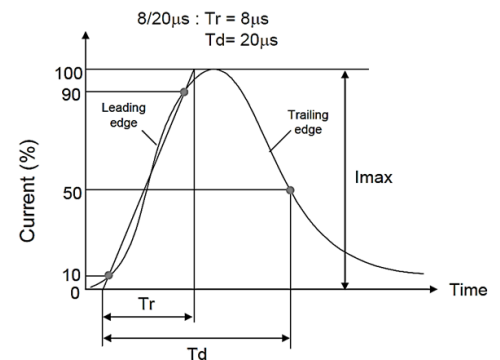
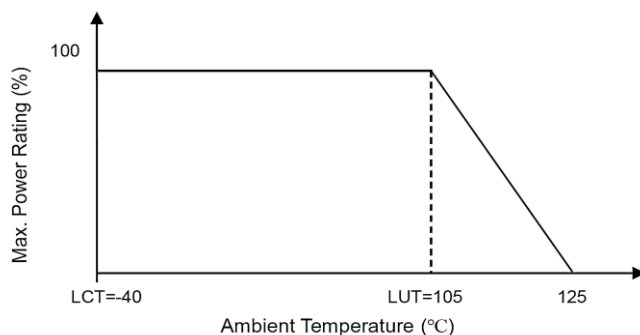
POWER DERATING and SURGE CURRENT WAVEFORM



ELECTRICAL CHARACTERISTICS – MVS5548P series

| Voltage Code | Varistor Voltage at 1mA DC | Max Continuous Voltage | | Max Clamping Voltage 8/20 μ s | | Max Surge Current 8/20 μ s | Max Energy 10/1K μ s | Rated Power | EIA 5548 Thickness |
|--------------|----------------------------|------------------------|-----------------|-----------------------------------|----------------|--------------------------------|--------------------------|-------------|--------------------|
| | V _{1mA} | V _{AC (rms)} | V _{DC} | V _P | I _P | I _{MAX} | W _{MAX} | P | H \pm 0.3 |
| | (V) | (V) | (V) | (V) | (A) | (A) | (J) | (W) | (mm) |
| 270 | 27(24~30) | 17 | 22 | 53 | 5 | 500 | 3.9 | 0.05 | 4.0 |
| 330 | 33(30~36) | 20 | 26 | 65 | 5 | 500 | 4.8 | 0.05 | 4.0 |
| 390 | 39(35~43) | 25 | 31 | 77 | 5 | 500 | 5.6 | 0.05 | 4.0 |
| 470 | 47(42~52) | 30 | 38 | 93 | 5 | 500 | 6.8 | 0.05 | 4.0 |
| 560 | 56(50~62) | 35 | 45 | 125 | 5 | 500 | 8.1 | 0.05 | 4.0 |
| 680 | 68(61~75) | 40 | 56 | 135 | 5 | 500 | 9.8 | 0.05 | 4.0 |
| 820 | 82(74~90) | 50 | 65 | 150 | 25 | 3500 | 14 | 0.4 | 4.0 |
| 101 | 100(90~110) | 60 | 85 | 165 | 25 | 3500 | 17 | 0.4 | 4.0 |
| 121 | 120(108~132) | 75 | 100 | 200 | 25 | 3500 | 20 | 0.4 | 4.0 |
| 151 | 150(135~165) | 95 | 125 | 250 | 25 | 3500 | 25 | 0.4 | 4.0 |
| 181 | 180(162~198) | 115 | 150 | 300 | 25 | 3500 | 30 | 0.4 | 4.0 |
| 201 | 205(185~226) | 130 | 170 | 340 | 25 | 3500 | 35 | 0.4 | 4.0 |
| 221 | 220(198~242) | 140 | 180 | 360 | 25 | 3500 | 39 | 0.4 | 4.0 |
| 241 | 240(216~264) | 150 | 200 | 395 | 25 | 3500 | 42 | 0.4 | 4.0 |
| 271 | 270(243~297) | 175 | 225 | 455 | 25 | 3500 | 49 | 0.4 | 4.0 |
| 301 | 300(270~330) | 195 | 250 | 500 | 25 | 3500 | 53 | 0.4 | 4.0 |
| 331 | 330(297~363) | 215 | 275 | 550 | 25 | 3500 | 58 | 0.4 | 4.0 |
| 361 | 360(324~396) | 230 | 300 | 595 | 25 | 3500 | 65 | 0.4 | 4.0 |
| 391 | 390(351~429) | 250 | 320 | 650 | 25 | 3500 | 70 | 0.4 | 6.0 |
| 431 | 430(387~473) | 275 | 350 | 710 | 25 | 3500 | 80 | 0.4 | 6.0 |
| 471 | 475(428~523) | 300 | 385 | 775 | 25 | 3500 | 85 | 0.4 | 6.0 |
| 511 | 510(459~561) | 320 | 410 | 845 | 25 | 3500 | 92 | 0.4 | 6.0 |
| 561 | 560(504~616) | 350 | 450 | 930 | 25 | 3500 | 92 | 0.4 | 6.0 |
| 621 | 620(558~682) | 395 | 510 | 1020 | 25 | 3500 | 95 | 0.4 | 6.0 |
| 681 | 680(612~748) | 420 | 560 | 1120 | 25 | 3500 | 98 | 0.4 | 6.0 |
| 751 | 750(675~825) | 465 | 615 | 1235 | 25 | 3500 | 100 | 0.4 | 6.0 |

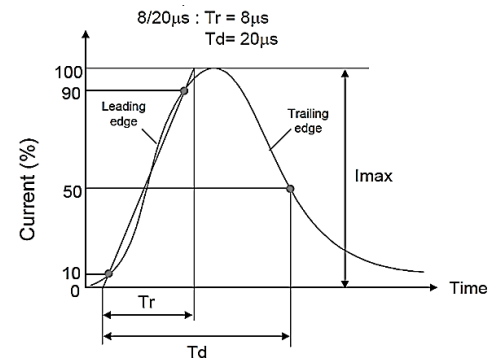
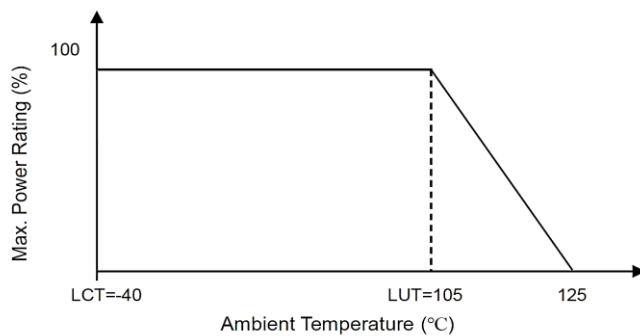
POWER DERATING and SURGE CURRENT WAVEFORM



ELECTRICAL CHARACTERISTICS – MVS6225P series

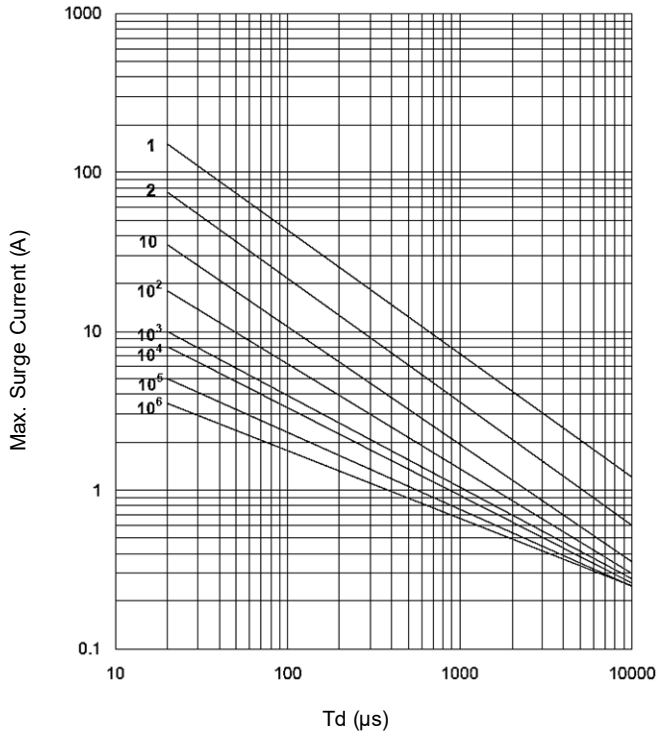
| Voltage Code | Varistor Voltage at 1mA DC | Max Continuous Voltage | | Max Clamping Voltage 8/20 μ s | | Max Surge Current 8/20 μ s | Max Energy 10/1K μ s | Rated Power | EIA 6225 Thickness |
|--------------|----------------------------|------------------------|-----------------|-----------------------------------|----------------|--------------------------------|--------------------------|-------------|--------------------|
| | V _{1mA} | V _{AC (rms)} | V _{DC} | V _P | I _P | I _{MAX} | W _{MAX} | P | H \pm 0.3 |
| | (V) | (V) | (V) | (V) | (A) | (A) | (J) | (W) | (mm) |
| 270 | 27(24~30) | 17 | 22 | 53 | 5 | 500 | 3.9 | 0.05 | 4.0 |
| 330 | 33(30~36) | 20 | 26 | 65 | 5 | 500 | 4.8 | 0.05 | 4.0 |
| 390 | 39(35~43) | 25 | 31 | 77 | 5 | 500 | 5.6 | 0.05 | 4.0 |
| 470 | 47(42~52) | 30 | 38 | 93 | 5 | 500 | 6.8 | 0.05 | 4.0 |
| 560 | 56(50~62) | 35 | 45 | 125 | 5 | 500 | 8.1 | 0.05 | 4.0 |
| 680 | 68(61~75) | 40 | 56 | 135 | 5 | 500 | 9.8 | 0.05 | 4.0 |
| 820 | 82(74~90) | 50 | 65 | 150 | 25 | 3500 | 14 | 0.4 | 4.0 |
| 101 | 100(90~110) | 60 | 85 | 165 | 25 | 3500 | 17 | 0.4 | 4.0 |
| 121 | 120(108~132) | 75 | 100 | 200 | 25 | 3500 | 20 | 0.4 | 4.0 |
| 151 | 150(135~165) | 95 | 125 | 250 | 25 | 3500 | 25 | 0.4 | 4.0 |
| 181 | 180(162~198) | 115 | 150 | 300 | 25 | 3500 | 30 | 0.4 | 4.0 |
| 201 | 205(185~226) | 130 | 170 | 340 | 25 | 3500 | 35 | 0.4 | 4.0 |
| 221 | 220(198~242) | 140 | 180 | 360 | 25 | 3500 | 39 | 0.4 | 4.0 |
| 241 | 240(216~264) | 150 | 200 | 395 | 25 | 3500 | 42 | 0.4 | 4.0 |
| 271 | 270(243~297) | 175 | 225 | 455 | 25 | 3500 | 49 | 0.4 | 4.0 |
| 301 | 300(270~330) | 195 | 250 | 500 | 25 | 3500 | 53 | 0.4 | 4.0 |
| 331 | 330(297~363) | 215 | 275 | 550 | 25 | 3500 | 58 | 0.4 | 4.0 |
| 361 | 360(324~396) | 230 | 300 | 595 | 25 | 3500 | 65 | 0.4 | 4.0 |
| 391 | 390(351~429) | 250 | 320 | 650 | 25 | 3500 | 70 | 0.4 | 6.0 |
| 431 | 430(387~473) | 275 | 350 | 710 | 25 | 3500 | 80 | 0.4 | 6.0 |
| 471 | 475(428~523) | 300 | 385 | 775 | 25 | 3500 | 85 | 0.4 | 6.0 |
| 511 | 510(459~561) | 320 | 410 | 845 | 25 | 3500 | 92 | 0.4 | 6.0 |
| 561 | 560(504~616) | 350 | 450 | 930 | 25 | 3500 | 92 | 0.4 | 6.0 |
| 621 | 620(558~682) | 395 | 510 | 1020 | 25 | 3500 | 95 | 0.4 | 6.0 |
| 681 | 680(612~748) | 420 | 560 | 1120 | 25 | 3500 | 98 | 0.4 | 6.0 |
| 751 | 750(675~825) | 465 | 615 | 1235 | 25 | 3500 | 100 | 0.4 | 6.0 |

POWER DERATING and SURGE CURRENT WAVEFORM

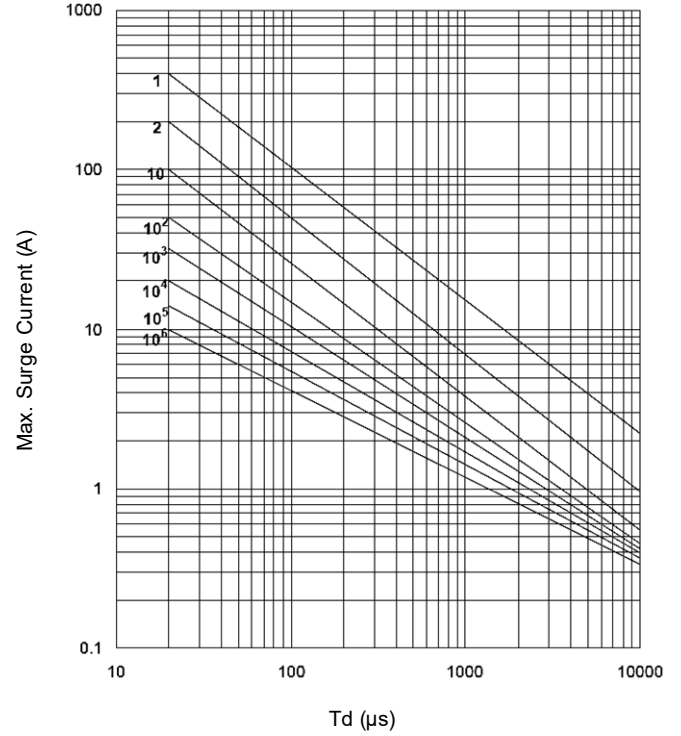


MAX. SURGE CURRENT DERATING CURVES

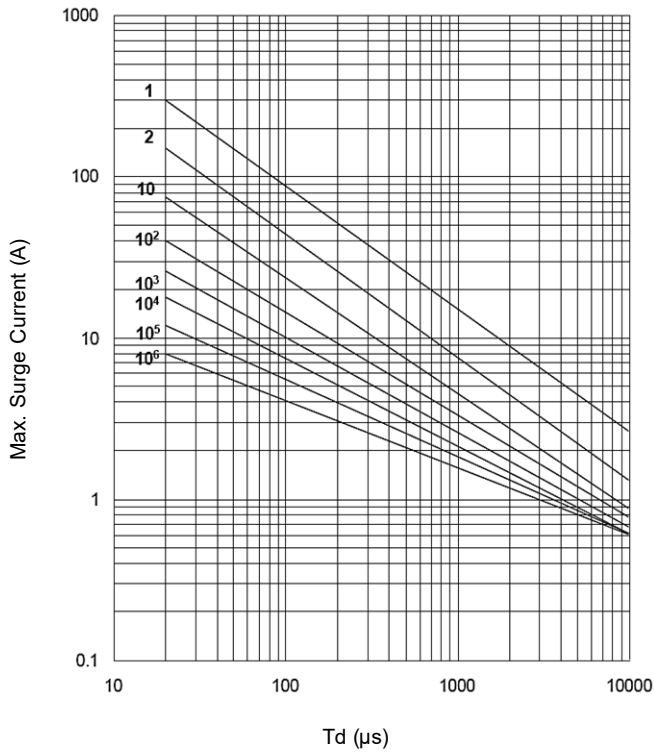
MVS3225P180 to MVS3225P680



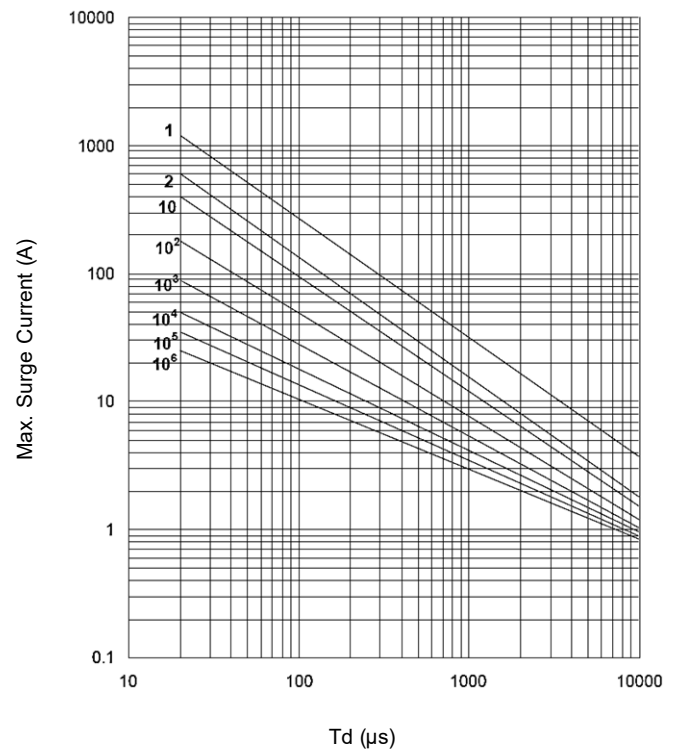
MVS3225P820 to MVS3225P561



MVS4032P180 to MVS4032P680

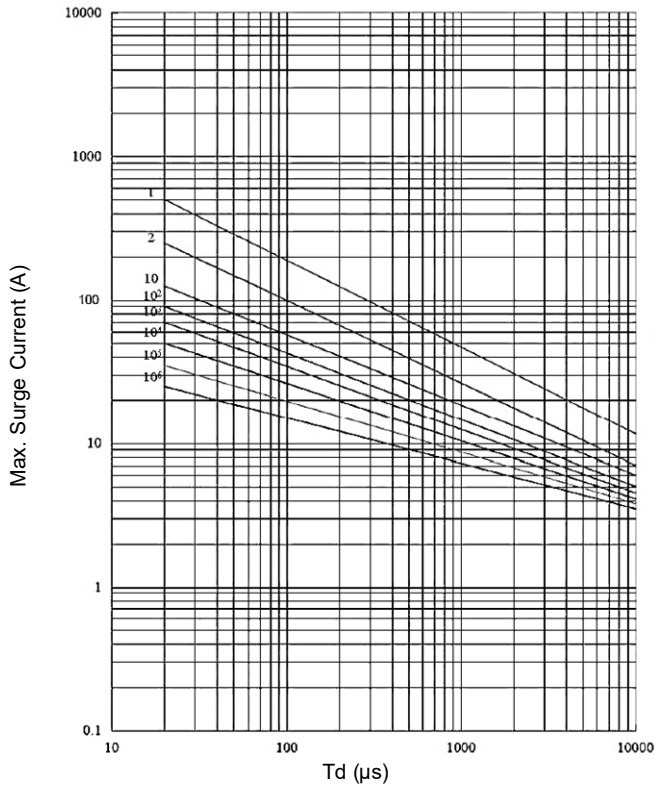


MVS4032P820 to MVS4032P751

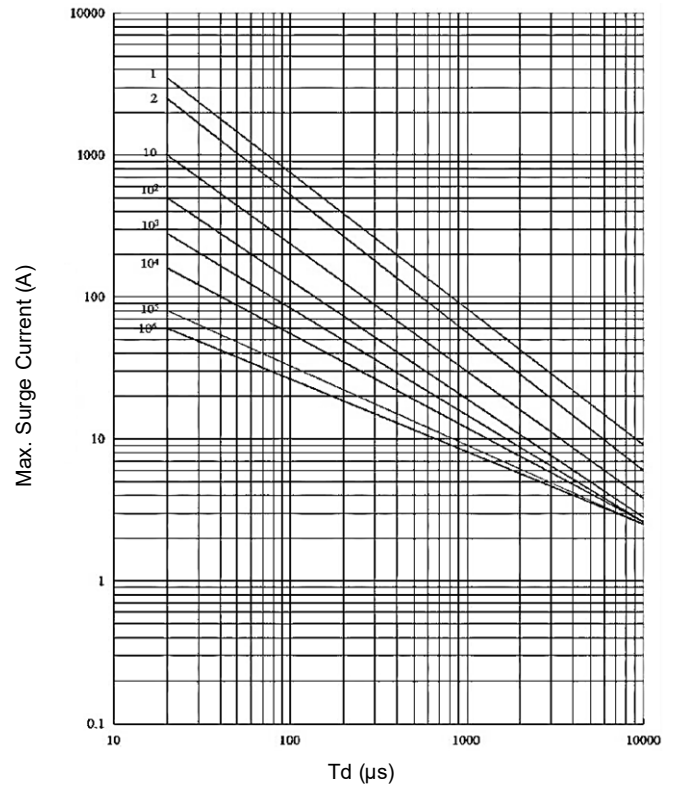


MAX. SURGE CURRENT DERATING CURVES

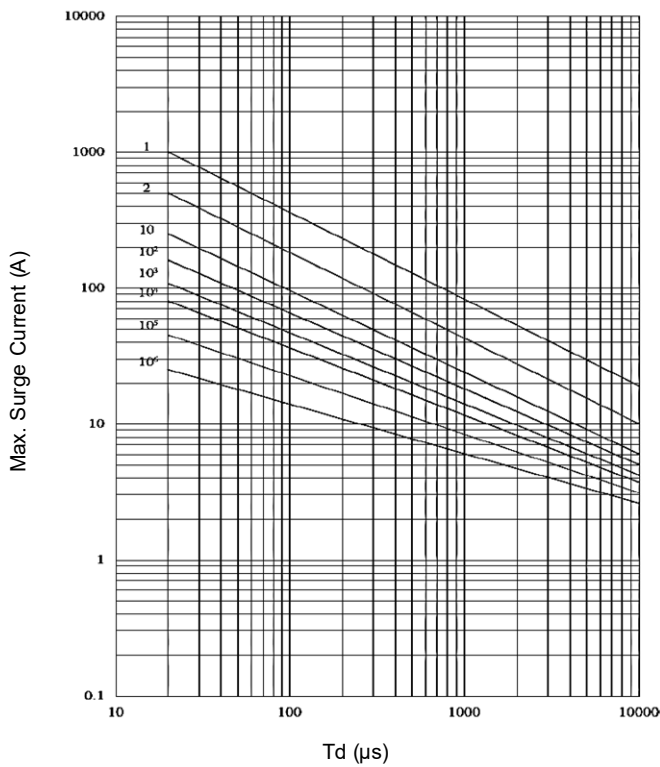
MVS5548P270 to MVS5548P680



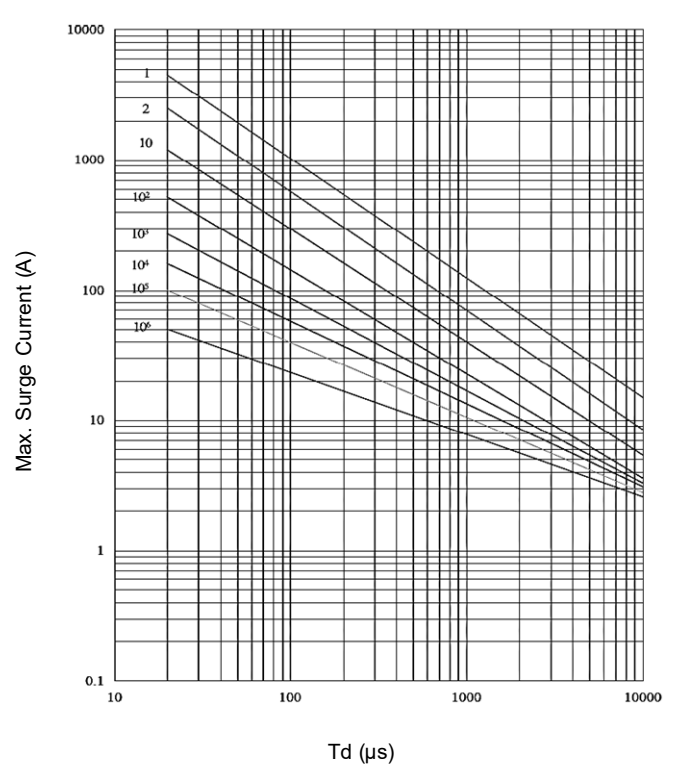
MVS5548P820 to MVS5548P751



MVS6255P270 to MVS6255P680

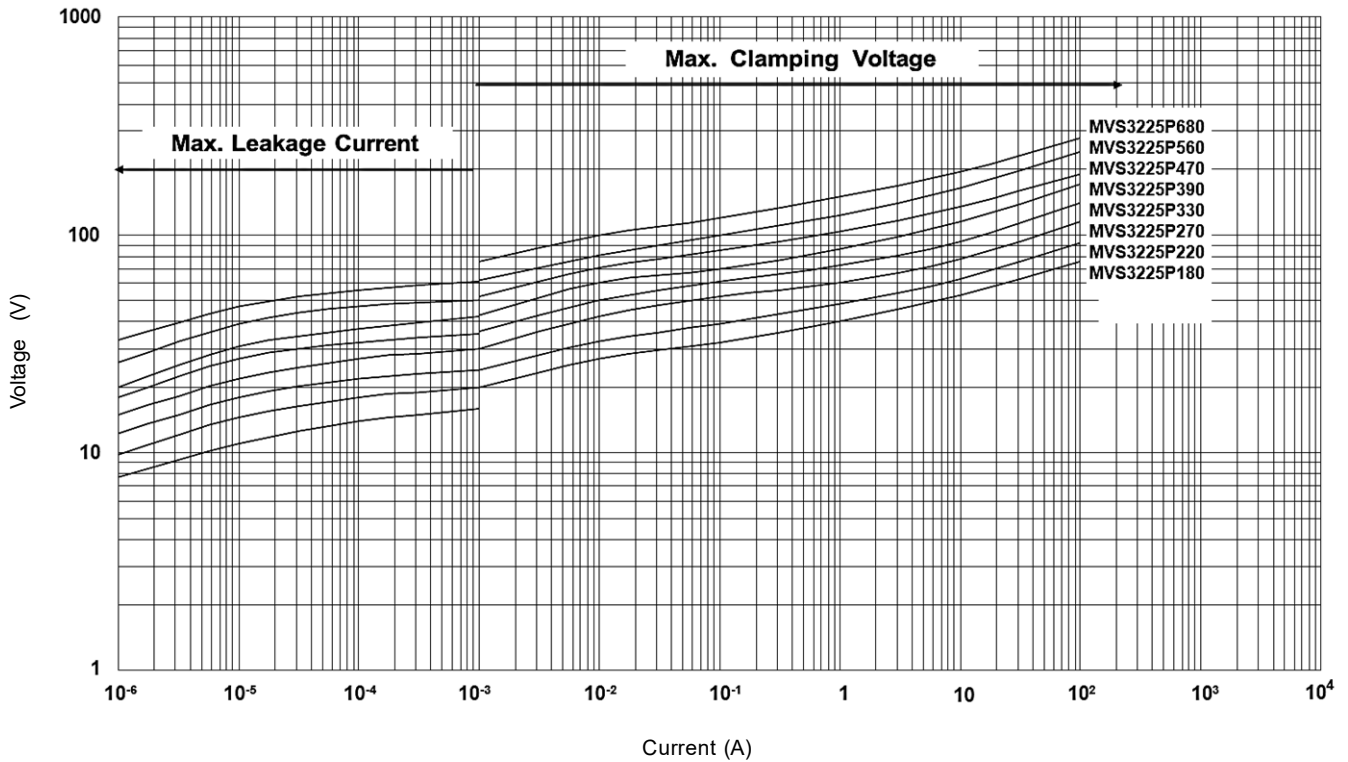


MVS6255P820 to MVS6255P751

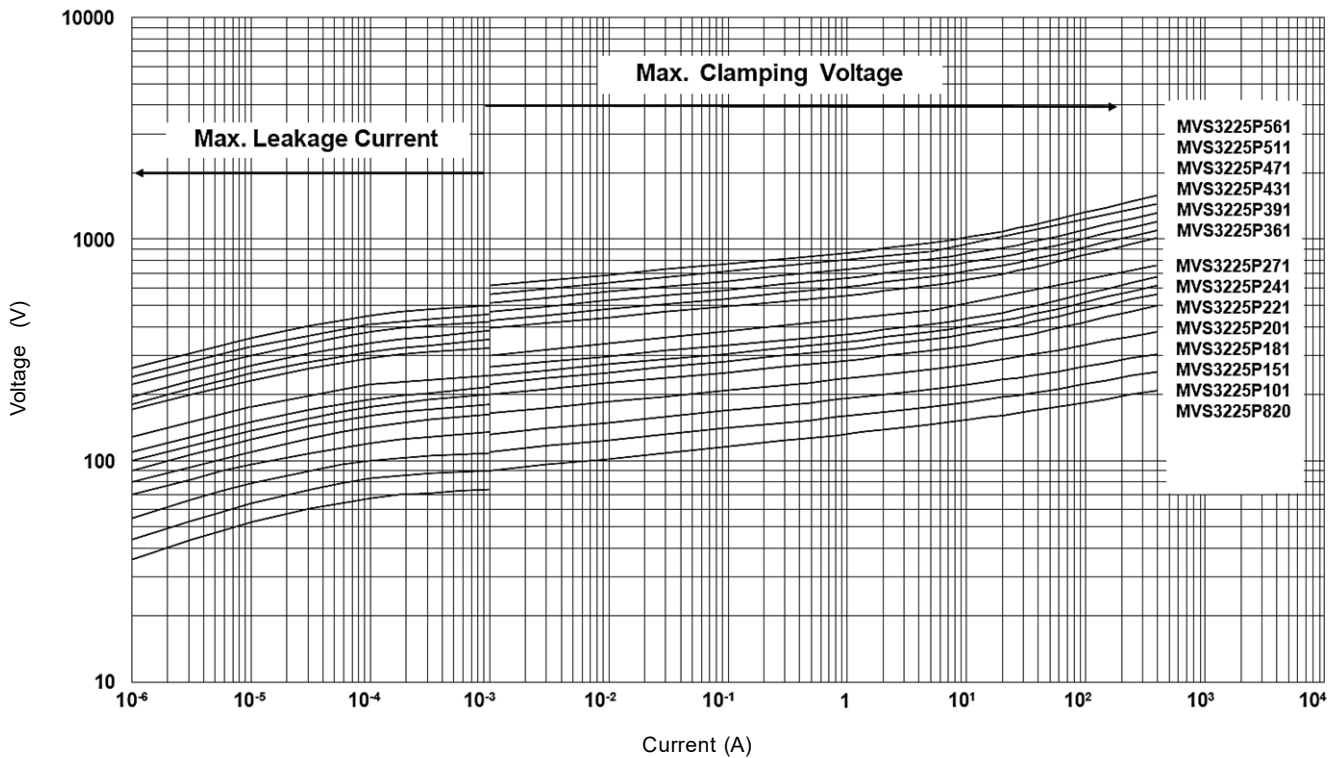


MAX. LEAKAGE CURRENT & MAX. CLAMPING VOLTAGE CURVES

MVS3225P180 to MVS3225P680

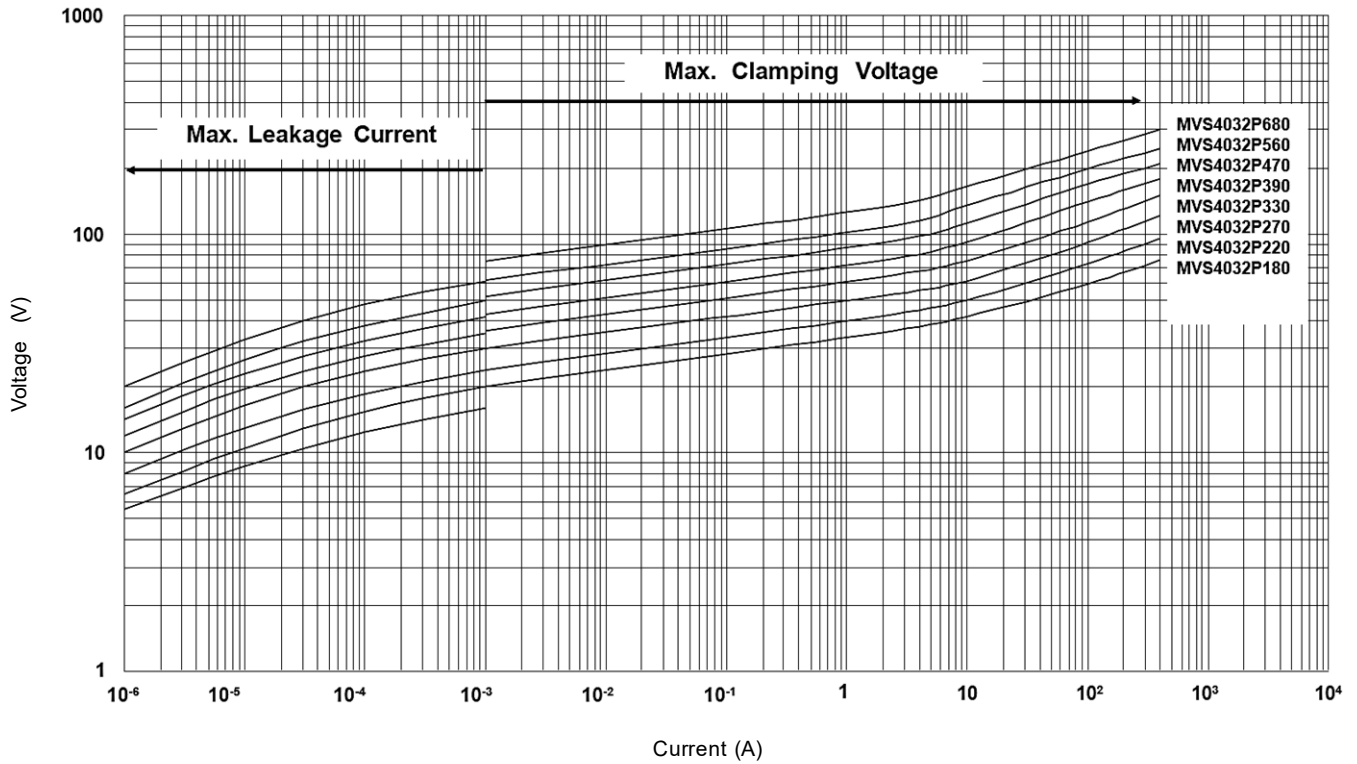


MVS3225P820 to MVS3225P561

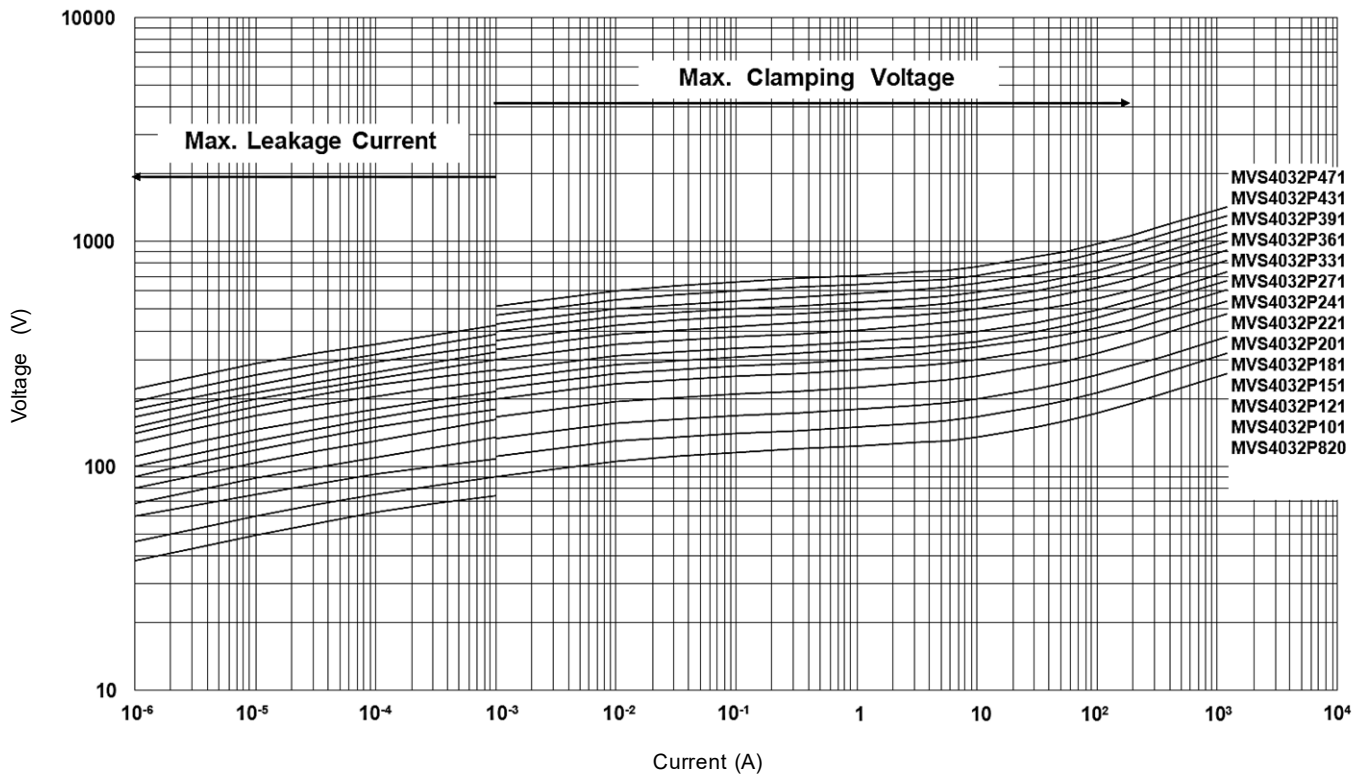


MAX. LEAKAGE CURRENT & MAX. CLAMPING VOLTAGE CURVES

MVS4032P180 to MVS4032P680

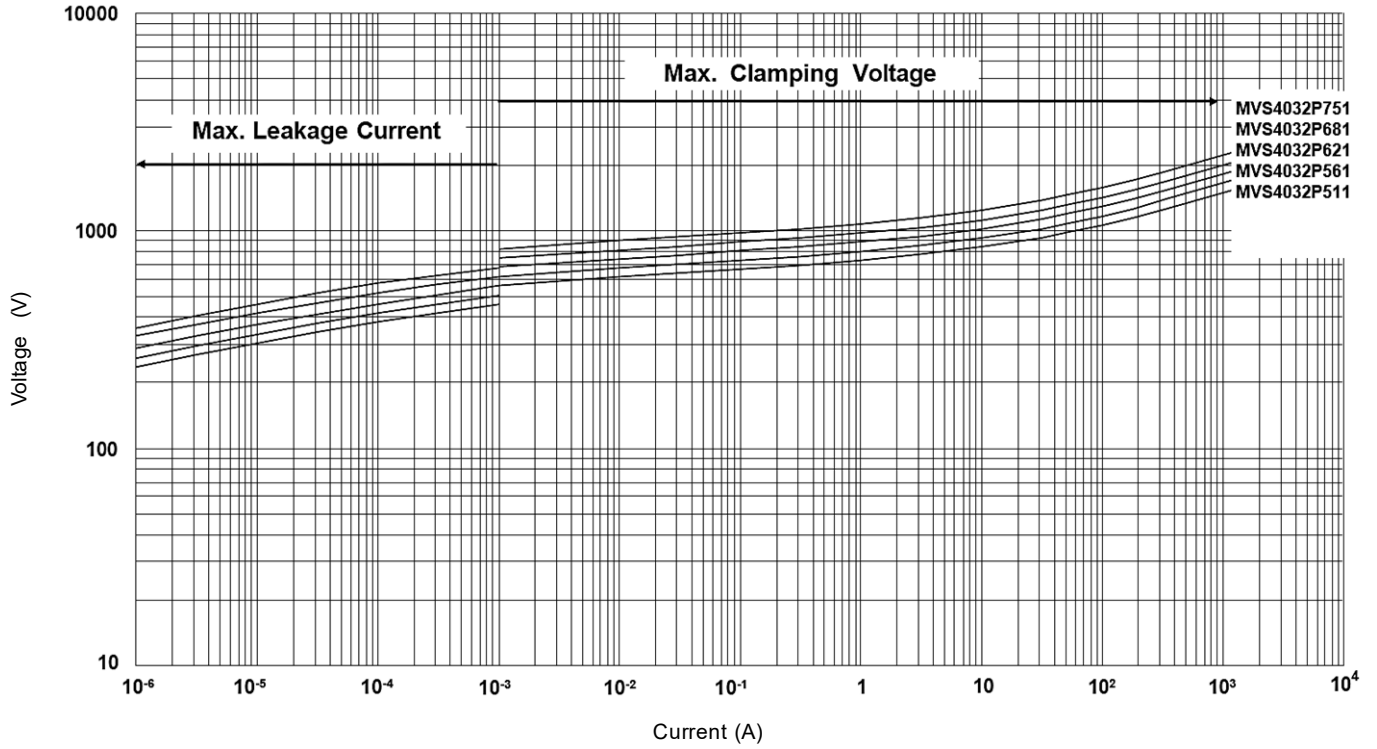


MVS4032P820 to MVS4032P471

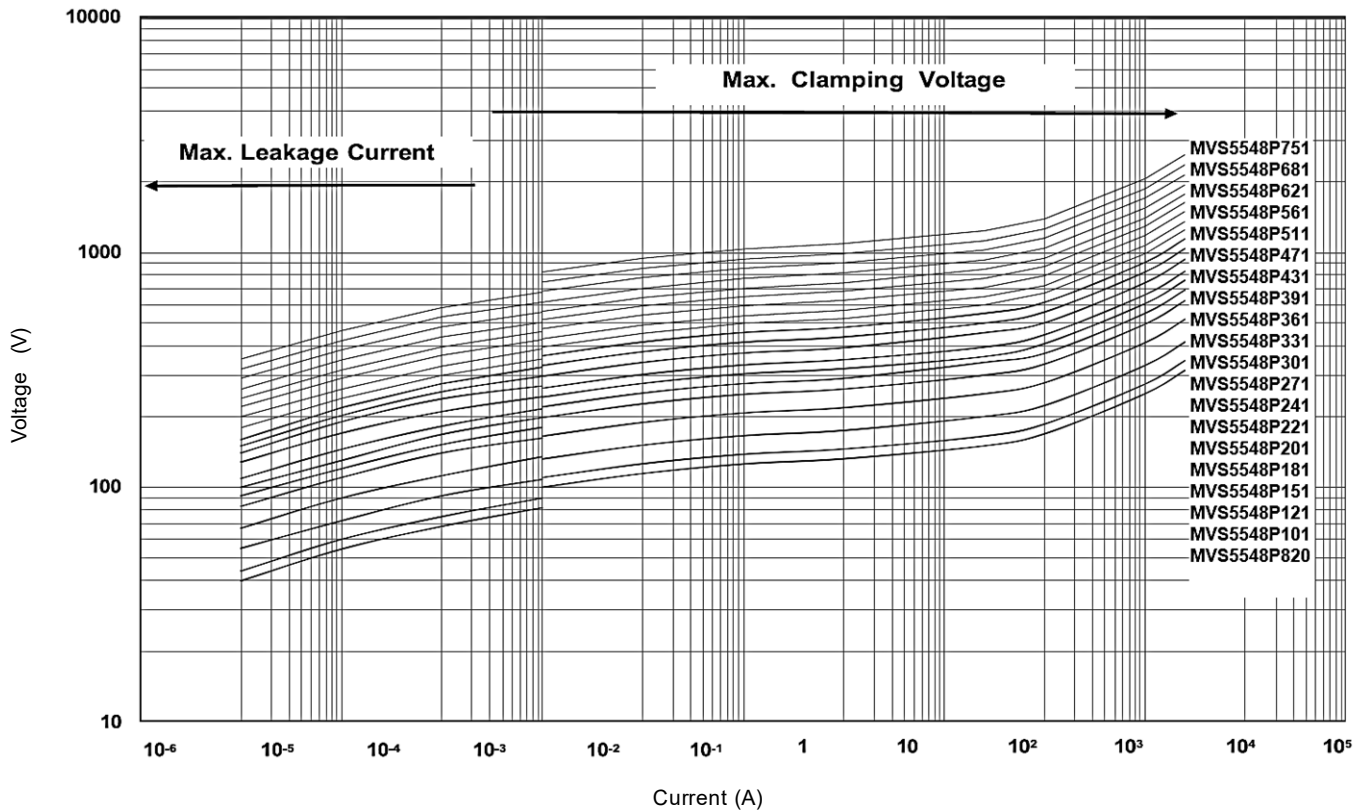


MAX. LEAKAGE CURRENT & MAX. CLAMPING VOLTAGE CURVES

MVS4032P511 to MVS4032P751

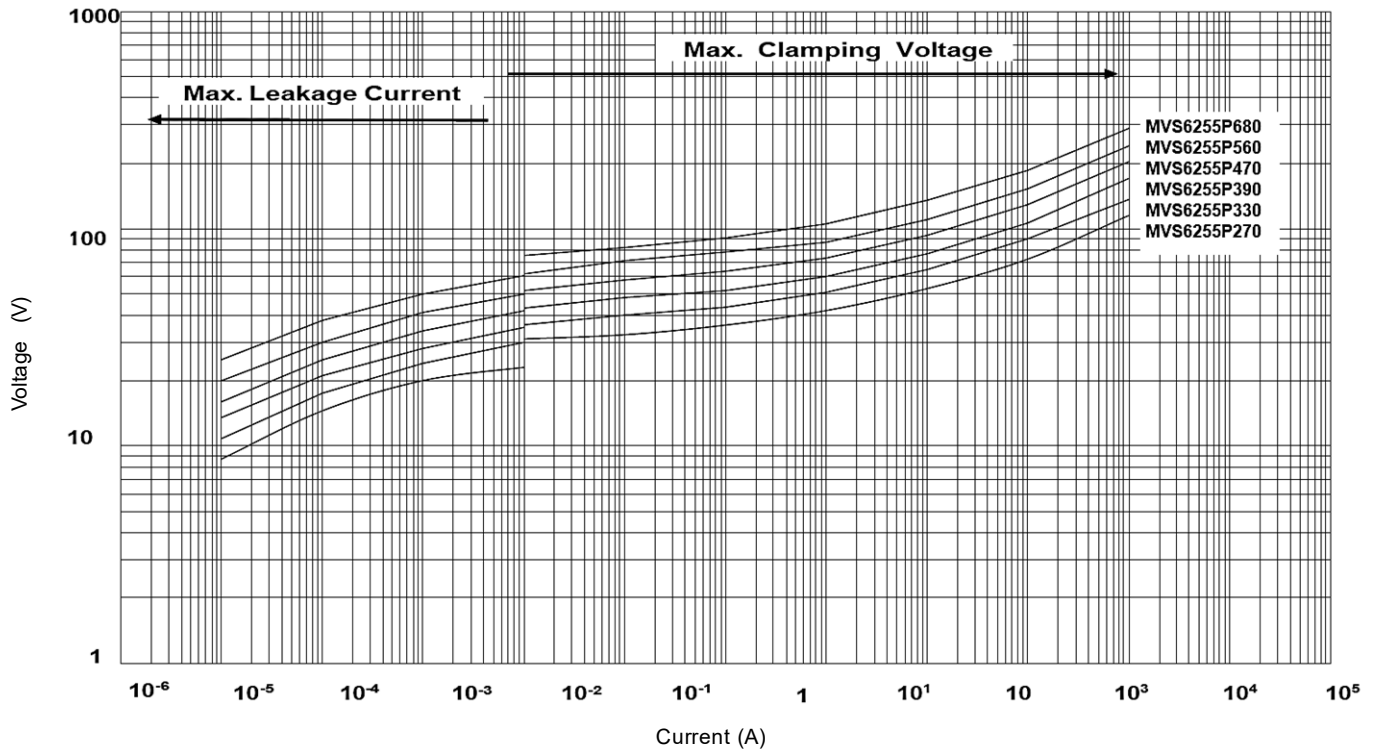


MVS5548P820 to MVS5548P751

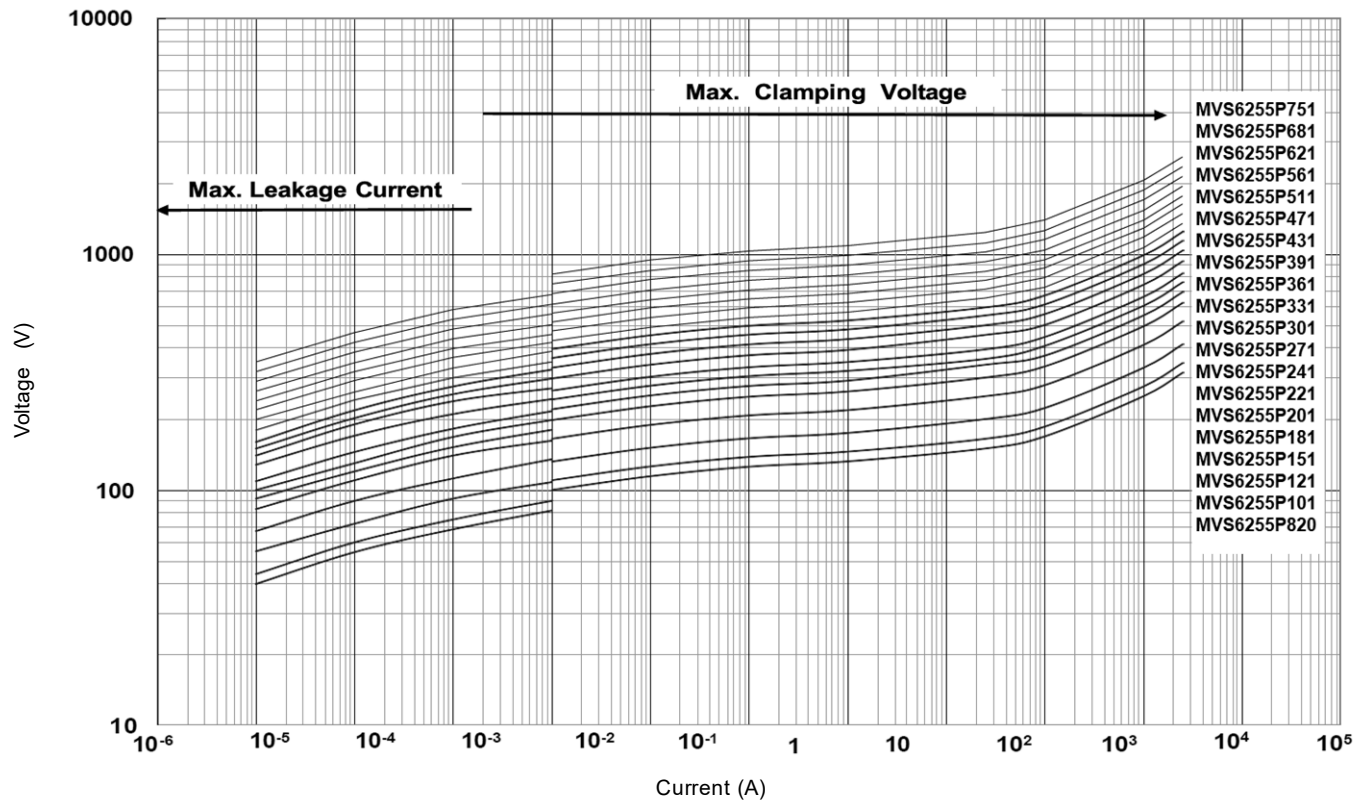


MAX. LEAKAGE CURRENT & MAX. CLAMPING VOLTAGE CURVES

MVS6255P270 to MVS6255P680



MVS6255P270 to MVS6255P751



Metal Oxide Varistor Plastic Encapsulated Type

MVS-P Series

MERITEK

RELIABILITY TEST CONDITION AND REQUIREMENT

| Item | Standard | Test Conditions / Method | Specifications | | | | | | | | | | | | | | | |
|--|------------------------|--|--|------------------|------------------|---|-------|------|---|------------------|-----|---|-------|------|---|------------------|-----|--|
| Vibration | IEC 60068-2-6 | Frequency range: 10 ~ 55 Hz Amplitude: 0.75mm or 98 m/s ² Direction: 3 mutually perpendicular directions, 2 hrs each. | $ \Delta V_{1mA}/V_{1mA} \leq 5\%$ No visible damage | | | | | | | | | | | | | | | |
| Solderability | IEC 60068-2-20 | 245±3°C, 3±0.3 sec | At least 95% of terminal electrode is covered by new solder | | | | | | | | | | | | | | | |
| Resistance to Soldering Heat | IEC 60068-2-20 | 260±5°C, MVS3225P Series: 5±1 sec MVS4032P/MVS5548P/MVS6255P Series: 10±1 sec | $ \Delta V_{1mA}/V_{1mA} \leq 5\%$ No visible damage | | | | | | | | | | | | | | | |
| High Temperature Storage | IEC 60068-2-2 | 125±5°C x 1000± 24 hrs | $ \Delta V_{1mA}/V_{1mA} \leq 5\%$ No visible damage | | | | | | | | | | | | | | | |
| Damp Heat, Steady State | IEC 60068-2-78 | a. 40±2°C, 90 ~ 95 % RH, 1344 hrs b. 40±2°C, 90 ~ 95 % RH, at 10%Vdc, 1344 hrs | $ \Delta V_{1mA}/V_{1mA} \leq 10\%$ No visible damage I.R $\geq 100M\Omega$ | | | | | | | | | | | | | | | |
| Rapid Change Of Temperature | IEC 60068-2-14 | The conditions shown below shall be repeated 5 cycles. <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Period (minutes)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40±3</td> <td>30±3</td> </tr> <tr> <td>2</td> <td>Room temperature</td> <td>5±3</td> </tr> <tr> <td>3</td> <td>105±2</td> <td>30±3</td> </tr> <tr> <td>4</td> <td>Room temperature</td> <td>5±3</td> </tr> </tbody> </table> | Step | Temperature (°C) | Period (minutes) | 1 | -40±3 | 30±3 | 2 | Room temperature | 5±3 | 3 | 105±2 | 30±3 | 4 | Room temperature | 5±3 | $ \Delta V_{1mA}/V_{1mA} \leq 5\%$ No visible damage |
| Step | Temperature (°C) | Period (minutes) | | | | | | | | | | | | | | | | |
| 1 | -40±3 | 30±3 | | | | | | | | | | | | | | | | |
| 2 | Room temperature | 5±3 | | | | | | | | | | | | | | | | |
| 3 | 105±2 | 30±3 | | | | | | | | | | | | | | | | |
| 4 | Room temperature | 5±3 | | | | | | | | | | | | | | | | |
| High Temperature Load | MIL-STD-202 Method 108 | MVS3225P & MVS4032P Series: 85°C MVS5548P & MVS6255P Series: 105°C 1000±24 hrs at VDC or V _{rms} (Max. Continuous Voltage) | $ \Delta V_{1mA}/V_{1mA} \leq 10\%$ R $\geq 1000M\Omega$ No visible damage | | | | | | | | | | | | | | | |
| 8/20µs Surge Life | IEC 61051-1 | 8/20µs waveform, 10 surge currents, unipolar, interval 30 secs, amplitude corresponding to max. Surge current derating curves for 20µs. | $ \Delta V_{1mA}/V_{1mA} \leq 10\%$ No visible damage | | | | | | | | | | | | | | | |
| 10/1000µs Surge Life | IEC 61051-1 | 10/1000µs waveform, 10 surge currents, unipolar, interval 2 mins, amplitude corresponding to max. Surge current derating curves for 1000µs. | $ \Delta V_{1mA}/V_{1mA} \leq 10\%$ No visible damage | | | | | | | | | | | | | | | |
| Voltage Proof | IEC 61051-1 | Metal balls method, 2500 V _{AC} 1 min | No visible damage | | | | | | | | | | | | | | | |
| Varistor Voltage Temperature Coefficient | IEC 60068-2-6 | MVS3225P & MVS4032P Series: measured at -40°C, +85°C and +25°C MVS5548P & MVS6255P Series: measured at -40°C, +105°C and +25°C | -0.05~-0.05 (%/°C) | | | | | | | | | | | | | | | |

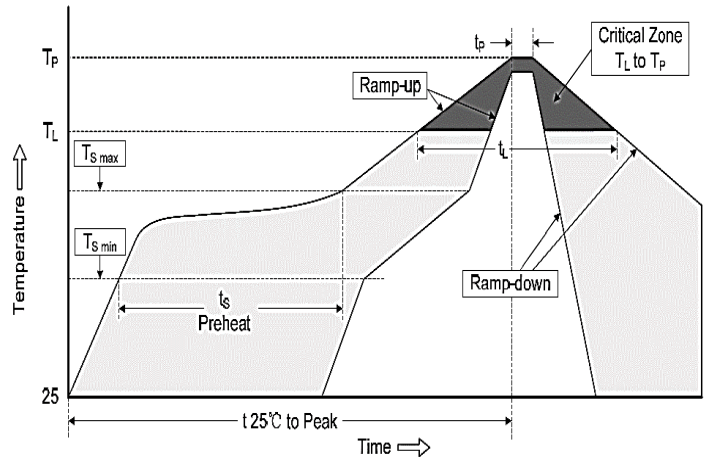
Metal Oxide Varistor Plastic Encapsulated Type

MVS-P Series

MERITEK

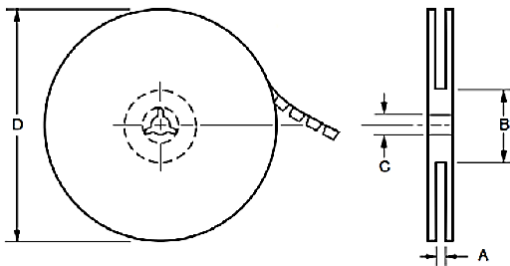
RECOMMENDED SOLDERING PROFILES

| Reflow Condition | | |
|--|-------------------------------|------------------|
| Pre Heat | Temp. Min $T_{s(min)}$ | 150°C |
| | Temp. Max $T_{s(max)}$ | 200°C |
| | Time (min. to max.) (t_s) | 30 ~ 90 seconds |
| Average ramp up rate $T_{s(max)}$ to T_L | | 3°C/second max. |
| Average ramp up rate T_L to peak | | 3°C/second max. |
| Reflow | Temp. (T_L) | 217°C |
| | Time (min. to max.) (t_L) | 60 ~ 150 seconds |
| Peak Temperature (T_P) | | 260°C |
| Time within 5°C of actual peak Temperature (t_p) | | <10 seconds |
| Ramp-down Rate | | 5°C/second max. |

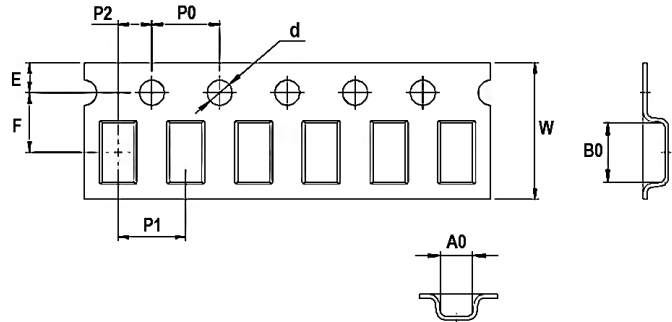


PACKAGING DIMENSION

Reel Specification



Plastic Tape Specification



| EIA Size | Reel Dimension (mm) | | | | Tape Dimensions (mm) | | | | | | | | | 13in Reel |
|----------|---------------------|--------|------|--------|----------------------|---------|--------|---------|--------|---------|---------|----------|--------|--------------|
| | A ±1 | B ±1.5 | C ±1 | D ±0.1 | A0 ±0.2 | B0 ±0.2 | E ±0.1 | F ±0.05 | W ±0.3 | P1 ±0.3 | P0 ±0.1 | P2 ±0.05 | d ±0.1 | Pcs Per Reel |
| 3225 | 17.0 | 75.0 | 12.5 | 340 | 7.0 | 8.7 | 1.75 | 7.5 | 16.0 | 12.0 | 4.0 | 2.0 | 1.5 | 1000 |
| 4032 | 17.0 | 75.0 | 12.5 | 340 | 8.6 | 10.6 | 1.75 | 7.5 | 16.0 | 12.0 | 4.0 | 2.0 | 1.5 | 1000 |
| 5548 | 2.0 | 75.0 | 13.5 | 340 | 12.5 | 14.3 | 1.75 | 11.5 | 24.0 | 20.0 | 4.0 | 2.0 | 1.5 | 500 |
| 6255 | 2.0 | 75.0 | 13.5 | 340 | 14.7 | 16.4 | 1.75 | 14.2 | 32.0 | 20.0 | 4.0 | 2.0 | 1.5 | 500 |

*Specifications subject to change without notice.