



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638

Phone: (562) 404-4474 * Fax: (562) 404-1773

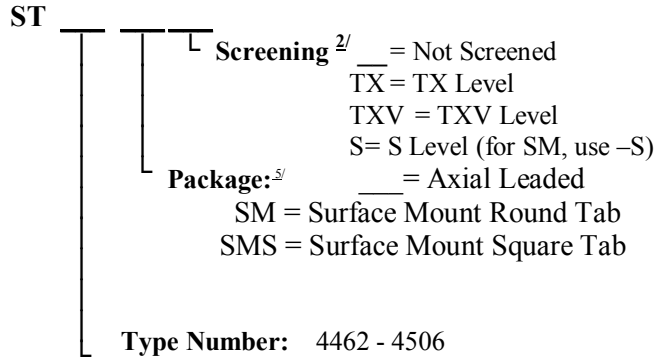
ssdi@ssdi-power.com * www.ssdi-power.com

**ST4462 – ST4506
Series**

**150 W Transient Voltage Suppressor
7.5 – 510 VOLTS**

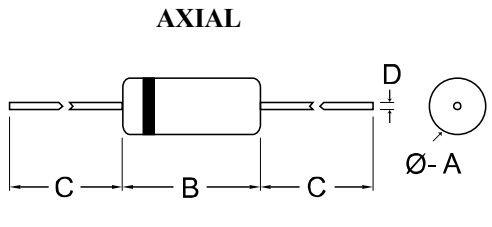
DESIGNER'S DATA SHEET

Part Number / Ordering Information^{1/}

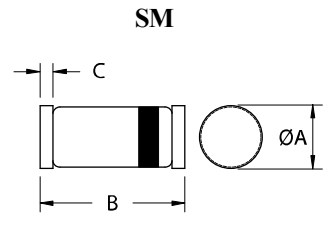


- FEATURES:**
- Hermetically Sealed
 - Low Reverse Leakage
 - Voltage up to 510V
 - Ultra Miniature
 - TX, TXV, and Space Level Screening Available^{2/}
 - 5 Times Greater Surge Than JAN13016 Series
 - ¼ Size of conventional 1 W Zeners

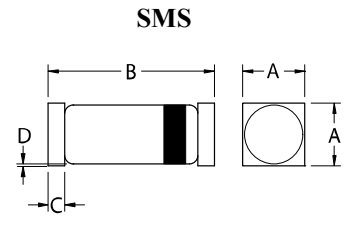
| Maximum Ratings | Symbol | Value | Units |
|--|------------------------------------|-------------|-------|
| Peak pulse power dissipation with a 10/1000 µs waveform | P _{PPM} | 150 | W |
| Steady State Power Dissipation | P _D | 3 | W |
| Operating and Storage Temp. | T _{op} & T _{stg} | -65 to +175 | °C |
| Maximum Forward Voltage Drop I _F = 1.0 Apk, T _A = 25 °C, pulsed | V _F | 1.5 | V |
| Thermal Resistance, (axial) Junction to Lead L=3/8" | P _{θJL} | 42 | °C/W |
| Thermal Resistance, (end tab) Junction to Tab | R _{θJE} | 32 | °C/W |



| DIM | MIN | MAX |
|-----|-------|-------|
| A | --- | .085" |
| B | --- | .170" |
| C | 1.00" | --- |
| D | .028" | .034" |



| DIM | MIN | MAX |
|-----|--------|--------|
| A | .075" | 0.085" |
| B | .125" | 0.150" |
| C | 0.010" | 0.022" |



| DIM | MIN | MAX |
|-----|--------|-------|
| A | .090" | .100" |
| B | .175" | .215" |
| C | .022" | .028" |
| D | 0.001" | --- |



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Electrical Characteristics @ 25 °C

| Part Number | Nominal Zener Voltage ^{2/} | Minimum Reverse Breakdown Voltage ^{2/} | Test Current | Clamping Voltage | | Maximum Reverse Standoff | | Maximum Continuous Current ^{2/} | Typical Temperature Coefficient |
|-------------|-------------------------------------|---|-----------------|----------------------------------|--------------------------------------|--------------------------|----------------|--|----------------------------------|
| | V _Z @ I _{ZT} | V _Z @ I _{ZT} | I _{ZT} | V _c @ I _{pp} | Peak ^{4/} @ I _{pp} | I _R | V _R | I _{RM} | T _c @ I _{ZT} |
| | Volts | Volts | mA | Volts | Amps | µA | Volts | mA | %/°C |
| ST4462 | 7.5 | 7 | 100 | 11.3 | 13.3 | 1500 | 6.2 | 240 | .07 |
| ST4463 | 8.2 | 7.7 | 100 | 12.3 | 12.2 | 1200 | 6.8 | 220 | .08 |
| ST4464 | 9.1 | 8.5 | 50 | 13.3 | 11.3 | 100 | 7.5 | 200 | .08 |
| ST4465 | 10 | 9.4 | 50 | 14.8 | 10.1 | 20 | 8.2 | 180 | .09 |
| ST4466 | 11 | 10.4 | 50 | 15.7 | 9.6 | 5 | 9.1 | 150 | .10 |
| ST4467 | 12 | 11.4 | 50 | 17 | 8.8 | 5 | 10 | 140 | .10 |
| ST4468 | 13 | 12.4 | 50 | 18.9 | 7.9 | 5 | 11 | 120 | .10 |
| ST4469 | 15 | 13.8 | 50 | 20.9 | 7.2 | 5 | 12 | 110 | .10 |
| ST4470 | 16 | 15.3 | 25 | 22.9 | 6.6 | 5 | 13 | 100 | .11 |
| ST4471 | 18 | 16.8 | 25 | 25.6 | 5.9 | 5 | 15 | 90 | .11 |
| ST4472 | 20 | 18.8 | 25 | 28.4 | 5.3 | 5 | 16 | 80 | .11 |
| ST4473 | 22 | 20.8 | 25 | 31 | 4.8 | 5 | 18 | 75 | .11 |
| ST4474 | 24 | 22.8 | 25 | 33.8 | 4.4 | 5 | 20 | 65 | .11 |
| ST4475 | 27 | 25.1 | 25 | 38.1 | 3.9 | 5 | 22 | 60 | .11 |
| ST4476 | 30 | 28 | 25 | 42.2 | 3.6 | 5 | 24 | 55 | .11 |
| ST4477 | 33 | 31 | 25 | 46.2 | 3.2 | 5 | 27 | 50 | .11 |
| ST4478 | 36 | 34 | 10 | 50.1 | 3 | 5 | 30 | 40 | .11 |
| ST4479 | 39 | 37 | 10 | 54.1 | 2.8 | 5 | 33 | 35 | .11 |
| ST4480 | 43 | 40 | 10 | 60.7 | 2.5 | 5 | 36 | 33 | .13 |
| ST4481 | 47 | 44 | 10 | 65.5 | 2.3 | 5 | 39 | 30 | .13 |
| ST4482 | 51 | 48 | 10 | 70.8 | 2.1 | 5 | 43 | 27 | .13 |
| ST4483 | 56 | 52 | 10 | 78.6 | 1.9 | 5 | 47 | 24 | .13 |
| ST4484 | 62 | 58 | 10 | 86.5 | 1.7 | 5 | 51 | 21 | .13 |
| ST4485 | 68 | 64 | 10 | 94.4 | 1.6 | 5 | 56 | 18 | .13 |
| ST4486 | 75 | 70 | 10 | 103.5 | 1.5 | 5 | 62 | 18 | .13 |
| ST4487 | 82 | 77 | 10 | 114 | 1.3 | 5 | 68 | 15 | .13 |
| ST4488 | 91 | 85 | 5 | 126 | 1.2 | 5 | 75 | 15 | .13 |
| ST4489 | 100 | 94 | 5 | 139 | 1.1 | 5 | 82 | 12 | .13 |
| ST4490 | 110 | 104 | 5 | 152 | 1 | 5 | 91 | 12 | .13 |
| ST4491 | 120 | 114 | 5 | 167 | 0.9 | 5 | 100 | 12 | .13 |
| ST4492 | 130 | 124 | 5 | 185 | 0.81 | 5 | 110 | 12 | .13 |
| ST4493 | 150 | 138 | 5 | 204 | 0.73 | 5 | 120 | 11 | .13 |
| ST4494 | 160 | 153 | 5 | 224 | 0.67 | 5 | 130 | 11 | .13 |
| ST4495 | 180 | 168 | 5 | 249 | 0.6 | 5 | 150 | 9 | .13 |
| ST4496 | 200 | 188 | 5 | 276 | 0.54 | 5 | 160 | 9 | .13 |
| ST4497 | 220 | 208 | 2 | 305 | 0.5 | 5 | 180 | 9 | .13 |
| ST4498 | 240 | 228 | 2 | 336 | 0.45 | 5 | 200 | 7 | .13 |
| ST4499 | 270 | 251 | 2 | 380 | 0.4 | 5 | 220 | 7 | .13 |
| ST4500 | 300 | 280 | 2 | 419 | 0.36 | 5 | 240 | 6.5 | .14 |
| ST4501 | 330 | 310 | 2 | 459 | 0.33 | 5 | 270 | 6 | .14 |
| ST4502 | 360 | 340 | 2 | 498 | 0.3 | 5 | 300 | 5.5 | .14 |
| ST4503 | 390 | 370 | 2 | 537 | 0.28 | 5 | 330 | 4.8 | .14 |
| ST4504 | 430 | 400 | 2 | 603 | 0.25 | 5 | 360 | 4.2 | .15 |
| ST4505 | 470 | 440 | 2 | 655 | 0.23 | 5 | 390 | 4.2 | .15 |
| ST4506 | 510 | 480 | 2 | 707 | 0.21 | 5 | 430 | 3.6 | .16 |

NOTES:

- 1 For ordering information, price, operating curves, and availability – contact factory.
- 2 Screening based on MIL-PRF-19500. Screening flows available on request.
- 3 All voltages are measured with an automated test set using a 35 msec test time. Longer or shorter test times will have a corresponding effect on the measured value due to heating effects.
- 4 Non-repetitive peak reverse current pulse.
- 5 Ratings based on T_L=100°C @ L=3/8". For SM or SMS, multiply by 1.66.

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: T00029C

DOC