



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

DESIGNER'S DATA SHEET

FEATURES:

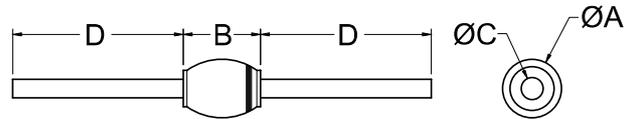
- Hermetically Sealed in Glass
- Rated at 5 W
- Available in Axial and Square Tab Surface Mount (SMS) version
- Available to TX, TXV, and Space Levels
- Replacement for Microsemi UZ5706 and UZ5806 Series.

Note:

SSDI's Zeners offer standard Voltage Tolerance of $\pm 10\%$ and $\pm 5\%$. For other Voltages and Voltage Tolerances, contact SSDI's Marketing Department.

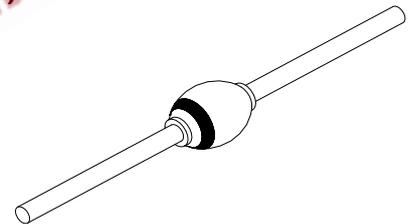
**SZ5706 thru SZ5890
 And
 SZ5110 thru SZ5227**

**5.0 WATT
 6.8 – 270 VOLTS
 ZENER DIODES**

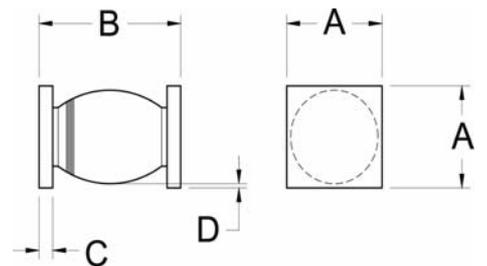


| DIM | MIN. | MAX |
|-----|-------|-------|
| A | --- | .158" |
| B | --- | .185" |
| C | .047" | .053" |
| D | 1.00" | --- |

AXIAL (L)



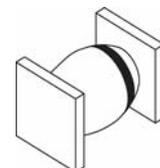
| Maximum Ratings | Symbol | Value | Units |
|---|-----------------|-------------|-------|
| Nominal Zener Voltage | V_Z | 6.8 - 270 | V |
| Maximum Zener Current | I_{ZM} | 16 - 675 | mA |
| Forward Surge Current (8.3 msec Puls) | I_{FSM} | .30 - 40 | A |
| Continuous Power | P_D | 5.0 | W |
| Operating and Storage Temp. | Top & Tstg | -65 to +175 | °C |
| Thermal Resistance, Junction to Lead L=3/8" (Axial) | $R_{\theta JL}$ | 22 | °C/W |
| Thermal Resistance, Junction to End Cap (SMS) | $R_{\theta JE}$ | 7 | °C/W |



| DIM | MIN. | MAX. |
|-----|------------------------------|-------|
| A | .155" | .185" |
| B | .190" | .220" |
| C | .020" | .030" |
| D | Body to Tab Clearance: .001" | |

SQUARE TAB (SMS)

All dimensions are prior to soldering



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

DATA SHEET #: Z00007C

DOC



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**SZ5706 thru SZ5890
 And
 SZ5110 thru SZ5227**

| Electrical Characteristics | | | | | | | | | | |
|----------------------------|-----------------------------------|--------------------|-------------------------------------|---------------------------------|---------|--------|-------|---------------------------------|--------------------------------|-----------------------------------|
| PART NUMBER (note 6) | ELECTRICAL SPECIFICATIONS @ 25°C | | | | | | | | MAXIMUM RATINGS | |
| | Nominal Zener Voltage (note 1) | Zener Test Current | Maximum Zener Impedance (note 2) | Maximum Reverse Leakage Current | | | | Typical Temperature Coefficient | Maximum Continuous (note 3) | Maximum Surge Current (note 4) |
| | VOLTAGE TOLERANCE | VZ @ IZT | IZT | ZZ @ IZT | IR @ VR | VR | | TC @ IZT | IZM | IS |
| 10% | 5% | VOLT | mA | Ohms | µA | 10%(A) | 5%(B) | %/°C | mA | Amps |
| SZ5806 | SZ5706 | 6.8 | 175 | 1.0 | 500 | 4.9 | 5.2 | .05 | 675 | 40 |
| SZ5807 | SZ5707 | 7.5 | 175 | 1.5 | 400 | 5.4 | 5.7 | .06 | 620 | 32 |
| SZ5808 | SZ5708 | 8.2 | 150 | 1.5 | 200 | 5.9 | 6.2 | .06 | 570 | 24 |
| SZ5809 | SZ5709 | 9.1 | 150 | 2.0 | 100 | 6.6 | 6.9 | .06 | 510 | 22 |
| SZ5810 | SZ5710 | 10 | 125 | 2.0 | 75 | 7.2 | 7.6 | .07 | 470 | 20 |
| SZ5812 | SZ5712 | 12 | 100 | 2.5 | 50 | 8.6 | 9.1 | .07 | 385 | 18 |
| SZ5813 | SZ5713 | 13 | 100 | 3.0 | 25 | 9.3 | 9.9 | .08 | 350 | 16 |
| SZ5814 | SZ5714 | 14 | 100 | 3.0 | 20 | 10.1 | 10.6 | .08 | 320 | 14 |
| SZ5815 | SZ5715 | 15 | 75 | 3.5 | 15 | 10.8 | 11.4 | .08 | 300 | 12 |
| SZ5816 | SZ5716 | 16 | 75 | 3.5 | 10 | 11.5 | 12.2 | .08 | 275 | 10 |
| SZ5818 | SZ5718 | 18 | 65 | 4.0 | 10 | 12.9 | 13.7 | .085 | 255 | 9.0 |
| SZ5820 | SZ5720 | 20 | 65 | 4.5 | 10 | 14.4 | 15.2 | .085 | 220 | 8.0 |
| SZ5822 | SZ5722 | 22 | 50 | 5.0 | 10 | 15.8 | 16.7 | .085 | 195 | 7.0 |
| SZ5824 | SZ5724 | 24 | 50 | 5.0 | 10 | 17.3 | 18.2 | .09 | 180 | 6.5 |
| SZ5827 | SZ5727 | 27 | 50 | 6.0 | 10 | 19.4 | 20.6 | .09 | 155 | 6.0 |
| SZ5830 | SZ5730 | 30 | 40 | 8.0 | 10 | 21.6 | 22.8 | .09 | 140 | 5.5 |
| SZ5833 | SZ5733 | 33 | 40 | 10 | 5 | 23.7 | 25.1 | .09 | 130 | 5.0 |
| SZ5836 | SZ5736 | 36 | 30 | 11 | 5 | 25.9 | 27.4 | .095 | 120 | 4.5 |
| SZ5840 | SZ5740 | 40 | 30 | 14 | 5 | 28.8 | 30.4 | .095 | 105 | 4.0 |
| SZ5845 | SZ5745 | 45 | 30 | 20 | 5 | 32.4 | 34.2 | .095 | 95 | 3.5 |
| SZ5850 | SZ5750 | 50 | 25 | 25 | 5 | 36.0 | 38.0 | .095 | 85 | 3.0 |
| SZ5856 | SZ5756 | 56 | 20 | 35 | 5 | 40.3 | 42.6 | .095 | 80 | 2.8 |
| SZ5860 | SZ5760 | 60 | 20 | 40 | 5 | 43.2 | 45.7 | .100 | 75 | 2.5 |
| SZ5870 | SZ5770 | 70 | 20 | 50 | 5 | 50.5 | 53.3 | .100 | 65 | 2.3 |
| SZ5875 | SZ5775 | 75 | 15 | 55 | 5 | 54.0 | 56.0 | .100 | 60 | 2.0 |
| SZ5880 | SZ5780 | 80 | 15 | 80 | 5 | 57.7 | 60.8 | .100 | 55 | 1.8 |
| SZ5890 | SZ5790 | 90 | 15 | 90 | 5 | 64.8 | 68.5 | .100 | 50 | 1.6 |
| SZ5210 | SZ5110 | 100 | 10 | 100 | 5 | 72.0 | 76.0 | .100 | 45 | 1.4 |
| SZ5211 | SZ5111 | 110 | 10 | 125 | 5 | 79.2 | 83.6 | .100 | 40 | 1.2 |
| SZ5212 | SZ5112 | 120 | 10 | 170 | 5 | 86.4 | 91.2 | .100 | 38 | 1.0 |
| SZ5213 | SZ5113 | 130 | 10 | 190 | 5 | 93.6 | 98.8 | .105 | 35 | 0.80 |
| SZ5214 | SZ5114 | 140 | 8 | 230 | 5 | 101.0 | 106.0 | .105 | 33 | 0.80 |
| SZ5215 | SZ5115 | 150 | 8 | 330 | 5 | 108.0 | 114.0 | .105 | 31 | 0.75 |
| SZ5216 | SZ5116 | 160 | 8 | 350 | 5 | 115.0 | 122.0 | .105 | 30 | 0.70 |
| SZ5217 | SZ5117 | 170 | 8 | 380 | 5 | 122.0 | 129.0 | .105 | 27 | 0.65 |
| SZ5218 | SZ5118 | 180 | 5 | 450 | 5 | 129 | 137 | .110 | 25 | 0.60 |
| SZ5219 | SZ5119 | 190 | 5 | 470 | 5 | 137 | 144 | .110 | 24 | 0.55 |
| SZ5220 | SZ5120 | 200 | 5 | 500 | 5 | 144 | 152 | .110 | 22 | 0.50 |
| SZ5222 | SZ5122 | 220 | 5 | 550 | 5 | 158 | 167 | .115 | 20 | 0.45 |
| SZ5224 | SZ5124 | 240 | 5 | 650 | 5 | 173 | 182 | .115 | 18 | 0.40 |
| SZ5226 | SZ5126 | 260 | 5 | 750 | 5 | 187 | 198 | .120 | 17 | 0.35 |
| SZ5227 | SZ5127 | 270 | 4 | 850 | 5 | 202 | 213 | .120 | 16 | 0.30 |

NOTES:

- 1) All zener voltages are measured with an automated test set using a 35 msec test time. Longer or shorter test time will have a corresponding effect on the measured value due to heating effects.
- 2) Zener impedance is derived from the AC voltage divided by the AC current with RMS value of 10% of DC zener test current superimposed on the test current.
- 3) Ratings based on maximum zener voltage of individual units (leaded units).
- 4) Figures shown are for a peak sinusoidal surge current of 8.3 msec duration, non-repetitive. The 8.3 msec square pulse rating is 71% of the value shown.
- 5) SSDI standard marking consists of a contrasting color cathode dot or band. Part number information is included on packaging labels.
- 6) Suffix "L" for axial lead, "SM" for surface mount Round Tab. "SMS" for Square Tab.

For optional high reliability screening or higher nominal zener voltages, consult SSDI MARKETING Department.