



**Solid State Devices, Inc.**

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**DESIGNER'S DATA SHEET**

**Part Number/Ordering Information**

**SZ5**

**Screening <sup>Z</sup>**

- \_\_\_ = Not Screened
- TX = TX Level
- TXV = TXV
- S = S Level

**Package Type**

- \_\_\_ = Axial Leaded
- SMS = Surface Mount Square Tab
- K = 40 Mil Lead Diameter

**Voltage Code (See Table II)**

- 06 thru 90
- 10 thru 27

**Tolerance Code (See Table II)**

- 52 & 58 = 10%
- 51 & 57 = 5%

**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 <sup>Z</sup>
- Replacement for Microsemi UZ5706 and UZ5806 Series.

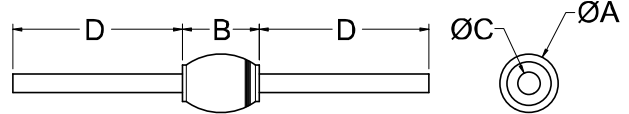
**Note:**

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

Maximum Ratings (Table I)	Symbol	Value	Units
Nominal Zener Voltage	V <sub>Z</sub>	6.8 - 270	V
Maximum Zener Current	I <sub>ZM</sub>	16 - 675	mA
Forward Surge Current (8.3 msec Puls)	I <sub>FSM</sub>	.30 - 40	A
Continuous Power	P <sub>D</sub>	5.0	W
Operating and Storage Temp.	Top & Tstg	-65 to +175	°C
Thermal Resistance, Junction to Lead L=3/8" (Axial)	___ - axial	34	°C/W
	K - axial	45	
Thermal Resistance, Junction to End Cap (SMS)	R <sub>0JE</sub>	7	°C/W

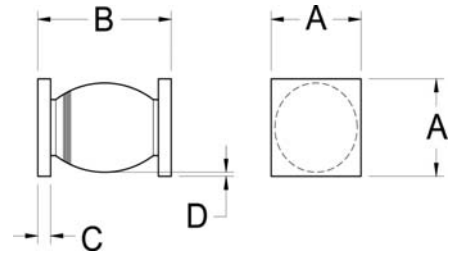
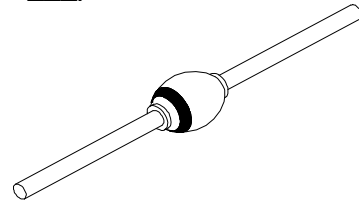
**SZ5706 thru SZ5890  
 And  
 SZ5110 thru SZ5227**

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



DIM	MIN.	MAX
A	---	.158"
B	---	.185"
C (___)	.047"	.053"
C (K)	.038"	.042"
D	1.00"	---

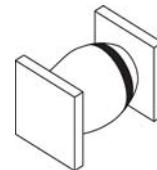
**AXIAL(K & \_\_\_)**



DIM	MIN.	MAX.
A	.155"	.185"
B	.190"	.225"
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.

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**SZ5706 thru SZ5890**

**And**

**SZ5110 thru SZ5227**

**Electrical Characteristics (Table II)**

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	IZSM
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 (lead 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 "SM" for surface mount Round Tab. "SMS" for Square Tab.
- 7) Screening based on MIL-PRF-19500. Screening flows available on request.
- 8) For optional high reliability screening or higher nominal zener voltages, consult SSDI MARKETING Department.

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