



# Solid State Devices, Inc.

14830 Valley View Blvd \* La Mirada, Ca 90638

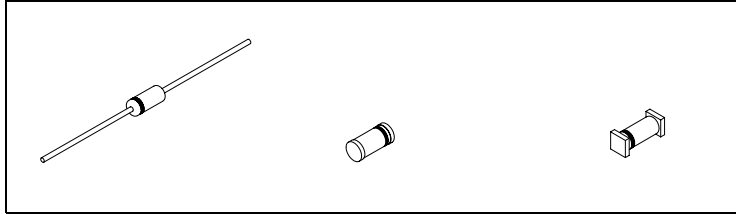
Phone: (562) 404-7855 \* Fax: (562) 404-1773

ssdi@ssdi-power.com \* [www.ssdi-power.com](http://www.ssdi-power.com)

## DESIGNER'S DATA SHEET

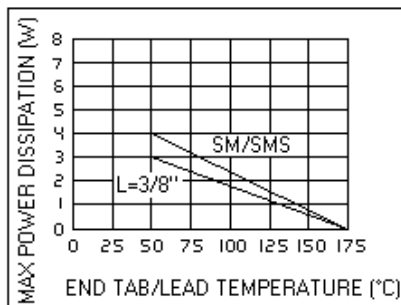
### FEATURES:

- High Surge Rating
- Hermetically Sealed in Glass
- Available to TX, TXV, and Space Levels

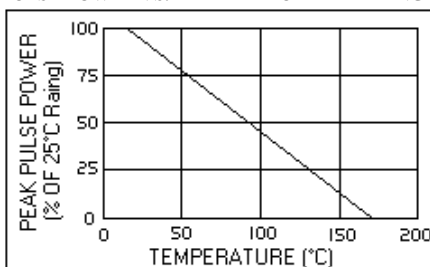


Maximum Ratings			
CHARACTERISTICS	Symbol	Value	Units
Steady Off Voltage	$V_{RWM}$	3-370	V
Steady State Power Dissipation	$P_D$	3	W
Peak Pulse Power @ 1.0 msec	$P_{PP}$	150	W
Peak Pulse Power And Steady State Power Derating	See Graph		
Peak Pulse Power And Pulse Width	See Graph		
Operating and Storage Temperature	-65°C to + 175°C		

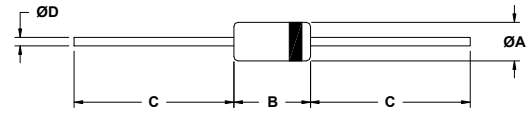
STEADY STATE POWER VS. TEMPERATURE DERATING CURVE



PEAK PULSE POWER VS. TEMPERATURE DERATING CURVE

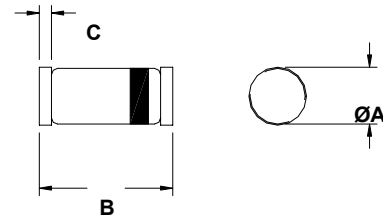


## 150 WATT 7.5 – 510 VOLTS TRANSIENT SUPPRESSOR



DIM	MIN.	MAX
A	---	.085"
B	---	.170"
C	1.0"	---
D	.028"	.034"

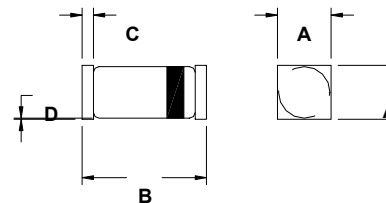
### AXIAL(L)



DIM	MIN	MAX
A	.077"	.083"
B	.130"	.146"
C	.010"	.022"

### ROUND TAB (SM)

All dimensions are prior to soldering



DIM	MIN.	MAX.
A	.090"	.100"
B	.175"	.215"
C	.022"	.028"
D	Body to Tab Clearance: .002"	

### SQUARE TAB (SMS)

All dimensions are prior to soldering

### Note:

SSDI's Transient Suppressors offer standard Breakdown Voltage Tolerance of  $\pm 10\%$ (A) and  $\pm 5\%$ (B). For other Voltages and Voltage Tolerances, contact SSDI's Marketing Department.

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

DATA SHEET #: T00001B

DOC



# ST150A7.5 thru ST150A510

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### ELECTRICAL CHARACTERISTICS

PART NUMBER	Break Down (note 1)		MAX REVERSE STANDOFF		PEAK PULSE CLAMPING		MAXIMUM	DYNAMIC	MAXIMUM
	Nominal Voltage	Test Current	Voltage	Reverse Leakage Current	Voltage (max.)	@ Current tp=1ms (NOTE 4)	CONTINUOUS (NOTE 3)	IMPEDANCE (NOTE 2)	TEMPERATURE COEFFICIENT
	VBR	@IBRT	VRWM	IR @ VRWM	Vc	IPP	IRM	ZBR @ IBRT	TC @ 25°C
For 5% Voltage Tolerance Specify "B" in place "A"	<b>Volts</b>	<b>mA</b>	<b>Volts</b>	<b>µA</b>	<b>Volts</b>	<b>A</b>	<b>mA</b>	<b>Ohms</b>	<b>%/°C</b>
ST150A7.5	7.5	100	3	50	13.3	11.3	400	2	.07
ST150A8.2	8.2	100	4	10	14.8	10.1	360	2	.08
ST150A9.1	9.1	50	5	10	15.7	9.6	330	4	.08
ST150A10	10	50	7.1	7	17.0	8.8	300	4	.09
ST150A11	11	50	7.8	3	18.9	7.9	250	7	.10
ST150A12	12	50	8.6	2	20.9	7.2	230	7	.10
ST150A13	13	50	9.5	2	22.9	6.6	200	10	.10
ST150A15	15	50	10.5	1	25.6	5.9	185	10	.10
ST150A16	16	25	11.4	1	28.4	5.3	170	15	.11
ST150A18	18	25	12.4	1	31.0	4.8	150	15	.11
ST150A20	20	25	14.3	1	33.8	4.4	135	15	.11
ST150A22	22	25	15.5	1	38.1	3.9	125	15	.11
ST150A24	24	25	17.1	1	42.2	3.6	110	15	.11
ST150A27	27	25	19.0	1	46.2	3.2	100	15	.11
ST150A30	30	25	20	1	50.1	3.0	90	15	.11
ST150A33	33	10	23	1	54.1	2.8	85	15	.11
ST150A36	36	10	26	1	60.7	2.5	65	40	.11
ST150A39	39	10	29	1	65.5	2.3	60	40	.11
ST150A43	43	10	31	1	70.8	2.1	55	45	.13
ST150A47	47	10	34	1	78.6	1.9	50	45	.13
ST150A51	51	10	37	1	86.5	1.7	45	60	.13
ST150A56	56	10	41	1	94.4	1.6	40	60	.13
ST150A62	62	10	45	1	103	1.5	35	80	.13
ST150A68	68	10	49	1	114	1.3	30	80	.13
ST150A75	75	10	53	1	126	1.2	30	100	.13
ST150A82	82	10	59	1	139	1.1	25	100	.13
ST150A91	91	5	65	1	152	1.0	25	200	.13
ST150A100	100	5	71	1	167	0.90	20	200	.13
ST150A110	110	5	77	1	185	0.81	20	250	.13
ST150A120	120	5	86	1	204	0.73	20	250	.13
ST150A130	130	5	95	1	224	0.67	20	300	.13
ST150A150	150	5	105	1	249	0.60	18	300	.13
ST150A160	160	5	114	1	276	0.54	18	350	.13
ST150A180	180	5	124	1	305	0.50	15	400	.13
ST150A200	200	2	143	1	336	0.45	15	500	.13
ST150A220	220	2	152	1	380	0.40	15	750	.13
ST150A240	240	2	171	1	419	0.36	12	850	.13
ST150A270	270	2	190	1	459	0.33	12	1000	.13
ST150A300	300	2	210	1	498	0.30	11	1500	.14
ST150A330	330	2	230	1	537	0.26	10	1900	.14
ST150A360	360	2	260	1	603	0.25	9	2200	.14
ST150A390	390	2	290	1	655	0.23	8	2800	.14
ST150A430	430	2	310	1	707	0.21	7	3500	.15
ST150A470	470	2	340	1	789	0.19	7	4500	.15
ST150A510	510	2	370	1	882	0.17	6	5500	.16

#### NOTES:

† Suffix "L" for axial lead, "SM" for surface mount Round Tab. "SMS" for Square Tab.

- 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 (leadless units). Multiply by 1.3 for SM and SMS devices.
- 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.

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

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**DOC**