ST150A7.5 thru ST150A510

PRELIMINARY DATA

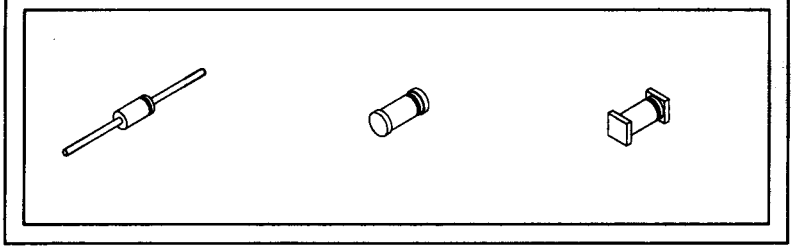
SOLID STATE DEVICES, INC
14849 Firestone Boulevard · La Mirada,CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

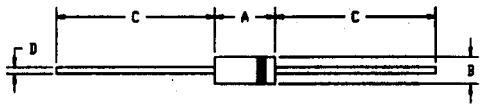
Designer's Data Sheet

150 WATT 7.5 - 510 VOLTS TRANSIENT SUPPRESSOR

FEATURES:

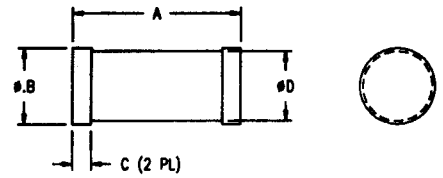
- High Surge Rating
- Hermetically Sealed in Glass
- Available to TX, TXV, and Space Levels





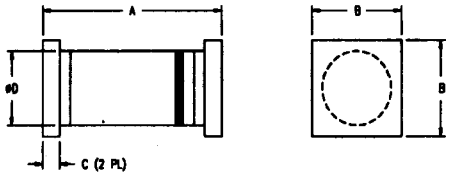
DIM	MIN.	MAX.
A	---	.170"
B	---	.085"
C	1.0"	---
D	.028"	.034"

AXIAL (L)



DIM	MIN.	MAX.
A	.130"	.146"
B	.077"	.083"
C	.010"	.022"
D	.072"	.078"

ROUND TAB (SM) All dimensions are prior to soldering



DIM	MIN.	MAX.
A	.175"	.200"
B	.090"	.100"
C	.023"	.027"
D	.077"	.083"

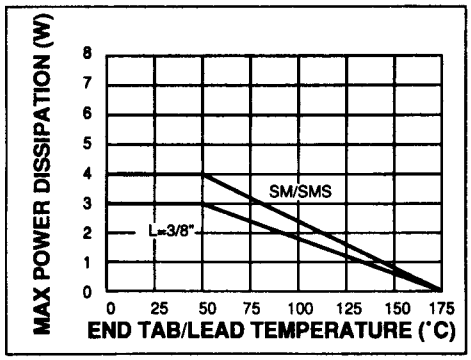
SQUARE TAB (SMS) All dimensions are prior to soldering

NOTE:
SSDI's Transient Suppressors offer standard Breakdown Voltage Tolerances of ± 10%(A) and ±5%(B). For other Voltages and Voltage Tolerances, contact SSDI's Marketing Department.

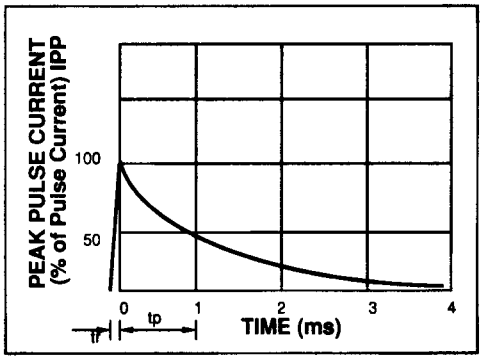
MAXIMUM RATINGS

CHARACTERISTICS	SYMBOL	VALUE	UNITS
Stand 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		

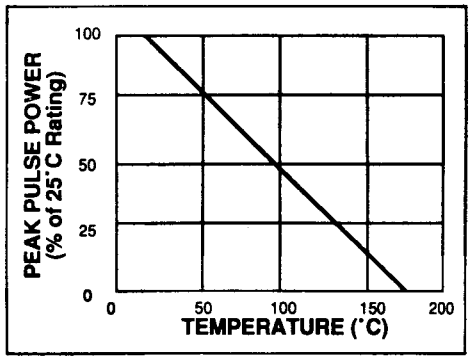
STEADY STATE POWER VS. TEMPERATURE DERATING CURVE



CURRENT PULSE WAVEFORM

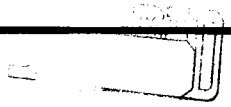


PEAK PULSE POWER VS. TEMPERATURE DERATING CURVE



PRELIMINARY DATA

ST150A7.5 thru ST150A510



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ELECTRICAL CHARACTERISTICS

PART † NUMBER	BREAK DOWN (note 1)		MAX REVERSE STAND OFF		PEAK PULSE CLAMPING		MAXIMUM CONTINUOUS CURRENT (note3)	DYNAMIC IMPEDANCE (note 2)	MAXIMUM TEMPERATURE COEFFICIENT
	Nominal Voltage	Test Current	Voltage	Reverse Leakage Current	Voltage (max.)	@ Current tp=1ms (note 4)			
	V_{BR}	@I_{BRT}	V_{RWM}	I_R @ V_{RWM}	V_C	I_{PP}	I_{RM}	Z_{BR} @ I_{BRT}	TC @25°C
For 5% Voltage Tolerance specify "B" in place of "A"	**Volts**	**mA**	**Volts**	**µA**	**Volts**	**A**	**mA**	**Ohms**	**%/°C**
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	0.28	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

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

NOTES:

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

1) 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.
2) Dynamic impedance is derived from the AC voltage divided by the AC current with RMS value of 10% of DC test current superimposed on the test current.
3) Ratings based on 100°C End tab temperature; for leaded devices multiply by 0.6
4) Pulse width (tp) is defined as the time from rated peak pulse current IPP to the point where peak pulse current decayed to 50% of rated IPP. (10µs X 1000µs waveform as defined by R.E.A.)
5) SSDI standard marking consists of a contrasting color cathode dot or band. Part Number information is included on packaging labels.