ST1.5KA7.5 thru ST1.5KA270

PRELIMINARY DATA

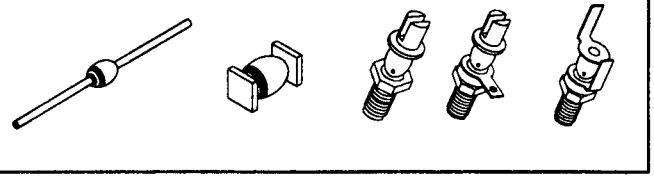
SOLID STATE DEVICES, INC
14849 Firestone Boulevard · La Mirada,CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

Designer's Data Sheet

1500 WATT 7.5-270 VOLTS TRANSIENT SUPPRESSORS

FEATURES:

- Hermetically Sealed in Glass
- Metallurgically Bonded
- Surface Mount Versions Available
- Ministud versions available
- Available to TX, TXV, and Space Levels

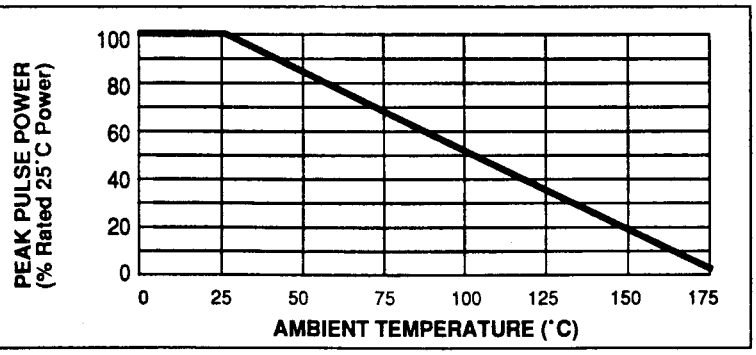


MAXIMUM RATINGS

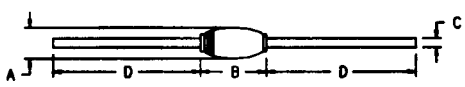
CHARACTERISTICS	SYMBOL	VALUE	UNITS
Stand Off Voltage	V_{RWM}	5.6-200	V
Steady State Power Dissipation	P_D	6	W
Peak Pulse Power @ 1.0 msec	P_{PP}	1500	W
Forward Surge Current	I_{FSM}	150	A
Peak Pulse Power and Steady State Power Derating		See Graph	
Peak Pulse Power and Pulse Width		See Graph	
Operating and Storage Temperature		-65°C to +175°C	

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.

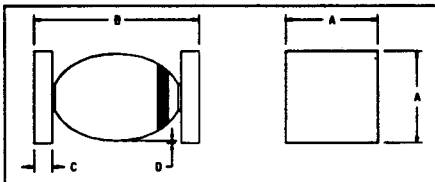
PEAK PULSE POWER VS. TEMPERATURE DERATING CURVE



AXIAL

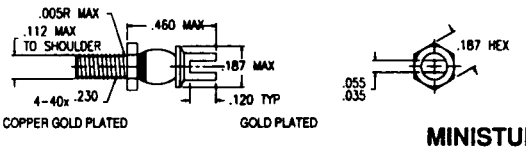


DIM	MIN.	MAX.
A	---	.180"
B	---	.200"
C	.047"	.053"
D	1.0"	---

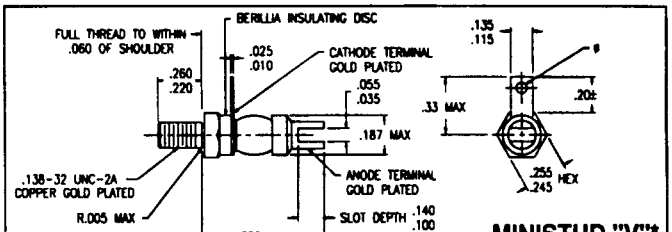


DIM	MIN.	MAX.
A	.172"	.180"
B	---	.250"
C	.023"	.027"
D	.005"	---

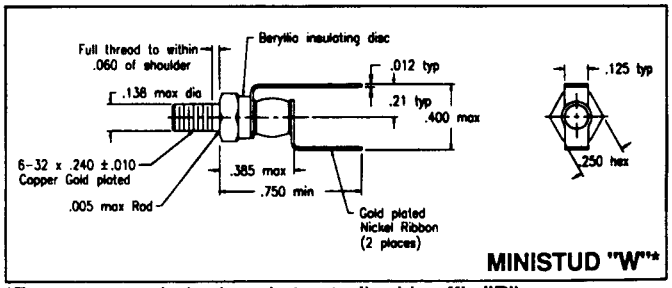
SQUARE TAB (SMS) All dimensions are prior to soldering



MINISTUD "C"*



MINISTUD "V"*



MINISTUD "W"*

*For reverse polarity (anode to stud) add suffix "R"

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

DATA SHEET #: T00002 A

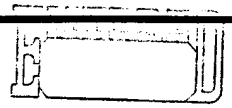
RMD

PRELIMINARY DATA

ST1.5KA7.5 thru ST1.5KA270

SOLID STATE DEVICES, INC

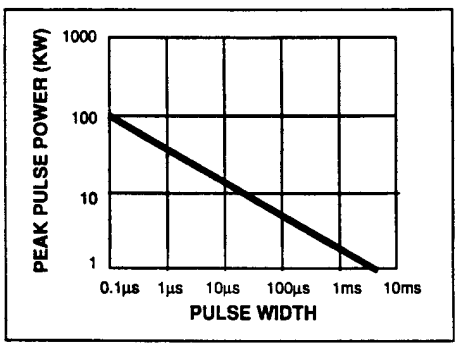
14849 Firestone Boulevard · La Mirada,CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424



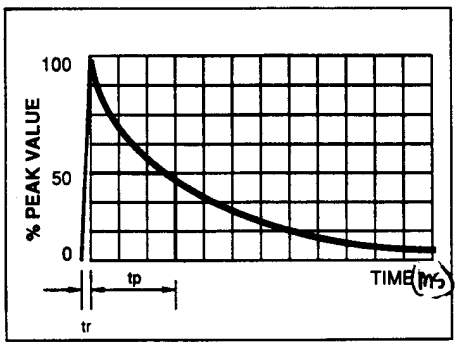
ELECTRICAL CHARACTERISTICS

PART † NUMBER	BREAK DOWN (note 1)		MAX REVERSE STAND OFF		PEAK PULSE CLAMPING		MAXIMUM CONTINUOUS CURRENT (note 3)	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**
ST1.5KA7.5	7.5	175	5.6	1500	11.7	128	1250	0.7	.03
ST1.5KA8.2	8.2	150	6.2	1200	12.5	120	1150	0.8	.03
ST1.5KA9.1	9.1	150	6.8	40	13.8	109	1020	0.9	.03
ST1.5KA10	10	125	7.5	20	15.0	100	950	1.0	.05
ST1.5KA11	11	125	8.2	15	16.2	93	860	1.1	.05
ST1.5KA12	12	100	9.1	10	17.3	87	770	1.1	.05
ST1.5KA13	13	100	10	4	19.0	79	700	1.2	.05
ST1.5KA15	15	75	11	2	22.0	68	600	1.2	.05
ST1.5KA16	16	75	12	2	23.5	64	550	1.3	.06
ST1.5KA18	18	65	13	2	26.5	57	500	1.3	.06
ST1.5KA20	20	65	15	2	29.0	52	440	1.5	.06
ST1.5KA22	22	50	16	2	31.9	47	390	1.6	.06
ST1.5KA24	24	50	18	2	34.7	43	360	1.8	.06
ST1.5KA27	27	50	20	2	38.5	39	310	2.5	.06
ST1.5KA30	30	40	22	2	42.9	35	280	4.0	.06
ST1.5KA33	33	40	24	2	46.9	32	260	5.0	.06
ST1.5KA36	36	30	27	2	50.0	30	240	6.0	.06
ST1.5KA39	39	30	30	2	55.6	27	210	7.0	.06
ST1.5KA43	43	30	33	2	60.0	25	180	10	.07
ST1.5KA47	47	25	36	2	65.2	23	175	12	.07
ST1.5KA51	51	25	39	2	71.4	21	170	14	.07
ST1.5KA56	56	20	43	2	78.9	19	160	18	.07
ST1.5KA62	62	20	47	2	88.2	17	150	20	.08
ST1.5KA68	68	20	51	2	93.7	16	130	22	.08
ST1.5KA75	75	20	56	2	107.1	14	120	25	.08
ST1.5KA82	82	15	62	2	115.4	13	110	30	.08
ST1.5KA91	91	15	68	2	125.0	12	100	40	.08
ST1.5KA100	100	12	75	2	136.4	11	90	45	.09
ST1.5KA110	110	12	82	2	152.0	9.9	82	65	.09
ST1.5KA120	120	10	91	2	167.0	9.0	75	90	.09
ST1.5KA130	130	10	100	2	185.0	8.1	69	100	.09
ST1.5KA150	150	8	110	2	204.0	7.2	60	150	.09
ST1.5KA160	160	8	120	2	224.0	6.6	56	180	.09
ST1.5KA180	180	5	130	2	249.0	6.0	50	210	.09
ST1.5KA200	200	5	150	2	276.0	5.4	45	250	.09
ST1.5KA220	220	5	160	2	305.0	4.8	41	350	.09
ST1.5KA240	240	5	180	2	336.0	4.5	37	450	.09
ST1.5KA270	270	5	200	2	380.0	3.9	34	600	.09

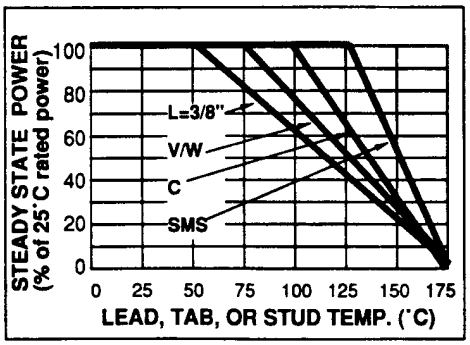
PEAK PULSE POWER VS. PULSE WIDTH



CURRENT PULSE WAVEFORM



STEADY STATE POWER DERATING



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

† **Suffix "L" for axial lead, "SMS" for Square Tab, "C" for ministud,"V" & "W" for isolated ministud.**

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 Tab temperature (SMS and C devices); multiply by 0.6 for L devices; multiply by 0.8 for V/W devices.
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.)