

**SOLID STATE DEVICES, INC**

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

Designer's Data Sheet**FEATURES:**

- 7.9-100 Volt Unidirectional
- Smaller than 704-15K36 and 704-15K36T Types
- Hermetically Sealed
- Meets all environmental requirements of MIL-S-19500H
- Custom configurations available
- TX and TXV Screening Available

APPLICATIONS:

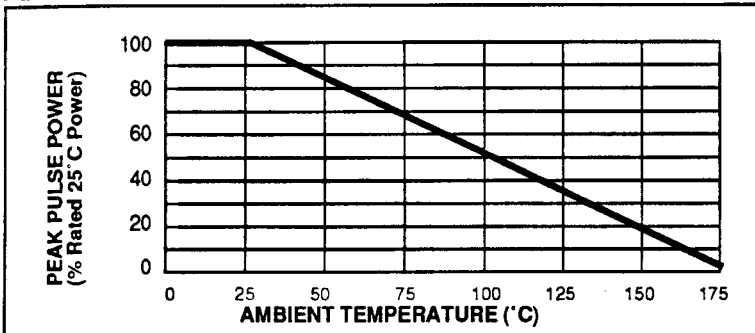
- Protection of Voltage Sensitive Components
- Protection Against Power Interruption
- Lightning Protection

MAXIMUM RATINGS

CHARACTERISTICS	SYMBOL	VALUE	UNITS
Stand Off Voltage	V_{RWM}	5.6-75	V
Steady State Power Dissipation	P_D	60	W
Peak Pulse Power @ 1.0 msec	P_{PP}	15,000	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		

NOTE:

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

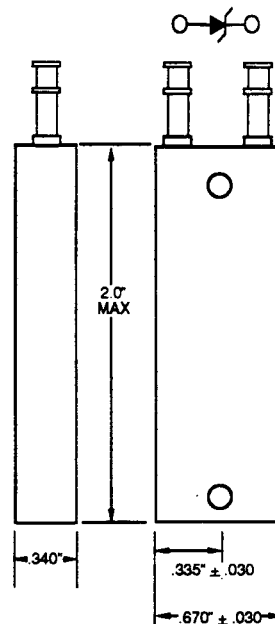
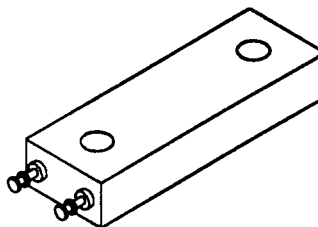
PEAK PULSE POWER VS. TEMPERATURE DERATING CURVE

**STA15K7.5
thru
STA15K100**

**15,000 WATTS
PEAK PULSE POWER**

7.9 -100 VOLTS

**UNIDIRECTIONAL TRANSIENT
VOLTAGE SUPPRESSOR**



Package shown is standard configuration. SSDI can custom design your module with terminals that meet your unique design criteria. Additionally, SSDI can package these devices with an irregular footprint or offset mounting positions. This data sheet is meant to serve as an example of SSDI's Transient Protection Module Capabilities. For custom configurations, please contact SSDI's Marketing

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

DATA SHEET #: T0004A

RMD

STA15K7.5 thru STA15K100

PRELIMINARY DATA

SSDI

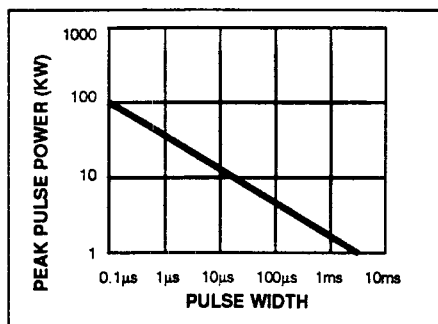
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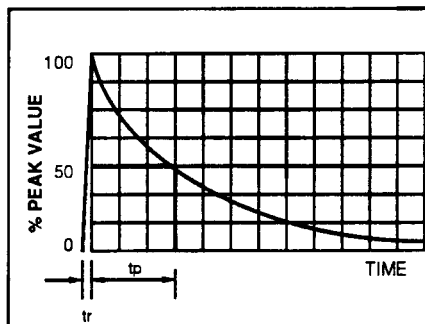
ELECTRICAL CHARACTERISTICS

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)			
	VBR	@IBRT	VRWM	IR @ VRWM	VC	IPP	IRM	ZBR @ IBRT	TC
For 5% Voltage Tolerance specify "B" in place of "A"	Volts	A	Volts	mA	Volts	A	A	Ohms	%/°C
STA15K7.9	7.9	1.75	5.6	16.500	11.7	1280	12.5	0.07	.03
STA15K8.9	8.9	1.50	6.2	13.200	12.5	1200	11.5	0.08	.03
STA15K9.8	9.8	1.50	6.8	0.440	13.8	1090	10.2	0.09	.03
STA15K10.7	10.7	1.25	7.5	0.220	15.0	1000	9.5	0.10	.05
STA15K11.0	11.0	1.25	8.2	0.165	16.2	930	8.6	0.11	.05
STA15K12.7	12.7	1.00	9.1	0.110	17.3	870	7.7	0.11	.05
STA15K13.5	13.5	1.00	10	0.044	19.0	790	7.0	0.12	.05
STA15K15.0	15.0	0.75	11	0.022	22.0	680	6.0	0.12	.05
STA15K16.7	16.7	0.75	12	0.022	23.5	640	5.5	0.13	.06
STA15K18.0	18.0	0.65	13	0.022	26.5	570	5.0	0.13	.06
STA15K20.2	20.2	0.65	15	0.022	29.0	520	4.4	0.15	.06
STA15K22.6	22.6	0.50	16	0.022	31.9	470	3.9	0.16	.06
STA15K24.5	24.5	0.50	18	0.022	34.7	430	3.6	0.18	.06
STA15K27.9	27.9	0.50	20	0.022	38.5	390	3.1	0.25	.06
STA15K30.5	30.5	0.40	22	0.022	42.9	350	2.8	0.40	.06
STA15K34	34.0	0.40	24	0.022	46.9	320	2.6	0.50	.06
STA15K36	36.0	0.30	27	0.022	50.0	300	2.4	0.60	.06
STA15K39	39.0	0.30	30	0.022	55.6	270	2.1	0.70	.06
STA15K45	45.0	0.30	33	0.022	60.0	250	1.8	1.0	.06
STA15K49	49.0	0.25	36	0.022	65.2	230	1.75	1.2	.07
STA15K51	51.0	0.25	39	0.022	71.4	210	1.7	1.4	.07
STA15K57	57.0	0.20	43	0.022	78.9	190	1.6	1.8	.07
STA15K62	62.0	0.20	47	0.022	88.2	170	1.5	2.0	.07
STA15K68	68.0	0.20	51	0.022	93.7	160	1.3	2.2	.08
STA15K75	75.0	0.20	56	0.022	107.1	140	1.2	2.5	.08
STA15K82	82.0	0.15	62	0.022	115.4	130	1.1	3.0	.08
STA15K91	91.0	0.15	68	0.022	125.0	120	1.0	4.0	.08
STA15K100	100.0	0.15	75	0.022	136.4	110	0.9	4.5	.09

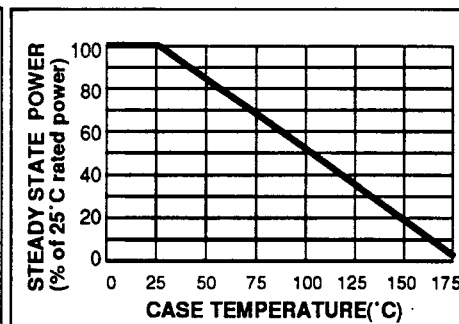
PEAK PULSE POWER VS. PULSE WIDTH



CURRENT PULSE WAVEFORM



STEADY STATE POWER DERATING



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

- 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 25°C Case temperature.
- 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.)