



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

FEATURES:

- 7.5-100 Volt Unidirectional-Anode to Stud
- Hermetically Sealed
- Meets all environmental requirements of MIL-S-19500
- Custom configurations available
- Reverse polarity-cathode to Stud (Add Suffix "R")
- TX and TXV Screening Available

APPLICATIONS:

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

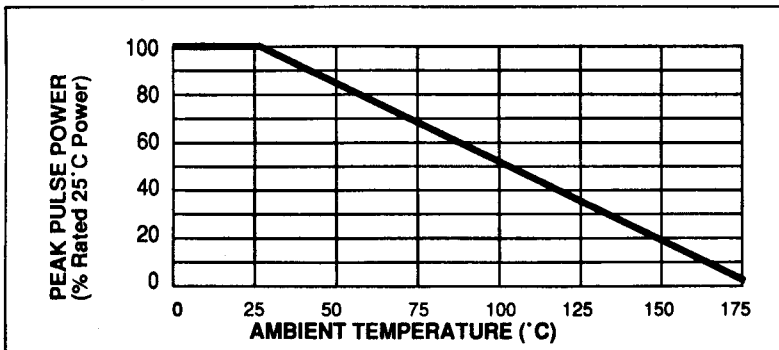
MAXIMUM RATINGS

CHARACTERISTICS	SYMBOL	VALUE	UNITS
Stand Off Voltage	VRWM	5.6-75	V
Steady State Power Dissipation	PD	60	W
Peak Pulse Power @ 1.0 msec	PPP	9,000	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



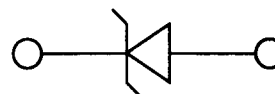
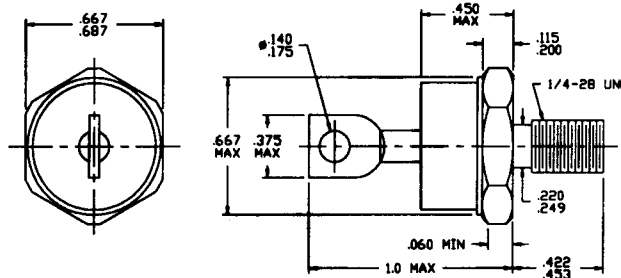
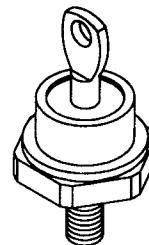
NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

**STA9K7.5P
thru
STA9K100P**

**9,000 WATTS
PEAK PULSE POWER**

7.5 -100 VOLTS

**UNIDIRECTIONAL TRANSIENT
VOLTAGE SUPPRESSOR**



For reverse polarity add suffix "R" to part number

DATA SHEET #: T00016 A

RMD

STA9K7.5P thru STA9K100P

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SSDI

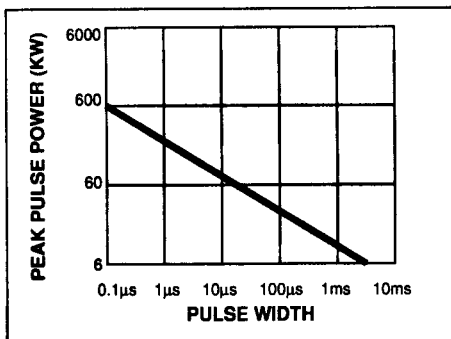
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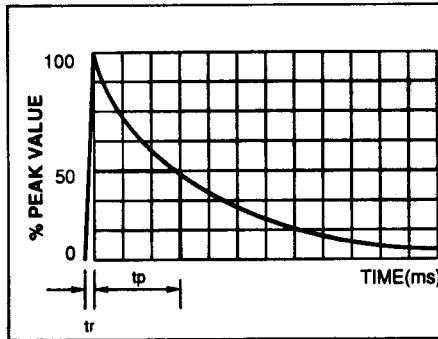
ELECTRICAL CHARACTERISTICS

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	Ω	%/°C
STA9K7.5P	7.5	1.05	5.6	9.00	11.7	768	7.50	0.12	.03
STA9K8.2P	8.2	0.90	6.2	7.20	12.5	720	6.90	0.14	.03
STA9K9.1P	9.1	0.90	6.8	0.24	13.8	654	6.12	0.15	.03
STA9K10P	10	0.75	7.5	0.12	15.0	600	5.70	0.17	.05
STA9K11P	11	0.75	8.2	0.09	16.2	558	5.16	0.19	.05
STA9K12P	12	0.60	9.1	0.06	17.3	522	4.62	0.19	.05
STA9K13P	13	0.60	10	0.012	19.0	474	4.20	0.20	.05
STA9K15P	15	0.45	11	0.012	22.0	408	3.60	0.20	.05
STA9K16P	16	0.45	12	0.012	23.5	384	3.30	0.22	.06
STA9K18P	18	0.39	13	0.012	26.5	342	3.00	0.22	.06
STA9K20P	20	0.39	15	0.012	29.0	312	2.64	0.25	.06
STA9K22P	22	0.30	16	0.012	31.9	282	2.34	0.27	.06
STA9K24P	24	0.30	18	0.012	34.7	258	2.16	0.30	.06
STA9K27P	27	0.30	20	0.012	38.5	234	1.86	0.42	.06
STA9K30P	30	0.24	22	0.012	42.9	210	1.68	0.67	.06
STA9K33P	33	0.24	24	0.012	46.9	192	1.56	0.84	.06
STA9K36P	36	0.18	27	0.012	50.0	180	1.44	1.00	.06
STA9K39P	39	0.18	30	0.012	55.6	162	1.26	1.17	.06
STA9K43P	43	0.18	33	0.012	60.0	150	1.08	1.67	.06
STA9K47P	47	0.15	36	0.012	65.2	138	1.05	2.00	.07
STA9K51P	51	0.15	39	0.012	71.4	126	1.02	2.34	.07
STA9K56P	56	0.12	43	0.012	78.9	114	0.96	3.00	.07
STA9K62P	62	0.12	47	0.012	88.2	102	0.90	3.34	.07
STA9K68P	68	0.12	51	0.012	93.7	96	0.78	3.67	.08
STA9K75P	75	0.12	56	0.012	107.1	84	0.72	4.17	.08
STA9K82P	82	0.09	62	0.012	115.4	78	0.66	5.00	.08
STA9K91P	91	0.09	68	0.012	125.0	72	0.60	6.67	.08
STA9K100P	100	0.072	75	0.012	136.4	66	0.54	7.50	.09

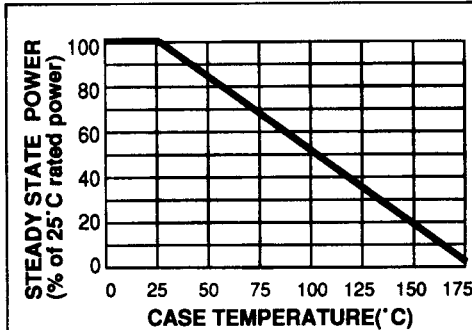
PEAK PULSE POWER VS. PULSE WIDTH



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.)