Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

STD5KA5.0 – STD5KA110
STD5KB5.0 – STD5KB110

5000 WATT
5.0-110 VOLTS
UNIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSOR

Designer's Data Sheet

STD5K ___ ___ ___ ___

Screening
__ = Not Screened
TX = TX Level
TXV = TXV Level
S = S Level

Polarity
__ = Normal (Anode to Stud)
R = Reverse (Cathode to Stud)

Voltage
5.0 – 110V

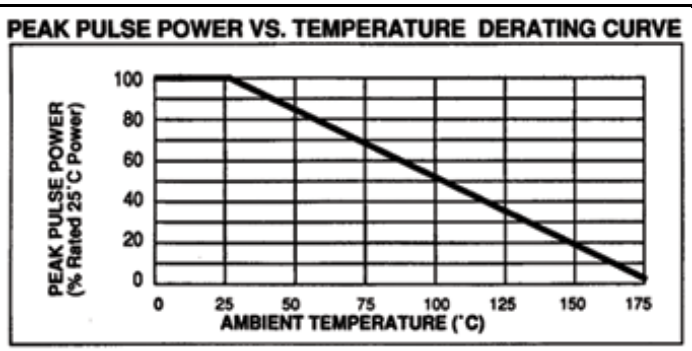
Voltage Tolerance
A = 10%
B = 5%

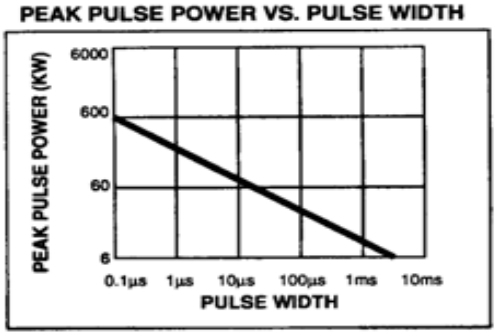
Features:
- 5.0-110 Volt Unidirectional-Anode to Stud
- Hermetically Sealed
- Meets all environmental requirements of MIL-S-19500
- Custom configurations available
- Reverse polarity-cathod to stud (Add suffix "R")
- TX, TXV, and Space Level screening available

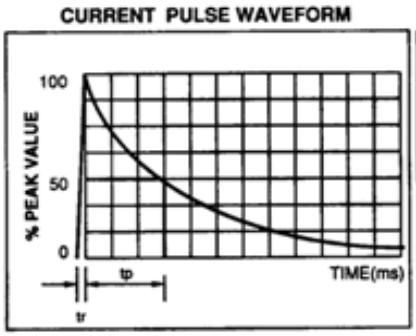
Applications:
- Protection of voltage sensitive components
- Protection against power interruption
- Lightning protection

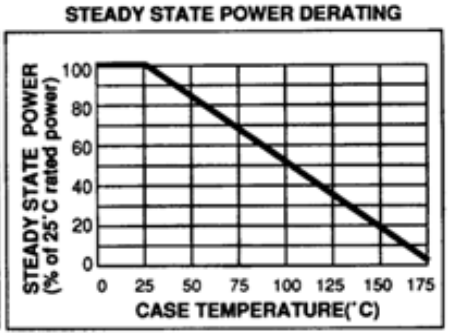
Maximum Ratings

Stand Off Voltage	V_{RWM}	5.0-110	Volts
Steady State Power Dissipation	P_D	8	Watts
Peak Pulse Power @ 1.0 msec	P_{PP}	5000	Watts
Forward Surge Current	I_{FSM}	400	Amps
Peak Pulse Power and Steady State Power Derating	**SEE GRAPH**		
Peak Pulse Power and Pulse Width	**SEE GRAPH**		
Operating and Storage Temperature	**-55°C to +175°C**		

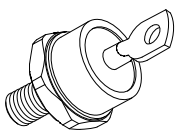








Note: SSDI Transient Suppressors offer standard Breakdown Voltage Tolerances of ± 10% (A) and ± 5% (B). For other Voltage and Voltage Tolerances, contact SSDI's Marketing Department.



DO-5

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	**DATA SHEET #: T00030B**	**DOC**

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STD5KA5.0 – STD5KA110
STD5KB5.0 – STD5KB110

ELECTRICAL CHARACTERISTICS

Part Number	Breakdown Voltage V_{BR} (note 1)			Reverse Stand Off Voltage	Maximum Reverse Leakage Current	Maximum Peak Pulse Current	Maximum Clamping Voltage @ I_{PPM} (Note 2)	Max Temperature Coefficient
For 5% Voltage Tolerance specify "B" in place of "A"	Min	Max	@I_T	V_{WM}	I_R@V_{WM}	I_{PPM}	V_C	V_{BR}
	V_{BR}	V_{BR}	mA	Volts	I_D(µA)	Amps	Volts	%/°C
STD5KA5.0	6.4	7.30	50	5.0	2000	520	9.6	0.057
STD5KB5.0	6.4	7.00	50	5.0	2000	543	9.2	0.057
STD5KA6.0	6.67	8.15	50	6.0	5000	439	11.4	0.061
STD5KB6.0	6.67	7.37	50	6.0	5000	485	10.3	0.061
STD5KA7.0	7.78	9.51	50	7.0	1000	378	13.3	0.068
STD5KB7.0	7.78	8.6	50	7.0	1000	417	12.0	0.068
STD5KA8.0	8.89	10.9	5.0	8.0	150	333	15.0	0.075
STD5KB8.0	8.89	9.83	5.0	8.0	150	367	13.6	0.075
STD5KA9.0	10.0	12.2	5.0	9.0	20.0	295	16.9	0.081
STD5KB9.0	10.0	11.1	5.0	9.0	20.0	325	15.4	0.081
STD5KA10	11.1	13.6	5.0	10.0	15.0	266	18.8	0.084
STD5KB10	11.1	12.3	5.0	10.0	15.0	294	17.0	0.084
STD5KA12	13.3	16.3	5.0	12.0	10.0	227	22.0	0.088
STD5KB12	13.3	14.7	5.0	12.0	10.0	251	19.9	0.088
STD5KA14	15.6	19.1	5.0	14.0	10.0	194	25.8	0.092
STD5KB14	15.6	17.2	5.0	14.0	10.0	215	23.2	0.092
STD5KA16	17.8	21.8	5.0	16.0	10.0	176	28.8	0.096
STD5KB16	17.8	19.7	5.0	16.0	10.0	176	28.8	0.096
STD5KA18	20.0	24.4	5.0	18.0	10.0	155	32.2	0.098
STD5KB18	20.0	22.1	5.0	18.0	10.0	172	29.2	0.098
STD5KA20	22.2	27.1	5.0	20.0	10.0	139	35.8	0.099
STD5KB20	22.2	24.5	5.0	20.0	10.0	154	32.4	0.099
STD5KA22	24.4	29.8	5.0	22.0	10.0	127	39.4	0.100
STD5KB22	24.4	26.9	5.0	22.0	10.0	141	35.5	0.100
STD5KA24	26.7	32.6	5.0	24.0	10.0	116	43.0	0.101
STD5KB24	26.7	29.5	5.0	24.0	10.0	128	38.9	0.101
STD5KA26	28.9	35.3	5.0	26.0	10.0	107	46.6	0.101
STD5KB26	28.9	31.9	5.0	26.0	10.0	119	42.1	0.101
STD5KA28	31.1	38.0	5.0	28.0	10.0	99	50.1	0.102
STD5KB28	31.1	34.4	5.0	28.0	10.0	110	45.4	0.102
STD5KA30	33.3	40.7	5.0	30.0	10.0	93	53.5	0.103
STD5KB30	33.3	36.8	5.0	30.0	10.0	103	48.4	0.103
STD5KA33	36.7	44.9	5.0	33.0	10.0	85	59.0	0.104
STD5KB33	36.7	40.6	5.0	33.0	10.0	94	53.3	0.104
STD5KA36	40.0	48.9	5.0	36.0	10.0	78	64.3	0.104
STD5KB36	40.0	44.2	5.0	36.0	10.0	85	58.1	0.104
STD5KA40	44.4	54.3	5.0	40.0	10.0	70	71.4	0.105
STD5KB40	44.4	49.1	5.0	40.0	10.0	78	64.5	0.105
STD5KA43	47.8	58.4	5.0	43.0	10.0	65	76.7	0.105
STD5KB43	47.8	52.8	5.0	43.0	10.0	72	69.4	0.105
STD5KA45	50.0	61.1	5.0	45.0	10.0	62	80.3	0.106
STD5KB45	50.0	55.3	5.0	45.0	10.0	69	72.7	0.106
STD5KA48	53.3	65.2	5.0	48.0	10.0	58	85.5	0.106
STD5KB48	53.3	58.9	5.0	48.0	10.0	65	77.4	0.106

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

Notes:
1. V_{BR} measured after I_T applied for 300 ms. I_T = Square Wave Pulse or equivalent.
2. Surge Current waveform per "Current Pulse Waveform" graph and Derate per "Peak Pulse Power vs. Temperature Derating Curve" graph.

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STD5KA5.0 – STD5KA110
STD5KB5.0 – STD5KB110

ELECTRICAL CHARACTERISTICS

Part Number	Breakdown Voltage V_{BR} (note 1)			Reverse Stand Off Voltage	Maximum Reverse Leakage Current	Maximum Peak Pulse Current	Maximum Clamping Voltage @ I_{PPM} (note 2)	Max Temperature Coefficient
For 5% Voltage Tolerance specify "B" in place of "A"	Min	Max	@I_T	V_{WM}	I_R@V_{WM}	I_{PPM}	V_C	V_{BR}
	V_{BR}	V_{BR}	mA	Volts	I_D(µA)	Amps	Volts	%/°C
STD5KA51	56.1	69.3	5.0	51.0	10.0	55	91.1	0.107
STD5KB51	56.7	62.7	5.0	51.0	10.0	61	82.4	0.107
STD5KA54	60.0	73.3	5.0	54.0	10.0	52	96.3	0.107
STD5KB54	60.0	66.3	5.0	54.0	10.0	57	87.1	0.107
STD5KA58	64.4	78.7	5.0	58.0	10.0	49	103	0.107
STD5KB58	64.4	71.2	5.0	58.0	10.0	53	94	0.107
STD5KA60	66.7	81.5	5.0	60.0	10.0	47	107	0.108
STD5KB60	66.7	73.7	5.0	60.0	10.0	52	97	0.108
STD5KA64	71.1	96.9	5.0	64.0	10.0	44	114	0.108
STD5KB64	71.1	78.6	5.0	64.0	10.0	49	103	0.108
STD5KA70	77.6	95.1	5.0	70.0	10.0	40	125	0.108
STD5KB70	77.8	86.0	5.0	70.0	10.0	44	113	0.108
STD5KA75	83.3	102	5.0	75.0	10.0	37	134	0.108
STD5KB75	83.3	92.1	5.0	75.0	10.0	41	121	0.108
STD5KA78	86.7	106.0	5.0	78.0	10.0	36	126	0.108
STD5KB78	86.7	95.8	5.0	78.0	10.0	40	126	0.108
STD5KA85	94.9	115	5.0	85.0	10.0	33	151	0.110
STD5KB85	94.4	104	5.0	85.0	10.0	36	137	0.110
STD5KA90	100	122	5.0	90.0	10.0	31	160	0.110
STD5KB90	100	111	5.0	90.0	10.0	34	146	0.110
STD5KA100	111	136	5.0	100	10.0	28	179	0.110
STD5KB100	111	123	5.0	100	10.0	31	162	0.110
STD5KA110	122	149	5.0	110	10.0	26	196	0.112
STD5KB110	122	135	5.0	110	10.0	28	177	0.112

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

Notes:
1. V_{BR} measured after I_T applied for 300 ms. I_T = Square Wave Pulse or equivalent.
2. Surge Current waveform per "Current Pulse Waveform" graph and Derate per "Peak Pulse Power vs. Temperature Derating Curve" graph.

