



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

DESIGNER'S DATA SHEET

FEATURES:

- 6.8 to 440 Volts Uni-Directional/Bi-Directional
- Molded Epoxy Package
- Glass Passivated Die
- 175°C Maximum Operating Temperature
- Modified TX Screening Available.^{4/}

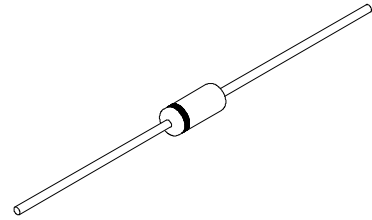
APPLICATIONS:

- Voltage Sensitive Component Protection
- Protection Against Power Surges
- Lightning Protection

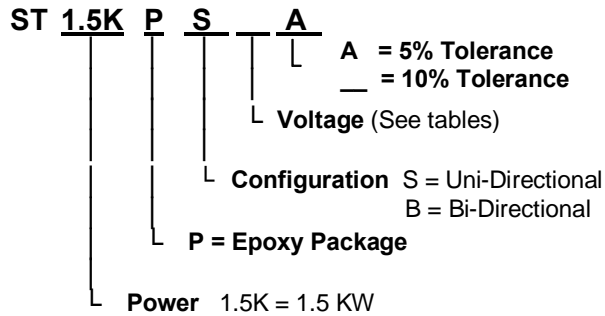
**ST1.5KPS6.8 thru ST1.5KPS440
and
ST1.5KPB6.8 thru ST1.5KPB440**

**1,500 WATTS
PEAK PULSE POWER
6.8 – 440 VOLTS
UNI-DIRECTIONAL AND
BI-DIRECTIONAL
TRANSIENT VOLTAGE
SUPPRESSOR**

AXIAL



Part Number / Ordering Information^{1/}



MAXIMUM RATINGS	Symbol	Value	Units
Stand Off Voltage	V_{RRM} V_{RSM} V_R	5.5 - 376	Volts
Steady State Power Dissipation	P_D	20	Watts
Peak Pulse Power @ 1.0 msec	P_{PP}	1500	Watts
Operating and Storage Temperature	T_{op} & T_{stg}	-65 to +175	°C

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

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**ST1.5KPS6.8 thru ST1.5KPS440
 and
 ST1.5KPB6.8 thru ST1.5KPB440**

ELECTRICAL CHARACTERISTICS (Note 1)		Standoff Voltage	Maximum Reverse Leakage	Reverse Breakdown Voltage		Test Current	Max Clamping Voltage (V _{CL}) @ Peak Pulse Current (I _{PP}) (Note 3)		Max Temp. Coefficient of V _{BR}	JEDEC Part Numbers
				Voltage (V _{BR}) @ I _T			V _{CL}	I _{PP}		
				Min	Max					
UNIPOLAR	BIPOLAR	V _{SO}	I _R @ V _{SO}	Voltage (V _{BR}) @ I _T		I _T	V _{CL}	I _{PP}	(% / °C)	
			(Note 2)							
		Volts	uA	Volts	Volts	mA	Volts	Amps		
ST1.5KPS6.8	ST1.5KPB6.8	5.50	1000	6.12	7.48	10	10.8	139	0.057	1N6267
ST1.5KPS6.8A	ST1.5KPB6.8A	5.80	1000	6.45	7.14	10	10.5	143	0.057	1N6267A
ST1.5KPS7.5	ST1.5KPB7.5	6.05	500	6.75	8.25	10	11.7	128	0.061	1N6268
ST1.5KPS7.5A	ST1.5KPB7.5A	6.40	500	7.13	7.88	10	11.3	132	0.061	1N6268A
ST1.5KPS8.2	ST1.5KPB8.2	6.63	200	7.38	9.02	10	12.5	120	0.065	1N6269
ST1.5KPS8.2A	ST1.5KPB8.2A	7.02	200	7.79	8.61	10	12.1	124	0.065	1N6269A
ST1.5KPS9.1	ST1.5KPB9.1	7.37	50.0	8.19	10.00	1	13.8	109	0.068	1N6270
ST1.5KPS9.1A	ST1.5KPB9.1A	7.78	50.0	8.65	9.55	1	13.4	112	0.068	1N6270A
ST1.5KPS10	ST1.5KPB10	8.10	10.0	9.00	11.00	1	15.0	100	0.073	1N6271
ST1.5KPS10A	ST1.5KPB10A	8.55	10.0	9.50	10.50	1	14.5	103	0.073	1N6271A
ST1.5KPS11	ST1.5KPB11	8.92	5.0	9.90	12.10	1	16.2	93	0.075	1N6272
ST1.5KPS11A	ST1.5KPB11A	9.40	5.0	10.50	11.60	1	15.6	96	0.075	1N6272A
ST1.5KPS12	ST1.5KPB12	9.72	5.0	10.80	13.20	1	17.3	87	0.078	1N6273
ST1.5KPS12A	ST1.5KPB12A	10.20	5.0	11.40	12.60	1	16.7	90	0.078	1N6273A
ST1.5KPS13	ST1.5KPB13	10.50	5.0	11.70	14.30	1	19.0	79	0.061	1N6274
ST1.5KPS13A	ST1.5KPB13A	11.10	5.0	12.40	13.70	1	18.2	82	0.081	1N6274A
ST1.5KPS15	ST1.5KPB15	12.10	5.0	13.50	16.50	1	22.0	68	0.084	1N6275
ST1.5KPS15A	ST1.5KPB15A	12.80	5.0	14.30	15.80	1	21.2	71	0.084	1N6275A
ST1.5KPS16	ST1.5KPB16	12.90	5.0	14.40	17.60	1	23.5	64	0.086	1N6276
ST1.5KPS16A	ST1.5KPB16A	13.60	5.0	15.20	16.80	1	22.5	67	0.086	1N6276A
ST1.5KPS18	ST1.5KPB18	14.50	5.0	16.20	19.80	1	26.5	56.5	0.088	1N6277
ST1.5KPS18A	ST1.5KPB18A	15.30	5.0	17.10	18.90	1	25.2	59.5	0.088	1N6277A
ST1.5KPS20	ST1.5KPB20	16.20	5.0	18.00	22.00	1	29.1	51.5	0.09	1N6278
ST1.5KPS20A	ST1.5KPB20A	17.10	5.0	19.00	21.00	1	27.7	54	0.09	1N6278A
ST1.5KPS22	ST1.5KPB22	17.80	5.0	19.80	24.20	1	31.9	47	0.092	1N6279
ST1.5KPS22A	ST1.5KPB22A	18.80	5.0	20.90	23.10	1	30.6	49	0.092	1N6279A
ST1.5KPS24	ST1.5KPB24	19.40	5.0	21.60	26.40	1	34.7	43	0.091	1N6280
ST1.5KPS24A	ST1.5KPB24A	20.50	5.0	22.80	25.20	1	33.2	45	0.094	1N6280A
ST1.5KPS27	ST1.5KPB27	21.80	5.0	24.30	29.70	1	39.1	38.5	0.096	1N6281
ST1.5KPS27A	ST1.5KPB27A	23.10	5.0	25.70	28.40	1	37.5	40	0.096	1N6281A
ST1.5KPS30	ST1.5KPB30	24.30	5.0	27.00	33.00	1	43.5	34.5	0.097	1N6282
ST1.5KPS30A	ST1.5KPB30A	25.60	5.0	28.50	31.50	1	41.4	36	0.097	1N6282A
ST1.5KPS33	ST1.5KPB33	26.80	5.0	29.70	36.30	1	47.7	31.5	0.098	1N6283
ST1.5KPS33A	ST1.5KPB33A	28.20	5.0	31.40	34.70	1	45.7	33	0.098	1N6283A
ST1.5KPS36	ST1.5KPB36	29.10	5.0	32.40	39.60	1	52.0	29	0.099	1N6284
ST1.5KPS36A	ST1.5KPB36A	30.80	5.0	34.20	37.80	1	49.9	30	0.099	1N6284A
ST1.5KPS39	ST1.5KPB39	31.60	5.0	35.10	42.90	1	56.4	26.5	0.1	1N6285
ST1.5KPS39A	ST1.5KPB39A	33.30	5.0	37.10	41.00	1	53.9	28	0.1	1N6285A
ST1.5KPS43	ST1.5KPB43	34.80	5.0	38.70	47.30	1	61.9	24	0.101	1N6286
ST1.5KPS43A	ST1.5KPB43A	36.80	5.0	40.90	45.20	1	59.3	25	0.101	1N6286A
ST1.5KPS56	ST1.5KPB56	45.60	5.0	50.40	61.80	1	80.5	18.6	0.103	1N6289
ST1.5KPS56A	ST1.5KPB56A	47.80	5.0	53.20	58.80	1	77.0	19.5	0.103	1N6289A

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ST1.5KPS6.8 thru ST1.5KPS440 and ST1.5KPB6.8 thru ST1.5KPB440

ELECTRICAL CHARACTERISTICS (Note 1)		Standoff Voltage	Maximum Reverse Leakage	Reverse Breakdown Voltage		Test Current	Max Clamping Voltage (V _{CL}) @ Peak Pulse Current (I _{PP}) (Note 3)		Max Temp. Coefficient of V _{BR}	JEDEC Part Numbers
PART NUMBER				V _{SO}	I _R @ V _{SO}		V _{BR} @ I _T			
			(Note 2)	Min	Max					
UNIPOLAR	BIPOLAR	Volts	uA	Volts	Volts	mA	Volts	Amps	(% / °C)	
ST1.5KPS62	ST1.5KPB62	50.20	5.0	55.80	68.20	1	89.0	16.9	0.104	1N6290
ST1.5KPS62A	ST1.5KPB62A	53.00	5.0	58.90	65.10	1	85.0	17.7	0.104	1N6290A
ST1.5KPS68	ST1.5KPB68	55.10	5.0	61.20	74.80	1	96.0	15.3	0.104	1N6291
ST1.5KPS68A	ST1.5KPB68A	58.10	5.0	64.60	71.40	1	92.0	16.3	0.104	1N6291A
ST1.5KPS75	ST1.5KPB75	60.70	5.0	67.50	82.50	1	108.0	13.9	0.105	1N6292
ST1.5KPS75A	ST1.5KPB75A	64.10	5.0	71.30	78.80	1	103.0	14.6	0.105	1N6292A
ST1.5KPS82	ST1.5KPB82	66.40	5.0	73.80	90.20	1	118.0	12.7	0.105	1N6293
ST1.5KPS82A	ST1.5KPB82A	70.10	5.0	77.90	86.10	1	113.0	13.3	0.105	1N6293A
ST1.5KPS91	ST1.5KPB91	73.70	5.0	81.90	100.00	1	131.0	11.4	0.106	1N6294
ST1.5KPS91A	ST1.5KPB91A	77.80	5.0	86.50	95.50	1	125.0	12	0.106	1N6294A
ST1.5KPS100	ST1.5KPB100	81.00	5.0	90.00	110.00	1	144.0	10.4	0.106	1N6295
ST1.5KPS100A	ST1.5KPB100A	85.50	5.0	95.00	105.00	1	137.0	11	0.106	1N6295A
ST1.5KPS110	ST1.5KPB110	89.20	5.0	99.00	121.00	1	158.0	9.5	0.107	1N6296
ST1.5KPS110A	ST1.5KPB110A	94.00	5.0	106.00	116.00	1	152.0	9.9	0.107	1N6296A
ST1.5KPS120	ST1.5KPB120	97.20	5.0	108.00	132.00	1	173.0	8.7	0.107	1N6297
ST1.5KPS120A	ST1.5KPB120A	102.00	5.0	114.00	126.00	1	165.0	9.1	0.107	1N6297A
ST1.5KPS130	ST1.5KPB130	106.00	5.0	117.00	143.00	1	187.0	8	0.107	1N6298
ST1.5KPS130A	ST1.5KPB130A	111.00	5.0	124.00	137.00	1	179.0	8.4	0.107	1N6298A
ST1.5KPS150	ST1.5KPB150	121.00	5.0	136.00	165.00	1	215.0	7	0.108	1N6299
ST1.5KPS150A	ST1.5KPB150A	128.00	5.0	143.00	158.00	1	207.0	7.2	0.108	1N6299A
ST1.5KPS160	ST1.5KPB160	130.00	5.0	144.00	176.00	1	230.0	6.5	0.108	1N6300
ST1.5KPS160A	ST1.5KPB160A	136.00	5.0	152.00	168.00	1	219.0	6.8	0.108	1N6300A
ST1.5KPS170	ST1.5KPB170	138.00	5.0	153.00	167.00	1	244.0	6.2	0.108	1N6301
ST1.5KPS170A	ST1.5KPB170A	145.00	5.0	162.00	179.00	1	234.0	6.4	0.108	1N6301A
ST1.5KPS180	ST1.5KPB180	146.00	5.0	162.00	198.00	1	256.0	5.8	0.108	1N6302
ST1.5KPS180A	ST1.5KPB180A	154.00	5.0	171.00	189.00	1	246.0	6.1	0.108	1N6302A
ST1.5KPS200	ST1.5KPB200	162.00	5.0	180.00	220.00	1	287.0	5.2	0.108	1N6303A
ST1.5KPS200A	ST1.5KPB200A	171.00	5.0	190.00	210.00	1	274.0	5.5	0.108	1N6303A
ST1.5KPS220	ST1.5KPB220	175.00	5.0	196.00	242.00	1	344.0	4.3	0.108	N/A
ST1.5KPS220A	ST1.5KPB220A	185.00	5.0	209.00	231.00	1	328.0	4.6	0.108	N/A
ST1.5KPS250	ST1.5KPB250	202.00	5.0	225.00	275.00	1	360.0	5	0.11	N/A
ST1.5KPS250A	ST1.5KPB250A	214.00	5.0	237.00	263.00	1	344.0	5	0.11	N/A
ST1.5KPS300	ST1.5KPB300	243.00	5.0	270.00	330.00	1	430.0	5	0.11	N/A
ST1.5KPS300A	ST1.5KPB300A	256.00	5.0	285.00	315.00	1	414.0	5	0.11	N/A
ST1.5KPS350	ST1.5KPB350	284.00	5.0	315.00	385.00	1	504.0	4	0.11	N/A
ST1.5KPS350A	ST1.5KPB350A	300.00	5.0	333.00	368.00	1	482.0	4	0.11	N/A
ST1.5KPS400	ST1.5KPB400	324.00	5.0	360.00	440.00	1	574.0	4	0.11	N/A
ST1.5KPS400A	ST1.5KPB400A	342.00	5.0	380.00	420.00	1	548.0	4	0.11	N/A
ST1.5KPS440	ST1.5KPB440	356.00	5.0	396.00	484.00	1	598.0	4	0.11	N/A
ST1.5KPS440A	ST1.5KPB440A	376.00	5.0	418.00	462.00	1	590.0	4	0.11	N/A

NOTES:

- 1/ Electrical Characteristics are at Junction Temperature (T_J) of 25°C
- 2/ For Bipolar Devices with a V_{BR} of 10 Volts or Less, the I_R Limit is Doubled
- 3/ Surge Current Waveform – Figure 2; Peak Pulse Power Derating Shown in Figure 3
- 4/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.



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**ST1.5KPS6.8 thru ST1.5KPS440
and
ST1.5KPB6.8 thru ST1.5KPB440**

FIGURE 1

DIMENSIONS		
DIM	MIN	MAX
A	0.190"	0.210"
B	0.355"	0.385"
C	1.00"	—
D	0.038"	0.042"

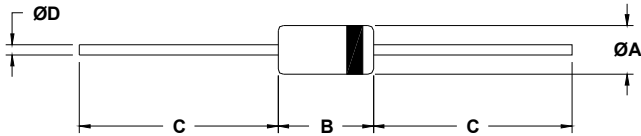


FIGURE 2

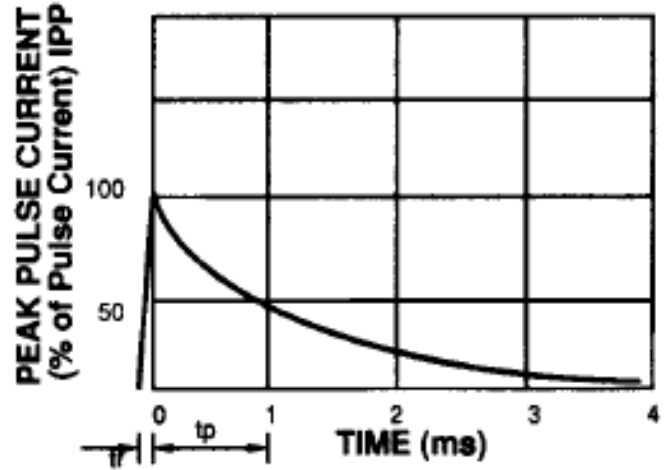
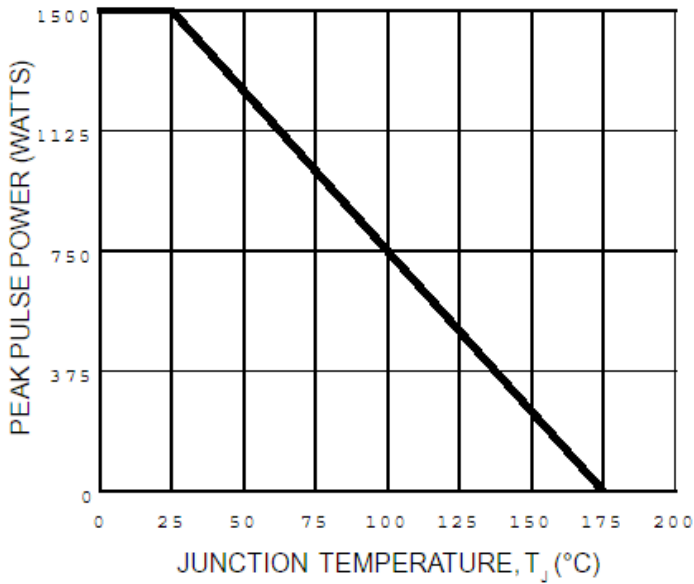


FIGURE 3



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