

# Transient Voltage Suppressors (SA Series)

500 Watt Peak Power Rating/DO-15

TYPE NUMBER See Notes	V <sub>WM</sub> V	V <sub>BR</sub> @ I <sub>T</sub>		I <sub>T</sub> mADC	MAX I <sub>D</sub> @ V <sub>WM</sub> μA DC	MAX V <sub>C</sub> @ I <sub>PP</sub> V	I <sub>PP</sub> A	ΔV <sub>BR</sub> mV/°C
		Min	Max					
		VDC						
SA5.0	5.0	6.40	7.30	10	600	9.6	52.0	5.0
SA5.0A	5.0	6.40	7.00	10	600	9.2	54.3	5.0
SA6.0	6.0	6.67	8.15	10	600	11.4	43.9	5.0
SA6.0A	6.0	6.67	7.37	10	600	10.3	48.5	5.0
SA6.5	6.5	7.22	8.82	10	400	12.3	40.7	5.0
SA6.5A	6.5	7.22	7.98	10	400	11.2	44.7	5.0
SA7.0	7.0	7.78	9.51	10	150	13.3	37.8	6.0
SA7.0A	7.0	7.78	8.60	10	150	12.0	41.7	6.0
SA7.5	7.5	8.33	10.2	1	50	14.3	35.0	7.0
SA7.5A	7.5	8.33	9.21	1	50	12.9	38.8	7.0
SA8.0	8.0	8.89	10.9	1	25	15.0	33.3	7.0
SA8.0A	8.0	8.89	9.83	1	25	13.6	36.7	7.0
SA8.5	8.5	9.44	11.5	1	10	15.9	31.4	8.0
SA8.5A	8.5	9.44	10.4	1	10	14.4	34.7	8.0
SA9.0	9.0	10.0	12.2	1	5	16.9	29.5	9.0
SA9.0A	9.0	10.0	11.1	1	5	15.4	32.5	9.0
SA10	10	11.1	13.6	1	3	18.8	26.6	10
SA10A	10	11.1	12.3	1	3	17.0	29.4	10
SA11	11	12.2	14.9	1	3	20.1	24.9	11
SA11A	11	12.2	13.5	1	3	18.2	27.4	11
SA12	12	13.3	16.3	1	3	22.0	22.7	12
SA12A	12	13.3	14.7	1	3	19.9	25.1	12
SA13	13	14.4	17.6	1	3	23.8	21.0	13
SA13A	13	14.4	15.9	1	3	21.5	23.2	13
SA14	14	15.6	19.1	1	3	25.8	19.4	14
SA14A	14	15.6	17.2	1	3	23.2	21.5	14
SA15	15	16.7	20.4	1	3	26.9	18.8	16
SA15A	15	16.7	18.5	1	3	24.4	20.6	16
SA16	16	17.8	21.8	1	3	28.8	17.6	19
SA16A	16	17.8	19.7	1	3	26.0	19.2	17
SA17	17	18.9	23.1	1	3	30.5	16.4	20
SA17A	17	18.9	20.9	1	3	27.6	18.1	19
SA18	18	20.0	24.4	1	3	32.2	15.5	21
SA18A	18	20.0	22.1	1	3	29.2	17.2	20
SA20	20	22.2	27.1	1	3	35.8	13.9	25
SA20A	20	22.2	24.5	1	3	32.4	15.4	23
SA22	22	24.4	29.8	1	3	39.4	12.7	28
SA22A	22	24.4	26.9	1	3	35.5	14.1	25
SA24	24	26.7	32.6	1	3	43.0	11.6	31
SA24A	24	26.7	29.5	1	3	38.9	12.8	28
SA26	26	28.9	35.3	1	3	46.6	10.7	31
SA26A	26	28.9	31.9	1	3	42.1	11.9	30
SA28	28	31.1	38.0	1	3	50.0	9.9	35
SA28A	28	31.1	34.4	1	3	45.4	11.0	31
SA30	30	33.3	40.7	1	3	53.5	9.3	39
SA30A	30	33.3	36.8	1	3	48.4	10.3	36

TYPE NUMBER See Notes	V <sub>WM</sub> V	V <sub>BR</sub> @ I <sub>T</sub>		I <sub>T</sub> mADC	MAX I <sub>D</sub> @ V <sub>WM</sub> μA DC	MAX V <sub>C</sub> @ I <sub>PP</sub> V	I <sub>PP</sub> A	ΔV <sub>BR</sub> mV/°C
		Min	Max					
		VDC						
SA33	33	36.7	44.9	1	3	59.0	8.5	42
SA33A	33	36.7	40.6	1	3	53.3	9.4	39
SA36	36	40.0	48.9	1	3	64.3	7.8	46
SA36A	36	40.0	44.2	1	3	58.1	8.6	41
SA40	40	44.4	54.3	1	3	71.4	7.0	51
SA40A	40	44.4	49.1	1	3	64.5	7.8	46
SA43	43	47.8	58.4	1	3	76.7	6.5	55
SA43A	43	47.8	52.8	1	3	69.4	7.2	50
SA45	45	50.0	61.1	1	3	80.3	6.2	58
SA45A	45	50.0	55.3	1	3	72.7	6.9	52
SA48	48	53.3	65.1	1	3	85.5	5.8	63
SA48A	48	53.3	58.9	1	3	77.4	6.5	56
SA51	51	56.7	69.3	1	3	91.1	5.5	66
SA51A	51	56.7	62.7	1	3	82.4	6.1	61
SA54	54	60.0	73.3	1	3	96.3	5.2	71
SA54A	54	60.0	66.3	1	3	87.1	5.7	65
SA58	58	64.4	78.7	1	3	103.0	4.9	78
SA58A	58	64.4	71.2	1	3	93.6	5.3	70
SA60	60	66.7	81.5	1	3	107.0	4.7	80
SA60A	60	66.7	73.7	1	3	96.8	5.2	71
SA64	64	71.1	86.9	1	3	114.0	4.4	86
SA64A	64	71.1	78.6	1	3	103.0	4.9	76
SA70	70	77.8	95.1	1	3	125.0	4.0	94
SA70A	70	77.8	86.0	1	3	113.0	4.4	85
SA75	75	83.3	102.0	1	3	134.0	3.7	101
SA75A	75	83.3	92.1	1	3	121.0	4.1	91
SA78	78	86.7	106.0	1	3	139.0	3.6	105
SA78A	78	86.7	95.8	1	3	126.0	4.0	95
SA85	85	94.4	115.0	1	3	151.0	3.3	114
SA85A	85	94.4	104.0	1	3	137.0	3.6	103
SA90	90	100	122.0	1	3	160.0	3.1	121
SA90A	90	100	111.0	1	3	146.0	3.4	110
SA100	100	111	136.0	1	3	179.0	2.8	135
SA100A	100	111	123.0	1	3	162.0	3.1	123
SA110	110	122	149.0	1	3	196.0	2.6	148
SA110A	110	122	135.0	1	3	177.0	2.8	133
SA120	120	133	163.0	1	3	214.0	2.3	162
SA120A	120	133	147.0	1	3	193.0	2.0	146
SA130	130	144	176.0	1	3	231.0	2.2	175
SA130A	130	144	159.0	1	3	209.0	2.4	158
SA150	150	167	204.0	1	3	268.0	1.9	203
SA150A	150	167	185.0	1	3	243.0	2.1	184
SA160	160	178	218.0	1	3	287.0	1.7	217
SA160A	160	178	197.0	1	3	259.0	1.9	196
SA170	170	189	231.0	1	3	304.0	1.6	230
SA170A	170	189	209.0	1	3	275.0	1.8	208

- 1) Suffix 'A' denotes 5% tolerance device, no suffix denotes 10% tolerance device. OPERATING/STORAGE TEMPERATURE -55°C to +175°C  
 2) Add suffix 'C' or 'CA' after Part Number to specify Bi-directional devices.  
 3) For Bi-directional devices having V<sub>R</sub> of 10 volts and under, the I<sub>D</sub> limit is doubled.  
 4) For Uni-directional devices V<sub>F</sub> max = 3.5V at I<sub>T</sub> = 35A, 0.5 sine wave of 8.33 msec. pulse width.

**SYMBOLS AND ABBREVIATIONS:**

V<sub>WM</sub> = Rated Stand-Off Voltage

I<sub>PP</sub> = Peak Pulse Current

V<sub>F</sub> (Max) = Maximum Forward Voltage

V<sub>BR</sub> = Breakdown Voltage

I<sub>T</sub> = Test Current

I<sub>D</sub> = Reverse Leakage

ΔV<sub>BR</sub> = Max. Temp. Coefficient of V<sub>BR</sub> (TA = 55 to 100°C)