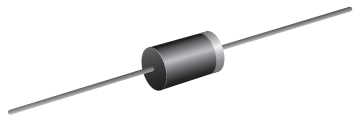
SA5.0A(CA) - SA440A(CA)

AXIAL LEADED TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE RANGE: 5.0 - 440 V
POWER: 500 Watts



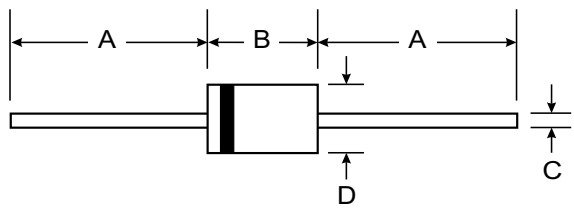
Features

- Glass Passivated Die Construction
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability

Mechanical Data

- Case: DO-15
- Terminals: Axial Leads, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking:
  Unidirectional – Device Code and Cathode Band
  Bidirectional – Device Code Only
- Weight: 0.40 grams (approx.)

RoHS COMPLIANT



DO-15		
Dim	**Min**	**Max**
A	25.40	—
B	5.50	7.62
C	0.686	0.889
D	2.60	3.60
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at T_A = 25°C (Note 1, 2, 5) Figure 3	P_{PPM}	500 Minimum	W
Peak Forward Surge Current (Note 3)	I_{FSM}	70	A
Peak Pulse Current on 10/1000µS Waveform (Note 1) Figure 1	I_{PPM}	See Table 1	A
Steady State Power Dissipation (Note 2, 4)	$P_{M(AV)}$	1.0	W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +175	°C

Note: 1. Non-repetitive current pulse, per Figure 1 and derated above T_A = 25°C per Figure 4.
2. Mounted on 40mm^2 copper pad.
3. 8.3ms single half sine-wave duty cycle = 4 pulses per minutes maximum.
4. Lead temperature at 75°C = T_L.
5. Peak pulse power waveform is 10/1000µS.

TYPE		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RWM}
(UNI)	(BI)	V_{RWM} (V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
SA5.0	SA5.0C	5.0	6.40	7.55	10	9.6	55.4	600.0
SA5.0A	SA5.0CA	5.0	6.40	7.25	10	9.2	55.4	600.0
SA6.0	SA6.0C	6.0	6.67	8.45	10	11.4	49.5	600.0
SA6.0A	SA6.0CA	6.0	6.67	7.67	10	10.3	49.5	600.0
SA6.5	SA6.5C	6.5	7.22	9.14	10	12.3	45.5	400.0
SA6.5A	SA6.5CA	6.5	7.22	8.30	10	11.2	45.5	400.0
SA7.0	SA7.0C	7.0	7.78	9.86	10	13.3	42.5	150.0
SA7.0A	SA7.0CA	7.0	7.78	8.95	10	12.0	42.5	150.0
SA7.5	SA7.5C	7.5	8.33	10.67	1.0	14.3	39.5	50.0
SA7.5A	SA7.5CA	7.5	8.33	9.58	1.0	12.9	39.5	50.0
SA8.0	SA8.0C	8.0	8.89	11.3	1.0	15.0	37.5	25.0
SA8.0A	SA8.0CA	8.0	8.89	10.23	1.0	13.6	37.5	25.0
SA8.5	SA8.5C	8.5	9.44	11.92	1.0	15.9	35.4	10.0
SA8.5A	SA8.5CA	8.5	9.44	10.82	1.0	14.4	35.4	10.0
SA9.0	SA9.0C	9.0	10.0	12.6	1.0	16.9	33.1	5.0
SA9.0A	SA9.0CA	9.0	10.0	11.5	1.0	15.4	33.1	5.0
SA10	SA10C	10	11.1	14.1	1.0	18.8	30.0	3.0
SA10A	SA10CA	10	11.1	12.8	1.0	17.0	30.0	3.0
SA11	SA11C	11	12.2	15.4	1.0	20.1	28.0	3.0
SA11A	SA11CA	11	12.2	14.0	1.0	18.2	28.0	3.0
SA12	SA12C	12	13.3	16.9	1.0	22.0	25.6	3.0
SA12A	SA12CA	12	13.3	15.3	1.0	19.9	25.6	3.0
SA13	SA13C	13	14.4	18.2	1.0	23.8	23.7	3.0
SA13A	SA13CA	13	14.4	16.5	1.0	21.5	23.7	3.0
SA14	SA14C	14	15.6	19.8	1.0	25.8	22.0	3.0
SA14A	SA14CA	14	15.6	17.9	1.0	23.2	22.0	3.0
SA15	SA15C	15	16.7	21.1	1.0	26.9	20.9	3.0
SA15A	SA15CA	15	16.7	19.2	1.0	24.4	20.9	3.0
SA16	SA16C	16	17.8	22.6	1.0	28.8	19.6	3.0
SA16A	SA16CA	16	17.8	20.5	1.0	26.0	19.6	3.0
SA17	SA17C	17	18.9	23.9	1.0	30.5	18.5	3.0
SA17A	SA17CA	17	18.9	21.7	1.0	27.6	18.5	3.0
SA18	SA18C	18	20.0	25.3	1.0	32.2	17.5	3.0
SA18A	SA18CA	18	20.0	23.3	1.0	29.2	17.5	3.0
SA20	SA20C	20	22.2	28.1	1.0	35.8	15.7	3.0
SA20A	SA20CA	20	22.2	25.5	1.0	32.4	15.7	3.0
SA22	SA22C	22	24.4	29.8	1.0	39.4	12.9	3.0

TYPE		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RWM}
(UNI)	(BI)	V_{RWM}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
SA22A	SA22CA	22	24.4	26.9	1.0	35.5	14.4	3.0
SA24	SA24C	24	26.7	32.6	1.0	43.0	11.9	3.0
SA24A	SA24CA	24	26.7	29.5	1.0	38.9	13.1	3.0
SA26	SA26C	26	28.9	35.3	1.0	46.6	10.9	3.0
SA26A	SA26CA	26	28.9	31.9	1.0	42.1	12.1	3.0
SA28	SA28C	28	31.1	38.0	1.0	50.0	10.2	3.0
SA28A	SA28CA	28	31.1	34.4	1.0	45.4	11.2	3.0
SA30	SA30C	30	33.3	40.7	1.0	53.5	9.5	3.0
SA30A	SA30CA	30	33.3	36.8	1.0	48.4	10.5	3.0
SA33	SA33C	33	36.7	44.9	1.0	59.0	8.6	3.0
SA33A	SA33CA	33	36.7	40.6	1.0	53.3	9.6	3.0
SA36	SA36C	36	40.0	48.9	1.0	64.3	7.9	3.0
SA36A	SA36CA	36	40.0	44.2	1.0	58.1	8.8	3.0
SA40	SA40C	40	44.4	54.3	1.0	71.4	7.1	3.0
SA40A	SA40CA	40	44.4	49.1	1.0	64.5	7.9	3.0
SA43	SA43C	43	47.8	58.4	1.0	76.7	6.6	3.0
SA43A	SA43CA	43	47.8	52.8	1.0	69.4	7.3	3.0
SA45	SA45C	45	50.0	61.1	1.0	80.3	6.4	3.0
SA45A	SA45CA	45	50.0	55.3	1.0	72.7	7.0	3.0
SA48	SA48C	48	53.3	65.2	1.0	85.5	6.0	3.0
SA48A	SA48CA	48	53.3	58.9	1.0	77.4	6.6	3.0
SA51	SA51C	51	56.7	69.3	1.0	91.1	5.6	3.0
SA51A	SA51CA	51	56.7	62.7	1.0	82.4	6.2	3.0
SA54	SA54C	54	60.0	73.3	1.0	96.3	5.3	3.0
SA54A	SA54CA	54	60.0	66.3	1.0	87.1	5.9	3.0
SA58	SA58C	58	64.4	78.7	1.0	103	5.0	3.0
SA58A	SA58CA	58	64.4	71.2	1.0	93.6	5.4	3.0
SA60	SA60C	60	66.7	81.5	1.0	107	4.8	3.0
SA60A	SA60CA	60	66.7	73.7	1.0	96.8	5.3	3.0
SA64	SA64C	64	71.1	86.9	1.0	114	4.5	3.0
SA64A	SA64CA	64	71.1	78.6	1.0	103	5.0	3.0
SA70	SA70C	70	77.8	95.1	1.0	125	4.1	3.0
SA70A	SA70CA	70	77.8	86.0	1.0	113	4.5	3.0
SA75	SA75C	75	83.0	102	1.0	134	3.8	3.0
SA75A	SA75CA	75	83.0	92.1	1.0	121	4.2	3.0
SA78	SA78C	78	86.0	106	1.0	139	3.7	3.0

TYPE		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RWM}
(UNI)	(BI)	V_{RWM}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
SA78A	SA78CA	78	86.0	95.8	1.0	126	4.0	3.0
SA85	SA85C	85	94.0	115	1.0	151	3.4	3.0
SA85A	SA85CA	85	94.0	104	1.0	137	3.7	3.0
SA90	SA90C	90	100	122	1.0	160	3.2	3.0
SA90A	SA90CA	90	100	111	1.0	146	3.3	3.0
SA100	SA100C	100	111	136	1.0	179	2.8	3.0
SA100A	SA100CA	100	111	123	1.0	162	3.1	3.0
SA110	SA110C	110	122	149	1.0	196	2.6	3.0
SA110A	SA110CA	110	122	135	1.0	177	2.9	3.0
SA120	SA120C	120	133	163	1.0	214	2.4	3.0
SA120A	SA120CA	120	133	147	1.0	193	2.6	3.0
SA130	SA130C	130	144	176	1.0	231	2.2	3.0
SA130A	SA130CA	130	144	159	1.0	209	2.4	3.0
SA150	SA150C	150	167	204	1.0	268	1.9	3.0
SA150A	SA150CA	150	167	185	1.0	243	2.1	3.0
SA160	SA160C	160	178	218	1.0	287	1.7	3.0
SA160A	SA160CA	160	178	197	1.0	259	2.0	3.0
SA170	SA170C	170	189	231	1.0	304	1.7	3.0
SA170A	SA170CA	170	189	209	1.0	275	1.9	3.0
SA180	SA180C	180	200	244	1.0	321	1.56	3.0
SA180A	SA180CA	180	200	221	1.0	290	1.73	3.0
SA190	SA190C	190	211	258	1.0	339	1.48	3.0
SA190A	SA190CA	190	211	233	1.0	306	1.64	3.0
SA200	SA200C	200	222	271	1.0	356	1.41	3.0
SA200A	SA200CA	200	222	245	1.0	322	1.56	3.0
SA220	SA220C	220	244	298	1.0	392	1.29	3.0
SA220A	SA220CA	220	244	270	1.0	355	1.42	3.0
SA250	SA250C	250	278	340	1.0	447	1.13	3.0
SA250A	SA250CA	250	278	307	1.0	403	1.25	3.0
SA300	SA300C	300	333	407	1.0	535	0.94	3.0
SA300A	SA300CA	300	333	368	1.0	484	1.04	3.0
SA350	SA350C	350	389	475	1.0	624	0.81	3.0
SA350A	SA350CA	350	389	430	1.0	565	0.89	3.0
SA400	SA400C	400	444	523	1.0	687	0.74	3.0
SA400A	SA400CA	400	444	491	1.0	645	0.79	3.0
SA440	SA440C	440	489	598	1.0	786	0.65	3.0
SA440A	SA440CA	440	489	540	1.0	710	0.71	3.0

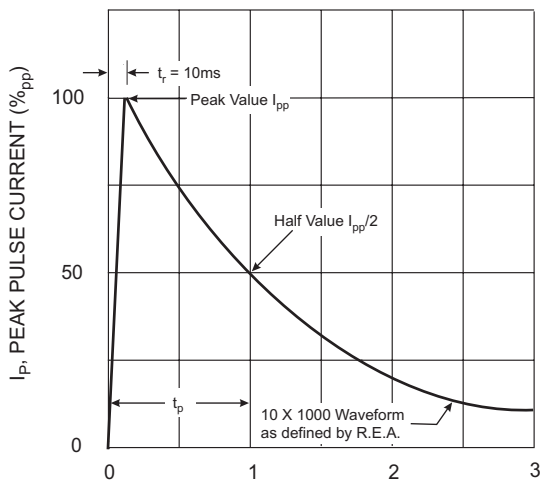


Fig. 1 Pulse Waveform

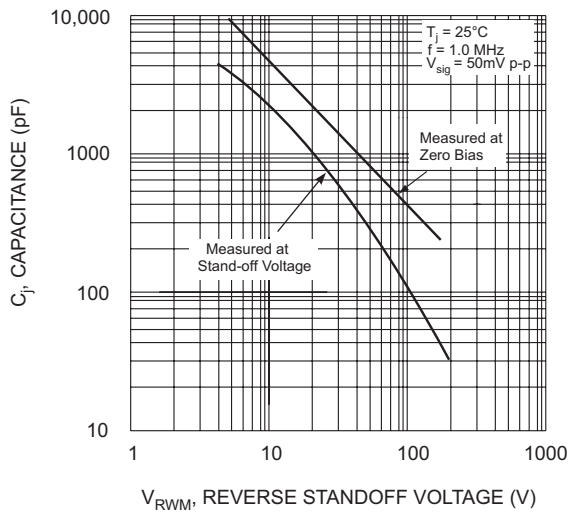


Fig. 2 Typical Junction Capacitance

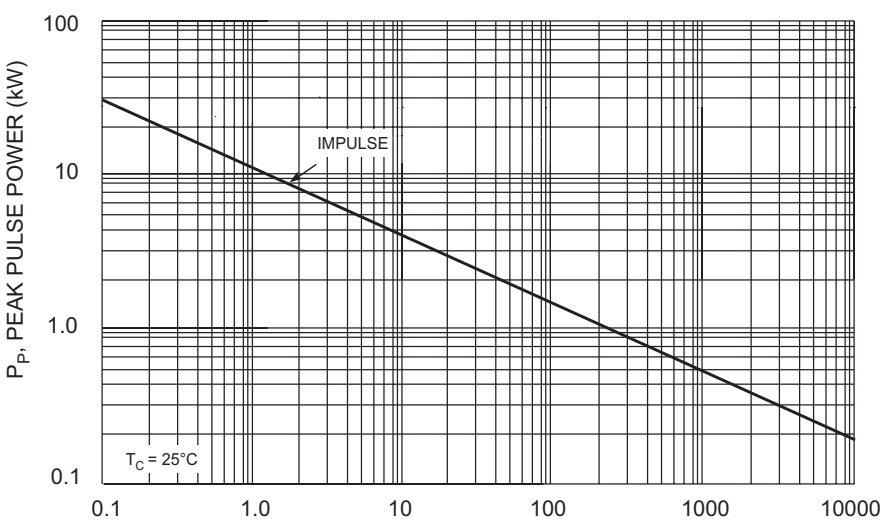


Fig. 3 Pulse Rating Curve

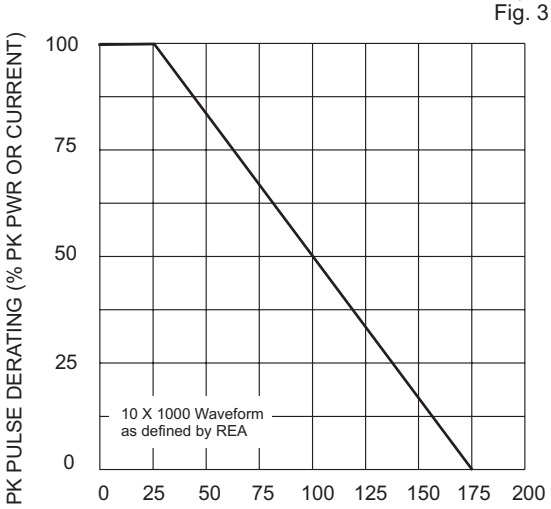


Fig. 4 Pulse Derating Curve

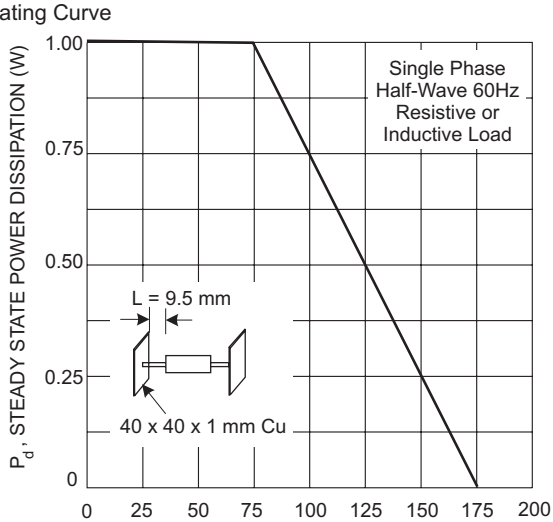


Fig. 5, Steady State Power Derating