

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).
- For bi-directional construction, indicate a "C" or "CA" suffix, i.e. SA5.0CA.

MAXIMUM RATINGS

Parameters	Symbol	Value	Unit
Average power dissipation @ $T_L = 25^\circ\text{C}$ ⁽¹⁾	$P_{M(AV)}$	2.5	Watts
Peak pulse power dissipation @ 1000 μs	P_{PP}	500	Watts
$t_{clamping}$ (0 Volts to BV min) Unidirectional Bidirectional		< 1 < 5	ps ns
Solder temperature @ 10s	T_{SP}	260	$^\circ\text{C}$
Operating and storage temperature range	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

Note 1: At 3/8" lead length from body.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Part number	Breakdown voltage		Test current	Rated stand-off voltage	Maximum reverse standby current	Maximum peak reverse voltage	Maximum peak pulse current	Maximum temperature coefficient of $V_{(BR)}$
						$V_C \text{ max}$		-55 to +175 $^\circ\text{C}$
	$V_{(BR)}$		I_T	V_{WM}	$I_D @ V_{WM}$	@ I_{PP}	I_{PP}	$\alpha V_{(BR)}$
	Volts		mA	Volts	μA	Volts	Amp	%/ $^\circ\text{C}$
SA5.0	6.40	7.30	10	5.0	600	9.6	52.0	0.057
SA5.0A	6.40	7.00	10	5.0	600	9.2	54.3	0.057
SA6.0	6.67	8.15	10	6.0	600	11.4	43.9	0.059
SA6.0A	6.67	7.37	10	6.0	600	10.3	48.5	0.059
SA6.5	7.22	8.82	10	6.5	400	12.3	40.7	0.061
SA6.5A	7.22	7.98	10	6.5	400	11.2	44.7	0.061
SA7.0	7.78	9.51	10	7.0	150	13.3	37.8	0.065
SA7.0A	7.78	8.60	10	7.0	150	12.0	41.7	0.065
SA7.5	8.33	10.2	1	7.5	50	14.3	35.0	0.067
SA7.5A	8.33	9.21	1	7.5	50	12.9	38.8	0.067
SA8.0	8.89	10.9	1	8.0	25	15.0	33.3	0.070
SA8.0A	8.89	9.83	1	8.0	25	13.6	36.7	0.070
SA8.5	9.44	11.5	1	8.5	5	15.9	31.4	0.073
SA8.5A	9.44	10.4	1	8.5	5	14.4	34.7	0.073
SA9.0	10.0	12.2	1	9.0	1	16.9	29.5	0.076
SA9.0A	10.0	11.1	1	9.0	1	15.4	32.5	0.076
SA10	11.1	13.6	1	10	1	18.8	26.6	0.078

ELECTRICAL CHARACTERISTICS (T_A= 25°C unless otherwise noted)

Part number	Breakdown voltage		Test current	Rated stand-off voltage	Maximum reverse standby current	Maximum peak reverse voltage	Maximum peak pulse current	Maximum temperature coefficient of V _(BR)			
						V _C max		-55 to +175°C			
	V _(BR)	I _T				V _{WM}		I _D @ V _{WM}	@ I _{PP}	I _{PP}	α V _(BR)
	Volts	mA				Volts		μA	Volts	Amp	%/°C
SA10A	11.1	12.3	1	10	1	17.0	29.4	0.078			
SA11	12.2	14.9	1	11	1	20.1	24.9	0.081			
SA11A	12.2	13.5	1	11	1	18.2	27.4	0.081			
SA12	13.3	16.3	1	12	1	22.0	22.7	0.082			
SA12A	13.3	14.7	1	12	1	19.9	25.1	0.082			
SA13	14.4	17.6	1	13	1	23.8	21.0	0.084			
SA13A	14.4	15.9	1	13	1	21.5	23.2	0.084			
SA14	15.6	19.1	1	14	1	25.8	19.4	0.086			
SA14A	15.6	17.2	1	14	1	23.2	21.5	0.086			
SA15	16.7	20.4	1	15	1	26.9	18.8	0.087			
SA15A	16.7	18.5	1	15	1	24.4	20.6	0.087			
SA16	17.8	21.8	1	16	1	28.8	17.6	0.088			
SA16A	17.8	19.7	1	16	1	26.0	19.2	0.088			
SA17	18.9	23.1	1	17	1	30.5	16.4	0.090			
SA17A	18.9	20.9	1	17	1	27.6	18.1	0.090			
SA18	20.0	24.4	1	18	1	32.2	15.5	0.092			
SA18A	20.0	22.1	1	18	1	29.2	17.2	0.092			
SA20	22.2	27.1	1	20	1	35.8	13.9	0.093			
SA20A	22.2	24.5	1	20	1	32.4	15.4	0.093			
SA22	24.4	29.8	1	22	1	39.4	12.7	0.094			
SA22A	24.4	26.9	1	22	1	35.5	14.1	0.094			
SA24	26.7	32.6	1	24	1	43.0	11.6	0.096			
SA24A	26.7	29.5	1	24	1	38.9	12.8	0.096			
SA26	28.9	35.3	1	26	1	46.6	10.7	0.097			
SA26A	28.9	31.9	1	26	1	42.1	11.9	0.097			
SA28	31.1	38.0	1	28	1	50.0	9.9	0.098			
SA28A	31.1	34.4	1	28	1	45.4	11.0	0.098			
SA30	33.3	40.7	1	30	1	53.5	9.3	0.099			
SA30A	33.3	36.8	1	30	1	48.4	10.3	0.099			
SA33	36.7	44.9	1	33	1	59.0	8.5	0.100			
SA33A	36.7	40.6	1	33	1	53.3	9.4	0.100			
SA36	40.0	48.9	1	36	1	64.3	7.8	0.101			

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

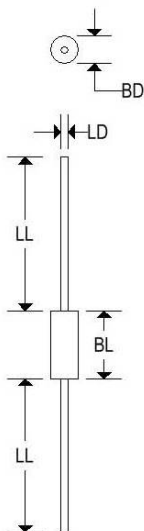
Part number	Breakdown voltage		Test current	Rated stand-off voltage	Maximum reverse standby current	Maximum peak reverse voltage	Maximum peak pulse current	Maximum temperature coefficient of $V_{(BR)}$
						$V_C \text{ max}$		-55 to +175°C
	$V_{(BR)}$		I_T	V_{WM}	$I_O @ V_{WM}$	@ I_{PP}	I_{PP}	$\alpha V_{(BR)}$
	Volts		mA	Volts	μA	Volts	Amp	%/°C
SA36A	40.0	44.2	1	36	1	58.1	8.6	0.101
SA40	44.4	54.3	1	40	1	71.4	7.0	0.101
SA40A	44.4	49.1	1	40	1	64.5	7.8	0.101
SA43	47.8	58.4	1	43	1	76.7	6.5	0.102
SA43A	47.8	52.8	1	43	1	69.4	7.2	0.102
SA45	50.0	61.1	1	45	1	80.3	6.2	0.102
SA45A	50.0	55.3	1	45	1	72.7	6.9	0.102
SA48	53.3	65.1	1	48	1	85.5	5.8	0.103
SA48A	53.3	58.9	1	48	1	77.4	6.5	0.103
SA51	56.7	69.3	1	51	1	91.1	5.5	0.103
SA51A	56.7	62.7	1	51	1	82.4	6.1	0.103
SA54	60.0	73.3	1	54	1	96.3	5.2	0.104
SA54A	60.0	66.3	1	54	1	87.1	5.7	0.104
SA58	64.4	78.7	1	58	1	103.0	4.9	0.104
SA58A	64.4	71.2	1	58	1	93.6	5.3	0.104
SA60	66.7	81.5	1	60	1	107.0	4.7	0.104
SA60A	66.7	73.7	1	60	1	96.8	5.2	0.104
SA64	71.1	86.9	1	64	1	114.0	4.4	0.105
SA64A	71.1	78.6	1	64	1	103.0	4.9	0.105
SA70	77.8	95.1	1	70	1	125.0	4.0	0.105
SA70A	77.8	86.0	1	70	1	113.0	4.4	0.105
SA75	83.3	102.0	1	75	1	134.0	3.7	0.105
SA75A	83.3	92.1	1	75	1	121.0	4.1	0.105
SA78	86.7	106.0	1	78	1	139.0	3.6	0.106
SA78A	86.7	95.8	1	78	1	126.0	4.0	0.106
SA85	94.4	115.0	1	85	1	151.0	3.3	0.106
SA85A	94.4	104.0	1	85	1	137.0	3.6	0.106
SA90	100.0	122.0	1	90	1	160.0	3.1	0.107
SA90A	100.0	111.0	1	90	1	146.0	3.4	0.107
SA100	111.0	136.0	1	100	1	179.0	2.8	0.107
SA100A	111.0	123.0	1	100	1	162.0	3.1	0.107
SA110	122.0	149.0	1	110	1	196.0	2.6	0.107

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Part number	Breakdown voltage		Test current	Rated stand-off voltage	Maximum reverse standby current	Maximum peak reverse voltage	Maximum peak pulse current	Maximum temperature coefficient of V _(BR)				
						VC max		-55 to +175°C				
	V _(BR)					I _T		V _{WM}	I _D @ V _{WM}	@ I _{PP}	I _{PP}	α V _(BR)
	Volts					mA		Volts	μA	Volts	Amp	%/°C
SA110A	122.0	135.0	1	110	1	177.0	2.8	0.107				
SA120	133.0	163.0	1	120	1	214.0	2.3	0.107				
SA120A	133.0	147.0	1	120	1	193.0	2.0	0.107				
SA130	144.0	176.0	1	130	1	231.0	2.2	0.108				
SA130A	144.0	159.0	1	130	1	209.0	2.4	0.108				
SA150	167.0	204.0	1	150	1	268.0	1.9	0.108				
SA150A	167.0	185.0	1	150	1	243.0	2.1	0.108				
SA160	178.0	218.0	1	160	1	287.0	1.7	0.108				
SA160A	178.0	197.0	1	160	1	259.0	1.9	0.108				
SA170	189.0	231.0	1	170	1	304.0	1.6	0.108				
SA170A	189.0	209.0	1	170	1	275.0	1.8	0.108				

MECHANICAL CHARACTERISTICS

Case	DO-41
Marking	Alpha-numeric
Polarity	Cathode band



	DO-41			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	-	0.107	-	2.720
BL	-	0.205	-	5.207
LD	0.028	0.034	0.711	0.864
LL	1.000	-	25.400	-

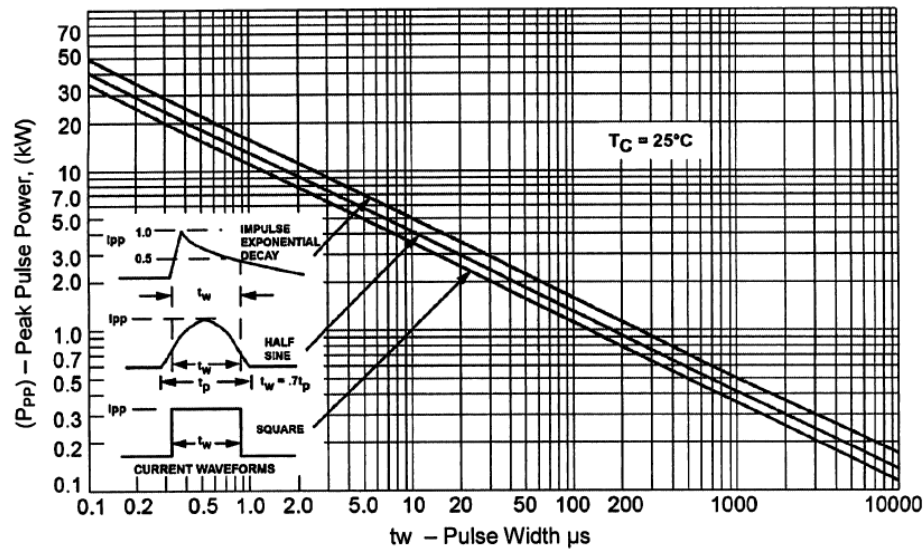


FIGURE 1
Peak Pulse Power vs Pulse Time

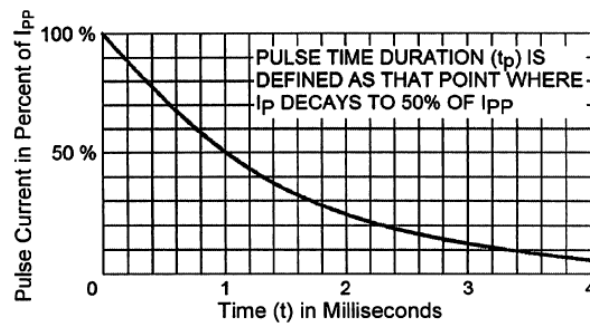


FIGURE 2
Pulse Waveform for Exponential Surge

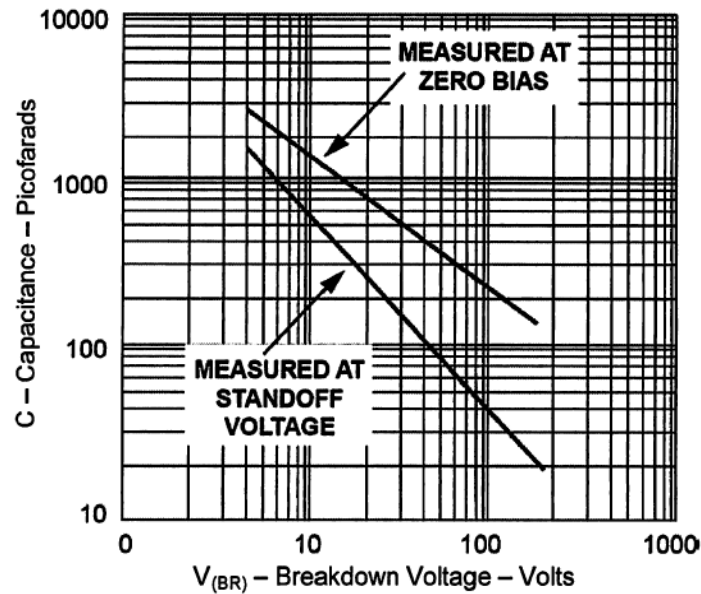


FIGURE 3
Typical Capacitance vs Breakdown Voltage

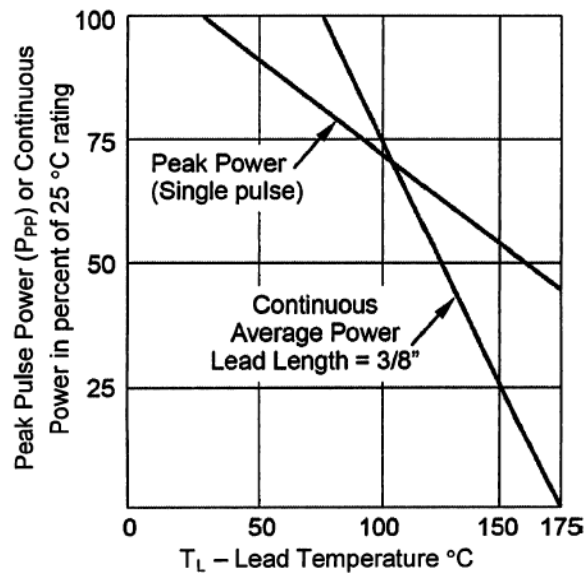


FIGURE 4
Derating Curve