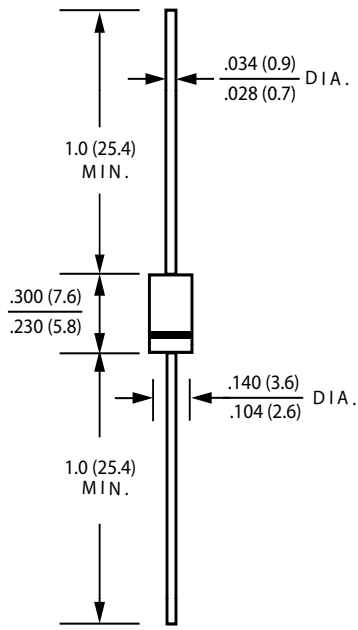




Transient Voltage Suppressors(500W)



DO-15

Dimensions in inches and (millimeters)



Ordering Information	
Part Number	Compound
SA SERIES	General
SA SERIES-H	Halogen Free
SA SERIES-Q	Automotive

PRIMARY CHARACTERISTICS	
V _{BR}	6.8~190V
PPPM	500W
P _D	3W
T _J max	150°C

Features

- Constructed with Glass Passivated Die
- 500W peak pulse power Dissipation
- Excellent clamping capability
- Uni and Bidirectional unit
- Very fast response time
- Component in accordance to RoHS 2002/95/EC
- AEC-Q101 Qualified

Mechanical Data

- Cases: DO-15
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead free Plating (Tin Finish)
Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.373 grams (approximate)

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Peak power dissipation with a 10/1000µs waveform	PPP	Minimum500	W
Power dissipation on infinite heatsink at TL=75°C	P _D	3	W
Peak forward surge current, 8.3ms single half sine-wave unidirectional only(1)	I _{FSM}	70	A
Maximum instantaneous forward voltage at 70A for unidirectional only(2)	V _F	3.5/5.0	V
Operating and Storage Temperature Range	T _J , T _{STG}	-55 ~ +150	°C

Note:

(1) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

(2) V_F<3.5V for devices of V_{BR}<200V and V_F<5.0V for devices of V_{BR}>201V



SA SERIES



Transient Voltage Suppressors(500W)

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min@I _T	Breakdown Voltage Max@I _T	Test Current	Max Clamping Voltage V _C @I _{PP}	Peak Pulse Current	Reverse Leakage I _R @V _{RRM}
DIRECTIONAL		V _{RRM}	V _{BR}	V _{BR}	I _T	V _C	I _{PP}	I _R
UNI	BI	V	V	V	mA	V	A	uA
SA5.0A	SA5.0CA	5.00	6.40	7.00	10.0	9.2	54.30	600
SA6.0A	SA6.0CA	6.00	6.67	7.37	10.0	10.3	48.50	600
SA6.5A	SA6.5CA	6.50	7.22	7.98	10.0	11.2	44.64	400
SA7.0A	SA7.0CA	7.00	7.78	8.60	10.0	12.0	41.67	150
SA7.5A	SA7.5CA	7.50	8.33	9.21	1.0	12.9	38.76	50
SA8.0A	SA8.0CA	8.00	8.89	9.83	1.0	13.6	38.76	25
SA8.5A	SA8.5CA	8.50	9.44	10.40	1.0	14.4	34.72	5
SA9.0A	SA9.0CA	9.00	10.00	11.10	1.0	15.4	32.47	5
SA10A	SA10CA	10.00	11.10	12.30	1.0	17.0	29.41	5
SA11A	SA11CA	11.00	12.20	13.50	1.0	18.2	27.47	5
SA12A	SA12CA	12.00	13.30	14.70	1.0	19.9	25.13	5
SA13A	SA13CA	13.00	14.40	15.90	1.0	21.5	23.26	5
SA14A	SA14CA	14.00	15.60	17.20	1.0	23.2	21.55	5
SA15A	SA15CA	15.00	16.70	18.50	1.0	24.4	20.49	5
SA16A	SA16CA	16.00	17.80	19.70	1.0	26.0	19.23	5
SA17A	SA17CA	17.00	18.90	20.90	1.0	27.6	18.12	5
SA18A	SA18CA	18.00	20.00	22.10	1.0	29.2	17.12	5
SA19A	SA19CA	19.00	21.10	23.30	1.0	30.8	16.24	5
SA20A	SA20CA	20.00	22.20	24.50	1.0	32.4	15.43	5
SA22A	SA22CA	22.00	24.40	26.90	1.0	35.5	14.80	5
SA24A	SA24CA	24.00	26.70	29.50	1.0	38.9	12.85	5
SA26A	SA26CA	26.00	28.90	31.90	1.0	42.1	11.88	5
SA28A	SA28CA	28.00	31.10	34.40	1.0	45.4	11.01	5
SA30A	SA30CA	30.00	33.30	36.80	1.0	48.4	10.33	5
SA33A	SA33CA	33.00	36.70	40.60	1.0	53.3	9.38	5
SA36A	SA36CA	36.00	40.00	44.20	1.0	58.1	8.61	5
SA40A	SA40CA	40.00	44.40	49.10	1.0	64.5	7.75	5
SA43A	SA43CA	43.00	47.80	52.80	1.0	69.4	7.20	5
SA45A	SA45CA	45.00	50.00	55.30	1.0	72.7	6.88	5
SA48A	SA48CA	48.00	53.30	58.90	1.0	77.4	6.46	5
SA51A	SA51CA	51.00	56.70	62.70	1.0	82.4	6.07	5
SA54A	SA54CA	54.00	60.00	66.30	1.0	87.1	5.74	5
SA58A	SA58CA	58.00	64.40	71.20	1.0	93.6	5.34	5
SA60A	SA60CA	60.00	66.70	73.70	1.0	96.8	5.17	5
SA64A	SA64CA	64.00	71.10	78.60	1.0	103.0	4.85	5
SA70A	SA70CA	70.00	77.80	86.00	1.0	113.0	4.42	5
SA75A	SA75CA	75.00	83.30	92.10	1.0	121.0	4.13	5
SA78A	SA78CA	78.00	86.70	95.80	1.0	126.0	3.97	5
SA80A	SA80CA	80.00	88.80	97.60	1.0	130.0	3.86	5
SA85A	SA85CA	85.00	94.40	104.00	1.0	137.0	3.65	5
SA90A	SA90CA	90.00	100.00	111.00	1.0	146.0	3.42	5



Transient Voltage Suppressors(500W)

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min@I _T	Breakdown Voltage Max@I _T	Test Current	Max Clamping Voltage V _C @I _{PP}	Peak Pulse Current	Reverse Leakage I _R @V _{RRM}
DIRECTIONAL		V _{RRM}	V _{BR}	V _{BR}	I _T	V _C	I _{PP}	I _R
UNI	BI	V	V	V	mA	V	A	uA
SA100A	SA100CA	100.00	111.00	123.00	1.0	162.0	3.09	5
SA110A	SA110CA	110.00	122.00	135.00	1.0	177.0	2.82	5
SA120A	SA120CA	120.00	133.00	147.00	1.0	193.0	2.59	5
SA130A	SA130CA	130.00	144.00	159.00	1.0	209.0	2.39	5
SA140A	SA140CA	140.00	155.00	171.00	1.0	227.0	2.20	5
SA150A	SA150CA	150.00	167.00	185.00	1.0	243.0	2.06	5
SA160A	SA160CA	160.00	178.00	197.00	1.0	259.0	1.93	5
SA170A	SA170CA	170.00	189.00	209.00	1.0	275.0	1.82	5
SA180A	SA180CA	180.00	200.00	220.00	1.0	292.0	1.71	5
SA190A	SA190CA	190.00	211.00	232.00	1.0	308.0	1.62	5

Note:

1. Suffix 'A ' denotes 5% tolerance device.
2. For Bi-Directional devices having VR of 10volts and under, the IR limit is double.
3. Add suffix 'CA' after part number to specify Bi-directional devices.

Transient Voltage Suppressors(500W)

Fig. 1 - Pulse Derating Curve

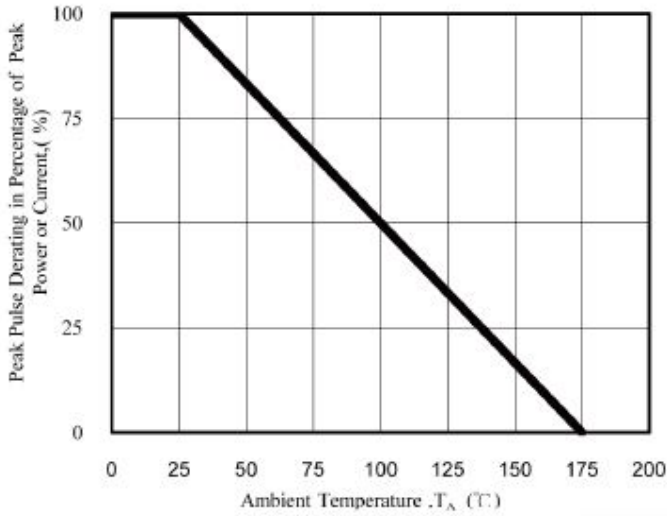


Fig. 2 - Maximum Non-Repetitive Surge Current

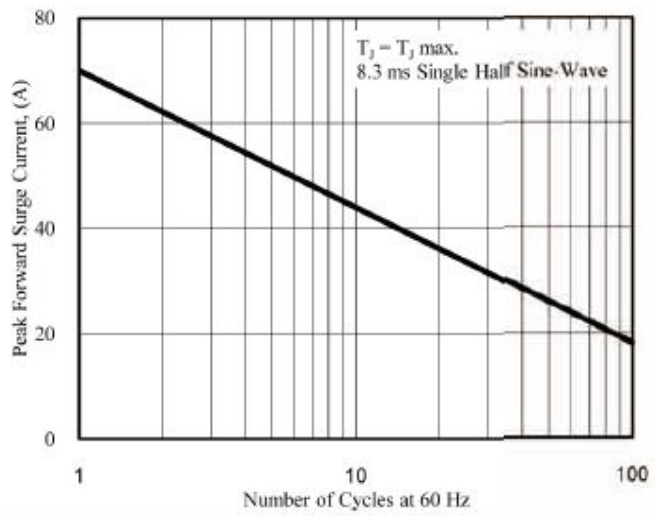


Fig. 3 - Steady State Power Derating Curve

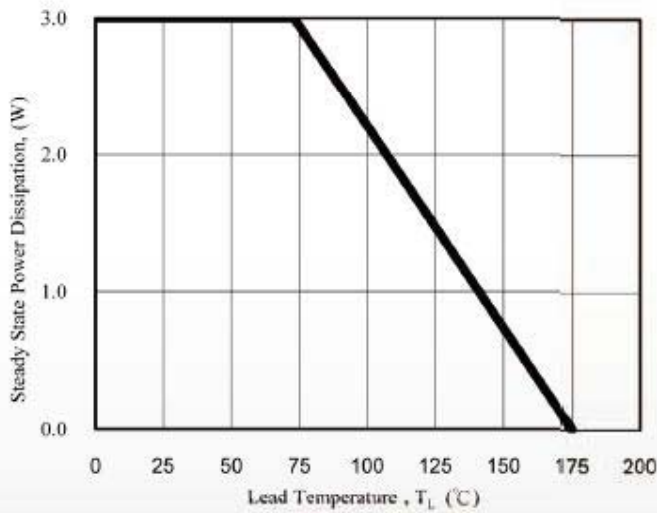


Fig. 4 - Peak Pulse Power Rating Curve

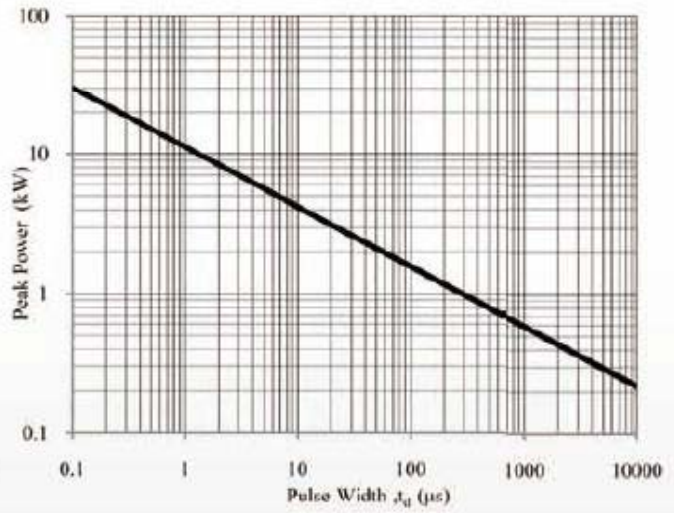


Fig. 5 - Pulse Waveform

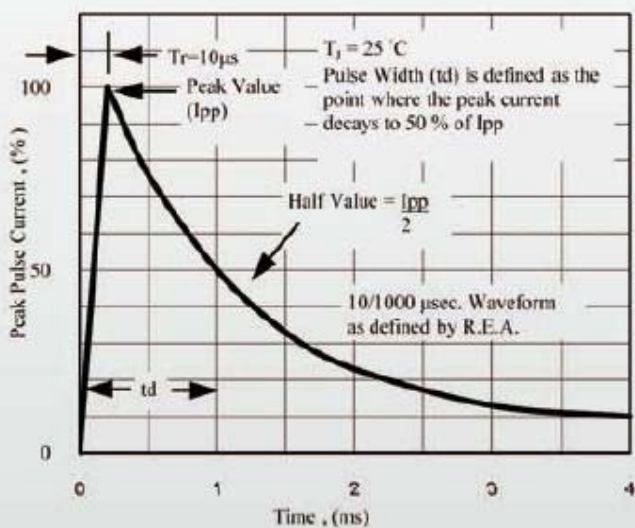


Fig. 6 - Typical junction Capacitance

