LITE-ON SEMICONDUCTOR

SA SERIES

GLASS PASSIVATED UNIDIRECTIONAL AND BIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSORS

REVERSE VOLTAGE - **5.0** to **170** Volts
POWER DISSIPATION - **500** WATTS

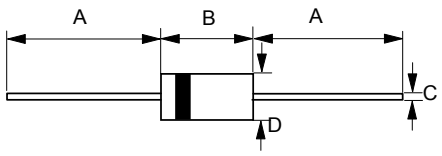
FEATURES

- Glass passivated chip
- Low leakage
- Uni and Bidirectional unit
- Excellent clamping capability
- The plastic material has U/L recognition 94V-O
- Fast response time

MECHANICAL DATA

- Case : Molded Plastic
- Marking : Unidirectional - type number and cathode band Bidirectional - type number only
- Weight : 0.34 grams

DO-15



	DO-15	
Dim.	Min.	Max.
A	25.4	-
B	5.80	7.60
C	0.71 ∅	0.86 ∅
D	2.60 ∅	3.60 ∅
All Dimensions in millimeter		

Datasheet.Directory

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOLS	VALUE	UNIT
PEAK POWER DISSIPATION AT T_A = 25℃, TP = 1ms (Note 1)	P_{PK}	500	WATTS
Peak Forward Surge Current 8.3ms single half sine-wave @ T_J = 25℃, (Note 2)	I_{FSM}	70	AMPS.
Steady State Power Dissipation at T_L =120℃ lead lenghts 0.375" (9.5mm), see fig. 4	$P_{M(AV)}$	2.0	WATTS
MaximumInstantaneous forward voltage at 35A for unidirectional devices only	V_F	3.5	Volts
Operating Temperature Range	T_J	-55 to +175	℃
Storage Temperature Range	T_{STG}	-55 to +175	℃

NOTES : 1. Non-repetitive current pulse, per fig. 5 and derated above TA= 25 C per fig. 1
2. 8.3ms single half sine-wave duty cycle= 4 pulses per minutes maximum (uni-directional units only).

REV. 7, Nov-2010, KDID01

FIG.1 - PULSE DERATING CURVE

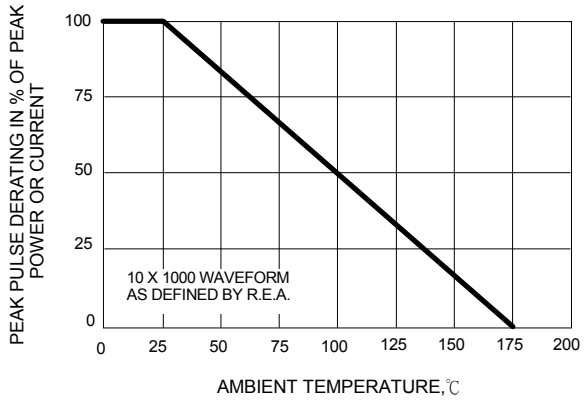


FIG.2 - TYPICAL JUNCTION CAPACITANCE

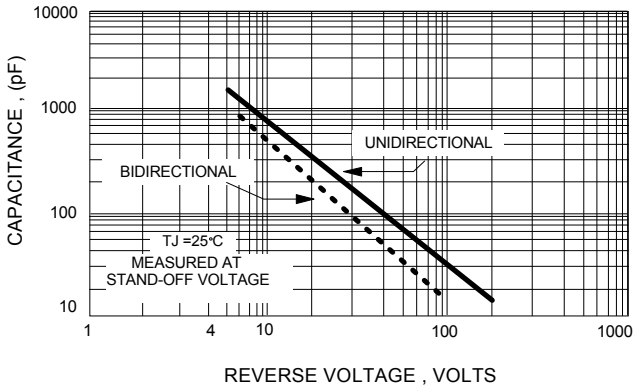


FIG.3 - PULSE RATING CURVE

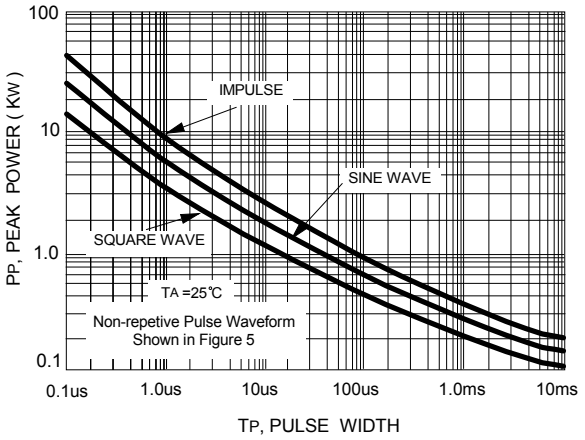


FIG.4 - STEADY STATE POWER DERATING CURVE

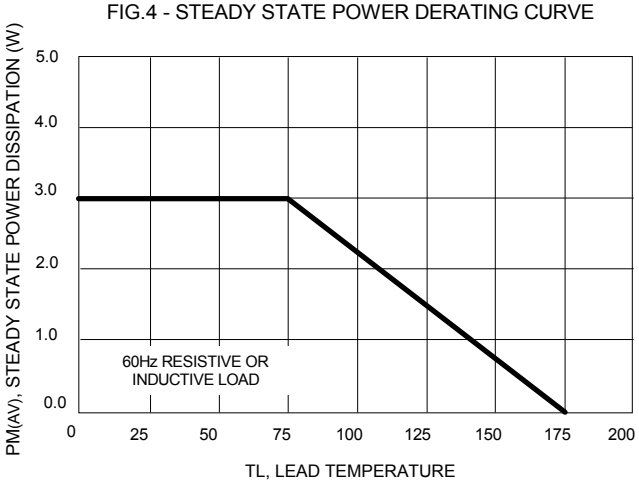
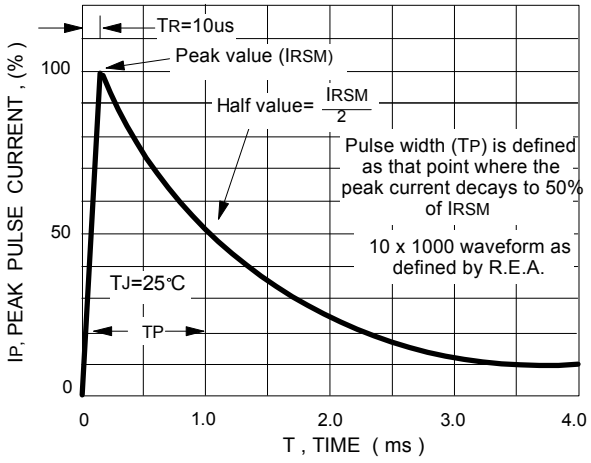


FIG.5 - PULSE WAVEFORM



LITE-ON SEMICONDUCTOR

Type Number	Type Number	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Clamping Voltage @Ipp	Max. Peak Pulse Current	Max. Reverse Leakage @VR
(UNI)	(BI)	V_R (V)	Min (V)	Max (V)	It (mA)	Vc (V)	Ipp (A)	I_R (uA)
SA5.0A	SA5.0CA	5.0	6.40	7.07	10	9.2	54.3	600
SA6.0A	SA6.0CA	6.0	6.67	7.37	10	10.3	48.5	600
SA6.5A	SA6.5CA	6.5	7.22	7.98	10	11.2	44.6	400
SA7.0A	SA7.0CA	7.0	7.78	8.60	10	12.0	41.7	150
SA7.5A	SA7.5CA	7.5	8.33	9.21	1	12.9	38.8	50
SA8.0A	SA8.0CA	8.0	8.89	9.83	1	13.6	36.8	25
SA8.5A	SA8.5CA	8.5	9.44	10.43	1	14.4	34.7	10
SA9.0A	SA9.0CA	9.0	10.0	11.1	1	15.4	32.5	5
SA10A	SA10CA	10	11.1	12.3	1	17.0	29.4	3
SA11A	SA11CA	11	12.2	13.5	1	18.2	27.5	3
SA12A	SA12CA	12	13.3	14.7	1	19.9	25.1	3
SA13A	SA13CA	13	14.4	15.9	1	21.5	23.3	3
SA14A	SA14CA	14	15.6	17.2	1	23.2	21.6	3
SA15A	SA15CA	15	16.7	18.5	1	24.4	20.5	3
SA16A	SA16CA	16	17.8	19.7	1	26.0	19.2	3
SA17A	SA17CA	17	18.9	20.9	1	27.6	18.1	3
SA18A	SA18CA	18	20.0	22.1	1	29.2	17.1	3
SA20A	SA20CA	20	22.2	24.5	1	32.4	15.4	3
SA22A	SA22CA	22	24.4	27.0	1	35.5	14.1	3
SA24A	SA24CA	24	26.7	29.5	1	38.9	12.9	3
SA26A	SA26CA	26	28.9	31.9	1	42.1	11.9	3
SA28A	SA28CA	28	31.1	34.4	1	45.4	11.0	3
SA30A	SA30CA	30	33.3	36.8	1	48.4	10.3	3
SA33A	SA33CA	33	36.7	40.6	1	53.3	9.4	3
SA36A	SA36CA	36	40.0	44.2	1	58.1	8.6	3
SA40A	SA40CA	40	44.4	49.1	1	64.5	7.8	3
SA43A	SA43CA	43	47.8	52.8	1	69.4	7.2	3
SA45A	SA45CA	45	50.0	55.3	1	72.7	6.9	3
SA48A	SA48CA	48	53.3	58.9	1	77.4	6.5	3
SA51A	SA51CA	51	56.7	62.7	1	82.4	6.1	3
SA54A	SA54CA	54	60.0	66.3	1	87.1	5.7	3
SA58A	SA58CA	58	64.4	71.2	1	93.6	5.3	3
SA60A	SA60CA	60	66.7	73.7	1	96.8	5.2	3
SA64A	SA64CA	64	71.1	78.6	1	103.0	4.9	3
SA70A	SA70CA	70	77.8	86.0	1	113.0	4.4	3
SA75A	SA75CA	75	83.3	92.1	1	121.0	4.1	3
SA78A	SA78CA	78	86.7	95.8	1	126.0	4.0	3
SA85A	SA85CA	85	94.4	104.3	1	137.0	3.6	3
SA90A	SA90CA	90	100	110.5	1	146.0	3.4	3
SA100A	SA100CA	100	111	122.7	1	162.0	3.1	3
SA110A	SA110CA	110	122	134.8	1	177.0	2.8	3
SA120A	SA120CA	120	133	147.0	1	193.0	2.6	3
SA130A	SA130CA	130	144	159.2	1	209.0	2.4	3
SA150A	SA150CA	150	167	184.6	1	243.0	2.1	3
SA160A	SA160CA	160	178	196.7	1	259.0	1.9	3
SA170A	SA170CA	170	189	208.9	1	275.0	1.8	3

NOTE :

Suffix'C' denotes Bi-directional device. Suffix'A' denotes 5% tolerance device.

1. For Bi-directional devices having VR of 10 volts and under,the IR limit is doubled .
2. For Uni-directional devices VF max=3.5V at IF=35A, 0.5 sine wave of 8.33 msec. pulse width .

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