LITE-ON SEMICONDUCTOR

1.5KE SERIES

GLASS PASSIVATED UNIDIRECTIONAL AND BIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSORS

REVERSE VOLTAGE - 6.8 to 440 V
POWER DISSIPATION - 1500 W

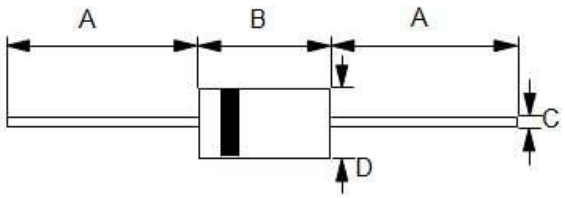
FEATURES

- Glass passivated chip
- Low leakage
- Uni and Bidirectional unit
- Excellent clamping capability
- The plastic material has U/L recognition 94V-O
- Fast response time
- Qualified to AEC-Q101 Rev_C
- IEC6100-4-2, >±30KV(air); >±30KV(Contact)

MECHANICAL DATA

- Case : Molded plastic
- Marking : Unidirectional - type number and cathode band Bidirectional - type number only
- Weight : 1.2 gram

DO-201



	DO-201	
Dim.	Min.	Max.
A	25.4	-
B	8.50	9.50
C	0.96	1.06
D	4.80	5.30
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Peak Power Dissipation at TA = 25 ℃ , TP = 1ms (Note 1)	P_{PP}	1500	W
Peak Forward Surge Current 8.3ms single half sine-wave @ TJ = 25 ℃ (Note 2)	I_{FSM}	200	A
Steady State Power Dissipation at TL =75℃ see fig.4 (on infinite heatsink)	$P_{M(AV)}$	5.0	W
Steady State Power Dissipation at TL =120℃ lead lenghts 0.375" (9.5mm) , see fig.4 without heatshink	$P_{M(AV)}$	2.5	W
Maximum Instantaneous forward voltage at 16A for unidirectional devices only (Note 3)	V_F	2	V
Typical Thermal Resistance (Note 4)	R0JA R0JL R0JC	55 11 10	°C/W
Operating junction temperature range	T_J	-55 to +175	°C
Storage temperature range	T_{STG}	-55 to +175	°C

REV.14, Jan.-2017, KDIF01

NOTES : 1. Non-repetitive current pulse, per fig. 5 and derated above TA= 25 ℃ per fig.1.
2. unidirectional units only.
3. VF max=2V at IF=16 A 300us square wave pulse.
4. Thermal resistance from junction to ambient, lead and case.

RATING AND CHARACTERISTIC CURVES
1.5KE SERIES

FIG.1 - PULSE DERATING CURVE

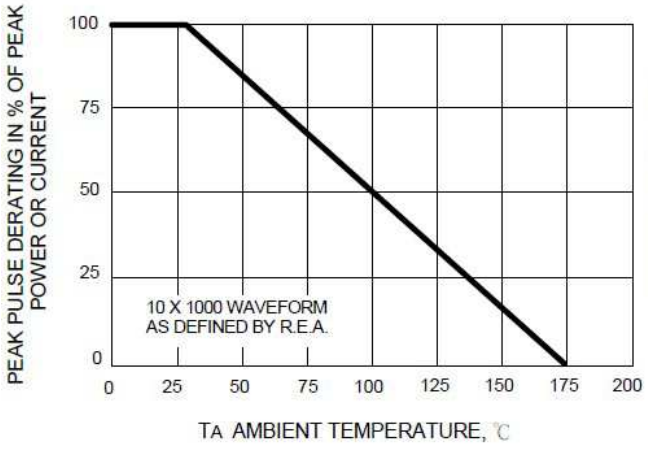


FIG.2 - TYPICAL JUNCTION CAPACITANCE

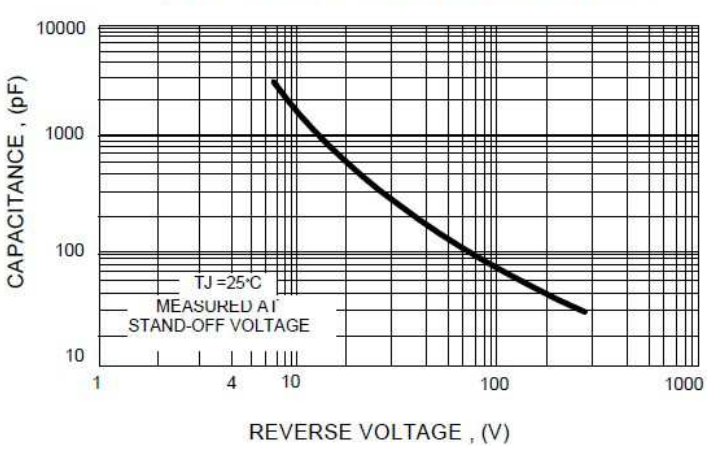


FIG.3 - PULSE RATING CURVE

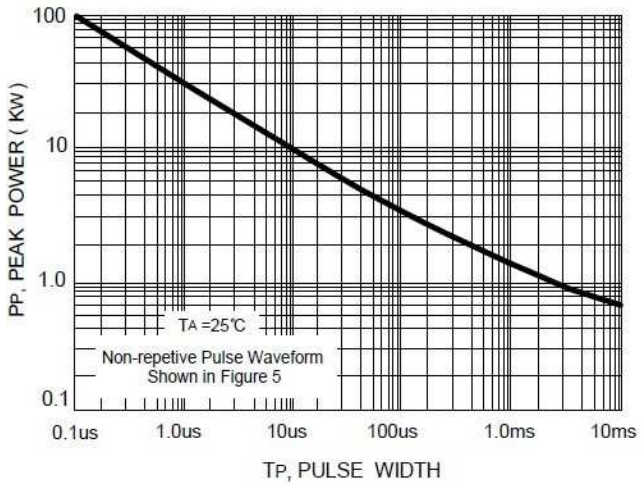


FIG.4 - STEADY STATE POWER DERATING CURVE

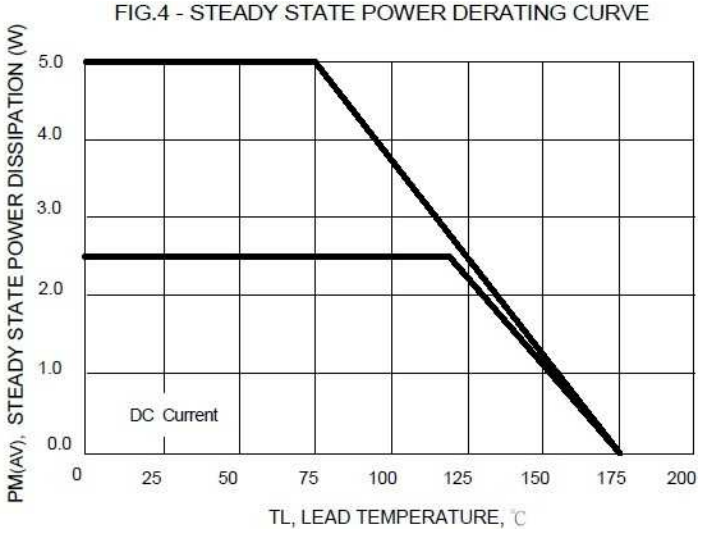
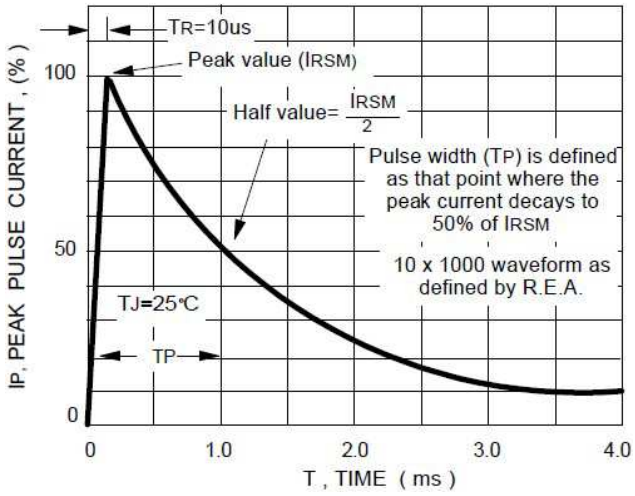


FIG.5 - PULSE WAVEFORM



Type Number	Type Number	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp	Max. Voltage Temp. Variation of Bv
(UNI)	(BI)	VR (V)	Min (V)	Max (V)	It (mA)	IR (uA)	Ipp (A)	Vc (V)	%/℃
1.5KE6.8A	1.5KE6.8CA	5.8	6.45	7.13	10	1000	142.9	10.5	0.057
1.5KE7.5A	1.5KE7.5CA	6.4	7.13	7.88	10	500	132.7	11.3	0.061
1.5KE8.2A	1.5KE8.2CA	7.0	7.79	8.61	10	200	124.0	12.1	0.065
1.5KE9.1A	1.5KE9.1CA	7.8	8.65	9.56	1	50	111.9	13.4	0.068
1.5KE10A	1.5KE10CA	8.6	9.50	10.50	1	10	103.4	14.5	0.073
1.5KE11A	1.5KE11CA	9.4	10.5	11.6	1	5	96.2	15.6	0.075
1.5KE12A	1.5KE12CA	10.2	11.4	12.6	1	0.5	89.8	16.7	0.078
1.5KE13A	1.5KE13CA	11.1	12.4	13.7	1	0.5	82.4	18.2	0.081
1.5KE15A	1.5KE15CA	12.8	14.3	15.8	1	0.5	70.8	21.2	0.084
1.5KE16A	1.5KE16CA	13.6	15.2	16.8	1	0.5	66.7	22.5	0.086
1.5KE18A	1.5KE18CA	15.3	17.1	18.9	1	0.5	59.5	25.2	0.088
1.5KE20A	1.5KE20CA	17.1	19.0	21.0	1	0.5	54.2	27.7	0.090
1.5KE22A	1.5KE22CA	18.8	20.9	23.1	1	0.5	49.0	30.6	0.092
1.5KE24A	1.5KE24CA	20.5	22.8	25.2	1	0.5	45.2	33.2	0.094
1.5KE27A	1.5KE27CA	23.1	25.7	28.4	1	0.5	40.0	37.5	0.096
1.5KE30A	1.5KE30CA	25.6	28.5	31.5	1	0.5	36.2	41.4	0.097
1.5KE33A	1.5KE33CA	28.2	31.4	34.7	1	0.5	32.8	45.7	0.098
1.5KE36A	1.5KE36CA	30.8	34.2	37.8	1	0.5	30.1	49.9	0.099
1.5KE39A	1.5KE39CA	33.3	37.1	41.0	1	0.5	27.8	53.9	0.100
1.5KE43A	1.5KE43CA	36.8	40.9	45.2	1	0.5	25.3	59.3	0.101
1.5KE47A	1.5KE47CA	40.2	44.7	49.4	1	0.5	23.1	64.8	0.101
1.5KE51A	1.5KE51CA	43.6	48.5	53.6	1	0.5	21.4	70.1	0.102
1.5KE56A	1.5KE56CA	47.8	53.2	58.8	1	0.5	19.5	77.0	0.103
1.5KE62A	1.5KE62CA	53.0	58.9	65.1	1	0.5	17.6	85.0	0.104
1.5KE68A	1.5KE68CA	58.1	64.6	71.4	1	0.5	16.3	92.0	0.104
1.5KE75A	1.5KE75CA	64.7	71.3	78.8	1	0.5	14.6	103.0	0.105
1.5KE82A	1.5KE82CA	70.1	77.9	86.1	1	0.5	13.3	113.0	0.105
1.5KE91A	1.5KE91CA	77.8	86.5	95.6	1	0.5	12.0	125.0	0.106
1.5KE100A	1.5KE100CA	85.5	95.0	105.0	1	0.5	10.9	137.0	0.106
1.5KE110A	1.5KE110CA	94.0	105.0	116.1	1	0.5	9.9	152.0	0.107
1.5KE120A	1.5KE120CA	102.0	114.0	126.0	1	0.5	9.1	165.0	0.107
1.5KE130A	1.5KE130CA	111.0	124.0	137.1	1	0.5	8.4	179.0	0.107
1.5KE150A	1.5KE150CA	128.0	143.0	158.1	1	0.5	7.2	207.0	0.108
1.5KE160A	1.5KE160CA	136.0	152.0	168.0	1	0.5	6.8	219.0	0.108
1.5KE170A	1.5KE170CA	145.0	162.0	179.1	1	0.5	6.4	234.0	0.108
1.5KE180A	1.5KE180CA	154.0	171.0	189.0	1	0.5	6.1	246.0	0.108
1.5KE200A	1.5KE200CA	171.0	190.0	210.0	1	0.5	5.5	274.0	0.108
1.5KE220A	1.5KE220CA	185.0	209.0	231.0	1	0.5	4.6	328.0	0.108
1.5KE250A	1.5KE250CA	214.0	237.0	262.0	1	0.5	4.4	344.0	0.110
1.5KE300A	1.5KE300CA	256.0	285.0	315.0	1	0.5	3.6	414.0	0.110
1.5KE350A	1.5KE350CA	300.0	332.0	367.0	1	0.5	3.1	482.0	0.110
1.5KE400A	1.5KE400CA	342.0	380.0	420.0	1	0.5	2.7	548.0	0.110
1.5KE440A	1.5KE440CA	376.0	418.0	462.0	1	0.5	2.5	600.0	0.110

NOTE :

Suffix 'A ' denotes 5% tolerance device.

1. Add suffix 'C 'or ' CA ' after part number to specify Bi-directional devices.
2. . The IR limit is double for Bi-Directional devices.

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