

Silicon Avalanche Diodes

1500W Axial Leaded Transient Voltage Suppressors

RoHS LCE Series



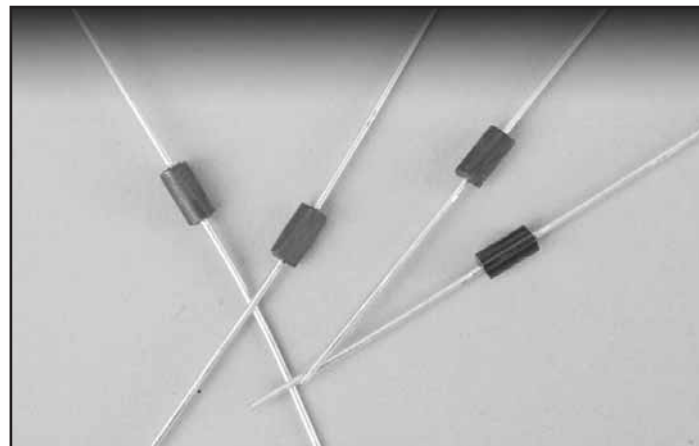
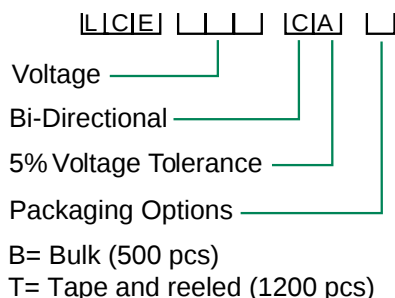
FEATURES

- RoHS compliant
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- 1500W Peak Pulse Power capability with a 10/1000µs waveform, repetition rate (duty cycle):0.05%
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time: typically less than 5.0ns from 0 Volts to V(BR)
- Ideal for data line applications
- Low capacitance
- High temperature soldering guaranteed: 265°C/10 seconds, 0.375" (9.5mm) lead length, 5lbs., (2.3kg) tension

Agency Approvals: Recognized under the Components Program of Underwriters Laboratories.

Agency File Number: E128662

ORDERING INFORMATION



MAXIMUM RATINGS AND CHARACTERISTICS

@25°C AMBIENT TEMPERATURE (unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Peak pulse power Dissipation with a 10/1000µs waveform (note 1, FIG.1)	P _{PPM}	Min 1500	Watts
Steady State Power Dissipation, TL= 75 with at lead lengths 0.375" (9.5mm)	P _{M(AV)}	5	Watts
Peak power pulse surge current with a 10/1000µs waveform (FIG.3, note 1)	I _{PPM}	See Table 1	Amps
Operating junction and Storage Temperature Range	T _j , T _{STG}	-55 to +175	°C

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above T_A= 25°C per Fig.2

Mechanical Specifications:

Weight:	0.045 ounce, 1.2 grams
Case:	JEDEC DO-201 Molded Plastic over passivated junction
Mounting Position:	Any
Polarity:	Color band denotes cathode except Bidirectionals
Terminal:	Solder Plated, solderable per MIL-STD-750, Method 2026
Standard Packaging:	16mm tape (EIA STD RS-481)

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SILICON DIODE
ARRAYS

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ELECTRICAL SPECIFICATION @ Tamb 25°C

Part Number	Reverse Stand off Voltage GE V_{WM} (Volts)	Breakdown Voltage V_{BR} (Volts) @ I_T		Test Current I_T (mA)	Maximum Reverse Leakage I_R @ V_R (μA)	Maximum Clamping Voltage V_C @ I_{PP} (Volts)	Maximum Peak Pulse Current I_{PP} (A)	Maximum Junction Capacitance @ 0 Volts (pF)	Working Inverse Blocking Voltage V_{WIB} (Volts)	Working Inverse Blocking Voltage V_{WIB} (Volts)	Peak Inverse Blocking Voltage V_{PIB} (Volts)
		MIN	MAX								
LCE6.5A	6.5	7.22	7.98	10	1000	11.2	100	100	75	1.0	100
LCE7.0A	7.0	7.78	8.60	10	500	12.0	100	100	75	1.0	100
LCE7.5A	7.5	8.33	9.21	10	250	12.9	100	100	75	1.0	100
LCE8.0A	8.0	8.89	9.83	1	100	13.6	100	100	75	1.0	100
LCE8.5A	8.5	9.44	10.40	1	50	14.4	100	100	75	1.0	100
LCE9.0A	9.0	10.00	11.10	1	10	15.4	97	100	75	1.0	100
LCE10A	10.0	11.10	12.30	1	5	17.0	88	100	75	1.0	100
LCE11A	11.0	12.20	13.50	1	5	18.2	82	100	75	1.0	100
LCE12A	12.0	13.30	14.70	1	5	19.9	75	100	75	1.0	100
LCE13A	13.0	14.40	15.90	1	5	21.5	70	100	75	1.0	100
LCE14A	14.0	15.60	17.20	1	5	23.2	65	100	75	1.0	100
LCE15A	15.0	16.70	18.50	1	5	24.4	61	100	75	1.0	100
LCE16A	16.0	17.80	19.70	1	5	26.0	57	100	75	1.0	100
LCE17A	17.0	18.90	20.90	1	5	27.6	54	100	75	1.0	100
LCE18A	18.0	20.00	22.10	1	5	29.2	51	100	75	1.0	100
LCE20A	20.0	22.20	24.50	1	5	32.4	46	100	75	1.0	100
LCE22A	22.0	24.40	26.90	1	5	35.5	42	100	75	1.0	100
LCE24A	24.0	26.70	29.50	1	5	38.9	39	100	75	1.0	100
LCE26A	26.0	28.90	31.90	1	5	42.1	36	100	75	1.0	100
LCE28A	28.0	31.10	34.40	1	5	45.5	33	100	75	1.0	100

Note: For parts without A, the VBR is $\pm 10\%$.

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Ratings and Characteristic Curves $T_A=25^\circ\text{C}$ unless otherwise noted

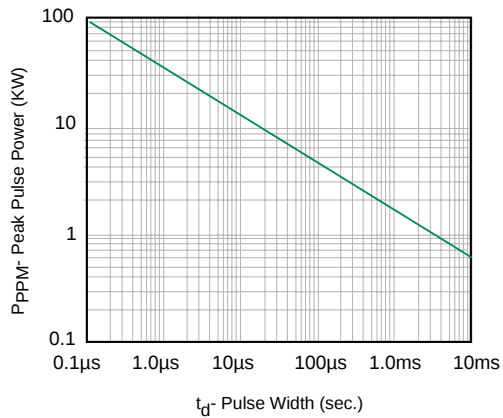


Fig. 1 Peak Pulse Power Rating

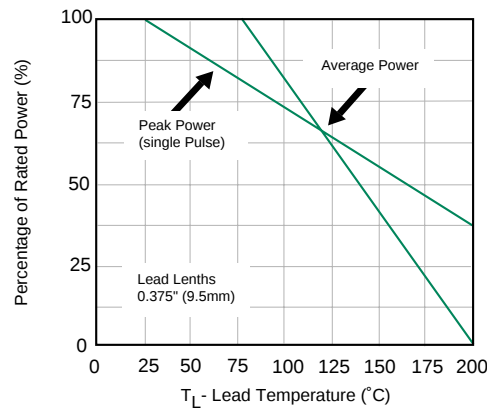


Fig. 2 Power Derating Curve

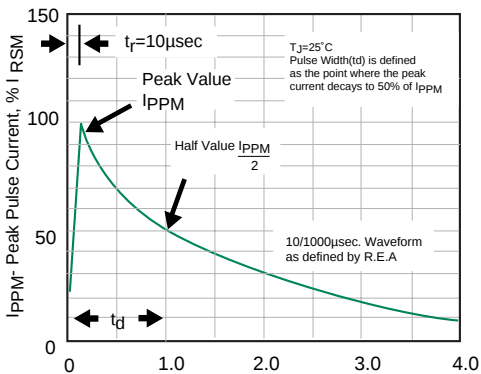
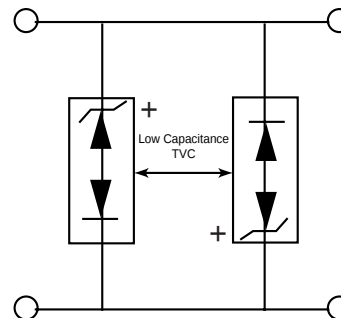


Fig. 3 Pulse Waveform



Application Note: Device must be used with two units in parallel, opposite in polarity as shown on circuit for AC signal line protection.

Fig. 4 AC Line Protection Application

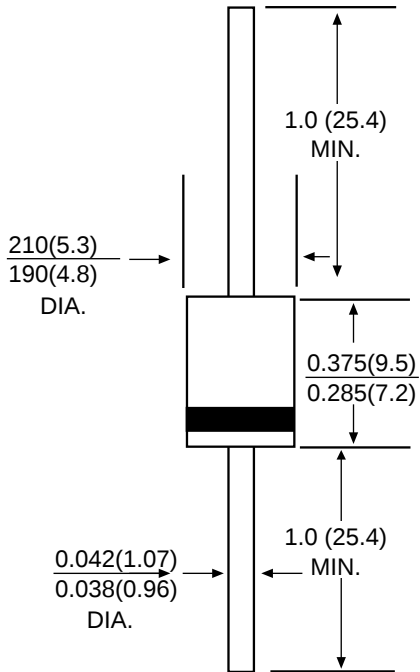
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Package Outline Dimensions

Case Style 1.5KE
(DO-201)



All dimensions in inches and (millimeters)