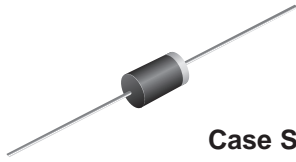


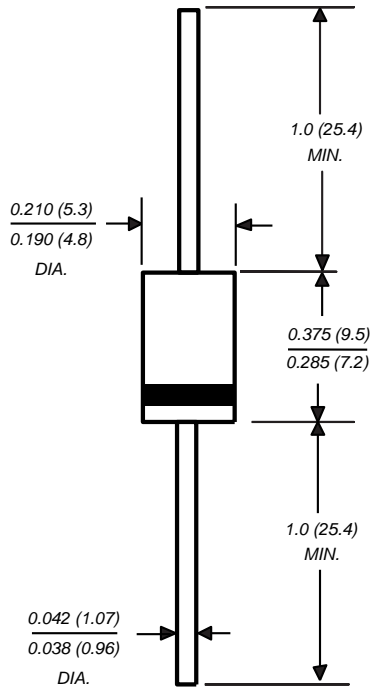


## Low Capacitance TRANSZORB® Transient Voltage Suppressors

**Peak Pulse Power** 1500W  
**Stand-off Voltage** 6.5 to 28V

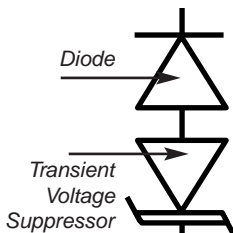


Case Style 1.5KE



Dimensions in inches and (millimeters)

### Schematic



### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- 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
- Very fast response time
- Ideal for data line applications
- High temperature soldering guaranteed: 265°C/10 seconds, 0.375" (9.5mm) lead length, 5lbs. (2.3 kg) tension

### Mechanical Data

**Case:** Molded plastic body over passivated junction

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes TVS cathode

**Mounting Position:** Any

**Weight:** 0.045 oz., 1.2 g

### Packaging Codes – Options (Antistatic):

- 51 – 1K per Bulk box, 10K/carton
- 54 – 1.4K per 13" paper Reel (52mm horiz. tape), 4.2K/carton
- 73 – 1K per horiz. tape & Ammo box, 10K/carton

## Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	Limit	Unit
Peak pulse power dissipation with a 10/1000µs waveform	PPPM	Minimum 1500 <sup>(1)(2)</sup>	W
Steady state power dissipation, at T <sub>L</sub> = 75°C with lead lengths 0.375" (9.5mm)	P <sub>M(AV)</sub>	6.5	W
Peak power pulse surge current with a 10/1000µs waveform <sup>(1)(3)</sup>	I <sub>PPM</sub>	See Next Table	A
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175	°C

**Note:** (1) Non-repetitive current pulse, per Fig.3 and derated above T<sub>A</sub> = 25°C per Fig. 2  
 (2) See Figure 1  
 (3) See Figure 3

# LCE6.5 thru LCE28A Series



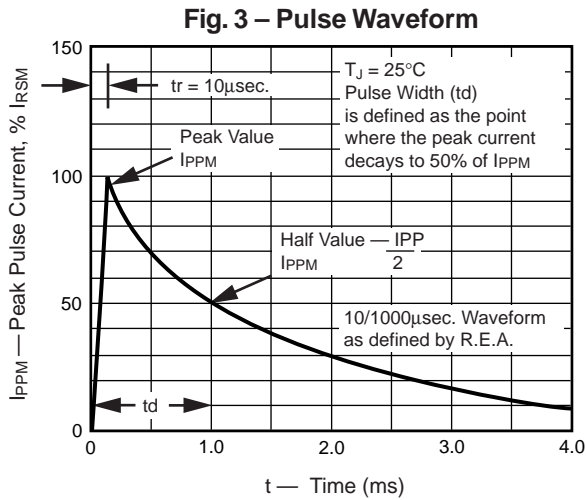
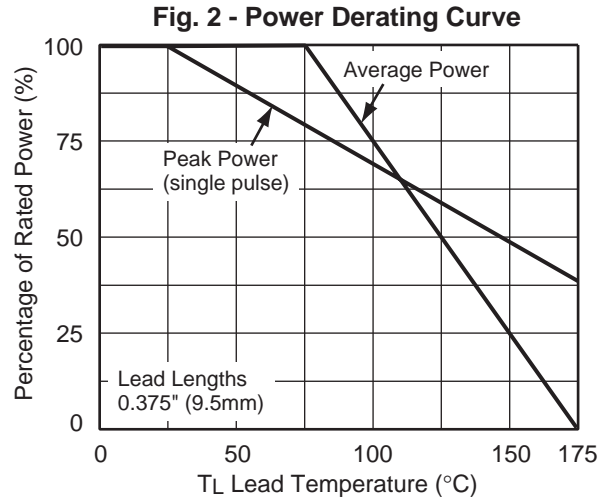
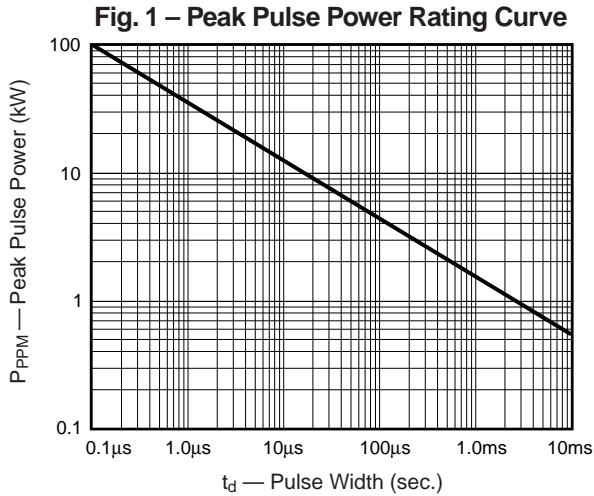
Vishay Semiconductors  
formerly General Semiconductor

## Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

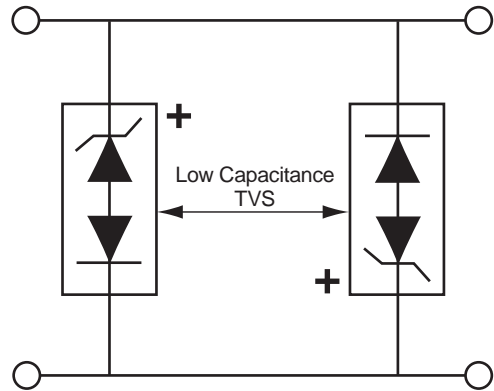
Part Number	Stand-off Voltage V <sub>WM</sub> (V)	Breakdown Voltage V <sub>(BR)</sub> (V)		Test Current at I <sub>r</sub> mA	Maximum Reverse Leakage at V <sub>WM</sub> I <sub>D</sub> (μA)	Maximum Clamping Voltage at I <sub>PP</sub> V <sub>C</sub> (V)	Maximum Peak Pulse Current (Fig 3) I <sub>PPM</sub> (A)	Maximum Junction Capacitance at 0 (V) (pF)	Working Inverse Blocking Voltage V <sub>WIB</sub> (V)	Maximum Inverse Blocking Leakage Current at V <sub>WIB</sub> I <sub>D</sub> (mA)	Minimum Peak Inverse Blocking Voltage V <sub>PiB</sub> (V)
		Min	Max								
LCE6.5	6.5	7.22	8.82	10.0	1000	12.3	100	100	75	1.0	100
LCE6.5A	6.5	7.22	7.98	10.0	1000	11.2	100	100	75	1.0	100
LCE7.0	7.0	7.78	9.51	10.0	500	13.3	100	100	75	1.0	100
LCE7.0A	7.0	7.78	8.60	10.0	500	12.0	100	100	75	1.0	100
LCE7.5	7.5	8.33	10.2	10.0	250	14.3	100	100	75	1.0	100
LCE7.5A	7.5	8.33	9.21	10.0	250	12.9	100	100	75	1.0	100
LCE8.0	8.0	8.89	10.9	1.0	100	15.0	100	100	75	1.0	100
LCE8.0A	8.0	8.89	9.83	1.0	100	13.6	100	100	75	1.0	100
LCE8.5	8.5	9.44	11.5	1.0	50.0	15.9	94	100	75	1.0	100
LCE8.5A	8.5	9.44	10.4	1.0	50.0	14.4	100	100	75	1.0	100
LCE9.0	9.0	10.0	12.2	1.0	10.0	16.9	89	100	75	1.0	100
LCE9.0A	9.0	10.0	11.1	1.0	10.0	15.4	97	100	75	1.0	100
LCE10	10	11.1	13.6	1.0	5.0	18.8	80	100	75	1.0	100
LCE10A	10	11.1	12.3	1.0	5.0	17.0	88	100	75	1.0	100
LCE11	11	12.2	14.9	1.0	5.0	20.1	74	100	75	1.0	100
LCE11A	11	12.2	13.5	1.0	5.0	18.2	82	100	75	1.0	100
LCE12	12	13.3	16.3	1.0	5.0	22.0	68	100	75	1.0	100
LCE12A	12	13.3	14.7	1.0	5.0	19.9	75	100	75	1.0	100
LCE13	13	14.4	17.6	1.0	5.0	23.8	63	100	75	1.0	100
LCE13A	13	14.4	15.9	1.0	5.0	21.5	70	100	75	1.0	100
LCE14	14	15.6	19.1	1.0	5.0	25.8	58	100	75	1.0	100
LCE14A	14	15.6	17.2	1.0	5.0	23.2	65	100	75	1.0	100
LCE15	15	16.7	20.4	1.0	5.0	26.9	56	100	75	1.0	100
LCE15A	15	16.7	18.5	1.0	5.0	24.4	61	100	75	1.0	100
LCE16	16	17.8	21.8	1.0	5.0	28.8	52	100	75	1.0	100
LCE16A	16	17.8	19.7	1.0	5.0	26.0	57	100	75	1.0	100
LCE17	17	18.9	23.1	1.0	5.0	30.5	49	100	75	1.0	100
LCE17A	17	18.9	20.9	1.0	5.0	27.6	54	100	75	1.0	100
LCE18	18	20.0	24.4	1.0	5.0	32.2	46	100	75	1.0	100
LCE18A	18	20.0	22.1	1.0	5.0	29.2	51	100	75	1.0	100
LCE20	20	22.2	27.1	1.0	5.0	35.8	42	100	75	1.0	100
LCE20A	20	22.2	24.5	1.0	5.0	32.4	46	100	75	1.0	100
LCE22	22	24.4	29.8	1.0	5.0	39.4	38	100	75	1.0	100
LCE22A	22	24.4	26.9	1.0	5.0	35.5	42	100	75	1.0	100
LCE24	24	26.7	32.6	1.0	5.0	43.0	35	100	75	1.0	100
LCE24A	24	26.7	29.5	1.0	5.0	38.9	39	100	75	1.0	100
LCE26	26	28.9	35.3	1.0	5.0	46.6	32	100	75	1.0	100
LCE26A	26	28.9	31.9	1.0	5.0	42.1	36	100	75	1.0	100
LCE28	28	31.1	38.0	1.0	5.0	50.1	30	100	75	1.0	100
LCE28A	28	31.1	34.4	1.0	5.0	45.5	33	100	75	1.0	100

**Note:** All the above devices are UL listed for Telecom application protection 497B, file number E136766.

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



**Fig. 4 - AC Line Protection Application**



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



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