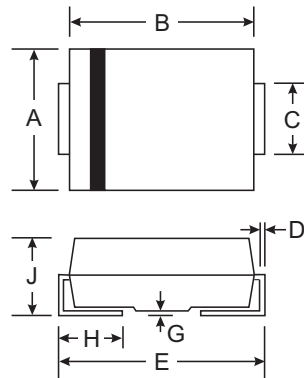


Features

- 1500 Watts of Peak Pulse Power Dissipation
- Available in stand-off voltage range of 6.5 to 170 V
- Low Capacitance of 100 pF or less
- Molding compound flammability rating : UL94V-O
- Pb / RoHS Free

Mechanical Data

- Case : SMC Molded plastic
- Epoxy : UL94V-O rate flame retardant
- Lead : Lead Formed for Surface Mount
- Polarity : Color band denotes cathode end except Bipolar.
- Mounting position : Any
- Weight : 0.21 gram



| SMC | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | 5.59 | 6.22 |
| B | 6.60 | 7.11 |
| C | 2.75 | 3.18 |
| D | 0.15 | 0.31 |
| E | 7.75 | 8.13 |
| G | 0.10 | 0.20 |
| H | 0.76 | 1.52 |
| J | 2.00 | 2.62 |
| All Dimensions in mm | | |

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Rating | Symbol | Value | Unit |
|---|-----------------|---------------|--------------------|
| Peak Pulse Power Dissipation on 10/1000 μs waveform (Note 1, Figure 1) | P_{PP} | 1500 | W |
| Steady State Power Dissipation at $T_L = 75^\circ\text{C}$ Lead Lengths 0.375", (9.5mm) (Note 2) | P_D | 5.0 | W |
| Thermal Resistance (Junction to Lead) | $R_{\theta JL}$ | 20 | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | - 65 to + 175 | $^\circ\text{C}$ |

Notes :

- (1) Non-repetitive Current pulse, per Fig. 3 and derated above $T_a = 25^\circ\text{C}$ per Fig. 2
- (2) 8.3 ms single half sine-wave, duty cycle = 4 pulses per minutes maximum.



| Type Number | Reverse Stand-off Voltage | Breakdown Voltage @ $I_{(BR)}$ | | | Maximum Reverse Leakage @ V_{WM} | Maximum Clamping Voltage @ I_{PP} | Maximum Peak Pulse Current @ 10/1000 | Maximum Junction Capacitance @ 0 Volt | Working Inverse Blocking Voltage | Inverse Blocking Leakage Current | Peak Inverse Blocking Voltage |
|--------------|---------------------------|--------------------------------|------|------------|------------------------------------|-------------------------------------|--------------------------------------|---------------------------------------|----------------------------------|----------------------------------|-------------------------------|
| | | V_{BR} (V) | | $I_{(BR)}$ | | | | | | | |
| | (V) | Min. | Max. | (mA) | (μ A) | (V) | (A) | pF | V_{WIB} (V) | I_{IB} μ A | V_{PIB} (V) |
| SMCJLCE6.5CA | 6.5 | 7.22 | 8.82 | 10 | 1000 | 12.3 | 100 | 100 | 75 | 10 | 100 |
| SMCJLCE6.5A | 6.5 | 7.22 | 7.98 | 10 | 1000 | 11.2 | 100 | 100 | 75 | 10 | 100 |
| SMCJLCE7.0CA | 7.0 | 7.78 | 9.51 | 10 | 500 | 13.3 | 100 | 100 | 75 | 10 | 100 |
| SMCJLCE7.0A | 7.0 | 7.78 | 8.60 | 10 | 500 | 12.0 | 100 | 100 | 75 | 10 | 100 |
| SMCJLCE7.5CA | 7.5 | 8.33 | 10.2 | 10 | 250 | 14.3 | 100 | 100 | 75 | 10 | 100 |
| SMCJLCE7.5A | 7.5 | 8.33 | 9.21 | 10 | 250 | 12.9 | 100 | 100 | 75 | 10 | 100 |
| SMCJLCE8.0CA | 8.0 | 8.89 | 10.9 | 1 | 100 | 15.0 | 100 | 100 | 75 | 10 | 100 |
| SMCJLCE8.0A | 8.0 | 8.89 | 9.83 | 1 | 100 | 13.6 | 100 | 100 | 75 | 10 | 100 |
| SMCJLCE8.5CA | 8.5 | 9.44 | 11.5 | 1 | 50 | 15.9 | 94 | 100 | 75 | 10 | 100 |
| SMCJLCE8.5A | 8.5 | 9.44 | 10.4 | 1 | 50 | 14.4 | 100 | 100 | 75 | 10 | 100 |
| SMCJLCE9.0CA | 9.0 | 10.0 | 12.2 | 1 | 10 | 16.9 | 89 | 100 | 75 | 10 | 100 |
| SMCJLCE9.0A | 9.0 | 10.0 | 11.1 | 1 | 10 | 15.4 | 97 | 100 | 75 | 10 | 100 |
| SMCJLCE10CA | 10 | 11.1 | 13.6 | 1 | 5 | 18.8 | 80 | 100 | 75 | 10 | 100 |
| SMCJLCE10A | 10 | 11.1 | 12.3 | 1 | 5 | 17.0 | 88 | 100 | 75 | 10 | 100 |
| SMCJLCE11CA | 11 | 12.2 | 14.9 | 1 | 5 | 20.1 | 74 | 100 | 75 | 10 | 100 |
| SMCJLCE11A | 11 | 12.2 | 13.5 | 1 | 5 | 18.2 | 82 | 100 | 75 | 10 | 100 |
| SMCJLCE12CA | 12 | 13.3 | 16.3 | 1 | 5 | 22.0 | 68 | 100 | 75 | 10 | 100 |
| SMCJLCE12A | 12 | 13.3 | 14.7 | 1 | 5 | 19.9 | 75 | 100 | 75 | 10 | 100 |
| SMCJLCE13CA | 13 | 14.4 | 17.6 | 1 | 5 | 23.8 | 63 | 100 | 75 | 10 | 100 |
| SMCJLCE13A | 13 | 14.4 | 15.9 | 1 | 5 | 21.5 | 70 | 100 | 75 | 10 | 100 |
| SMCJLCE14CA | 14 | 15.6 | 19.1 | 1 | 5 | 25.8 | 58 | 100 | 75 | 10 | 100 |
| SMCJLCE14A | 14 | 15.6 | 17.2 | 1 | 5 | 23.2 | 65 | 100 | 75 | 10 | 100 |
| SMCJLCE15CA | 15 | 16.7 | 20.4 | 1 | 5 | 26.9 | 56 | 100 | 75 | 10 | 100 |
| SMCJLCE15A | 15 | 16.7 | 18.5 | 1 | 5 | 24.4 | 61 | 100 | 75 | 10 | 100 |
| SMCJLCE16CA | 16 | 17.8 | 21.8 | 1 | 5 | 28.8 | 52 | 100 | 75 | 10 | 100 |
| SMCJLCE16A | 16 | 17.8 | 19.7 | 1 | 5 | 26.0 | 57 | 100 | 75 | 10 | 100 |
| SMCJLCE17CA | 17 | 18.9 | 23.1 | 1 | 5 | 30.5 | 49 | 100 | 75 | 10 | 100 |
| SMCJLCE17A | 17 | 18.9 | 20.9 | 1 | 5 | 27.6 | 54 | 100 | 75 | 10 | 100 |
| SMCJLCE18CA | 18 | 20.0 | 24.4 | 1 | 5 | 32.2 | 46 | 100 | 75 | 10 | 100 |
| SMCJLCE18A | 18 | 20.0 | 22.1 | 1 | 5 | 29.2 | 51 | 100 | 75 | 10 | 100 |
| SMCJLCE20CA | 20 | 22.2 | 27.1 | 1 | 5 | 35.8 | 42 | 100 | 75 | 10 | 100 |
| SMCJLCE20A | 20 | 22.2 | 24.5 | 1 | 5 | 32.4 | 46 | 100 | 75 | 10 | 100 |
| SMCJLCE22CA | 22 | 24.4 | 29.8 | 1 | 5 | 39.4 | 38 | 100 | 75 | 10 | 100 |
| SMCJLCE22A | 22 | 24.4 | 26.9 | 1 | 5 | 35.5 | 42 | 100 | 75 | 10 | 100 |
| SMCJLCE24CA | 24 | 26.7 | 32.6 | 1 | 5 | 43.0 | 35 | 100 | 75 | 10 | 100 |
| SMCJLCE24A | 24 | 26.7 | 29.5 | 1 | 5 | 38.9 | 39 | 100 | 75 | 10 | 100 |
| SMCJLCE26CA | 26 | 28.9 | 35.3 | 1 | 5 | 46.6 | 32 | 100 | 75 | 10 | 100 |
| SMCJLCE26A | 26 | 28.9 | 31.9 | 1 | 5 | 42.1 | 36 | 100 | 75 | 10 | 100 |
| SMCJLCE28CA | 28 | 31.1 | 38.0 | 1 | 5 | 50.1 | 30 | 100 | 75 | 10 | 100 |
| SMCJLCE28A | 28 | 31.1 | 34.4 | 1 | 5 | 45.5 | 33 | 100 | 75 | 10 | 100 |
| SMCJLCE30CA | 30 | 33.3 | 40.7 | 1 | 5 | 53.5 | 28 | 100 | 75 | 10 | 100 |
| SMCJLCE30A | 30 | 33.3 | 36.8 | 1 | 5 | 48.4 | 31 | 100 | 75 | 10 | 100 |
| SMCJLCE33CA | 33 | 36.7 | 44.9 | 1 | 5 | 59.0 | 25.4 | 100 | 75 | 10 | 100 |
| SMCJLCE33A | 33 | 36.7 | 40.6 | 1 | 5 | 53.3 | 28.1 | 100 | 75 | 10 | 100 |



| Type Number | Reverse Stand-off Voltage | Breakdown Voltage @ $I_{(BR)}$ | | | Maximum Reverse Leakage @ V_{WM} | Maximum Clamping Voltage @ I_{PP} | Maximum Peak Pulse Current @ 10/1000 | Maximum Junction Capacitance @ 0 Volt | Working Inverse Blocking Voltage | Inverse Blocking Leakage Current | Peak Inverse Blocking Voltage |
|--------------|---------------------------|--------------------------------|-----------------|------------------|------------------------------------|-------------------------------------|--------------------------------------|---------------------------------------|----------------------------------|----------------------------------|-------------------------------|
| | | V_{BR} (V) | $I_{(BR)}$ (mA) | I_D (μ A) | | | | | | | |
| | V_{WM} (V) | Min. | Max. | (mA) | (μ A) | (V) | (A) | pF | V_{WIB} (V) | I_{IB} (μ A) | V_{PIB} (V) |
| SMCJLCE36CA | 36 | 40.0 | 48.9 | 1 | 5 | 64.3 | 23.3 | 100 | 75 | 10 | 100 |
| SMCJLCE36A | 36 | 40.0 | 44.2 | 1 | 5 | 58.1 | 25.8 | 100 | 75 | 10 | 100 |
| SMCJLCE40CA | 40 | 44.4 | 54.3 | 1 | 5 | 71.4 | 21 | 100 | 75 | 10 | 100 |
| SMCJLCE40A | 40 | 44.4 | 49.1 | 1 | 5 | 64.5 | 23.3 | 100 | 75 | 10 | 100 |
| SMCJLCE43CA | 43 | 47.8 | 58.4 | 1 | 5 | 76.7 | 19.5 | 100 | 150 | 10 | 200 |
| SMCJLCE43A | 43 | 47.8 | 52.8 | 1 | 5 | 69.4 | 21.6 | 100 | 150 | 10 | 200 |
| SMCJLCE45CA | 45 | 50.0 | 61.1 | 1 | 5 | 80.3 | 18.7 | 100 | 150 | 10 | 200 |
| SMCJLCE45A | 45 | 50.0 | 55.3 | 1 | 5 | 72.7 | 20.6 | 100 | 150 | 10 | 200 |
| SMCJLCE48CA | 48 | 53.3 | 65.1 | 1 | 5 | 85.5 | 17.5 | 100 | 150 | 10 | 200 |
| SMCJLCE48A | 48 | 53.3 | 58.9 | 1 | 5 | 77.4 | 19.4 | 100 | 150 | 10 | 200 |
| SMCJLCE51CA | 51 | 56.7 | 69.3 | 1 | 5 | 91.1 | 16.5 | 100 | 150 | 10 | 200 |
| SMCJLCE51A | 51 | 56.7 | 62.7 | 1 | 5 | 82.4 | 18.2 | 100 | 150 | 10 | 200 |
| SMCJLCE54CA | 54 | 60.0 | 73.3 | 1 | 5 | 96.3 | 15.6 | 100 | 150 | 10 | 200 |
| SMCJLCE54A | 54 | 60.0 | 66.3 | 1 | 5 | 87.1 | 17.2 | 100 | 150 | 10 | 200 |
| SMCJLCE58CA | 58 | 64.4 | 78.7 | 1 | 5 | 103 | 14.6 | 100 | 150 | 10 | 200 |
| SMCJLCE58A | 58 | 64.4 | 71.2 | 1 | 5 | 93.6 | 16 | 100 | 150 | 10 | 200 |
| SMCJLCE60CA | 60 | 66.7 | 81.5 | 1 | 5 | 107 | 14 | 90 | 150 | 10 | 200 |
| SMCJLCE60A | 60 | 66.7 | 73.7 | 1 | 5 | 96.8 | 15.5 | 90 | 150 | 10 | 200 |
| SMCJLCE64CA | 64 | 71.1 | 86.9 | 1 | 5 | 114 | 13.2 | 90 | 150 | 10 | 200 |
| SMCJLCE64A | 64 | 71.1 | 78.6 | 1 | 5 | 103 | 14.6 | 90 | 150 | 10 | 200 |
| SMCJLCE70CA | 70 | 77.8 | 95.1 | 1 | 5 | 125 | 12.0 | 90 | 150 | 10 | 200 |
| SMCJLCE70A | 70 | 77.8 | 86.0 | 1 | 5 | 113 | 13.3 | 90 | 150 | 10 | 200 |
| SMCJLCE75CA | 75 | 83.3 | 102 | 1 | 5 | 134 | 11.2 | 90 | 150 | 10 | 200 |
| SMCJLCE75A | 75 | 83.3 | 92.1 | 1 | 5 | 121 | 12.4 | 90 | 150 | 10 | 200 |
| SMCJLCE80CA | 80 | 88.7 | 108 | 1 | 5 | 142 | 10.6 | 90 | 150 | 10 | 200 |
| SMCJLCE80A | 80 | 88.7 | 98.0 | 1 | 5 | 129 | 11.6 | 90 | 150 | 10 | 200 |
| SMCJLCE90CA | 90 | 100 | 122 | 1 | 5 | 160 | 9.4 | 90 | 300 | 10 | 200 |
| SMCJLCE90A | 90 | 100 | 111 | 1 | 5 | 146 | 10.3 | 90 | 300 | 10 | 200 |
| SMCJLCE100CA | 100 | 111 | 136 | 1 | 5 | 179 | 8.4 | 90 | 300 | 10 | 200 |
| SMCJLCE100A | 100 | 111 | 123 | 1 | 5 | 162 | 9.3 | 90 | 300 | 10 | 200 |
| SMCJLCE110CA | 110 | 122 | 149 | 1 | 5 | 196 | 7.7 | 90 | 300 | 10 | 400 |
| SMCJLCE110A | 110 | 122 | 135 | 1 | 5 | 178 | 8.4 | 90 | 300 | 10 | 400 |
| SMCJLCE120CA | 120 | 133 | 163 | 1 | 5 | 214 | 7.0 | 90 | 300 | 10 | 400 |
| SMCJLCE120A | 120 | 133 | 147 | 1 | 5 | 193 | 7.8 | 90 | 300 | 10 | 400 |
| SMCJLCE130CA | 130 | 144 | 176 | 1 | 5 | 231 | 6.5 | 90 | 300 | 10 | 400 |
| SMCJLCE130A | 130 | 144 | 159 | 1 | 5 | 209 | 7.2 | 90 | 300 | 10 | 400 |
| SMCJLCE150CA | 150 | 167 | 204 | 1 | 5 | 268 | 5.6 | 90 | 300 | 10 | 400 |
| SMCJLCE150A | 150 | 167 | 185 | 1 | 5 | 243 | 6.2 | 90 | 300 | 10 | 400 |
| SMCJLCE160CA | 160 | 178 | 218 | 1 | 5 | 287 | 5.2 | 90 | 300 | 10 | 400 |
| SMCJLCE160A | 160 | 178 | 197 | 1 | 5 | 259 | 5.8 | 90 | 300 | 10 | 400 |
| SMCJLCE170CA | 170 | 189 | 231 | 1 | 5 | 304 | 4.9 | 90 | 300 | 10 | 400 |
| SMCJLCE170A | 170 | 189 | 209 | 1 | 5 | 275 | 5.4 | 90 | 300 | 10 | 400 |



RATING AND CHARACTERISTIC CURVES (SMCJLCE Series)

FIG.1 - PEAK PULSE POWER VS. PULSE TIME

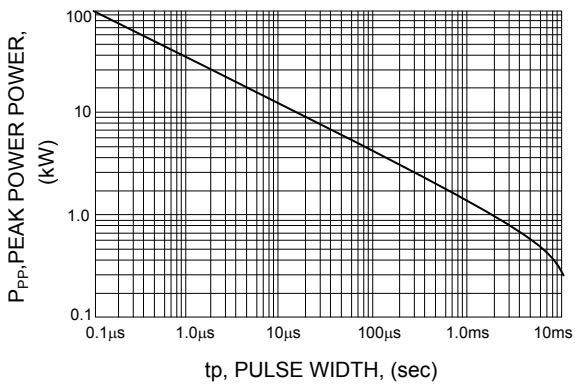


FIG.2 - DERATING CURVE

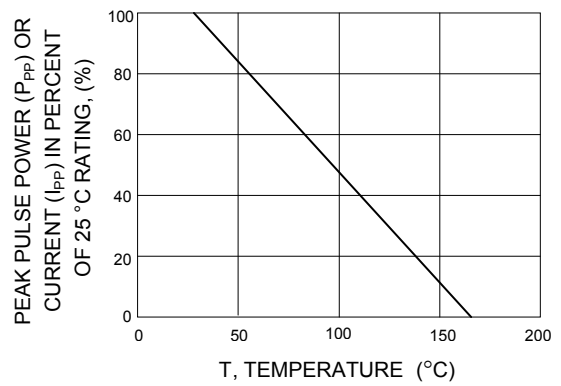


FIG.3 - PULSE WAVEFORM

