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|---|----------------|
|  | E480232 |
|---|----------------|

Features

- AEC-Q101 Qualified
- For Surface Mount Application in Order to Optimize Board Space
- Built-in Strain Relief
- Glass Passivated Junction
- Excellent Clamping Capability
- Repetition Rate(duty cycle):0.5%
- Fast Response Time: Typical Less Than 1ps From 0V to BV Min
- Typical I_D Less Than $1\mu A$ above 10V
- High Temperature Soldering: 260°C/10 Seconds at Terminals
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- For Bidirectional Devices Add "C" To The Suffix of The Part Number: i.e.SMLJ10CAHE3 for 5% Tolerance
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Mechanical Data

- Polarity: Color Band Denotes Positive End(Cathode) Except Bi-directional Types
- Weight: 0.007 ounce, 0.21 gram
- Manufacturing Code Added for Better Tracking
- Standard Packaging: 16mm Tape Per (EIA 481).
- Terminals: Solderable Per MIL-STD-750, Method 2026

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Thermal Resistance: 17.5°C/W Junction to Lead
- Thermal Resistance: 75°C/W Junction to Ambient

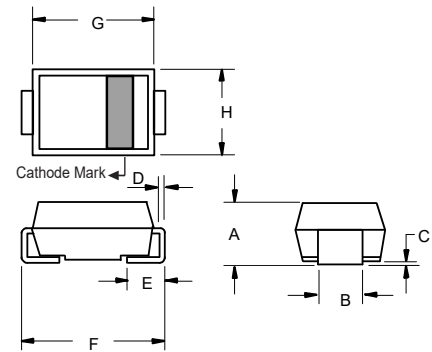
Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|--|-----------|---------------|---------------------|
| Peak Pulse Power Surge Current on 10/1000 μs Waveform | I_{PPM} | See the Table | Note 3 |
| Peak Pulse Power Dissipation on 10/1000 μs Waveform | P_{PPM} | 3000W(Min) | Note 3,4 |
| Power Dissipation on infinite heat sink | P_D | 6.5W | $T_L = 50^\circ C.$ |

- Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
3. Non-repetitive current pulse, per Fig.3 and derated above $T_A=25^\circ C$ per Fig.4.
4. Mounted on 8.0mm² copper pads to each terminal.

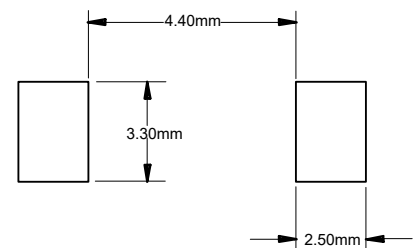
3000 Watt TVS 10 to 43 Volts

SMC (DO-214AB) (LEAD FRAME)



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.079 | 0.103 | 2.00 | 2.62 | |
| B | 0.108 | 0.128 | 2.75 | 3.25 | |
| C | 0.002 | 0.008 | 0.051 | 0.203 | |
| D | 0.006 | 0.012 | 0.152 | 0.305 | |
| E | 0.030 | 0.060 | 0.76 | 1.52 | |
| F | 0.305 | 0.320 | 7.75 | 8.13 | |
| G | 0.260 | 0.280 | 6.60 | 7.11 | |
| H | 0.220 | 0.245 | 5.59 | 6.22 | |

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC Part Number | Reverse Stand -Off Voltage | Breakdown Voltage $V_{BR}(V)$ | | Test Current | Max. Clamping Voltage @ I_{PP} | Peak Pulse Current | Reverse Leakage Current@ V_{WM} | Marking Code |
|-----------------|----------------------------|-------------------------------|------|--------------|----------------------------------|--------------------|-----------------------------------|--------------|
| | $V_{WM}(V)$ | Min | Max | $I_T(mA)$ | $V_C(V)$ | $I_{PP}(A)$ | $I_D(\mu A)$ | |
| SMLJ10AHE3 | 10 | 11.1 | 12.3 | 5 | 17.0 | 176.4 | 15 | PDX |
| SMLJ11AHE3 | 11 | 12.2 | 13.5 | 5 | 18.2 | 164.8 | 2 | PDZ |
| SMLJ12AHE3 | 12 | 13.3 | 14.7 | 5 | 19.9 | 150.6 | 2 | PEE |
| SMLJ13AHE3 | 13 | 14.4 | 15.9 | 5 | 21.5 | 139.4 | 2 | PEG |
| SMLJ14AHE3 | 14 | 15.6 | 17.2 | 5 | 23.2 | 129.4 | 2 | PEK |
| SMLJ15AHE3 | 15 | 16.7 | 18.5 | 5 | 24.4 | 123.0 | 2 | PEM |
| SMLJ16AHE3 | 16 | 17.8 | 19.7 | 5 | 26.0 | 115.4 | 2 | PEP |
| SMLJ17AHE3 | 17 | 18.9 | 20.9 | 5 | 27.6 | 106.6 | 2 | PER |
| SMLJ18AHE3 | 18 | 20.0 | 22.1 | 5 | 29.2 | 102.8 | 2 | PET |
| SMLJ20AHE3 | 20 | 22.2 | 24.5 | 5 | 32.4 | 92.6 | 2 | PEV |
| SMLJ22AHE3 | 22 | 24.4 | 26.9 | 5 | 35.5 | 84.4 | 2 | PEX |
| SMLJ24AHE3 | 24 | 26.7 | 29.5 | 5 | 38.9 | 77.2 | 2 | PEZ |
| SMLJ26AHE3 | 26 | 28.9 | 31.9 | 5 | 42.1 | 71.2 | 2 | PFE |
| SMLJ28AHE3 | 28 | 31.1 | 34.4 | 5 | 45.4 | 66.0 | 2 | PFG |
| SMLJ30AHE3 | 30 | 33.3 | 36.8 | 5 | 48.4 | 62.0 | 2 | PFK |
| SMLJ33AHE3 | 33 | 36.7 | 40.6 | 5 | 53.3 | 56.2 | 2 | PFM |
| SMLJ36AHE3 | 36 | 40.0 | 44.2 | 5 | 58.1 | 51.6 | 2 | PFP |
| SMLJ40AHE3 | 40 | 44.4 | 49.1 | 5 | 64.5 | 46.4 | 2 | PFR |
| SMLJ43AHE3 | 43 | 47.8 | 52.8 | 5 | 69.4 | 43.2 | 2 | PFT |
| SMLJ10CAHE3 | 10 | 11.1 | 12.3 | 5 | 17.0 | 176.4 | 15 | DDX |
| SMLJ11CAHE3 | 11 | 12.2 | 13.5 | 5 | 18.2 | 164.8 | 2 | DDZ |
| SMLJ12CAHE3 | 12 | 13.3 | 14.7 | 5 | 19.9 | 150.6 | 2 | DEE |
| SMLJ13CAHE3 | 13 | 14.4 | 15.9 | 5 | 21.5 | 139.4 | 2 | DEG |
| SMLJ14CAHE3 | 14 | 15.6 | 17.2 | 5 | 23.2 | 129.4 | 2 | DEK |
| SMLJ15CAHE3 | 15 | 16.7 | 18.5 | 5 | 24.4 | 123.0 | 2 | DEM |
| SMLJ16CAHE3 | 16 | 17.8 | 19.7 | 5 | 26.0 | 115.4 | 2 | DEP |
| SMLJ17CAHE3 | 17 | 18.9 | 20.9 | 5 | 27.6 | 106.6 | 2 | DER |
| SMLJ18CAHE3 | 18 | 20.0 | 22.1 | 5 | 29.2 | 102.8 | 2 | DET |
| SMLJ20CAHE3 | 20 | 22.2 | 24.5 | 5 | 32.4 | 92.6 | 2 | DEV |
| SMLJ22CAHE3 | 22 | 24.4 | 26.9 | 5 | 35.5 | 84.4 | 2 | DEX |
| SMLJ24CAHE3 | 24 | 26.7 | 29.5 | 5 | 38.9 | 77.2 | 2 | DEZ |
| SMLJ26CAHE3 | 26 | 28.9 | 31.9 | 5 | 42.1 | 71.2 | 2 | DFE |
| SMLJ28CAHE3 | 28 | 31.1 | 34.4 | 5 | 45.4 | 66.0 | 2 | DFG |
| SMLJ30CAHE3 | 30 | 33.3 | 36.8 | 5 | 48.4 | 62.0 | 2 | DFK |
| SMLJ33CAHE3 | 33 | 36.7 | 40.6 | 5 | 53.3 | 56.2 | 2 | DFM |
| SMLJ36CAHE3 | 36 | 40.0 | 44.2 | 5 | 58.1 | 51.6 | 2 | DFP |
| SMLJ40CAHE3 | 40 | 44.4 | 49.1 | 5 | 64.5 | 46.4 | 2 | DFR |
| SMLJ43CAHE3 | 43 | 47.8 | 52.8 | 5 | 69.4 | 43.2 | 2 | DFT |

Curve Characteristics

Fig. 1 - Peak Pulse Power Rating Curve

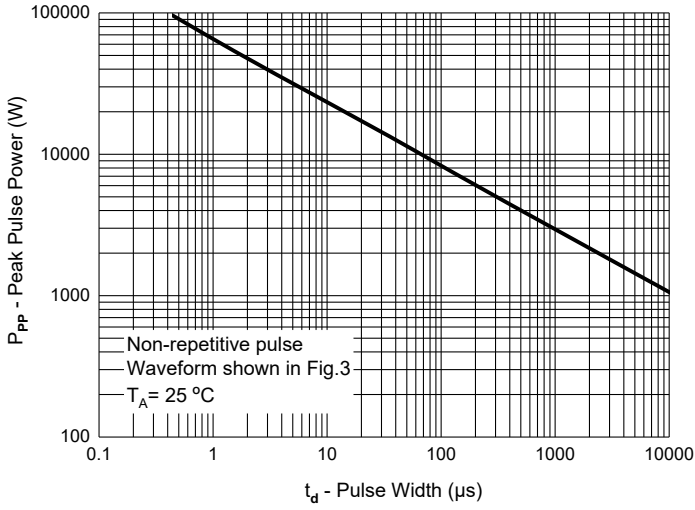


Fig. 2 - Typical Junction Capacitance



Fig. 3 - Pulse Waveform

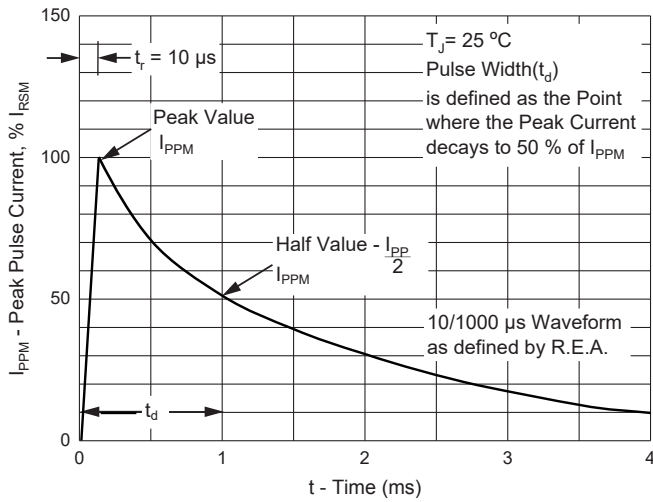


Fig. 4 - Pulse Derating Curve



Ordering Information

| Device | Packing |
|----------------|----------------------|
| Part Number-TP | Tape&Reel:3Kpcs/Reel |

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