

Features

- Automotive Protection
- Glass Passivated Chip
- Excellent Clamping Capability
- Uni and Bidirectional Unit
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- For Bidirectional Devices Add "C" To The Suffix of The Part Number: i.e.SLD10CA for 5% Tolerance
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- 6000 W Peak Pulse Power Capability With a 10/1000 us waveform Repetitive Rate(duty cycle)0.01%
- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C

| | | | |
|--|------------------|-------|----------------------|
| Peak Pulse Power Dissipation with a 10/1000µs Waveform | P _{PP} | 6000W | Note 2 |
| Peak Pulse Power Dissipation with a 10/10000µs Waveform | P _{PP} | 2400W | Note 2 |
| Power Dissipation On Infinite Heatsink | P _D | 8.0W | T _L =75°C |
| Peak forward surge current, 8.3 ms single half sine-wave unidirectional only | I _{FSM} | 500A | Note 3 |
| Maximum instantaneous forward voltage at 100 A for unidirectional only | V _F | 3.5V | Note 3 |

Note:

- (1)High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
- (2)Non-repetitive current pulse per Fig.3 and derated above T_A= 25 °C per Fig.4
- (3)Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum

Pin Configuration:



**6000Watts TVS
10 to 60 Volts**

R-6



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.340 | 0.360 | 8.60 | 9.10 | |
| B | 0.340 | 0.360 | 8.60 | 9.10 | |
| C | 0.048 | 0.052 | 1.20 | 1.32 | |
| D | 1.000 | ----- | 25.40 | ----- | |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC Part Number | | Breakdown Voltage V_{BR} @ I_T | | | Maximum Reverse Leakage $I_R @ V_{RWM}$ (μA) | Working Peak Reverse Voltage V_{RWM} (V) | Maximum Reverse Surge Current I_{PP} (A) | Maximum Clamping Voltage $V_C @ I_{PP}$ (V) |
|-----------------|---------|------------------------------------|---------|------------|---|--|--|---|
| (Uni) | (Bi) | Min (V) | Max (V) | I_T (mA) | | | | |
| SLD10A | SLD10CA | 11.80 | 13.0 | 5 | 10 | 10 | 350.0 | 17.0 |
| SLD11A | SLD11CA | 12.20 | 13.5 | 5 | 10 | 11 | 327.0 | 18.2 |
| SLD12A | SLD12CA | 13.30 | 14.7 | 5 | 10 | 12 | 300.0 | 19.9 |
| SLD13A | SLD13CA | 14.40 | 15.9 | 5 | 10 | 13 | 277.0 | 21.5 |
| SLD14A | SLD14CA | 15.60 | 17.2 | 5 | 10 | 14 | 257.0 | 23.2 |
| SLD15A | SLD15CA | 16.70 | 18.5 | 5 | 10 | 15 | 245.0 | 24.4 |
| SLD16A | SLD16CA | 17.80 | 19.7 | 5 | 10 | 16 | 229.0 | 26.0 |
| SLD17A | SLD17CA | 18.90 | 20.9 | 5 | 10 | 17 | 216.0 | 27.6 |
| SLD18A | SLD18CA | 20.00 | 22.1 | 5 | 10 | 18 | 204.0 | 29.2 |
| SLD20A | SLD20CA | 22.20 | 24.5 | 5 | 10 | 20 | 184.0 | 32.4 |
| SLD22A | SLD22CA | 24.40 | 26.9 | 5 | 10 | 22 | 168.0 | 35.5 |
| SLD24A | SLD24CA | 25.00 | 30.0 | 5 | 10 | 24 | 153.0 | 38.9 |
| SLD26A | SLD26CA | 28.90 | 31.9 | 5 | 10 | 26 | 142.0 | 42.1 |
| SLD28A | SLD28CA | 31.10 | 34.4 | 5 | 10 | 28 | 131.0 | 45.4 |
| SLD30A | SLD30CA | 33.30 | 36.8 | 5 | 10 | 30 | 123.0 | 48.4 |
| SLD33A | SLD33CA | 36.70 | 40.6 | 5 | 10 | 33 | 112.0 | 53.3 |
| SLD36A | SLD36CA | 40.00 | 44.2 | 5 | 10 | 36 | 103.0 | 58.1 |
| SLD40A | SLD40CA | 44.40 | 49.1 | 5 | 10 | 40 | 92.5 | 64.5 |
| SLD43A | SLD43CA | 49.00 | 54.2 | 5 | 10 | 43 | 86.00 | 69.4 |
| SLD48A | SLD48CA | 53.30 | 58.9 | 5 | 10 | 48 | 77.00 | 77.4 |
| SLD54A | SLD54CA | 60.00 | 66.3 | 5 | 10 | 54 | 68.50 | 87.1 |
| SLD58A | SLD58CA | 64.40 | 71.2 | 5 | 10 | 58 | 64.00 | 93.6 |
| SLD60A | SLD60CA | 68.40 | 75.6 | 5 | 10 | 60 | 61.50 | 96.8 |

Note:

1. Add suffix ' CA ' after part number to specify Bi-directional devices
2. For Bi-Directional devices having V_R of 10 volts and under, the I_R limit is double
3. Surge current waveform is defined at 10/1000us waveform

Curve Characteristics

Fig. 1 - Peak Pulse Power Rating Curve



Fig. 2 - Typical Junction Capacitance



Fig. 3 - Pulse Waveform



Fig. 4 - Pulse Derating Curve

