



SCD5817 THRU SCD5819

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 40 Volts

Forward Current - 1.0 Ampere

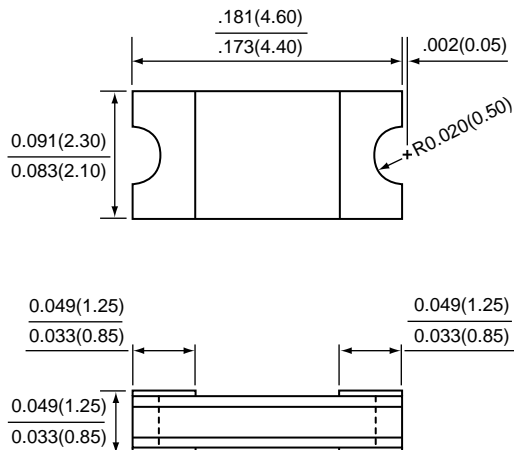
PATENTED

2010



FEATURES

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * For surface mounted applications
- * Low profile package
- * Built-in strain relief
- * Metal to silicon rectifier , majority carrier conduction
- * Low power loss , High efficiency
- * High current capability , low VF
- * High surge capacity
- * For using in low voltage high frequency switching power supply, inverters , free wheeling , and polarity protection applications



*Dimensions in inches and (millimeters)

SuperChipTM

MECHANICAL DATA

Case : Packed with FRP substrate and epoxy underfilled
Terminals : Solder plated , solderable per MIL-STD-750, Method 2026
Polarity : Laser marking

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

| Ratings at 25 °C ambient temperature unless otherwise specified. | SYMBOLS | SCD5817 | SCD5818 | SCD5819 | UNITS |
|--|---------|-------------|---------|---------|--------|
| Maximum repetitive peak reverse voltage | VRRM | 20 | 30 | 40 | Volts |
| Maximum RMS voltage | VRMS | 14 | 21 | 28 | Volts |
| Maximum DC blocking voltage | VDC | 20 | 30 | 40 | Volts |
| Maximum average forward rectified current @TC=75°C | I (AV) | 1.0 | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | IFSM | 25 | | | Amps |
| Maximum instantaneous forward voltage at 1.0 A (NOTE 1) | VF | 0.45 | 0.55 | 0.60 | Volts |
| Maximum instantaneous forward voltage at 3.0 A (NOTE 1) | | 0.75 | 0.875 | 0.90 | |
| Maximum DC reverse current @TA=25°C | IR | 0.5 | | | mA |
| at rated DC blocking voltage @TA=100°C | | 10 | | | |
| Typical Junction capacitance (NOTE 2) | CJ | 110 | | | pF |
| Typical thermal resistance (NOTE3) | R θJA | 80 | | | °C / W |
| Operating junction and storage temperature range | TJ,TSTG | -50 to +125 | | | °C |

NOTES : (1) Pulse test with PW=300usec , 1% duty cycle.
 (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
 (3) Thermal Resistance Junction to Ambient

RATINGS AND CHARACTERISTIC CURVES SCD5817 THRU SCD5819

FIG.1 - FORWARD CURRENT DERATING CURVE

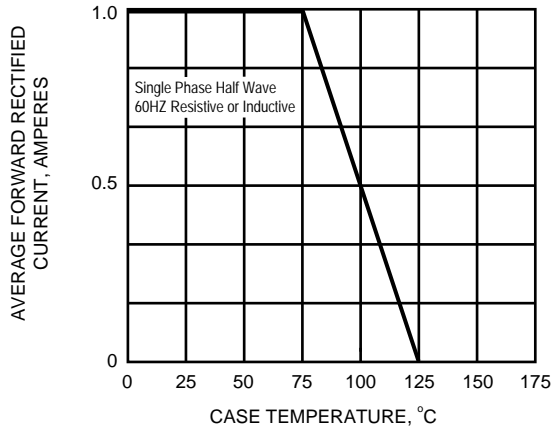


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

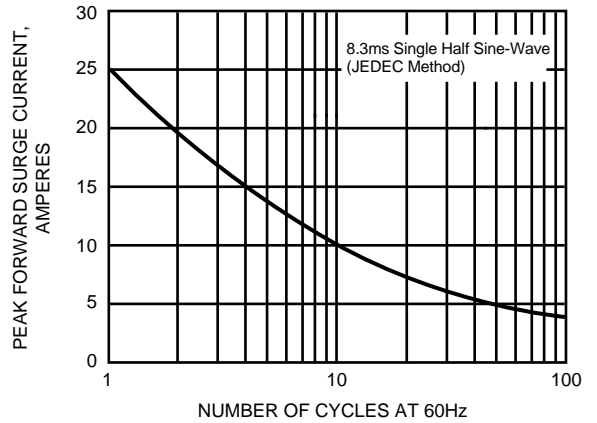


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

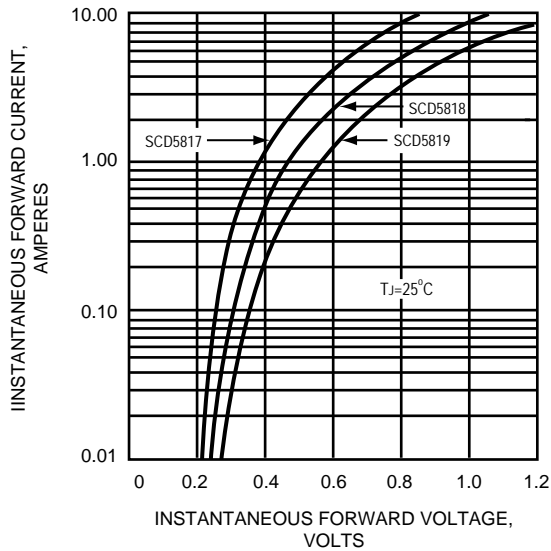


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

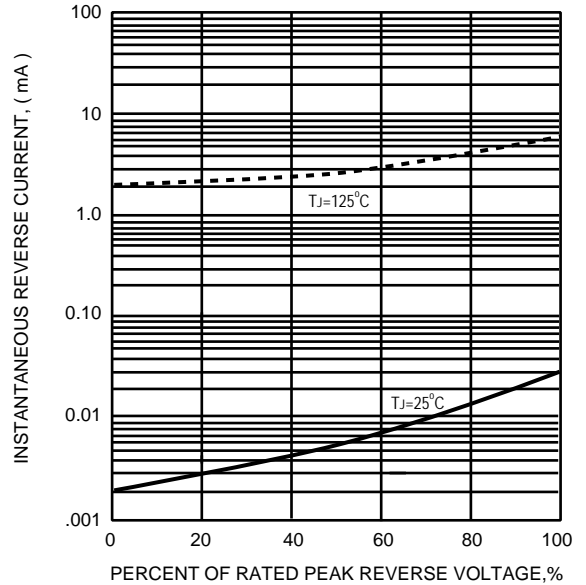


FIG.5 - TYPICAL JUNCTION CAPACITANCE

