



# SCD5817 THRU SCD5819

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 40 Volts

Forward Current - 1.0 Ampere

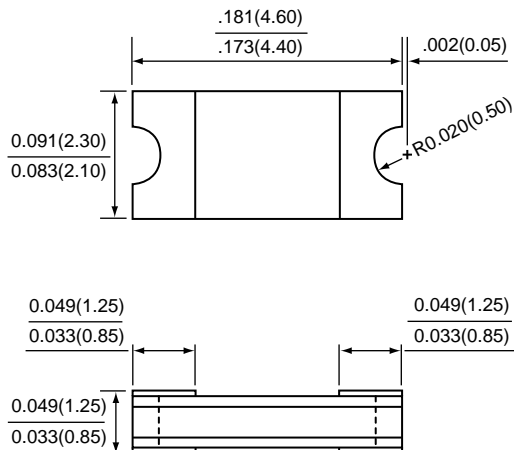
**PATENTED**

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)

**SuperChip**<sup>TM</sup>

### 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

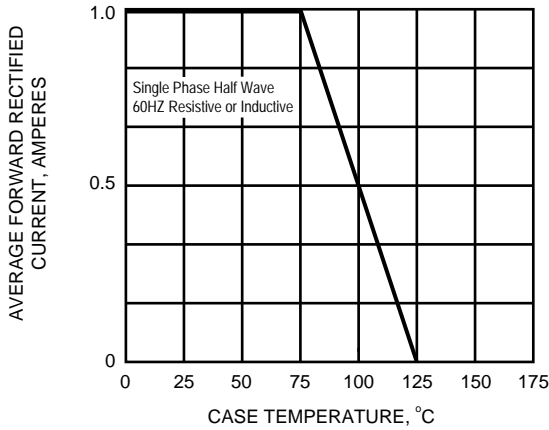


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

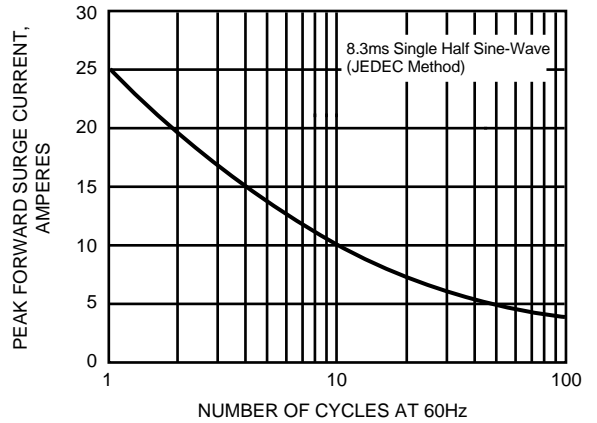


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

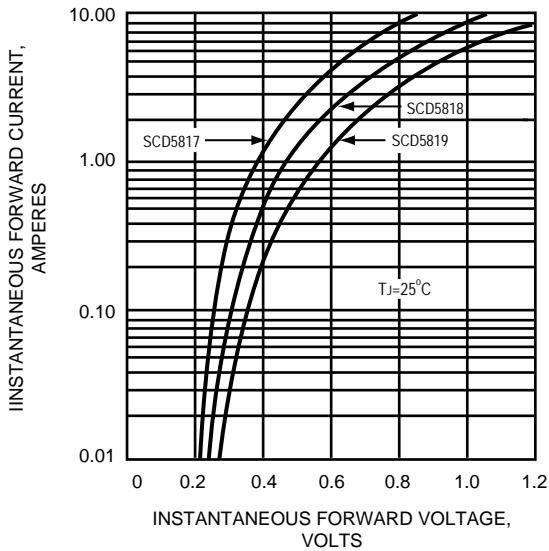


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

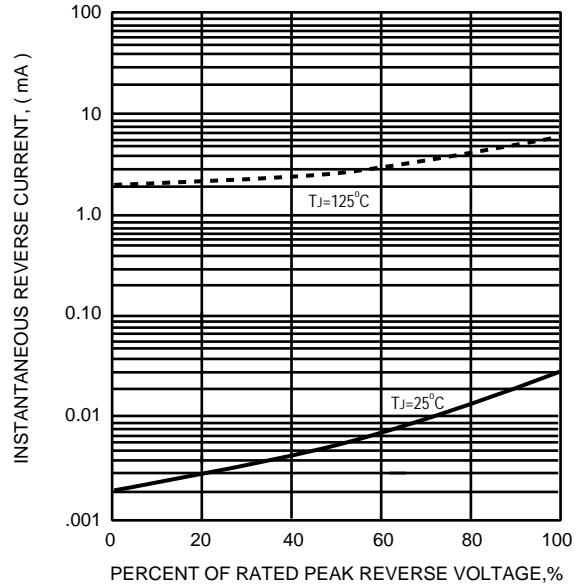


FIG.5 - TYPICAL JUNCTION CAPACITANCE

