



# SCD12 THRU SCD16

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 60 Volts

Forward Current - 1.0 Ampere

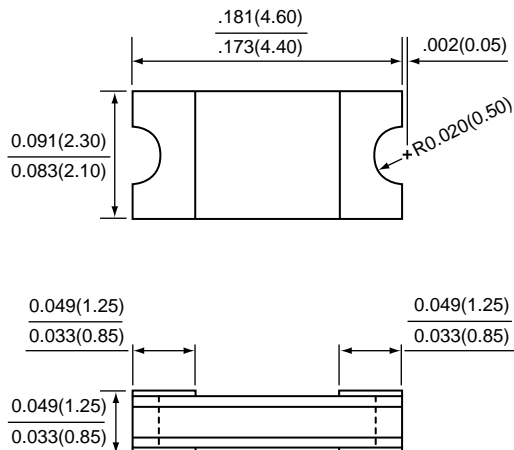
**PATENTED**

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  
**Weight :** 0.02 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.	SYMBOLS	SCD12	SCD13	SCD14	SCD15	SCD16	UNITS
Maximum repetitive peak reverse voltage	VRRM	20	30	40	50	60	Volts
Maximum RMS voltage	VRMS	14	21	28	35	42	Volts
Maximum DC blocking voltage	VDC	20	30	40	50	60	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	30					Amps
Maximum instantaneous forward voltage at 1.0 A (NOTE 1)	VF	0.50			0.70		Volts
Maximum DC reverse current (NOTE 1) @TA=25 °C at rated DC blocking voltage @TA=100 °C	IR	0.5					mA
Typical thermal resistance (NOTE 2)	R θJA	88					°C / W
	R θJL	28					
Operating junction temperature range	TJ	-55 to +125			-55 to +150		°C
Storage temperature range	TSTG	-55 to +150					°C

NOTES : (1) Pulse test with PW=300usec , 1% duty cycle.

(2) Mounted on P.C. board with 5.0mm<sup>2</sup> (.013mm thick) copper pad areas.

# RATINGS AND CHARACTERISTIC CURVES SCD12 THRU SCD16

FIG.1 - FORWARD CURRENT DERATING CURVE

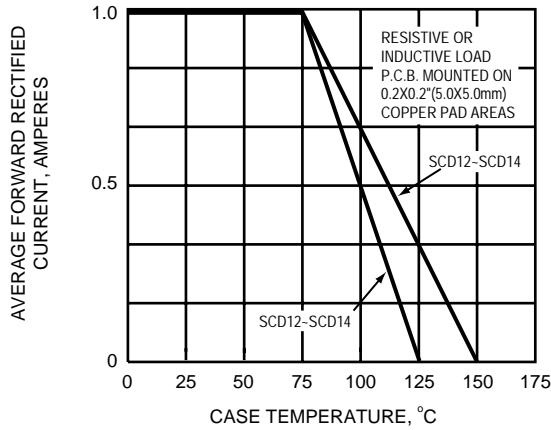


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

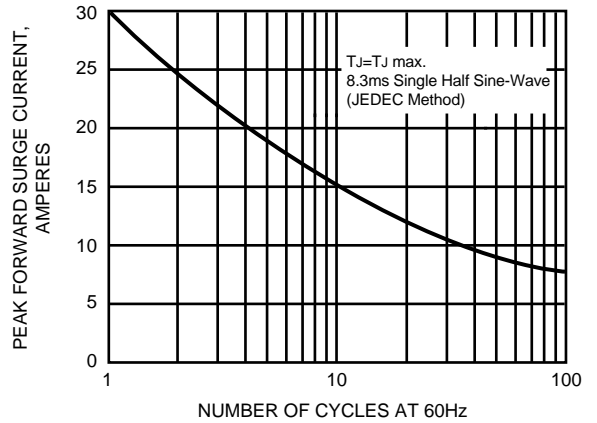


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

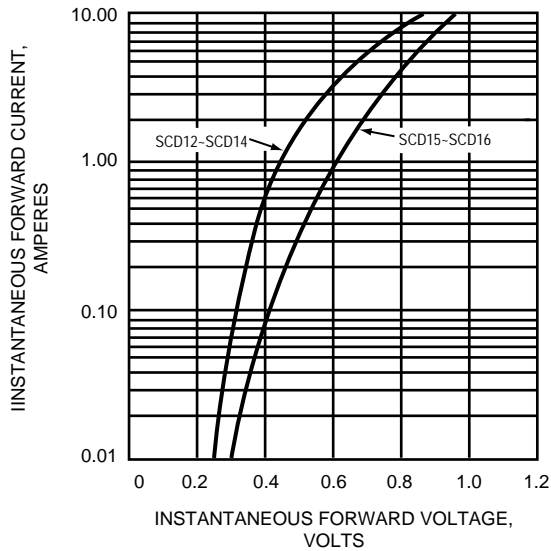


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

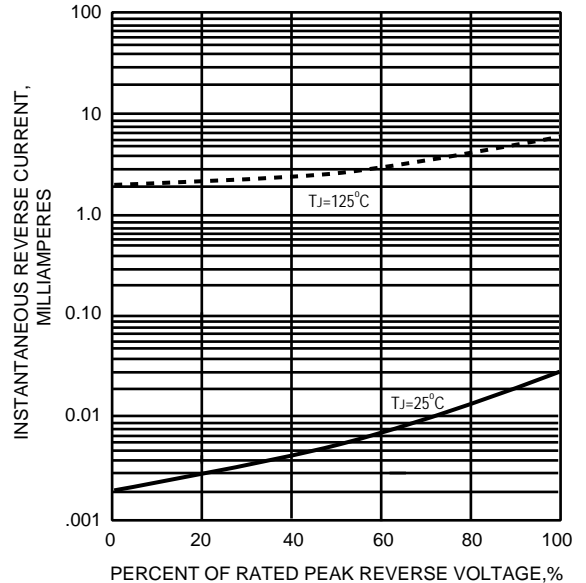


FIG.5 - TYPICAL JUNCTION CAPACITANCE

