



# SCD12 THRU SCD110

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

*Reverse Voltage - 20 to 100 Volts*

*Forward Current - 1.0 Ampere*

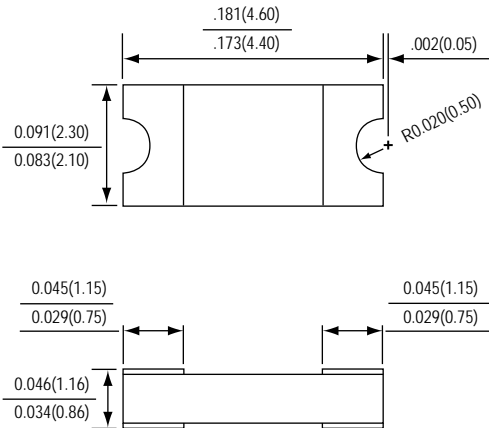
**PATENTED**

2010



### FEATURES

- \* Lead free product
- \* Leadless chip form , no lead damage
- \* Lead-free solder joint , no wire bond & lead frame
- \* 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** : Pure Tin plated (Lead-Free), solderable per MIL-STD-750, Method 2026.  
**Polarity** : Laser marking  
**Weight** : 0.02 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

<i>Ratings at 25 °C ambient temperature unless otherwise specified.</i>	SYMBOLS	SCD12	SCD14	SCD16	SCD110	UNITS
Maximum repetitive peak reverse voltage	VRRM	20	40	60	100	Volts
Maximum RMS voltage	VRMS	14	28	42	70	Volts
Maximum DC blocking voltage	VDC	20	40	60	100	Volts
Maximum average forward rectified current (SEE FIG.1)	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	0.85		Volts
Maximum DC reverse current (NOTE 1) @T <sub>J</sub> =25°C at rated DC blocking voltage @T <sub>J</sub> =100°C	IR	0.5				mA
		10	5			
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 width PW=300usec , 1% duty cycle.  
 (2) Mounted on P.C. board with 0.2 x 0.2"(5.0 x5.0mm) copper pad areas.

# RATINGS AND CHARACTERISTIC CURVES SCD12 THRU SCD110

FIG.1 - FORWARD CURRENT DERATING CURVE

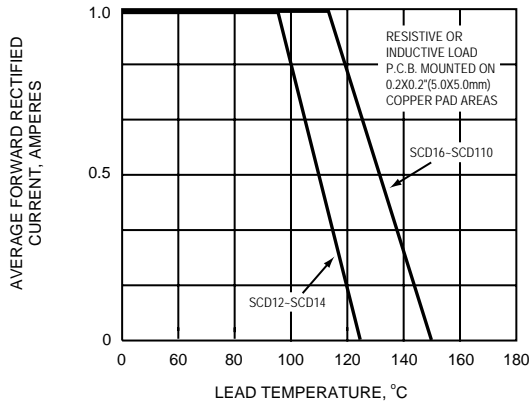


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

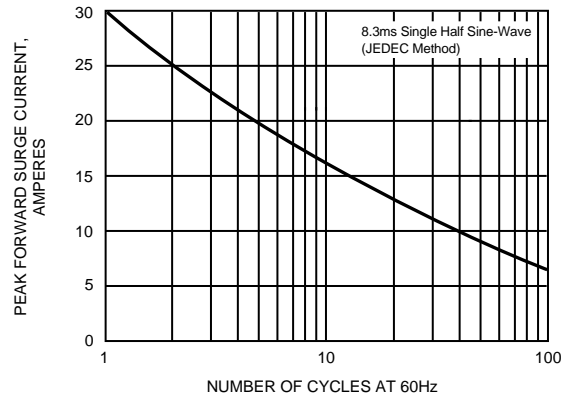


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

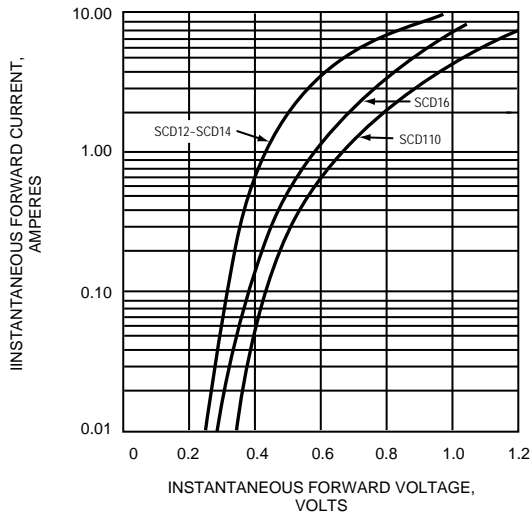


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

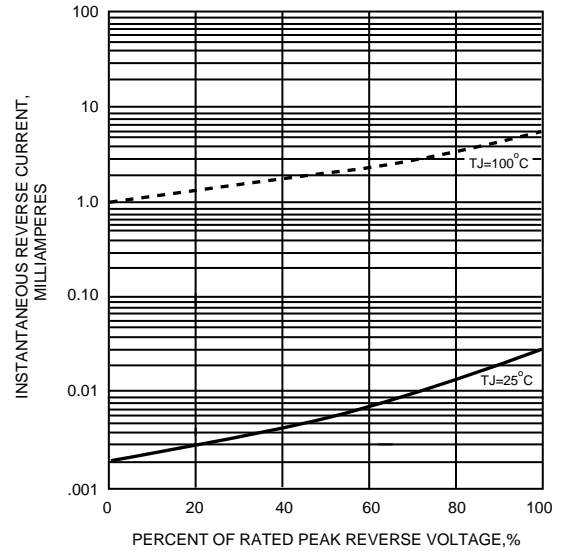


FIG.5 - TYPICAL JUNCTION CAPACITANCE

