



# SCD12L THRU SCD14L

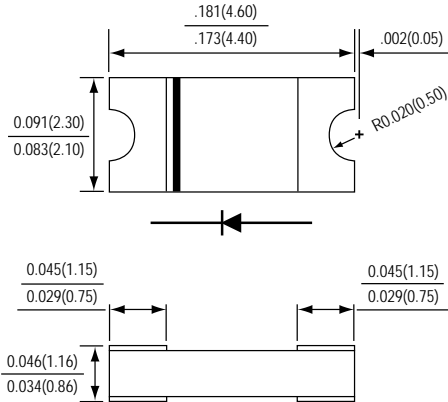
## SURFACE MOUNT LOW VF SCHOTTKY BARRIER RECTIFIER

*Reverse Voltage - 20 to 40 Volts*

*Forward Current - 1.0 Amperes*

**PATENTED**

2010



\*Dimensions in inches and (millimeters)

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



### 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 , Super low VF drop
- \* High surge capacity
- \* For using in low voltage high frequency switching power supply, inverters , free wheeling , and polarity protection applications

### MECHANICAL DATA

- Case :** Packed with FRP substrate and epoxy underfilled  
**Terminals :** Pure Tin plated (Lead-Free), solderable per MIL-STD-750, Method 2026.  
**Polarity :** Cathode Band, Laser marking  
**Weight :** 0.02 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

<i>Ratings at 25 °C ambient temperature unless otherwise specified.</i>	SYMBOLS	SCD12L	SCD14L	UNITS
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	40	Volts
Maximum RMS voltage	V <sub>RMS</sub>	14	28	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	20	40	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)	I <sub>FSM</sub>	30		Amps
Maximum instantaneous forward voltage at 1.0 A (NOTE 1)	V <sub>F</sub>	0.38		Volts
Maximum DC reverse current (NOTE 1) @T <sub>J</sub> =25°C at rated DC blocking voltage @T <sub>J</sub> =80°C	I <sub>R</sub>	1.0		mA
Typical thermal resistance (NOTE 2)	R θJA	55		°C / W
	R θJL	17		
Operating junction temperature range	T <sub>J</sub>	-55 to +125		°C
Storage temperature range	T <sub>STG</sub>	-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 SCD12L THRU SCD14L

FIG.1 - FORWARD CURRENT DERATING CURVE

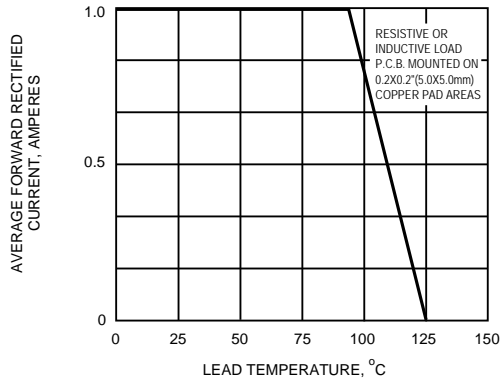


FIG.2 - MAXIMUM NON-REPETITIVE  
PEAK FORWARD SURGE CURRENT

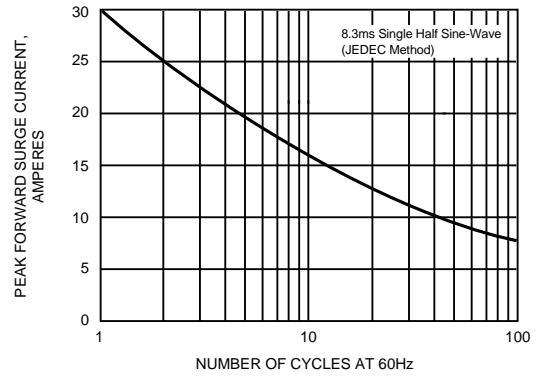


FIG.3 - TYPICAL INSTANTANEOUS  
FORWARD CHARACTERISTICS

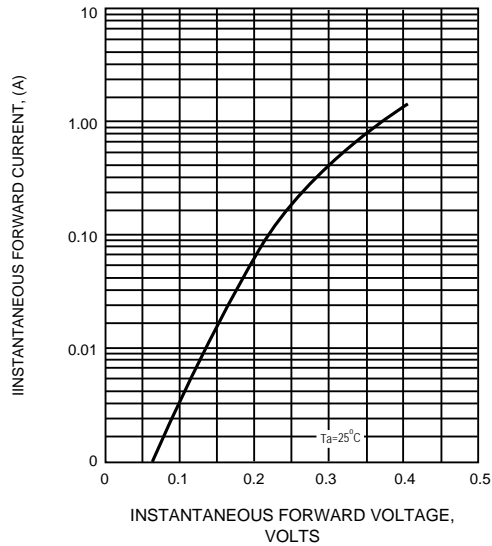


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

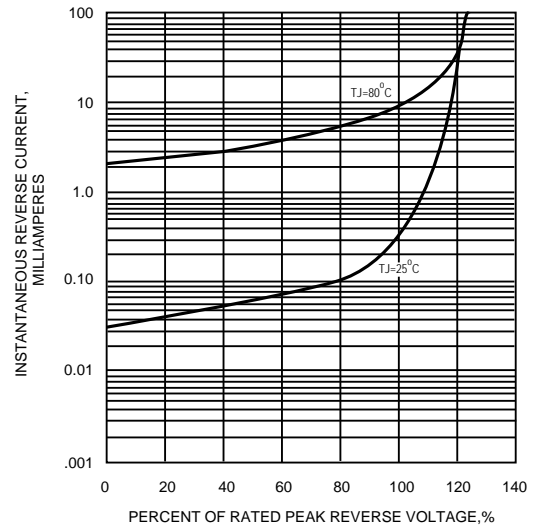


FIG.5 - TYPICAL JUNCTION CAPACITANCE

