



USCD012 THRU USCD014

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

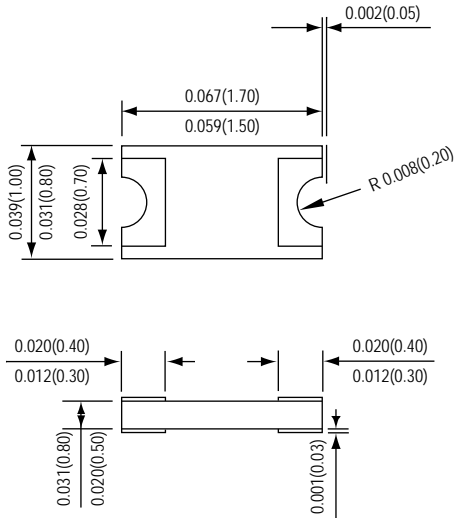
Reverse Voltage - 20 to 40 Volts

Forward Current - 100 mA

PATENTED

PRELIMINARY

0603



*Dimensions in inches and (millimeters)

SuperChipTM

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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

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 : 0.003 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

| <i>Ratings at 25 °C ambient temperature unless otherwise specified.</i> | SYMBOLS | USCD012 | USCD014 | UNITS |
|---|---------|-------------|---------|-------|
| Maximum repetitive peak reverse voltage | VRRM | 20 | 40 | Volts |
| Maximum RMS Voltage | VRMS | 14 | 28 | Volts |
| Maximum DC Blocking Voltage | VDC | 20 | 40 | Volts |
| Average Forward Rectified Current | IO | 100 | | mA |
| Peak Forward Surge Current at 8.3 ms single half sine-wave | IFSM | 2.0 | | Amps |
| Maximum Instantaneous Forward Voltage at 0.1 A | VF | 0.40 | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | IR | 50 | | uA |
| Maximum DC Reverse Current at 10 V | IR | 20 | | uA |
| Junction Temperature | TJ | +125 | | °C |
| Storage temperature range | TSTG | -40 to +125 | | °C |

RATINGS AND CHARACTERISTIC CURVES USCD012 THRU USCD014

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

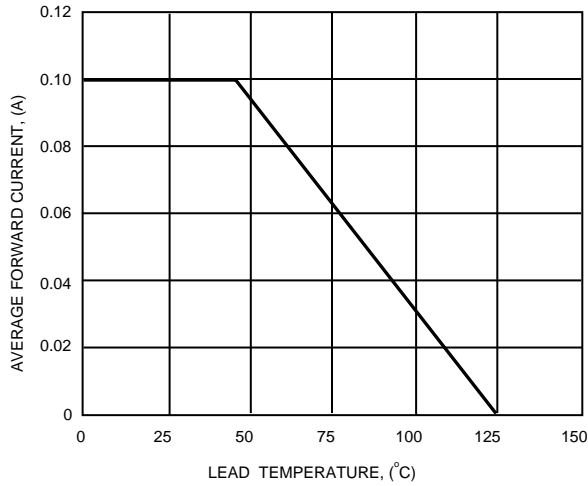


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

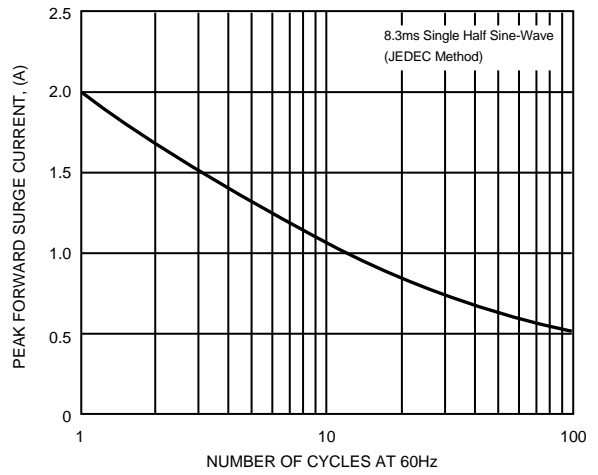


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

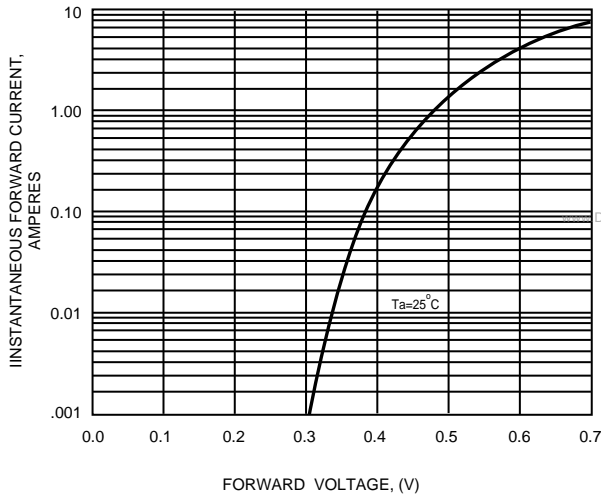


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

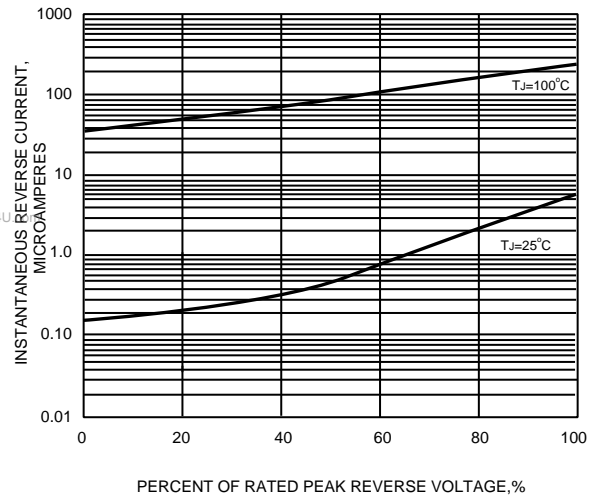


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

