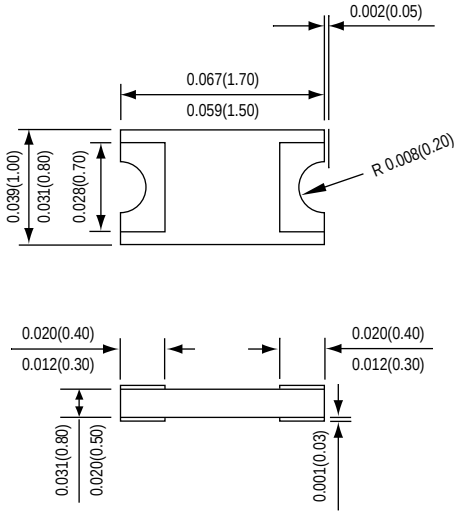
USCD024R

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 40 Volts *Forward Current - 200 mA*

PATENTED

0603



*Dimensions in inches and (millimeters)

SuperChip™

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 V_F, low I_R
* 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 : 0.003 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.	*SYMBOLS*	***USCD024R***	*UNITS*
Maximum repetitive peak reverse voltage	V_{RRM}	40	Volts
Maximum RMS voltage	V_{RMS}	28	Volts
Maximum DC blocking voltage	V_{DC}	40	Volts
Maximum average forward rectified current (SEE FIG.1)	$I_{(AV)}$	200	mA
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	2.0	Amps
Maximum instantaneous forward voltage at 0.2 A	V_F	0.45	Volts
Maximum DC reverse current at V_R @10V	I_R	1.0	uA
Junction temperature	T_J	125	°C
Operating temperature	Topr	-40 to +125	
Operating and storage temperature range	T_{opr}, T_{STG}	- 40 to +125	

RATINGS AND CHARACTERISTIC CURVES OF USCD024R

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

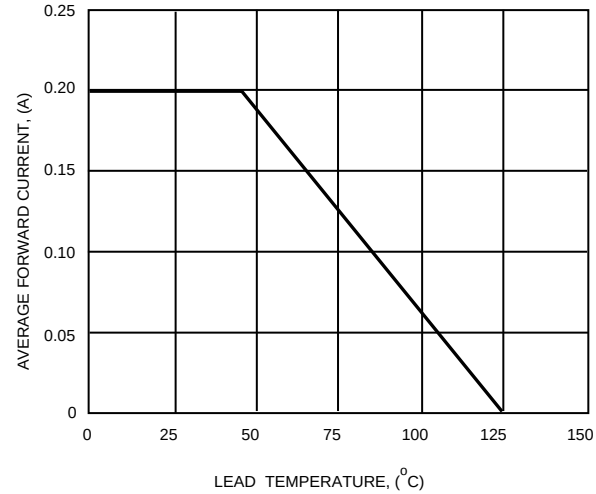


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

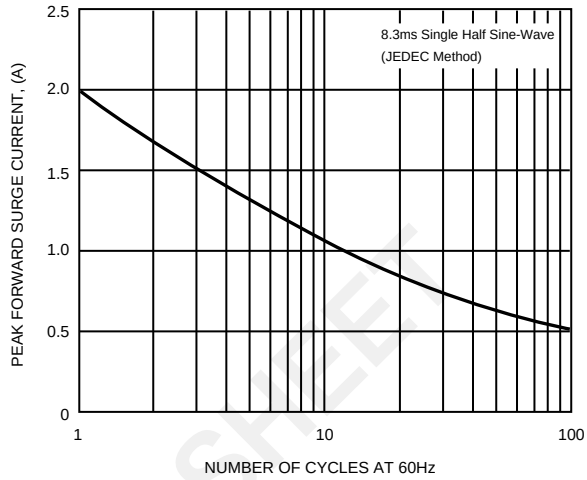


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

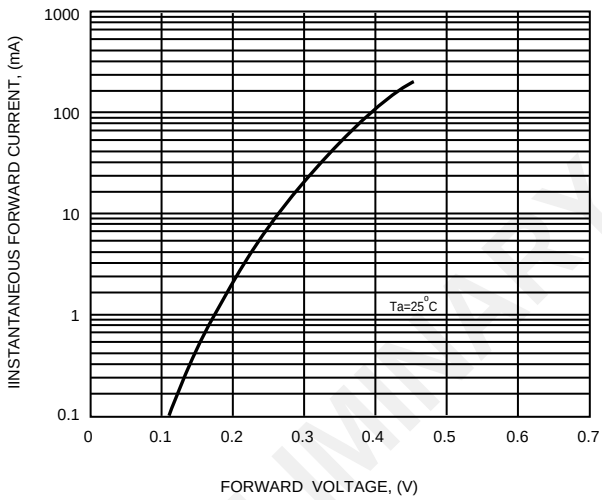


FIG. 4 - REVERSE CHARACTERISTICS

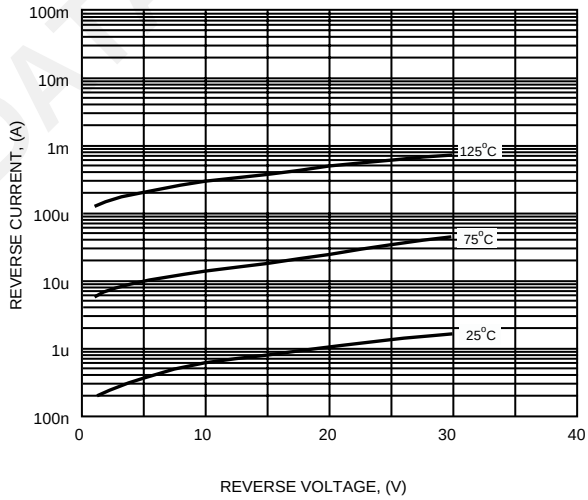


FIG. 5 - TYPICAL JUNCTION CAPACITANCE