

# SR002 - SR010

## 0.5 AMP. Schottky Barrier Rectifiers

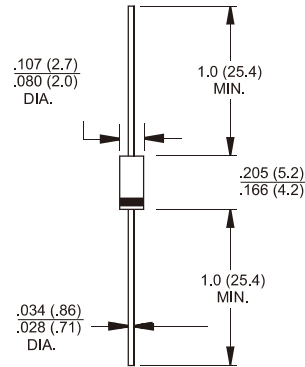
### DO-41

### Features

- ✧ Low power loss, high efficiency.
- ✧ High current capability, Low VF.
- ✧ High reliability
- ✧ High surge current capability.
- ✧ Epitaxial construction.
- ✧ Guard-ring for transient protection.
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.

### Mechanical Data

- ✧ Cases: DO-41 molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.33 grams



Dimensions in inches and (millimeters)  
Marking Diagram



SR0XX = Specific Device Code  
G = Green Compound  
Y = Year  
WW = Work Week

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

Type Number	Symbol	SR 002	SR 003	SR 004	SR 005	SR 006	SR 009	SR 010	Units
Maximum Recurrent Peak Reverse Voltage	VRRM	20	30	40	50	60	90	100	V
Maximum RMS Voltage	VRMS	14	21	28	35	42	63	70	V
Maximum DC Blocking Voltage	VDC	20	30	40	50	60	90	100	V
Maximum Average Forward Rectified Current See Fig. 1	I <sub>F(AV)</sub>	0.5							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	I <sub>FSM</sub>	30							A
Maximum Instantaneous Forward Voltage @ 0.5A	V <sub>F</sub>	0.55		0.70		0.85		V	
Maximum D.C. Reverse Current @ T <sub>A</sub> =25°C at Rated DC Blocking Voltage @ T <sub>A</sub> =100°C (Note 1)  @ T <sub>A</sub> =125°C	I <sub>R</sub>	0.5		0.5		0.1		mA	
		10		5		-			mA
		-		-		2		mA	
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	110		80		65			pF
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub>	50							°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-65 to +125			-65 to +150				°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150							°C

Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle  
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.  
3. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.

## RATINGS AND CHARACTERISTIC CURVES (SR002 THRU SR010)

FIG.1- FORWARD CURRENT DERATING CURVE

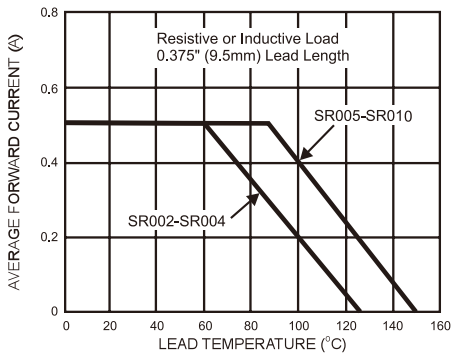


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

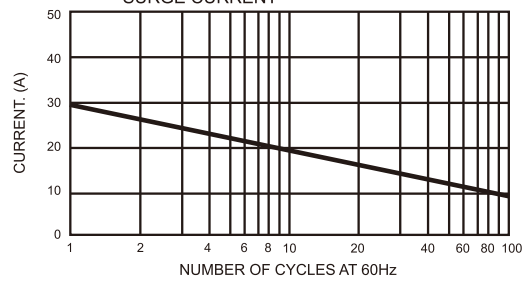


FIG.3- TYPICAL FORWARD CHARACTERISTICS

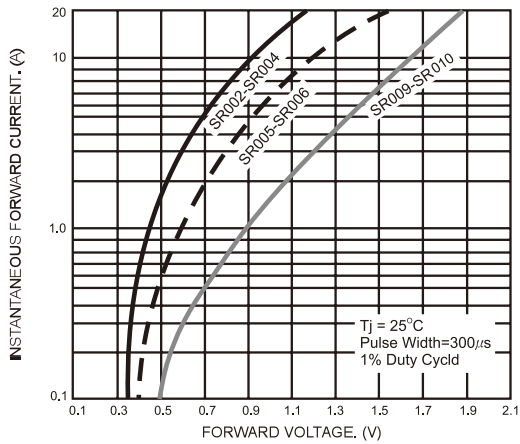


FIG.4- TYPICAL REVERSE CHARACTERISTICS

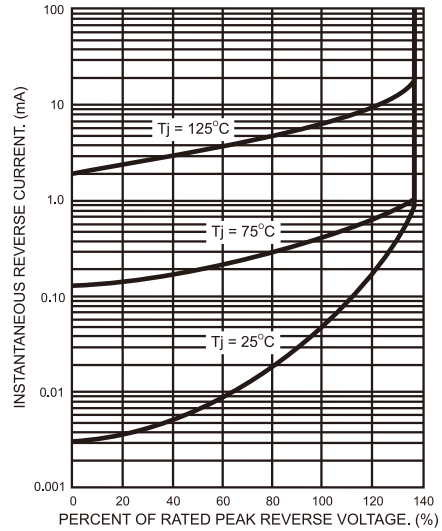


FIG.5- TYPICAL JUNCTION CAPACITANCE

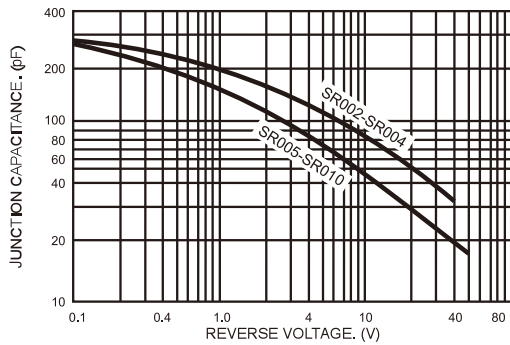


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

