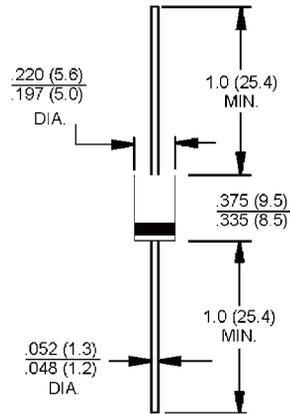


Features

- ✧ 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-201AD 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: 1.1 grams



Dimensions in inches and (millimeters)

Marking Diagram



- SR50X = 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 502	SR 503	SR 504	SR 505	SR 506	SR 509	SR 510	SR 515	SR 520	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	90	100	150	200	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	63	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	90	100	150	200	V
Maximum Average Forward Rectified Current Refer to Fig 1	$I_{(AV)}$	5.0									A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	120									A
Maximum Instantaneous Forward Voltage @ 5.0A	V_F	0.55		0.70		0.85		1.05			V
Maximum DC Reverse Current @ $T_A=25^{\circ}C$ at Rated DC Blocking Voltage @ $T_A=100^{\circ}C$	I_R	0.5				0.1				mA	
		15		10		5.0		1.0		mA	
Typical Junction Capacitance (Note 2)	C_j	250		210		120				pF	
Typical Thermal Resistance (Note 1)	$R\theta_{JA}$	35				10				$^{\circ}C/W$	
	$R\theta_{JC}$	2				2					
Operating Temperature Range	T_J	-65 to +150									$^{\circ}C$
Storage Temperature Range	T_{STG}	-65 to +150									$^{\circ}C$

- Notes:
1. Mount on Cu-Pad Size 16mm x 16mm on P.C.B.
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (SR502 THRU SR520)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

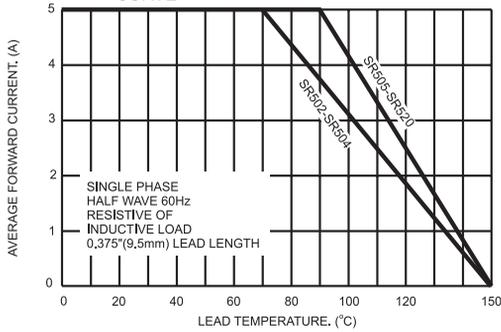


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

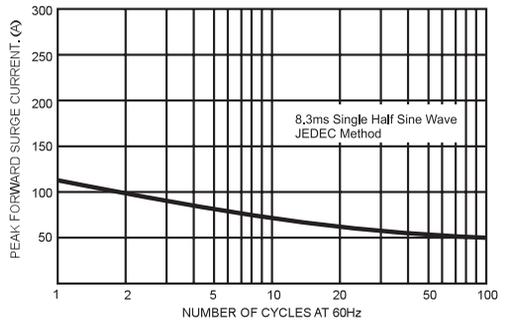


FIG.3- TYPICAL FORWARD CHARACTERISTICS

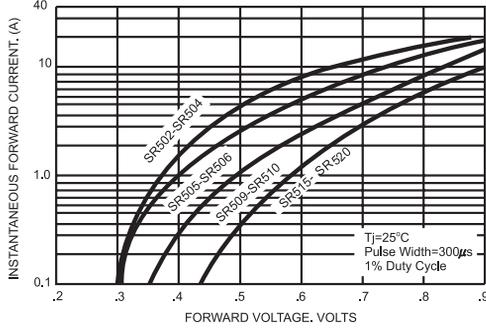


FIG.4- TYPICAL REVERSE CHARACTERISTICS

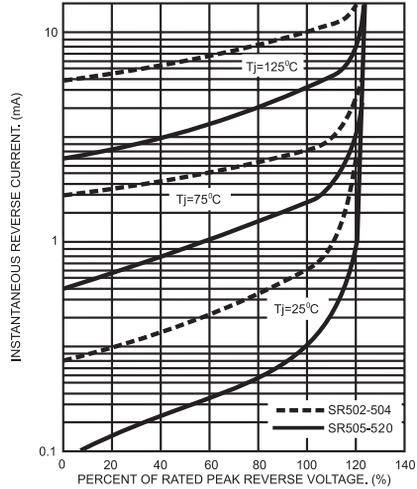


FIG.5- TYPICAL JUNCTION CAPACITANCE

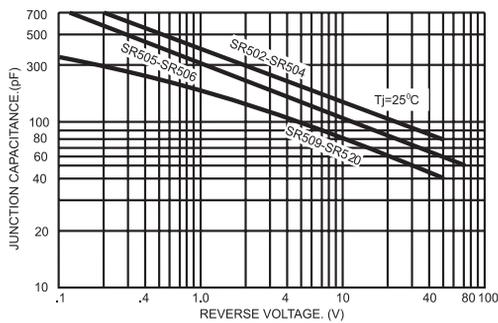


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

