

TO-220AB

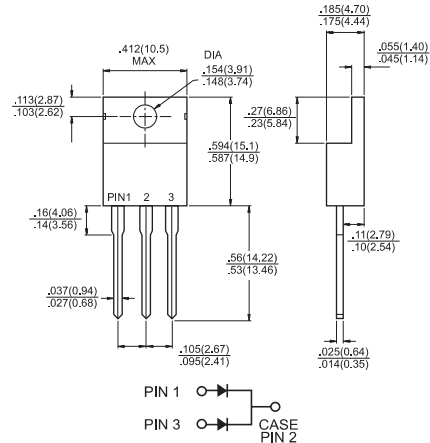


Features

- ◇ 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 inventor, free wheeling, and polarity protection application

Mechanical Data

- ◇ Cases: TO-220AB molded plastic
- ◇ Epoxy: UL 94V-0 rate flame retardant
- ◇ Terminals: Pure tin plated, lead free.
- ◇ Polarity: As marked
- ◇ High temperature soldering guaranteed:
260°C/10 seconds .25", (6.35mm) from case.
- ◇ Mounting torque: 5 in – lbs. max.
- ◇ Weight: 2.24 grams



Dimensions in inches and (millimeters)

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 2020	SR 2030	SR 2040	SR 2050	SR 2060	SR 2090	SR 20100	SR 20150	Units	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	90	100	150	V	
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	63	70	105	V	
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	90	100	150	V	
Maximum Average Forward Rectified Current See Fig. 1	$I_{(AV)}$	20								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	200								A	
Maximum Instantaneous Forward Voltage @ 10A	V_F	0.55		0.70		0.90		1.00		V	
Maximum D.C. Reverse Current @ $T_c=25^\circ C$ at Rated DC Blocking Voltage @ $T_c=100^\circ C$	I_R	0.5				0.1				mA	
		15		10		5.0				mA	
Typical Junction Capacitance (Note 2)	C_j	430			360						pF
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	1.0								°C/W	
Operating Junction Temperature Range	T_J	-65 to +125				-65 to +150					°C
Storage Temperature Range	T_{STG}	-65 to +150									°C

Notes: 1. Thermal Resistance from Junction to Case Per Leg, with Heatsink size (4"x6"x0.25") Al-Plate.

2. Measured at 1MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (SR2020 THRU SR20150)

FIG.1- FORWARD CURRENT DERATING CURVE

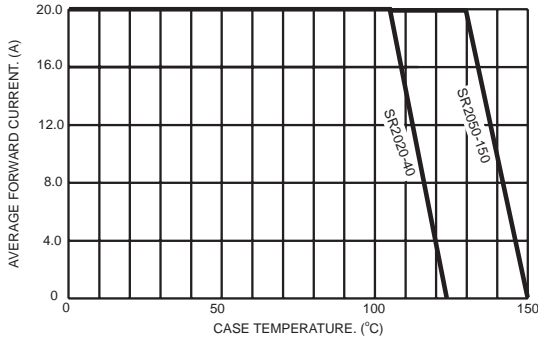


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

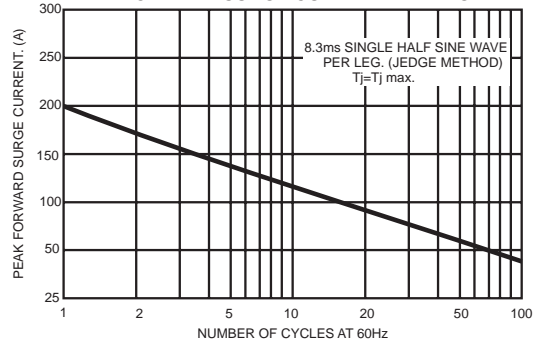


FIG.3- TYPICAL FORWARD CHARACTERISTICS PER LEG

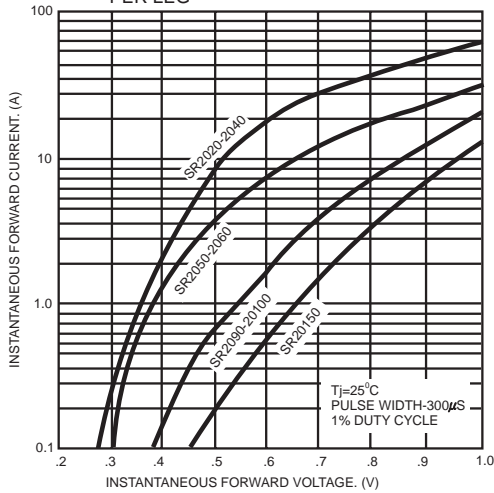


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

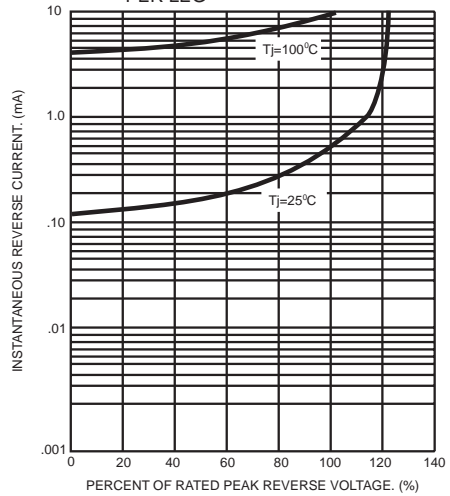


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

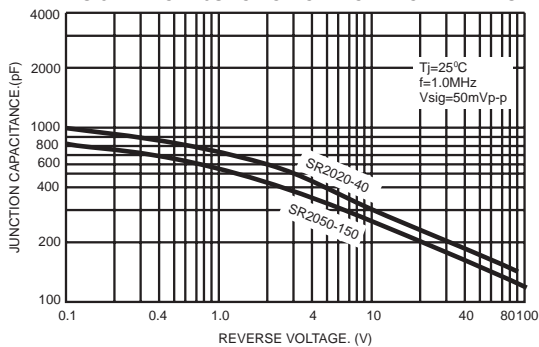


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

