

# SRF2020 - SRF20150

## Isolated 20.0 AMPS. Schottky Barrier Rectifiers ITO-220AB

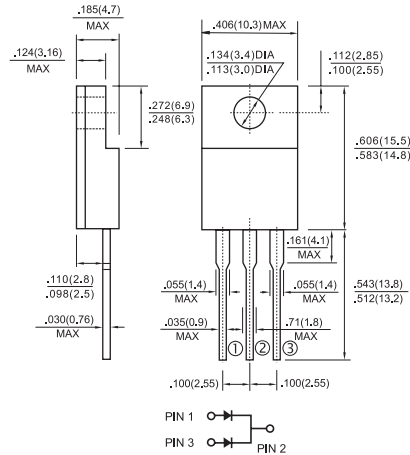


### Features

- ✧ For surface mounted application
- ✧ Low power loss, high efficiency
- ✧ High current capability, low VF
- ✧ High reliability
- ✧ Epitaxial construction
- ✧ Guard-ring for transient protection

### Mechanical Data

- ✧ Cases: ITO-220AB molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Terminals: Pure tin plated, Lead solderable per MIL-STD-750, Method 2026 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260°C/10 seconds .25", (6.35mm) from case.
- ✧ Weight: 2.24 grams
- ✧ Mounting torque: 5 in – lbs. max.



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	SRF 2020	SRF 2030	SRF 2040	SRF 2050	SRF 2060	SRF 2090	SRF 20100	SRF 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 @ 10.0A	$V_F$	0.55		0.70		0.92		1.02		V	
Maximum D.C. Reverse Current @ $T_c=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_c=100^\circ\text{C}$	$I_R$	0.5					0.1				mA
		15		10		5.0					
Typical Junction Capacitance (Note 2)	$C_j$	440			300		280			pF	
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	1.5									°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 (SRF2020 THRU SRF20150)

FIG.1- FORWARD CURRENT DERATING CURVE

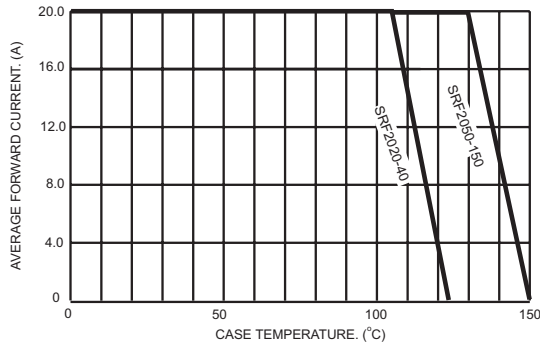


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

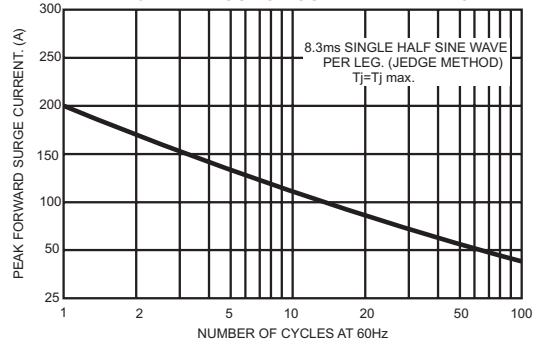


FIG.3- TYPICAL FORWARD CHARACTERISTICS PER LEG

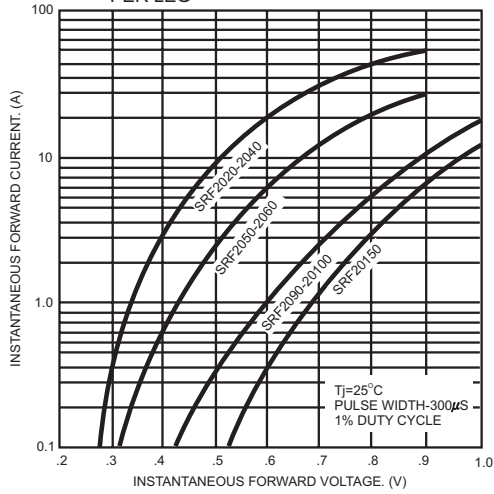


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

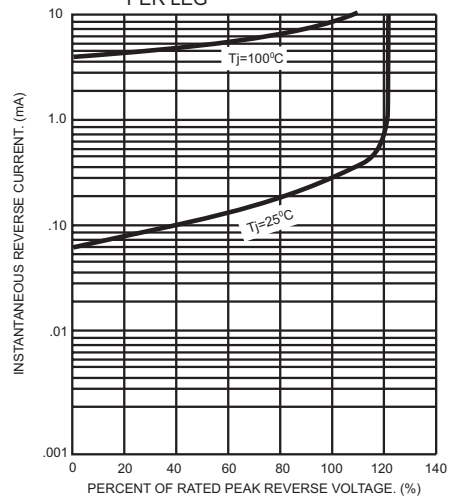


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

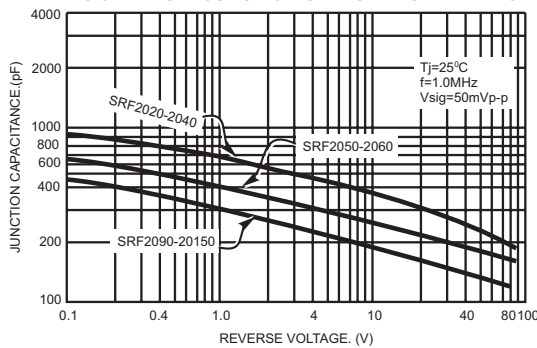


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

