

# SRF1020 - SRF10150

Isolated 10.0 AMPS. Schottky Barrier Rectifiers

**ITO-220AB**

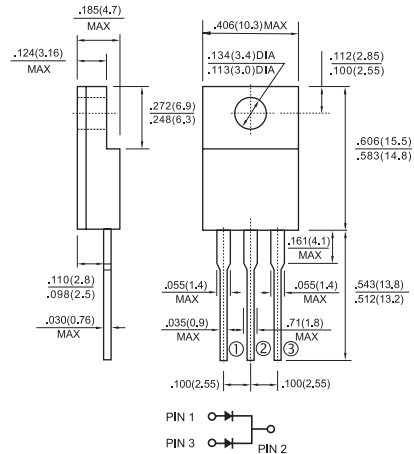


## Features

- ✧ 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, Leads solderable per MIL- STD-202, Method 208 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 – 1bs. 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 1020	SRF 1030	SRF 1040	SRF 1050	SRF 1060	SRF 1090	SRF 10100	SRF 10150	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	100	100	150	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	70	70	105	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	100	100	150	V
Maximum Average Forward Rectified Current See Fig. 1	$I_{(AV)}$	10								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		0.90		1.00		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			mA	
Typical Junction Capacitance (Note 2)	$C_j$	300								pF
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	3.5				4.0				°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. Mounted on Heatsink Size of 2" x 3" x 0.25" Al-Plate.  
2. Measured at 1MHz and Applied Reverse Voltage of 4.0V D.C.

## RATINGS AND CHARACTERISTIC CURVES (SRF1020 THRU SRF10150)

FIG.1- FORWARD CURRENT DERATING CURVE

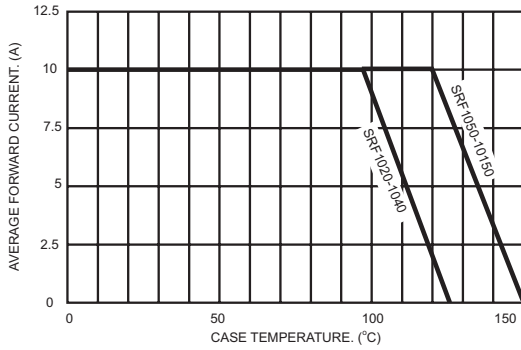


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

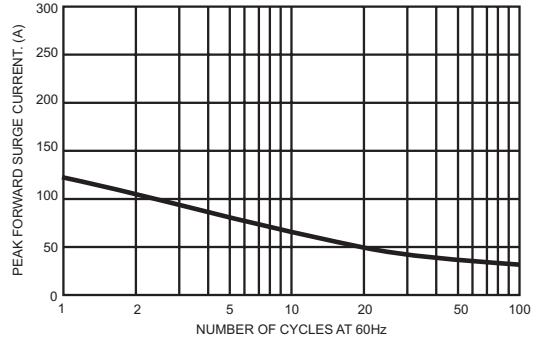


FIG.3- TYPICAL FORWARD CHARACTERISTICS PER LEG

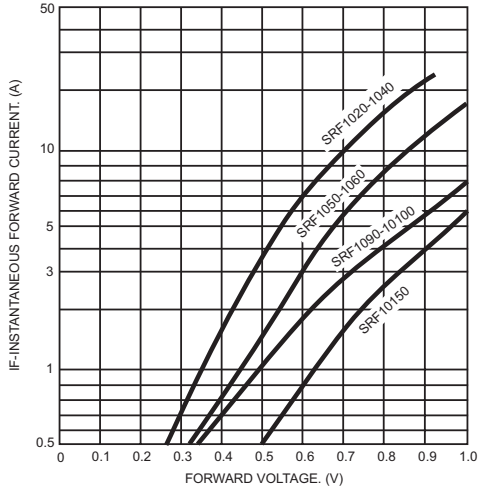


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

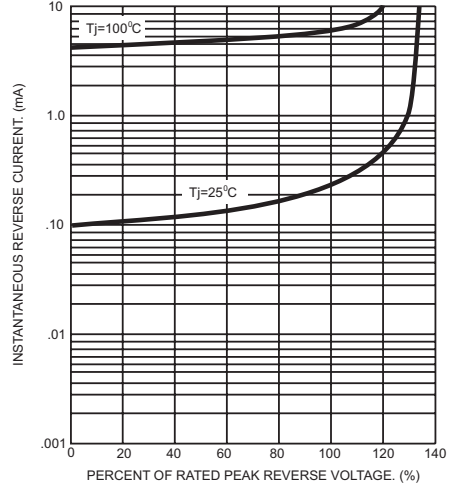


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

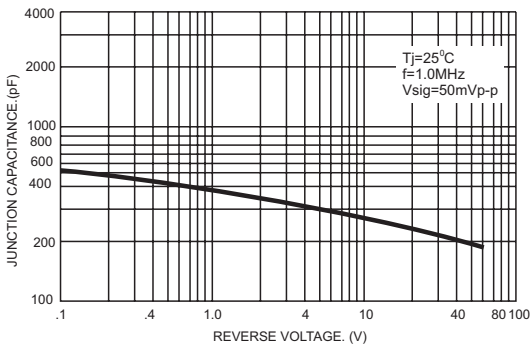


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

