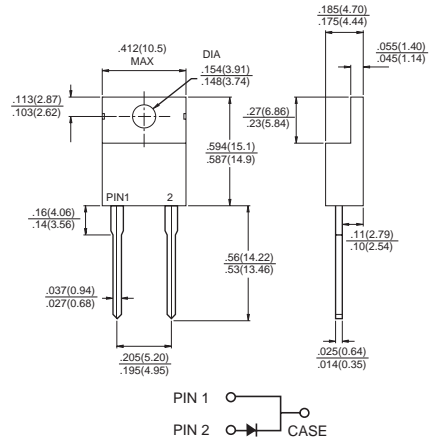




### TO-220AC



## 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

## Mechanical Data

- ✧ Cases: TO-220AC molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/ .25", (6.35mm) from case.
- ✧ 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	SRA 1020	SRA 1030	SRA 1040	SRA 1050	SRA 1060	SRA 1090	SRA 10100	SRA 10150	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 @ $T_c=110^\circ\text{C}$	$I_{(AV)}$	10								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	170								A
Maximum Instantaneous Forward Voltage @ 10A	$V_F$	0.55		0.70		0.85		0.95		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)	$C_j$	400								pF
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	2.0								$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	-65 to +125			-65 to +150					$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150								$^\circ\text{C}$

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 (SRA1020 THRU SRA10150)

FIG.1- FORWARD CURRENT DERATING CURVE

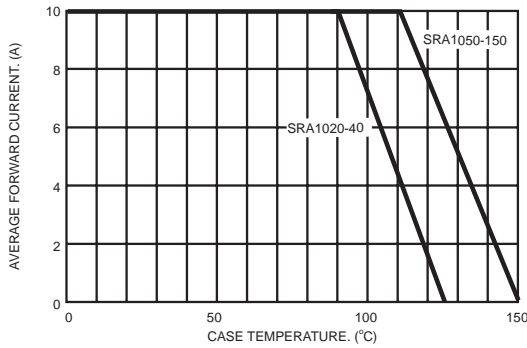


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

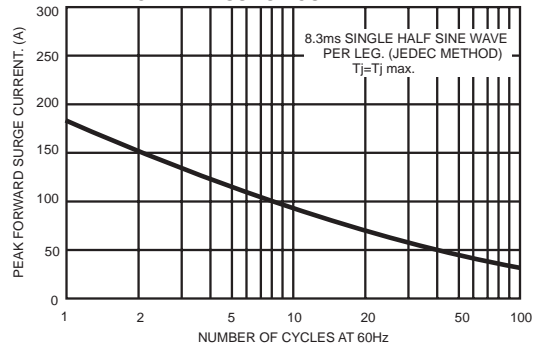


FIG.3- TYPICAL FORWARD CHARACTERISTICS

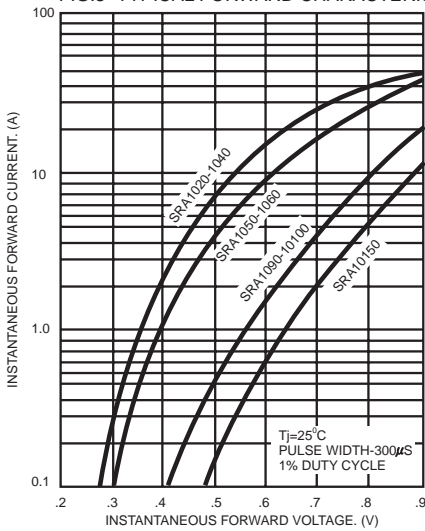


FIG.4- TYPICAL REVERSE CHARACTERISTICS

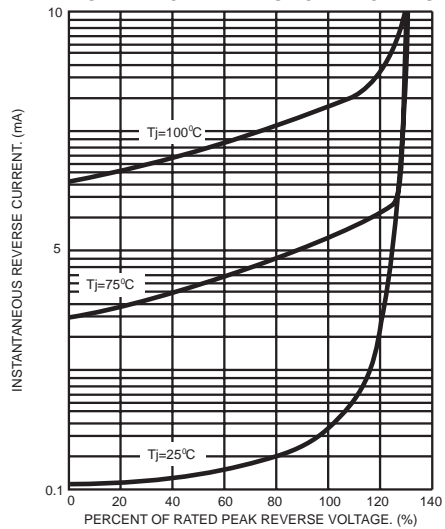


FIG.5- TYPICAL JUNCTION CAPACITANCE

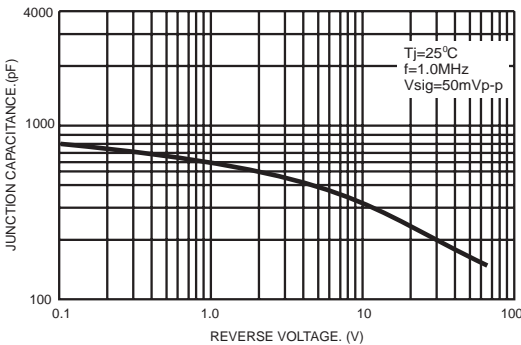


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

