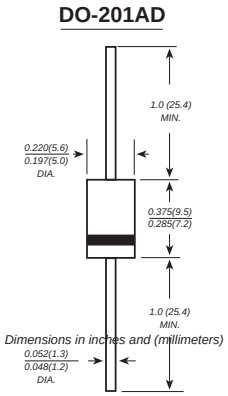
# 10.0AMPS. SUPERFAST RECOVERY RECTIFIER

## SRA4E

### FEATURE

. Low forward voltage drop
. High current capability
. High reliability
. High surge current capability
. Epitaxial construction
. High temperature soldering guaranteed
260°C /10seconds, 0.25"(6.35mm)from case.




### MECHANICAL DATA

. Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
. Mounting position: any

Single phase, half wave, 60Hz,resistive or inductive load.
For capacitive load, derate current by 20%

### MAXIMUM RATINGS ($T_C$=25℃ unless otherwise noted)

| Parameter | Symbol | SRA4E | Units |
|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 400 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 280 | V |
| Maximum DC blocking Voltage | $V_{DC}$ | 400 | V |
| Maximum Average Forward Rectified Current at $T_C$ =100°C | $I_{F(AV)}$ | 10.0 | A |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$ | 120 | A |
| Maximum Reverse Recovery Time (Note 1) | $t_{rr}$ | 30 | nS |
| Typical Junction Capacitance (Note 2) | $C_J$ | 50 | pF |
| Operation Junction Temperature and Storage Temperature | $T_J$, $T_{STG}$ | -55 to +175 | °C |

### ELECTRICAL CHARACTERISTICS ($T_C$=25℃ unless otherwise noted)

| Parameter | | Symbol | Typ | Max | Units |
|---|---|---|---|---|---|
| Maximum Forward Voltage | at 10.0A DC | $V_F$ | 1.10 | 1.30 | V |
| Maximum DC Reverse Current | @$T_A$=25°C | $I_R$ | ---- | 10 | μA |
| at rated DC blocking voltage | @$T_A$ =100°C | | ---- | 100.0 | |

### THERMAL CHARACTERISTICS($T_C$=25℃ unless otherwise noted)

| Parameter | Symbol | SRA4E | Units |
|---|---|---|---|
| Typical Thermal Resistance (Note 3) | $R_{(JC)}$ | 6.5 | ℃/W |

**Note:**

1. Test Conditions: $I_F$=0.5A, $I_R$=1.0A, $I_{RR}$=0.25A
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance From Junction to Case

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## RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

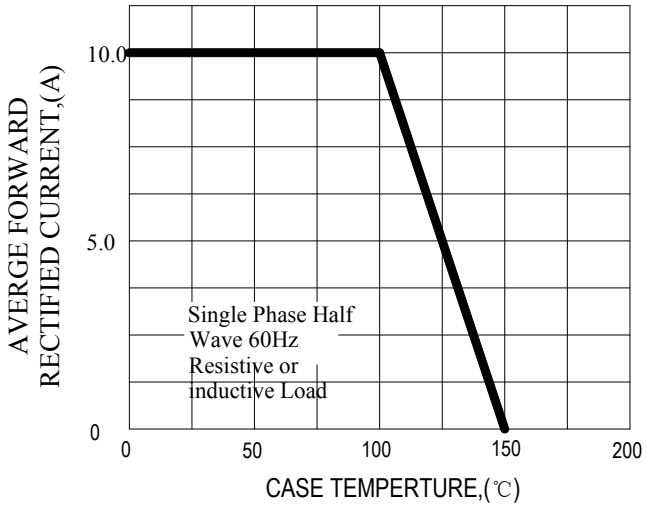



FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

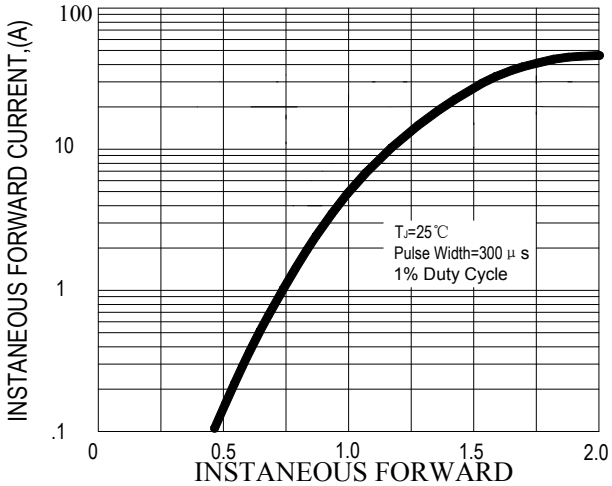



FIG.3-MAXIMUN NON-REPETITIVE FORWARD SURGE CURRENT

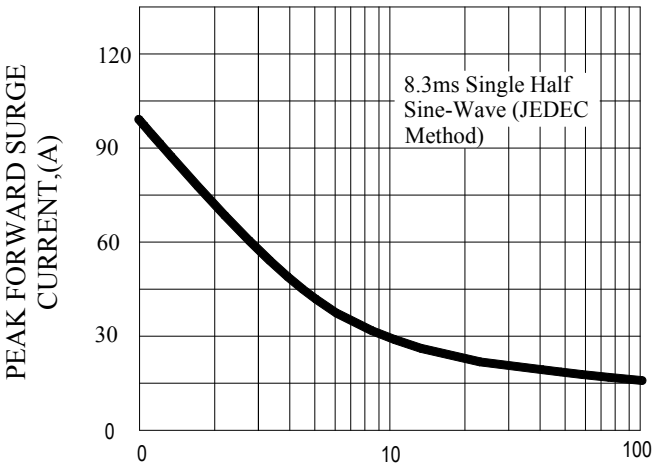



FIG.4-TYPICAL REVERSE CHARACTERISTICS

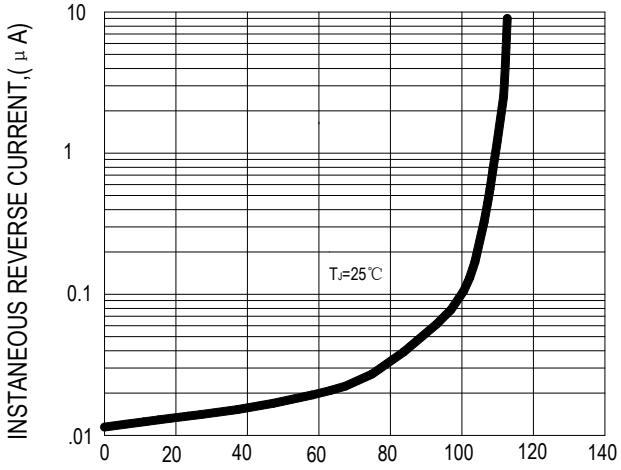
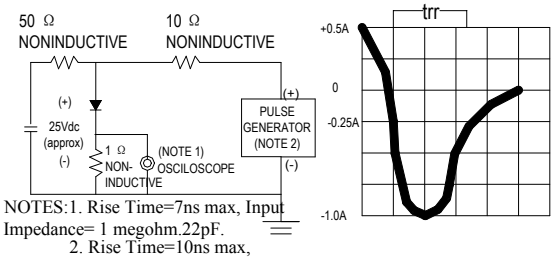



FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERSITIC




NOTES:1. Rise Time=7ns max, Input Impedance= 1 megohm.22pF.
2. Rise Time=10ns max,
Souce Impedance= 50 ohms.

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