



SUPER FAST GLASS PASSIVATED RECTIFIER

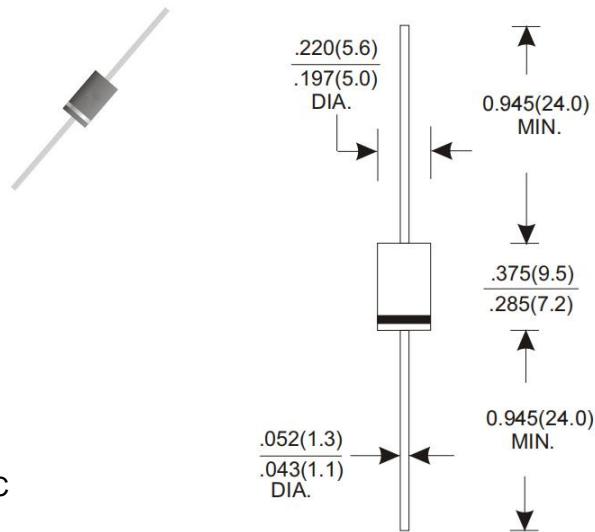
SRA4E

VOLTAGE RANGE 400 Volts
CURRENT 10 Ampere



Features

- Super fast switching speed
- Glass passivated chip junction
- Low power loss, high efficiency
- Low leakage
- High Surge Capacity
- High temperature soldering guaranteed
260°C/10 seconds, 0.375"(9.5mm) lead length



Dimensions in inches and (millimeters)

Mechanical Data

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.042ounce, 1.19 gram

Maximum Ratings and Electrical Characteristics

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

TYPE NUMBER	SYMBOLS	SRA4E	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	400	Volts
Maximum RMS Voltage	V_{RMS}	280	Volts
Maximum DC Blocking Voltage	V_{DC}	400	Volts
Maximum Average Forward Rectified Current 0.375"(9.5mm) lead length at $T_A=100^\circ\text{C}$	$I_{(AV)}$	10	Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	150	Amps
Maximum Instantaneous Forward Voltage at 10A	V_F	1.25	Volts
Maximum DC Reverse Current at rated DC blocking Voltage at	I_R	5.0	μA
$T_A = 25^\circ\text{C}$		150	
Maximum Reverse Recovery Time (NOTE 1)	T_{RR}	35	nS
Typical Junction Capacitance (NOTE 2)	C_J	6.5	pF
Typical Thermal Resistance (NOTE 3)	$R_{\theta JA}$	30	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_J	(-55 to +150)	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-55 to +150)	$^\circ\text{C}$

Notes:

1. Reverse Recovery Test Conditions: $I_f=0.5\text{A}$, $I_r=1.0\text{A}$, $I_{rr}=0.25\text{A}$.
2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
3. Thermal Resistance from Junction to Ambient with 0.375"(9.5mm) lead length, PCB mounted.



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Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

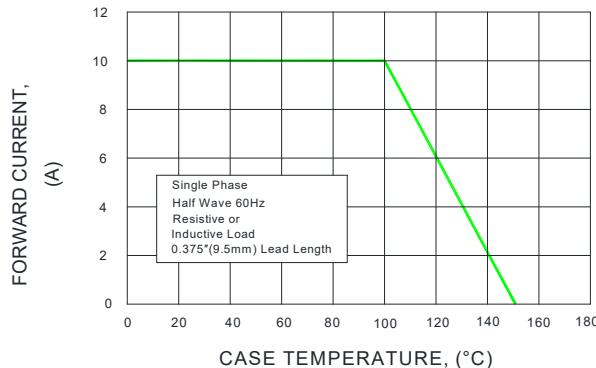


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

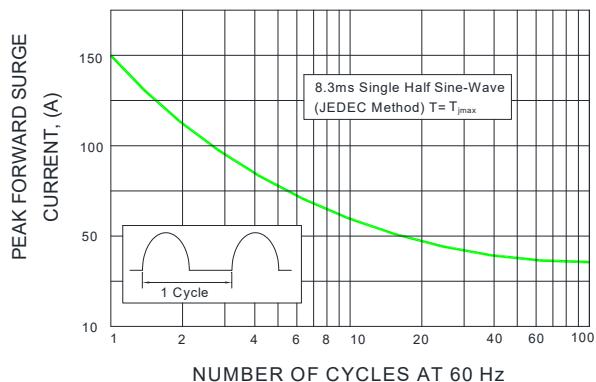


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

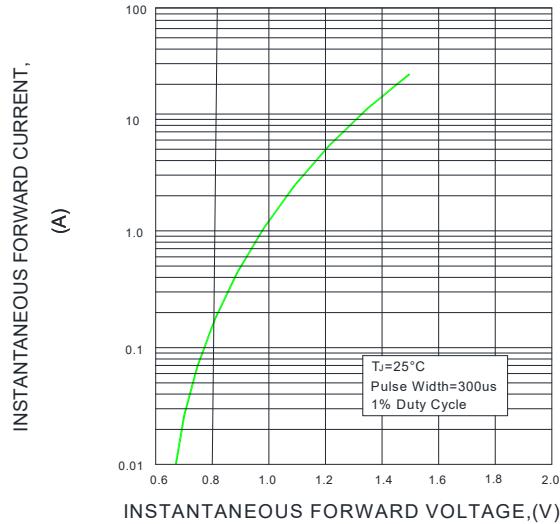


FIG.4-TYPICAL REVERSE CHARACTERISTICS

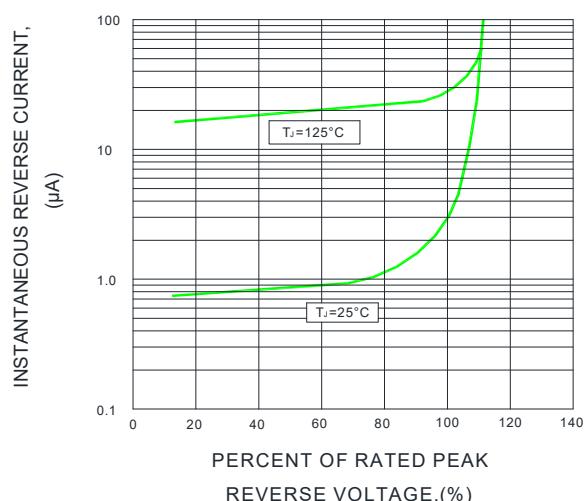


FIG.5-TYPICAL JUNCTION CAPACITANCE

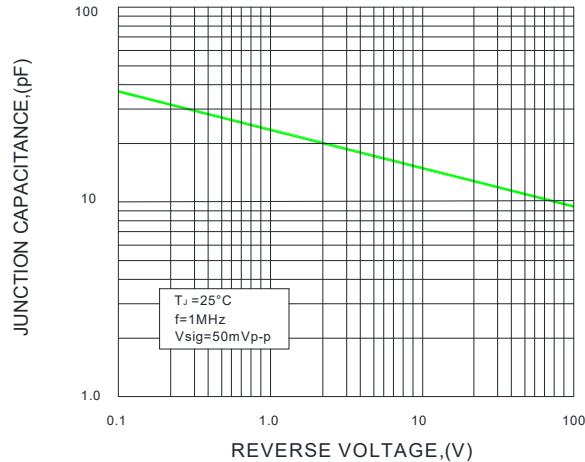
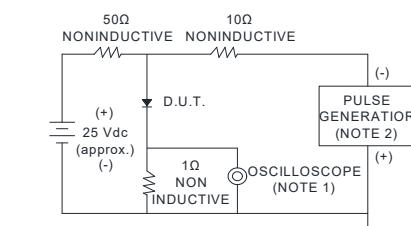
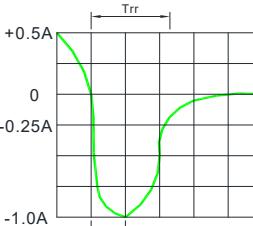


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

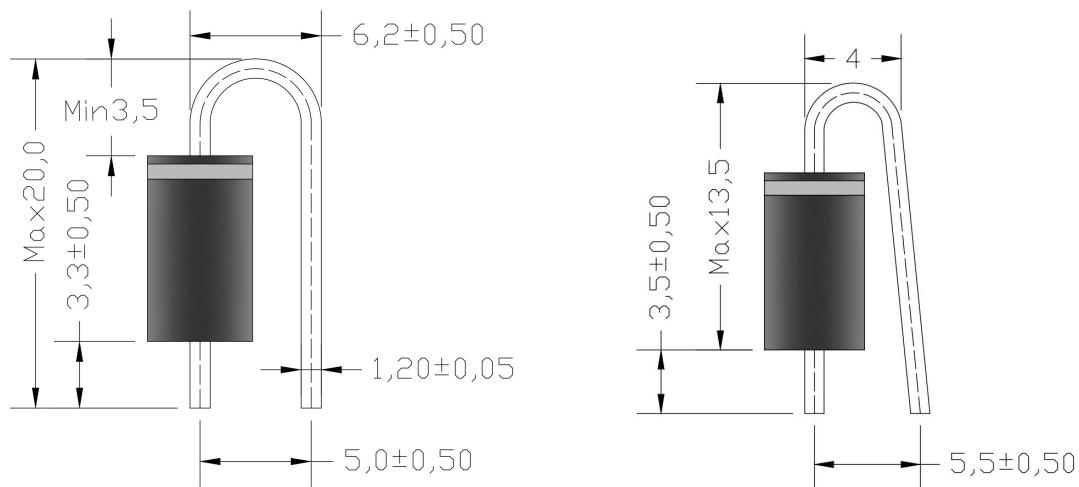
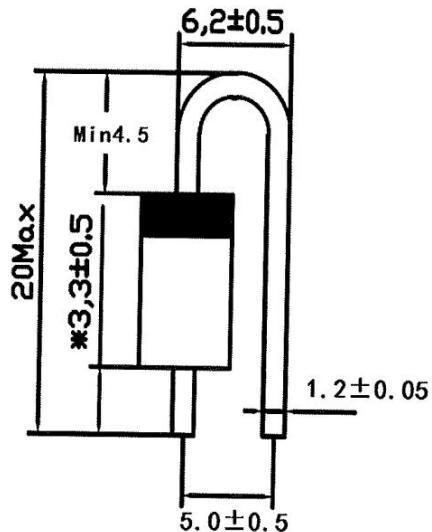


NOTES : 1.Rise Time=7ns mas. Input Impedance= 1 magohm. 22pF
 2.Rise time=10ns max. Source Impedance= 50 ohms



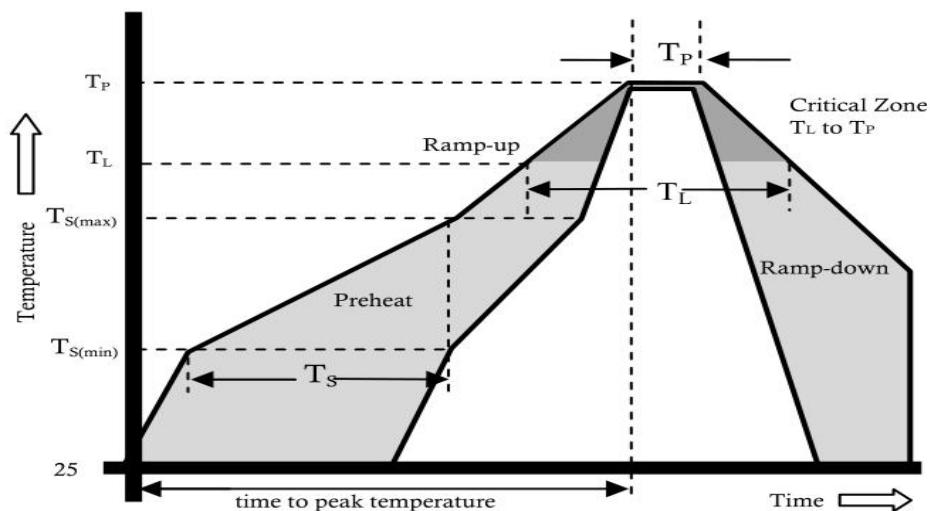


Dimensions (DO-27/DO-201AD)





Reflow Profile



Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time (Min to Max)	60-180 secs.
Average ramp up rate (Liquidus Temp (TL) to peak)		3°C/sec. Max.
TS(max) to TL - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature (TL) (Liquidus)	+217°C
	Temperature (TL)	60-150 secs.
Peak Temp (TP)		+(260+0/-5) °C
Time within 5°C of actual Peak Temp (TP)		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (TP)		8 min. Max.
Do not exceed		+260°C



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Disclaimer

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