

SR820K THRU SR8200K

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 200 Volts CURRENT 8.0 Ampere

FEATURES

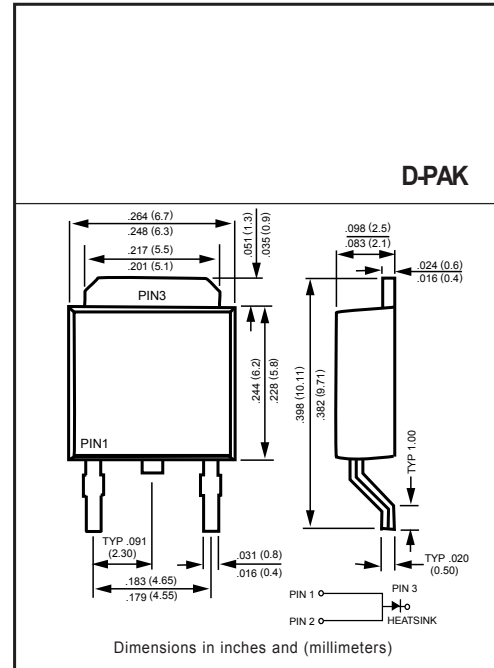
- * High reliability
- * Low switching loss
- * Low forward voltage drop
- * High current capability
- * High switching capability

MECHANICAL DATA

- * Epoxy: Device has UL flammability classification 94V-O
- * Case: Molded plastic
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting: position: Any
- * Weight: 0.33 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.



MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	SR820K	SR830K	SR835K	SR840K	SR845K	SR850K	SR860K	SR880K	SR8100K	SR8150K	SR8200K	UNITS	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	35	40	45	50	60	80	100	150	200	Volts	
Maximum RMS Voltage	V_{RMS}	14	21	25	28	32	35	42	56	70	105	140	Volts	
Maximum DC Blocking Voltage	V_{DC}	20	30	35	40	45	50	60	80	100	150	200	Volts	
Maximum Average Forward Rectified Current at Derating Case Temperature	I_O	8.0											Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150											Amps	
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	60											°C/W	
	$R_{\theta JC}$	3												
Typical Junction Capacitance (Note 2)	C_J	700					450							pF
Operating Temperature Range	T_J	150											°C	
Storage Temperature Range	T_{STG}	-55 to + 150											°C	

ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)

CHARACTERISTICS	SYMBOL	SR820K	SR830K	SR835K	SR840K	SR845K	SR850K	SR860K	SR880K	SR8100K	SR8150K	SR8200K	UNITS		
Maximum Instantaneous Forward Voltage at 8.0A DC	V_F	.65											Volts		
Maximum Average Reverse Current at Rated DC Blocking Voltage	I_R	@ $T_A = 25^\circ\text{C}$.2			.85				mA
		@ $T_A = 100^\circ\text{C}$	2											mA	

- NOTES : 1. Thermal Resistance : Heat-sink case mounted or if PCB mounted.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts. □
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
4. Suffix "R" for Reverse Polarity.
5. Suffix "S" for D2-PAK Pkg.

RATING AND CHARACTERISTICS CURVES (SR820K THRU SR8200K)

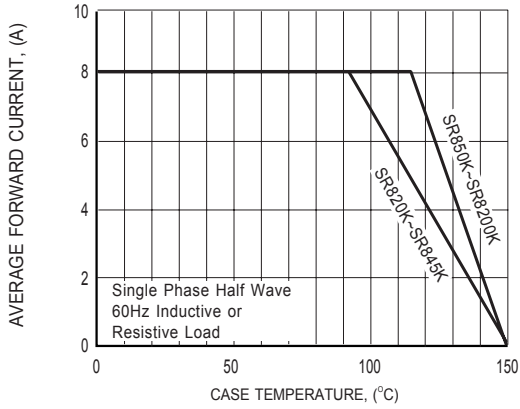


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

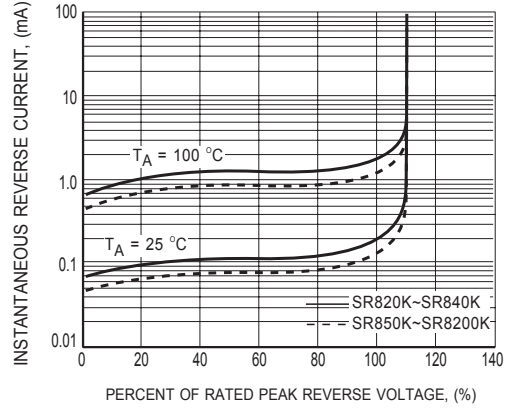


FIG.2 TYPICAL REVERSE CHARACTERISTICS

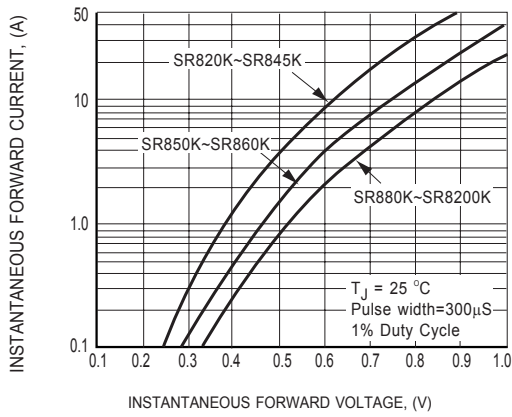


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

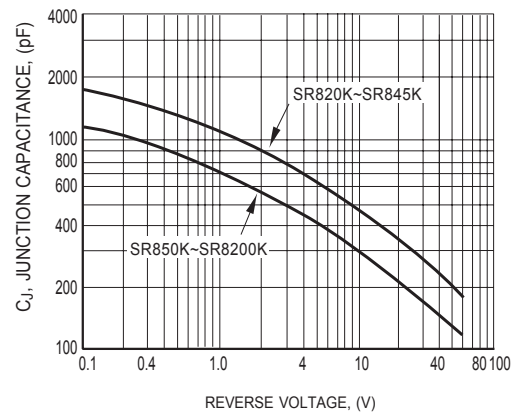


FIG.4 TYPICAL JUNCTION CAPACITANCE

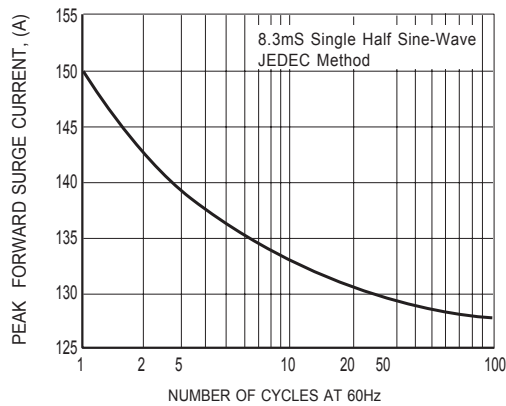


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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