

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 To 200 Volts CURRENT 10.0 Ampere

FEATURES

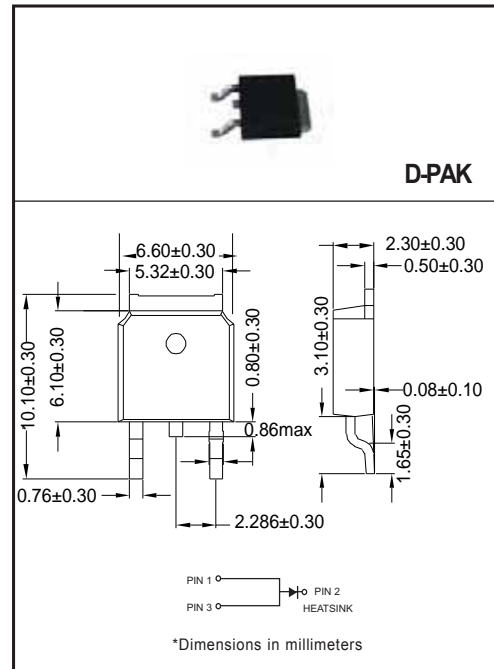
- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * High switching capability
- * High surge capability
- * High reliability
- * P/N suffix V means AEC-Q101 qualified, e.g:SR1020KV

MECHANICAL DATA

- * Case: D - PAK molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any

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	SR1020K	SR1040K	SR1060K	SR10150K	SR10200K	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	40	60	150	200	Volts
Maximum RMS Voltage	V_{RMS}	14	28	42	105	140	Volts
Maximum DC Blocking Voltage	V_{DC}	20	40	60	150	200	Volts
Maximum Average Forward Rectified Current at Derating Case Temperature	I_O	10.0					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150					Amps
Typical Current Squared Time	I^2t	93.37					A ² /Sec
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	3.0					°C/W
	$R_{\theta JA}$	60					
Typical Junction Capacitance (Note 3)	C_J	450					pF
Operating Temperature Range	T_J	-55 to + 150					°C
Storage Temperature Range	T_{STG}	-55 to + 150					°C

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

CHARACTERISTICS	SYMBOL	SR1020K	SR1040K	SR1060K	SR10150K	SR10200K	UNITS
Maximum Instantaneous Forward Voltage at 100A DC	V_F	.65		.70		.92	Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	I_R	@ $T_A = 25^\circ C$	0.05			0.01	mA
		@ $T_A = 150^\circ C$	5.0				

- NOTES : 1. Thermal Resistance : Heat-sink mounted.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. * ROHS compliant"

2022-03/97
REV:F

RATING AND CHARACTERISTICS CURVES (SR1020K THRU SR10200K)

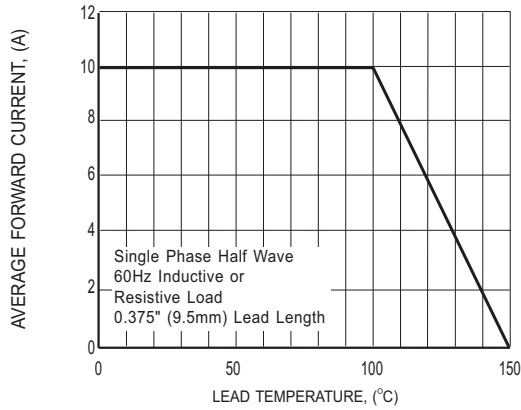


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

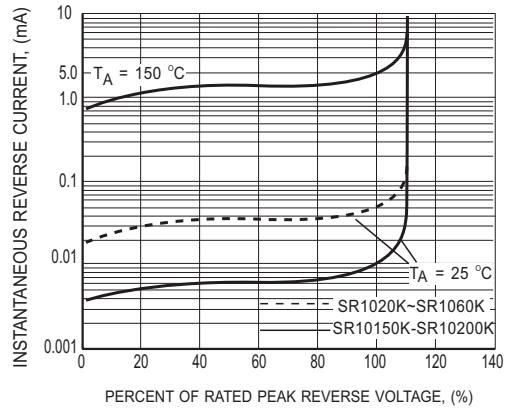


FIG.2 MAXIMUM REVERSE CHARACTERISTICS

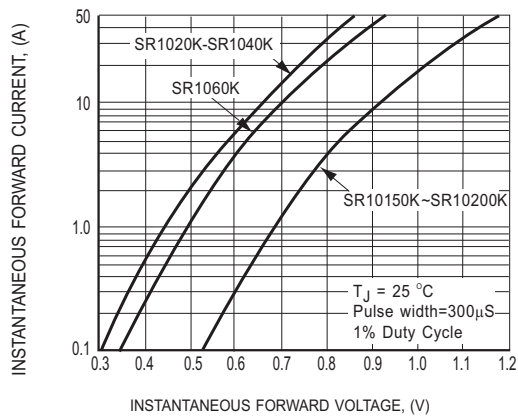


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

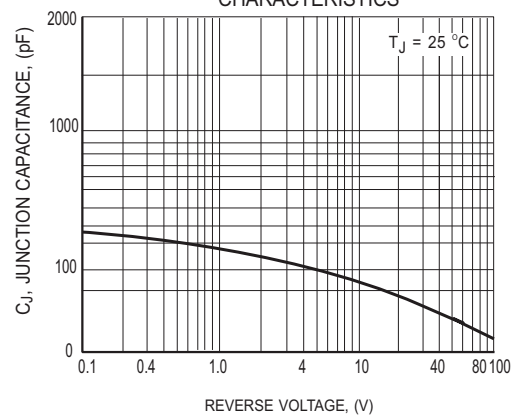


FIG.4 TYPICAL JUNCTION CAPACITANCE

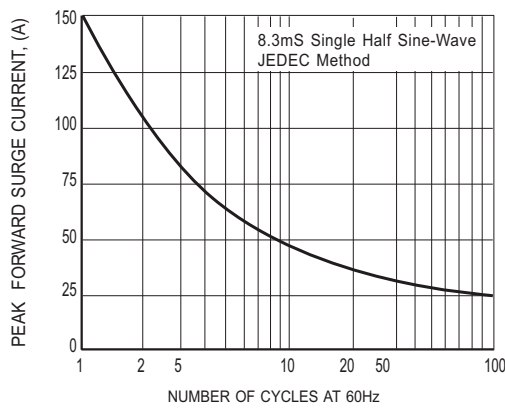
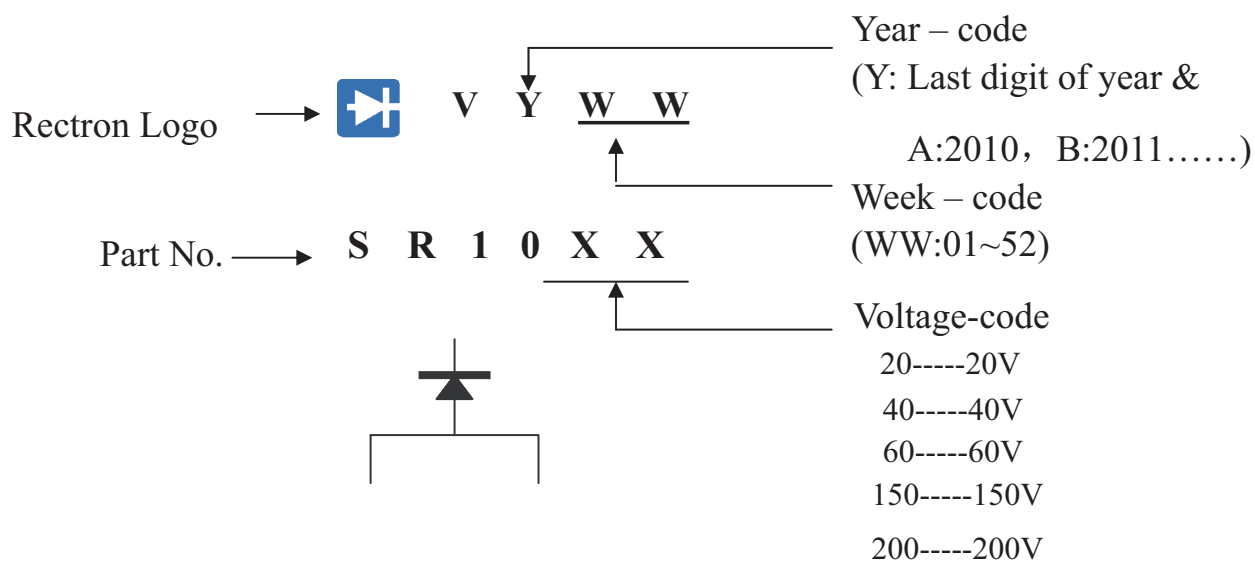


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



Marking Description



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
DPAK	-W/-C	2,500	2,500	338*338*40	360*355*360	20,000	---

DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.