SAM YANG

# SAMYANG ELECTRONICS

*( SINGLE CHIP )*

***SR820 --- SR8200***

## SCHOTTKY BARRIER RECTIFIER

**VOLTAGE RANGE: 20 --- 200 V**
**CURRENT: 8.0A**

### FEATURES

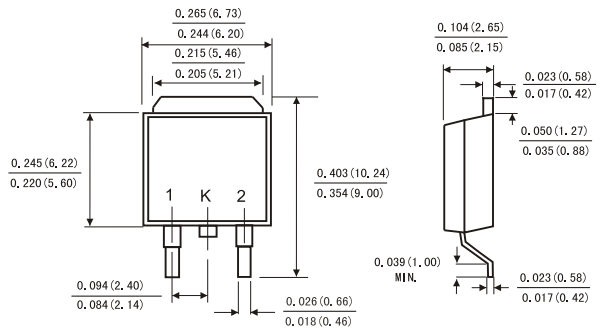
- ◇Metal-semiconductor junction with guard ring
- ◇Epitaxial construction
- ◇Low forward voltage drop,low switching losses
- ◇High surge capability
- ◇For use in low voltage,high frequency inverters free wheeling,and polarity protection applications
- ◇The plastic material carries U/L recognition 94V-0

### MECHANICAL DATA

- ◇Case:JEDEC TO-252, molded plastic
- ◇Terminals: Axial lead ,solderable per MIL- STD-202,Method 208
- ◇Polarity: As marked
- ◇Weight: 0.014 ounces,0.4 grams
- ◇Mounting position: Any

**TO - 252**

(DPAK)




Dimensions in inches and (milimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

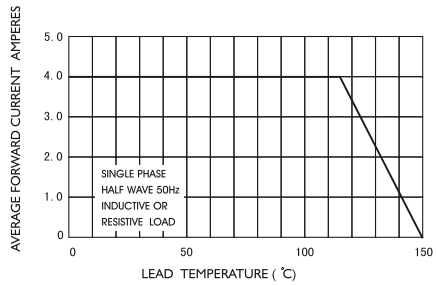
Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

| | Symbols | SR 820 | SR 830 | SR 840 | SR 850 | SR 860 | SR 880 | SR **8100** | SR 8150 | SR 8200 | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | Volts |
| Maximum RMS voltage | $V_{RMS}$ | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | 140 | Volts |
| Maximum DC blocking voltage | $V_{DC}$ | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | Volts |
| Maximum average forward rectified current (see Fig.1) | $I_{(AV)}$ | 8.0 | | | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$ | 150.0 | | | | | | | | | Amps |
| Maximum instantaneous forward voltage at 8.0 A(Notes 1 ) | $V_F$ | 0. 60 | | | 0.75 | | 0.85 | | 0.90 | 0.95 | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage(Notes 1) $T_A$=25℃ | $I_R$ | 0.2 | | | | | | | | | mA |
| $T_A$=125℃ | | 15 | | | 50 | | | | | | |
| Typical thermal resistance (Notes 2) | $R_{\theta JC}$ | 2.5 | | | | | | | | | ˚C/W |
| Operating junction temperature range | $T_J$ | -65 to+150 | | | | | | | | | ˚C |
| Storage temperature range | $T_{STG}$ | -65 to+150 | | | | | | | | | ˚C |

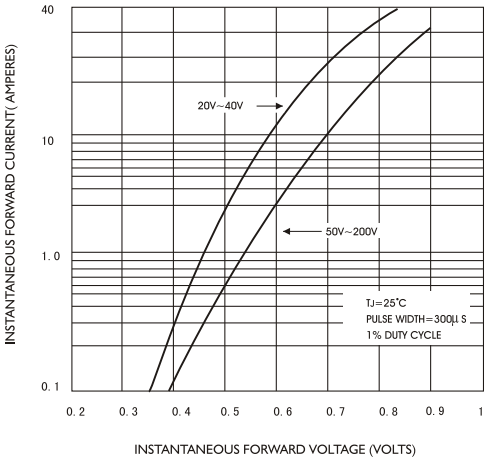
NOTE: 1. Pulse test:300us pulse width,1% duty cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3.Thermal resistance junction to ambient

www.diode.co.kr

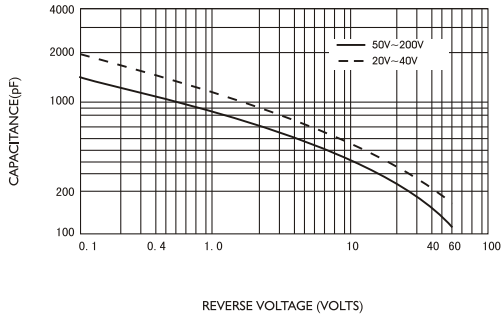
## FIG.1-FORWARD CURRENT DERATING CURVE



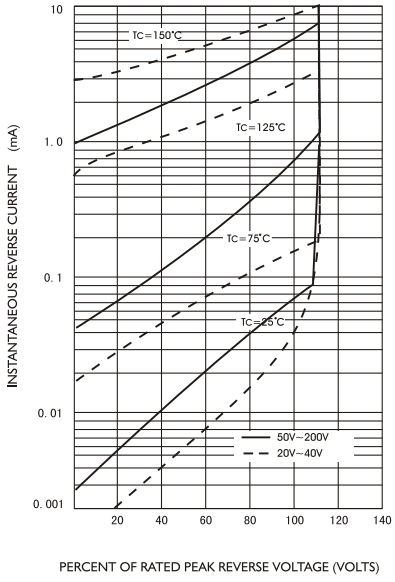

## FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS




## FIG.4-TYPICAL JUNCTION CAPACITANCE




## FIG.3-TYPICAL REVERSE CHARACTERISTICS




## FIG.5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

