



CHENYI ELECTRONICS

# SR520 THRU SR5A0

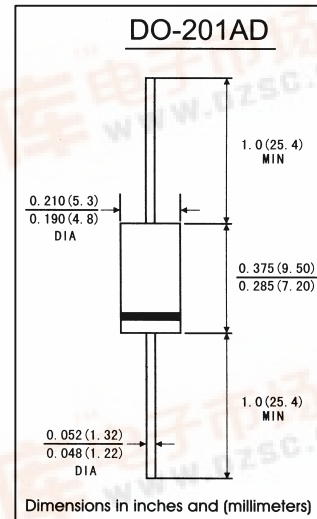
## SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts

Forward Current - 5.0Ampere

### FEATURES

- . Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- . Metal silicon junction ,majority carrier conduction
- . Guard ring for overvoltage protection
- . Low power loss,high efficiency
- . High current capability ,Low forward voltage drop
- . High surge capability
- . For use in low voltage ,high frequency inverters, free wheeling , and polarity protection applications
- . High temperature soldering guaranteed: 250°C/10 seconds at terminals, 0.375"(9.5mm)lead length, 5lbs.(2.3kg)tension



### MECHANICAL DATA

- . **Case:** JEDEC DO-201AD molded plastic body
- . **Terminals:** plated axial leads,solderable per MIL-STD-750,method 2026
- . **Polarity:** color band denotes cathode end
- . **Mounting Position:** Any
- . **Weight:** 0.041 ounce, 1.15 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified,Single phase,half wave,resistive or inductive)

load. For capacitive load,derate by 20%)

|  | Symbols         | SR520       | SR530 | SR540 | SR550       | SR560 | SR580 | SR5A0 | Units |
|--|-----------------|-------------|-------|-------|-------------|-------|-------|-------|-------|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$       | 20          | 30    | 40    | 50          | 60    | 80    | 100   | Volts |
| Maximum RMS voltage  | $V_{RMS}$       | 14          | 21    | 28    | 35          | 42    | 57    | 71    | Volts |
| Maximum DC blocking voltage  | $V_{DC}$        | 20          | 30    | 40    | 50          | 60    | 80    | 100   | Volts |
| Maximum average forward rectified current 0.375"(9.5mm)lead length (see Fig.1)                                   | $I_{(AV)}$      | 5.0         |       |       |             |       |       |       | Amp   |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated $T_L$ ) | $I_{FSM}$       | 150.0       |       |       |             |       |       |       | Amps  |
| Maximum instantaneous forward voltage at 5.0 A(Note 1)   | $V_F$           | 0.55        |       | 0.70  |             | 0.85  |       | 0.85  | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)                                       | $I_R$           | 2.5         |       |       |             |       |       |       | mA    |
|  |                 | 50          |       | 25    |             |       |       |       |       |
| Typeical junction capacitance(Note 3)  | $C_J$           | 250         |       | 400   |             |       |       |       | pF    |
| Typeical thermal resistance(Note 2)  | $R_{\theta JA}$ | 25.0        |       |       |             |       |       |       | °C/W  |
|  | $R_{\theta JL}$ | 8.0         |       |       |             |       |       |       |       |
| Operating junction temperature range   | $T_J$           | -65 to +125 |       |       | -65 to +150 |       |       |       | °C    |
| storage temperature range  | $T_{STG}$       | -65 to +150 |       |       |             |       |       |       | °C    |

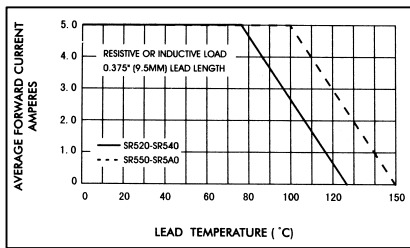
Notes: 1. Pulse test: 300  $\mu$ s pulse width,1% duty cycle

2. Thermal resistance from junction to lead vertical P.C.B. Mounted, 0.375"(9.5mm)

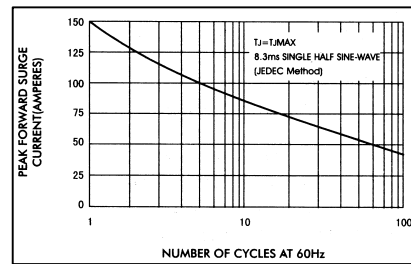
3. Measure a 1MHz and reverse voltage of 4.0volts

**RATINGS AND CHARACTERISTIC CURVES SR520 THRU SR5A0**

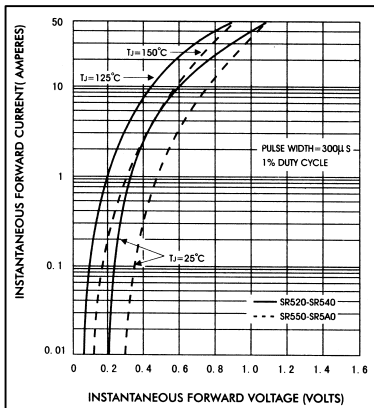
**FIG.1-FORWARD CURRENT DERATING CURVE**



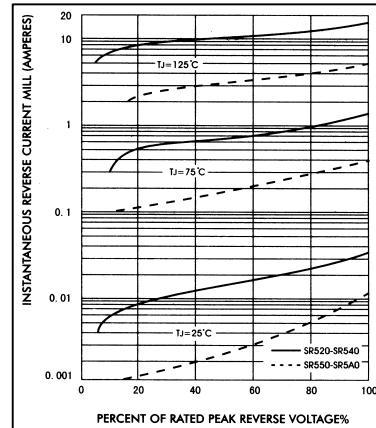
**FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



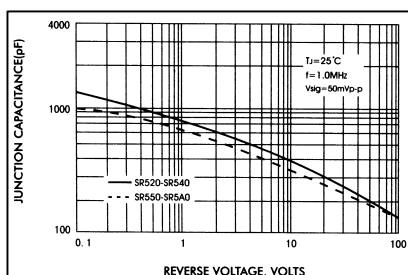
**FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4-TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**



**FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE**

