

### SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE: 20 --- 60 V  
CURRENT: 5.0 A

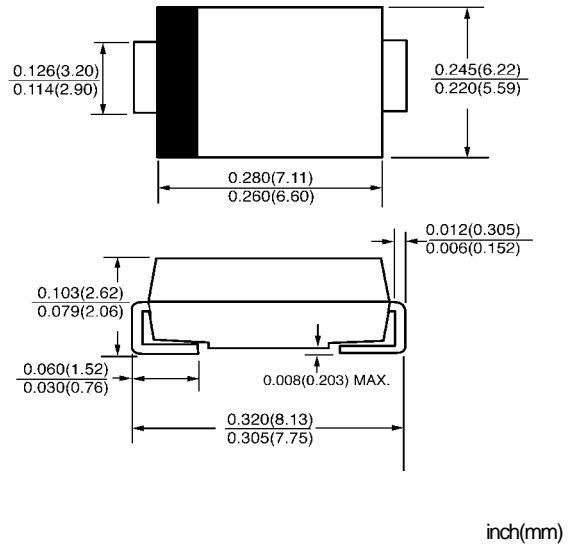
#### FEATURES

- Plastic package has Underwriters Laborator Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal silicon junction, majority carrier conduction
- High surge capability
- High current capability, low forward voltage drop
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 250°C/10 seconds at terminals

#### MECHANICAL DATA

- Case: JEDEC DO-214AB, molded plastic over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.007 ounces, 0.21 gram

#### DO - 214AB(SMC)



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

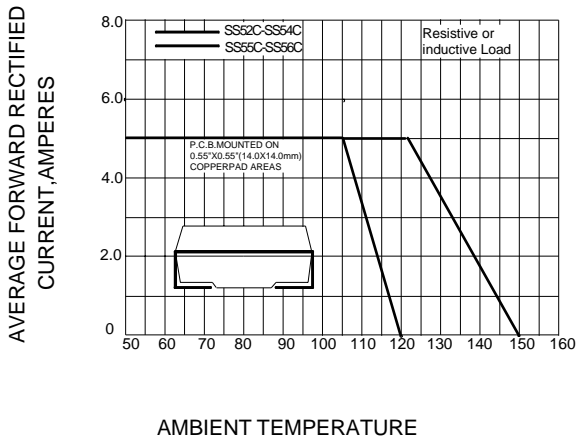
Ratings at 25 ambient temperature unless otherwise specified

|  |            | SS52C       | SS53C | SS54C | SS55C       | SS56C | UNITS |
|--|------------|-------------|-------|-------|-------------|-------|-------|
| Device marking code  |            | S2C         | S3C   | S4C   | S5C         | S6C   |       |
| Maximum recurrent peak reverse voltage   | $V_{RRM}$  | 20          | 30    | 40    | 50          | 60    | V     |
| Maximum RMS voltage  | $V_{RWS}$  | 14          | 21    | 28    | 35          | 42    | V     |
| Maximum DC blocking voltage  | $V_{DC}$   | 20          | 30    | 40    | 50          | 60    | V     |
| Maximum average forward rectified current at $T_L$ (SEE FIG.1) (NOTE 2)                          | $I_{(AV)}$ | 5.0         |       |       |             |       | A     |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$  | 175         |       |       |             |       | A     |
| Maximum instantaneous forward voltage at 5.0A (NOTE.1)   | $V_F$      | 0.55        |       |       | 0.70        |       | V     |
| Maximum DC reverse current @ $T_A=25$ at rated DC blocking voltage (NOTE1) @ $T_A=100$           | $I_R$      | 0.5         |       |       |             |       | mA    |
|  |            | 20          |       |       | 10          |       |       |
| Typical thermal resistance (NOTE2)   | $R_{JA}$   | 55          |       |       |             |       | /W    |
|  | $R_{JL}$   | 17          |       |       |             |       |       |
| Operating junction and storage temperature range   | $T_{STG}$  | -65--- +150 |       |       |             |       |       |
| Storage temperature range  | $T_J$      | -65--- +150 |       |       | -65--- +150 |       |       |

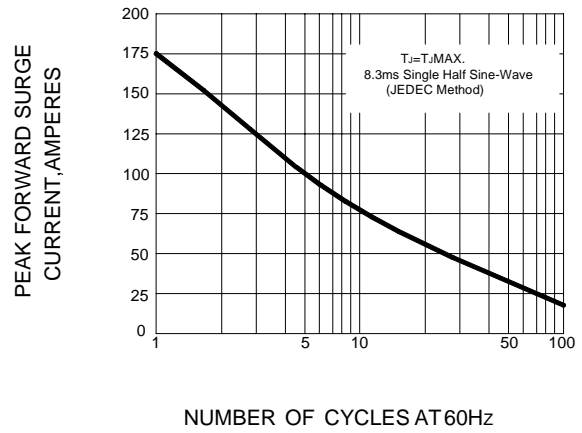
NOTE: 1. Pulse test: 300  $\mu$ S pulse width, 1% duty cycle  
2. P.C.B. mounted with 0.55"X0.55" (14.0X14.0mm<sup>2</sup>) copper pad areas

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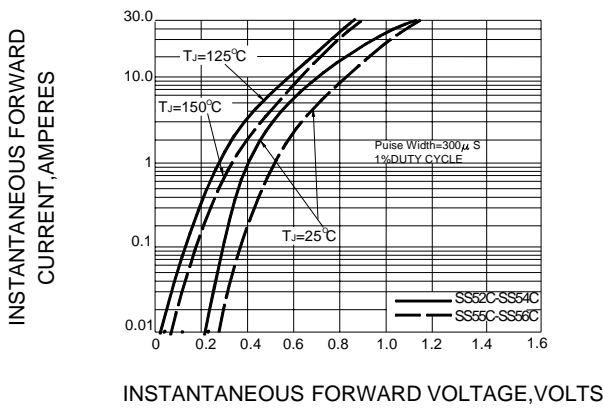
**FIG.1 – FORWARD DERATING CURVE**



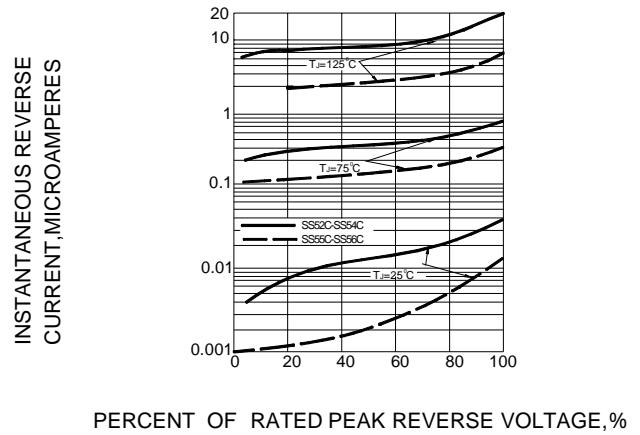
**FIG.2- PEAK FORWARD SURGE CURRENT**



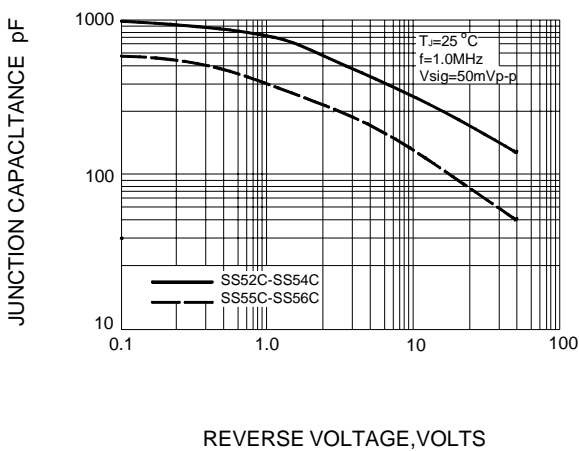
**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**



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

