

## SCHOTTKY BARRIER RECTIFIER

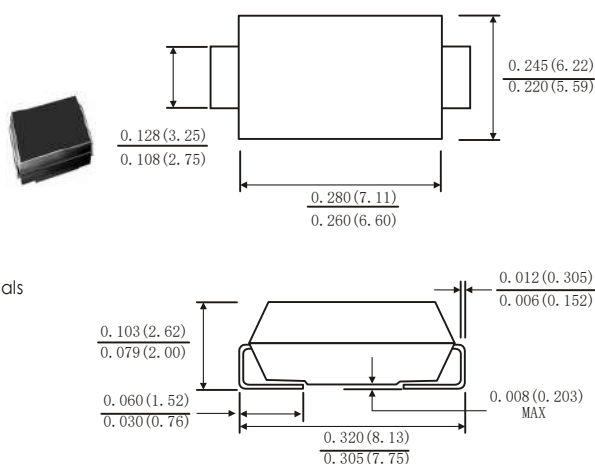
### Features :

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- For surface mount applications
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- Low profile package
- Built-in strain relief ,ideal for automated placement
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

### Mechanical Data :

- **Case:** JEDEC SMC(DO-214AB) molded plastic body
- **Terminals:** solder plated ,solderable per MIL-STD-750,method 2026
- **Polarity:** color band denotes cathode end
- **Weight:** 0.007ounce,0.21 gram

### SMC(DO-214AB)



Dimensions in inches and (millimeters)

## 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                                           | SK52C        | SK53C        | SK54C        | SK55C        | SK56C        | SK58C        | SK510C         | SK515C         | SK520C         | Units |    |
|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|----------------|-------|----|
| Marking Code                                                                                                       | -                                                 | SK52<br>SS52 | SK53<br>SS53 | SK54<br>SS54 | SK55<br>SS55 | SK56<br>SS56 | SK58<br>SS58 | SK510<br>SS510 | SK515<br>SS515 | SK520<br>SS520 | -     |    |
| Maximum repetitive peak reverse voltage                                                                            | VRRM                                              | 20           | 30           | 40           | 50           | 60           | 80           | 100            | 150            | 200            | Volts |    |
| Maximum RMS voltage                                                                                                | VRMS                                              | 14           | 21           | 28           | 35           | 42           | 57           | 71             | 105            | 140            | Volts |    |
| Maximum DC blocking voltage                                                                                        | VDC                                               | 20           | 30           | 40           | 50           | 60           | 80           | 100            | 150            | 200            | Volts |    |
| Maximum average forward rectified current<br>0.375"(9.5mm) lead length(see fig.1)                                  | IAV                                               | 5.0          |              |              |              |              |              |                |                |                | Amps  |    |
| Peak forward surge current 8.3ms single half<br>sine-wave superimposed on rated load<br>(JEDEC method at rated Tj) | IFSM                                              | 150.0        |              |              |              |              |              |                |                |                | Amps  |    |
| Maximum instantaneous forward voltage<br>at 5.0 A( Note 1 )                                                        | VF                                                | 0.55         |              |              | 0.70         |              | 0.85         |                | 0.90           | 0.95           | Volts |    |
| Maximum instantaneous reverse<br>current at rated DC blocking<br>voltage( Note 1 )                                 | T <sub>A</sub> = 25 °C<br>T <sub>A</sub> = 100 °C | IR           | 0.2          |              |              |              |              |                |                |                | mA    |    |
|                                                                                                                    |                                                   |              | 50           |              |              | 10           |              |                |                |                |       |    |
| Typical junction capacitance( Note 3 )                                                                             | CJ                                                | 500          |              |              | 400          |              |              |                |                |                |       | pF |
| Typical thermal resistance ( Note 2 )                                                                              | RθJA<br>RθJL                                      | 55.0<br>17.0 |              |              |              |              |              |                |                |                | °C/W  |    |
| Operating junction temperature range                                                                               | TJ                                                | -65 to +150  |              |              |              |              |              |                |                |                | °C    |    |
| Storage temperature range                                                                                          | TSTG                                              | -65 to +150  |              |              |              |              |              |                |                |                | °C    |    |

- Notes:** 1. Pulse test: 300  $\mu$ s pulse width, 1% duty cycle  
 2. P.C.B. mounted 0.55X0.55"(14X14mm) copper pad areas  
 3. Measured at 1MHz and reverse voltage of 4.0 volts

## RATINGS AND CHARACTERISTIC CURVES

FIG.1-FORWARD CURRENT DERATING CURVE

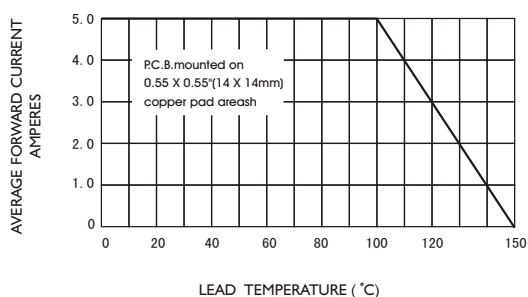


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

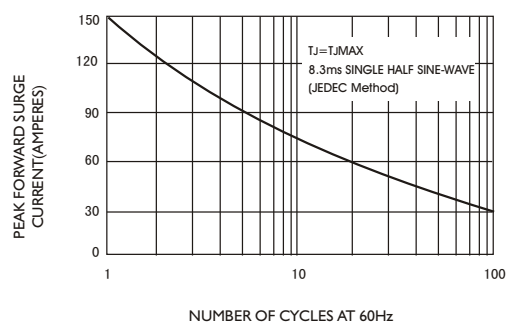


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

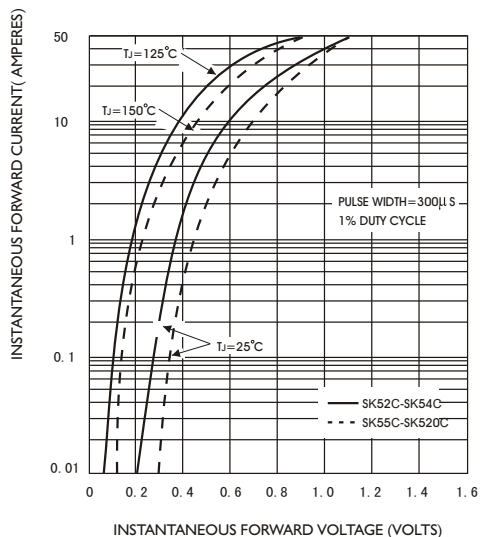


FIG.4-TYPICAL REVERSE CHARACTERISTICS

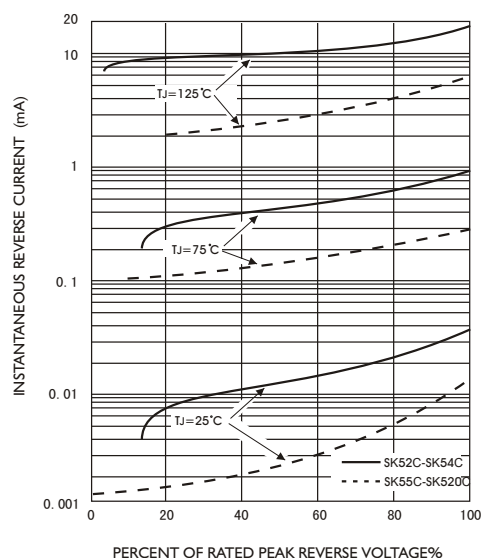


FIG.5-TYPICAL JUNCTION CAPACITANCE

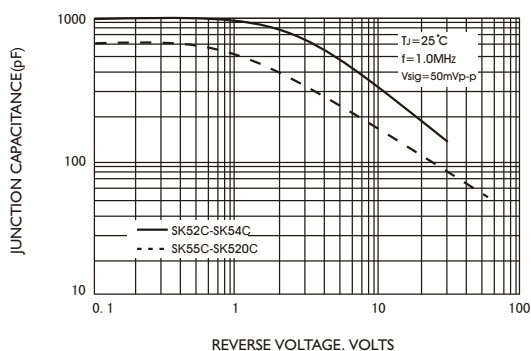


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

