# SS52 THRU SS5200

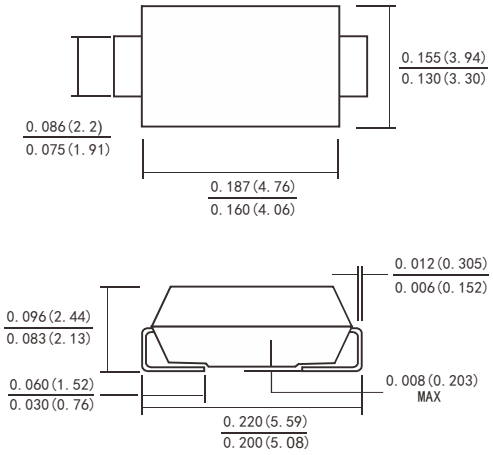
## SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts
Forward Current - 5.0Amperes

## 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

## SMB(DO-214AA)




Dimensions in inches and (millimeters)

## MECHANICAL DATA

- *Case*: JEDEC SMB(DO-214AA) molded plastic body
- *Terminals*: solder plated ,solderable per MIL-STD-750,method 2026
- *Polarity*: color band denotes cathode end
- *Weight*: 0.003ounce,0.09 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25℃ ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

| | Symbols | SS 52 | SS 53 | SS 54 | SS 56 | SS 510 | SS 5150 | SS 5200 | Units |
|---|---|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 20 | 30 | 40 | 60 | 100 | 150 | 200 | Volts |
| Maximum RMS voltage | $V_{RMS}$ | 14 | 21 | 28 | 42 | 70 | 105 | 140 | Volts |
| Maximum DC blocking voltage | $V_{DC}$ | 20 | 30 | 40 | 60 | 100 | 150 | 200 | Volts |
| Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1) | $I_{(AV)}$ | 5.0 | | | | | | | Amps |
| 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 | | | 0.65 | 0.80 | 0.85 | 0.85 | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) $T_A$ =25℃ | $I_R$ | 0. 2 | | | | 0.01 | | | mA |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) $T_A$ =100℃ | $I_R$ | 20 | | | 10 | | | | mA |
| Typical junction capacitance(Note 3) | $C_J$ | 500 | | | 400 | | | | PF |
| Typical thermal resistance (Note 2) | $R_{\theta JA}$<br>$R_{\theta JL}$ | 55.0<br>17.0 | | | | | | | ℃/W |
| Operating junction temperature range | $T_J$ | -65 to+125 | | | | -65 to+175 | | | ℃ |
| Storage temperature range | $T_{STG}$ | -65 to+150 | | | | | | | ℃ |

*Notes*: 1.Pulse test: 300 μ 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

## Rating and Characteristic Curves ( TA = 25°C Unless otherwise noted )

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FIG.1-FORWARD CURRENT DERATING CURVE

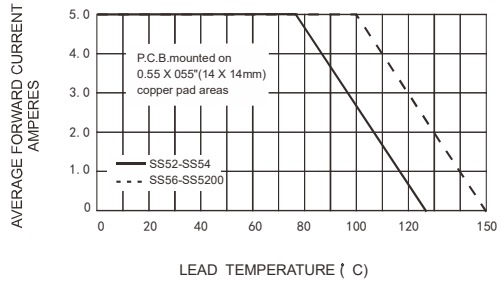


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

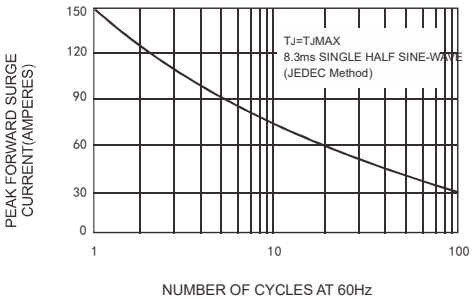


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

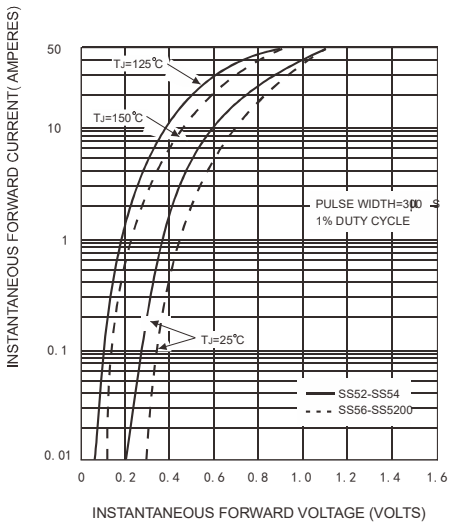


FIG.4-TYPICAL REVERSE CHARACTERISTICS

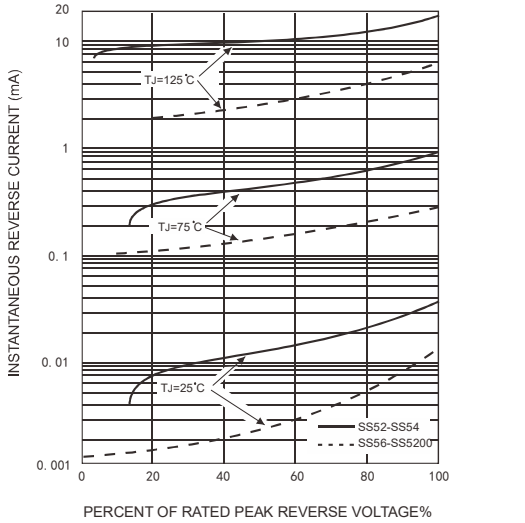


FIG.5-TYPICAL JUNCTION CAPACITANCE

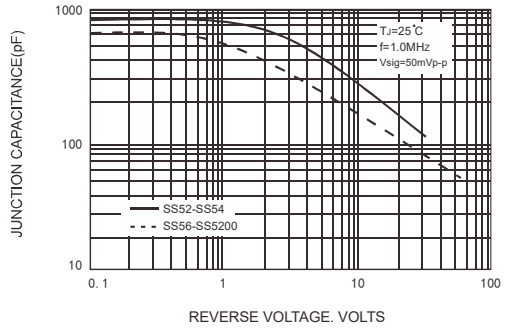


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE