

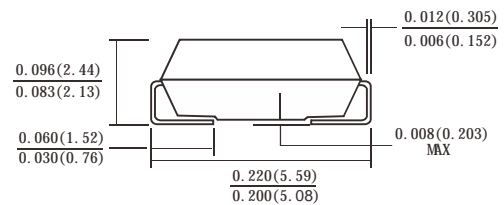
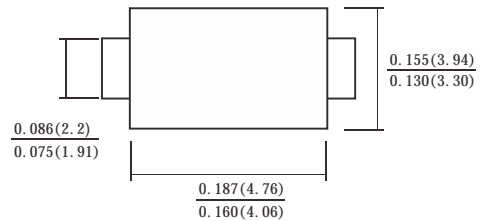


Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junctions
- Fast switching for high efficiency
- High forward surge capability
- High temperature soldering:
260°C/10 seconds at terminals
- Component in accordance to
RoHS 2002/95/1 and WEEE 2002/96/EC



SMB(DO-214AA)



Dimensions in inches and (millimeters)

Mechanical Date

- **Case:** JEDEC DO-214AA molded plastic body over glass passivated chip
- **Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** Laser band denotes cathode end

Maximum Ratings and Electrical Characteristics Rating at 25 °C

ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%

| Type Number | SYMBOL | ES3AB | ES3BB | ES3CB | ES3DB | ES3EB | ES3GB | ES3JB | Unit |
|--|-----------------|-------------|-------|-------|-------|-------|-------|-------|--------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Average Rectified Output Current @ $T_L = 100^\circ C$ | $I_{F(AV)}$ | 3.0 | | | | | | | A |
| Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 100 | | | | | | | A |
| Forward Voltage @ $I_F = 3.0A$ | V_{FM} | 1.0 | | | 1.25 | | 1.65 | | V |
| Peak Reverse Current @ $T_A = 25^\circ C$ | I_R | 5.0 | | | | | | | uA |
| At Rated DC Blocking Voltage @ $T_A = 125^\circ C$ | | 100 | | | | | | | |
| $I^2 t$ Rating for fusing ($t < 8.3ms$) | $I^2 t$ | 26.56 | | | | | | | A^2s |
| Maximum Reverse Recovery Time (Note 1) | T_{rr} | 35 | | | | | | | ns |
| Typical Junction Capacitance (Note 2) | C_J | 45 | | | | | | | pF |
| Typical Thermal Resistance Junction to Ambient(Note 3) | $R_{\theta JA}$ | 20 | | | | | | | $^\circ C/W$ |
| Operating Temperature Range | T_J | -55 to +150 | | | | | | | $^\circ C$ |
| Storage Temperature Range | T_{STG} | -55 to +150 | | | | | | | $^\circ C$ |

Note: 1.Reverse Recovery Test Conditions: $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$.

2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C.

3. Thermal Resistance from Junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas.



ES3AB-ES3JB

Surface Mount Superfast Rectifiers

Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

FIG.1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

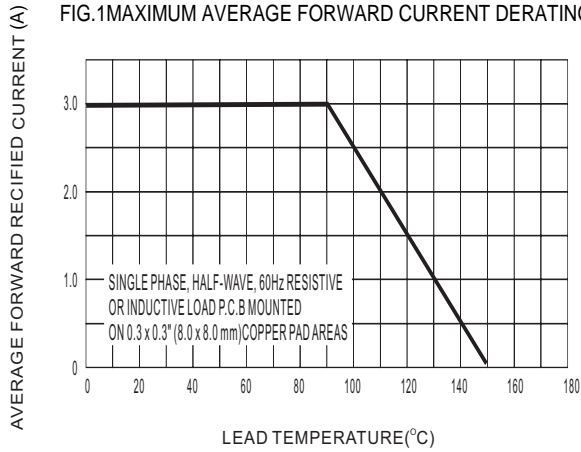


FIG.2 TYPICAL FORWARD CHARACTERISTICS

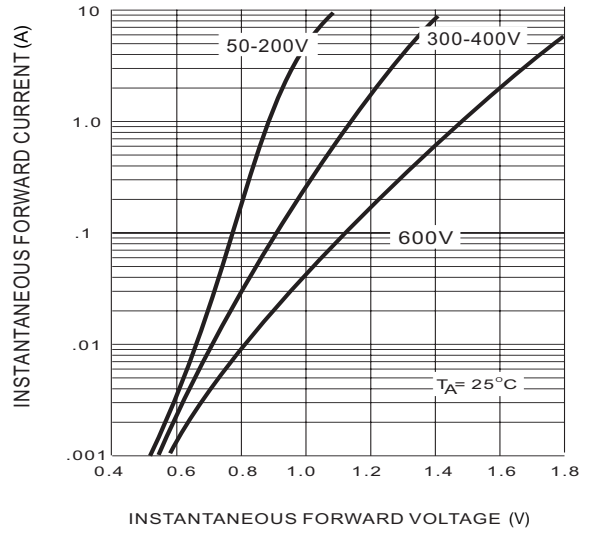


FIG.3 MAXIMUM NON-REPEITIVE SURGE CURRENT

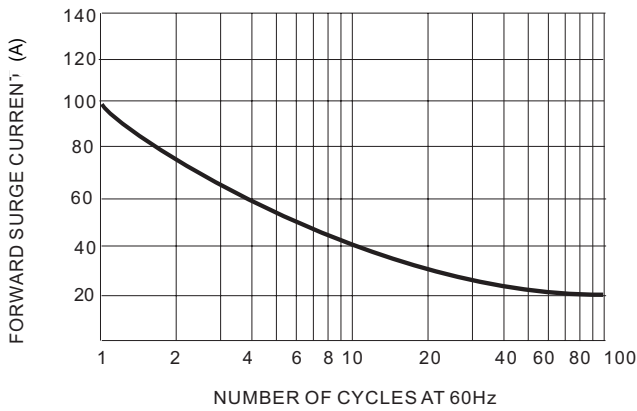


FIG.4 TYPICAL JUNCTION CAPACITANCE

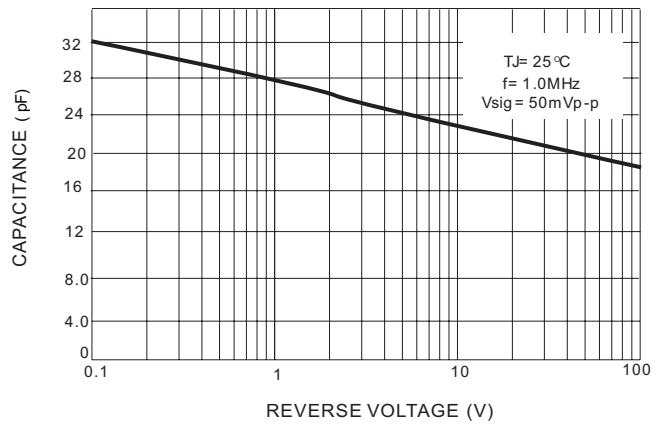


FIG.5 TYPICAL REVERSE CHARACTERISTICS

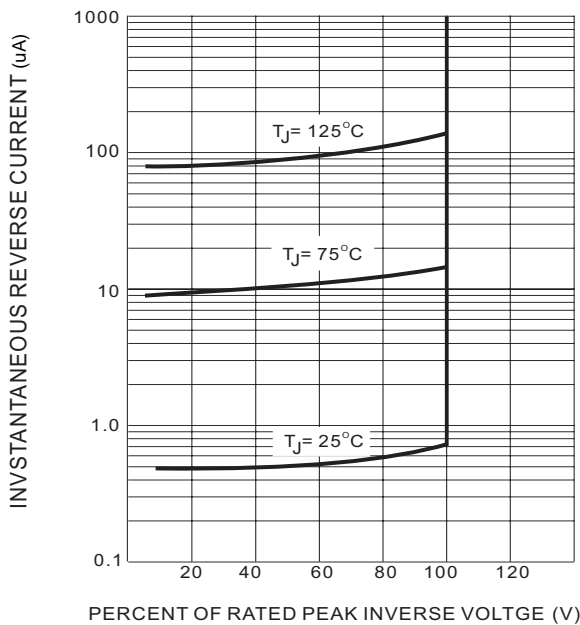


FIG.6 MOUNTING PAD LAYOUT

