



## Features

- ✧ For surface mounted application
- ✧ Glass passivated junction chip.
- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ Easy pick and place
- ✧ High surge current capability
- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✧ High temperature soldering: 260°C / 10 seconds at terminals

## Mechanical Data

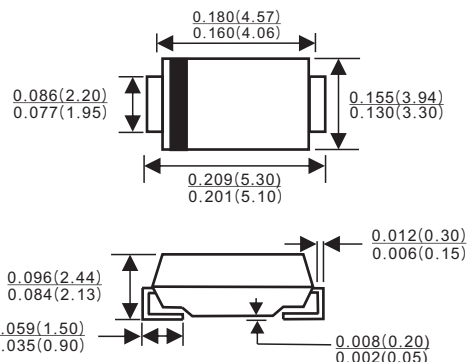
- ✧ Case: Molded plastic
- ✧ Terminals: Pure tin plated, lead free.
- ✧ Polarity: Indicated by cathode band
- ✧ Weight: 0.093 gram

## Marking Information



**LGE: Lu Guang Electronic**  
**XXXX: marking code (S3A-S3M)**

## SMB/DO-214AA



Dimensions in inches and(millimeters)

## 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          | S3AB        | S3BB | S3DB | S3GB | S3JB | S3KB | S3MB | Units              |
|-----------------------------------------------------------------------------------------------------|-----------------|-------------|------|------|------|------|------|------|--------------------|
| Maximum Recurrent Peak Reverse Voltage                                                              | $V_{RRM}$       | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | V                  |
| Maximum RMS Voltage                                                                                 | $V_{RMS}$       | 35          | 70   | 140  | 280  | 420  | 560  | 700  | V                  |
| Maximum DC Blocking Voltage                                                                         | $V_{DC}$        | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | V                  |
| Maximum Average Forward Rectified Current @ $T_L = 75^\circ C$                                      | $I_{(AV)}$      | 3.0         |      |      |      |      |      |      | A                  |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method ) | $I_{FSM}$       | 80          |      |      |      |      |      |      | A                  |
| Maximum Instantaneous Forward Voltage @ 3.0A                                                        | $V_F$           | 1.15        |      |      |      |      |      |      | V                  |
| Maximum DC Reverse Current @ $T_A = 25^\circ C$ at Rated DC Blocking Voltage @ $T_A = 125^\circ C$  | $I_R$           | 10<br>250   |      |      |      |      |      |      | $\mu A$<br>$\mu A$ |
| Typical Reverse Recovery Time ( Note 1 )                                                            | $T_{rr}$        | 1.5         |      |      |      |      |      |      | $\mu S$            |
| Typical Junction Capacitance ( Note 2 )                                                             | $C_j$           | 40          |      |      |      |      |      |      | pF                 |
| Typical Thermal Resistance (Note 3)                                                                 | $R_{\theta JL}$ | 10          |      |      |      |      |      |      | $^\circ C/W$       |
| Operating Temperature Range                                                                         | $T_J$           | -55 to +150 |      |      |      |      |      |      | $^\circ C$         |
| Storage Temperature Range                                                                           | $T_{STG}$       | -55 to +150 |      |      |      |      |      |      | $^\circ C$         |

- Notes:
1. Reverse Recovery Test Conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$
  2. Measured at 1 MHz and Applied  $V_R = 4.0$  Volts
  3. Measured on P.C. Board with 0.4" x 0.4" (10mm x 10mm) Copper Pad Areas.

### RATINGS AND CHARACTERISTIC CURVES (S3AB THRU S3MB)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

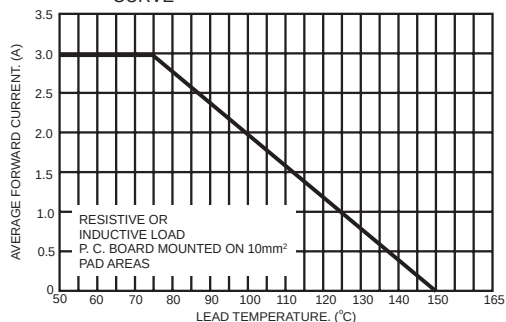


FIG.2- TYPICAL REVERSE CHARACTERISTICS

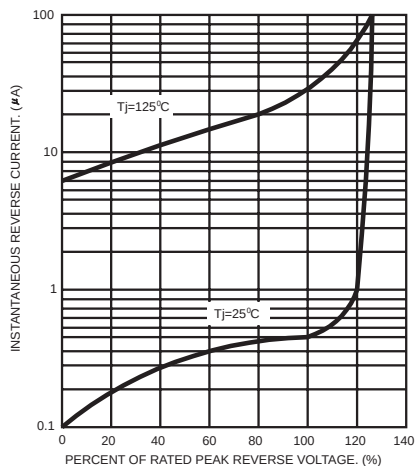


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

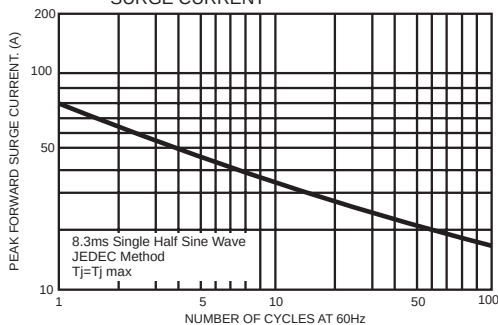


FIG.5- TYPICAL FORWARD CHARACTERISTICS

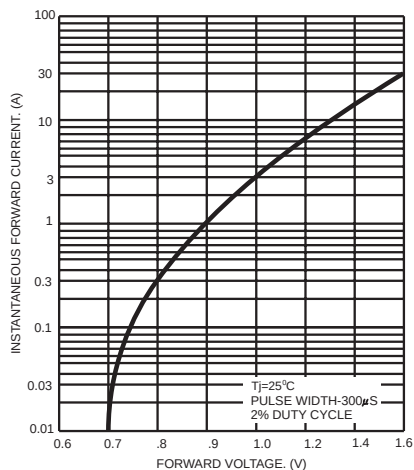


FIG.4- TYPICAL JUNCTION CAPACITANCE

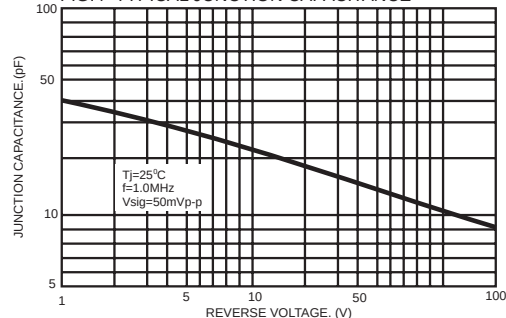
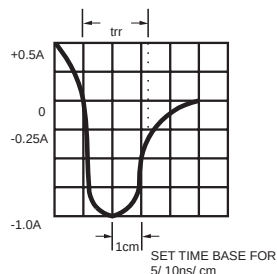
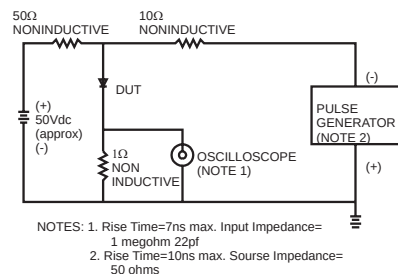


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



| PACKAGE | SPQ/PCS   | CARTON SPQ/PCS | CARTON SIZE/CM | CARTON GW/KG | CARTON NW/KG |
|---------|-----------|----------------|----------------|--------------|--------------|
| SMB     | 3000/REEL | 48000          | 36X35.8X36.5   | 12.00        | 11.00        |