

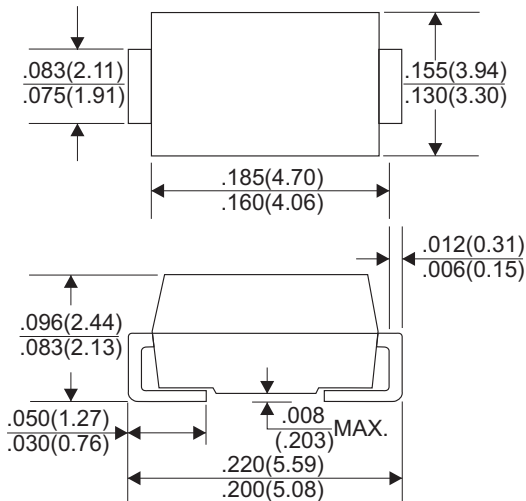


# ES5AB THRU ES5JB

## SURFACE MOUNT SUPER FAST RECOVERY RECTIFIERS

Reverse Voltage - 50 to 600 Volts      Forward Current - 5.0 Ampere

### DO-214AA(SMB)



Dimensions in inches and (millimeters)

### FEATURES

- \* Glsaa passivate device
- \* Ideal for surface mouted applications
- \* Low reverse leakage
- \* Metallurgically bonded construction
- \* High temperature soldering guaranteed:  
250°C/10 seconds 0.375"(9.5mm)lead lenght,  
5 lbs.(2.3kg) tension

### MECHANICAL DATA

- \* Case: JEDEC SMB molded plastic
- \* Terminals: Plated axial leads, solderable per  
MIL-STD-750, Method 2026
- \* Polarity: Color band denotes cathode end
- \* Mounting Position: Any

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unieess otherwies specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| TYPE NUMBER                                                                                           | ES5AB      | ES5BB | ES5CB | ES5DB | ES5EB | ES5GB | ES5JB | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 50         | 100   | 150   | 200   | 300   | 400   | 600   | V     |
| Maximum RMS Voltage                                                                                   | 35         | 70    | 105   | 140   | 210   | 280   | 420   | V     |
| Maximum DC Blocking Voltage                                                                           | 50         | 100   | 150   | 200   | 300   | 400   | 600   | V     |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length at Ta=55°C                      | 5.0        |       |       |       |       |       |       | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 150        |       |       |       |       |       |       | A     |
| Maximum Instantaneous Forward Voltage at 5.0A                                                         | 0.95       |       |       |       | 1.3   |       | 1.7   | V     |
| Maximum DC Reverse Current<br>Ta=25°C                                                                 | 5.0        |       |       |       |       |       |       | µA    |
| at Rated DC Blocking Voltage<br>Ta=100°C                                                              | 50         |       |       |       |       |       |       | µA    |
| Maximum Reverse Recovery Time (Note 1)                                                                | 35         |       |       |       |       |       |       | nS    |
| Typical Junction Capacitance (Note 2)                                                                 | 15         |       |       |       |       |       |       | pF    |
| Operating and Storage Temperature Range Tj, Tstg                                                      | -65 — +150 |       |       |       |       |       |       | °C    |
| Marking code                                                                                          | ES5A       | ES5B  | ES5C  | ES5D  | ES5E  | ES5G  | ES5J  |       |

#### NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

# RATING AND CHARACTERISTIC CURVES (ES5AB THRU ES5JB)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

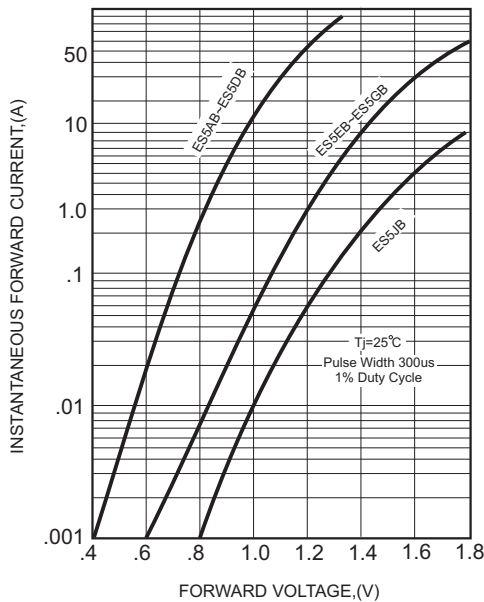


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

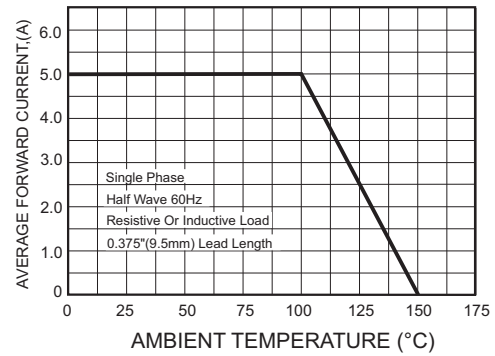


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

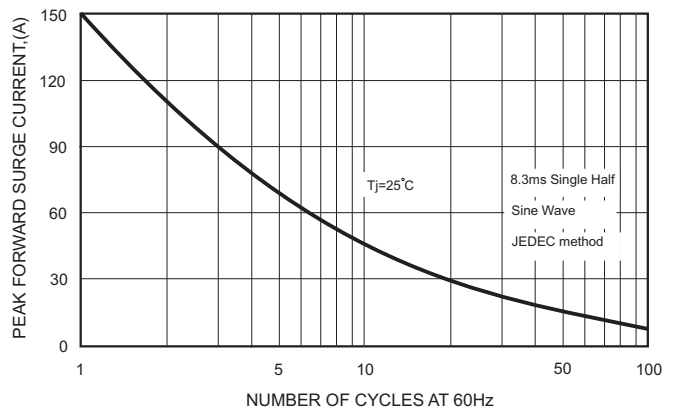
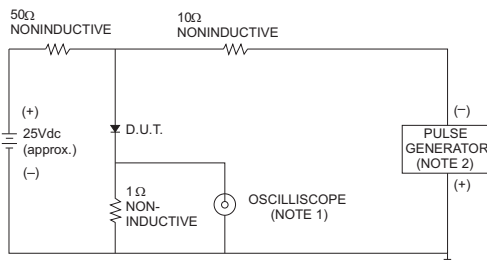


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

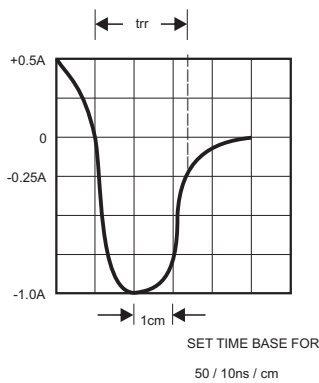


FIG.5-TYPICAL JUNCTION CAPACITANCE

