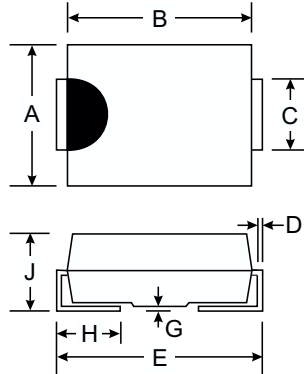


### Features

- Glass Passivated Die Construction
- Super-Fast Recovery Time For High Efficiency
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 100A Peak
- Ideally Suited for Automated Assembly
- Plastic Material: UL Flammability Classification Rating 94V-0



Dim	SMB		SMC	
	Min	Max	Min	Max
A	3.30	3.94	5.59	6.22
B	4.06	4.57	6.60	7.11
C	1.96	2.21	2.75	3.18
D	0.15	0.31	0.15	0.31
E	5.00	5.59	7.75	8.13
G	0.10	0.20	0.10	0.20
H	0.76	1.52	0.76	1.52
J	2.00	2.62	2.00	2.62

**All Dimensions in mm**

AB, BB, CB, DB Suffix Designates SMB Package  
A, B, C, D, Suffix Designates SMC Package

### Mechanical Data

- Case: Molded Plastic
- Terminals: Solder Plated Terminal - Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- SMB Weight: 0.093 grams (approx.)
- SMC Weight: 0.21 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	ES3A/B	ES3B/B	ES3C/B	ES3D/B	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	V
Working Peak Reverse Voltage	V <sub>RWM</sub>					
DC Blocking Voltage	V <sub>R</sub>					
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	105	140	V
Average Rectified Output Current @ T <sub>T</sub> = 100°C	I <sub>O</sub>	3.0				A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	100				A
Forward Voltage @ I <sub>F</sub> = 3.0A	V <sub>FM</sub>	0.9				V
Peak Reverse Current @ T <sub>A</sub> = 25°C at Rated DC Blocking Voltage @ T <sub>A</sub> = 125°C	I <sub>RM</sub>	10 500				μA
Reverse Recovery Time (Note 3)	t <sub>rr</sub>	25				ns
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	45				pF
Typical Thermal Resistance, Junction to Terminal (Note 1)	R <sub>θJT</sub>	15				K/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150				°C

- Notes:
1. Unit mounted on PC board with 5.0 mm<sup>2</sup> (0.013 mm thick) copper pads as heat sink.
  2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
  3. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A. See Figure 5.

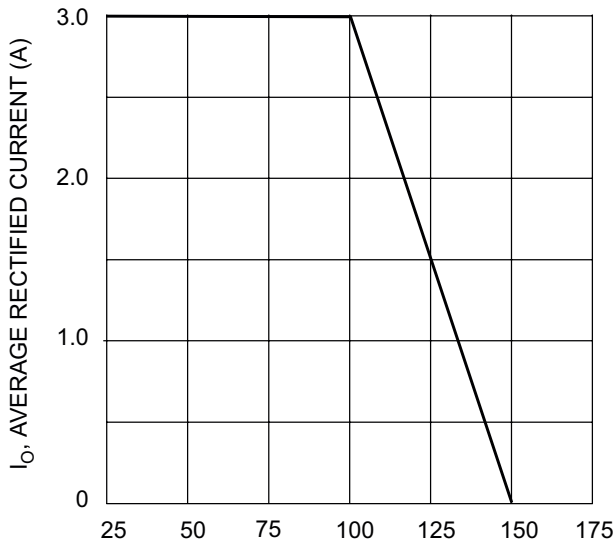


Fig. 1 Forward Current Derating Curve

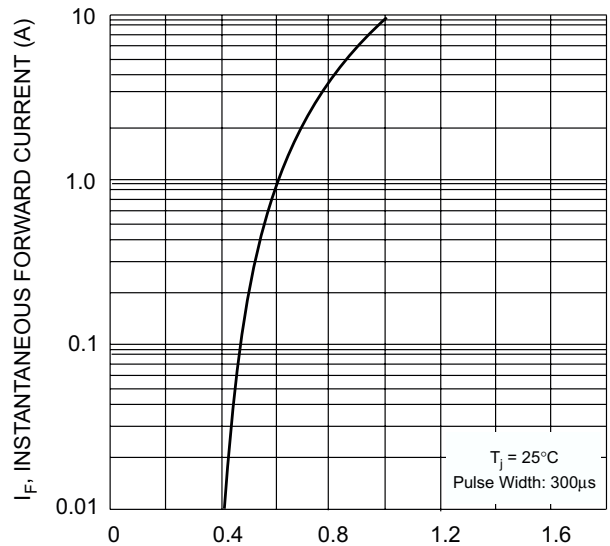


Fig. 2 Typical Forward Characteristics

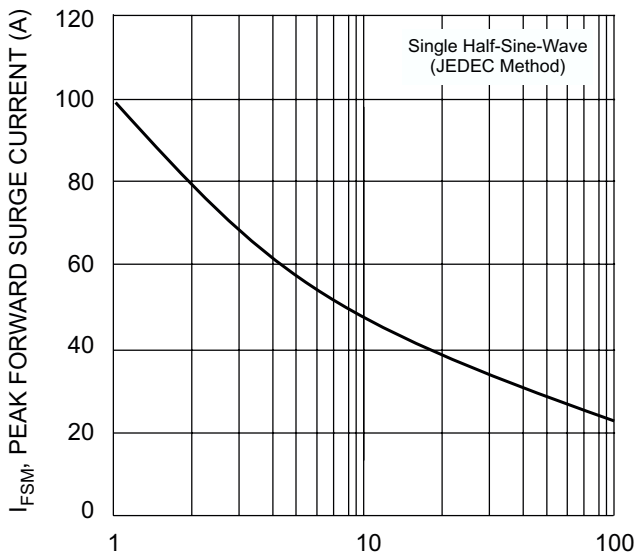


Fig. 3 Surge Current Derating Curve

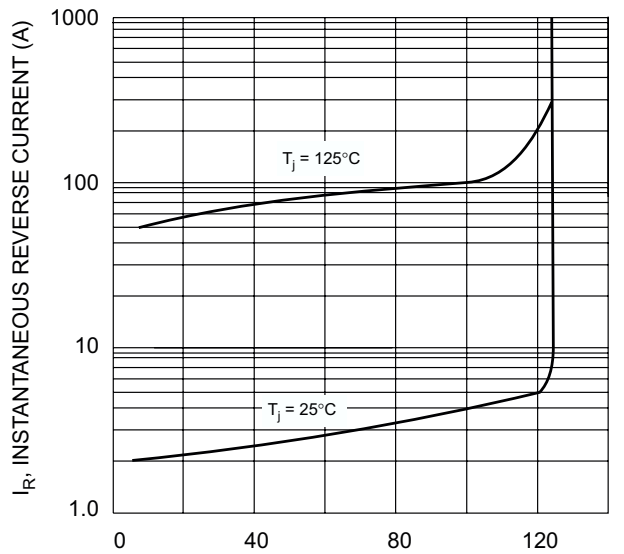
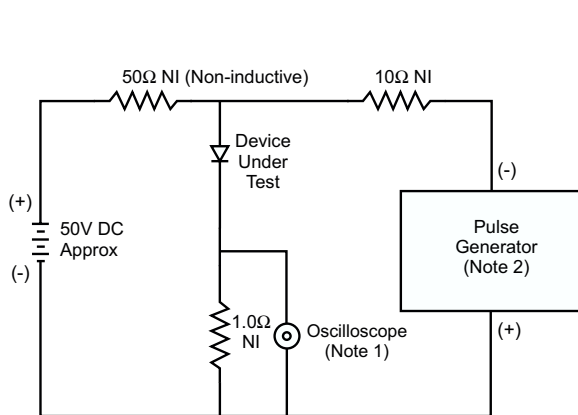
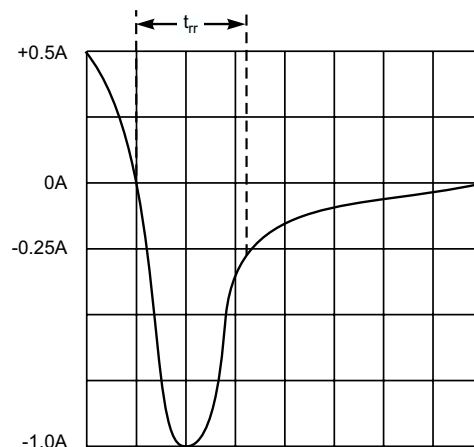


Fig. 4 Typical Reverse Characteristics



Notes:  
 1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.  
 2. Rise Time = 10ns max. Input Impedance = 50Ω.



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit