

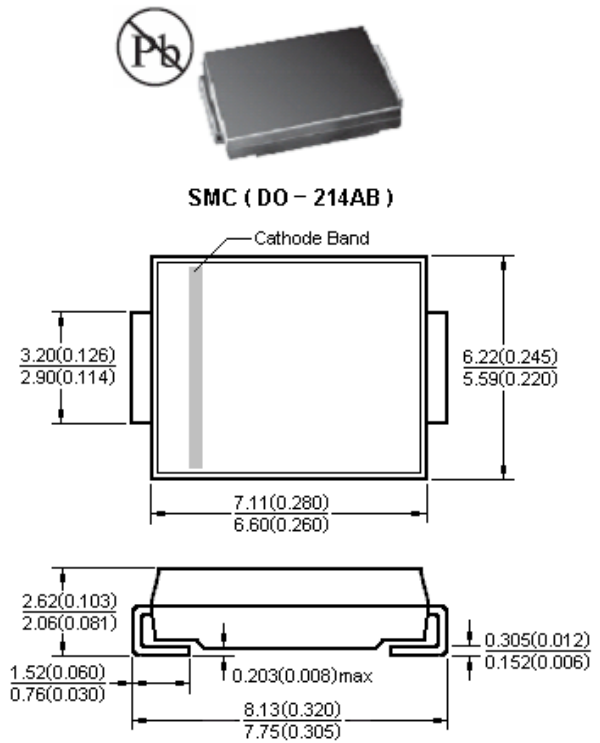


**Features**

- Glass passivated chip junctions
- Ideal for automated placement
- Ultrafast reverse recovery time for high efficiency
- Low profile package
- 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

**Mechanical Date**

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



Dimensions in millimeters and (inches)

**Maximum Ratings and Electrical Characteristics** Rating at 25 °C

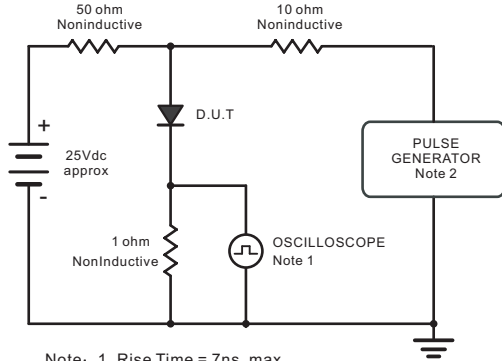
ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%

Parameter	Symbols	ES3K	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	800	V
Maximum RMS voltage	$V_{RMS}$	560	V
Maximum DC Blocking Voltage	$V_{DC}$	800	V
Maximum Average Forward Rectified Current at $T_c = 125\text{ }^\circ\text{C}$	$I_{F(AV)}$	3	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	90	A
Maximum Forward Voltage at 3 A	$V_F$	1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25\text{ }^\circ\text{C}$ $T_a = 125\text{ }^\circ\text{C}$	$I_R$	5 100	$\mu\text{A}$
Typical Junction Capacitance at $V_R = 4\text{V}$ , $f = 1\text{MHz}$	$C_j$	40	pF
Maximum Reverse Recovery Time <sup>(1)</sup>	$t_{rr}$	35	ns
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$ $R_{\theta JC}$	40 16	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150	$^\circ\text{C}$

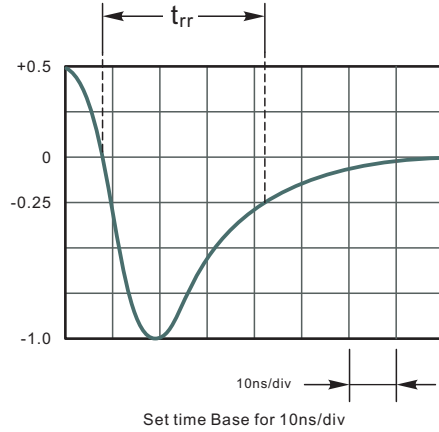
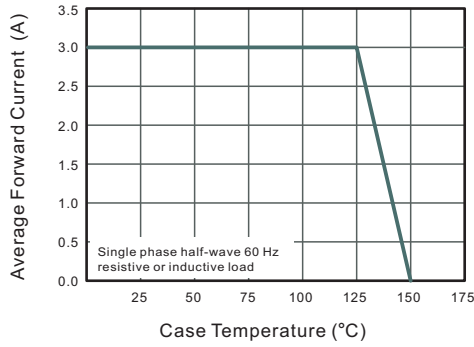
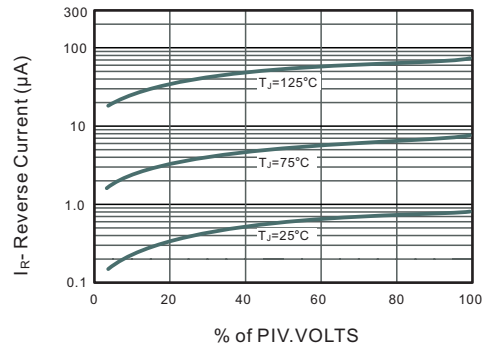
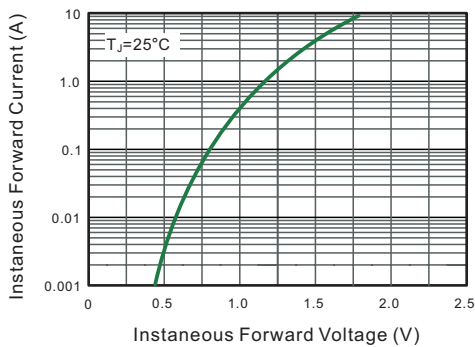
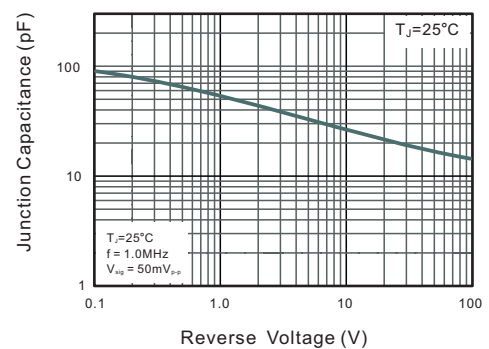
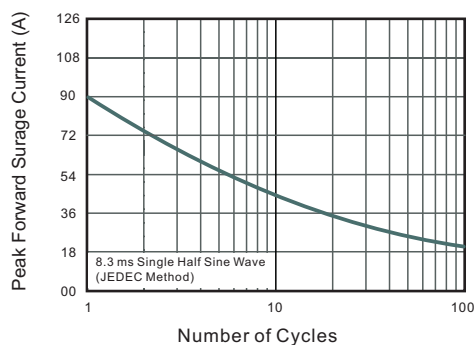
(1) Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.



**Characteristic Curves ( $T_A=25^\circ\text{C}$  unless otherwise noted)**
**Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram**


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


**Fig.2 Maximum Average Forward Current Rating**

**Fig.3 Typical Reverse Characteristics**

**Fig.4 Typical Forward Characteristics**

**Fig.5 Typical Junction Capacitance**

**Fig.6 Maximum Non-Repetitive Peak Forward Surge Current**


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