

Standard Diode



RoHS
Compliant



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
- High temperature soldering : 260°C/10 seconds at terminals

Specifications:

Mechanical Data:

Cases	: Moulded plastic
Terminals	: Pure tin plated, lead free
Polarity	: Indicated by cathode band
Packaging	: 16mm tape per EIA STD RS-481
Weight	: 0.21g

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Parameters	Symbol	S3B	S3K	S3M	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	100	800	1,000	V
Maximum RMS Voltage	V _{RMS}	70	560	700	
Maximum DC Blocking Voltage	V _{DC}	100	800	1,000	
Maximum Average Forward Rectified Current at T _L = 105°C	I _(AV)	3			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	100			
Maximum Instantaneous Forward Voltage at 3A	V _F	1.15			V
Maximum DC Reverse Current at T _A = 25°C at Rated DC Blocking Voltage at T _A = 125°C	I _R	10 250			μA μA

Standard Diode

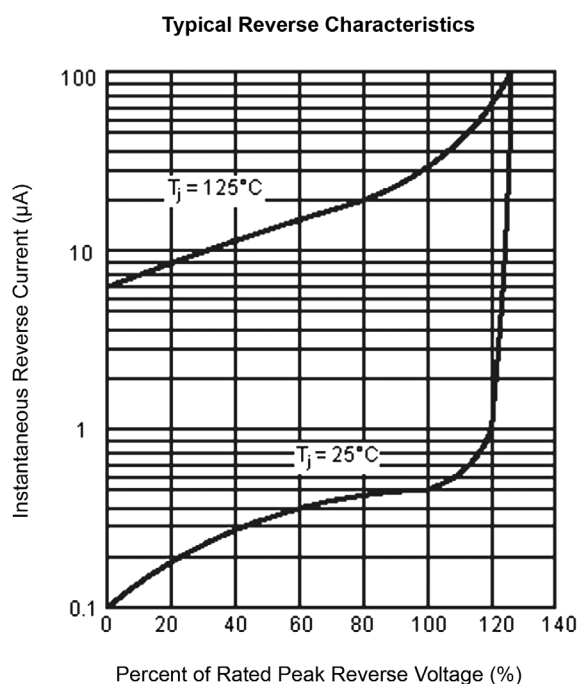
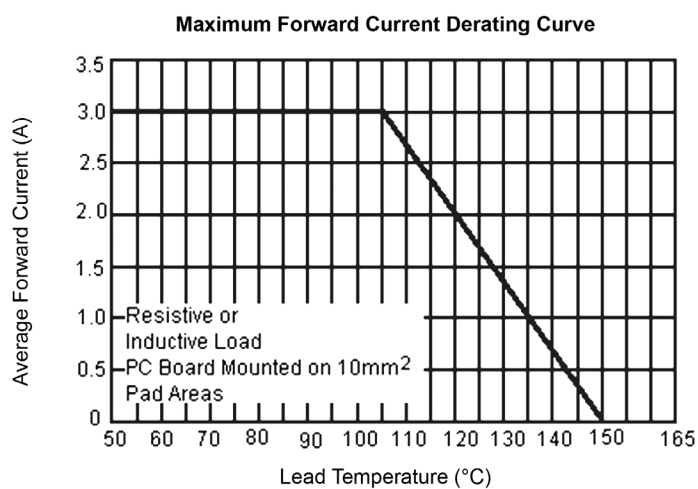


Parameters	Symbol	S3B	S3K	S3M	Units
Maximum Reverse Recovery Time (Note 1)	T_{rr}	1.5			μS
Typical Junction Capacitance (Note 2)	C_j	60			pF
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$ $R_{\theta JA}$	13 47			$^{\circ}\text{C/W}$
Operating Temperature Range	T_J	-55 to +150			$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}				

Notes:

- Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$.
- Measured at 1MHz and Applied $V_R = 4\text{V}$.
- Measured on PC Board with 0.6" $\times$ 0.6" (16mm $\times$ 16mm) Copper Pad Areas.

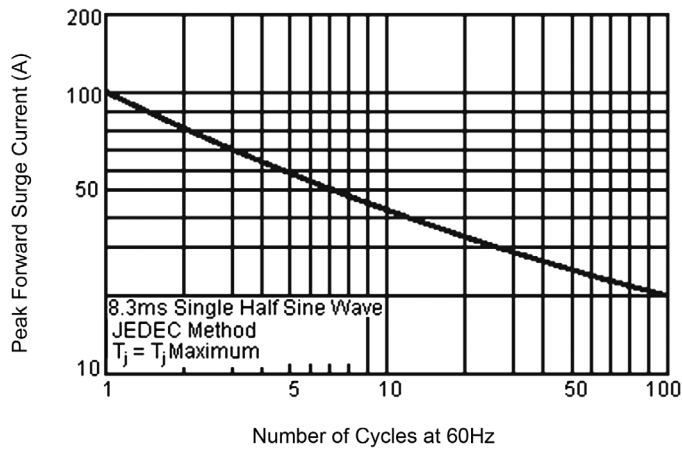
Ratings and Characteristic Curves



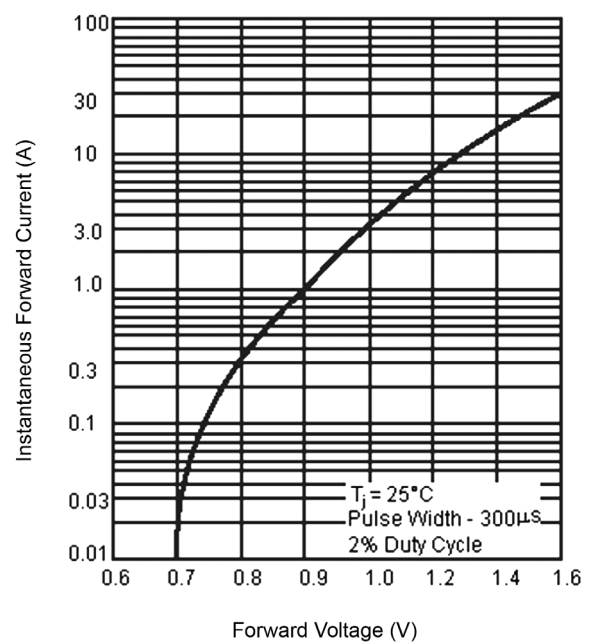
Standard Diode



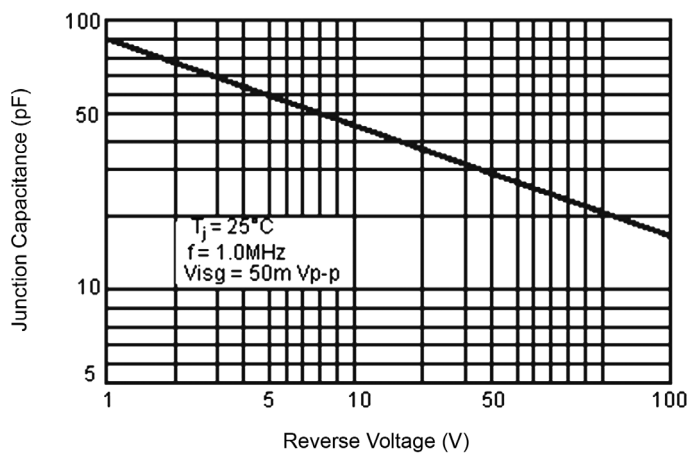
Maximum Non-Repetitive Forward Surge Current



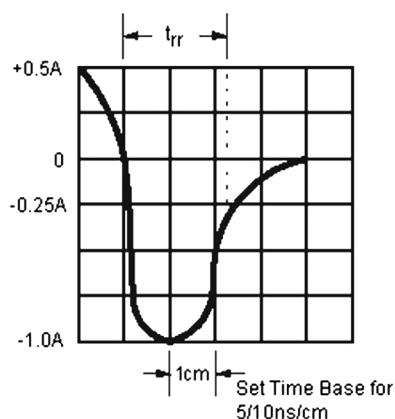
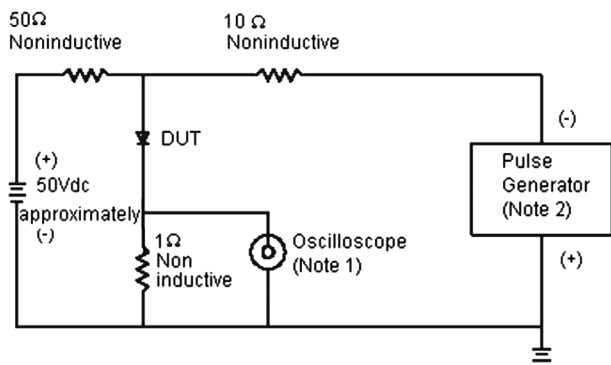
Typical Forward Characteristics



Typical Junction Capacitance



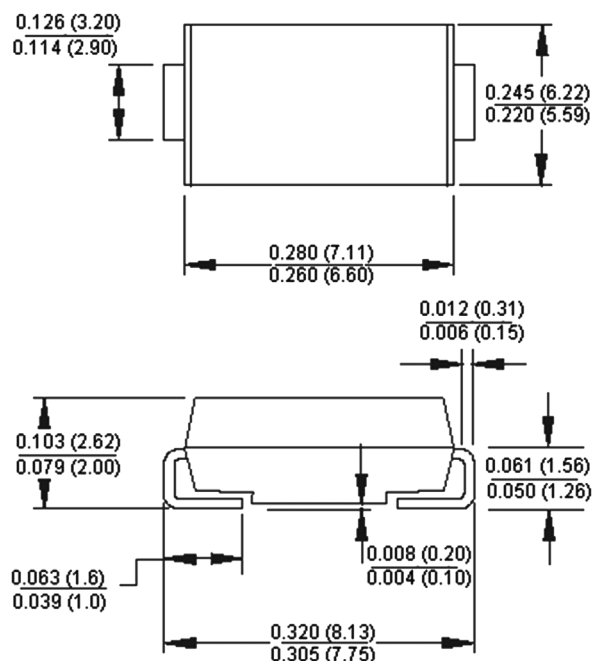
Reverse Recovery Time Characteristic and Test Circuit Diagram



Note:

1. Rise Time = 7ns Maximum Input Impedance = 1MΩ 22pf
2. Rise Time = 10ns Maximum Source Impedance = 50Ω

SMC/DO-214AB



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Diode, Standard, 3A, 100V	S3B
Diode, Standard, 3A, 800V	S3K
Diode, Standard, 3A, 1,000V	S3M

Important Notice : This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2012.