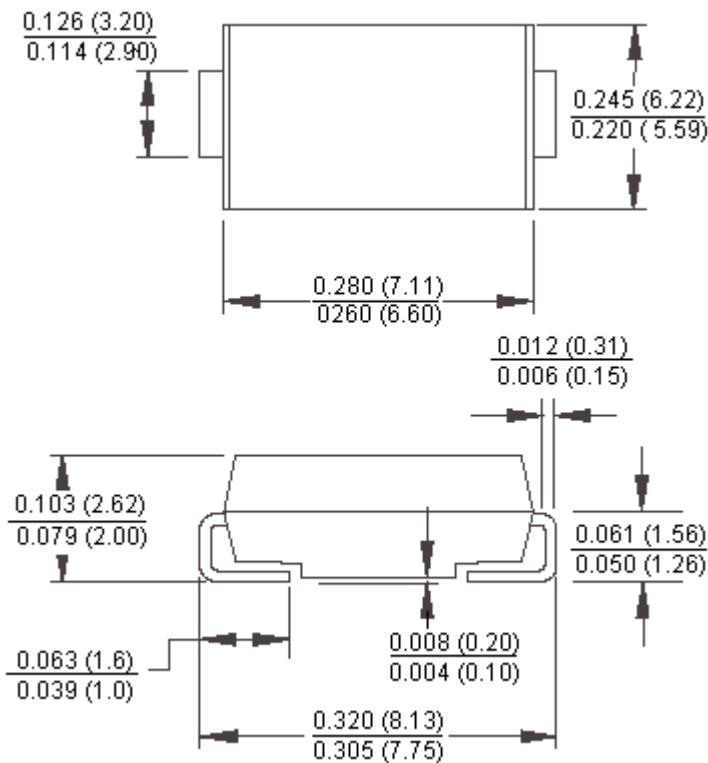




Features:

- Glass passivated junction chip.
- For surface mounted application.
- Low profile package.
- Built-in strain relief.
- Ideal for automated placement.
- Easy pick and place.
- Super fast recovery time for high efficiency.
- Glass passivated chip junction.
- High temperature soldering: 260°C/10 seconds at terminals.
- Plastic material.

SMC/DO-214AB



Dimensions : Inches (Millimetres)

Mechanical Data:

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

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%.

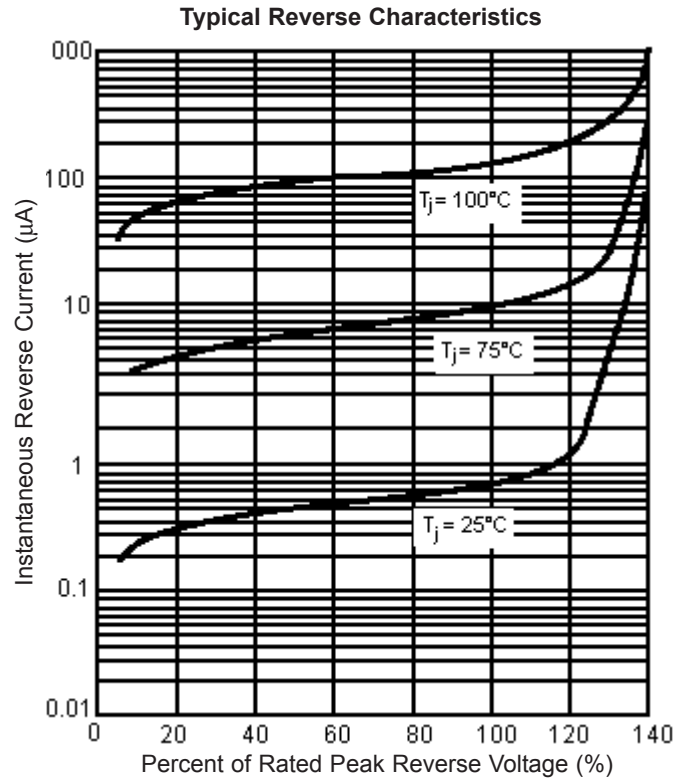
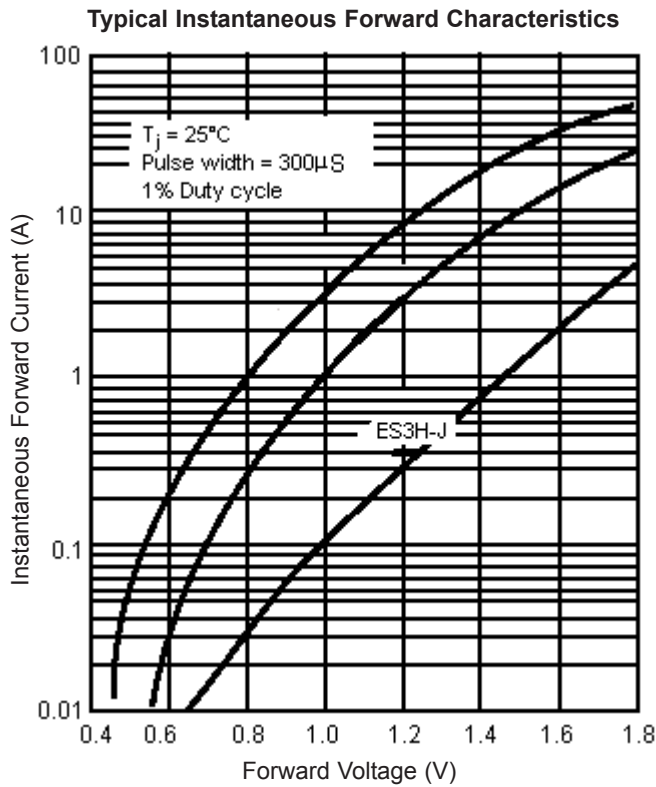
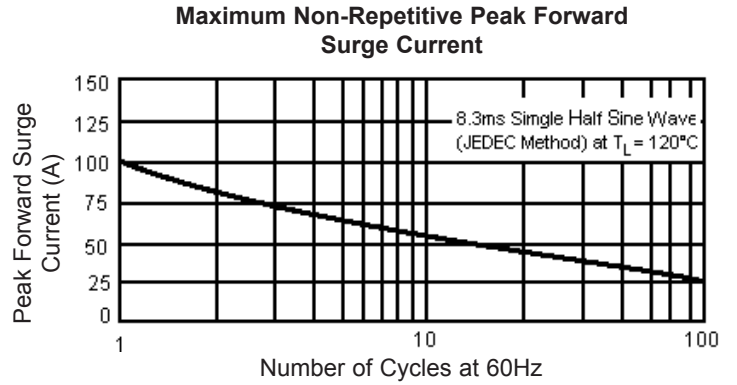
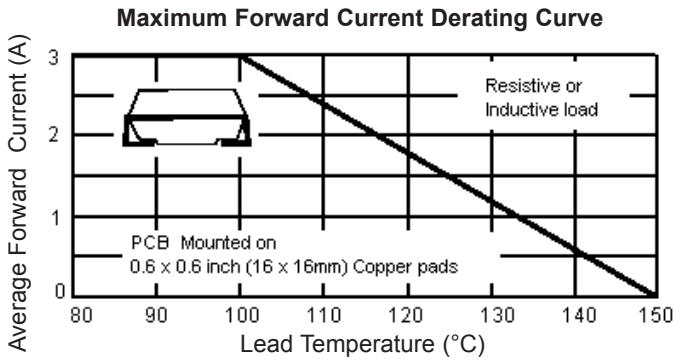
Type Number	Symbol	ES3A	ES3F	ES3H	ES3J	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	300	500	600	V
Maximum RMS Voltage	V_{RMS}	35	210	350	420	
Maximum DC Blocking Voltage	V_{DC}	50	300	500	600	
Maximum Average Forward Rectified Current	$I_{(AV)}$	3.0				A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) at $T_L = 100^\circ\text{C}$	I_{FSM}	100				
Maximum Instantaneous Forward Voltage at 3.0A	V_F	0.95	1.3	1.7	v	
Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 100^\circ\text{C}$	I_R	10 500				μA μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	35				nS
Typical Junction Capacitance (Note 2)	C_j	45	30			pF
Maximum Thermal Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	47 12				$^\circ\text{C/W}$
Operating Temperature Range	T_J	-55 to +150				$^\circ\text{C}$
Storage Temperature Range	T_{STG}					

Notes: 1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.

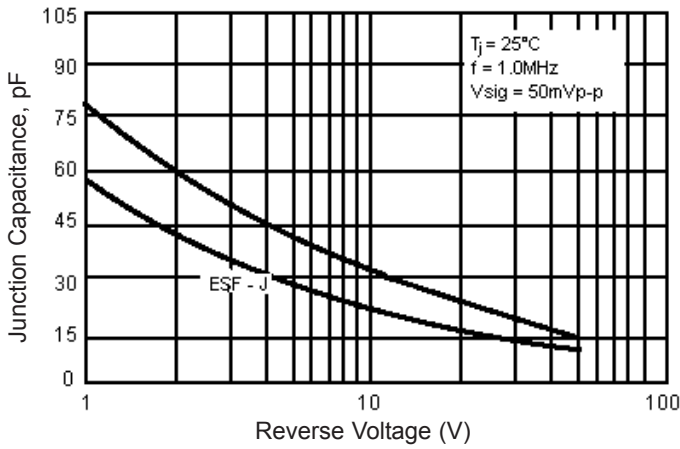
2. Measured at 1MHz and Applied $V_R = 4.0$ Volts.

3. Units Mounted on PCB with 0.6 x 0.6 Inches (16mm x 16mm) Copper Pad Areas.

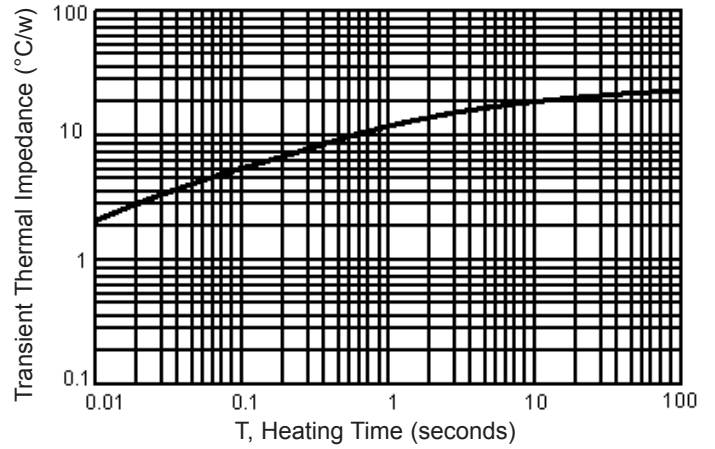
Ratings and Characteristic Curves (ES3A, ES3F, ES3H and ES3J)



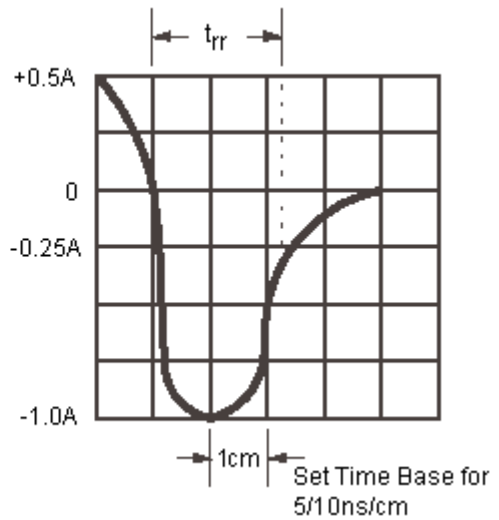
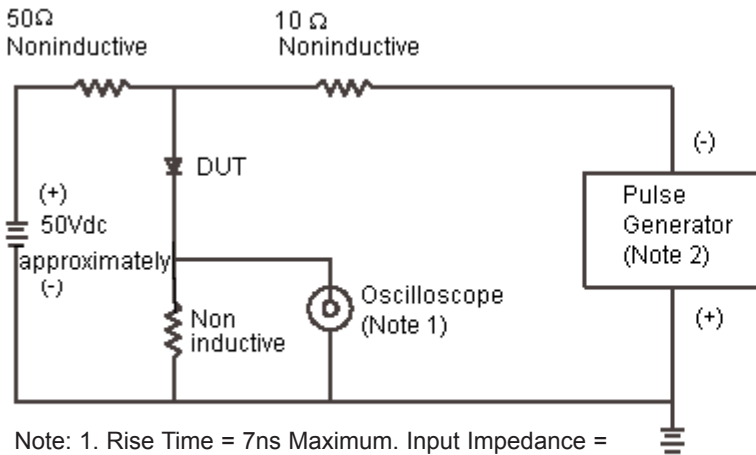
Typical Junction Capacitance



Typical Transient Thermal Impedance



Reverse Recovery Time Characteristic and Test Circuit Diagram



- Note: 1. Rise Time = 7ns Maximum. Input Impedance = 1 Megohm 22pf
 2. Rise Time = 10ns Maximum Source Impedance = 50 ohms

Part Number Table

Description	Part Number
Diode, Ultra-Fast, 3A, 50V	ES3A
Diode, Ultra-Fast, 3A, 300V	ES2F
Diode, Ultra-Fast, 3A, 500V	ES3H
Diode, Ultra-Fast, 3A, 600V	ES3J

Notes:

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