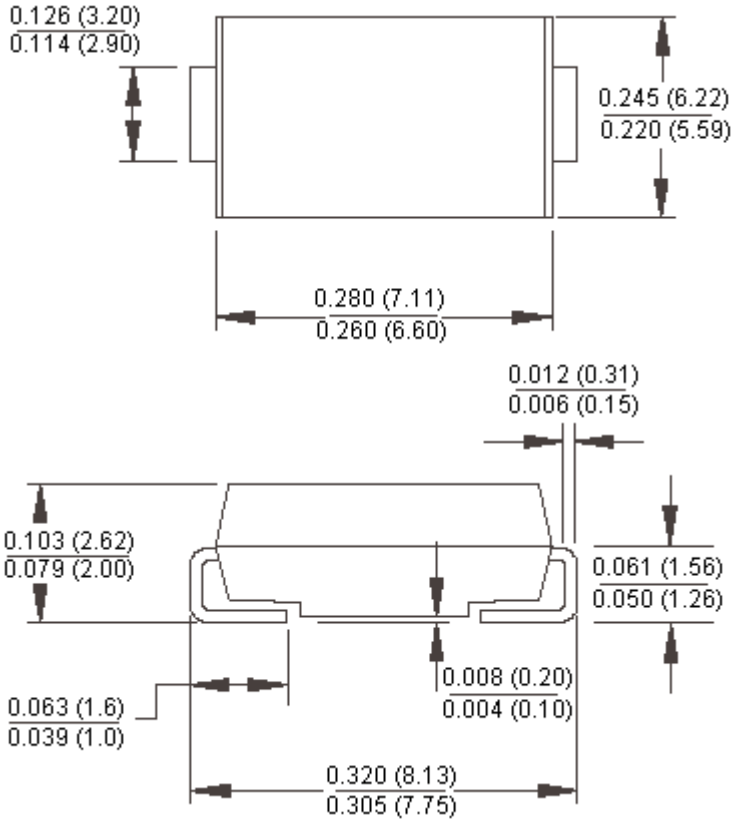
RS3x Series

RoHS Compliant

Features:

- For surface mounted application.
- Glass passivated junction chip.
- Built-in strain relief, ideal for automated placement.
- Plastic material.
- Fast switching for high efficiency.
- High temperature soldering: 260°C/10 seconds at terminals.

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

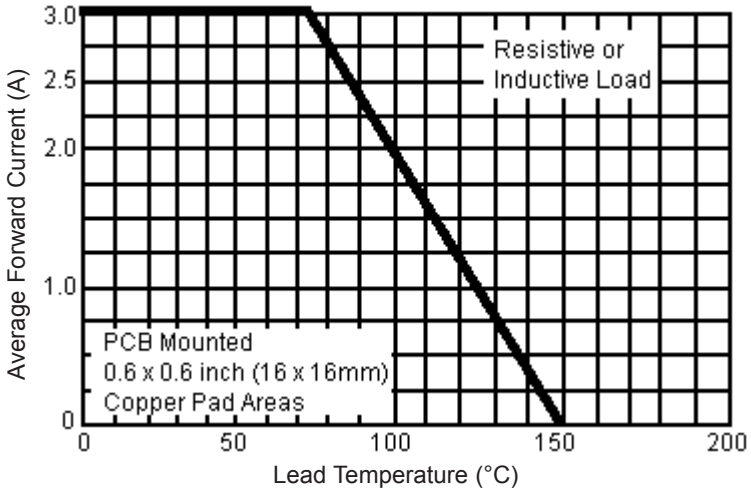
Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Type Number	Symbol	RS 3A	RS 3D	RS 3G	RS 3J	RS 3M	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	200	400	600	1000	V
Maximum RMS Voltage	V_{RMS}	35	140	280	420	700	
Maximum DC Blocking Voltage	V_{DC}	50	200	400	600	1000	
Maximum Average Forward Rectified Current at T_L = 75°C	$I_{(AV)}$	3.0					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 3.0A	V_F	1.3					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
Maximum Reverse Recovery Time (Note 1)	T_{rr}	150			250	500	nS
Typical Junction Capacitance (Note 2)	C_j	60					pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	50 15					°C/W
Operating Temperature Range	T_J	-55 to +150					°C
Storage Temperature Range	T_{STG}						

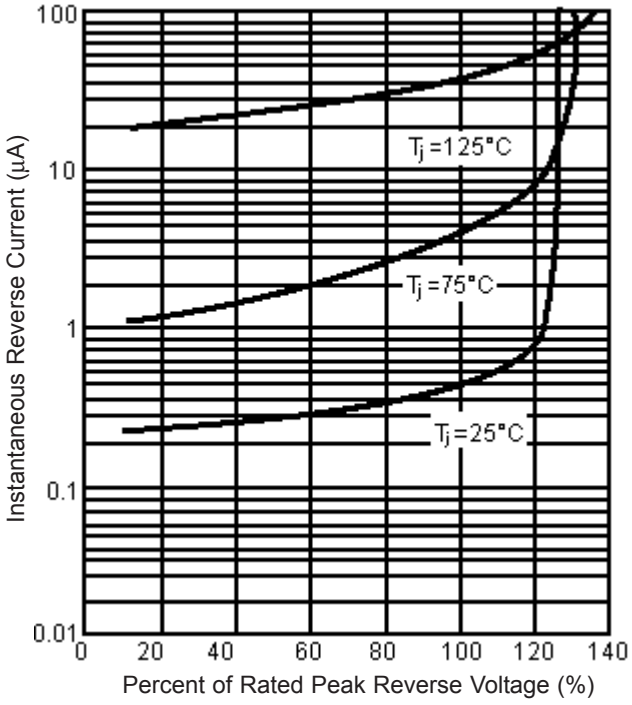
Notes: 1. Reverse Recovery Test Conditions: I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A.
2. Measured at 1MHz and Applied V_R = 4.0 Volts.
3. Thermal Resistance from Junction to Ambient and Junction to Lead Mounted on PCB with 0.6 x 0.6 inches (16mm x 16mm) Copper Pad Areas.

Ratings and Characteristic Curves (RS3A, RS3D, RS3G, RS3J, RS3M)

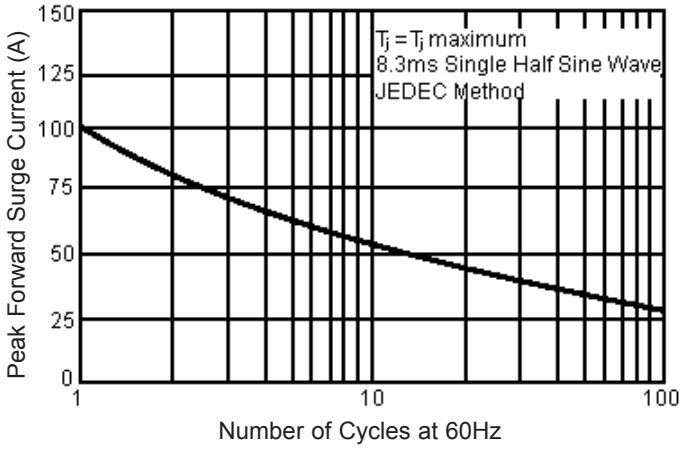
Maximum Forward Current Derating Curve



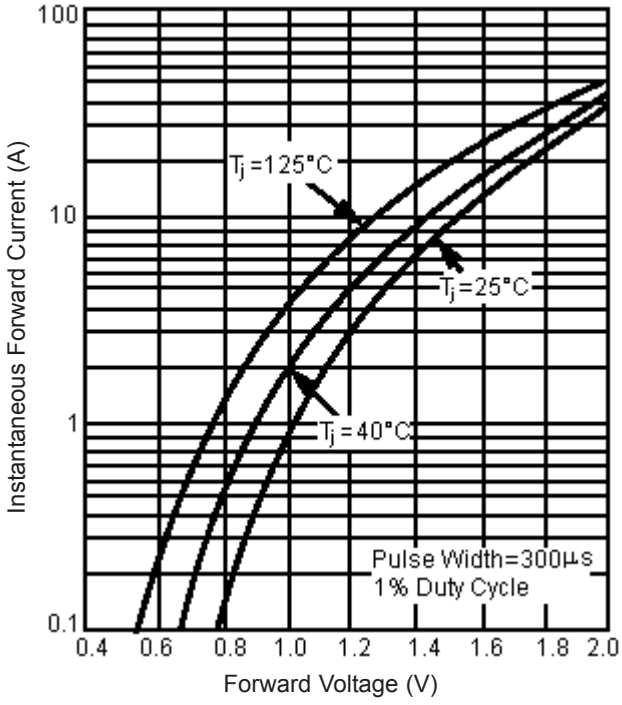
Typical Reverse Characteristics



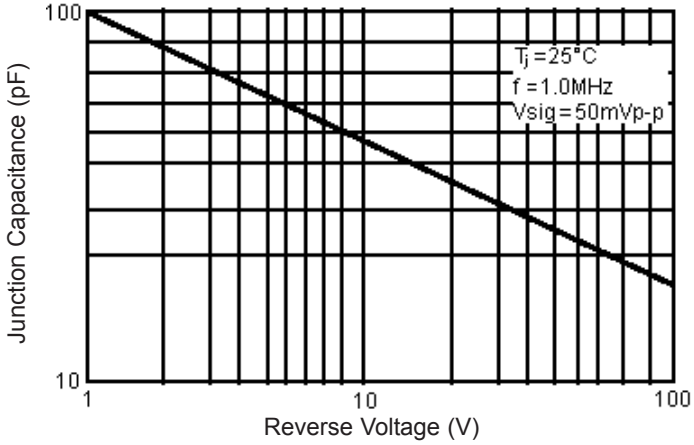
Maximum Non-Repetitive Peak Forward Surge Current



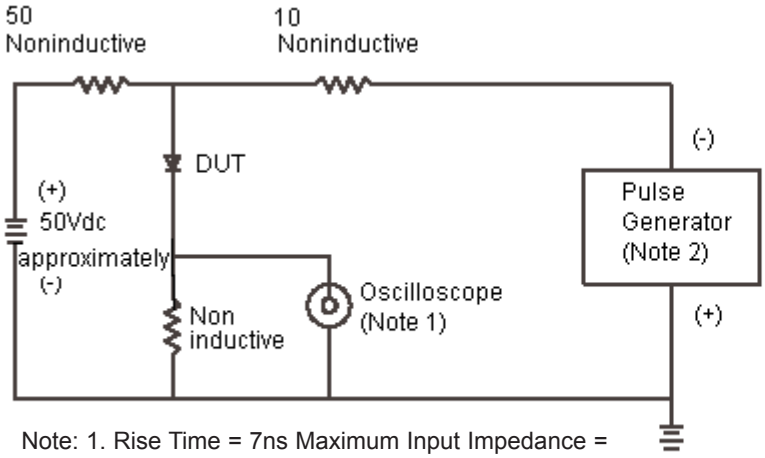
Typical Instantaneous Forward Characteristics

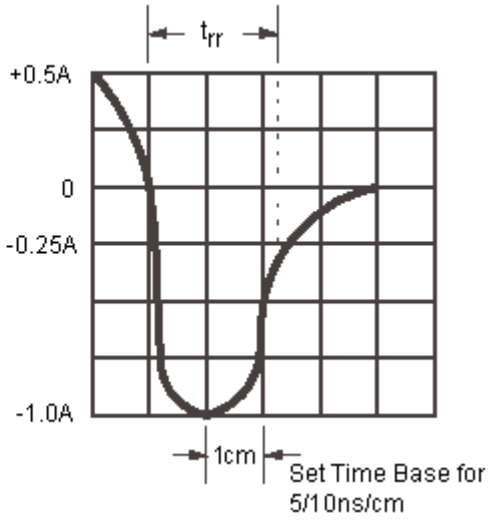


Typical Junction Capacitance



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, Fast, 3A, 50V	RS3A
Diode, Fast, 3A, 200V	RS3D
Diode, Fast, 3A, 400V	RS3G
Diode, Fast, 3A, 600V	RS3J
Diode, Fast, 3A, 1000V	RS3M

Notes:

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