

# RS3 Series

## Fast Recovery Power Diodes



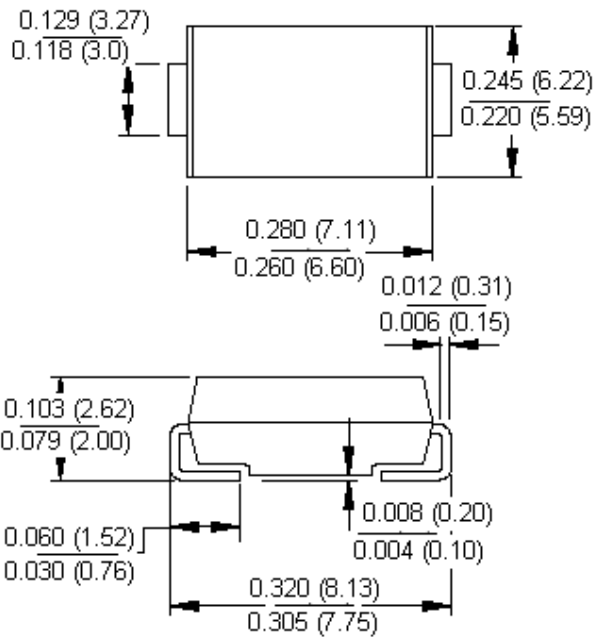
### Features:

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

### Mechanical Data:

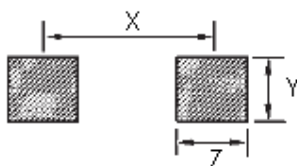
Cases : Moulded plastic.  
 Terminals : Solder plated.  
 Polarity : Indicated by cathode band.

### SMC/DO-214AB



Dimensions : Inches (Millimetres)

### Foot Print



### Dimensions

Length	Width	Depth	X	Y	Z
8.13	6.22	2.62	6.5	3.2	1.8

Dimensions : Millimetres



### 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	RS3B	RS3K	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	100	800	V
Maximum RMS Voltage	$V_{RMS}$	70	560	
Maximum DC Blocking Voltage	$V_{DC}$	100	800	
Maximum Average Forward Rectified Current See Figure 1 at $T_L = 75^\circ\text{C}$	$I_{(AV)}$	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 $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 125^\circ\text{C}$	$I_R$	10 250		$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	150	500	nS
Typical Junction Capacitance (Note 2)	$C_j$	60		pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	50.0 15.0		$^\circ\text{C/W}$
Operating Temperature Range	$T_j$	-55 to +150		$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$			

#### Notes:

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

### Ratings and Characteristic Curves

Figure 1 Maximum Forward Current Derating Curve

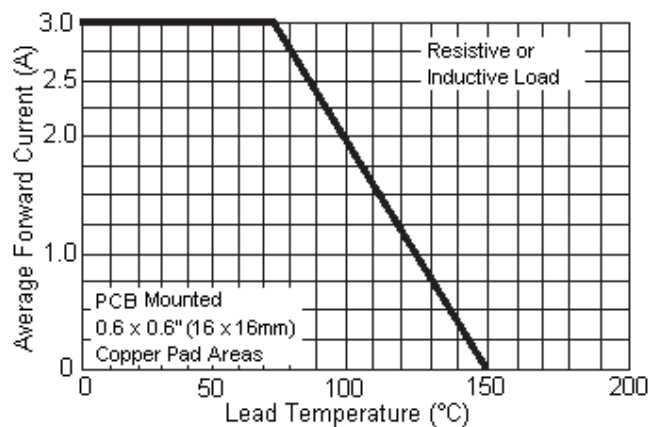


Figure 2 Maximum Non-Repetitive Forward Surge Current

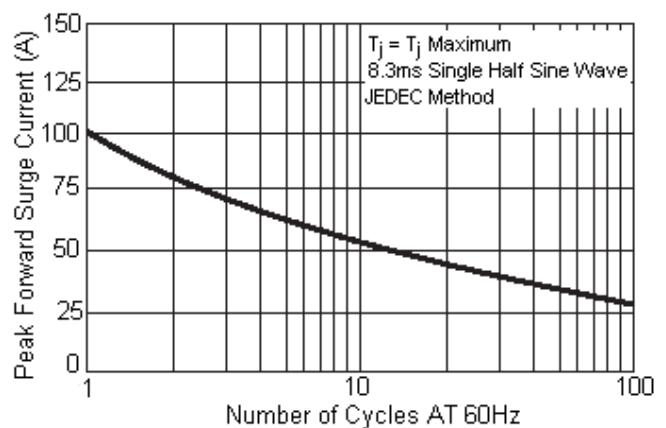


Figure 3 Typical Instantaneous Forward Characteristics

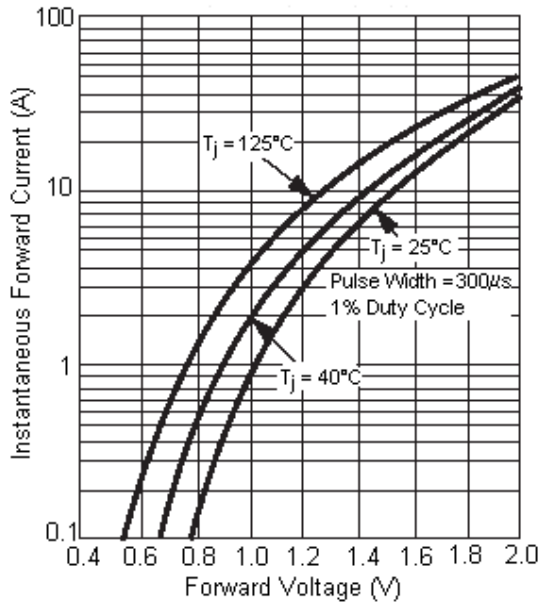


Figure 4 Typical Reverse Characteristics

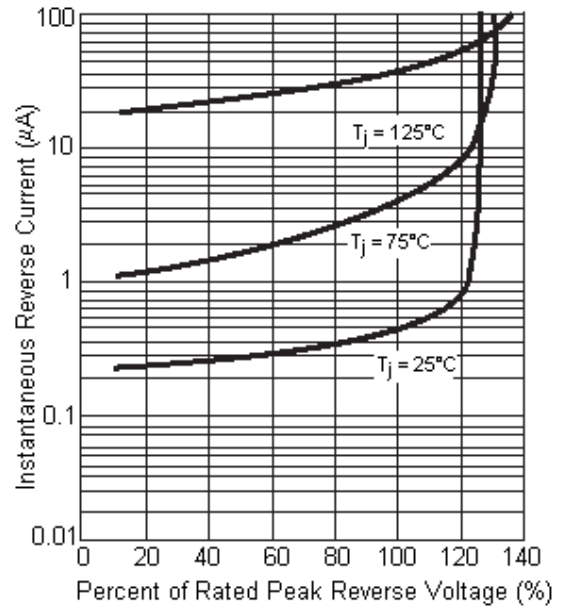
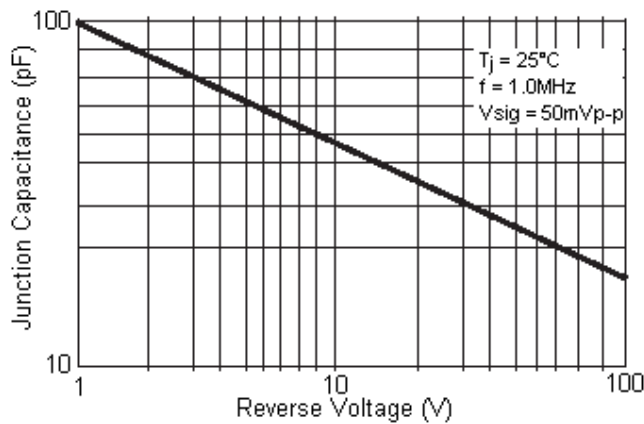


Figure 5 Typical Junction Capacitance



### Specifications

$I_F$ (av) (A)	$V_{RRM}$ (V)	$I_{FSM}$ (A)	$t_{rr}$ maximum (nS)	$V_F$ (V) at $I_F = 3\text{(A)}$	Package	Part Number
3	100	100	150	1.3	DO-214AB (SMC)	RS3B
	800		500			RS3K

# RS3 Series

## Fast Recovery Power Diodes



### Notes:

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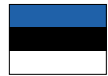
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