RS3 Series
Fast Recovery Power Diode

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

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°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	1.3		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
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)	RθJA RθJL	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 = 1A, I_{RR} = 0.25A
2. Measured at 1MHz and Applied V_R = 4V
3. Thermal Resistance from Junction to Ambient and from Junction to Lead Mounted on PCB with 0.6" × 0.6" (16mm × 16 mm) Copper Pad Areas.

Ratings and Characteristic Curves

Figure 1 Max. Forward Current Derating Curve

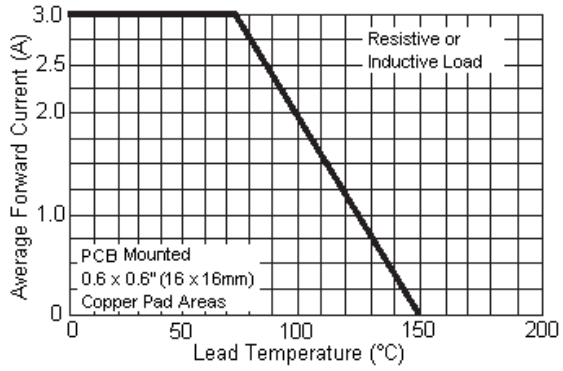


Figure 2 Max. Non-Repetitive Forward Surge Current

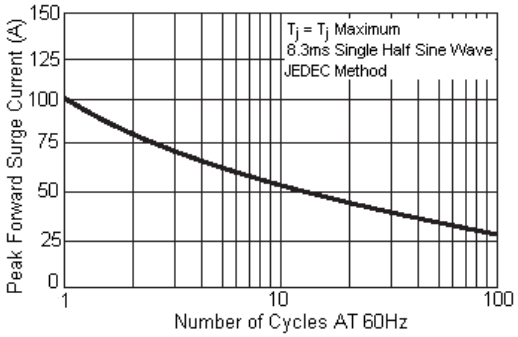


Figure 3 Typical Instantaneous Forward Characteristics

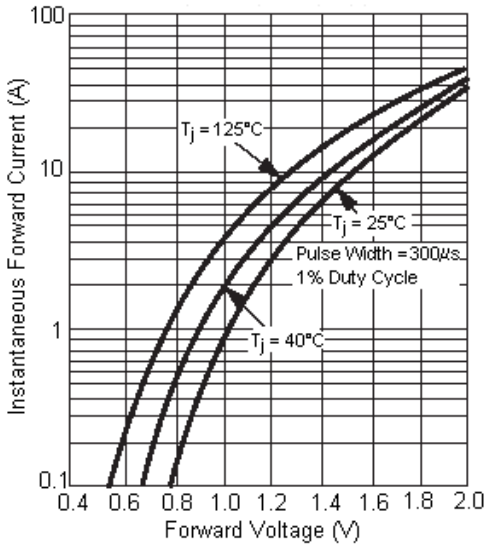


Figure 4 Typical Reverse Characteristics

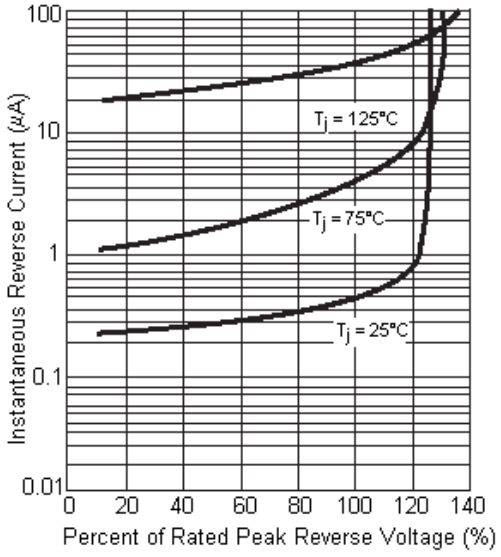
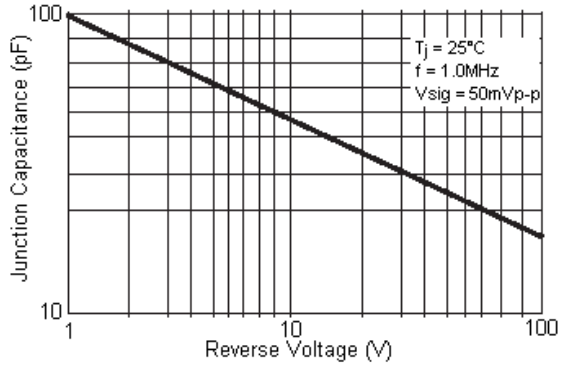


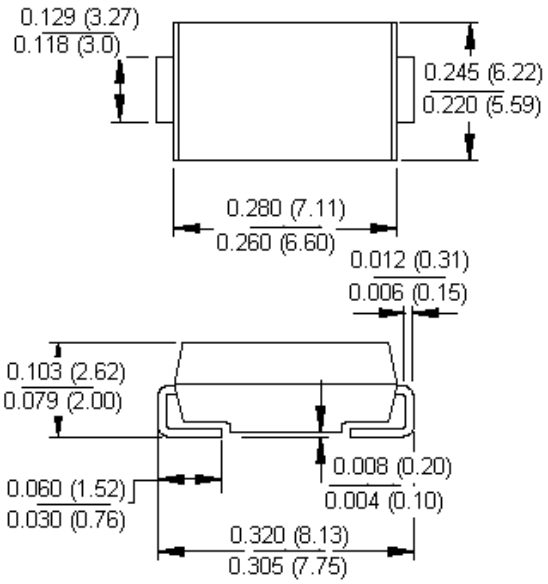
Figure 5 Typical Junction Capacitance



RS3 Series
Fast Recovery Power Diode

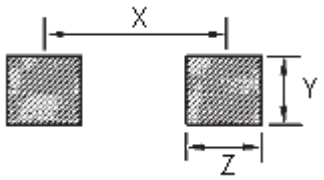
Dimensions:

SMC/DO-214AB



Dimensions : Inches (Millimetres)

Foot Print



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

Dimensions : Millimetres

Part Number Table

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

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.