

3.0A SURFACE MOUNT GLASS PASSIVATED RECTIFIER

Features

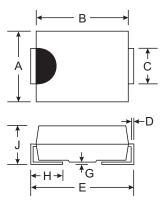
- Glass Passivated Die Construction
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 100A Peak
- Ideally Suited for Automatic Assembly
- Lead Free Finish/RoHS Compliant (Note 3)

Mechanical Data

Case: SMB/SMC

Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208 (3)
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number & Date Code, See Page 2
- Ordering Information: See Page 2
- Weight: SMB 0.093 grams (approximate) SMC 0.21 grams (approximate)



Dim	SI	ИΒ	SMC				
	Min	Max	Min	Max			
Α	3.30	3.94	5.59	6.22			
В	4.06	4.57	6.60	7.11			
С	1.96	2.21	2.75	3.18			
D	0.15	0.31	0.15	0.31			
Е	5.00	5.59	7.75	8.13			
G	0.10	0.20	0.10	0.20			
Н	0.76	1.52	0.76	1.52			
J	2.00	2.62	2.00	2.62			
All Dimensions in mm							

AB, BB, DB, GB, JB, KB, MB Suffix Designates SMB Package A, B, D, G, J, K, M Designates SMC Package

@ T_A = 25°C unless otherwise specified **Maximum Ratings and Electrical Characteristics**

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic		Symbol	S3 A/AB	S3 B/BB	S3 D/DB	S3 G/GB	S3 J/JB	S3 K/KB	S3 M/MB	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V _{RRM} V _{RWM} V _R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage		V _{R(RMS)}	30	70	140	280	420	560	700	V
Average Rectified Output Current @ T _T = 75°C		Io	3.0						Α	
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load		I _{FSM}	100					Α		
Forward Voltage @ I _F = 3.0A		V _{FM}	1.15					V		
$\begin{array}{lll} \text{Peak Reverse Current} & \text{@ T}_{A} = 25^{\circ}\text{C} \\ \text{at Rated DC Blocking Voltage} & \text{@ T}_{A} = 125^{\circ}\text{C} \end{array}$		I _{RM}	10 250					μΑ		
Typical Total Capacitance (Note 1)		Ст	40					pF		
Typical Thermal Resistance Junction to Terminal (Note 2)		R ₀ JT	10					°C/W		
Operating and Storage Temperature Range		T _j , T _{STG}	-65 to +150					°C		

Notes:

- 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
- 2. Thermal resistance: Junction to Terminal, unit mounted on PC board with 5.0 mm² (0.013 mm thick) copper pad as heat sink.
- 3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.



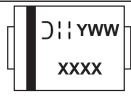
Ordering Information (Note 4)

Device*	Packaging	Shipping
S3xB-13-F S3x-13-F	SMB SMC	3000/Tape & Reel

^{*}x = Device type, e.g. S3AB-13-F (SMB package); S3A-13-F (SMC Package).

4. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf. Notes:

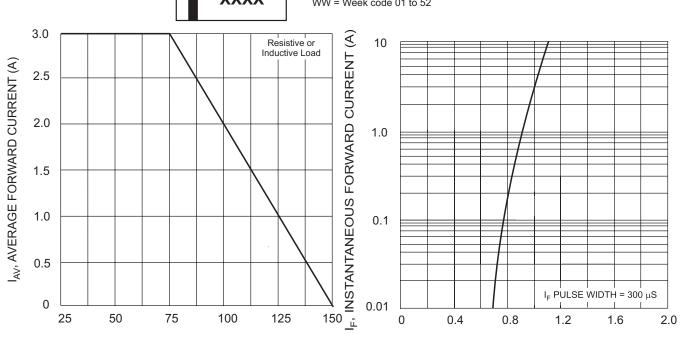
Marking Information

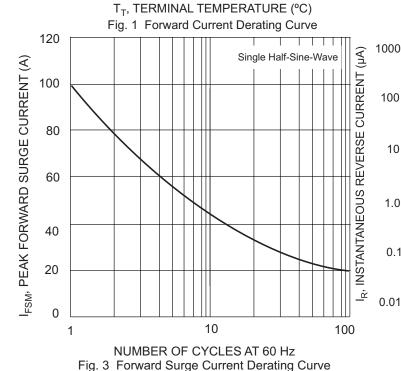


XXXX = Product type marking code, ex. S5KC

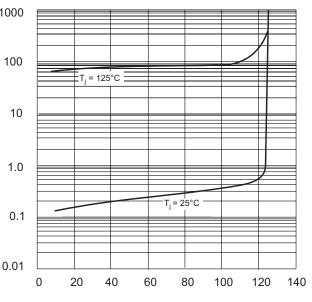
Oll = Manufacturers' code marking

YWW = Date code marking Y = Last digit of year ex: 2 for 2002 WW = Week code 01 to 52





V_F, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typical Forward Characteristics



PERCENT OF RATED PEAK REVERSE VOLTAGE (%) Fig. 4 Typical Reverse Characteristics



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