

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Low Profile Package
- Glass Passivated Chip Junction
- Superfast Reverse Recovery Time
- Lead Free in comply with EU RoHS 2011/65/EU Directives

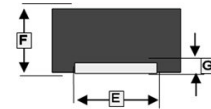
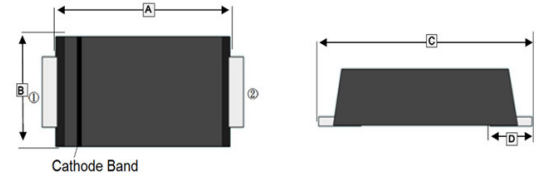
## MECHANICAL DATA

- Case: SMBM
- Terminals: Solderable per MIL-STD-750, Method 2026

## MARKING

Part Number	Marking Code	Part Number	Marking Code
SUF301BM-C	E3DB	SUF304BM-C	E3GB
SUF302BM-C		SUF305BM-C	E3JB
SUF303BM-C			

## SMBM



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.20	4.70	E	1.80	2.20
B	3.40	3.80	F	1.10	1.45
C	5.10	5.50	G	0.18	0.26
D	1.00 REF.				

## PACKAGE INFORMATION

Package	MPQ	Leader Size
SMAM	5K	13 inch

## ORDER INFORMATION

Part Number	Type
SUF301BM-C~SUF305BM-C	Lead (Pb)-free and Halogen-free

## ABSOLUTE MAXIMUM RATINGS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, de-rate current by 20%.)

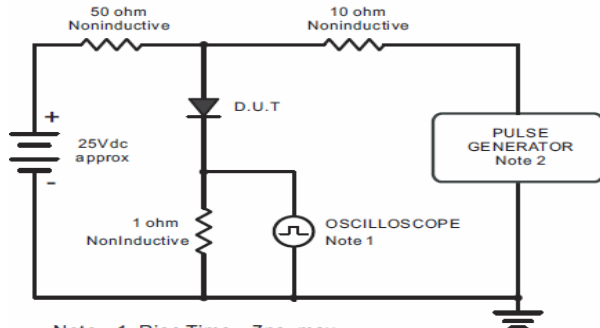
Parameter	Symbol	Part Number					Unit
		SUF301 BM-C	SUF302 BM-C	SUF303 BM-C	SUF304 BM-C	SUF305 BM-C	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	
Maximum Average Forward Rectified Current	$I_F$	3					A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	80					A
Maximum Forward Voltage @ $I_F=3A$	$V_F$	1		1.25	1.68	V	
Maximum DC Reverse Current @ Rated DC Blocking Voltage	$T_A=25^\circ C$	5					$\mu A$
	$T_A=125^\circ C$	100					
Maximum Reverse Recovery Time <sup>1</sup>	$T_{RR}$	35					nS
Typical Junction Capacitance <sup>3</sup>	$C_J$	35					pF
Typical Thermal Resistance <sup>2</sup>	$R_{\theta JA}$	45					$^\circ C/W$
	$R_{\theta JC}$	15					
Operating & Storage Temperature	$T_J, T_{STG}$	-55~150					$^\circ C$

### Notes:

1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{RR}=0.25A$ .
2. P.C.B. mounted with 2.0 x 2.0" (5 x 5 cm) copper pad areas.
3.  $V_R=4V$ ,  $f=1MHz$ .

**RATINGS AND CHARACTERISTIC CURVES**

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7 ns, max.  
Input Impedance = 1 megohm, 22pF.  
2. Rise Time = 10ns, max.  
Source Impedance = 50 ohms.

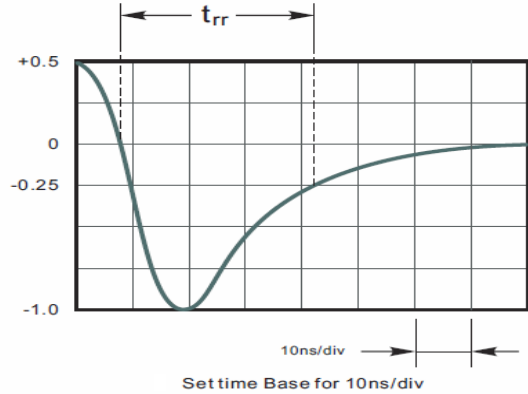


Fig.2 Maximum Average Forward Current Rating

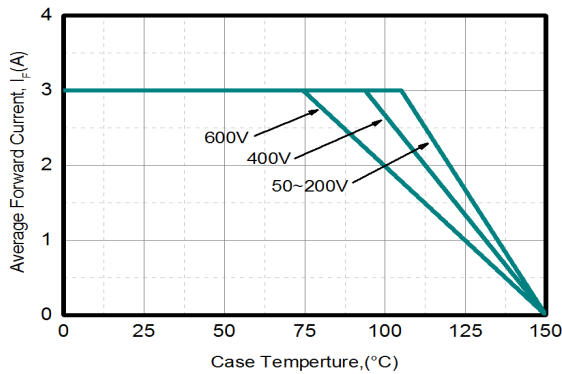


Fig.3 Typical Reverse Characteristics

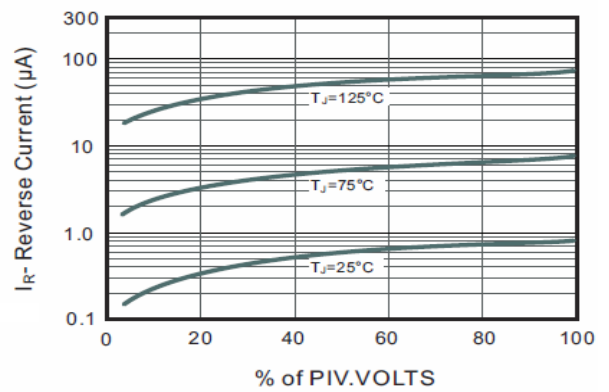


Fig.4 Typical Forward Characteristics

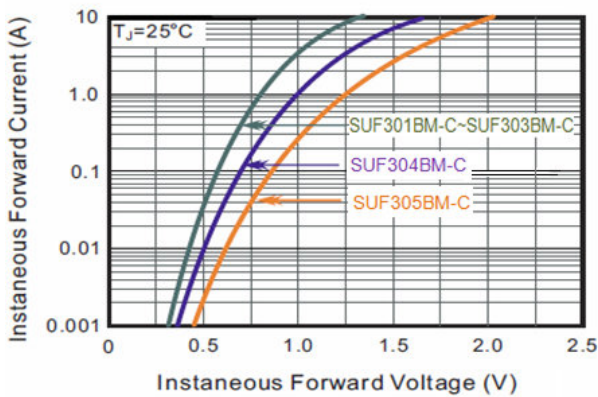


Fig.5 Typical Junction Capacitance

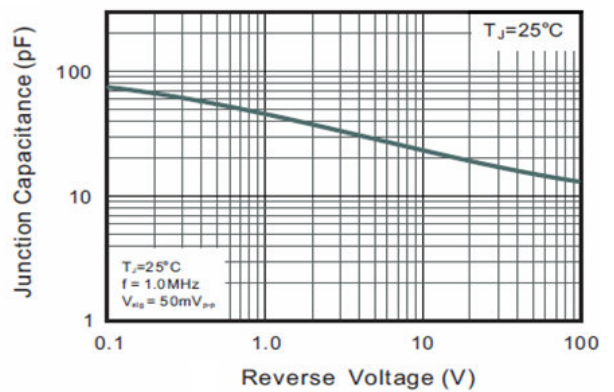


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current

