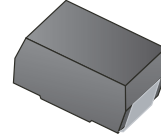


RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Low Profile Package
- Ideal for Automated Placement
- Glass Passivated Chip Junction
- High Forward Surge Capability
- Super Fast Reverse Recovery Time
- Meets MSL Level 1, per J-STD-020, LF Maximum Peak of 260°C

**SMB**



## MECHANICAL DATA

- Epoxy: UL94V-0 Rate Flame Retardant
- Terminals: Tin Plated Leads, Solderable per J-STD-002 and JESD22-B102
- Polarity: Cathode line denotes the cathode end
- Mounting Position: Any

## PACKAGE INFORMATION

Package	MPQ	Leader Size
SMB	3K	13 inch

## ORDER INFORMATION

Part Number	Type
ES203B-C~ES204B-C	Lead (Pb)-free and Halogen-free

Cathode  Anode

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Part Number		Unit
		ES203B-C	ES204B-C	
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	200	400	V
Maximum RMS Voltage	V <sub>RMS</sub>	140	280	
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	400	
Average Rectified Output Current @60Hz sine wave, Resistance load, T <sub>L</sub>	I <sub>O</sub>	2		A
Surge (Non-repetitive) Forward Current @ T <sub>J</sub> =25°C	60Hz half-sine wave	50		A
	1ms square wave	100		
Maximum Instantaneous Forward Voltage @ I <sub>F</sub> =2A	V <sub>F</sub>	0.92	1.25	V
Maximum DC Reverse Current @Rated DC Blocking Voltage	T <sub>J</sub> =25°C	5		µA
	T <sub>J</sub> =125°C	50		
Maximum Reverse Recovery Time <sup>1</sup>	T <sub>RR</sub>	25		nS
Typical Junction Capacitance	C <sub>J</sub>	40	26	pF
Typical Thermal Resistance <sup>2</sup>	R <sub>θJA</sub>	70		°C/W
	R <sub>θJL</sub>	20		
	R <sub>θJC</sub>	15		
Operating & Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55~150		°C

Notes:

1. Measured with I<sub>F</sub>=0.5A, I<sub>R</sub>=1A, I<sub>RR</sub>=0.25A.
2. Thermal resistance from junction-ambient and from junction-lead mounted on P.C.B. with 0.3" x 0.3" (8mm x 8mm) copper pad areas.

**CHARACTERISTICS CURVE**

FIG.1: Io-TL Curve

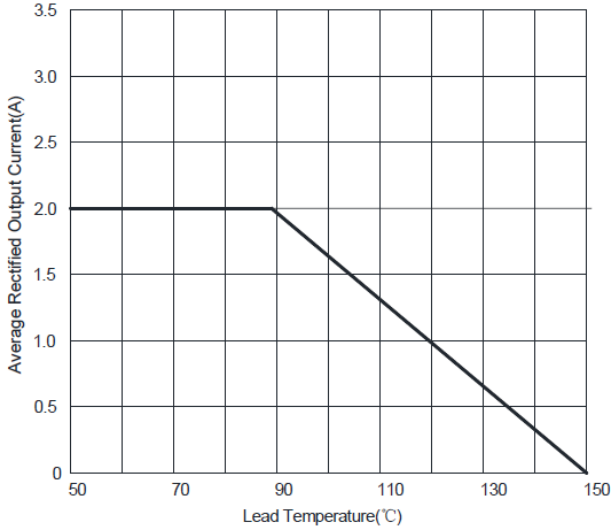


FIG2: Surge Forward Current Capability

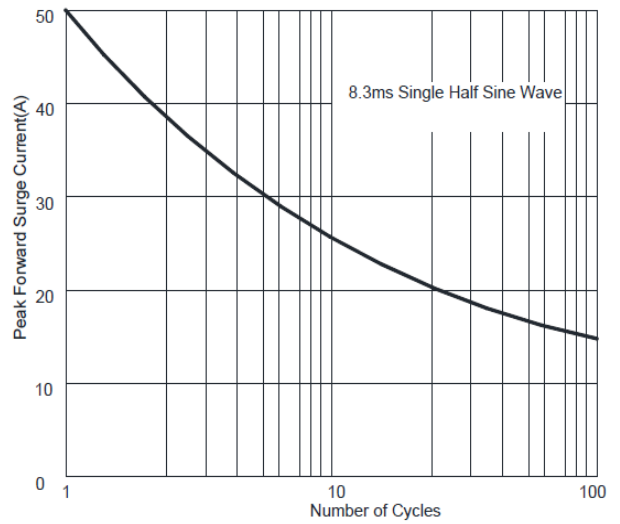


FIG.3: Typical Forward Characteristics

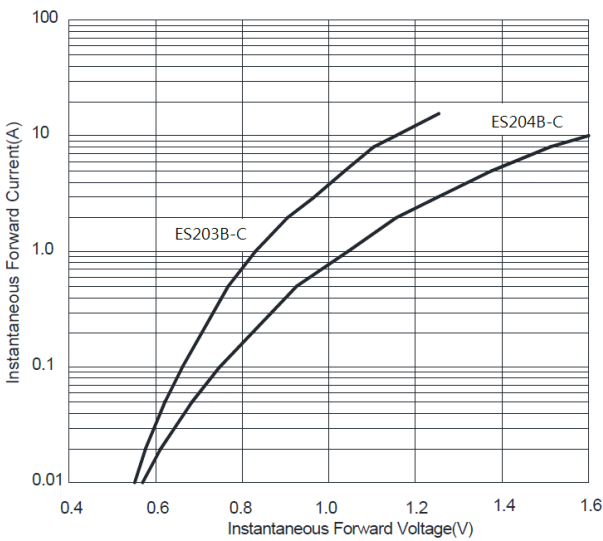


FIG4: Typical Reverse Characteristics

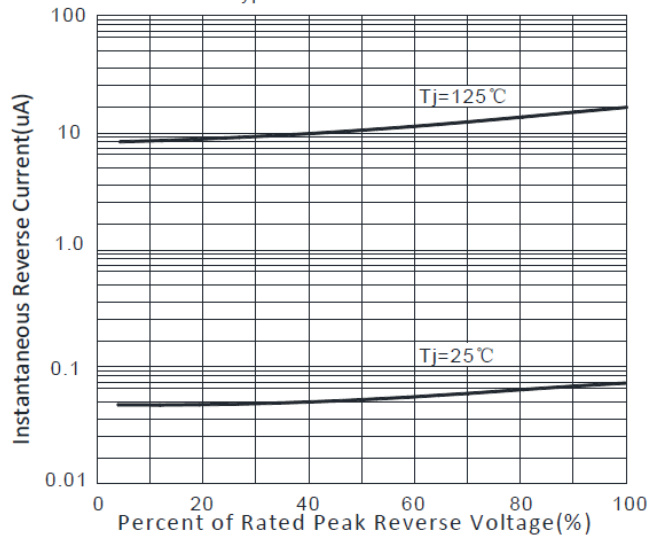
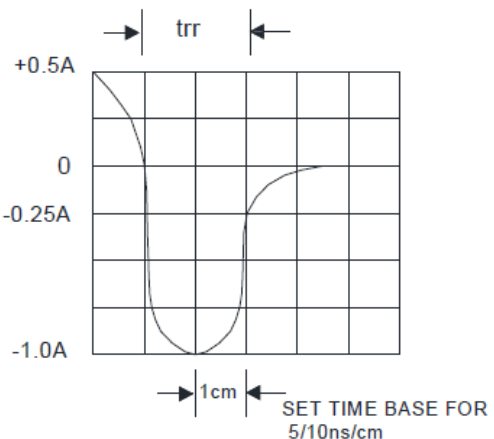
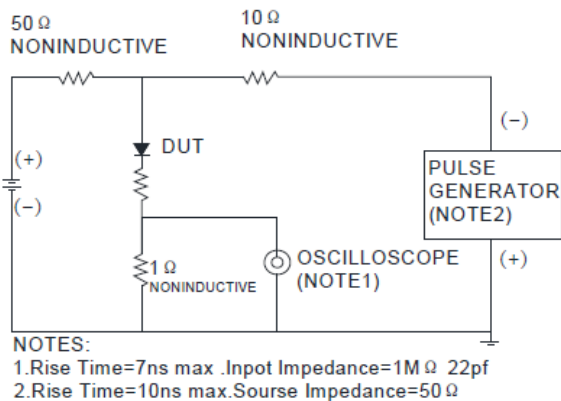
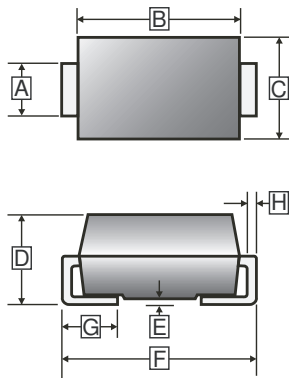


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



**PACKAGE OUTLINE DIMENSIONS**

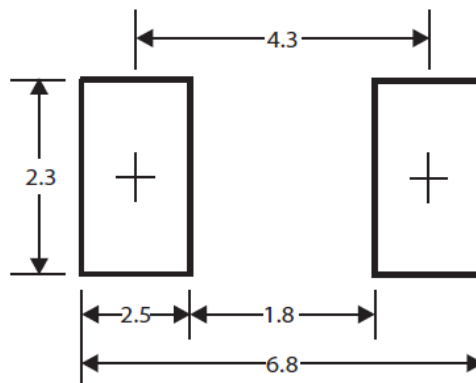
**SMB**



REF.	Millimeter	
	Min.	Max.
A	1.85	2.20
B	4.00	4.85
C	3.25	3.94
D	1.90	2.61
E	-	0.25
F	5.05	5.59
G	0.75	1.55
H	0.15	0.31

**MOUNTING PAD LAYOUT**

**SMB**



\*Dimensions in millimeters