

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

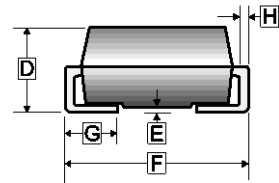
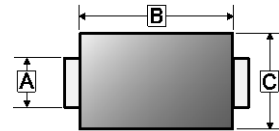
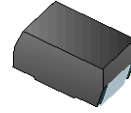
FEATURES

- Surface mount device
- High surge current capability
- Low reverse current

MECHANICAL DATA

- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead Free Plating(Tin Finish) Solderable Per MIL-STD-202, Method 208
- Mounting position: Any
- Polarity: Color band denotes cathode

SMB



PACKAGE INFORMATION

Package	MPQ	Leader Size
SMB	3K	13 inch

ORDER INFORMATION

Part Number	Type
ES45B-C	Lead (Pb)-free and Halogen-free

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(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	Ratings	Unit	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	V	
Working Peak Reverse Voltage	V_{RWM}	600		
Maximum RMS Voltage	V_{RMS}	420		
Maximum DC Blocking Voltage	V_{DC}	600		
Maximum Average Forward Rectified Current	I_F	4	A	
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150	A	
Maximum Instantaneous Forward Voltage	V_F	$I_F=4A$	1.28	V
		$I_F=3A$	1.25	
Maximum DC Reverse Current @Rated DC Blocking Voltage	I_R	$T_J=25^{\circ}C$	10	μA
		$T_J=150^{\circ}C$	250	
Maximum Reverse Recovery Time ¹	T_{RR}	50	nS	
Storage and Operating Temperature Range	T_J, T_{STG}	-65~175	°C	

Note:

1. Measured with $I_F=0.5A$, $I_R=1A$, $I_{RR}=0.25A$.

CHARACTERISTIC CURVES

FIG.1 FORWARD CURRENT DERATING CURVE

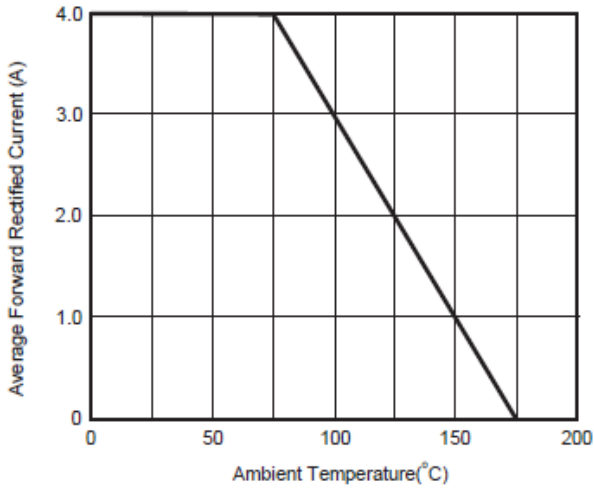


FIG.2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

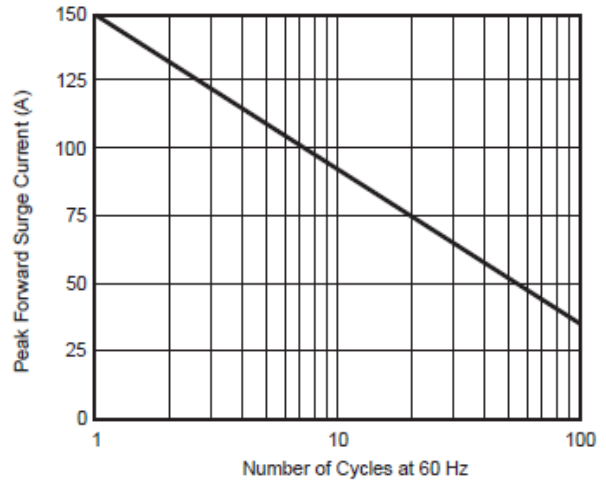


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

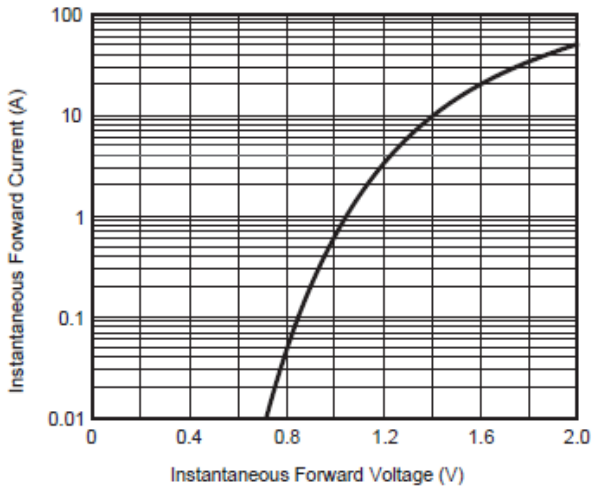


FIG. 4. TYPICAL REVERSE CHARACTERISTICS

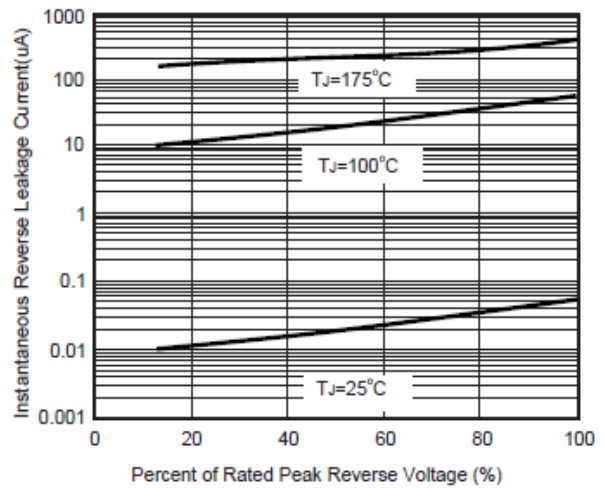


FIG.5 TYPICAL JUNCTION CAPACITANCE PER LEG

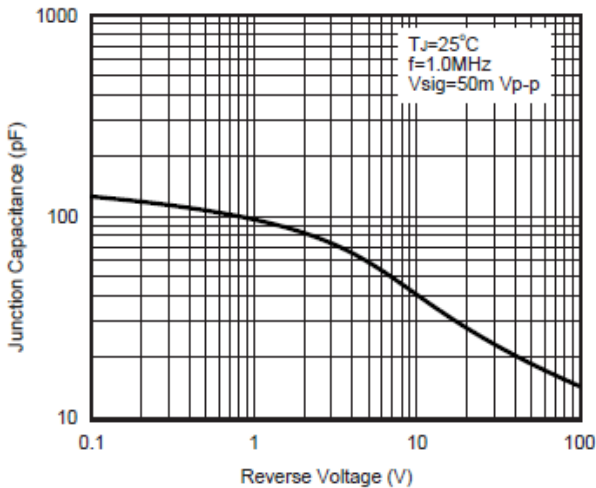


FIG. 6 MOUNTING PAD LAYOUT

