

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

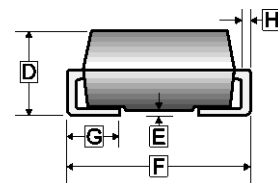
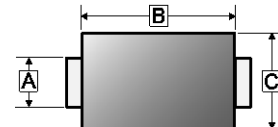
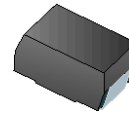
## FEATURES

- 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

### SMC



## PACKAGE INFORMATION

Package	MPQ	Leader Size
SMC	3K	13 inch

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.75	3.27	E	-	0.203
B	6.52	7.11	F	7.64	8.17
C	5.50	6.22	G	0.75	1.60
D	1.98	2.62	H	0.23 TYP.	

## ORDER INFORMATION

Part Number	Type
ES45C-C	Lead (Pb)-free and Halogen-free

## 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	$\mu A$
		$T_J=150^{\circ}C$	250	
Maximum Reverse Recovery Time <sup>1</sup>	$T_{RR}$	50	nS	
Storage and Operating Temperature Range	$T_{STG}, T_J$	-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

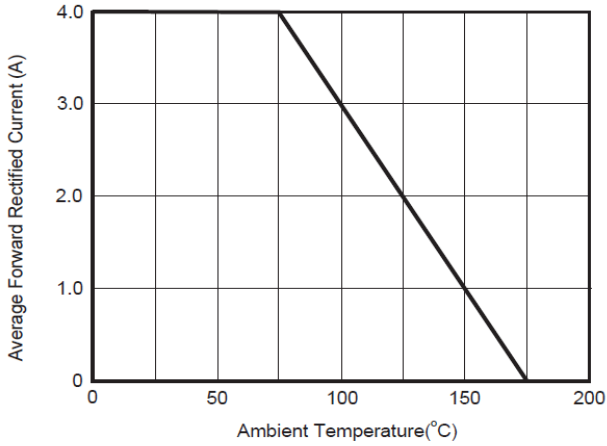


FIG.2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

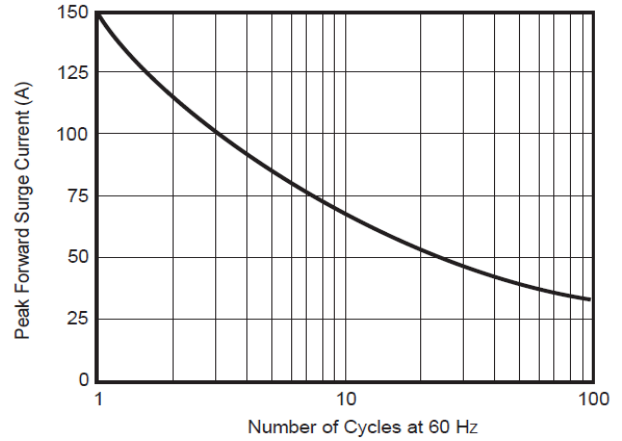


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

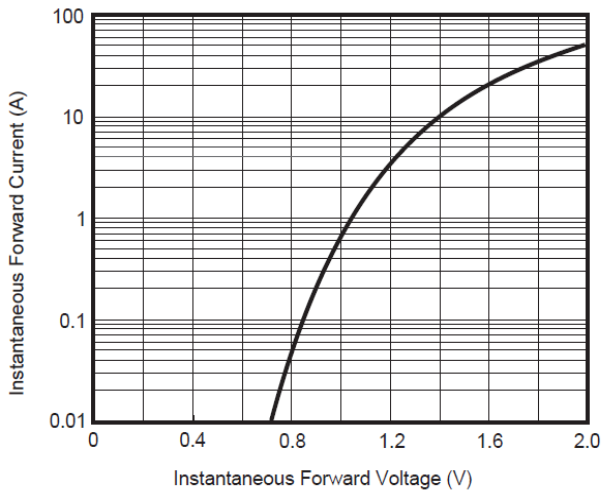


FIG 4. TYPICAL REVERSE CHARACTERISTICS

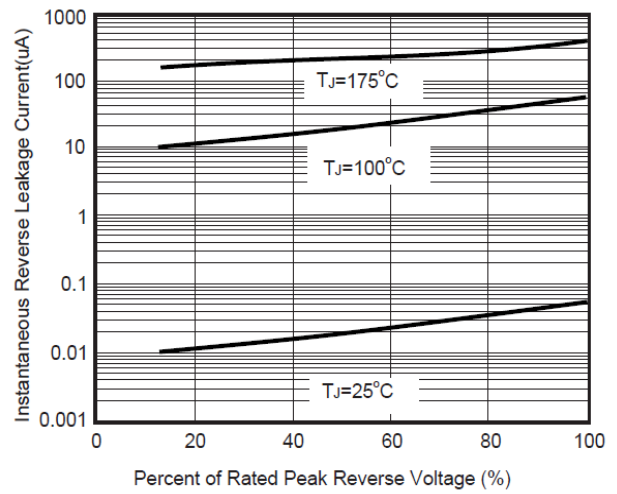


FIG. 5 MOUNTING PAD LAYOUT

