

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

FEATURES

- For surface mount application
- Glass passivated junction chip
- Built-in strain relief, ideal for automated placement
- Plastic material used carries Underwriters Laboratory Classification 94V-0
- Fast switching for high efficiency
- High temperature soldering guaranteed: 250°C/10 seconds at terminals
- Qualified to AEC-Q101 standards for high reliability

MECHANICAL DATA

- Case: Molded plastic
- Terminals: Solder plated, solderable
- Polarity: Color band denotes cathode end
- Mounting position: Any

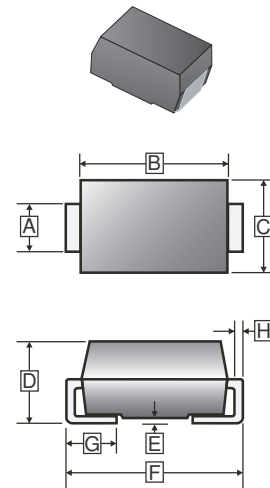
PACKAGE INFORMATION

Package	MPQ	Leader Size
SMC	3K	13 inch

ORDER INFORMATION

Part Number	Type
SMF301CCR-C~SMF307CCR-C	Lead (Pb)-free and Halogen-free

SMC



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.750	3.270	E	-	0.203
B	6.520	7.110	F	7.640	8.170
C	5.50	6.220	G	0.750	1.520
D	1.980	2.620	H	0.23 TYP	

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	Part Number							Unit
		SMF301 CCR-C	SMF302 CCR-C	SMF303 CCR-C	SMF304 CCR-C	SMF305 CCR-C	SMF306 CCR-C	SMF307 CCR-C	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	I_F	3							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	100							A
Maximum Instantaneous Forward Voltage @ $I_F=3A$	V_F	1.3							V
Maximum DC Reverse Current @ Rated DC Blocking Voltage	I_R	10							μA
		250							
Maximum Reverse Recovery Time ¹	T_{RR}	150				250	500		nS
Typical Junction Capacitance ²	C_J	75							pF
Typical Thermal Resistance ³	$R_{\theta JA}$	50							$^{\circ}C/W$
	$R_{\theta JL}$	15							
Operating & Storage Temperature	T_J, T_{STG}	-55~150							$^{\circ}C$

Notes:

1. Reverse Recovery Time test condition: $I_F=0.5A, I_R=1A, I_{RR}=0.25A$.
2. Measured at 1MHz and applied reverse voltage of 4V D.C.
3. Rating applies when surface mounted on the minimum pad size recommended, PC Board with 8X8mm copper pad.

CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

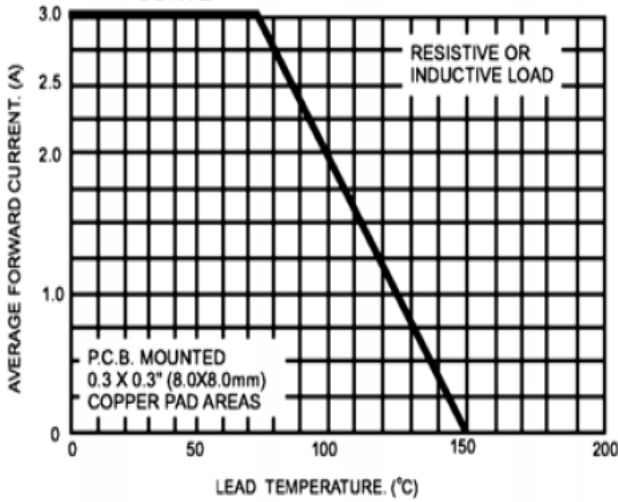


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

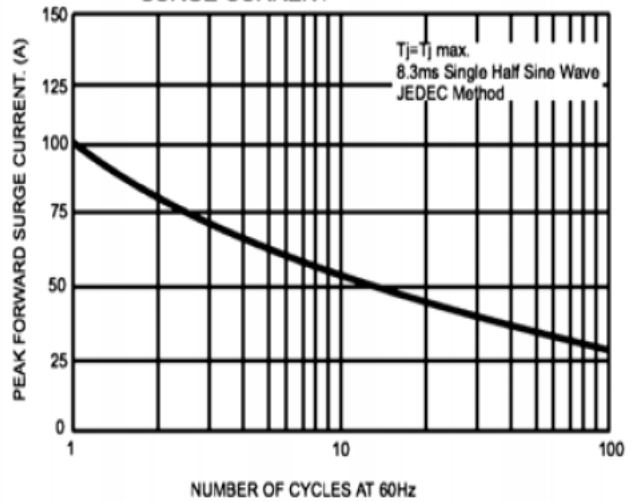


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

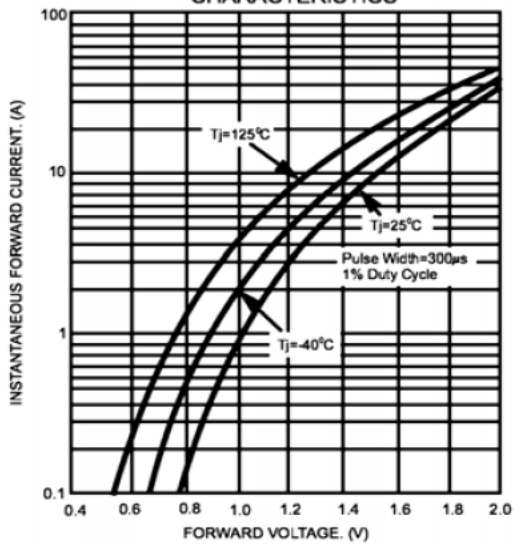


FIG.4- TYPICAL REVERSE CHARACTERISTICS

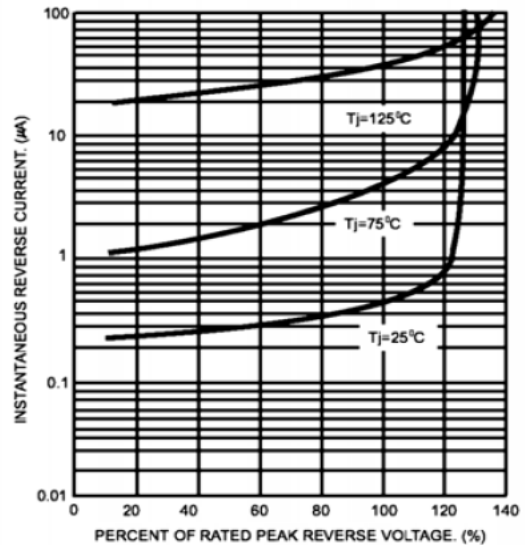


FIG.5- TYPICAL JUNCTION CAPACITANCE

