

RoHS Compliant Product

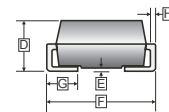
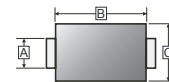
A suffix of "-C" specifies halogen & lead-free



**SMC**

**FEATURES**

- High Current Capability
- Extremely Low Thermal Resistance
- For Surface Mount Application
- Higher Temp Soldering : 250°C for 10 Seconds at Terminals
- Low Reverse Current



**MECHANICAL DATA**

- Case: Molded Plastic
- Epoxy: UL 94V-0 Rate Flame Retardant
- Polarity: Color Band Denotes Cathode End
- Mounting Position: Any

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.750	3.250	E	-	0.203
B	6.520	7.110	F	7.750	8.130
C	5.590	6.220	G	0.760	1.520
D	2.000	2.620	H	0.150	0.305

**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 derate current by 20%.

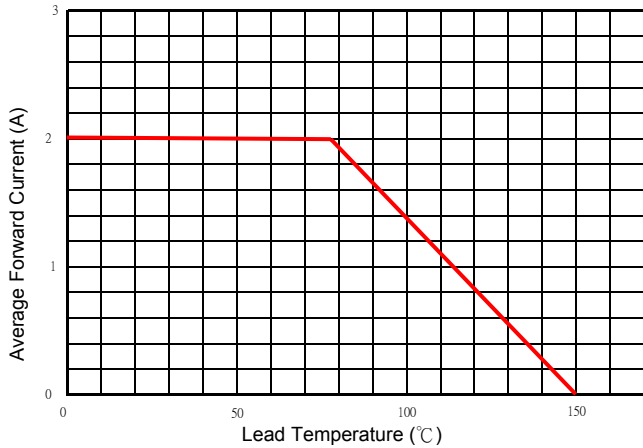
TYPE NUMBER	SYMBOL	SMF212C	UNITS
Repetitive Peak reverse voltage	$V_{RRM}$	1200	V
RMS Voltage	$V_{RMS}$	850	V
Average Forward Current @ $T_J=25^{\circ}C$	$I_{F(AV)}$	2	A
Peak Forward Current @ 8.3 ms, single half sine wave	$I_{FSM}$	50	A
Maximum Instantaneous Forward Voltage			
$V_F @ I_F = 2.0 A, T_A = 25^{\circ}C$	$V_F$	1.4	V
$V_F @ I_F = 2.0 A, T_A = 125^{\circ}C$		1.0	
Maximum Reverse Current			
At $V_R=1200 V @ T_J = 25^{\circ}C$	$I_R$	5	$\mu A$
At $V_R=1200V @ T_J = 125^{\circ}C$ (Note 3)		50	
Typical Junction Capacitance (Note 1)	$C_J$	9	pF
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	12	$^{\circ}C/W$
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	55	
Reverse recovery time $I_F = 0.5 A, I_{RR} = 0.25 A, I_R = 1A$	$T_{RR}$	500	nS
Operating Temperature Range	$T_J$	-50 ~ + 175	$^{\circ}C$
Storage temperature	$T_{STG}$	-65 ~ + 175	$^{\circ}C$

NOTES:

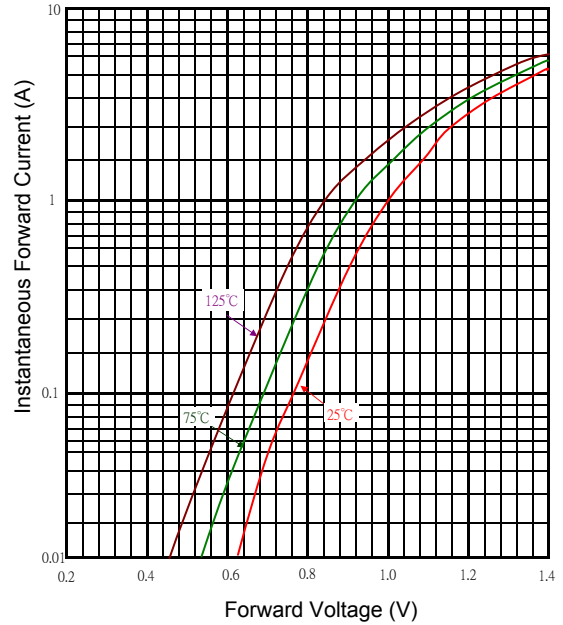
1. Measured at 1MHz and applied reverse voltage of 5.0 V D.C.
2. Printed circuit board FR4 copper pad 1x1cm, 35um thickness.
3. Pulse test: 300uS pulse width, 1% duty Cycle

**RATINGS AND CHARACTERISTIC CURVES**

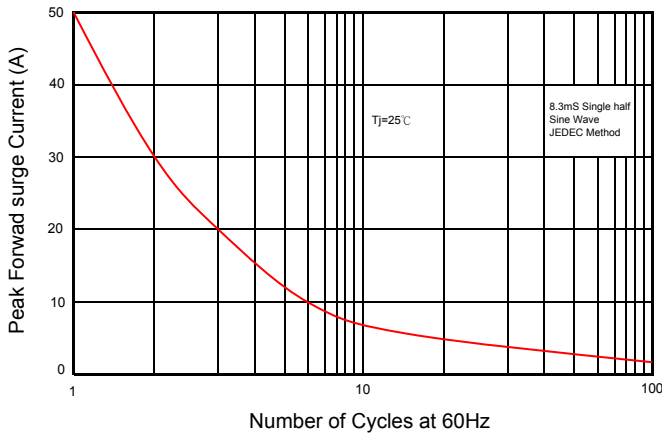
Typical Forward Current Derating Curve



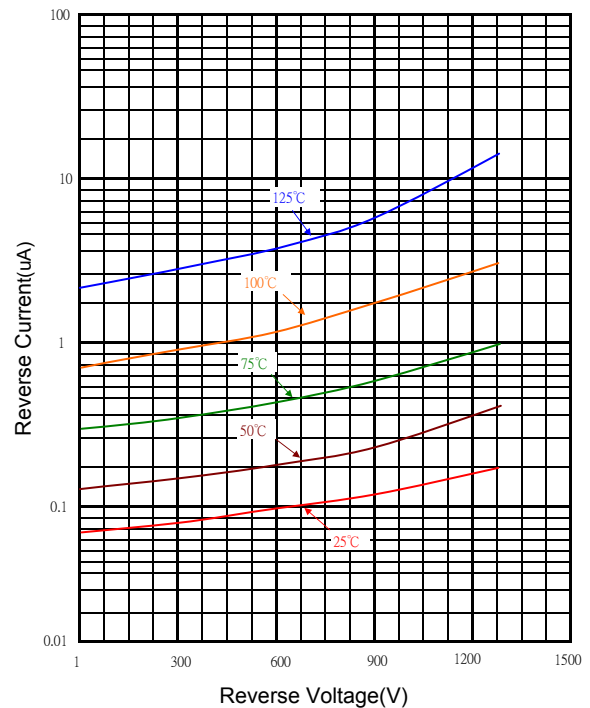
Typical Forward Characteristic



Maximum Non- Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

