

RoHS Compliant Product

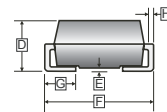
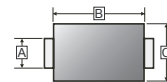
A suffix of "-C" specifies halogen & lead-free



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%.

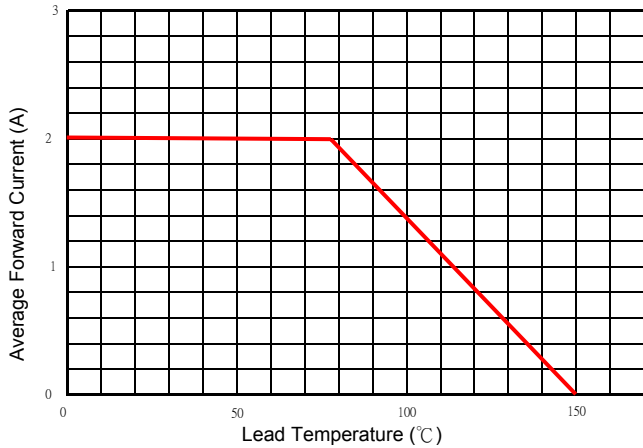
TYPE NUMBER	SYMBOL	SMF212C	UNITS
Repetitive Peak reverse voltage	V_{RRM}	1200	V
RMS Voltage	V_{RMS}	850	V
Average Forward Current @ $T_J=25^\circ\text{C}$	$I_{F(AV)}$	2	A
Peak Forward Current @ 8.3 ms, single half sine wave	I_{FSM}	50	A
Maximum Instantaneous Forward Voltage			
$V_F @ I_F = 2.0 \text{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

NOTES:

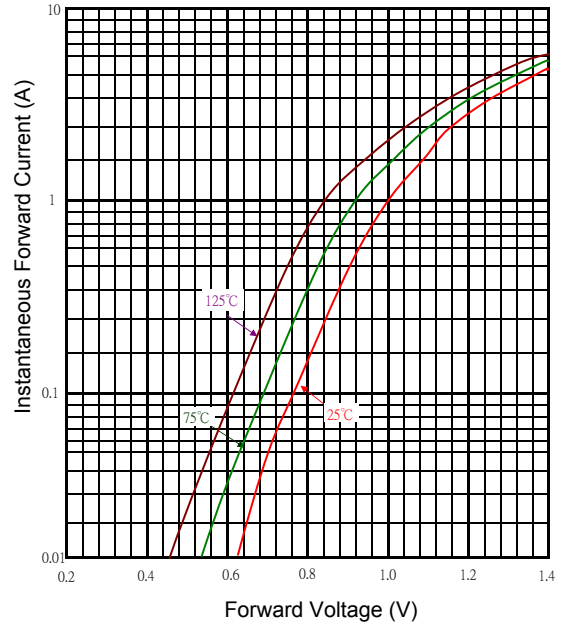
1. Measured at 1MHz and applied reverse voltage of 5.0 V D.C.
2. Printed circuit board FR4 copper pad 1×1cm, 35um thickness.
3. Pulse test: 300uS pulse width, 1% duty Cycle

RATINGS AND CHARACTERISTIC CURVES

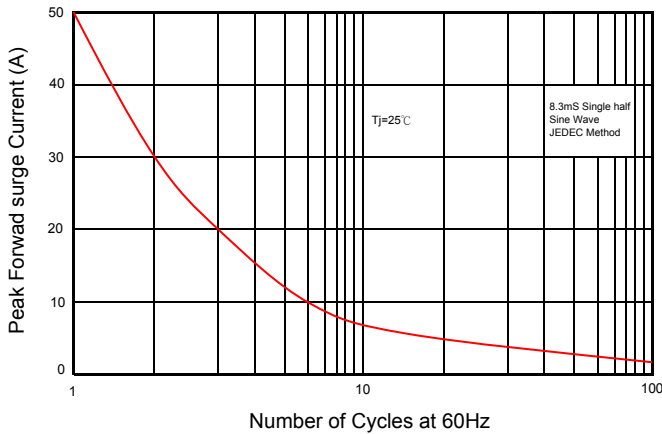
Typical Forward Current Derating Curve



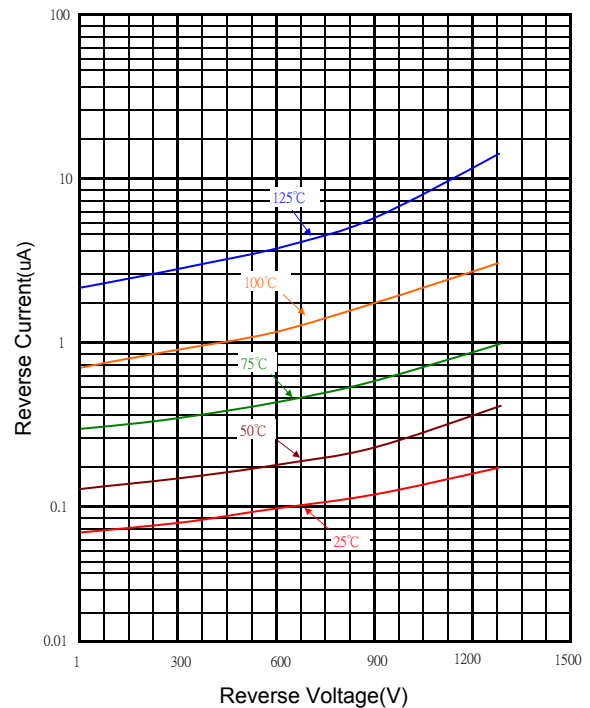
Typical Forward Characteristic



Maximum Non- Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

