

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

**FEATURES**

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction
- High operating temperature

**MECHANICAL DATA**

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any

**PACKAGE INFORMATION**

Package	MPQ	Leader Size
SMAF	3K	7 inch

**ORDER INFORMATION**

Part Number	Type
SMH3200AF-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	Rating	Unit
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	200	V
Working Peak Reverse Voltage	V <sub>RSM</sub>	200	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	V
Maximum Average Forward Rectified Current	I <sub>F</sub>	3	A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	80	A
Voltage Rate of Change (Rated V <sub>R</sub> )	dv/dt	10000	V/μs
Typical Thermal Resistance	R <sub>θJL</sub>	22	°C/W
Operating & Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	175, -50~175	°C

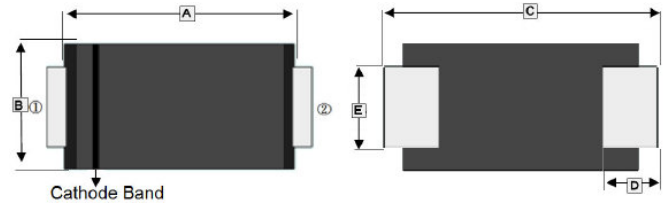
**ELECTRICAL CHARACTERISTICS**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Instantaneous Forward Voltage	V <sub>F</sub>	-	0.83	0.9	V	I <sub>F</sub> =3A, T <sub>J</sub> =25°C
		-	0.68	-		I <sub>F</sub> =3A, T <sub>J</sub> =125°C
Maximum DC Reverse Current <sup>2</sup> at Rated DC Blocking Voltage	I <sub>R</sub>	-	0.06	50	uA	T <sub>J</sub> =25°C
		-	45	800		T <sub>J</sub> =125°C
Typical Junction Capacitance <sup>1</sup>	C <sub>J</sub>	-	40	-	pF	

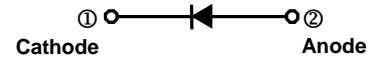
Notes:

1. Measured at 1MHz and applied reverse voltage of 5V D.C.
2. Pulse Test: Pulse Width=300μs, Duty Cycle ≤2%.

**SMAF**

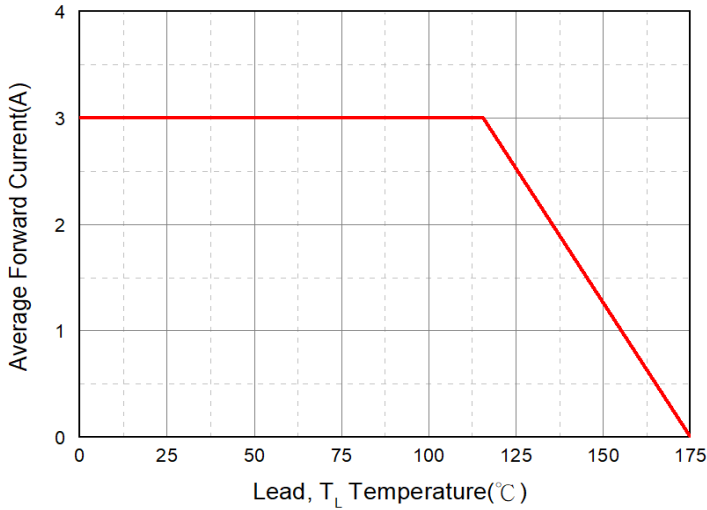


REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	3.20	4.60	D	0.70	1.50
B	2.25	2.95	E	1.25	1.65
C	4.40	5.60	F	0.90	1.20

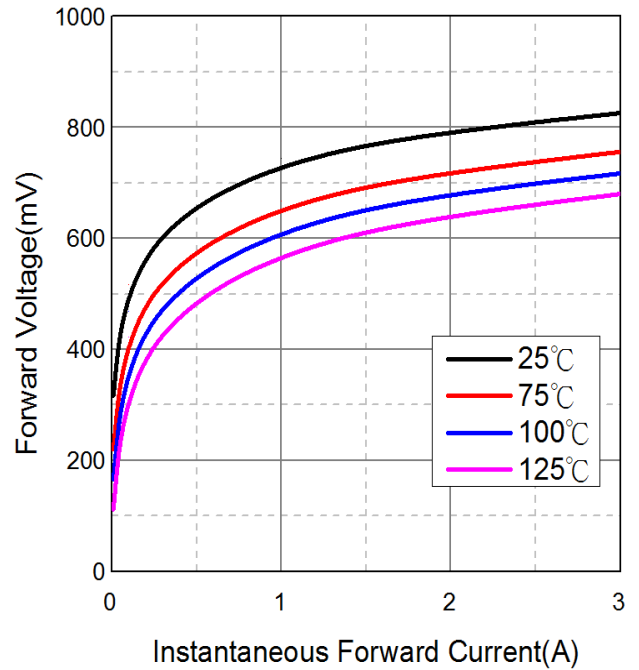


**RATINGS AND CHARACTERISTIC CURVES**

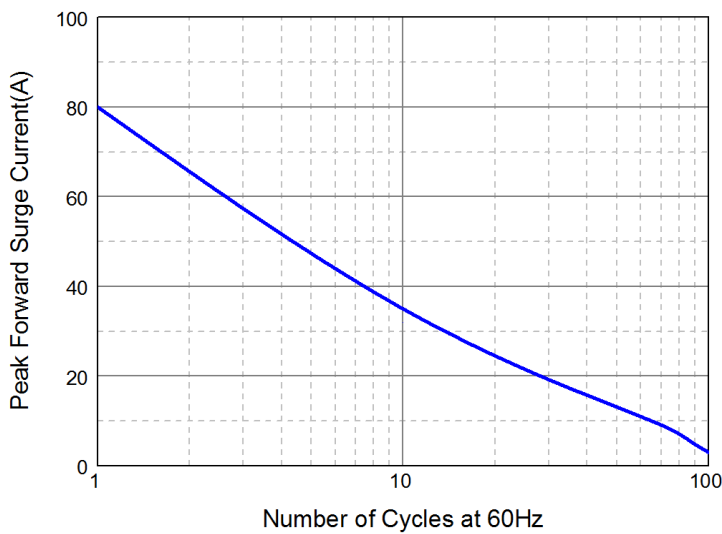
Typical Forward Current Derating Curve



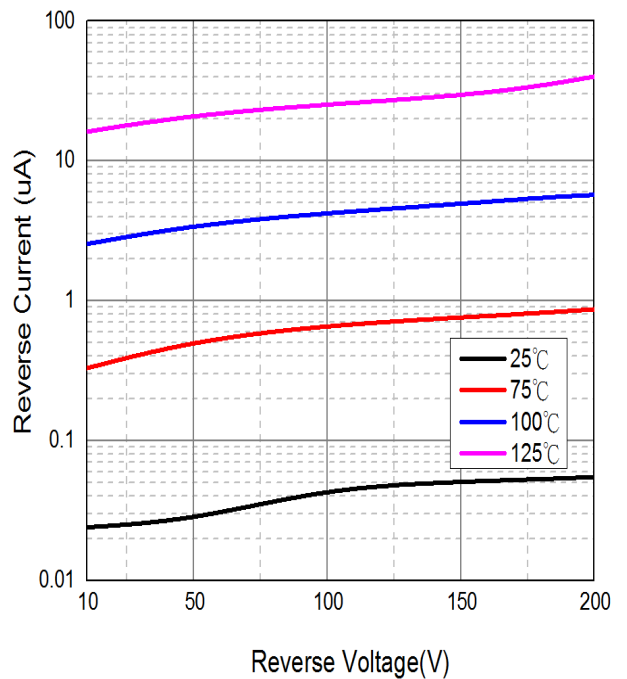
Typical Forward Characteristic



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

