



Features

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- Surge Overload Rating to 100A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- Lead Free Finish/RoHS Compliant
- Green Molding Compound (No Halogen and Antimony)



SMC



Mechanical Data

- Case: SMC
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.21 grams (approximate)

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
MB39_R1_00001	SMC	B390C	3000

Maximum Ratings (Ta=25°C unless otherwise noted)

Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Item	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	90	V
Maximum RMS Voltage	V _{RMS}	36	V
Average Rectified Output Current @ T _j = 90°C	I _o	3.0	A
Surge(Non-repetitive)Forward Current	I _{FSM}	100	A
Junction Temperature	T _j	-55~+125	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C
Typical Thermal Resistance Junction to Terminal	R _{θJT}	10	°C/W

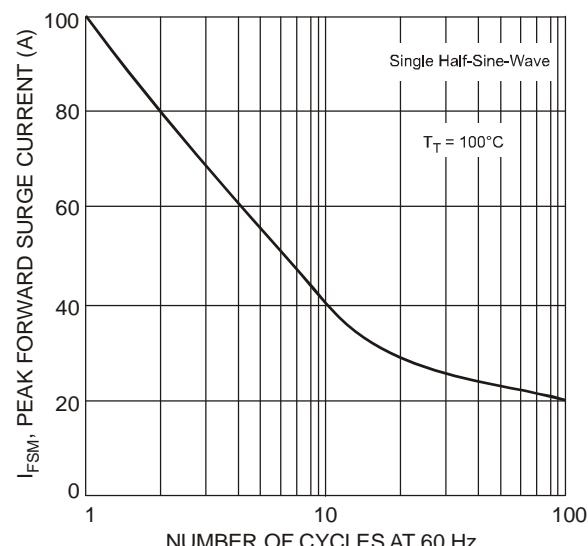
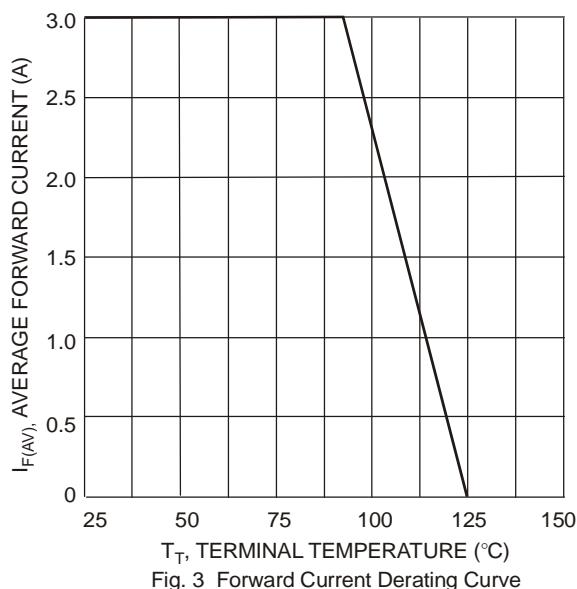
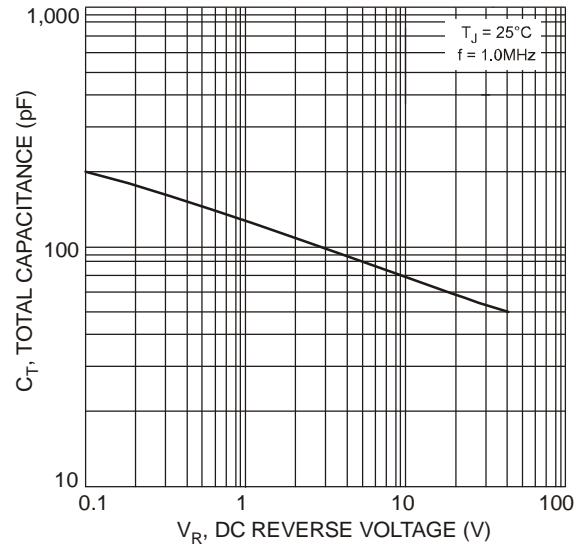
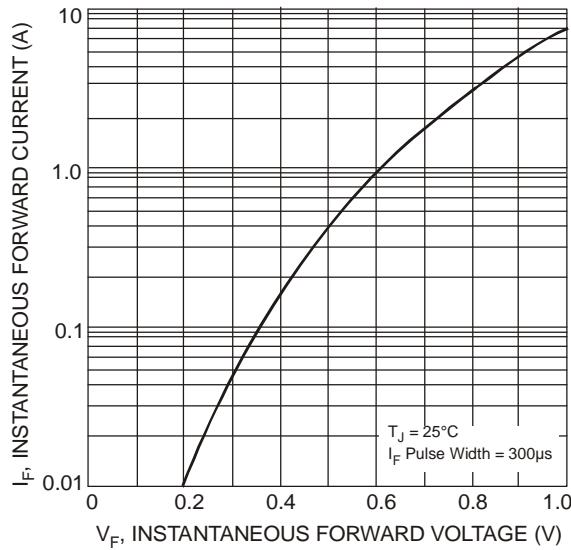


Electrical Characteristics (Ta=25°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V _F	-	-	0.79 0.69	V	I _F = 3.0A, T _A = 25°C I _F = 3.0A, T _A = 100°C
Leakage Current (Note 1)	I _R	-	-	0.5 20	mA	@ Rated V _R , T _A = 25°C @ Rated V _R , T _A = 100°C
Total Capacitance	C _T	-	-	100	pF	V _R = 4V, f = 1MHz

Notes: 1. Short duration pulse test used to minimize self-heating effect.

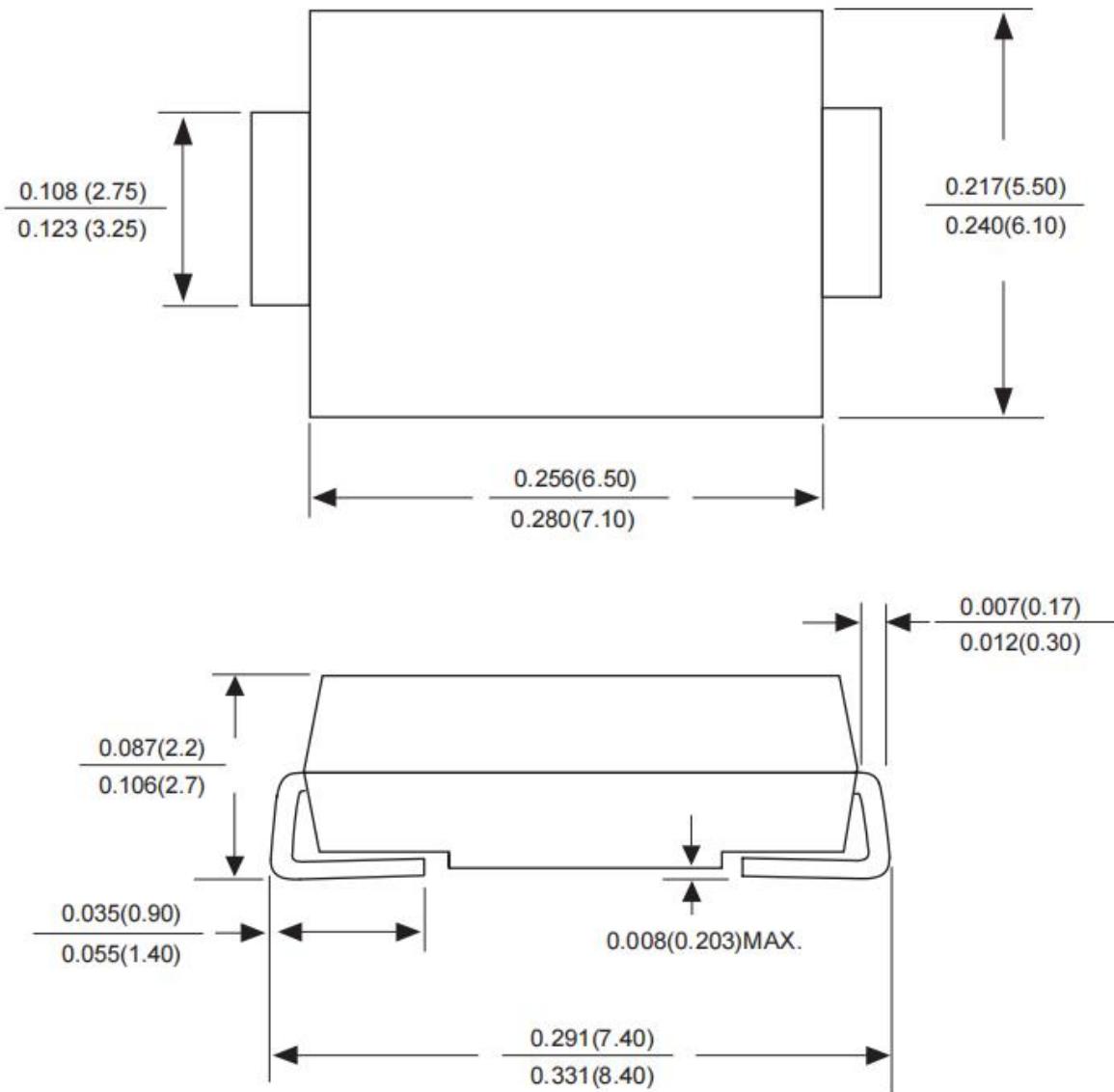
Typical Characteristics





Package Outline Dimensions

SMC



Dimensions in inches and (millimeters)



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