

RoHS Compliant Product

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



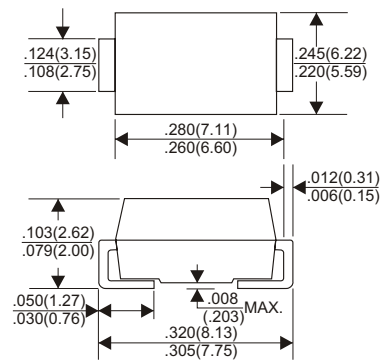
SMC

## FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* Epitaxial construction

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: As Marked
- \* Mounting position: Any
- \* Weight: 1.10 grams(Approximately)



## 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	SM5150C	UNITS
Maximum Recurrent Peak Reverse Voltage	150	V
Working Peak Reverse Voltage	150	V
Maximum DC Blocking Voltage	150	V
Maximum Average Forward Rectified Current		
See Fig. 1	5	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	150	A
Maximum Instantaneous Forward Voltage (I <sub>F</sub> = 5 Amps, T <sub>F</sub> = 25°C)	0.87	V
Maximum Instantaneous Forward Voltage (I <sub>F</sub> = 5 Amps, T <sub>F</sub> = 125°C)	0.72	V
Maximum DC Reverse Current T <sub>a</sub> =25°C	0.02	mA
at Rated DC Blocking Voltage T <sub>a</sub> =125°C	10	mA
Typical Junction Capacitance (Note 1)	350	pF
Typical Thermal Resistance R <sub>θJC</sub> (Note 2)	12	°C/W
Operating Temperature Range T <sub>J</sub>	-50 ~ +150	°C
Storage Temperature Range T <sub>STG</sub>	-65 ~ +175	°C

### NOTES:

1. Measured at 1MHz and applied reverse voltage of 5.0V D.C.
2. Thermal Resistance Junction to Case.

RATING AND CHARACTERISTIC CURVES (SM5150C)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

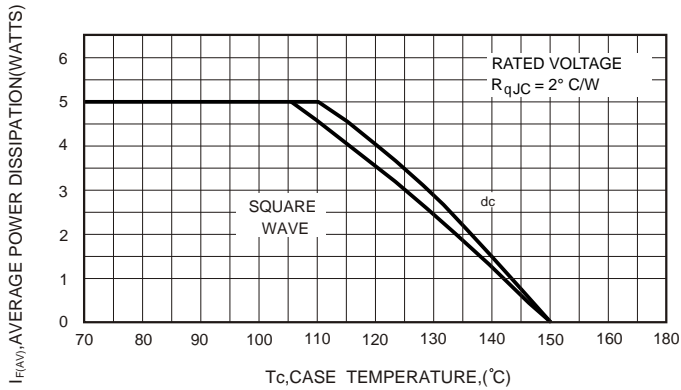


FIG.2- TYPICAL FORWARD VOLTAGE

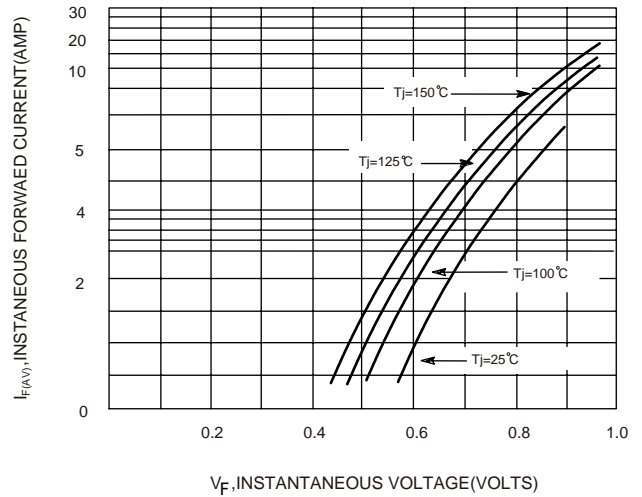


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

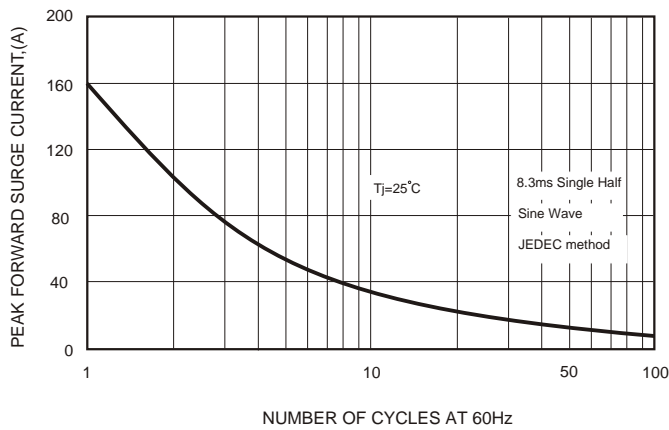


FIG.5-TYPICAL REVERSE CURRENT (PER LEG)

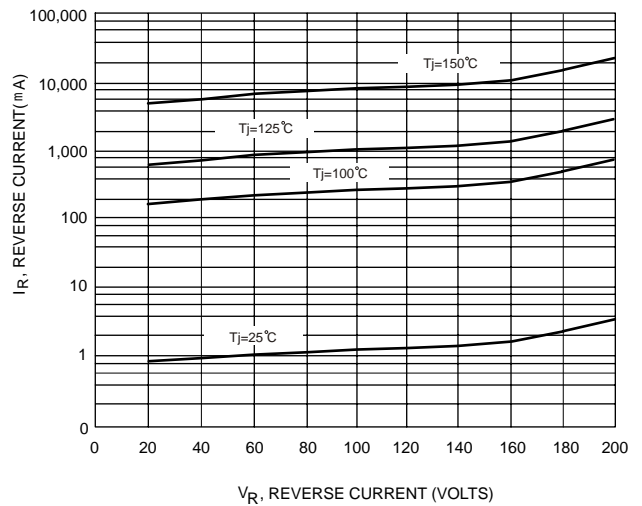


FIG.4-TYPICAL JUNCTION CAPACITANCE

