SMU51C THRU SMU57C

5.0 AMP SURFACE MOUNT SUPER FAST RECTIFIERS



FEATURES

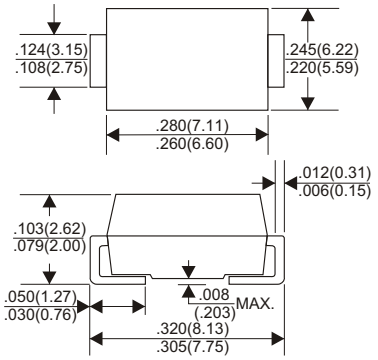
* Ideal for surface mount applications
* Easy pick and place
* Built-in strain relief
* Super fast recovery time for high speed switching

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Metallurgically bonded construction
* Polarity: Color band denotes cathode end
* Mounting position: Any

VOLTAGE RANGE
50 to 600 Volts
CURRENT
5.0 Amperes

DO-214AB(SMC)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature uniess otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	SMU51C	SMU52C	SMU53C	SMU54C	SMU55C	SMU56C	SMU57C	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V
Maximum RMS Voltage	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at T_L=70°C	5.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	150							A
Maximum Instantaneous Forward Voltage at 5.0A	0.98				1.30		1.75	V
Maximum DC Reverse Current Ta=25°C	5.0							μA
at Rated DC Blocking Voltage Ta=100°C	100							μA
Maximum Reverse Recovery Time (Note 1)	35							nS
Typical Junction Capacitance (Note 2)	50							pF
Operating and Storage Temperature Range T_J, T_{STG}	-65 — +150							°C

NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATING AND CHARACTERISTIC CURVES (SMU51C THRU SMU57C)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

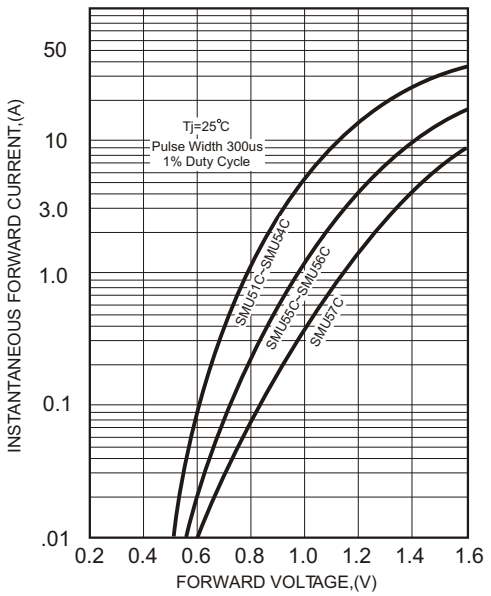


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

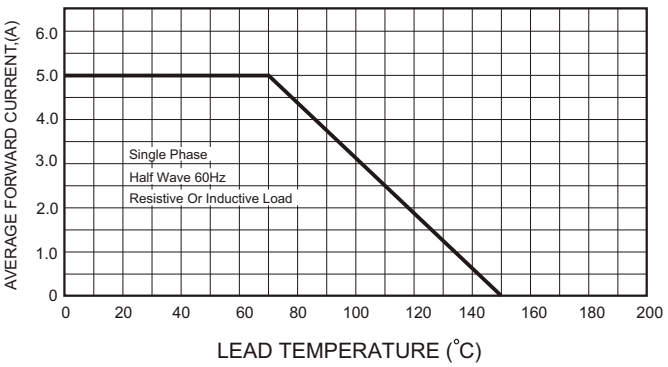
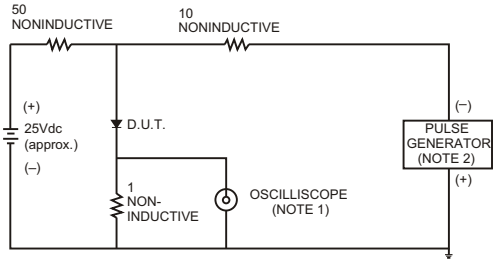
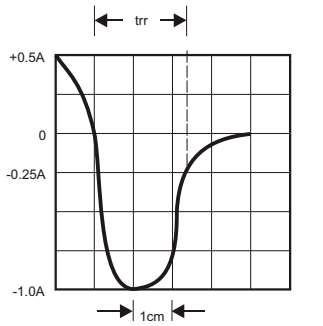


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.



SET TIME BASE FOR

50 / 10ns / cm

FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

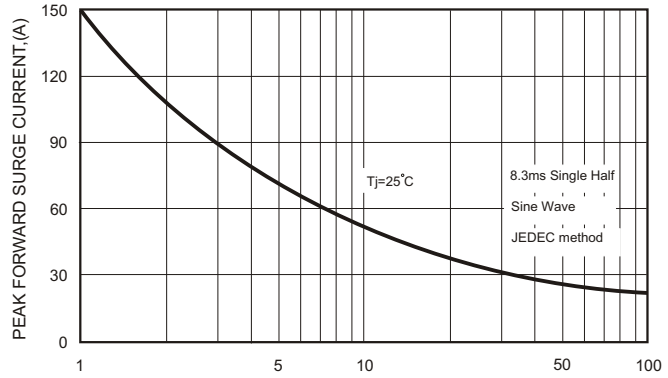


FIG.5-TYPICAL JUNCTION CAPACITANCE

