

US3A THRU US3M



3.0 AMP HIGH EFFICIENCY RECTIFIERS



FEATURES

- * Ideal for surface mount applications
- * Easy pick and place
- * Built-in strain relief
- * High surge current capability

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated, solderable per MIL-STD-202F, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.063 grams
- * Both normal and Pb free product are available:
- * Normal: 80~95%Sn, 5~20%Pb
- * Pb free: 99 Sn above can meet Rohs environment substance directive request

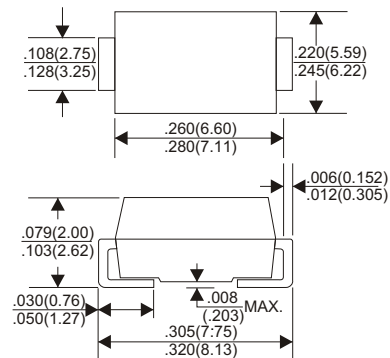
VOLTAGE RANGE

50 to 1000 Volts

CURRENT

3.0 Amperes

DO-214AB(SMC)



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	US3A	US3B	US3D	US3G	US3J	US3K	US3M	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	3.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	200							A
Maximum Instantaneous Forward Voltage at 3.0A	1.0			1.3		1.70		V
Maximum DC Reverse Current Ta=25 C	5							μA
at Rated DC Blocking Voltage Ta=100 C	150							μA
Maximum Reverse Recovery Time (Note 1)	50				75			nS
Typical Junction Capacitance (Note 2)	75							pF
Operating and Storage Temperature Range Tj, TSTG	-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 (US3A THRU RS3M)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

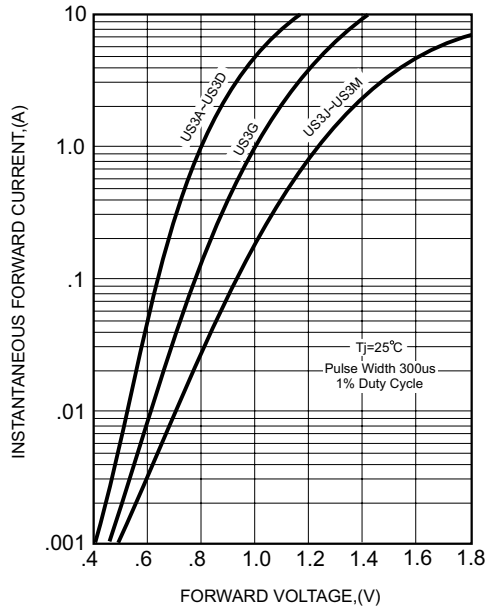


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

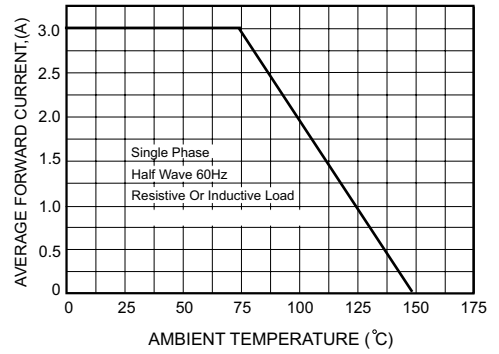
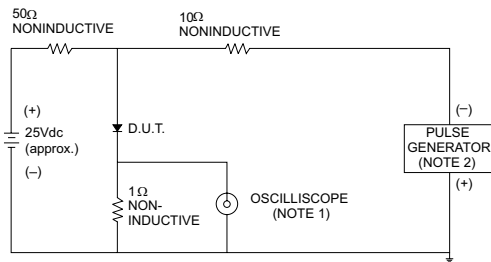


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



- NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

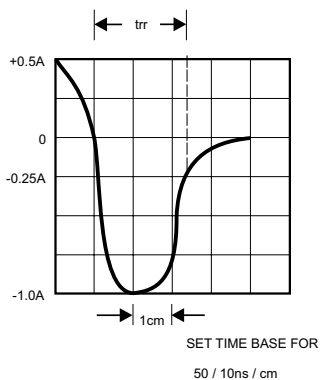


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

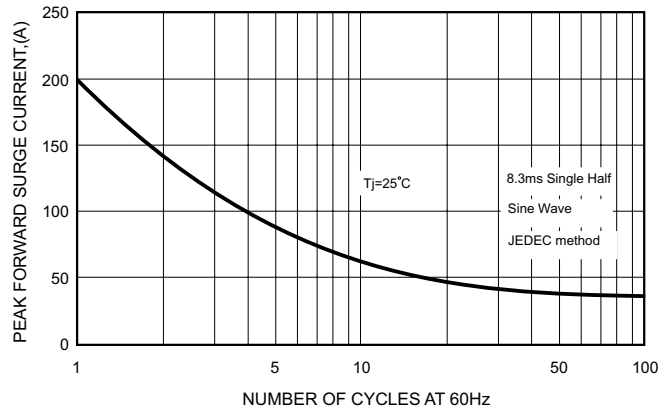


FIG.5-TYPICAL JUNCTION CAPACITANCE

