

ES5A THRU ES5J

5.0 AMP SUPER FAST RECTIFIERS



FEATURES

- * Ideal for surface mount applications
- * Easy pick and place
- * Built-in strain relief
- * High surge current capability
- * Lead Free Finish/RoHS Compliant

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Metallurgically bonded construction
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.215 grams

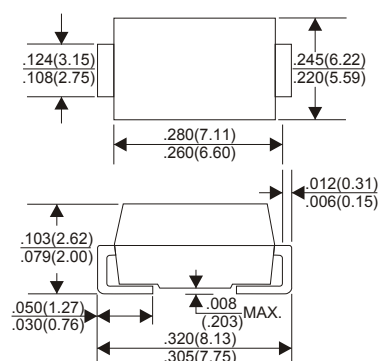
VOLTAGE RANGE

50 to 600 Volts

CURRENT

5.0 Ampere

DO-214AB(SMC)



Dimensions in inches and (millimeters)

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	ES5A	ES5B	ES5C	ES5D	ES5E	ES5G	ES5J	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	5.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	100							A
Maximum Instantaneous Forward Voltage at 3.0A	0.95		1.25			1.70		V
Maximum DC Reverse Current $T_a=25^\circ\text{C}$	5.0							μA
at Rated DC Blocking Voltage $T_a=100^\circ\text{C}$	150							μA
Maximum Reverse Recovery Time (Note 1)	35							nS
Typical Junction Capacitance (Note 2)	25							pF
Operating and Storage Temperature Range T_j, T_{STG}	-65 — +150							$^\circ\text{C}$

NOTES:

1. Reverse Recovery Time test condition: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $IRR=0.25\text{A}$
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATING AND CHARACTERISTIC CURVES (ES5A THRU ES5J)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

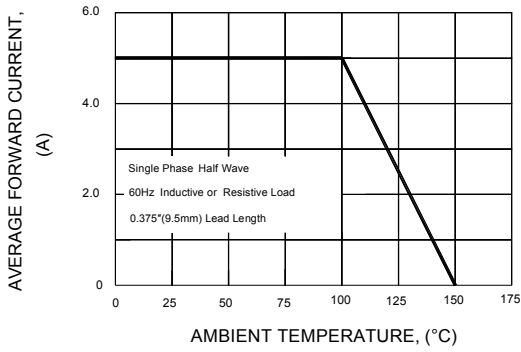


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

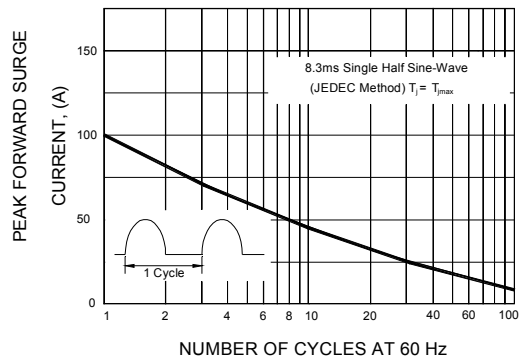


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

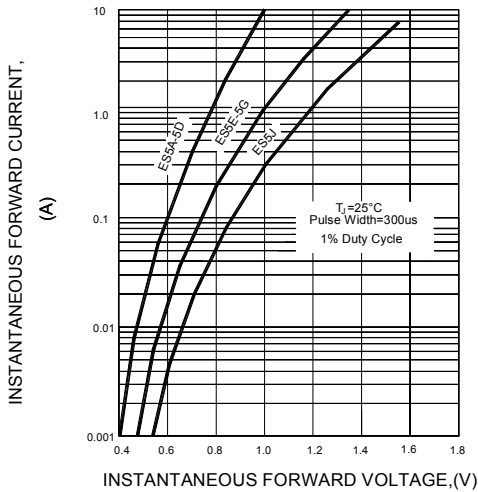


FIG.4-TYPICAL REVERSE CHARACTERISTICS

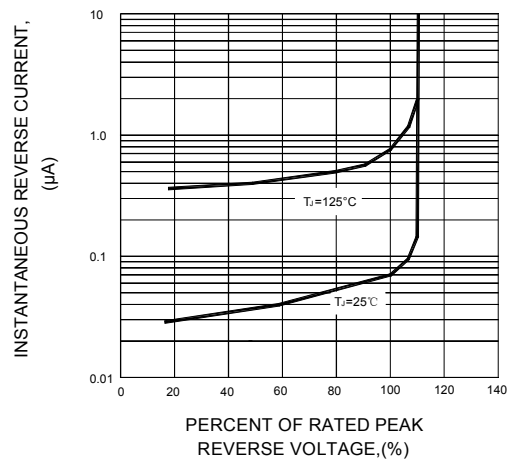


FIG.5-TYPICAL JUNCTION CAPACITANCE

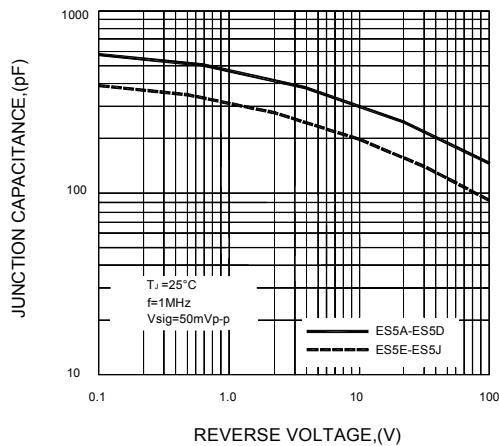
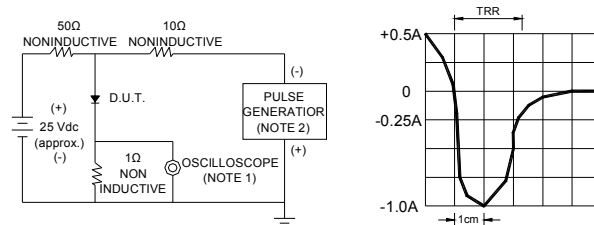


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



- NOTES : 1. Rise Time=7ns max. Input Impedance= 1 megohm. 22pF
 2. Rise time=10ns max. Source Impedance= 50 ohms
- SET TIME BASE FOR 50/100ns/cm