

CURRENT 8.0 Ampere
 VOLTAGE RANG 200 to 600 Volts

ES8DC THRU ES8JC

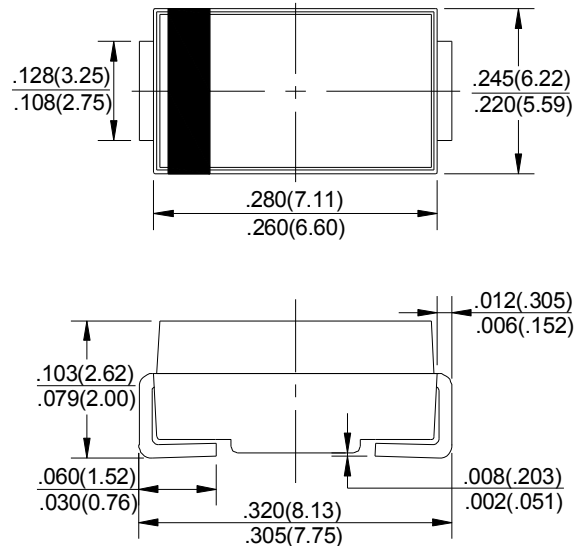
Features

- ✧ Special for Automotive LED/HID lamp
- ✧ For surface mounted application
- ✧ Low profile package
- ✧ Built-in strain relief
- ✧ Ideal for automated placement
- ✧ Easy pick and place
- ✧ Superfast recovery time for high efficiency
- ✧ Glass passivated chip junction
- ✧ High temperature soldering:
260 °C/10 seconds at terminals
- ✧ Plastic material used carries Underwriters
Laboratory Classification 94V-0

Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Terminals: Pure tin plated, lead free.
- ✧ Polarity: Indicated by cathode band
- ✧ Packing: 12mm tape per EIA STD RS-481
- ✧ Weight: 0.21 gram

DO-214AB/SMC



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

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

Type Number	Symbol	ES8D	ES8G	ES8J	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	V
Maximum RMS Voltage	V_{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	V
Maximum Average Forward Rectified Current See Fig. 1	$I_{(AV)}$	8.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	125			A
Maximum Instantaneous Forward Voltage @ 8.0A	V_F	0.98	1.3	1.7	V
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_R	10 350			μA μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	35			nS
Typical Junction Capacitance (Note 2)	C_j	45	30		pF
Maximum Thermal Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	75 20			$^\circ\text{C}/\text{W}$
Operating Temperature Range	T_J	-55 to +150			$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150			$^\circ\text{C}$

- Notes:
1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
 2. Measured at 1 MHz and Applied $V_R = 4.0$ Volts
 3. Units Mounted on P.C.B. 0.4" x 0.4" (10mm x 10mm) Pad Areas

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RATING AND CHARACTERISTIC CURVES ES8D Thru ES8J

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

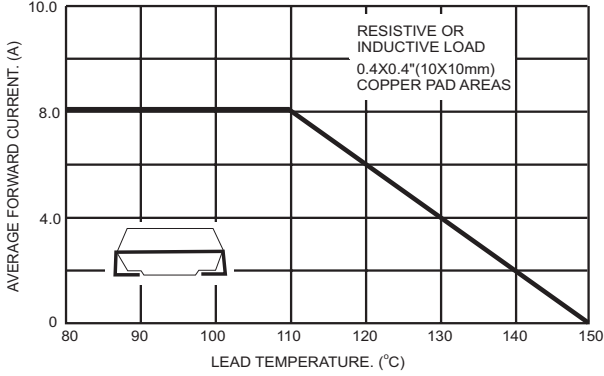


FIG.2- TYPICAL REVERSE CHARACTERISTICS

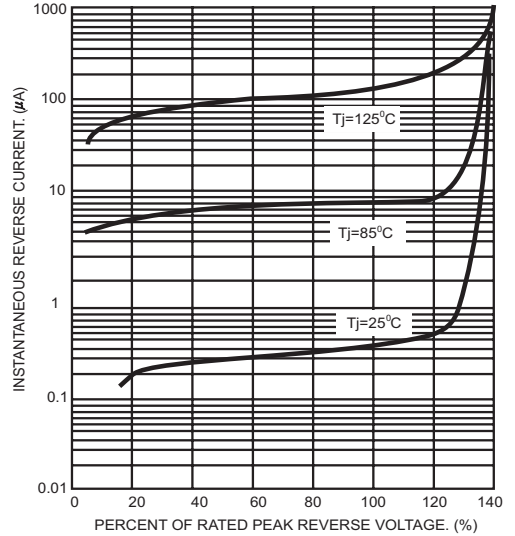


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

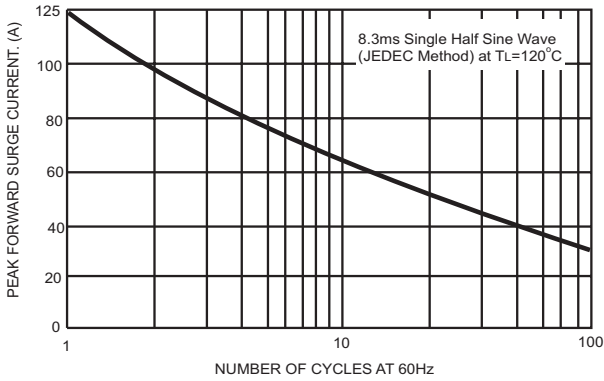


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

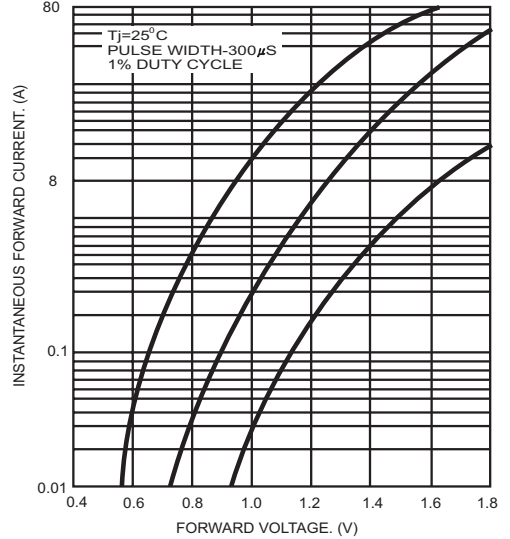


FIG.4- TYPICAL JUNCTION CAPACITANCE

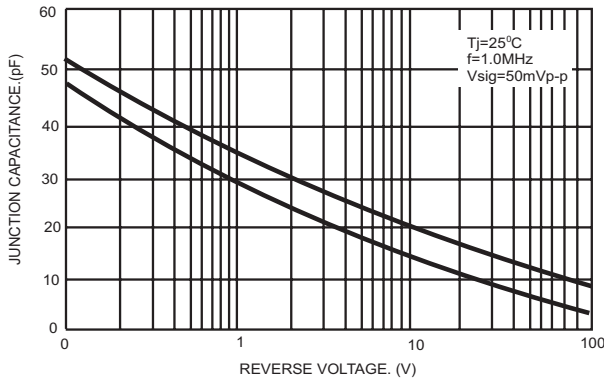
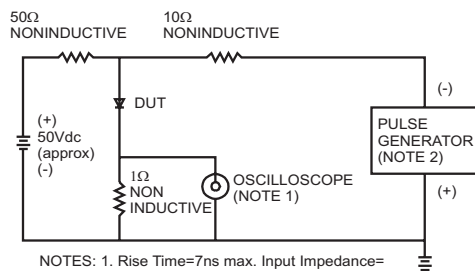


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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

