



SURFACE MOUNT GLASS PASSIVATED RECTIFIER

ES3A THRU ES3J

**VOLTAGE RANGE
CURRENT**

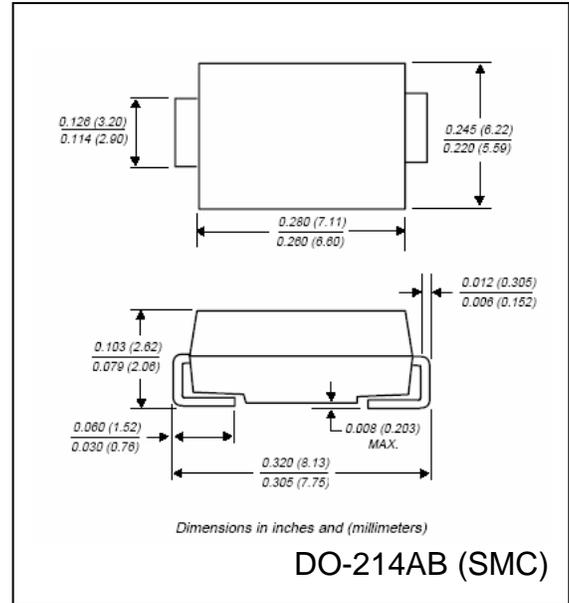
**50 to 600 Volts
3.0 Ampere**

FEATURES

- Plastic package has UL flammability classification 94V-0
- Glass passivated chip junction
- Built in strain relief
- Super Fast switching speed for high efficiency
- High temperature Soldering guaranteed: 260 °C / 10 seconds

MECHANICAL DATA

- Case: JEDEC DO-214AB transfer molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.007 ounce, 0.25 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3J	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current, At $T_A = 55^\circ\text{C}$ (Note 1)	$I_{(AV)}$	3.0							Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	100							Amps
Maximum Instantaneous Forward Voltage @ 3.0A	V_F	0.95			1.25		1.7	Volts	
Maximum DC Reverse Current at Rated $T_A = 25^\circ\text{C}$	I_R	5.0							μA
DC Blocking Voltage per element $T_A = 125^\circ\text{C}$		300							
Maximum Reverse Recovery Time Test conditions $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$	t_{rr}	35							nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	45			30				pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	55							$^\circ\text{C/W}$
	$R_{\theta JL}$	17							
Operating Junction Temperature Range	T_J	(-55 to +150)							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-55 to +150)							$^\circ\text{C}$

Notes:

1. Thermal resistance from junction to ambient and from junction to lead mounted on PCB with 0.3" x 0.3" (8.0mm x 8.0mm) copper pad areas.

RATINGS AND CHARACTERISTIC CURVES ES3A THRU ES3J

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

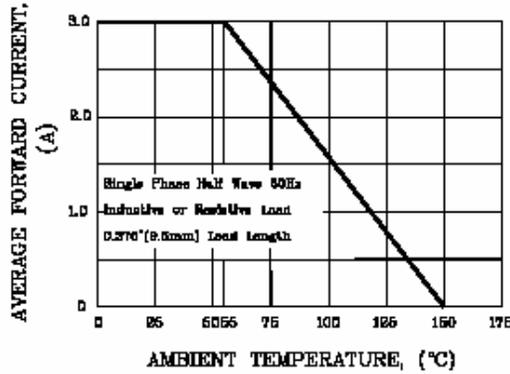


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

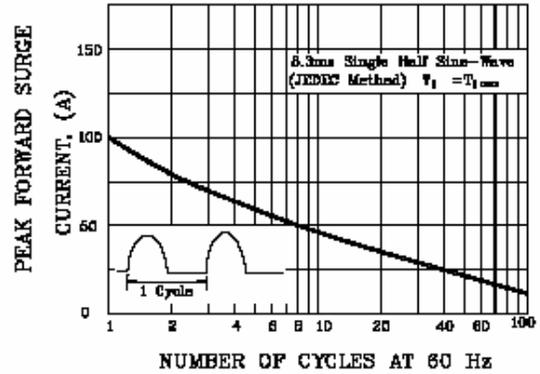


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

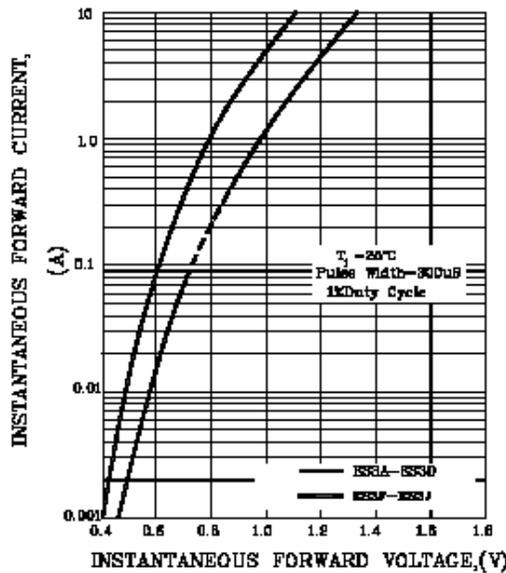


FIG.4-TYPICAL REVERSE CHARACTERISTICS

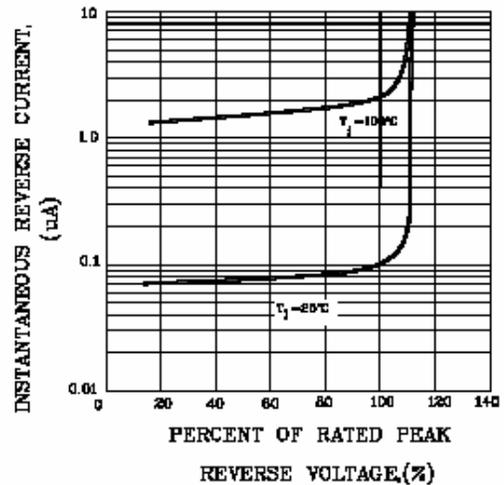


FIG.5-TYPICAL JUNCTION CAPACITANCE

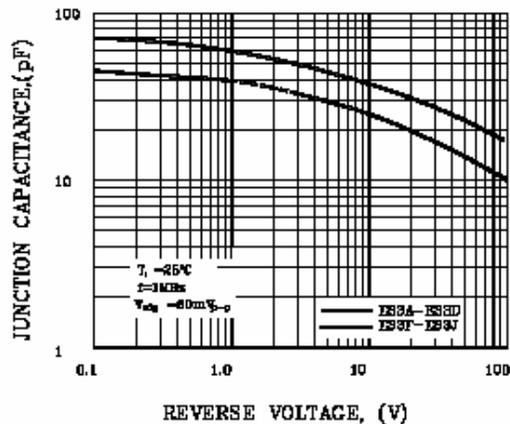


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

