

ES3A-B THRU ES3J-B

SURFACE MOUNT FAST ULTRAFAST RECTIFIER

VOLTAGE: 50 to 600V

CURRENT: 3.0A

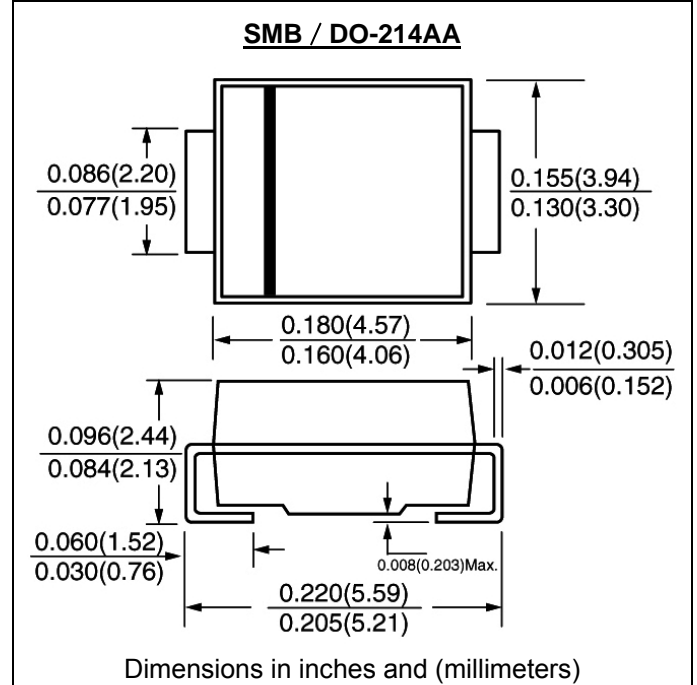


FEATURE

Ideal for surface mount pick and place application
 Low profile package
 Built-in strain relief
 High surge capability
 High temperature soldering guaranteed
 260°C/10sec/at terminals
 Glass passivated chip
 Ultrafast recovery time for high efficiency

MECHANICAL DATA

Terminal: Solder plated, solderable per J-STD-002
 Case: JEDEC DO-214AA molded plastic body over passivated chip
 Polarity: color band denotes cathode



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	SYMBOL	ES3 A-B	ES3 B-B	ES3 C-B	ES3 D-B	ES3F -B	ES3 G-B	ES3J -B	units
Maximum Recurrent Peak Reverse Voltage	V _{rrm}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V _{rms}	35	70	105	140	210	280	420	V
Maximum DC blocking Voltage	V _{dc}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified at T _L =100°C	I _{f(av)}	3.0							A
Peak Forward Surge Current 8.3ms single half sine- wave superimposed on rated load	I _{fsm}	100.0							A
Maximum Instantaneous Forward Voltage at rated forward current	V _f	0.90				1.0	1.25	1.7	V
Maximum DC Reverse Current at rated DC blocking voltage T _a =25°C T _a =100°C	I _r	10.0 500.0							μA
Maximum Reverse Recovery Time (Note1)	T _{rr}	20				25	35	nS	
Typical Junction Capacitance (Note 2)	C _j	45.0							pF
Typical Thermal Resistance (Note 3)	R _{th(jl)}	20.0							°C/W
Storage and Operating Junction Temperature	T _{stg} , T _j	-55 to +150							°C

Note:

- Reverse Recovery Condition I_f =0.5A, I_r =1.0A, I_{rr} =0.25A
- Measured at 1.0 MHz and applied reverse voltage of 4.0V_{dc}
- Thermal Resistance from Junction to terminal mounted on 7×7mm copper pad area

Fig. 1 – Maximum Forward Current Derating Curve

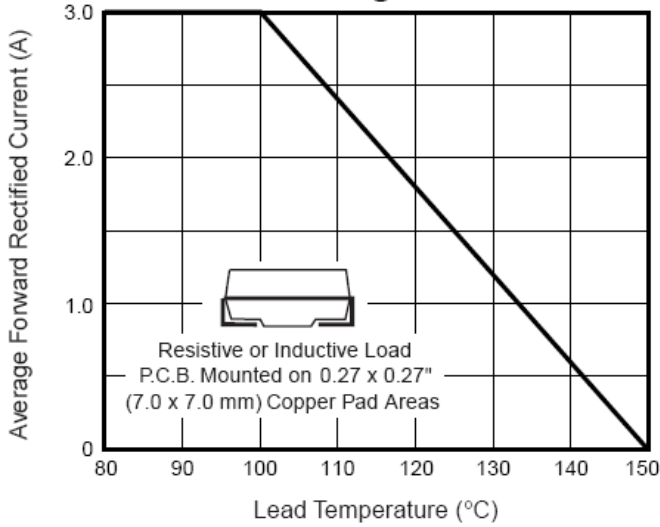


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

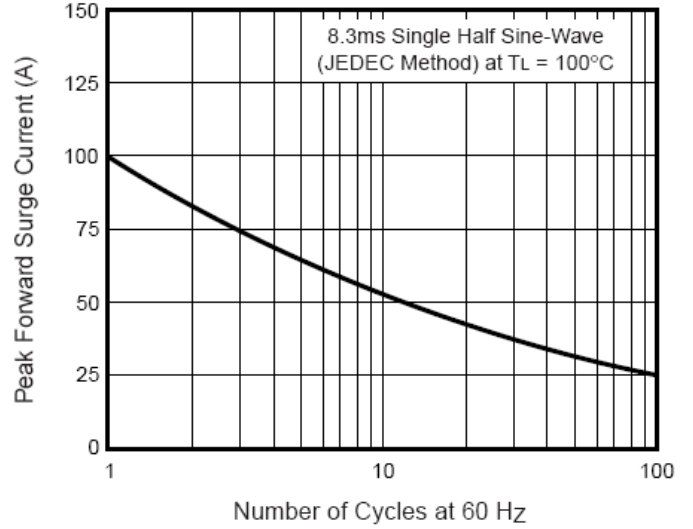


Fig. 3 – Typical Instantaneous Forward Characteristics

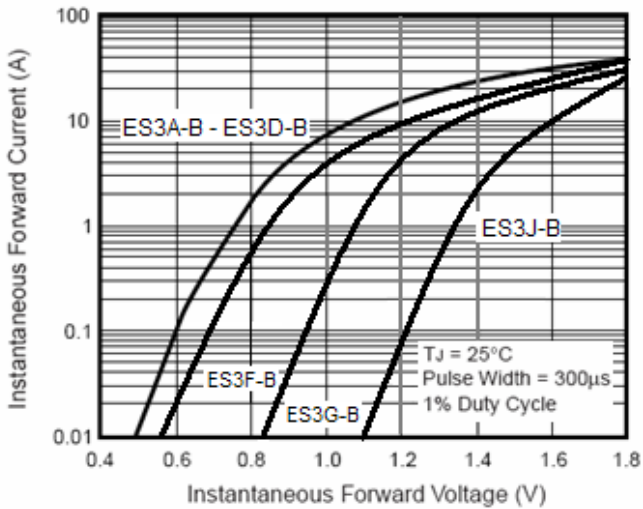


Fig. 4 – Typical Reverse Leakage Characteristics

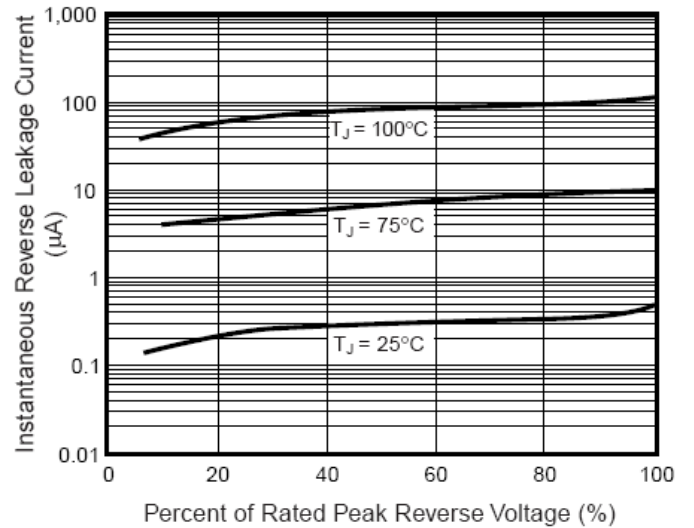


Fig. 5 – Typical Junction Capacitance

