



ES3AB thru ES3MB

Super Fast Surface Mount Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 3.0 Amperes

Features

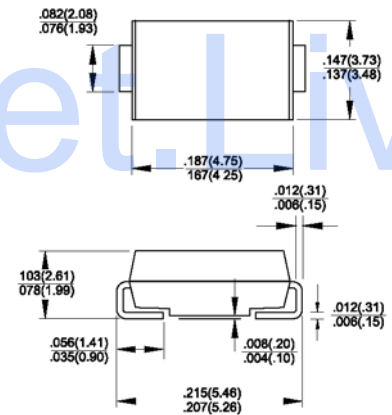
- ◆ Glass passivated chip
- ◆ Super fast switching for high efficiency
- ◆ For surface mounted applications
- ◆ Low forward voltage drop and high current capability
- ◆ Low reverse leakage current
- ◆ Plastic material has UL flammability classification 94V-0



DO-214AA (SMB)

Mechanical Data

- ◆ Case : Molded plastic
- ◆ Polarity : Color band denote cathode
- ◆ Weight : 0.003 ounce, 0.093 gram



Dimensions in inches and (millimeters)

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%

Parameter	Symbols	ES 3AB	ES 3BB	ES 3CB	ES 3DB	ES 3FB	ES 3GB	ES 3JB	ES 3KB	ES 3MB	Units	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	800	1000	Volts	
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	560	700	Volts	
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	800	1000	Volts	
Maximum average forward rectified current @ $T_L=100^\circ\text{C}$	$I_{(AV)}$	3.0									Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100.0									Amps	
Maximum forward voltage @ 3.0A DC	V_F	0.92			1.25			1.7			Volts	
Maximum DC reverse current at rated DC blocking voltage @ $T_J=25^\circ\text{C}$ @ $T_J=125^\circ\text{C}$	I_R					10.0		500				μA μA
Maximum reverse recovery time (Note 1)	t_{rr}					25						nS
Typical junction capacitance (Note 2)	C_j					45						pF
Typical thermal resistance (Note 3) (Note 4)	$R_{\theta JL}$ $R_{\theta JA}$					10		50				$^\circ\text{C/W}$
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. 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 1.0MHz and applied reverse voltage of 4.0V DC.
 3. Thermal Resistance junction to Lead.
 4. Thermal Resistance junction to Ambient.

RATINGS AND CHARACTERISTIC CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

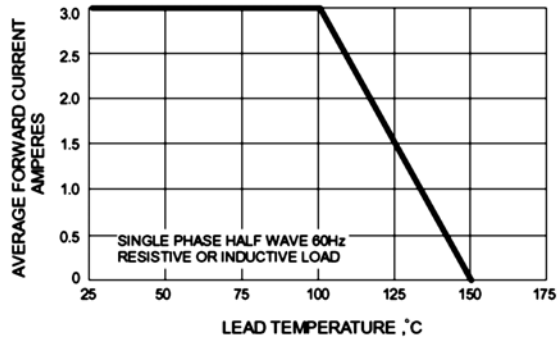


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

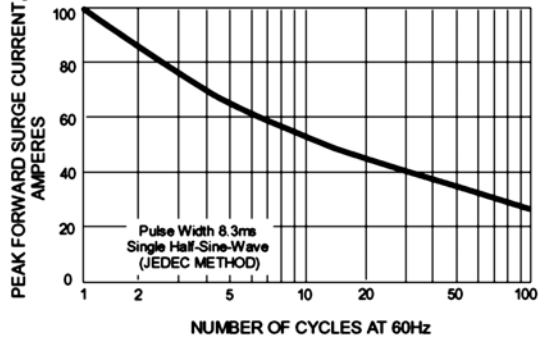


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

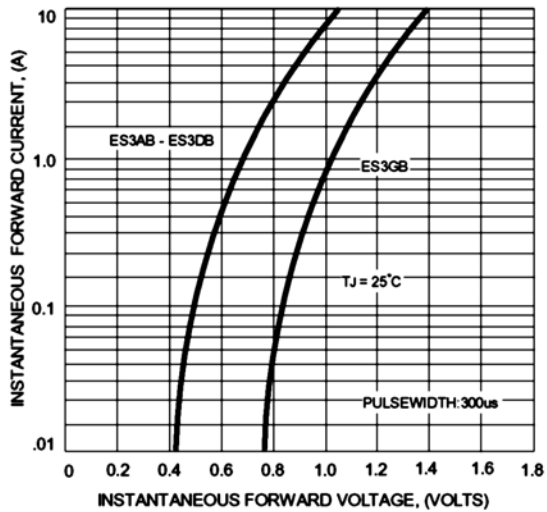


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

