ES3AB thru ES3MB

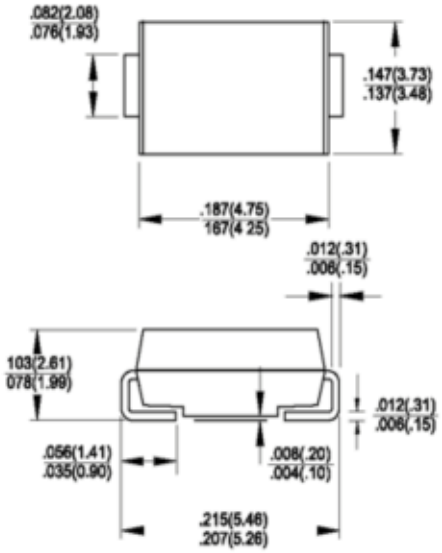
Super Fast Surface Mount Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 3.0 Amperes

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)



Dimensions in inches and (millimeters)

Mechanical Data

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

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°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 @ T_J=25°C at rated DC blocking voltage @ T_J=125°C	I_R	10.0 500									uA uA
Maximum reverse recovery time (Note 1)	t_{rr}	35									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									°C/W
Operating junction temperature range	T_J	-55 to +150									°C
Storage temperature range	T_{STG}	-55 to +150									°C

Notes: 1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
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

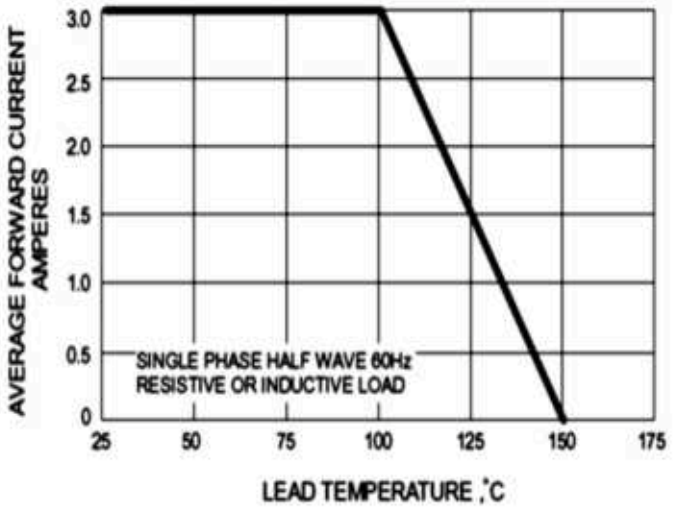


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

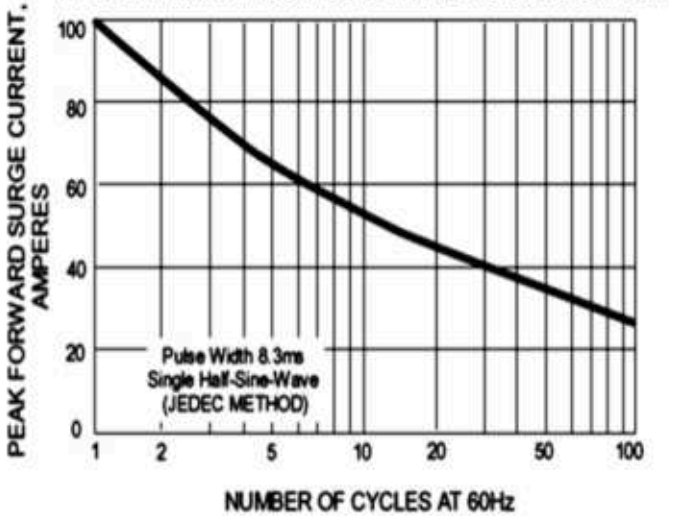


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

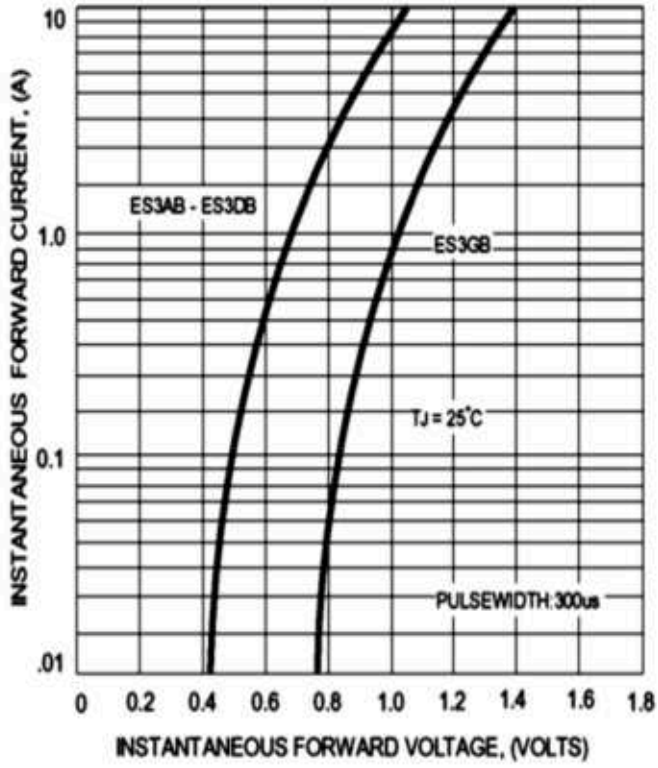


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

