



# ES3ABT THRU ES3JBT

## SURFACE MOUNT GLASS PASSIVATED JUNCTION SUPER FAST RECOVERY RECTIFIER

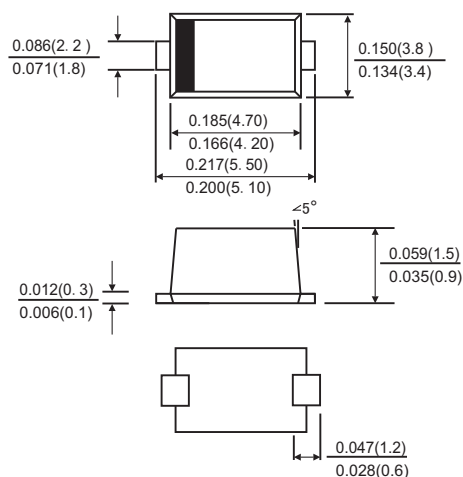
Reverse Voltage: 50 to 600 Volts  
Forward Current: 3.0 Amperes

### FEATURES

- Glass passivated
- Ideal for surface mount automotive applications
- Ultrafast recovery time for high efficiency
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Lead (Pb)-free component
- Component in accordance to RoHS 2011/65/EU
- High temperature soldering guaranteed: 260°C/10 seconds at terminals



### SMBF



### MECHANICAL DATA

- Case: SMBF molded plastic body
- Terminals: solder plated, solderable per MIL-STD-750, method 2026
- Polarity: color band denotes cathode end

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Dimensions in inches and (millimeters)

(Rating 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	ES3							Units	
		ABT	BBT	CBT	DBT	EBT	GBT	JBT		
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 $T_L=110^\circ\text{C}$	$I_{(AV)}$	3.0							Amps	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	100							Amps	
Maximum Instantaneous Forward Voltage at 3.0 A	$V_F$	1.0				1.25		1.7	Volts	
Maximum DC Reverse Current At Rated DC Blocking Voltage	$T_A=25^\circ\text{C}$	$I_R$	5							$\mu\text{A}$
	$T_A=125^\circ\text{C}$		100							
Maximum Reverse Recovery Time(Note 1)	$t_{rr}$	35							ns	
Typical Thermal Resistance (NOTE2)	$R_{\theta JA}$	55							$^\circ\text{C}/\text{W}$	
Operating Junction and Storage Temperature	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$	

Note: 1. Reverse Recovery Test conditions:  $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{RR}=0.25\text{A}$ .  
2. P. C. B. mounted with 0.5x0.5" (12.7x12.7mm) Copper Pad Areas.

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## RATINGS AND CHARACTERISTIC CURVES ES3ABT

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

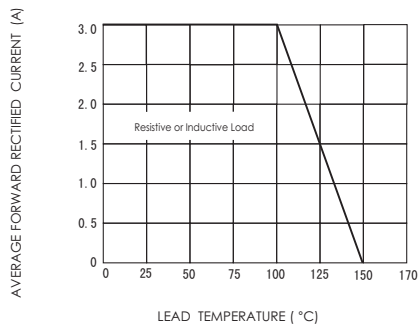


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

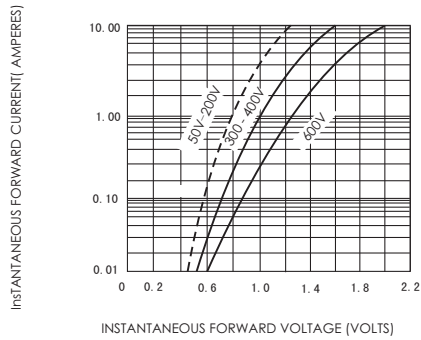


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

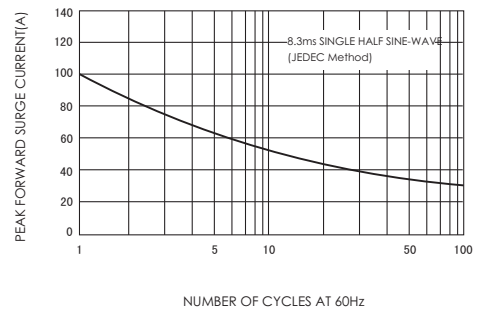
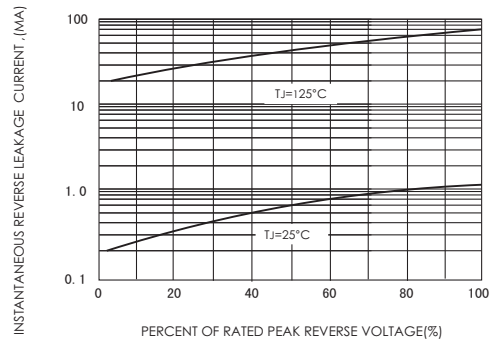


FIG.4-TYPICAL REVERSE CHARACTERISTICS



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