

# Super Fast Recovery Rectifiers

## ER3A THRU ER3K 50 to 800 V 3.0 A

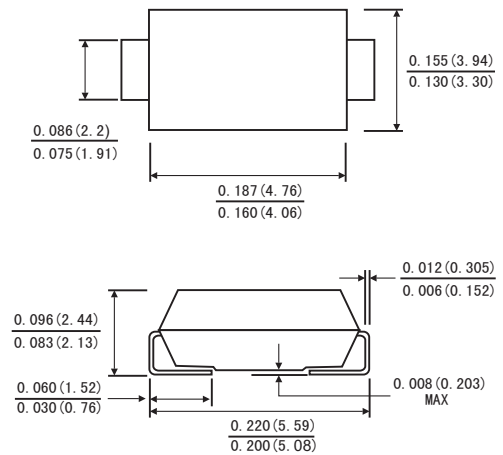
### FEATURES

- 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 2002/95/EC and WEEE 2002/96/EC
- High temperature soldering guaranteed:260°C/10 seconds at terminals

### MECHANICAL DATA

- Case: JEDEC SMB(DO-214AA) molded plastic body
- TerMInals: solder plated ,solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight: 0.003ounce,0.093 gram

### SMB(DO-214AA)



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(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
		A	B	D	F	G	J	K	
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	300	400	600	800	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	210	280	420	560	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	300	400	600	800	Volts
Maximum Average Forward Rectified Current T <sub>L</sub> =110°C	I <sub>t(AV)</sub>	3.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	100							Amps
Maximum Instantaneous Forward Voltage at 3.0 A <sub>r</sub>		0.95		1.25		1.7	2.2	Volts	
Maximum DC Reverse Current At Rated DC Blocking Voltage	T <sub>A</sub> =25°C	10							μA
	T <sub>A</sub> =125°C	500							
Maximum Reverse Recovery Time(Note1)	T <sub>rr</sub>	35							ns
Typical Junction Capacitance(Note2)	C <sub>j</sub>	45							pF
Typical Thermal Resistance (NOTE3)	R <sub>θ JA</sub>	16							°C/W
Operating Junction and Storage Temperature	T <sub>range</sub> T <sub>STG</sub>	-55 to+150							°C

Note: 1.Reverse Recovery Test conditions: I<sub>F</sub>=0.5A,I<sub>R</sub>=1.0A,I<sub>RR</sub>=0.25A.

2.Measured at 1MHz and applied reverse voltage of 4.0 Volts.

3. Thermal Resistance From Junction To Ambient P. C. B. Mounted On 0.2x0.2" (5.0x5.0mm) Copper Pad Areas.

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FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

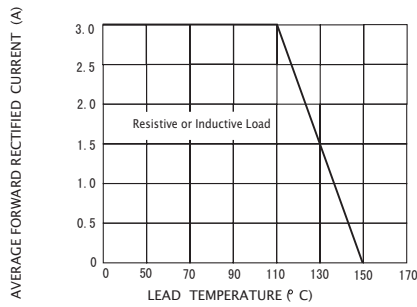


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

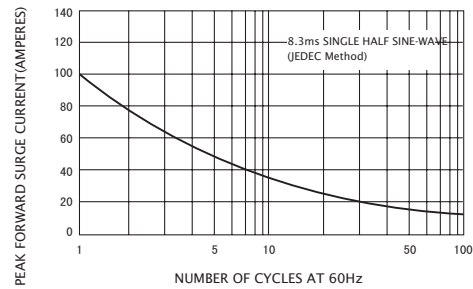


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

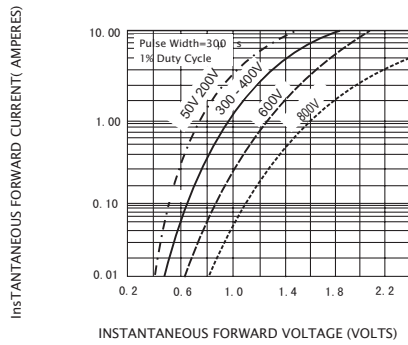


FIG.4-TYPICAL REVERSE CHARACTERISTICS

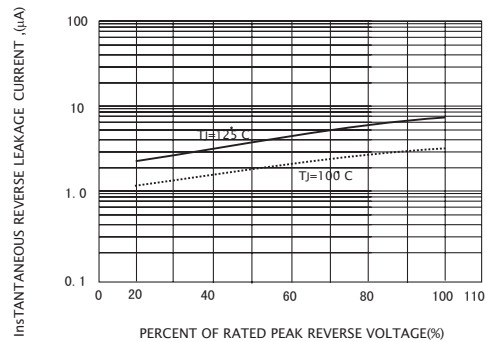


FIG.5-TYPICAL JUNCTION CAPACITANCE

