

Surface Mount Super Fast Glass Passivated Rectifier

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Features

- Super fast switching time for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

Mechanical Data

Case	: Molded Plastic
Polarity	: Colour band denotes cathode
Weight	: 0.007 ounces, 0.093 grams
Mounting Position	: Any
Forward Current	: 3 Amperes

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%

Characteristics	Symbol	ES3BB+	ES3DB+	Unit
Max. Recurrent Peak Reverse Voltage	V_{RRM}	100	200	V
Max. RMS Voltage	V_{RMS}	70	140	V
Max. DC Blocking Voltage	V_{DC}	100	200	V
Max. Average Forward Rectified Current @ $T_A = 50^\circ\text{C}$	$I_{(AV)}$	3		A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	I_{FSM}	100		A
Peak Forward Voltage at 3A DC	V_F	0.95		V
Maximum DC Reverse Current @ $T_J = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_J = 100^\circ\text{C}$	I_R	5 100		μA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	35		nS
Typical Junction Capacitance (Note 2)	C_J	70		pF
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	20		$^\circ\text{C/W}$
Operating Temperature Range	T_J	-55 to +150		$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150		$^\circ\text{C}$

- Notes :**
1. Measured with $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$
 2. Measured at 1MHz and applied reverse voltage of 4V DC
 3. Thermal resistance junction to lead
 4. The typical data above is for reference only

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Rating and Characteristic Curves

FIG. 1 – FORWARD CURRENT DERATING CURVE

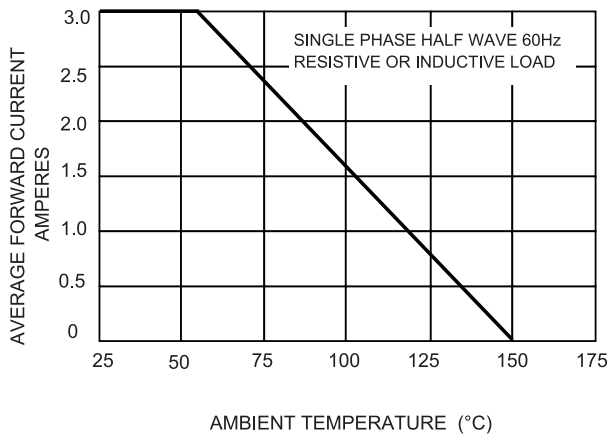


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

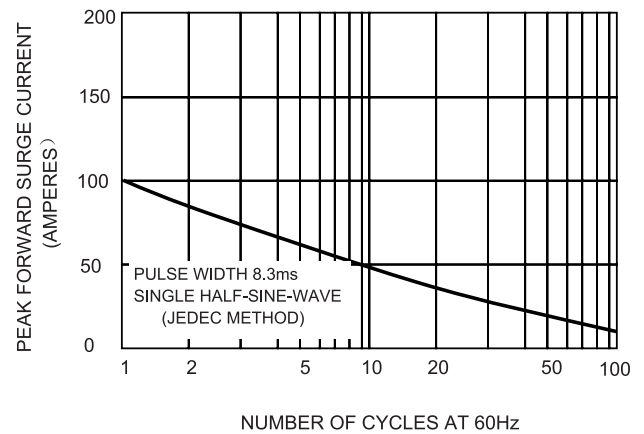


FIG. 3 – TYPICAL JUNCTION CAPACITANCE

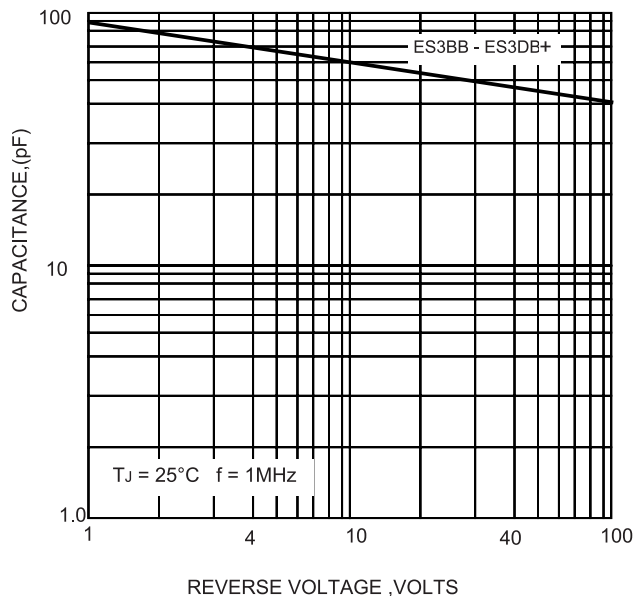
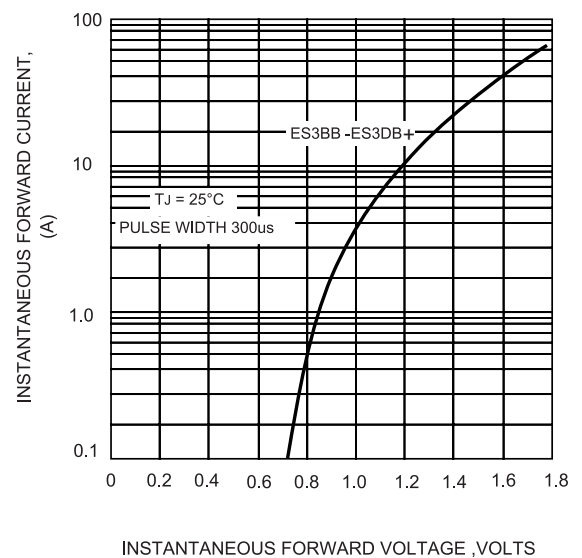


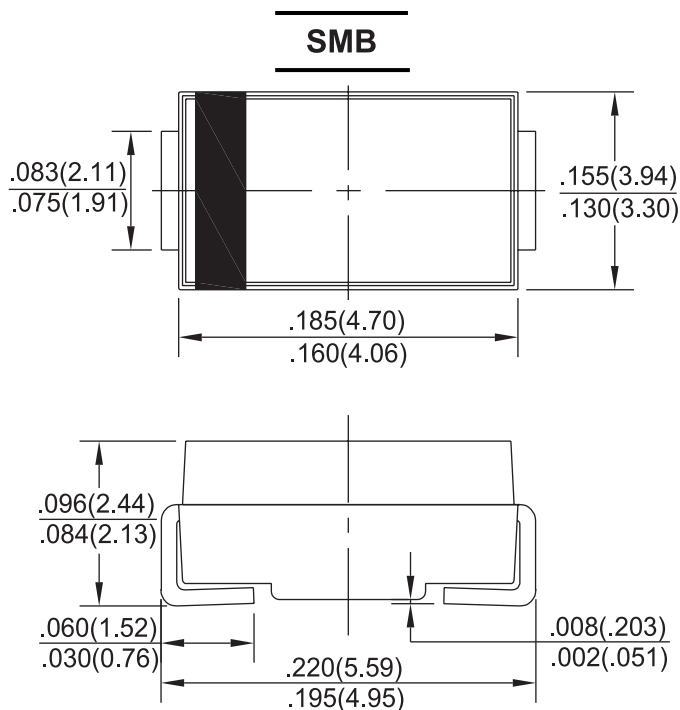
FIG.4-TYPICAL FORWARD CHARACTERISTICS



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Dimensions:



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Super Fast Diode, 3A 100V SMB	ES3BB+
Super Fast Diode, 3A 200V SMB	ES3DB+

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