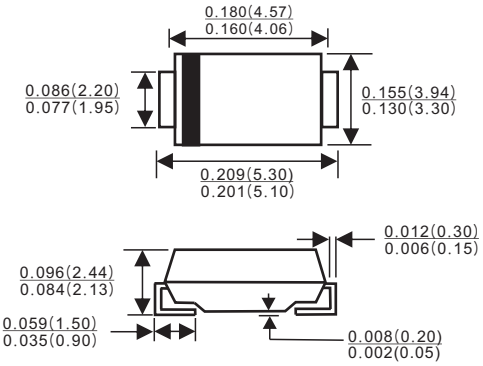
ES3MB

3.0AMP Glass Passivated Super Fast Rectifiers

SMB

Features

- ◇ High efficiency,low VF
- ◇ High current capability
- ◇ High reliability
- ◇ High surge current capability
- ◇ Low power loss
- ◇ Low power loss,high effiency
- ◇ High current capability
- ◇ For use in low voltagek,high frequency inventor,free Wheeling,and polarity protection application.



Dimensions in inches and (millimeters)

Mechanical Data

- ◇ Case:Molded plastic
- ◇ Epoxy:UL 94V-0 rated flame retardant
- ◇ Polarity:Color band denotes cathode
- ◇ High temperature soldering guaranteed: 260℃/10 seconds/.375”,(9.5mm) lead Lengths at 5 lbs.,(2.3kg) tension
- ◇ Mounting position:ANY
- ◇ Weight:0.093 gram

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient tepmerature unless otherwise specified.
Single phase,half wave,60Hz,resistive or inductive load.
For capacitive load,derate current by 20%

Type Number	Symbol	ES3MB	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS voltage	V_{RMS}	700	V
Maximum DC blocking voltage	V_{DC}	1000	V
Maximum Average Forward Rectified Current .375(9.5mm) Lead Length @TA=90℃	$I_{F(AV)}$	3.0	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load(JEDEC method)	I_{FSM}	100	A
I^2t Rating for Fusing (t < 8.3ms)	I^2T	41.5	A^2s
Maximum Instantaneous Forward Voltage @3.0A	V_F	1.7	V
Maximum DC Reverse current @T_A=25℃ at Rated DC Blocking Voltage @ T_A=125℃	I_R	5.0 100	μA
Maximum Reverse Recovery Time(IF=0.5A,IR=1.0A,IRR=0.25A)	Trr	75	nS
Typical junction capacitance: VR=4.0v,f=1MHz	C_J	50	pF
Maximum thermal resistance	$R_{\Theta JA}$	70	℃/W
(PCB mounted on 0.2x0.2”(5.0x5.0mm)copper pad area)	$R_{\Theta JL}$	15	℃/W
Operating temperature range	T_J	-55 to +150	℃
Storage temperature range	T_{STG}	-55 to +150	℃

ES3MB

Surface Mount Rectifiers

Ratings AND Charactieristic Curves

FIG.1 – FORWARD CURRENT DERATING CURVE

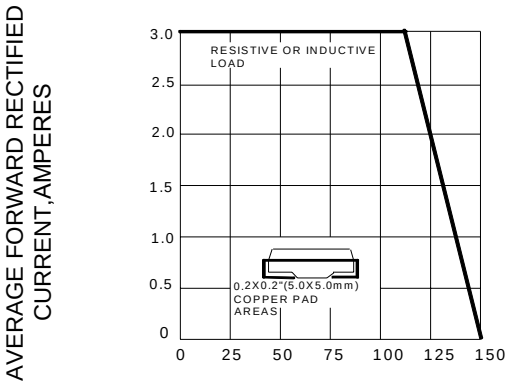


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

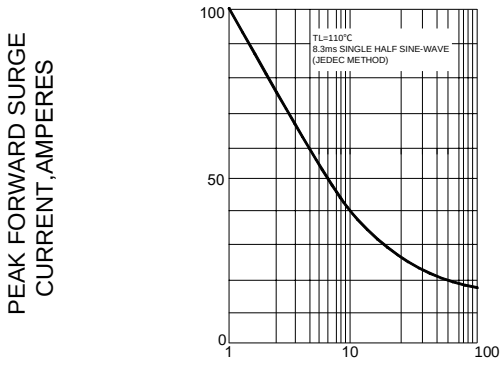


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

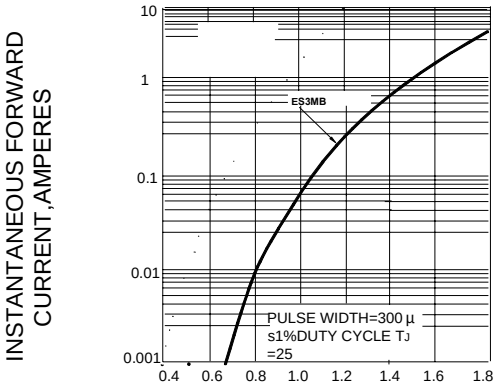


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

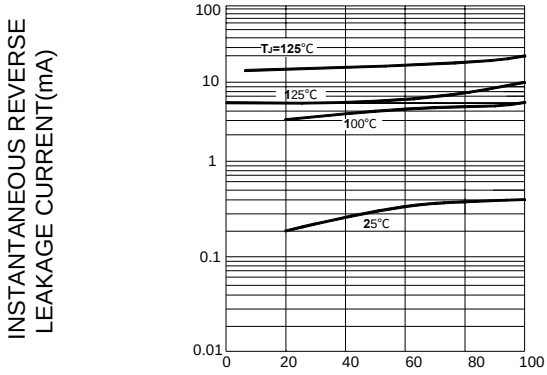


FIG.5 – TYPICAL JUNCTION CAPACITANCE

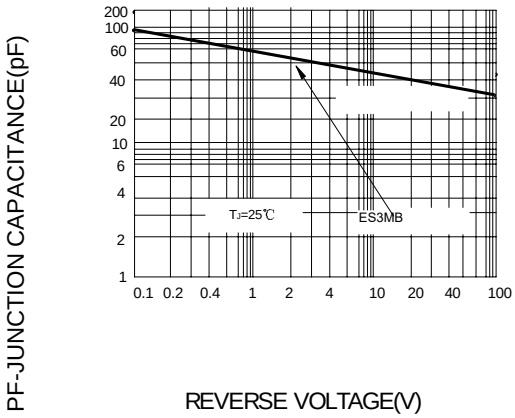
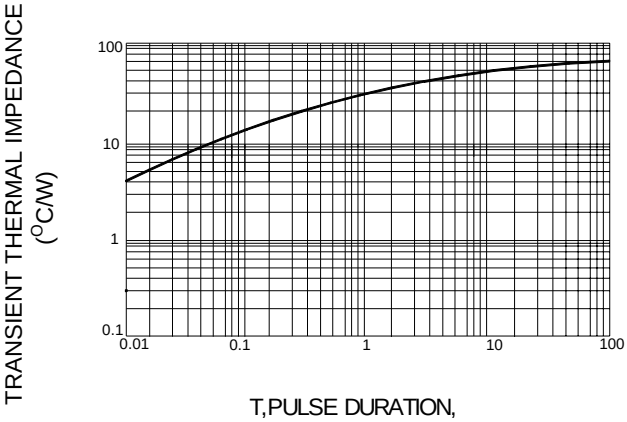


FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMB	3000/REEL	48000	36X35.8X36.5	12.00	11.00