

Surface Mount Super Fast Recovery Rectifier

ES3AB—ES3JB

Features

- ◆ Low profile package
- ◆ Ideal for automated placement
- ◆ Glass passivated chip junction
- ◆ High forward surge capability
- ◆ Super fast reverse recovery time

Mechanical Data

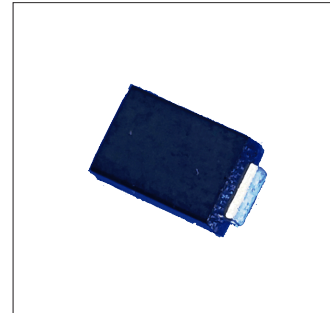
Case: SMB Molded plastic body

Terminals: Plated leads solderable per MIL-STD-750,
Method 2026

High temperature soldering guaranteed: 260°C/10 seconds

Polarity: Cathode line denotes the cathode end

Mounting Position: Any



Maximum Ratings & Electrical Characteristics

Ratings at TA = 25°C unless otherwise specified

Characteristic	Symbol	ES3AB	ES3BB	ES3DB	ES3FB	ES3GB	ES3JB	Units
Peak repetitive reverse voltage	VRRM	50	100	200	300	400	600	V
RMS reverse voltage	VRMS	35	70	140	210	280	420	V
DC blocking voltage	VDC	50	100	200	300	400	600	V
Maximum average forward output current	IF(AV)	3						A
Peak forward surge current, 8.3ms single half-sine-wave, @TJ = 25°C	IFSM	100						A
Rating for fusig (t<8.3ms)	I2t	41.7						A2sec
Maximum instantaneous forward voltage @ 3A	VF	0.95		1.3		1.7		V
Maximum reverse recovery time (Note 1)	Trr	35						nS
Maximum Reverse current @TA =25°C Rated VR @TA =125°C	IR	10 200						μ A

Thermal Characteristics

Characteristic	Symbol	ES3AB	ES3BB	ES3DB	ES3FB	ES3GB	ES3JB	Units
Typical thermal resistance (Note 2)	R θJA	75						°C /W
	R θJL	25						
Operating junction temperature range	TJ	- 55 ---- + 150						°C
Storage temperature range	TSTG	- 55 ---- + 150						°C

Note:

(1) IF=0.5A, IR=1A, IRR=0.25A

(2) Units mounted on P.C.B. with 8.0 x 8.0 mm land areas.

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Ratings and Characteristic Curves ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Fig.1-Forward Current Derating Curve

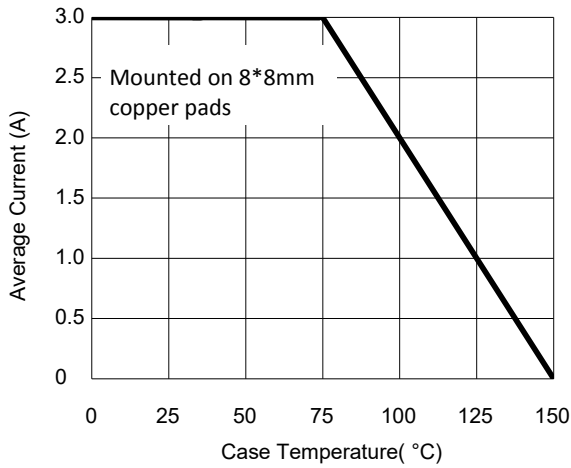


Fig.2- Surge Current Derating Curve

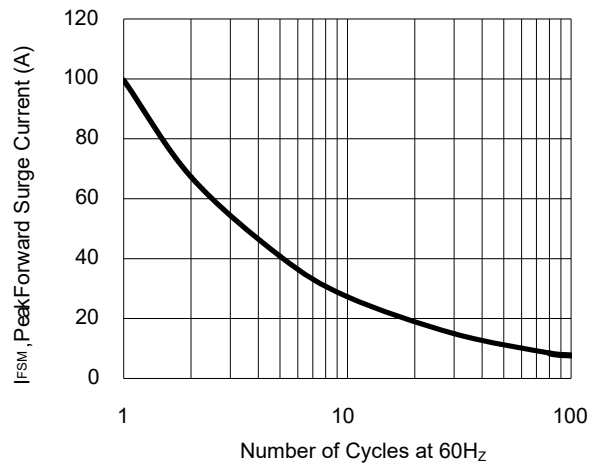


Fig.3- Typical Forward Voltage Characteristic

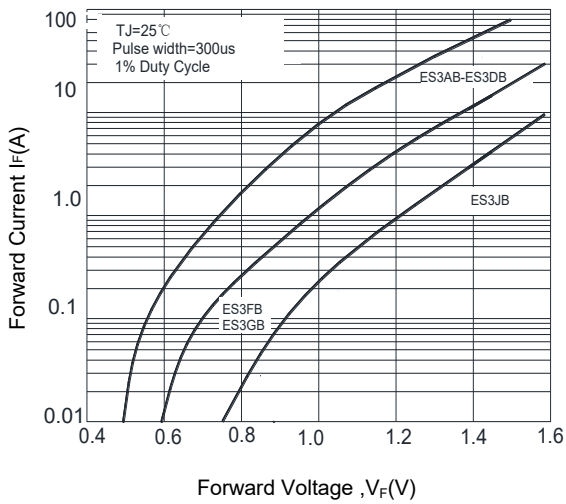
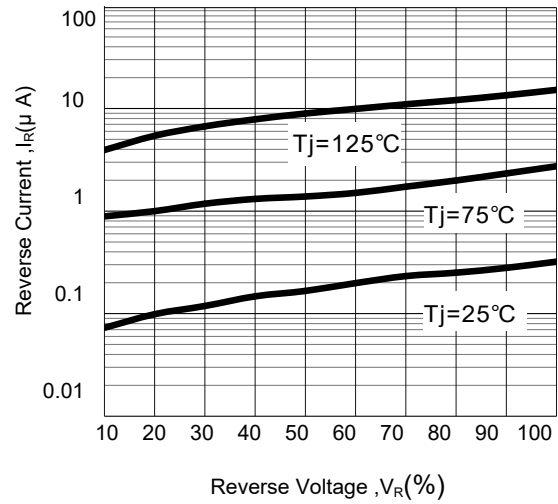


Fig.4- Typical Reverse Characteristic

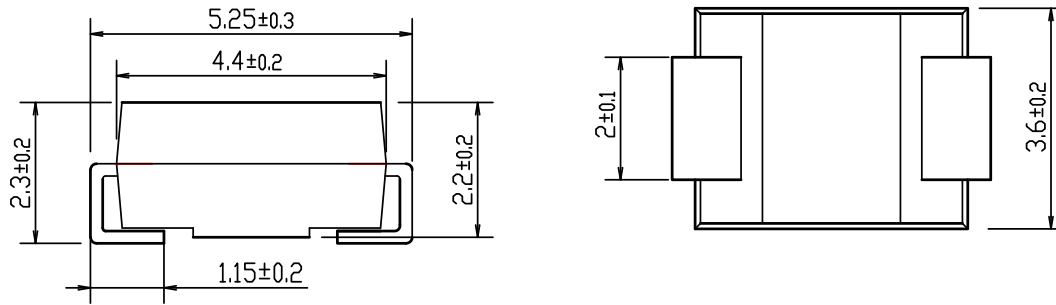


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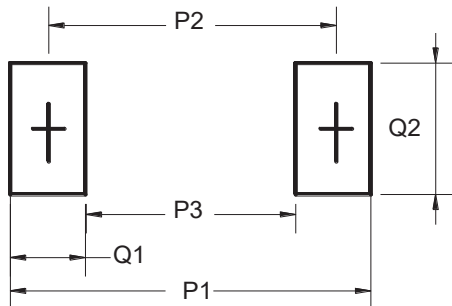
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Package Outline Dimensions(unit:mm)

DO-214AA (SMB)



Mounting Pad Layout(unit:mm)



Dim	Millimeters
P1	6.80
P2	4.30
P3	1.80
Q1	2.50
Q2	2.30

Ordering Information

Part No.	Marking	Package	Shipping
ES3AB	ES3AB	SMB	3000PCS /Tape&Reel
ES3BB	ES3BB	SMB	3000PCS /Tape&Reel
ES3DB	ES3DB	SMB	3000PCS /Tape&Reel
ES3FB	ES3FB	SMB	3000PCS /Tape&Reel
ES3GB	ES3GB	SMB	3000PCS /Tape&Reel
ES3JB	ES3JB	SMB	3000PCS /Tape&Reel