

Features

- Glass passivated superfast recovery Rectifiers
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260 °C, 10 s
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21 definition



RoHS
COMPLIANT



DO-214AA (SMB)

Typical Applications

For use in secondary rectification and freewheeling for ultrafast switching speeds of converters in consumer applications.

Maximum Ratings (TA = 25 °C unless otherwise noted)									
Parameter	Symbol	ES3AB	ES3BB	ES3CB	ES3DB	ES3FB	ES3GB	ES3JB	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	100							A
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)										
Parameter	Test Conditions	Symbol	ES3AB	ES3BB	ES3CB	ES3DB	ES3FB	ES3GB	ES3JB	Unit
Maximum forward voltage	IF=3.0A,TA=25°C	VF	0.95				1.30		1.70	Volts
Maximum DC reverse current at rated DC blocking voltage	TA=25°C	IR	10.0							µA
	TA=125°C		500							
Maximum reverse recovery time	IF=0.5A,IR=1.0A, IRR=0.25A	trr	35							nS
Typical junction capacitance	4.0 V, 1 MHz	CJ	45							pF
Typical thermal resistance ¹⁾	junction to ambient	RθJA	50							°C/W
	junction to case	RθJC	30							
	junction to lead	RθJL	10							

Note1): Mounted on PCB with 5*5mm copper pad, 2 OZ, FR4 PCB;



ES3AB thru ES3JB

Surface Mount Glass Passivated Superfast Rectifier
Reverse Voltage 50~600V Forward Current 3A

(TA = 25°C unless otherwise noted)

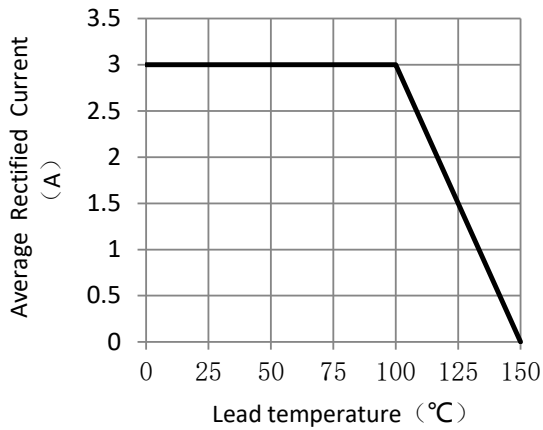


Figure 1. Forward Current Derating Curve

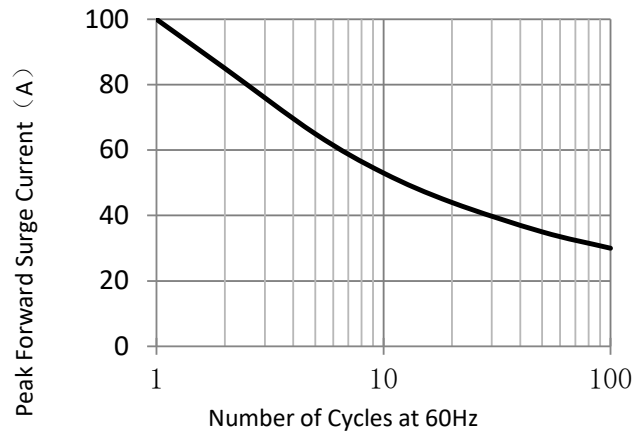


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

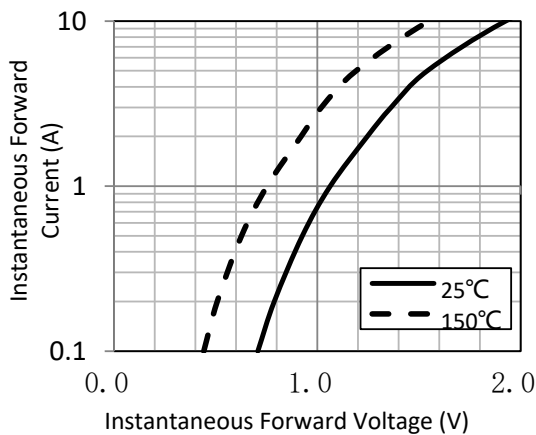


Figure 3. Typical Instantaneous Forward Characteristics (ES3JB)

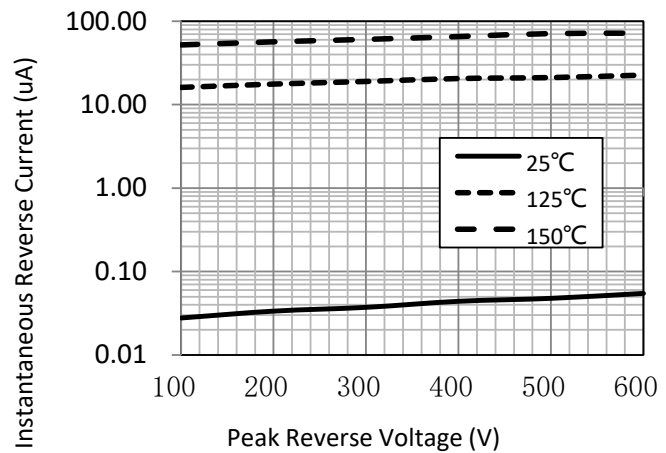


Figure 4. Typical Reverse Characteristics (ES3JB)

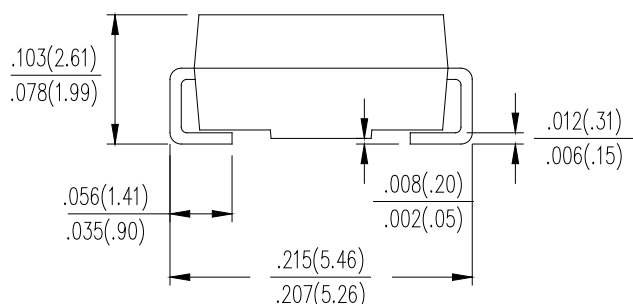
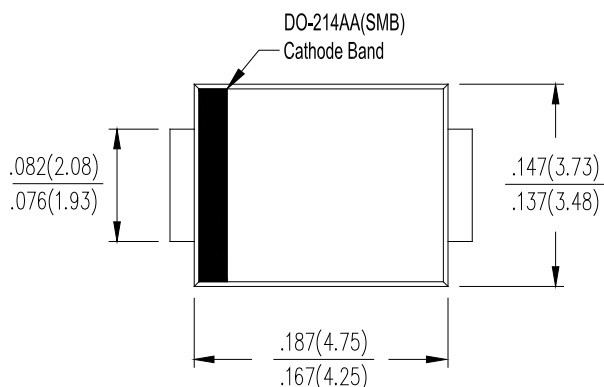
Package Outline Dimensions

in inches (millimeters)
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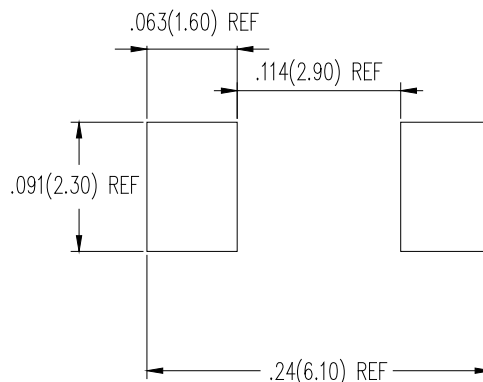


ES3AB thru ES3JB

Surface Mount Glass Passivated Superfast Rectifier
Reverse Voltage 50~600V Forward Current 3A



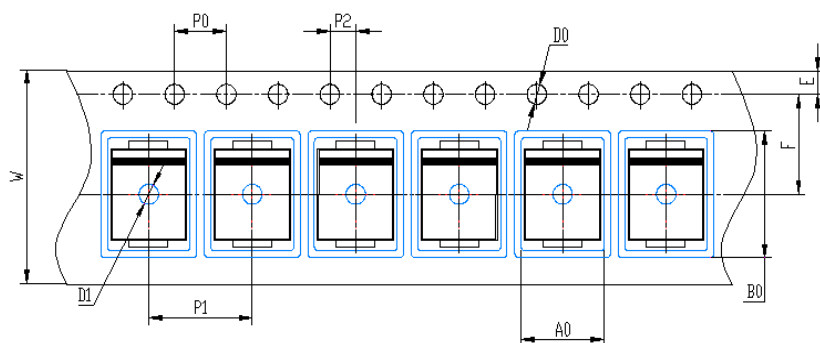
Mounting Pad Layout



Packing Information

3000 pcs/Reel, 10 Reels/Box; 12mm Tape, 13" Reel

Tape & Reel Specification



Symbols	SMB (mm)
W	12 ± 0.2
E	1.75 ± 0.1
F	5.5 ± 0.05
D0	1.5 ± 0.1
D1	1.50 +0.1/-0
P0	4.0 ± 0.1
P1	8.0 ± 0.1
P2	2.0 ± 0.05
A0	3.95 ± 0.1
B0	5.74 ± 0.1

Version	Revision content	Date
A	Initial version release	Jun-21

Disclaimers

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ES3AB thru ES3JB

Surface Mount Glass Passivated Superfast Rectifier Reverse Voltage 50~600V Forward Current 3A

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