

### 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



DO-214AA (SMB)

### Typical Applications

For use of general purpose rectification in lighting, cellular phone, portable device, power supplies and other consumer applications.

### Maximum Ratings (TA = 25 °C unless otherwise noted)

Parameter	Symbol	ES2A	ES2B	ES2C	ES2D	ES2F	ES2G	ES2J	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	$I_{F(AV)}$	2.0								A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	50								A
Rating for fusing( $t < 8.3ms$ )	$I^2t$	10.0								A <sup>2</sup> sec
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	ES2A	ES2B	ES2C	ES2D	ES2F	ES2G	ES2J	Unit	
Maximum instantaneous forward voltage	$I_F=2.0A$ $T_A=25^\circ C$	$V_F$	0.95				1.3		1.7	Volts	
Maximum DC reverse current at rated DC blocking voltage	$T_A=25^\circ C$	$I_R$	10.0							$\mu A$	
	$T_A=100^\circ C$		100								
Maximum reverse recovery time	$I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$	$t_{rr}$	35								nS
Typical junction capacitance	4.0 V, 1 MHz	$C_J$	25				20				pF

### Thermal Characteristics

Parameter	Symbol	ES2A	ES2B	ES2C	ES2D	ES2F	ES2G	ES2J	Unit
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$	75							$^\circ C/W$
	$R_{\theta JC}$	20							
	$R_{\theta JI}$	25							

Notes:1. The thermal resistance from junction to ambient, case or mount, mounted on P.C.B with 8x8mm copper pads, 2 OZ, FR4 PCB



# ES2A thru ES2K

Surface Mount Glass Passivated Superfast Rectifier  
 Reverse Voltage 50 to 600V Forward Current 2A

## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

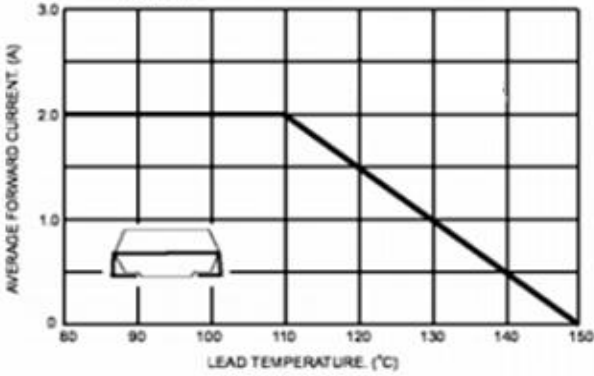


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

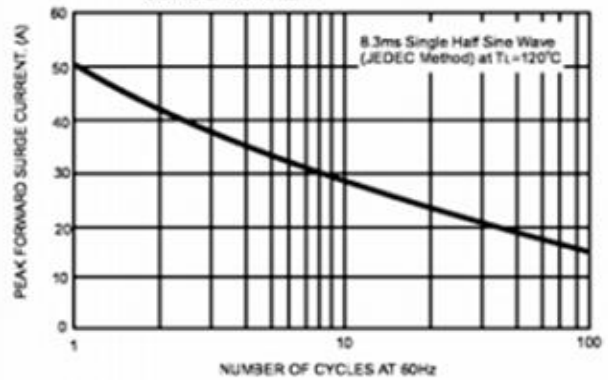


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

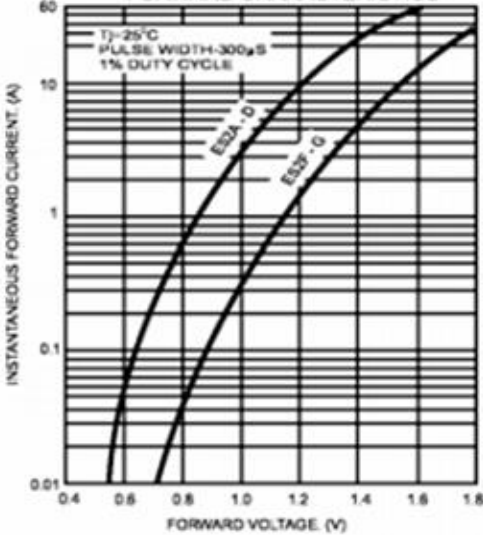


FIG.4- TYPICAL REVERSE CHARACTERISTICS

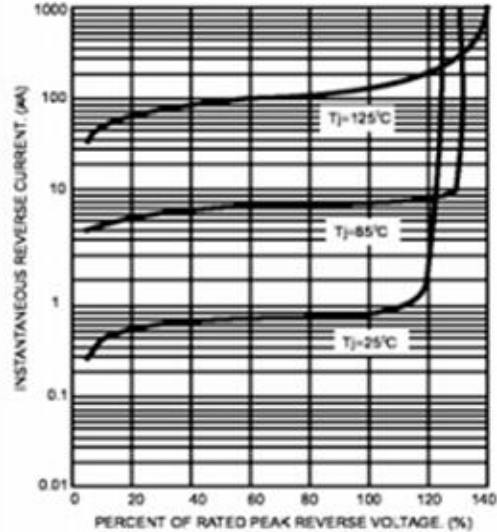
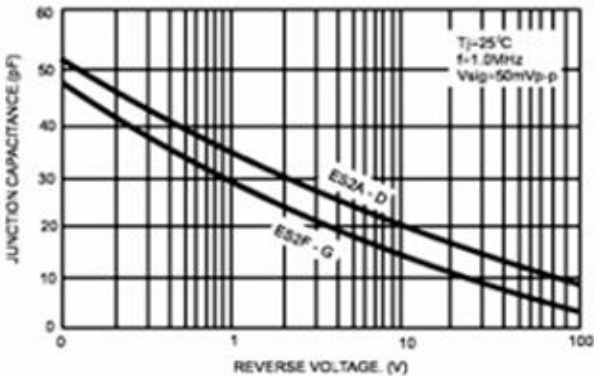
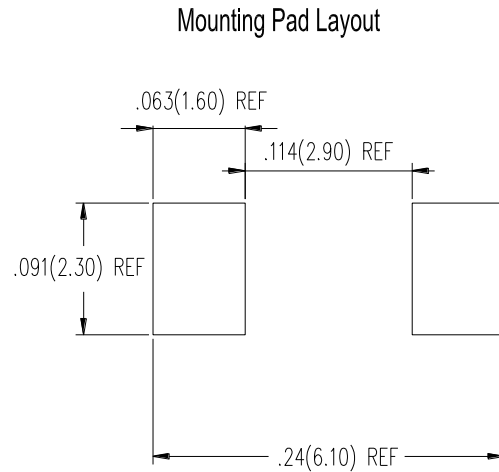
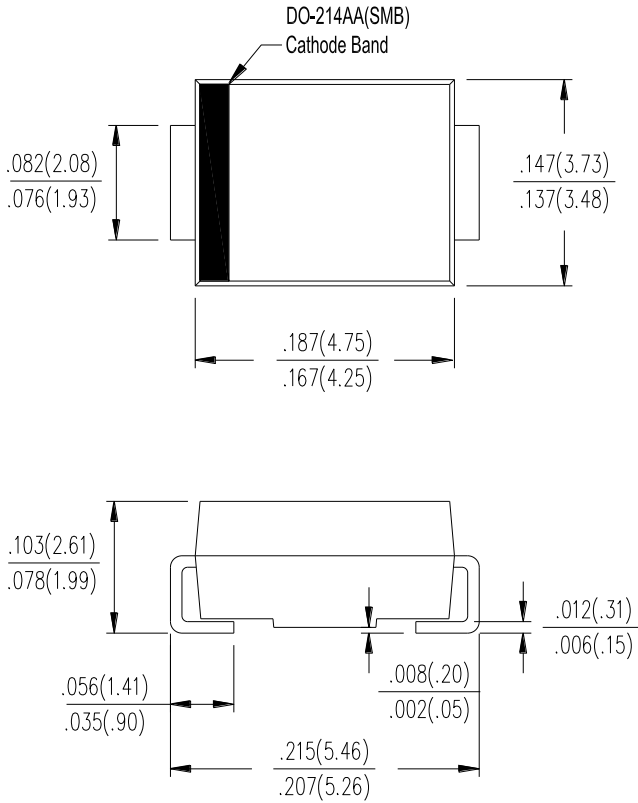


FIG.5- TYPICAL JUNCTION CAPACITANCE



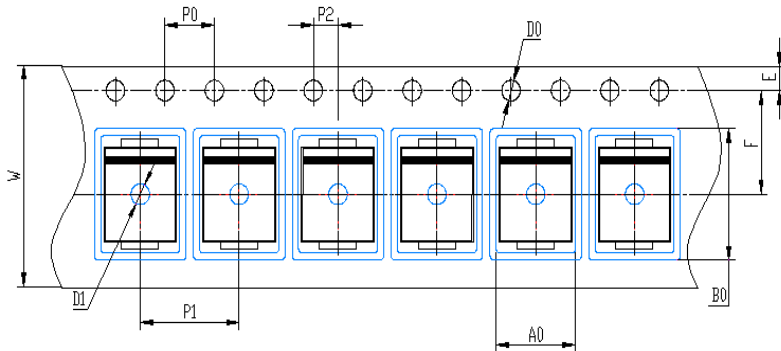
## Package Outline Dimensions



## Packing Information

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

## Tape & Reel Specification



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

Version	Revision content	Date
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# ES2A thru ES2K

Surface Mount Glass Passivated Superfast Rectifier  
Reverse Voltage 50 to 600V Forward Current 2A

A	Initial version release	Jun-21
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