ES2A thru ES2K

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

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 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^2sec
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℃	V_F	0.95				1.3		1.7	Volts
Maximum DC reverse current at rated DC blocking voltage	T_A=25℃	I_R	10.0							μA
	T_A=100℃		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(1)	$R_{\theta JA}$	75							℃/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 8×8mm copper pads,2 OZ,FR4 PCB

Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

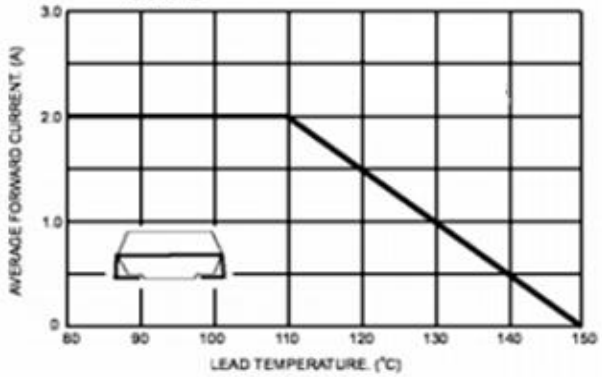


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

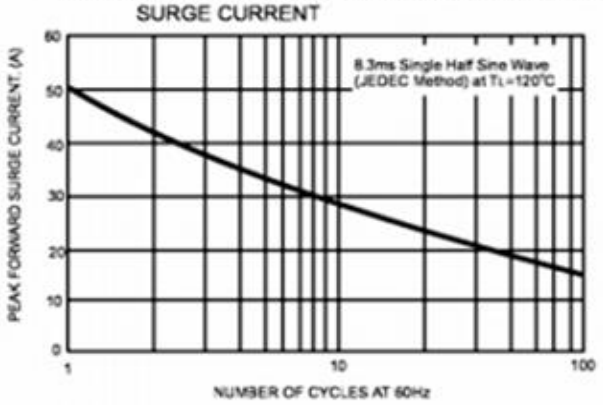


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

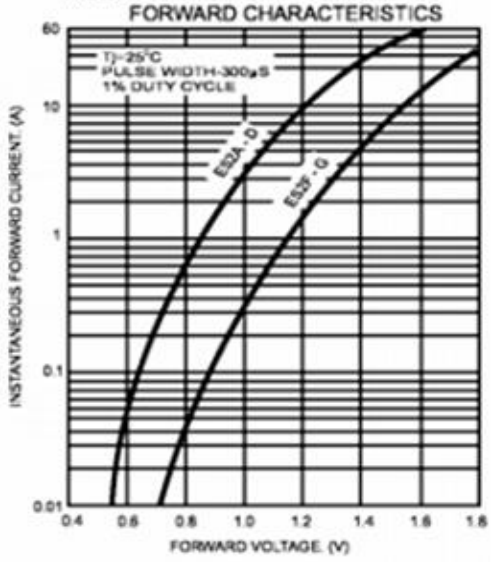


FIG.4- TYPICAL REVERSE CHARACTERISTICS

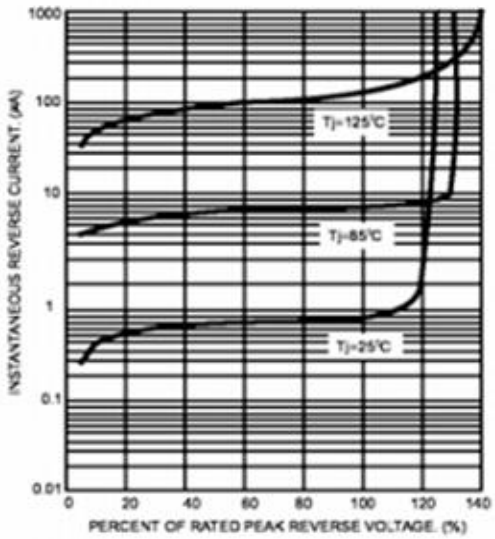
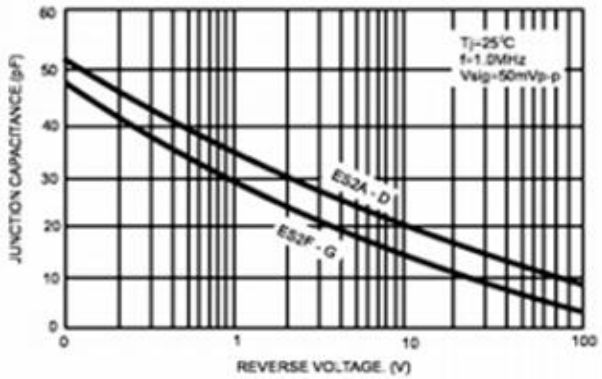


FIG.5- TYPICAL JUNCTION CAPACITANCE



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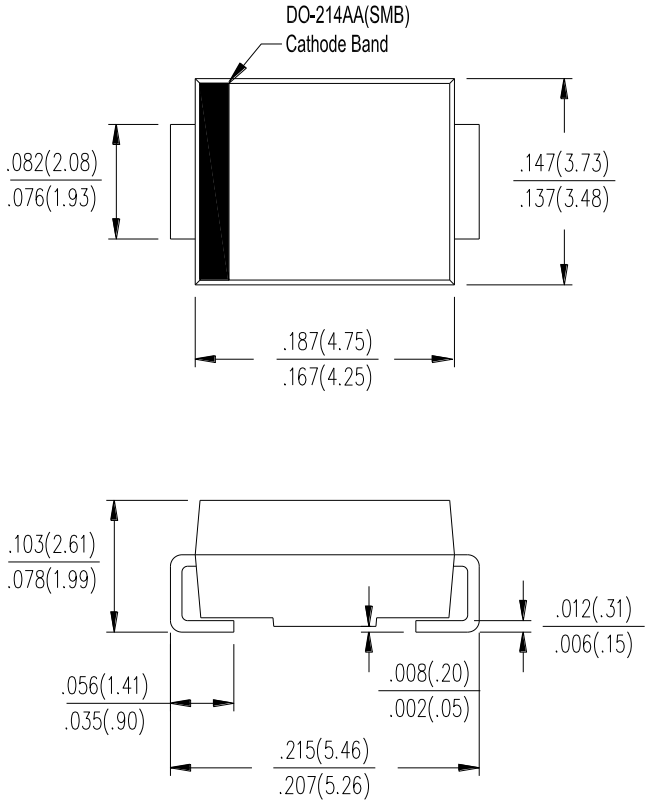
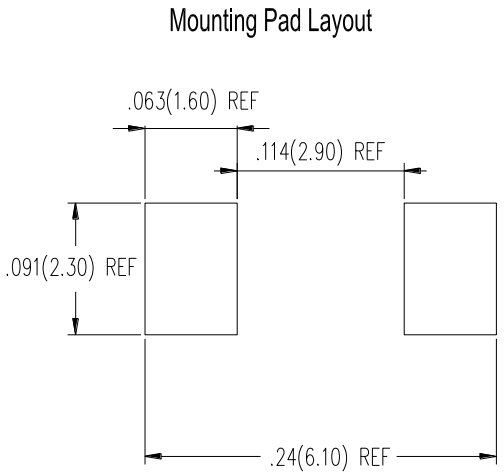
Package Outline Dimensions

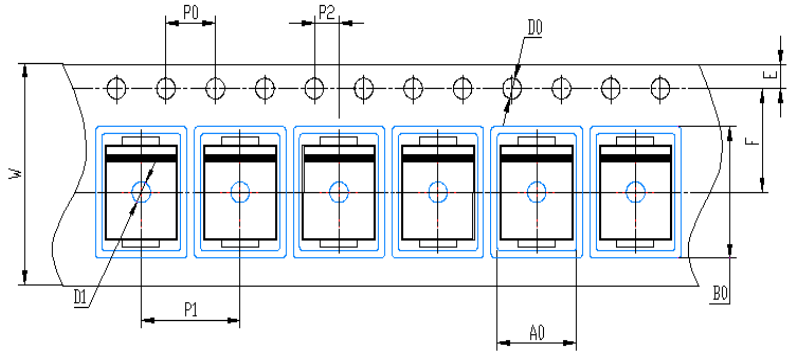




Packing Information

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

Tape & Reel Specification



Symbo	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

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