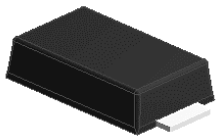
2A,50-600V Superfast Rectifiers

Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260℃/10 seconds

Pb
RoHS
COMPLIANT



eSGB (DO-221AC)

Applications

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

Maximum Ratings & Electrical Characteristics (TA=25℃ unless otherwise noted)

Parameter	Symbol	L2U1	L2U2	L2U3	L2U4	L2U5	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	V
Maximum average forward rectified current	$I_{F(AV)}$	2					A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load per diode	I_{FSM}	50					A
Operating junction temperature range	T_J	-55 to +150					°C
Storage temperature range	T_{STG}	-55 to +150					°C

Thermal-Mechanical Specifications (TA=25℃ unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	85	°C /W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	15	°C /W
Thermal Resistance, Junction to Lead	$R_{\theta JL}$	18	°C /W

Electrical Specifications(T_A=25℃ unless otherwise noted)								
Parameter	**Symbol**	**Test Conditions**	**L2U1**	**L2U2**	**L2U3**	**L2U4**	**L2U5**	**Unit**
Forward Drop Voltage	V_F	I_F=2A	1.0			1.3	1.7	V
Reverse leakage current @V_R	I_R	T_J =25℃	5					uA
		T_J =125℃	50					
Typical junction capacitance	C_J	4.0 V 1 MHZ	15					pF
Maximum reverse recovery time	trr	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	35					nS

Note：

1. Mounted on copper pad area of 0.2x0.2” (5.0 x 5.0mm) to each terminal.

Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)

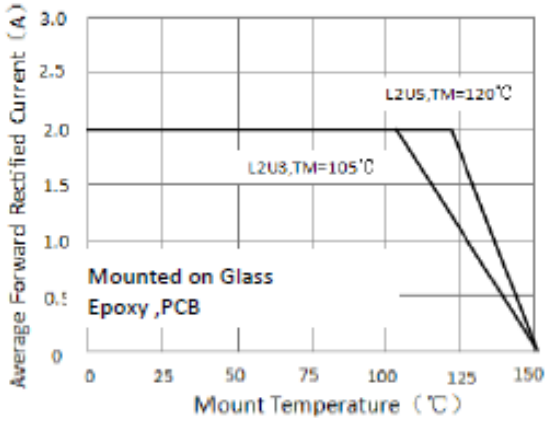


Figure 1.Forward Current Derating Curve

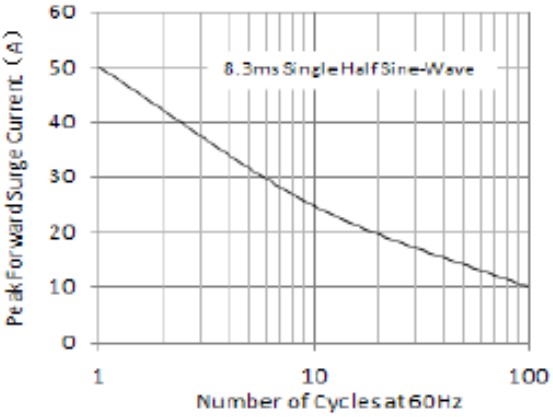


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

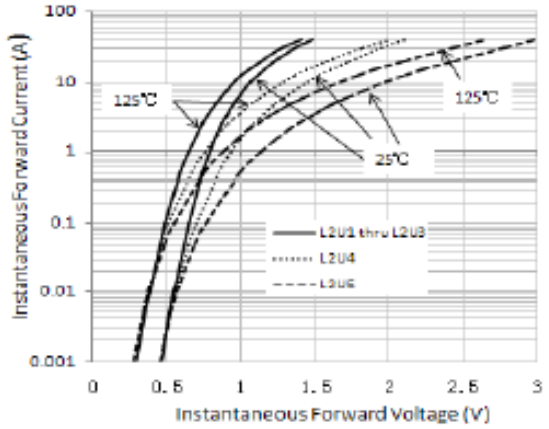


Figure 3. Typical Instantaneous Forward Characteristics

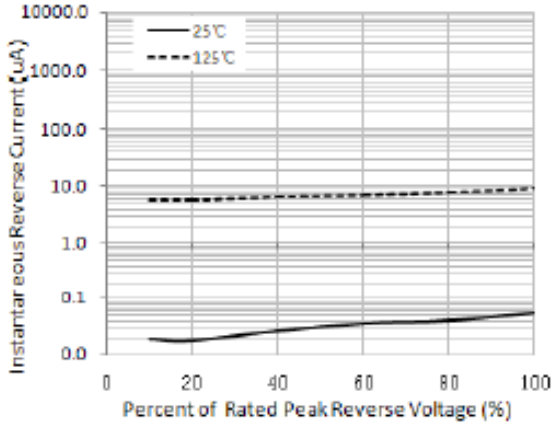
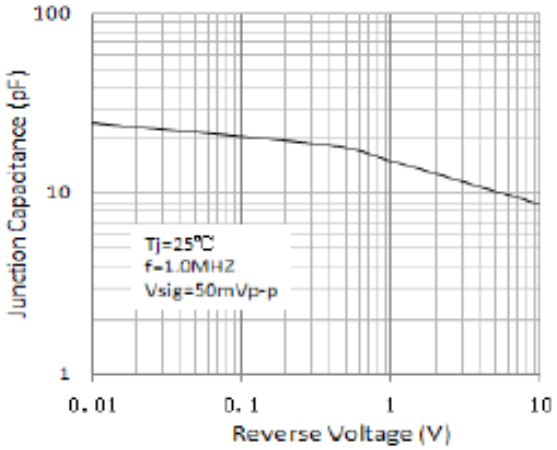


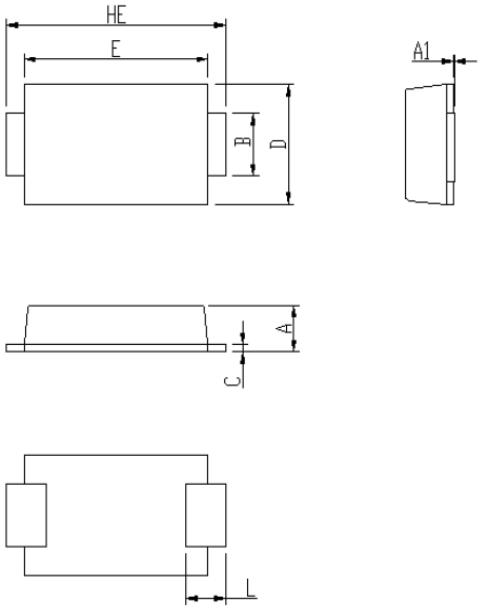
Figure 4. Typical Reverse Characteristics



Package Outline Dimensions

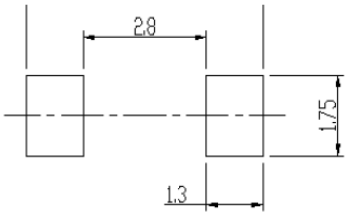
in inches (millimeters)

eSGB (DO-221AC)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.92	1.08	0.036	0.043
A1	0	0.1	0.000	0.004
B	1.25	1.45	0.049	0.057
C	0.1	0.25	0.004	0.010
D	2.6	2.8	0.102	0.110
E	4.1	4.3	0.161	0.169
L	0.7	1.1	0.028	0.043
HE	4.8	5.2	0.189	0.205

Soldering footprint



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.10.12	Modify document format
Rev.C	2023.12.29	Modify package name

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