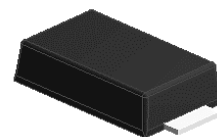


3A,400V Superfast Rectifier

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°C/10 seconds



eSGB (DO-221AC)

Applications

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

Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)			
Parameter	Symbol	ES3HGL	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	400	V
Maximum RMS voltage	V _{RMS}	280	V
Maximum DC blocking voltage	V _{DC}	400	V
Maximum average forward rectified current	I _{F(AV)}	3	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	100	A
Operating junction temperature range	T _J	-55 to +175	°C
Storage temperature range	T _{STG}	-55 to +175	°C

Thermal-Mechanical Specifications (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{thJA}	85	°C /W
Thermal Resistance, Junction to Case	R _{thJC}	15	°C /W
Thermal Resistance, Junction to Lead	R _{thJL}	18	°C /W

Electrical Specifications($T_A=25^{\circ}\text{C}$ unless otherwise noted)				
Parameter	Symbol	Test Conditions	ES3HGL	Unit
Maximum forward drop voltage	V_F	$I_F=3\text{A}$	1.24	V
Maximum reverse leakage current @ V_R	I_R	$T_J=25^{\circ}\text{C}$	10	μA
Typical junction capacitance	C_J	$V_R=4.0\text{V}$, $f=1\text{MHz}$	37	pF
Maximum reverse recovery time	t_{rr}	$I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$	50	ns

Note:

1. Mounted on copper pad area of 5 x 5mm to each terminal.

Ratings and Characteristics Curves (T_A = 25°C unless otherwise noted)

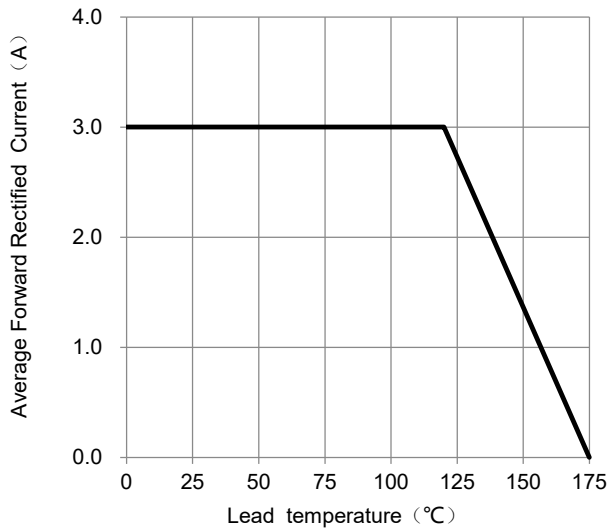


Fig.1 – Forward Current Derating Curve

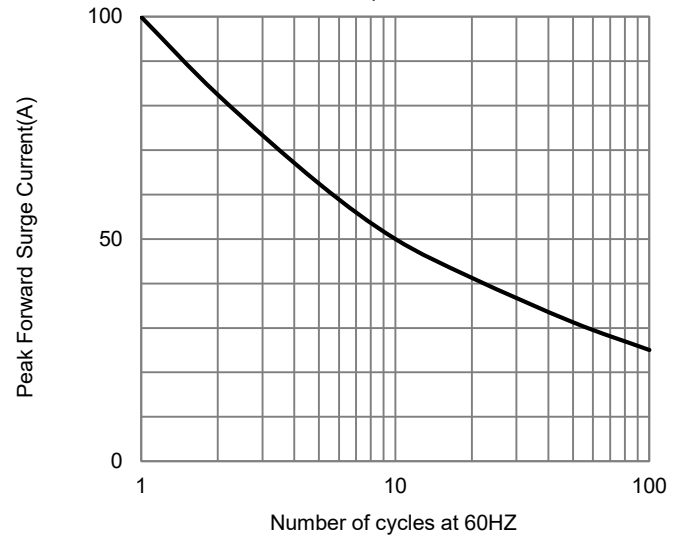


Fig.2 – Maximum Non-Repetitive Surge Current

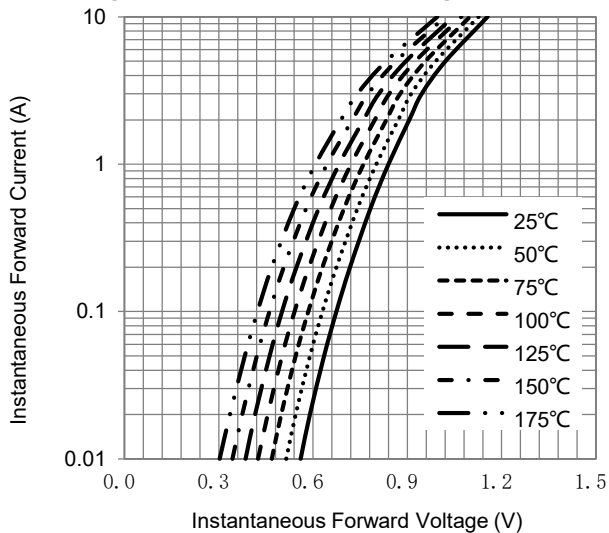


Fig.3 – Typical Forward Voltage Characteristics

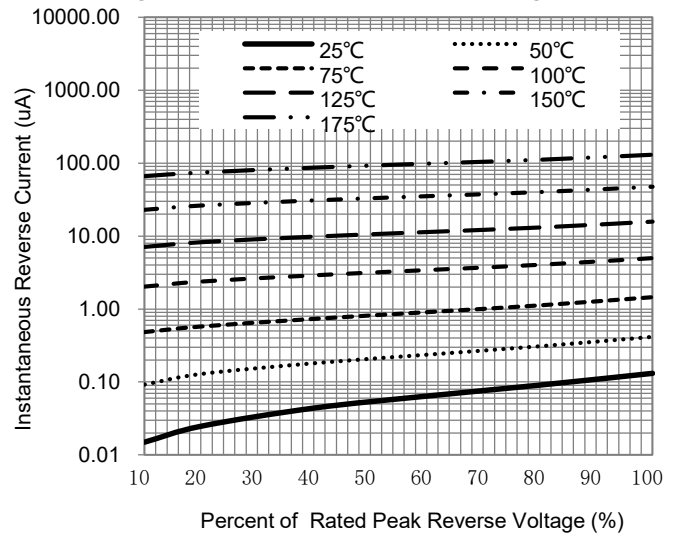


Fig.4 – Typical Reverse Current Characteristics

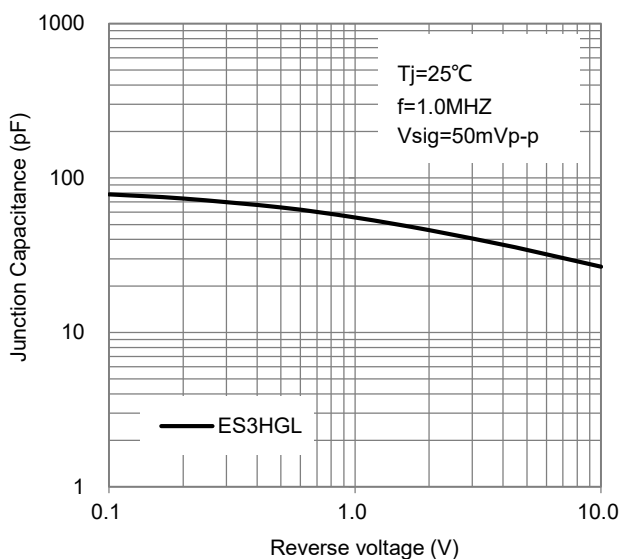
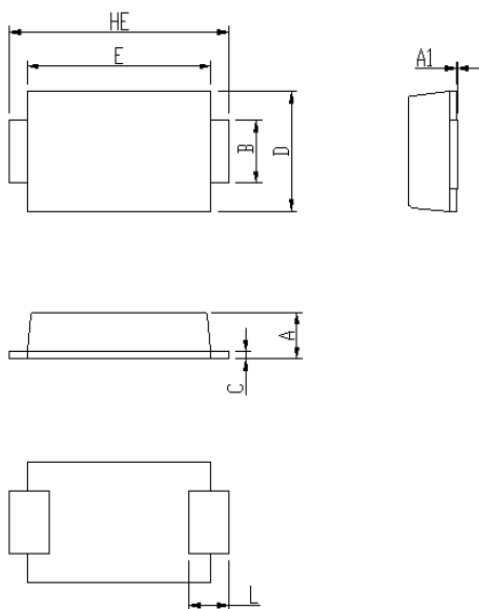


Fig.5 – Typical Junction Capacitance

Package Outline Dimensions

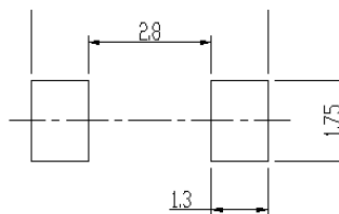
in inches (millimeters)

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



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