

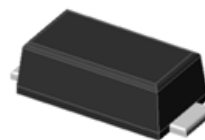
1A,600V Superfast Rectifier

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



RoHS
COMPLIANT



eSGA (SOD-123FL)

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	ES1HJF	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	600	V
Maximum RMS voltage	V _{RMS}	420	V
Maximum DC blocking voltage	V _{DC}	600	V
Maximum average forward rectified current	I _{F(AV)}	1	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	35	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}	100	°C /W
Thermal Resistance, Junction to Case	R _{thJC}	20	°C /W
Thermal Resistance, Junction to Lead	R _{thJL}	20	°C /W

Electrical Specifications($T_A=25^{\circ}\text{C}$ unless otherwise noted)				
Parameter	Symbol	Test Conditions	ES1HJF	Unit
Maximum forward drop voltage	V_F	$I_F=1\text{A}$	1.25	V
Maximum reverse leakage current @ V_R	I_R	$T_J=25^{\circ}\text{C}$	5	μA
Typical junction capacitance	C_J	$V_R=4.0\text{V}$, $f=1\text{MHz}$	13	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 ($T_A = 25^\circ\text{C}$ unless otherwise noted)

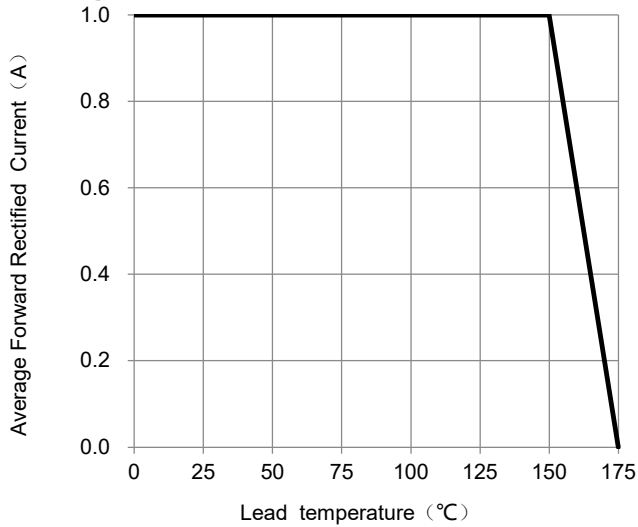


Fig.1 –Forward Current Derating Curve

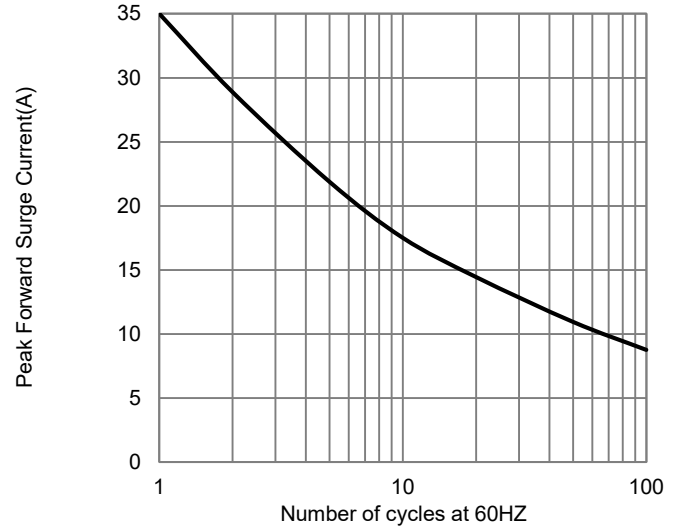


Fig.2 – Maximum Non-Repetitive Surge Current

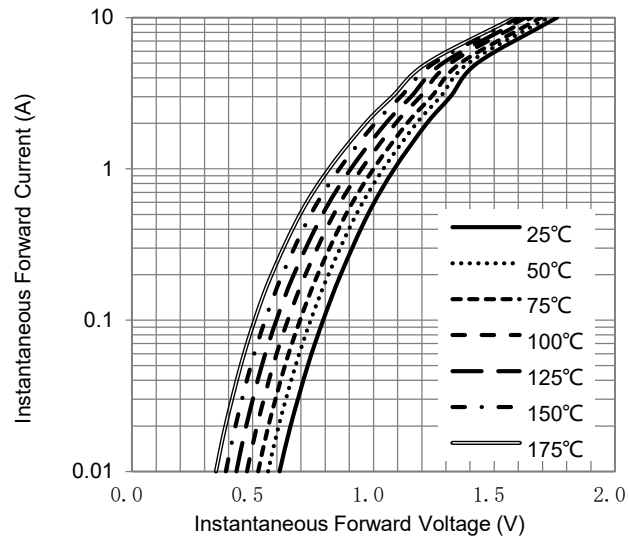


Fig.3 –Typical Forward Voltage Characteristics

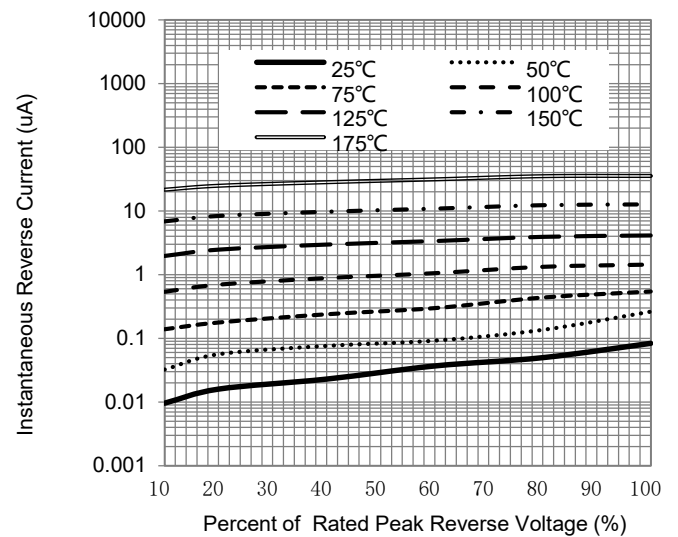


Fig.4 –Typical Reverse Current Characteristics

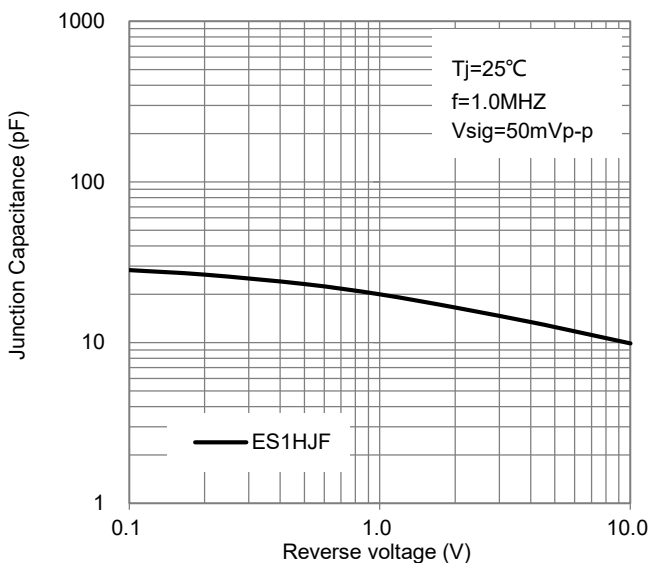
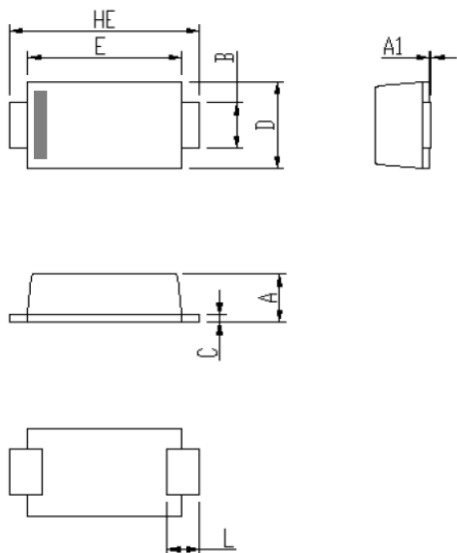


Fig.5 –Typical Junction Capacitance

Package Outline Dimensions

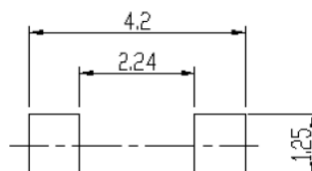
in inches (millimeters)

eSGA (SOD-123FL)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.9	1.08	0.035	0.043
A1	0	0.1	0.000	0.004
B	0.85	1.05	0.033	0.041
C	0.1	0.25	0.004	0.010
D	1.7	2	0.067	0.079
E	2.9	3.1	0.114	0.122
L	0.43	0.83	0.017	0.033
HE	3.5	3.9	0.138	0.154

Soldering footprint



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