8A,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℃/10 seconds

RoHS COMPLIANT

eSGC (TO-277B)

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**	**ES8HJW**	**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	$I_{F(AV)}$	8	A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150	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}	40	°C /W
Thermal Resistance, Junction to Case	R_{thJC}	15	°C /W
Thermal Resistance, Junction to Lead	R_{thJL}	7	°C /W

Electrical Specifications(T_A=25°C unless otherwise noted)				
Parameter	**Symbol**	**Test Conditions**	**ES8HJW**	**Unit**
Maximum forward drop voltage	V_F	I_F=8A	1.30	V
Maximum reverse leakage current @V_R	I_R	T_J =25°C	10	uA
Typical junction capacitance	C_J	V_R=4.0V, f=1MHZ	62	pF
Maximum reverse recovery time	trr	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	50	ns

Note：

1.Mounted on copper pad area of 30 x 30mm to each terminal.

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

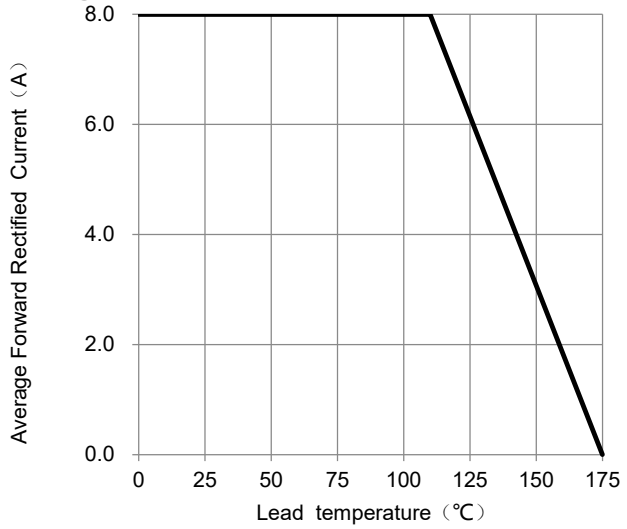


Fig.1 –Forward Current Derating Curve

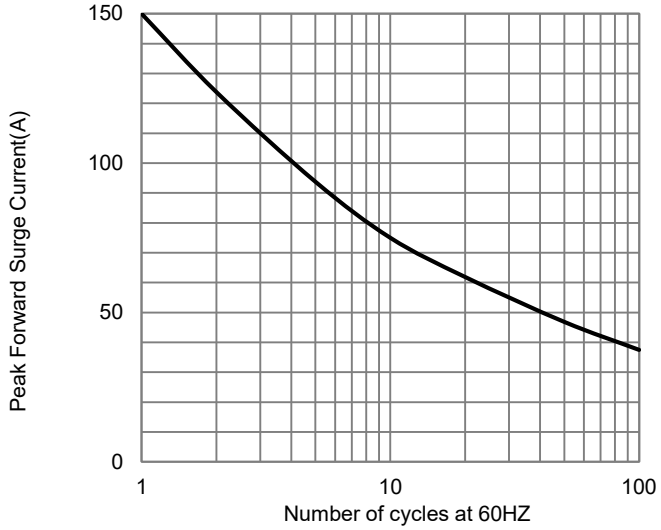


Fig.2 – Maximum Non-Repetitive Surge Current

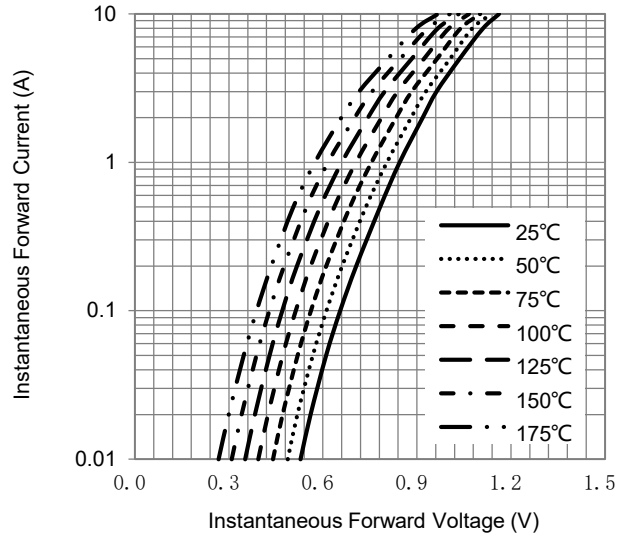


Fig.3 –Typical Forward Voltage Characteristics

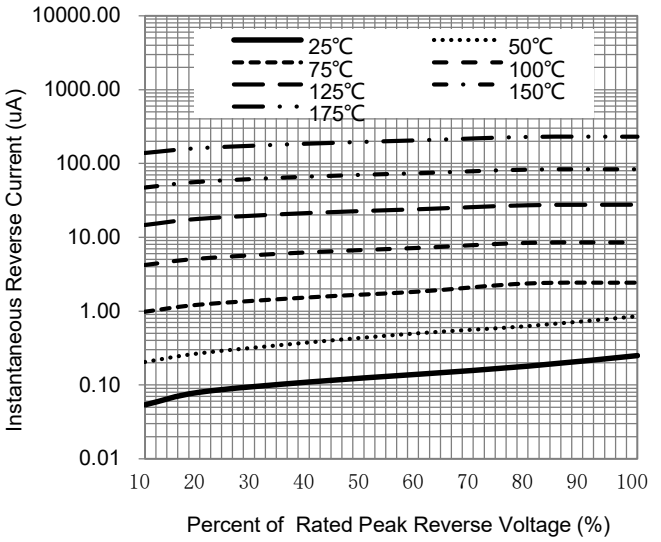


Fig.4 –Typical Reverse Current Characteristics

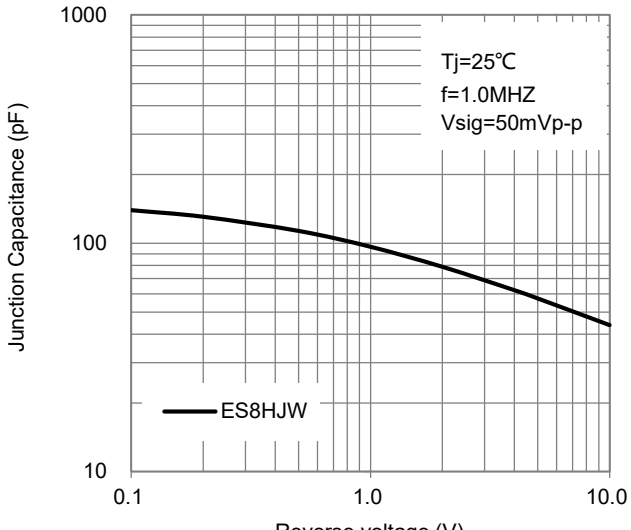
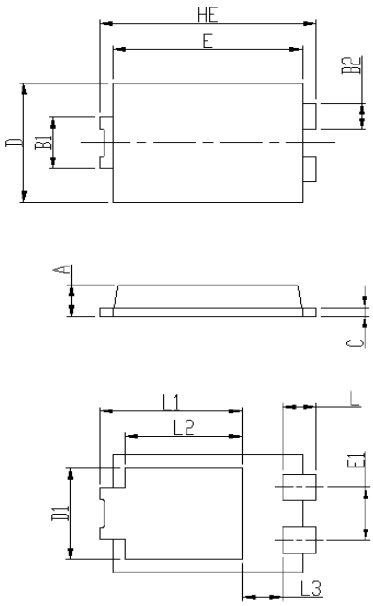


Fig.5 –Typical Junction Capacitance

Package Outline Dimensions

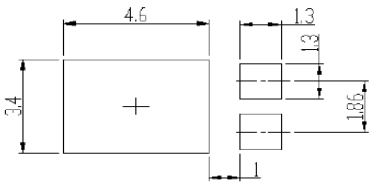
in inches (millimeters)

eSGC (TO-277B)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
HE	6.4	6.6	0.252	0.260
E	5.6	5.8	0.220	0.228
D	4.1	4.3	0.161	0.169
B1	1.7	1.9	0.067	0.075
B2	0.8	1	0.031	0.039
A	1.05	1.2	0.041	0.047
C	0.3	0.4	0.012	0.016
L	0.85	1.1	0.033	0.043
L1	4.2	4.4	0.165	0.173
L2	3.52 Typ.		0.139 Typ.	
L3	1.1	1.4	0.043	0.055
D1	3	3.3	0.118	0.130
E1	1.86 Typ.		0.073 Typ.	

Soldering footprint



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