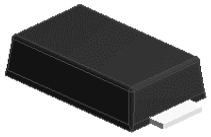
1A,400V Superfast Rectifier

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℃/10 seconds
- AEC-Q101 Qualified

RoHS
COMPLIANT



iSGA (SOD-123HS)

Applications

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

Maximum Ratings & Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	ES1HGP	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	$I_{F(AV)}$	1	A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30	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}	70	°C /W
Thermal Resistance, Junction to Case	R_{thJC}	40	°C /W
Thermal Resistance, Junction to Lead	R_{thJL}	10	°C /W

Electrical Specifications(T_A=25°C unless otherwise noted)				
Parameter	**Symbol**	**Test Conditions**	**ES1HGP**	**Unit**
Maximum forward drop voltage	V_F	I_F=1A	1.25	V
Maximum reverse leakage current @V_R	I_R	T_J =25°C	5	uA
Typical junction capacitance	C_J	V_R=4.0V, f=1MHz	22	pF
Maximum reverse recovery time	trr	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	25	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)

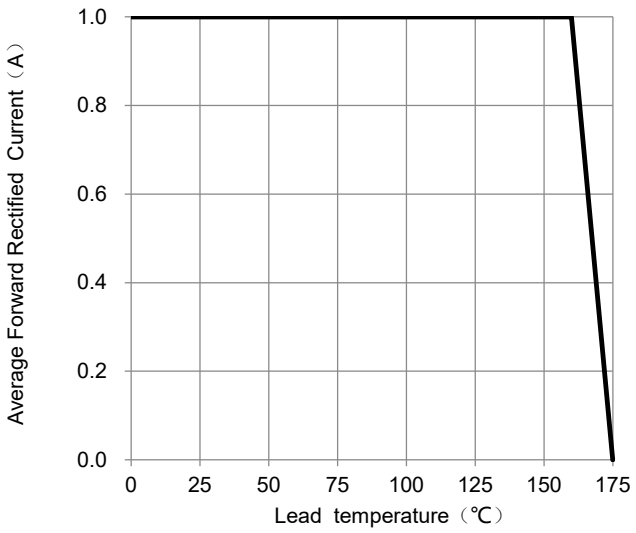


Fig.1 –Forward Current Derating Curve

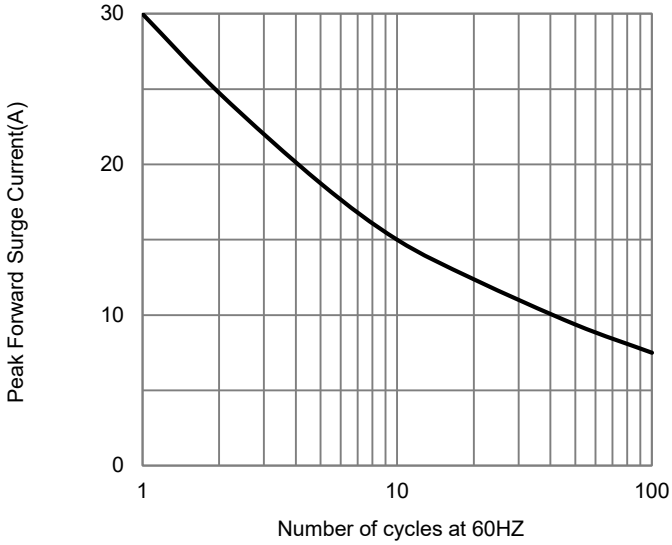


Fig.2 – Maximum Non-Repetitive Surge Current

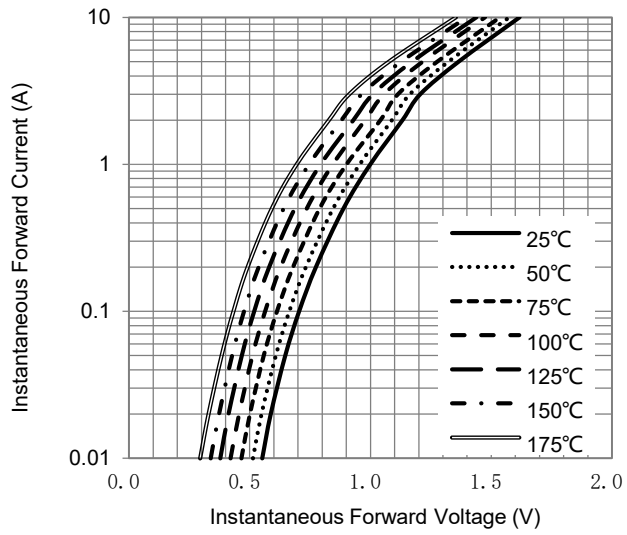


Fig.3 –Typical Forward Voltage Characteristics

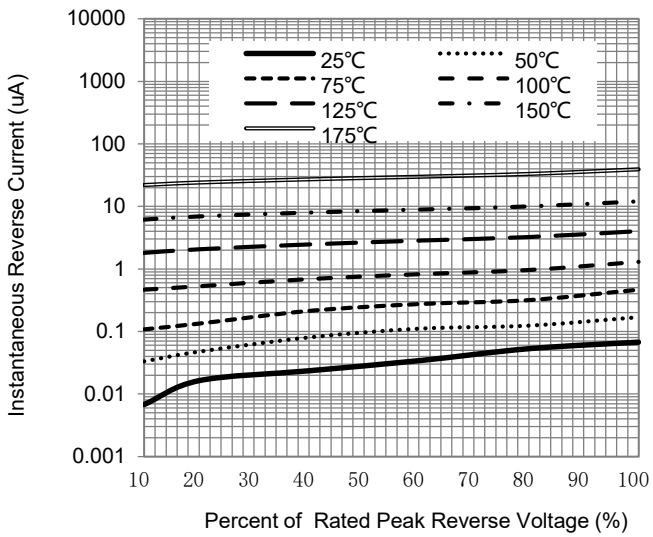


Fig.4 –Typical Reverse Current Characteristics

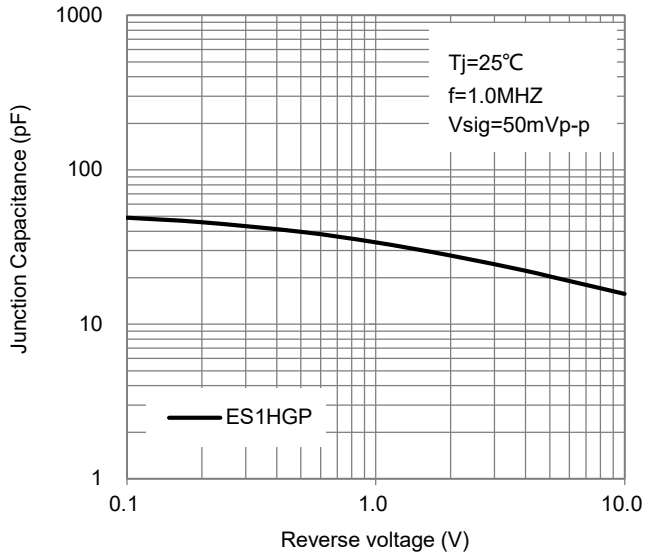
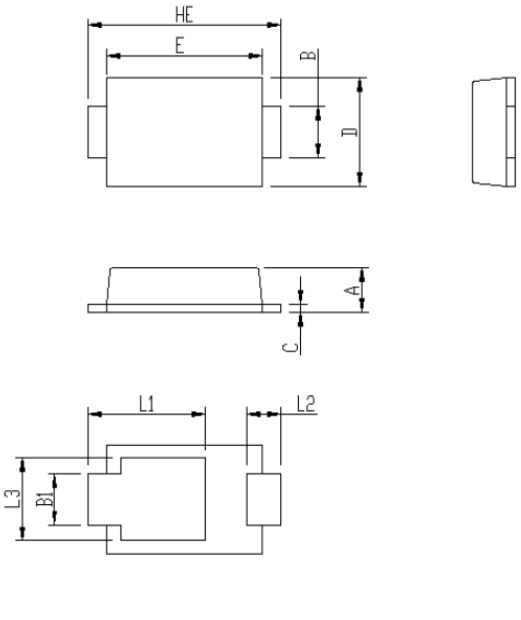


Fig.5 –Typical Junction Capacitance

Package Outline Dimensions

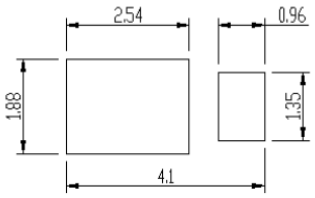
in inches (millimeters)

iSGA (SOD-123HS)



Package	iSGA	
Unit:mm	MIN	MAX
A	0.75	0.90
B	0.85	1.05
B1	0.85	1.05
C	0.1	0.25
D	1.9	2.1
E	2.9	3.1
L1	2.0	2.45
L2	0.4	0.85
L3	1.3	1.7
HE	3.5	3.9

Soldering footprint



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