Surface Mount Glass Passivated High Efficient Rectifier

SMAF(eSGB)

Features

- ROHS compliant
- Glass passivated chip
- High forward surge capability
- Meet MSL level 1, per J-STD-020 LF maximum peak of 250 °C
- Solder dip 260 °C / 40S
- Component in accordance to ROHS 2002/95/EC and WEEE 2002/96/WC
- UL recognition, file number E342874

Primary characteristics

$I_{F(AV)}$	1A
V_{RRM}	50V to 1000V
I_{FSM}	30A
I_{RM}	5uA
V_{FM} at I_F=1A	1.3/1.7V
T_J max.	150 °C

Applications

Ideal for ac-to-dc bridge full wave rectification suck as SMPS, home applianes, office equipment, indusrial automation applicatios

Mechanical data

- SMAF(eSGB)
- Epoxy meets UL 94 V-0 flammability rating
- Terminals: Tin plated leads.
- Polarity: As marked.
- Mounting Torque:10cm-kg(8.8 inches-lbs)max.
- Recommended Torque:5.7 cm-kg(5 inches-lbs)

Maximum rating (Ta=25°C unless otherwise noted)

Parameter		Sym	SMAF(eSGB)							Unit
			LH1	LH2	LH3	LH4	LH5	LH6	LH7	
Max. repetitive peak reverse voltage		V_{RRM}	50	100	200	400	600	800	1000	V
Max. RMS reverse voltage		V_{RMS}	35	70	140	280	420	560	700	V
Max. DC blocking voltage		V_{DC}	50	100	200	400	600	800	1000	V
Max. average forward current		$I_{F(AV)}$	1							A
Non-repetitive peak forward surge current 8.3ms single half-sine-wave		I_{FSM}	30							A
Max. instantaneous forward voltage drop per diode		V_{FM}	1.3				1.7			V
Max. instantaneous reverse current at rated DC blocking voltage	Ta=25 °C	I_{RM}	5							μA
	Ta=125 °C		50							
Operating junction temperature		T_J	-55 ~ +150							°C
Storage temperature		T_{STG}	-55 ~ +150							°C
Maximum reverse recovery time (Note1)		trr	50				75			nS
Typical thermal resistance (Note2)		$R_{\Theta J-M}$	18							°C/W

Notes:

1 Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A

2.The thermal resistance from junction to mount,mounted on P.C.B with 8×8mm copper pads,2 OZ,FR4 PCB

Ordering information (Example)				
PREFERRED	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
LH7				

Typical characteristics

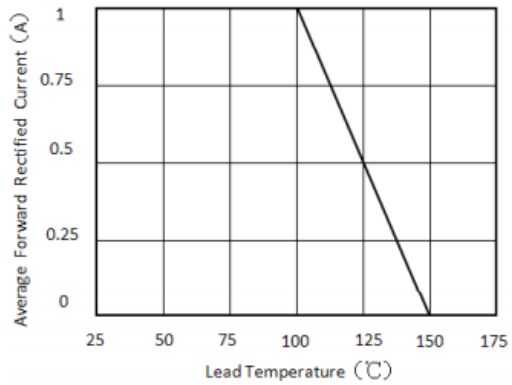


Figure 1.Forward Current Derating Curve

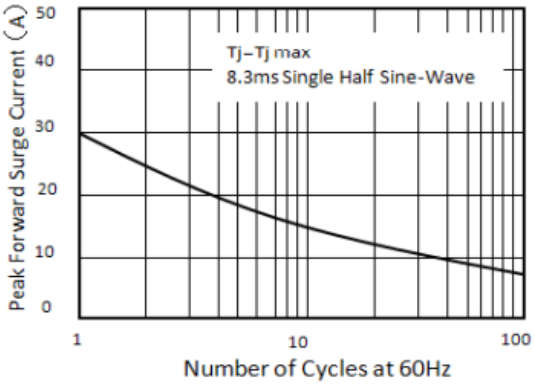


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

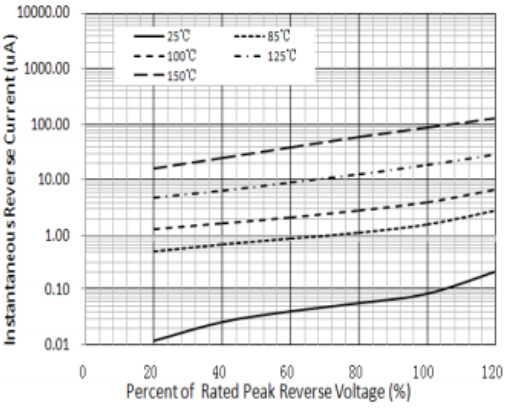


Figure 3. Typical Reverse Characteristics

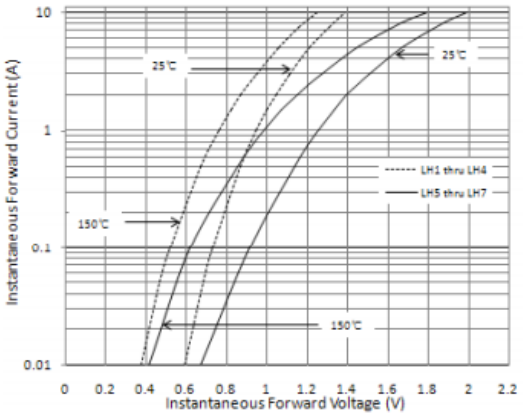
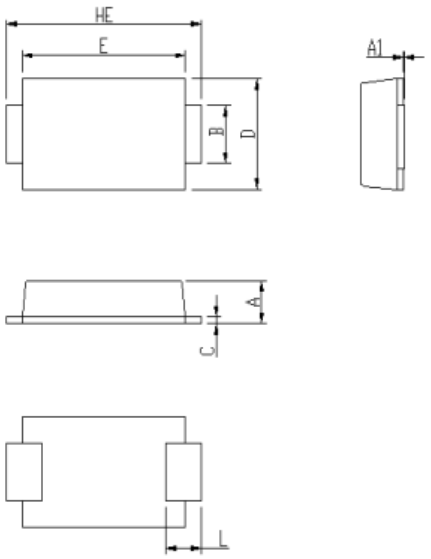


Figure 4. Typical Instantaneous

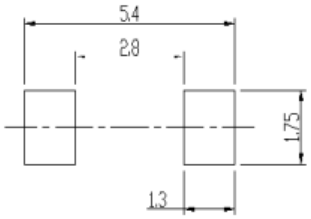
Package outline dimensions

in inches (millimeters)



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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