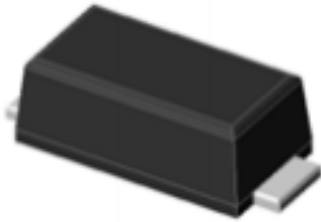


Super Fast Surface Mount Rectifiers

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 600V
I_{FSM}	30A
I_{RM}	5uA
V_{FM} at $I_F=1A$	1/1.3/1.7V
T_J max.	150 °C

Applications

Ideal for ac-to-dc bridge full wave rectification such as SMPS, home appliances, office equipment, industrial automation applications

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
		FU1	FU2	FU3	FU4	FU5	
Max. repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	V
Max. RMS reverse voltage	V_{RMS}	35	70	140	280	420	V
Max. DC blocking voltage	V_{DC}	50	100	200	400	600	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			1.3	1.7	V
Max. instantaneous reverse current at rated DC blocking voltage	I_{RM}	5					μA
		50					
Operating junction temperature	T_J	-55 ~ +150					°C
Storage temperature	T_{STG}	-55 ~ +150					°C
Maximum reverse recovery time (Note1)	t_{rr}	35					nS
Typical thermal resistance (Note2)	R_{J-C}	32					°C/W
	R_{J-A}	66					°C/W

Notes:

1 Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $IRR=0.25A$

2 The thermal resistance from junction to ambient, case or mount, mounted on P.C.B with 8x8mm copper pads, 2 OZ, FR4 PCB



Ordering information (Example)

PREFERRED	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
LU1				

Typical characteristics

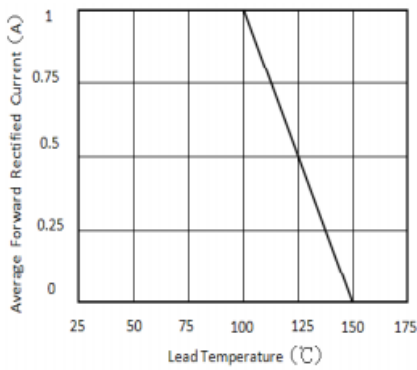


Figure 1. Forward Current Derating Curve

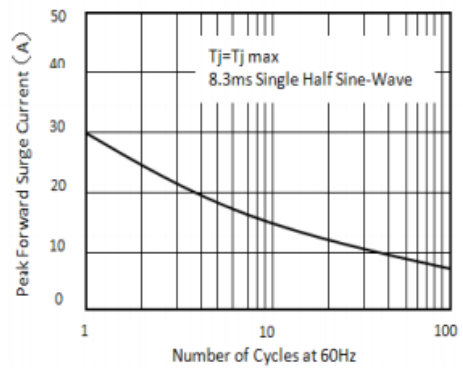
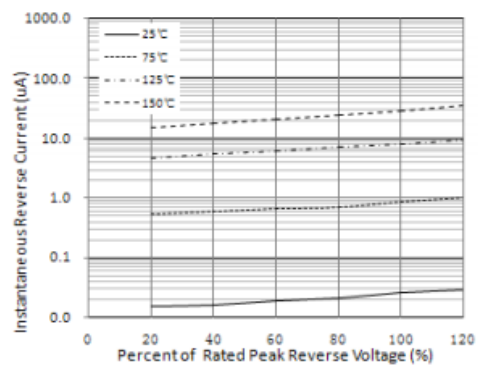
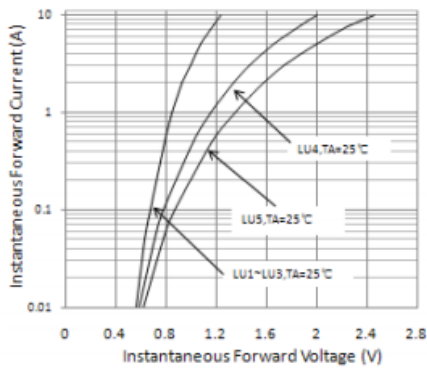
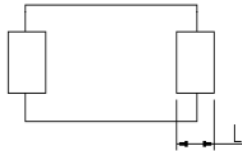
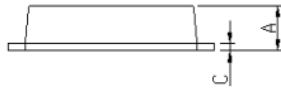
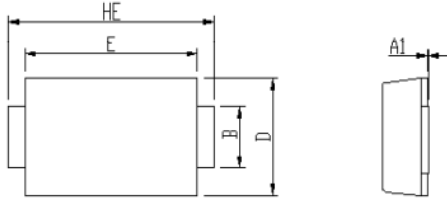


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current



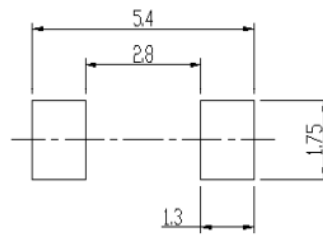
Package outline dimensions

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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