LITE-ON SEMICONDUCTOR

S1A thru S1M

SURFACE MOUNT GLASS PASSIVATED RECTIFIER

REVERSE VOLTAGE – 50 to 1000 Volts FORWARD CURRENT – 1.0 Ampere

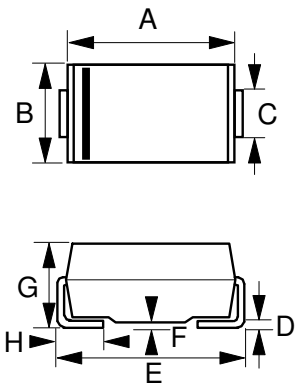
FEATURES

- Glass passivated chip
- For surface mounted applications
- Low reverse leakage current
- Low forward voltage drop
- High current capability

MECHANICAL DATA

- Case: Molded plastic
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.), “Halogen-free”
- Suffix "Q" with Part No. means AEC-Q101 Qualified
- Polarity: Indicated by cathode band
- Weight : 0.07 grams (Approximate)

SMA



SMA		
DIM.	MIN.	MAX
A	4.06	4.57
B	2.29	2.92
C	1.27	1.63
D	0.15	0.31
E	4.83	5.59
F	0.05	0.20
G	1.96	2.40
H	0.76	1.52
All dimension in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	S1A	S1B	S1D	S1G	S1J	S1K	S1M	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Average rectified output current @ T_L=100°C @ T_C=100°C	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load. (JEDEC METHOD)	I_{FSM}	30							A
Operation and storage temperature range	T_J, T_{STG}	-55 to +150							°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Forward voltage	I_F=1.0A	V_F	1.1	V
Reverse leakage current	V_R at rated T_J=25°C T_J=125°C	I_R	5.0 100	uA
Typical junction capacitance (Note 1)		C_J	10	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note 2)	$RthJ_L$ $RthJ_C$	30 30	°C/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	TYP.	UNIT
Reverse recovery time	I_F= 0.5A, I_{RR}= 0.25A, I_R =1.0A	T_{RR}	1300	ns

Note :

(1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
(2) Thermal resistance junction to ambient, case and lead.

REV. 14, Apr.-2017, KSDA01

RATING AND CHARACTERISTIC CURVES
S1A thru S1M

LITEON

FIG.1- FORWARD CURRENT DERATING CURVE

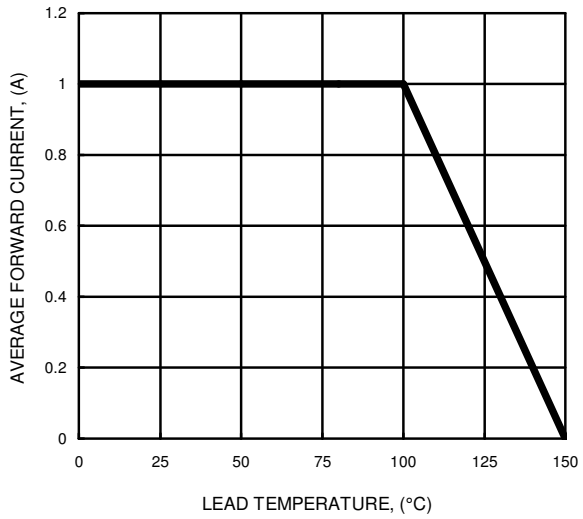


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

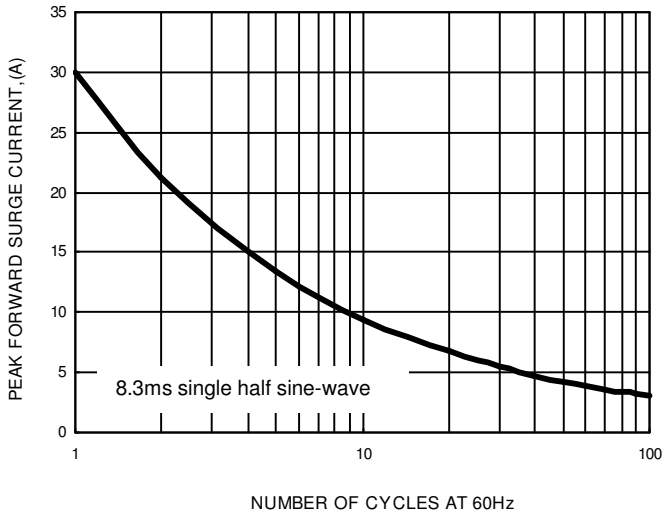


FIG.3- TYPICAL FORWORD CHARACTERISTICS

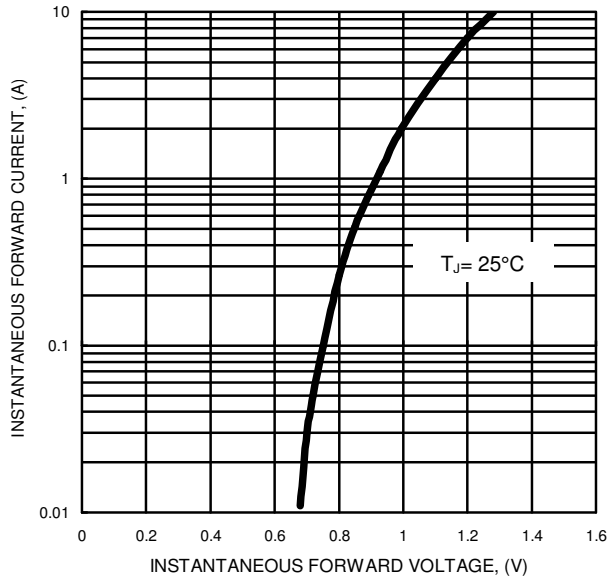
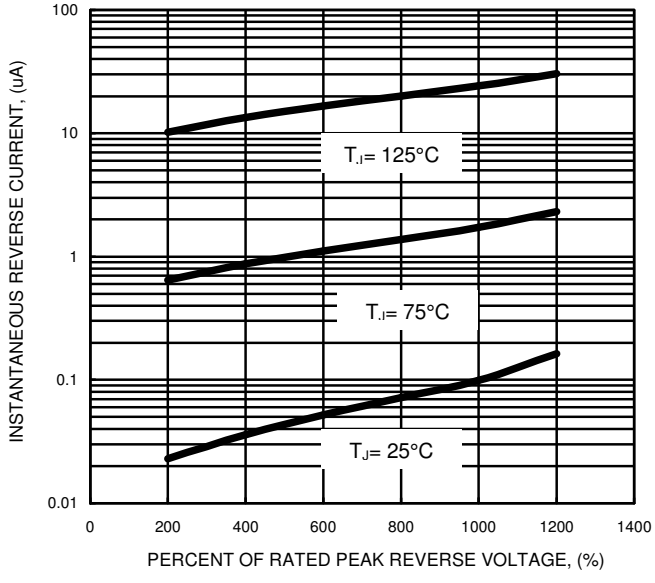


FIG.4- TYPICAL REVERSE CHARACTERISTICS



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