LITE-ON SEMICONDUCTOR

FES1DE

SURFACE MOUNT SUPER FAST RECTIFIERS

REVERSE VOLTAGE – 200 Volts
FORWARD CURRENT – 1.0 Amperes

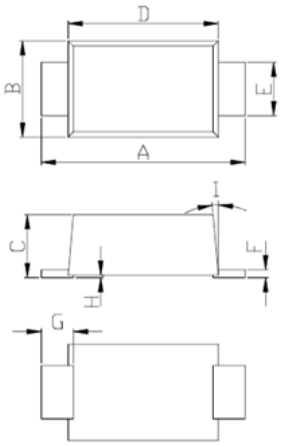
FEATURES

- Fast switching for high efficiency
- For surface mounted applications
- Glass passivated chip
- Low reverse leakage current
- Low forward voltage drop
- High current capability

MECHANICAL DATA

- Case: JEDEC DO-219AA
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free".
- Terminals: Lead Free Plating (Matte Tin Finish.)
- Component in accordance to RoHs 2002/95/EC
- Marking code: E1D
- Weight: 16.5 mg (Approximate)

F1A



F1A			
DIM	MIN	TYP	MAX
A	3.50	3.80	3.90
B	1.70	1.90	2.00
C	0.81	1.18	1.20
D	2.70	2.80	2.90
E	0.80	1.00	1.35
F	0.05	0.15	0.30
G	0.35	0.60	0.85
H	0.03	0.07	0.10
I	0°	5°	8°
All dimension in millimeter			

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATING

PARAMETER		SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	200	V
Maximum DC blocking voltage		V_{DC}	200	V
Average rectified forward current	@Tc=90°C	$I_{(AV)}$	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	30	A
Operating and Storage temperature range		T_J, T_{STG}	-55 ~ +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	TYP	MAX	UNIT
Forward voltage	I_F=1.0A	T_J=25°C	V_F	0.87	0.92	V
Leakage current	V_R=200V	T_J=25°C T_J=125°C	I_R	0.01 1.2	5 200	uA
Typical junction capacitance (Note 1)			C_J	20		pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical Thermal Resistance (Note 2)	$RthJ_A$ $RthJ_L$ $RthJ_C$	115 45 55	°C/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Reverse recovery time	I_F=0.5A , I_{RR}=0.25A, I_R=1.0A	T_{RR}	25	nS

Note :

(1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
(2) Thermal resistance test performed in accordance with JESD-51.

REV.-1, Nov-2017,KSEP09

RATING AND CHARACTERISTIC CURVES
FES1DE

LITEON

FIG.1- FORWARD CURRENT DERATING CURVE

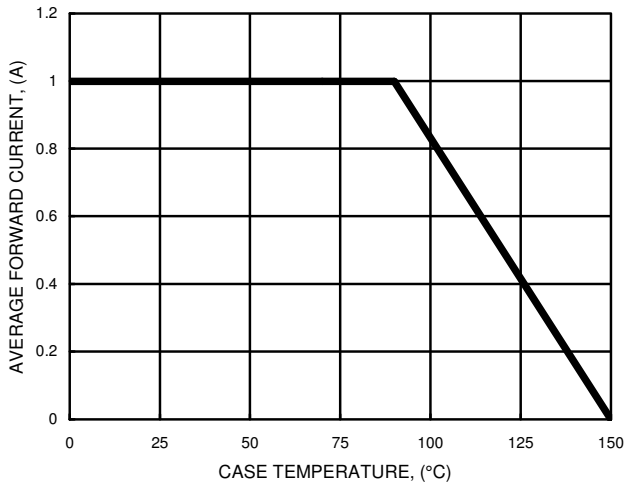


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

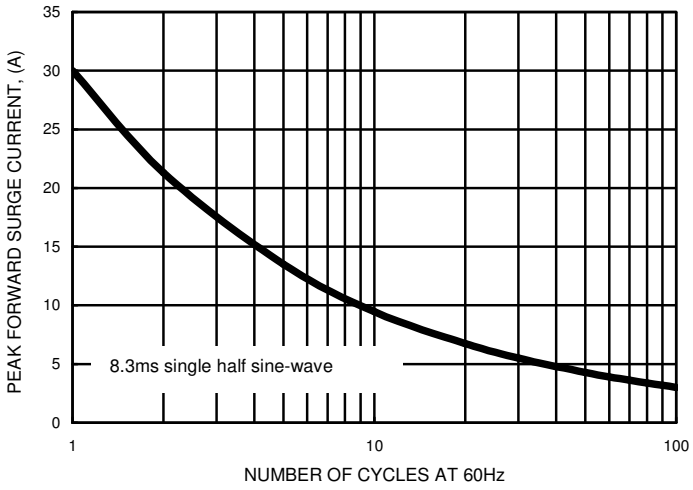


FIG.3- TYPICAL FORWORD CHARACTERISTICS

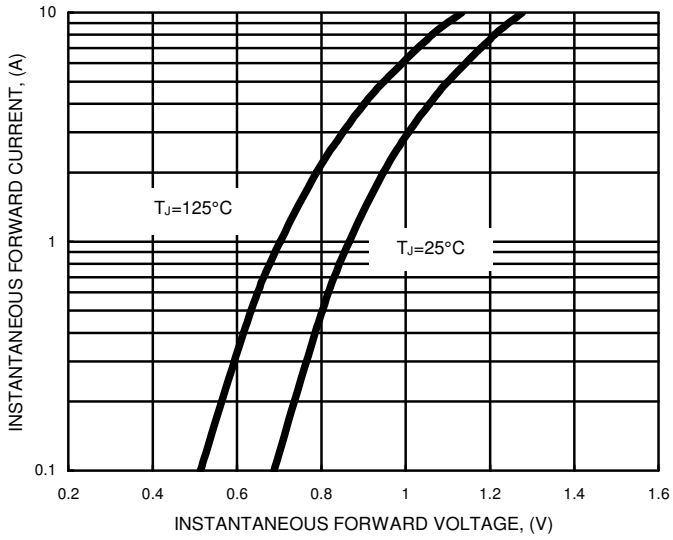


FIG.4- TYPICAL JUNCTION CAPACITANCE

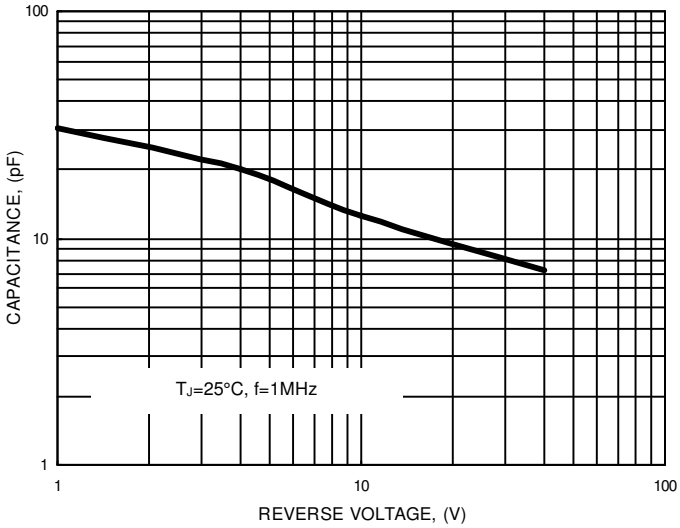
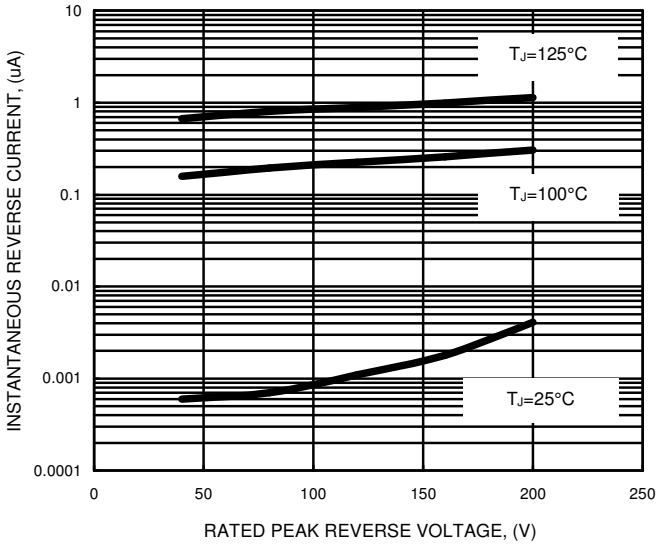


FIG.5- TYPICAL REVERSE CHARACTERISTICS



Important Notice and Disclaimer

LSC reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

LSC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does LSC assume any liability for application assistance or customer product design. LSC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of LSC.

LSC products are not authorized for use as critical components in life support devices or systems without express written approval of LSC.