LITE-ON SEMICONDUCTOR

FB3100D

SURFACE MOUNT
SCHOTTKY BARRIER RECTIFIER

REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 3.0 Amperes

FEATURES

- Very low profile package
- High efficiency
- Extremely fast switching
- Negligible switching losses
- Low forward voltage drop, low power loss
- Qualified to AEC-Q101 Rev_C

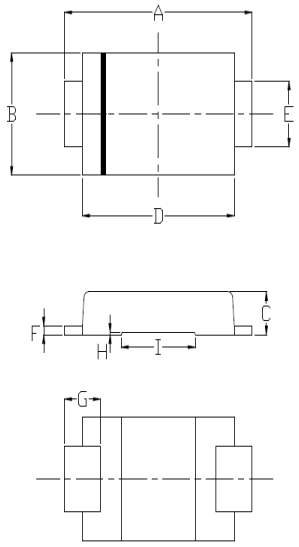
APPLICATION

- High frequency inverters, freewheeling
- DC/DC converters
- Polarity protection

MECHANICAL DATA

- Case: JEDEC DO-221AC
- Case Material: “Green” molding compound, UL flammability classification 94V-0,“Halogen-free”.
- Moisture Sensitivity: Level 1 per J-STD-020
- Lead free finish, RoHS compliant
- Polarity indicator: As marked on body
- Weight:0.0354 grams (Approximate)
- Marking code: B3100

F3-D



F3-D			
DIM	MIN	TYP	MAX
A	4.80	5.20	5.60
B	2.25	2.80	2.95
C	0.90	1.00	1.10
D	3.95	4.20	4.60
E	1.25	1.50	1.65
F	0.15	0.20	0.40
G	0.75	1.00	1.50
H	0.025	0.05	0.075
I	1.90	2.05	2.20
All dimension in millimeter			

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER		SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	100	V
Maximum DC blocking voltage		V_{DC}	100	V
Maximum Average rectified output current	@T_C=125°C	$I_{(AV)}$	3.0	A
Peak forward surge current 8.3ms single half sine-wave Superimposed on rated load.		I_{FSM}	70	A
Operating junction temperature range		T_J	-55 to +175	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS		SYMBOL	TYP	MAX	UNIT
Forward voltage (Note 1)	I_F=3.0A	T_J=25°C T_J=125°C	V_F	-- 0.62	0.835 --	V
Leakage current	V_R=100V	T_J=25°C T_J=125°C	I_R	-- 0.73	6 3	uA mA
Typical junction capacitance (Note 2)			C_J	98		pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 3,4)	$RthJ_C$ $RthJ_a$	25 80	°C/W

REV.-2, Sep-2019, KSHP28

Note :

(1) 300us pulse width, 2% duty cycle.
(2) Measured at 1.0MHz and applied voltage of 4.0VDC.
(3) Thermal resistance test performed in accordance with JESD-51.
(4) Unit mounted on glass-epoxy substrate with 1oz/ft²_10mm x 12 mm copper pad.

RATING AND CHARACTERISTIC CURVES
FB3100D

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FIG.1- FORWARD CURRENT DERATING CURVE

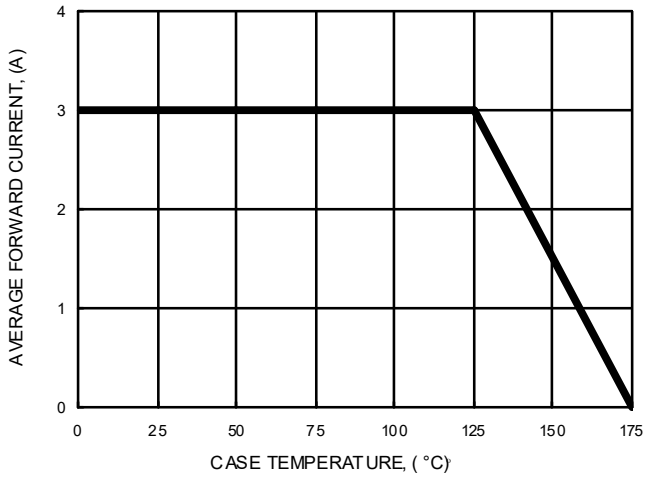


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

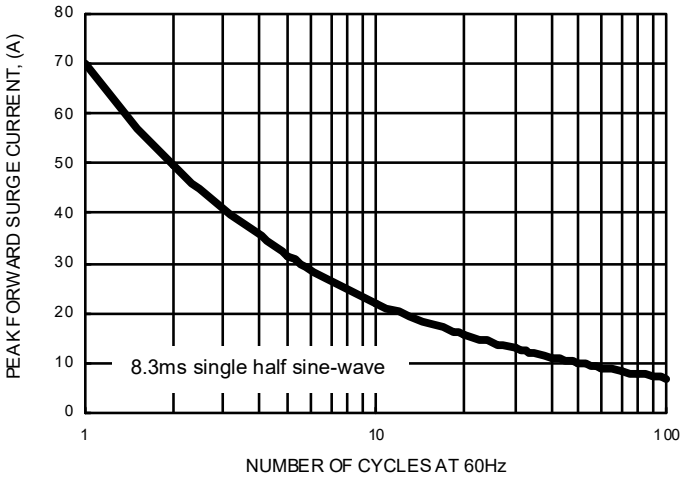


FIG.3- TYPICAL FORWORD CHARACTERISTICS

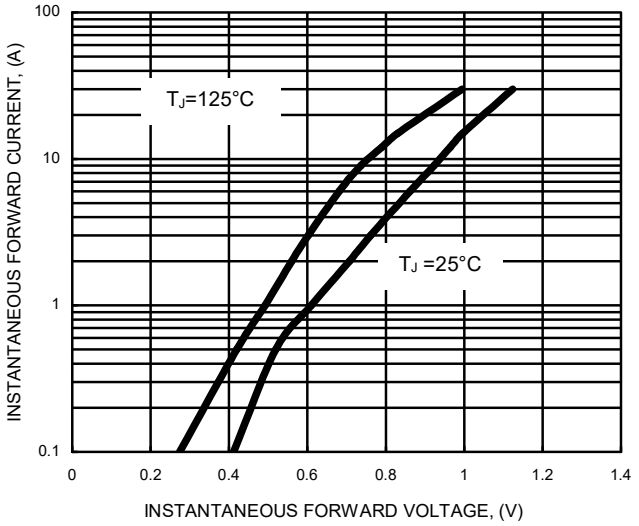


FIG.4- TYPICAL JUNCTION CAPACITANCE

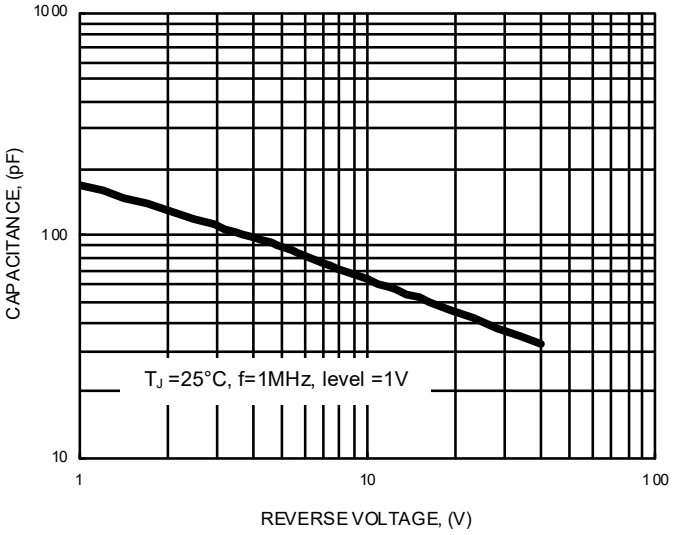
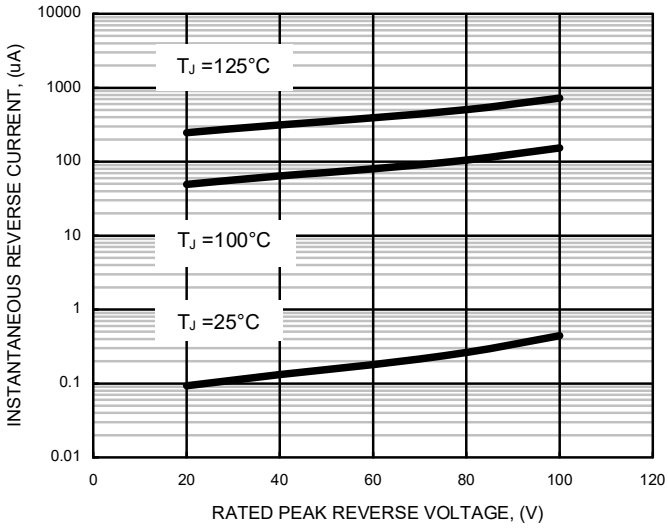


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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