

**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
- Lead-Free Finish; RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)

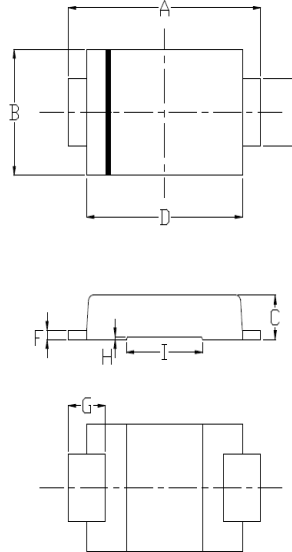
**APPLICATION**

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

**MECHANICAL DATA**

- Package: JEDEC DO-221AC
- Package 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	@ $T_C=125^\circ C$ $I_{(AV)}$	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 4)	$I_F=3.0A$ $T_J=25^\circ C$ $T_J=125^\circ C$	$V_F$	-- 0.62	0.835 --	V
Leakage current	$V_R=100V$ $T_J=25^\circ C$ $T_J=125^\circ C$	$I_R$	-- 0.73	6 3	uA mA
Typical junction capacitance (Note 5)		$C_J$		98	pF

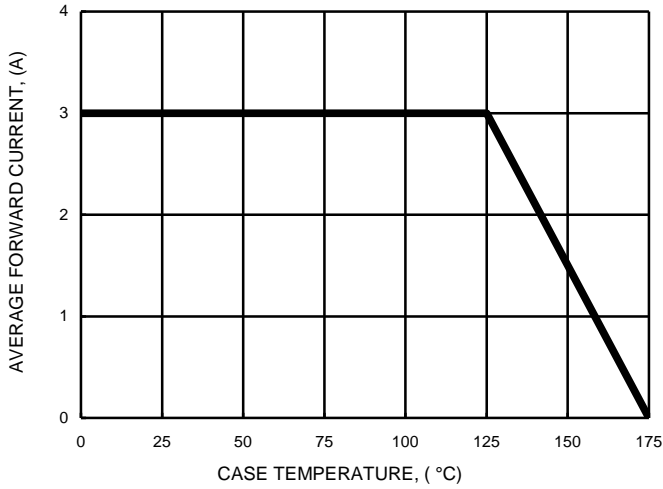
**THERMAL CHARACTERISTICS**

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 6,7)	$R_{thJC}$ $R_{thJA}$	25 80	°C/W

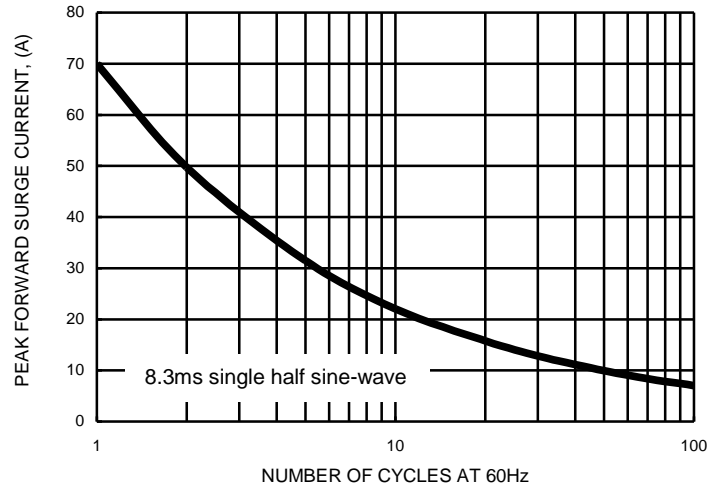
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.  
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.  
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.  
 4. 300us pulse width, 2% duty cycle.  
 5. Measured at 1.0MHz and applied voltage of 4.0VDC.  
 6. Thermal resistance test performed in accordance with JESD-51.  
 7. Unit mounted on glass-epoxy substrate with 1oz/ft<sup>2</sup> 10mm x 12 mm copper pad.

**RATING AND CHARACTERISTIC CURVES  
FB3100D**

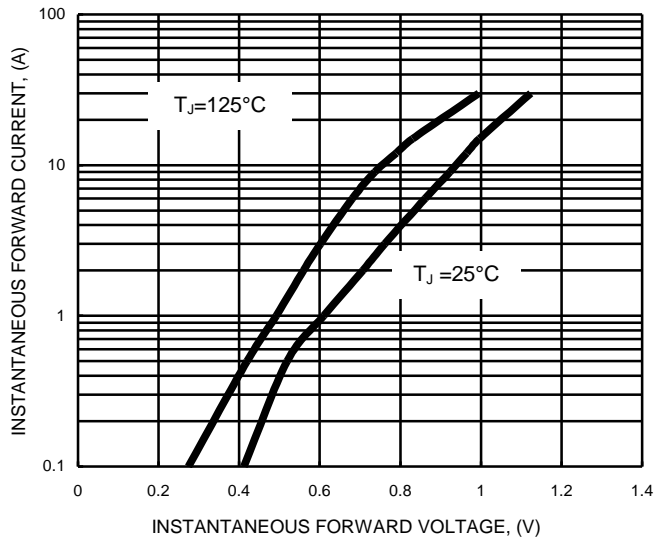
**FIG.1- FORWARD CURRENT DERATING CURVE**



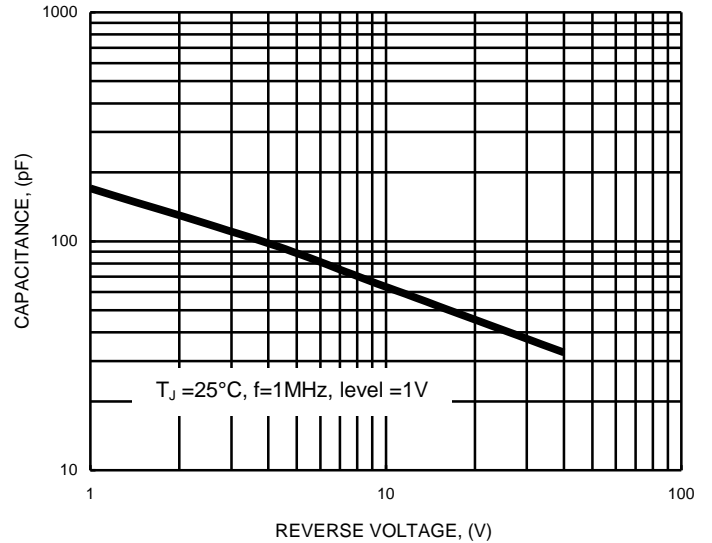
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



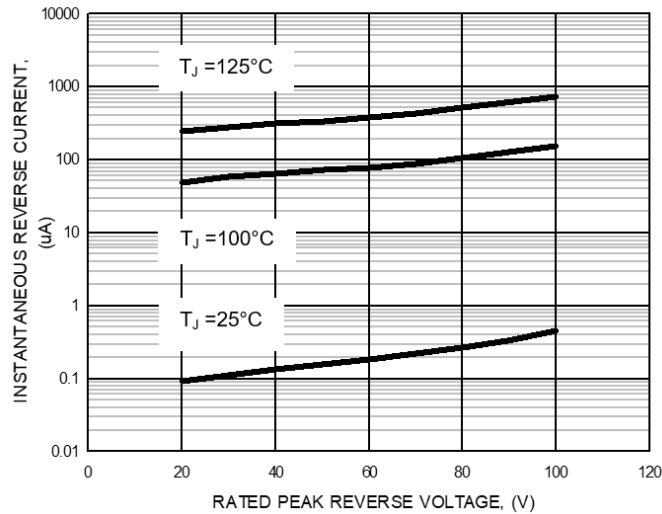
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



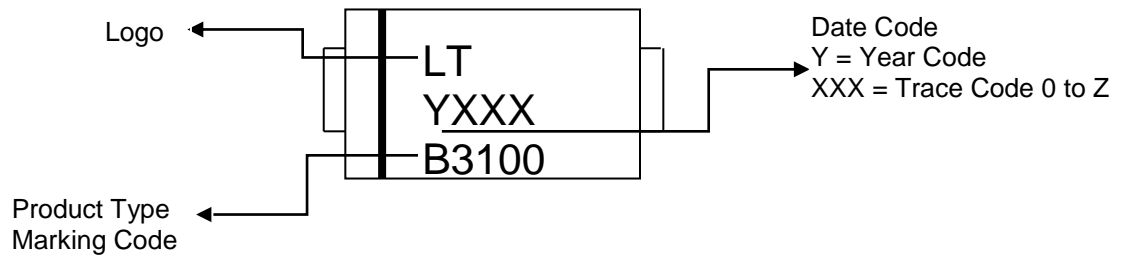
**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



### Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
FB3100D	F3-D	10000	Tape & Reel
FB3100D-7	F3-D	3000	Tape & Reel

### Marking Information :



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