

**SURFACE MOUNT  
SCHOTTKY BARRIER RECTIFIER**

**REVERSE VOLTAGE – 20 Volts  
FORWARD CURRENT – 3.0 Amperes**

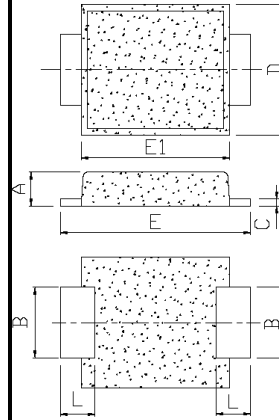
**FEATURES**

- Very low profile package – 0.98mm
- High efficiency
- Low forward voltage drop, low power loss
- Qualified according to AEC-Q101 Rev\_C
- For use in low voltage, high frequency inverters, free wheeling, dc-to-dc converters and polarity protection applications
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. “Green” Device (Note 3)**

**MECHANICAL DATA**

- Package: JEDEC DO-221AC
- Package Material: “Green” molding compound, UL flammability classification 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating (Matte Tin Finish.) e3
- Weight: 0.0354 grams (Approximate)
- Component in accordance to RoHs 2002/95/EC

**SMA Flat**



SMA Flat		
DIM.	MIN.	MAX.
A	0.90	1.10
B	1.25	1.65
C	0.15	0.40
D	2.25	2.95
E	4.80	5.60
E1	3.95	4.60
L	0.75	1.50
All dimension in millimeter		

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

**ABSOLUTE RATINGS**

PARAMETER	SYMBOL	FB320LA	UNIT
Device marking code	Note	B3D	—
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	V
Maximum RMS Voltage	$V_{RMS}$	14	V
Maximum DC blocking voltage	$V_{DC}$	20	V
Average rectified Output Current @ $T_L=105^{\circ}C$ (Fig.1)	$I_{(AV)}$	3.0	A
Peak Forward Surge Current 8.3ms single half sine-wave	$I_{FSM}$	50	A
Forward Voltage (Note 4) IF=3.0A @ $T_J=25^{\circ}C$ @ $T_J=100^{\circ}C$	$V_F$	0.40 0.37	V
Leakage Current (Note 4) VDC=Rated @ $T_J=25^{\circ}C$ @ $T_J=100^{\circ}C$	$I_R$	0.5 45	mA
Typical Junction Capacitance (Note 5)	$C_J$	370	pF
Operating junction temperature	$T_J$	-55 to +150	°C
Storage temperature range	$T_{STG}$	-55 to +150	°C
THERMAL CHARACTERISTIC	SYMBOL	Typical	UNIT
Typical thermal resistance junction to Case (Note 6)	$R_{\theta JC}$	25	°C/W
Typical thermal resistance junction to Ambient (Note 6)	$R_{\theta JA}$	65	°C/W
Typical thermal resistance junction to Lead (Note 6)	$R_{\theta JL}$	17	°C/W

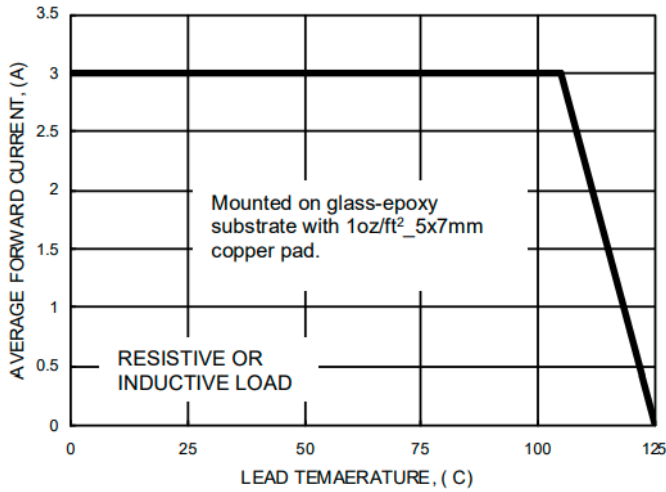
**Notes:**

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 4.0V DC.
6. Thermal Resistance test performed in accordance with JESD-51. Unit mounted on glass-epoxy substrate with 1oz/ft<sup>2</sup> 7x5 mm copper pad.

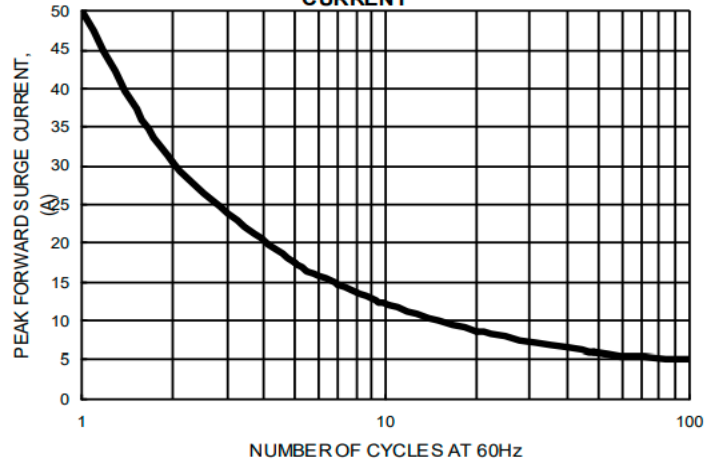
**RATING AND CHARACTERISTIC CURVES**

**FB320LA**

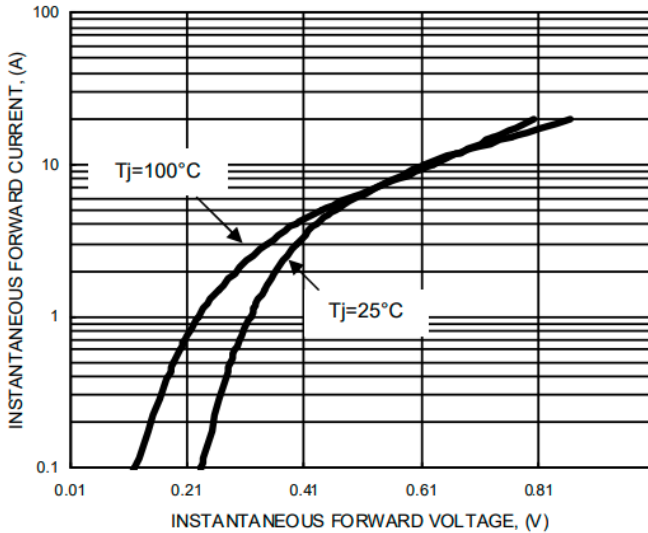
**FIG.1- FORWARD CURRENT DERATING CURVE**



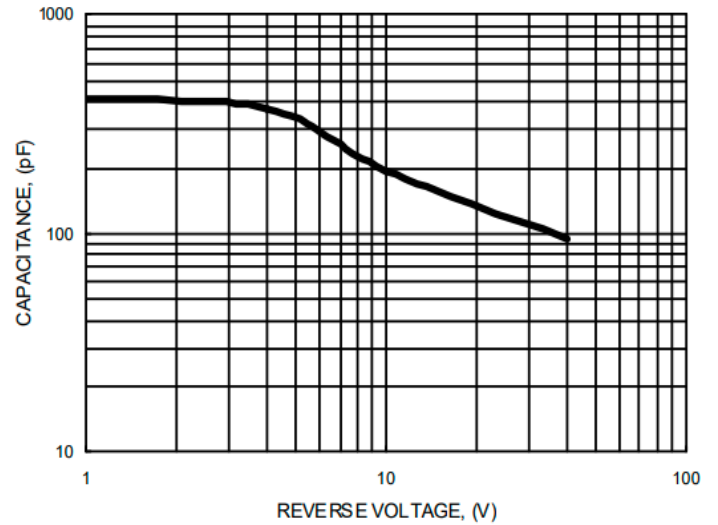
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



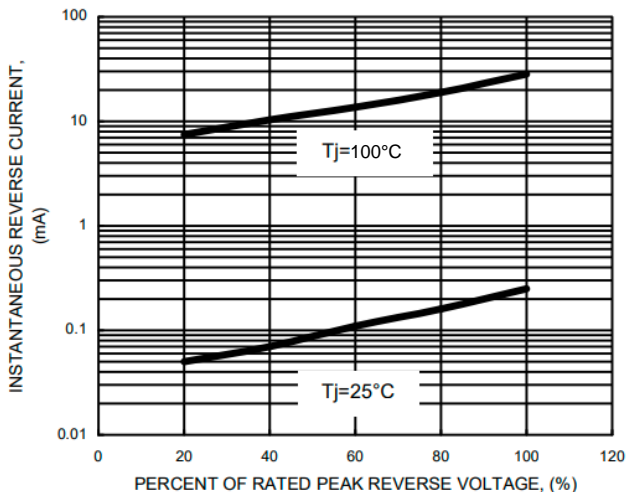
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



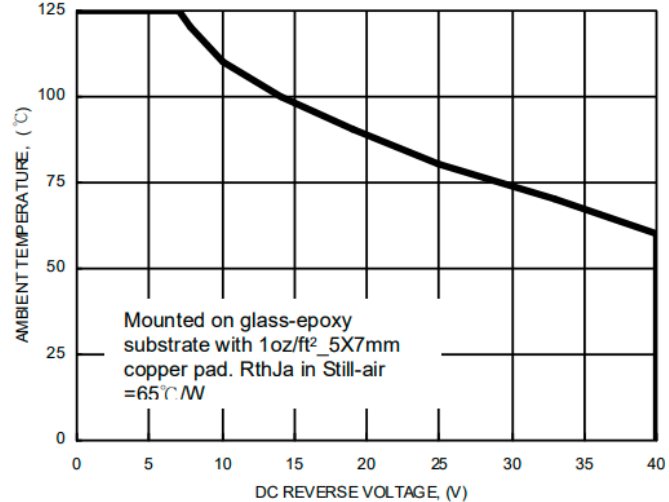
**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



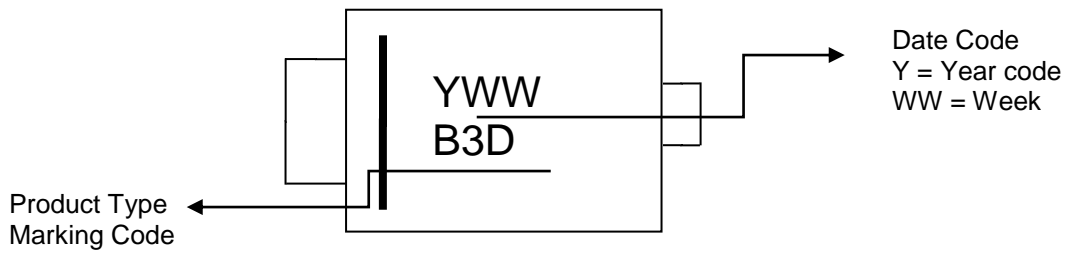
**FIG.6- DC REVERSE VOLTAGE DERATING CURVE**



**Ordering Information:**

Part Number	Package	Packing	
		Qty.	Carrier
FB320LA	SMA Flat	3000	Tape & Reel

**Marking Information:**



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