

B120-B140(LS)

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE – 20 to 40 Volts
FORWARD CURRENT – 1.0 Amperes

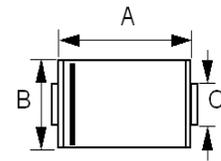
FEATURES

- For surface mounted application
- Metal-semiconductor junction with guard ring
- Epitaxial construction
- Very low forward voltage drop
- High current capability
- Qualified according to AEC-Q101 Rec_C
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection application
- IEC 61000-4-2, level 4 (ESD), > 15KV (air)
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Case: Molded plastic
- Case Material: Molding compound, UL Flammability classification 94V-0, "Halogen-free".
- Polarity: Indicated by cathode band.
- Weight: 0.064 grams (Approximate)

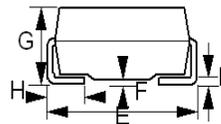
SMA



COLOR BAND DENOTES CATHODE



Cathode Anode



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	2.01	2.40
H	0.76	1.52

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

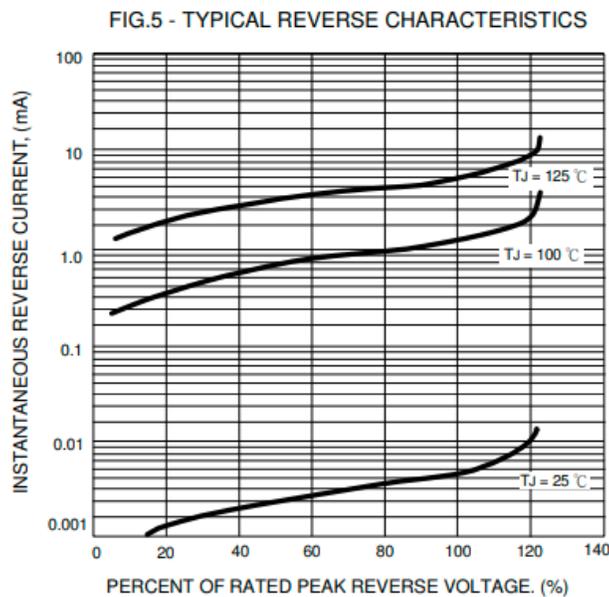
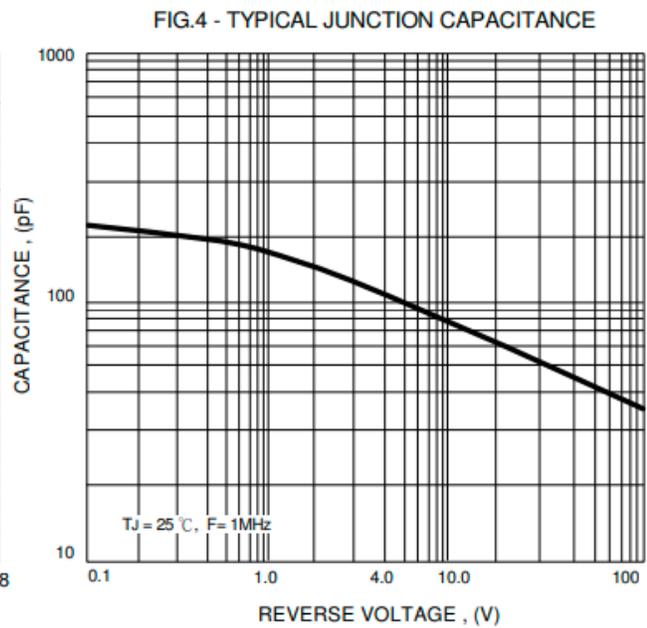
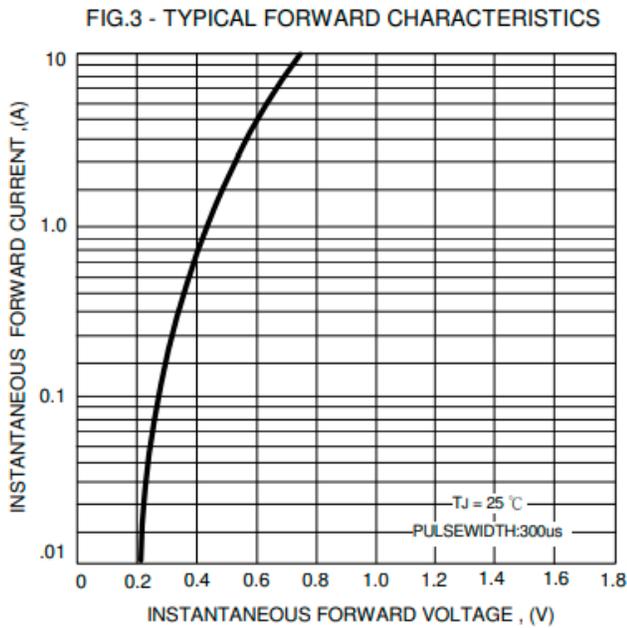
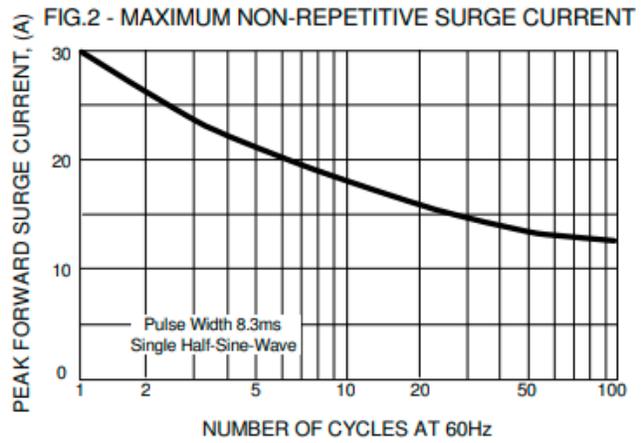
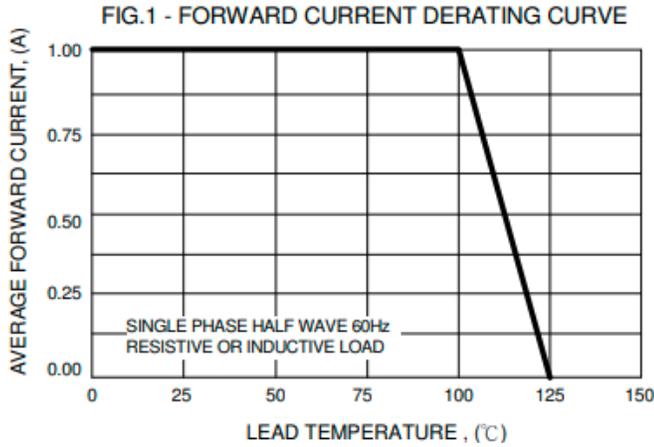
CHARACTERISTICS	SYMBOL	B120	B140	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	V
Maximum RMS Voltage	V_{RMS}	14	28	V
Maximum DC Blocking Voltage	VDC	20	40	V
Maximum Average Forward Rectified Current @ $T_L=100^\circ\text{C}$	I_{AV}	1.0		A
Peak Forward Surge 8.3ms single half sine-wave super imposed on rated load (JEDEC METHOD)	I_{FSM}	30		A
Maximum Forward Voltage at 1.0A DC	V_F	0.5		V
Maximum DC Reverse Current @ $T_j=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_j=100^\circ\text{C}$	I_R	0.1 10		mA
Typical Junction Capacitance (Note 4)	C_T	110		pF
Typical Thermal Resistance (Note 5)	$R_{\theta JL}$	20		$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_j	-55 to +125		$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150		$^\circ\text{C}$

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. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
5. Thermal Resistance Junction to Lead

REV-3, Oct-2021, KSHA24

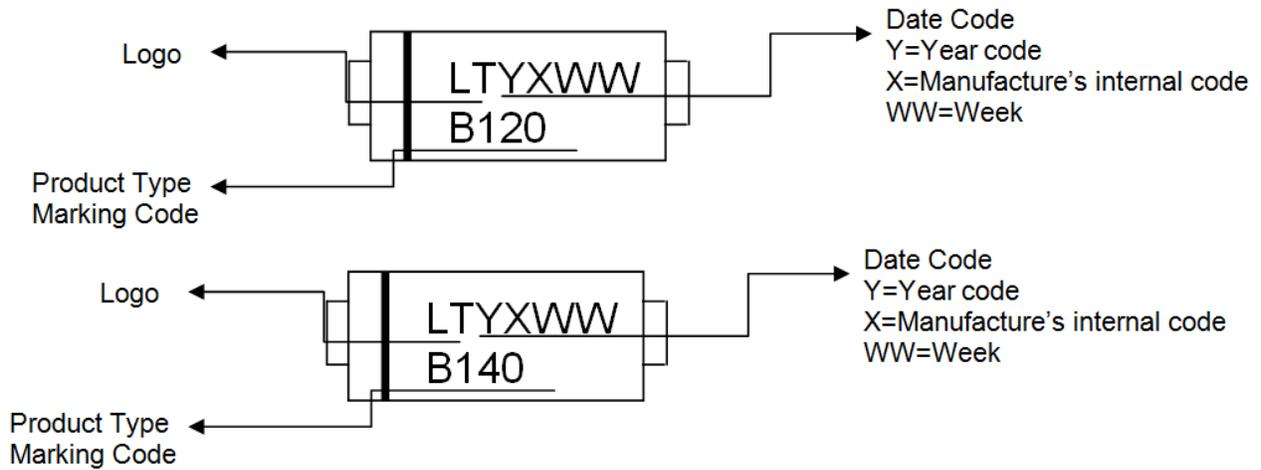
RATING AND CHARACTERISTIC CURVES
B120-B140(LS)



Ordering Information

Part Number	Package	Packing	
		Qty.	Carrier
B120	SMA	5000	Tape & Reel
B140-LS	SMA	5000	Tape & Reel

Marking Information



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