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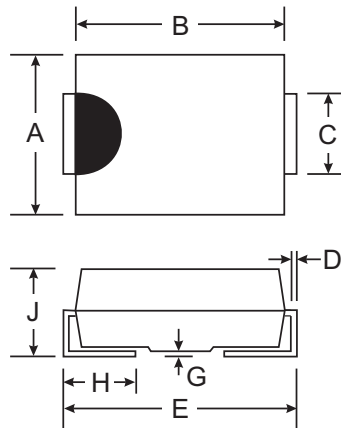
Jameco Part Number 1538806

### Features

- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 100A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- **Lead Free Finish/RoHS Compliant (Note 3)**

### Mechanical Data

- Case: SMC
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Marking: B370, B380, B390: Type number B3100: B310
- Weight: 0.21 grams (approximate)



SMC		
Dim	Min	Max
A	5.59	6.22
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

### Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

Characteristic	Symbol	B370	B380	B390	B3100	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	70	80	90	100	V
Working Peak Reverse Voltage	$V_{RWM}$					
DC Blocking Voltage	$V_R$					
RMS Reverse Voltage	$V_{R(RMS)}$	49	56	63	70	V
Average Rectified Output Current @ $T_T = 90^\circ\text{C}$	$I_O$	3.0				A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	100				A
Forward Voltage @ $I_F = 3.0\text{A}$	$V_{FM}$	0.79 0.69				V
Peak Reverse Current at Rated DC Blocking Voltage	$I_{RM}$	0.5 20				mA
Typical Total Capacitance (Note 2)	$C_T$	100				pF
Typical Thermal Resistance Junction to Terminal (Note 1)	$R_{\theta JT}$	10				$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-55 to +125				$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150				$^\circ\text{C}$

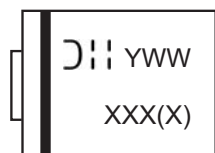
- Notes: 1. Valid provided that terminals are kept at ambient temperature.  
 2. Measured at 1.0MHz and Applied Reverse Voltage of 4.0V DC.  
 3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.

## Ordering Information (Note 4)

Device*	Packaging	Shipping
B3x-13-F	SMC	3000/Tape & Reel

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

\* x = Device type, e.g. B380-13-F (SMC package).



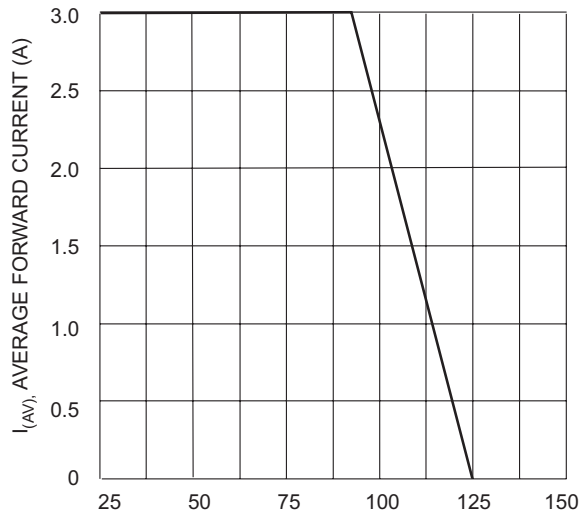
XXXX = Product type marking code, ex: B380 (SMC package)

D||| = Manufacturers' code marking

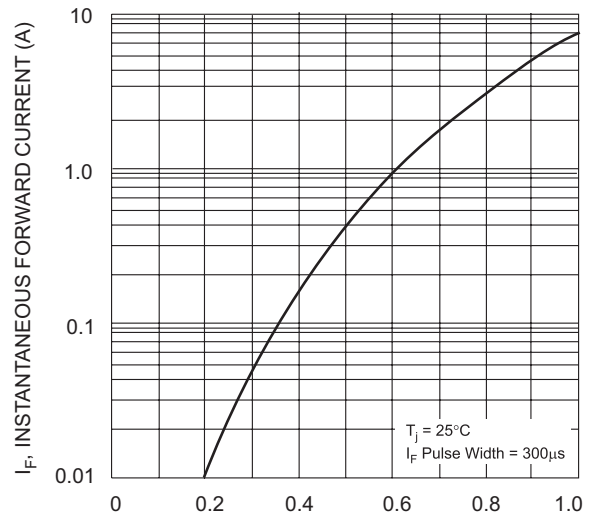
YWW = Date code marking

Y = Last digit of year ex: 2 for 2002

WW = Week code 01 to 52



$T_T$ , TERMINAL TEMPERATURE ( $^{\circ}\text{C}$ )  
Fig. 1 Forward Current Derating Curve



$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics

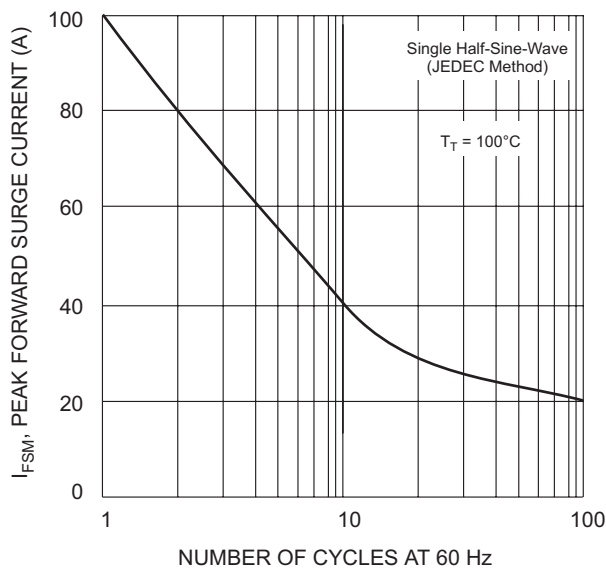


Fig. 3 Max Non-Repetitive Peak Forward Surge Current

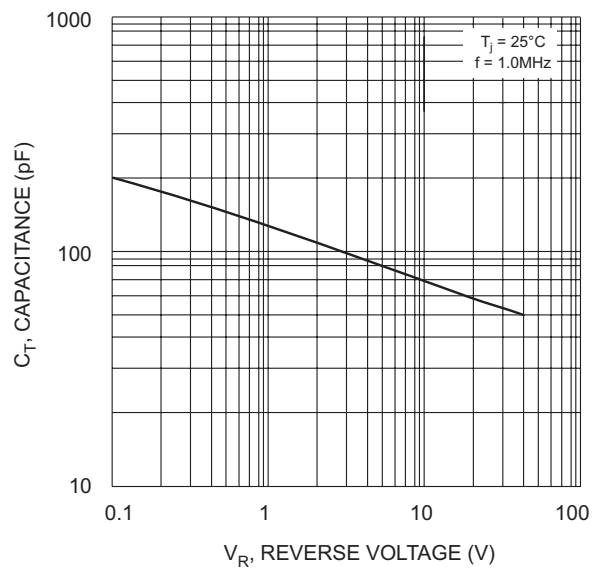


Fig. 4 Typical Total Capacitance

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