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## **B320B-13-F(MS) THRU B3A0B-13-F(MS)**

**Product specification**




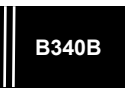




## Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 250°C/10 seconds at terminals

## Mechanical Data

- **Case:** JEDEC DO-214AA molded plastic body
- **Terminals:** leads solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.003 ounce, 0.093 grams

## Reference News

Outline	Marking						
							
SMB	B320B-13-F(MS)	B330B-13-F(MS)	B340B-13-F(MS)	B350B-13-F(MS)	B360B-13-F(MS)	B380B-13-F(MS)	B3A0B-13-F(MS)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

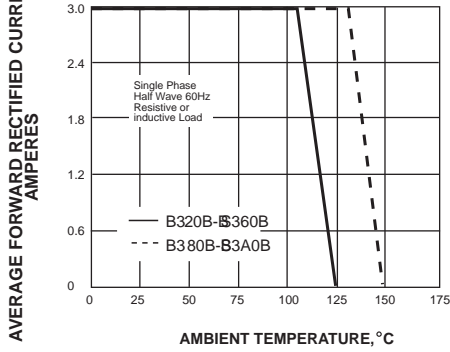
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

YFW Catalog Number	SYMBOLS	B320B-13-F(MS)	B330B-13-F(MS)	B340B-13-F(MS)	B350B-13-F(MS)	B360B-13-F(MS)	B380B-13-F(MS)	B3A0B-13-F(MS)	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	VOLTS
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	70	VOLTS
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	VOLTS
Maximum average forward rectified current at $T_L$ (see fig.1)	$I_{AV}$	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	100.0							Amps
Maximum instantaneous forward voltage at 3.0A	$V_F$	0.55		0.70		0.85			Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_R$	0.5					10		mA
		20							
Typical junction capacitance (NOTE 1)	$C_J$	500			300				pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	55.0							°C/W
Operating junction temperature range	$T_J$	-50 to +125					-50 to +150		°C
Storage temperature range	$T_{STG}$	-50 to +150							°C

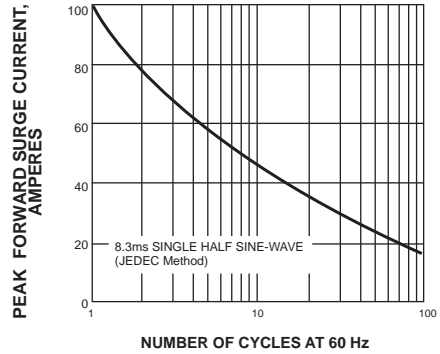
**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C. 2. P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

**RATINGS AND CHARACTERISTIC CURVES**

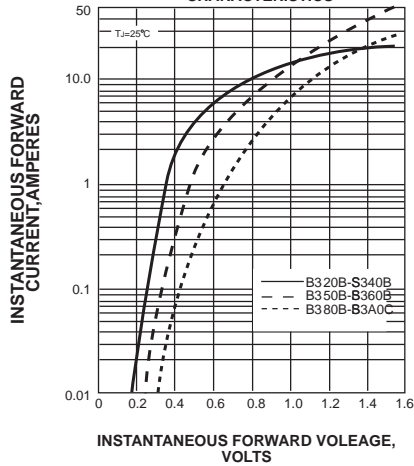
**FIG. 1- FORWARD CURRENT DERATING CURVE**



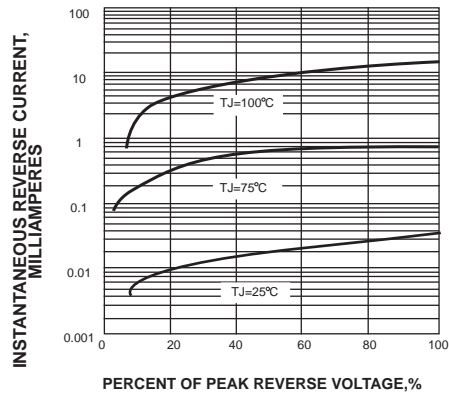
**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



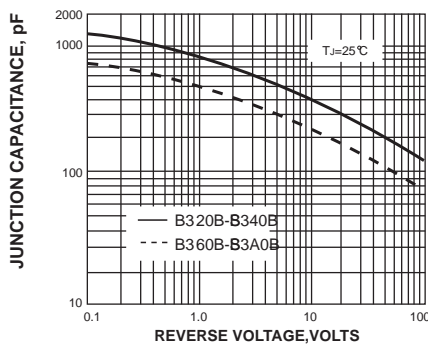
**FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



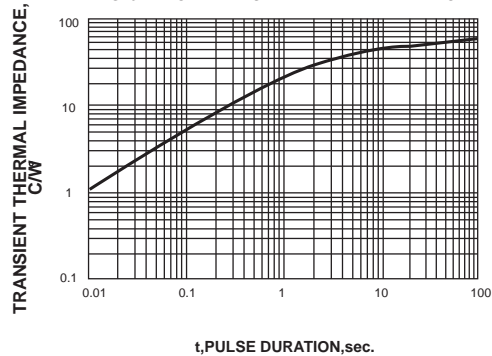
**FIG. 4-TYPICAL REVERSE CHARACTERISTICS**



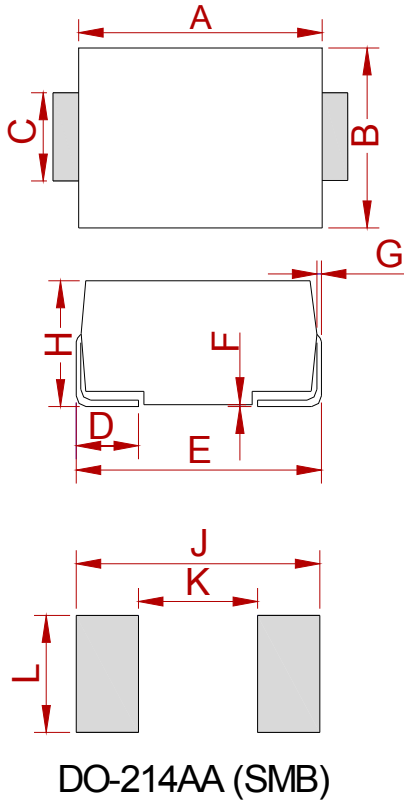
**FIG. 5-TYPICAL JUNCTION CAPACITANCE**



**FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE**

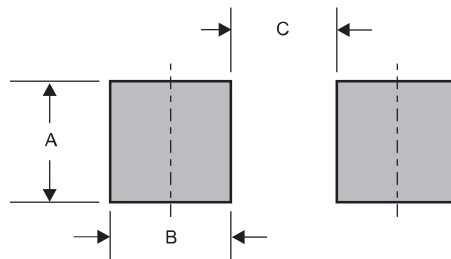


**PACKAGE MECHANICAL DATA**



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.25	4.75	0.167	0.187
B	3.30	3.94	0.130	0.155
C	1.85	2.21	0.073	0.087
D	0.76	1.52	0.030	0.060
E	5.08	5.59	0.200	0.220
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.11	2.44	0.083	0.096
J	6.80		0.270	
K		2.60		0.100
L	2.40		0.090	

**Suggested solder pad layout**



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMB	0.078 (2.00)	0.059 (1.50)	0.110 (2.80)

**REEL SPECIFICATION**

P/N	PKG	QTY
B230-13-F(MS) THRU B2200B-13-F(MS)	SMB	2500

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