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## **B320A(MS) THRU B3100A(MS)**

**Product specification**









## Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- 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-214AC molded plastic body
- **Terminals:** leads solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.002 ounce, 0.07 grams

## Reference News

| Outline   | Marking   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |
| SMA   | B320A(MS)   | B330A(MS)   | B340A(MS)   | B350A(MS)   | B360A(MS)   | B380A(MS)   | B3100A(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%.

| Catalog Number  | SYMBOLS         | B320A(MS)   | B330A(MS) | B340A(MS) | B350A(MS) | B360A(MS) | B380A(MS)   | B3100A(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<br>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   | $I_R$           | 0.5         |           |           |           |           |             |            | mA    |
|   |                 | 20          |           |           |           |           | 10          |            |       |
| 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

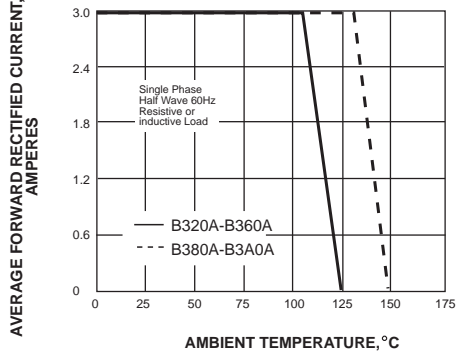


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

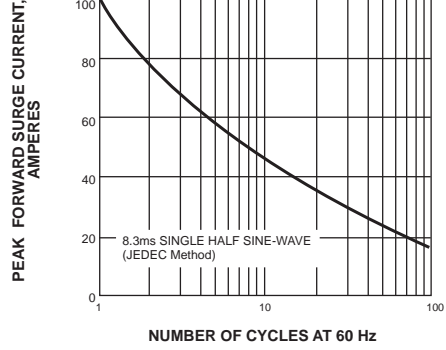


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

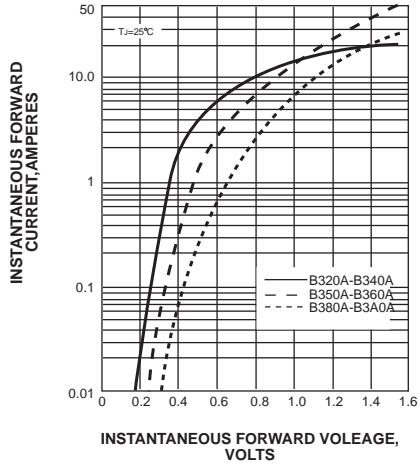


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

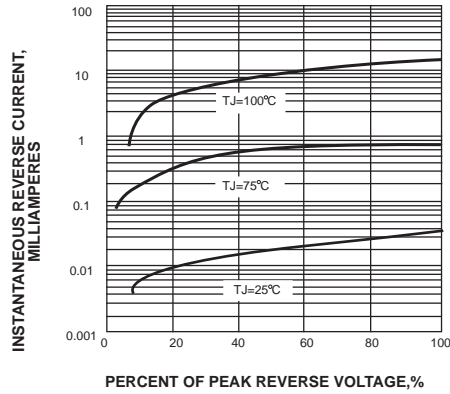


FIG. 5-TYPICAL JUNCTION CAPACITANCE

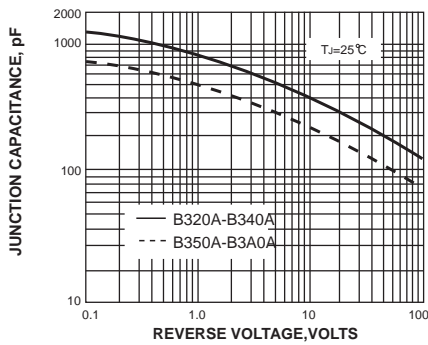
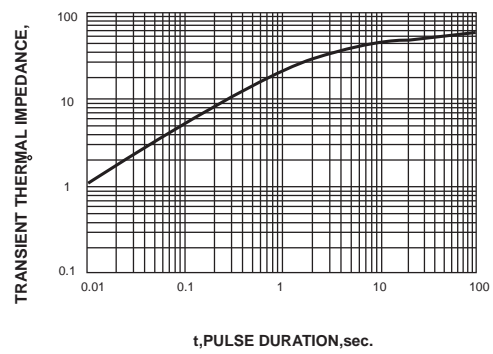
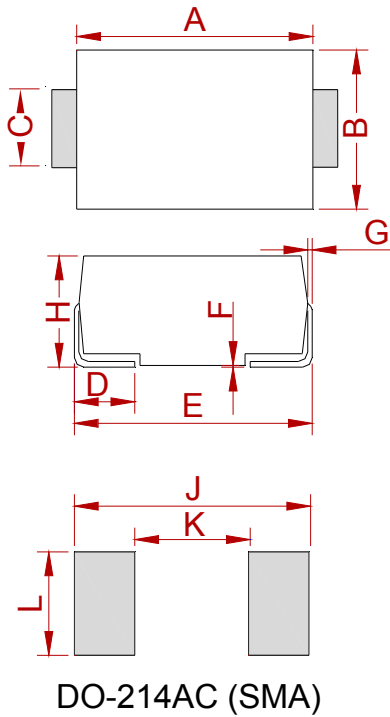


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

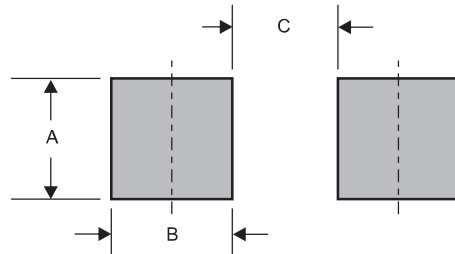


## PACKAGE MECHANICAL DATA



| Ref. | Dimensions  |       |        |       |
|------|-------------|-------|--------|-------|
|      | Millimeters |       | Inches |       |
|      | Min.        | Max.  | Min.   | Max.  |
| A    | 4.25        | 4.65  | 0.167  | 0.183 |
| B    | 2.50        | 2.90  | 0.098  | 0.114 |
| C    | 1.35        | 1.65  | 0.053  | 0.065 |
| D    | 0.76        | 1.52  | 0.030  | 0.060 |
| E    | 4.93        | 5.28  | 0.194  | 0.208 |
| F    | 0.051       | 0.203 | 0.002  | 0.008 |
| G    | 0.15        | 0.31  | 0.006  | 0.012 |
| H    | 1.98        | 2.41  | 0.078  | 0.095 |
| J    | 6.50        |       | 0.256  |       |
| K    |             | 2.30  |        | 0.090 |
| L    | 1.70        |       | 0.067  |       |

## Suggested solder pad layout



Dimensions in inches and (millimeters)

| PACKAGE | A            | B            | C            |
|---------|--------------|--------------|--------------|
| SMA     | 0.110 (2.80) | 0.063 (1.60) | 0.087 (2.20) |

## REEL SPECIFICATION

| P/N                       | PKG | QTY  |
|---------------------------|-----|------|
| B320A(MS) THRU B3100A(MS) | SMA | 2000 |

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