# SB320D THRU SB360D

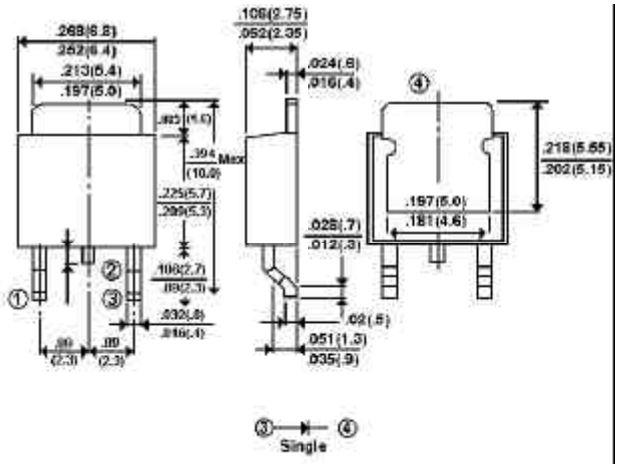
## DPAK SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE - 20 to 60 Volts  CURRENT - 3.0 Amperes

### FEATURES

- Plastic package has Underwriters Laboratory Flammab ity Classification 94V-O
- For surface mounted applications
- Low profile package
- Bu t-in strain relief
- Metal to s icon rectifier majority carrier conduction
- Low power loss, High efficiency
- High current capab ity, low $V_F$
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection app cations
- High temperature soldering guaranteed: 260 ¢J/10 seconds at terminals

### DPAK/TO-252AA




Dimensions in inches and (millimeters)

### MECHANICAL DATA

Case: D PAK/TO-252AA molded plastic
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode
Standard packaging: 16mm tape (EIA-481)
Weight: 0.015 ounce, 0.4 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ¢J ambient temperature unless otherwise specified.
Resistive or inductive load.

| | SYMBOLS | SB320D | SB330D | SB340D | SB350D | SB360D | UNITS |
|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum RMS Voltage | $V_{RMS}$ | 14 | 21 | 28 | 35 | 42 | Volts |
| Maximum DC Blocking Voltage | $V_{DC}$ | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum Average Forward Rectified Current at $T_C$=75 ¢J | $I_{(AV)}$ | 3.0 | | | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | $I_{FSM}$ | 75.0 | | | | | Amps |
| Maximum Instantaneous Forward Voltage at 3.0A (Note 1) | $V_F$ | 0.50 | | | 0.65 | | Volts |
| Maximum DC Reverse Current $T_A$=25 ¢J(Note 1)<br>At Rated DC Blocking Voltage $T_A$=100 ¢J | $I_R$ | 0.2<br>20.0 | | | | | mA |
| Maximum Thermal Resistance (Note 2) | R £KJL<br>R £KJA | 6.0<br>80.0 | | | | | ¢J/W |
| Operating Junction Temperature Range | $T_J$ | -50 to +125 | | | | | ¢J |
| Storage Temperature Range | $T_{STG}$ | -50 to +150 | | | | | ¢J |

NOTES:

1. Pulse Test with PW=300 £gsec, 2% Duty Cycle.
2. Mounted on P.C.Board with 14mm$^2$ (.013mm thick) copper pad areas.

RATING AND CHARACTERISTIC CURVES

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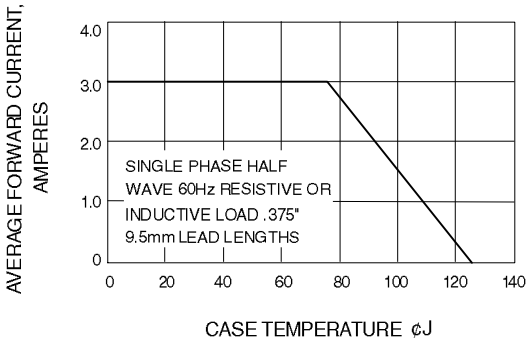


Fig. 1-FORWARD CURRENT DERATING CURVE

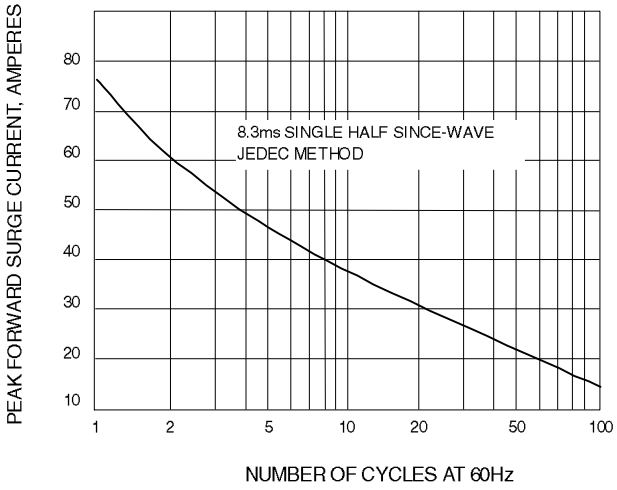


Fig. 2-MAXIMUM NON-REPETITIVE SURGE CURRENT

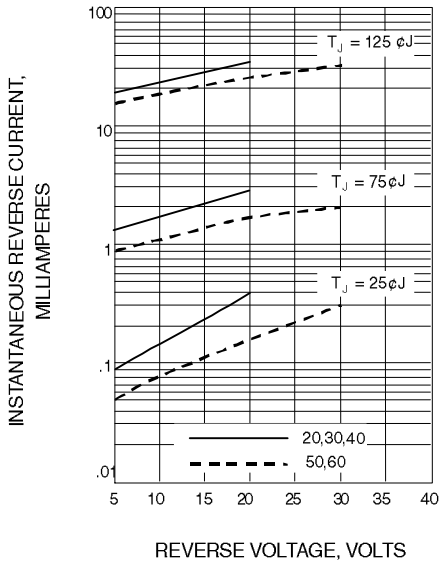


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

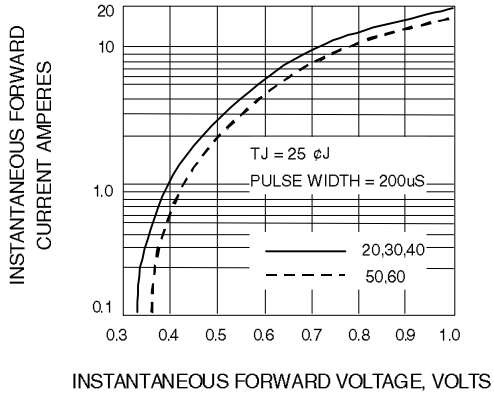


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

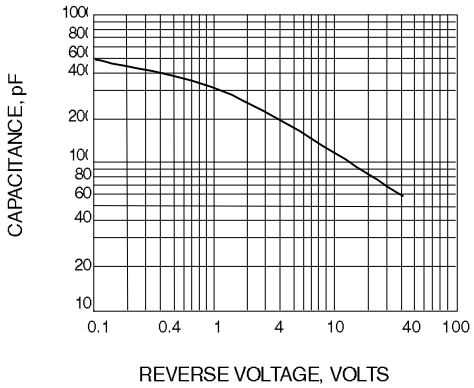


Fig. 5-TYPICAL JUNCTION CAPACITANCE