



## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

Voltage

40~200 V

Current

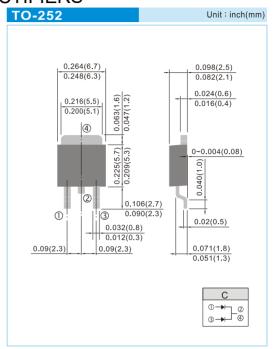
8 A

#### **Features**

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O.
- ← For surface mounted applications in order to optimize board space
- C Low power loss, High efficiency
- High surge capacity
- C Lead free in compliance with EU RoHS 2011/65/EU directive.
- ← Green molding compound as per IEC61249 Std..(Halogen Free)

#### Mechanical Data

- Case: TO-252 Molded plastic
- C Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marking
- C Approx. Weight: 0.0104 ounces, 0.297 grams
- Marking: Part number



# Maximum Ratings (T<sub>A</sub>=25°C unless otherwise noted)

| PARAMETER   |                        | SYMBOL            | BD840CS                 | BD845CS | BD850CS | BD860CS | BD880CS | BD890CS | BD8100CS | BD8150CS | BD8200CS | UNIT |
|---|------------------------|-------------------|-------------------------|---------|---------|---------|---------|---------|----------|----------|----------|------|
| Maximum repetitive peak reverse voltage   |                        | $V_{RRM}$         | 40                      | 45      | 50      | 60      | 80      | 90      | 100      | 150      | 200      | V    |
| Maximum rms voltage   |                        | $V_{RMS}$         | 28                      | 31.5    | 35      | 42      | 56      | 63      | 70       | 105      | 140      | V    |
| Maximum dc blocking voltage   |                        | $V_R$             | 40                      | 45      | 50      | 60      | 80      | 90      | 100      | 150      | 200      | V    |
| Maximum average forward rectified current   |                        | $I_{F(AV)}$       | 8                       |         |         |         |         |         |          |          | Α        |      |
| Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load |                        | I <sub>FSM</sub>  | 85                      |         |         |         |         |         |          | Α        |          |      |
| Maximum forward voltage at 4A per diode   |                        | $V_{F}$           | 0.7 0.75 0.8 0.9        |         |         |         | .9      | V       |          |          |          |      |
| Maximum dc reverse current at   | T <sub>J</sub> =25 °C  |                   | 0.05                    |         |         |         |         |         |          |          |          | mA   |
| rated dc blocking voltage   | T <sub>J</sub> =100 °C | I <sub>R</sub> 20 |                         |         |         |         |         |         |          |          |          |      |
| Typical thermal resistance  |                        | R <sub>→JC</sub>  | 5                       |         |         |         |         |         |          | °C/W     |          |      |
| Operating junction and storage temperature range                                    |                        | $T_{J}, T_{STG}$  | -55 to +150 -65 to +175 |         |         |         |         |         |          | °C       |          |      |

Note: Both Bonding and Chip structure are available.





#### **RATING AND CHARACTERISTIC CURVES**

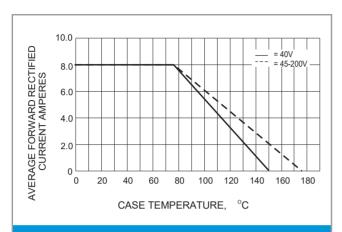


Fig.1- FORWARD CURRENT DERATING CURVE

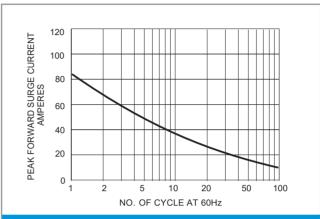


Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

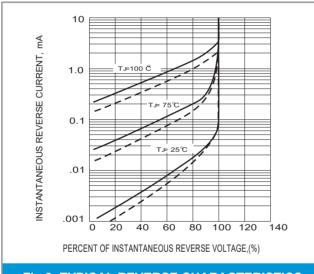


Fig.3-TYPICAL REVERSE CHARACTERISTICS

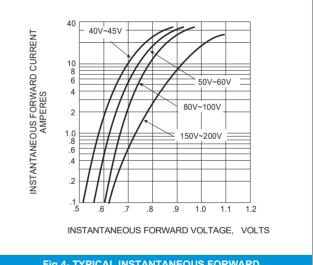
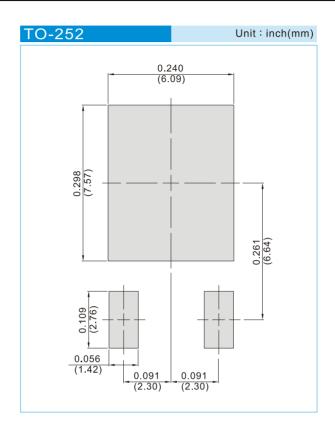


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS





### **MOUNTING PAD LAYOUT**



### **ORDER INFORMATION**

Packing informationT/R – 3K per 13" plastic Reel

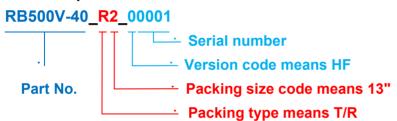




## Part No\_packing code\_Version

BD840CS\_L2\_00001 BD840CS\_S2\_00001

## For example:



| Packing Code XX                        |                         |                                     |                         |               | Version Code XXXXX   |                                       |  |  |  |
|--|-------------------------|-------------------------------------|-------------------------|---------------|----------------------|---------------------------------------|--|--|--|
| Packing type                           | 1 <sup>st</sup><br>Code | Packing size code                   | 2 <sup>nd</sup><br>Code | HF or<br>RoHS | 1 <sup>st</sup> Code | 2 <sup>nd</sup> ~5 <sup>th</sup> Code |  |  |  |
| Tape and Ammunition<br>Box (T/B)       | A                       | N/A                                 | 0                       | HF            | 0                    | serial number                         |  |  |  |
| Tape and Reel (T/R)                    | R                       | 7"                                  | 1                       | RoHS          | 1                    | serial number                         |  |  |  |
| Bulk Packing (B/P)                     | В                       | 13"                                 | 2                       |               |                      |                                       |  |  |  |
| Tube Packing (T/P)                     | Т                       | 26mm                                | X                       |               |                      |                                       |  |  |  |
| Tape and Reel (Right Oriented) (TRR)   | S                       | 52mm                                | Y                       |               |                      |                                       |  |  |  |
| Tape and Reel (Left Oriented)<br>(TRL) | L                       | PANASERT T/B<br>CATHODE UP (PBCU)   | U                       |               |                      |                                       |  |  |  |
| FORMING                                | F                       | PANASERT T/B<br>CATHODE DOWN (PBCD) | D                       |               |                      |                                       |  |  |  |





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