

**BSCD32H THRU BSCD310H**

● **FEATURES**

- \* Halogen-free type
- \* Lead free product , compliance to RoHs
- \* Lead less chip form , no lead damage
- \* Lead-free solder joint , no wire bond & lead frame
- \* Low power loss , High efficiency
- \* High current capability , low VF
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

● **APPLICATION**

- \* Switching mode power supply applications
- \* Portable equipment battery applications
- \* High frequency rectification
- \* DC / DC Converter
- \* Telecommunication

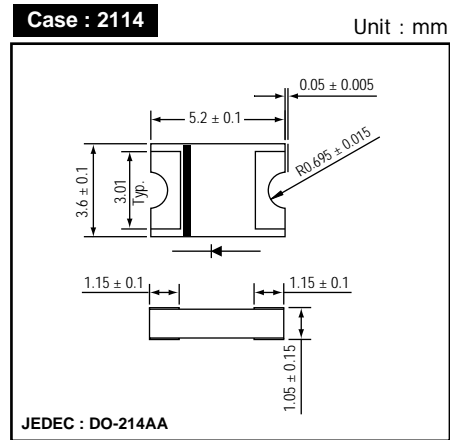
● **MECHANICAL DATA**

**Case :** Packed with FRP substrate and epoxy underfilled  
**Terminals :** Pure Tin plated (Lead-Free), solderable per MIL-STD-750, Method 2026.  
**Polarity :** Laser Cathode band marking  
**Weight :** 0.042 gram

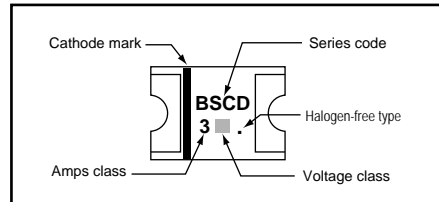
● **PACKING**

- \* 5,000 pieces per 13" (330mm ± 2mm) reel
- \* 2 reels per box
- \* 5 boxes per carton

● **OUTLINE DIMENSIONS**



● **MARKING**



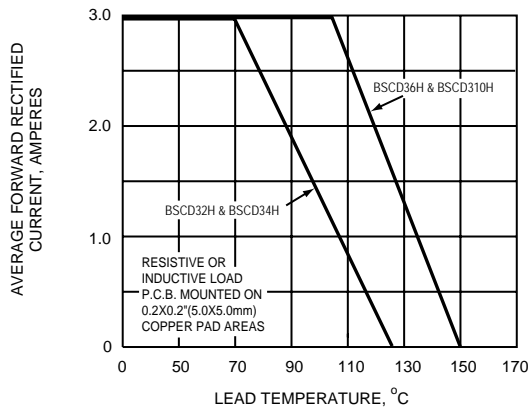
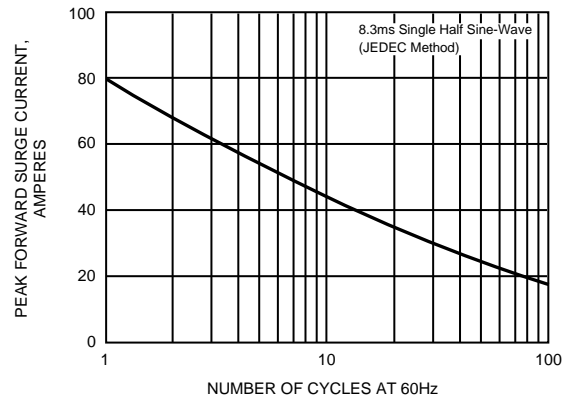
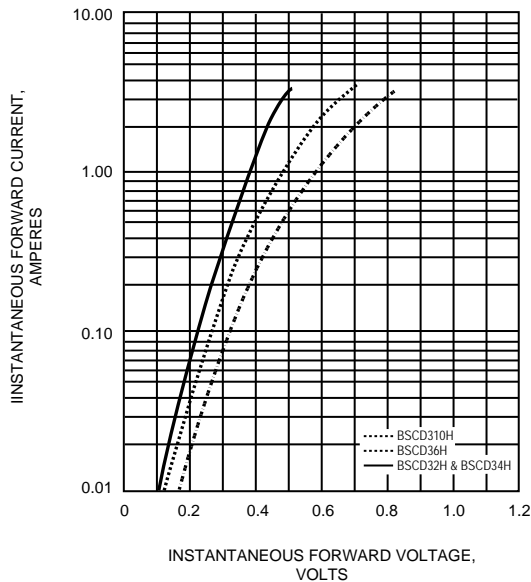
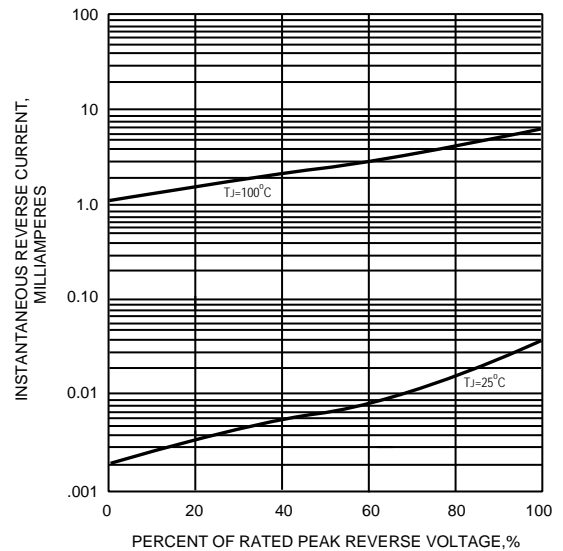
**Absolute Maximum Ratings (Ta = 25 °C)**

| ITEM                                 | Symbol | Conditions                  | Rating      |         |             |          | Unit |
|--------------------------------------|--------|-----------------------------|-------------|---------|-------------|----------|------|
|                                      |        |                             | BSCD32H     | BSCD34H | BSCD36H     | BSCD310H |      |
| Repetitive peak reverse voltage      | VRRM   |                             | 20          | 40      | 60          | 100      | V    |
| Average forward current (SEE FIG.1)  | IF(AV) |                             | 3.0         |         |             |          | A    |
| Peak forward surge current           | IFSM   | 8.3ms single half sine-wave | 80          |         |             |          | A    |
| Operating junction temperature Range | Tj     |                             | -55 to +125 |         | -55 to +150 |          | °C   |
| Storage temperature Range            | TSTG   |                             | -55 to +150 |         |             |          | °C   |

**Electrical characteristics (Ta = 25 °C)**

| ITEM                            | Symbol  | Conditions                   | Type     | Min. | Typ. | Max. | Unit |
|---------------------------------|---------|------------------------------|----------|------|------|------|------|
| Forward voltage (NOTE 1)        | VF      | IF = 0.5A                    | BSCD32H  | -    | 0.35 | -    | V    |
|                                 |         | IF = 1.0A                    | /        | -    | 0.40 | -    |      |
|                                 |         | IF = 3.0A                    | BSCD34H  | -    | 0.48 | 0.50 |      |
|                                 |         | IF = 0.5A                    | BSCD36H  | -    | 0.38 | -    | V    |
| IF = 1.0A                       |         | -                            | 0.48     | -    |      |      |      |
| IF = 3.0A                       |         | -                            | 0.65     | 0.70 |      |      |      |
|                                 |         | IF = 0.5A                    | BSCD310H | -    | 0.48 | -    | V    |
|                                 |         | IF = 1.0A                    |          | -    | 0.58 | -    |      |
|                                 |         | IF = 3.0A                    |          | -    | 0.78 | 0.85 |      |
| Repetitive peak reverse current | IRRM    | VR = Max. VRRM , Ta = 25 °C  |          | -    | 0.04 | 0.50 | mA   |
| Junction capacitance            | Cj      | VR = 4V, f = 1.0 MHz         |          | -    | 180  | -    | pF   |
| Thermal resistance              | Rth(JA) | Junction to ambient (NOTE 2) |          | -    | 55   | -    | °C/W |
|                                 | Rth(JL) | Junction to lead (NOTE 2)    |          | -    | 17   | -    | °C/W |

NOTES : (1) Pulse test width PW=300usec , 1% duty cycle.  
 (2) Mounted on P.C. board with 0.2 x 0.2"(5.0 x5.0mm) copper pad areas.  
 (3) Preliminary draft.

**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**
