

## ■ Features

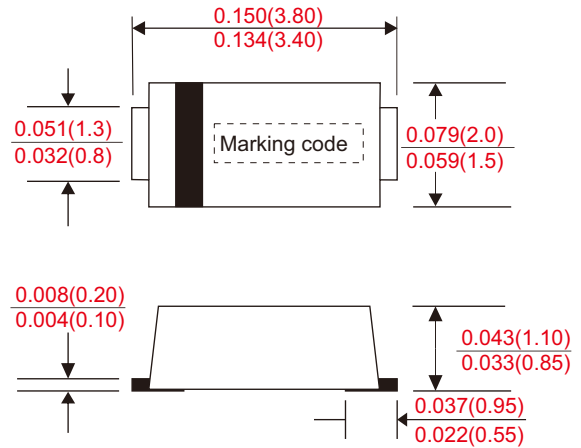
- Low profile surface mounted application in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead free in compliance with EU RoHS.

## ■ Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-123SL
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Weight : Approximated 0.018 gram

## ■ Outline

SOD-123SL



Dimensions in inches and (millimeters)

## ■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified.

| Parameter                            | Conditions                                                           | Symbol    | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|----------------------------------------------------------------------|-----------|------|------|------|------|
| Forward Rectified Output Current     |                                                                      | $I_O$     |      |      | 1.0  | A    |
| Forward Surge Current                | 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | $I_{FSM}$ |      |      | 25   | A    |
| Peak Reverse Current @ 25°C          | 40V,60V                                                              | $I_R$     |      |      | 0.1  | mA   |
|                                      | 100V,150V,200V                                                       |           |      |      | 0.05 |      |
| At Rated DC Blocking Voltage @ 100°C | 40V,60V                                                              | $I_R$     |      |      | 10   |      |
|                                      | 100V,150V,200V                                                       |           |      |      | 5    |      |
| Storage temperature Range            |                                                                      | $T_{STG}$ | -50  |      | +150 | °C   |

| Symbol     | Max.<br>repetitive peak<br>reverse voltage<br>$V_{RRM}$ (V) | Max.<br>RMS voltage<br>$V_{RMS}$ (V) | Max. DC<br>blocking voltage<br>$V_R$ (V) | Max. forward voltage<br>@1A, $T_A = 25^{\circ}\text{C}$<br>$V_F$ (V) | Operating temperature<br>$T_J$ ( $^{\circ}\text{C}$ ) |
|------------|-------------------------------------------------------------|--------------------------------------|------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------|
| B140WG-SL  | 40                                                          | 28                                   | 40                                       | 0.55                                                                 | -50 ~ +150                                            |
| B160WG-SL  | 60                                                          | 42                                   | 60                                       | 0.70                                                                 |                                                       |
| B1100WG-SL | 100                                                         | 70                                   | 100                                      | 0.85                                                                 |                                                       |
| B1150WG-SL | 150                                                         | 105                                  | 150                                      | 0.92                                                                 |                                                       |
| B1200WG-SL | 200                                                         | 140                                  | 200                                      |                                                                      |                                                       |

## ■ Rating and characteristic curves

FIG. 1- FORWARD CURRENT DERATING CURVE

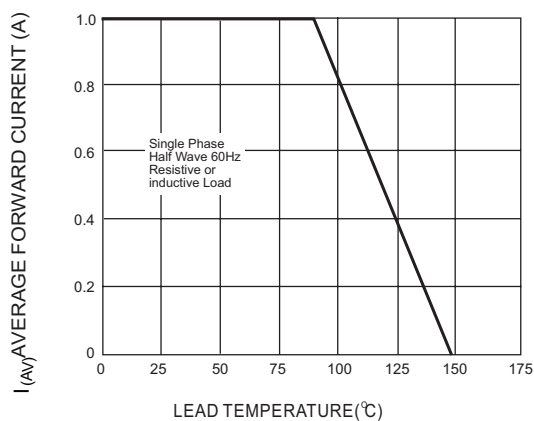


FIG. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

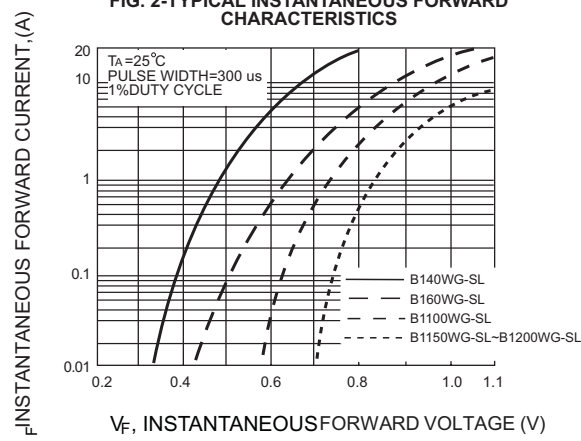


FIG. 3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

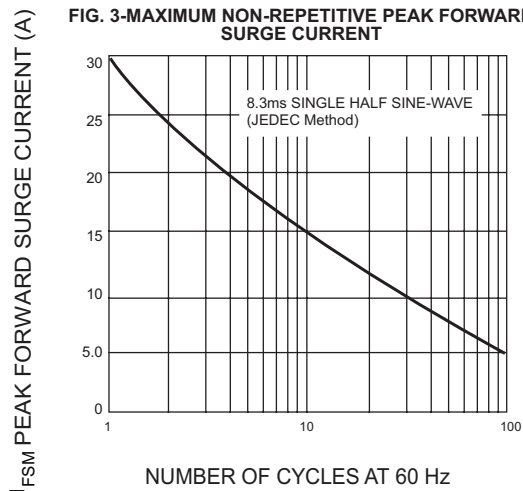
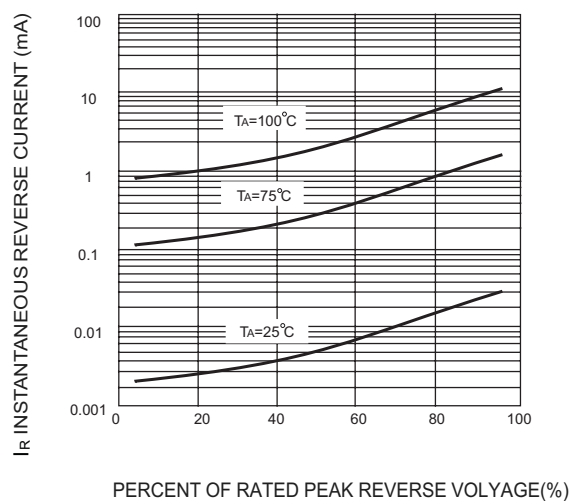
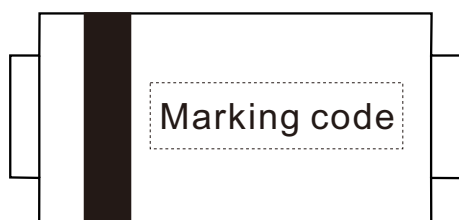


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



## ■ Marking Information



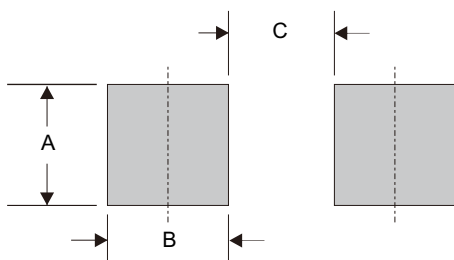
|              | Part number | Marking Code |
|--------------|-------------|--------------|
| Halogen free | B140WG-SL   | D14          |
|              | B160WG-SL   | D16          |
|              | B1100WG-SL  | D110         |
|              | B1150WG-SL  | D115         |
|              | B1200WG-SL  | D120         |

## ■ Ordering/Packing information

|              | Part number | Case      | Q'TY/Reel (PCS) | Q'TY/Box (PCS) | Q'TY/Carton (PCS) |
|--------------|-------------|-----------|-----------------|----------------|-------------------|
| Halogen free | B140WG-SL   | SOD-123SL | 3,000           | 15,000         | 180,000           |

Notes : 1. For packaging details please reference our website at <http://www.citcorp.com.tw/tchinese/products/index.php>

## ■ SOD-123SL foot print



| A            | B            | C            |
|--------------|--------------|--------------|
| 0.048 (1.22) | 0.045 (1.15) | 0.076 (1.95) |

Dimensions in inches and (millimeters)

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