

SMD Schottky Barrier Diode



SMD Diodes Specialist

CDBER0140L (RoHS Device)

$I_o = 100 \text{ mA}$
 $V_R = 40 \text{ Volts}$

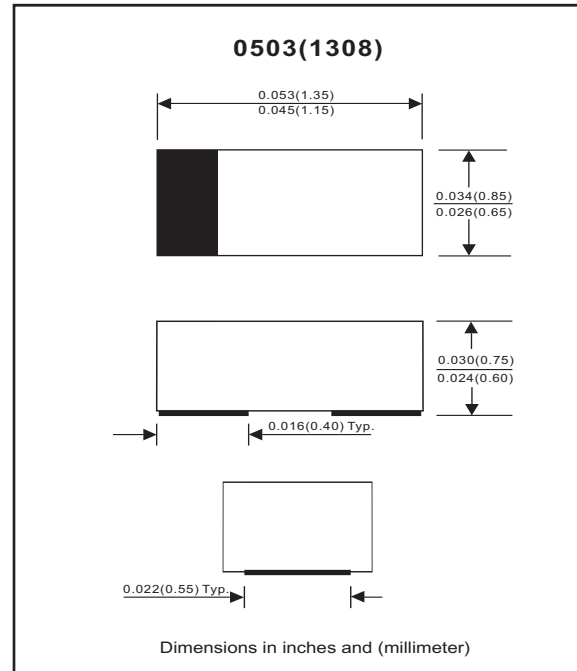


Features

- Low forward voltage.
- Designed for mounting on small surface.
- Extremely thin / leadless package.
- Majority carrier conduction.

Mechanical data

- Case: 0503(1308) standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking code: cathode band & B8
- Mounting position: Any.
- Weight: 0.002 gram(approx.).



Maximum Rating (at $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|-----------------------------------|---|-----------|-----|-----|------|------------------|
| Repetitive Peak reverse voltage | | V_{RRM} | | | 45 | V |
| Reverse voltage | | V_R | | | 40 | V |
| Average forward rectified current | | I_o | | | 100 | mA |
| Forward current, surge peak | 8.3 ms single half sine-wave superimposed on rate load (JEDEC method) | I_{FSM} | | | 1 | A |
| Storage temperature | | T_{STG} | -40 | | +125 | $^\circ\text{C}$ |
| Junction temperature | | T_j | | | +125 | $^\circ\text{C}$ |

Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|-------------------------------|--|--------|-----|-----|--------------|---------------|
| Forward voltage | $I_F = 100\text{mA}$ $I_F = 10\text{mA}$ | V_F | | | 0.55 0.34 | V |
| Reverse current | $V_R = 10\text{V}$ | I_R | | | 30 | μA |
| Capacitance between terminals | $f = 1 \text{ MHz}$, and 10 VDC reverse voltage | C_T | | 6 | | pF |

RATING AND CHARACTERISTIC CURVES (CDBER0140L)

Fig. 1 - Forward characteristics

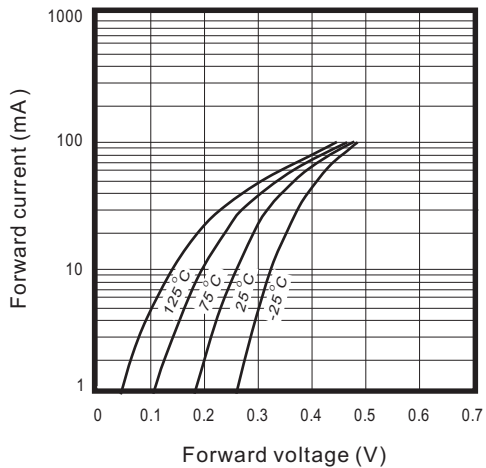


Fig. 2 - Reverse characteristics

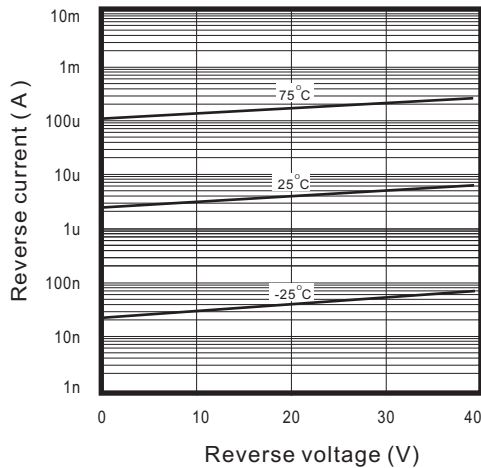


Fig. 3 - Capacitance between terminals characteristics

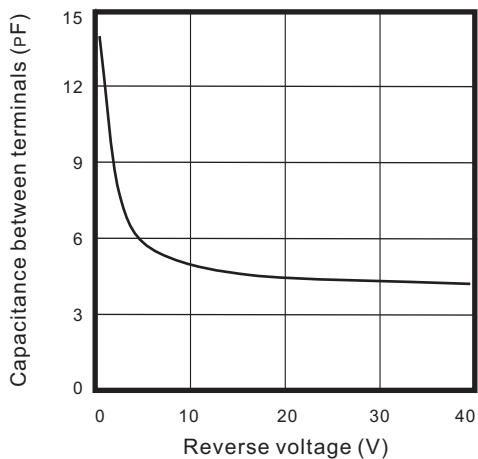
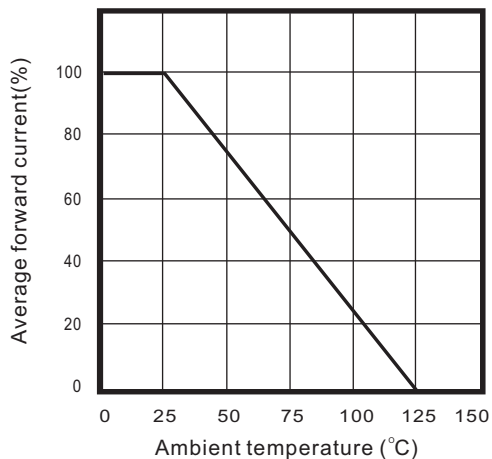


Fig. 4 - Current derating curve



Reel Taping Specification



| ER/0503 | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|---------|--------|---------------|---------------|---------------|---------------|--------------|----------------|----------------|
| | (mm) | 0.90 ± 0.10 | 1.46 ± 0.10 | 0.80 ± 0.10 | 1.55 ± 0.05 | 178 ± 1 | 60.0 MIN. | 13.0 ± 0.20 |
| | (inch) | 0.035 ± 0.004 | 0.057 ± 0.004 | 0.031 ± 0.004 | 0.061 ± 0.002 | 7.008 ± 0.04 | 2.362 MIN. | 0.512 ± 0.008 |

| ER/0503 | SYMBOL | E | F | P | P ₀ | P ₁ | T | W | W ₁ |
|---------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 0.22 ± 0.05 | 8.00 ± 0.20 | 13.5 MAX. |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.008 ± 0.002 | 0.315 ± 0.008 | 0.531 MAX. |

Marking Code

| Park Number | Marking Code |
|-------------|--------------|
| CDBER0140L | B8 |



Suggested PAD Layout

| SIZE | ER/0503 | |
|------|---------|--------|
| | (mm) | (inch) |
| A | 0.85 | 0.033 |
| B | 0.55 | 0.022 |
| C | 0.85 | 0.033 |
| D | 1.40 | 0.055 |
| E | 0.30 | 0.118 |



Standard Package

| Case Type | Qty per Reel | Reel Size |
|-----------|--------------|-----------|
| | (Pcs) | (inch) |
| ER/0503 | 4000 | 7 |