

SMD Schottky Barrier Diode

CDBU0320/0330/0340-HF

$I_o = 350 \text{ mA}$

$V_R = 20 \text{ to } 40 \text{ Volts}$

RoHS Device

Halogen Free

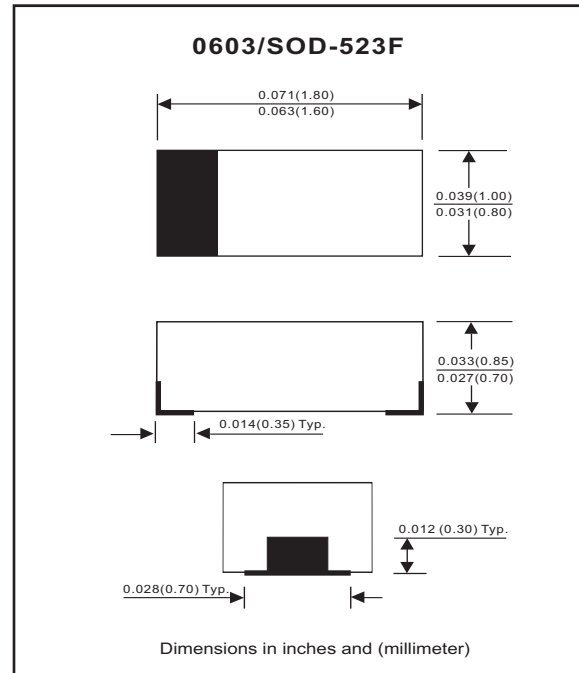


Features

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

Mechanical data

- Case: 0603/SOD-523F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking code:
CDBU0320-HF : BH
CDBU0330-HF : BJ
CDBU0340-HF : BK
- Mounting position: Any
- Weight: 0.003 gram(approx.).



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

| Parameter | Symbol | CDBU0320-HF | CDBU0330-HF | CDBU0340-HF | Unit |
|---|--------------------|-------------|-------------|-------------|--------------------|
| Repetitive Peak reverse voltage Reverse voltage | V_{RRM} V_R | 20 | 30 | 40 | V |
| RMS reverse voltage | $V_{R(RMS)}$ | 14 | 21 | 28 | V |
| Average forward rectified current | I_o | 350 | | | mA |
| Forward current, surge peak 8.3 ms single half sine-wave | I_{FSM} | 1.5 | | | A |
| Power dissipation | P_D | 150 | | | mW |
| Thermal resistance junction to ambient air | $R_{\theta JA}$ | 667 | | | $^\circ\text{C/W}$ |
| Storage temperature | T_{STG} | -65 to +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 |
|--|---|----------|-----|-----|--------------|---------------|
| Reverse current CDBU0320-HF CDBU0330-HF CDBU0340-HF | $V_R = 20\text{V}$ $V_R = 30\text{V}$ $V_R = 40\text{V}$ | I_R | | | 5 5 5 | μA |
| Forward voltage | $I_F = 20\text{mA}$ $I_F = 200\text{mA}$ | V_F | | | 0.37 0.60 | V |
| Capacitance between terminals | $f = 1 \text{ MHz}$, and 0 VDC reverse voltage | C_T | | 50 | | pF |
| Reverse recovery time | $I_F=I_R=10\text{mA}$, $I_{rr}=0.1 \times I_R$, $R_L=100 \text{ ohm}$ | T_{rr} | | 6.4 | | nS |

RATING AND CHARACTERISTIC CURVES (CDBU0320/0330/0340-HF)

Fig. 1 - Forward characteristics

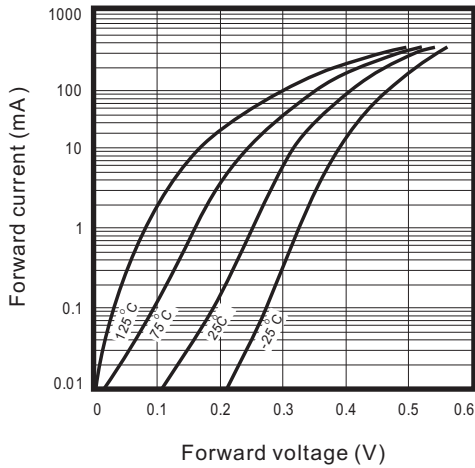


Fig. 2 - Reverse characteristics

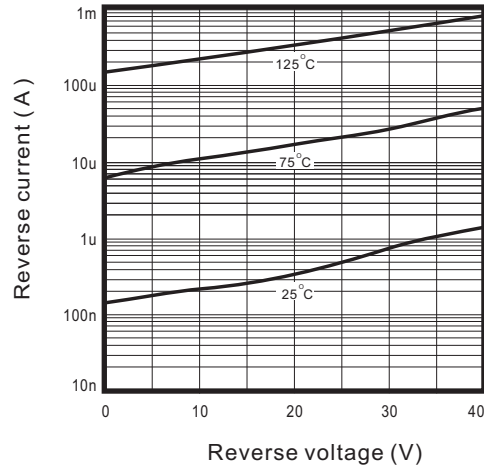


Fig.3 - Capacitance between terminals characteristics

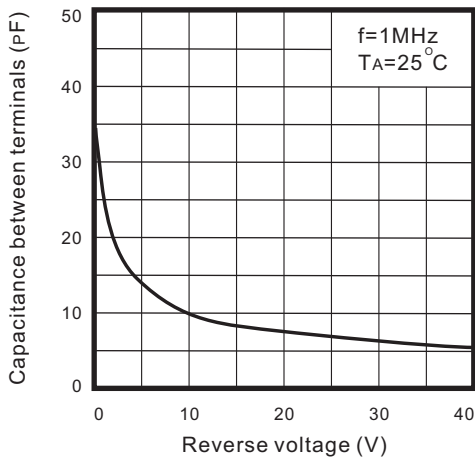
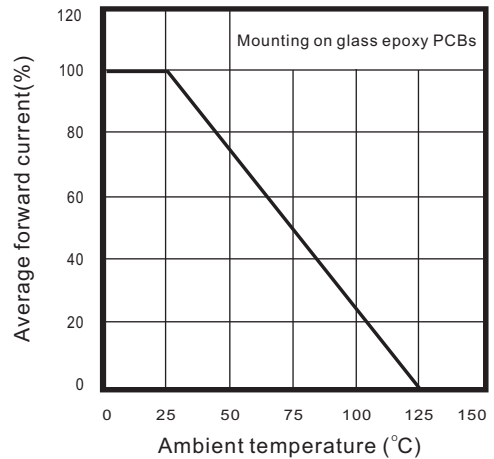
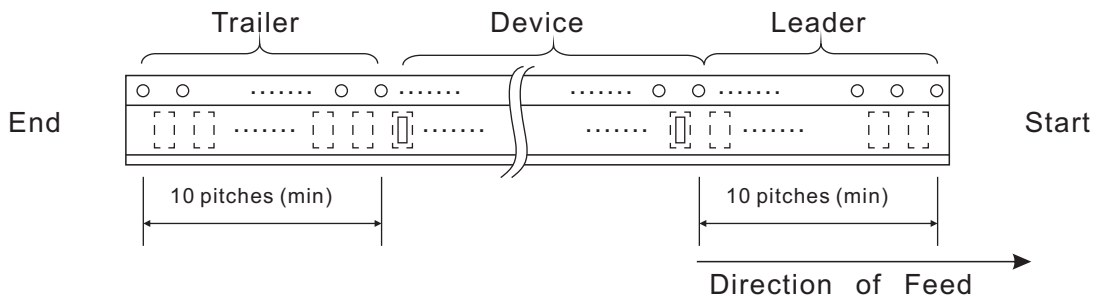
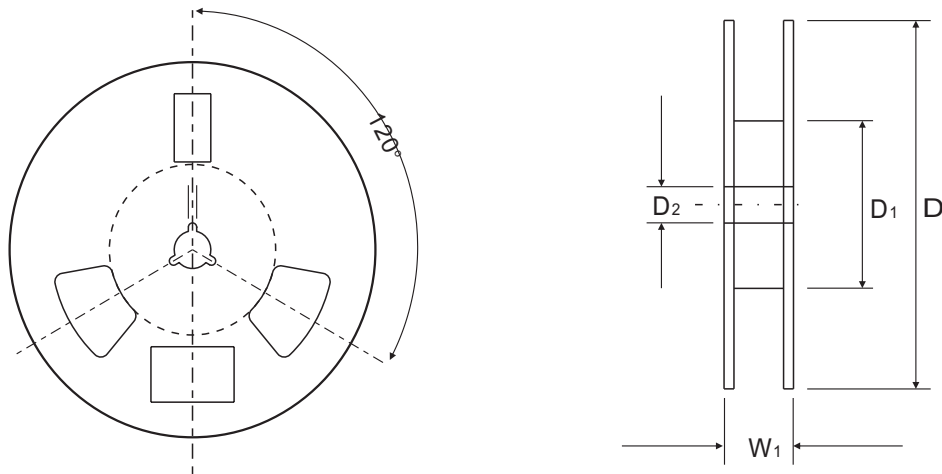
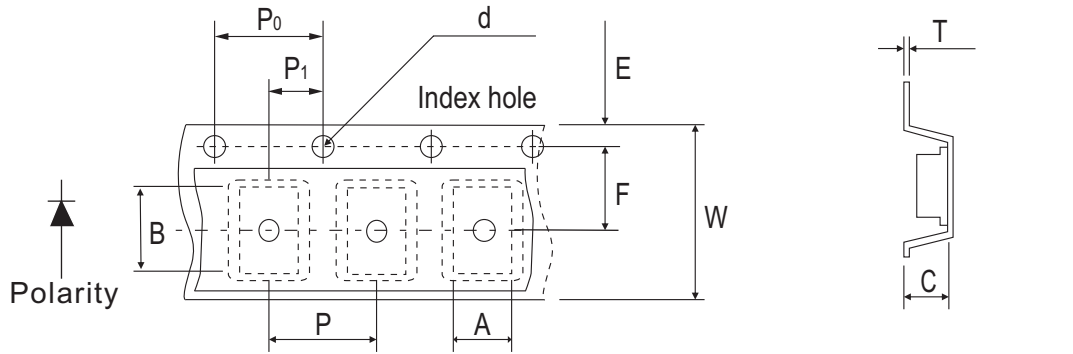


Fig.4 - Current derating curve



Reel Taping Specification



| | | | | | | | | |
|--------------------|--------|---------------|---------------|---------------|---------------|--------------|----------------|----------------|
| 0603 (SOD-523F) | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
| | (mm) | 1.00 ± 0.10 | 1.85 ± 0.10 | 1.00 ± 0.10 | 1.55 ± 0.05 | 178 ± 1 | 60.0 MIN. | 13.0 ± 0.20 |
| | (inch) | 0.039 ± 0.004 | 0.073 ± 0.004 | 0.039 ± 0.004 | 0.061 ± 0.002 | 7.008 ± 0.04 | 2.362 MIN. | 0.512 ± 0.008 |

| | | | | | | | | | |
|--------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| 0603 (SOD-523F) | 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 ± 0.05 | 0.23 ± 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 | 0.009 ± 0.002 | 0.315 ± 0.008 | 0.531 MAX. |

Marking Code

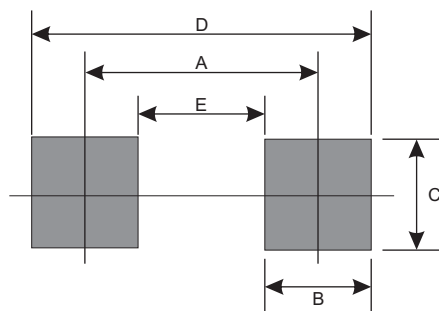
| Part Number | Marking Code |
|-------------|--------------|
| CDBU0320-HF | BH |
| CDBU0330-HF | BJ |
| CDBU0340-HF | BK |



xx = Product type marking code

Suggested PAD Layout

| SIZE | 0603/SOD-523F | |
|------|---------------|--------|
| | (mm) | (inch) |
| A | 1.70 | 0.067 |
| B | 0.60 | 0.024 |
| C | 0.80 | 0.031 |
| D | 2.30 | 0.091 |
| E | 1.10 | 0.043 |



Standard Package

| Case Type | Qty per Reel | Reel Size |
|---------------|--------------|-----------|
| | (Pcs) | (inch) |
| 0603/SOD-523F | 4000 | 7 |

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Comchip Technology:](#)

[CDBU0320](#) [CDBU0320-HF](#)