

SMD Schottky Barrier Diode



SMD Diodes Specialist

CDBU0230R-HF (RoHS Device)

$I_o = 200 \text{ mA}$
 $V_R = 30 \text{ Volts}$

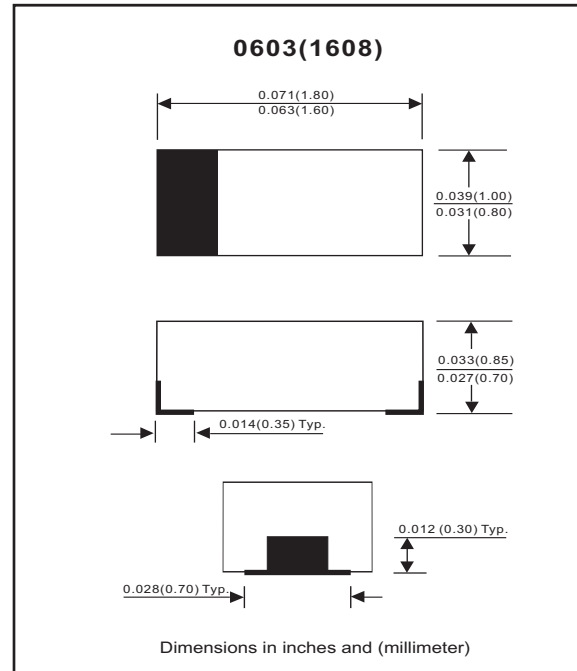


Features

- Halogen free.
- Low reverse current.
- Designed for mounting on small surface.
- Extremely thin / leadless package.
- Majority carrier conduction.

Mechanical data

- Case: 0603(1608) standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking code: cathode band & BB
- Mounting position: Any
- Weight: 0.003 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} | | | 35 | V |
| Reverse voltage | | V_R | | | 30 | V |
| Average forward current | | I_o | | | 200 | mA |
| Forward current,surge peak | 8.3ms 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 | $I_F = 200 \text{ mA}$ | V_F | | | 0.6 | V |
| Reverse current | $V_R = 10 \text{ V}$ | I_R | | | 1 | μA |

RATING AND CHARACTERISTIC CURVES (CDBU0230R-HF)

Fig. 1 - Forward characteristics

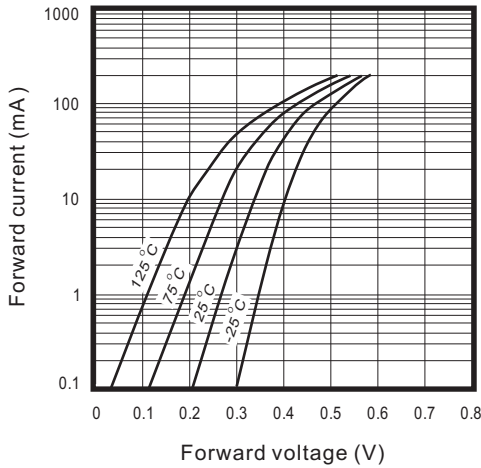


Fig. 2 - Reverse characteristics

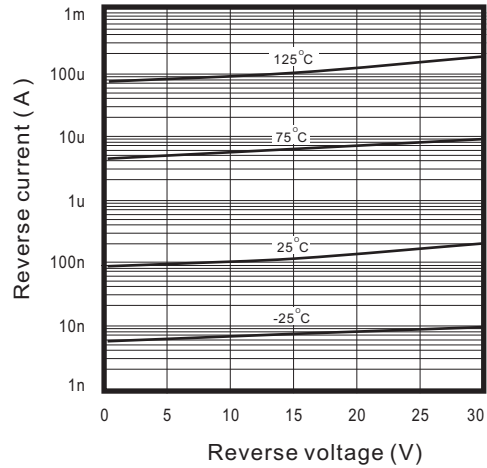


Fig. 3 - Capacitance between terminals characteristics

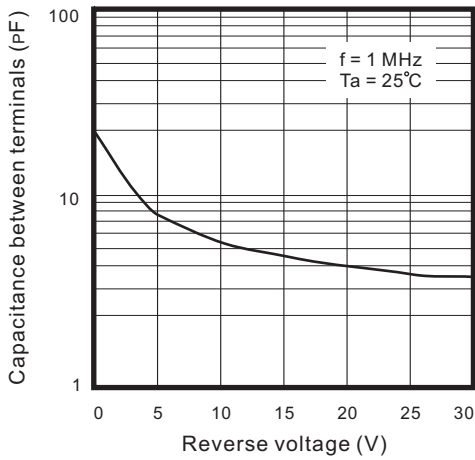


Fig. 4 - Current derating curve

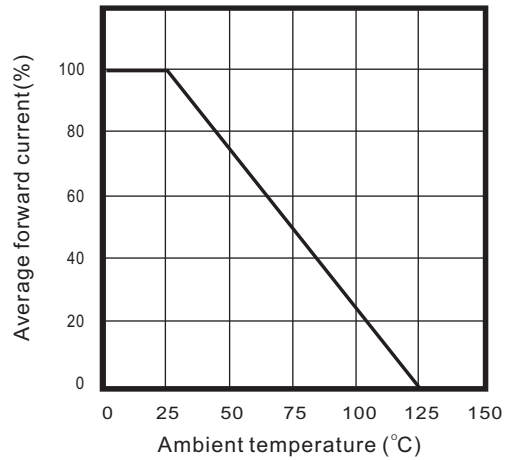


Fig. 5 - VF Dispersion map

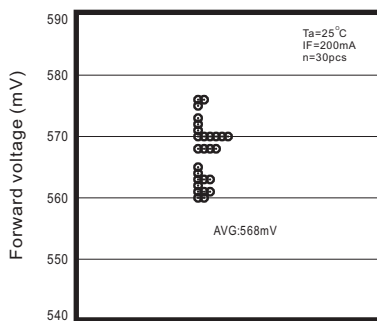


Fig. 6 - IR Dispersion map

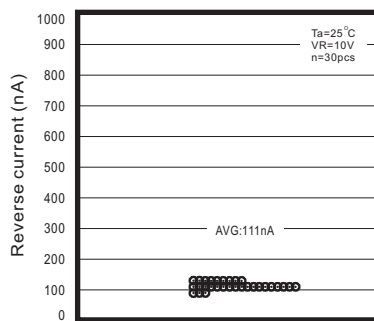
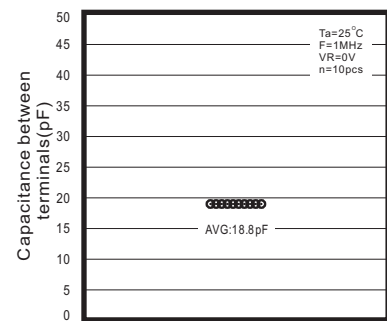


Fig. 7 - CT Dispersion map



Reel Taping Specification



| U/0603 | 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 |

| U/0603 | 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

| | |
|--------------|--------------|
| Park Number | Marking Code |
| CDBU0230R-HF | BB |



Suggested PAD Layout

| SIZE | U/0603 | |
|------|--------|--------|
| | (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) |
| U/0603 | 4000 | 7 |