

## HRB0502A

### Silicon Schottky Barrier Diode for Rectifying

REJ03G0047-0200Z

Rev.2.00

Sep.01.2003

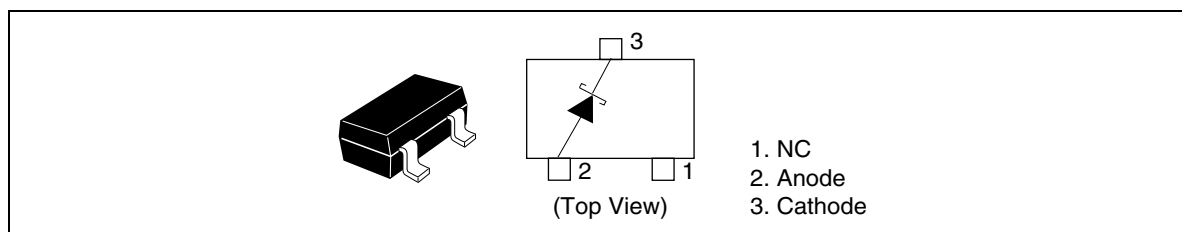
#### Features

- Low forward voltage drop and suitable for high efficiency rectifying.
- CMTAK Package is suitable for high density surface mounting and high speed assembly.

#### Ordering Information

| Type No. | Laser Mark | Package Code |
|----------|------------|--------------|
| HRB0502A | E3         | CMTAK        |

#### Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°C)

| Item                                      | Symbol         | Value       | Unit |
|-------------------------------------------|----------------|-------------|------|
| Repetitive peak reverse voltage           | $V_{RRM}$      | 20          | V    |
| Forward current                           | $I_F^{*1}$     | 500         | mA   |
| Non-Repetitive peak forward surge current | $I_{FSM}^{*2}$ | 5           | A    |
| Junction temperature                      | Tj             | 125         | °C   |
| Storage temperature                       | Tstg           | -55 to +125 | °C   |

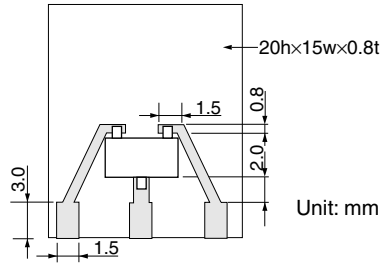
Notes: 1. See from Fig.4 to Fig.6  
2. 10 ms sine wave 1 pulse

## Electrical Characteristics

(Ta = 25°C)

| Item               | Symbol   | Min | Typ | Max | Unit | Test Condition                         |
|--------------------|----------|-----|-----|-----|------|----------------------------------------|
| Forward voltage    | $V_F$    | —   | —   | 0.4 | V    | $I_F = 500 \text{ mA}$                 |
| Reverse current    | $I_R$    | —   | —   | 200 | μA   | $V_R = 20 \text{ V}$                   |
| Capacitance        | C        | —   | 120 | —   | pF   | $V_R = 0 \text{ V}, f = 1 \text{ MHz}$ |
| Thermal resistance | Rth(j-a) | —   | 450 | —   | °C/W | Polyimide board <sup>*1</sup>          |

Note: Polyimide board



## Main Characteristic

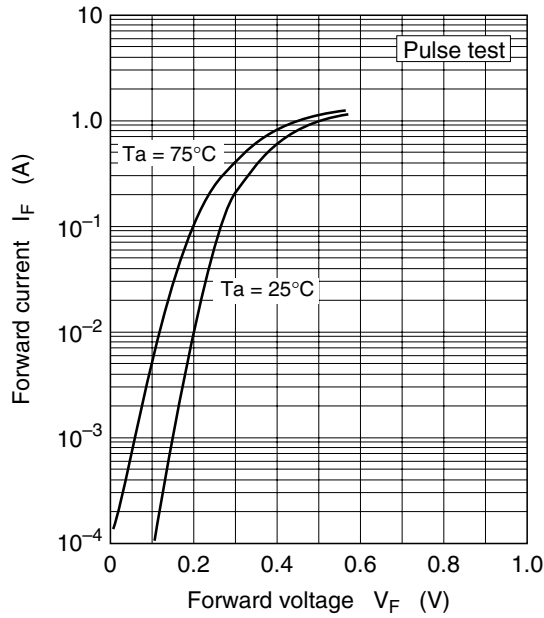


Fig.1 Forward current vs. Forward voltage

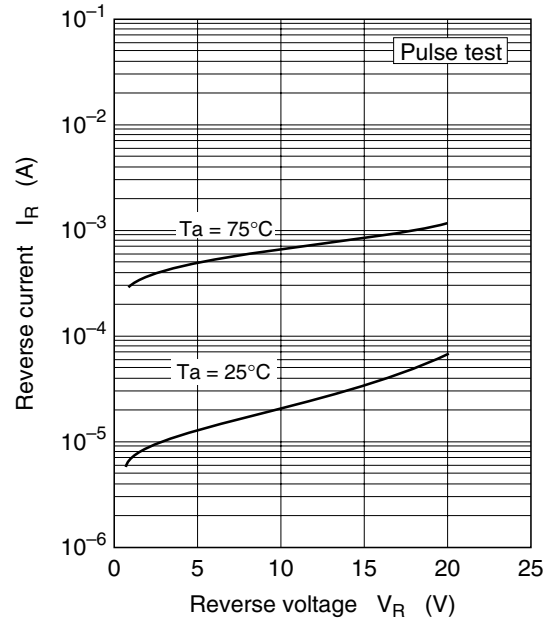


Fig.2 Reverse current vs. Reverse voltage

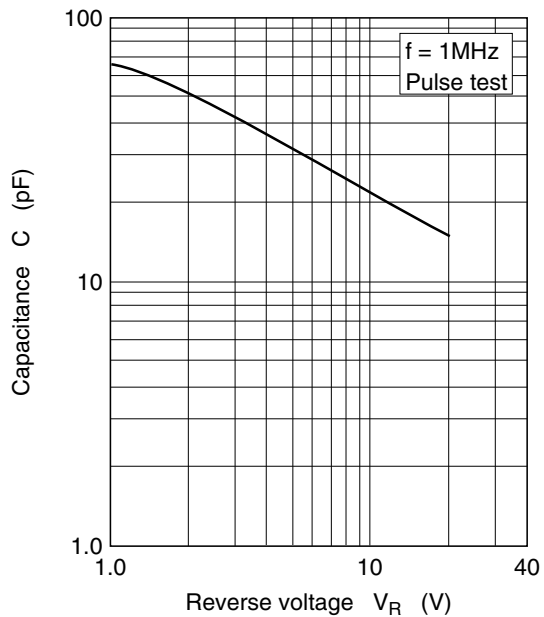


Fig.3 Capacitance vs. Reverse voltage

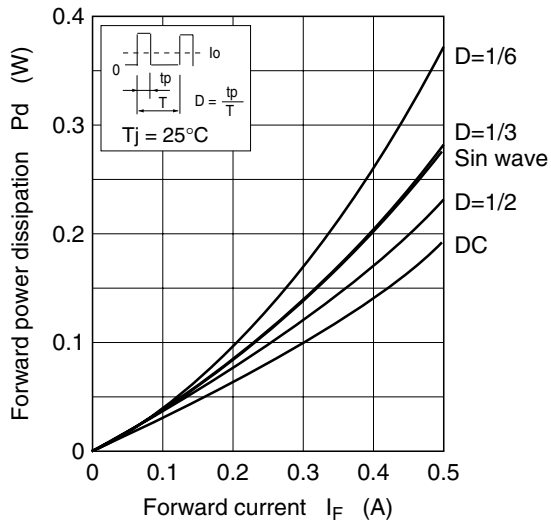


Fig.4 Forward power dissipation vs. Forward current

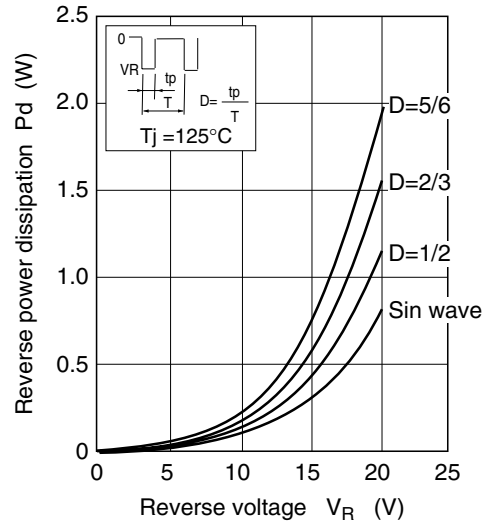


Fig.5 Reverse power dissipation vs. Reverse voltage

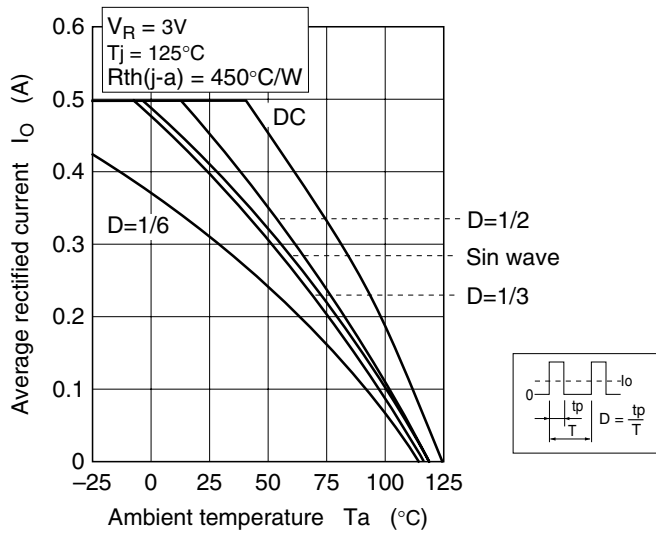
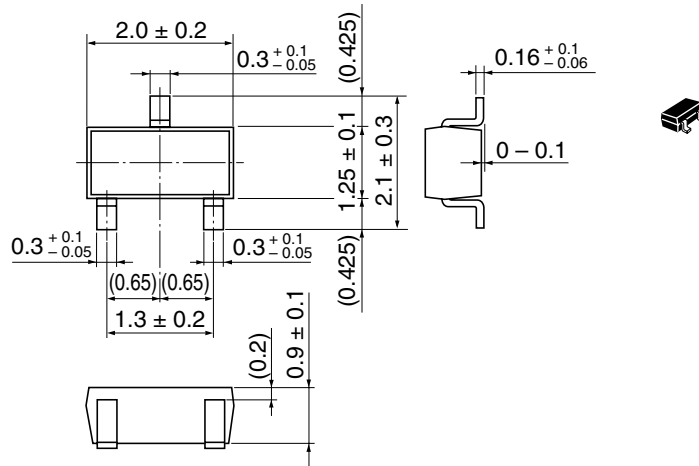


Fig.6 Average rectified current vs. Ambient temperature

# Package Dimensions

As of January, 2003  
Unit: mm



|                        |          |
|------------------------|----------|
| Package Code           | CMPAK    |
| JEDEC                  | —        |
| JEITA                  | Conforms |
| Mass (reference value) | 0.006 g  |

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