

产品规格书

| 批准 | 审核 | 校核 | 编制 |
|------------|------------|------------|------------|
| 朴雨根 | 纪春华 | 朴致均 | 郑羿 |
| 2018.04.18 | 2018.04.18 | 2018.04.18 | 2018.04.18 |

规格书更改履历:

| 序号 | 更改内容 | 履历号 | 更改时间 | 责任人 |
|----|------|-----|------------|-----|
| 1 | 新规制定 | 000 | 2017.10.18 | 郑羿 |
| 2 | 增加决裁 | 001 | 2018.04.18 | 郑羿 |
| 3 | | | | |
| | | | | |

General Purpose Schottky Barrier Diode

General Description

These Schottky barrier diodes are designed for high-speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction. Miniature surface mount package is excellent for hand-held and portable applications where space is limited.


SOT-23

Features and Benefits

Low forward drop voltage and low leakage current

Very low switching time

Applications

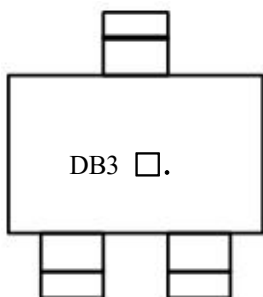
General purpose and high speed switching

Protection circuit and voltage clamping

Ordering Information

| Part Number | Marking Code | Package | Packaging |
|-------------|--------------|---------|-------------|
| KDB310WM | DB3 □. | SOT-23 | Tape & Reel |

Marking Information

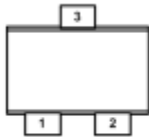
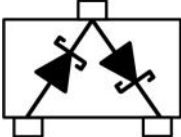


DB3 = Specific Device Code

□ = Year & Week Code Marking

• = Da Lian

Pinning Information

| Pin | Description | Simplified Outline | Graphic Symbol |
|-----|--------------------------------------|--|---|
| 1 | Anode (Diode 1) |  |  |
| 2 | Cathode (Diode 2) | | |
| 3 | Cathode (Diode 1) Anode (Diode 1) | | |

Absolute Maximum Ratings (T_{amb}=25°C, Unless otherwise specified)

| Characteristic | Symbol | Ratings | Unit |
|---|------------------|---------|------|
| Peak reverse voltage | V _{RM} | 40 | V |
| DC reverse voltage | V _R | 30 | V |
| Repetitive peak forward current | I _{FRM} | 0.5 | A |
| Forward current | I _F | 0.2 | A |
| Non-repetitive peak forward surge current(t=10ms) | I _{FSM} | 2 | A |
| Power dissipation ¹⁾ | P _D | 150 | mW |

1) Device mounted on FR-4 board with recommended pad layout.

Thermal Characteristics (T_{amb}=25°C, Unless otherwise specified)

| Characteristic | Symbol | Ratings | Unit |
|---|----------------------|---------|------|
| Thermal resistance, junction to ambient ¹⁾ | R _{th(j-a)} | 833 | °C/W |
| Operating junction temperature | T _j | 150 | °C |
| Storage temperature range | T _{stg} | -55~150 | °C |

1) Device mounted on FR-4 board with recommended pad layout.

Electrical Characteristics (T_{amb}=25°C, Unless otherwise specified)

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit. |
|---------------------------------------|-------------------|--|------|------|------|-------|
| Forward voltage ²⁾ | V _{F(1)} | I _F =10mA | - | - | 0.4 | V |
| | V _{F(2)} | I _F =30mA | - | - | 0.5 | V |
| Reverse leakage current ³⁾ | I _R | V _R =30V | - | - | 1 | μA |
| Total capacitance | C _T | V _R =1V, f=1MHz | - | - | 10 | pF |
| Reverse recovery time | t _{rr} | I _F = I _R =10mA, I _{R(REC)} = 1mA | - | - | 5 | ns |

2) Pulse test: t_P≤380μs, Duty cycle≤2%

3) Pulse test: t_P≤5 ms, Duty cycle≤2%

Rating and Characteristic Curves

Fig. 1) Typical Forward Characteristics

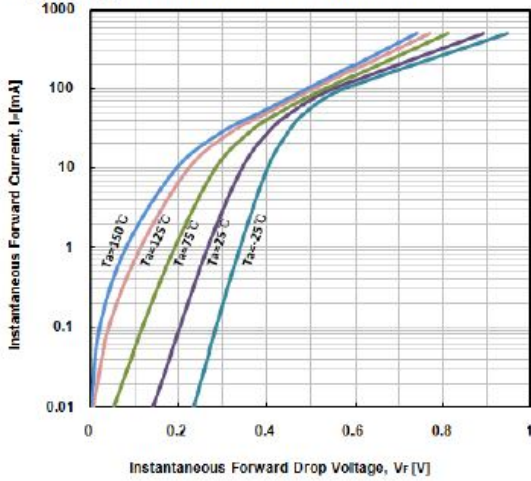


Fig. 2) Typical Reverse Characteristics

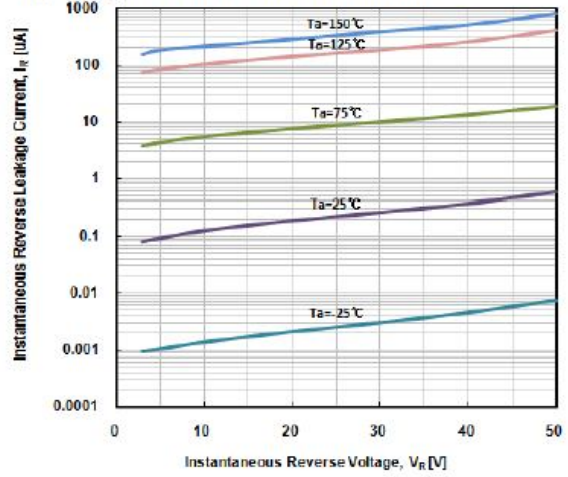


Fig. 3) Typical Total Capacitance Characteristics

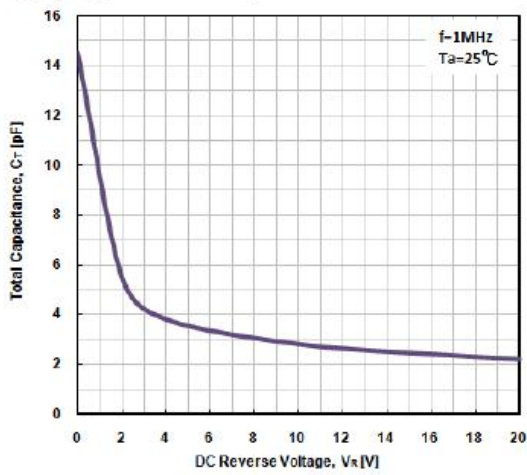
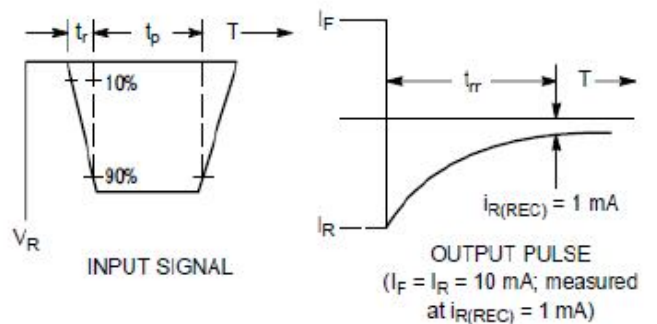
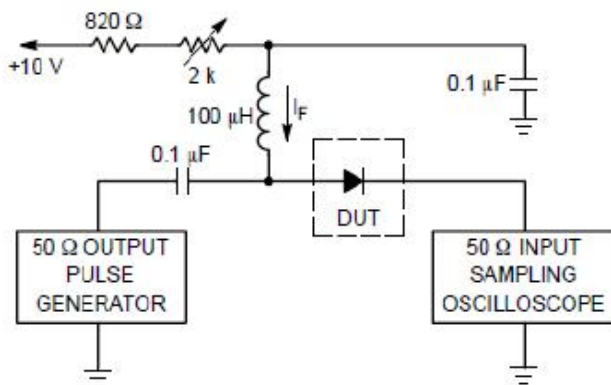
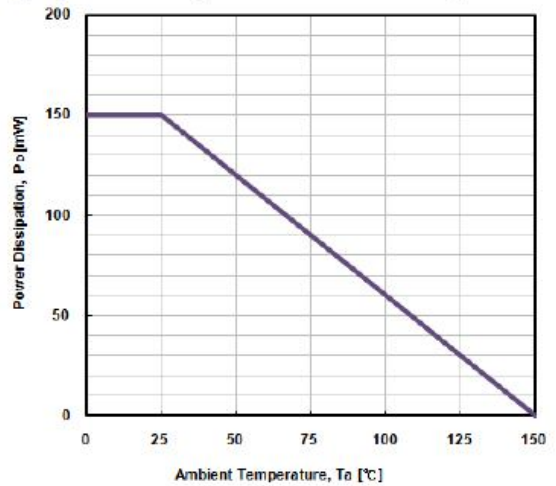
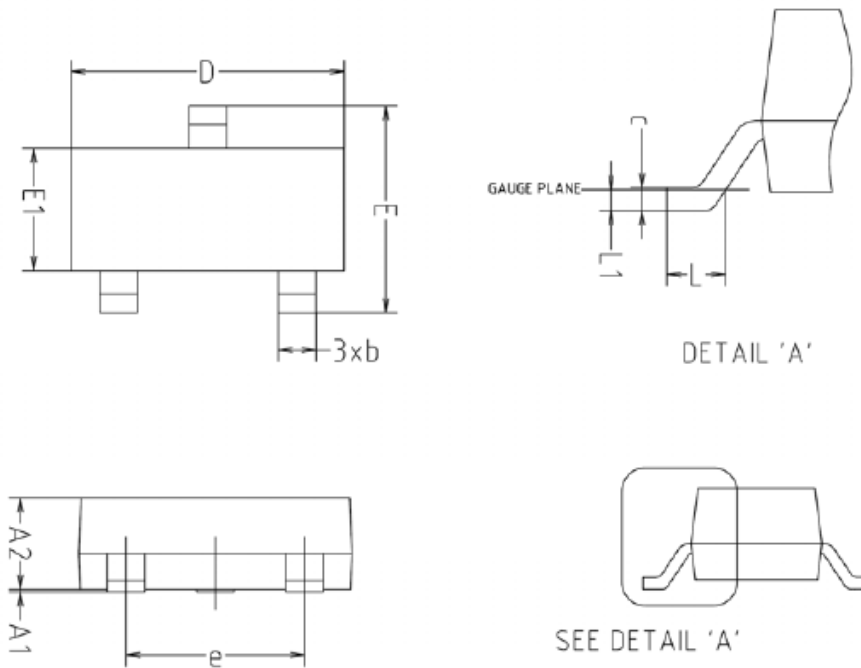


Fig. 4) Power dissipation vs. Ambient temperature

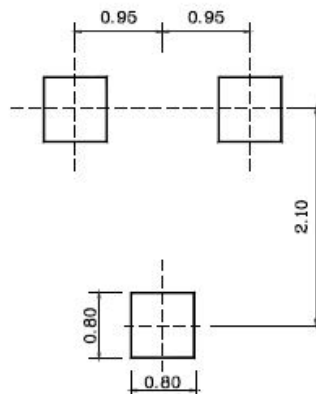


Package Outline Dimensions



| SYMBOL | MILLIMETERS | | | NOTE |
|--------|-------------|---------|---------|------|
| | MINIMUM | NOMINAL | MAXIMUM | |
| A1 | 0.00 | - | 0.10 | |
| A2 | 0.82 | - | 1.02 | |
| b | 0.39 | 0.42 | 0.45 | |
| c | 0.09 | 0.12 | 0.15 | |
| D | 2.80 | 2.90 | 3.00 | |
| E | 2.20 | 2.40 | 2.60 | |
| E1 | 1.20 | 1.30 | 1.40 | |
| e | 1.90BSC | | | |
| L | 0.20 | - | - | |
| L1 | 0.12BSC | | | |

※ Recommend PCB solder land (Unit : mm)



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