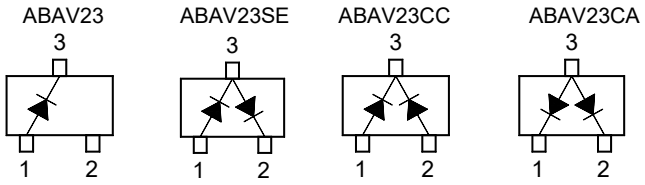
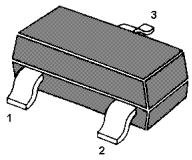
## Silicon Epitaxial Planar Diodes

High voltage switching diode

### Features

- AEC-Q101 Qualified
- Halogen and Antimony Free(HAF), RoHS compliant




SOT-23 Plastic Package

### Absolute Maximum Ratings ($T_a$ = 25℃)

| Parameter | | Symbol | Value | Unit |
|---|---|---|---|---|
| Maximum Repetitive Reverse Voltage | | $V_{RRM}$ | 250 | V |
| Reverse Voltage | | $V_R$ | 200 | V |
| Forward Current | | $I_{F(AV)}$ | 400 | mA |
| Repetitive Peak Forward Current | | $I_{FRM}$ | 625 | mA |
| Non-repetitive Peak Forward Surge Current | at t = 10 ms<br>at t = 100 μs<br>at t = 1 μs | $I_{FSM}$ | 1.7<br>3<br>9 | A |
| Power Dissipation [1] | | $P_D$ | 350 | mW |
| Operating Junction Temperature Range | | $T_j$ | - 55 to + 150 | ℃ |
| Storage Temperature Range | | $T_{stg}$ | - 55 to + 150 | ℃ |

### Thermal Characteristics

| Parameter | Symbol | Max. | Unit |
|---|---|---|---|
| Thermal Resistance from Junction to Ambient [1] | $R_{\theta JA}$ | 357 | ℃/W |

[1] Device mounted on FR-4 PCB with minimum recommended pad layout.

**Characteristics at $T_a$ = 25℃**

| Parameter | Symbol | Min. | Max. | Unit |
|---|---|---|---|---|
| Reverse Breakdown Voltage<br>at $I_R$ = 100 µA | $V_{(BR)R}$ | 250 | - | V |
| Forward Voltage<br>at $I_F$ = 100 mA<br>at $I_F$ = 200 mA | $V_F$ | -<br>- | 1<br>1.25 | V |
| Reverse Current<br>at $V_R$ = 200 V, $T_j$ = 25℃<br>at $V_R$ = 200 V, $T_j$ = 150℃ | $I_R$ | -<br>- | 100<br>100 | nA<br>µA |
| Total Capacitance<br>at $V_R$ = 0 V, f = 1 MHz | $C_{tot}$ | - | 5 | pF |
| Reverse Recovery Time<br>at $I_F$ = $I_R$ = 30 mA, $I_{rr}$ = 0.1 X $I_R$, $R_L$ = 100 Ω | $t_{rr}$ | - | 50 | ns |

## Electrical Characteristic Curve

Fig 1. Power Derating Curve

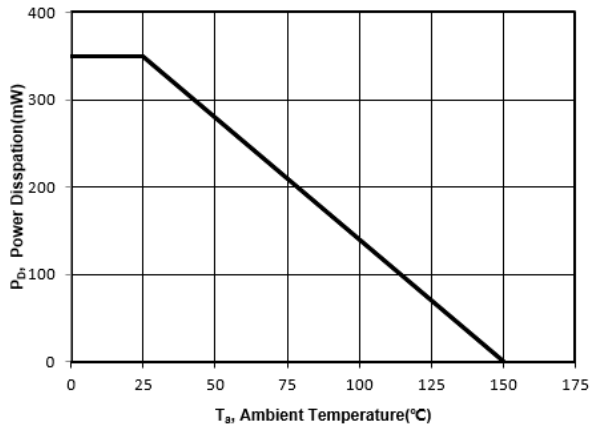



Fig 2. Forward Characteristic Curve

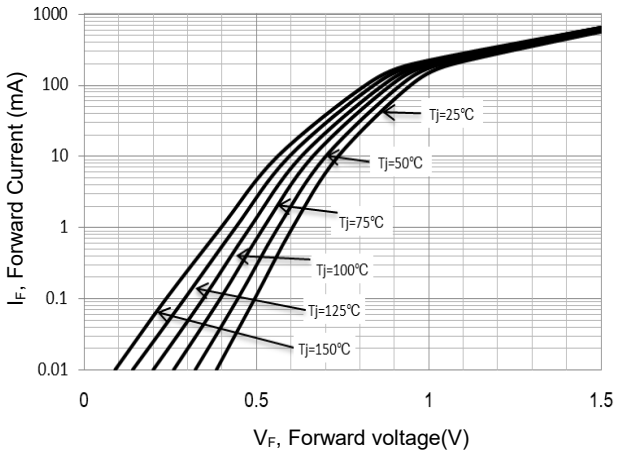



Fig 3. Reverse Characteristic Curve

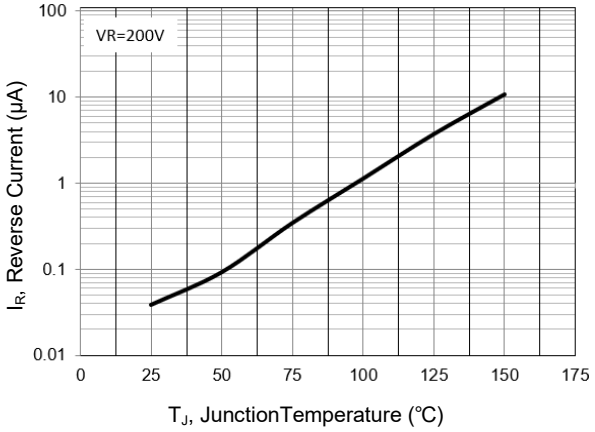
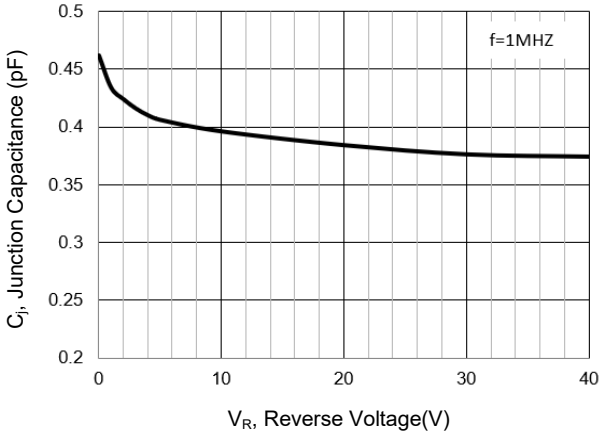
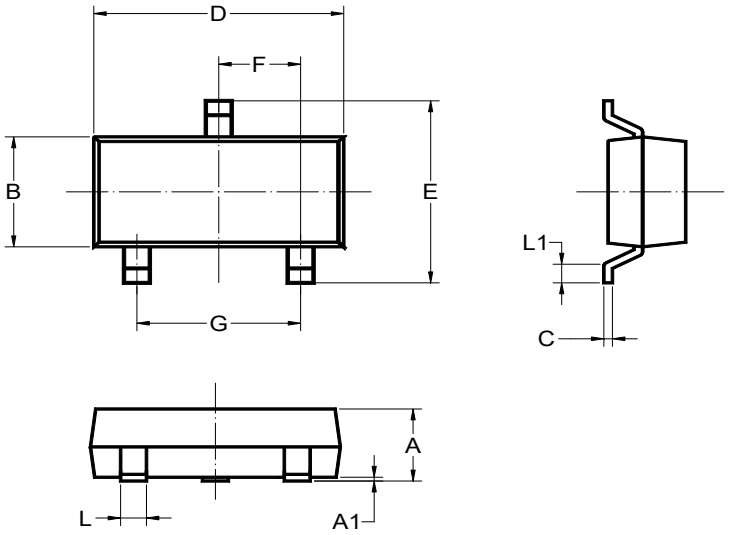



Fig 4. Junction Capacitance

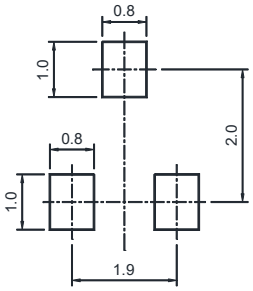


## Package Outline (Dimensions in mm) SOT-23




| Unit | A | A1 | B | C | D | E | F | G | L | L1 |
|---|---|---|---|---|---|---|---|---|---|---|
| mm | 1.20<br>0.89 | 0.100<br>0.013 | 1.40<br>1.20 | 0.19<br>0.08 | 3.04<br>2.80 | 2.6<br>2.2 | 1.02<br>0.89 | 2.04<br>1.78 | 0.51<br>0.37 | 0.2<br>MIN |

## Recommended Soldering Footprint



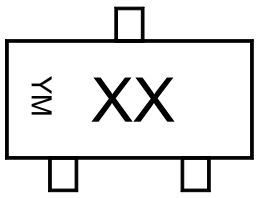

## Packing information

| Package | Tape Width (mm) | Pitch | | Reel Size | | Per Reel Packing Quantity |
|---|---|---|---|---|---|---|
| | | mm | inch | mm | inch | |
| SOT-23 | 8 | 4 ± 0.1 | 0.157 ± 0.004 | 178 | 7 | 3,000 |

## Marking information

" XX " = Part No.

| Type | Marking Code | Type | Marking Code |
|---|---|---|---|
| ABAV23 | HC | ABAV23SE | PY |
| ABAV23CC | PZ | ABAV23CA | RA |




" YM " = Date Code Marking

" Y " = Year

" M " = Month

Font type: Arial

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