

Small Signal Product

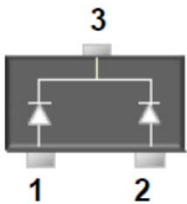
**SMD Schottky Diode**

**FEATURES**

- Epitaxial planar die construction
- Surface device type mounting
- Moisture sensitivity level 1
- Matte Tin(Sn) lead finish with Nickel(Ni) underplat
- Packing code with suffix "G" means green compound (halogen-free)



SOT-23



**MECHANICAL DATA**

- Case: SOT- 23, molded plastic
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed: 260°C/10s
- Weight: 0.008g (approximately)
- Marking Code: D3Q

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERSTICS (T <sub>A</sub> =25°C unless otherwise noted) |                                   |             |      |
|---------------------------------------------------------------------------------------------|-----------------------------------|-------------|------|
| PARAMETER                                                                                   | SYMBOL                            | VALUE       | UNIT |
| Power Dissipation                                                                           | P <sub>D</sub>                    | 200         | mW   |
| Repetitive Peak Reverse Voltage                                                             | V <sub>RRM</sub>                  | 40          | V    |
| Reverse Voltage                                                                             | V <sub>R</sub>                    | 25          | V    |
| Mean Forward Current                                                                        | I <sub>O</sub>                    | 350         | mA   |
| Non-Repetitive Peak Forward Surge Current (Note 1)                                          | I <sub>FSM</sub>                  | 1.5         | A    |
| Junction and Storage Temperature Range                                                      | T <sub>J</sub> , T <sub>STG</sub> | -40 to +125 | °C   |

| PARAMETER                                                        | SYMBOL            | MIN | MAX  | UNIT |
|------------------------------------------------------------------|-------------------|-----|------|------|
| Reverse Breakdown Voltage<br>I <sub>R</sub> =100μA               | V <sub>(BR)</sub> | 40  | -    | V    |
| Forward Voltage<br>I <sub>F</sub> =10mA<br>I <sub>F</sub> =200mA | V <sub>F</sub>    | -   | 0.32 | V    |
|                                                                  |                   | -   | 0.55 |      |
| Reverse Leakage Current<br>V <sub>R</sub> =25V                   | I <sub>R</sub>    | -   | 70   | μA   |
| Junction Capacitance<br>V <sub>R</sub> =0V, f=1.0MHz             | C <sub>J</sub>    | -   | 50   | pF   |

Note 1: Mean output current per element : I<sub>O</sub>/2

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**RATINGS AND CHARACTERISTICS CURVES**

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

Fig. 1 Typical Forward Characteristics

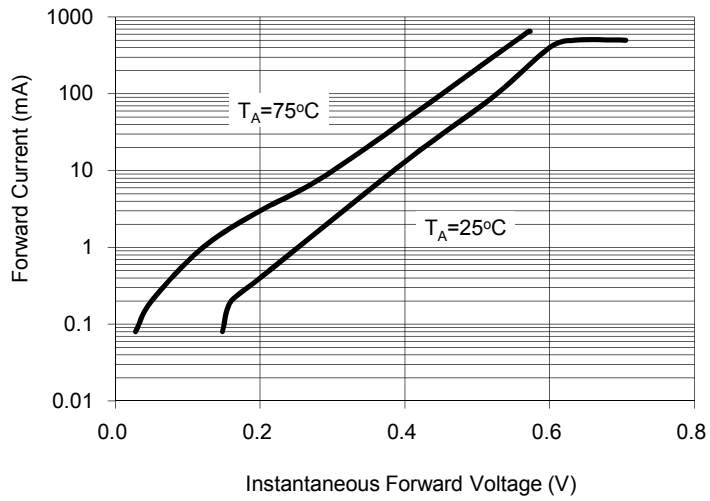


Fig. 2 Reverse Current VS. Reverse Voltage

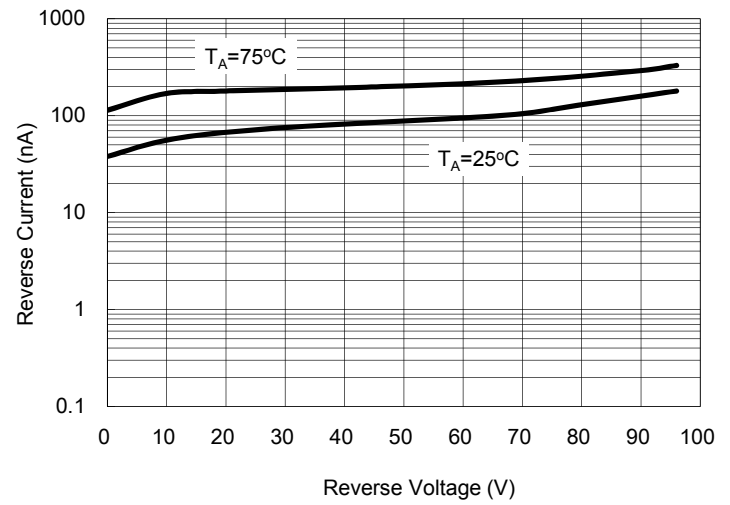


Fig. 3 Admissible Power Dissipation Curve

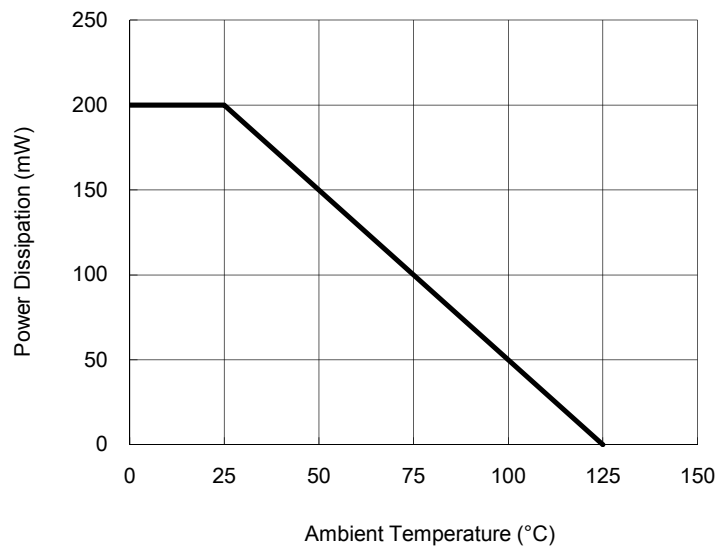
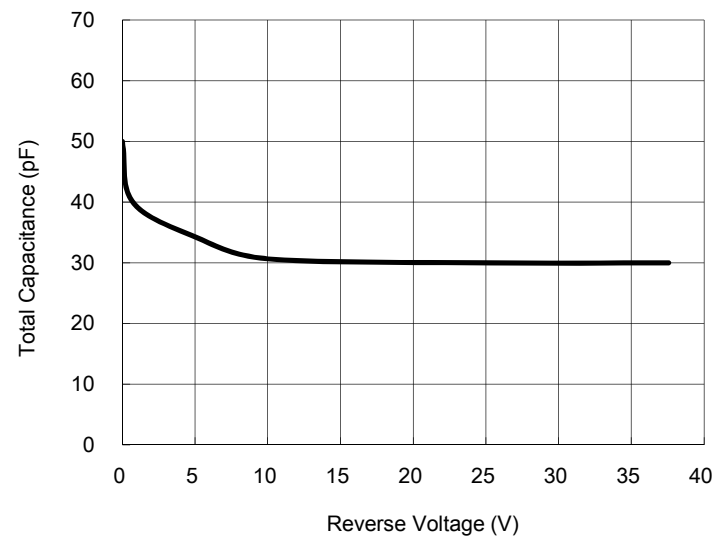


Fig. 4 Typical Junction Capacitance



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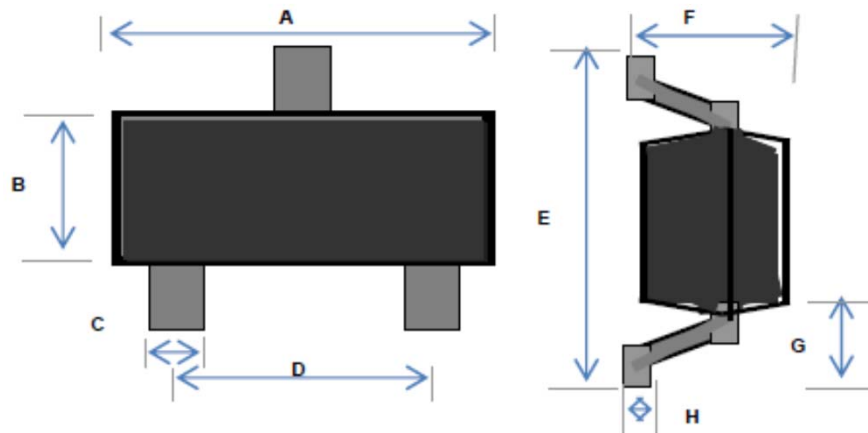
| ORDERING INFORMATION |                             |                 |                        |         |                |
|----------------------|-----------------------------|-----------------|------------------------|---------|----------------|
| PART NO.             | PART NO.<br>SUFFIX (Note 1) | PACKING<br>CODE | PACKING CODE<br>SUFFIX | PACKAGE | PACKING        |
| RB495D               | -xx                         | RF              | G                      | SOT-23  | 3K / 7" Reel   |
|                      |                             | R5              |                        |         | 10K / 13" Reel |

Note 1: Part No. Suffix „-xx “ would be used for special requirement

| EXAMPLE       |          |                    |              |                        |                                                  |
|---------------|----------|--------------------|--------------|------------------------|--------------------------------------------------|
| PREFERRED P/N | PART NO. | PART NO.<br>SUFFIX | PACKING CODE | PACKING CODE<br>SUFFIX | DESCRIPTION                                      |
| RB495D RF     | RB495D   |                    | RF           |                        | Multiple manufacture<br>source                   |
| RB495D RFG    | RB495D   |                    | RF           | G                      | Multiple manufacture<br>source<br>Green compound |
| RB495D-D0 RFG | RB495D   | -D0                | RF           | G                      | Defined manufacture<br>source<br>Green compound  |
| RB495D-B0 R5G | RB495D   | -B0                | R5           | G                      | Defined manufacture<br>source<br>Green compound  |

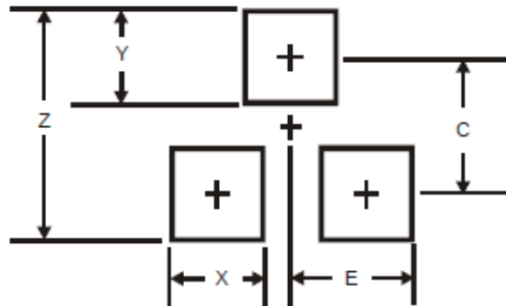
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**PACKAGE OUTLINE DIMENSIONS**



| DIM. | Unit(mm) |      | Unit(inch) |       |
|------|----------|------|------------|-------|
|      | Min      | Max  | Min        | Max   |
| A    | 2.70     | 3.10 | 0.106      | 0.122 |
| B    | 1.10     | 1.50 | 0.043      | 0.059 |
| C    | 0.30     | 0.51 | 0.012      | 0.020 |
| D    | 1.78     | 2.04 | 0.070      | 0.080 |
| E    | 2.10     | 2.64 | 0.083      | 0.104 |
| F    | 0.89     | 1.30 | 0.035      | 0.051 |
| G    | 0.55 REF |      | 0.022 REF  |       |
| H    | 0.10 REF |      | 0.004 REF  |       |

**SUGGEST PAD LAYOUT**



| DIM. | Unit(mm) | Unit(inch) |
|------|----------|------------|
|      | Typ.     | Typ.       |
| Z    | 2.8      | 0.110      |
| X    | 0.7      | 0.028      |
| Y    | 0.9      | 0.035      |
| C    | 1.9      | 0.075      |
| E    | 1.0      | 0.039      |

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