

Small Signal Product

## Surface Mount Schottky Barrier

### FEATURES

- Designed for mounting on small surface
- Extremely thin/leadless package
- Low capacitance
- Low forward voltage drop
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21


**0603**

### MECHANICAL DATA

- Case: 0603
- Terminal: Gold plated, solderable per MIL-STD-750, method 2026
- Polarity: Indicated by cathode band
- Weight: 3 mg (approximately)
- Marking code: BC

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)                                     |                     |             |      |
|----------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------|------|
| PARAMETER                                                                                                                        | SYMBOL              | VALUE       | UNIT |
| Repetitive Peak Reverse Voltage                                                                                                  | V <sub>RRM</sub>    | 40          | V    |
| DC Reverse Voltage                                                                                                               | V <sub>R</sub>      | 40          | V    |
| RMS Reverse Voltage                                                                                                              | V <sub>R(RMS)</sub> | 28          | V    |
| Average Forward Current                                                                                                          | I <sub>O</sub>      | 200         | mA   |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rate Load                                                 | I <sub>FSM</sub>    | 600         | mA   |
| Power Dissipation                                                                                                                | P <sub>d</sub>      | 150         | mW   |
| Forward Voltage<br>I <sub>F</sub> = 1.0 mA<br>I <sub>F</sub> = 40 mA                                                             | V <sub>F</sub>      | 0.38        | V    |
|                                                                                                                                  |                     | 1.0         |      |
| Reverse Leakage Current<br>V <sub>R</sub> = 30 V                                                                                 | I <sub>R</sub>      | 0.2         | μA   |
| Typical Capacitance Between Terminals<br>V <sub>R</sub> = 0 V, f = 1.0 MHz Reverse Voltage                                       | C <sub>J</sub>      | 5           | pF   |
| Reverse Recovery Time<br>( I <sub>F</sub> = I <sub>R</sub> = 10mA, I <sub>RR</sub> = 0.1×I <sub>R</sub> , R <sub>L</sub> =100Ω ) | t <sub>rr</sub>     | 5           | ns   |
| Junction Temperature                                                                                                             | T <sub>J</sub>      | -65 to +125 | °C   |
| Storage Temperature                                                                                                              | T <sub>STG</sub>    | -65 to +125 | °C   |

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**RATINGS AND CHARACTERISTICS CURVES**

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

Fig.1 Forward Characteristics

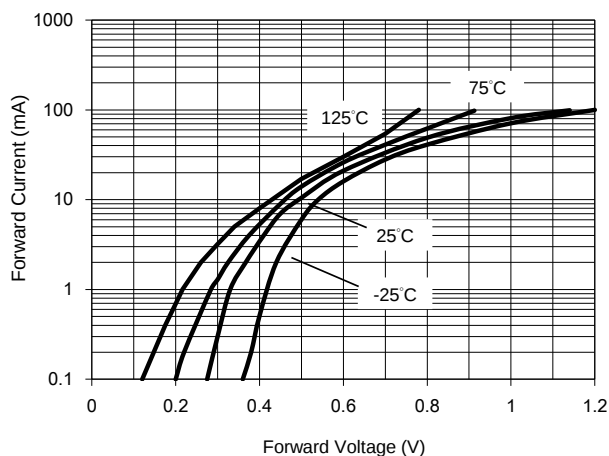


Fig. 2 Reverse Characteristics

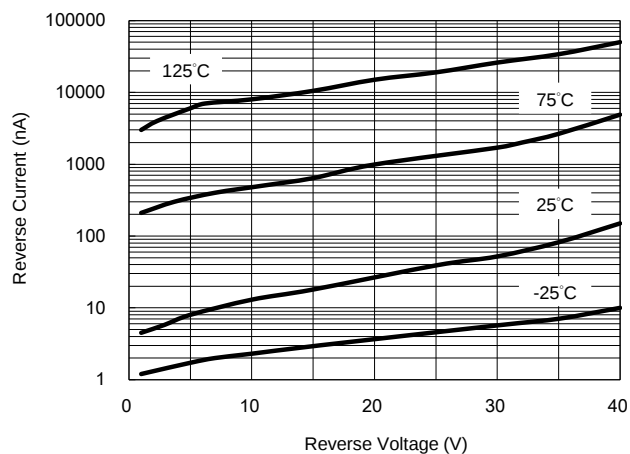
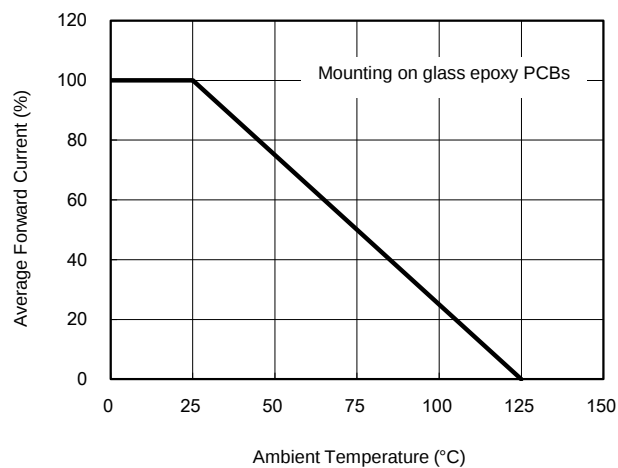
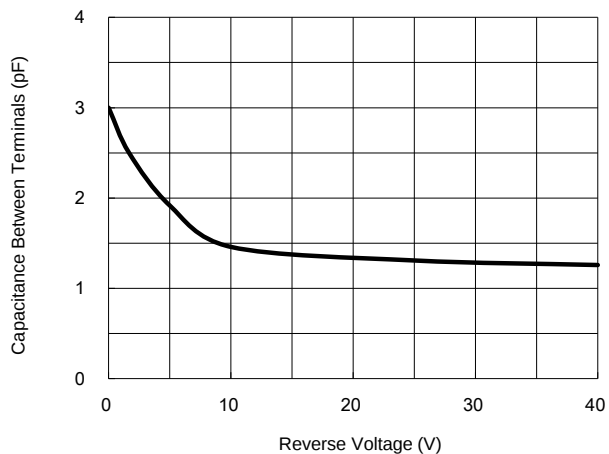


Fig. 3 Capacitance Between Terminals Characteristics



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**ORDERING INFORMATION**

| PART NO. | PACKING CODE | PACKING CODE SUFFIX | PACKAGE | PACKING      |
|----------|--------------|---------------------|---------|--------------|
| TSS40U   | RG           | G                   | 0603    | 4K / 7" Reel |

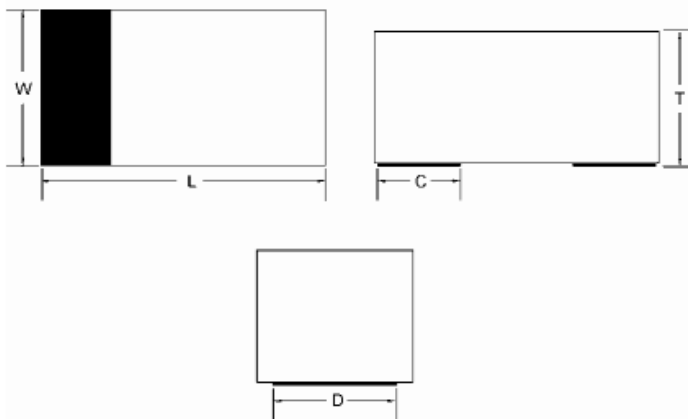
Note: Whole series with green compound

**EXAMPLE**

| EXAMPLE PART NO. | PART NO. | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION    |
|------------------|----------|--------------|---------------------|----------------|
| TSS40U RGG       | TSS40U   | RG           | G                   | Green compound |

**PACKAGE OUTLINE DIMENSION**

0603



| DIM. | Unit (mm) |      |      | Unit (inch) |       |       |
|------|-----------|------|------|-------------|-------|-------|
|      | Min       | Typ. | Max  | Min         | Typ.  | Max   |
| L    | 1.60      | -    | 1.80 | 0.063       | -     | 0.071 |
| W    | 0.80      | -    | 1.00 | 0.031       | -     | 0.039 |
| T    | 0.70      | -    | 0.85 | 0.028       | -     | 0.033 |
| C    | -         | 0.45 | -    | -           | 0.018 | -     |
| D    | -         | 0.70 | -    | -           | 0.028 | -     |

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