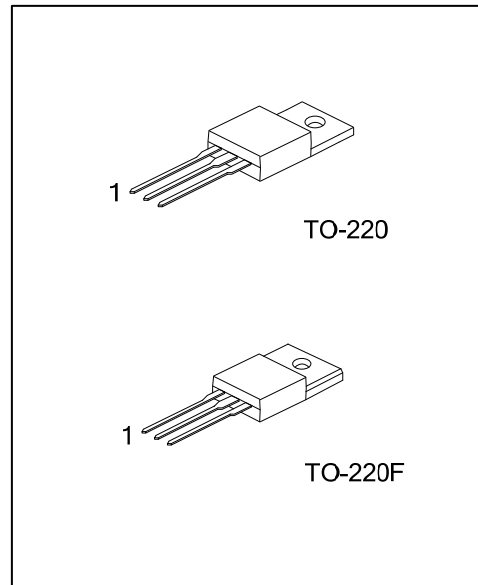




# TGBR20U100C

**DIODE**

## DUAL TRENCH MOS SCHOTTKY BARRIER RECTIFIER



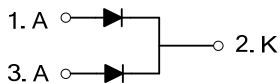
■ DESCRIPTION

The UTC **TGBR20U100C** is a dual trench mos schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

■ FEATURES

- \* Ultra low forward voltage drop
- \* High switching speed

■ SYMBOL



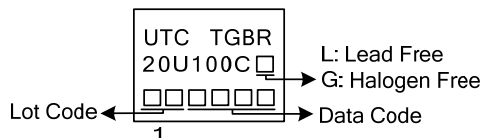
■ ORDERING INFORMATION

| Ordering Number    |                    | Package | Pin Assignment |   |   | Packing |
|--------------------|--------------------|---------|----------------|---|---|---------|
| Lead Free          | Halogen Free       |         | 1              | 2 | 3 |         |
| TGBR20U100CL-TA3-T | TGBR20U100CG-TA3-T | TO-220  | A              | K | A | Tube    |
| TGBR20U100CL-TF3-T | TGBR20U100CG-TF3-T | TO-220F | A              | K | A | Tube    |

Note: Pin Assignment: A: Anode K: Cathode

|                           |  |
|---------------------------|--|
| <p>TGBR20U100CG-TA3-T</p> | <p>(1) T: Tube<br/>(2) TA3: TO-220, TF3: TO-220F<br/>(3) G: Halogen Free and Lead Free, L: Lead Free</p> |
|---------------------------|--|

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (PER LEG) ( $T_A=25^\circ\text{C}$  unless otherwise specified)

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitance load, derate current by 20%.

| PARAMETER  | SYMBOL    | RATINGS    | UNIT             |
|--|-----------|------------|------------------|
| DC Blocking Voltage  | $V_{RM}$  | 100        | V                |
| Working Peak Reverse Voltage   | $V_{RWM}$ | 100        | V                |
| Peak Repetitive Reverse Voltage  | $V_{RRM}$ | 100        | V                |
| Average Rectified Output Current Per Device  | Per Leg   | 10         | A                |
|  | Total     | 20         | A                |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | $I_{FSM}$ | 140        | A                |
| Operating Junction Temperature   | $T_J$     | -65 ~ +150 | $^\circ\text{C}$ |
| Storage Temperature  | $T_{STG}$ | -65 ~ +150 | $^\circ\text{C}$ |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL CHARACTERISTICS (PER LEG)

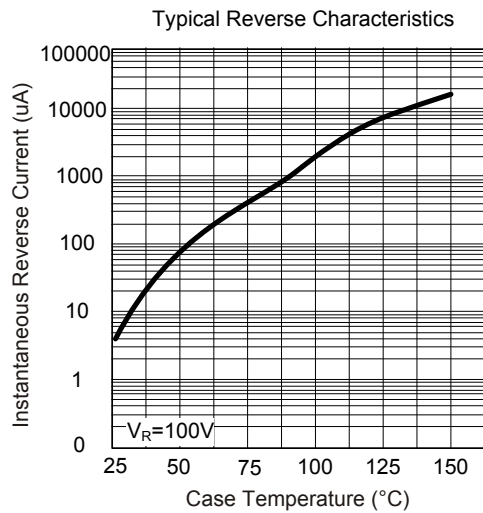
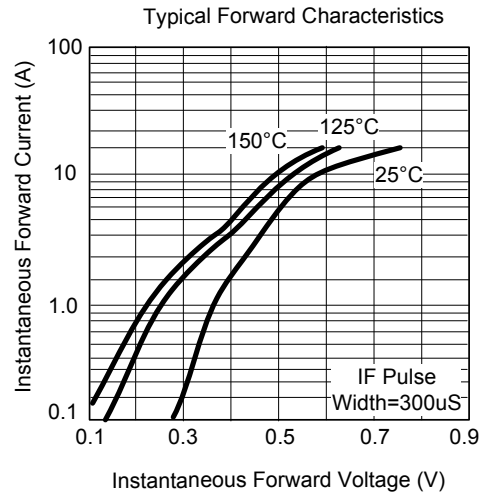
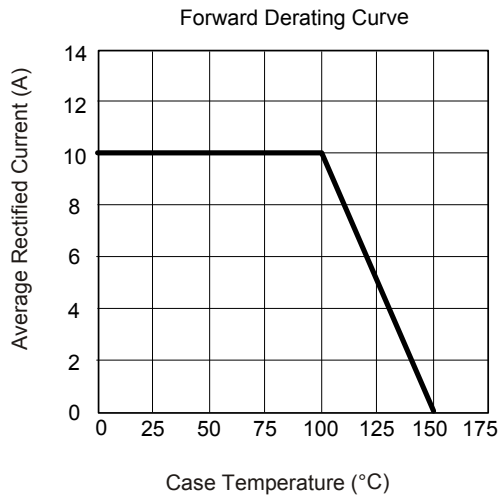
| PARAMETER                  | SYMBOL  | RATINGS | UNIT               |
|----------------------------|---------|---------|--------------------|
| Typical Thermal Resistance | TO-220  | 2       | $^\circ\text{C/W}$ |
|                            | TO-220F | 4       | $^\circ\text{C/W}$ |

■ ELECTRICAL CHARACTERISTICS (PER LEG) ( $T_A=25^\circ\text{C}$  unless otherwise specified.)

| PARAMETER                 | SYMBOL      | TEST CONDITIONS                          | MIN | TYP  | MAX  | UNIT          |
|---------------------------|-------------|--|-----|------|------|---------------|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | $I_R=0.50\text{mA}$                      | 100 |      |      | V             |
| Forward Voltage Drop      | $V_{FM}$    | $I_F=3\text{A}, T_J=25^\circ\text{C}$    |     | 0.44 |      | V             |
|                           |             | $I_F=3\text{A}, T_J=125^\circ\text{C}$   |     | 0.36 |      | V             |
|                           |             | $I_F=5\text{A}, T_J=25^\circ\text{C}$    |     | 0.49 |      | V             |
|                           |             | $I_F=5\text{A}, T_J=125^\circ\text{C}$   |     | 0.43 |      | V             |
|                           |             | $I_F=10\text{A}, T_J=25^\circ\text{C}$   |     | 0.60 | 0.67 | V             |
|                           |             | $I_F=10\text{A}, T_J=125^\circ\text{C}$  |     | 0.53 | 0.60 | V             |
| Leakage Current           | $I_{RM}$    | $V_R=100\text{V}, T_J=25^\circ\text{C}$  |     | 10   | 100  | $\mu\text{A}$ |
|                           |             | $V_R=100\text{V}, T_J=125^\circ\text{C}$ |     | 8    | 40   | mA            |

Note: Pulse Test: Pulse width  $\leq 300\mu\text{s}$ , Duty cycle  $\leq 2\%$ .

■ TYPICAL CHARACTERISTICS (PER LEG)



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