

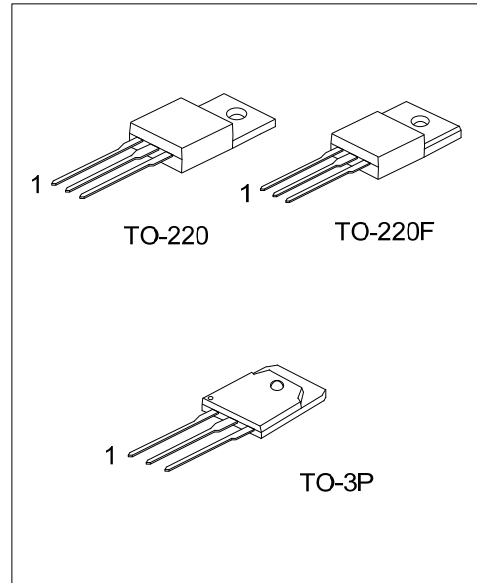


TGBR40U100C

Preliminary

DIODE

DUAL TRENCH MOS SCHOTTKY BARRIER RECTIFIER



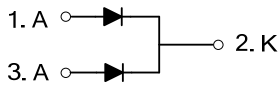
DESCRIPTION

The UTC **TGBR40U100C** 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



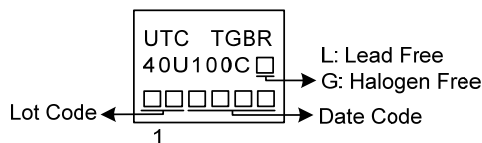
ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | | Packing |
|--------------------|--------------------|---------|----------------|---|---|---------|
| Lead Free | Halogen Free | | 1 | 2 | 3 | |
| TGBR40U100CL-TA3-T | TGBR40U100CG-TA3-T | TO-220 | A | K | A | Tube |
| TGBR40U100CL-TF3-T | TGBR40U100CG-TF3-T | TO-220F | A | K | A | Tube |
| TGBR40U100CL-T3P-T | TGBR40U100CG-T3P-T | TO-3P | A | K | A | Tube |

Note: Pin Assignment: A: Anode K: Cathode

| | |
|---------------------------|--|
| <p>TGBR40U100CG-TA3-T</p> | <p>(1) T: Tube</p> <p>(2) TA3: TO-220, TF3: TO-220F, T3P: TO-3P</p> <p>(3) L: Lead Free, G: Halogen Free and 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 | 20 | A |
| | Total | 40 | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | I_{FSM} | 250 | 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 | $^{\circ}\text{C/W}$ |
| | TO-3P | 1.5 | $^{\circ}\text{C/W}$ |

■ 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} | $I_F=20\text{A}, T_J=25^{\circ}\text{C}$ | | | 0.65 | V |
| | | $I_F=20\text{A}, T_J=125^{\circ}\text{C}$ | | | 0.61 | V |
| Leakage Current | I_{RM} | $V_R=100\text{V}, T_J=25^{\circ}\text{C}$ | | | 500 | μA |
| | | $V_R=100\text{V}, T_J=125^{\circ}\text{C}$ | | | 45 | mA |

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

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