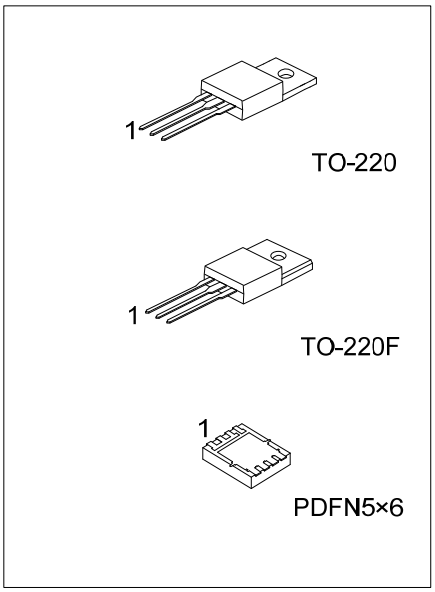
# TGBR20L100

**Preliminary** ***DIODE***

## TRENCH MOS SCHOTTKY BARRIER RECTIFIER



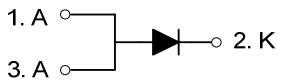
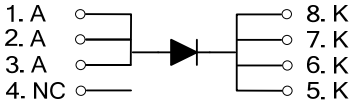

## ■ DESCRIPTION

The UTC **TGBR20L100** is a 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

* Low forward voltage drop
* High switching speed

## ■ SYMBOL

| TO-220 / TO-220F | PDFN5×6 |
|---|---|
|  |  |





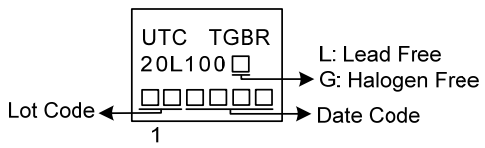
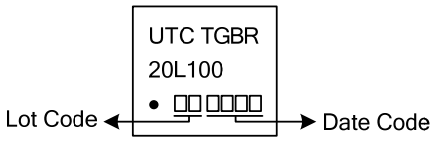
## ■ ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | | | | | | | Packing |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead Free | Halogen Free | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| TGBR20L100L-TA3-T | TGBR20L100G-TA3-T | TO-220 | A | K | A | - | - | - | - | - | Tube |
| TGBR20L100L-TF3- T | TGBR20L100G-TF3-T | TO-220F | A | K | A | - | - | - | - | - | Tube |
| TGBR20L100L-P5060-R | TGBR20L100G-P5060-R | PDFN5×6 | A | A | A | NC | K | K | K | K | Tape Reel |

Note: Pin Assignment: A: Anode K: Common Cathode NC: No Comment

| | |
|---|---|
| TGBR20L100G-TA3-T<br>(1)Packing Type<br>(2)Package Type<br>(3)Green Package | (1) T: Tube, R: Tape Reel<br>(2) TA3: TO-220, TF3: TO-220F, P5060: PDFN5×6<br>(3) G: Halogen Free and Lead Free, L: Lead Free |

## ■ MARKING

| TO-220 / TO-220F | PDFN5×6 |
|---|---|
|  |  |

## ■ ABSOLUTE MAXIMUM RATINGS ($T_A$=25°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 |
| WorkingPeak Reverse Voltage | $V_{RWM}$ | 100 | V |
| Peak Repetitive Reverse Voltage | $V_{RRM}$ | 100 | V |
| Average Rectified Output Current | $I_O$ | 20 | 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 | °C |
| Storage Temperature | $T_{STG}$ | -65 ~ +150 | °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 | $\theta_{JC}$ | 2 | °C/W |
| | TO-220F | | 4 | °C/W |
| | PDFN5×6 | $\theta_{JA}$ | 4.5 (Note) | °C/W |

Note: FR-4 PCB, 2 oz Copper. Minimum recommended pad layout.

## ■ ELECTRICAL CHARACTERISTICS (PER LEG) ($T_A$=25°C,unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | $I_R$=0.50mA | 100 | | | V |
| Forward Voltage Drop | $V_{FM}$ | $I_F$=20A, $T_J$=25°C | | | 0.84 | V |
| | | $I_F$=20A, $T_J$=125°C | | | 0.79 | V |
| Leakage Current | $I_{RM}$ | $V_R$=100V, $T_J$=25°C | | | 100 | μA |
| | | $V_R$=100V, $T_J$=125°C | | | 20 | mA |

Note: Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%.

## ■ TYPICAL CHARACTERISTICS