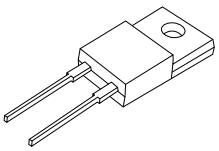
# SUPERFAST RECOVERY RECTIFIER



TO-220F-2

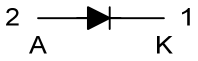
## ■ DESCRIPTION

The UTC **ER1004** is a superfast recovery rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop, high current capability and high efficiency, etc.

## ■ FEATURES

* Low forward voltage drop
* High current capability
* High surge capacity
* Low power loss
* High efficiency
* Super fast recovery times, high voltage

## ■ SYMBOL



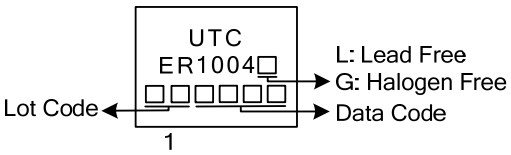

## ■ ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | Packing |
|---|---|---|---|---|---|
| Lead Free | Halogen Free | | 1 | 2 | |
| ER1004L-TF32-R | ER1004G-TF32-R | TO-220F-2 | K | A | Tape Reel |

Note: Pin Assignment: A: Anode K: Common Cathode

| | |
|---|---|
| TGBR5L45L-TF32-R<br>(1)Packing Type<br>(2)Package Type<br>(3)Green Package | (1) R: Tape Reel<br>(2) TF32: TO-220F-2<br>(3) L: Lead Free, G: Halogen Free and Lead Free |

## ■ MARKING



## ■ ABSOLUTE MAXIMUM RATINGS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitance load, derate current by 20%.

| PARAMETER | SYMBOL | RATINGS | UNIT |
|---|---|---|---|
| Recurrent Peak Reverse Voltage | $V_{RRM}$ | 400 | V |
| RMS Voltage | $V_{RMS}$ | 280 | V |
| Average Average Forward Current at $T_C$=100°C | $I_O$ | 10 | A |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | $I_{FSM}$ | 150 | A |
| Operating Junction Temperature | $T_J$ | -55~+150 | °C |
| Storage Temperature | $T_{STG}$ | -55~+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 |
|---|---|---|---|
| Junction to Ambient | $\theta_{JA}$ | 62.5 | °C/W |
| Junction to Case | $\theta_{JC}$ | 5 | °C/W |

## ■ ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitance load, derate current by 20%

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| Forward Voltage Drop | $V_F$ | $I_F$=10A | | | 1.3 | V |
| DC Reverse Current at Rated DC Blocking Voltage | $I_R$ | $T_J$=25°C | | | 10 | μA |
| | | $T_J$=100°C | | | 500 | μA |
| Reverse Recovery Time (Note 2) | $t_{rr}$ | | | 50 | | ns |
| Junction Capacitance (Note 1) | $C_J$ | | | 62 | | pF |

Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Reverse Recovery Test Conditions: $I_F$=0.5A, $I_R$=1A, Irr=0.25A.