



## ER1004

Preliminary

DIODE

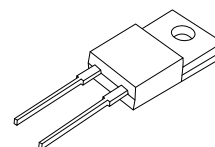
## SUPERFAST RECOVERY RECTIFIER

### 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.

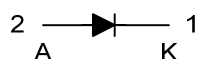
### FEATURES

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



TO-220F-2

### SYMBOL



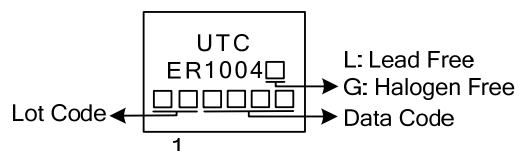
### ORDERING INFORMATION

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	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) TF32: TO-220F-2
	(3)Green Package	(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 $T_C=100^{\circ}\text{C}$	$I_O$	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	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-55~+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
Junction to Ambient	$\theta_{JA}$	62.5	$^{\circ}\text{C/W}$
Junction to Case	$\theta_{JC}$	5	$^{\circ}\text{C/W}$

## ■ 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	$V_F$	$I_F=10\text{A}$			1.3	V
DC Reverse Current at Rated DC Blocking Voltage	$I_R$	$T_J=25^{\circ}\text{C}$			10	$\mu\text{A}$
		$T_J=100^{\circ}\text{C}$			500	$\mu\text{A}$
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:  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

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