



# ER1004

## FAST RECOVERY EPITAXIAL DIODE

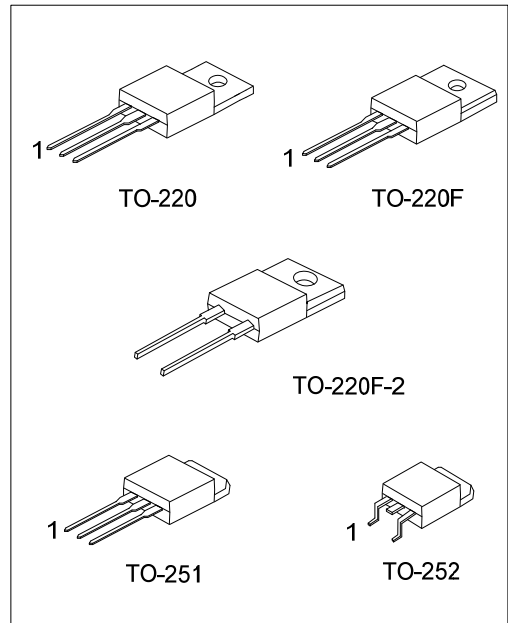
### SUPERFAST RECOVERY RECTIFIER

■ DESCRIPTION

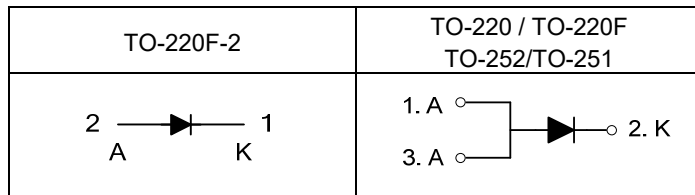
The UTC **ER1004** is a superfast recovery rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop, high current capability and high efficiency, etc.

■ FEATURES

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



■ SYMBOL



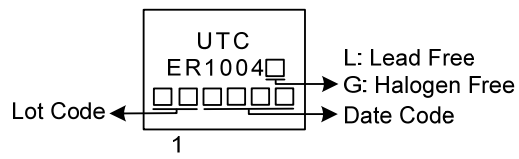
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
ER1004L-TA3-R	ER1004G-TA3-R	TO-220	A	K	A	Tube
ER1004L-TF3-T	ER1004G-TF3-T	TO-220F	A	K	A	Tube
ER1004L-TF32-R	ER1004G-TF32-R	TO-220F-2	K	A	-	Tube
ER1004L-TM3-T	ER1004G-TM3-T	TO-251	A	K	A	Tube
ER1004L-TN3-R	ER1004G-TN3-R	TO-252	A	K	A	Tape Reel

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

<p>ER1004G-TA3-R</p> <ul style="list-style-type: none"> <li>(1) Packing Type</li> <li>(2) Package Type</li> <li>(3) Green Package</li> </ul>	<ul style="list-style-type: none"> <li>(1) T: Tube, R: Tape Reel</li> <li>(2) TA2: TO-220-2, TA3: TO-220, TF32: TO-220F-2, TM3: TO-251, TN3: TO-252</li> <li>(3) G: Halogen Free and Lead Free, L: Lead Free</li> </ul>
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### ■ 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
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)	$I_{FSM}$	110	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
Typical Thermal Resistance	TO-220	2	°C/W
	TO-220F	4	°C/W
	TO-220F-2		
	TO-251 TO-252	6	°C/W

### ■ ELECTRICAL CHARACTERISTICS

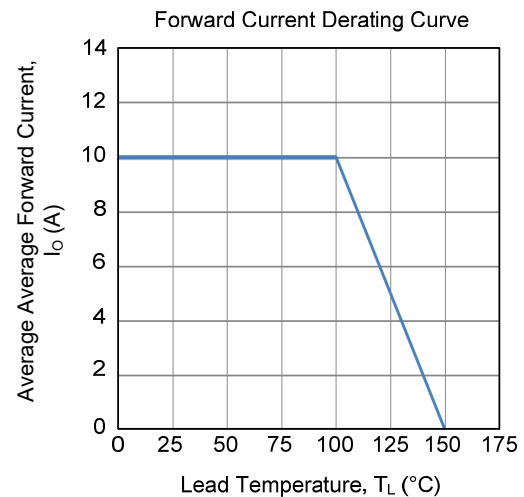
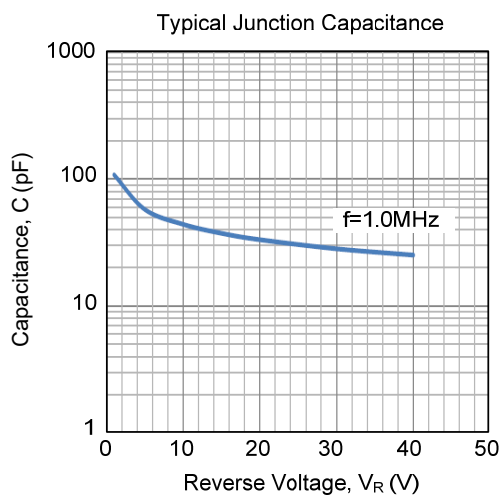
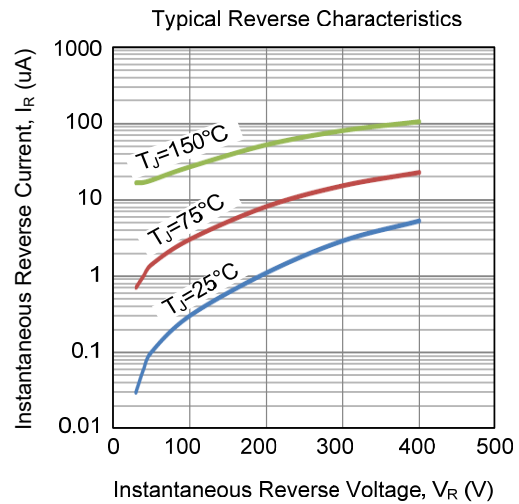
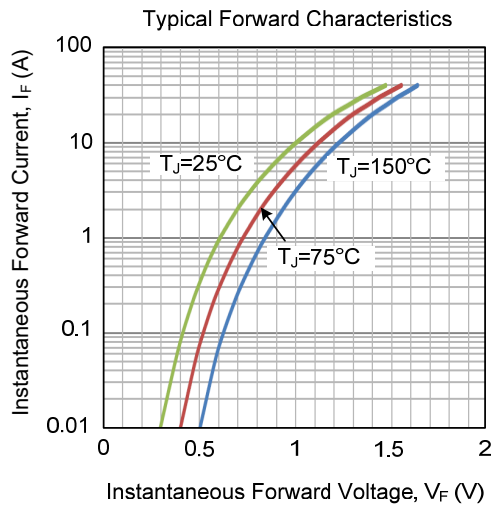
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitance load, derate current by 20%

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage Drop	$V_F$	$I_F=10\text{A}$			1.5	V
DC Reverse Current at Rated DC Blocking Voltage	$I_R$	$T_J=25^\circ\text{C}$			10	$\mu\text{A}$
		$T_J=125^\circ\text{C}$			500	$\mu\text{A}$
Reverse Recovery Time (Note 2)	$t_{rr}$				60	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:  $I_F=5.0\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

## ■ TYPICAL CHARACTERISTICS



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