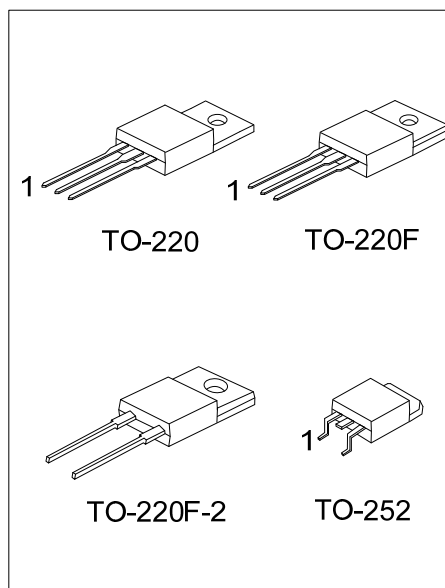


**ER1004****FAST RECOVERY EPITAXIAL DIODE****SUPERFAST RECOVERY
RECTIFIER****DESCRIPTION**

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**

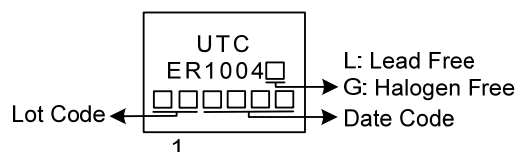
TO-220F-2	TO-220 / TO-220F / TO-252

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-TN3-R	ER1004G-TN3-R	TO-252	A	K	A	Tape Reel

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

	(1) T: Tube, R: Tape Reel (2) TA2: TO-220-2, TA3: TO-220, TF32: TO-220F-2, TN3: TO-252 (3) G: Halogen Free and Lead Free, L: Lead Free
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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	$^{\circ}\text{C}$
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
Typical Thermal Resistance	TO-220	2	$^{\circ}\text{C}/\text{W}$
	TO-220F	4	$^{\circ}\text{C}/\text{W}$
	TO-220F-2	4	$^{\circ}\text{C}/\text{W}$
	TO-252	6	$^{\circ}\text{C}/\text{W}$

■ ELECTRICAL CHARACTERISTICS

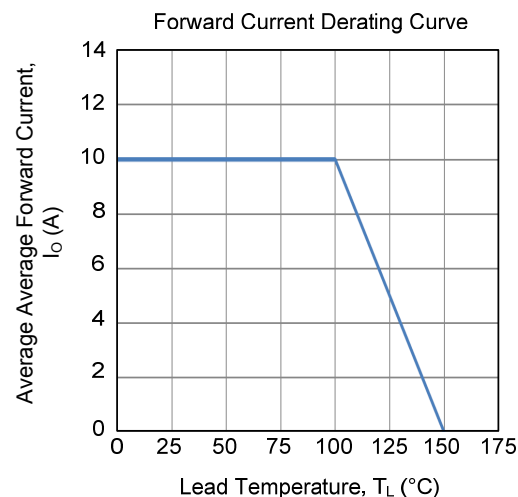
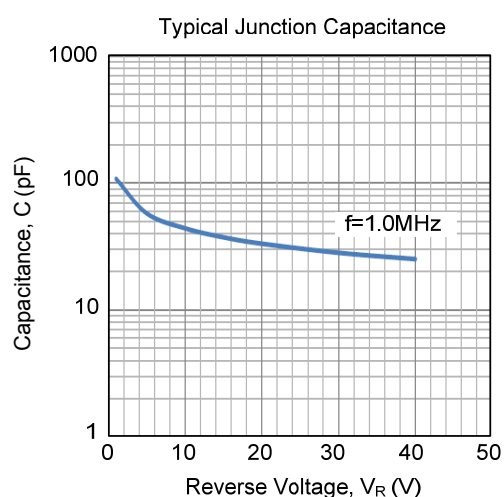
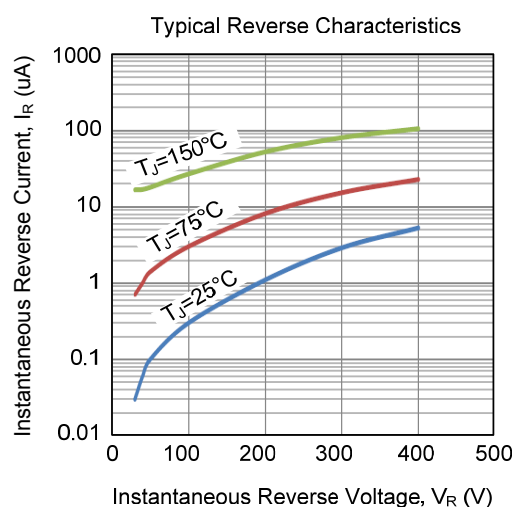
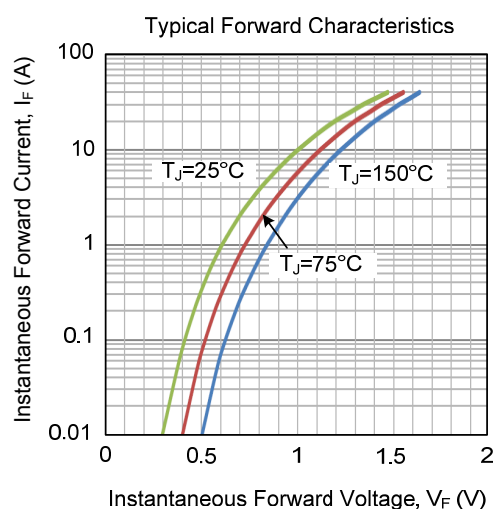
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitance load, derate current by 20%

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	μA
		$T_J=125^{\circ}\text{C}$			500	μA
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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