



UFR3060C

FAST RECOVERY EPITAXIAL DIODE

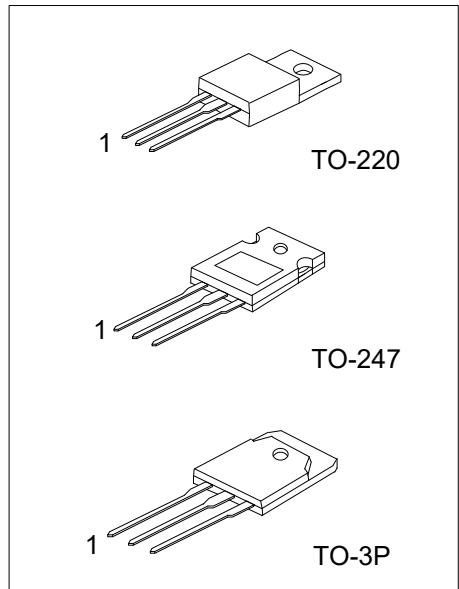
ULTRAFAST SOFT RECOVERY RECTIFIER DIODE

DESCRIPTION

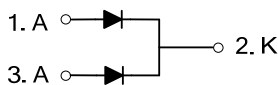
The UTC **UFR3060C** utilizes advanced processing techniques to achieve ultrafast recovery times and higher forward current. Its soft recovery characteristics and high reliability suit for wide industrial applications.

FEATURES

- * Ultrafast Recovery Time
- * Soft Recovery Characteristics
- * Low Recovery Loss
- * Low Forward Voltage
- * High Surge Current Capability
- * Low Leakage Current



SYMBOL



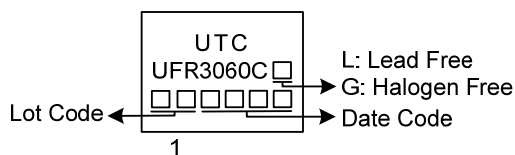
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UFR3060CL-TA3-T	UFR3060CG-TA3-T	TO-220	A	K	A	Tube
UFR3060CL-T47-T	UFR3060CG-T47-T	TO-247	A	K	A	Tube
UFR3060CL-T3P-T	UFR3060CG-T3P-T	TO-3P	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>UFR3060CG-TA3-T</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Green Package</p>	<p>(1) T: Tube</p> <p>(2) TA3: TO-220, T47: TO-247, T3P: TO-3P</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_c=25°C unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Maximum D.C. Reverse Voltage	V _R	600	V
Maximum Peak Repetitive Reverse Voltage	V _{RRM}	600	V
Maximum Working Peak Reverse Voltage	V _{RWM}	600	V
Maximum Average Forward Current (T _c =110°C)	Per Leg	15	A
	Total	30	A
Non-Repetitive Forward Surge Current (T _J =45°C, t=10ms, 50Hz, Sine)	I _{FSM}	140	A
Operating Temperature Range	T _J	-40 ~ +150	°C
Storage Temperature Range	T _{STG}	-40 ~ +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.

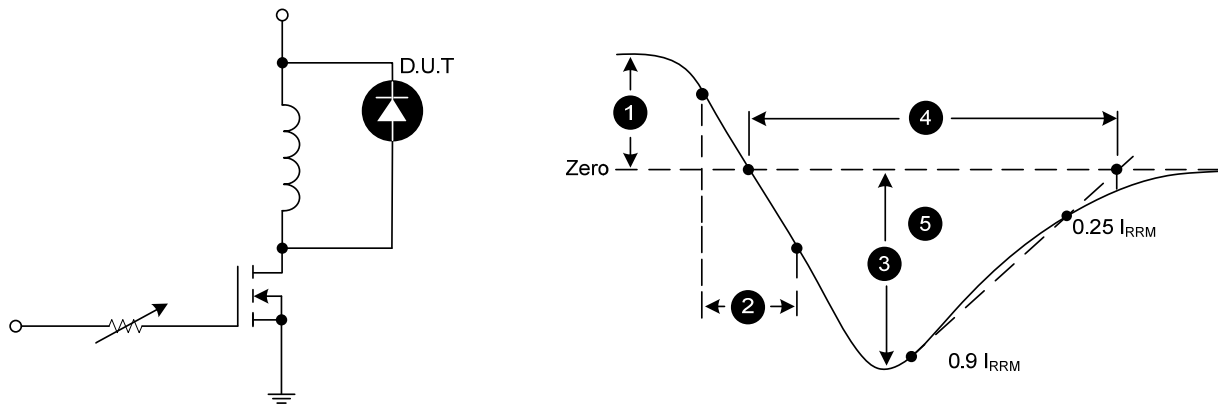
■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Case	TO-220	1.2	°C/W
	TO-247	0.8	°C/W

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
STATIC PARAMETERS						
Forward Voltage	V _F	I _F =15A			1.65	V
		I _F =15A, T _J =125°C			1.4	V
Maximum Reverse Leakage Current	I _{RM}	V _R =600V			3	μA
		V _R =600V, T _J =125°C			100	μA
DYNAMIC PARAMETERS						
Reverse Recovery Time	t _{rr}	I _F =1A, di _F /dt=-100A/μs, V _R =400V		25		ns
Reverse Recovery Time	t _{rr}	I _F =15A, di _F /dt=-100A/μs, V _R =400V, T _J =25°C		58		ns

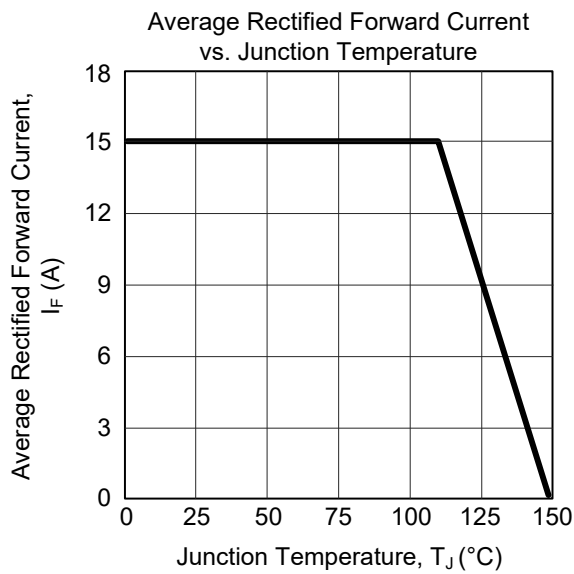
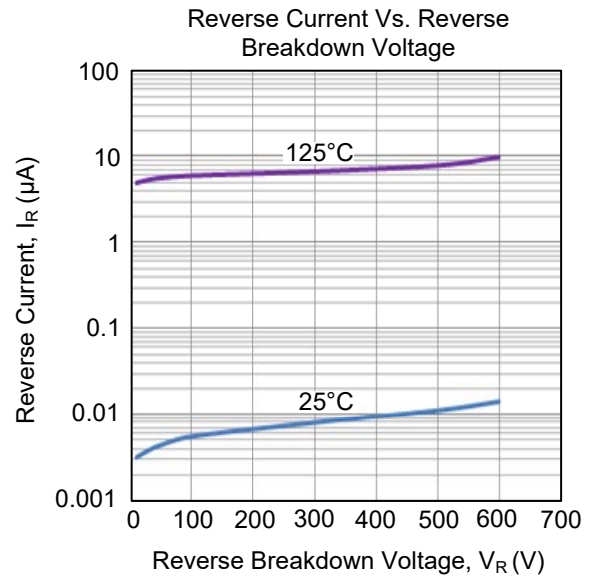
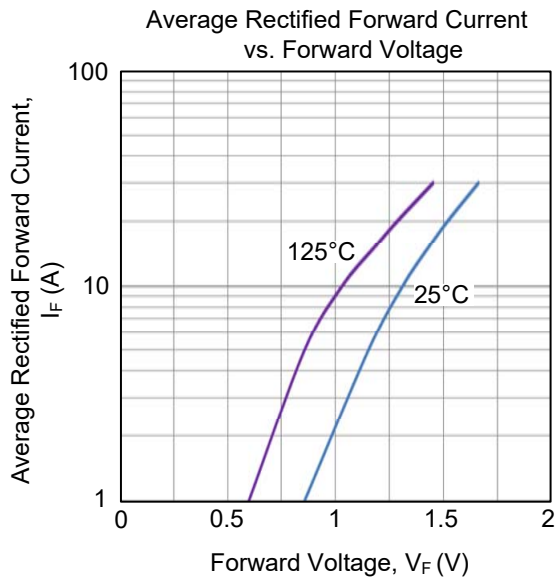
■ TEST CIRCUITS AND WAVEFORMS



Diode Reverse Recovery Test Circuit and Waveform

1. I_F - Forward Conduction Current
2. di_F/dt - Rate of Diode Current Change Through Zero Crossing.
3. I_{RRM} - Maximum Reverse Recovery Current.
4. t_{rr} - Reverse Recovery Time, measured from zero crossing where diode current goes from positive to negative, to the point at which the straight line through I_{RRM} and $0.25 \cdot I_{RRM}$ passes through zero.
5. Q_{rr} - Area Under the Curve Defined by I_{RRM} and t_{rr} .

■ TYPICAL CHARACTERISTICS



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