



UFR8060C

FAST RECOVERY EPITAXIAL DIODE

ULTRAFAST SOFT RECOVERY RECTIFIER DIODE

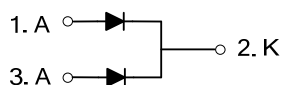
DESCRIPTION

The UTC **UFR8060C** 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



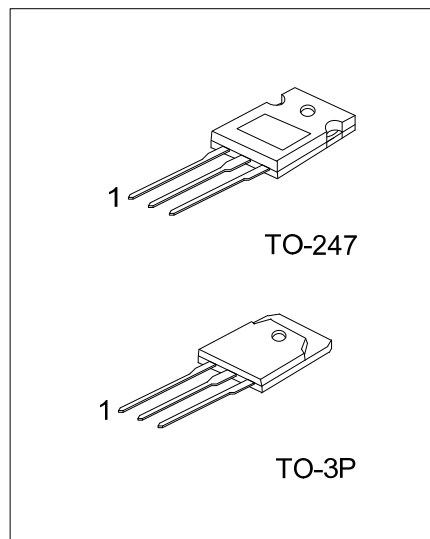
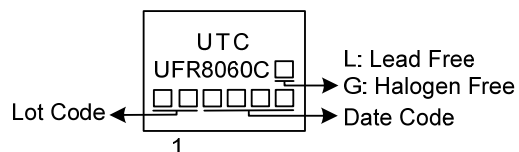
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UFR8060CL-T47-T	UFR8060CG-T47-T	TO-247	A	K	A	Tube
UFR8060CL-T3P-T	UFR8060CG-T3P-T	TO-3P	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

UFR8060CG-T47-T	(1)Packing Type (2)Package Type (3)Green Package	(1) T: Tube (2) T47: TO-247, T3P: TO-3P (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING



■ ABSOLUTE MAXIMUM RATINGS ($T_C=25^\circ\text{C}$ 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 ($T_C=110^\circ\text{C}$)	Per Leg	40	A
	Total	80	A
Non-Repetitive Forward Surge Current ($T_J=45^\circ\text{C}$, $t=10\text{ms}$, 50Hz, Sine)	I_{FSM}	330	A
Operating Temperature Range	T_J	$-40 \sim +150$	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	$-40 \sim +150$	$^\circ\text{C}$

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.

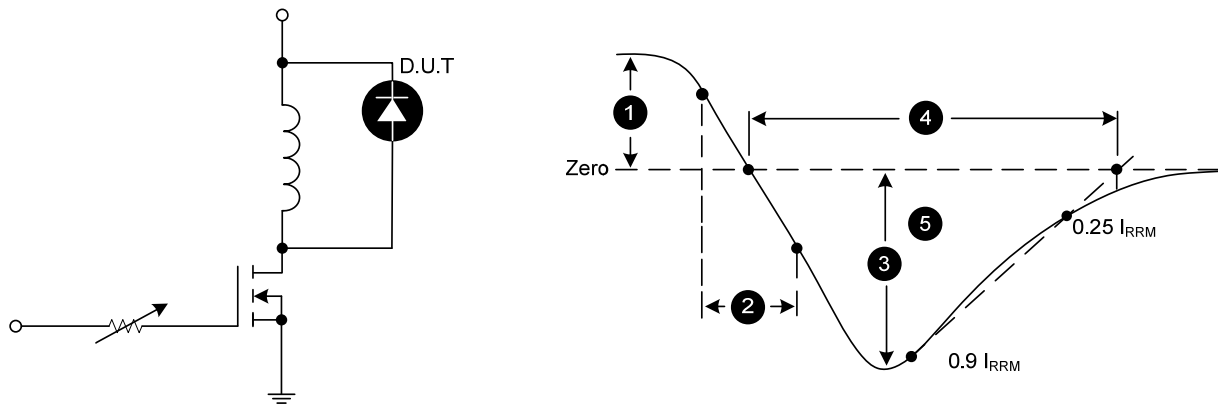
■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Case	θ_{JC}	0.8	$^\circ\text{C/W}$

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
STATIC PARAMETERS						
Forward Voltage	V _F	I _F =40A			2.0	V
		I _F =40A, T _J =150°C			1.8	V
Maximum Reverse Leakage Current	I _{RM}	V _R =600V			100	μA
		V _R =600V, T _J =150°C			500	μA
DYNAMIC PARAMETERS						
Reverse Recovery Time	t _{rr}	I _F =1A, di _F /dt=-100A/μs, V _R =400V		64	80	ns
Reverse Recovery Time	t _{rr}	I _F =30A, di _F /dt=-100A/μs, V _R =400V, T _J =25°C		85	105	ns

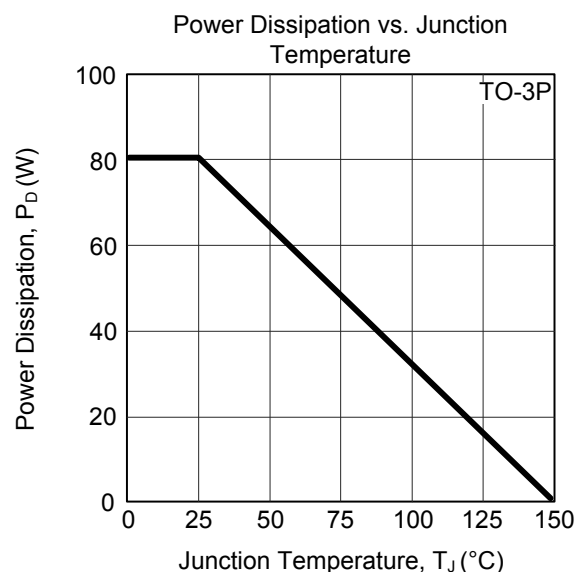
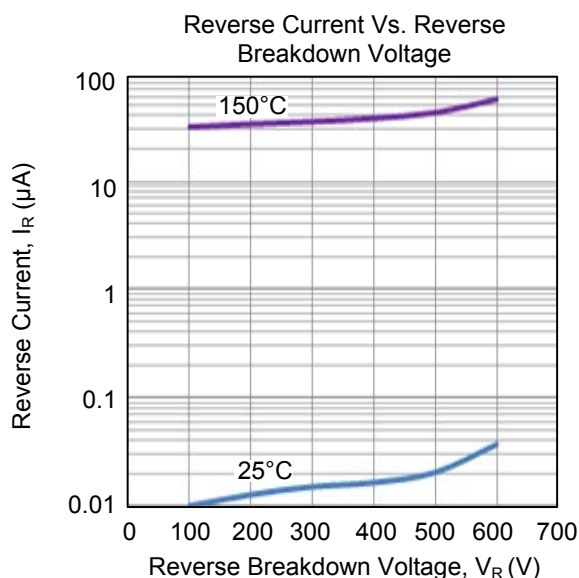
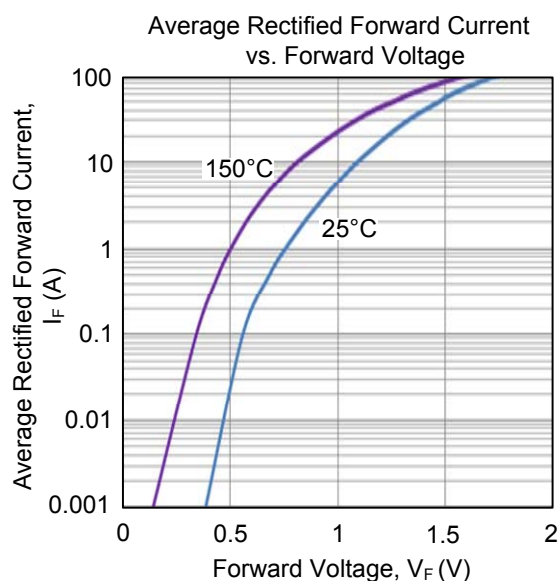
■ TEST CIRCUITS AND WAVEFORMS



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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