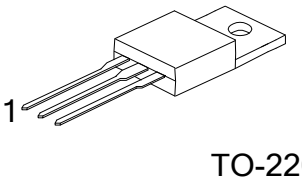
UHR3020C **Advance** ***FAST RECOVERY EPITAXIAL DIODE***

CATHODE HYPERFASTER SOFT RECOVERY RECTIFIER



TO-220

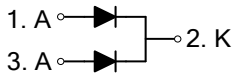
■ DESCRIPTION

The UTC **UHR3020C** is a hyperfaster soft 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
* hyperfaster recovery times, high voltage

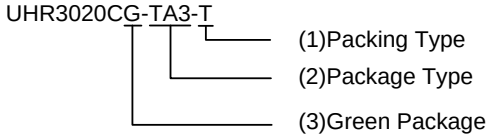
■ SYMBOL



■ ORDERING INFORMATION

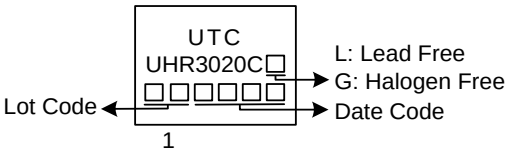
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UHR3020CL-TA3-T	UHR3020CG-TA3-T	TO-220	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode



(1) T: Tube
(2) TA3: TO-220
(3) G: Halogen Free and Lead Free, L: 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
DC Blocking Voltage		V_R	200	V
Recurrent Peak Reverse Voltage		V_{RRM}	200	V
Average Average Forward Current at T_C=159°C	Per Leg	$I_{F(AV)}$	15	A
	Total		30	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)		I_{FSM}	160	A
Operating Junction Temperature		T_J	-65 ~ +175	°C
Storage Temperature		T_{STG}	-65 ~ +175	°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 (PER LEG)

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	θ_{JC}	1.1	°C/W

Note: Mounting surface, flat, smooth and greased.

■ 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=15A			1.05	V
		I_F=15A, T_J=125°C			0.85	V
DC Reverse Current at Rated DC Blocking Voltage	I_R	V_R=V_{RM}, T_J=25°C			10	μA
		V_R=V_{RM}, T_J=125°C			300	μA
Reverse Recovery Time	t_{rr}	I_F=1A, V_R=30V, di/dt=50A/μs			52	ns
		I_F=1A, V_R=30V, di/dt=100A/μs			40	nC
Reverse recovery charge	Q_{rr}	I_F=1A, V_R=30V, di/dt=50A/μs			43	ns
		I_F=1A, V_R=30V, di/dt=100A/μs			52	nC
Junction Capacitance	C_J	V_R=200V		57		pF

Note: Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%.