



BYC20C

DIODE

RECTIFIER DAUL DIODE, HYPERFAST

DESCRIPTION

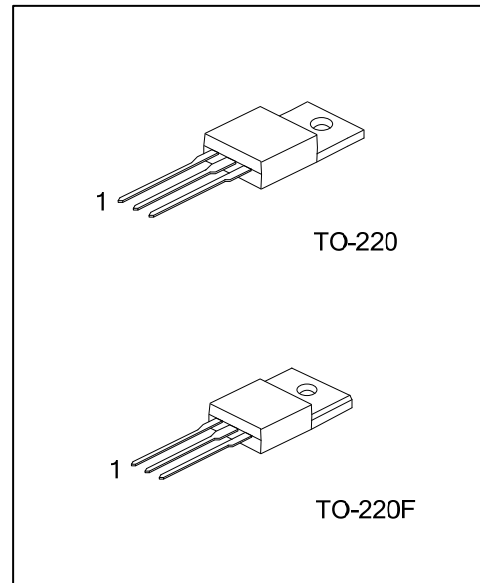
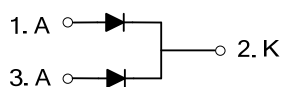
The UTC **BYC20C** is a rectifier dual diode. It provides the designers with ultra-fast switching and low switching loss in associated MOSFET.

The UTC **BYC20C** is ideally used in half-bridge lighting ballasts, half-bridge/full-bridge switched mode power supplies and continuous current mode (CCM) power factor correction (PFC).

FEATURES

- * Low Reverse Recovery Current
- * Ultra-Fast Switching
- * Low Switching Loss In Associated MOSFET
- * Low Thermal Resistance

SYMBOL



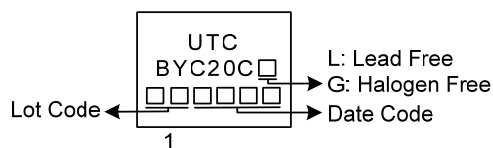
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BYC20CL-TA3-T	BYC20CG-TA3-T	TO-220	A	K	A	Tube
BYC20CL-TF3-T	BYC20CG-TF3-T	TO-220F	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode Tab: Mounting Base

BYC20CG-TA3-T	(1)Packing Type	(1) T: Tube
	(2)Package Type	(2) TA3: TO-220, TF3: TO-220F
	(3)Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

MARKING



■ ABSOLUTE MAXIMUM RATINGS (Pre Leg)

PARAMETER		SYMBOL	RATINGS	UNIT
Peak Repetitive Reverse Voltage		V_{RRM}	600	V
Crest Working Reverse Voltage		V_{RWM}	600	V
Average Forward Current	$\delta = 0.5$; with reappplied $V_{RRM(max)}$; $T_{Tab} \leq 78^{\circ}C$	$I_{F(AV)}$	10	A
Repetitive Peak Forward Current	$\delta = 0.5$; with reappplied $V_{RRM(max)}$; $T_{Tab} \leq 78^{\circ}C$	I_{FRM}	20	A
Non-Repetitive Peak Forward Current.	$t = 10ms$	I_{FSM}	65	A
	$t = 8.3ms$ sinusoidal; $T_J = 150^{\circ}C$ prior to surge with reappplied $V_{RWM(max)}$		71	A
Operating Junction Temperature		T_J	+150	$^{\circ}C$
Storage Temperature		T_{STG}	-40 ~ +150	$^{\circ}C$

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 Ambient		θ_{JA}	60	K/W
Junction to Tab	TO-220	θ_{JB}	2	K/W
	TO-220F		5	K/W

■ ELECTRICAL CHARACTERISTICS (Pre Leg) ($T_J = 25^{\circ}C$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage	V_F	$I_F = 10A, T_J = 150^{\circ}C$		1.4	1.8	V
		$I_F = 20A, T_J = 150^{\circ}C$		1.7	2.3	V
		$I_F = 10A$		2.0	2.9	V
Reverse Current	I_R	$V_R = 600V$		9	200	μA
		$V_R = 500V, T_J = 100^{\circ}C$		1.1	3.0	mA
Reverse Recovery Time	t_{RR}	$I_F = 1A, V_R = 30V, dI_F/dt = 50A/\mu s$		35	55	ns
		$I_F = 10A, V_R = 400V, dI_F/dt = 100A/\mu s$		64		ns

■ TYPICAL CHARACTERISTICS

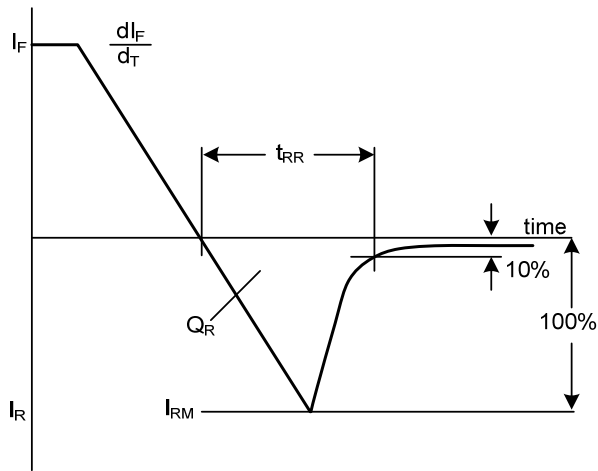


Fig 1. Reverse Recovery Definitions

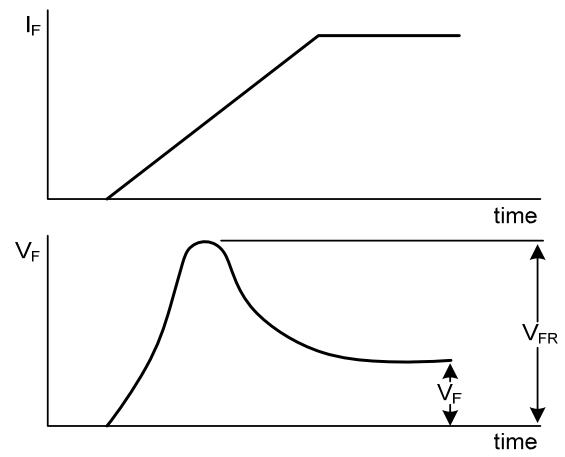
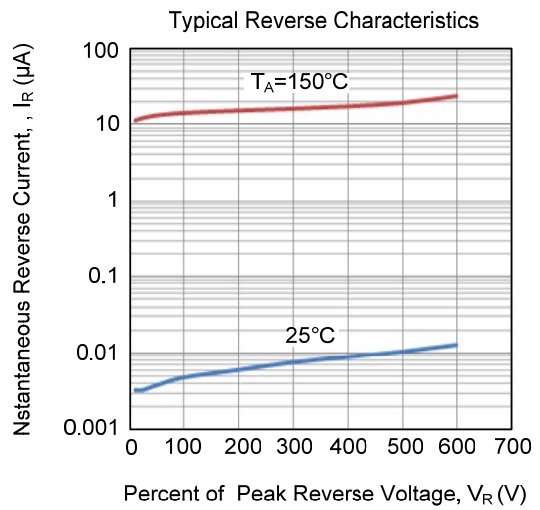
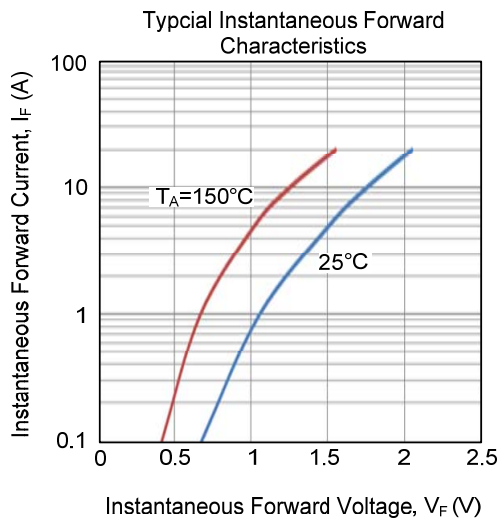


Fig 2. Forward Recovery Definitions

■ TYPICAL CHARACTERISTICS



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