



## BYR29

Preliminary

DIODE

### RECTIFIER DIODE ULTRAFAST

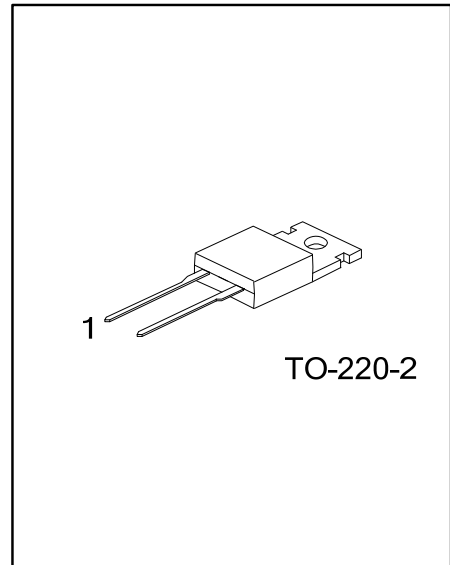
#### DESCRIPTION

The UTC **BYR29** is a rectifier diode and It provides the designers with ultra-fast switching and low switching loss.

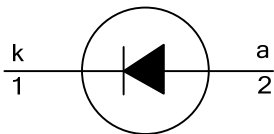
The UTC **BYR29** is suitable for half-bridge lighting ballasts, half-bridge/full-bridge switched mode power supplies and active power factor correction.

#### FEATURES

- \* Low Reverse Recovery Current
- \* Ultra-Fast Switching
- \* Low Switching Loss
- \* Low Thermal Resistance



#### SYMBOL



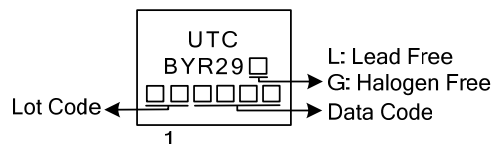
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
BYR29L-6-TA2-T	BYR29G-6-TA2-T	TO-220-2	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

BYR29L-6-TA2-T	(1)Packing Type	(1) T: Tube
	(2)Package Type	(2) TA2: TO-220-2
	(3)Green Package	(3) L: Lead Free, G: Halogen Free and Lead Free

#### MARKING



### ■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	CONDITIONS	RATINGS	UNIT
Peak Repetitive Reverse Voltage	$V_{RRM}$		600	V
Crest Working Reverse Voltage	$V_{RWM}$		600	V
Continuous Reverse Voltage	$V_R$		600	V
Average Forward Current	$I_{F(AV)}$	square wave; $\delta = 0.5$ ; $T_{Tab} \leq 115^\circ\text{C}$	8	A
Repetitive Peak Forward Current	$I_{FRM}$	$t = 25\mu\text{s}$ ; $\delta = 0.5$ ; $T_{Tab} \leq 115^\circ\text{C}$	16	A
Non-Repetitive Peak Forward Current	$I_{FSM}$	$t = 10\text{ms}$	60	A
		$t = 8.3\text{ms}$ sinusoidal; with reapplied $V_{RRM(max)}$	66	A
Junction Temperature	$T_J$		150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$		-40 ~ +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 Ambient	$\theta_{JA}$	60	K/W
Junction to Tab	$\theta_{JB}$	2.5	K/W

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage	$V_F$	$I_F = 8\text{A}$ , $T_J = 150^\circ\text{C}$		1.07	1.50	V
		$I_F = 20\text{A}$		1.75	1.95	V
Reverse Current	$I_R$	$V_R = V_{RRM}$ , $T_J = 25^\circ\text{C}$		1.0	10	$\mu\text{A}$
		$V_R = V_{RRM}$ , $T_J = 100^\circ\text{C}$		0.1	0.2	mA
Reverse Recovery Charge	$Q_S$	$I_F = 2\text{A} \sim V_R \geq 30\text{V}$ , $dI_F/dt = 20\text{A}/\mu\text{s}$		150	200	nC
Reverse Recovery Time	$t_{RR}$	$I_F = 1\text{A} \sim V_R \geq 30\text{V}$ , $dI_F/dt = 100\text{A}/\mu\text{s}$		60	75	ns
Peak Reverse Recovery Current	$I_{RRM}$	$I_F = 10\text{A} \sim V_R \geq 30\text{V}$ , $dI_F/dt = 50\text{A}/\mu\text{s}$ , $T_J = 100^\circ\text{C}$			6	A
Forward Recovery Voltage	$V_{FR}$	$I_F = 10\text{A}$ , $dI_F/dt = 10\text{A}/\mu\text{s}$		5.0		V

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