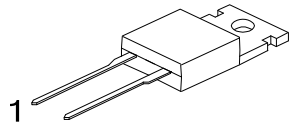
RECTIFIER DIODE ULTRAFAST



TO-220-2

■ DESCRIPTION

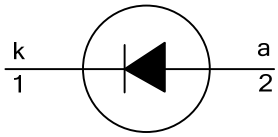
The UTC **BYR29** is a rectifier diode and It provides the designers with ultra-fast switching and low switching loss.

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



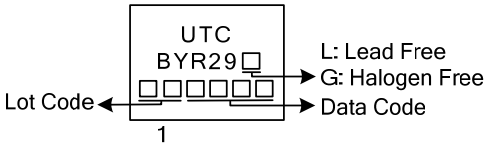
■ ORDERING INFORMATION

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; δ =0.5; T_{Tab} ≤115°C	8	A
Repetitive Peak Forward Current	I_{FRM}	t = 25μs; δ =0.5; T_{Tab} ≤115°C	16	A
Non-Repetitive Peak Forward Current	I_{FSM}	t = 10ms	60	A
		t = 8.3ms sinusoidal; with reapplied $V_{RRM(max)}$	66	A
Junction Temperature	T_J		150	°C
Storage Temperature	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 Ambient	$θ_{JA}$	60	K/W
Junction to Tab	$θ_{JB}$	2.5	K/W

■ ELECTRICAL CHARACTERISTICS (T_J =25°C, unless otherwise specified)

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