

**Ultrafast Rectifier**
**BYV29X-600**
**FEATURES**

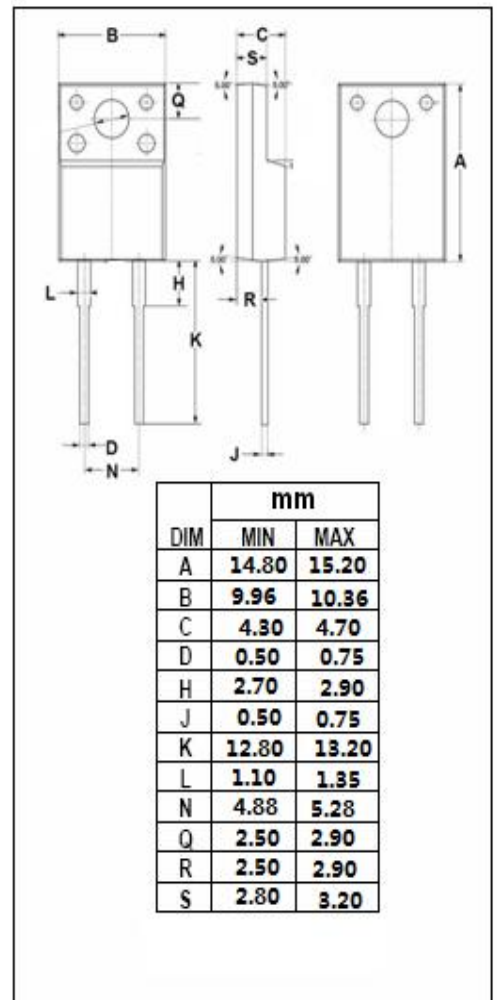
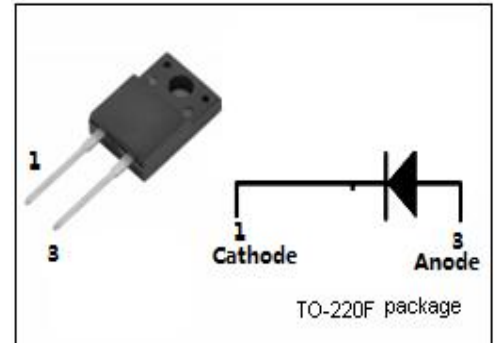
- With TO-220F packaging
- 600V blocking voltage
- Low forward voltage drop
- Fast switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Switch mode power supplies
- Output rectifier in high frequency
- Switch applications

**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	600	V
I <sub>F(AV)</sub>	Average Rectified Forward Current; @T <sub>c</sub> =85°C	9	A
I <sub>FRM</sub>	Repetitive Peak Forward Current; @T <sub>c</sub> =85°C	18	A
I <sub>FSM</sub>	Non-repetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 50Hz)	91	A
T <sub>J</sub>	Junction Temperature	-40~150	°C
T <sub>stg</sub>	Storage Temperature Range	-40~150	°C



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**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	5.5	$^{\circ}C/W$

**ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}C$ )**

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_{F^*}$	Maximum Instantaneous Forward Voltage	$I_F=8A ; T_j=25^{\circ}C$ $I_F=8A ; T_j=150^{\circ}C$	1.26 1.11	V
$I_{R^*}$	Maximum Instantaneous Reverse Current	$V_R= 600V$ $V_R= 600V; T_j=100^{\circ}C$	50 350	$\mu A$
$t_{rr}$	Maximum Reverse Recovery Time	$I_F =1A; di/dt = 100A/\mu s; V_R=30V$	60	ns

\*:Pulse test ,Pulse width=300us,duty cycle $\leq$ 2%

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