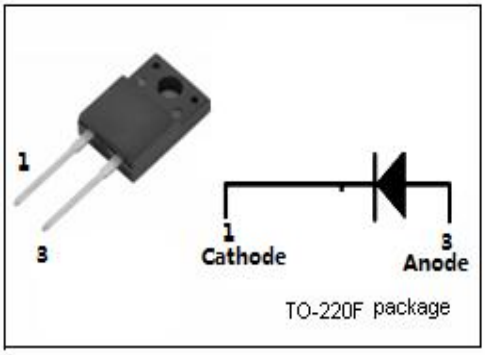
Ultrafast Rectifier BYV29X-600

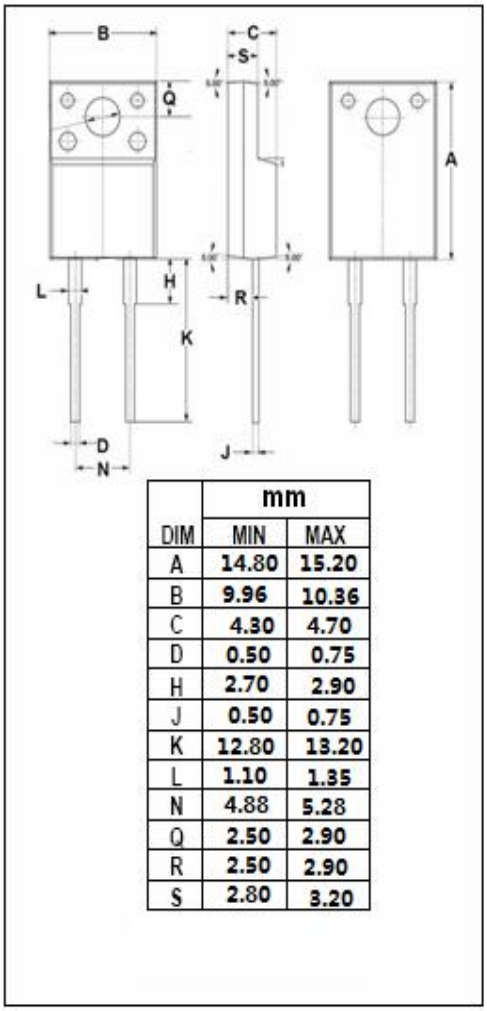
FEATURES

- 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



DIM	mm MIN	MAX
A	14.80	15.20
B	9.96	10.36
C	4.30	4.70
D	0.50	0.75
H	2.70	2.90
J	0.50	0.75
K	12.80	13.20
L	1.10	1.35
N	4.88	5.28
Q	2.50	2.90
R	2.50	2.90
S	2.80	3.20

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RWM} V_R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	600	V
$I_{F(AV)}$	Average Rectified Forward Current;@Tc=85℃	9	A
I_{FRM}	Repetitive Peak Forward Current;@Tc=85℃	18	A
I_{FSM}	Non-repetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 50Hz)	91	A
T_J	Junction Temperature	-40~150	℃
T_{stg}	Storage Temperature Range	-40~150	℃

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THERMAL CHARACTERISTICS

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

ELECTRICAL CHARACTERISTICS(T_a=25℃)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_{F*}	Maximum Instantaneous Forward Voltage	I_F=8A ;Tj=25℃ I_F=8A ;Tj=150℃	1.26 1.11	V
I_{R*}	Maximum Instantaneous Reverse Current	V_R= 600V V_R= 600V;Tj=100℃	50 350	μA
t_{rr}	Maximum Reverse Recovery Time	IF =1A;di/dt = 100A/μs;V_R=30V	60	ns

*:Pulse test ,Pulse width=300us,duty cycle≤2%