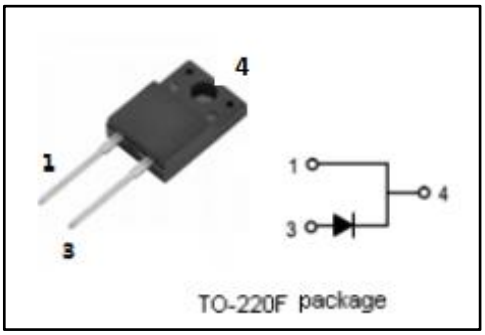
Ultra fast Rectifier

BYC30X-600P

FEATURES

- With TO-220F packaging
- High performance fast recovery diode
- Low loss and soft recovery
- High current capability
- Low reverse leakage current
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



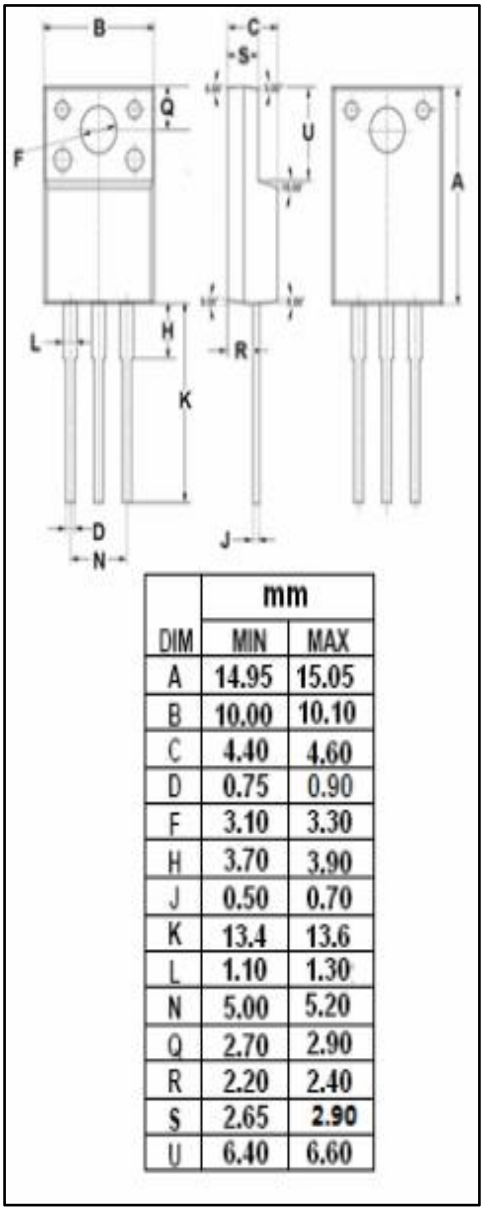
TO-220F package

APPLICATIONS

- Switching power supply
- Power switching circuits
- General purpose

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=100℃	30	A
I_{FRM}	Repetitive Peak Forward Current	60	A
I_{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 50Hz)	200	A
T_J	Junction Temperature	-65~175	℃
T_{stg}	Storage Temperature Range	-65~175	℃



DIM	mm MIN	mm MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

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Ultra fast Rectifier — BYC30X-600P

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	3.5	℃/W

ELECTRICAL CHARACTERISTICS(T_a=25℃) (Pulse Test: Pulse Width=300 μs,Duty Cycle≤2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	I_F=30A;Tj=25℃ I_F=30A;Tj=150℃	2.75 1.80	V
I_R	Maximum Instantaneous Reverse Current	V_R= $V_{RWM;}$Tj=25℃ V_R= $V_{RWM;}$Tj=150℃	10 600	μA
t_{rr}	Maximum Reverse Recovery Time	I_F =15A;V_R=30V;dI_F/dt=50A/μs	35	ns

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