

Ultra fast Rectifier
BYC30X-600P
FEATURES

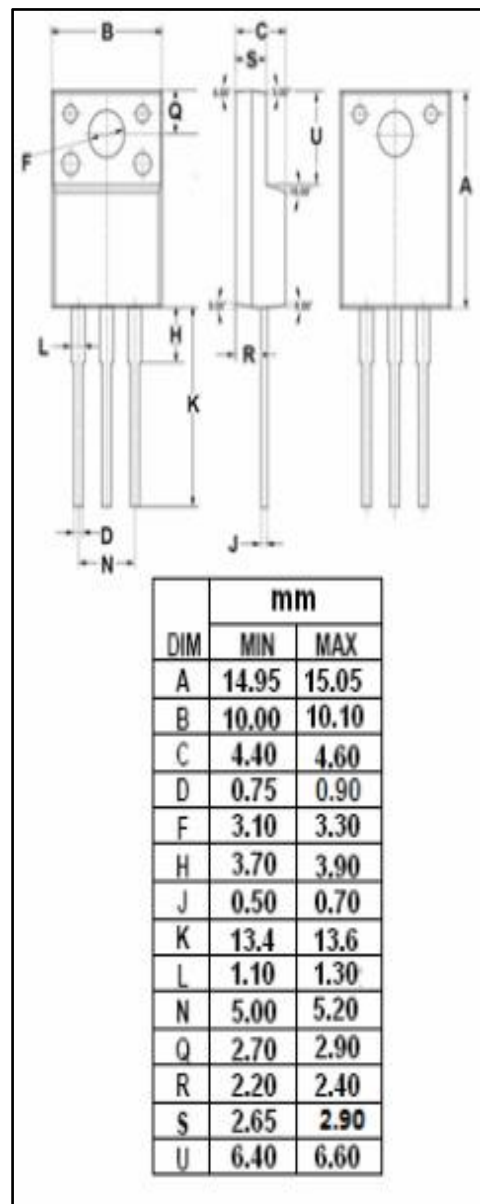
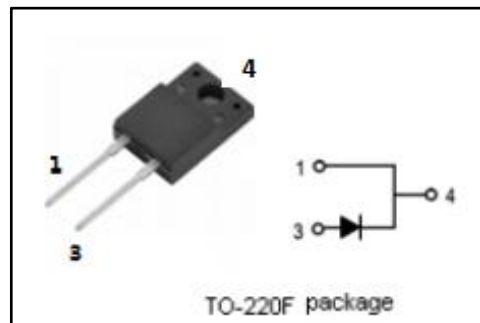
- With TO-220F packaging
- High performance fast recovery diode
- Low loss and soft recovery
- High current capability
- Low reverse leakage current
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supply
- Power switching circuits
- General purpose

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

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 @T _c =100°C	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	°C
T _{stg}	Storage Temperature Range	-65~175	°C



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case	3.5	°C/W

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$) (Pulse Test: Pulse Width=300 μ s, Duty Cycle \leq 2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F=30\text{A}; T_j=25^\circ\text{C}$ $I_F=30\text{A}; T_j=150^\circ\text{C}$	2.75 1.80	V
I_R	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=25^\circ\text{C}$ $V_R=V_{RWM}; T_j=150^\circ\text{C}$	10 600	μ A
t_{rr}	Maximum Reverse Recovery Time	$I_F=15\text{A}; V_R=30\text{V}; dI_F/dt=50\text{A}/\mu\text{s}$	35	ns

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