

Ultrafast Rectifier

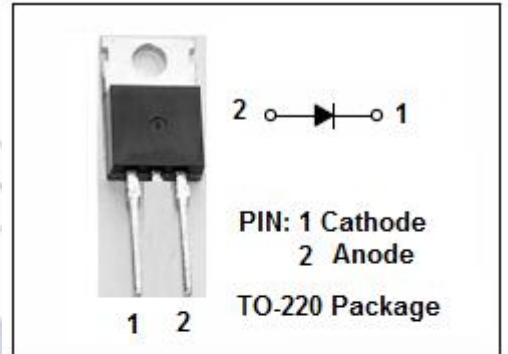
BYW80-200

FEATURES

- Suited for SMPS
- Very low Forward losses
- High surge current capability
- High avalanche energy capability
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

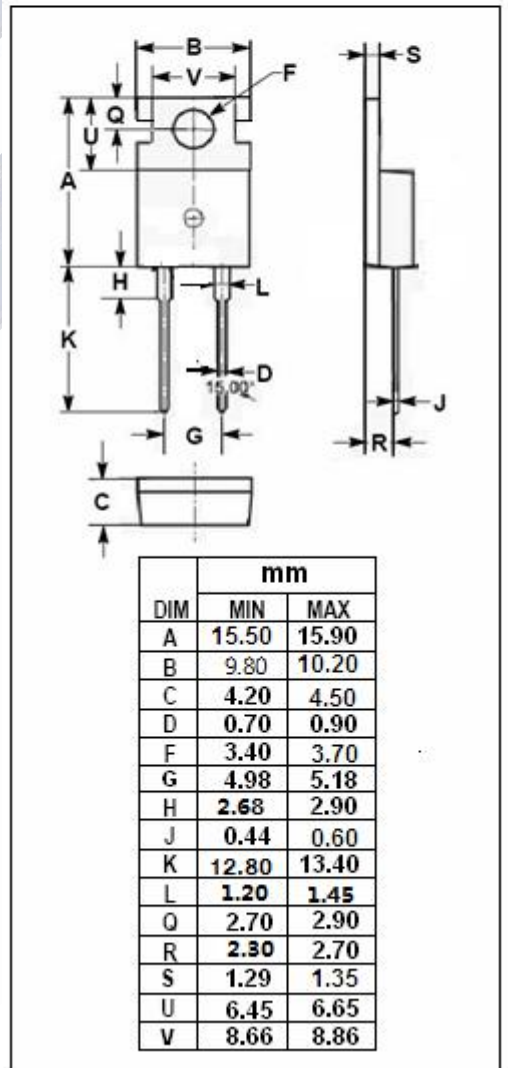
APPLICATIONS

- Signal chip rectifier suited for switched mode power supplies and high frequency DC to DC converters. This device is intended for use in low voltage ,high frequency inverters,free wheeling and polarity protection application



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	200	V
I _{F(AV)}	Average Rectified Forward Current	10	A
I _{F(RMS)}	RMS forward current	20	A
I _{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	100	A
T _J	Junction Temperature	-65~150	°C
T _{stg}	Storage Temperature Range	-65~150	°C



Fast Recovery Rectifier

BYW80-200

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case	2.5	$^{\circ}\text{C}/\text{W}$

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	$I_F=15\text{A}; T_j=25^{\circ}\text{C}$ $I_F=15\text{A}; T_j=125^{\circ}\text{C}$ $I_F=7\text{A}; T_j=125^{\circ}\text{C}$	1.15 1.05 0.85	V
I_{R^*}	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=100^{\circ}\text{C}$ $V_R=V_{RWM}$	1000 10	μ A
t_{rr}	Maximum Reverse Recovery Time	$I_F=1\text{A}; V_R \geq 30\text{V}; di/dt = -50\text{A}/\mu\text{s}$	35	ns

*:Pulse test $t_p=5\text{ms}, \sigma < 2\%$ **:Pulse test $t_p=380\mu\text{s}, \sigma < 2\%$