

Ultrafast Rectifier

BYW51-200

FEATURES

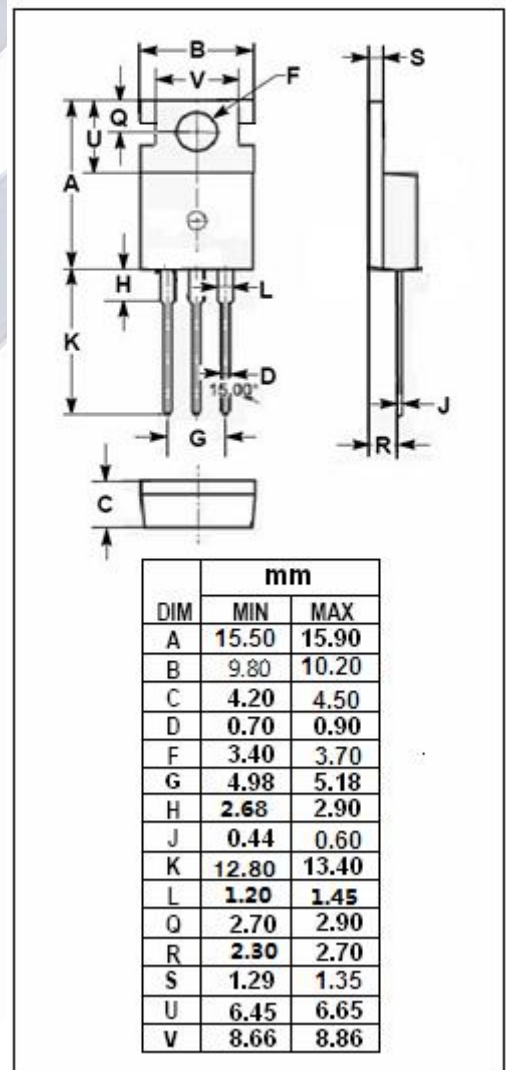
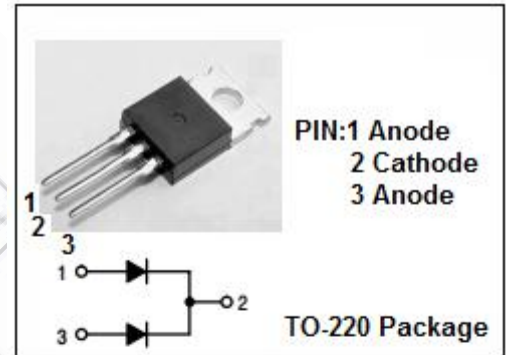
- High surge capacity
- Low Forward Voltage
- Low Leakage Current
- 150°C Operating Junction Temperature
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Dual center tap rectifier suited for switched mode power supplies and high frequency DC to DC converters

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _R RM V _R WM V _R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	200	V
I _F (AV)	Average Rectified Forward Current Per Diode Per device	10 20	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	150	°C
T _{stg}	Storage Temperature Range	-65~150	°C



Fast Recovery Rectifier

BYW51-200

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case	1.4	$^{\circ}\text{C}/\text{W}$

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	$I_F=16\text{A}; T_j=25^{\circ}\text{C}$ $I_F=16\text{A}; T_j=125^{\circ}\text{C}$ $I_F=8\text{A}; T_j=125^{\circ}\text{C}$	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 15	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 $t_p=380\mu\text{s}, \sigma < 2\%$