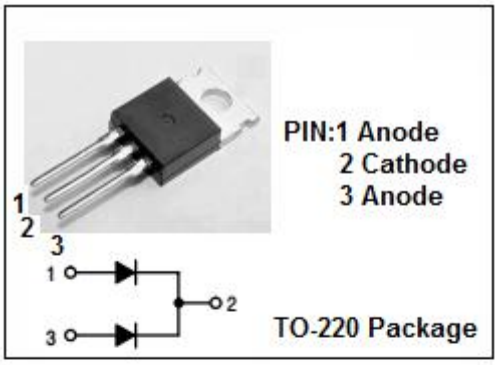
Ultrafast Rectifier

BYW51-200



FEATURES

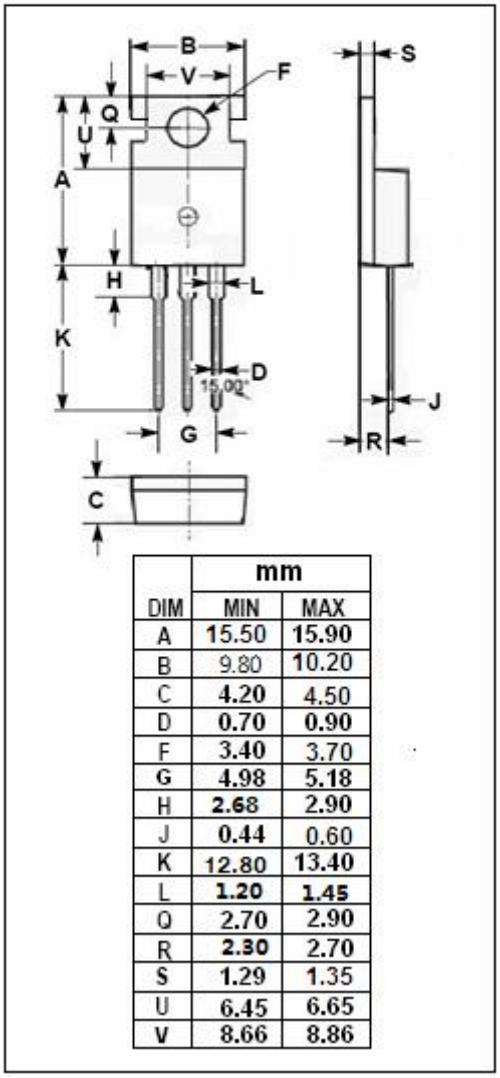
- High surge capacity
- Low Forward Voltage
- Low Leakage Current
- 150℃ Operating Junction Temperature
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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 **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	℃
T_{stg}	Storage Temperature Range	-65~150	℃



DIM	mm MIN	mm MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

Fast Recovery Rectifier BYW51-200

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.4	℃/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_{F**}	Maximum Instantaneous Forward Voltage	I_F=16A ;Tj=25℃ I_F= 16A ;Tj=125℃ I_F= 8A ;Tj=125℃	1.15 1.05 0.85	V
I_{R*}	Maximum Instantaneous Reverse Current	V_R= $V_{RWM;}$Tj=100℃ V_R= V_{RWM}	1000 15	μA
t_{rr}	Maximum Reverse Recovery Time	IF =1A;V_R≥30V;di/dt = -50A/μs	35	ns

*:Pulse test tp=5ms,σ<2%

**:Pulse test tp=380us,σ<2%