

Ultrafast Rectifier diodes

BYV42E-200

FEATURES

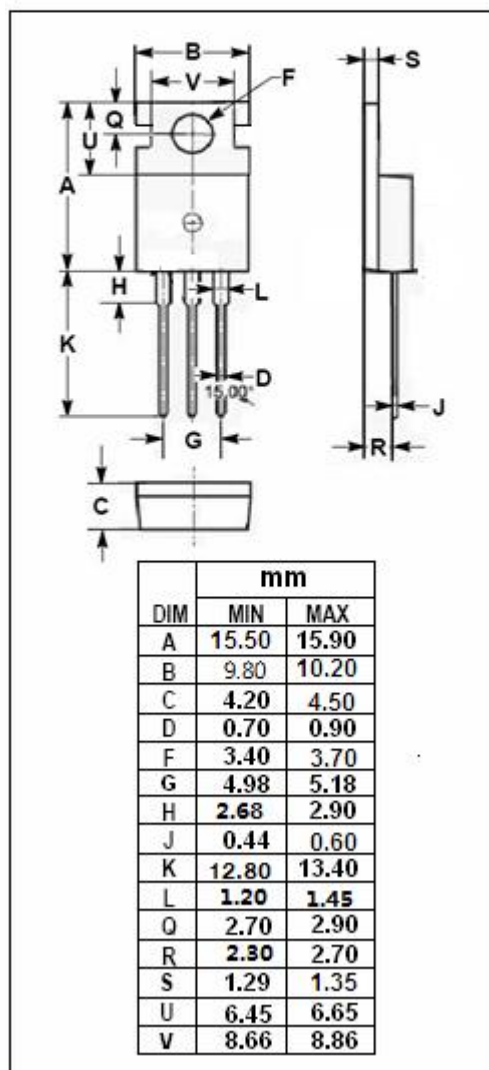
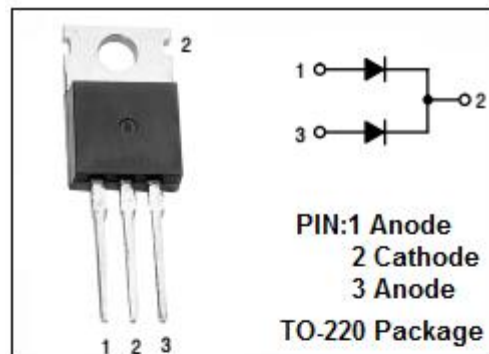
- Metal silicon junction, majority carrier conduction
- Low Power Loss/High Efficiency
- High current capability, low forward voltage drop
- High surge capability
- Guardring for overvoltage protection
- High temperature soldering guaranteed
- RoHS product
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for low-voltage, high frequency inverters, free wheeling and polarity protection applications.

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

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 (Rated V_R) $T_C=125^\circ\text{C}$	15	A
I_{FRM}	Peak Repetitive Forward Current (Rated V_R , Square Wave, 20kHz) $T_C=125^\circ\text{C}$	30	A
I_{RRM}	Peak Repetitive Reverse Surge Current (20 μs , 1.0kHz)	0.2	A
T_J	Junction Temperature	-40~150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-40~150	$^\circ\text{C}$



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	1.5	°C/W

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300 μs, Duty Cycle ≤ 1%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V _F	Maximum Instantaneous Forward Voltage	I _F = 15A ; T _C = 25°C I _F = 30A ; T _C = 25°C	1.05 1.2	V
I _R	Maximum Instantaneous Reverse Current	Rated DC Voltage, T _C = 25°C	0.1	mA

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