

# Fast Recovery Rectifier

## HFA16TB120

### FEATURES

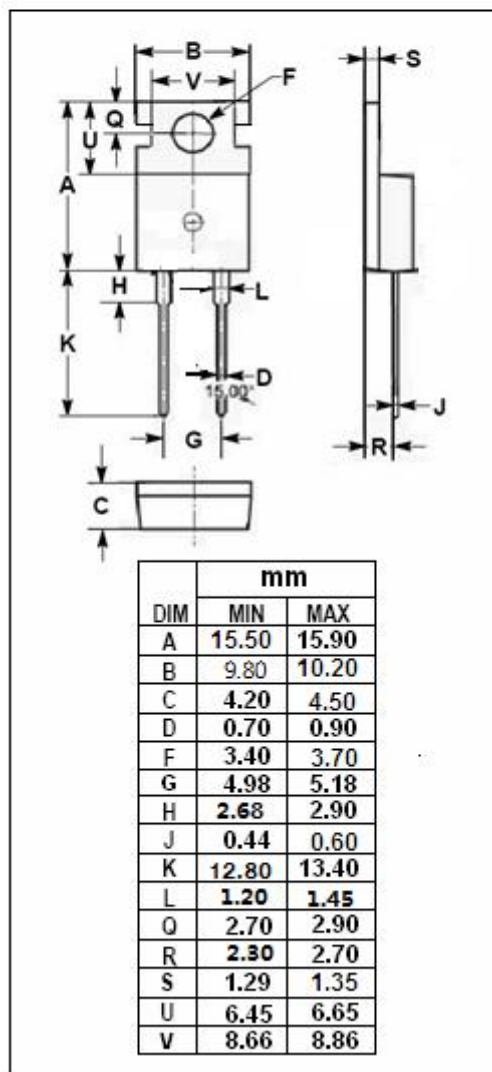
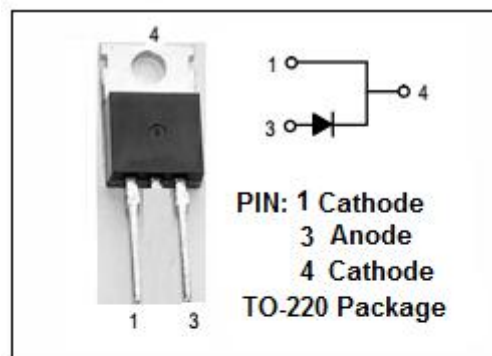
- 1200V blocking voltage
- Ultrafast recovery
- Ultrasoft recovery
- Very low IRRM
- Very low Qrr
- Specified at operating conditions
- Designed and qualified for industrial level
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Be suited for applications in power supplies and power conversion systems (such as inverters), motor drives, and many other similar applications where high speed, high efficiency is needed.

### ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	1200	V
I <sub>F(AV)</sub>	Average Rectified Forward Current @T <sub>c</sub> =100°C	16	A
I <sub>FSM</sub>	Single pulse forward current Maximum repetitive forward current	190 64	A
T <sub>J</sub>	Junction Temperature	-55~150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C



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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{thj-c}$	Thermal Resistance, Junction to Case	0.83	°C/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F=16\text{A}; T_j=25^{\circ}\text{C}$ $I_F=16\text{A}; T_j=125^{\circ}\text{C}$ $I_F=32\text{A}; T_j=25^{\circ}\text{C}$	3.0 2.7 3.93	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R = V_{Rrated}$ $V_R = 0.8 \times V_{Rrated}$ $T_j=125^{\circ}\text{C}$	20 2000	$\mu$ A
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=16\text{A}; di/dt = 200\text{A}/\mu\text{s}; V_R=200\text{V};$	135	ns

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