

**Ultrafast Rectifier**

**FFPF20U40S**

**FEATURES**

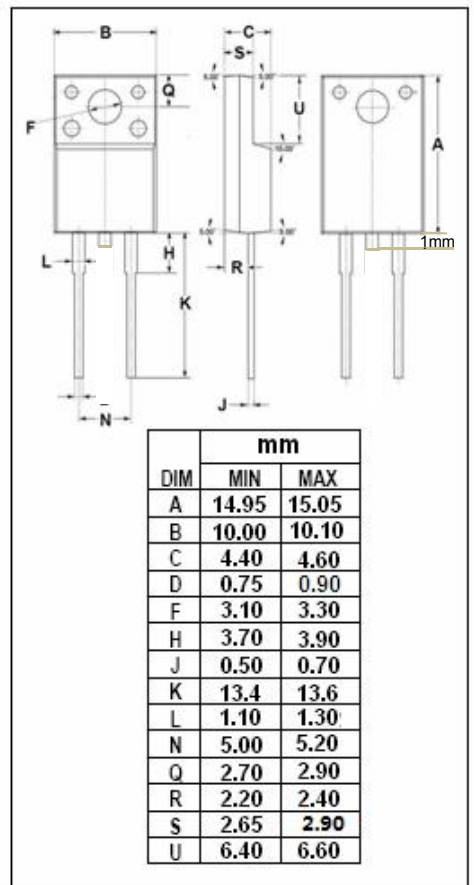
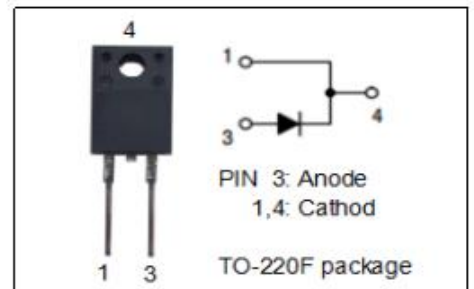
- Ultrafast with soft recovery
- Low forward voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Switching power supply
- Power switching mode circuits
- Freewheeling diodes

**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	400	V
I <sub>F(AV)</sub>	Average Rectified Forward Current	20	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	200	A
P <sub>D</sub>	Maximum power dissipation	100	W
T <sub>J</sub>	Junction Temperature	-65~150	°C
T <sub>stg</sub>	Storage Temperature Range	-65~150	°C



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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2	$^{\circ}C/W$

ELECTRICAL CHARACTERISTICS( $T_a=25^{\circ}C$ )

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_{F^*}$	Maximum Instantaneous Forward Voltage	$I_F=20A; T_j=25^{\circ}C$ $I_F=20A; T_j=100^{\circ}C$	1.4 1.3	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=V_{RWM};$ $V_R=V_{RWM}; T_j=100^{\circ}C$	50 500	$\mu A$
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=20A; di/dt=200A/\mu s$	50	ns

\*:Pulse test ,Pulse width=300us,duty cycle $\leq$ 2%

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