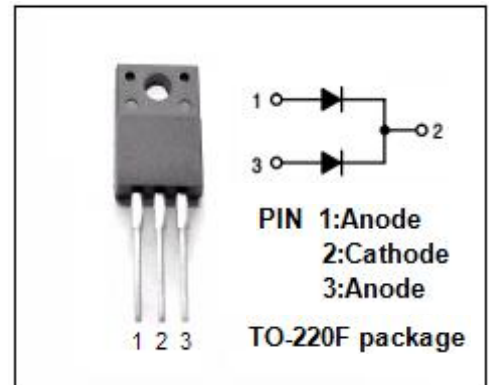


Ultra fast Rectifier
STTH1002CFP
FEATURES

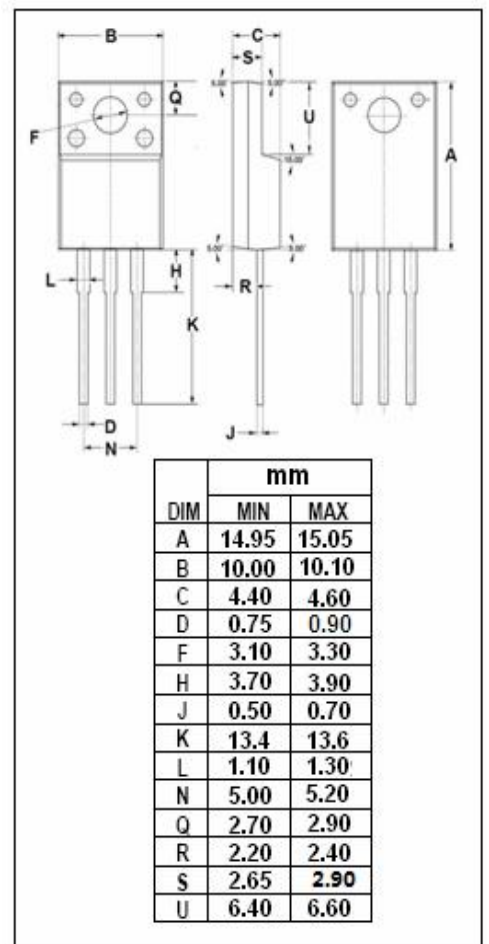
- With TO-220F packaging
- High junction temperature capability
- Low forward voltage, high current capability
- High current capability
- Low power loss, high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation


APPLICATIONS

- Switching power supply
- Free-wheeling diodes
- Reverse battery protection
- Center tap configuration

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{RRM} V _{RMS} V _R	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	200	V
I _{F(AV)}	Average Rectified Forward Current @T _c =120°C	10	A
I _{FSM}	Nonrepetitive Peak Surge Current (10ms single half sine-wave superimposed on rated load conditions)	50	A
T _J	Junction Temperature	-65~175	°C
T _{stg}	Storage Temperature Range	-65~175	°C



Ultra fast Rectifier

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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	6.5	°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 =5A; T _j =25°C	1.1	V
		I _F =5A; T _j =150°C	0.89	
		I _F =10A; T _j =25°C	1.25	
		I _F =10A; T _j =150°C	1.05	
I _R	Maximum Instantaneous Reverse Current	V _R = rated V _{RRM} ; T _j =25°C V _R = rated V _{RRM} ; T _j =125°C	5 40	μA
t _{rr}	Maximum Reverse Recovery Time	I _F =1A; V _R =30V; dI _F /dt=100A/ μs	50	ns

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