

# Ultra fast Rectifier

# APT15D60K

## FEATURES

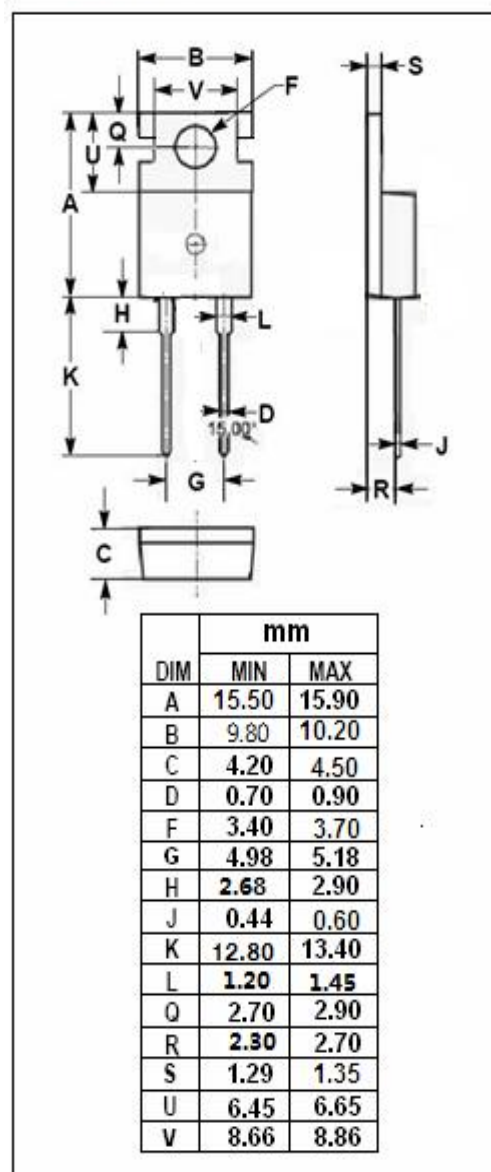
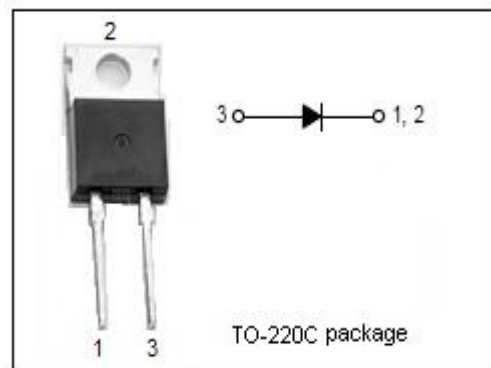
- With TO-220 packaging
- Ultrafast recovery times
- Low leakage current;low losses
- Soft recovery characteristics
- High reliability systems
- Low noise switching
- High surge current capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Switching power supply
- Power switching circuits
- General purpose

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

SYMBOL	PARAMETER	VALUE	UNIT
VRRM VRWM VR	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	600	V
IF(AV)	Average Rectified Forward Current @T <sub>c</sub> =90℃ Duty Cycle=0.5	15	A
I <sub>FRM</sub>	Peak Repetitive Forward Current (Rated V <sub>R</sub> , Square Wave, 20kHz)	25	A
IFSM	Nonrepetitive Peak Surge Current 8.3ms single half sine-wave superimposed on rated load conditions; One shot	110	A
P <sub>D</sub>	Maximum Power Dissipation	100	W
T <sub>J</sub>	Junction Temperature	-55~150	℃
T <sub>stg</sub>	Storage Temperature Range	-55~150	℃



## Ultra fast Rectifier

## APT15D60K

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{thj-c}$	Thermal Resistance, Junction to Case	2.0	°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	$I_F=15\text{A}; T_j=25^{\circ}\text{C}$ $I_F=15\text{A}; T_j=150^{\circ}\text{C}$	1.8 1.6	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=25^{\circ}\text{C}$ $V_R=V_{RWM}; T_j=150^{\circ}\text{C}$	150 500	$\mu$ A
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=1.0\text{A}; dI_F/dt=-15\text{A}/\mu\text{s}; V_R=30\text{V}$	50	ns

## NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.