

Ultrafast Rectifier

15ETU12

FEATURES

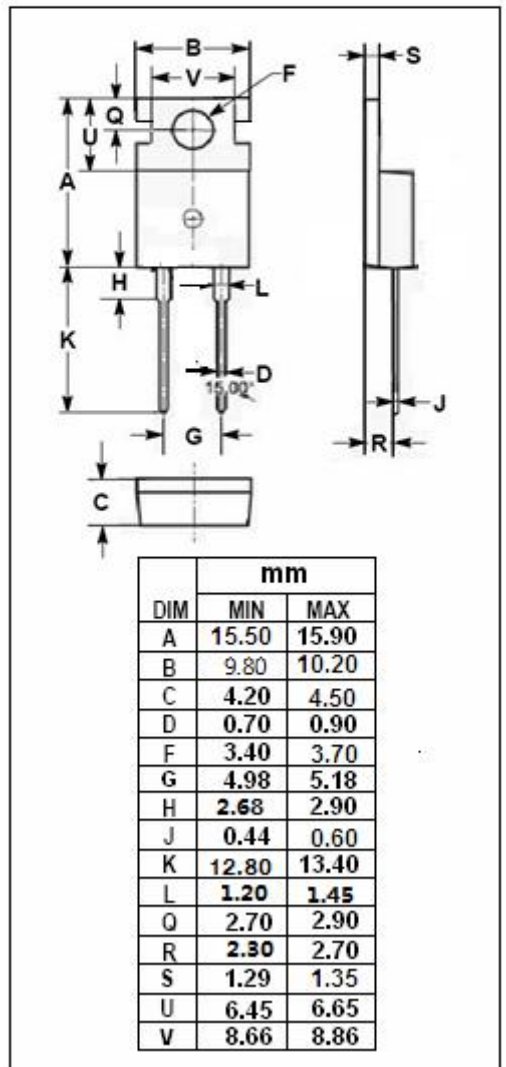
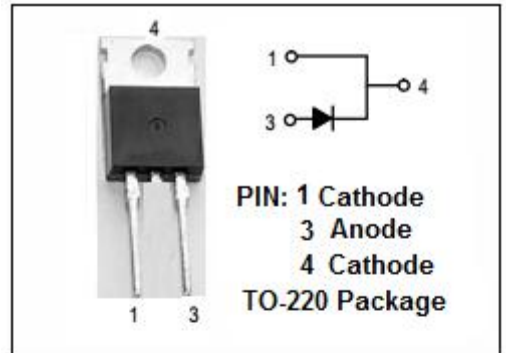
- 1200V blocking voltage
- Ultrafast recovery time
- Optimized forward voltage drop
- Designed and qualified for industrial level
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- The devices are intended for use in boost stage in the AC/DC section of SMPS, high frequency output rectification of battery charger, inverters of solar inverters, or as freewheeling diodes in motor drive.

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	1200	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_c=100^{\circ}\text{C}$	15	A
I_{FSM}	Non- repetitive peak surge current	150	A
T_J	Junction Temperature	-55~150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$



Ultrafast Rectifier
15ETU12
THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case	1.3	$^{\circ}\text{C}/\text{W}$

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F=15\text{A}; T_j=25^{\circ}\text{C}$	2.2	V
I_R	Maximum Instantaneous Reverse Current	$V_R=V_{R\text{ rated}}$ $V_R=V_{R\text{ rated}} \quad T_j=125^{\circ}\text{C}$	80 150	μA
t_{rr}	Maximum Reverse Recovery Time	$I_F=15\text{A}; dI_F/dt=100\text{A}/\mu\text{s}$ $V_R=390\text{V}$	167	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.