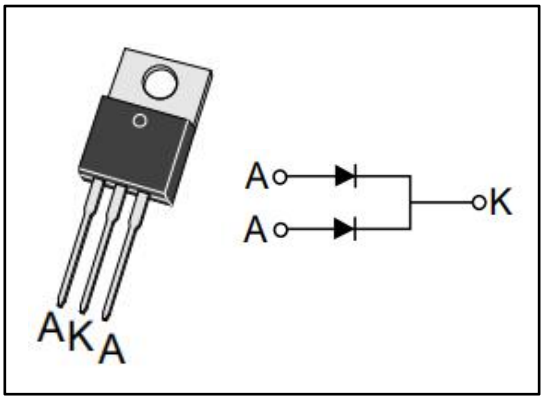
Ultrafast Recovery Rectifier STPR1020CT



FEATURES

- Ultrafast Recovery Time
- Low Forward Voltage
- Low Leakage Current
- 150℃ Operating Junction Temperature
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

MECHANICAL CHARACTERISTICS

- Case: Epoxy, Molded
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260℃ Max for 10 Seconds

APPLICATIONS

- Designed for use in output rectification stage of SMPS,UPS,dc-to-dc converters as well as freewheeling diode in low voltage inverters and chopper motor drives.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RWM} V_R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	200	V
$I_{F(AV)}$	Average Rectified Forward Current **Per Leg** (Rated V_R) **Total Device**	5 10	A
I_{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions 8.3 half-mssine Wave-According to JEDEC Method)	50	A
T_J	Junction Temperature	-65~150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

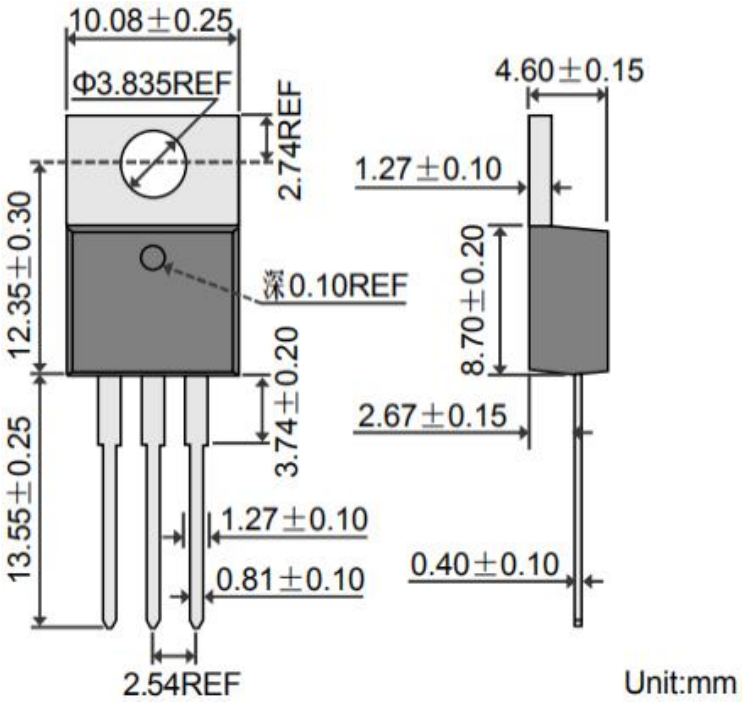
THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	4.0	℃/W

Ultrafast Recovery Rectifier STPR1020CT

ELECTRICAL CHARACTERISTICS(T_a=25℃) (Pulse Test: Pulse Width=300 μs,Duty Cycle≤2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	I_F= 5A @TJ=125℃ I_F= 10A @TJ=125℃ I_F= 10A @TJ=25℃	0.99 1.20 1.25	V
I_R	Maximum Instantaneous Reverse Current	V_{RRM}= 200V	50	μA
t_{rr}	Maximum Reverse Recovery Time	I_F= 0.5A, I_R= 1A, I_{REC}= 0.25A	30	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.