

Ultrafast Rectifier Diode

BYV42-200

FEATURES

- High thermal cycling performance
- Low on-state losses
- Low thermal resistance
- Soft recovery characteristic

APPLICATIONS

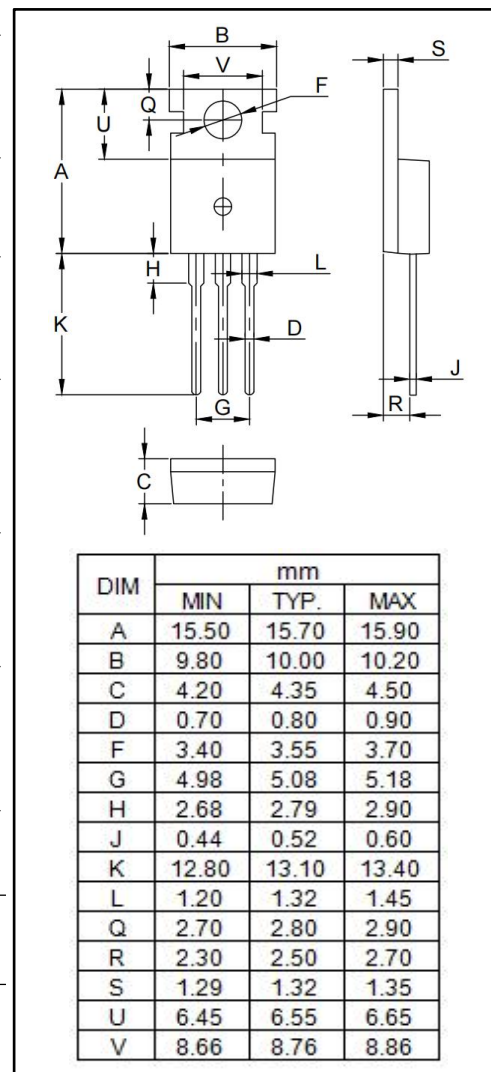
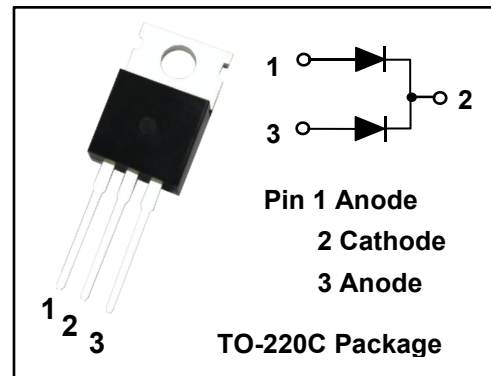
- Switched mode power supplies
- Power Factor Correction (PFC) for Interleaved Topology

ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM}	Peak Reverse voltage	200	V
$I_{F(AV)}$	Average Rectified Forward Current (both diodes conducting) $\delta = 0.5$; $T_C \leq 108^{\circ}\text{C}$;	30	A
I_{FSM}	Non-repetitive Peak Surge Current per diode $t_p=10\text{ms}$, sinusoidal	150	A
T_J	Max.Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-40~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case Per diodes	2.4	$^{\circ}\text{C/W}$



Ultrafast Rectifier Diode

BYV42-200

ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MIN	Type	MAX	UNIT
V _F	Maximum Instantaneous Forward Voltage	I _F = 15 A ; T _J = 25 °C	-	-	1.05	V
		I _F = 30 A ; T _J = 25 °C	-	-	1.20	
		I _F = 15 A ; T _J = 150 °C	-	-	0.85	
I _R	Maximum Instantaneous Reverse Current	Rated DC Voltage, T _J = 25 °C	-	-	100	uA
		Rated DC Voltage, T _J = 100 °C	-	-	1	mA
t _{rr}	Reverse Recovery Time	I _F = 1 A, V _R = 30 V, dI _F /dt = 100 A/μs, T _J = 25 °C	-	-	28	ns

PRODUCT DISCLAIMER

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.

It is strictly prohibited to reprint or copy part or all of this datasheet without permission from ISC.