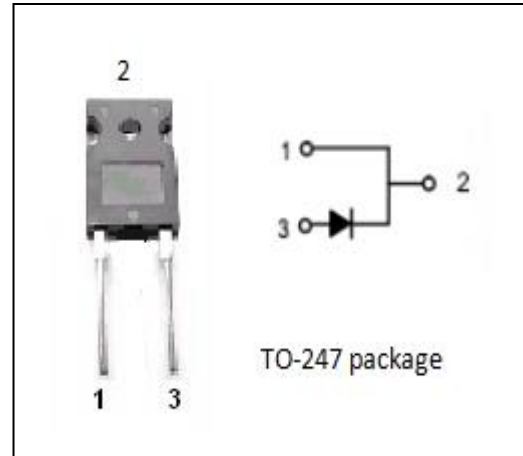


Ultrafast Rectifier
BYR16W-1200
FEATURES

- Fast switching
- Low forward voltage drop
- Low thermal resistance
- Soft recovery characteristic
- Reduces switching losses in associated MOSFET or IGBT
- Planar passivated for voltage ruggedness and reliability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation


APPLICATIONS

- Switched-Mode Power Supplies
- Power factor correction diode
- Uninterrupted Power Supply
- Motor drive and SMPS freewheeling diode

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; $\delta = 0.5$; $T_{mb} \leq 98^{\circ}\text{C}$; square-wave | 16 | A |
| I_{FSM} | Nonrepetitive Peak Surge Current Sine-wave | $t_p=10\text{ms}$ 150 $t_p=8.3\text{ms}$ 165 | A |
| T_J | Max.Junction Temperature | 150 | $^{\circ}\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^{\circ}\text{C}$ |

Ultrafast Rectifier

BYR16W-1200

ELECTRICAL CHARACTERISTICS(T_a=25°C)

| SYMBOL | PARAMETER | CONDITIONS | MAX | UNIT |
|-----------------|---------------------------------------|---|-------------------|-----------|
| V _F | Maximum Instantaneous Forward Voltage | I _F = 16A; T _j =25°C I _F = 16A; T _j =125°C I _F = 32A; T _j =25°C | 3.0 2.7 3.9 | V |
| I _R | Maximum Instantaneous Reverse Current | V _R =1200V; T _j =25°C V _R =1200V; T _j =125°C | 100 2 | μ A mA |
| t _{rr} | Maximum Reverse Recovery Time | I _F =1A;V _R =30V;dI _F /dt=200A/μ s; | 40 | 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.