



PDR5K

PDR5K - Industry first 5A/750V rectifier in a PowerDi-5 package

Description

PDR5K is the industry first 5A/750V rectifier in a PowerDi-5 package. It is designed to be used as a low profile solution to replace standard larger bulky bridge packages for offline AC/DC Switch Mode Power Supplies (SMPS).

The new SBR family of 40A Ultra-low VF rectifier in a lower profile TO-262 package designed to be used as output rectifiers for SMPS. The ultra-low VF performance allows for reduced power loss, cooler operations and higher efficiency.

Combining both products in the primary and secondary side of a SMPS offers the total solution for the lowest package profile height with the highest efficiency.



Description

- **Ultra low forward voltage (VF)**
Provides better efficiency and cooler operation to the device
- **Lower Profile Package Height**
PowerDi-5 footprint occupies only 45% compared to SMC package, while the TO-262 package height is 31.1% lower in profile height compared to standard TO-220 packages.
- **High forward current rating (I_{FSM})**
A high forward surge current rating protects against poor AC line input current, large current surges and lightning strikes.
- **"Green" Antimony and Bromine-free mold compound**
Continual commitment of manufacturing environmental friendly products

Circuit functions

- | | |
|-----------------------|-----------------------------|
| ■ Bridge diode | ■ Boost diode |
| ■ Output diode | ■ Freewheeling diode |

Applications

- | | |
|---------------------------------|---------------------------|
| ■ Input Bridge Rectifier | ■ DC/DC converters |
| ■ AC/DC power supplies | ■ DC/AC inverters |



New Product Announcement

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Product summary

New Rectifier and SBR products						
Part No	Description	Package	Max T _J	VF @ rated current 25°C, Max	I _R @ rated voltage 25°C, Max	Sample Availability
PDR5K	5.0 Amperes / 750 Volts, Low VF Rectifier	PowerDi-5	175C	0.99V	10uA	Available now
SBR40U60CTE	40.0 Amperes / 60 Volts, Ultra-Low VF SBR	TO-262	150C	0.60V	500uA	Available now
SBR40U120CTE	40.0 Amperes / 120 Volts, Ultra-Low VF SBR	TO-262	150C	0.86V	500uA	Available now
SBR40U100CTE	40.0 Amperes / 100 Volts, Ultra-Low VF SBR	TO-262	150C	0.78V	500uA	Available now
SBR30A100CTE	30.0 Amperes / 100 Volts, Low VF SBR	TO-262	175C	0.80V	100uA	Available now
SBR20U100CTE	20.0 Amperes / 100 Volts, Ultra-Low VF SBR	TO-262	150C	0.70V	500uA	Available now
SBR20A100CTE	20.0 Amperes / 100 Volts, Low VF SBR	TO-262	175C	0.75V	100uA	Available now
SBR20I100CTE	20.0 Amperes / 100 Volts, Standard SBR	TO-262	175C	0.87V	100uA	Available now

Competitor Cross Reference

Part number cross Reference		
Competitor part number	Diodes Incorporated equivalent part number	Diodes Incorporated nearest equivalent part number
S4PJ	PDR5K	
STPS41L60CR	SBR40U60CTE	
48CTQ060CR	SBR40U60CTE	
V140120C	SBR40U120CTE	
V140100C		SBR40U100CTE
STPS41H100CR		SBR40U100CTE
STPS20S100CR		SBR20I100CTE
STPS20H100CR		SBR20A100CTE
V120100C	SBR20A100CTE	
V130100C	SBR30A100CTE	