



Field Plated Technology Sets Industry Leading* Performance for TO252 Package Rectifiers

These latest generation Super Barrier Rectifiers (SBR®), a proprietary and patented Diodes Incorporated technology, utilize a Metal Oxide Semiconductor (MOS) manufacturing process to create a superior alternative to the Schottky diode.

Packaged in TO252 (DPAK), the SBRFP10U60D1 (10A, 60V) and SBRFP10U45D1 (10A, 45V) 'U-Series' parts, feature ultra-low forward voltage drop (max. 0.5V**) allowing designers to maximize power efficiency in their systems bringing associated benefits including lower energy costs, longer battery run times along with lower operating temperatures and improved reliability.

* Lowest forward voltage compared with competitor parts in TO252 (DPAK) package for both 45V and 60V rated parts.

** For SBRFP10U45D1 (SBRFP10U60D1 =0.52V)

SBR is a registered trademark of Diodes Incorporated.



The Diodes Advantage

- **Industry Leading* Ultra Low Forward Voltage (V_F)**
 - Minimizes conduction losses thereby increasing power efficiency
- **High Temperature Stability**
 - Low reverse leakage provides increased reliability against thermal runaway at high temperatures
- **Superior Avalanche Performance**
 - Robust enough to withstand reverse energy which improves system reliability
 - Significantly outperforms equivalent standard Schottky diodes

Circuit Functions

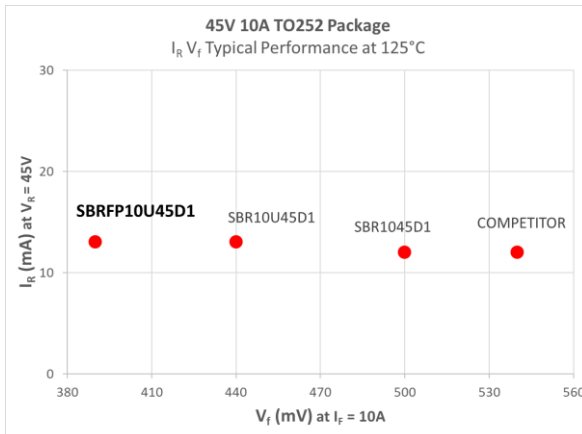
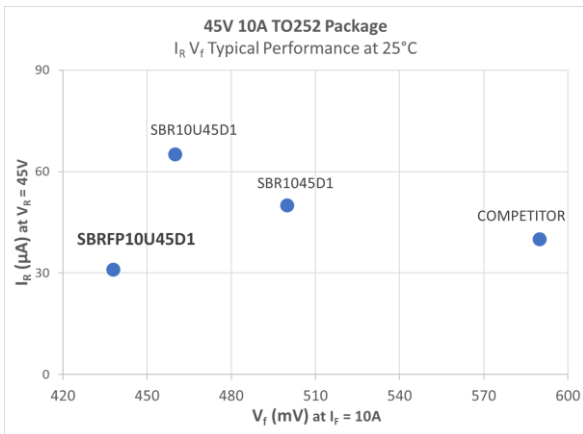
- Polarity Protection Diode
- DC-DC Converter
- Flyback Diode
- Blocking Diode

Applications

- Motor Controls
- Portable Appliances
- LED Lighting
- Power over Ethernet (PoE)



Performance Comparison



- **Ultra Low Forward Voltage (V_f)**
 - Minimizes conduction losses thereby increasing power efficiency
- **High Temperature Stability**
 - Low reverse leakage provides increased reliability against thermal runaway at high temperatures

Specifications

Part	Package	Peak Repetitive Reverse Voltage V_{RRM} (V)	Average Rectified Current I_o (A)	Maximum Forward Voltage Drop V_F (V)	Maximum Reverse Current I_R (μ A)
SBRFP10U60D1	TO252 (DPAK)	60	10	0.52	200
SBRFP10U45D1	TO252 (DPAK)	45	10	0.50	200

@TA = +25°C

Ordering Information

Part Number	Quantity
SBRFP10U60D1-13	2500 Pieces/Reel
SBRFP10U45D1-13	2500 Pieces/Reel

Further Information

<https://www.diodes.com/part/SBRFP10U45D1>
<https://www.diodes.com/part/SBRFP10U60D1>