

# MBRS130L

## Features

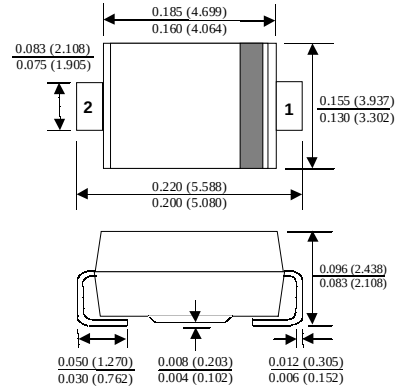
- Compact surface mount package with J-bend leads.
- 1.5 Watt Power Dissipation package.
- 1.0 Ampere, forward voltage less than 395 mV.

## Ordering

- 13 inch reel (330 mm); 12 mm Tape; 3,000 units per reel.



**SMB/DO-214AA**  
COLOR BAND DENOTES CATHODE  
TOP MARK: 1BL3



## 1.0 Ampere Schottky Power Rectifiers

### Absolute Maximum Ratings\*

$T_A = 25^\circ\text{C}$  unless otherwise noted

| Symbol          | Parameter                                                                                                         | Value       | Units              |
|-----------------|-------------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| $I_O$           | Average Rectified Current<br>@ $T_A = 120^\circ\text{C}$<br>@ $T_A = 110^\circ\text{C}$                           | 1.0<br>2.0  | A<br>A             |
| $V_{RRM}$       | Repetitive Peak Reverse Voltage                                                                                   | 30          | V                  |
| $I_{f(surge)}$  | Non-Repetitive Forward Surge Current<br>8.3 ms single half-sine-wave<br>Superimposed on rated load (JEDEC method) | 40          | A                  |
| $R_{\theta JL}$ | Thermal Resistance, Junction to Lead **                                                                           | 12          | $^\circ\text{C/W}$ |
| $T_{stg}$       | Storage Temperature Range                                                                                         | -65 to +150 | $^\circ\text{C}$   |
| $T_J$           | Operating Junction Temperature                                                                                    | -65 to +125 | $^\circ\text{C}$   |

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

\*\*Device mounted on FR-4 PCB 0.013 mm.

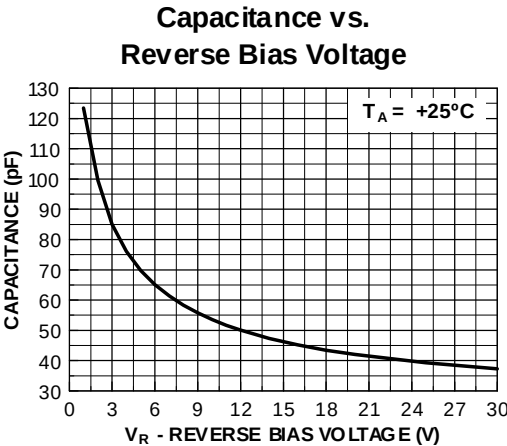
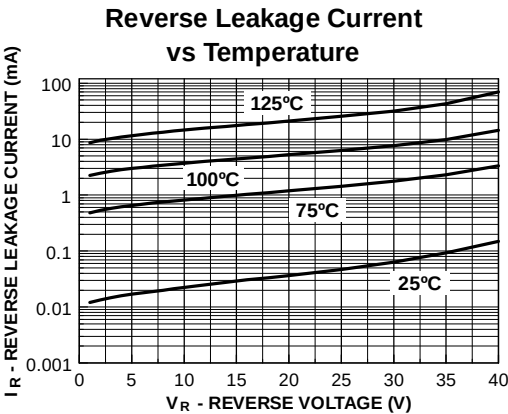
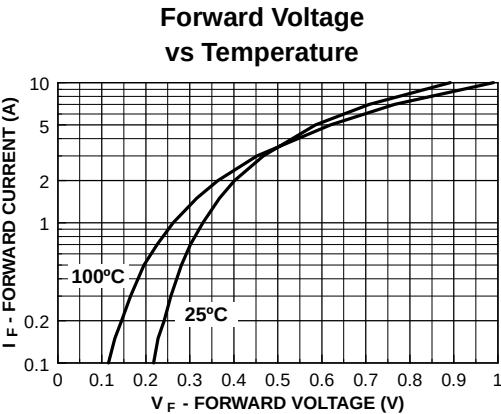
### Electrical Characteristics\*

$T_A = 25^\circ\text{C}$  unless otherwise noted

| Symbol | Parameter               | Test Conditions                                                                                    | Min | Max        | Units    |
|--------|-------------------------|----------------------------------------------------------------------------------------------------|-----|------------|----------|
| $I_R$  | Reverse Leakage Current | $V_R = 30\text{ V}$ , $T_A = 25^\circ\text{C}$<br>$V_R = 30\text{ V}$ , $T_A = 100^\circ\text{C}$  |     | 1.0<br>10  | mA<br>mA |
| $V_F$  | Forward Voltage         | $I_F = 1.0\text{ A}$ , $T_A = 25^\circ\text{C}$<br>$I_F = 2.0\text{ A}$ , $T_A = 25^\circ\text{C}$ |     | 395<br>445 | mV<br>mV |

\*Pulse Test: Pulse Width  $\leq 300\text{ }\mu\text{s}$ , Duty Cycle  $\leq 2.0\%$

Typical Characteristics



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| CROSSVOLT™           | POP™          |
| E <sup>2</sup> CMOS™ | PowerTrench™  |
| FACT™                | QS™           |
| FACT Quiet Series™   | Quiet Series™ |
| FAST®                | SuperSOT™-3   |
| FAST <sup>r</sup> ™  | SuperSOT™-6   |
| GTO™                 | SuperSOT™-8   |
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