

What is ReverSave™?

Short discription



Never stop thinking

What is Reversave™?

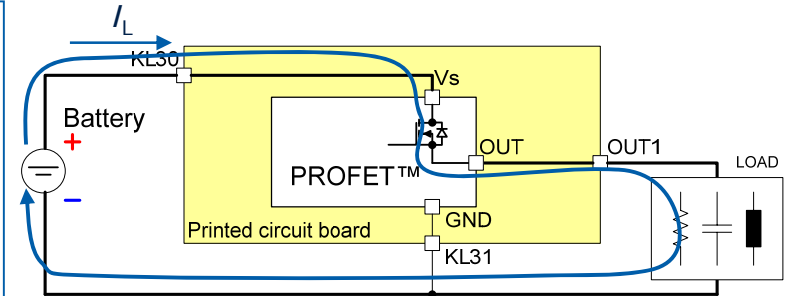
In short:

Reversave™ is reverse battery protection by channel self turn-ON. Reducing the power losses increases the device's robustness.

Normal operation:

■ Device's power losses defined by on-state resistor:

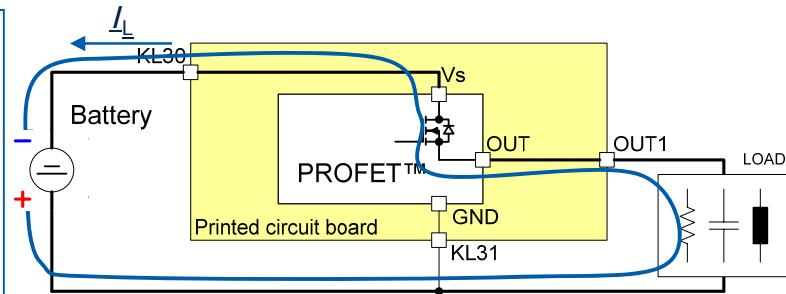
□ Example: $R_{DS(on)} = 10\text{m}\Omega; I_L = 10\text{A}$
 $\rightarrow P_v = V_{DS} \times I_L = R_{DS(on)} \times I_L^2 = \mathbf{1W}$



Reverse battery condition:

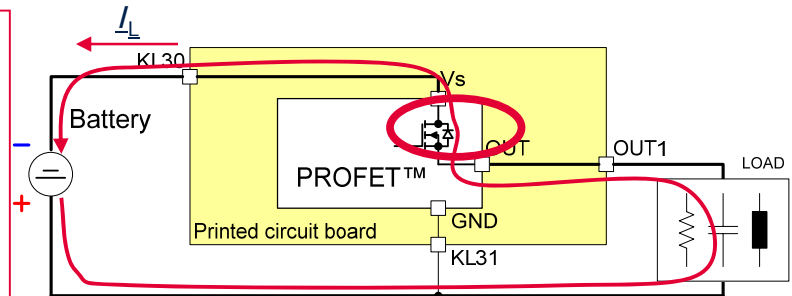
■ With Reversave™, device's power losses defined by reverse on-state resistor:

□ Example: $R_{ON(inv)} = 10\text{m}\Omega; I_L = -10\text{A}$
 $\rightarrow P_v = -V_{DS} \times -I_L = R_{ON(inv)} \times I_L^2 = \mathbf{1W}$



■ Without Reversave™, device's power losses defined by body diode:

□ Example: $V_{ON(inv)} = 0.7\text{V}; I_L = 10\text{A}$
 $\rightarrow P_v = -V_{DS} \times -I_L = \mathbf{7W}$



Summary

- Reversave™ increases the robustness of a Smart High-Side switch in reverse battery condition.
- Reversave™ is most effective for applications where the load current in reverse battery condition is in the same range as the normal load current.
- Especially for applications with normal load current higher than 5A, Reversave™ is a very handy feature.

A person wearing a white lab coat, a white face mask, and safety glasses is working in a laboratory. They are holding a piece of equipment. The background is slightly blurred, showing other lab equipment and a clean, professional environment.

We commit.
We innovate.
We partner.
We create value.



Never stop thinking