

# Featured Products



Contributes to functional safety with a full range of protection functions

AEC-Q100 Qualified (Grade 1)

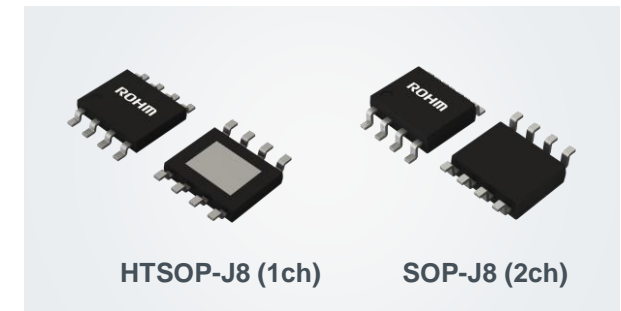
## Automotive-Grade IPD Low Side Switches (Intelligent Power Devices)

BV1LExxxEFJ (1ch) / BM2LExxFJ-C series (2ch)

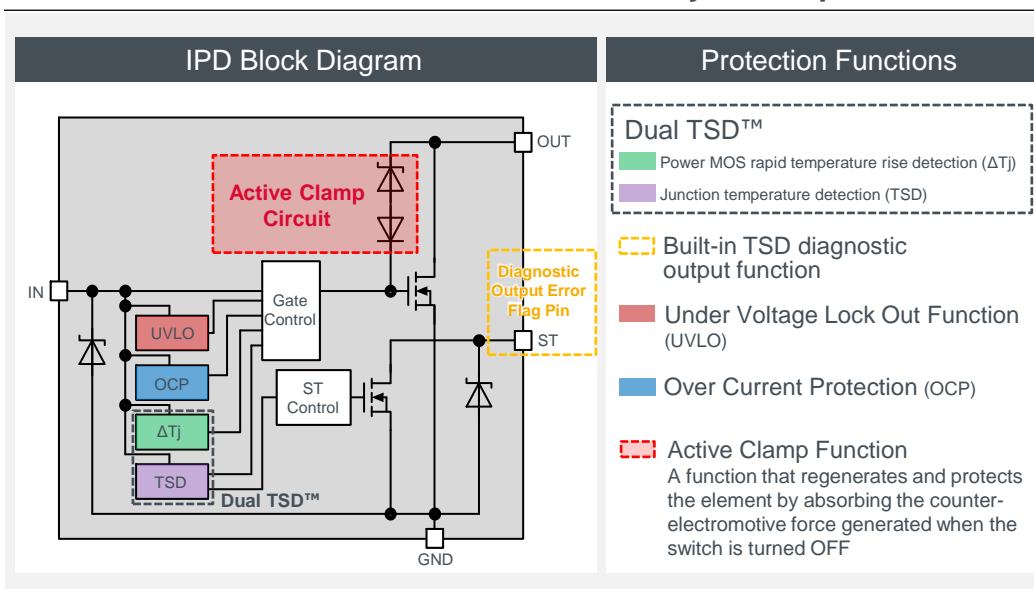
Dual TSD™ and ComfySIL™ are trademarks or registered trademarks of ROHM Co., Ltd.



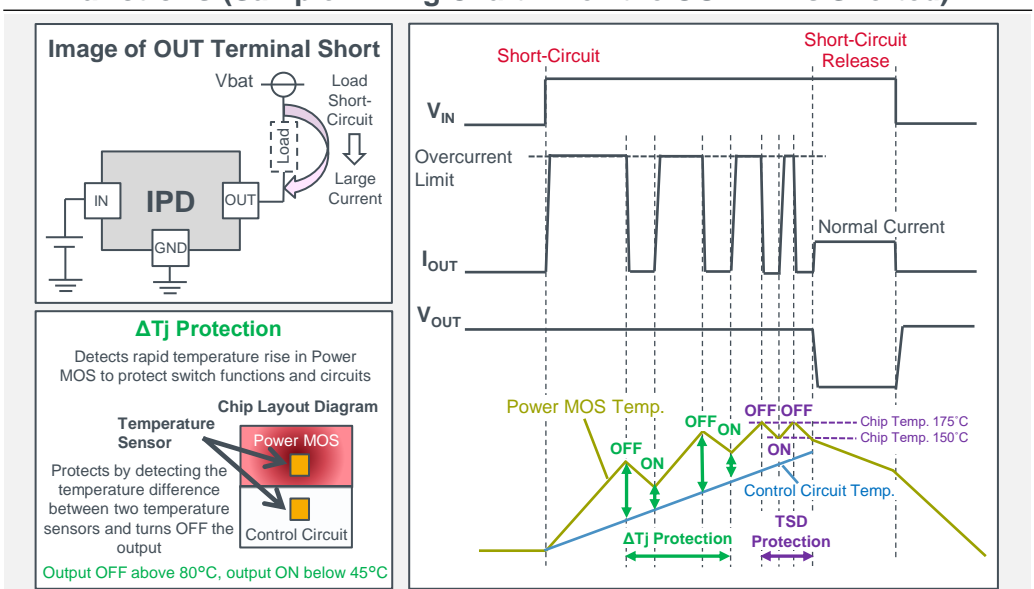
- **Equipped with Dual TSD™ and TSD™ diagnostic functions**  
Includes a diagnostic output function in addition to junction temperature overheat detection (TSD) and Power MOS rapid temperature rise detection ( $\Delta T_j$ )
- **Active clamp circuit protects the IPD from counter-electromotive force**  
Protects the IPD against electromagnetic inductive energy from coils, actuators, etc
- **Self-turn ON prevention circuit prevents malfunctions**  
Prevents momentary malfunctions during frequently occurring rapid battery rise



### Built-in Protection Functions Ensure Worry-Free Operation



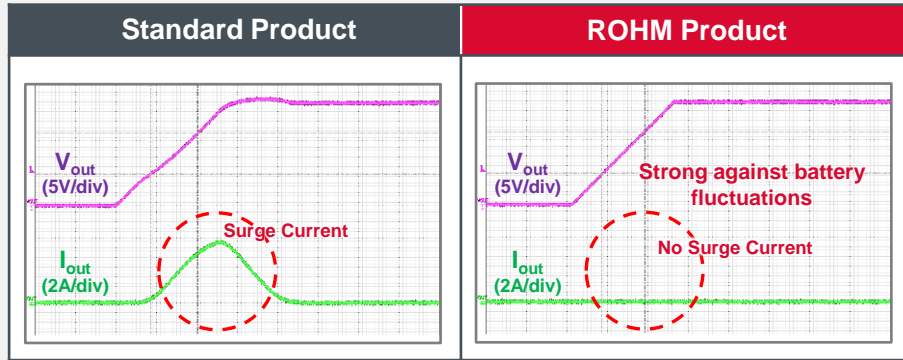
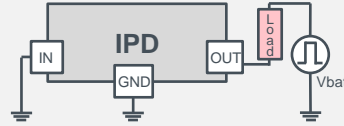
### Equipped with Overcurrent Protection and Dual TSD™ Functions (Sample Timing Chart When the OUT Pin is Shorted)



## IPD That Doesn't Malfunction Even During Battery Fluctuations

### Self Turn-ON Test

Behavior of the IC when the battery is quickly started up when IN=Low

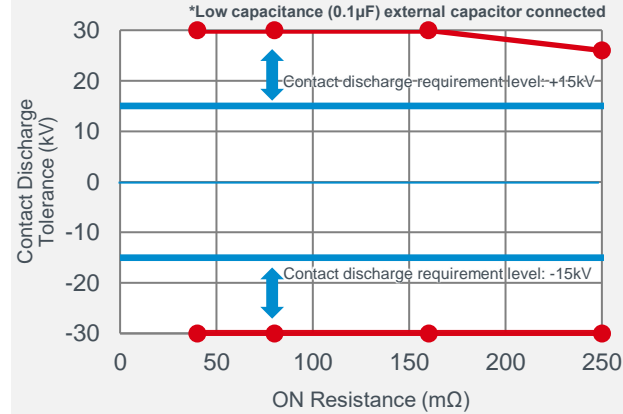


ROHM products do not require external malfunction countermeasures

## Surge-Resistant IPD Designed for Automotive Use

### Contact Discharge Tolerance

ISO10605 standard test: Assuming electrostatic discharge from a charged human body to an electronic device



Low capacitance external capacitor provides sufficient tolerance

## ROHM IPD Smart Switches

L-Shaped Protection Smart High Side Switches

Smart High Side Switches

Smart Low Side Switches

With Error Flag

## Smart Low-Side Switches with Error Flag (BV1LExxxEFJ-C/BM2LExxxFJ-C series)

Part No.	No. of ch	Voltage Range (V)	Drain- Source Voltage Max (V)	Overcurrent Limit (A) Tj=25°C		ON Resistance Tj=25°C Typ (mΩ)	Output Clamp Voltage Min (V)	Active Clamp Tolerance Tj (START)=25°C (mJ)	Operating Temperature Tj (°C)	ComfySIL™ Functional Safety Categories	Package
				Min	Typ						
<b>New</b> BV1LE040EFJ-C	1	3.0 to 5.5	40	17.5	25.0	40	40	250 (I <sub>OUT(START)</sub> =2.5A)	-40 to +150	FS supportive*	HTSOP-J8
<b>New</b> BV1LE080EFJ-C				9.0	13.0	80		200 (I <sub>OUT(START)</sub> =1.5A)			
<b>New</b> BV1LE160EFJ-C				5.0	7.0	160		90 (I <sub>OUT(START)</sub> =1.0A)			
<b>New</b> BV1LE250EFJ-C				2.8	4.3	250		500 (I <sub>OUT(START)</sub> =0.5A)			
<b>New</b> BM2LE040FJ-C	2	3.0 to 5.5	40	17.5	25.0	40	40	250 (I <sub>OUT(START)</sub> =2.5A)	-40 to +150	FS supportive*	SOP-J8
<b>New</b> BM2LE080FJ-C				9.0	13.0	80		200 (I <sub>OUT(START)</sub> =1.5A)			
<b>New</b> BM2LE160FJ-C				5.0	7.0	160		90 (I <sub>OUT(START)</sub> =1.0A)			
<b>New</b> BM2LE250FJ-C				2.8	4.3	250		500 (I <sub>OUT(START)</sub> =0.5A)			

\* ICs developed for automotive use support safety analysis related to functional safety. Click on the icon to access the product datasheet and the icon to view the datasheet on ROHM's website.

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