

4 / 5-cell battery protection IC

S-82B4/5 Series **S-82C4/5** series

S-82B4/5,C4/5 Series



ABLIC Inc.

Improves safety through a temperature protection function and shrinks protection circuit board size! 4 / 5-cell battery

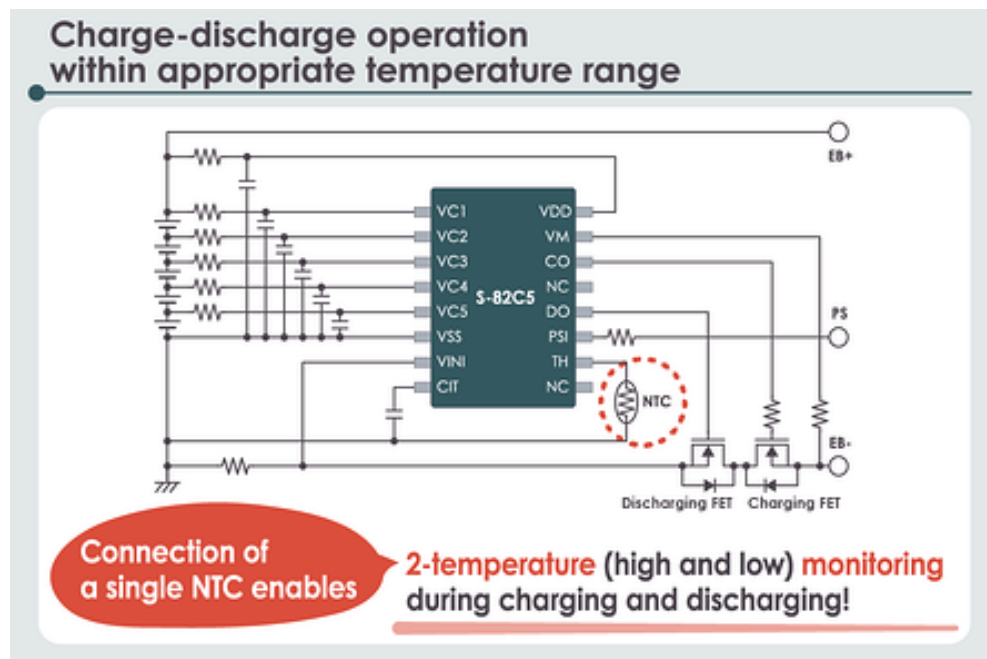
● Charge-discharge operation within appropriate temperature range

The S-82C4/C5 Series provides a temperature protection function and the connection of a single NTC enables 2-temperature (high and low temperature) monitoring during charging and discharging.

4-temperature monitoring enabled

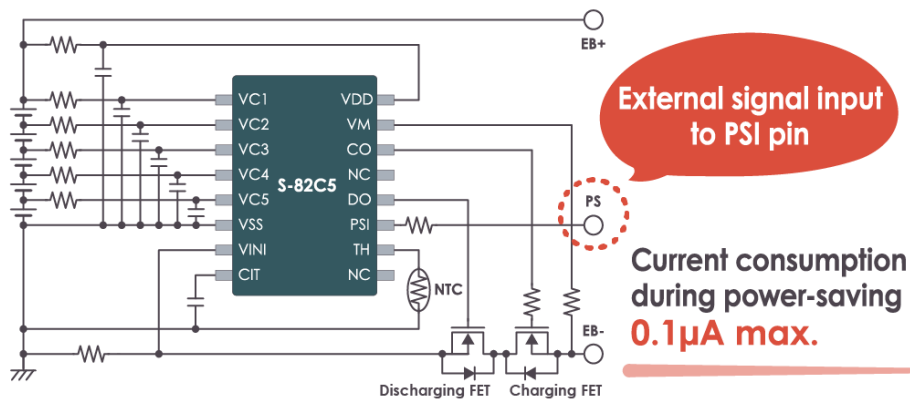
- High temperature charge-discharge inhibition temperature
- High temperature charge inhibition temperature
- Low temperature charge inhibition temperature
- Low temperature charge-discharge inhibition temperature

The intermittent operation of the temperature detection circuit permits low current consumption even when using a 10kΩ NTC.



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Contributing to lowering standby current during warehousing and long-term storage



● Contributing to lowering standby current during warehousing and long-term storage

The S-82B4/5 and 82C4/5 Series activate their power-saving functions through input of an external signal to the PSI pin to lower current consumption to 0.1µA max. (low current consumption mode).

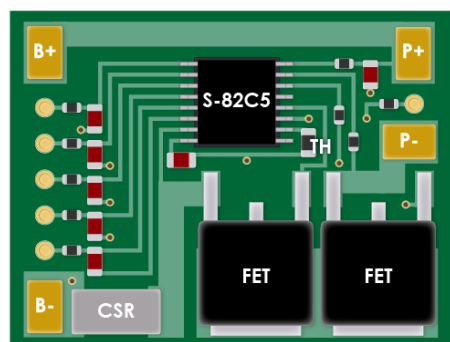
Engage this mode prior to shipment to prevent loss of battery pack capacity from standby current during warehousing.

This also helps lowering standby current during long-term storage of devices.

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Shrinking size of protection circuit boards

Example of a board layout using S-82C5



6.4 × 5.1 × 1.1 mm

25 to 40% fewer external parts than our previous products!

*As a 4 / 5-cell battery protection IC. Based on our research as of July 2022

● Shrinking size of protection circuit boards

The S-82B4/5 and 82C4/5 Series have been tailored to the protection of 4-cell and 5-cell battery packs and have 25 to 40% fewer external parts than our previous products.

Use of a 16-pin TSSOP (6.4 × 5.1 × 1.1 (max.) mm), the industry's smallest class of package*, has reduced the size of the protection circuit board.

*As a 4 / 5-cell battery protection IC.
Based on our research as of July 2022

- Cordless fan
- Power tool
- Drone
- Robot cleaner
- Cordless cleaner
- Gardening tool



Cordless fan



Power tool



Drone



Robot cleaner

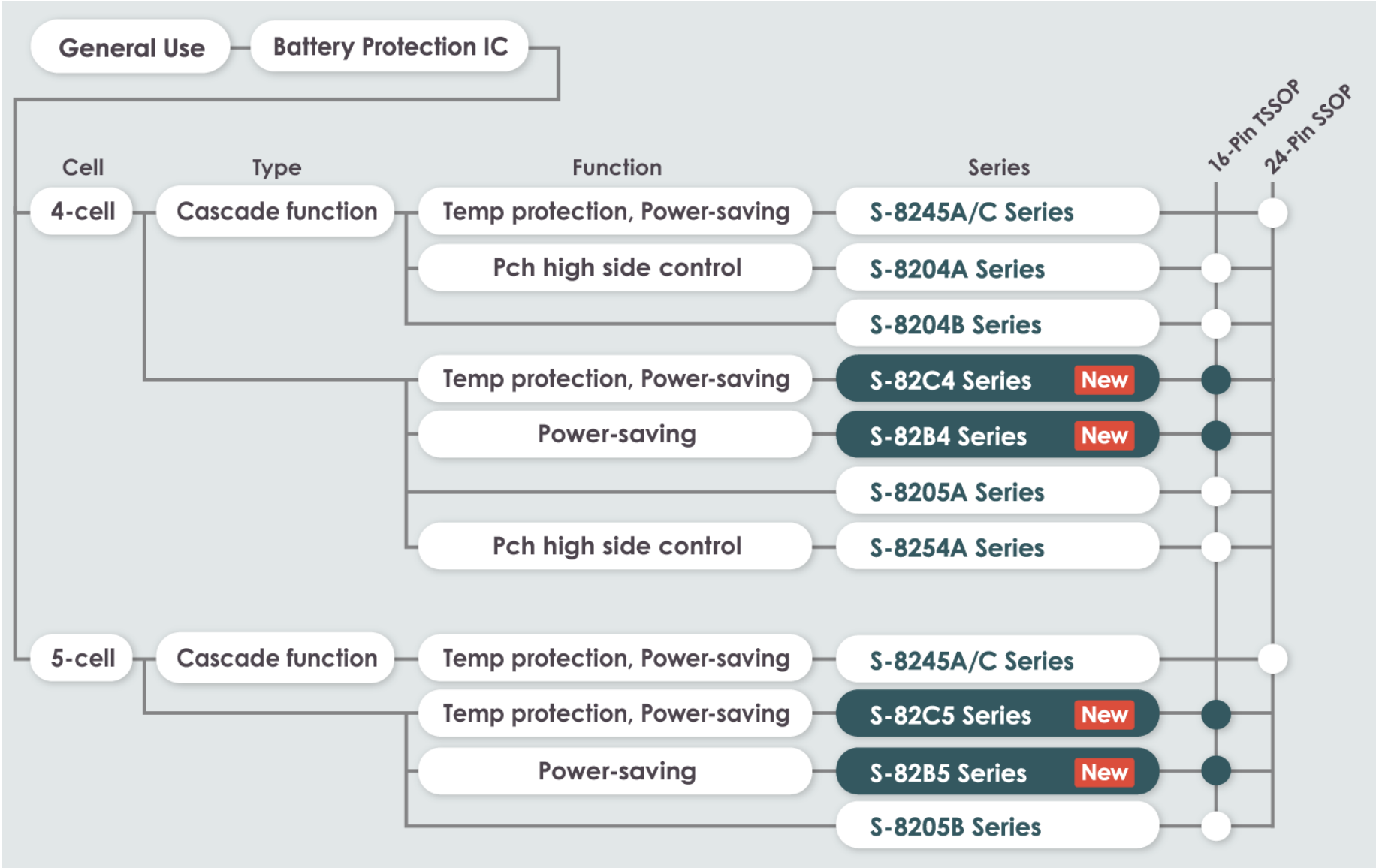


Cordless cleaner



Gardening tool

Battery Protection ICs Lineup



Product name	S-82B4A	S-82B5A	S-82C4A	S-82C5A
	For general-use			
Number of cells	4-cell	5-cell	4-cell	5-cell
Function	Power saving	Temperature protection, Power saving		
Overcharge detection voltage (Accuracy)	3.90V to 4.50V (±20mV)			
Overdischarge detection voltage (Accuracy)	2.00V to 3.20V (±50mV)			
Discharge overcurrent 1 detection voltage (Accuracy)	0.010V to 0.200V (±5mV)			
Discharge overcurrent 2 detection voltage (Accuracy)	0.020V to 0.300V (±10mV)			
Current consumption during operation	4.0μA typ., 8.0μA max. (Ta = +25°C)		5.0μA typ., 10.0μA max. (Ta = +25°C)	
Current consumption during power-down	0.1μA max. (Ta = +25°C)			
Current consumption during power-saving	0.1μA max. (Ta = +25°C)			
Packages	16-Pin TSSOP			
Operation temperature range	Ta= -40°C to +85°C			

Thank you so much!

ABLIC Inc.