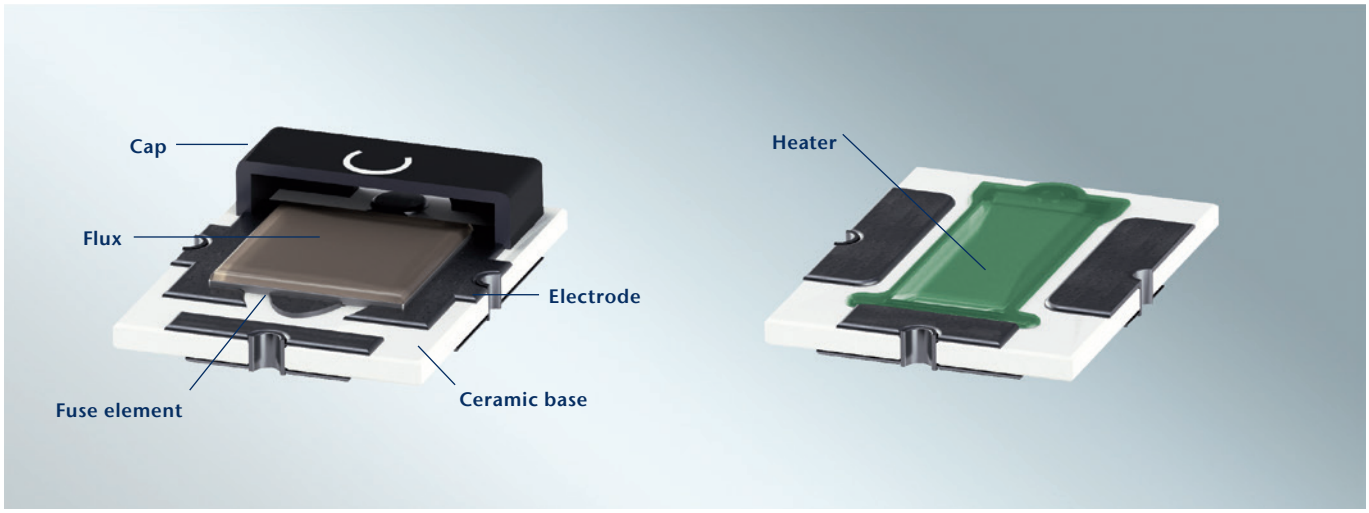
SEFUSE® D6S Battery Fuses

Surface mount fuses for lithium ion batteries



SCHOTT SEFUSE® D6S battery fuses are used in battery packs for li-ion battery applications, including rechargeable electronic devices, home appliances, power tools, and vehicles. They are designed to protect li-ion batteries from dangerous circumstances of overcurrent and overcharging, and additionally help prevent fires caused by overheating.

SEFUSE® D6S battery fuses come in a surface mount package (SMD). SCHOTT offers a number of variations to meet different current and package size requirements.

Product Lineup/Applications

Series	Electrical Ratings		Dimensions (mm)			Safety Standards	Usage Examples				
	Rated Current (A)	Rated Voltage (Vdc)	H	L	W		Mobile Devices	Cordless and Robotic Vacuum Cleaners	Rechar-geable Power and Garden Tools	E-bikes	E-motor-cycles
 D6SC Series	12	36	0.85	4.00	3.00	UL/TÜV	√	√			
	15						√	√	√		
	22	62					√	√	√		
 D6SA Series	12	36	0.90	5.40	3.20	UL/TÜV	√	√			
	15						√	√	√		
	30	62						√	√	√	
 D6SE Series	30	80	1.70	9.50	5.00	UL/TÜV		√	√	√	
	45							√	√	√	√
	60							√	√	√	√

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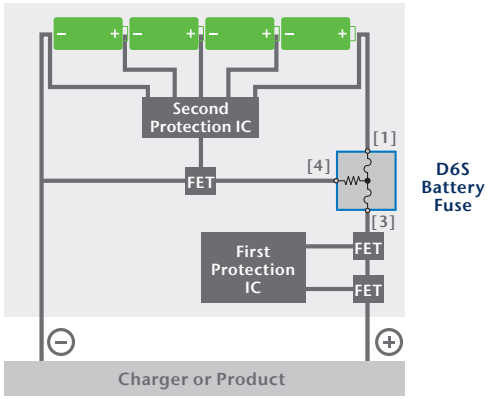
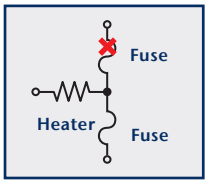
Operating Principles/Fuse Wiring Diagram



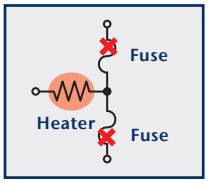
Overcurrent

In case overcurrent occurs while using the device, the fuse element will open and cut off the circuit.



Overcharging

In case of overcharging, the FET is activated and the heater element disables the fuse element, subsequently cutting off the circuit.



Cautions

Design Caution

- The data in this brochure is measured with UL-standard PCBs (glass epoxy single-sided copper laminated t = 0.6mm). Performance is influenced by the thermal capacity of the PCBs.
- Customers should judge the propriety of the mounting location and method for each application. The body temperature of the battery fuse becomes higher as current passes through, and might rise higher than the ambient atmosphere temperature. Therefore, after mounting the battery fuse under the same conditions used for actual operation, please run the final product and confirm if the battery fuse operates normally. Please test and confirm battery fuse operation repeatedly – under both normal conditions and predicted maximum abnormal conditions.
- Do not use this device in aerospace equipment, aeronautical equipment, nuclear reactor control systems, life-support equipment or systems, transportation machinery engine control, or safety-related equipment. This device is designed for use in household electric appliances, office automation equipment, audio and video equipment, computer communications equipment, test and measurement equipment, personal electronic equipment, transportation equipment (excluding engine control), and power applications such as power tools and E-bikes.
- Do not contact the battery fuse and resin mold. The resin might infiltrate into the product and cause a failure to meet the specification when the resin mold is done to this product. These products are not guaranteed after resin mold.
- Do not use the battery fuse in liquid (water or organic solvents) or in abnormal atmospheres (sulfurous acid gas, nitrogen oxide gas, or high humidity). Ultrasonic cleaning or immersion cleaning processes must not be perfor med on the battery fuse before and after mounting. This type of cleaning could cause the flux on the element to flow, and fail to meet specifications. Moreover, a similar influence happens when the product comes in contact with cleaning solution. These products will not be guaranteed after cleaning.
- Make sure that the terminals of this product are connected properly to the pads of the circuit board and the value falls in the rated heater resistance between terminal [1] – [4] and [3] – [4].
- Please do not reuse the battery fuse once the solder connection has been removed.

Disposal Consideration

- Battery fuses are classified as industrial waste, so dispose according to government / provincial regulations, or entrust disposal to a licensed contractor.

Other Caution

- If it is expected that general consumers who are not aware of the usage cautions for the battery fuse will handle it, please warn not to mount, remove, or replace the battery fuse in the user manual and other related material.

schott.com/batteryfuse

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