



Product Data Sheet

Li-ion Rechargeable Battery ABS L 8s52p 28V 78Ah

The 8s52p 78Ah battery was originally qualified for the Thai Earth Observation System (THEOS) spacecraft. Since qualification, the design has been utilized for a variety of applications from civilian to commercial applications, especially for Earth observation spacecraft.

This battery does not require cell balancing electronics.

More than 20 flight batteries have been built and delivered.

Facts at a Glance

ABS L™ Cell	18650HCM
Configuration	8s52p
Nameplate Capacity	78 Ah
Energy	2246 Wh
Mass	22.8 kg
Footprint	295 x 355 mm
Height	180 mm
Nominal Voltage	28V
Voltage Range	20 - 33.6V

**Celebrating customer success with over 2.5 billion cell hours of in-orbit heritage
using ABS L Li-ion cell technology**



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Qualification and Flight History

Temperature

Non-Operating	Operating
-20°C to 60°C	Discharge: -5°C to 45°C
	Charge: 0°C to 45°C

Shock

Frequency (Hz)	PF SRS Level Test Q = 10
100	15 g
2,000	1,600 g
10,000	2,000 g

Note: via similarity

Cell Level Radiation Exposure

Dosage	Effects
< 1Mrad	Negligible
Up to 18Mrad	~5% of Capacity

Random Vibration

Frequency (Hz)	Qualification*
20	0.002 g ² /Hz
20 - 80	+3 dB/Octave
80 - 500	0.08 g ² /Hz
500 - 2000	-6 dB/Octave
Overall G _{RMS}	9.59 G _{RMS}
Duration	2 min/axis

*Notching utilized within profile

Notable Missions

Mission	Customer	Launch Date
SMAP	NASA JPL	January 2015

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EnerSys World Headquarters
2366 Bernville Road
Reading, PA 19605
Tel: +1-610-208-1991 /
+1-800-538-3627

ABSL US Office
1751 S. Fordham Street,
Suite 100
Longmont, CO 80503
Tel: +1-303-848-8081

ABSL UK Office
Building F4, Culham Science Centre
Abingdon, England OX14 3ED
Tel: +1-44-1865-408-710 /
+1-44-7968-707-561