

+ Nanophosphate[®] Lithium Ion Prismatic Pouch Cell

AMP20*M*HD-A

KEY FEATURES AND BENEFITS

- + High usable energy over a wide state of charge (SOC) range and very low cost per Watt-hour
- + Excellent abuse tolerance and superior cycle life from A123's patented Nanophosphate[®] lithium ion chemistry
- + High power with over 2,400 W/kg and 4,500 W/L



AMP20 Cell Specifications

Cell Dimensions (mm)	7.25 x 160 x 227
Cell Weight (g)	496
Cell Capacity (minimum, Ah)	19.6
Energy Content (nominal, Wh)	65
Discharge Power (nominal, W)	1200
Voltage (nominal, V)	3.3
Specific Power (nominal, W/kg)	2400
Specific Energy (nominal, Wh/kg)	131
Energy Density (nominal, Wh/L)	247
Operating Temperature	-30°C to 55°C
Storage Temperature	-40°C to 60°C

Abuse Test	Test Result
Nail Penetration	Pass – EUCAR 3
Overcharge	Pass – EUCAR 3
Over-discharge	Pass – EUCAR 3
Thermal Stability	Pass – EUCAR 4
External Short	Pass – EUCAR 3
Crush	Pass – EUCAR 3

APPLICATIONS



PHEV and EV Passenger Vehicles



PHEV and EV Commercial Vehicles



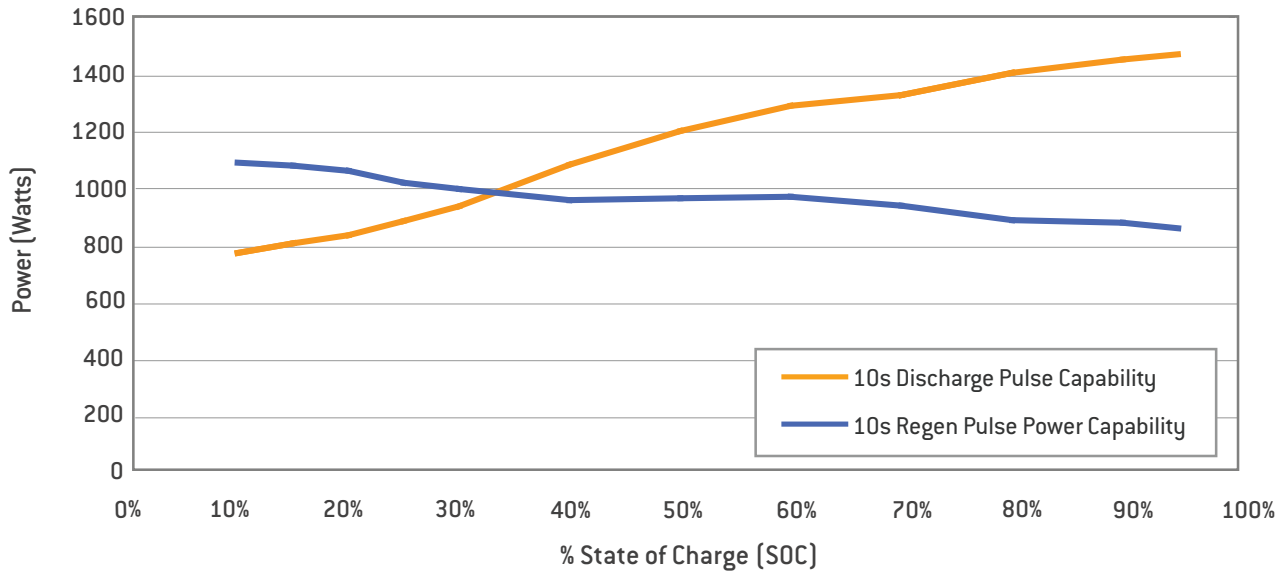
Utility-scale Storage

+ Nanophosphate[®] Lithium Ion Prismatic Pouch Cell

AMP20M1HD-A

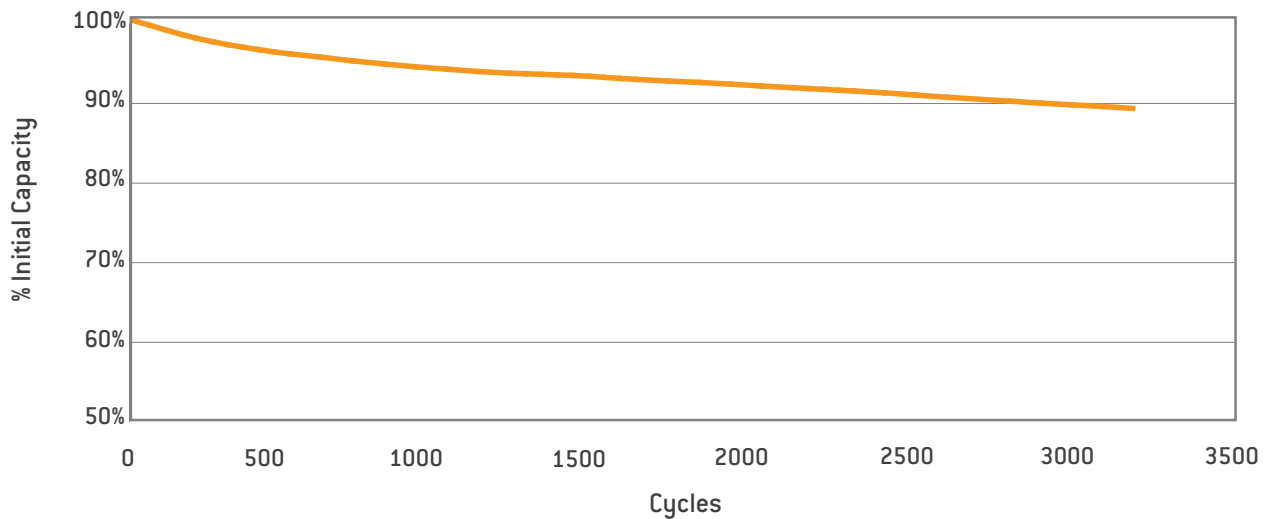
POWER

10s Pulse Power Capability vs State of Charge at 23°C, Using FreedomCAR HPPC
 $V_{max} = 3.8\text{ V}$, $V_{min} = 1.6\text{ V}$



CYCLE LIFE

Capacity vs Cycles
100% Depth of Discharge (DOD), +1C/-2C, 23°C



Preliminary specifications, performance may vary depending on use conditions and application.
A123 Systems makes no warranty explicit or implied with this datasheet. Contents subject to change without notice.

CORPORATE HEADQUARTERS

A123 Systems, Inc.
200 West Street
Waltham, MA 02451
(617) 778-5700

www.a123systems.com

