

VR420A 14.4V 6.2Ah 89.3Wh Rechargeable Lithium Ion Smart Battery

Specifications

Model	VR420A	
Capacity	0.2C (Typical)	6200mAh ⁽¹⁾⁽²⁾
	0.2C (Minimum)	5580mAh ⁽¹⁾⁽²⁾
Charging	Voltage	16.8V ⁽⁸⁾
	Current (Maximum)	3000mA ⁽⁸⁾
	Temperature	0°C to +45°C ⁽⁶⁾
Discharging	Voltage (Average)	14.4V ⁽²⁾
	Cut-Off Voltage	9.6V ⁽⁷⁾
	Current (Maximum)	6.2A ⁽⁸⁾
	Temperature	-20°C to +60°C ⁽⁴⁾⁽⁶⁾
Storage	Temperature	-20°C to +60°C
Cycle Life	>300 (Typ) ⁽¹⁾⁽³⁾⁽⁵⁾⁽⁶⁾	
Dimensions	Length	87.9mm ± 0.20mm
	Width	152.0mm ± 0.20mm
	Thickness	22.8mm ± 0.20mm
Weight	~470g	
Fuel Gauge	Texas Instruments BQ20z65-R1 Impedance Track™ fuel gauge with SMBus communication	
Termination	6 position Samtec Connector (UPS-06-07.0-01-L-V). The following mating parts are available: (a) UPT-06-03.0-01-L-V-LC-TR (vertical mount) (b) UPT-06-01-01-L-RA (right angle mount)	
Certification	Transportation	ST/SG/AC.10.11 Rev5 (UN38.3 T1-T8 Tests)
	Safety	IEC 62133-2:2017 & UL 2054
	CE Marking	EMC Directive 2004/108/EC

Notes

- CVCC 16.80V, 3A charge to Terminate Charge Alarm at +20°C.
- 0.2C discharge to Terminate Discharge Alarm at +20°C.
- 0.5C discharge to Terminate Discharge Alarm at +20°C.
- Discharge performance degrades at lower temperatures.
Empirical testing in application is suggested to determine suitability.
Maximum current capability may not be available at low temperatures.
- To 80% of 0.2C minimum rated capacity
- Cycle life degrades at higher operating temperatures, empirical testing in application suggested to determine suitability.
- Battery will disconnect itself below this level.
- Do not exceed this level.

The VR420A is available off the shelf and can also be customised for your application, getting you to market quickly and confidently.

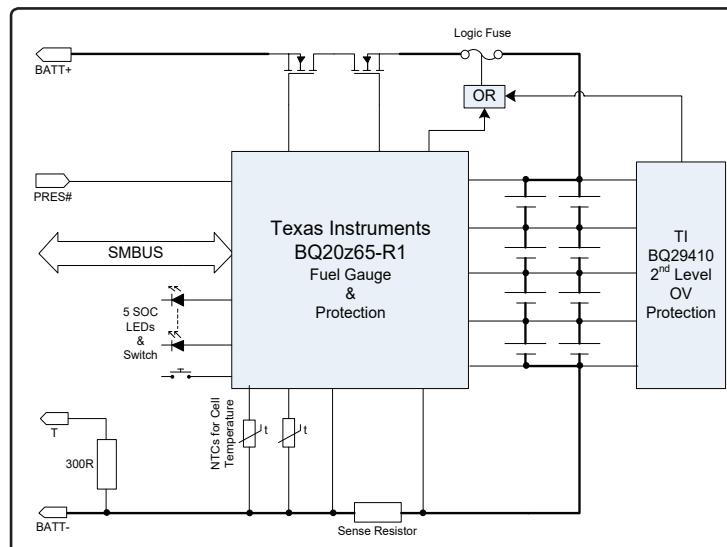
Features

- 14.4V high energy density Lithium Ion technology
- High current delivery (6.2A continuous)
- Compact mechanical footprint
- SBDS rev.1.1 compliant impedance tracking fuel gauge
- Active protection circuitry (OV, UV, OC, SC)
- 5-Bar LED visual state of charge indicator
- Redundant passive over-current protection
- 6 position Samtec connector interface
- Tough plastic enclosure
- IEC 62133-2 and UL 2054 (safety) compliant
- UN38.3 (transportation) compliant
- CE marked (EMC/ESD compliance)

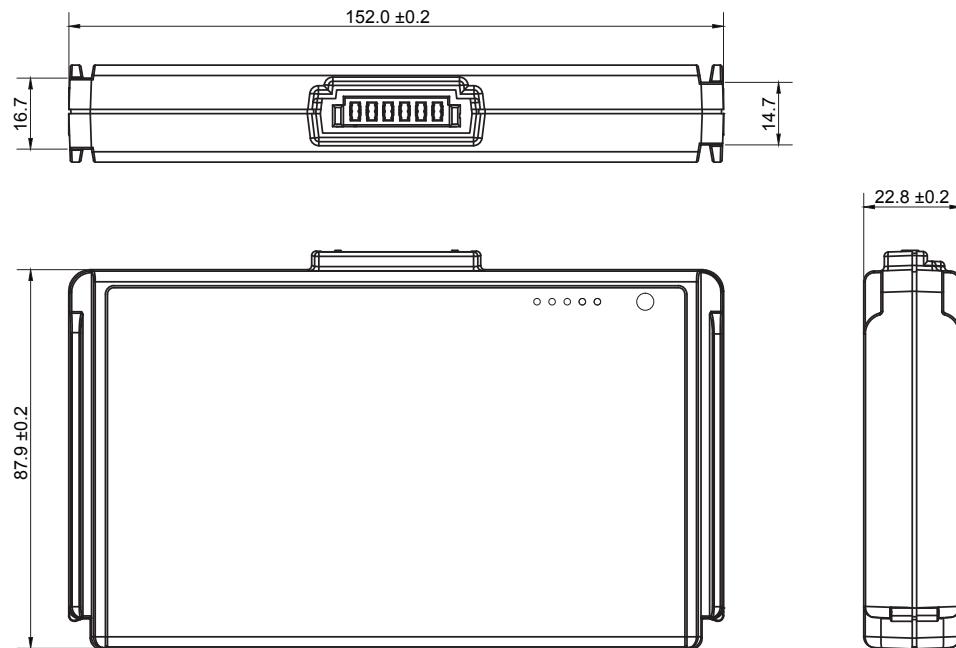
Image



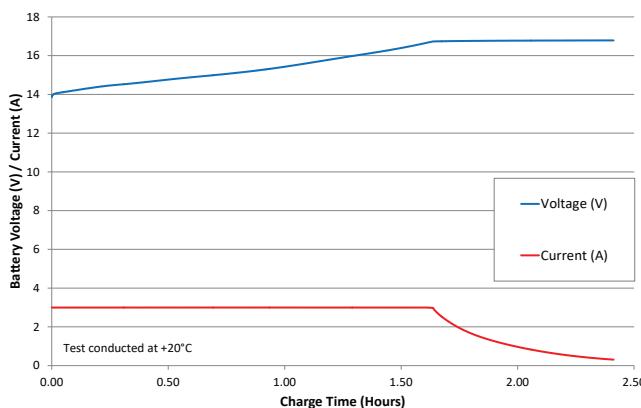
Block Diagram



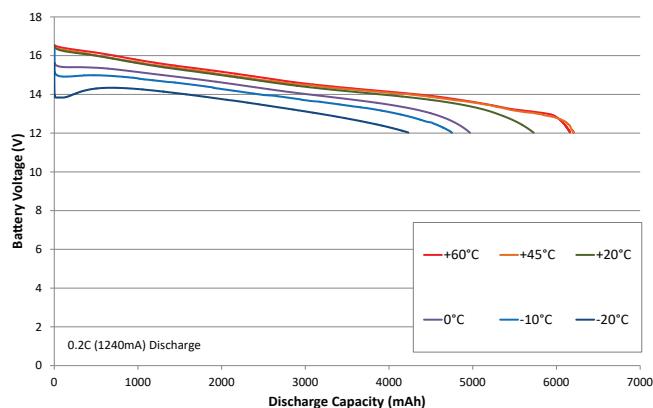
Mechanical Drawing



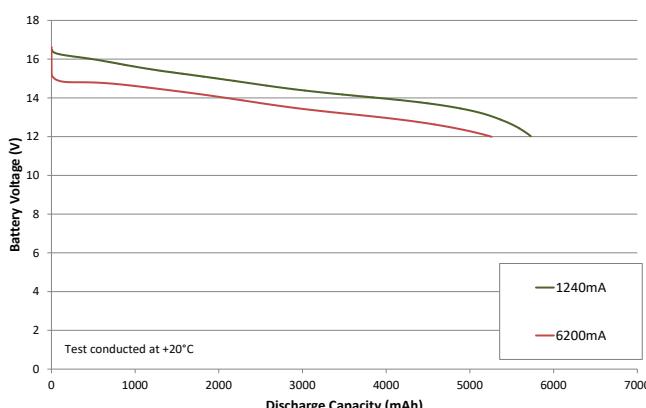
Typical Charge Performance



Typical Discharge Performance at Various Temperatures



Typical Discharge Performance at Various Rates



VR420A

