

SUPER HIGH POWER SERIES

Nickel-Metal Hydride

VH Cs

Designed for applications requiring fast charge and high discharge rates (40 A), the VH Cs cell specially targets cordless power tools applications, and also, with its high capacity of 2.95 Ah, home appliances, racing cars and personal electric vehicles.

The VH Cs nickel-metal hydride cell is well positioned against the competition with its high capacity, long life duration and good storage ability.

To answer customers requirements, Saft will provide custom-designed and standardized battery packs and electronic monitoring systems. For your battery design and system needs, please contact Saft's engineers.



Applications

- Cordless power tools
- Radio control models
- Home appliances
- Personal electric vehicles

Main advantages

- Super high capacity
- Quick and fast charge
- High mid-discharge voltage
- Good storage ability

Technology

- Foam positive electrode
- Nickel metal-hydride negative electrode
- Alkaline electrolyte

Temperature range in discharge

+0°C to +40°C

Storage

Recommended: +5°C to +25°C

Relative humidity: 65 ± 5%

Data are given for single cell.

Please consult Saft for utilization of cell outside this specification.

Electrical characteristics

Nominal voltage (V)	1.2
Typical capacity (mAh) at C/5	3150
Minimum capacity (mAh) at C/5	2950
IEC designation	HR 23/43
Impedance at 1000 Hz (mΩ)	< 5

Dimensions

Diameter (mm)	22.0 ± 0.05
Height (mm)	42.3 ± 0.3
Projection (mm)	0.85 ± 0.2
Flat area diameter (mm)	10 ± 0.1
Weight (g)	59.0

Dimensions are given for bare cells.

Charge conditions

Rate	Time (h)	Temp. (°C)	Charge current (mA)
Ultrafast			Consult Saft
Fast	1 to 2	+5 to +45	3000 to 1500
Quick	3 to 5	+5 to +45	1000 to 650
Standard	15	+5 to +45	300
Trickle*		0 to +40	~ 100

End of charge cut-off is requested: -dV or dT°C/dt

* Trickle charge follows quick or normal charge

The maximum battery temperature recommended during charge is +45°C

Maximum discharge current

Continuous (A) at +20°C	40
Peak (A) at +20°C*	100

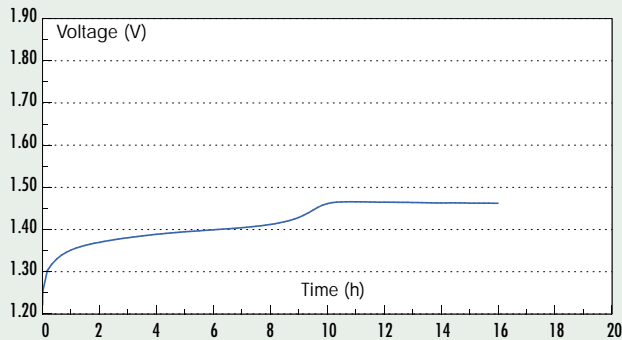
* Peak duration: 0.2 s-cell voltage (0.7)

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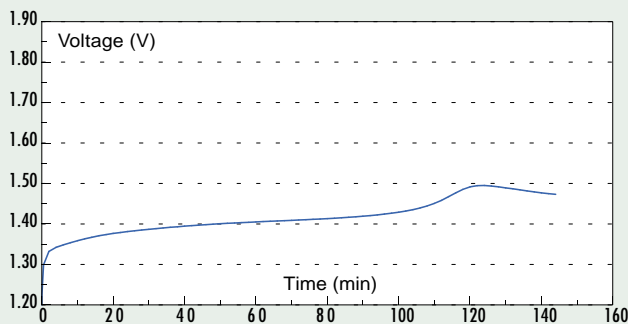
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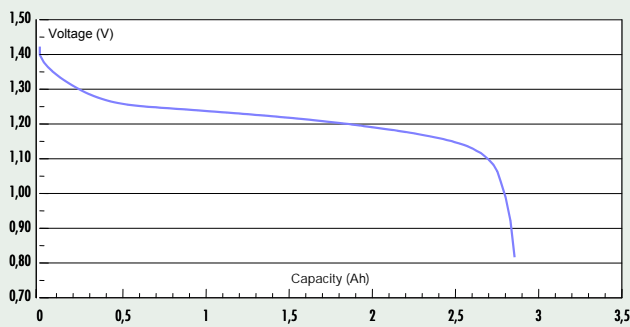
Voltage in slow charge current 0.1 C



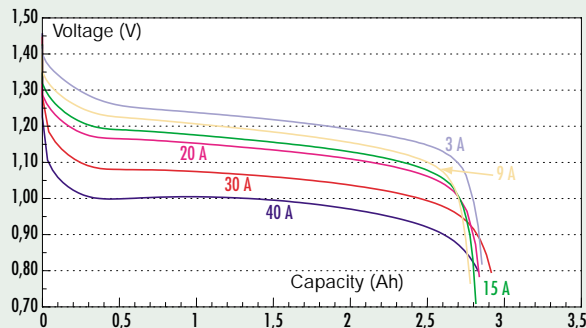
Voltage in charge current 0.5 C



Voltage in discharge at +20°C (0.2 C) after slow charge at 0.1 C

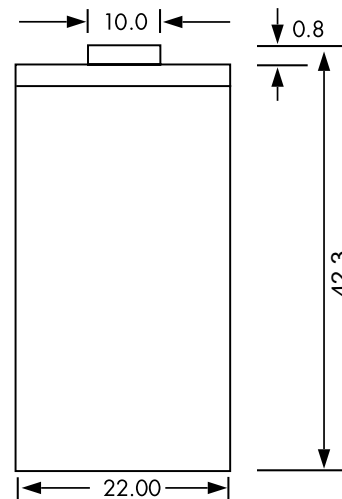


Voltage in discharge (+20°C) at various currents after fast charge at 0.5 C



Typical performances

For graphs shown, C is the IEC₅ capacity



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