HPC-1530

LONG SING

Hybrid Pulse Capacitor (HPC) for IOT batteries

Performance Data

(Typical values for batteries stored at +25°C for one year)

System	Hybrid Pulse Capacitor cell
Version	HPC1530
Capacity When Charge to 3.67V	>250AS
Capacity When Charge to 3.9V	>470AS
Max. Pulse Current	2A
Discharge End Voltage	2.5V - End voltage can reach 2.0V at -20°C
Max.Charge Voltage	3.67V 3.9V
In Parallel	ER(3.6V) ER(3.9V)
Charging Method	self balancing charging
Temperature Range	-40°C~+85°C
Cell Impedance @ 1kHz,RT	max. 120mΩ
Weight	11.5g
Dimension	Φ14.5*H27.0mm

Self Discharge Current

Temperature	@3.67V	@3.9V
20°C	3.5uA	6uA
40°C	7uA	12.5uA

Key Features

• Full seal technology

• Extremely low self discharge rate

• Wide operating temperature range

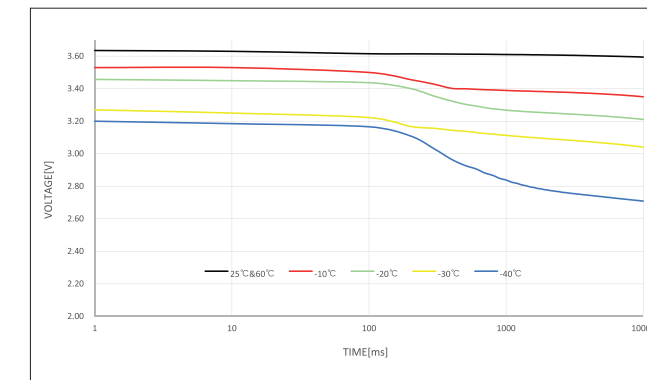• Low capacity, high pulse current safe design

Main Applications

• Long service life, high pulse current applications

• Long service life GPS+GSM applications

• Utility Meters(AMR)

• Asset, Container & Cargo Tracking

• Communication Equipment

• Sonar Buoys

• Security & Medical Device

Safety:

UL1642 , IEC62133 , UN38.3

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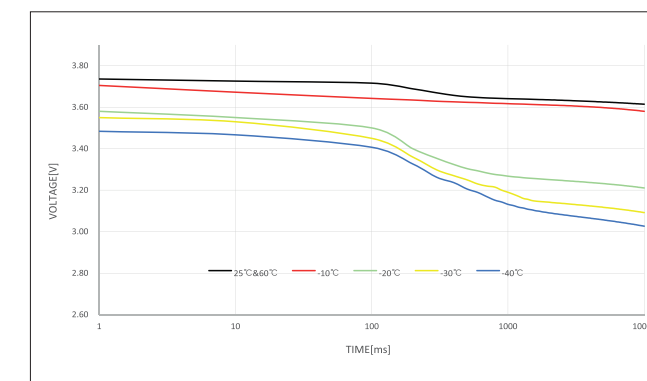

Performance Data

Voltage curves for HPC1530 at Li/SOCl2 potential **(3.67 V), 350 mA**
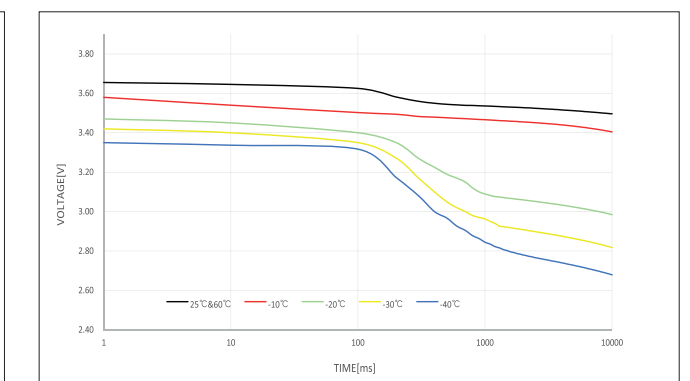

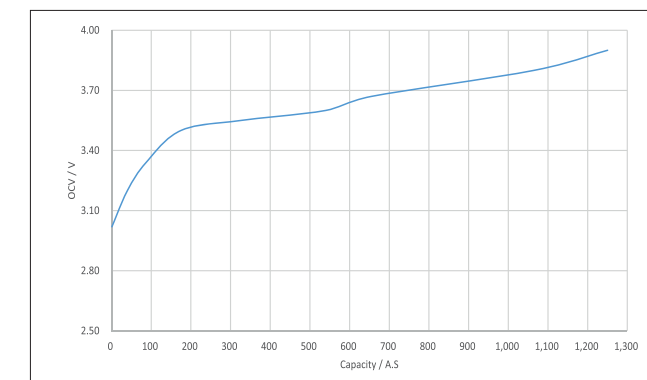Voltage curves for HPC1530 at Li/SOCl2 potential **(3.67 V), 600 mA**
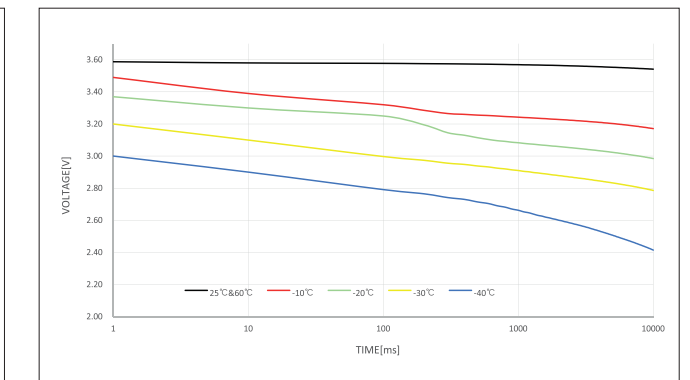
Voltage curves for HPC1530 at Li/SO2Cl2 potential **(3.90 V), 350 mA**

Voltage curves for HPC1530 at Li/SO2Cl2 potential **(3.90 V), 600 mA**

Available c apacity vs. OC V f or HPC1530 **(at RT, 50mA charge 125 mA discharge)**

HPC used in a IOT battery pack (ER+HPC) usage considerations

• HPC is the key for high current pulse and low temperature load capability in ER+HPC battery pack.

• The capacity of HPC can be ignored for the length of life time in the ER+HPC battery pack.

• The self-discharge of HPC can be ignored for the battery life of ER+HPC, which is mainly affected by the capacity attenuation of ER.

• The whole ER+HPC IOT batteries can not be charged.

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