

LONG SING Hybrid Pulse Capacitor

Model: HPC1020

1. Scope

This specification describes the performance indicators of LONGSING's hybrid pulse capacitor HPC-1020.

2. Characteristics

2.1 Physical

2.1.1 Length:	19.75±0.1mm
2.1.2 Diameter:	9.0+0.15/-0.1mm
2.1.3 Weight:	3.3g Max

2.2 Electrical

2.2.1 3.67V Capacity:	32AS (9mAh)
2.2.2 4.1V Capacity:	108AS (30mAh)
2.2.3 Impedance:	300mΩ (at RT @1kHz)

2.2.4 Discharge

Maximum continuous discharge current:	320mA
Maximum pulse current:	650mA
Cut off voltage:	2.5V

(Lower than 2.5V at room temperature may increase HPC impedance)

Discharge Temp. Range:	-40°C~+85°C
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2.2.5 Charge

Maximum charge voltage:	4.1V
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Maximum charge current: 8mA

Charge Temp. Range: -20°C ~ +50°C

(Charge temperature can be extended to -40°C ~ -20°C and 50°C ~ 85°C, the max charge current is limited to 1.6mA)

2.2.6 Self discharge

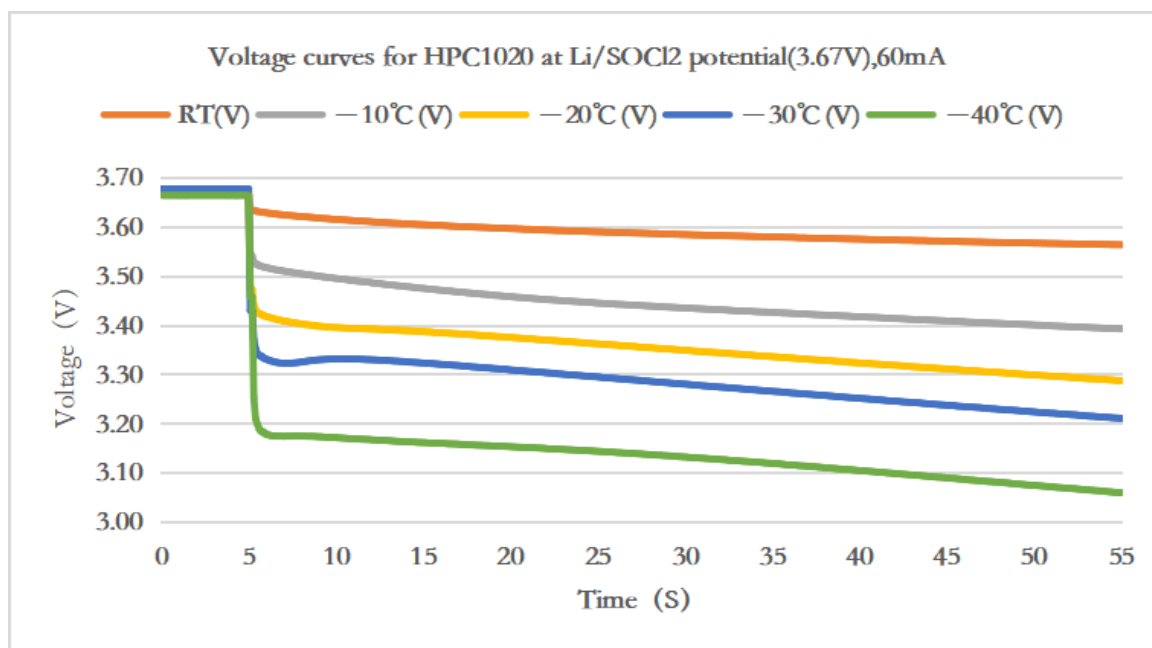
Self-discharge at ambient temperature: 1μA

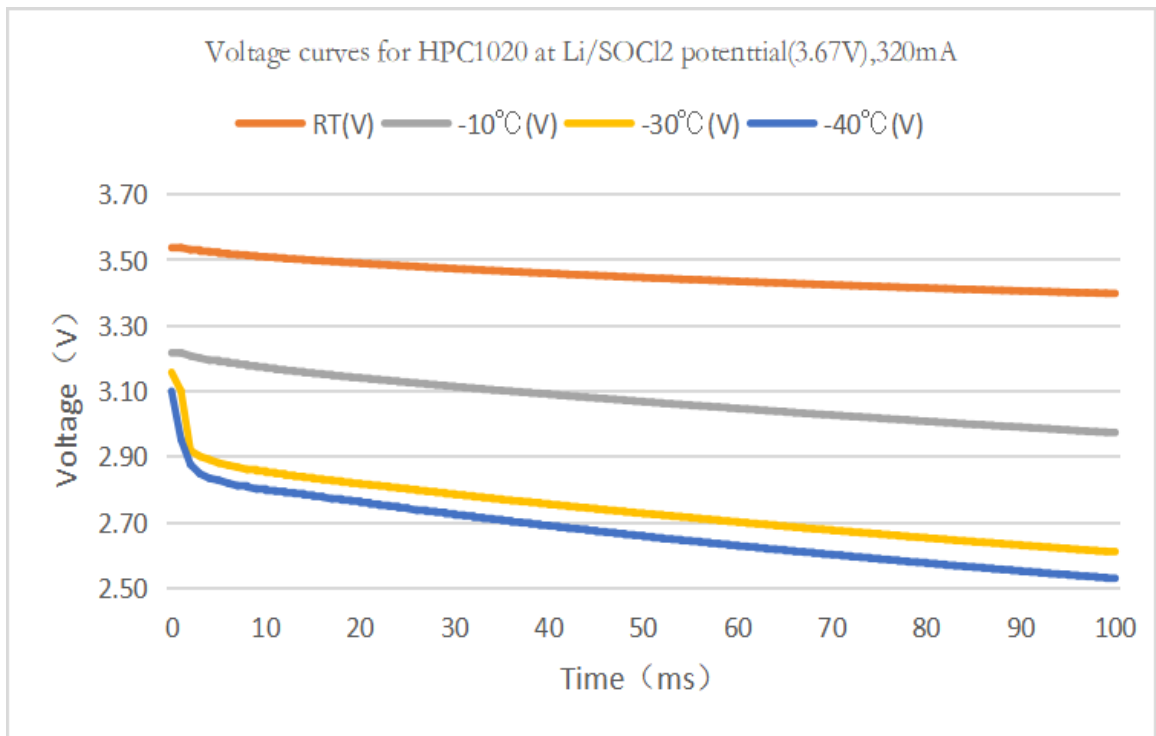
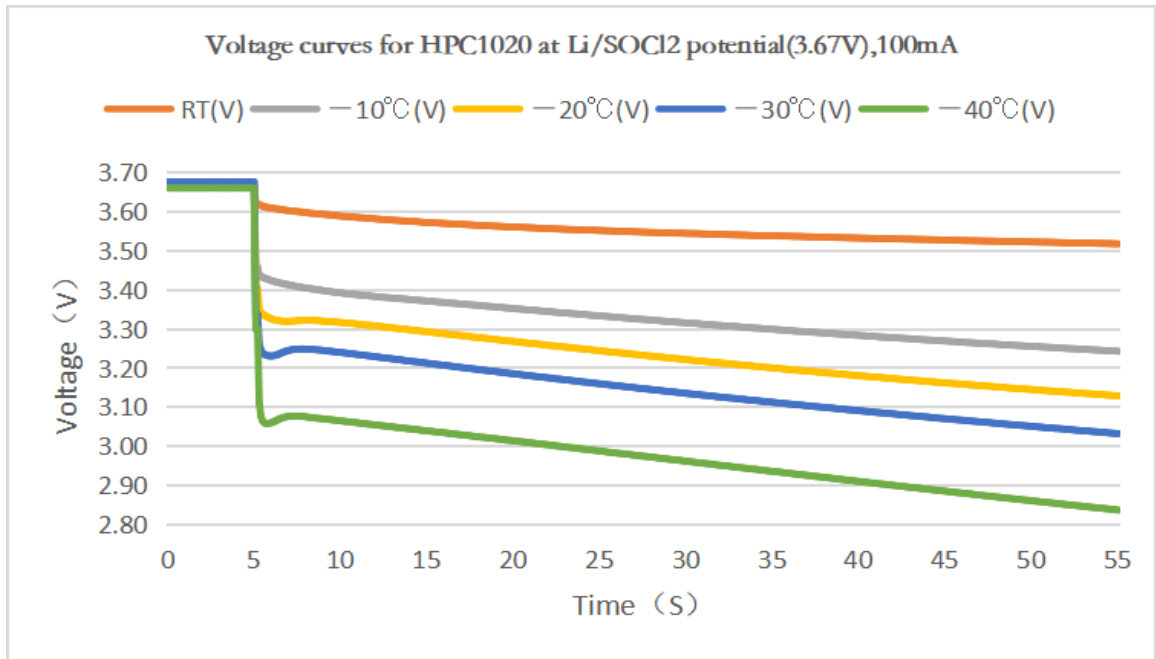
Self-discharge at high temperature (80°C) : 5μA

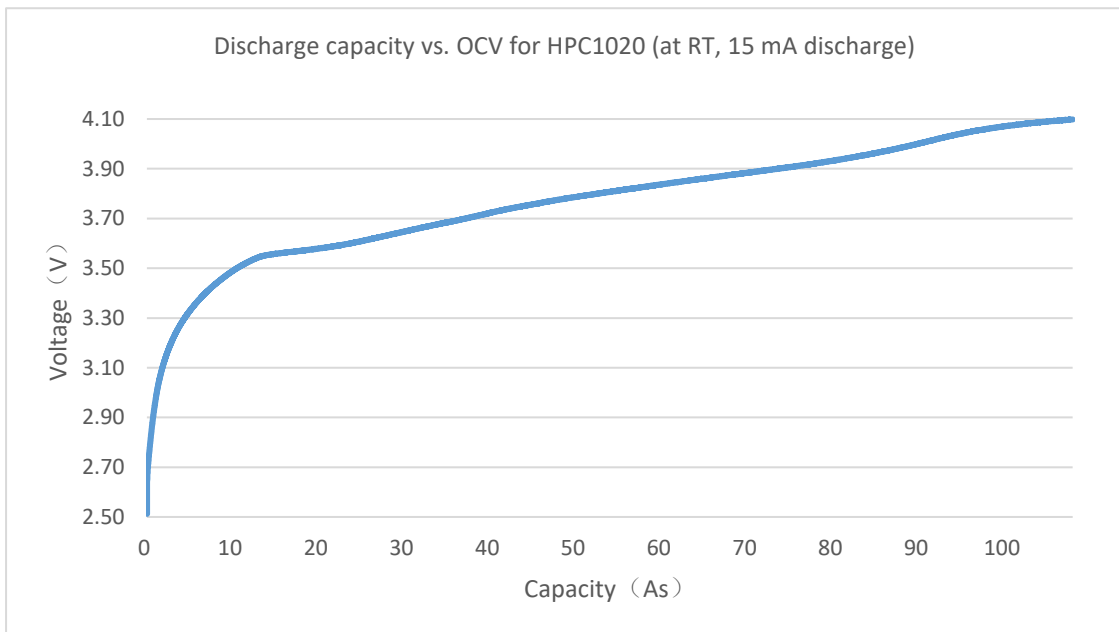
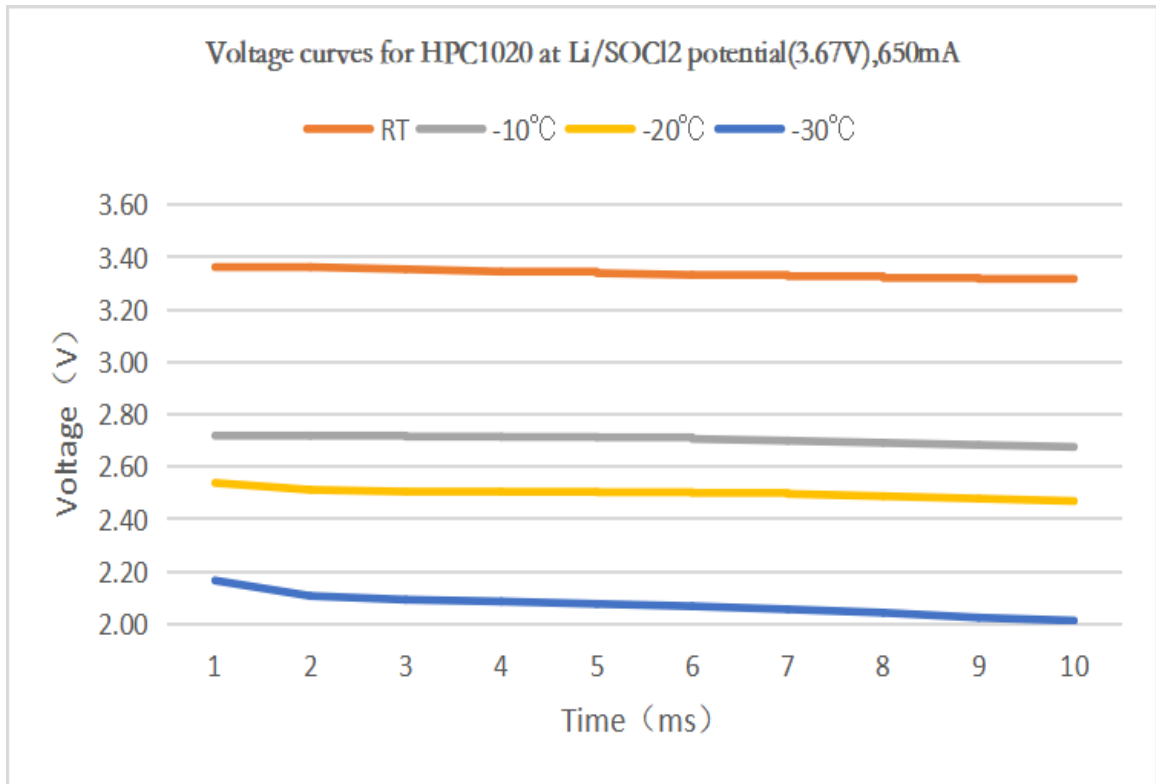
2.2.7 Battery life:

Temperature	HPC	IOT battery pack (ER+HPC)
RT	3 years	10 years
60°C	1 month	7 years
80°C	1 week	1 year

2.2.8 Performance data:







2.3 HPC1020 application protection (Designed by the user according to the table)

Item	Requirement
Over Charge protection	HPC1020 voltage should not be higher than 4.2 V
Over Discharge protection	HPC1020 voltage should not be lower than 2.4 V

2.4 Security and Transportation

- ◆ UL1642 certificate approved: MH61580

2.5 Battery pack assembly and usage considerations

- ◆ Two or more series and parallel should be matched by the manufacturer according to the internal resistance and voltage
- ◆ For more than 2 cells in parallel, maximum charge current shall be limited to 20mA for the whole pack.