

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

2.2.5 Charge

Maximum charge voltage: 4.1V

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Maximum charge current: 8mA

Charge Temp. Range: -20℃~+50℃ (Charge temperature can be extended to -40℃~-20℃ and

50°C~85°C, the max charge current is limited to 1.6mA)

2.2.6 Self discharge

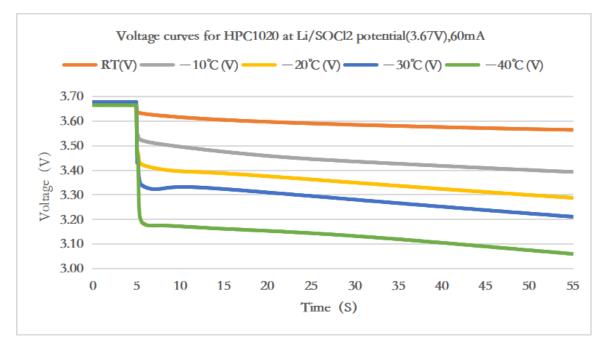
Self-discharge at ambient temperature:	1μΑ
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Self-discharge at high temperature (80°C) : $5\mu A$

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

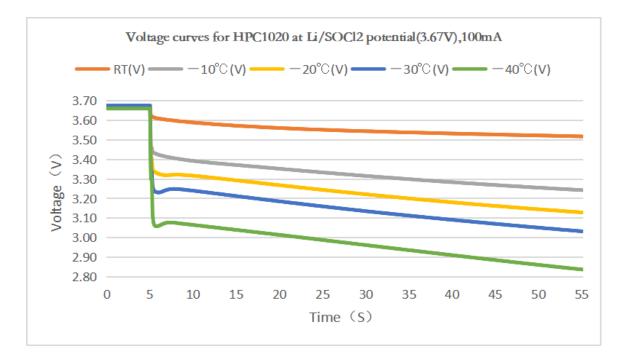
2.2.8 Performance data:

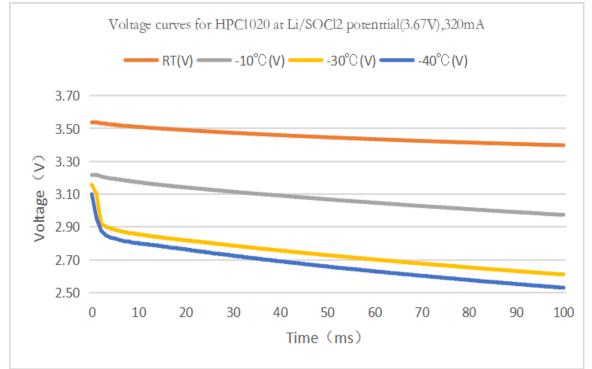


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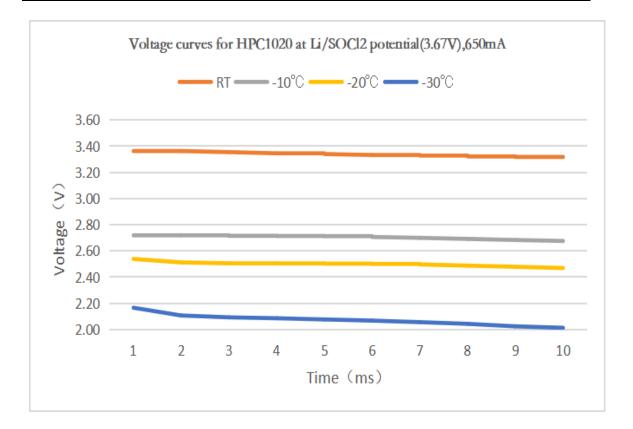


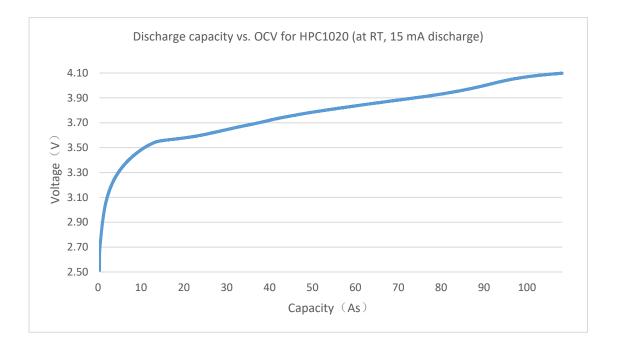




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2.3 HPC1020 application protection (Designed by the user according to the

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 matached 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.