

LONG SING Hybrid Pulse Capacitor

Model: HPC-1550

1. Scope:

This specification describes the performance of LONGSING HPC-1550 as an independent power supply.

2. Characteristics:

2.1 Physical

- 2.1.1 Length: 50.0±0.3mm
- 2.1.2 Diameter: 14.5±0.1mm
- 2.1.3 Weight: 20.0±0.2g

2.2 Electrical

2.2.1 Charge

- Charge Voltage: 4.1V
- Standard Charge Current: 100mA
- Charge Method: Constant Current Constant Voltage(End of Charge 20mA)
- Charge Temp. Range: -20 ~ +50°C(Charge temperature can be extended to -40°C ~ -20°C and 50 ~ 85°C provided that the max charge current is limited to 20mA)

2.2.2 Discharge

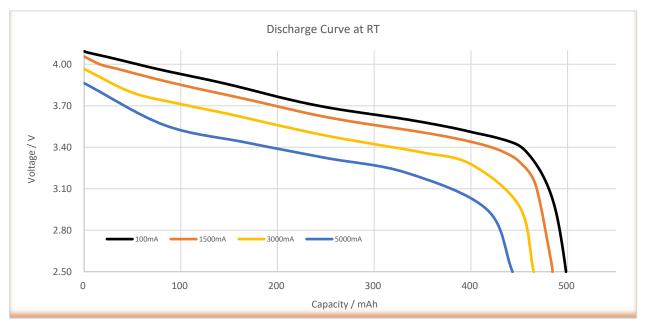
- Standard discharge current: 250mA
- End of Discharge: 2.5V @RT (Cut-off voltage can reach 2.0V at -40°C ~ -20°C)
- Discharge Temp. Range: -40 ~ +85°C
- Performance Characteristics:

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ltem	Performance	Conditions
Battery Capacity	> 450[mAh]	Discharge at 250mA
	> 410[mAh]	Discharge at 2500mA
Charge-Discharge Cycles	> 370[mAh]	After 5000 cycles
Temperature	> 280[mAh]	Discharge @-40°C @250mA
	> 360[mAh]	Discharge @-30°C @250mA
	> 390[mAh]	Discharge @-20°C @250mA
	> 430[mAh]	Discharge @0°C @250mA
	> 450[mAh]	Discharge @60°C @250mA
Charge Retention	430[mAh]	After 1 year @RT @250mA
(reversible)		
Impedance	≤60mΩ	Impedance at 1KHz

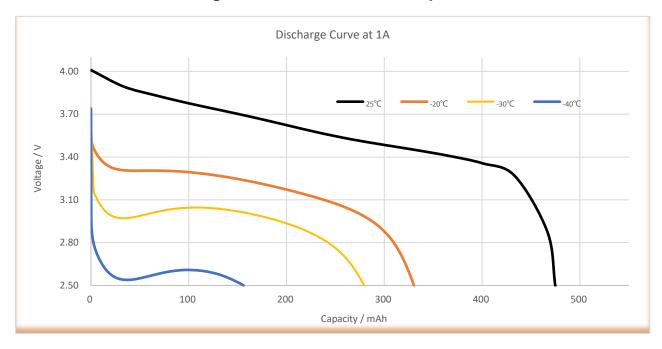
Discharge curves at Room Temperature



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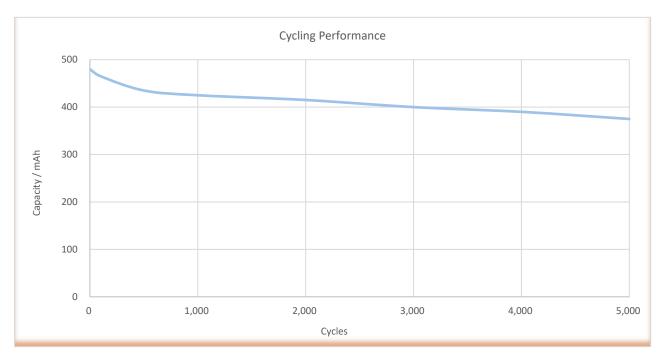
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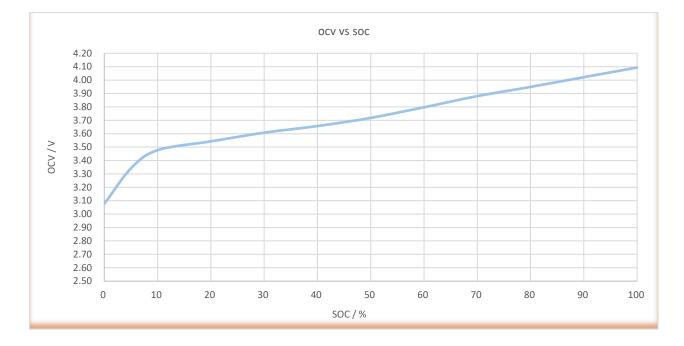
Discharge Curves at Different Temperature@1A

Charge/ Discharge Cycling Performance



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Static Voltage at different SOC

2.3 HPC1550 application protection (to be applied by the user)

Item	Specifications
Over Charge Protection	HPC1550 voltage should not be higher than 4.2 V
Over Discharge Protection	HPC1550 voltage should not be lower than 2.4 V

2.4 Safety Characteristics

- UL1642 certificate approved, UL File NO.: MH61580
- ◆ IEC62133 , UN38.3

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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 200 mA for the whole pack.

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