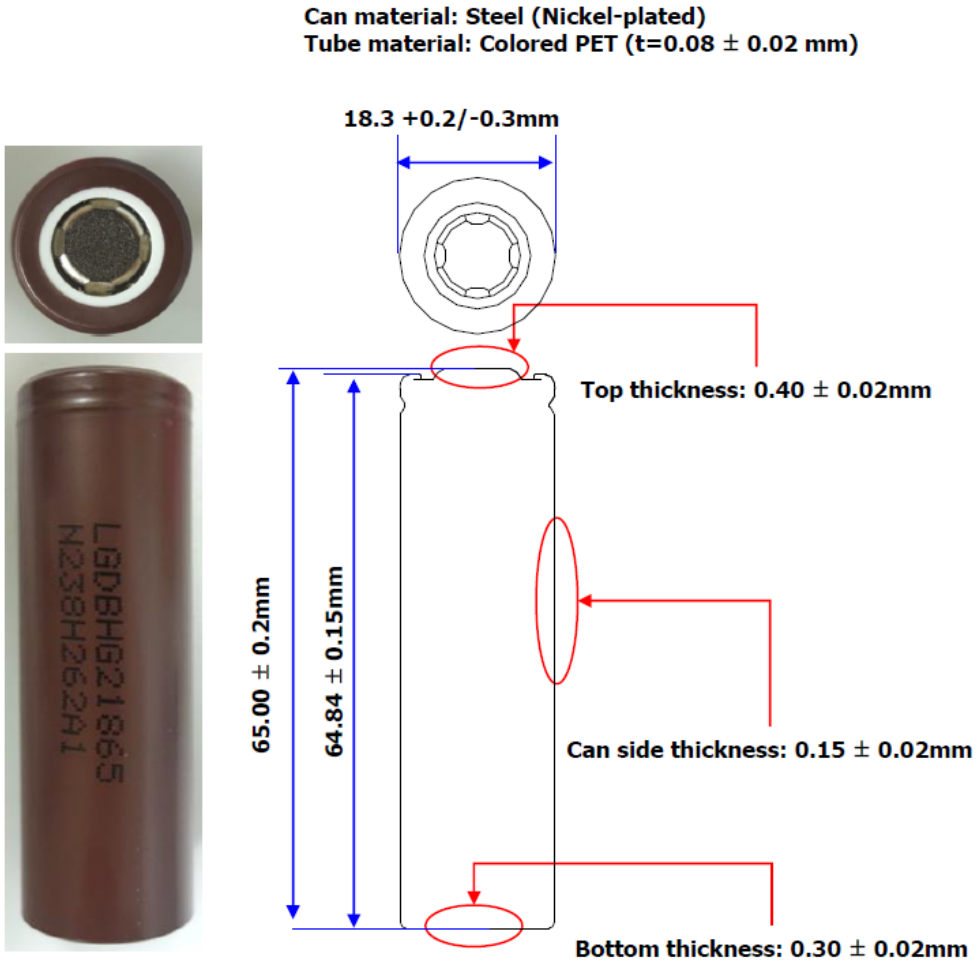
Technical Information and Experimental Test Results for LG 18650HG2

Testing performed at McMaster University, Hamilton, Ontario, Canada

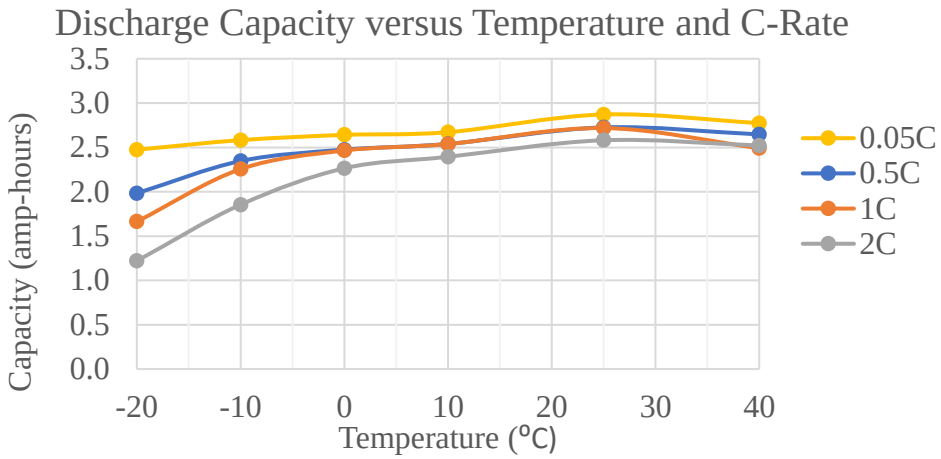
1- Battery Main Specifications

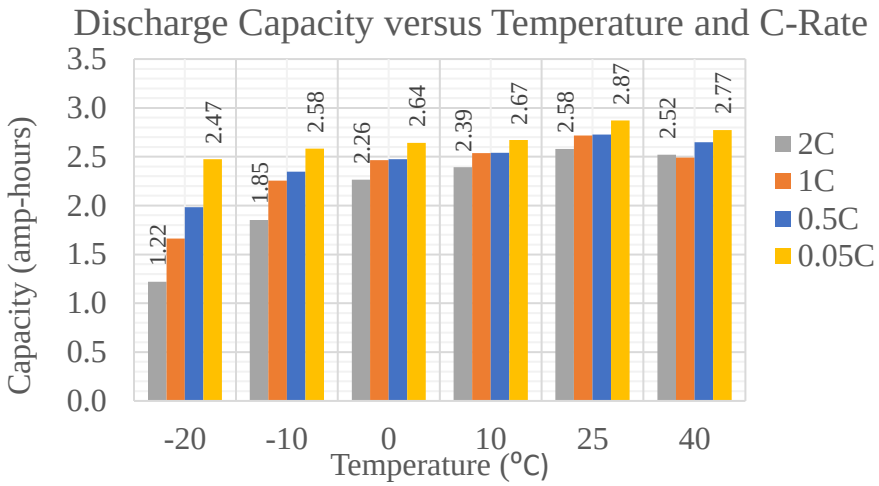
Chemistry	**Li[NiMnCo]O2 (H-NMC) / Graphite + SiO**
Nominal Voltage	**3.6 V**
Charge	**1.5A,4.2,50mA End-Current (CC-CV) Normal**
	4A, 4.2V,100mA End-Current (CC-CV) Fast
Discharge	**2V End Voltage, 20A MAX Continuous Current**
Nominal Capacity	**3.0 Ah**
Energy Density	**240 (Wh/Kg)**

2- Battery Dimension

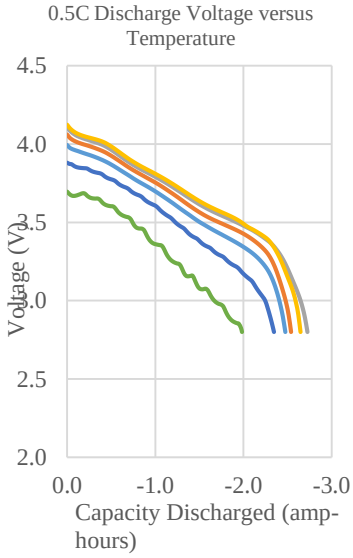


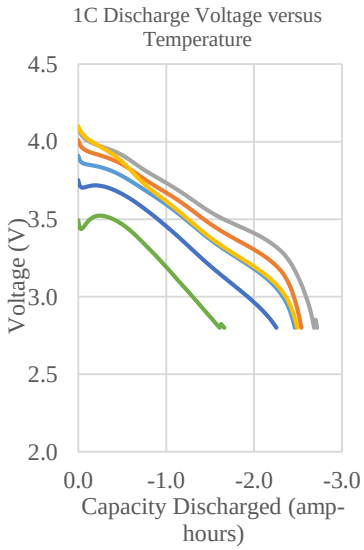
3- Discharge Capacity Vs Temperature and different C-Rate

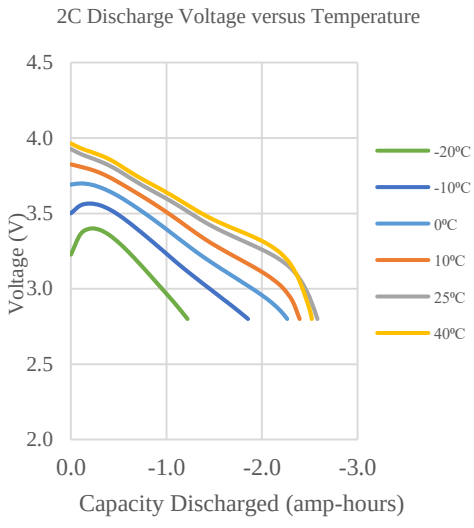




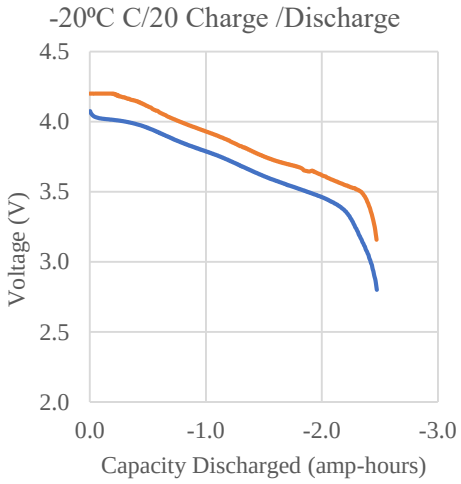
4- Discharge Voltage Vs Temperature at different C-Rate

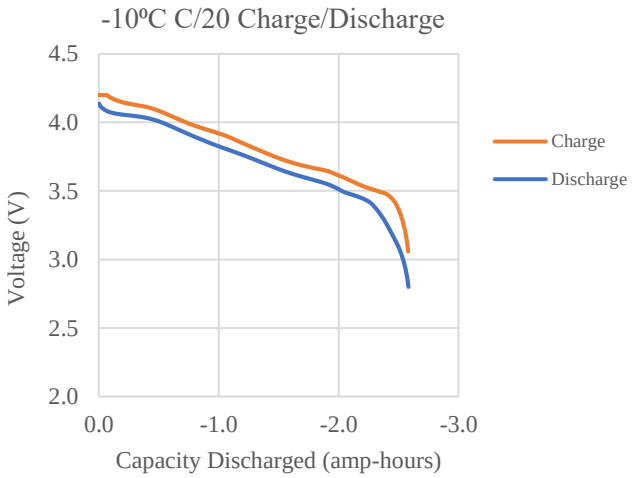


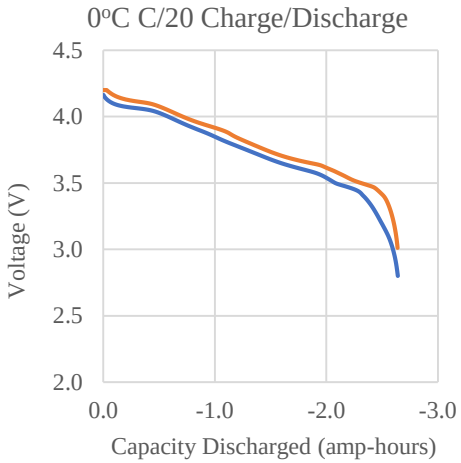


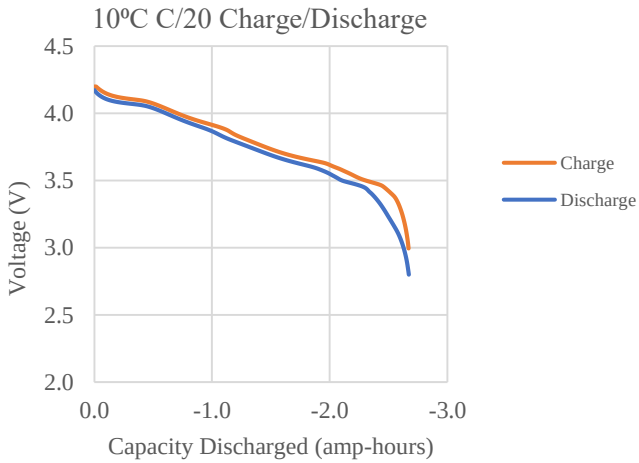


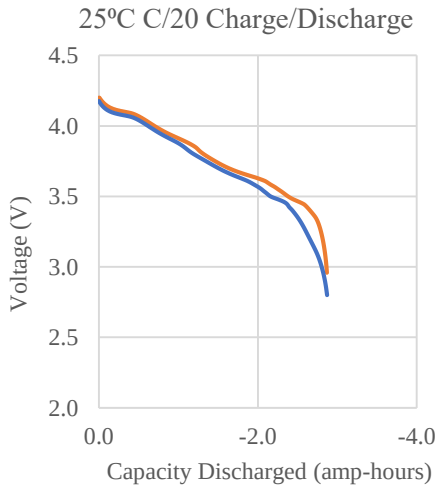
5- Charge/Discharge Voltage Vs C-Rate at different Temperatures

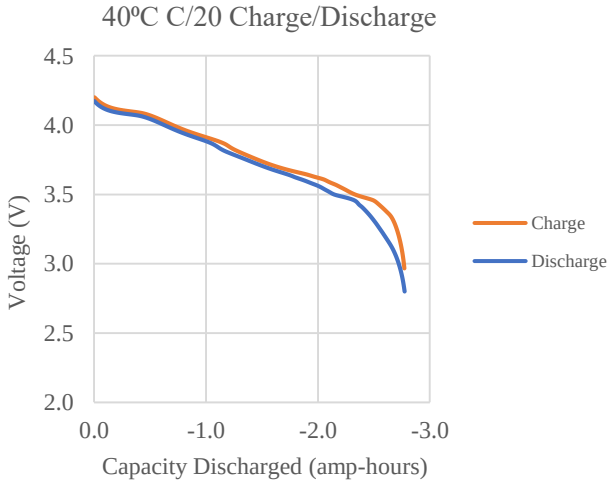




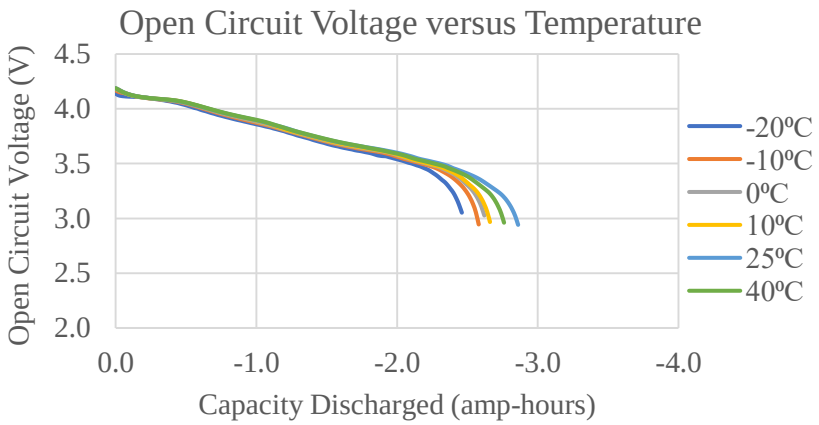




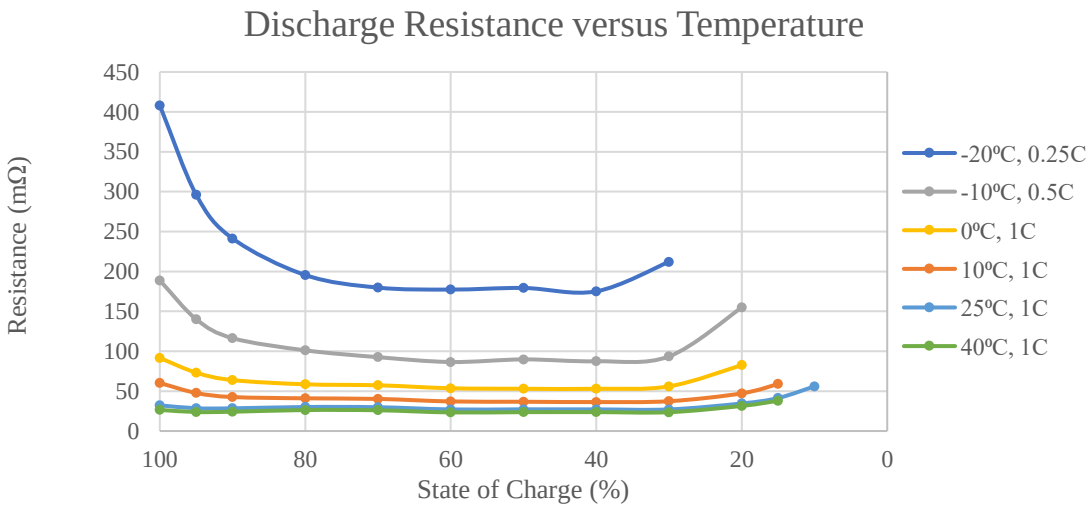




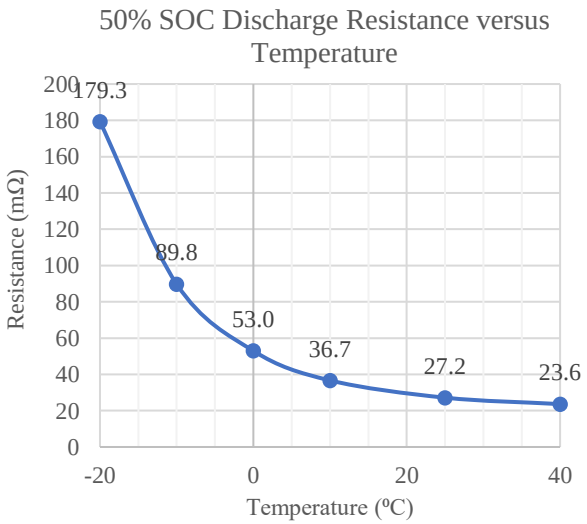
6- Open Circuit Voltage Vs Temperature at 0.05 C-Rate

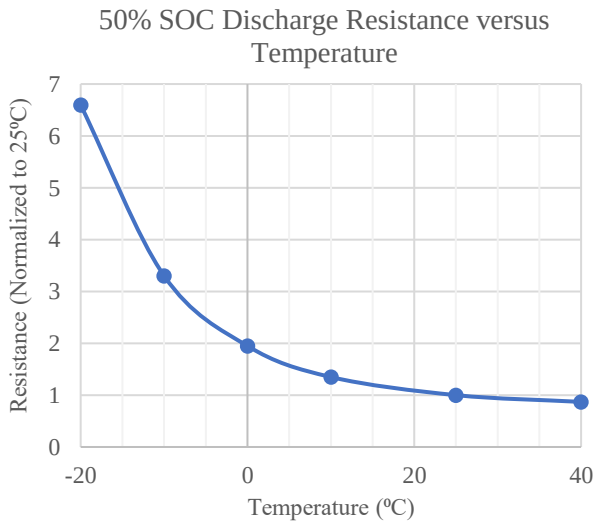


7- HPPC Resistance Vs Temperatures at different C-Rates

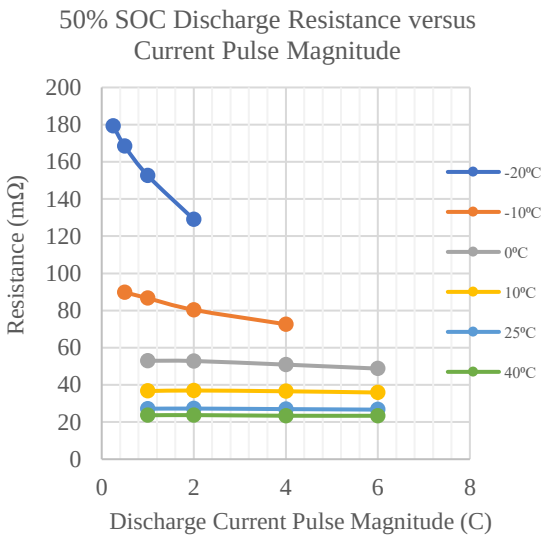


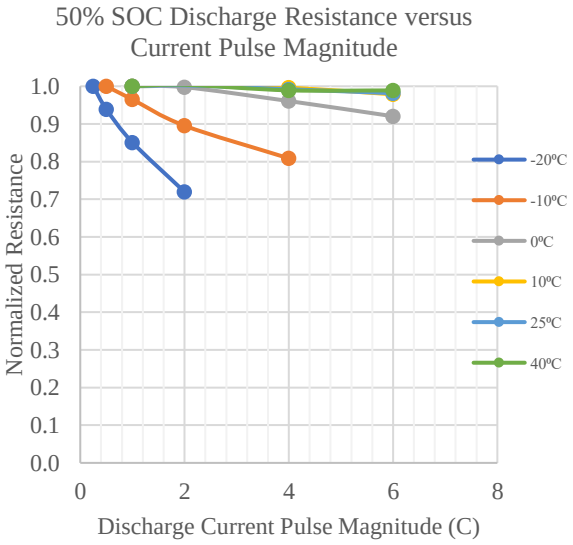
8- HPPC Resistance Vs Temperatures at 50% SOC



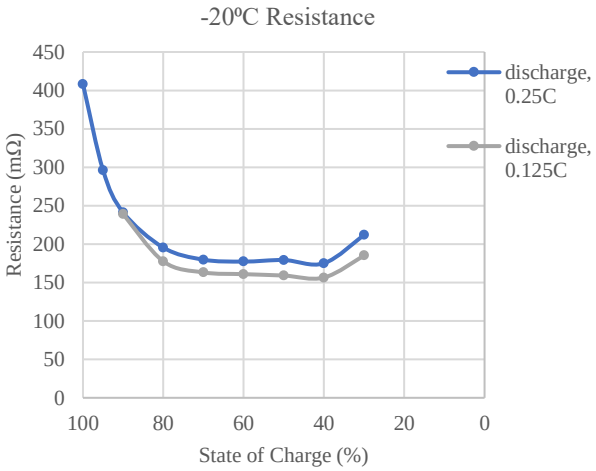


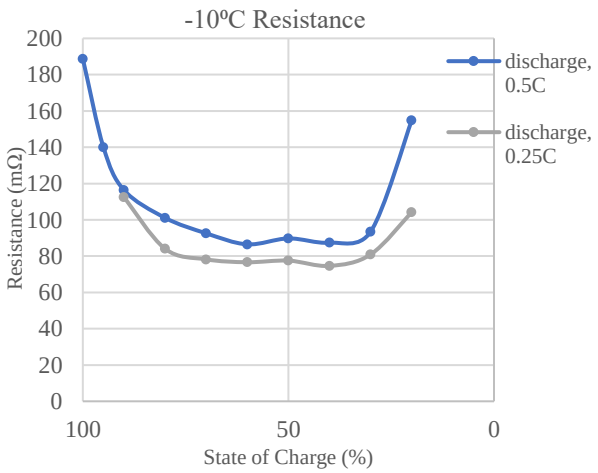
9- HPPC Resistance Vs C-Rates at 50% SOC

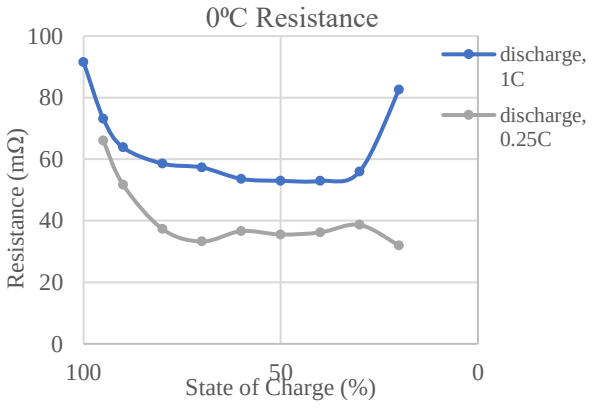


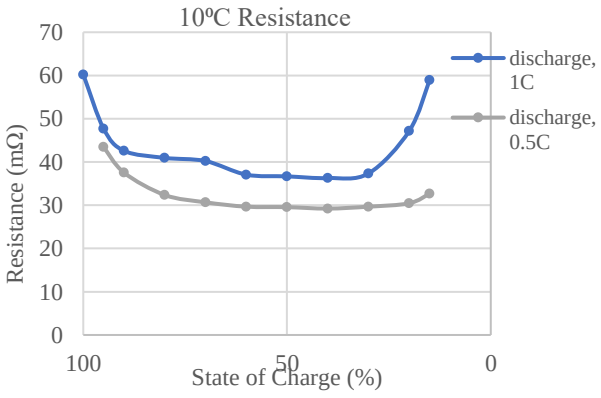


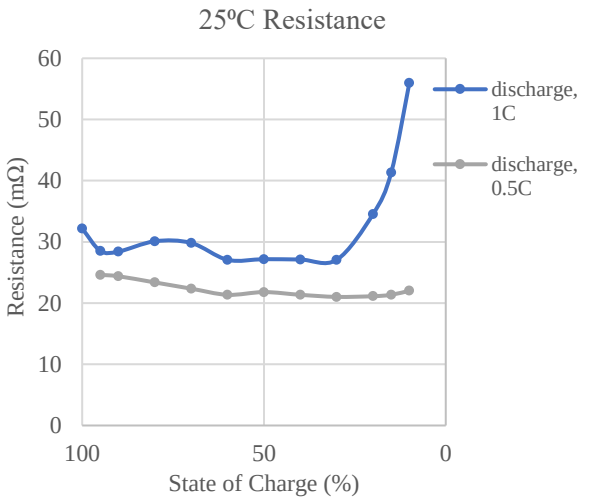
10- HPPC Resistance Vs Temperatures at different C-Rate

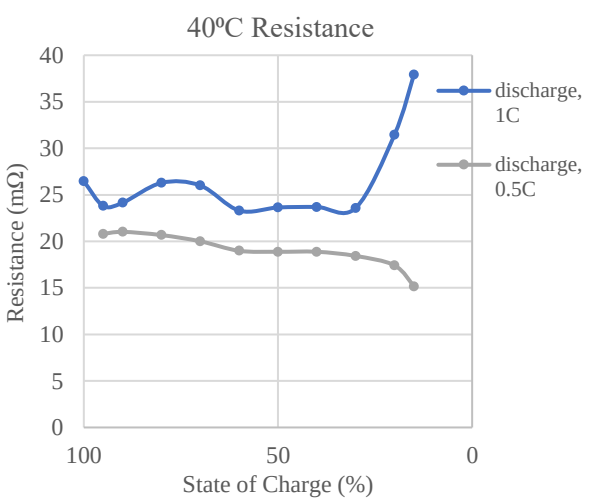


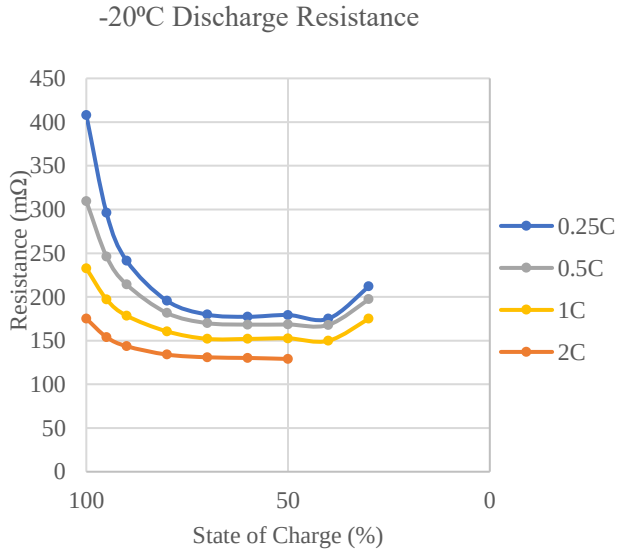


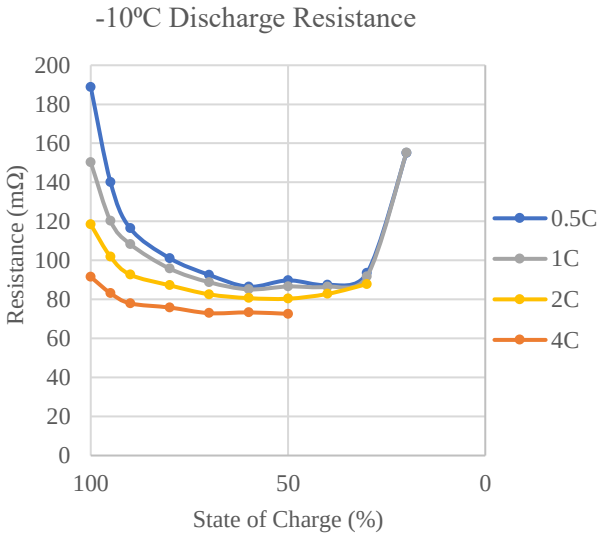


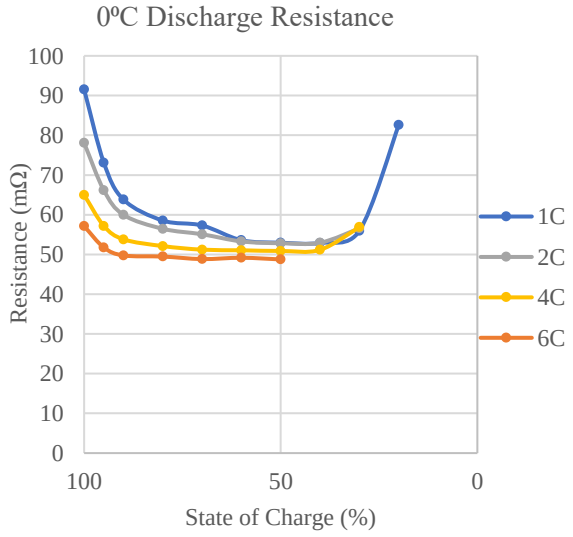


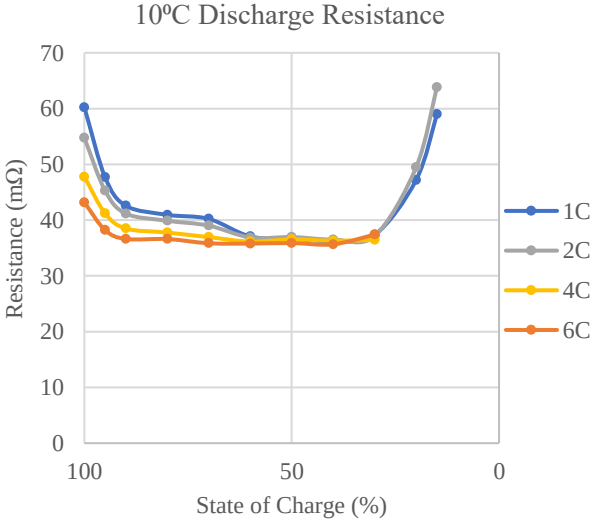

25ºC Resistance
Resistance (mΩ)
State of Charge (%)
discharge, 1C
discharge, 0.5C

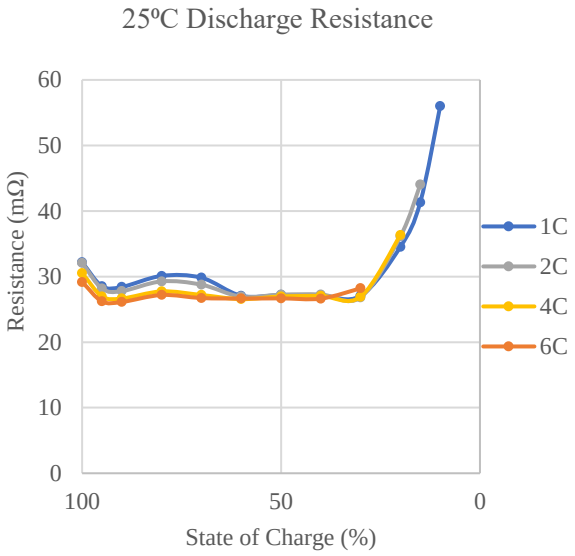

40ºC Resistance
Resistance (mΩ)
State of Charge (%)
discharge, 1C
discharge, 0.5C

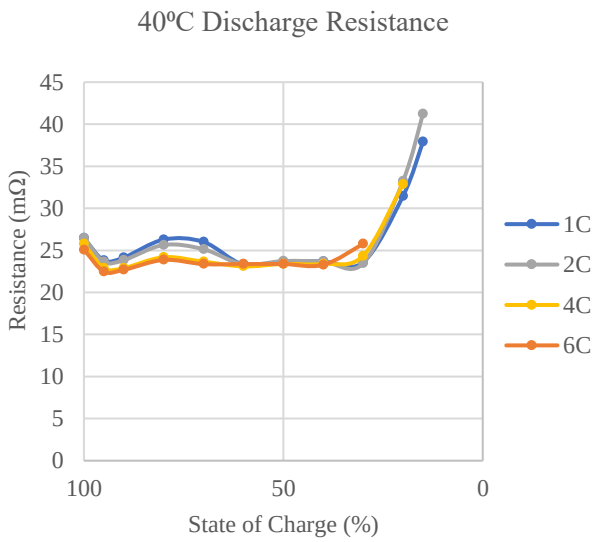

-20ºC Discharge Resistance
Resistance (mΩ)
State of Charge (%)
0.25C
0.5C
1C
2C


-10ºC Discharge Resistance
Resistance (mΩ)
State of Charge (%)
0.5C
1C
2C
4C


0ºC Discharge Resistance
Resistance (mΩ)
State of Charge (%)
1C
2C
4C
6C


10ºC Discharge Resistance
Resistance (mΩ)
State of Charge (%)
1C
2C
4C
6C


25ºC Discharge Resistance
Resistance (mΩ)
60
50
40
30
20
10
0
100
50
0
State of Charge (%)
1C
2C
4C
6C


40ºC Discharge Resistance
Resistance (mΩ)
45
40
35
30
25
20
15
10
5
0
100
50
0
State of Charge (%)
1C
2C
4C
6C