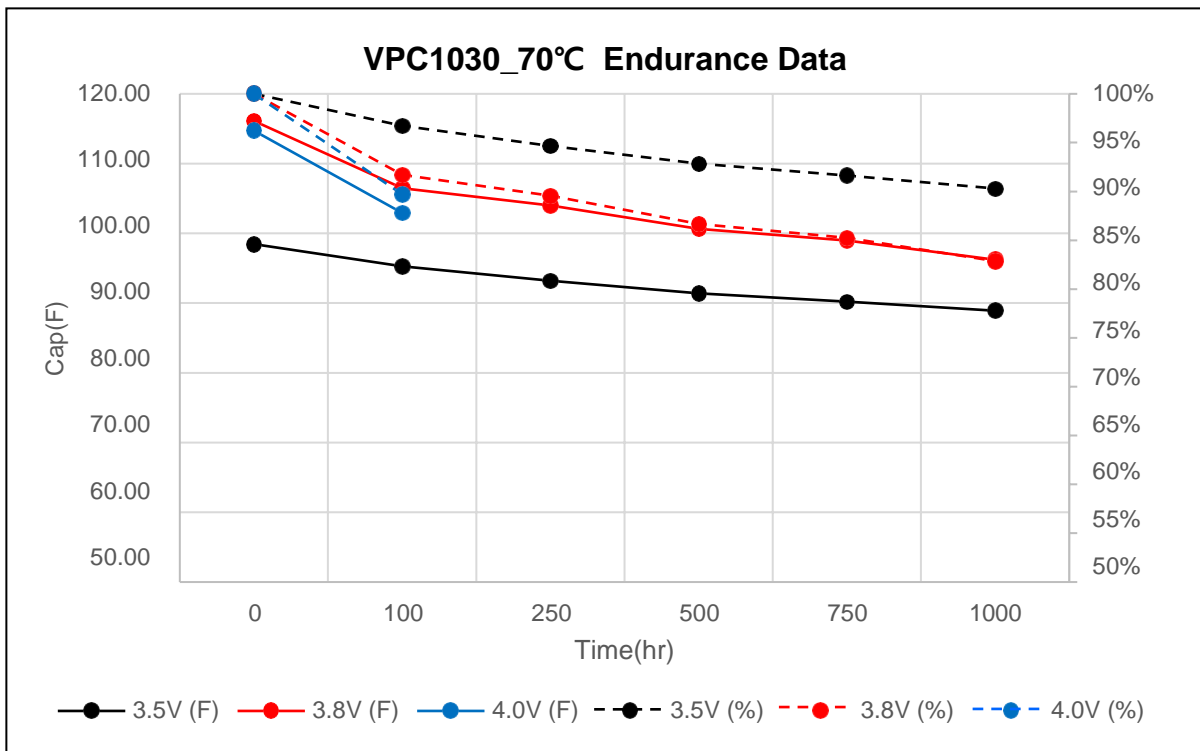
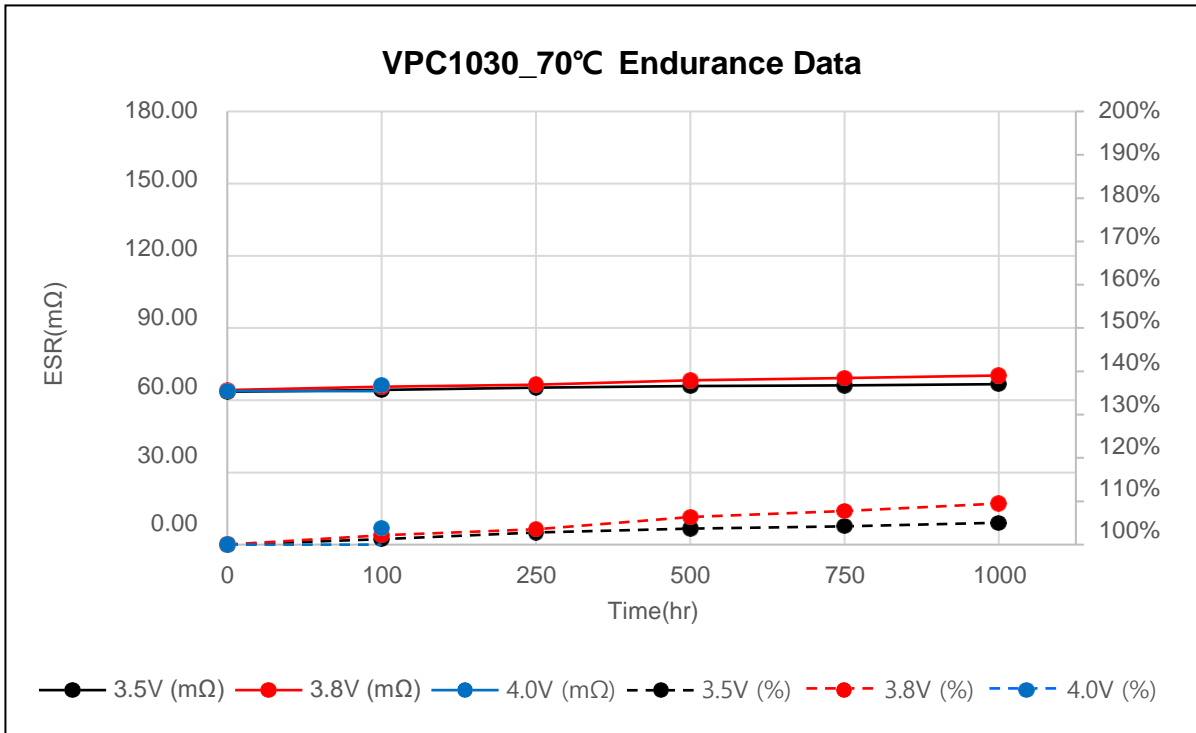


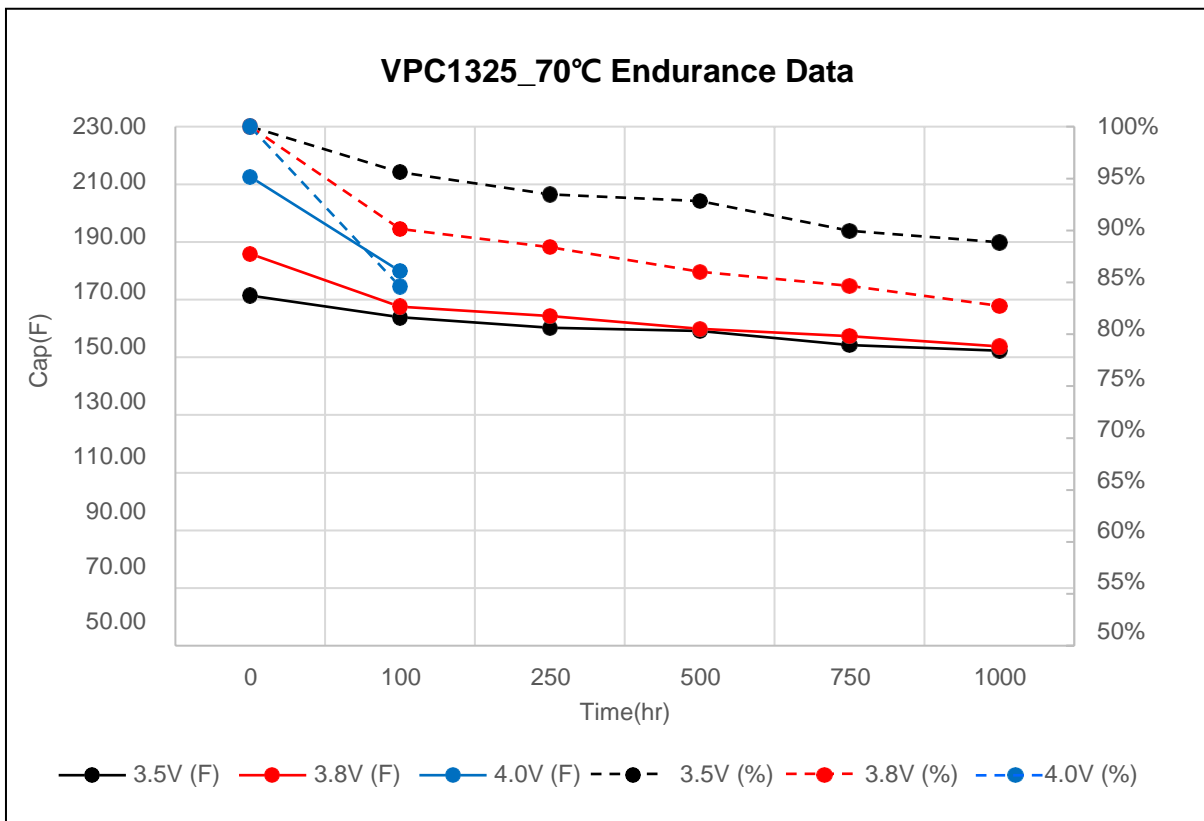
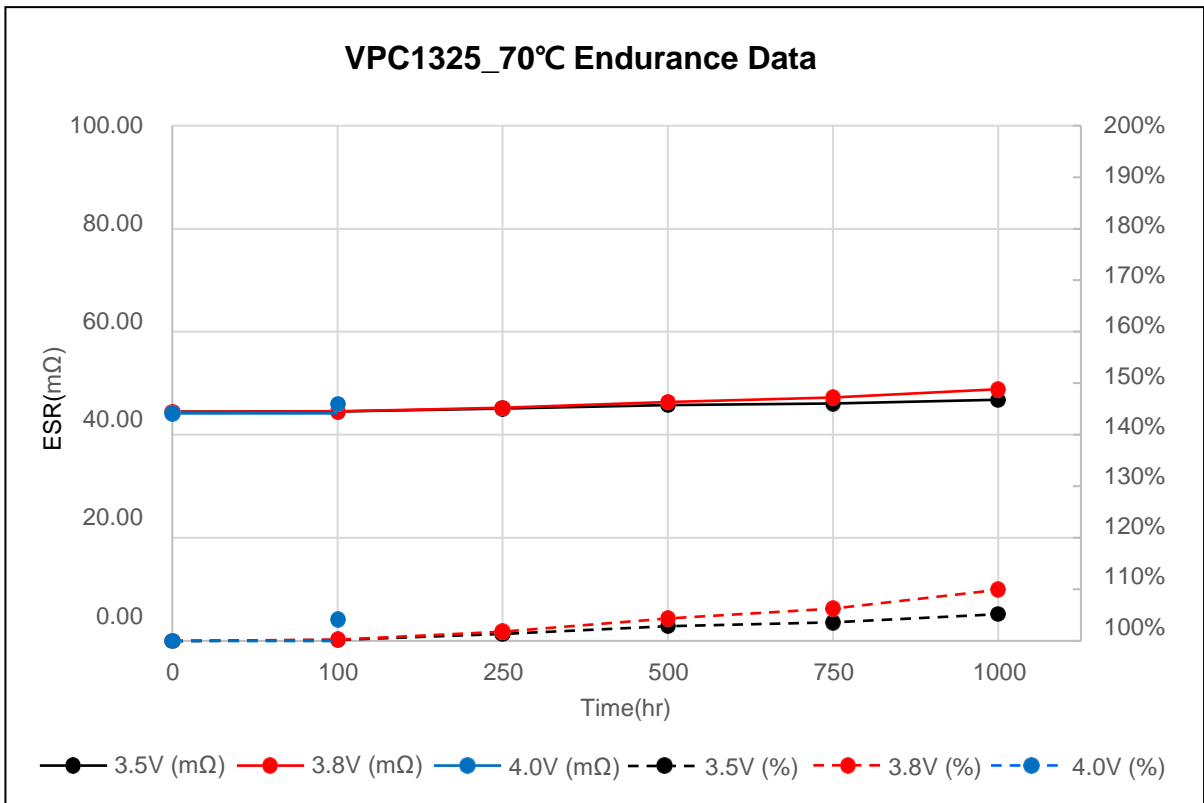
FAQ (VPC Series)

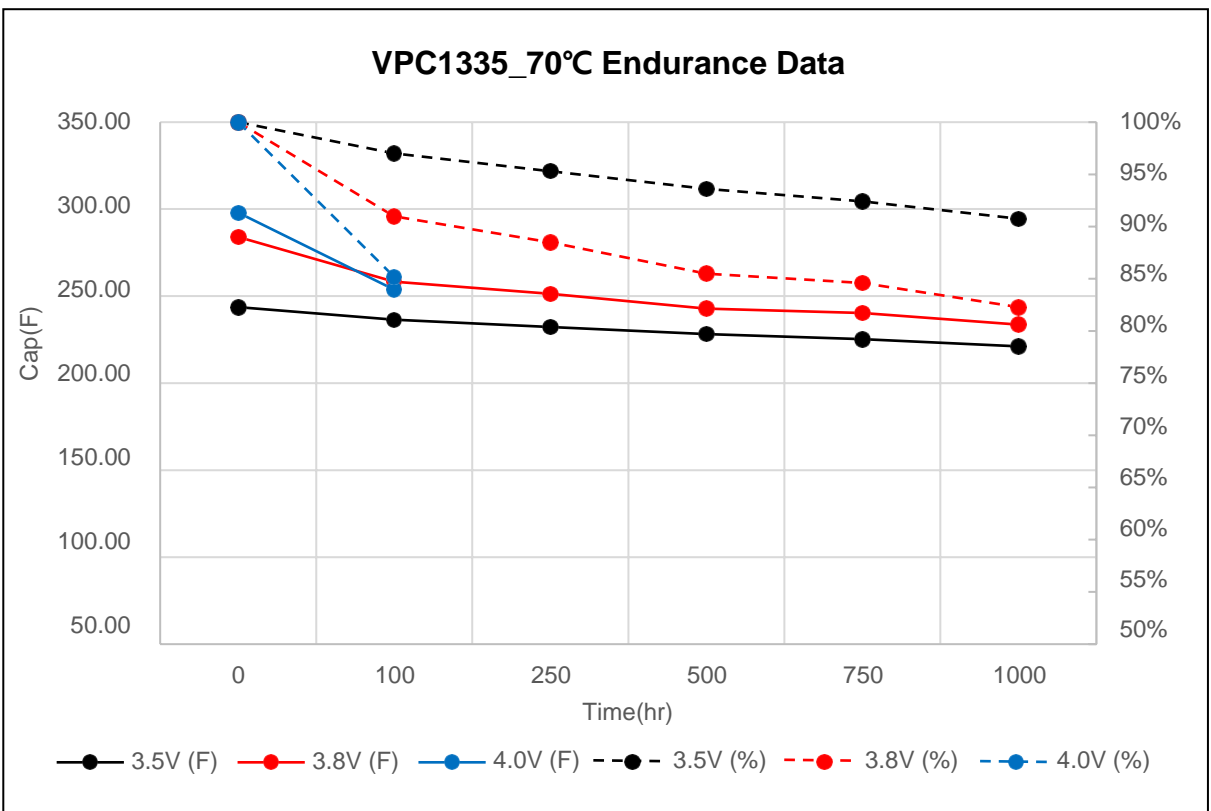
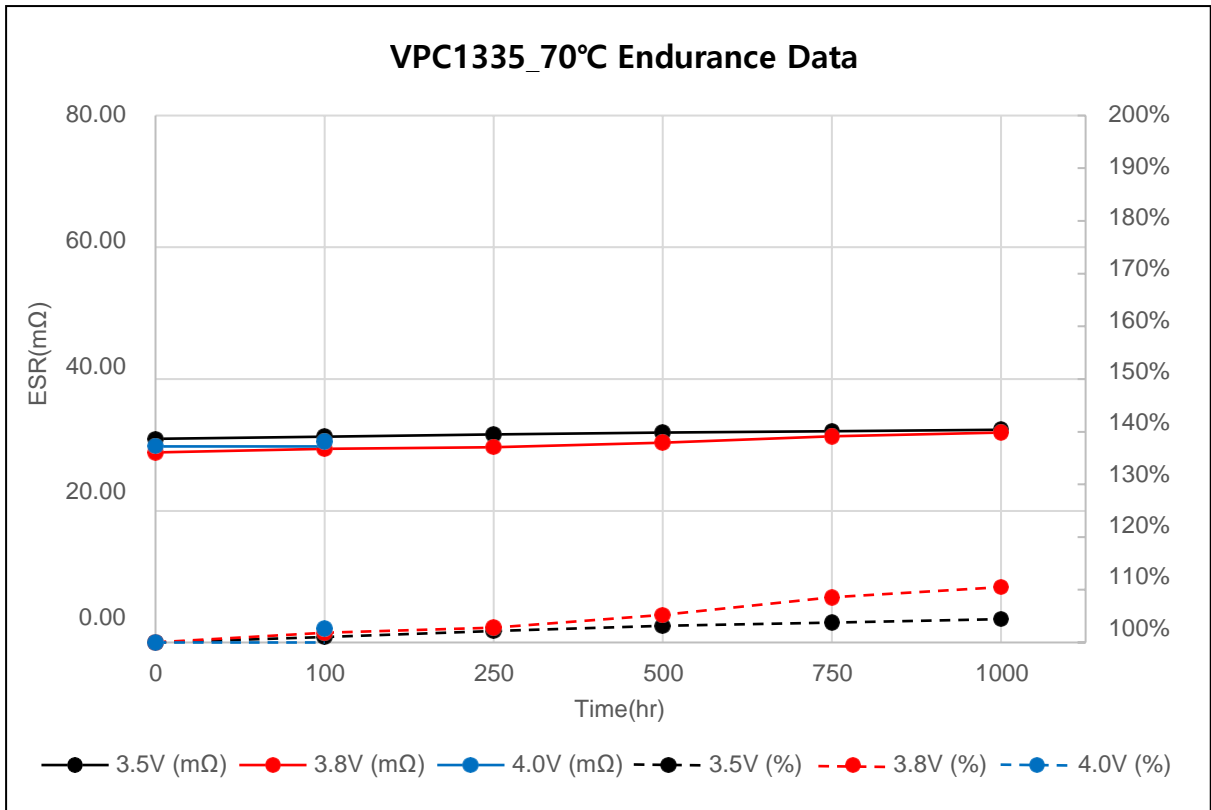
Q. Lifetime when VEL series is used above 3.8V

A. When VEL series is used on 4.0V constantly, it could be used but, the lifetime will be decreased about 2 or 3 times more than when it will be used on 3.8V

*Attached. Endurance Data on each voltage







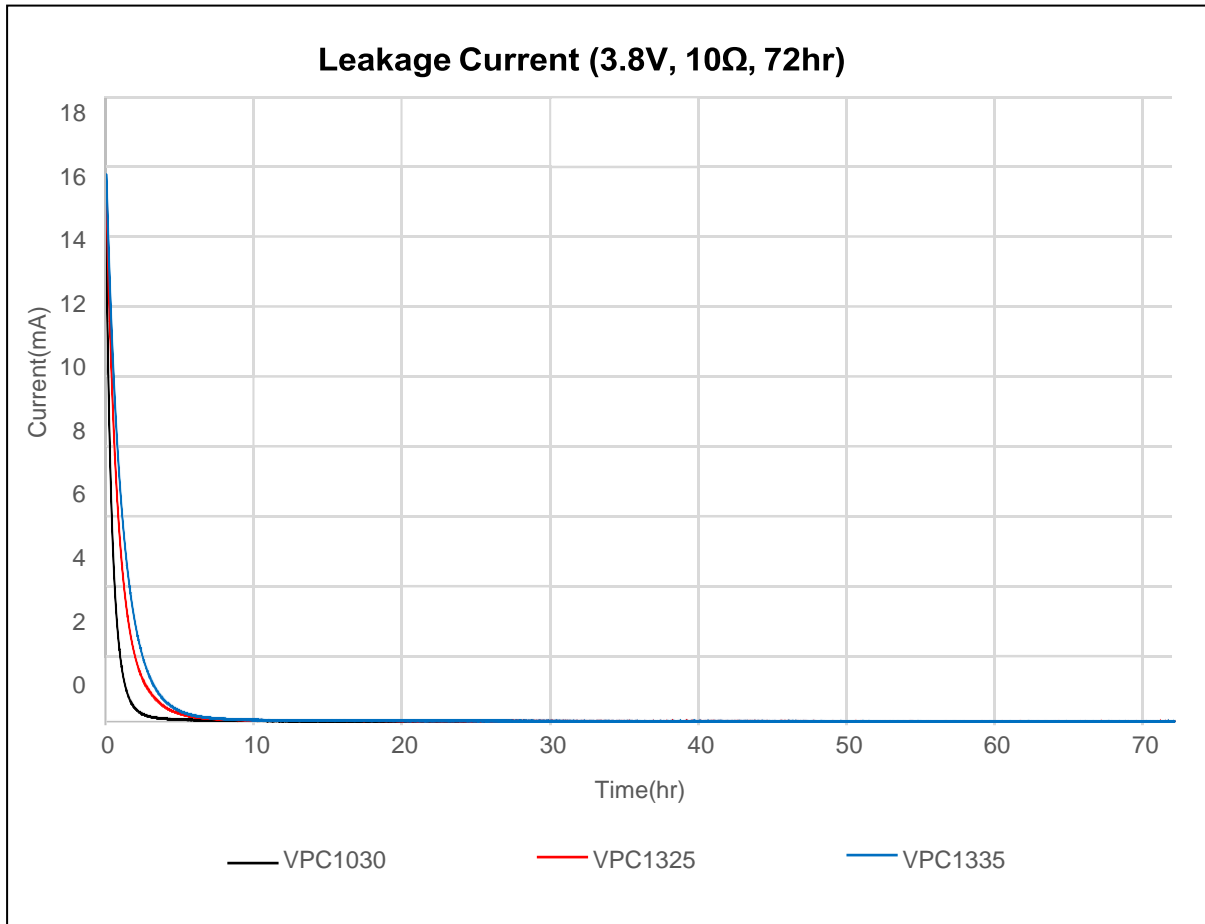
Q. Leakage Current

A. Leakage Current(72hrs) :

- VPC1030: $1.8\mu\text{A}$ / VPC1325 : $6.3\mu\text{A}$ / VPC1335 : $7.2\mu\text{A}$

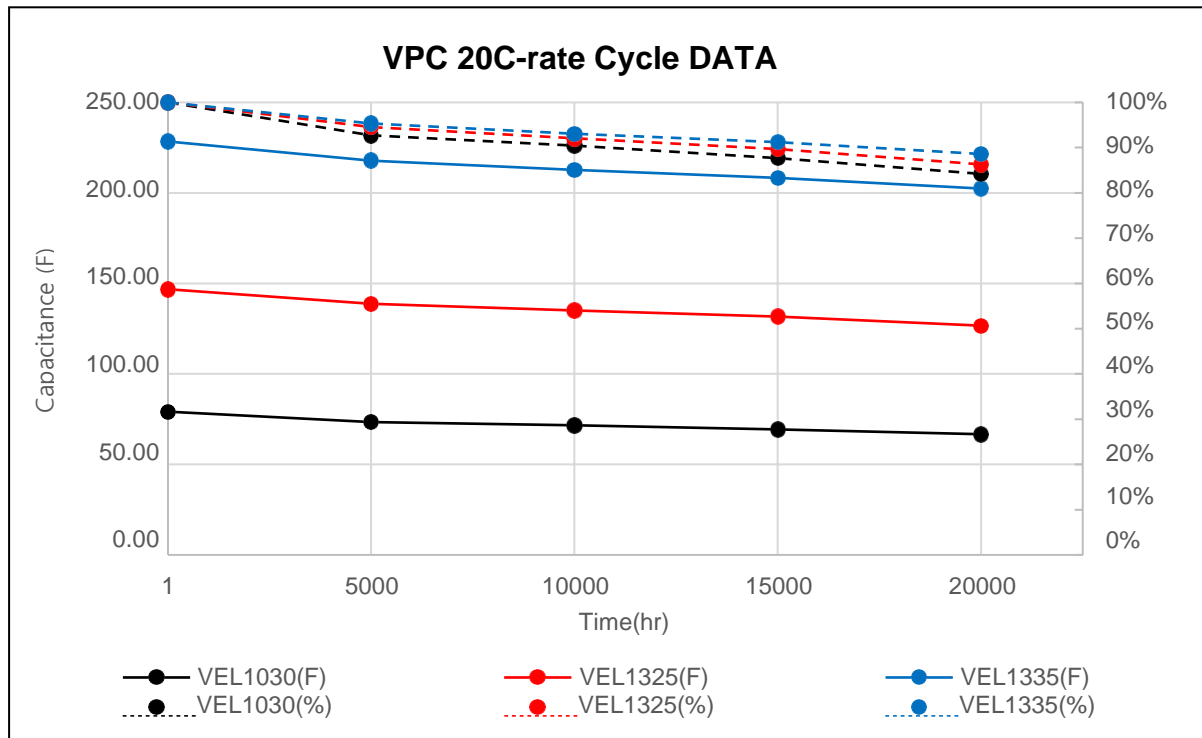
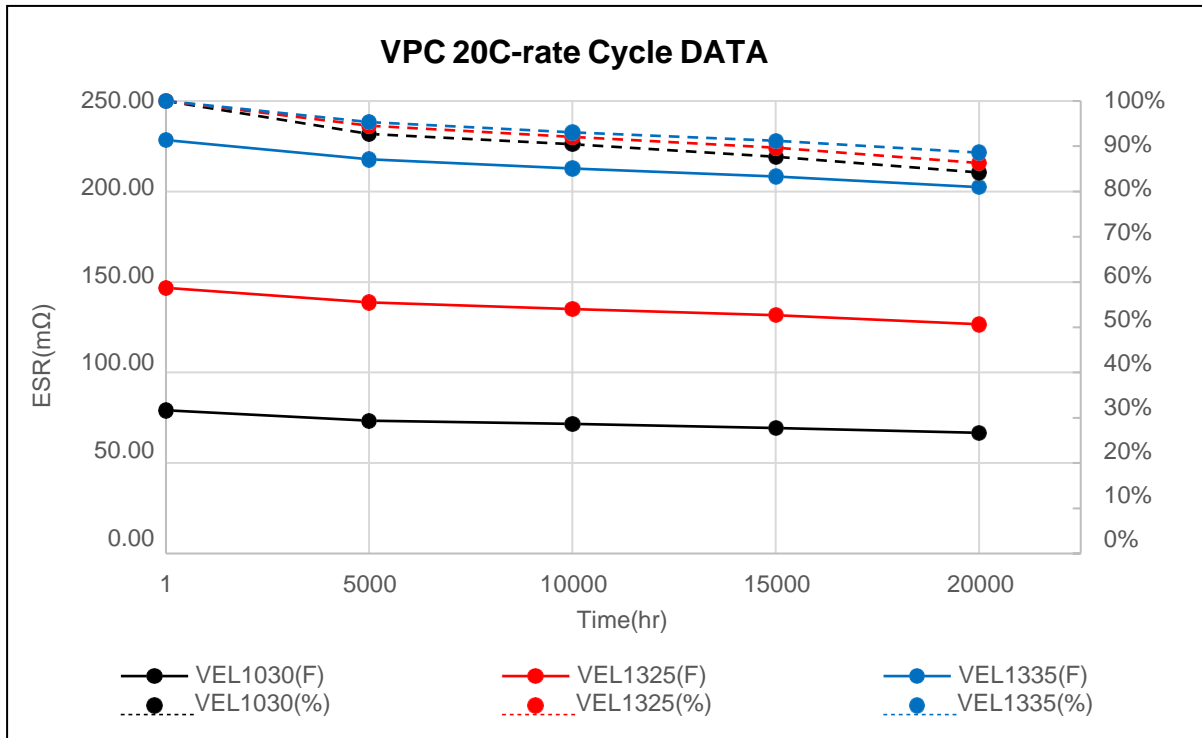
*Test Conditions: Room Temperature

*Measuring Conditions: Charge 3.8V, 72hr, Charge Protection Resistance 10Ω)



Q. ESR increase and Capacitance decrease after 30,000Cycle

A. Estimated lifetime is affected by operating temperature, Cycle-time per a day, charging current and discharging current. If the products are used in the room temperature, 20C-rate(Current), 3.8V – 2.5V(Voltage) DOD 100% condition, capacitance will be decreased about 20% from initial value and ESR will be increased about 10 ~ 15% from initial value.



Q. Estimated lifetime between 3.8V – 3.3V

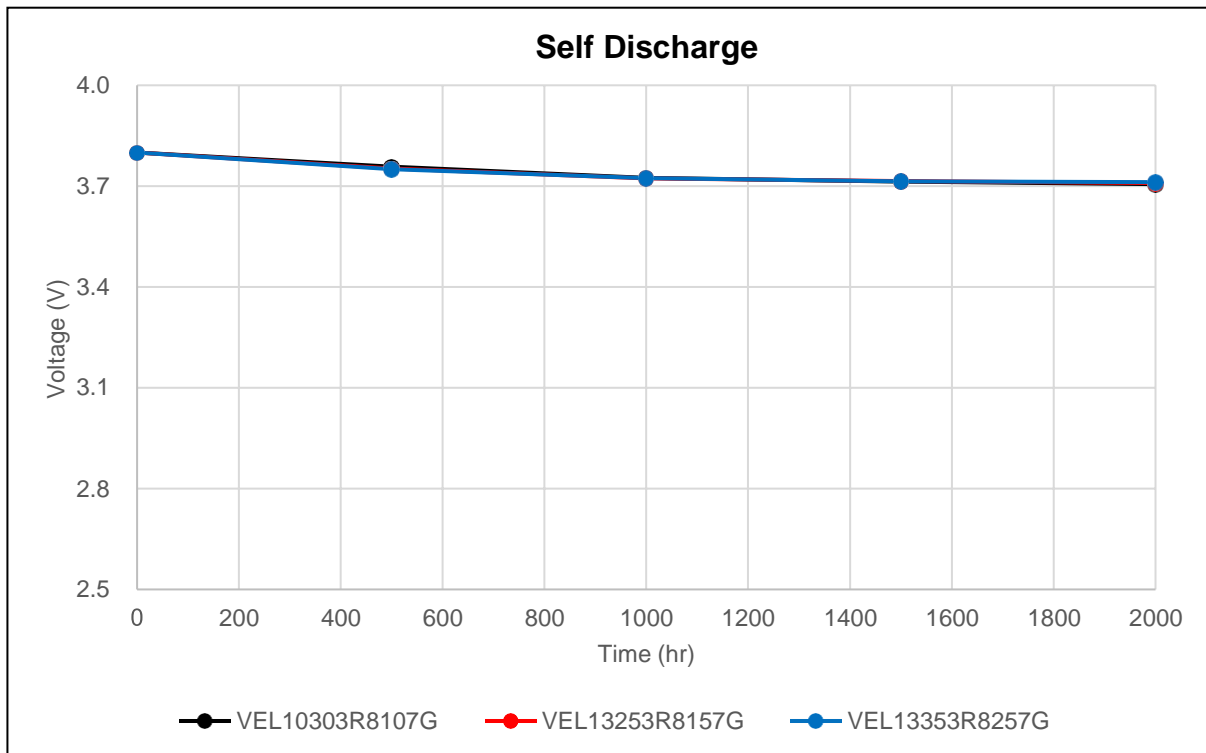
A. Estimated lifetime is affected by operating temperature, Cycle-time per a day, charging current and discharging current. If the products are used in 3.8V– 3.3V, as it will be used about half of DOD(3.8V – 2.5V), it will have 2 or 3 times more lifetime comparing to when the products are used on 3.8V – 2.5V.

Capacitance will be decreased about 20% from initial value and ESR will be increased about 20% from initial value. The lifetime will be estimated depends on the operating conditions.

Q. Self Discharging time which will be decreased up to 30%

A. After 2,000hours, self-discharging is about -0.1V, and like EDLC, VEL is also using “Farad” to designate capacitance, after 2,000hours capacitance is decreased about 10%.

But, as VEL is shipped to be charged under 3.65V to be connected LiSoCl2, mainly



Q. Meaning of Li/SOCI2 Battery System

A. It means that VEL series is parallel connected with LiSoCl2 Battery to support Transient Minimum Voltage corresponding output of LiSoCl2 Battery.

* * *



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