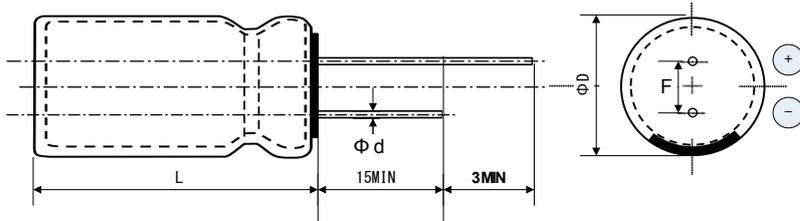


Spec Sheet

Part No. : VLCRS3R8206MG



Part No.	Part Dimension(mm)			
	ϕD	L	ϕd	F
VLCRS3R8206MG	$\phi 10.0 \pm 0.5$	30 ± 2	$\phi 0.6 \pm 0.05$	5.0 ± 0.5

Products characteristics table

Nominal Capacitance	20F
Max. Usable Voltage1	3.8V(at -30 to +70°C)
Max. Usable Voltage2	3.5V(at -30 to +85°C)
Min. Operating Voltage1	2.2V(at -30 to +70°C)
Min. Operating Voltage2	2.5V(at -30 to +85°C)
Initial Internal Resistance(DCR)	250mΩ Max
Initial Capacitance	20F ±15%
Operating Temp. Range1	-30 to +70°C
Operating Temp. Range2	-30 to +85°C
Soldering	Manual

The data is reference only. Electrical characteristics vary depending on environment or measurement condition.
 VINATech Co., Ltd. reserves the right to make change to the data at any time without notice.
 Before making final selection, please check product specification.

Technical Data of VLCRS3R8206MG

•Specification Chart

Table 1 - Specification
Measurement

•Performance

Initial discharging characteristics	Fig.1
Temperature characteristics	
Capacitance	Fig. 2
DCR	Fig. 3
Floating charge characteristics	
Capacitance	Fig. 4
DCR	Fig. 5
Cycle characteristics	
Capacitance	Fig. 6
DCR	Fig. 7
Self discharge characteristics	Fig. 8
Leak current	Fig. 9

27 Jul. 2017
VINATech Co., Ltd.

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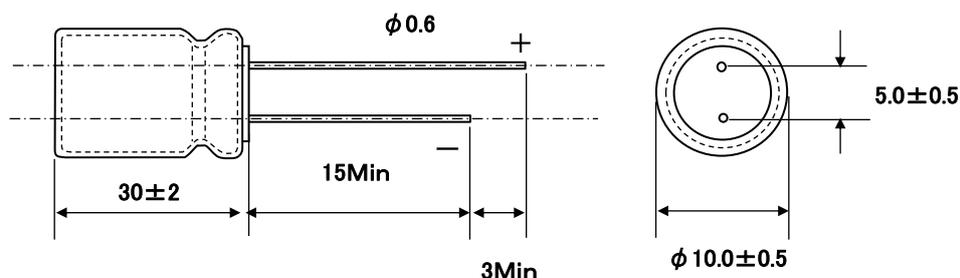
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Table-1 VLRS3R8206MG Specification

Items		Specification	Test condition
1	Usable temperature range	-30~+85°C	
2	Upper limit operating voltage	3.8V	Within the range of usable temperature (3.5V when over 70°C)
3	Lower limit operating voltage	2.2V	Within the range of usable temperature (2.5V when over 70°C)
4	Initial characteristics	Capacitance	17F to 23F
		DCR	Under 250mΩ
5	Temperature characteristics	-30°C Capacitance	Over 10.2F
		DCR	Under 4000mΩ
		70°C,85°C Capacitance	Over 17F
		DCR	Under 250mΩ
6	Floating charge characteristics	Capacitance	Over 13.6F
		DCR	Under 375mΩ
7	Floating charge characteristics	Capacitance	Over 13.6F
		DCR	Under 375mΩ
8	Heat cycle characteristics	Capacitance	Over 13.6F
		DCR	Under 375mΩ
9	Floating charge characteristics in high temperature and high humidity	Capacitance	Over 13.6F
		DCR	Under 375mΩ

[Measurement]



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VLCRS3R8206MG Initial discharge characteristics

Test condition

Ambient Temp. : 25±5°C

Charge : 3.8V-30minutes Max 0.2A

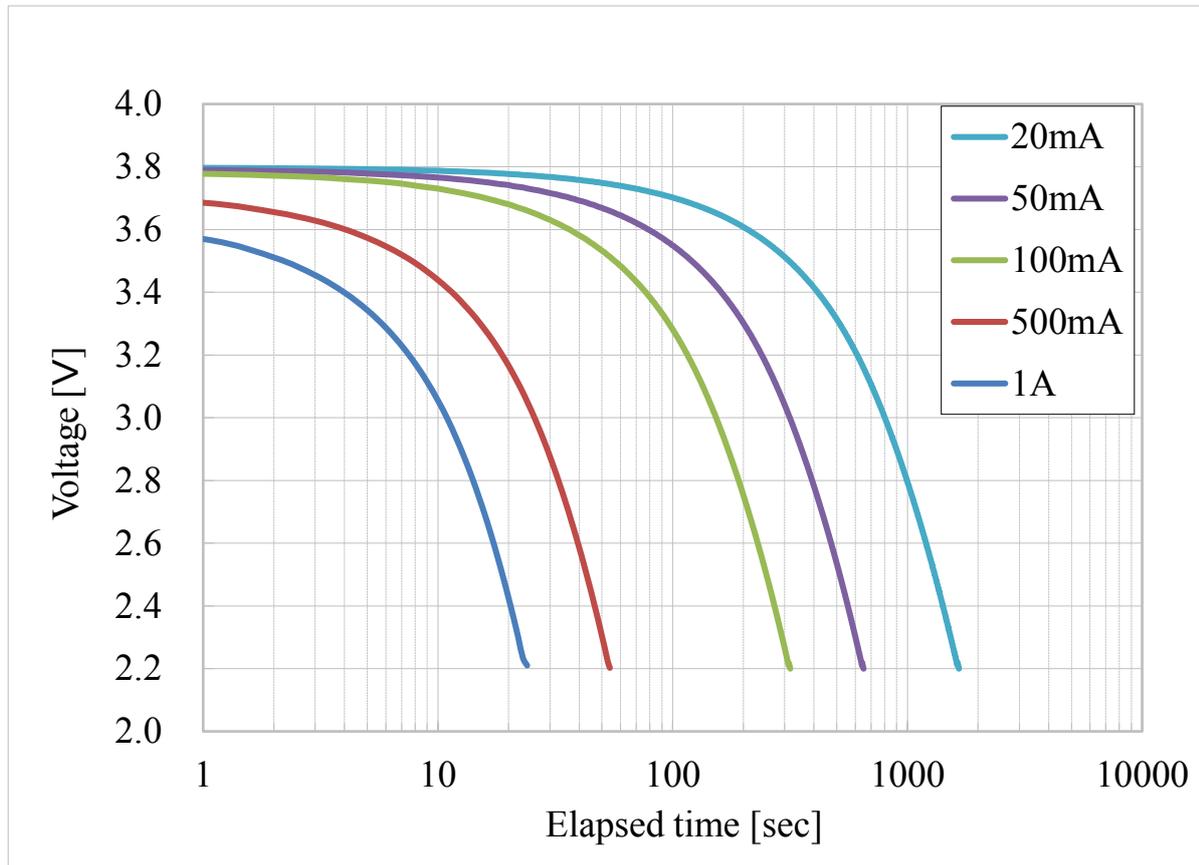


Fig.1 Initial discharge characteristics

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VLCRS3R8206MG Temperature characteristics

Items		Specifications	Test condition
-30°C	Capacitance	Over 10.2F	After keeping a cell with 2hr or more each temperature. (3.5V when over 70°C)
	DCR	Under 4000mΩ	
70°C, 85°C	Capacitance	Over 17F	
	DCR	Under 250mΩ	

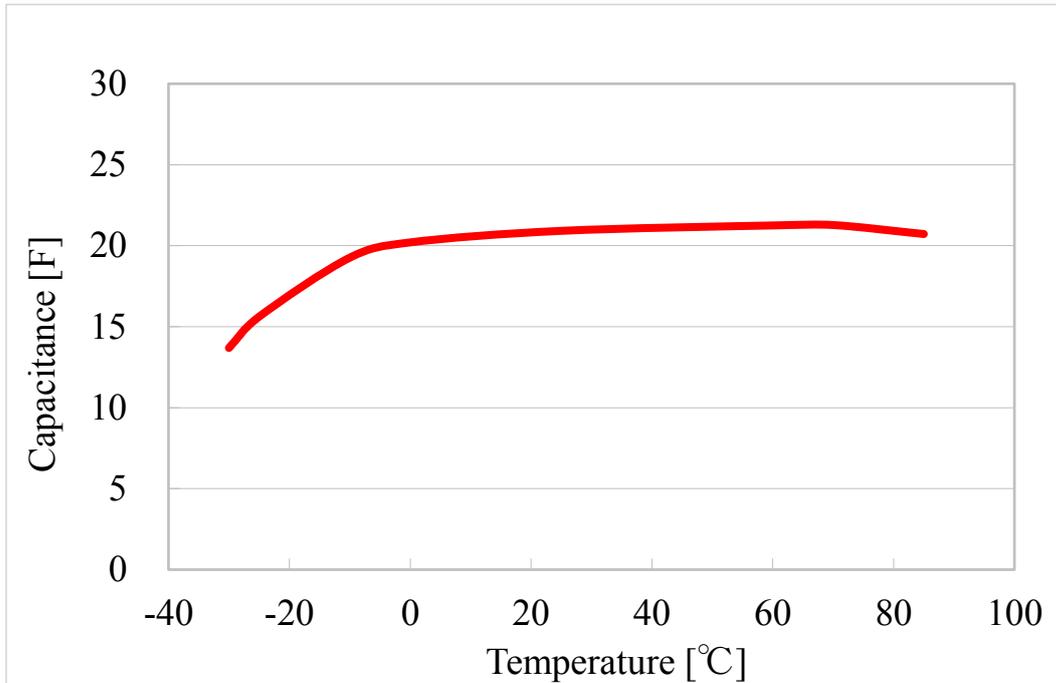


Fig. 2 Temperature characteristics (Capacitance change)

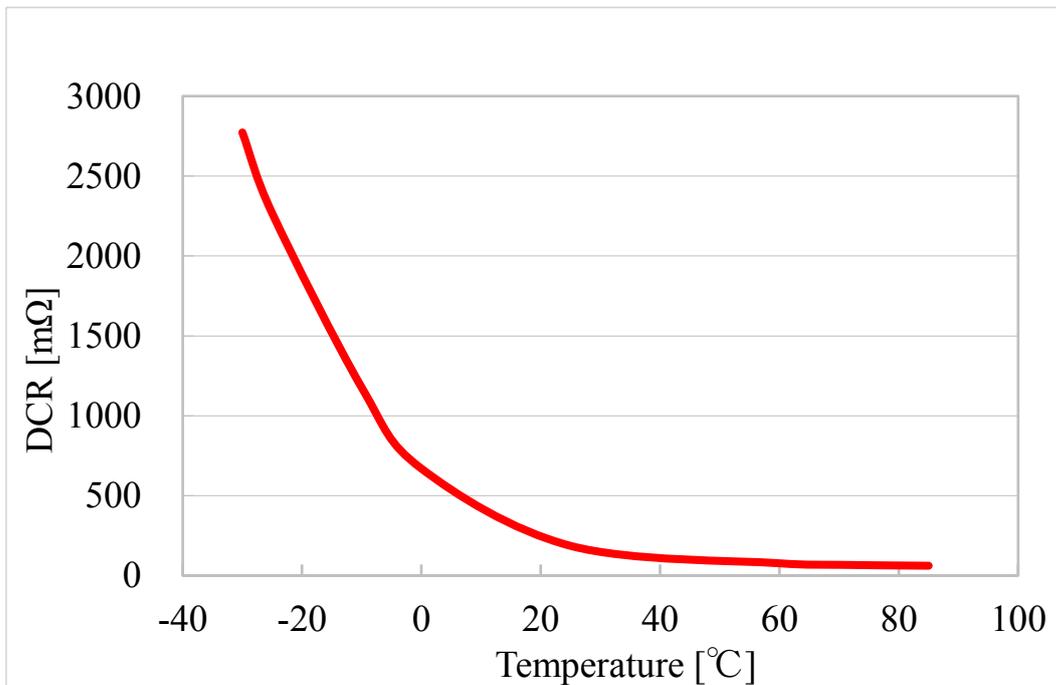


Fig. 3 Temperature characteristics (DCR change)

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VLCRS3R8206MG Floating charge characteristics

Items	Floating specification	Test condition
Capacitance	Over 13.6F	Temperature : 70±2°C Measure at normal temperature and normal humidity after apply 3.8V for 1000 hours
DCR	Under 375mΩ	
Appearance	No significant defect	

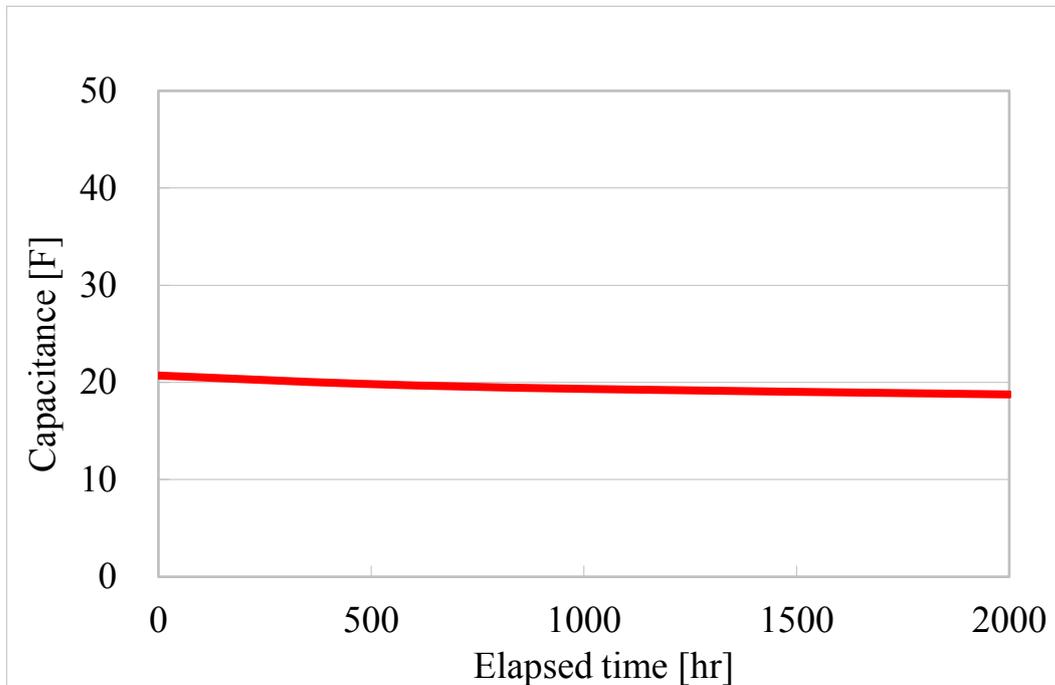


Fig. 4 Floating charge characteristics (Capacitance change)

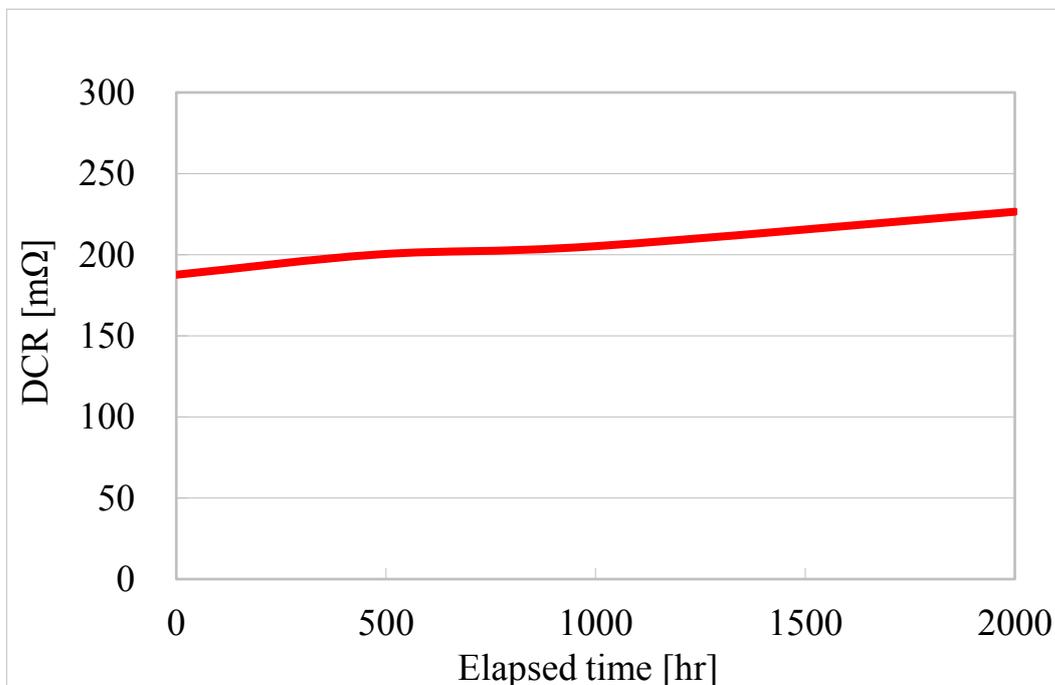


Fig. 5 Floating charge characteristics (DCR change)

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VLCRS3R8206MG Charge/Discharge cycle characteristics

※This item is not a guaranty item.

Items	Cycle specification	Test condition
Capacitance		Ambient temp. : 25±5°C
DCR		Charge/Discharge cycle : 10000Times
Appearance		Charge : 3.8V-60sec Max 1A Discharge : 1A Cut off Volt. 2.2V

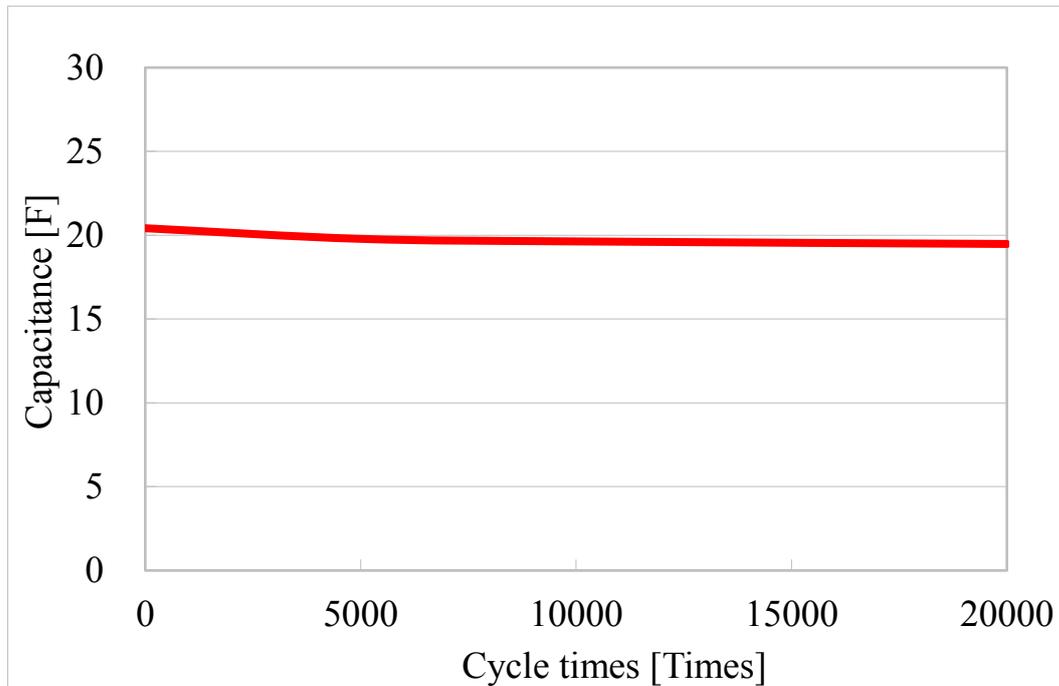


Fig. 6 Charge/Discharge cycle characteristics (Capacitance change)

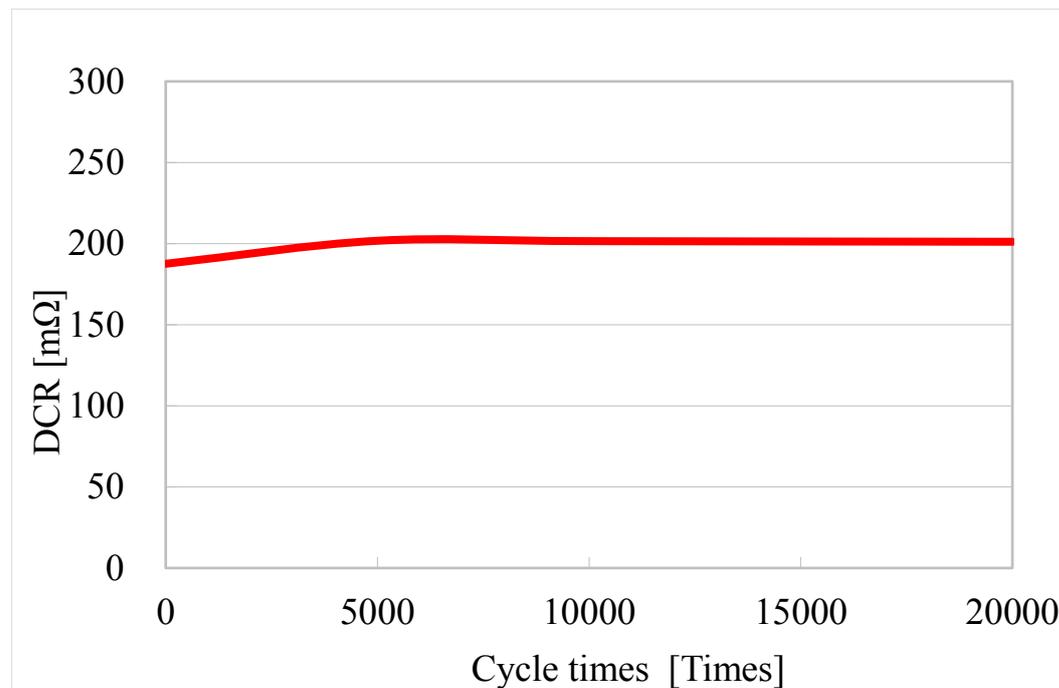


Fig. 7 Charge/Discharge cycle characteristics (DCR change)

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VLCRS3R8206MG Self discharge / Leak current

※This item is not a guaranty item.

Test Condition : Charge 25°C 3.8V 24hr

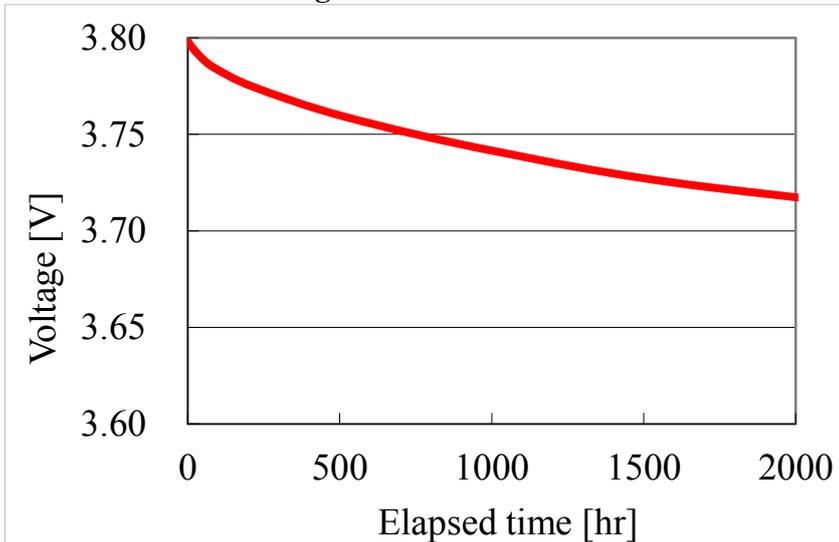


Fig. 8 Self discharge characteristics (Voltage change)

Test condition : Follow JIS C5160-1, 3.8V 25°C

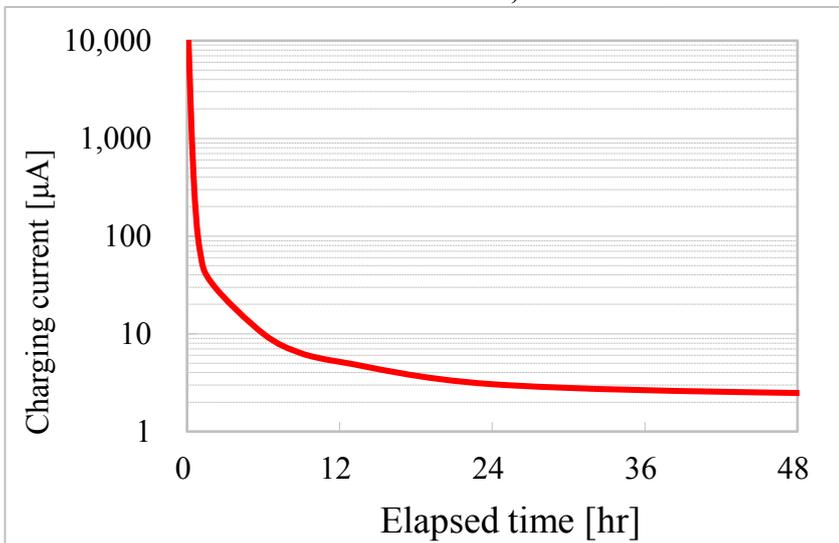


Fig.9 Leak current

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