



# Reliability Data

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Snap-In Aluminum Electrolytic Capacitors

## SMQ series

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Test:

Endurance  
Shelf life  
Temperature Characteristics  
Frequency Characteristics

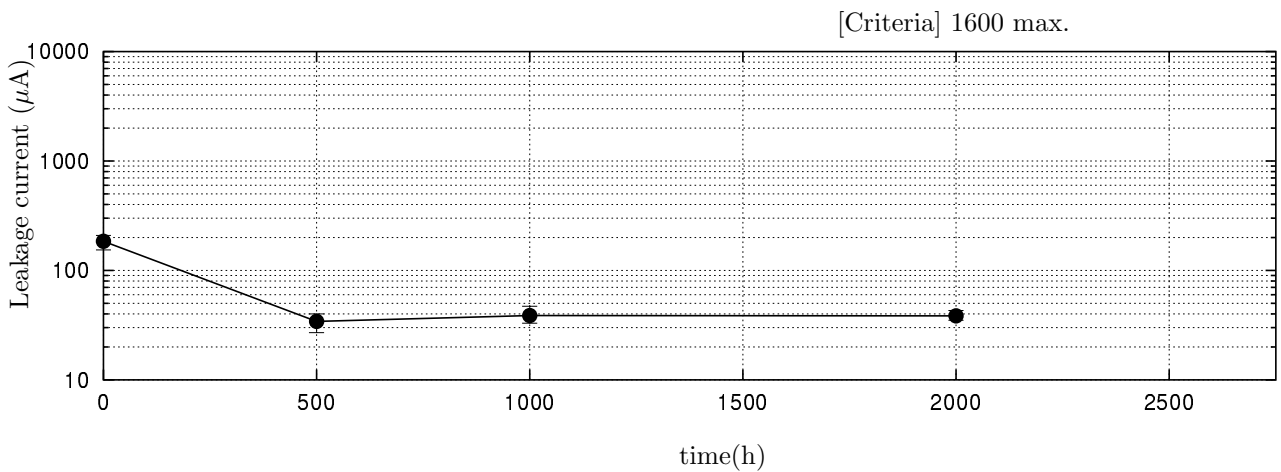
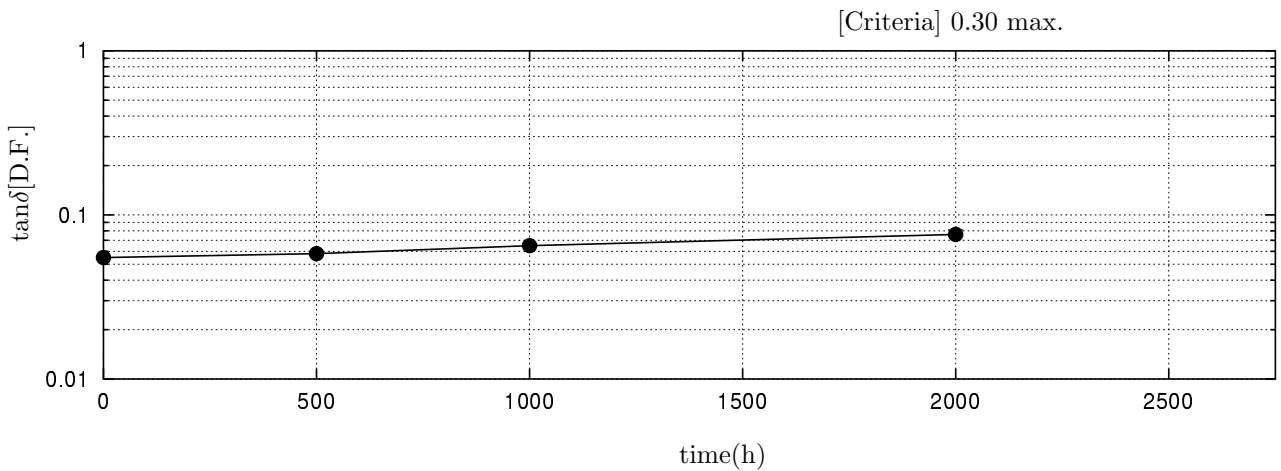
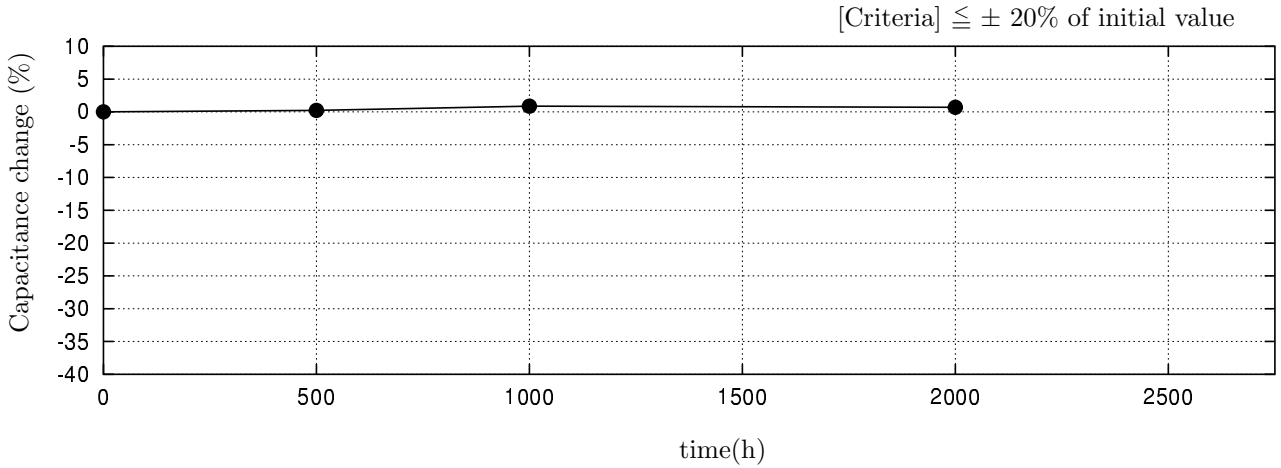
Item:

ESMQ161VSN182MQ45S (160V1800 $\mu$ F, $\phi$ 25.4 $\times$ 45L)  
ESMQ401VSN471MQ50S (400V470 $\mu$ F, $\phi$ 25.4 $\times$ 50L)  
ESMQ451VSN391MR40S (450V390 $\mu$ F, $\phi$ 30 $\times$ 40L)

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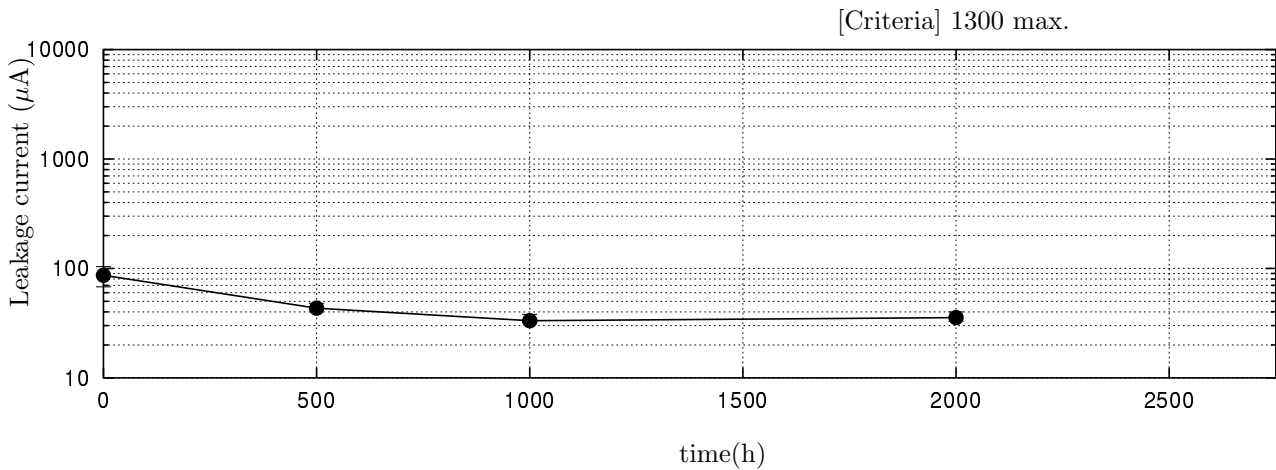
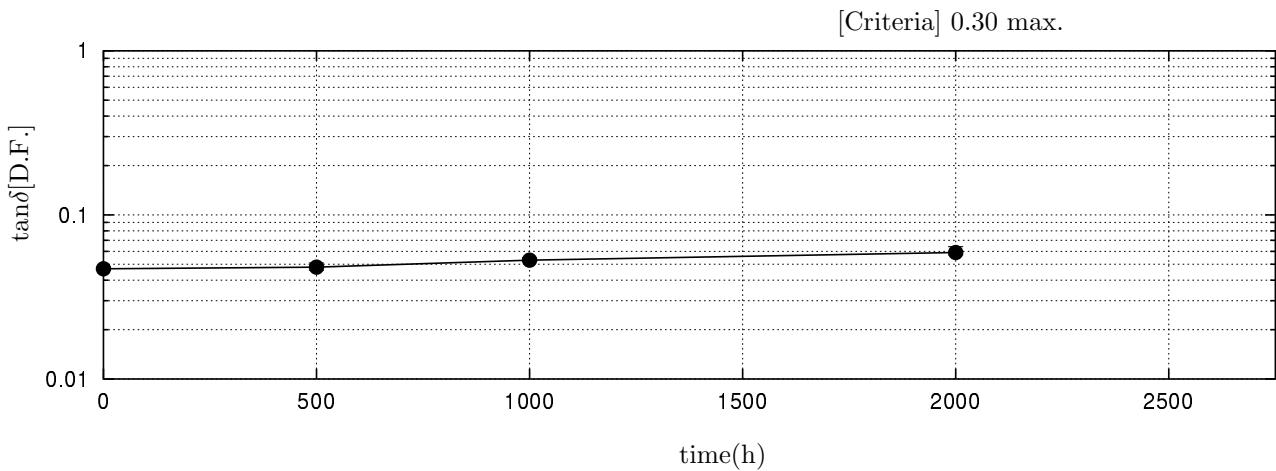
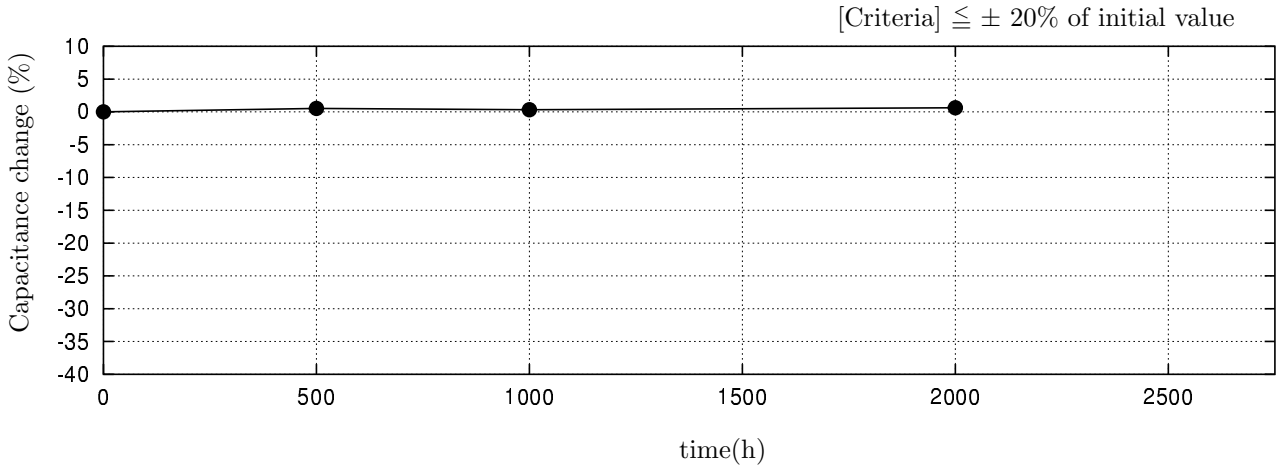
Aluminum Electrolytic Capacitor Reliability data

Test name		Endurance			
Test temp.	85 (°C)	Leakage Current (Volt)	160 (V)	Measurement LCR meter	4284A
Applied Voltage	(V)	Leakage Current (Time)	5 (min)	Measurement Freq.	120 (Hz)
Ripple Current	4.20 (Arms)	Leakage Current (Temp.)	20 (°C)	Measurement Temp.	20 (°C)
Ripple freq.	120 (Hz)			Specified Period of Time	2000 (h)
Mark	Part No.	Rated Voltage(V)	Nominal Capacitance(μF)	Case Size(φ × L)mm	Tested qty(pcs)
●	ESMQ161VSN182MQ45S	160	1800	φ 25.4×45 L	6



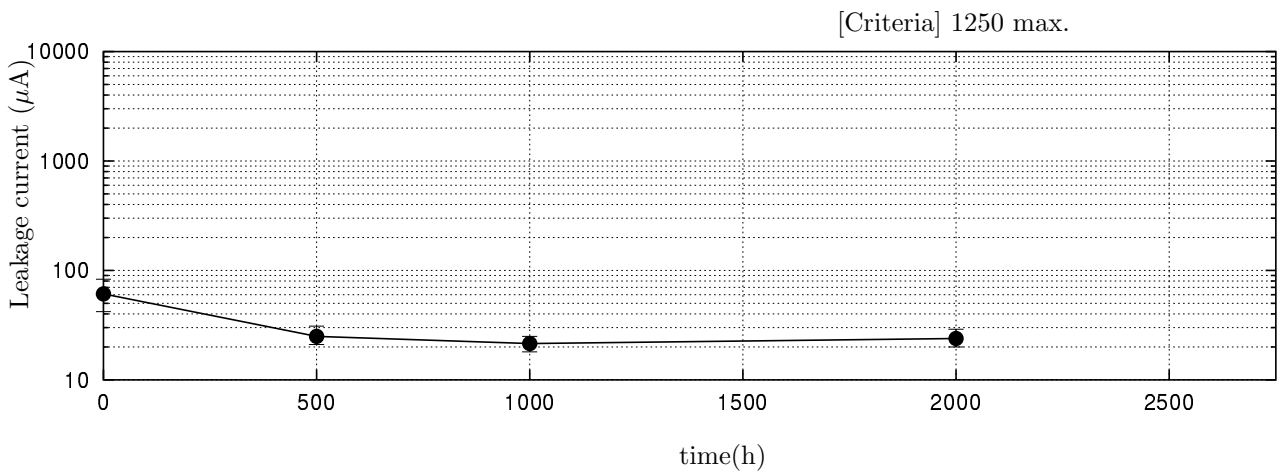
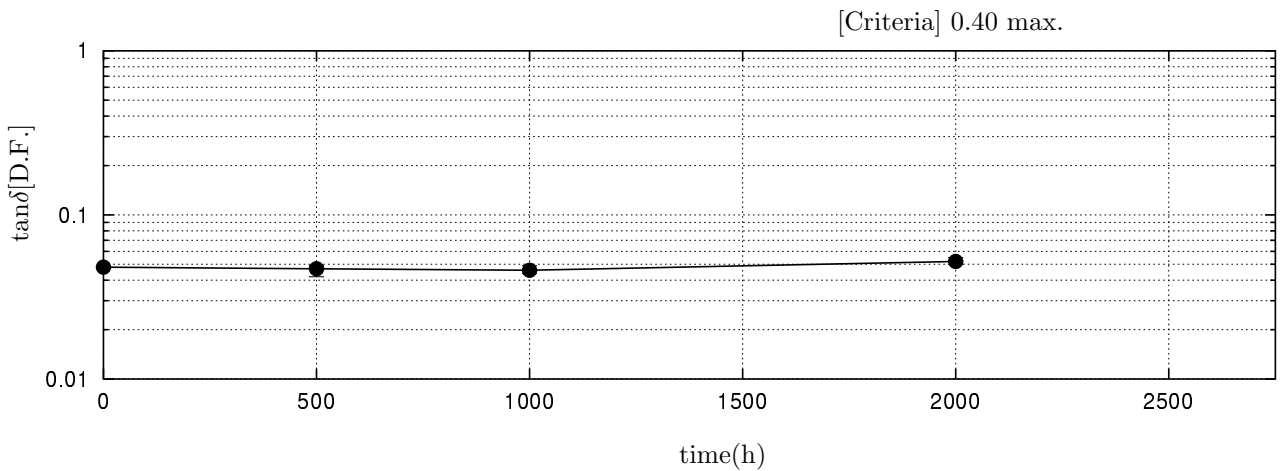
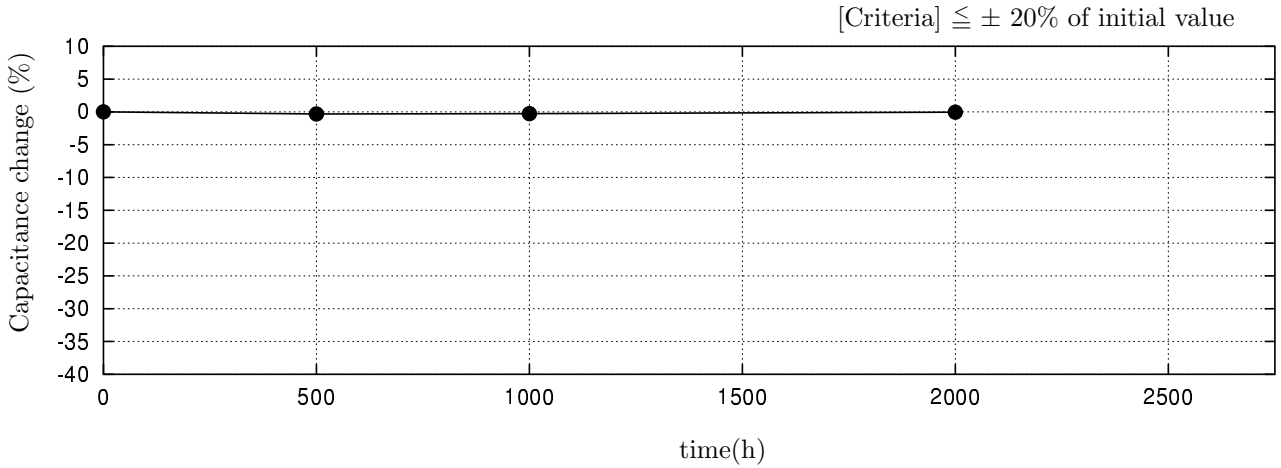
Aluminum Electrolytic Capacitor Reliability data

Test name		Endurance			
Test temp.	85 (°C)	Leakage Current (Volt)	400 (V)	Measurement LCR meter	4284A
Applied Voltage	(V)	Leakage Current (Time)	5 (min)	Measurement Freq.	120 (Hz)
Ripple Current	2.39 (Arms)	Leakage Current (Temp.)	20 (°C)	Measurement Temp.	20 (°C)
Ripple freq.	120 (Hz)			Specified Period of Time	2000 (h)
Mark	Part No.	Rated Voltage(V)	Nominal Capacitance(μF)	Case Size(φ × L)mm	Tested qty(pcs)
●	ESMQ401VSN471MQ50S	400	470	φ 25.4×50 L	6



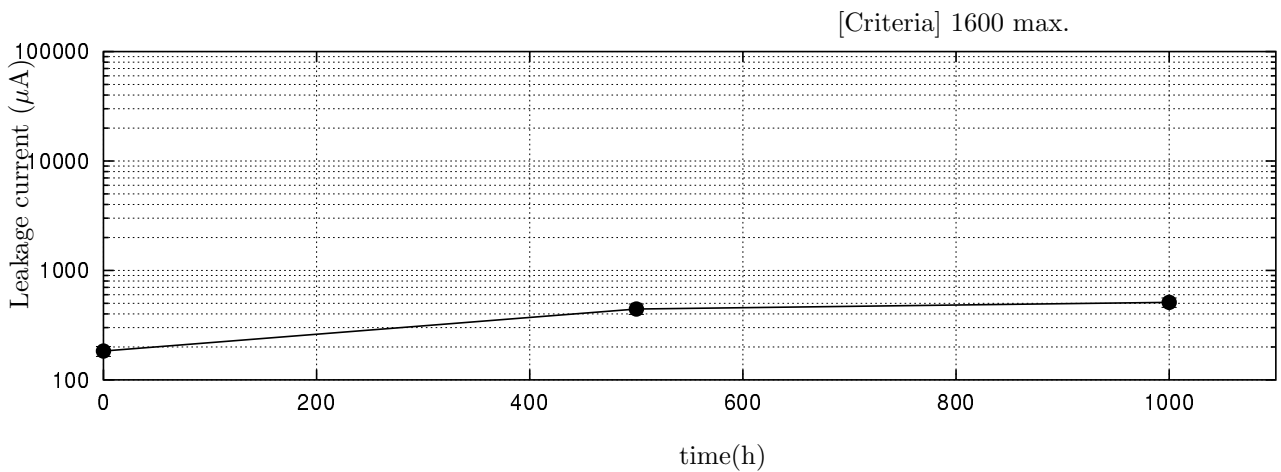
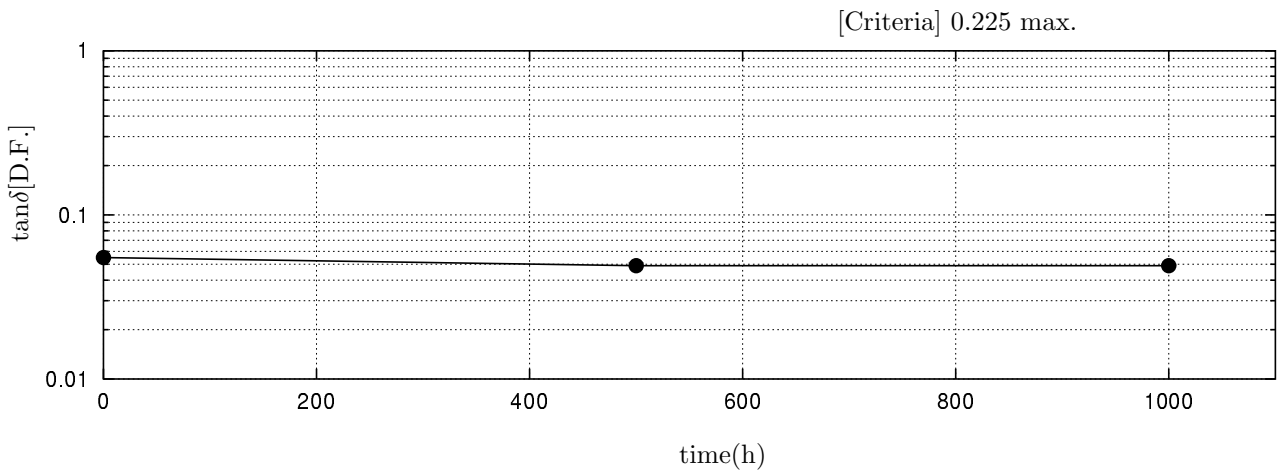
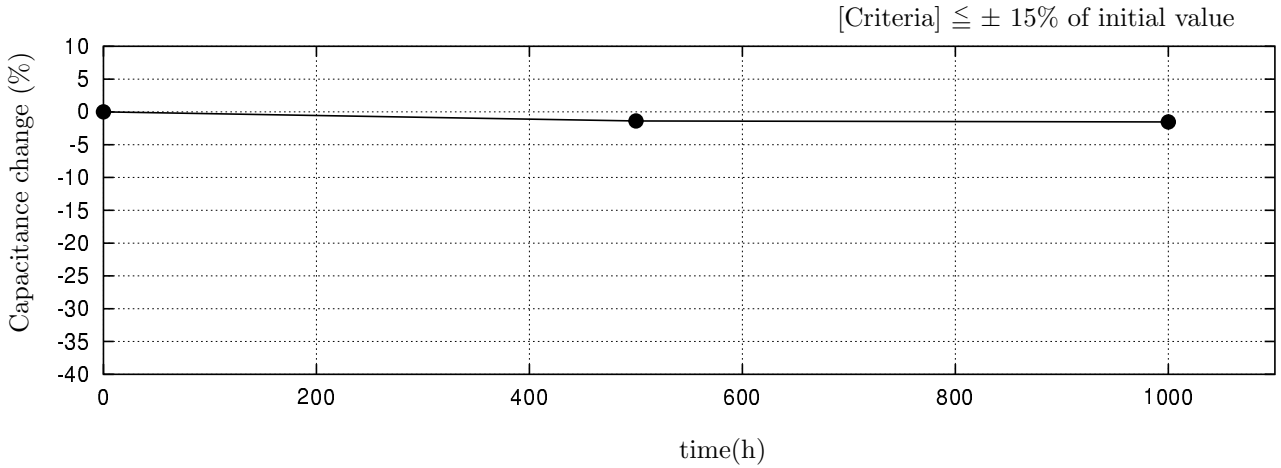
Aluminum Electrolytic Capacitor Reliability data

Test name		Endurance			
Test temp.	85 (°C)	Leakage Current (Volt)	450 (V)	Measurement LCR meter	4284A
Applied Voltage	(V)	Leakage Current (Time)	5 (min)	Measurement Freq.	120 (Hz)
Ripple Current	2.24 (Arms)	Leakage Current (Temp.)	20 (°C)	Measurement Temp.	20 (°C)
Ripple freq.	120 (Hz)			Specified Period of Time	2000 (h)
Mark	Part No.	Rated Voltage(V)	Nominal Capacitance(μF)	Case Size(φ × L)mm	Tested qty(pcs)
●	ESMQ451VSN391MR40S	450	390	φ 30×40 L	6



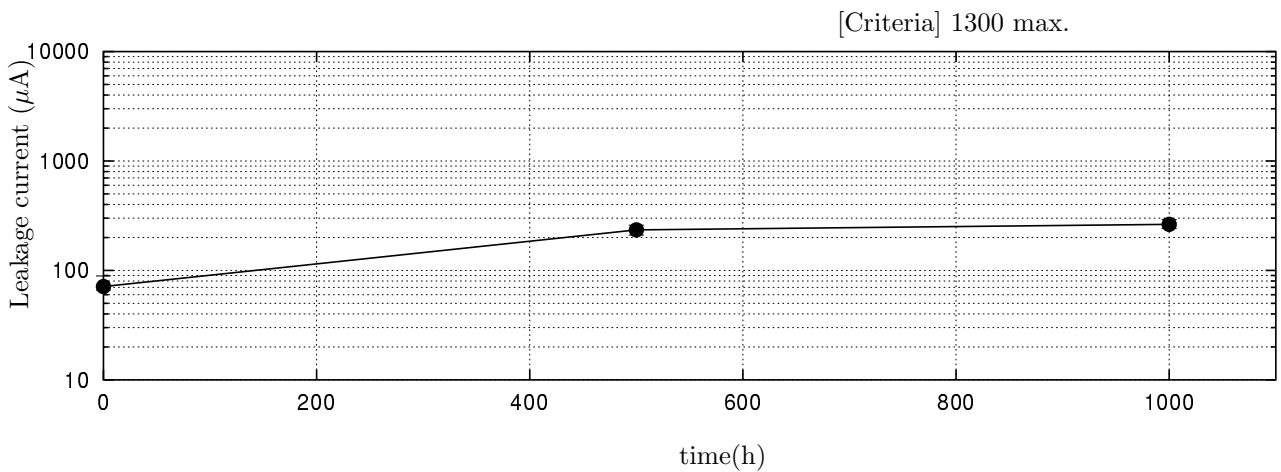
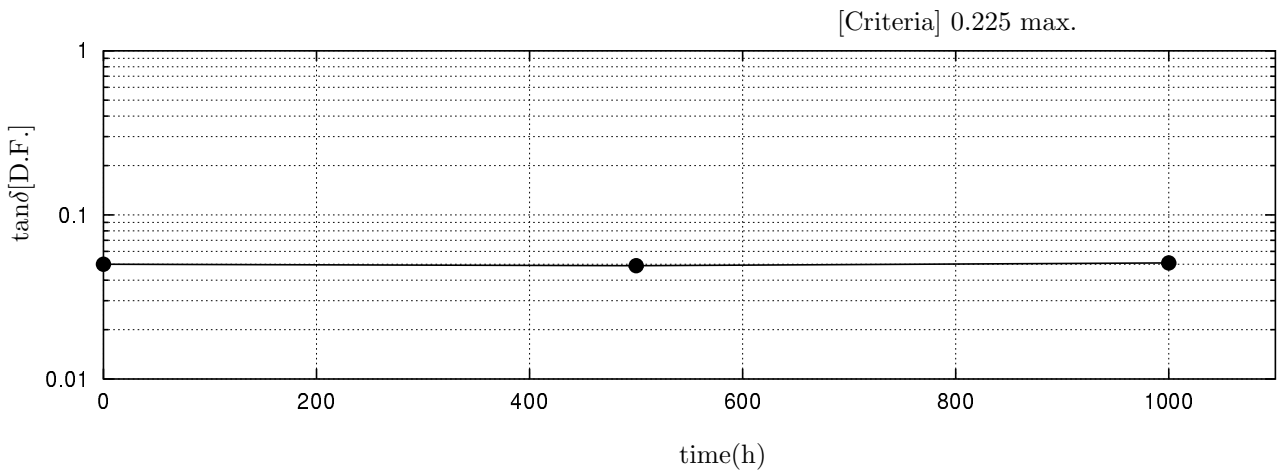
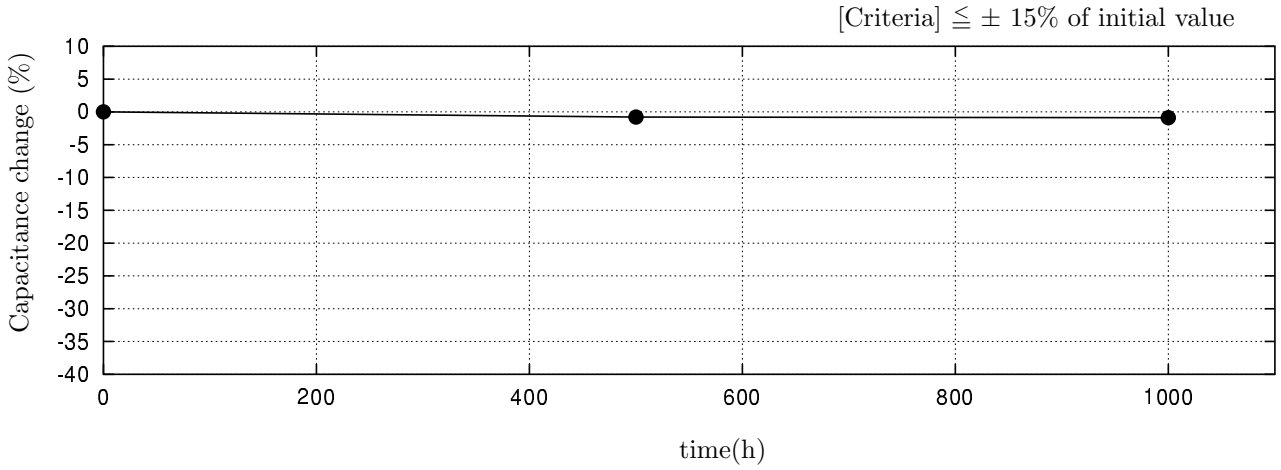
Aluminum Electrolytic Capacitor Reliability data

Test name		Shelf life			
Test temp.	85 (°C)	Leakage Current (Volt)	160 (V)	Measurement LCR meter	4284A
Applied Voltage	(V)	Leakage Current (Time)	5 (min)	Measurement Freq.	120 (Hz)
Ripple Current	(Arms)	Leakage Current (Temp.)	20 (°C)	Measurement Temp.	20 (°C)
Ripple freq.	(Hz)			Specified Period of Time	1000 (h)
Mark	Part No.	Rated Voltage(V)	Nominal Capacitance(μF)	Case Size(φ × L)mm	Tested qty(pcs)
●	ESMQ161VSN182MQ45S	160	1800	φ 25.4×45 L	10



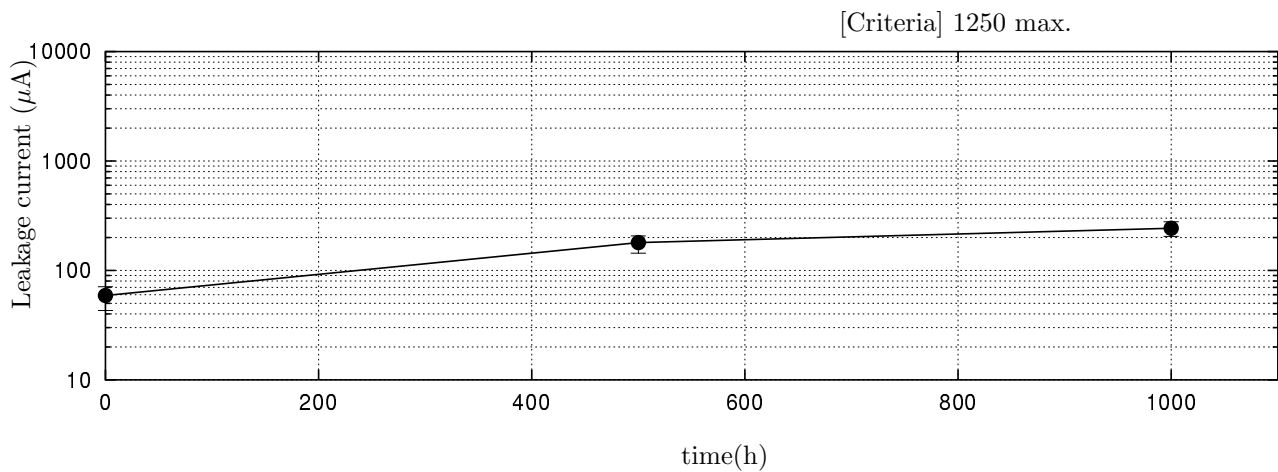
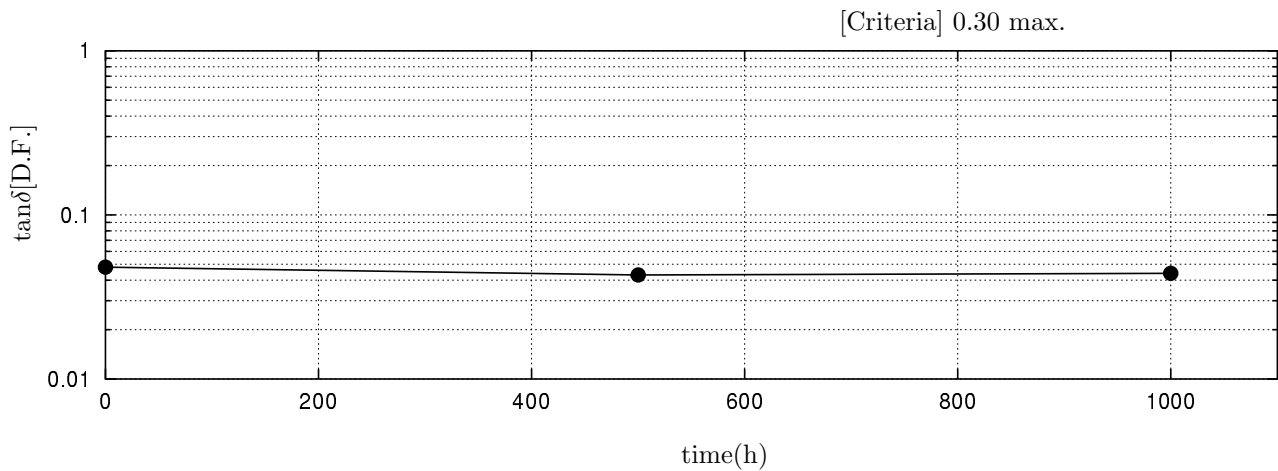
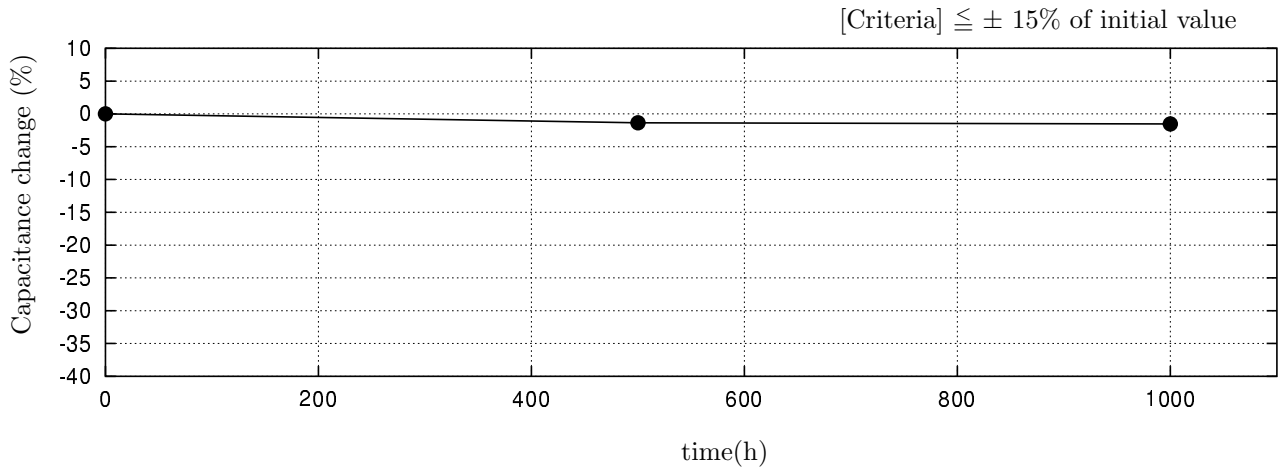
Aluminum Electrolytic Capacitor Reliability data

Test name		Shelf life			
Test temp.	85 (°C)	Leakage Current (Volt)	400 (V)	Measurement LCR meter	4284A
Applied Voltage	(V)	Leakage Current (Time)	5 (min)	Measurement Freq.	120 (Hz)
Ripple Current	(Arms)	Leakage Current (Temp.)	20 (°C)	Measurement Temp.	20 (°C)
Ripple freq.	(Hz)			Specified Period of Time	1000 (h)
Mark	Part No.	Rated Voltage(V)	Nominal Capacitance(μF)	Case Size(φ × L)mm	Tested qty(pcs)
●	ESMQ401VSN471MQ50S	400	470	φ 25.4×50 L	10



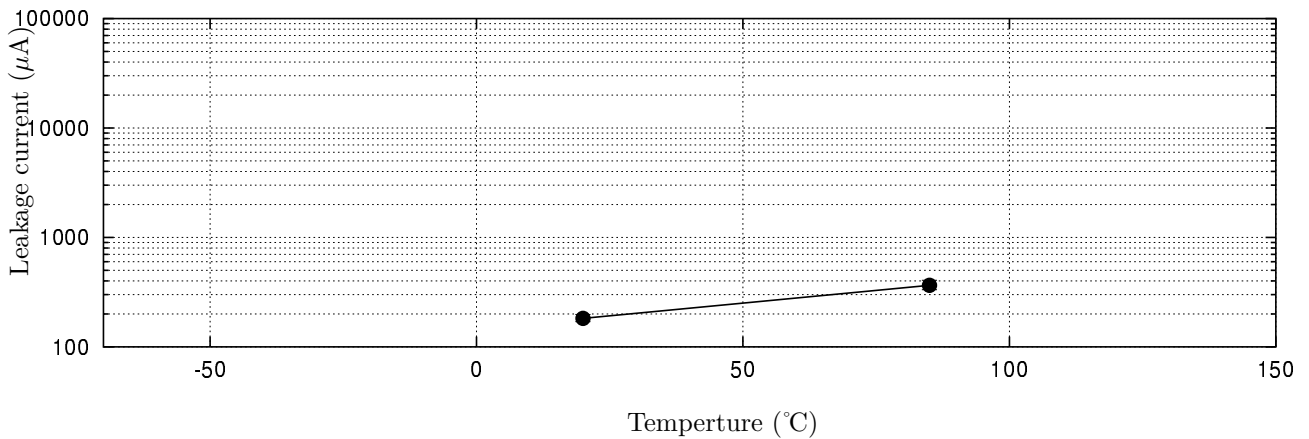
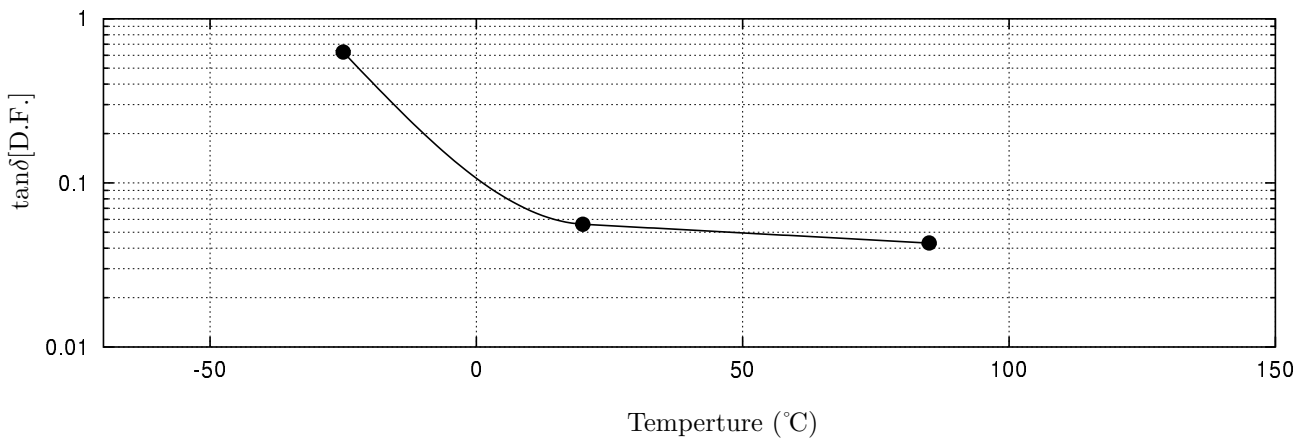
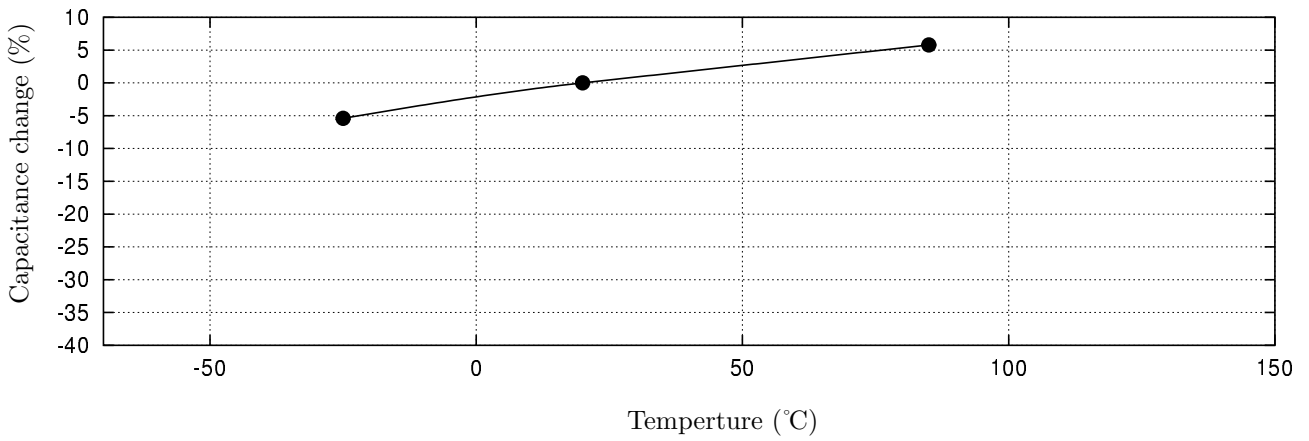
## Aluminum Electrolytic Capacitor Reliability data

Test name		Shelf life			
Test temp.	85 (°C)	Leakage Current (Volt)	450 (V)	Measurement LCR meter	4284A
Applied Voltage	(V)	Leakage Current (Time)	5 (min)	Measurement Freq.	120 (Hz)
Ripple Current	(Arms)	Leakage Current (Temp.)	20 (°C)	Measurement Temp.	20 (°C)
Ripple freq.	(Hz)			Specified Period of Time	1000 (h)
Mark	Part No.	Rated Voltage(V)	Nominal Capacitance( $\mu$ F)	Case Size( $\phi \times L$ )mm	Tested qty(pcs)
●	ESMQ451VSN391MR40S	450	390	$\phi 30 \times 40$ L	10



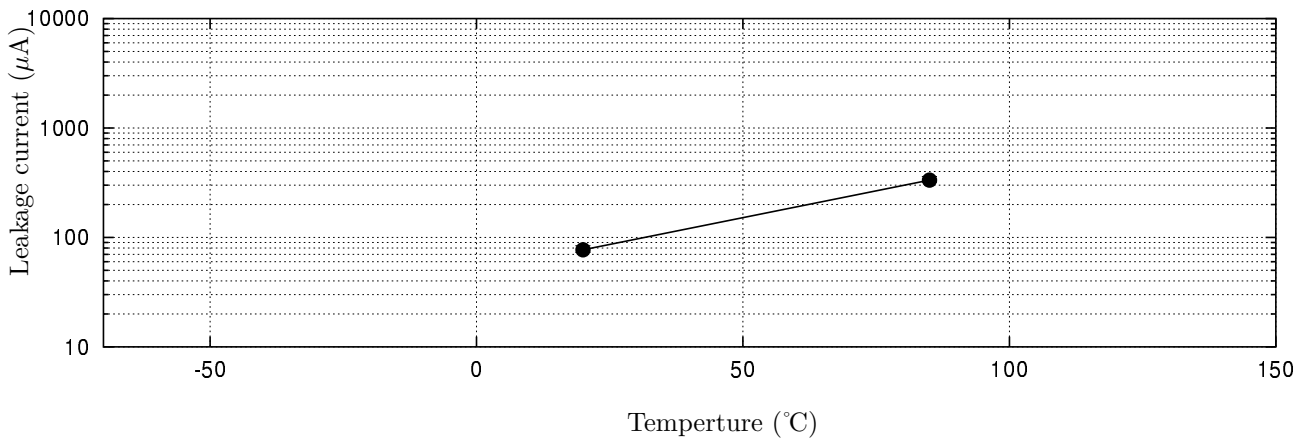
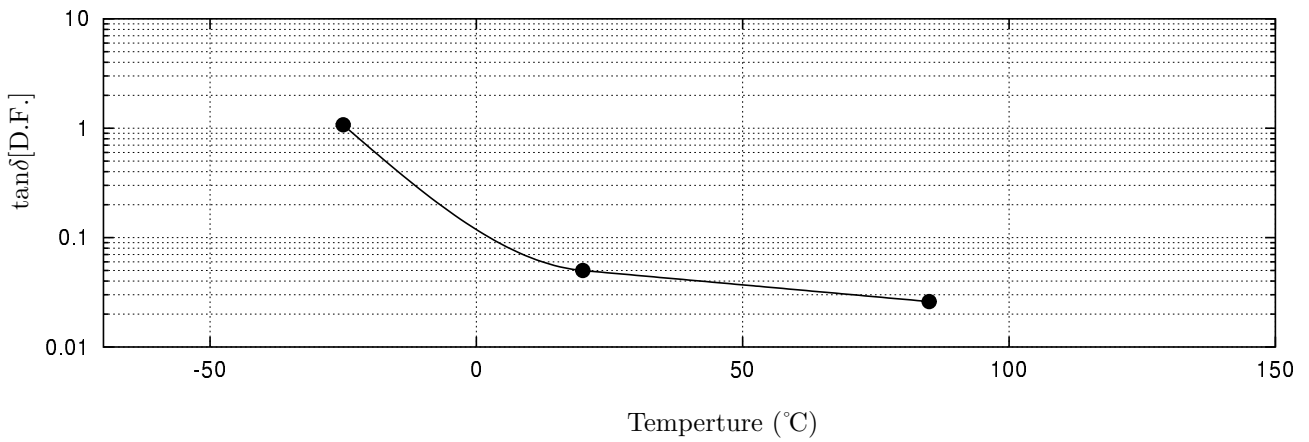
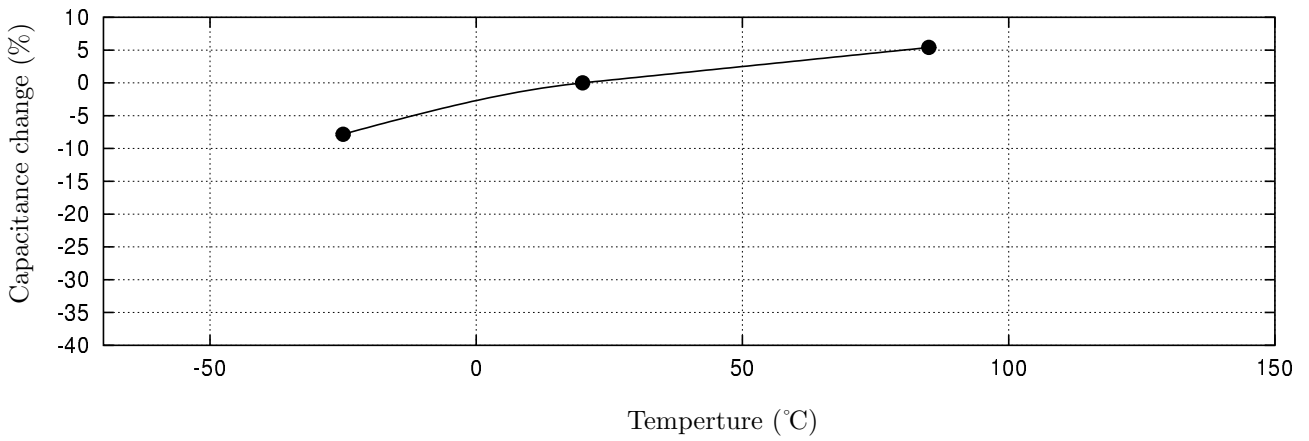
Aluminum Electrolytic Capacitor Reliability data

Test name					
<b>Temperature Characteristics</b>					
Test temp. -25 ~ 85 (°C)		Leakage Current (Volt) 160 (V)	Measurement LCR meter 4284A		
		Leakage Current (Time) 5 (min)	Measurement Freq. 120 (Hz)		
Mark	Part No.	Rated Voltage(V)	Nominal Capacitance(μF)	Case Size(φ × L)mm	Tested qty(pcs)
●	ESMQ161VSN182MQ45S	160	1800	φ 25.4×45 L	3



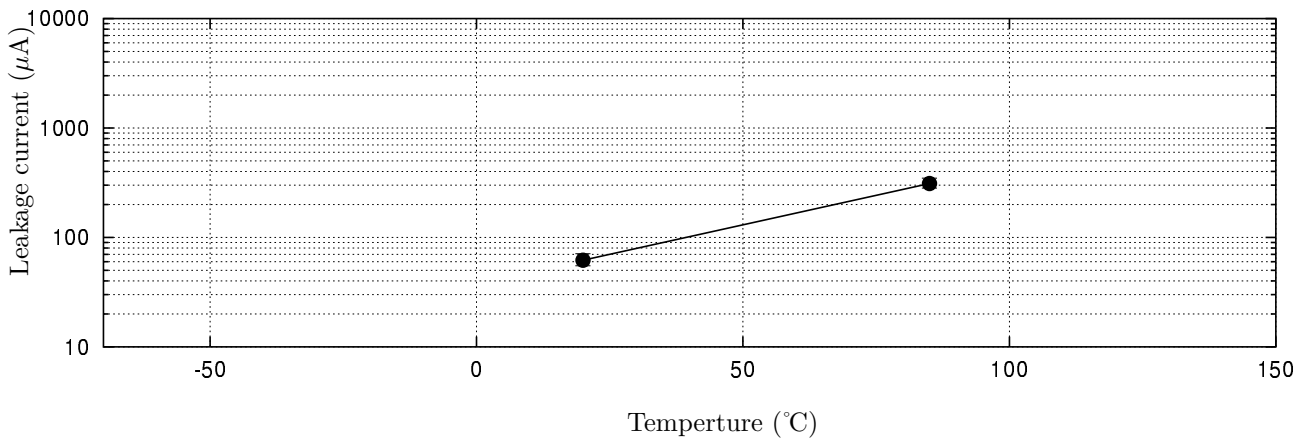
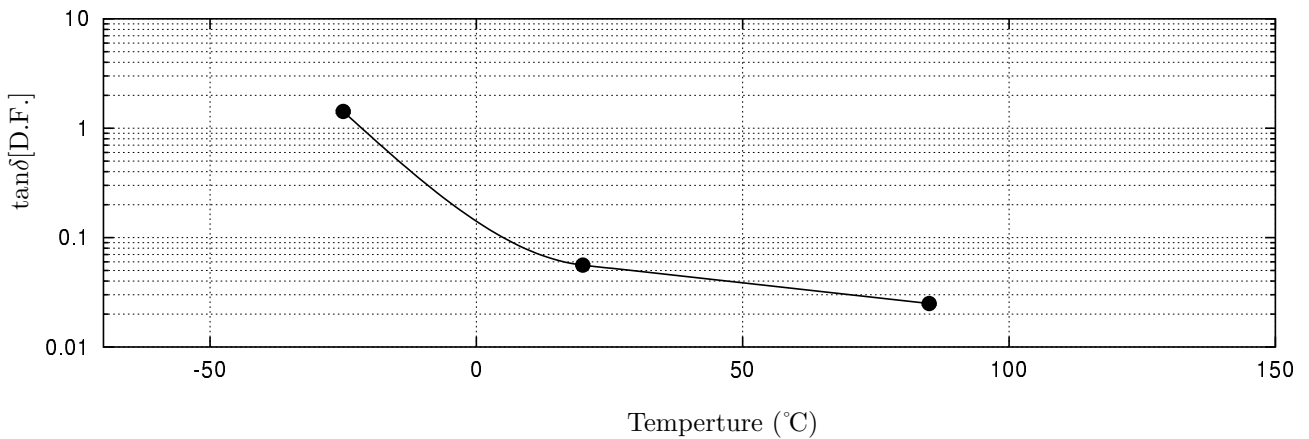
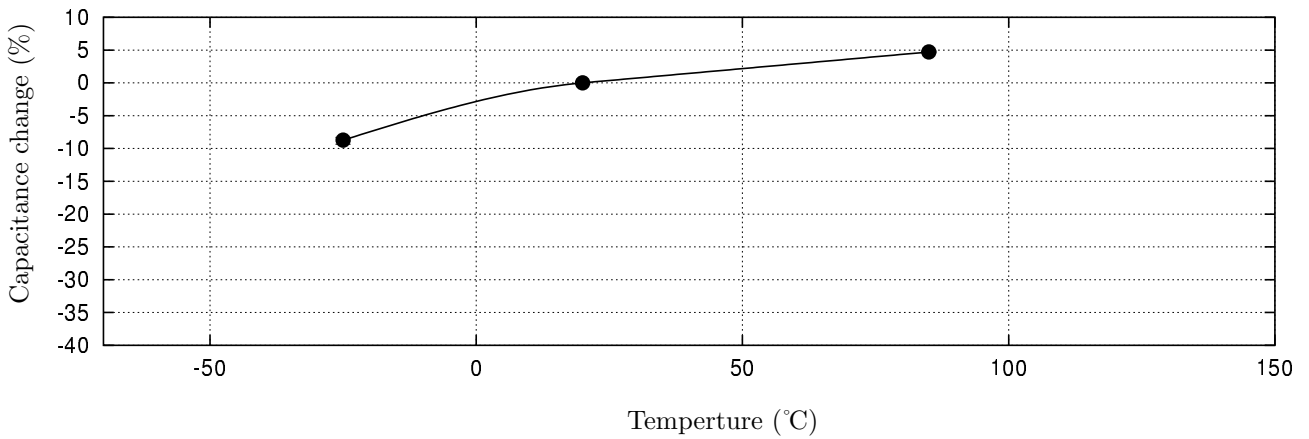
Aluminum Electrolytic Capacitor Reliability data

Test name					
<b>Temperature Characteristics</b>					
Test temp. -25 ~ 85 (°C)		Leakage Current (Volt) 400 (V)	Measurement LCR meter 4284A		
		Leakage Current (Time) 5 (min)	Measurement Freq. 120 (Hz)		
Mark	Part No.	Rated Voltage(V)	Nominal Capacitance(μF)	Case Size(φ × L)mm	Tested qty(pcs)
●	ESMQ401VSN471MQ50S	400	470	φ 25.4×50 L	3



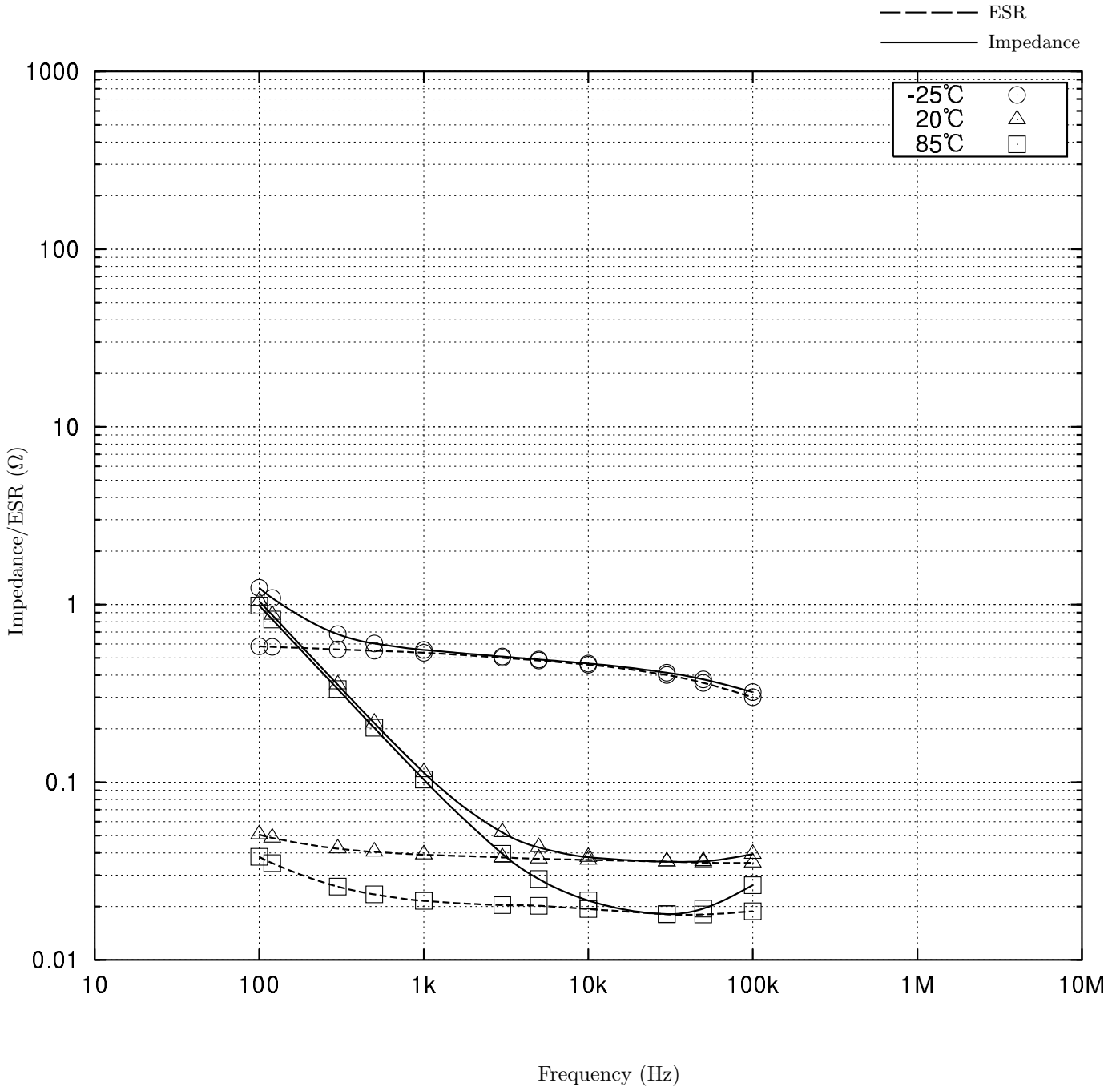
Aluminum Electrolytic Capacitor Reliability data

Test name					
<b>Temperature Characteristics</b>					
Test temp. -25 ~ 85 (°C)		Leakage Current (Volt) 450 (V)	Measurement LCR meter 4284A		
		Leakage Current (Time) 5 (min)	Measurement Freq. 120 (Hz)		
Mark	Part No.	Rated Voltage(V)	Nominal Capacitance(μF)	Case Size(φ × L)mm	Tested qty(pcs)
●	ESMQ451VSN391MR40S	450	390	φ 30×40 L	3



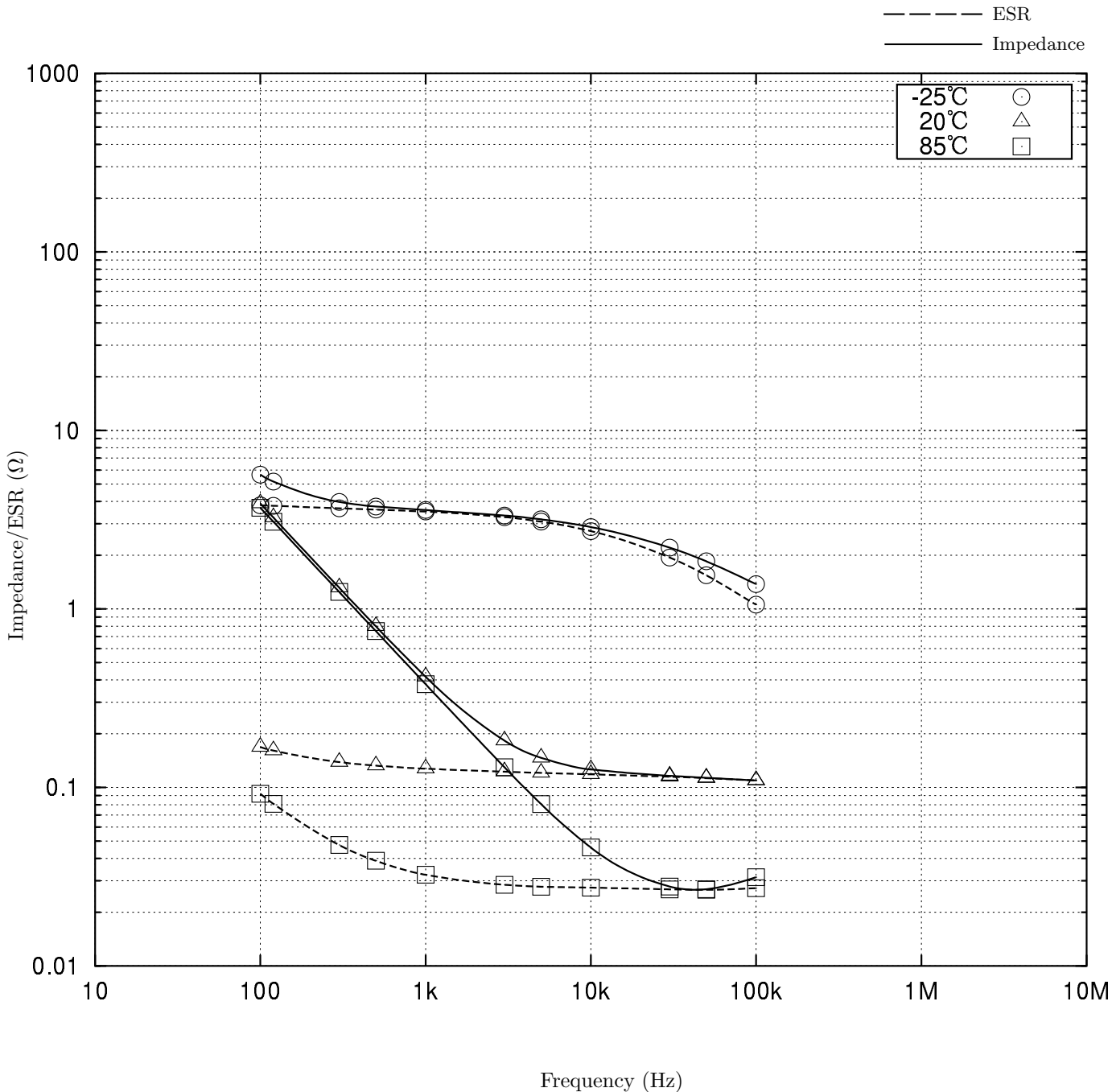
Aluminum Electrolytic Capacitor Reliability data

Test name					Frequency-Impedance/ESR Characteristics				
Test temp.					-25 ~ 85 (°C) Measurement LCR meter 4284A				
Part No.		Rated Voltage(V)		Nominal Capacitance(μF)		Case Size(φ × L)mm		Tested qty(pcs)	
ESMQ161VSN182MQ45S		160		1800		φ 25.4×45 L		3	



Aluminum Electrolytic Capacitor Reliability data

Test name <b>Frequency-Impedance/ESR Characteristics</b>				
Test temp. -25 ~ 85 (°C) Measurement LCR meter 4284A				
Part No.	Rated Voltage(V)	Nominal Capacitance(μF)	Case Size(φ × L)mm	Tested qty(pcs)
ESMQ401VSN471MQ50S	400	470	φ 25.4×50 L	3



Aluminum Electrolytic Capacitor Reliability data

Test name <b>Frequency-Impedance/ESR Characteristics</b>				
Test temp. -25 ~ 85 (°C) Measurement LCR meter 4284A				
Part No.	Rated Voltage(V)	Nominal Capacitance(μF)	Case Size(φ × L)mm	Tested qty(pcs)
ESMQ451VSN391MR40S	450	390	φ 30×40 L	3

