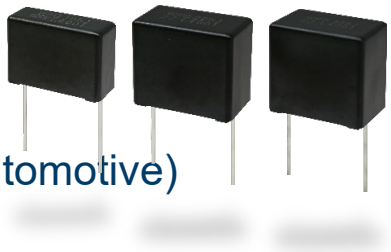
Panasonic INDUSTRY

NEW



Plastic Film Capacitors

Metallized Polypropylene Film Capacitor (For Automotive)

ECWFJ series

Non-inductive construction using metallized polypropylene film with flame retardant plastic case.

Features

- High safety (with safety function)
- High thermal shock resistance (800 V, 1100 V : -55℃ ⇔ 85℃, 1000 cycles)
- Flame-retardant plastic case and non-combustible resin
- AEC-Q200 compliant
- RoHS compliant

Recommended applications

- DC/DC, AC/DC converter circuit in xEV
- High frequency and high current circuits

Explanation of part number

■ Lead pitch : 27.5 mm

1	2	3	4	5	6	7	8	9	10	11	12
E	C	W	F	J							
Product code		Dielectric & construction			Rated voltage		Capacitance			Cap. Tol.	Suffix 2

Code	R.voltage [DC]
80	800 V
1B	1100 V

R. volt. code	Code	Cap. Tol.
80, 1B	J	±5 %

Code	Lead form
Blank	Straight
A	Cut lead

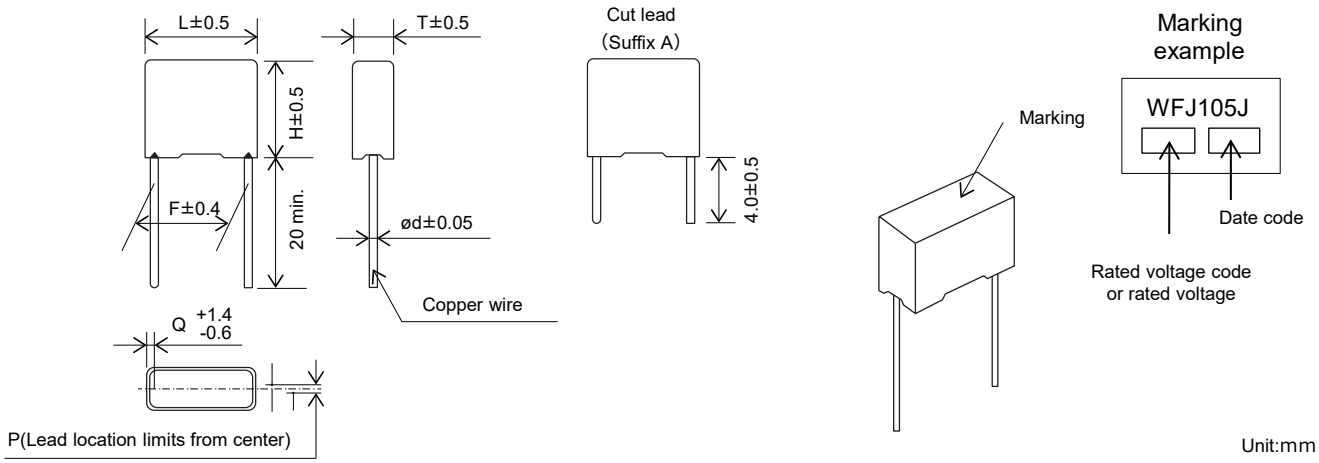
Specifications

Category temperature range (Including temperature-rise on unit surface)	−40 ℃ to +110 ℃		
Upper limit temperature that can be used	The capacitor surface temperature should reduce voltage and current when exceeds 70 °C and is below 110 °C. (Refer to the derating by temperature graph on applicable specifications.)		
Rated voltage [DC]	800 V, 1100 V （Rated voltage will be reduced if the temperature exceeds 85 °C）		
Capacitance range	800 V	Lead pitch：27.5 mm	2.0 μF to 8.0 μF
	1100 V	Lead pitch：27.5 mm	1.0 μF to 5.0 μF
Capacitance tolerance	±5% (J)		
Dissipation factor (tan δ)	tan δ ≦ 0.1 % (20 ℃, 1 kHz)		
Withstand voltage	Between terminals： Rated voltage (V) × 150 % 60 s		
Insulation resistance (IR)	IR ≧ 3,000 MΩ･uF (20 ℃, 500 V [DC], 60 s)		

＊ In case of applying voltage in alternating current (50 Hz or 60 Hz sine wave) to a capacitor with DC rated voltage, please refer to the page of “Permissible voltage (R.M.S) in alternating current corresponding to DC rated voltage”.

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.
Should a safety concern arise regarding this product, please be sure to contact us immediately.

Dimensions



Rating · Dimensions · Quantity

■ Rated voltage [DC] : 800 V, Capacitance tolerance : ±5 %(J)

Part No	Cap. (μF)	Dimensions (mm)							Permissible current *1 (Arms)	ESR*4 [Typ.]*2 (mΩ)	ESL*4 [Typ.]*3 (nH)	Min. order Q'ty (PCS)	
		L	T	H	F	ød	P	Q				Straight	Cut lead
ECWFJ80205J( )	2.0	31.5	10.5	21.0	27.5	0.8	0±1.0	2.0	4.2	18.0	16	300	300
ECWFJ80225J( )	2.2	31.5	10.5	21.0	27.5	0.8	0±1.0	2.0	4.5	16.5	16	300	300
ECWFJ80275J( )	2.7	31.5	12.0	24.5	27.5	0.8	0±1.0	2.0	5.0	13.6	19	200	250
ECWFJ80305J( )	3.0	31.5	12.0	24.5	27.5	0.8	0±1.0	2.0	5.3	12.4	15	200	250
ECWFJ80335J( )	3.3	31.5	12.0	24.5	27.5	0.8	0±1.0	2.0	5.6	11.3	14	200	250
ECWFJ80355J( )	3.5	31.5	13.5	28.5	27.5	0.8	0±1.0	2.0	5.8	10.7	21	150	150
ECWFJ80395J( )	3.9	31.5	13.5	28.5	27.5	0.8	0±1.0	2.0	6.2	9.7	20	150	150
ECWFJ80405J( )	4.0	31.5	13.5	28.5	27.5	0.8	0±1.0	2.0	6.2	9.5	20	150	150
ECWFJ80475J( )	4.7	31.5	13.5	28.5	27.5	0.8	0±1.0	2.0	6.8	8.2	14	150	150
ECWFJ80505J( )	5.0	31.5	16.0	29.5	27.5	0.8	0±1.0	2.0	7.1	7.7	18	150	100
ECWFJ80565J( )	5.6	31.5	16.0	29.5	27.5	0.8	0±1.0	2.0	7.5	7.0	15	150	100
ECWFJ80605J( )	6.0	31.5	16.0	29.5	27.5	0.8	0±1.0	2.0	7.8	6.5	15	150	100
ECWFJ80685J( )	6.8	31.5	17.5	32.5	27.5	0.8	0±1.0	2.0	8.3	5.8	14	150	100
ECWFJ80705J( )	7.0	31.5	17.5	32.5	27.5	0.8	0±1.0	2.0	8.5	5.7	14	150	100
ECWFJ80755J( )	7.5	31.5	17.5	32.5	27.5	0.8	0±1.0	2.0	8.8	5.3	13	150	100
ECWFJ80805J( )	8.0	31.5	17.5	32.5	27.5	0.8	0±1.0	2.0	9.1	5.0	11	150	100

∗( ) : Suffix for lead crimped

*1 : 70 ℃, 10 kHz *2 : 20 ℃, 10 kHz *3 : 20 ℃

*4 : This data is for reference only and does not guarantee the specifications of the product.

■ Rated voltage [DC] : 1100 V, Capacitance tolerance : ±5 %(J)

Part No	Cap. (μF)	Dimensions (mm)							Permissible current *1 (Arms)	ESR*4 [Typ.]*2 (mΩ)	ESL*4 [Typ.]*3 (nH)	Min. order Q'ty (PCS)	
		L	T	H	F	ød	P	Q				Straight	Cut lead
ECWFJ1B105J( )	1.0	31.5	10.5	21.0	27.5	0.8	0±1.0	2.0	3.3	36.5	17	300	300
ECWFJ1B155J( )	1.5	31.5	12.0	24.5	27.5	0.8	0±1.0	2.0	4.1	24.1	18	200	250
ECWFJ1B205J( )	2.0	31.5	12.0	24.5	27.5	0.8	0±1.0	2.0	4.8	18.7	13		
ECWFJ1B225J( )	2.2	31.5	13.5	28.5	27.5	0.8	0±1.0	2.0	5.1	17.1	19	150	150
ECWFJ1B305J( )	3.0	31.5	16.0	29.5	27.5	0.8	0±1.0	2.0	6.3	12.7	19		100
ECWFJ1B335J( )	3.3	31.5	16.0	29.5	27.5	0.8	0±1.0	2.0	6.7	11.5	17		
ECWFJ1B405J( )	4.0	31.5	17.5	32.5	27.5	0.8	0±1.0	2.0	7.5	9.6	19	100	
ECWFJ1B475J( )	4.7	31.5	18.5	35.0	27.5	0.8	0±1.0	2.0	8.3	8.2	18		
ECWFJ1B505J( )	5.0	31.5	18.5	35.0	27.5	0.8	0±1.0	2.0	8.6	7.7	15		

∗( ) : Suffix for lead crimped

*1 : 70 ℃, 10 kHz *2 : 20 ℃, 10 kHz *3 : 20 ℃

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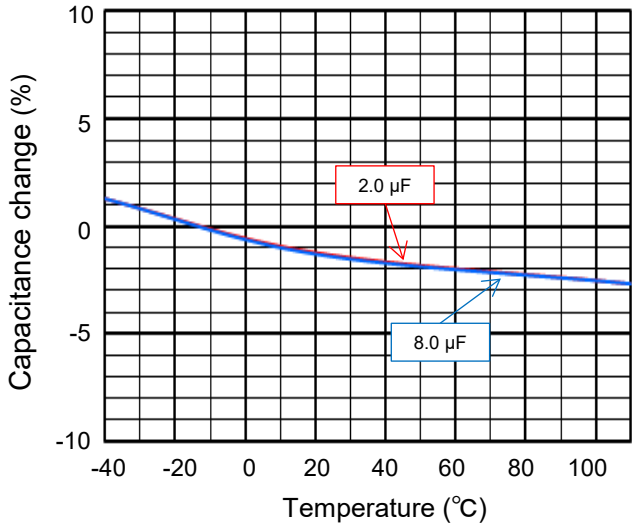
Characteristics data

■ **Rated voltage [DC] : 800 V**

Electrical characteristics <Typical data >

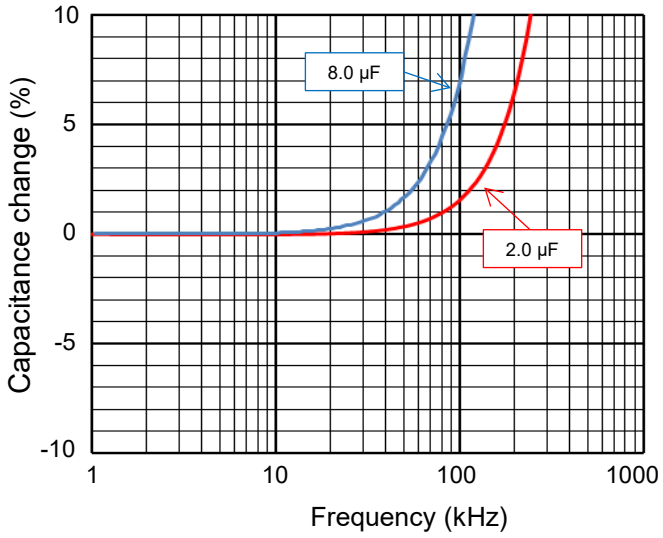
Temperature characteristics

at 1 kHz **[Capacitance change]**

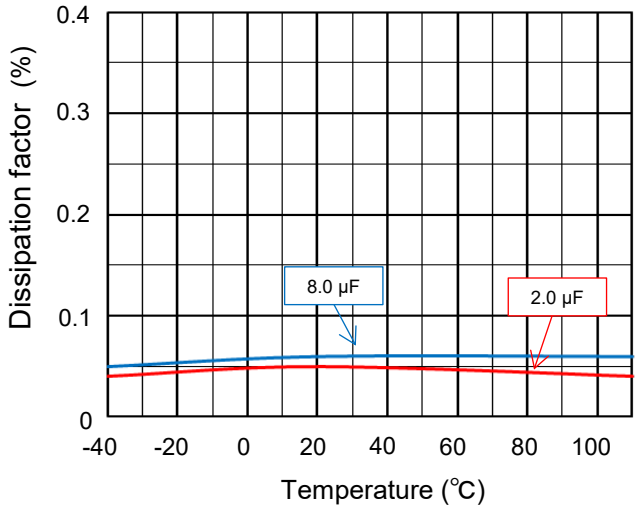


Frequency characteristics

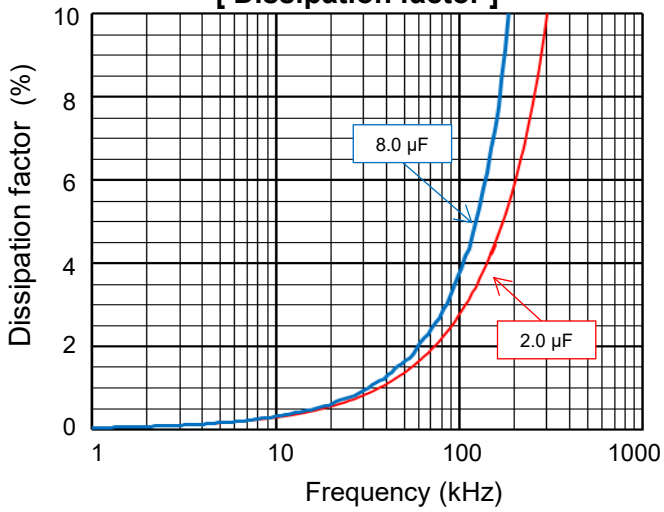
[Capacitance change]



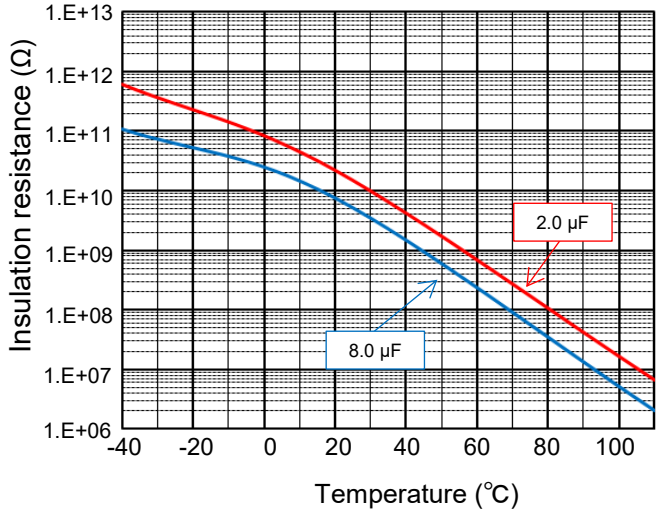
at 1 kHz **[Dissipation factor]**



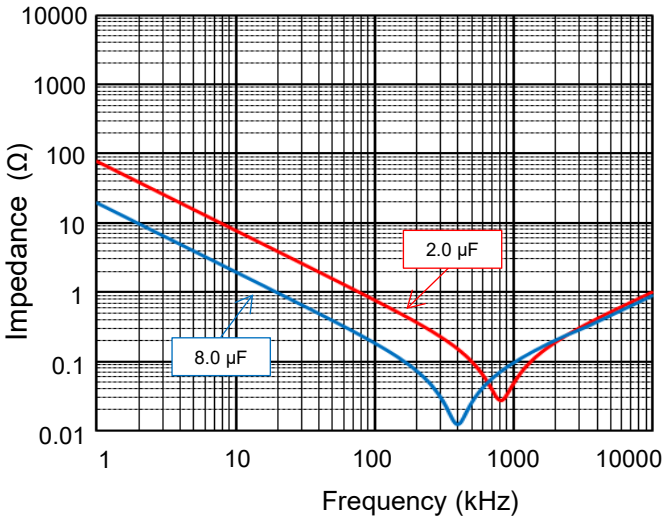
[Dissipation factor]



at DC 500 V **[Insulation resistance]**



[Impedance characteristics]

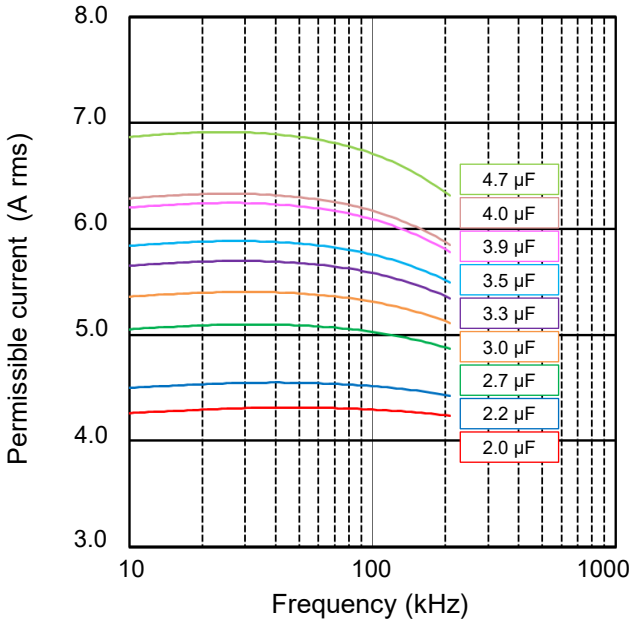


Characteristics data

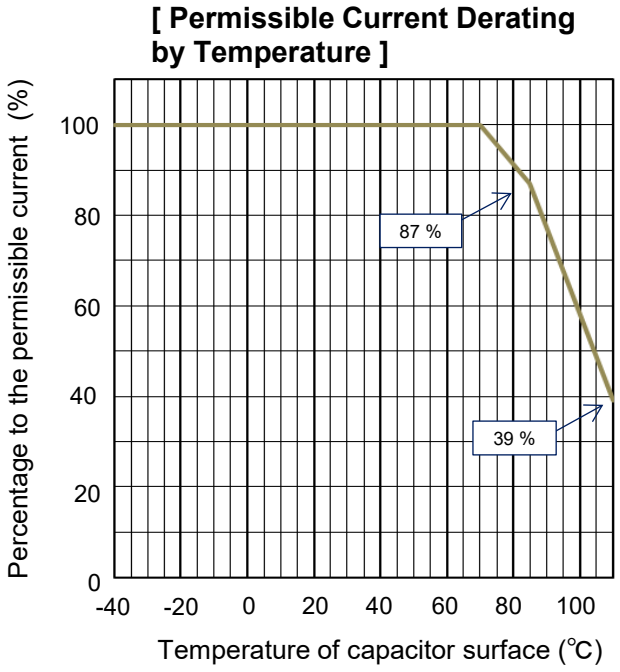
■ **Rated voltage [DC] : 800 V**

Applicable specifications

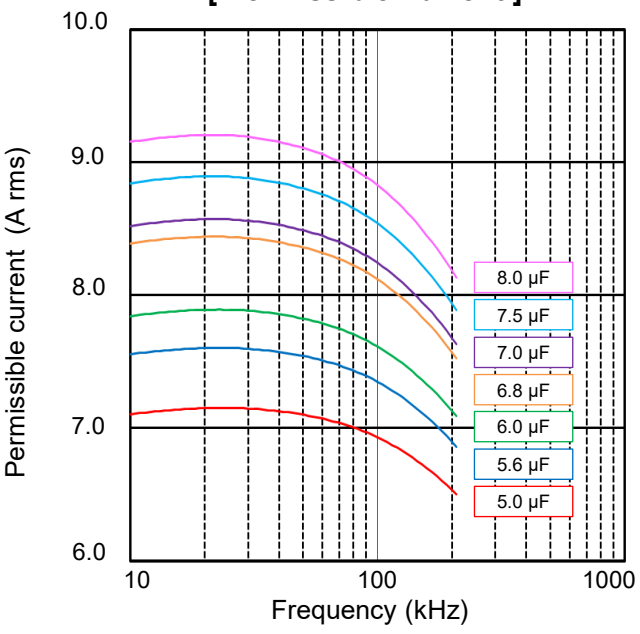
[Permissible Current]



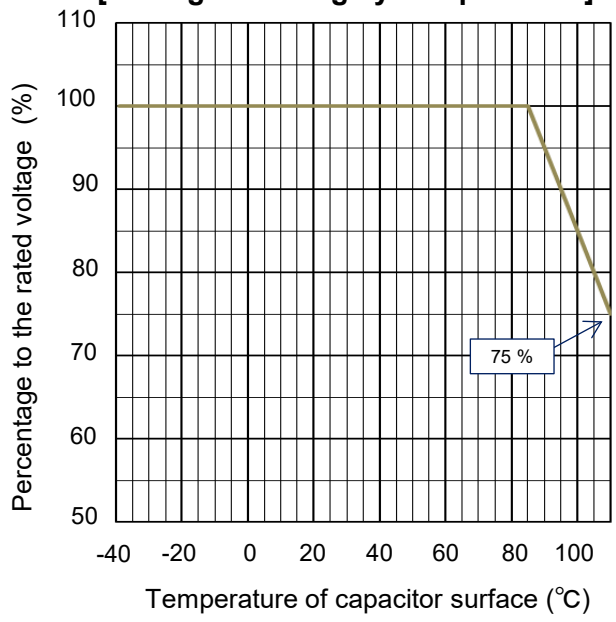
[Permissible Current Derating by Temperature]



[Permissible Current]



[Voltage Derating by Temperature]



Permissible pulse current (dV/dt) (Max. 10000 cycles)

R.voltage [DC] (V)	Capacitance (μF)	Code	dV/dt (V/μs)	Current (Ao-p)
800	2.0	205	50	100.0
	2.2	225		110.0
	2.7	275		135.0
	3.0	305		150.0
	3.3	335		165.0
	3.5	355		175.0
	3.9	395		195.0
	4.0	405		200.0
	4.7	475		235.0

R.voltage [DC] (V)	Capacitance (μF)	Code	dV/dt (V/μs)	Current (Ao-p)
800	5.0	505	50	250.0
	5.6	565		280.0
	6.0	605		300.0
	6.8	685		340.0
	7.0	705		350.0
	7.5	755		375.0
	8.0	805		400.0

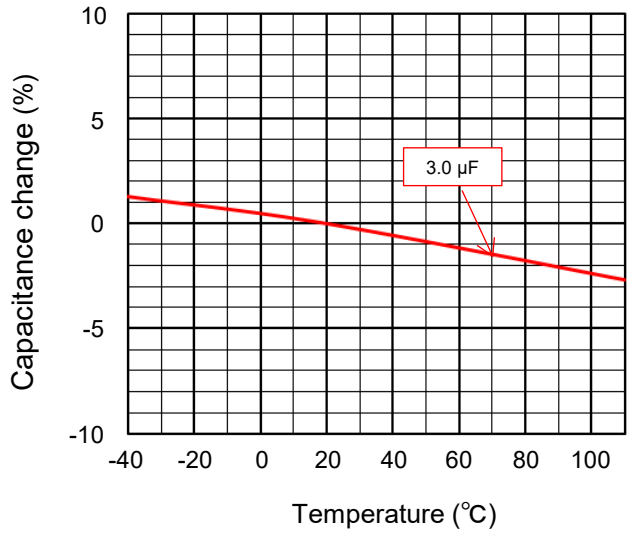
Characteristics data

■ **Rated voltage [DC] : 1100 V**

Electrical characteristics <Typical data >

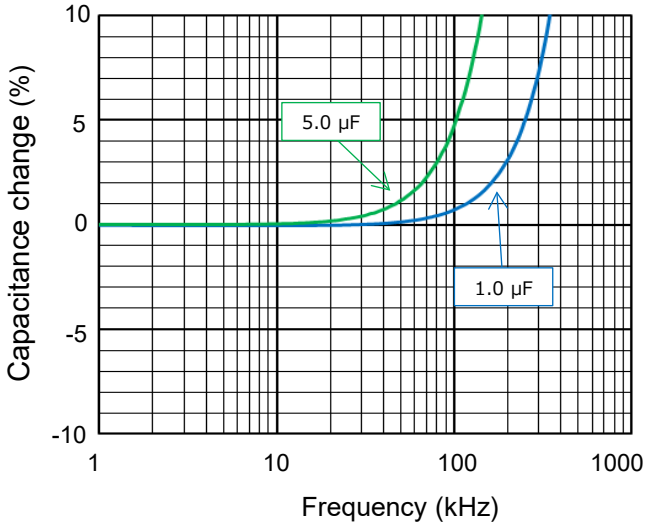
Temperature characteristics

at 1 kHz **[Capacitance change]**

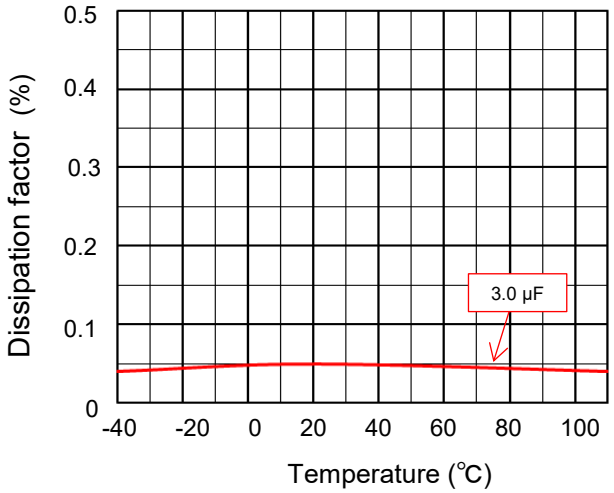


Frequency characteristics

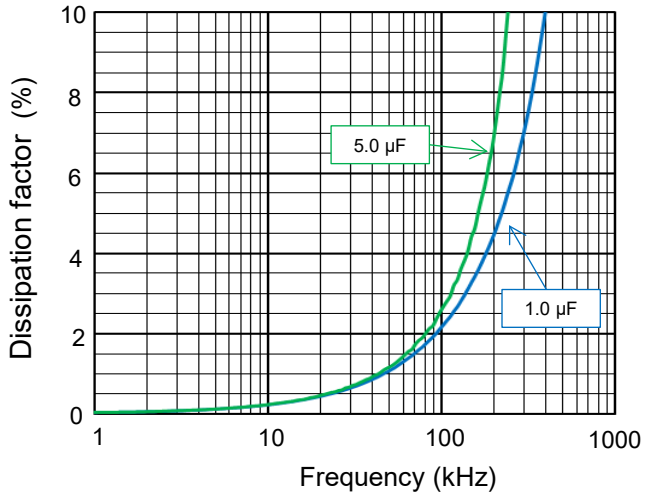
[Capacitance change]



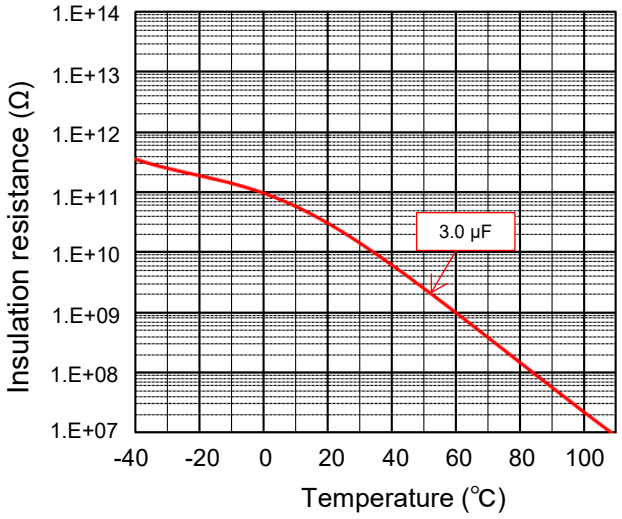
at 1 kHz **[Dissipation factor]**



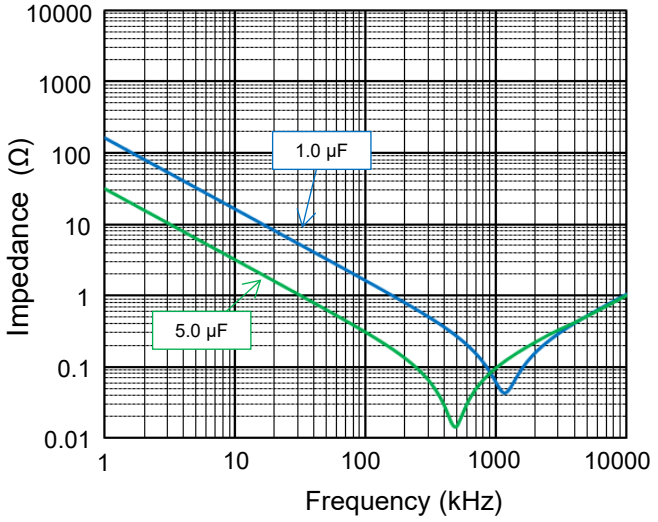
[Dissipation factor]



at DC 500 V **[Insulation resistance]**



[Impedance characteristics]

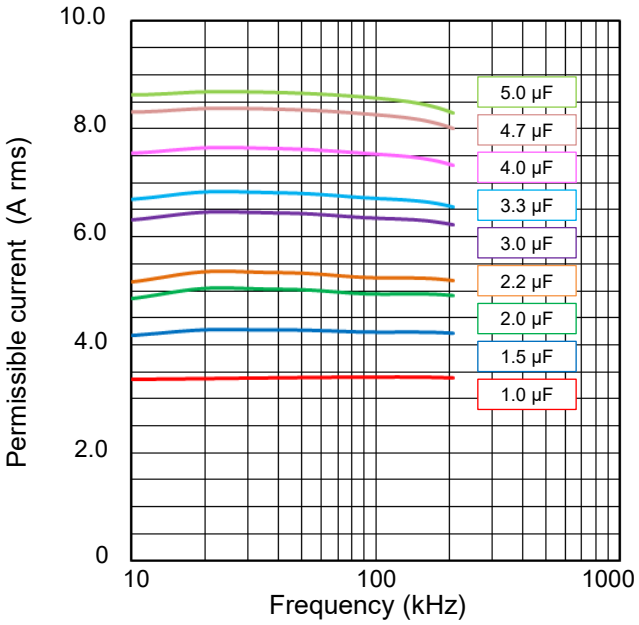


Characteristics data

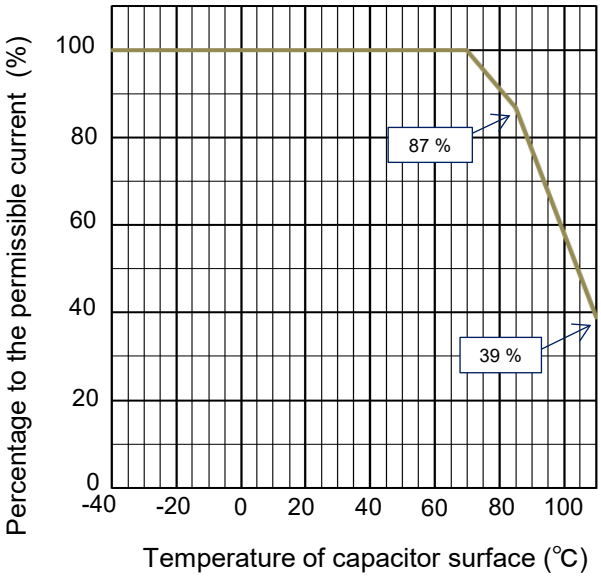
■ **Rated voltage [DC] : 1100 V**

Applicable specifications

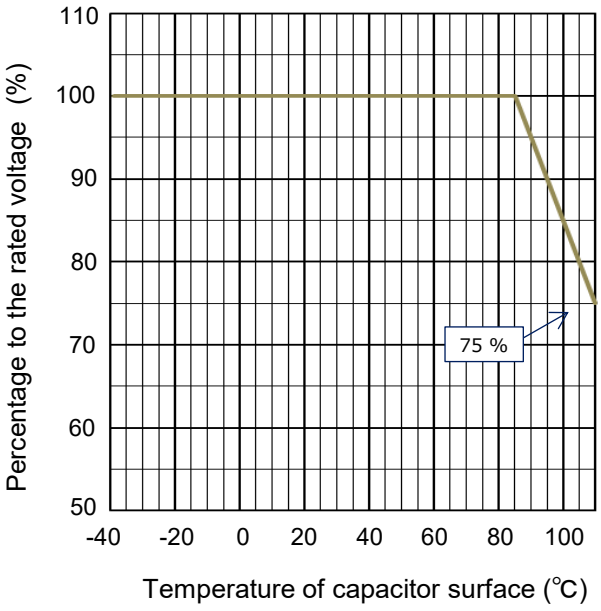
[Permissible Current]



[Permissible Current Derating by Temperature]



[Voltage Derating by Temperature]



Permissible pulse current (dV/dt)
(Max. 10000 cycles)

R.voltage [DC] (V)	Capacitance (μF)	Code	dV/dt (V/μs)	Current (Ao-p)
1100	1.0	105	100	100.0
	1.5	155		150.0
	2.0	205		200.0
	2.2	225		220.0
	3.0	305		300.0
	3.3	335		330.0
	4.0	405		400.0
	4.7	475		470.0
	5.0	505		500.0

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