

Metallized Polyester Film Capacitor

Type: **ECQE(B)**

Non-inductive construction using metallized polyester film with flame retardant epoxy resin coating

■Features

- Small size
- Excellent electrical characteristics
- Flame retardant epoxy resin coating
- RoHS directive compliant

■Recommended Applications

- General purpose usage
- ※Please contact us when applications are CDI , ignitor etc.



■Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11	12
E	C	Q	E							B	
Products code		Dielectric & construction		Rated voltage		Capacitance			Cap.Tol.	Suffix	Suffix
				2	250 VDC				J ±5 %		
				1A	125 VAC				K ±10 %		

Suffix	Lead Form
Blank	Straight
B	Crimped lead
Z	Cut lead
2	Straight taping (Ammono)
3	Crimped taping (Ammono)
6	Crimped taping (Ammono)

■Explanation of Part Numbers for Odd Size Taping

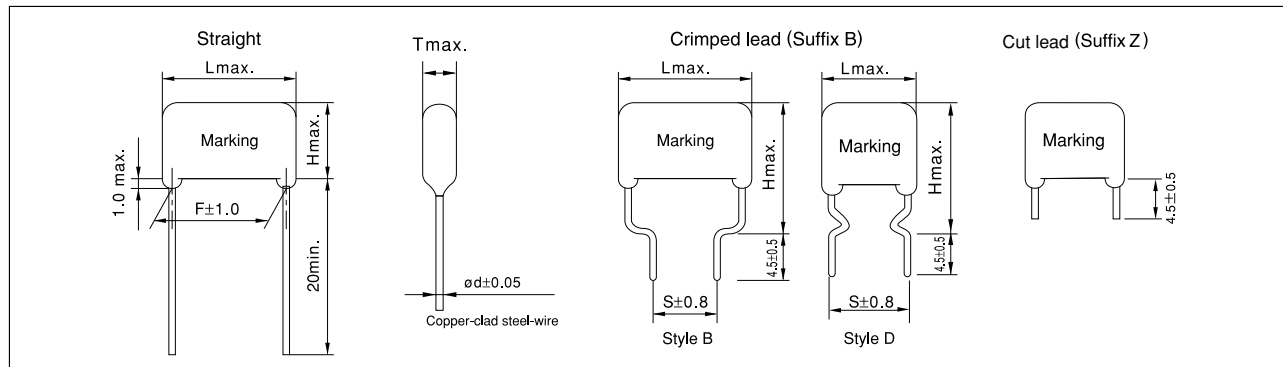
1	2	3	4	5	6	7	8	9	10	11	12
E	C	Q	E							R	B
Products code		Dielectric & construction		Rated voltage		Capacitance			Suffix	Cap. Tol.	Suffix

■Specifications

Category temp. range (Including temperature-rise on unit surface)	250 VDC	-40 °C to +105 °C
	125 VAC	-40 °C to +85 °C
Rated voltage	250 VDC, 125 VAC (250 VDC : Derating of rated voltage by 1.25 %/°C at more than 85 °C)	
Capacitance range	0.010 µF to 4.7 µF	
Capacitance tolerance	±5 % (J), ±10 % (K)	
Dissipation factor (tan δ)	tan δ ≤ 1.0 % (20 °C, 1 kHz)	
Withstand voltage	Rated volt. 250 VDC Between terminals : Rated vol. (VDC) × 150 % 60 s	
	Rated volt. 125 VAC Between terminals : Rated volt. (VAC) × 230 % 60 s Between terminals to enclosure: 1500 VAC 60 s	
Insulation resistance (IR)	250 VDC	C ≤ 0.33 µF : IR ≥ 9000 MΩ (20 °C, 100 VDC, 60 s) C > 0.33 µF : IR ≥ 3000 MΩ · µF (20 °C, 100 VDC, 60 s)
	125 VAC	C ≤ 0.47 µF : IR ≥ 2000 MΩ (20 °C, 500 VDC, 60 s) C > 0.47 µF : IR ≥ 3000 MΩ · µF (20 °C, 100 VDC, 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".
- ※ Voltage to be applied to ECQE1A (B) is only sine wave (50 Hz or 60 Hz).

■Dimensions in mm (not to scale)

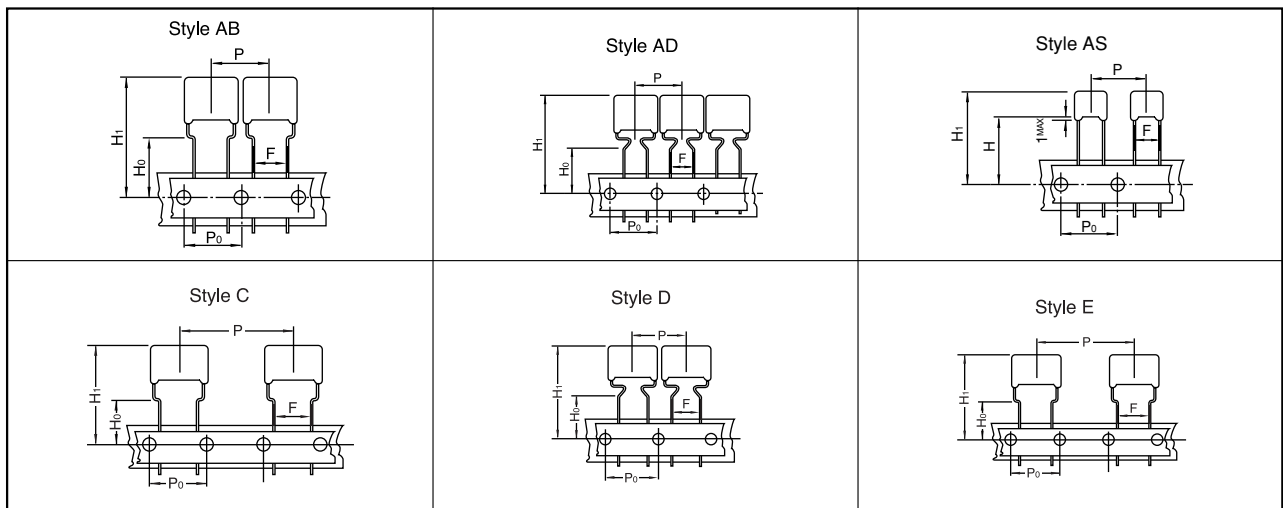


■Packaging Specifications for Bulk Package

Packing quantity : 100 pcs./bag

■Taping Specifications for Automatic Insertion

●Taping style



*Refer to the page of taping specifications.

●Packaging Specifications

Type	Rated volt.	Cap. range (μF)	Taping style							Packing	suffix
			AD	AS	AB	B	C	D	E		
ECQE(B)	250 VDC	0.010 to 0.15		○						Ammo	() B2
		0.010 to 0.68	○							Ammo	() B3
		0.82 to 1.5					○			Ammo	() B3
		0.18 to 0.68						○		Ammo	R() B
		0.82 to 4.7							○	Ammo	R() B
	125 VAC	0.010 to 0.068		○						Ammo	() B2
		0.082 to 0.22			○					Ammo	() B6
		0.27 to 2.7					○			Ammo	() B3
		0.082 to 0.68						○		Ammo	R() B
		0.82 to 2.7							○	Ammo	R() B

●Lead Spacing

Style	Lead Spacing
AD	5.0 mm
AS	5.0 mm
AB	5.0 mm
C	5.0 mm
D	7.5 mm
E	7.5 mm

*See the column "Rating, Dimensions & Quantity Box" for packing quantity.

■ Rating, Dimensions & Quantity/Ammo Box

● Rated voltage: 250 VDC, Capacitance tolerance: $\pm 5\%$ (J), $\pm 10\%$ (K)

Part No.	Cap. (μF)	Dimensions (mm)							Min. order Q'ty									
		L ^{max.}	T ^{max.}	H ^{max.}		F	S	ø d	Taping									
				Straight	Crimped lead	Straight	Crimped lead		Standard 5 mm	Odd size 5 mm	Odd size 7.5 mm							
ECQE2103□B()	0.010	7.9	4.2	7.1	12.1	5.0	5.0	0.50	2000	—	—							
ECQE2123□B()	0.012	7.9	4.2	7.1	12.1	5.0	5.0	0.50										
ECQE2153□B()	0.015	7.9	4.2	7.1	12.1	5.0	5.0	0.50										
ECQE2183□B()	0.018	7.9	4.3	7.2	12.2	5.0	5.0	0.50										
ECQE2223□B()	0.022	7.9	4.3	7.2	12.2	5.0	5.0	0.50										
ECQE2273□B()	0.027	7.9	4.3	7.2	12.2	5.0	5.0	0.50										
ECQE2333□B()	0.033	7.9	4.3	7.2	12.2	5.0	5.0	0.50										
ECQE2393□B()	0.039	7.9	4.5	7.4	12.4	5.0	5.0	0.50	1500			—	—					
ECQE2473□B()	0.047	7.9	4.5	7.4	12.4	5.0	5.0	0.50										
ECQE2563□B()	0.056	7.9	4.7	7.7	12.7	5.0	5.0	0.50										
ECQE2683□B()	0.068	7.9	5.1	8.0	13.0	5.0	5.0	0.50										
ECQE2823□B()	0.082	7.9	5.4	8.6	13.6	5.0	5.0	0.50										
ECQE2104□B()	0.10	7.9	5.9	9.0	14.0	5.0	5.0	0.50	1000					—	—			
ECQE2124□B()	0.12	7.9	5.7	10.6	15.6	5.0	5.0	0.50	1500									
ECQE2154□B()	0.15	7.9	6.3	11.2	16.2	5.0	5.0	0.50	1000									
ECQE2184□B()	0.18	10.3	5.0	9.7	14.7	7.5	5.0	0.50	1500							1500		
ECQE2224□B()	0.22	10.3	5.4	10.1	15.1	7.5	5.0	0.50								1000		
ECQE2274□B()	0.27	10.3	5.9	10.8	15.8	7.5	5.0	0.50	1000									
ECQE2334□B()	0.33	10.3	6.4	11.3	16.3	7.5	5.0	0.50									1000	
ECQE2394□B()	0.39	12.3	5.7	10.9	15.9	10.0	5.0	0.60										1000
ECQE2474□B()	0.47	12.3	6.2	11.4	16.4	10.0	5.0	0.60										
ECQE2564□B()	0.56	12.3	6.7	11.9	16.9	10.0	5.0	0.60								1000		
ECQE2684□B()	0.68	12.3	7.3	12.7	17.7	10.0	5.0	0.60	1000									
ECQE2824□B()	0.82	15.3	6.3	13.3	18.3	12.5	5.0	0.60			1000							
ECQE2105□B()	1.0	15.3	7.0	14.0	19.0	12.5	5.0	0.60									1000	
ECQE2125□B()	1.2	15.3	7.6	14.6	19.6	12.5	5.0	0.60										1000
ECQE2155□B()	1.5	15.3	8.6	15.7	20.7	12.5	5.0	0.60								1000		
ECQE2185□B()	1.8	20.8	7.6	14.6	19.6	17.5	10.0	0.80	1000									
ECQE2225□B()	2.2	20.8	8.4	15.6	20.6	17.5	10.0	0.80			1000							
ECQE2275□B()	2.7	20.8	9.3	16.7	21.7	17.5	10.0	0.80									1000	
ECQE2335□B()	3.3	20.8	10.5	17.9	22.9	17.5	10.0	0.80				1000						
ECQE2395□B()	3.9	20.8	10.8	19.8	24.8	17.5	10.0	0.80					1000					
ECQE2475□B()	4.7	20.8	11.9	21.0	26.0	17.5	10.0	0.80	1000									
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Style D: 0.010 μ F to 0.68 μ F
 Style B: 0.82 μ F to 4.7 μ F

■ Rating, Dimensions & Quantity/Ammo Box

● Rated voltage : 125 VAC Capacitance tolerance : $\pm 5\%$ (J), $\pm 10\%$ (K)

Part No.	Cap. (μF)	Dimensions (mm)							Min. order Q'ty				
		L max.	T max.	H max.		F		S	ø d	Taping			
				Straight	Crimped lead	Straight	Crimped lead	Standard 5 mm		Odd size 5 mm	Odd size 7.5 mm		
ECQE1A103□B()	0.010	7.9	4.2	7.1		5.0		0.50	2000				
ECQE1A123□B()	0.012	7.9	4.2	7.1		5.0		0.50					
ECQE1A153□B()	0.015	7.9	4.2	7.1		5.0		0.50					
ECQE1A183□B()	0.018	7.9	4.3	7.2		5.0		0.50					
ECQE1A223□B()	0.022	7.9	4.3	7.2		5.0		0.50					
ECQE1A273□B()	0.027	7.9	4.3	7.2		5.0		0.50					
ECQE1A333□B()	0.033	7.9	4.3	7.2		5.0		0.50					
ECQE1A393□B()	0.039	7.9	4.5	7.4		5.0		0.50					
ECQE1A473□B()	0.047	7.9	4.8	7.7		5.0		0.50					
ECQE1A563□B()	0.056	7.9	5.1	8.0		5.0		0.50					
ECQE1A683□B()	0.068	7.9	5.4	8.6		5.0		0.50					
ECQE1A823□B()	0.082	10.3	4.6	7.6		12.6		7.5				7.5	0.50
ECQE1A104□B()	0.10	10.3	5.1	7.7	12.7	7.5	7.5	0.50	1000				
ECQE1A124□B()	0.12	10.3	5.3	8.4	13.4	7.5	7.5	0.50					
ECQE1A154□B()	0.15	10.3	5.7	8.9	13.9	7.5	7.5	0.50					
ECQE1A184□B()	0.18	10.3	5.6	10.3	15.3	7.5	7.5	0.50					
ECQE1A224□B()	0.22	10.3	6.1	11.0	16.0	7.5	7.5	0.50					
ECQE1A274□B()	0.27	12.3	5.4	10.7	15.7	10.0	7.5	0.60					
ECQE1A334□B()	0.33	12.3	5.9	11.2	16.2	10.0	7.5	0.60	800	1000			
ECQE1A394□B()	0.39	12.3	6.4	11.6	16.6	10.0	7.5	0.60	700				
ECQE1A474□B()	0.47	12.3	7.0	12.2	17.2	10.0	7.5	0.60	600				
ECQE1A564□B()	0.56	12.3	6.7	11.9	16.9	10.0	7.5	0.60	500		900		
ECQE1A684□B()	0.68	12.3	7.3	12.7	17.7	10.0	7.5	0.60	600		1000		
ECQE1A824□B()	0.82	15.3	6.3	13.3	18.3	12.5	7.5	0.60	500		900		
ECQE1A105□B()	1.0	15.3	7.0	14.0	19.0	12.5	7.5	0.60	600	500			
ECQE1A125□B()	1.2	20.8	7.1	14.1	19.1	17.5	10.0	0.80	500	400			
ECQE1A155□B()	1.5	20.8	8.0	15.1	20.1	17.5	10.0	0.80	400	300			
ECQE1A185□B()	1.8	20.8	8.7	15.9	20.9	17.5	10.0	0.80					
ECQE1A225□B()	2.2	20.8	9.7	17.1	22.1	17.5	10.0	0.80					
ECQE1A275□B()	2.7	20.8	10.9	18.2	23.2	17.5	10.0	0.80	300				
ECQE1A335□B()	3.3	25.8	9.6	18.7	23.7	22.5	15.0	0.80	—	—			
ECQE1A395□B()	3.9	25.8	10.6	19.7	24.7	22.5	15.0	0.80					
ECQE1A475□B()	4.7	25.8	11.8	20.8	25.8	22.5	15.0	0.80					

Style D: 0.082 μ F to 0.68 μ F
 Style B: 0.82 μ F to 4.7 μ F

Notice for AC rated

AC rated capacitors complying with clause 1 of "Electrical Appliance and Material Safety Law".

As for clause 2 of "Electrical Appliance and Material Safety Law", please use ECQUL type or ECQUG type.

When using these capacitors as a across-the-line capacitor, it shall be required to follow either item 1. or item 2. condition.

1. Capacitor shall be connected in parallel with varistor (Specified varistor voltage in table 1.)
2. Voltage applied for capacitor shall not exceed other than specified in table 1, when using these capacitors.

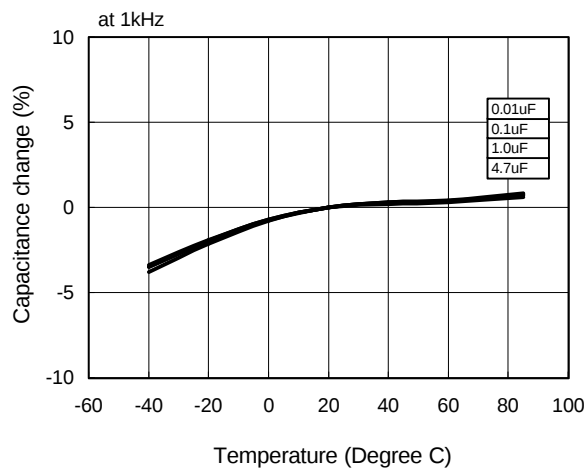
Table 1

Cap. Rated Voltage	Varistor voltage	Pulse voltage
125 VAC	250 V	250 V _{0-P}

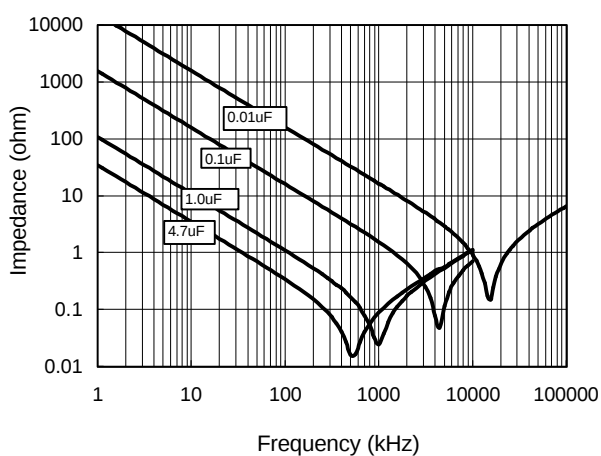
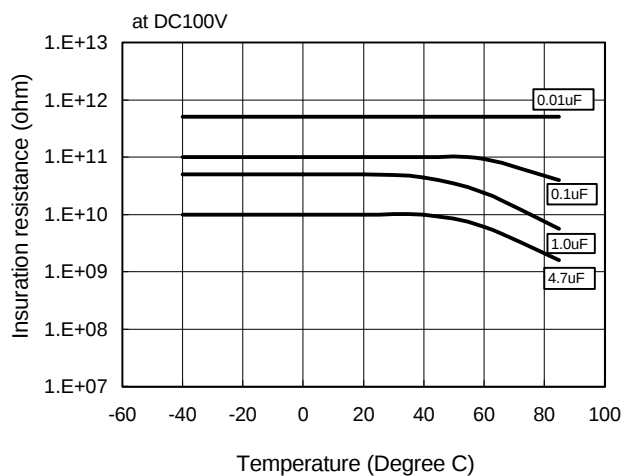
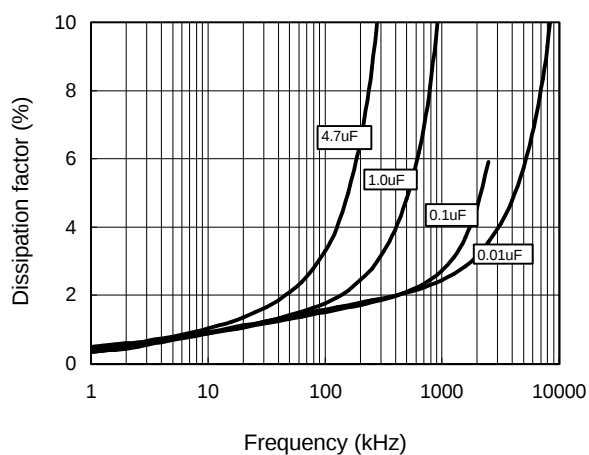
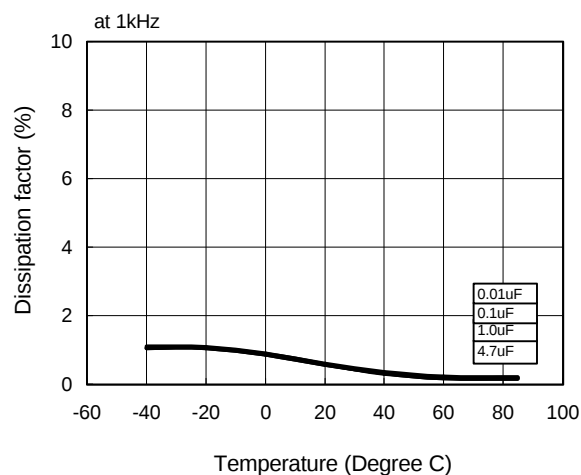
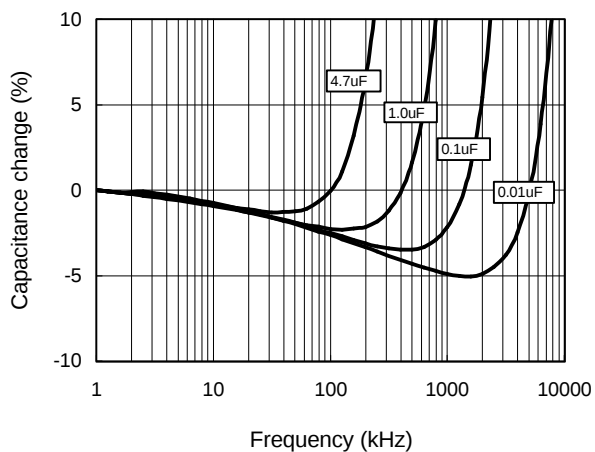
ECQE(B) Type 250VDC Series (Metallized Polyester Film)

Erectrical Characteristics <Typical Data>

Temperature Characteristics



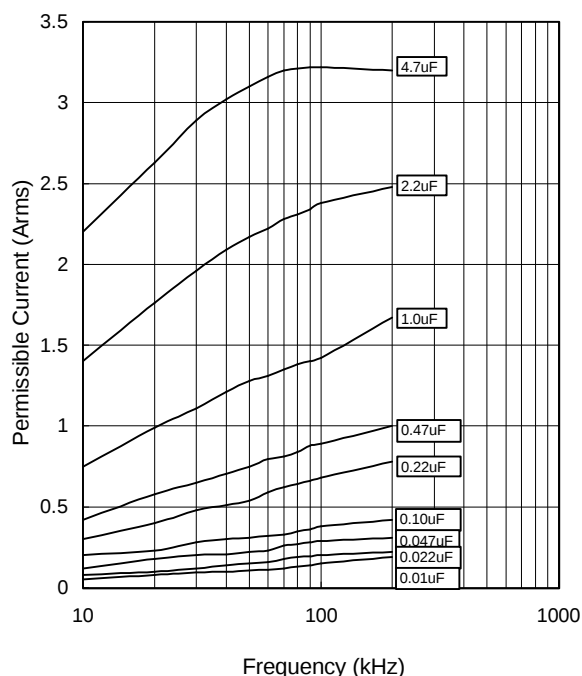
Frequency Characteristics



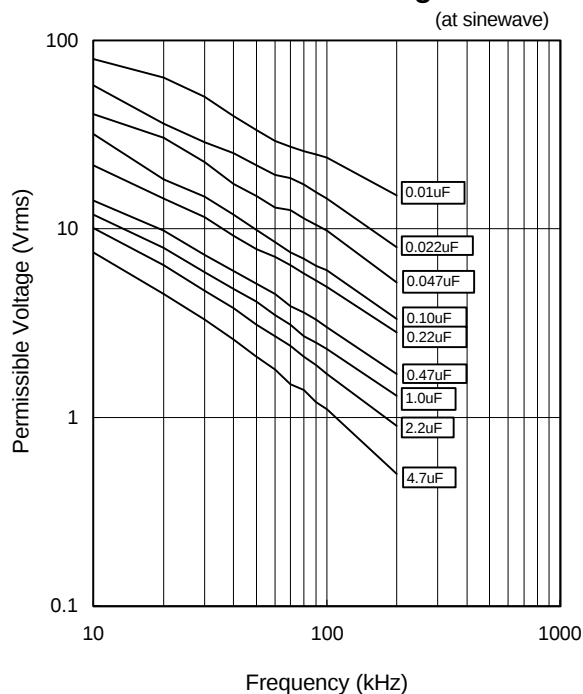
ECQE(B) Type 250VDC Series (Metallized Polyester Film)

Applicable Specifications

Permissible Current



Permissible Voltage

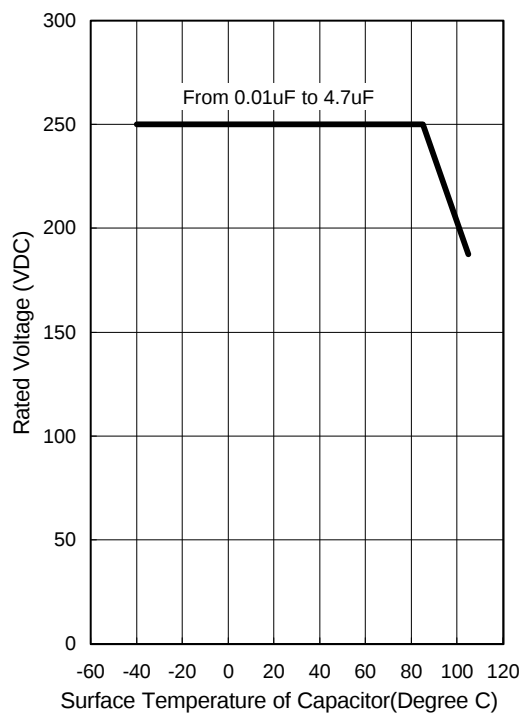


Pulse Handling Capability (dV/dt)

(Max 10000cycles)

Rating Voltage	Capacitance Value(uF)	Code	dV/dt(V/us)	Current(o-p) (A)
250VDC	0.010	103	48	0.48
	0.015	153		0.72
	0.022	223		1.06
	0.033	333		1.58
	0.047	473		2.26
	0.068	683		3.26
	0.100	104	33	4.80
	0.150	154		7.20
	0.220	224		7.26
	0.330	334	23	10.89
	0.470	474		10.81
	0.680	684	18	15.64
	1.000	105		18.00
	1.500	155	10	27.00
	2.200	225		22.00
	3.300	335		33.00
	4.700	475		47.00

Voltage Derating by Temperature

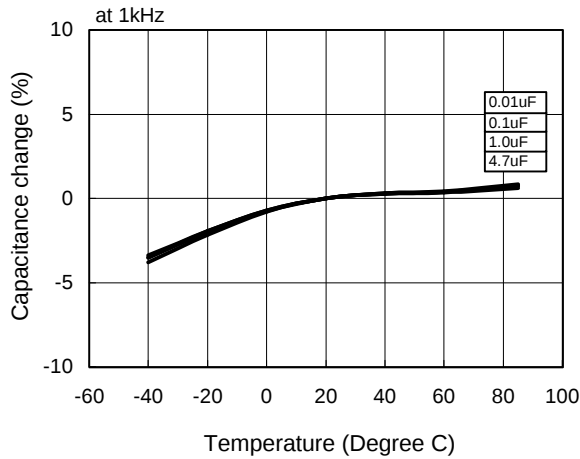


* Please consult Panasonic if your condition exceeds the above spec.

ECQE(B) Type 125VAC Series (Metallized Polyester Film)

Erectrical Characteristics <Typical Data>

Temperature Characteristics



Frequency Characteristics

