

## Metallized Polyester Film Capacitor

Series : **ECQE(B)**

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



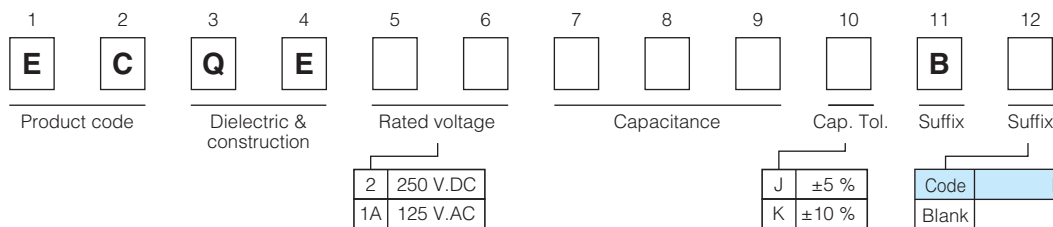
### Features

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

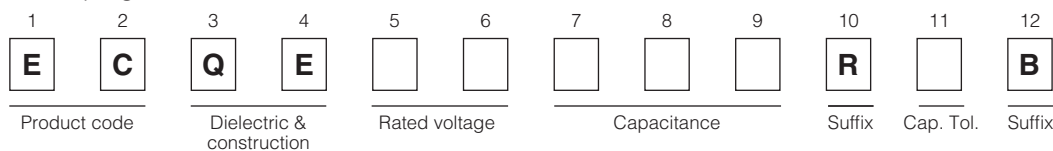
### Recommended applications

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

### Explanation of part number



- Odd size taping



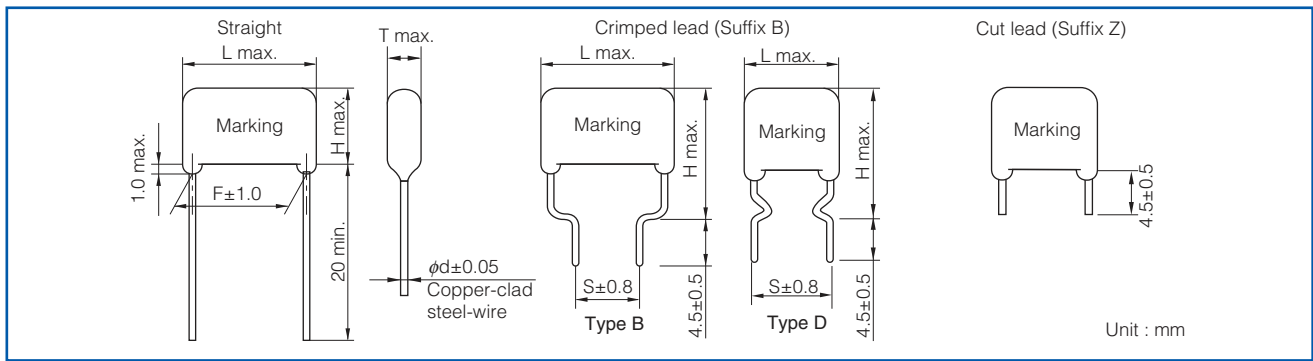
### Specifications

Category temp. range (Including temperature-rise on unit surface)	250 V.DC	- 40 °C to +105 °C							
	125 V.AC	- 40 °C to +105 °C							
Rated voltage	250 V.DC, 125 V.AC (250 V.DC : Derating of rated voltage by 1.25 %/°C at more than 85 °C)								
Capacitance range	250 V.DC	0.010 μF to 4.7 μF (E12)							
	125 V.AC	0.010 μF to 4.7 μF (E12)							
Capacitance tolerance	±5 % (J), ±10 % (K)								
Dissipation factor (tan δ)	tan δ ≤ 1.0 % ( 20 °C, 1 kHz )								
Withstand voltage	<ul style="list-style-type: none"> <li>• Rated volt. : 250 V.DC Between terminals : Rated volt. (V.DC) × 150 %, 60 s</li> <li>• Rated volt. : 125 V.AC Between terminals : Rated volt. (V.AC) × 230 %, 60 s Between terminals to enclosure : 1500 V.AC, 60 s</li> </ul>								
	Insulation resistance (IR)	<table border="1"> <tr> <td>250 V.DC</td> <td>C ≤ 0.33 μF : IR ≥ 9000 MΩ (20 °C, 100 V.DC, 60 s)</td> </tr> <tr> <td></td> <td>C &gt; 0.33 μF : IR ≥ 3000 MΩ · μF (20 °C, 100 V.DC, 60 s)</td> </tr> <tr> <td>125 V.AC</td> <td>C ≤ 0.47 μF : IR ≥ 2000 MΩ (20 °C, 500 V.DC, 60 s)</td> </tr> <tr> <td></td> <td>C &gt; 0.47 μF : IR ≥ 3000 MΩ · μF (20 °C, 100 V.DC, 60 s)</td> </tr> </table>	250 V.DC	C ≤ 0.33 μF : IR ≥ 9000 MΩ (20 °C, 100 V.DC, 60 s)		C > 0.33 μF : IR ≥ 3000 MΩ · μF (20 °C, 100 V.DC, 60 s)	125 V.AC	C ≤ 0.47 μF : IR ≥ 2000 MΩ (20 °C, 500 V.DC, 60 s)	
250 V.DC	C ≤ 0.33 μF : IR ≥ 9000 MΩ (20 °C, 100 V.DC, 60 s)								
	C > 0.33 μF : IR ≥ 3000 MΩ · μF (20 °C, 100 V.DC, 60 s)								
125 V.AC	C ≤ 0.47 μF : IR ≥ 2000 MΩ (20 °C, 500 V.DC, 60 s)								
	C > 0.47 μF : IR ≥ 3000 MΩ · μF (20 °C, 100 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".

\* Voltage to be applied to ECQE1A (B) is only sine wave (50 Hz or 60 Hz).

## Dimensions

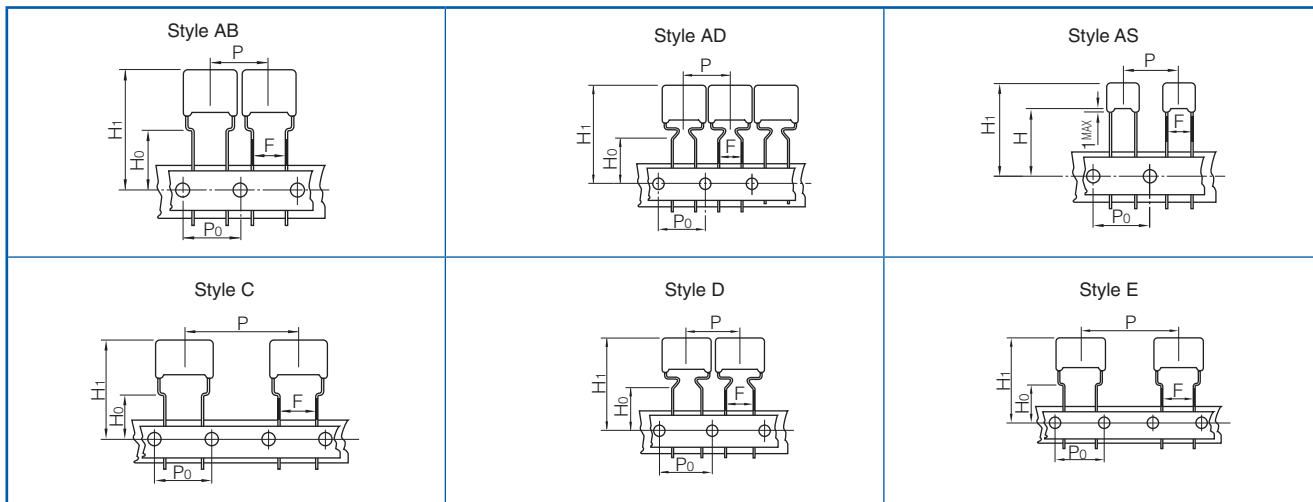


## Packaging specifications for bulk package

- Packing quantity : 100 pcs./bag

## Taping specifications for automatic insertion

- Taping style



\* Refer to the page of taping specifications.

- Packaging specifications

Series	Rated voltage	Capacitance range (μF)	Taping style							Packing	suffix
			AD	AS	AB	B	C	D	E		
ECQE(B)	250 V.DC	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 V.AC	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" for packing quantity

## Rating · Dimensions · Quantity

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

Part No.	Cap. ( $\mu$ F)	Dimensions (mm)							Min. order Q'ty					
		L max.	T max.	H max.		F	S	$\phi$ d	Taping			Bulk		
				Straight	Crimped lead	Straight	Crimped lead		Standard 5 mm	Odd size 5 mm	Odd size 7.5 mm	Straight - Crimped lead		
ECQE2103□B( )	0.010	7.9	4.2	7.1	12.1	5.0	5.0	0.5	2000					
ECQE2123□B( )	0.012	7.9	4.2	7.1	12.1	5.0	5.0	0.5						
ECQE2153□B( )	0.015	7.9	4.2	7.1	12.1	5.0	5.0	0.5						
ECQE2183□B( )	0.018	7.9	4.3	7.2	12.2	5.0	5.0	0.5						
ECQE2223□B( )	0.022	7.9	4.3	7.2	12.2	5.0	5.0	0.5						
ECQE2273□B( )	0.027	7.9	4.3	7.2	12.2	5.0	5.0	0.5						
ECQE2333□B( )	0.033	7.9	4.3	7.2	12.2	5.0	5.0	0.5						
ECQE2393□B( )	0.039	7.9	4.5	7.4	12.4	5.0	5.0	0.5	1500		-			
ECQE2473□B( )	0.047	7.9	4.5	7.4	12.4	5.0	5.0	0.5						
ECQE2563□B( )	0.056	7.9	4.7	7.7	12.7	5.0	5.0	0.5						
ECQE2683□B( )	0.068	7.9	5.1	8.0	13.0	5.0	5.0	0.5	1000					
ECQE2823□B( )	0.082	7.9	5.4	8.6	13.6	5.0	5.0	0.5						
ECQE2104□B( )	0.10	7.9	5.9	9.0	14.0	5.0	5.0	0.5						
ECQE2124□B( )	0.12	7.9	5.7	10.6	15.6	5.0	5.0	0.5	1500	-				
ECQE2154□B( )	0.15	7.9	6.3	11.2	16.2	5.0	5.0	0.5	1000					
ECQE2184□B( )	0.18	10.3	5.0	9.7	14.7	7.5	5.0	0.5	1500			1500		
ECQE2224□B( )	0.22	10.3	5.4	10.1	15.1	7.5	5.0	0.5						
ECQE2274□B( )	0.27	10.3	5.9	10.8	15.8	7.5	5.0	0.5	1000			1000		
ECQE2334□B( )	0.33	10.3	6.4	11.3	16.3	7.5	5.0	0.5						
ECQE2394□B( )	0.39	12.3	5.7	10.9	15.9	10.0	5.0	0.6						
ECQE2474□B( )	0.47	12.3	6.2	11.4	16.4	10.0	5.0	0.6						
ECQE2564□B( )	0.56	12.3	6.7	11.9	16.9	10.0	5.0	0.6						
ECQE2684□B( )	0.68	12.3	7.3	12.7	17.7	10.0	5.0	0.6						
ECQE2824□B( )	0.82	15.3	6.3	13.3	18.3	12.5	5.0	0.6	-			600	500	
ECQE2105□B( )	1.0	15.3	7.0	14.0	19.0	12.5	5.0	0.6						
ECQE2125□B( )	1.2	15.3	7.6	14.6	19.6	12.5	5.0	0.6						
ECQE2155□B( )	1.5	15.3	8.6	15.7	20.7	12.5	5.0	0.6						
ECQE2185□B( )	1.8	20.8	7.6	14.6	19.6	17.5	10.0	0.8						
ECQE2225□B( )	2.2	20.8	8.4	15.6	20.6	17.5	10.0	0.8						
ECQE2275□B( )	2.7	20.8	9.3	16.7	21.7	17.5	10.0	0.8						
ECQE2335□B( )	3.3	20.8	10.5	17.9	22.9	17.5	10.0	0.8						
ECQE2395□B( )	3.9	20.8	10.8	19.8	24.8	17.5	10.0	0.8						
ECQE2475□B( )	4.7	20.8	11.9	21.0	26.0	17.5	10.0	0.8						

\* □ : Capacitance tolerance code  
( ) : Suffix for lead crimped or taped type

Type D : 0.010  $\mu$ F to 0.68  $\mu$ F  
Type B : 0.82  $\mu$ F to 4.7  $\mu$ F

## Rating · Dimensions · Quantity

● Rated voltage : 125 V.AC, Capacitance tolerance : ± 5 %(J), ±10 %(K)

Part No.	Cap. (μF)	Dimensions (mm)							Min. order Q'ty							
		L max.	T max.	H max.		F		S	φd	Taping			Bulk			
				Straight	Crimped lead	Straight	Crimped lead	Standard 5 mm		Odd size 5 mm	Odd size 7.5 mm	Straight - Crimped lead				
ECQE1A103□B( )	0.010	7.9	4.2	7.1	-	5.0	-	0.5	2000	-	-	-	500			
ECQE1A123□B( )	0.012	7.9	4.2	7.1		5.0		0.5								
ECQE1A153□B( )	0.015	7.9	4.2	7.1		5.0		0.5								
ECQE1A183□B( )	0.018	7.9	4.3	7.2		5.0		0.5								
ECQE1A223□B( )	0.022	7.9	4.3	7.2		5.0		0.5								
ECQE1A273□B( )	0.027	7.9	4.3	7.2		5.0		0.5								
ECQE1A333□B( )	0.033	7.9	4.3	7.2		5.0		0.5								
ECQE1A393□B( )	0.039	7.9	4.5	7.4		5.0		0.5								
ECQE1A473□B( )	0.047	7.9	4.8	7.7		5.0		0.5								
ECQE1A563□B( )	0.056	7.9	5.1	8.0		5.0		0.5								
ECQE1A683□B( )	0.068	7.9	5.4	8.6		5.0		0.5								
ECQE1A823□B( )	0.082	10.3	4.6	7.6		12.6		7.5						7.5	0.5	1500
ECQE1A104□B( )	0.10	10.3	5.1	7.7	12.7	7.5	7.5	0.5								
ECQE1A124□B( )	0.12	10.3	5.3	8.4	13.4	7.5	7.5	0.5								
ECQE1A154□B( )	0.15	10.3	5.7	8.9	13.9	7.5	7.5	0.5								
ECQE1A184□B( )	0.18	10.3	5.6	10.3	15.3	7.5	7.5	0.5								
ECQE1A224□B( )	0.22	10.3	6.1	11.0	16.0	7.5	7.5	0.5	1000	-	1000	500				
ECQE1A274□B( )	0.27	12.3	5.4	10.7	15.7	10.0	7.5	0.6								
ECQE1A334□B( )	0.33	12.3	5.9	11.2	16.2	10.0	7.5	0.6								
ECQE1A394□B( )	0.39	12.3	6.4	11.6	16.6	10.0	7.5	0.6								
ECQE1A474□B( )	0.47	12.3	7.0	12.2	17.2	10.0	7.5	0.6								
ECQE1A564□B( )	0.56	12.3	6.7	11.9	16.9	10.0	7.5	0.6								
ECQE1A684□B( )	0.68	12.3	7.3	12.7	17.7	10.0	7.5	0.6								
ECQE1A824□B( )	0.82	15.3	6.3	13.3	18.3	12.5	7.5	0.6								
ECQE1A105□B( )	1.0	15.3	7.0	14.0	19.0	12.5	7.5	0.6								
ECQE1A125□B( )	1.2	20.8	7.1	14.1	19.1	17.5	10.0	0.8					-	-	-	500
ECQE1A155□B( )	1.5	20.8	8.0	15.1	20.1	17.5	10.0	0.8								
ECQE1A185□B( )	1.8	20.8	8.7	15.9	20.9	17.5	10.0	0.8								
ECQE1A225□B( )	2.2	20.8	9.7	17.1	22.1	17.5	10.0	0.8								
ECQE1A275□B( )	2.7	20.8	10.9	18.2	23.2	17.5	10.0	0.8								
ECQE1A335□B( )	3.3	25.8	9.6	18.7	23.7	22.5	15.0	0.8								
ECQE1A395□B( )	3.9	25.8	10.6	19.7	24.7	22.5	15.0	0.8								
ECQE1A475□B( )	4.7	25.8	11.8	20.8	25.8	22.5	15.0	0.8								

\* □ : Capacitance tolerance code  
( ) : Suffix for lead crimped or taped type

Type D : 0.082 μF to 0.68 μF  
Type B : 0.82 μF to 4.7 μF

### 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 ECQUA type or ECQUL 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

Capacitor rated voltage	Varistor voltage	Pulse voltage
125 V.AC	250 V	250 V <sub>0,P</sub>

## Guidelines and precautions regarding the technical information and use of our products described in this online catalog.

- If you want to use our products described in this online catalog for applications requiring special qualities or reliability, or for applications where the failure or malfunction of the products may directly jeopardize human life or potentially cause personal injury (e.g. aircraft and aerospace equipment, traffic and transportation equipment, combustion equipment, medical equipment, accident prevention, anti-crime equipment, and/or safety equipment), it is necessary to verify whether the specifications of our products fit to such applications. Please ensure that you will ask and check with our inquiry desk as to whether the specifications of our products fit to such applications use before you use our products.
- The quality and performance of our products as described in this online catalog only apply to our products when used in isolation. Therefore, please ensure you evaluate and verify our products under the specific circumstances in which our products are assembled in your own products and in which our products will actually be used.
- If you use our products in equipment that requires a high degree of reliability, regardless of the application, it is recommended that you set up protection circuits and redundancy circuits in order to ensure safety of your equipment.
- The products and product specifications described in this online catalog are subject to change for improvement without prior notice. Therefore, please be sure to request and confirm the latest product specifications which explain the specifications of our products in detail, before you finalize the design of your applications, purchase, or use our products.
- The technical information in this online catalog provides examples of our products' typical operations and application circuits. We do not guarantee the non-infringement of third party's intellectual property rights and we do not grant any license, right, or interest in our intellectual property.
- If any of our products, product specifications and/or technical information in this online catalog is to be exported or provided to non-residents, the laws and regulations of the exporting country, especially with regard to security and export control, shall be observed.

## <Regarding the Certificate of Compliance with the EU RoHS Directive/REACH Regulations>

- The switchover date for compliance with the RoHS Directive/REACH Regulations varies depending on the part number or series of our products.
- When you use the inventory of our products for which it is unclear whether those products are compliant with the RoHS Directive/REACH Regulation, please select "Sales Inquiry" in the website inquiry form and contact us.

**We do not take any responsibility for the use of our products outside the scope of the specifications, descriptions, guidelines and precautions described in this online catalog.**