

## 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

1	2	3	4	5	6	7	8	9	10	11	12																						
<b>E</b>	<b>C</b>	<b>Q</b>	<b>E</b>							<b>B</b>																							
Product code		Dielectric & construction		Rated voltage		Capacitance			Cap. Tol.	Suffix	Suffix																						
				<table border="1"> <tr><td>2</td><td>250 V.DC</td></tr> <tr><td>1A</td><td>125 V.AC</td></tr> </table>		2	250 V.DC	1A	125 V.AC				<table border="1"> <tr><td>J</td><td>±5 %</td></tr> <tr><td>K</td><td>±10 %</td></tr> </table>	J	±5 %	K	±10 %	<table border="1"> <thead> <tr><th>Code</th><th>Lead Form</th></tr> </thead> <tbody> <tr><td>Blank</td><td>Straight</td></tr> <tr><td>B</td><td>Crimped lead</td></tr> <tr><td>Z</td><td>Cut lead</td></tr> <tr><td>2</td><td>Straight taping (Ammo)</td></tr> <tr><td>3</td><td>Crimped taping (Ammo)</td></tr> <tr><td>6</td><td>Crimped taping (Ammo)</td></tr> </tbody> </table>		Code	Lead Form	Blank	Straight	B	Crimped lead	Z	Cut lead	2	Straight taping (Ammo)	3	Crimped taping (Ammo)	6	Crimped taping (Ammo)
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- Odd size taping

1	2	3	4	5	6	7	8	9	10	11	12
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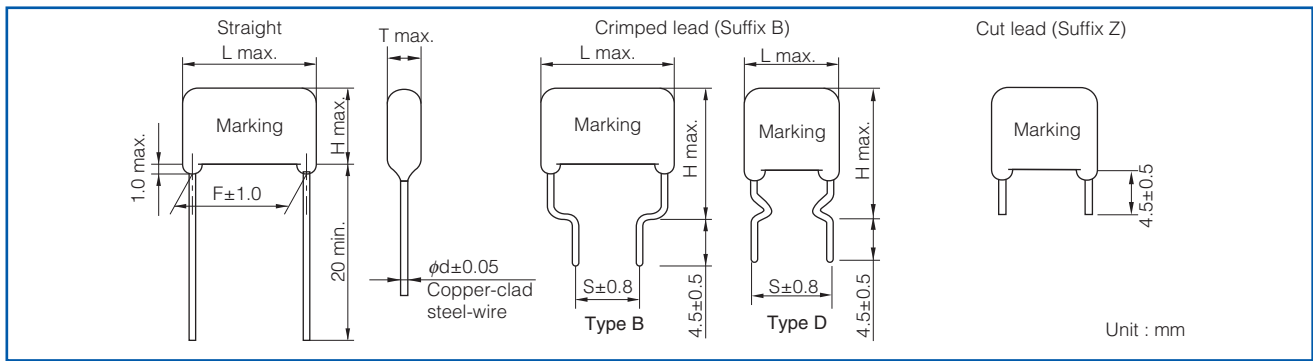
### Specifications

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)	
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\* 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

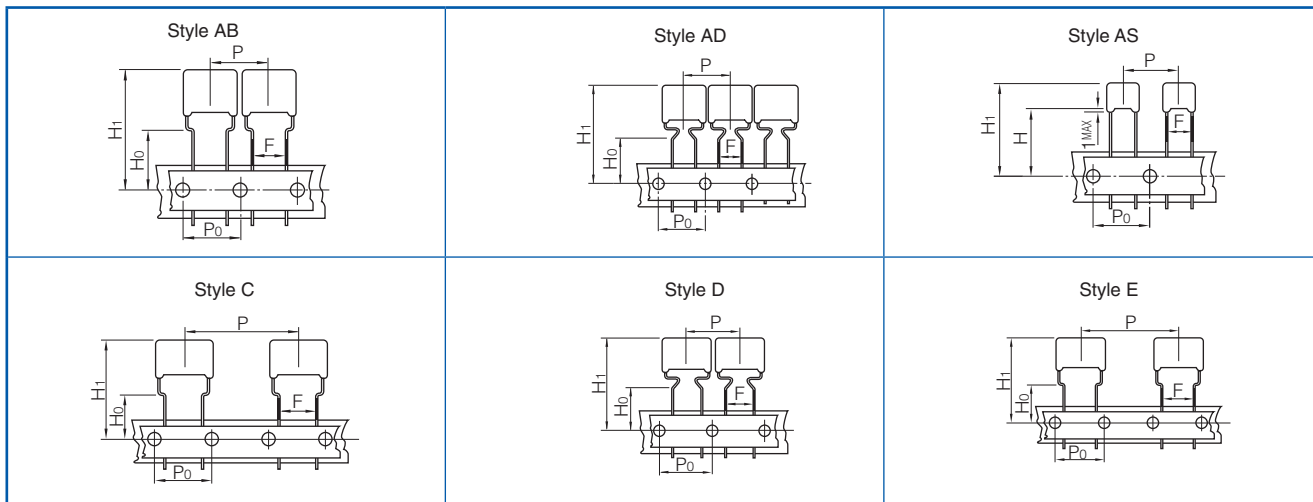


## Packaging specifications for bulk package

- 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					
ECQE2823□B( )	0.082	7.9	5.4	8.6	13.6	5.0	5.0	0.5	1000		-		
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					
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							
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		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								
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>