

### Polyester Film Capacitor

Type: **ECQB(F)**

Designed for high density insertion applications

#### ■ Features

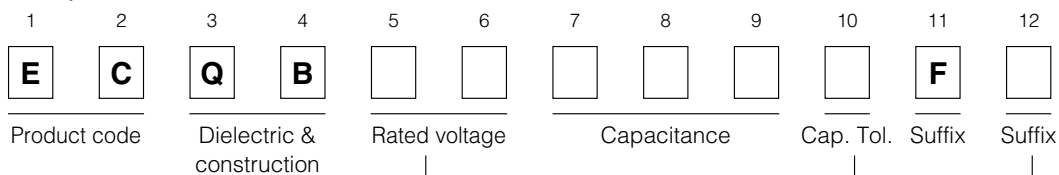
- Small in size
- Excellent electric characteristics in non-inductive construction
- RoHS directive compliant

#### ■ Recommended Applications

- General purpose



#### ■ Explanation of Part Numbers

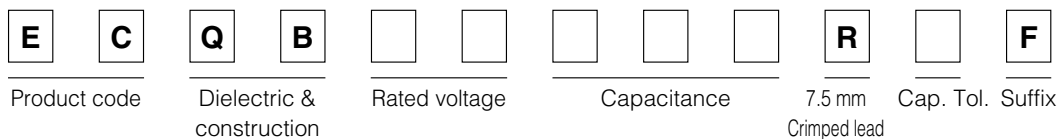


50 VDC	63 VDC	100 VDC	200 VDC
1H	1J	1	2

±5 %	±10 %
J	K

Taping				lead	
Ammo		Reel		Type1	Type2
Straight	Crimped	Straight	Crimped		style N   style T
4	3	5	9	Blank	W

#### ● Explanation of Part Number for Odd Size Taping

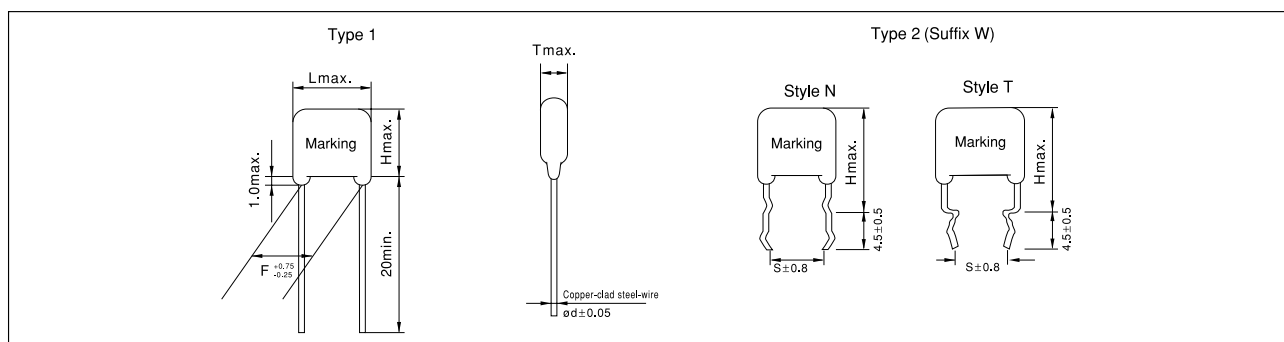


#### ■ Specifications

Category temp. range (Including temperature-rise on unit surface)	-40 °C to +105 °C
Rated voltage	50 VDC, 63 VDC, 100 VDC, 200 VDC (Derating of rated voltage by 2.5 %/°C at more than 85 °C)
Capacitance range	0.00010 μF to 0.47 μF
Capacitance tolerance	±5 % (J), ±10 % (K) (0.00010 μF to 0.00039 μF/50 V, 63 VDC : ±10 % only)
Dissipation factor (tan δ)	tan δ ≤ 0.8 % (ECQB(F)100 VDC : tan δ ≤ 1.0 %) (20 °C, 1 kHz)
Withstand voltage	Between terminals : Rated voltage(VDC) × 250 % 1 s to 5 s
Insulation resistance (IR)	$C \leq 0.33 \mu\text{F} : IR \geq 30000 \text{ M}\Omega$ (20 °C, 50 VDC, 60 s : ECQB1H(F), ECQB1J(F)) $C > 0.33 \mu\text{F} : IR \geq 10000 \text{ M}\Omega \cdot \mu\text{F}$ (20 °C, 100 VDC, 60 s : ECQB1(F), ECQB2(F))

\* 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".

#### ■ Dimensions in mm (not to scale)

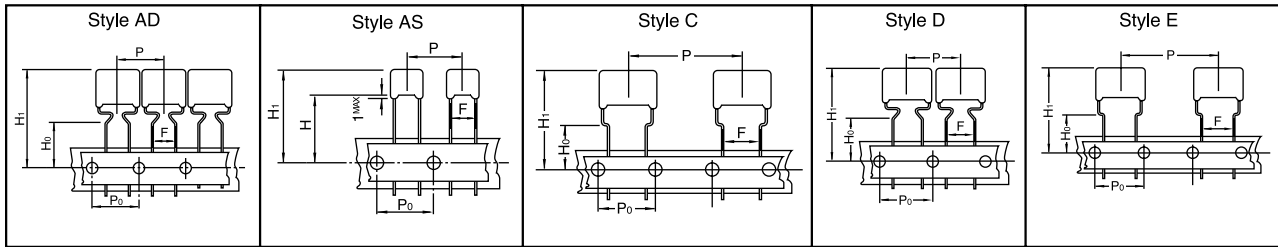


### ■Packaging Specifications for Bulk Package

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	
			AD	AS	B	C	D		E
ECQB (F)	50 VDC	0.00010 to 0.22	○						Ammo
		0.00010 to 0.10		○					Ammo
		0.00010 to 0.22	○						Reel
		0.00010 to 0.10		○					Reel
	63 VDC	0.00010 to 0.033	○	○					Ammo
		0.00010 to 0.033	○	○					Reel
	100 VDC	0.00010 to 0.12	○						Ammo
		0.00010 to 0.047		○					Ammo
		0.00010 to 0.10	○						Reel
		0.00010 to 0.047		○					Reel
	200 VDC	0.15 to 0.47				○			Ammo
		0.0010 to 0.033	○						Ammo
		0.0033 to 0.056					○		Ammo
		0.068 to 0.47						○	Ammo
		0.039 to 0.22				○			Ammo

#### ●Lead Spacing

Style	Lead Spacing
AD	5.0 mm
AS	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 & Reel

● Type ECQB(F), Rated voltage:50 VDC, Capacitance tolerance: ±5 %(J), ±10 %(K)

Only ±10 %(K) is available from 0.00010 μF to 0.00039 μF

Part No.	Cap. (μF)	Dimensions (mm)							Quantity	
		L <sub>max.</sub>	T <sub>max.</sub>	H <sub>max.</sub>		F	S	ød	Ammo	Reel
				Type 1	Type 2					
ECQB1H101KF( )	0.00010	7.0	3.0	6.0	11.0	5.00	5.0	0.50	2000	2000
ECQB1H121KF( )	0.00012	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H151KF( )	0.00015	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H181KF( )	0.00018	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H221KF( )	0.00022	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H271KF( )	0.00027	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H331KF( )	0.00033	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H391KF( )	0.00039	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H471 □F( )	0.00047	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H561 □F( )	0.00056	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H681 □F( )	0.00068	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H821 □F( )	0.00082	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H102 □F( )	0.0010	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H122 □F( )	0.0012	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H152 □F( )	0.0015	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H182 □F( )	0.0018	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H222 □F( )	0.0022	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H272 □F( )	0.0027	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H332 □F( )	0.0033	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H392 □F( )	0.0039	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H472 □F( )	0.0047	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H562 □F( )	0.0056	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H682 □F( )	0.0068	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H822 □F( )	0.0082	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H103 □F( )	0.010	7.0	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H123 □F( )	0.012	7.3	3.3	6.3	11.3	5.00	5.0	0.50		
ECQB1H153 □F( )	0.015	7.5	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H183 □F( )	0.018	7.5	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H223 □F( )	0.022	7.5	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1H273 □F( )	0.027	7.5	3.5	6.5	11.5	5.00	5.0	0.50		
ECQB1H333 □F( )	0.033	7.5	3.5	6.5	11.5	5.00	5.0	0.50		
ECQB1H393 □F( )	0.039	7.5	4.0	7.0	12.0	5.00	5.0	0.50		
ECQB1H473 □F( )	0.047	7.5	4.0	7.0	12.0	5.00	5.0	0.50		
ECQB1H563 □F( )	0.056	8.0	4.3	7.5	12.5	5.00	5.0	0.50		
ECQB1H683 □F( )	0.068	8.0	4.3	8.5	13.5	5.00	5.0	0.50		
ECQB1H823 □F( )	0.082	8.0	4.5	8.5	13.5	5.00	5.0	0.50		
ECQB1H104 □F( )	0.10	8.0	5.0	10.0	15.0	5.00	5.0	0.50		
ECQB1H124 □F( )	0.12	11.0	5.0	9.5	14.5	7.50	5.0	0.60		
ECQB1H154 □F( )	0.15	11.0	5.0	10.0	15.0	7.50	5.0	0.60		
ECQB1H184 □F( )	0.18	11.0	5.5	10.5	15.5	7.50	5.0	0.60		
ECQB1H224 □F( )	0.22	11.0	6.0	11.5	16.5	7.50	5.0	0.60		
ECQB1H274 □F( )	0.27	13.0	6.0	12.0	17.0	10.00	5.0	0.60		
ECQB1H334 □F( )	0.33	13.0	6.5	13.0	18.0	10.00	5.0	0.60		
ECQB1H394 □F( )	0.39	13.0	7.0	14.0	19.0	10.00	5.0	0.60		
ECQB1H474 □F( )	0.47	13.0	7.5	14.5	19.5	10.00	5.0	0.60		

Suffix for lead crimped or taped type  
 Cap. tol. code

Style N: 0.00010 μF to 0.10 μF  
 Style T: 0.12 μF to 0.47 μF

■ Rating, Dimensions & Quantity/Ammo Box & Reel

● Type ECQB(F), Rated voltage: 63 VDC, Capacitance tolerance: ±5 %(J), ±10 %(K)

Only ±10 %(K) is available from 0.00010 μF to 0.00039 μF

Part No.	Cap. (μF)	Dimensions (mm)							Quantity		
		L <sub>max.</sub>	T <sub>max.</sub>	H <sub>max.</sub>		F		S	ød	Ammo	Reel
				Type 1	Type 2	Type 1	Type 2				
ECQB1J101KF( )	0.00010	7.0	3.0	6.0	11.0	5.00	5.0	0.50	2000	2000	
ECQB1J121KF( )	0.00012	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J151KF( )	0.00015	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J181KF( )	0.00018	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J221KF( )	0.00022	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J271KF( )	0.00027	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J331KF( )	0.00033	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J391KF( )	0.00039	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J471 □F( )	0.00047	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J561 □F( )	0.00056	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J681 □F( )	0.00068	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J821 □F( )	0.00082	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J102 □F( )	0.0010	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J122 □F( )	0.0012	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J152 □F( )	0.0015	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J182 □F( )	0.0018	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J222 □F( )	0.0022	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J272 □F( )	0.0027	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J332 □F( )	0.0033	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J392 □F( )	0.0039	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J472 □F( )	0.0047	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J562 □F( )	0.0056	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J682 □F( )	0.0068	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J822 □F( )	0.0082	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J103 □F( )	0.010	7.0	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J123 □F( )	0.012	7.3	3.3	6.3	11.3	5.00	5.0	0.50			
ECQB1J153 □F( )	0.015	7.5	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J183 □F( )	0.018	7.5	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J223 □F( )	0.022	7.5	3.0	6.0	11.0	5.00	5.0	0.50			
ECQB1J273 □F( )	0.027	7.5	3.5	6.5	11.5	5.00	5.0	0.50			
ECQB1J333 □F( )	0.033	7.5	3.5	6.5	11.5	5.00	5.0	0.50			

□ Suffix for lead crimped or taped type  
 □ Cap. tol. code

Style N: 0.00010 μF to 0.033 μF

■ Rating, Dimensions & Quantity/Ammo Box & Reel

● Type ECQB(F), Rated voltage: 100 VDC, Capacitance tolerance: ±5 % (J), ±10 % (K)

Only ±10 % (K) is available from 0.00010 μF to 0.00039 μF

Part No.	Cap. (μF)	Dimensions (mm)							Quantity	
		L <sub>max.</sub>	T <sub>max.</sub>	H <sub>max.</sub>		F	S	ød	Ammo	Reel
				Type 1	Type 2					
ECQB1101KF( )	0.00010	7.2	3.0	6.0	11.0	5.00	5.0	0.50	2000	2000
ECQB1121KF( )	0.00012	7.2	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1151KF( )	0.00015	7.2	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1181KF( )	0.00018	7.2	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1221KF( )	0.00022	7.2	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1271KF( )	0.00027	7.2	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1331KF( )	0.00033	7.2	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1391KF( )	0.00039	7.2	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1471□F( )	0.00047	7.2	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1561□F( )	0.00056	7.2	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1681□F( )	0.00068	7.2	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1821□F( )	0.00082	7.2	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1102□F( )	0.0010	7.2	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1122□F( )	0.0012	7.2	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1152□F( )	0.0015	7.2	3.0	6.0	11.0	5.00	5.0	0.50		
ECQB1182□F( )	0.0018	7.2	3.0	6.5	11.5	5.00	5.0	0.50		
ECQB1222□F( )	0.0022	7.2	3.0	6.5	11.5	5.00	5.0	0.50		
ECQB1272□F( )	0.0027	7.2	3.0	6.5	11.5	5.00	5.0	0.50		
ECQB1332□F( )	0.0033	7.2	3.0	6.5	11.5	5.00	5.0	0.50		
ECQB1392□F( )	0.0039	7.2	3.0	6.5	11.5	5.00	5.0	0.50		
ECQB1472□F( )	0.0047	7.2	3.0	6.5	11.5	5.00	5.0	0.50		
ECQB1562□F( )	0.0056	7.2	3.0	6.5	11.5	5.00	5.0	0.50		
ECQB1682□F( )	0.0068	7.2	3.0	6.5	11.5	5.00	5.0	0.50		
ECQB1822□F( )	0.0082	7.2	3.2	7.0	12.0	5.00	5.0	0.50		
ECQB1103□F( )	0.010	7.2	3.2	7.0	12.0	5.00	5.0	0.50		
ECQB1123□F( )	0.012	7.2	3.5	7.0	12.0	5.00	5.0	0.50		
ECQB1153□F( )	0.015	7.2	4.0	7.5	12.5	5.00	5.0	0.50		
ECQB1183□F( )	0.018	7.5	4.5	8.0	13.0	5.00	5.0	0.50		
ECQB1223□F( )	0.022	7.5	4.5	9.0	14.0	5.00	5.0	0.50		
ECQB1273□F( )	0.027	7.5	5.0	9.5	14.5	5.00	5.0	0.50		
ECQB1333□F( )	0.033	7.5	5.5	10.0	15.0	5.00	5.0	0.50		
ECQB1393□F( )	0.039	7.5	6.0	11.2	16.2	5.00	5.0	0.50		
ECQB1473□F( )	0.047	7.5	6.5	11.8	16.8	5.00	5.0	0.50		
ECQB1563□F( )	0.056	10.0	5.0	12.0	17.0	7.50	5.0	0.60		
ECQB1683□F( )	0.068	10.0	5.5	12.4	17.4	7.50	5.0	0.60		
ECQB1823□F( )	0.082	10.0	5.5	14.0	19.0	7.50	5.0	0.60		
ECQB1104□F( )	0.10	10.5	6.0	14.6	19.6	7.50	5.0	0.60		
ECQB1124□F( )	0.12	10.5	7.0	15.2	20.2	7.50	5.0	0.60		
ECQB1154□F( )	0.15	13.0	7.0	13.8	18.8	10.00	5.0	0.60		
ECQB1184□F( )	0.18	13.0	7.5	14.4	19.4	10.00	5.0	0.60		
ECQB1224□F( )	0.22	13.0	8.0	15.2	20.2	10.00	5.0	0.60		
ECQB1274□F( )	0.27	13.0	8.5	17.2	22.2	10.00	5.0	0.60		
ECQB1334□F( )	0.33	13.0	9.0	18.0	23.0	10.00	5.0	0.60		
ECQB1394□F( )	0.39	13.0	10.5	19.0	24.0	10.00	5.0	0.60		
ECQB1474□F( )	0.47	13.0	11.5	19.2	24.2	10.00	5.0	0.60		

↑ Suffix for lead crimped or taped type  
 — Cap. tol. code

Style N: 0.00010 μF to 0.047 μF  
 Style T: 0.056 μF to 0.47 μF

■ Rating, Dimensions & Quantity/Ammo Box & Reel

● Type ECQB(F), Rated voltage: 200 VDC, Capacitance tolerance: ±5 % (J), ±10 % (K)

Part No.	Cap. ( $\mu$ F)	Dimensions (mm)							Quantity
		L <sub>max.</sub>	T <sub>max.</sub>	H <sub>max.</sub>		F	S	$\phi$ d	
				Type 1	Type 2	Type 1	Type 2		Ammo
ECQB2102□F( )	0.0010	8.5	4.0	7.0	12.0	5.00	5.0	0.50	1000
ECQB2122□F( )	0.0012	8.5	4.0	7.5	12.5	5.00	5.0	0.50	
ECQB2152□F( )	0.0015	8.5	4.0	7.5	12.5	5.00	5.0	0.50	
ECQB2182□F( )	0.0018	8.5	4.5	7.5	12.5	5.00	5.0	0.50	
ECQB2222□F( )	0.0022	8.5	4.5	7.5	12.5	5.00	5.0	0.50	
ECQB2272□F( )	0.0027	8.5	4.5	8.0	13.0	5.00	5.0	0.50	
ECQB2332□F( )	0.0033	11.0	4.5	7.5	12.5	7.50	5.0	0.60	
ECQB2392□F( )	0.0039	11.0	4.5	7.5	12.5	7.50	5.0	0.60	
ECQB2472□F( )	0.0047	11.0	4.5	8.5	13.5	7.50	5.0	0.60	
ECQB2562□F( )	0.0056	11.0	4.5	8.5	13.5	7.50	5.0	0.60	
ECQB2682□F( )	0.0068	11.0	4.5	9.0	14.0	7.50	5.0	0.60	
ECQB2822□F( )	0.0082	11.0	4.5	9.0	14.0	7.50	5.0	0.60	
ECQB2103□F( )	0.010	11.0	4.5	10.0	15.0	7.50	5.0	0.60	
ECQB2123□F( )	0.012	11.0	5.0	10.5	15.5	7.50	5.0	0.60	
ECQB2153□F( )	0.015	11.0	5.5	10.5	15.5	7.50	5.0	0.60	
ECQB2183□F( )	0.018	11.0	5.5	10.0	15.0	7.50	5.0	0.60	
ECQB2223□F( )	0.022	11.0	6.0	10.5	15.5	7.50	5.0	0.60	
ECQB2273□F( )	0.027	11.0	6.5	11.5	16.5	7.50	5.0	0.60	
ECQB2333□F( )	0.033	11.0	7.0	12.0	17.0	7.50	5.0	0.60	
ECQB2393□F( )	0.039	13.5	5.0	12.5	17.5	10.00	7.5	0.60	
ECQB2473□F( )	0.047	13.5	5.5	13.0	18.0	10.00	7.5	0.60	
ECQB2563□F( )	0.056	13.5	6.0	13.5	18.5	10.00	7.5	0.60	
ECQB2683□F( )	0.068	16.0	5.5	13.0	18.0	12.50	10.0	0.60	
ECQB2823□F( )	0.082	16.0	6.0	13.5	18.5	12.50	10.0	0.60	
ECQB2104□F( )	0.10	16.0	7.0	14.5	19.5	12.50	10.0	0.60	
ECQB2124□F( )	0.12	19.0	6.5	16.0	21.0	15.00	12.5	0.60	
ECQB2154□F( )	0.15	19.0	7.5	17.0	22.0	15.00	12.5	0.60	
ECQB2184□F( )	0.18	19.0	8.0	17.5	22.5	15.00	12.5	0.60	
ECQB2224□F( )	0.22	19.0	9.0	18.5	23.5	15.00	12.5	0.60	
ECQB2274□F( )	0.27	24.0	8.0	17.5	22.5	20.00	15.0	0.80	
ECQB2334□F( )	0.33	24.0	9.0	18.5	23.5	20.00	15.0	0.80	
ECQB2394□F( )	0.39	24.0	10.0	19.5	24.5	20.00	15.0	0.80	
ECQB2474□F( )	0.47	24.0	11.5	20.5	25.5	20.00	15.0	0.80	

Suffix for lead crimped or taped type  
 Cap. tol. code

Style N: 0.0010  $\mu$ F to 0.0027  $\mu$ F  
 Style T: 0.0033  $\mu$ F to 0.47  $\mu$ F

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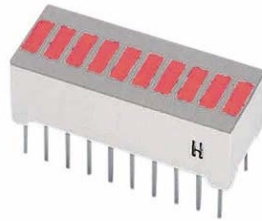


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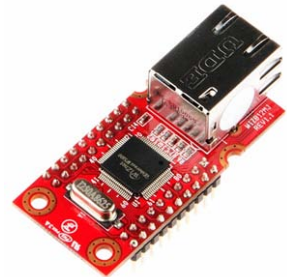
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10-Segments LED Bar Display



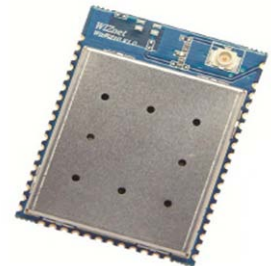
Ethernet Module



Arduino Uno



MicroSD Breakout Board



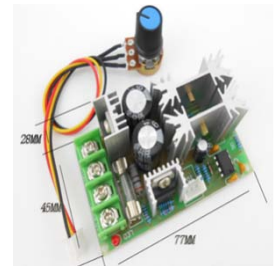
WiFi Module



20x4 LCD Display Module



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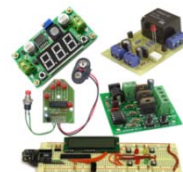
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