

## Stacked Metallized Plastic Film Capacitor

Type: **ECQV(L)/(M)**

Designed for high density insertion applications.

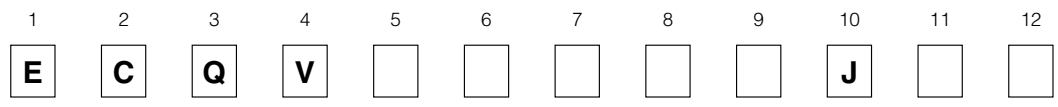
### ■Features

- Small size and large capacitance
- Excellent electric characteristics in non-inductive construction
- Wide range for automatic insertion
- RoHS directive compliant

### ■Recommended Applications

- General purpose
- Noise suppression for logic circuit

### ■Explanation of Part Numbers



Product code

Dielectric & construction

Rated voltage

Capacitance

Cap. Tol.

Suffix

Suffix

|    |         |
|----|---------|
| 1H | 50 VDC  |
| 1J | 63 VDC  |
| 1  | 100 VDC |

|   |         |
|---|---------|
| L | 50 VDC  |
| M | 63 VDC  |
|   | 100 VDC |

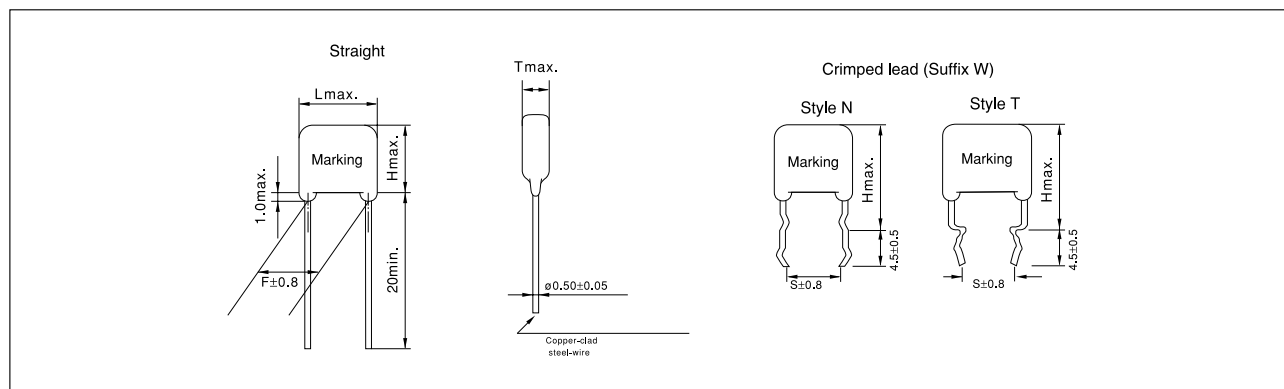
| Suffix | Lead Form              |
|--------|------------------------|
| Blank  | Straight               |
| W      | Crimped lead           |
| 2      | Straight taping (Ammo) |
| 3      | Crimped taping (Ammo)  |
| 5      | Straight taping (Reel) |
| 9      | Crimped taping (Reel)  |

### ■Specifications

|                                                                      |                                                                                                                                                          |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category temp. range<br>(Including temperature-rise on unit surface) | −40 °C to +105 °C                                                                                                                                        |
| Rated voltage                                                        | 50 VDC, 63 VDC, 100 VDC<br>(Derating of rated voltage by 2.5 %/°C at more than 85 °C)                                                                    |
| Capacitance range                                                    | 0.010 μF to 2.2 μF                                                                                                                                       |
| Capacitance tolerance                                                | ± 5 % (J)                                                                                                                                                |
| Dissipation factor (tan δ)                                           | tan δ ≤ 1.0 % (20 °C, 1 kHz)                                                                                                                             |
| Withstand voltage                                                    | Between terminals : Rated volt. (VDC) × 150 % 60 s                                                                                                       |
| Insulation resistance (IR)                                           | $C \leq 0.33 \mu\text{F}$ : IR ≥ 3000 MΩ (20 °C, 50 VDC, 60 s ECQV1H, ECQV1J)<br>$C > 0.33 \mu\text{F}$ : IR ≥ 1000 MΩ · μF (20 °C, 100 VDC, 60 s ECQV1) |

\* 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)



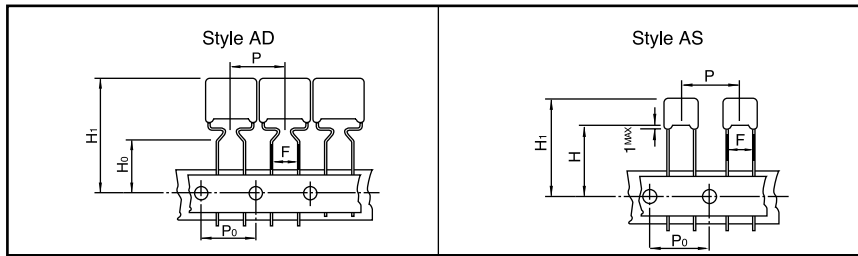
### ■Packaging Specifications for Bulk Package

Packing quantity: 100 pcs./bag

Design, Specifications are subject to change without notice. Ask factory for technical specifications before purchase and/or use. Whenever a doubt about safety arises from this product, please inform us immediately for technical consultation without fail.

■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 | B | C | D | E |         |        |
| ECQV (L) | 50 VDC      | 0.010 to 2.2    | ○            |    |   |   |   |   | Ammo    | JL3    |
|          |             | 0.010 to 1.0    |              | ○  |   |   |   |   | Ammo    | JL2    |
|          |             | 0.010 to 2.2    | ○            |    |   |   |   |   | Reel    | JL9    |
|          |             | 0.010 to 1.0    |              | ○  |   |   |   |   | Reel    | JL5    |
| ECQV (M) | 63 VDC      | 0.010 to 1.0    | ○            |    |   |   |   |   | Ammo    | JM3    |
|          |             | 0.010 to 0.15   |              | ○  |   |   |   |   | Ammo    | JM2    |
|          |             | 0.010 to 1.0    | ○            |    |   |   |   |   | Reel    | JM9    |
|          |             | 0.010 to 0.15   |              | ○  |   |   |   |   | Reel    | JM5    |
|          | 100 VDC     | 0.010 to 0.47   | ○            |    |   |   |   |   | Ammo    | JM3    |
|          |             | 0.010 to 0.10   |              | ○  |   |   |   |   | Ammo    | JM2    |
|          |             | 0.010 to 0.47   | ○            |    |   |   |   |   | Reel    | JM9    |
|          |             | 0.010 to 0.10   |              | ○  |   |   |   |   | Reel    | JM5    |

●Lead Spacing

| Style | Lead Spacing |
|-------|--------------|
| AD    | 5.0 mm       |
| AS    | 5.0 mm       |

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

■Rating, Dimensions & Quantity/Ammo Box or Reel

●Type ECQV(L) Rated voltage : 50 VDC

| Part No.       | Cap. (μF) | Dimensions (mm)   |                   |                   |              |     |     |      | Quantity |      |
|----------------|-----------|-------------------|-------------------|-------------------|--------------|-----|-----|------|----------|------|
|                |           | L <sub>max.</sub> | T <sub>max.</sub> | H <sub>max.</sub> |              | F   | S   | ød   | Ammo     | Reel |
|                |           |                   |                   | Straight          | Crimped lead |     |     |      |          |      |
| ECQV1H103JL( ) | 0.010     | 7.3               | 3.2               | 5.0               | 9.0          | 5.0 | 5.0 | 0.50 | 2000     | 2000 |
| ECQV1H123JL( ) | 0.012     | 7.3               | 3.2               | 5.0               | 9.0          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H153JL( ) | 0.015     | 7.3               | 3.2               | 5.0               | 9.0          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H183JL( ) | 0.018     | 7.3               | 3.2               | 5.0               | 9.0          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H223JL( ) | 0.022     | 7.3               | 3.2               | 5.0               | 9.0          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H273JL( ) | 0.027     | 7.3               | 3.2               | 5.0               | 9.0          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H333JL( ) | 0.033     | 7.3               | 3.2               | 5.0               | 9.0          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H393JL( ) | 0.039     | 7.3               | 3.2               | 5.0               | 9.0          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H473JL( ) | 0.047     | 7.3               | 3.2               | 5.0               | 9.0          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H563JL( ) | 0.056     | 7.3               | 3.2               | 5.0               | 9.0          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H683JL( ) | 0.068     | 7.3               | 3.2               | 5.0               | 9.0          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H823JL( ) | 0.082     | 7.3               | 3.6               | 5.0               | 9.0          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H104JL( ) | 0.10      | 7.3               | 4.0               | 5.0               | 9.0          | 5.0 | 5.0 | 0.50 | 1000     | 1000 |
| ECQV1H124JL( ) | 0.12      | 7.3               | 4.0               | 5.0               | 9.0          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H154JL( ) | 0.15      | 7.3               | 4.4               | 5.5               | 9.5          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H184JL( ) | 0.18      | 7.3               | 4.5               | 5.5               | 9.5          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H224JL( ) | 0.22      | 7.3               | 4.8               | 5.5               | 9.5          | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H274JL( ) | 0.27      | 7.3               | 4.6               | 7.0               | 11.0         | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H334JL( ) | 0.33      | 7.3               | 5.2               | 7.0               | 11.0         | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H394JL( ) | 0.39      | 7.3               | 5.7               | 7.3               | 11.3         | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H474JL( ) | 0.47      | 7.3               | 6.0               | 7.3               | 11.3         | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H564JL( ) | 0.56      | 7.3               | 5.8               | 10.0              | 14.0         | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H684JL( ) | 0.68      | 7.3               | 6.5               | 10.0              | 14.0         | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H824JL( ) | 0.82      | 7.3               | 6.8               | 10.0              | 14.0         | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H105JL( ) | 1.0       | 7.3               | 8.0               | 11.0              | 15.0         | 5.0 | 5.0 | 0.50 |          |      |
| ECQV1H125JL( ) | 1.2       | 10.2              | 6.5               | 10.0              | 14.0         | 7.5 | 5.0 | 0.50 |          |      |
| ECQV1H155JL( ) | 1.5       | 10.2              | 7.2               | 10.0              | 14.0         | 7.5 | 5.0 | 0.50 |          |      |
| ECQV1H185JL( ) | 1.8       | 10.2              | 7.2               | 12.0              | 16.5         | 7.5 | 5.0 | 0.50 |          |      |
| ECQV1H225JL( ) | 2.2       | 10.2              | 7.9               | 12.0              | 16.5         | 7.5 | 5.0 | 0.50 |          |      |

↑ Suffix for lead crimped or taped type

Style N: 0.010 μF to 1.0 μF  
Style T: 1.2 μF to 2.2 μF

■ Rating, Dimensions & Quantity/Ammo Box or Reel

● Type ECQV(M) Rated voltage : 63 VDC

| Part No.       | Cap.<br>( $\mu$ F) | Dimensions (mm)   |                   |                   |              |     |     |          | Quantity |      |
|----------------|--------------------|-------------------|-------------------|-------------------|--------------|-----|-----|----------|----------|------|
|                |                    | L <sub>max.</sub> | T <sub>max.</sub> | H <sub>max.</sub> |              | F   | S   | $\phi$ d | Ammo     | Reel |
|                |                    |                   |                   | Straight          | Crimped lead |     |     |          |          |      |
| ECQV1J103JM( ) | 0.010              | 7.5               | 3.2               | 6.8               | 10.8         | 5.0 | 5.0 | 0.50     | 2000     | 2000 |
| ECQV1J123JM( ) | 0.012              | 7.5               | 3.2               | 6.8               | 10.8         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1J153JM( ) | 0.015              | 7.5               | 3.2               | 6.8               | 10.8         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1J183JM( ) | 0.018              | 7.5               | 3.2               | 6.8               | 10.8         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1J223JM( ) | 0.022              | 7.5               | 3.2               | 6.8               | 10.8         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1J273JM( ) | 0.027              | 7.5               | 3.2               | 6.8               | 10.8         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1J333JM( ) | 0.033              | 7.5               | 3.2               | 6.8               | 10.8         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1J393JM( ) | 0.039              | 7.5               | 3.2               | 6.8               | 10.8         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1J473JM( ) | 0.047              | 7.5               | 3.2               | 6.8               | 10.8         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1J563JM( ) | 0.056              | 7.5               | 3.2               | 6.8               | 10.8         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1J683JM( ) | 0.068              | 7.5               | 3.2               | 6.8               | 10.8         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1J823JM( ) | 0.082              | 7.5               | 3.2               | 6.8               | 10.8         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1J104JM( ) | 0.10               | 7.5               | 3.2               | 7.0               | 11.0         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1J124JM( ) | 0.12               | 7.5               | 3.8               | 7.0               | 11.0         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1J154JM( ) | 0.15               | 7.5               | 4.1               | 7.0               | 11.0         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1J184JM( ) | 0.18               | 10.2              | 3.5               | 9.0               | 14.0         | 7.5 | 5.0 | 0.50     |          |      |
| ECQV1J224JM( ) | 0.22               | 10.2              | 3.5               | 9.0               | 14.0         | 7.5 | 5.0 | 0.50     |          |      |
| ECQV1J274JM( ) | 0.27               | 10.2              | 3.5               | 9.0               | 14.0         | 7.5 | 5.0 | 0.50     |          |      |
| ECQV1J334JM( ) | 0.33               | 10.2              | 3.8               | 9.0               | 14.0         | 7.5 | 5.0 | 0.50     |          |      |
| ECQV1J394JM( ) | 0.39               | 10.2              | 4.0               | 9.0               | 14.0         | 7.5 | 5.0 | 0.50     |          |      |
| ECQV1J474JM( ) | 0.47               | 10.2              | 4.5               | 9.0               | 14.0         | 7.5 | 5.0 | 0.50     | 1000     | 1000 |
| ECQV1J564JM( ) | 0.56               | 10.2              | 4.9               | 9.0               | 14.0         | 7.5 | 5.0 | 0.50     |          |      |
| ECQV1J684JM( ) | 0.68               | 10.2              | 5.5               | 10.0              | 15.0         | 7.5 | 5.0 | 0.50     |          |      |
| ECQV1J824JM( ) | 0.82               | 10.2              | 6.1               | 10.0              | 15.0         | 7.5 | 5.0 | 0.50     |          |      |
| ECQV1J105JM( ) | 1.0                | 10.2              | 6.9               | 10.0              | 15.0         | 7.5 | 5.0 | 0.50     |          |      |

Style N: 0.010  $\mu$ F to 0.15  $\mu$ F

Style T: 0.18  $\mu$ F to 1.0  $\mu$ F

● Type ECQV(M) Rated voltage : 100 VDC

| Part No.      | Cap.<br>( $\mu$ F) | Dimensions (mm)   |                   |                   |              |     |     |          | Quantity |      |
|---------------|--------------------|-------------------|-------------------|-------------------|--------------|-----|-----|----------|----------|------|
|               |                    | L <sub>max.</sub> | T <sub>max.</sub> | H <sub>max.</sub> |              | F   | S   | $\phi$ d | Ammo     | Reel |
|               |                    |                   |                   | Straight          | Crimped lead |     |     |          |          |      |
| ECQV1103JM( ) | 0.010              | 7.5               | 3.2               | 7.0               | 12.0         | 5.0 | 5.0 | 0.50     | 2000     | 2000 |
| ECQV1123JM( ) | 0.012              | 7.5               | 3.2               | 7.0               | 12.0         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1153JM( ) | 0.015              | 7.5               | 3.2               | 7.0               | 12.0         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1183JM( ) | 0.018              | 7.5               | 3.2               | 7.0               | 12.0         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1223JM( ) | 0.022              | 7.5               | 3.2               | 7.0               | 12.0         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1273JM( ) | 0.027              | 7.5               | 3.2               | 7.0               | 12.0         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1333JM( ) | 0.033              | 7.5               | 3.2               | 7.0               | 12.0         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1393JM( ) | 0.039              | 7.5               | 3.2               | 7.0               | 12.0         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1473JM( ) | 0.047              | 7.5               | 3.2               | 7.0               | 12.0         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1563JM( ) | 0.056              | 7.5               | 3.2               | 7.0               | 12.0         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1683JM( ) | 0.068              | 7.5               | 4.0               | 7.0               | 12.0         | 5.0 | 5.0 | 0.50     | 1000     | 1000 |
| ECQV1823JM( ) | 0.082              | 7.5               | 4.1               | 7.0               | 12.0         | 5.0 | 5.0 | 0.50     |          |      |
| ECQV1104JM( ) | 0.10               | 7.5               | 4.5               | 7.0               | 12.0         | 5.0 | 5.0 | 0.50     | 2000     | 2000 |
| ECQV1124JM( ) | 0.12               | 10.2              | 3.3               | 9.0               | 14.0         | 7.5 | 5.0 | 0.50     |          |      |
| ECQV1154JM( ) | 0.15               | 10.2              | 3.3               | 9.0               | 14.0         | 7.5 | 5.0 | 0.50     |          |      |
| ECQV1184JM( ) | 0.18               | 10.2              | 3.6               | 9.0               | 14.0         | 7.5 | 5.0 | 0.50     |          |      |
| ECQV1224JM( ) | 0.22               | 10.2              | 4.0               | 9.0               | 14.0         | 7.5 | 5.0 | 0.50     | 1000     | 1000 |
| ECQV1274JM( ) | 0.27               | 10.2              | 4.2               | 9.0               | 14.0         | 7.5 | 5.0 | 0.50     |          |      |
| ECQV1334JM( ) | 0.33               | 10.2              | 4.8               | 10.0              | 15.0         | 7.5 | 5.0 | 0.50     |          |      |
| ECQV1394JM( ) | 0.39               | 10.2              | 5.5               | 10.0              | 15.0         | 7.5 | 5.0 | 0.50     |          |      |
| ECQV1474JM( ) | 0.47               | 10.2              | 6.8               | 10.5              | 15.5         | 7.5 | 5.0 | 0.50     |          |      |

↑ ———— Suffix for lead crimped or taped type

Style N: 0.010  $\mu$ F to 0.10  $\mu$ F

Style T: 0.12  $\mu$ F to 0.47  $\mu$ F