

## Stacked Metallized Plastic Film Capacitors

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

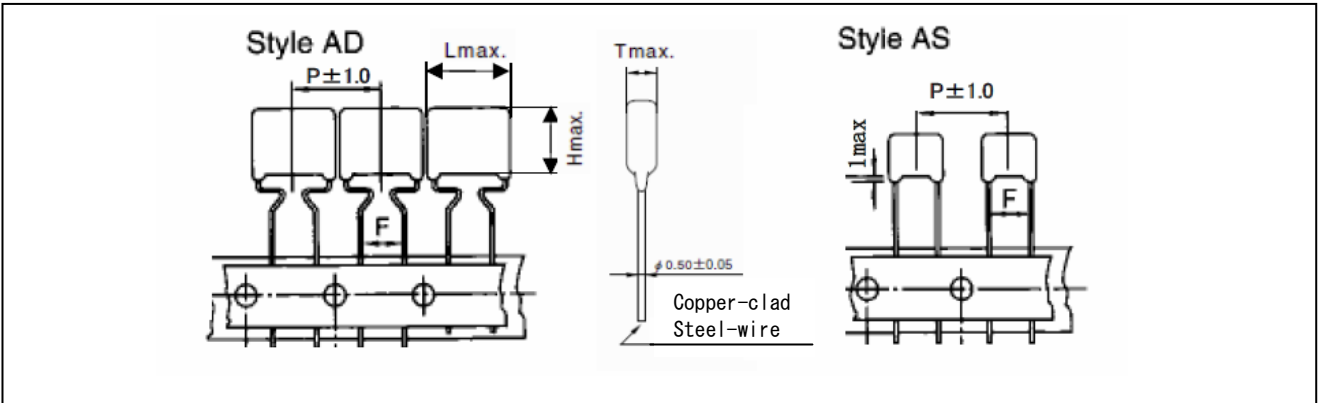
|              |   |                           |   |               |         |             |         |           |                        |        |    |
|--------------|---|---------------------------|---|---------------|---------|-------------|---------|-----------|------------------------|--------|----|
| 1            | 2 | 3                         | 4 | 5             | 6       | 7           | 8       | 9         | 10                     | 11     | 12 |
| E            | C | Q                         | V |               |         |             |         |           | J                      |        |    |
| Product code |   | Dielectric & construction |   | Rated voltage |         | Capacitance |         | Cap. Tol. | Suffix                 | Suffix |    |
|              |   |                           |   | 1H            | 50 VDC  | L           | 50 VDC  | Suffix    |                        | Form   |    |
|              |   |                           |   | 1J            | 63 VDC  | M           | 63 VDC  | 2         | Straight taping (Ammo) |        |    |
|              |   |                           |   | 1             | 100 VDC |             | 100 VDC | 3         | Crimped taping (Ammo)  |        |    |

### ■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 (E12)                                                                                                         |
| Capacitance tolerance                                                | ±5 % (J)                                                                                                                         |
| Dissipation factor (tan δ)                                           | tan δ ≤ 1.0 % (20°C, 1kHz)                                                                                                       |
| Withstand voltage                                                    | Between terminals : Rated voltage(VDC) × 150 % 60 s                                                                              |
| Insulation resistance (IR)                                           | C ≤ 0.33 μF : IR ≥ 3000 MΩ (20 °C, 50 VDC, 60 s ECQV1H, ECQV1J)<br>C > 0.33 μF : 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)

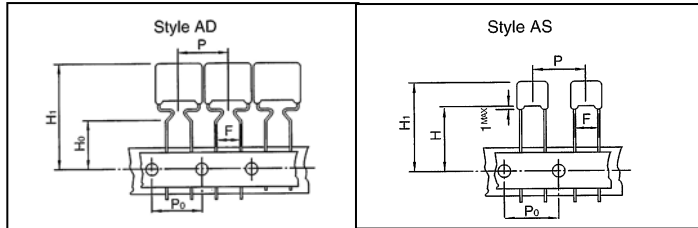


### ■Packaging Specification

Taping only

## ■Taping Specifications for Automatic Insertion

### ●Taping style



\*Refer to the page of taping specifications.

### ●Packaging Specifications

| Type    | Rated voltage | Cap. Range ( $\mu F$ ) | Taping Style |    |   |   |   |   | Packing |
|---------|---------------|------------------------|--------------|----|---|---|---|---|---------|
|         |               |                        | AD           | AS | B | C | D | E |         |
| ECQV(L) | 50 VDC        | 0.010 to 2.2           | ○            |    |   |   |   |   | Ammo    |
|         |               | 0.010 to 1.0           |              | ○  |   |   |   |   | Ammo    |
| ECQV(M) | 63 VDC        | 0.01 to 1.0            | ○            |    |   |   |   |   | Ammo    |
|         |               | 0.010 to 0.15          |              | ○  |   |   |   |   | Ammo    |
|         | 100 VDC       | 0.010 to 0.47          | ○            |    |   |   |   |   | Ammo    |
|         |               | 0.010 to 0.10          |              | ○  |   |   |   |   | Ammo    |

### ●Lead Spacing

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

※See the column “Rating, Dimensions & Quantity Box” for packing quantity.

## ■Rating, Dimension & Quantity / Ammo Box or Reel

### ● Type ECQV(L) Rated voltage : 50 VDC

| Part No.        | Capacitance ( $\mu F$ ) | Dimensions (mm) |           |           |              |          |             |                   | Quantity |
|-----------------|-------------------------|-----------------|-----------|-----------|--------------|----------|-------------|-------------------|----------|
|                 |                         | $L_{max}$       | $T_{max}$ | $H_{max}$ | $F+0.8/-0.2$ |          | $P \pm 1.0$ | $\phi d \pm 0.05$ | Ammo     |
|                 |                         |                 |           |           | Style AD     | Style AS |             |                   |          |
| ECQV1H103JL ( ) | 0.010                   | 7.3             | 3.2       | 5.0       | 5.0          | 5.0      | 12.7        | 0.50              | 2000     |
| ECQV1H123JL ( ) | 0.012                   | 7.3             | 3.2       | 5.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H153JL ( ) | 0.015                   | 7.3             | 3.2       | 5.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H183JL ( ) | 0.018                   | 7.3             | 3.2       | 5.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H223JL ( ) | 0.022                   | 7.3             | 3.2       | 5.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H273JL ( ) | 0.027                   | 7.3             | 3.2       | 5.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H333JL ( ) | 0.033                   | 7.3             | 3.2       | 5.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H393JL ( ) | 0.039                   | 7.3             | 3.2       | 5.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H473JL ( ) | 0.047                   | 7.3             | 3.2       | 5.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H563JL ( ) | 0.056                   | 7.3             | 3.2       | 5.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H683JL ( ) | 0.068                   | 7.3             | 3.2       | 5.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H823JL ( ) | 0.082                   | 7.3             | 3.6       | 5.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H104JL ( ) | 0.10                    | 7.3             | 4.0       | 5.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H124JL ( ) | 0.12                    | 7.3             | 4.0       | 5.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H154JL ( ) | 0.15                    | 7.3             | 4.4       | 5.5       | 5.0          | 5.0      | 12.7        | 0.50              | 1000     |
| ECQV1H184JL ( ) | 0.18                    | 7.3             | 4.5       | 5.5       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H224JL ( ) | 0.22                    | 7.3             | 4.8       | 5.5       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H274JL ( ) | 0.27                    | 7.3             | 4.6       | 7.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H334JL ( ) | 0.33                    | 7.3             | 5.2       | 7.0       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H394JL ( ) | 0.39                    | 7.3             | 5.7       | 7.3       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H474JL ( ) | 0.47                    | 7.3             | 6.0       | 7.3       | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H564JL ( ) | 0.56                    | 7.3             | 5.8       | 10.0      | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H684JL ( ) | 0.68                    | 7.3             | 6.5       | 10.0      | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H824JL ( ) | 0.82                    | 7.3             | 6.8       | 10.0      | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H105JL ( ) | 1.0                     | 7.3             | 8.0       | 11.0      | 5.0          | 5.0      | 12.7        | 0.50              |          |
| ECQV1H125JL ( ) | 1.2                     | 10.2            | 6.5       | 10.0      | 5.0          | —        | 12.7        | 0.50              |          |
| ECQV1H155JL ( ) | 1.5                     | 10.2            | 7.2       | 10.0      | 5.0          | —        | 12.7        | 0.50              |          |
| ECQV1H185JL ( ) | 1.8                     | 10.2            | 7.2       | 12.0      | 5.0          | —        | 12.7        | 0.50              |          |
| ECQV1H225JL ( ) | 2.2                     | 10.2            | 7.9       | 12.0      | 5.0          | —        | 12.7        | 0.50              |          |

↑  
— Suffix for taped type

## ■Rating, Dimension & Quantity / Ammo Box or Reel

### ●Type ECQV(L) Rated voltage : 63 VDC

| Part No.        | Capacitance<br>( $\mu$ F) | Dimensions (mm)  |                  |                  |            |          |       |          | Quantity |
|-----------------|---------------------------|------------------|------------------|------------------|------------|----------|-------|----------|----------|
|                 |                           | L <sub>max</sub> | T <sub>max</sub> | H <sub>max</sub> | F+0.8/-0.2 |          | P±1.0 | φ d±0.05 | Ammo     |
|                 |                           |                  |                  |                  | Style AD   | Style AS |       |          |          |
| ECQV1J103JM ( ) | 0.010                     | 7.5              | 3.2              | 6.8              | 5.0        | 5.0      | 12.7  | 0.50     | 2,000    |
| ECQV1J123JM ( ) | 0.012                     | 7.5              | 3.2              | 6.8              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1J153JM ( ) | 0.015                     | 7.5              | 3.2              | 6.8              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1J183JM ( ) | 0.018                     | 7.5              | 3.2              | 6.8              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1J223JM ( ) | 0.022                     | 7.5              | 3.2              | 6.8              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1J273JM ( ) | 0.027                     | 7.5              | 3.2              | 6.8              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1J333JM ( ) | 0.033                     | 7.5              | 3.2              | 6.8              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1J393JM ( ) | 0.039                     | 7.5              | 3.2              | 6.8              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1J473JM ( ) | 0.047                     | 7.5              | 3.2              | 6.8              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1J563JM ( ) | 0.056                     | 7.5              | 3.2              | 6.8              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1J683JM ( ) | 0.068                     | 7.5              | 3.2              | 6.8              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1J823JM ( ) | 0.082                     | 7.5              | 3.2              | 6.8              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1J104JM ( ) | 0.10                      | 7.5              | 3.2              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1J124JM ( ) | 0.12                      | 7.5              | 3.8              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1J154JM ( ) | 0.15                      | 7.5              | 4.1              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1J184JM ( ) | 0.18                      | 10.2             | 3.5              | 9.0              | 5.0        | —        | 12.7  | 0.50     |          |
| ECQV1J224JM ( ) | 0.22                      | 10.2             | 3.5              | 9.0              | 5.0        | —        | 12.7  | 0.50     |          |
| ECQV1J274JM ( ) | 0.27                      | 10.2             | 3.5              | 9.0              | 5.0        | —        | 12.7  | 0.50     |          |
| ECQV1J334JM ( ) | 0.33                      | 10.2             | 3.8              | 9.0              | 5.0        | —        | 12.7  | 0.50     |          |
| ECQV1J394JM ( ) | 0.39                      | 10.2             | 4.0              | 9.0              | 5.0        | —        | 12.7  | 0.50     |          |
| ECQV1J474JM ( ) | 0.47                      | 10.2             | 4.5              | 9.0              | 5.0        | —        | 12.7  | 0.50     | 1,000    |
| ECQV1J564JM ( ) | 0.56                      | 10.2             | 4.9              | 9.0              | 5.0        | —        | 12.7  | 0.50     |          |
| ECQV1J684JM ( ) | 0.68                      | 10.2             | 5.5              | 10.0             | 5.0        | —        | 12.7  | 0.50     |          |
| ECQV1J824JM ( ) | 0.82                      | 10.2             | 6.1              | 10.0             | 5.0        | —        | 12.7  | 0.50     |          |
| ECQV1J105JM ( ) | 1.0                       | 10.2             | 6.9              | 10.0             | 5.0        | —        | 12.7  | 0.50     |          |

↑  
— Suffix for taped type

### ●Type ECQV(L) Rated voltage : 100 VDC

| Part No.       | Capacitance<br>( $\mu$ F) | Dimensions (mm)  |                  |                  |            |          |       |          | Quantity |
|----------------|---------------------------|------------------|------------------|------------------|------------|----------|-------|----------|----------|
|                |                           | L <sub>max</sub> | T <sub>max</sub> | H <sub>max</sub> | F+0.8/-0.2 |          | P±1.0 | φ d±0.05 | Ammo     |
|                |                           |                  |                  |                  | Style AD   | Style AS |       |          |          |
| ECQV1103JM ( ) | 0.010                     | 7.5              | 3.2              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     | 2,000    |
| ECQV1123JM ( ) | 0.012                     | 7.5              | 3.2              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1153JM ( ) | 0.015                     | 7.5              | 3.2              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1183JM ( ) | 0.018                     | 7.5              | 3.2              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1223JM ( ) | 0.022                     | 7.5              | 3.2              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1273JM ( ) | 0.027                     | 7.5              | 3.2              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1333JM ( ) | 0.033                     | 7.5              | 3.2              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1393JM ( ) | 0.039                     | 7.5              | 3.2              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1473JM ( ) | 0.047                     | 7.5              | 3.2              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1563JM ( ) | 0.056                     | 7.5              | 3.2              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1683JM ( ) | 0.068                     | 7.5              | 4.0              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     | 1,000    |
| ECQV1823JM ( ) | 0.082                     | 7.5              | 4.1              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1104JM ( ) | 0.10                      | 7.5              | 4.5              | 7.0              | 5.0        | 5.0      | 12.7  | 0.50     |          |
| ECQV1124JM ( ) | 0.12                      | 10.2             | 3.3              | 9.0              | 5.0        | —        | 12.7  | 0.50     | 2,000    |
| ECQV1154JM ( ) | 0.15                      | 10.2             | 3.3              | 9.0              | 5.0        | —        | 12.7  | 0.50     |          |
| ECQV1184JM ( ) | 0.18                      | 10.2             | 3.6              | 9.0              | 5.0        | —        | 12.7  | 0.50     |          |
| ECQV1224JM ( ) | 0.22                      | 10.2             | 4.0              | 9.0              | 5.0        | —        | 12.7  | 0.50     |          |
| ECQV1274JM ( ) | 0.27                      | 10.2             | 4.2              | 9.0              | 5.0        | —        | 12.7  | 0.50     | 1,000    |
| ECQV1334JM ( ) | 0.33                      | 10.2             | 4.8              | 10.0             | 5.0        | —        | 12.7  | 0.50     |          |
| ECQV1394JM ( ) | 0.39                      | 10.2             | 5.5              | 10.0             | 5.0        | —        | 12.7  | 0.50     |          |
| ECQV1474JM ( ) | 0.47                      | 10.2             | 6.8              | 10.0             | 5.0        | —        | 12.7  | 0.50     |          |

↑  
— Suffix for taped type