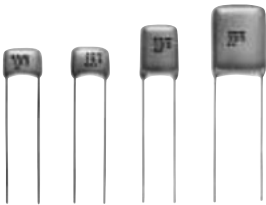


Stacked Metallized Film Capacitor

Type: **ECQV**

Designed for application where high density insertion of components is required.



- Features
- ◆High volumetric efficiency
  - ◆Excellent electrical characteristics in non-inductive construction
  - ◆Wide range for automatic insertion

- Recommended Applications
- ◆General purpose usage
  - ◆Noise suppression for logic circuits

■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

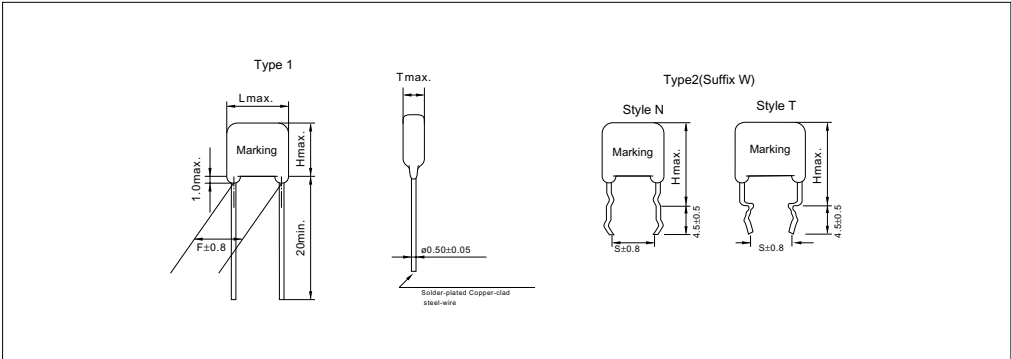
|       |       |        |
|-------|-------|--------|
| 50VDC | 63VDC | 100VDC |
| 1H    | 1J    | 1      |

| Taping   |         |          |         | Crimped lead |         |
|----------|---------|----------|---------|--------------|---------|
| Ammo     |         | Reel     |         | Type1        | Type2   |
| Straight | Crimped | Straight | Crimped | style N      | style T |
| 2        | 3       | 5        | 9       | Blank        | W       |

■Specifications

|                       |                                                                                                                              |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------|
| Category temp. range  | -40 to +85°C                                                                                                                 |
| Rated voltage         | 50VDC, 63VDC, 100VDC                                                                                                         |
| Capacitance range     | 0.01 to 2.2 μF                                                                                                               |
| Capacitance tolerance | ±5%(J)                                                                                                                       |
| Dissipation factor    | 1.0%max.(20°C 1kHz)                                                                                                          |
| Withstand voltage     | Between terminals : Rated volt.(VDC)×150% 60s                                                                                |
| Insulation resistance | C≤0.33μF : 3000MΩ min.      ( 20°C, 50VDC 60s ECQV1H, ECQV1J )<br>C>0.33μF : 1000MΩ . μFmin.      ( 20°C, 100VDC 60s ECQV1 ) |

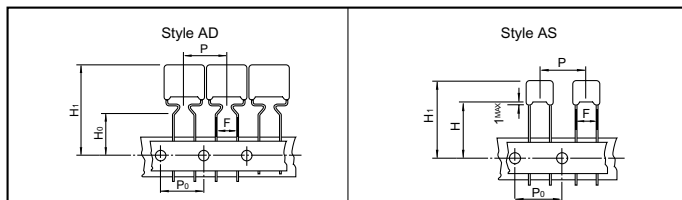
■Dimensions in mm(not to scale)



- Packaging Specifications for Bulk Package
- Packing quantity:100pcs./bag

### ■Taping Specifications for Automatic Insertion

#### ●Taping style



#### ●Packaging Specifications

| Type     | Rated volt. | Cap. range (μF) | Taping style |    |   |   |   |   | Packing |
|----------|-------------|-----------------|--------------|----|---|---|---|---|---------|
|          |             |                 | AD           | AS | B | C | D | E |         |
| ECQV (L) | 50VDC       | 0.01 to 2.2     | ○            |    |   |   |   |   | Ammo    |
|          |             | 0.01 to 1.0     |              | ○  |   |   |   |   | Ammo    |
|          |             | 0.01 to 2.2     | ○            |    |   |   |   |   | Reel    |
|          |             | 0.01 to 1.0     |              | ○  |   |   |   |   | Reel    |
| ECQV (M) | 63VDC       | 0.01 to 1.0     | ○            |    |   |   |   |   | Ammo    |
|          |             | 0.01 to 1.0     | ○            |    |   |   |   |   | Reel    |
|          |             | 0.01 to 0.15    |              | ○  |   |   |   |   | Reel    |
|          |             | 0.01 to 0.47    | ○            |    |   |   |   |   | Ammo    |
|          | 100VDC      | 0.01 to 0.47    | ○            |    |   |   |   |   | Reel    |
|          |             | 0.01 to 0.1     |              | ○  |   |   |   |   | Ammo    |
|          |             | 0.01 to 0.1     | ○            |    |   |   |   |   | Reel    |
|          |             | 0.01 to 0.1     | ○            |    |   |   |   |   | Reel    |

#### ●Lead Spacing

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

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

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

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

| Part No.       | Cap.<br>(μF) | Dimensions (mm)   |                   |                   |        |        |        |     | Quantity |      |
|----------------|--------------|-------------------|-------------------|-------------------|--------|--------|--------|-----|----------|------|
|                |              | L <sub>max.</sub> | T <sub>max.</sub> | H <sub>max.</sub> |        | F      |        | S   | ød       |      |
|                |              |                   |                   | Type-1            | Type-2 | Type-1 | Type-2 |     |          |      |
| ECQV1H103JL( ) | 0.01         | 7.3               | 3.2               | 5.0               | 9.0    | 5.0    | 5.0    | 5.0 | 0.50     | 2000 |
| ECQV1H123JL( ) | 0.012        | 7.3               | 3.2               | 5.0               | 9.0    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H153JL( ) | 0.015        | 7.3               | 3.2               | 5.0               | 9.0    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H183JL( ) | 0.018        | 7.3               | 3.2               | 5.0               | 9.0    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H223JL( ) | 0.022        | 7.3               | 3.2               | 5.0               | 9.0    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H273JL( ) | 0.027        | 7.3               | 3.2               | 5.0               | 9.0    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H333JL( ) | 0.033        | 7.3               | 3.2               | 5.0               | 9.0    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H393JL( ) | 0.039        | 7.3               | 3.2               | 5.0               | 9.0    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H473JL( ) | 0.047        | 7.3               | 3.2               | 5.0               | 9.0    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H563JL( ) | 0.056        | 7.3               | 3.2               | 5.0               | 9.0    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H683JL( ) | 0.068        | 7.3               | 3.2               | 5.0               | 9.0    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H823JL( ) | 0.082        | 7.3               | 3.6               | 5.0               | 9.0    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H104JL( ) | 0.1          | 7.3               | 4.0               | 5.0               | 9.0    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H124JL( ) | 0.12         | 7.3               | 4.0               | 5.0               | 9.0    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H154JL( ) | 0.15         | 7.3               | 4.4               | 5.5               | 9.5    | 5.0    | 5.0    | 5.0 | 0.50     | 1000 |
| ECQV1H184JL( ) | 0.18         | 7.3               | 4.5               | 5.5               | 9.5    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H224JL( ) | 0.22         | 7.3               | 4.8               | 5.5               | 9.5    | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H274JL( ) | 0.27         | 7.3               | 4.6               | 7.0               | 11.0   | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H334JL( ) | 0.33         | 7.3               | 5.2               | 7.0               | 11.0   | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H394JL( ) | 0.39         | 7.3               | 5.7               | 7.3               | 11.3   | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H474JL( ) | 0.47         | 7.3               | 6.0               | 7.3               | 11.3   | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H564JL( ) | 0.56         | 7.3               | 5.8               | 10.0              | 14.0   | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H684JL( ) | 0.68         | 7.3               | 6.5               | 10.0              | 14.0   | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H824JL( ) | 0.82         | 7.3               | 6.8               | 10.0              | 14.0   | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H105JL( ) | 1.0          | 7.3               | 8.0               | 11.0              | 15.0   | 5.0    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H125JL( ) | 1.2          | 10.2              | 6.5               | 10.0              | 14.0   | 7.5    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H155JL( ) | 1.5          | 10.2              | 7.2               | 10.0              | 14.0   | 7.5    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H185JL( ) | 1.8          | 10.2              | 7.2               | 12.0              | 16.5   | 7.5    | 5.0    | 5.0 | 0.50     |      |
| ECQV1H225JL( ) | 2.2          | 10.2              | 7.9               | 12.0              | 16.5   | 7.5    | 5.0    | 5.0 | 0.50     |      |

— Suffix for lead crimped or taped type

styleN:0.01 to 1.0 μF  
styleT:1.2 to 2.2 μF

■ Rating, Dimensions & Quantity/Ammo Box or Reel

● Type ECQV(M) Rated voltage : 63VDC

| 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 |      |
|                |                    |                   |                   | Type-1            | Type-2 | Type-1 | Type-2 |      |          |      |
| ECQV1J103JM( ) | 0.01               | 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( ) | 0.1                | 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 |          |      |

StyleN:0.01 to 0.15  $\mu$ F  
StyleT:0.18 to 1.0  $\mu$ F

● Type ECQV(M) Rated voltage : 100VDC

| 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 |      |
|               |                    |                   |                   | Type-1            | Type-2 | Type-1 | Type-2 |      |          |      |
| ECQV1103JM( ) | 0.01               | 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( ) | 0.1                | 7.5               | 4.5               | 7.0               | 12.0   | 5.0    | 5.0    | 0.50 |          |      |
| ECQV1124JM( ) | 0.12               | 10.2              | 3.3               | 9.0               | 14.0   | 7.5    | 5.0    | 0.50 | 2000     | 2000 |
| 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 |          |      |
| ECQV1274JM( ) | 0.27               | 10.2              | 4.2               | 9.0               | 14.0   | 7.5    | 5.0    | 0.50 | 1000     | 1000 |
| 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 |          |      |

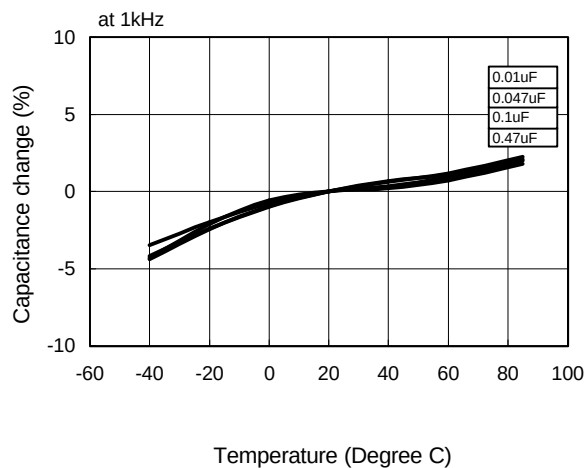
↑ Suffix for lead crimped or taped type

StyleN:0.01 to 0.1  $\mu$ F

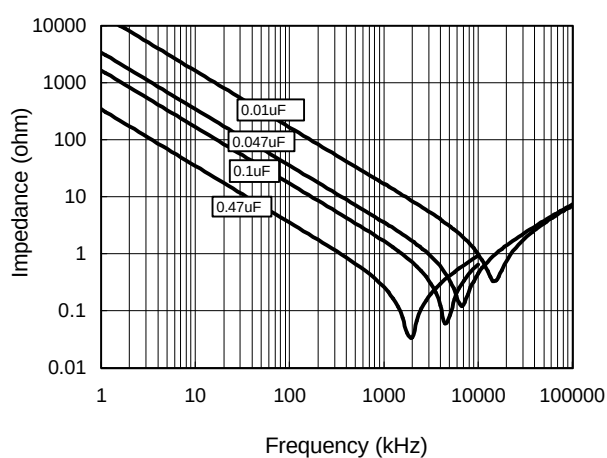
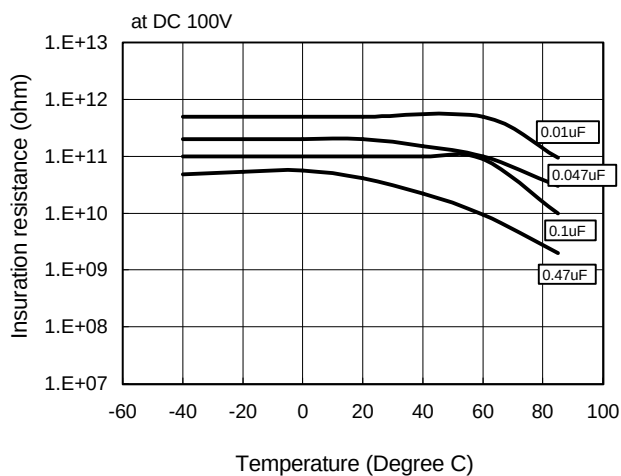
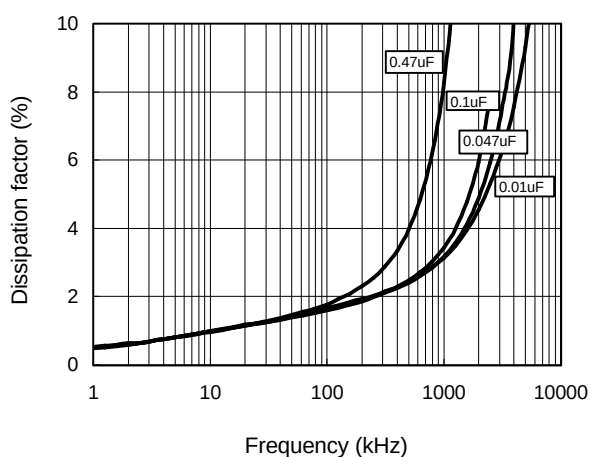
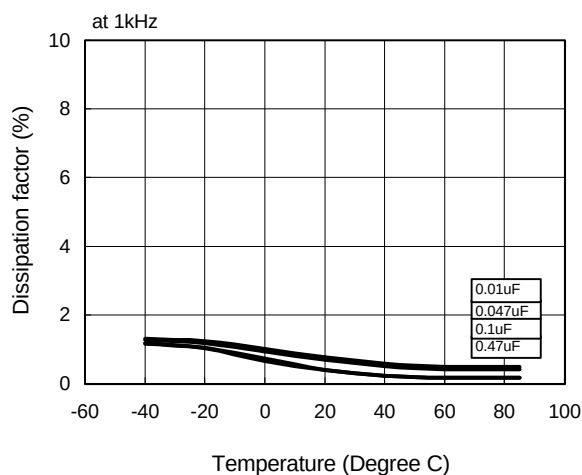
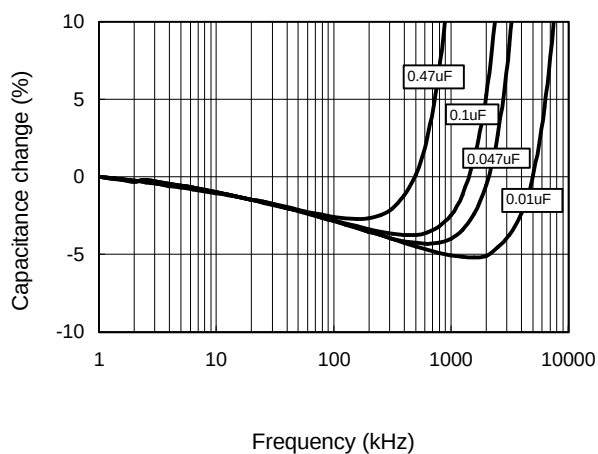
# ECQV(M) Type 100VDC Series (Polyester Film)

## Erectrical Characteristics <Typical Data>

**Temperature Characteristics**



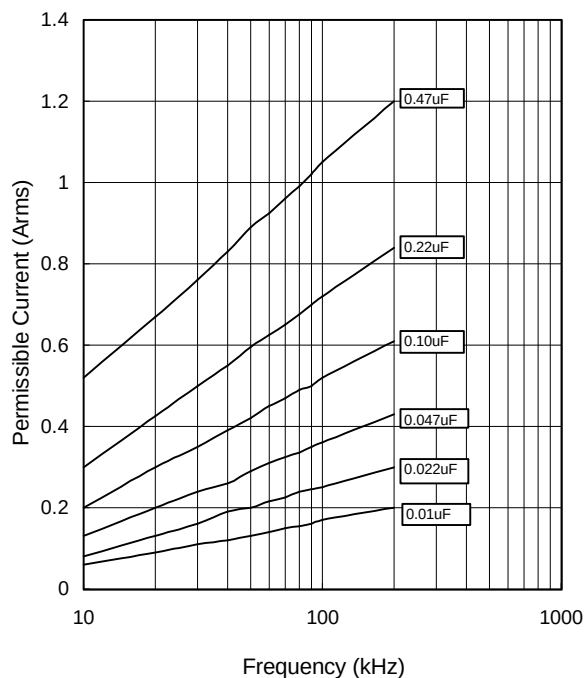
**Frequency Characteristics**



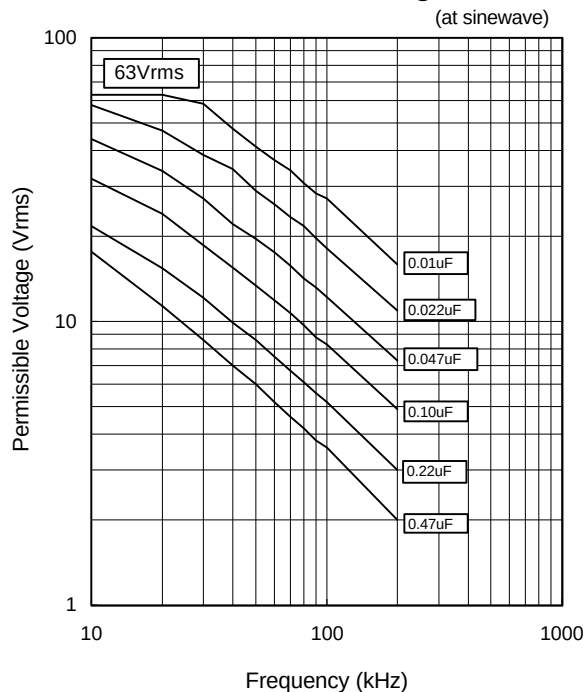
# ECQV(M) Type 100VDC Series (Polyester Film)

## Applicable Specifications

**Permissible Current**



**Permissible Voltage**

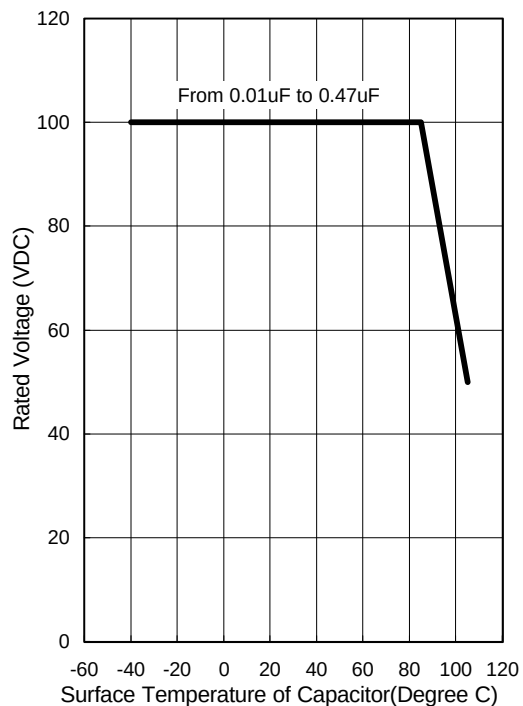


**Pulse Handling Capability (dV/dt)**

(Max 10000cycles)

| Rating Voltage | Capacitance Value(uF) | Code | dV/dt(V/us) | Current(o-p) (A) |
|----------------|-----------------------|------|-------------|------------------|
| 100VDC         | 0.010                 | 103  | 55          | 0.55             |
|                | 0.015                 | 153  |             | 0.83             |
|                | 0.022                 | 223  |             | 1.21             |
|                | 0.033                 | 333  |             | 1.82             |
|                | 0.047                 | 473  |             | 2.59             |
|                | 0.068                 | 683  | 43          | 3.74             |
|                | 0.100                 | 104  |             | 5.50             |
|                | 0.150                 | 154  |             | 6.45             |
|                | 0.220                 | 224  |             | 9.46             |
|                | 0.330                 | 334  |             | 14.19            |
|                | 0.470                 | 474  |             | 20.21            |

**Voltage Derating by Temperature**

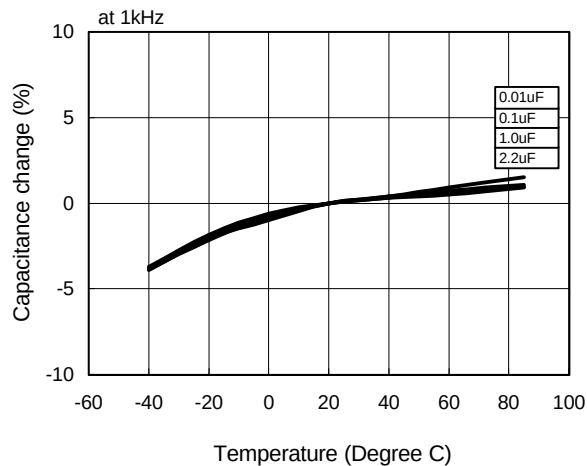


\* Please consult Panasonic if your condition exceeds the above spec.

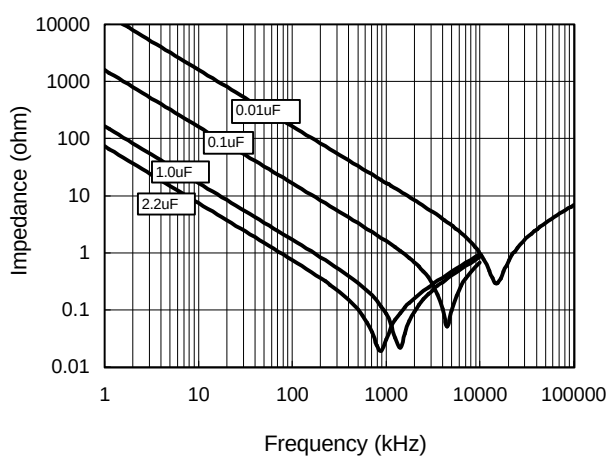
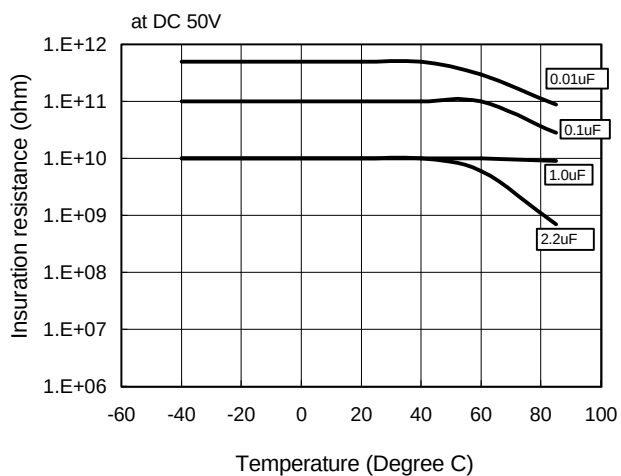
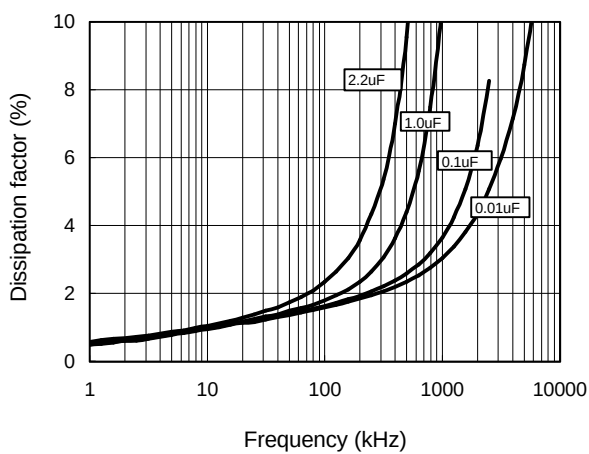
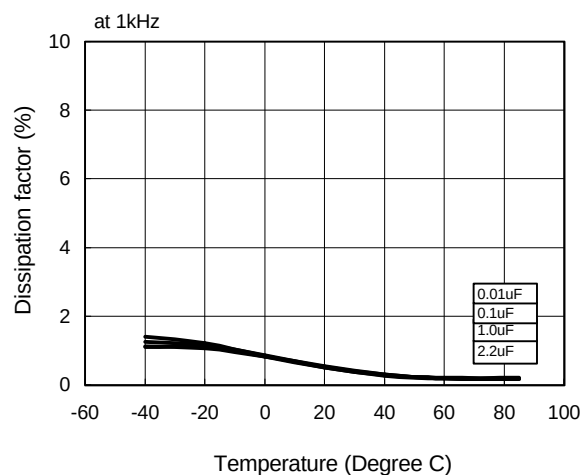
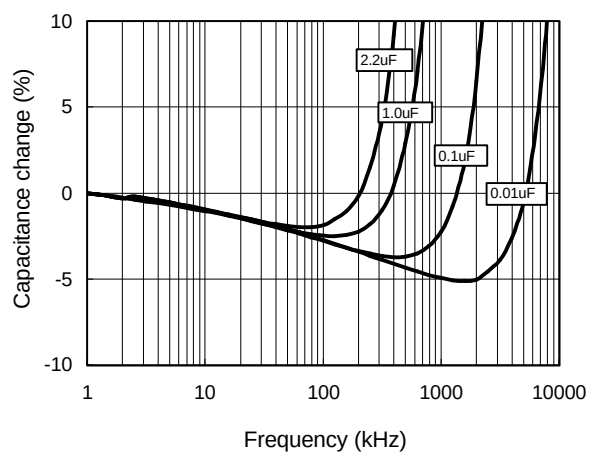
# ECQV(L) Type 50VDC Series (Polyester Film)

## Erectrical Characteristics <Typical Data>

**Temperature Characteristics**



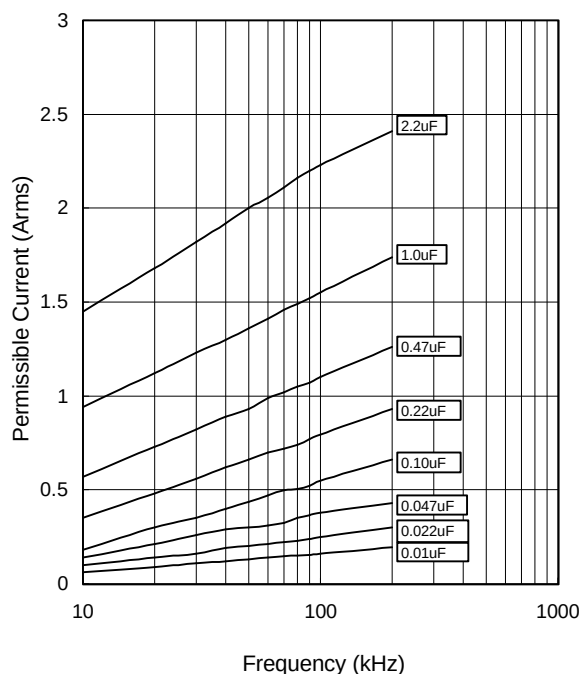
**Frequency Characteristics**



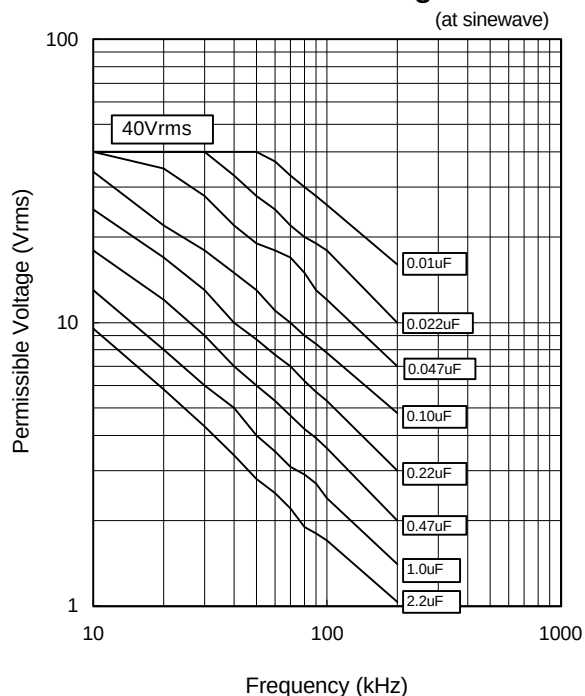
# ECQV(L) Type 50VDC Series (Polyester Film)

## Applicable Specifications

**Permissible Current**



**Permissible Voltage**

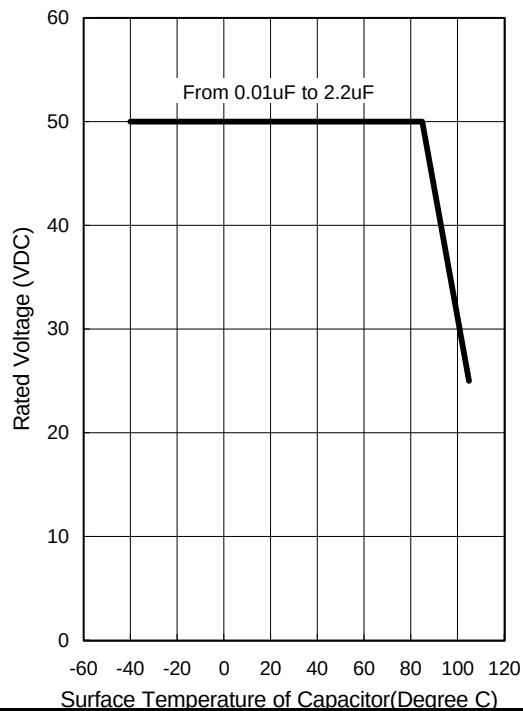


**Pulse Handling Capability (dV/dt)**

(Max 10000cycles)

| Rating Voltage | Capacitance Value(uF) | Code | dV/dt(V/us) | Current(o-p) (A) |
|----------------|-----------------------|------|-------------|------------------|
| 50VDC          | 0.010                 | 103  | 37          | 0.37             |
|                | 0.015                 | 153  |             | 0.56             |
|                | 0.022                 | 223  |             | 0.81             |
|                | 0.033                 | 333  |             | 1.22             |
|                | 0.047                 | 473  |             | 1.74             |
|                | 0.068                 | 683  | 32          | 2.52             |
|                | 0.100                 | 104  |             | 3.20             |
|                | 0.150                 | 154  |             | 4.80             |
|                | 0.220                 | 224  |             | 7.04             |
|                | 0.330                 | 334  |             | 10.56            |
|                | 0.470                 | 474  |             | 15.04            |
|                | 0.680                 | 684  |             | 21.76            |
|                | 1.000                 | 105  | 12          | 32.00            |
|                | 1.500                 | 155  |             | 18.00            |
|                | 2.200                 | 225  |             | 26.40            |

**Voltage Derating by Temperature**

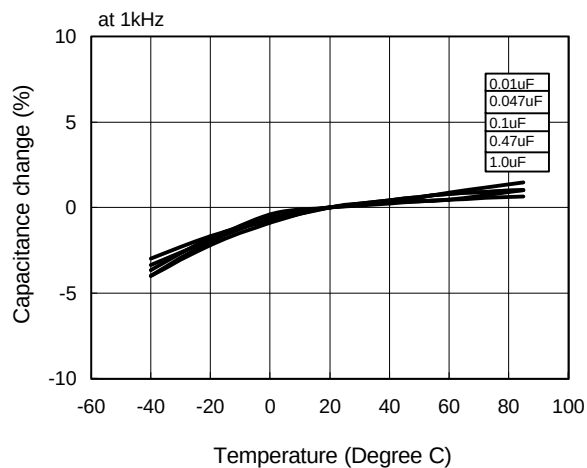


\* Please consult Panasonic if your condition exceeds the above spec.

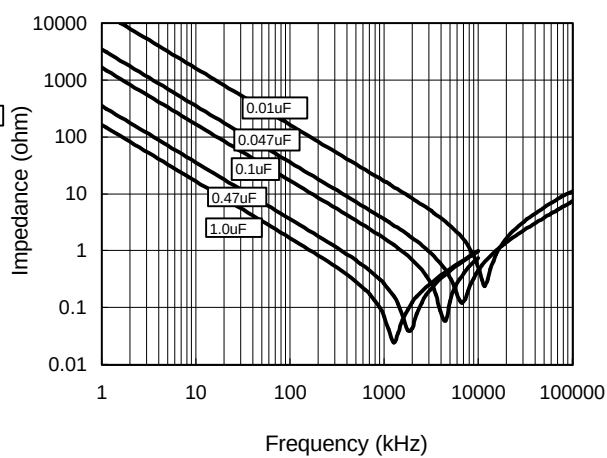
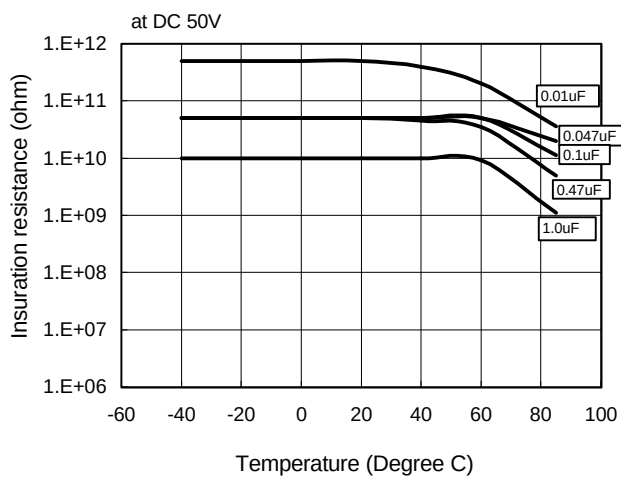
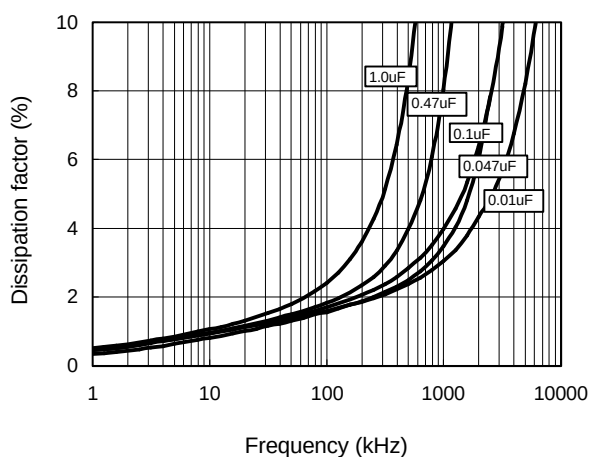
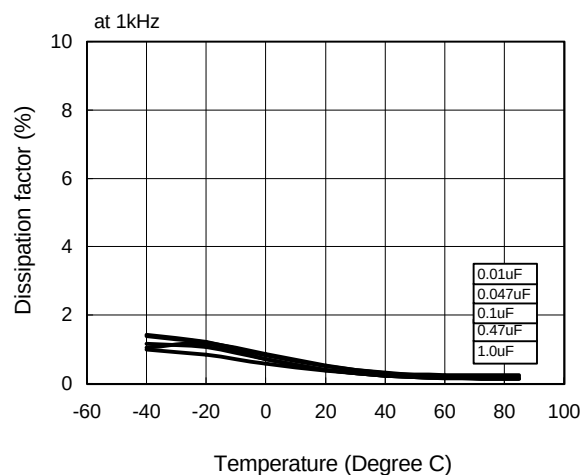
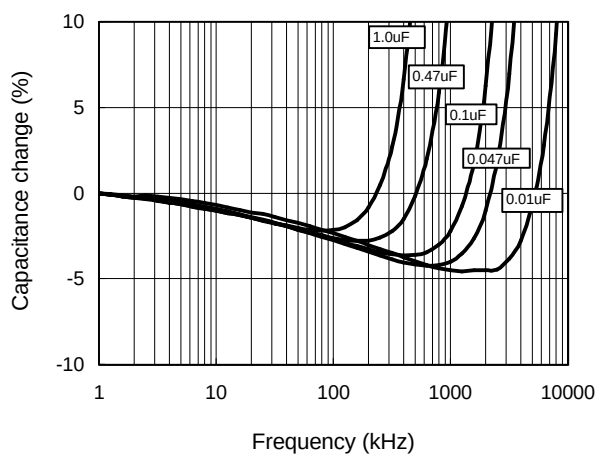
# ECQV(M) Type 63VDC Series (Polyester Film)

## Erectrical Characteristics <Typical Data>

**Temperature Characteristics**



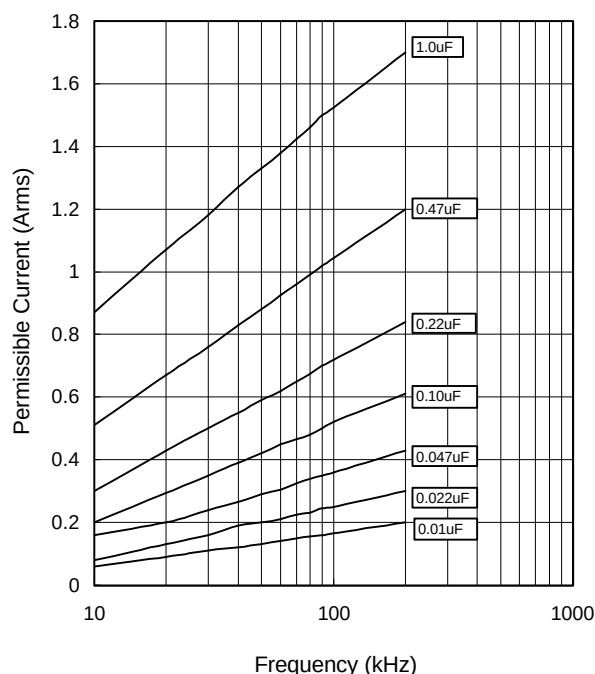
**Frequency Characteristics**



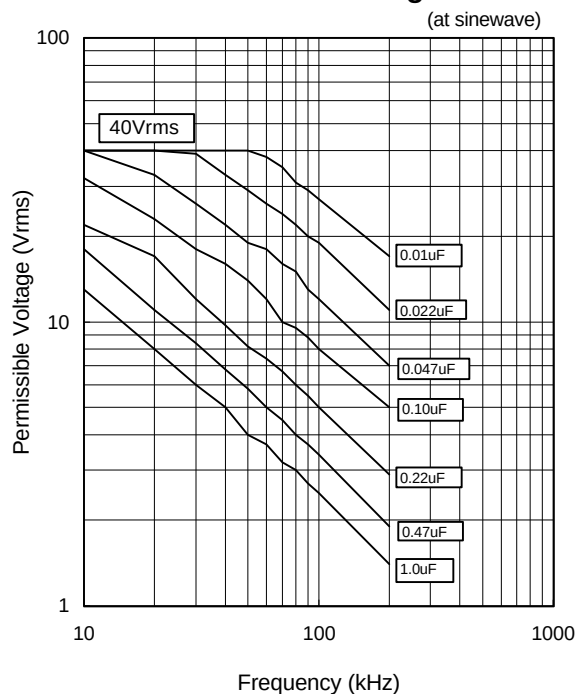


**Applicable Specifications**

**Permissible Current**



**Permissible Voltage**

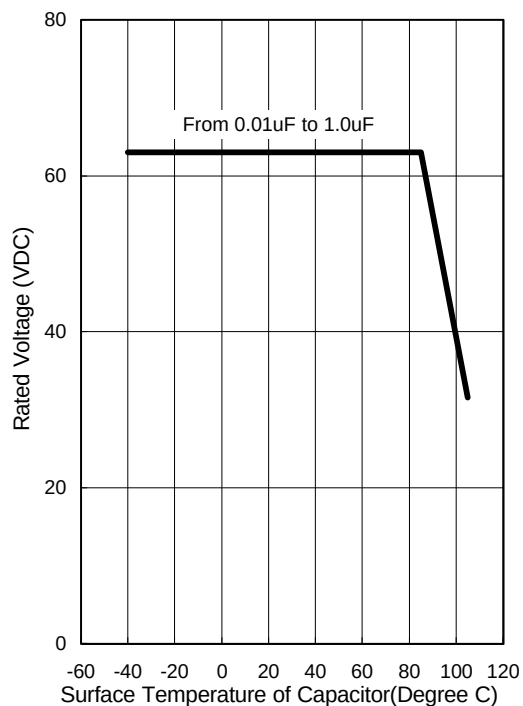


**Pulse Handling Capability (dV/dt)**

(Max 10000cycles)

| Rating Voltage | Capacitance Value(uF) | Code | dV/dt(V/us) | Current(o-p) (A) |
|----------------|-----------------------|------|-------------|------------------|
| 63VDC          | 0.010                 | 103  | 49          | 0.49             |
|                | 0.015                 | 153  |             | 0.74             |
|                | 0.022                 | 223  |             | 1.08             |
|                | 0.033                 | 333  |             | 1.62             |
|                | 0.047                 | 473  |             | 2.30             |
|                | 0.068                 | 683  |             | 3.33             |
|                | 0.100                 | 104  | 45          | 4.90             |
|                | 0.150                 | 154  |             | 7.35             |
|                | 0.220                 | 224  |             | 9.90             |
|                | 0.330                 | 334  |             | 14.85            |
|                | 0.470                 | 474  | 33          | 21.15            |
|                | 0.680                 | 684  |             | 30.60            |
|                | 1.000                 | 105  |             | 33.00            |

**Voltage Derating by Temperature**



\* Please consult Panasonic if your condition exceeds the above spec.