

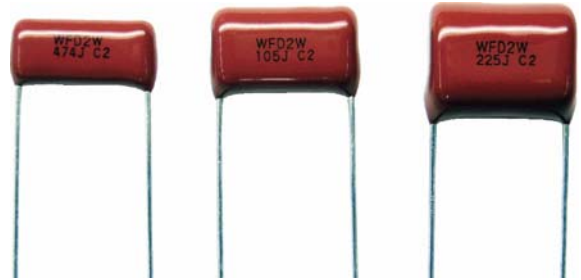
Metallized Polypropylene Film Capacitors

Type: **ECWFD**

Non-inductive construction using metallized Polypropylene film with flame retardant epoxy resin coating.

■ Features

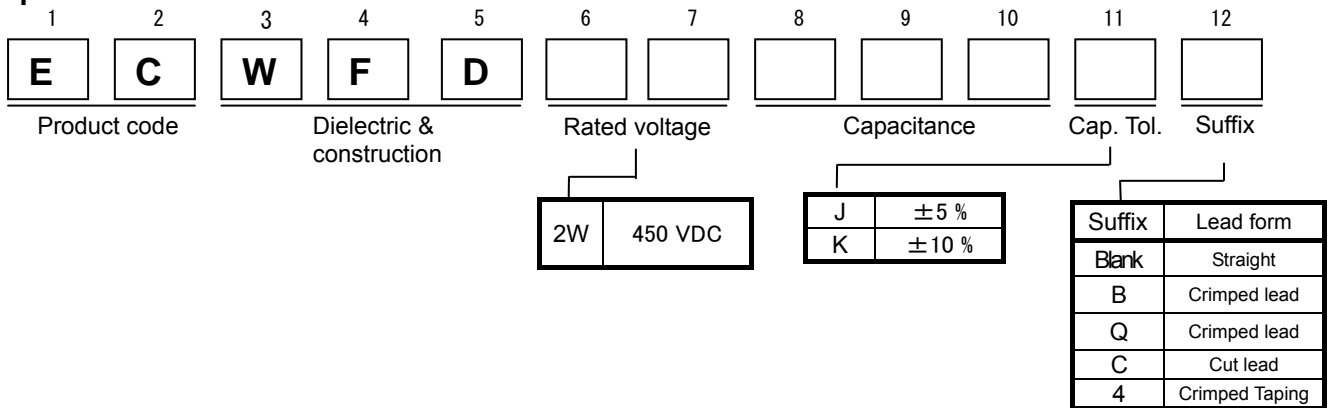
- Small size
- Excellent frequency characteristics
- Low loss
- Flame retardant epoxy resin coating
- Low Hum Sound Noise
- RoHS directive compliant



■ Recommended Applications

- Active filter circuits
- High frequency and high current circuits

■ Explanation of Part Numbers



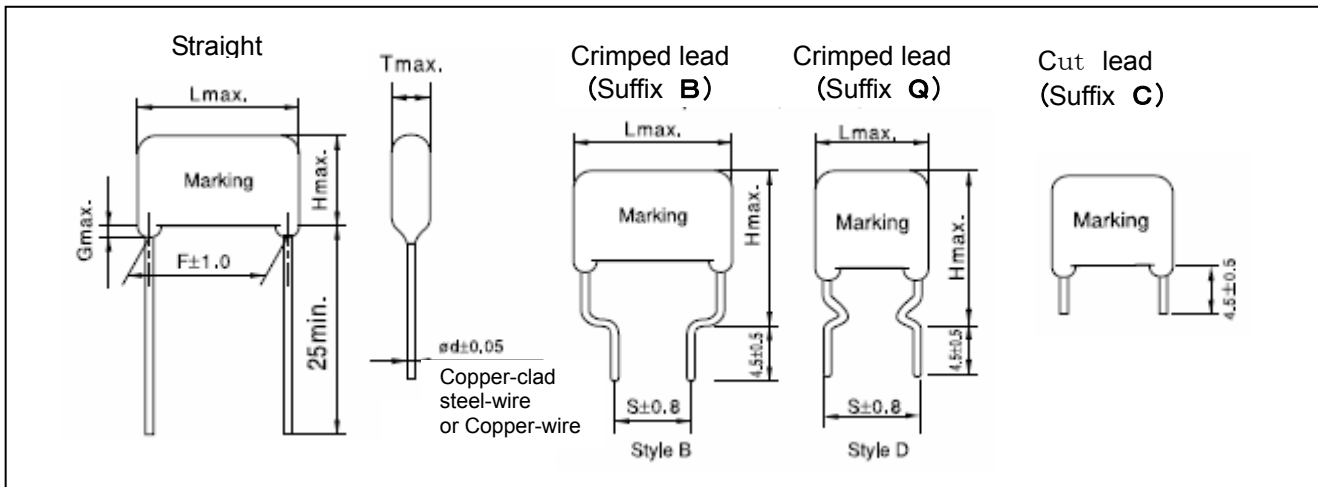
■ Specifications

| | |
|--|---|
| Category temp. range (Including temperature-rise on unit surface) | -40 °C to +105 °C |
| Rated voltage | 450 VDC (Derating of rated voltage by 1.25%/°C at more than 85°C) Peak to peak voltage applied on the capacitor should be less than 240Vp-p ,and zero to peak voltage should be less than 450V. |
| Capacitance range | 0.47 uF to 2.2 uF |
| Capacitance tolerance | ±5% (J), ±10 % (K) |
| Withstand voltage | Between terminals: Rated voltage(VDC) × 150 % 60 s |
| Dissipation factor (tan δ) | tan δ ≤ 0.1 % (20 °C, 1 kHz) |
| Insulation resistance (IR) | IR ≥ 10,000 MΩ · uF (20 °C, 100 VDC, 60 s) |

*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)

(Dimensions : mm)

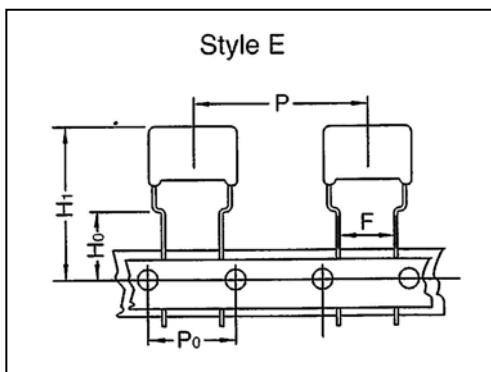


■ Packaging Specification for Bulk Package

Packing quantity: 100 pcs./bag

■ Taping Specifications for Automatic Insertion

● Taping style



*Refer to the page of taping specifications

● Packaging Specifications

| Type | Rated voltage | Cap. Range (uF) | Taping Style | | | | | Packing | Suffix | |
|-------|---------------|-----------------|--------------|----|---|---|---|---------|--------|---|
| | | | AD | AS | B | C | D | | | E |
| ECWFD | 450 VDC | 0.47 to 2.2 | | | | | | ○ | Ammo | 4 |

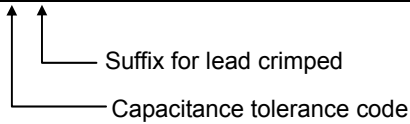
● Lead Spacing

| Style | Lead spacing |
|-------|--------------|
| E | 7.5 mm |

■ Rating, Dimension & Quantity / Ammo Box

● Type ECWFD Rated voltage : 450VDC

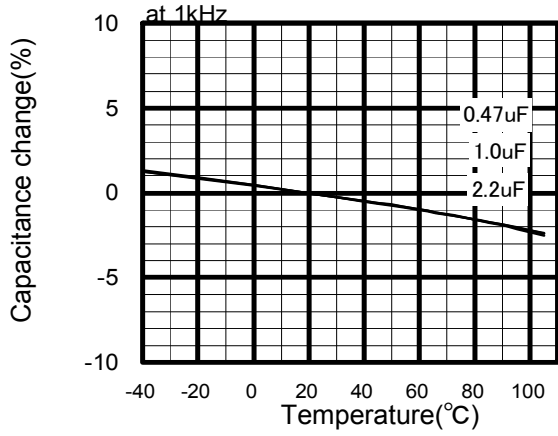
| Part No. | Capacitance (μF) | Dimensions (mm) | | | | | | | | | | Min. Order Qty | |
|----------------|------------------|------------------|------------------|------------------|-------------------------|-------------------------|------|-------------------------|-------------------------|------------------|-----|----------------|------|
| | | L ^{max} | T ^{max} | H ^{max} | | | F | S | | G ^{max} | Φd | Taping 7.5mm | Bulk |
| | | | | Straight | Crimped lead (Suffix B) | Crimped lead (Suffix Q) | | Crimped lead (Suffix B) | Crimped lead (Suffix Q) | | | | |
| ECWFD2W474□() | 0.47 | 17.5 | 5.8 | 9.0 | 14.0 | 16.0 | 15.0 | 7.5 | 10.0 | 1.5 | 0.8 | 500 | 1000 |
| ECWFD2W564□() | 0.56 | 17.5 | 6.2 | 9.4 | 14.4 | 16.4 | 15.0 | 7.5 | 15.0 | 1.5 | 0.8 | | |
| ECWFD2W684□() | 0.68 | 17.5 | 6.7 | 9.9 | 14.9 | 16.9 | 15.0 | 7.5 | 15.0 | 1.5 | 0.8 | 400 | |
| ECWFD2W824□() | 0.82 | 17.5 | 7.2 | 10.4 | 15.4 | 17.4 | 15.0 | 7.5 | 15.0 | 1.5 | 0.8 | | |
| ECWFD2W105□() | 1.00 | 17.5 | 7.8 | 11.0 | 16.0 | 18.0 | 15.0 | 7.5 | 15.0 | 1.5 | 0.8 | 300 | |
| ECWFD2W125□() | 1.20 | 17.5 | 8.5 | 11.6 | 16.6 | 18.6 | 15.0 | 7.5 | 15.0 | 1.5 | 0.8 | | |
| ECWFD2W155□() | 1.50 | 17.5 | 9.3 | 12.5 | 17.5 | 19.5 | 15.0 | 7.5 | 15.0 | 1.5 | 0.8 | 200 | |
| ECWFD2W185□() | 1.80 | 17.5 | 10.1 | 13.3 | 18.3 | 20.3 | 15.0 | 7.5 | 15.0 | 1.5 | 0.8 | | |
| ECWFD2W225□() | 2.20 | 17.5 | 11.1 | 14.3 | 19.3 | 21.3 | 15.0 | 7.5 | 15.0 | 1.5 | 0.8 | | |



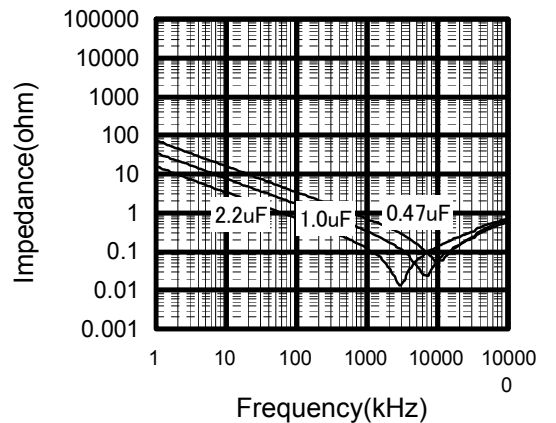
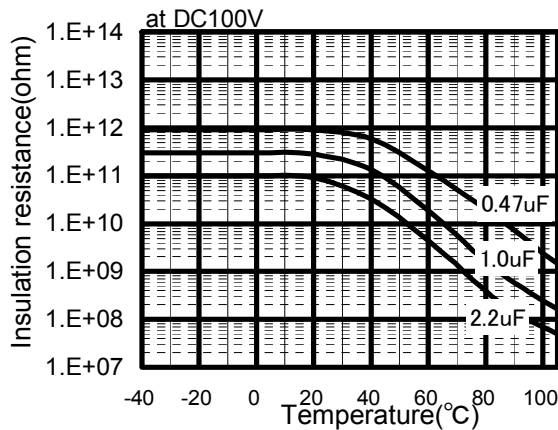
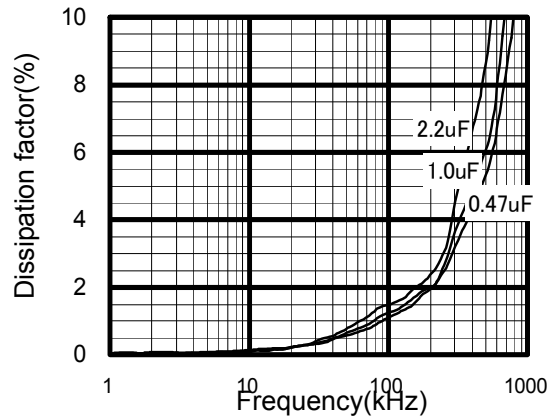
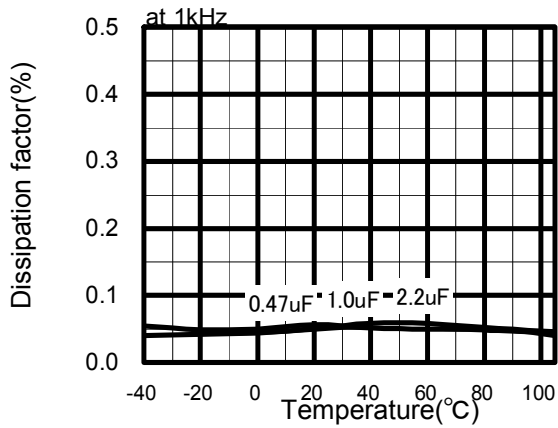
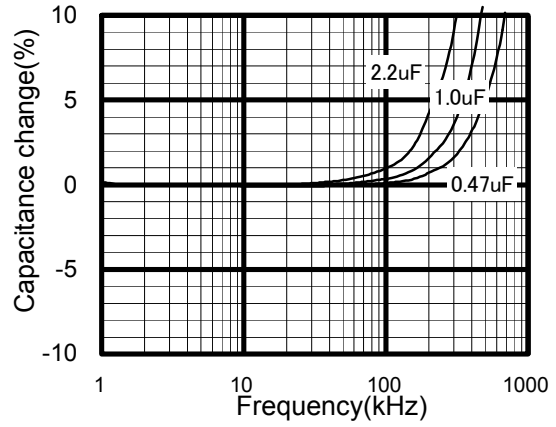
ECWFD Type DC450V series (Metallized Polypropylene Film)

Electrical Characteristics <Typical Data >

Temperature Characteristics

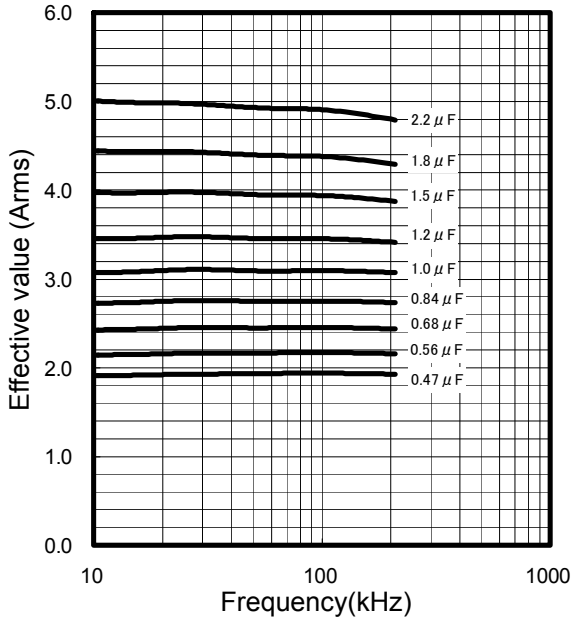


Frequency Characteristics

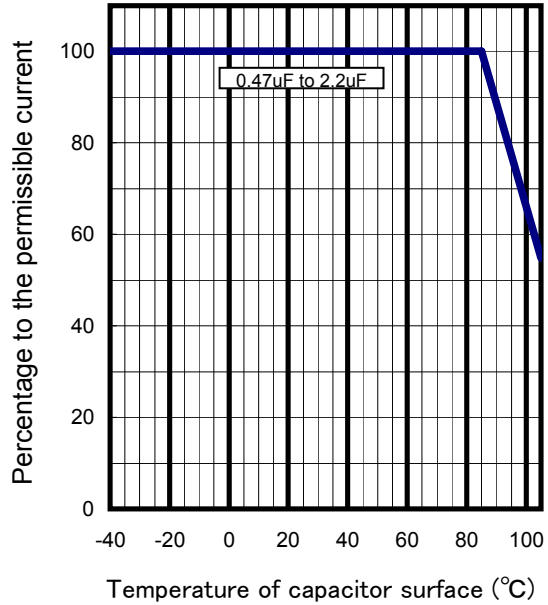


ECWFD Type DC450V series (Metallized Polypropylene Film)
Applicable Specifications

Permissible Current



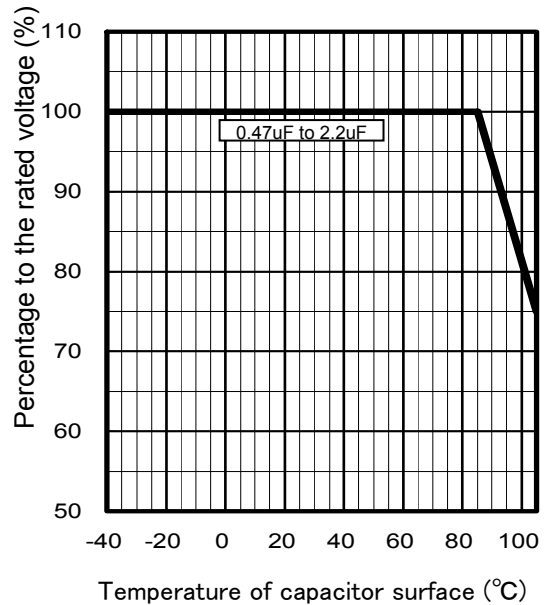
Permissible Current Derating by Temperature



Pulse Handling Capability (dv/dt)
 (Max 10000cycles)

| Rated Voltage | Capacitance (μF) | Code | dV/dt (V/μs) | Current (A0-P) |
|---------------|------------------|------|--------------|----------------|
| DC 450V | 0.47 | 474 | 24.3 | 11.4 |
| | 0.56 | 564 | | 13.6 |
| | 0.68 | 684 | | 16.5 |
| | 0.82 | 824 | | 19.9 |
| | 1.00 | 105 | | 24.3 |
| | 1.20 | 125 | | 29.1 |
| | 1.50 | 155 | | 36.4 |
| | 1.80 | 185 | | 43.7 |
| | 2.20 | 225 | | 53.4 |

Voltage Derating by Temperature



*Please consult Panasonic if your condition exceeds the above
 *P When you use this product, peak voltage must not exceed DC rated voltage.
 *The current(0-P) value is calculated using nominal capacitance.