

C41

Water Cooled Resonant Capacitor

## Water Cooled Resonant Capacitor C41-TC2



### Characteristics

- Conduction water-cooled
- Polypropylene dielectric
- Low dissipation factor( $\text{tg}\delta$ ), low ESL and low ESR
- High voltage, high frequency and high  $\text{dv}/\text{dt}$
- High current resistance, excellent heat dissipation

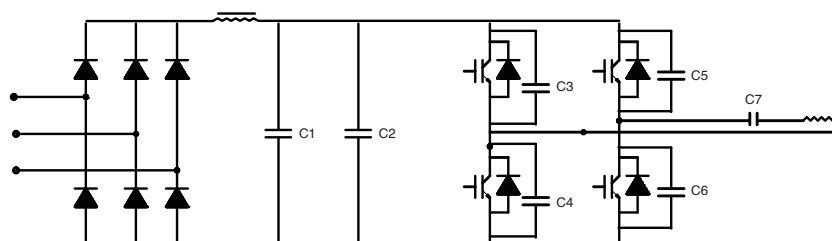
### Application

- Widely used in high power and high frequency resonant devices

### Technical Data

|                                  |  |
|----------------------------------|--|
| ● Reference standards            | GB/T 3984-2004 IEC 60110.1   |
| ● Operating temperature range    | -40°C~+85°C  |
| ● Capacitance range              | 0.1 $\mu\text{F}$ ~85 $\mu\text{F}$  |
| ● Rated capacitance              | 100kVar-1500 kVar  |
| ● Rated voltage                  | 400VAC-1100VAC   |
| ● Tolerance                      | $\pm 5\%$ $\pm 10\%$   |
| ● Test voltage between terminals | 1.5 $U_{\text{NAC}}$ 10s   |
|                                  | 3.5 $U_{\text{NDC}}$ 10s at 25°C $\pm 5^\circ\text{C}$                       |
| ● Dissipation factor             | $\text{tg}\delta \leq 5 \times 10^{-4}$ at 25°C $\pm 5^\circ\text{C}$ , 1kHz |
| ● Insulation resistance          | $R \cdot C \geq 3000\text{s}$ , at 100VDC, 25°C $\pm 5^\circ\text{C}$ , 60s  |
| ● Life expectancy                | 100000h at $U_{\text{N}}$ and 70°C, 30000h at $U_{\text{rms}}$               |

### Typical Circuit

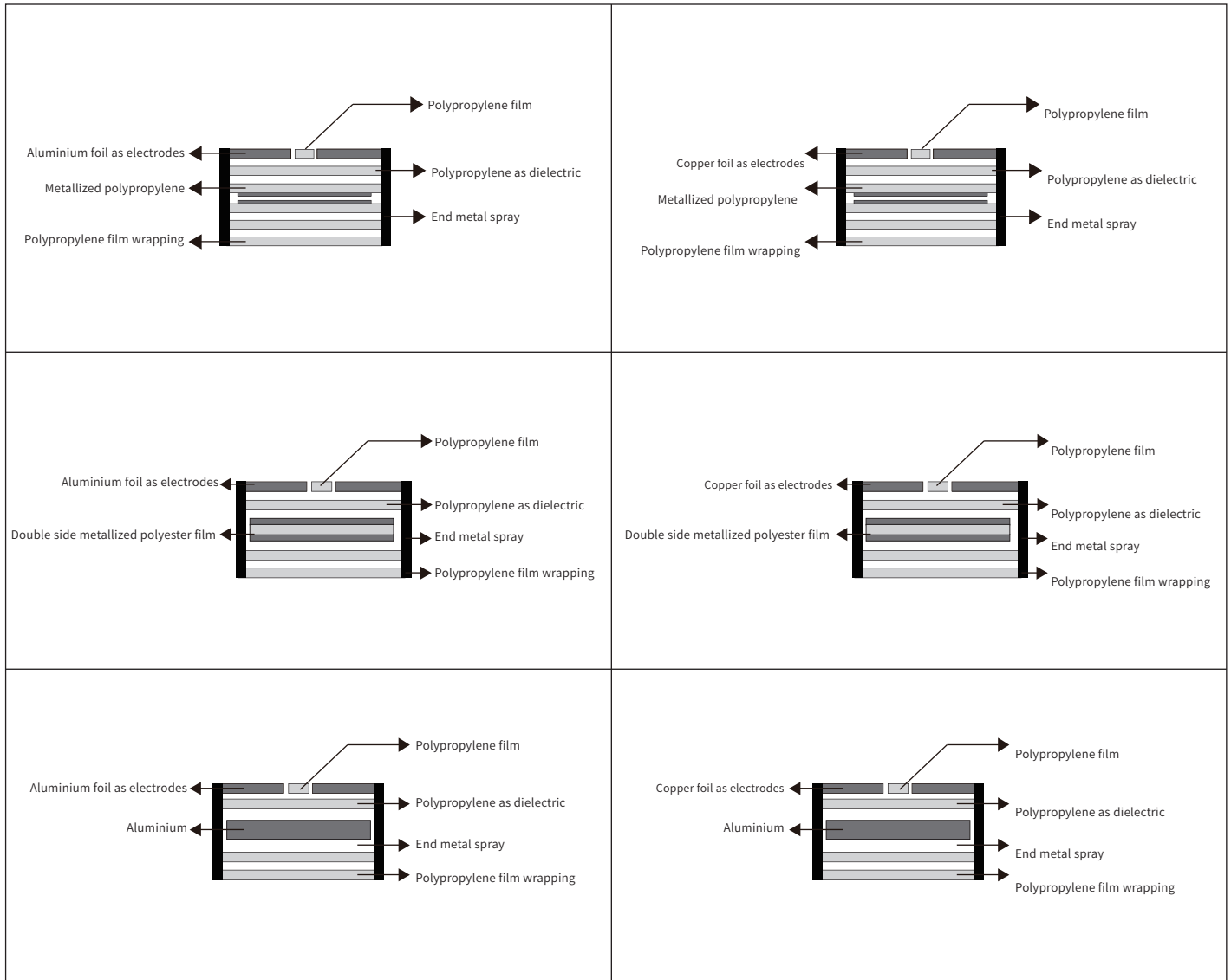


C7 is the water-cooled capacitor in the series resonant capacitor

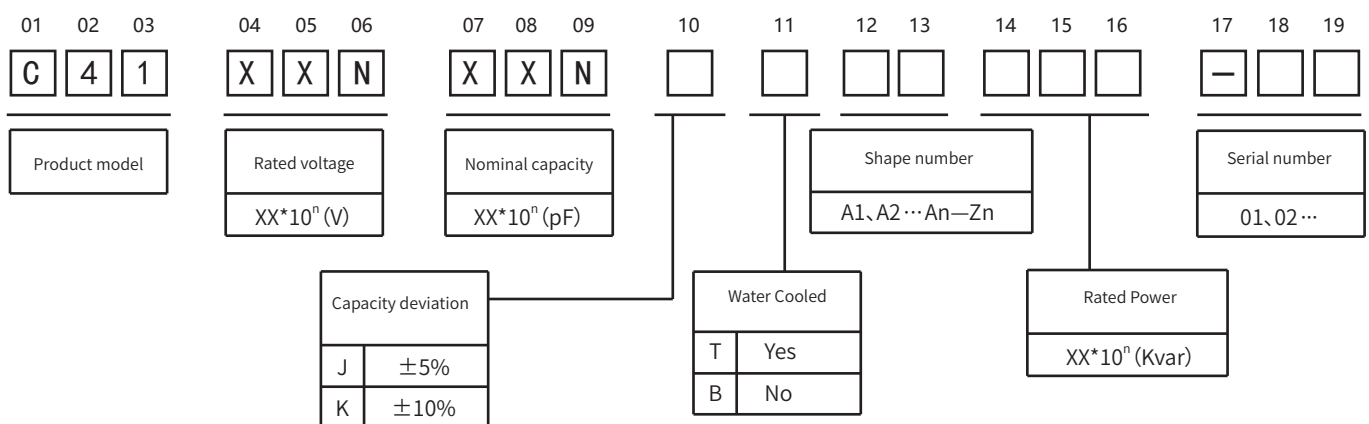
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### Construction Diagram



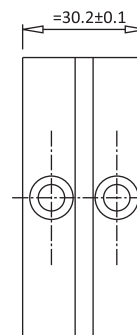
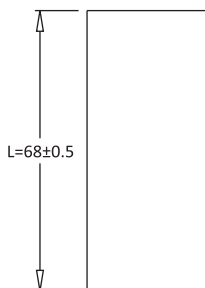
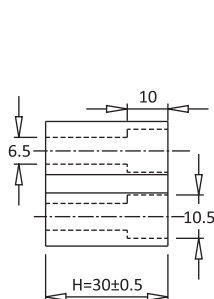
### Product Coding



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### C41—TC2



### Article Table

| Part Number         | Rated Voltage Vrms | Nominal Capacitance $\mu\text{F}$ at 1Khz | Max Irms A | Max Power kVar | Freq Range @Full Power (kHz) | ESR m $\Omega$ | Dimension (mm) |    |      | Case Code |
|---------------------|--------------------|---|------------|----------------|------------------------------|----------------|----------------|----|------|-----------|
|                     |                    |   |            |                |                              |                | L              | H  | T    |           |
| C41102503KTC2151... | 1000               | 0.05                                      | 200        | 150            | 478-700                      | 1.5            | 68             | 30 | 30.2 | TC2       |
| C41102104KTC2151... | 1000               | 0.10                                      | 250        | 150            | 238-423                      | 1.5            | 68             | 30 | 30.2 | TC2       |
| C41701174KTC2151... | 700                | 0.17                                      | 250        | 150            | 286-389                      | 1.2            | 68             | 30 | 30.2 | TC2       |
| C41701254KTC2151... | 700                | 0.25                                      | 250        | 150            | 195-265 T                    | 1.2            | 68             | 30 | 30.2 | TC2       |
| C41701334KTC2151... | 700                | 0.33                                      | 250        | 150            | 148-200                      | 1.0            | 68             | 30 | 30.2 | TC2       |
| C41701504KTC2151... | 700                | 0.50                                      | 250        | 150            | 93-132                       | 1.0            | 68             | 30 | 30.2 | TC2       |
| C41601664KTC2151... | 600                | 0.66                                      | 300        | 150            | 100-145                      | 0.8            | 68             | 30 | 30.2 | TC2       |
| C41501125KTC2151... | 500                | 1.20                                      | 300        | 150            | 79-80                        | 0.6            | 68             | 30 | 30.2 | TC2       |
| C41501135KTC2151... | 500                | 1.30                                      | 300        | 150            | 72                           | 0.6            | 68             | 30 | 30.2 | TC2       |
| C41401245KTC2151... | 400                | 2.40                                      | 400        | 150            | 63-72                        | 0.6            | 68             | 30 | 30.2 | TC2       |
| C41102104KTC2201... | 1000               | 0.10                                      | 250        | 200            | 318-498                      | 1.2            | 68             | 30 | 30.2 | TC2       |
| C41901174KTC2201... | 900                | 0.17                                      | 300        | 200            | 232-422                      | 1.0            | 68             | 30 | 30.2 | TC2       |
| C41801254KTC2201... | 800                | 0.25                                      | 300        | 200            | 199-286                      | 0.9            | 68             | 30 | 30.2 | TC2       |
| C41801334KTC2201... | 800                | 0.33                                      | 300        | 200            | 150-216                      | 0.8            | 68             | 30 | 30.2 | TC2       |
| C41801504KTC2201... | 800                | 0.50                                      | 350        | 200            | 98-194                       | 0.6            | 68             | 30 | 30.2 | TC2       |
| C41701664KTC2201... | 700                | 0.66                                      | 400        | 200            | 98-193                       | 0.4            | 68             | 30 | 30.2 | TC2       |
| C41601125KTC2201... | 600                | 1.20                                      | 450        | 200            | 74-134                       | 0.4            | 68             | 30 | 30.2 | TC2       |
| C41601135KTC2201... | 600                | 1.30                                      | 450        | 200            | 65-120                       | 0.4            | 68             | 30 | 30.2 | TC2       |
| C41451245KTC2201... | 450                | 2.40                                      | 500        | 200            | 65-85                        | 0.3            | 68             | 30 | 30.2 | TC2       |
| C41102104KTC2301... | 1000               | 0.10                                      | 300        | 300            | 478                          | 1.5            | 68             | 30 | 30.2 | TC2       |
| C41102174KTC2301... | 1000               | 0.17                                      | 300        | 300            | 281                          | 1.4            | 68             | 30 | 30.2 | TC2       |
| C41801334KTC2301... | 800                | 0.33                                      | 400        | 300            | 225-256                      | 1.2            | 68             | 30 | 30.2 | TC2       |
| C41801504KTC2301... | 800                | 0.50                                      | 400        | 300            | 149-170                      | 1.1            | 68             | 30 | 30.2 | TC2       |
| C41701664KTC2301... | 700                | 0.66                                      | 450        | 300            | 147-163                      | 1.0            | 68             | 30 | 30.2 | TC2       |
| C41601135KTC2301... | 600                | 1.30                                      | 500        | 300            | 99                           | 0.9            | 68             | 30 | 30.2 | TC2       |
| C41501245KTC2301... | 500                | 2.40                                      | 600        | 300            | 79                           | 0.8            | 68             | 30 | 30.2 | TC2       |

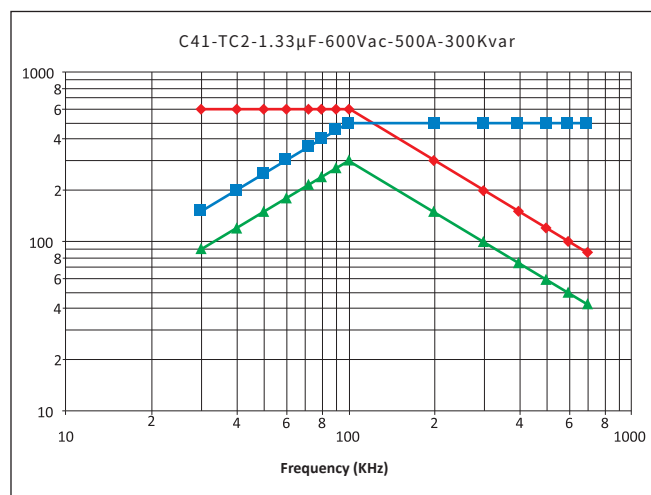
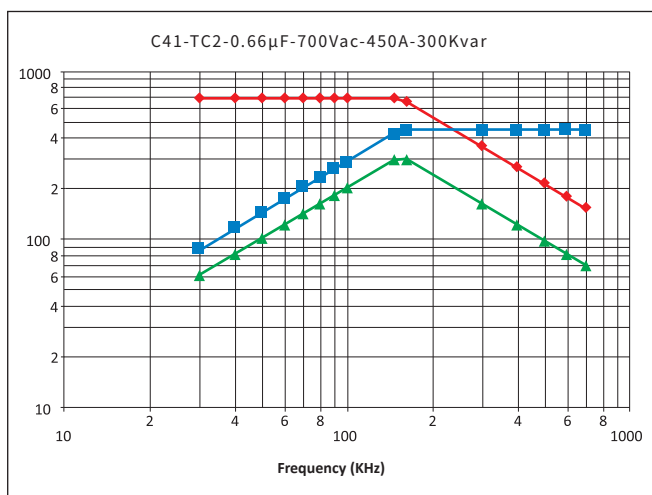
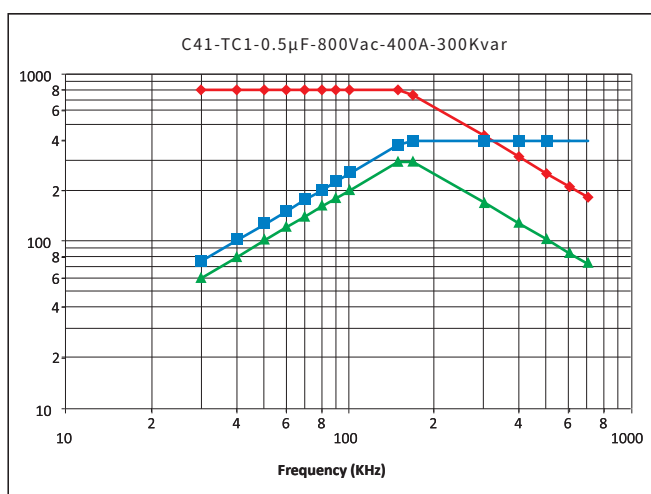
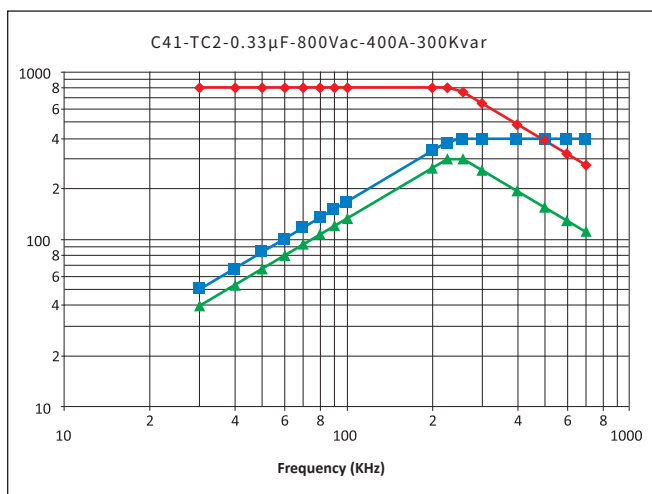
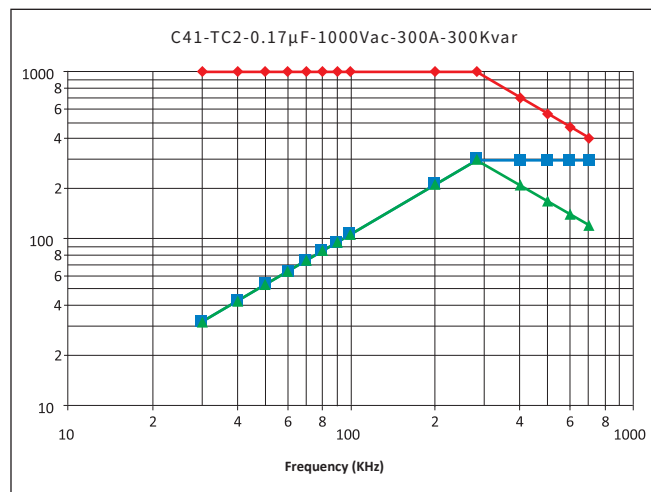
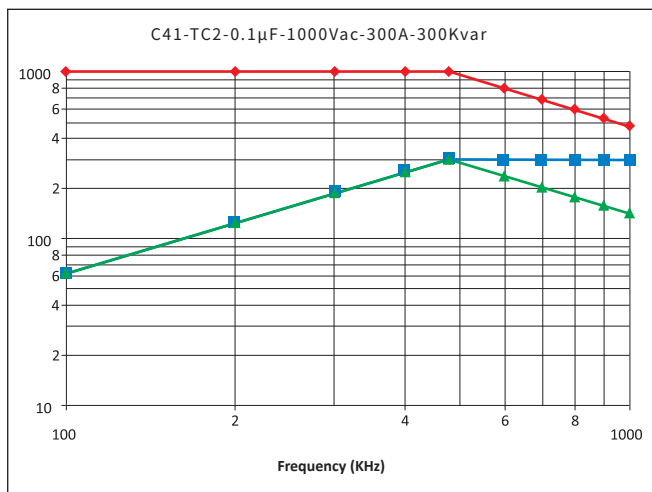
The above table / graphics are for reference only, subject to the actual product (unit: mm)

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### Temperature Characteristics

—◆— Voltage    —■— Current    —▲— Power



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