

Energy Storage Capacitor Pulse Grade Capacitor : STP-02 series

Application :

Electric Fence Energizer, Welding Energizer Equipment, High intensity discharge lighting, High Energy and Current Discharge applications

Construction :

- Cylindrical or Axial Thermoplastic Case : self-extinguishing (UL-94V0 grade) plastic - so that the capacitor can be operated at a higher temperature range and harsh working environment
 - Axial type with Tin Plated Copper lead or Terminals : wrapped with flame retardant tape and epoxy ends seal
 - Box type : Terminals / Electrical Lead Wires / Tin plated Copper Lead Wires
 - Epoxy Dipped type
- Providing different connections and mounting options so as to increase your design flexibility

Properties :

Low D.F. & Dielectric loss, High Discharge Current & Voltage Capabilities; High Insulation Resistance; AC and DC voltage; Flame Retardant Construction; Easy Installation

Electrical Connecting :

- Tin plated copper lead wire
- Flexible electrical lead wire
- Terminals : 250 type 6.35mm (page.29~30)
- Terminals – which can deliver larger discharge current Ipp & Ir.m.s. when compare with lead wires

Mounting : Plastic Cylindrical Case : with stud – M8 / without stud

Electrical Characteristic :

- Rated Voltage : 400 ~ 1600Vdc / 220 ~ 570Vac (can customized design)
- Capacitance range : 0.1uF ~ 60uF
- Capacitance Tolerance : $\pm 5\%$; $\pm 10\%$
- Equivalent Series Resistance (ESR) : measured at 25C 100kHz
- Dissipation factor (DF) : $< 0.1\%$ 1KHz) at 23C
- Testing Voltage : (can be customized design)
- STP-02R : $1.2 \times U_n$ 10sec 25C
- STP-02QT, STP-02QL, STP-02QI : $1.6 \times U_n$ 10sec 25C
- Insulation Resistance : Terminal – Terminal : 15000M ohm 1kVdc 60sec
- Terminal – Case : 5000M ohm 1kVdc 60sec
- Operate Temperature :
- STP-02R : -25~70C / -25~80C
- STP-02QT, STP-02QL and STP-02QI : -25~80C / -40~100C

Options :

Thermocouple can be build-in :

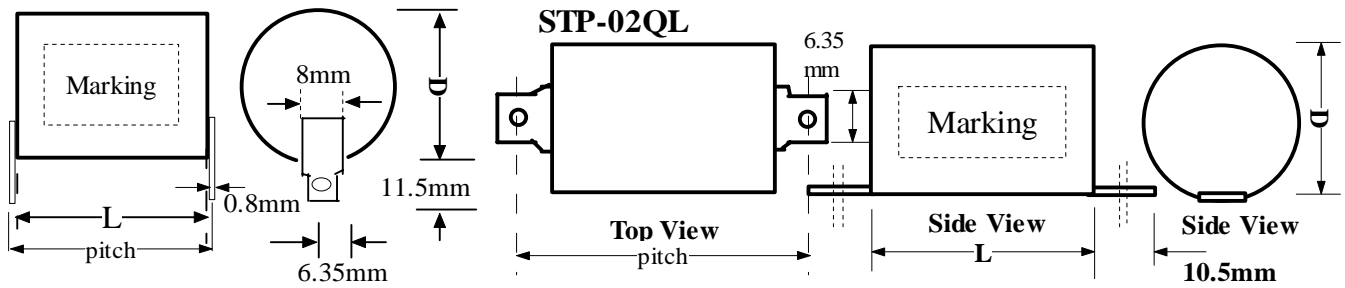
- capacitor internal temperature can be measured
- output temperature signal can be used as one of reference signals in the circuit and trigger other function



Energy Storage Capacitor - STP-02QT and STP-02QL series

- large Terminals to deliver larger discharge current Ipp and I.r.m.s. when compare with traditional copper tin wires
- for Welding Equipment and power supply application

STP-02QT



Dimension and standard value : 450Vdc / 280Vac at 70C

+/- 1mm

| Capacitance uF | Diameter D mm | Length L mm | STP-02QT pitch mm | STP-02QL pitch mm | I.R in Mohm 100V | ESR 100KHz mohm | dv/dt V/us | Peak Pulse Current A 70C | r.m.s. Current A 70C |
|-------------------|------------------|----------------|----------------------|----------------------|------------------------|-----------------------|---------------|--------------------------------|----------------------------|
| 2.0uF | 22.5 | 37.5 | 38.5 | 51.5 | 600,000 | 3.1 | 90 | 180 | 10A |
| 2.2uF | 23.5 | 37.5 | 38.5 | 51.5 | 600,000 | 3.0 | 90 | 198 | 10A |
| 2.5uF | 24.5 | 37.5 | 38.5 | 51.5 | 600,000 | 3.0 | 90 | 225 | 10A |
| 3.0uF | 26 | 37.5 | 38.5 | 51.5 | 600,000 | 3.0 | 90 | 270 | 10A |
| 4.0uF | 31.5 | 37.5 | 38.5 | 51.5 | 600,000 | 2.9 | 90 | 360 | 10A |
| 6.0uF | 37 | 37.5 | 38.5 | 51.5 | 600,000 | 2.9 | 90 | 540 | 12A |
| 6.8uF | 38.5 | 37.5 | 38.5 | 51.5 | 600,000 | 2.5 | 90 | 621 | 12A |
| 8.0uF | 43 | 37.5 | 38.5 | 51.5 | 600,000 | 2.2 | 90 | 720 | 12A |
| 9.0uF | 44.5 | 37.5 | 38.5 | 51.5 | 600,000 | 2.2 | 90 | 810 | 12A |
| 10.0uF | 38 | 49 | 50 | 63 | 400,000 | 2.3 | 70 | 700 | 13.5A |
| 12.0uF | 41.5 | 49 | 50 | 63 | 400,000 | 2.3 | 70 | 840 | 13.5A |
| 15.0uF | 45 | 49 | 50 | 63 | 400,000 | 2.0 | 70 | 1050 | 13.5A |
| 17.0uF | 47 | 49 | 50 | 63 | 400,000 | 2.0 | 70 | 1190 | 13.5A |
| 20.0uF | 52 | 49 | 50 | 63 | 400,000 | 1.8 | 70 | 1400 | 13.5A |

Dimension and standard value : 600Vdc / 330Vac at 70C

| Capacitance uF | Diameter D mm | Length L mm | STP-02QT pitch mm | STP-02QL pitch mm | I.R in Mohm 100V | ESR 100KHz mohm | dv/dt V/us | Peak Pulse Current A 70C | r.m.s. Current A 70C |
|-------------------|------------------|----------------|----------------------|----------------------|------------------------|-----------------------|---------------|--------------------------------|----------------------------|
| 2.0uF | 22.5 | 38.5 | 39.5 | 52.5 | 600,000 | 3.1 | 120 | 240 | 11A |
| 2.2uF | 23.5 | 38.5 | 39.5 | 52.5 | 600,000 | 3.0 | 120 | 264 | 11A |
| 2.5uF | 24.5 | 38.5 | 39.5 | 52.5 | 600,000 | 3.0 | 120 | 300 | 11A |
| 3.0uF | 26 | 38.5 | 39.5 | 52.5 | 600,000 | 3.0 | 120 | 360 | 11A |
| 4.0uF | 31.5 | 38.5 | 39.5 | 52.5 | 600,000 | 2.9 | 120 | 480 | 11A |
| 6.0uF | 37 | 38.5 | 39.5 | 52.5 | 600,000 | 2.9 | 120 | 720 | 13.5A |
| 6.8uF | 38.5 | 38.5 | 39.5 | 52.5 | 600,000 | 2.5 | 120 | 816 | 13.5A |
| 8.0uF | 43 | 38.5 | 39.5 | 52.5 | 600,000 | 2.2 | 120 | 960 | 13.5A |
| 9.0uF | 44.5 | 38.5 | 39.5 | 52.5 | 600,000 | 2.2 | 120 | 1080 | 13.5A |
| 10.0uF | 39.5 | 48 | 49 | 62 | 400,000 | 2.3 | 100 | 1000 | 15A |
| 12.0uF | 43 | 48 | 49 | 62 | 400,000 | 2.3 | 100 | 1200 | 15A |
| 15.0uF | 47 | 48 | 49 | 62 | 400,000 | 2.0 | 100 | 1500 | 15A |
| 17.0uF | 50 | 48 | 49 | 62 | 400,000 | 2.0 | 100 | 1700 | 15A |
| 20.0uF | 54 | 48 | 49 | 62 | 400,000 | 1.8 | 100 | 2000 | 15A |

For other Capacitance, Voltage and Peak Pulse Discharge Current not listed, please contact us for details.