



CAP-XX Dual Cell Supercapacitors

Unparalleled combination of performance and value

The CAP-XX dual cell **supercapacitor** range provides excellent peak power performance at a very competitive cost.

Excellent peak power delivery in a dual cell supercapacitor module

The new CAP-XX GY25R4 range of dual cell supercapacitor modules provides excellent pulse power handling characteristics resulting from the combination of very high capacitance and relatively low ESR.

Each GY25R4 series module is available with either passive or active balancing to equalize cell voltages and minimize leakage current.

The GY25R4 series provides a cost-effective solution to solve the power performance limitations of low power batteries in a range of consumer and industrial applications.

When used in conjunction with a low power energy source such as an energy harvester and or low power battery, the CAP-XX GY25R4 series of cylindrical supercapacitors enable extended back up time, longer battery life, and the provision of peak power as required.

Main features

- High pulse power capability
- Low ESR
- Low leakage current
- Long life
- Meet environmental standards for disposal and operation (RoHS)

Applications

- Energy harvesting for wireless sensors
- Energy harvesting for wireless HVAC sensors and actuators
- Peak power support for GSM/GPRS transmission
- Last gasp power for remote meter status transmission
- Peak power support for locks and actuators
- Peak power support for portable drug delivery systems
- Short term bridging power for battery hot swaps



CAP-XX Dual Cell Supercapacitor

Dual Cell Module Part Numbering Explanation

| G | Y | N | vvv | dd | mm | S | ccc | R | B |
|--------------|--------------------|--------------------|----------------|--|------------------------|--|-------------------------------------|--|---|
| Model | Cylindrical | no of cells | Voltage | Diameter | Length | Tolerance | μF (micro-F) | Lead format | Balancing |
| | | 2 | 5R4 = 5.4V | 6C = 6.3mm 08 = 8.0mm 10 = 10mm 1B = 12.5mm | 16 = 16mm 68 = 68mm | M ± 20% S +30% / -10% V +25% / -5% | Two digits + number of zeros. | R = shrink wrap/radial S = plastic/radial | 0 = no balancing R = Resistor* A = Active* |

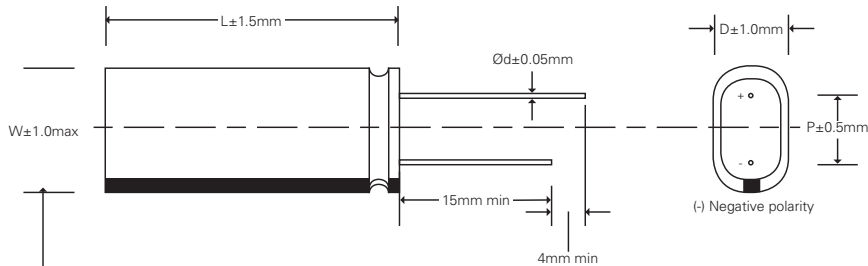
High Capacitance Supercapacitor Modules

Series-Connected Radial Lead Type / Rated Voltage 5.4V / Temperature Range -40°C to +65°C

| CAP-XX Part No. | Cap (Capacitance) | Rated Voltage (V) | Diameter (mm) | Length (mm) | DCL max @ 72 Hrs (μA)* | ESR max @ 1KHz (mΩ) | ESR max @ DC (mΩ) | Power Density (W/kg) | Max Energy (Wh) | Energy Density (Wh/kg) |
|------------------------|-------------------|-------------------|---------------|-------------|------------------------|---------------------|-------------------|----------------------|-----------------|------------------------|
| Shrink Wrap | | | | | | | | | | |
| GY25R40814S474R0 | 0.47 | 5.4 | 8 | 14 | 2 | 380 | 1720 | 1209 | 0.0019 | 1.00 |
| GY25R40818S105R0 | 1 | 5.4 | 8 | 18 | 6 | 250 | 730 | 2274 | 0.0041 | 1.80 |
| GY25R40822S155R0 | 1.5 | 5.4 | 8 | 22 | 10 | 200 | 590 | 2526 | 0.0061 | 2.40 |
| GY25R41022S255R0 | 2.5 | 5.4 | 10 | 22 | 20 | 180 | 360 | 2396 | 0.0101 | 2.50 |
| GY25R41B22S505R0 | 5 | 5.4 | 12.5 | 22 | 25 | 120 | 200 | 2606 | 0.0203 | 3.00 |
| GY25R41B32M755R0 | 7.5 | 5.4 | 12.5 | 32 | 65 | 90 | 160 | 2396 | 0.0304 | 3.30 |
| Plastic Package | | | | | | | | | | |
| GY25R40916S474S0 | 0.47 | 5.4 | 9 | 16 | 2 | 380 | 1720 | 1209 | 0.0019 | 1.20 |
| GY25R40920S105S0 | 1 | 5.4 | 9 | 20 | 6 | 250 | 730 | 2274 | 0.0041 | 1.90 |
| GY25R40924S155S0 | 1.5 | 5.4 | 9 | 24 | 10 | 200 | 590 | 2526 | 0.0061 | 2.70 |

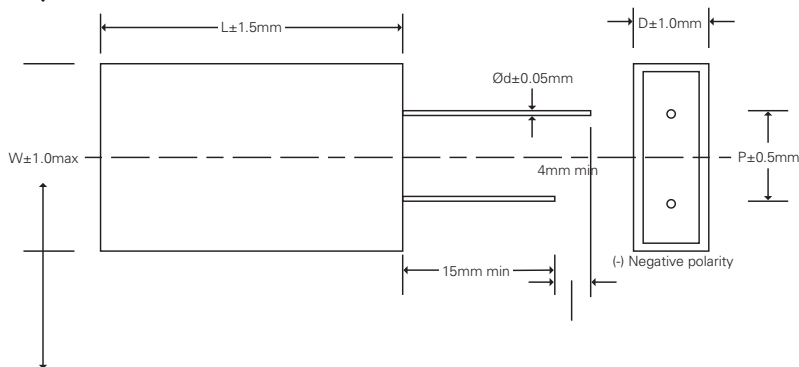
*Leakage current will be affected by the balancing solution used. Contact CAP-XX to determine which balancing solution best suits your design.

Shrink Wrap Type



| D (mm) | W (mm) | P (mm) |
|--------|--------|--------|
| 8 | 16 | 11.5 |
| 10 | 20 | 15.5 |
| 12.5 | 25 | 18.0 |

Plastic Type



| D (mm) | W (mm) | P (mm) |
|--------|--------|--------|
| 9 | 18 | 11.5 |