Super-Cap (ELECTRIC DOUBLE LAYER CAPACITORS)

GDCPH®

Upgrade

GD Standard Type

Features

High Power and Long-Term Reliability feature

If GDCPH Ultracapacitor enables this component to use in various applications as backup power unit, auxiliary power unit, instantaneous power compensation, peak power compensation and energy storage as well.

Specification

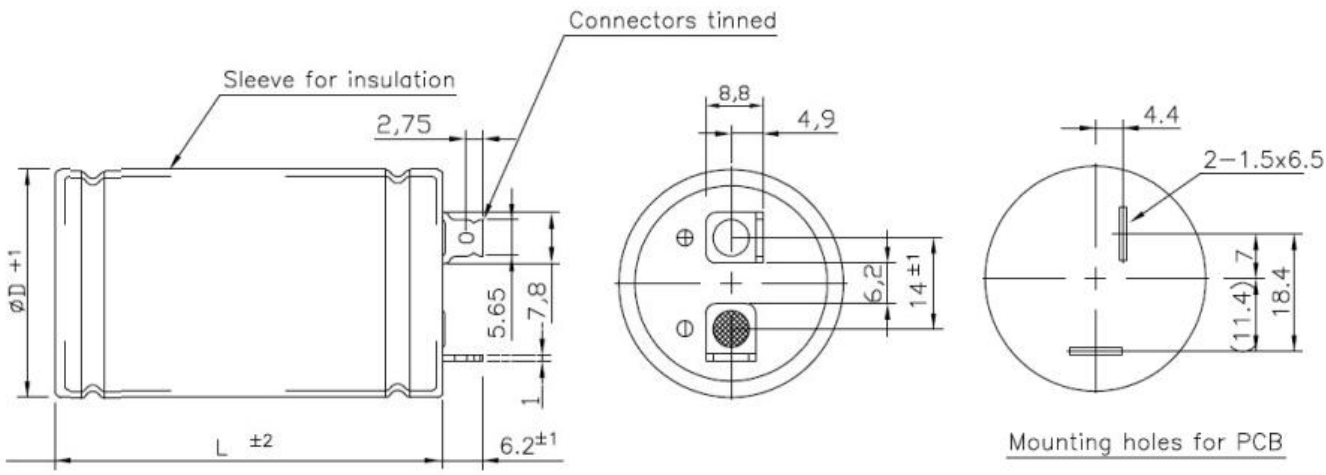
Rated Voltage	3.0 V	
Max. Voltage[1]	3.2 V	
Capacitance Tolerance	-5% / +15%	
Operating temperature range	-40 ~ 65 ˚C at 3.0V (-40 ~ 85℃ at 2.5V)	
Storage temperature range	-40 ~ 70 ˚C	
Endurance Life (65℃)	1,000 Hours	
	Capacitance change	Within 20% of initially specified value
	ESR change	Within 100% of initially specified value
Projected Life Time (25℃)	10 Years at rated voltage	
	Capacitance change	Within 20% of initially specified value
	ESR change	Within 100% of initially specified value
Projected Cycle Life (25℃)[2]	500,000 Cycles	
	Capacitance change	Within 20% of initially specified value
	ESR change	Within 100% of initially specified value
Shelf Life (25℃)	4 Years stored uncharged state	
Certifications	ROHS, REACH	

Standard Ratings

Part number	Capacitance (F)	Max. ESR (mΩ)		Max. Current (A) Non-repeated (Calculated value)	Leakage Current (mA)	Max. Stored Energy (Wh)
		AC (1KHz)	DC			
GD 3R0L 407Q EA	407	3.0	3.2	257	< 1	0.47
GD 3R0L 507Q EA	500	2.8	3.0	282	< 1	0.53
GD 3R0L 650F EA	650	2.8	3.0	295	< 1.2	0.60

*Remark
1)Non-repeated, not to exceed 1sec.
2)Actual cycle value can be subject to various application conditions.
3)Initial state value.

Physical Properties



Standard Ratings

Part number	Max. Continuous Current (A)[3]		Thermal Resistance (℃/W) _ Cell Surface	Dimension (mm)		Weight (g)
	△T=15 ℃	△T=40 ℃		D1 (+ 1.0)	L (±2.0)	
GD 3R0L 407Q EA	25	40	8.0	35.0	61.0	72
GD 3R0L 507Q EA	25	40	8.3	35.0	66.0	80
GD 3R0L 650F EA	25	40	8.3	35.0	71.0	88

* Material for weldable terminal : AL 6061