

Lithium-Ion Button Cells – CoinPower

High capacity, safe and powerful battery solutions for mobile energy supply

Series	CP1254	CP1454	CP1654
Nominal Voltage	3,7 V	3,7 V	3,7 V
Capacity	60 mAh	85 mAh	120 mAh
Continuous Discharge	2 C	2 C	2 C
Pulse Discharge	3 C (2s)	3 C (2s)	3 C (2s)
Discharge-Temperature	-20 / + 60° C	-20 / + 60° C	-20 / + 60° C
Charge-Temperature	0 / + 45° C	0 / + 45° C	0 / + 45° C
Self Discharge (SoC 30%)	2% per month	2% per month	2% per month
Energy Density	365 Wh/l	380 Wh/l	410Wh/l

Features:

- 10 – 30% higher energy density vs. all the other competitors in the microbattery market
- Extended life time >>500 FULL cycles@80% of initial capacity
- High drain capability
- High cycle stability
- Best mechanical stability compared to pouch cells
- Not sensitive for scratches and dents
- Fully automated cell production - made in Germany
- Build in safety features



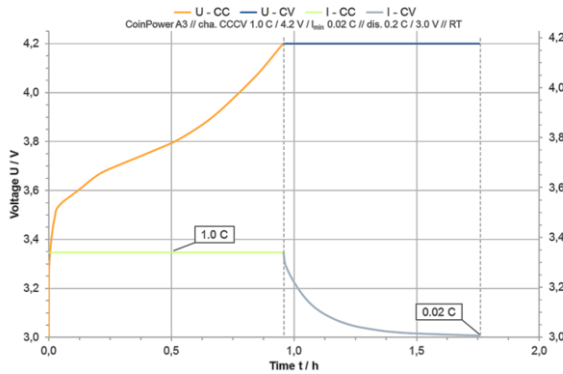
General applications:

Bluetooth Mono + Stereo Headsets, Wearable Technologies, Smart Watch/FitnessTracker, Sensors for Fitness/Sport/Healthcare, Medical applications, Industrial

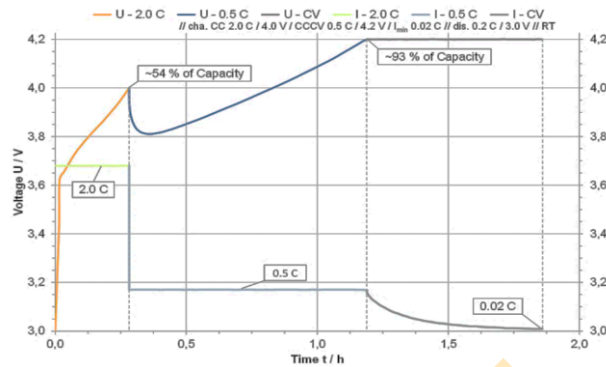
Important Questions for the first steps

Operating Voltage	Minimum	Maximum	Typical
Current consumption	Base load	max. peak and duration / best case: peak-profile	
Temperature	Minimum	Maximum	Typical
	Best case: temperature profile over lifetime		
Lifetime	How long is expected - in years		
Charging	Required charge time - discharge time (capacity mAh)		
Space	How much space is available LxWxH		
Application	As much as possible information about the application Project name		
Expected Volume	per Year	Total	SOP (start of production)

Standard-Fast Charge:



Rapid Charge:



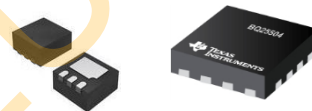
Charged Capacity	Standard Charge (0.5C)	Fast Charge (1C)	Rapid Charge (2C // 4.0V – 0.5C // 4.2V)
25 %	35 min	15 min	8 min
50 %	65 min	30 min	15 min
75 %	95 min	45 min	50 min
100 %	165 min	105 min	100 min

Safety Tests

UL 1642 IEC 62133 UN 38.3

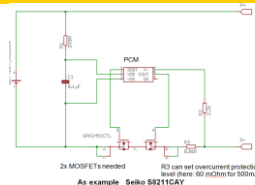
Examples for Charging ICs:

- | | |
|-------------------|-------------------|
| Texas Instruments | Linear Technology |
| ▪ BQ 24040 | ▪ LT 4070 |
| ▪ BQ 24050 | ▪ LT 4071 |
| ▪ BQ 24052 | |



Examples for PCM for CoinPower Series:

- Seiko (S8211CAY, S8200A)
- Mitsumi (MM 3077 LY, MM 2511 K56)
- Texas Instruments (BQ 29700, BQ 29707)
- Diodes (AP 9211)



Using a soldering iron

Proceed with the soldering quickly within 3 seconds while maintaining the iron tip temperature at about 320 °C and not allow the temperature of the cell body to exceed 60 °C. Soldering is only allowed on welded Tags or wires, not direct on the cell body.

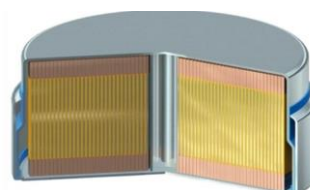
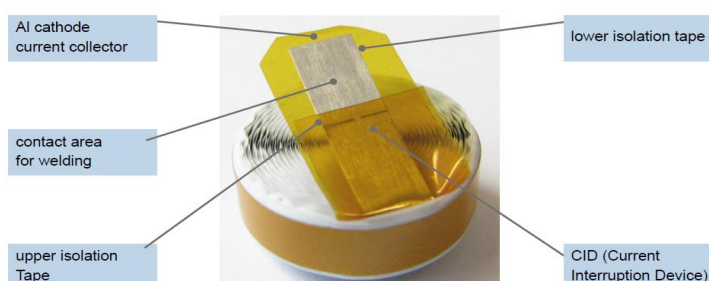
Dip Soldering/Wave Soldering

These two soldering producers could lead to short circuit of battery.

Reflow Soldering

NEVER USE REFLOW SOLDERING

One of the key features (CID)



Construction of VARTA CoinPower



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