

Preliminary Data Sheet – CP1654 A4X (CoinPower®)¹

	Type Designation	CP1654 A4X
	Type Number	63165
	VKB Number	63165 401 511
	Cell Code	INR1654
	System	Graphite – layered metal oxide
	UL Recognition	(LiNi _x Mn _y Co _z O ₂) MH13654
h	Nominal Voltage [V]	3.7 (average)
¥ L	Typical Capacity [mAh]	149 (at 0.1C from 4.3 V to 3.0 V at RT)
	Nominal Capacity [mAh]	145 (at 0.2C from 4.3 V to 3.0 V at RT)
	Rated Capacity C [mAh]	140 (at 0.2C from 4.3 V to 3.0 V at RT)
d (Dimensions [mm] (without Tags)	
	Diameter	16.1 +0.0/-0.3
	Height	5.4 +0.2/-0.1
	Weight. approx [g]	3.1 +0.2/-0.2
CPIESA AG CPIESA AG CPIESA AG CPIESA AG CPIESA AG CFRMAN	Charging Method	Constant Current + Constant Voltage
	Charge Voltage [V]	4.30 ± 0.05
	Initial Change Coursent Im Al	Standard Charres ² , 70
	Initial Charge Current [mA]	Standard Charge ² : 70 Fast Charge ² : 140
		Rapid Charge ³ : 280
	Charging Cut-Off (a) or (b)	
	a) by time [h]	Standard Charge: 3.5
		Fast/Rapid Charge: 2
	b) by min current [mA]	3
	Discharge Cut-Off Voltage [V]	3.0
	Max. Pulse Discharge Current [mA]	435 @ 2s
	Max. Continuous Discharge Current [mA]	290
	Operating Temperature [°C]	Charge: 0 to 45
		Discharge: -20 to 60
	Cell Surface Temperature [°C]	60
	Storage Temperature	1 Year at -20 to 20 °C > 90
	Capacity Recovery Rate ⁴ [%]	3 Month at -20 to 45 °C > 90 1 Month at -20 to 60 °C > 85
	Impedance Initial [Ω]	< 0.4 @ 1kHz
	Cycle Life 0.5C/0.5C, 20 °C ⁵ [Cycles]	>500 (> 80% of C _{ini})
	Safety	UN 38.3 passed
		relevant tests acc. IEC 62133 pending
	Internal Approval	
	Overcharge Test (4.8V, 3C, 12h)	pending
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 ¹ Recommendations regarding Charging/Discharging and Safety (cf. Handling Precautions/Advanced Product Information) have to be accepted. Cell must not be used without external safety electronics (PCM – Protection Circuit Module)! The CoinPower cell may exclusively be used for the intended purpose. For medical applications please contact VARTA Microbattery. This product is protected by patents, please see: www.varta-ag.com/patents
² "CoinPower A4-Version Charging Document" must be observed.
³ "CoinPower A4-Version Charging Document" must be observed.
³ "CoinPower A4-Version Charging Document" must be observed. Max. charging voltage: 4.05V ± 0.05V; min. charging temperature: 20°C.
⁴ After storage at initial cell voltage of 3.6 to 3.7 V / cell
⁵ typical values