

M2329V2.1DCX

The Batteries' innovative plasma activated all solid state thin film battery



Description

M2329V2.1DCX is The Batteries' innovative plasma activated all solid state thin film battery with unique specifications, overperforming current Li-ion and solid state batteries in all key parameters, such as safety, charging speed, cycle life, working temperature range, discharge rate. It is possible because of high quality thin film cathode and solid state electrolyte structures, allowing high Li-ions mobility and conductivity, low internal resistance, absence of dendrite growth. Lithium provides highest energy density as most effective anode. M2329V2.1DCX is a 23x29 mm battery with a capacity of 1.0 mAh or 10.0 mAh. The form factor of the battery can be changed in accordance with customer requirements.

M2329V2.1DCX plasma activated all solid state thin film battery is produced based on The Batteries' proprietary patented technology, providing the uniformity and high productivity rate of the deposition process over large area. The technology allows to significantly reduce the production cost of all solid state thin film batteries.

Advantages

- ≡ All solid state battery structure
- ≡ Ultra fast charge
- ≡ Unique record-high lifetime
- ≡ Wide working temperature range
- ≡ High discharge rate (continuous and pulsed)
- ≡ Customized form factor
- ≡ Non-flammable, no thermal runaway or explosion possible

General parameters

- ≡ Capacity: 1.0 mAh; 10.0 mAh
- ≡ Nominal voltage: 3.9 V
- ≡ Charging time to 80%: < 4 minutes
- ≡ Working temperature: -40 ÷ 125 °C
- ≡ Discharge rate: 20 C
- ≡ Discharge rate (pulsed): 40 C @ 100ms
- ≡ Customized form factor
- ≡ Non-flammable, no thermal runaway or explosion possible

Applications

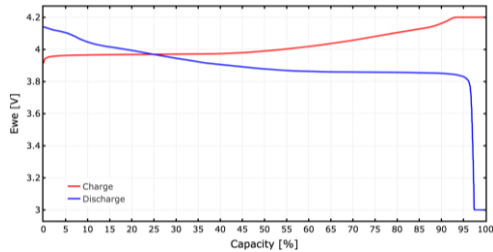
- ≡ IoT, beacons, wireless sensors
- ≡ Power backup, RTC
- ≡ Energy storage for energy harvesting devices
- ≡ Wearable and implantable medical devices
- ≡ Electronic shelf labels
- ≡ Drive recorders
- ≡ RFID, smartcards

Datasheet

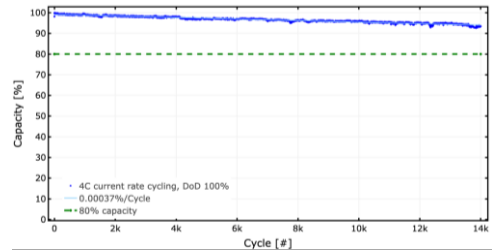
Parameter	Value		Units
Energy:	4.0	40.0	mWh
Capacity:	1.0	10.0	mAh
Average voltage:	3.9		V
Typical CV charge time to 80% of capacity:	< 4		min
Max discharge continuous current:	20		C
Max discharge pulse current:	40 @100ms		C
Charge/discharge cycles:	> 10 000 CCCV regime @4C, DoD 100%		cycles
Operating temperature range:	-40 ÷ +125		°C
Dimensions:	23x29		mm
Thickness:	0.075	0.75	mm
Flammability:	Non-flammable No thermal runaway or explosion possible		

Typical characteristics

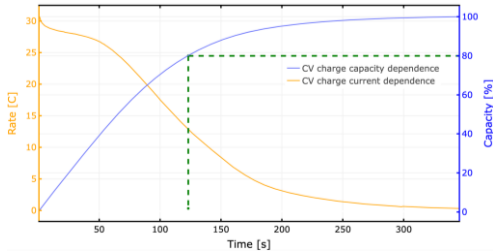
Typical charge/discharge curve



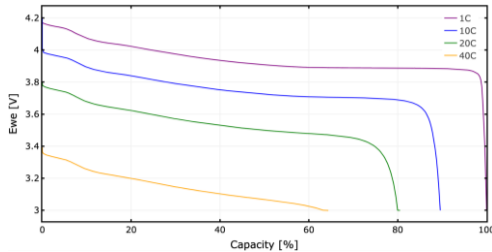
Typical cycling characteristics 4C current rate



Typical CV charge time dependence



Typical discharge curves for different current rates



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