

HLC – 1530A



Hybrid Layer Capacitor (HLC) For *PulsesPlus™* batteries

Electrical characteristics (For batteries stored at RT for 1 year or less)

Capacity when charge to 3.67 V	250 As
Capacity when charge to 3.90 V	380 As
Discharge end voltage	2.5 V (discharge below 2.5 V at RT may increase the HLC internal impedance). For other temperatures and discharge condition please contact Tadiran for these end voltage conditions.

Mechanical characteristics

Length	27.4 mm. max
Diameter	15.1 mm. max
Weight	9.9 gr. max

Operating conditions

Maximum discharge current:	
Continuous	0.75 A
Pulse, 1 sec	3.0 A
Charge (constant current)	
Max. charge voltage	3.95 V
Max. charge current	50 mA
Operating temperature range	
HLC in PulsesPlus™ battery	-40 °C ÷ +85 °C
Storage temperature range of HLC	-40 °C ÷ +60 °C
Cell impedance at RT	< 140 mΩ at 1 kHz
Self discharge of PulsesPlus™ battery at RT	1.8 µA
Self discharge of PulsesPlus™ battery at 80 °C	8 µA

Shelf life at different storage temperature to 80% of initial capacity

Temperature	HLC	HLC in <i>Pulses Plus™</i> battery
RT	3 years	10 years
60 °C	4 weeks	7 years
80 °C	1 week	At least 1 year

Safety

Tested according to:

Short circuit at RT and at +55 °C	UL, UN, IEC
Oven at +150 °C	UL, IEC
Over-charge & over-discharge (200 % at currents up to 1 A)	UL, UN, IEC
Impact	UL, UN, IEC
Compression	UL, IEC
Shock and vibration	UL, IEC

UN Manual of Tests and Criteria, UL 1642, IEC 60086

UL Approved under file MH12193 issued December 7th, 2000



Technology

- Anode: Carbon based
- Cathode: Multi metal oxides
- Electrolyte: Organic
- Shut down separator

Key Features

- Hermetically sealed (glass-to-metal)
- Wide operating temperature range
- Low self discharge
- End of life indication capability
- High reliability
- Lightweight
- Safe design

Main Applications

- Utility Meters (AMR)
- Asset, Container & Cargo Tracking
- RFID Devices
- Sonar Buoys
- Communication Equipment
- Emergency & Medical Devices

Ordering Part No.

■ HLC -1530A/S	61153122000
■ HLC -1530A/T	61153122150
■ HLC -1530A/TP	61153132000
■ HLC -1530A/PT2	61153135000

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WARNING:
Fire, Explosion, And Severe Burn Hazard.
Do Not Recharge, Crush, Disassemble, Heat
Above 100°C, Incinerate Or Short Circuit.

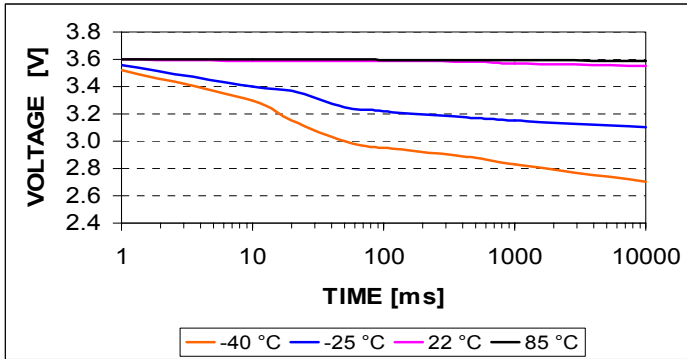
THE INFORMATION PROVIDED HERE IS NECESSARILY OF A GENERAL NATURE. SINCE SPECIFIC PERFORMANCE DEPENDS ON ACTUAL OPERATING AND STORAGE CONDITIONS, OUR ENGINEERS WILL PROVIDE PARTICULAR APPLICATION INSTRUCTIONS UPON REQUEST. DATA SUBJECT TO REVISION WITHOUT NOTICE. ANY REPRESENTATION IN THIS BROCHURE CONCERNING PERFORMANCE ARE FOR INFORMATION PURPOSES ONLY AND NOT WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF FUTURE PERFORMANCE. TADIRAN'S STANDARD LIMITED WARRANTY, STATED IN ITS SALES CONTRACT OR ORDER CONFIRMATION FORM IS THE ONLY WARRANTY OFFERED BY TADIRAN.

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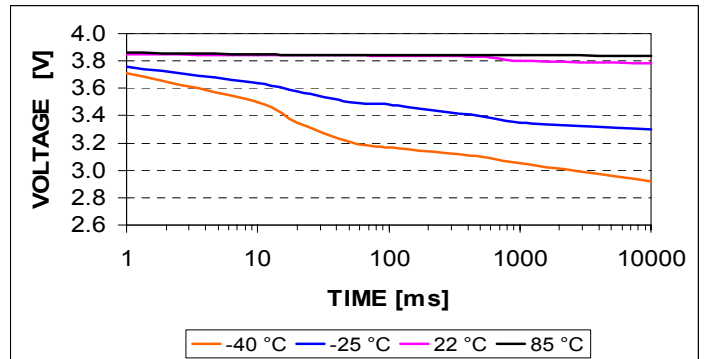


Performance data

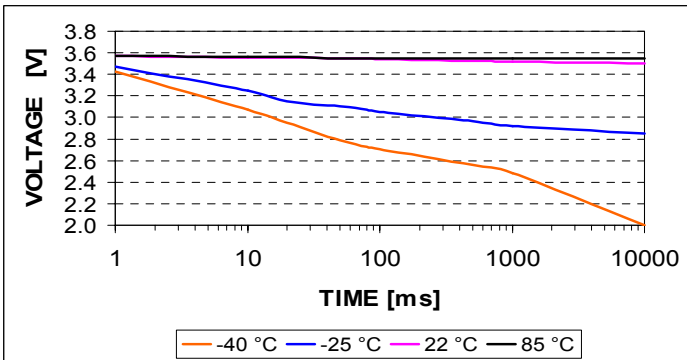
Voltage curves for HLC1530A at Li/SOCl₂ potential (3.67 V), 350 mA



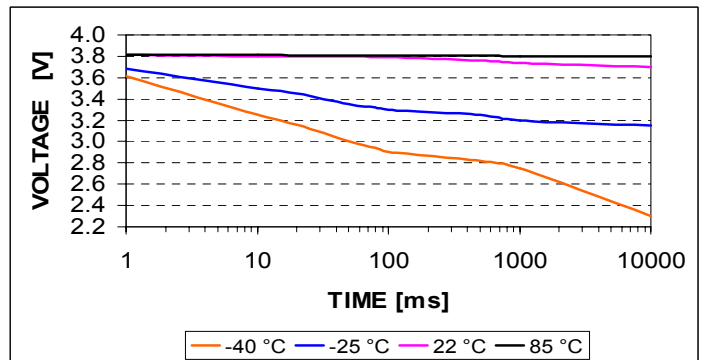
Voltage curves for HLC1530A at Li/SO₂Cl₂ potential (3.90 V), 350 mA



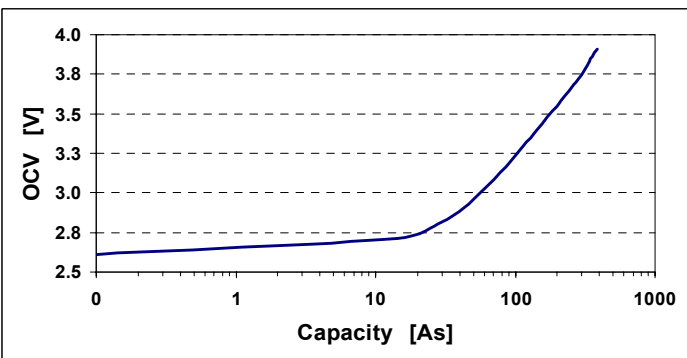
Voltage curves for HLC1530A at Li/SOCl₂ potential (3.67 V), 600 mA



Voltage curves for HLC1530A at Li/SO₂Cl₂ potential (3.90 V), 600 mA



Available capacity vs. OCV for HLC1530A (at RT, 90 mA discharge)



Warning:

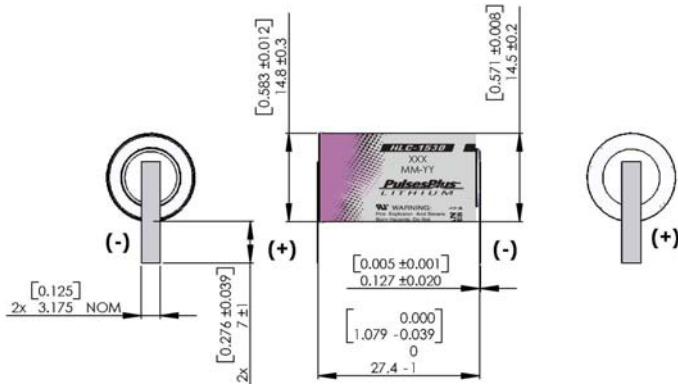
- The HLC is designed for use in a PulsesPlus™ battery or in low charge current as specified only. The HLC may explode or violently vent if over-charge above 4.4V.
- Do not charge the HLC higher than 4.1 V, over discharge, short circuit, heat above 100 °C, incinerate or expose content to water.
- Charging the HLC at above 3.95 V may lead to capacity loss and / or internal impedance rise.

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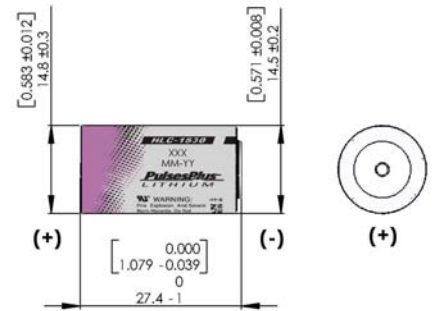
HLC – 1530A

Lead terminations

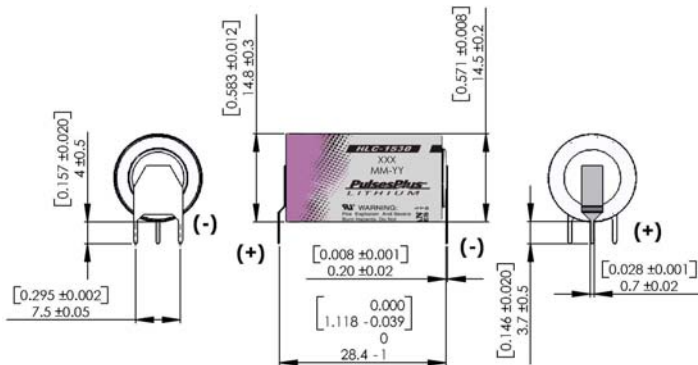
HLC-1530A/T (Soldering Tabs)
Cat. # 61153122150



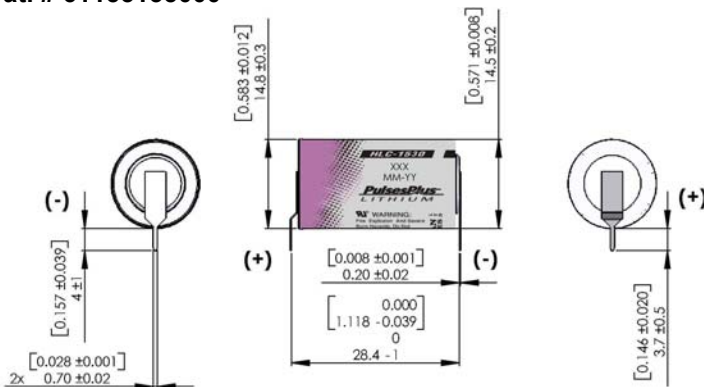
HLC-1530A/S (Standard)
Cat. # 61153122000



HLC-1530A/TP (PCB Mountable - Polarized)
Cat. # 61153132000



HLC-1530A/PT2 (PCB Mountable)
Cat. # 61153135000



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