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KBT KEEP BETTER TECH 103040

KBT 3.7V 1200mAh Li-Polymer Battery User Manual

Model: 103040 | Brand: KBT KEEP BETTER TECH

1. Introduction

This manual provides essential information for the safe and effective use of your KBT 3.7V 1200mAh Li-Polymer Battery (Model 103040). These rechargeable lithium-ion batteries are designed for various electronic devices and come equipped with PH2.54 and PH1.25/2.0 JST connectors for versatile replacement applications. Please read this manual thoroughly before installation and operation to ensure optimal performance and safety.

2. Safety Information and Precautions

Lithium polymer batteries are powerful and require careful handling. Adhere to the following safety guidelines to prevent damage, injury, or fire:

- **Certified Quality:** Each KBT lithium battery undergoes rigorous safety examinations, including UN38.3 test standards (low-high temperature, impact, overcharging, external short circuit, vibration tests) to minimize risks during production, shipping, and use.
- **Charging:** Only use chargers specifically designed for lithium polymer batteries. Do not overcharge or discharge the battery beyond its specified voltage limits.
- **Temperature:** Do not expose batteries to extreme temperatures (above 60°C or below -20°C for discharge, above 45°C or below 0°C for charge). Avoid direct sunlight or heat sources.
- **Physical Damage:** Do not puncture, disassemble, short-circuit, or modify the battery. Avoid dropping or subjecting the battery to strong impacts.
- **Storage:** Store batteries in a cool, dry place away from flammable materials. If not used for extended periods, refer to the maintenance section for proper storage procedures.
- **Disposal:** Do not dispose of batteries in general waste or by incineration. Recycle them at designated battery recycling centers.
- **Polarity:** Always ensure correct polarity when connecting the battery to a device or charger. Incorrect connection can cause damage.



Figure 1: KBT Li-Polymer Battery highlighting multiple protection features including overcharge, over-discharge voltage, and short-circuit protection.

3. Product Overview

3.1 Features

- **High Capacity:** 3.7V 1200mAh Li-Polymer battery, providing 4.44Wh of power.
- **Versatile Connectors:** Includes PH2.54 2-Pin JST connector and PH1.25/2.0 JST connectors for broad compatibility.
- **Long Cycle Life:** Approximately 800 charge and discharge cycles, ensuring 1-2 years of normal use.
- **No Memory Effect:** Designed to maintain full capacity without degradation from partial charges.
- **Multiple Protections:** Built-in safeguards against overcharge, over-discharge voltage, over current, and short circuits.
- **Wide Application:** Suitable for digital cameras, tablets, home monitors, GPS devices, toys, network boxes, USB fans, testers, air purifiers, controllers, Bluetooth speakers, baby infant monitors, keyboards, and mice.

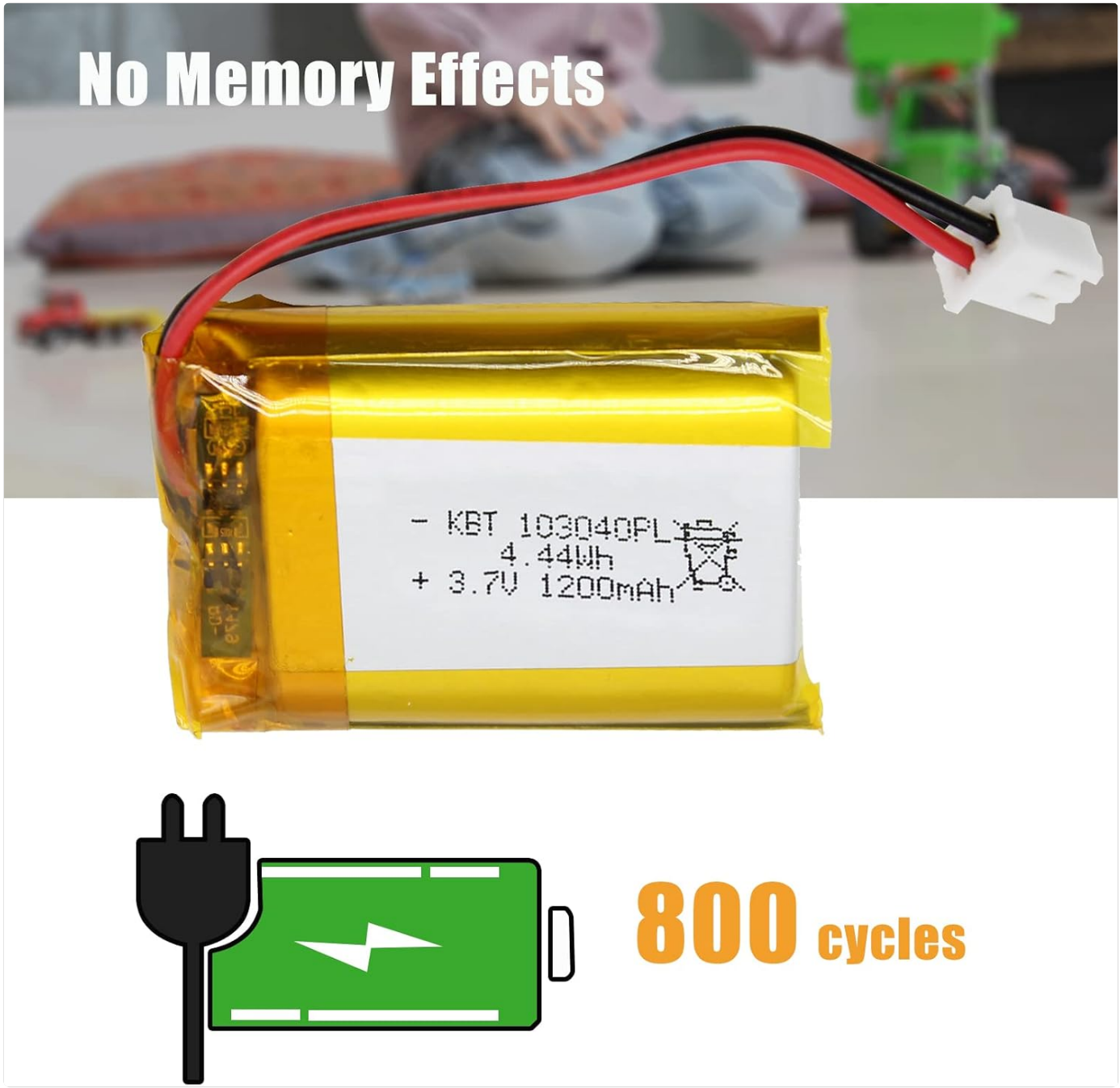


Figure 2: The KBT Li-Polymer Battery is designed for approximately 800 charge and discharge cycles, indicating a long operational lifespan.

3.2 Components

The KBT 3.7V 1200mAh Li-Polymer Battery package typically includes:

- KBT 103040 Li-Polymer Batteries (8-pack)
- Assorted PH2.54 and PH1.25/2.0 JST Connectors
- Heat Shrink Tubing for secure connections



Figure 3: An 8-pack of KBT 3.7V 1200mAh Li-Polymer Batteries, accompanied by a selection of JST connectors and heat shrink tubing for installation.

4. Setup and Installation

Follow these steps to properly install the KBT Li-Polymer Battery as a replacement:

1. **Prepare the Battery:** If replacing an existing battery, carefully cut off the old connector from the KBT battery's wires, ensuring enough wire length remains for the new connection.
2. **Select Connector:** Choose the appropriate PH2.54 or PH1.25/2.0 JST connector that matches your device's requirements. Cut off a suitable length of heat shrinkable tube.
3. **Connect Wires:** Carefully strip a small portion of insulation from the ends of the battery wires and the chosen connector wires. Connect the wires, ensuring that the positive (red) wire from the battery connects to the positive wire of the connector, and the negative (black) wire from the battery connects to the negative wire of the connector. Twist or solder the connections securely.
4. **Insulate Connections:** Slide the heat shrink tubing over the connected wires. Using a heat gun or a lighter (with caution, keeping flame away from the battery itself), gently heat the tubing until it shrinks tightly around the connections, providing insulation and strain relief.
5. **Install in Device:** Once the connections are secure and insulated, carefully place the battery into your device,

ensuring it fits without bending or forcing.

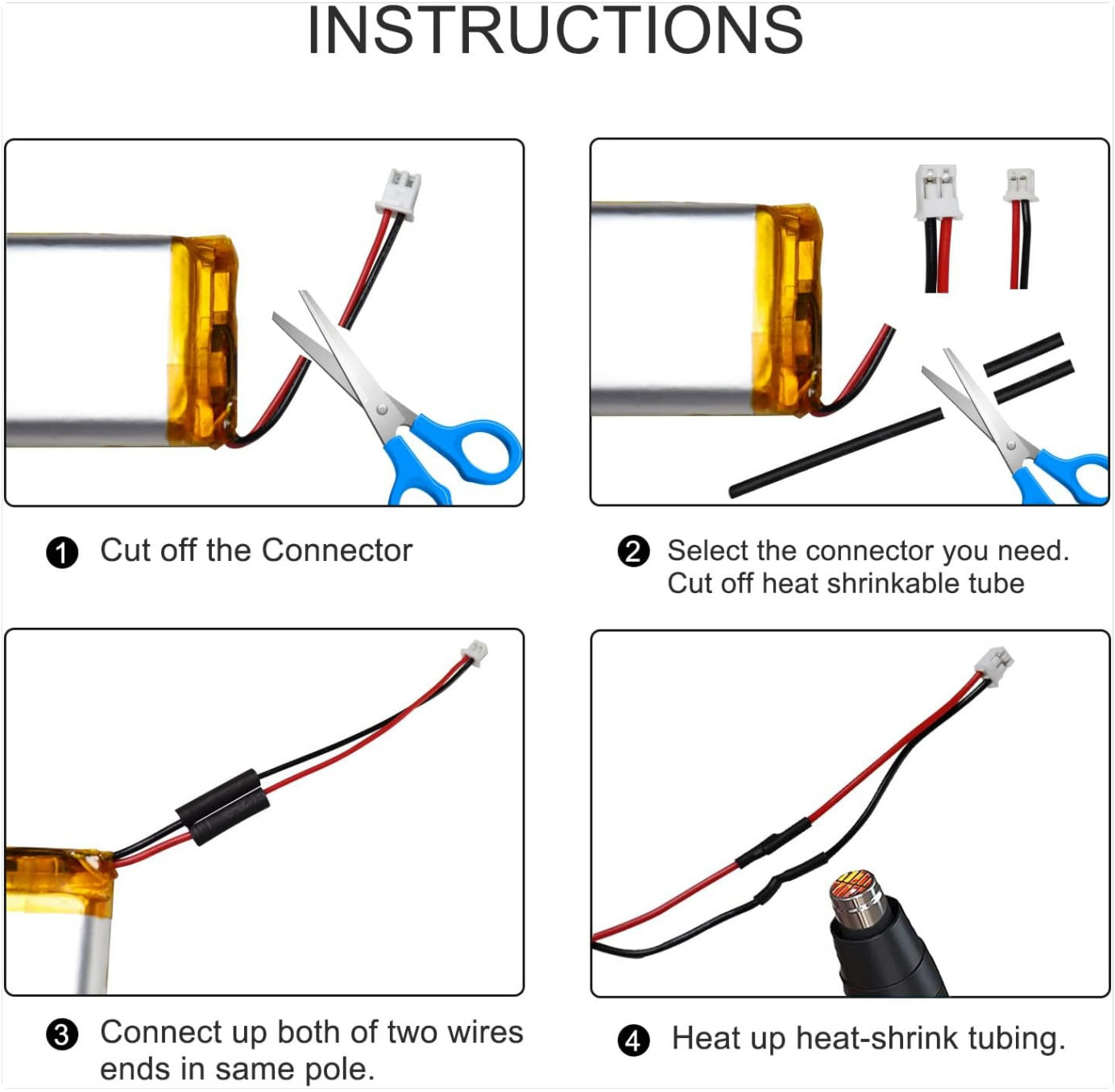


Figure 4: Visual guide for replacing the battery connector, showing steps from cutting the old connector to heat-shrinking the new connection.

5. Operating Instructions

Once installed, the KBT Li-Polymer Battery operates like any standard rechargeable battery in compatible devices. Ensure your device's charging system is compatible with 3.7V lithium polymer batteries.

- **Initial Charge:** For optimal performance, it is recommended to fully charge the battery before its first use.
- **Regular Use:** Use the battery as needed for your electronic device. The battery's intelligent protection circuit manages charging and discharging within safe limits.
- **Recharging:** Recharge the battery when your device indicates low power. Avoid completely draining the battery repeatedly, as this can shorten its lifespan.

6. Maintenance

Proper maintenance extends the life of your KBT Li-Polymer Battery:

- **Regular Charging:** If the battery is not used often, it is crucial to run out its capacity and fully charge it once a month. This helps maintain battery health and prevents deep discharge.
- **Storage:** Store batteries in a cool, dry place, ideally at around 50% charge, if they will not be used for an extended period. Avoid storing in extreme temperatures.
- **Cleaning:** Keep the battery and its connectors clean and free from dust or debris. Use a dry, soft cloth for cleaning.

7. Troubleshooting

If you encounter issues with your KBT Li-Polymer Battery, consider the following common problems and solutions:

Problem	Possible Cause	Solution
Battery not charging	Incorrect charger, loose connection, damaged battery/charger, device issue.	Ensure charger is compatible and connected securely. Test with another compatible charger if possible. Check battery for visible damage.
Battery not holding charge	Battery degradation, improper charging habits, extreme temperatures.	Ensure monthly charging if stored. Avoid deep discharge. Operate within recommended temperature ranges. If battery is old, replacement may be necessary.
Device not powering on with new battery	Incorrect polarity, faulty connection, battery not charged, device issue.	Verify correct polarity during installation. Check all connections for security. Ensure battery is charged. Test the device with a known working battery if available.
Battery swelling or overheating	Overcharging, internal short, physical damage, manufacturing defect.	**Immediately discontinue use.** Safely remove the battery if possible and dispose of it properly at a recycling facility. Do not attempt to charge or use a swollen battery. Contact support.

8. Specifications

Parameter	Value
Model Number	103040PL
Typical Voltage	3.7V
Capacity	1200mAh / 4.44Wh
Max Charge Current	1200mA
Standard Load Current	600mA
Max Load Current	1200mA
Internal Resistor	90 mΩ
Overcharge Protection	4.30±0.05V
Over-discharge Protection	2.90±0.075V

Parameter	Value
Over Current Protection	1.67-1.85A
Short Circuit Protection	No output when short circuit
Discharge Temperature	-20°C to 60°C
Charge Temperature	0°C to 45°C
Battery Dimensions (L x W x H)	40.0mm x 30.0mm x 10.0mm

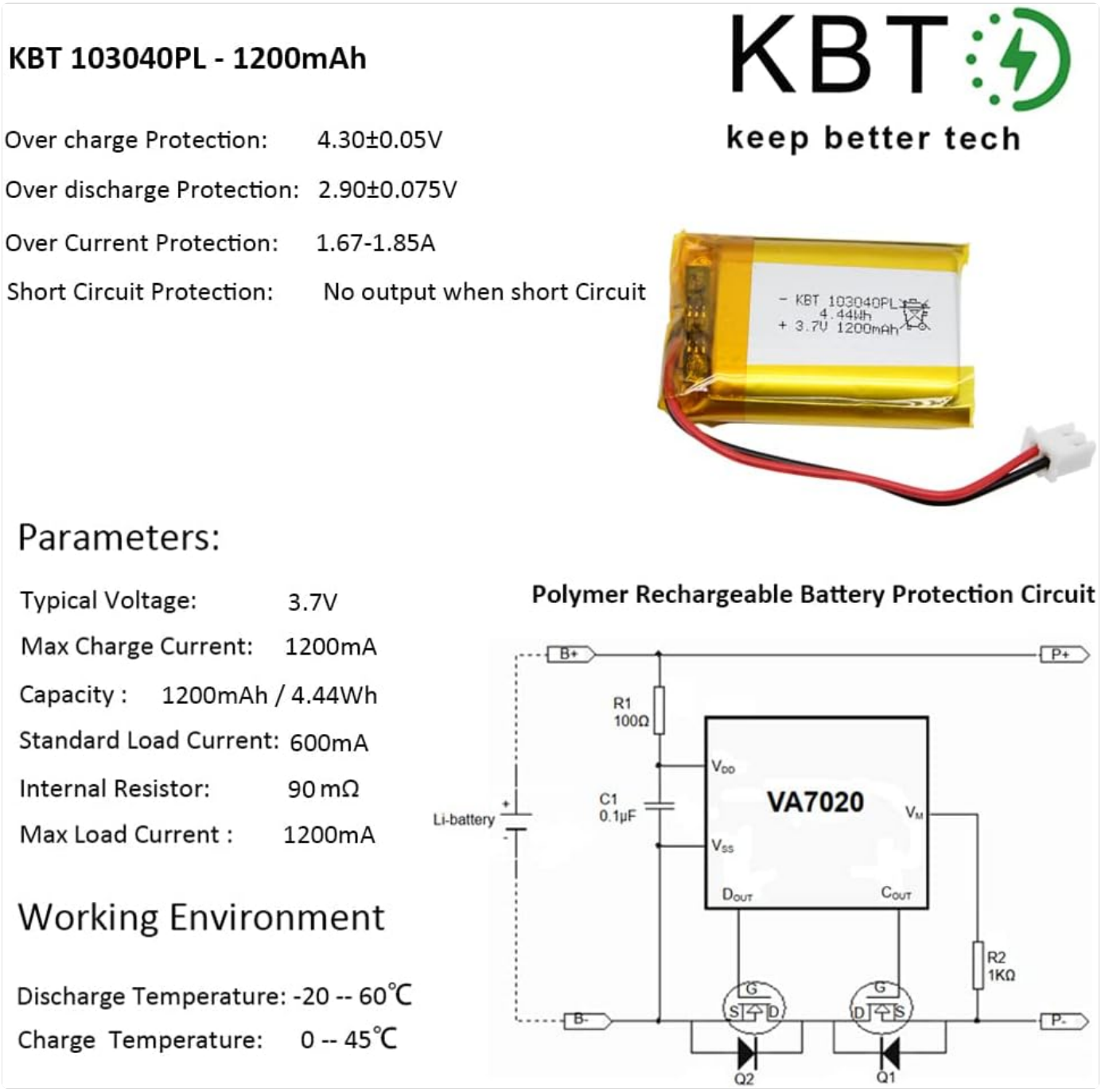


Figure 5: Technical parameters and the Polymer Rechargeable Battery Protection Circuit diagram for the KBT 103040PL battery.

Product Size

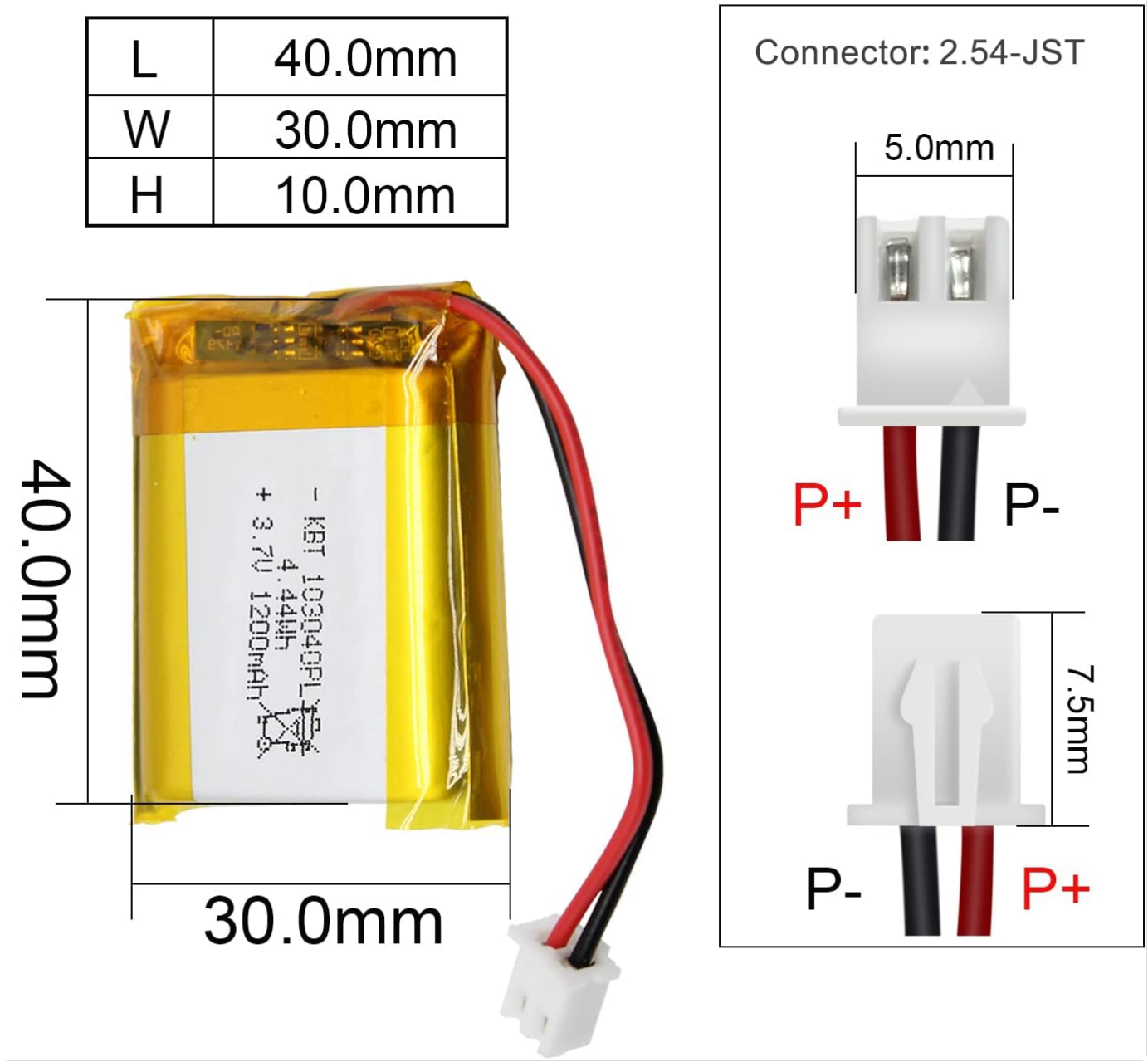


Figure 6: Detailed measurements of the KBT Li-Polymer Battery (40mm x 30mm x 10mm) and specifications for the 2.54-JST connector, including pin spacing and polarity.

9. Warranty and Support

KBT KEEP BETTER TECH stands behind the quality of its products.

- **Lifetime Warranty:** Every KBT battery is guaranteed for quality for its lifetime.
- **Customer Support:** If you encounter any problems with the product that are caused by the product itself, please contact KBT for replacement or refund at any time.

For support, please refer to the contact information provided with your purchase or visit the official KBT KEEP BETTER TECH store page on Amazon.

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