

Repair manual

Hammer Construction 2 Thermal 5G

HS2404 | HS2404e

Contents

Introduction	3
Parts	4
Tools	7
Security	8
Disassembly	9
0 First steps	9
1 SIM tray	9
2 LCD display	10
3 Middle housing	11
4 Motherboard	12
5 Front camera	13
6 Main camera	14
7 Sub-PCBA	15
8 Buzzer	16
9 Battery	17

Introduction

This manual contains technical instructions for replacing original manufacturer parts in your Hammer smartphone and is intended for end users and service providers with the knowledge, experience and tools required to repair electronic devices.

All functionality, features, specifications, and other product information provided in this document, including, but not limited to, the benefits, design, pricing, components, performance, availability, and capabilities of the product, are subject to change without notice or obligation. mPTech reserves the right to make changes to this manual and the product described herein at any time without obligation to notify you of such changes.

IMPORTANT!

Read the entire manual first. Do not continue if you are not comfortable performing repairs according to the instructions in this manual.



Failure to follow repair instructions, use of non-original parts or inappropriate tools may result in damage to the part/device or compromise its functionality and water resistance.

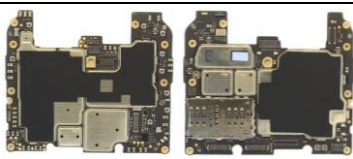


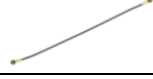
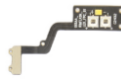
Failure to follow repair instructions, use of non-original parts or inappropriate tools may cause fire or other safety hazards and lead to property damage, personal injury or death.

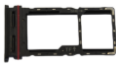
Warranty

Damage caused by repairs performed outside of an Authorized Service Center is not covered by the mPTech warranty. Such damage may result in future repairs being subject to out-of-warranty costs or the device becoming ineligible for future repairs performed by mPTech.

Parts

Product	Part ID	Image
BM-79 battery	CZE005684	
Buzzer	CZE005681	
Distance sensor	CZE005691	
Speaker	CZE005729	
Night camera	CZE005690	
Front camera	CZE005722	
Thermal camera	CZE005723	
Rear camera	CZE005721	
LCD+TP	CZE005683	
Center housing	CZE005677	
Orange rear housing Green rear housing	CZE005673 CZE005672	
Proximity sensor cover	CZE005697	
Battery foam	CZE005696	
Night camera foam	CZE005693	
Rear camera foam	CZE005725	
Motherboard	CZE005671	
Sub-PCBA	CZE005700	

Additional antenna board	CZE005701	
Speaker adhesive pad	CZE006038	
LCD+TP adhesive pad	CZE005714	
Distance sensor cover adhesive	CZE005825	
Camera cover adhesive pad	CZE005698	
Night camera cover adhesive pad	CZE005820	
Rear camera cover adhesive pad	CZE005821	
RF cable 1	CZE005685	
RF cable 2	CZE005686	
RF cable 3	CZE005687	
RF cable 4	CZE005688	
Thermal camera lens	CZE005724	
Buzzer mesh	CZE005823	
Speaker mesh	CZE005713	
Speaker mesh 2	CZE005922	
Distance sensor cover	CZE005695	
Night camera cover	CZE005699	
Thermal camera cover	CZE005726	
Rear camera cover	CZE005824	
Screw 1 M1.4*5.0mm	CZE005705	
Screw 2 M1.4*6.5mm	CZE005706	
Screw 3 M1.4*5.5mm	CZE005708	
Screw 4 M1.4*3.0mm	CZE005709	
Screw 5 WA1.4*3	CZE005710	
Distance sensor tape	CZE005703	
Fingerprint reader tape	CZE005730	
Main tape	CZE005702	
LED&IR tape	CZE005704	

PA conductive tape	CZE005692	
Thermal camera holder	CZE005720	
SIM tray	CZE005712	
Night camera gasket	CZE005694	
Front camera gasket	CZE005727	
Vibration	CZE005689	
Distance sensor bracket	CZE005682	
Motherboard bracket	CZE005680	
LCD connector cap	CZE005678	
Heat dissipation gel	CZE005711	

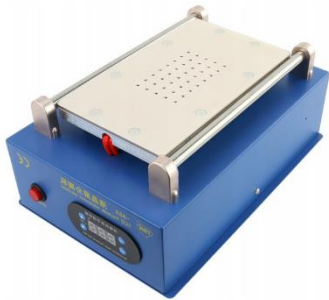
*Always use original manufacturer parts. Third-party parts may not function properly.

Tools

Tools not supplied by mPTech with the product can be purchased at electronics stores.

Use only demagnetized tools specifically designed for repairing small electronic devices, as most electronic components are sensitive to electromagnetic interference.

Repair tools

LCD heater	
Suction cup	
Triangular opening tool	
Antistatic tweezers (anti-ESD*)	
Plastic opening tool	
Philips PH0 screwdriver	
Microfiber cloth	
IPA cloths	
SIM card tray eject pin	

* ESD: electrostatic discharge

Security

During repairs, you must wear safety equipment at all times.

Safety glasses	
Antistatic gloves (anti-ESD*)	
Antistatic mat (anti-ESD*)	
Grounding strap (anti-ESD*)	

*ESD: electrostatic discharge



Perform repairs in a well-ventilated area.
The work area should be free of foreign objects and sharp materials.
Do not leave loose screws, extra screws, or small parts inside the device.
Use caution when using sharp tools near the battery.



The device contains a built-in lithium-ion battery. Improper battery replacement, improper handling of parts, failure to discharge the battery before repair, or failure to follow the instructions provided may result in battery overheating, swelling, venting, leakage, or a thermal runaway event. These events can cause fire, personal injury, death, data loss, or damage to the device, parts, or other property.



Before you begin repairs, completely discharge the battery. A discharged battery is less prone to thermal events. If you cannot determine the battery charge level, do not repair the device.

Disassembly

The device is disassembled in the following order:

- LCD display
- Middle housing
- Main board
- Front camera
- Main camera
- Sub-PCBA (*main microphone, USB-C port*)
- Buzzer (*speaker*)
- Battery

0 | First steps

Before starting repairs, always perform the following steps:

- Back up your device.
- Completely discharge the battery.
- Turn off the device.
- Disconnect all cables.
- Remove all additional accessories (e.g., cases).
- Organize and clean your work area.
- Put on an ESD wrist strap and attach it to a properly grounded ESD mat.



Ensure you are using the correct tools and parts for the model you are repairing.

Take your time. Read all instructions and warnings carefully.

The end of each tape/antenna must be aligned with the connector. Press each end into the connector until you hear a click to ensure that it is securely attached.

1 | SIM tray



Disassembling the device with the SIM card tray in place may damage the device.

Required tools

- SIM card tray eject pin

Steps

1. Locate the SIM card tray.
2. Insert the SIM card eject tool into the hole next to the SIM card tray.
3. Push the SIM card eject tool toward the case to eject the SIM card tray.
4. Remove the SIM card tray.

2| LCD display

Required tools

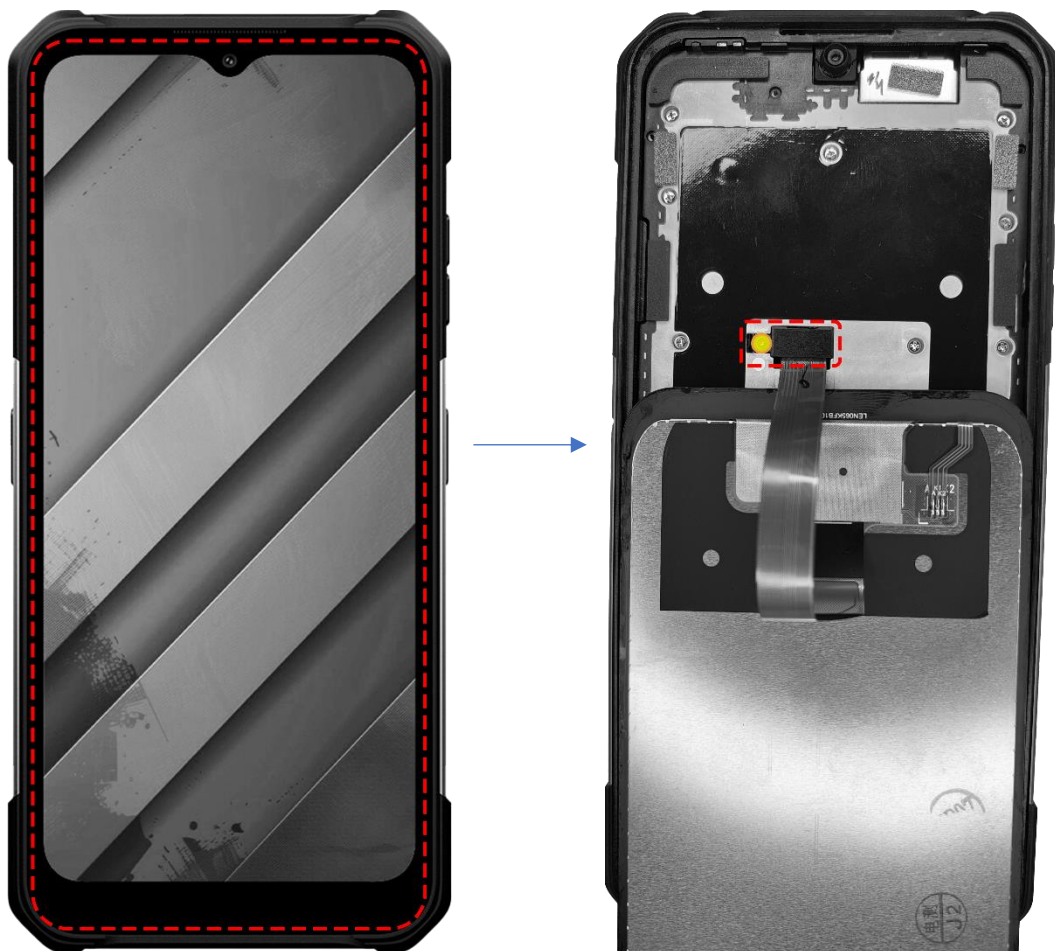
- LCD heater
- suction cup
- triangular opening tool
- Philips PH0 screwdriver
- antistatic tweezers

Steps

1. Using an LCD heater, evenly heat the LCD surface to reduce the stickiness of the foam between the LCD frame and the rest of the device.
2. Insert the opening tool between the LCD frame and the case to create a gap.
3. Slide the tool along the edges of the device to separate the two parts.
4. Remove the screw using a screwdriver.
5. Remove the LCD connector cap using antistatic tweezers.
6. Disconnect the LCD ribbon connector using antistatic tweezers..



The opening tool should not be inserted deeper than the width of the LCD frame, otherwise the display will be damaged.
Be careful not to damage or scratch the device .



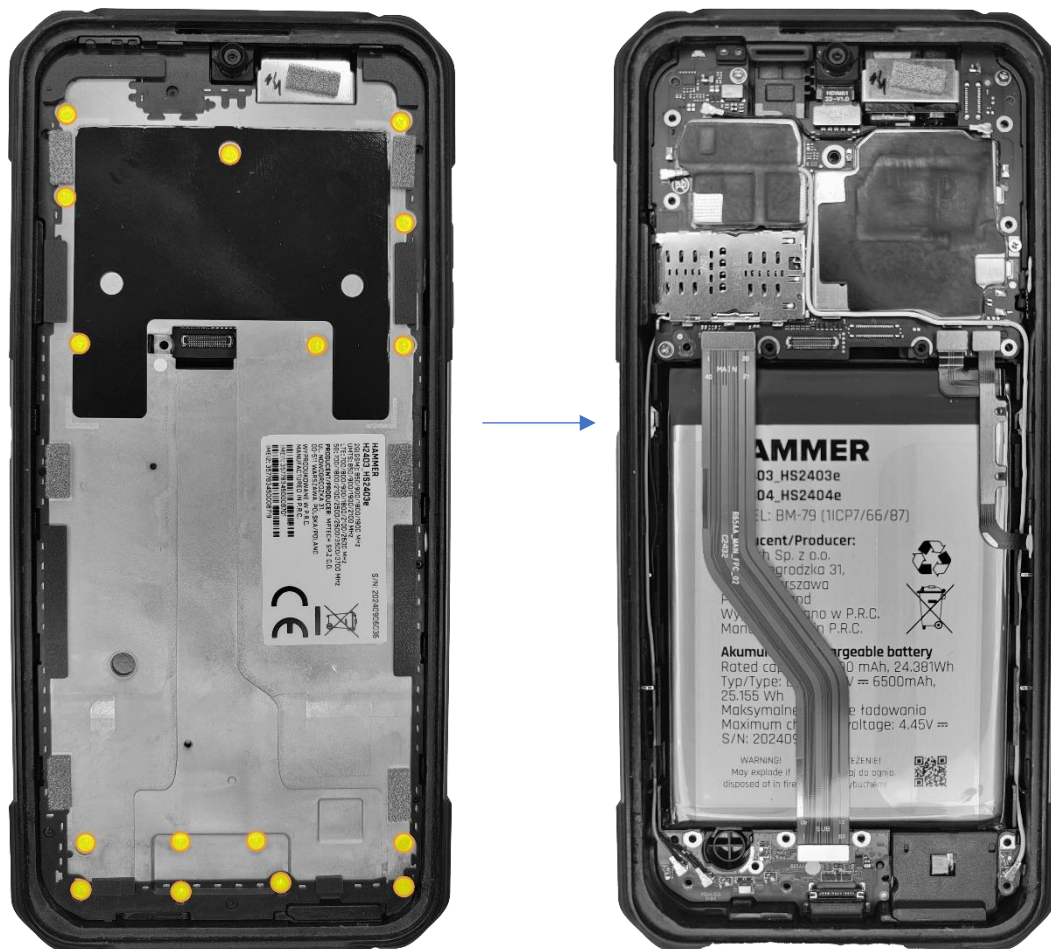
3| Middle housing

Required tools

- Philips PH0 screwdriver
- antistatic tweezers

Steps

1. Find the 16 points where the screws are located..
2. Remove all screws using a screwdriver.
3. Carefully grasp the middle housing with round-tipped tweezers and remove it from the case.



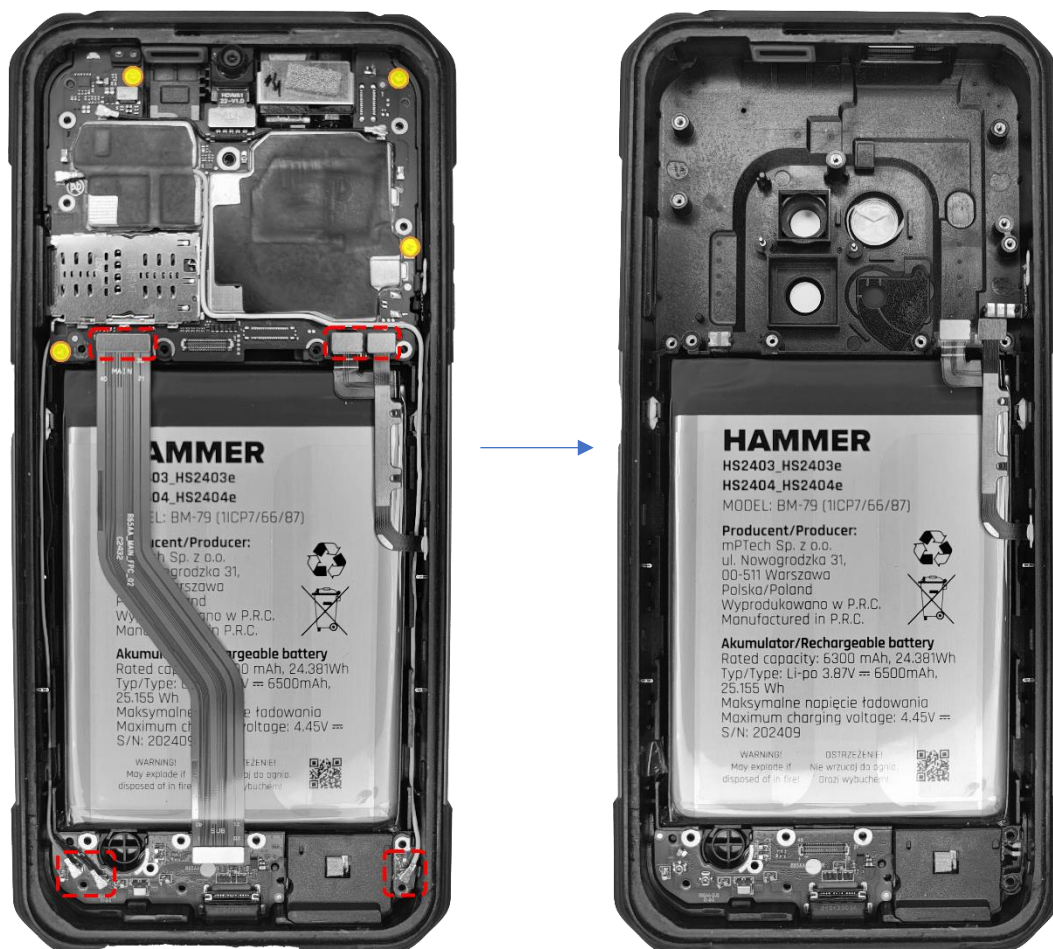
4| Motherboard

Required tools

- Philips PH0 screwdriver
- antistatic tweezers

Steps

1. Find the 4 points where the screws are located.
2. Remove all screws using a screwdriver.
3. Disconnect the battery connector, sub-PCBA and button connector using antistatic tweezers.
4. Disconnect the three RF connectors on the sub-PCBA.
5. Carefully grasp the motherboard with round-tipped tweezers and remove it from the case.



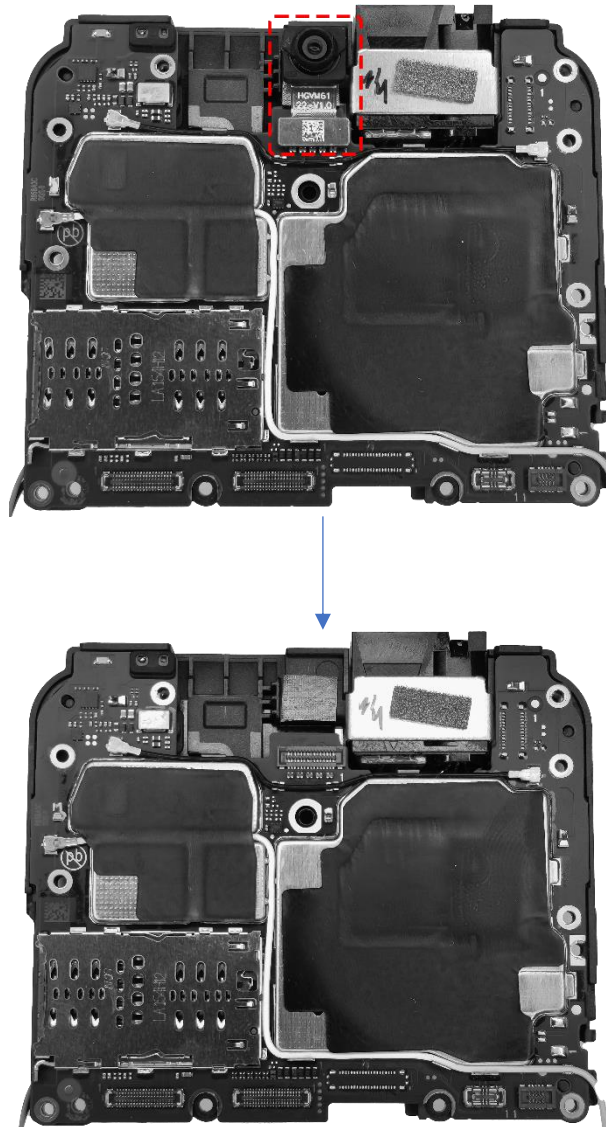
5| Front camera

Required tools

- antistatic tweezers

Steps

1. Disconnect the camera connector on the other side using antistatic tweezers.
2. Carefully grasp the camera with round-tipped tweezers and remove it from the housing.



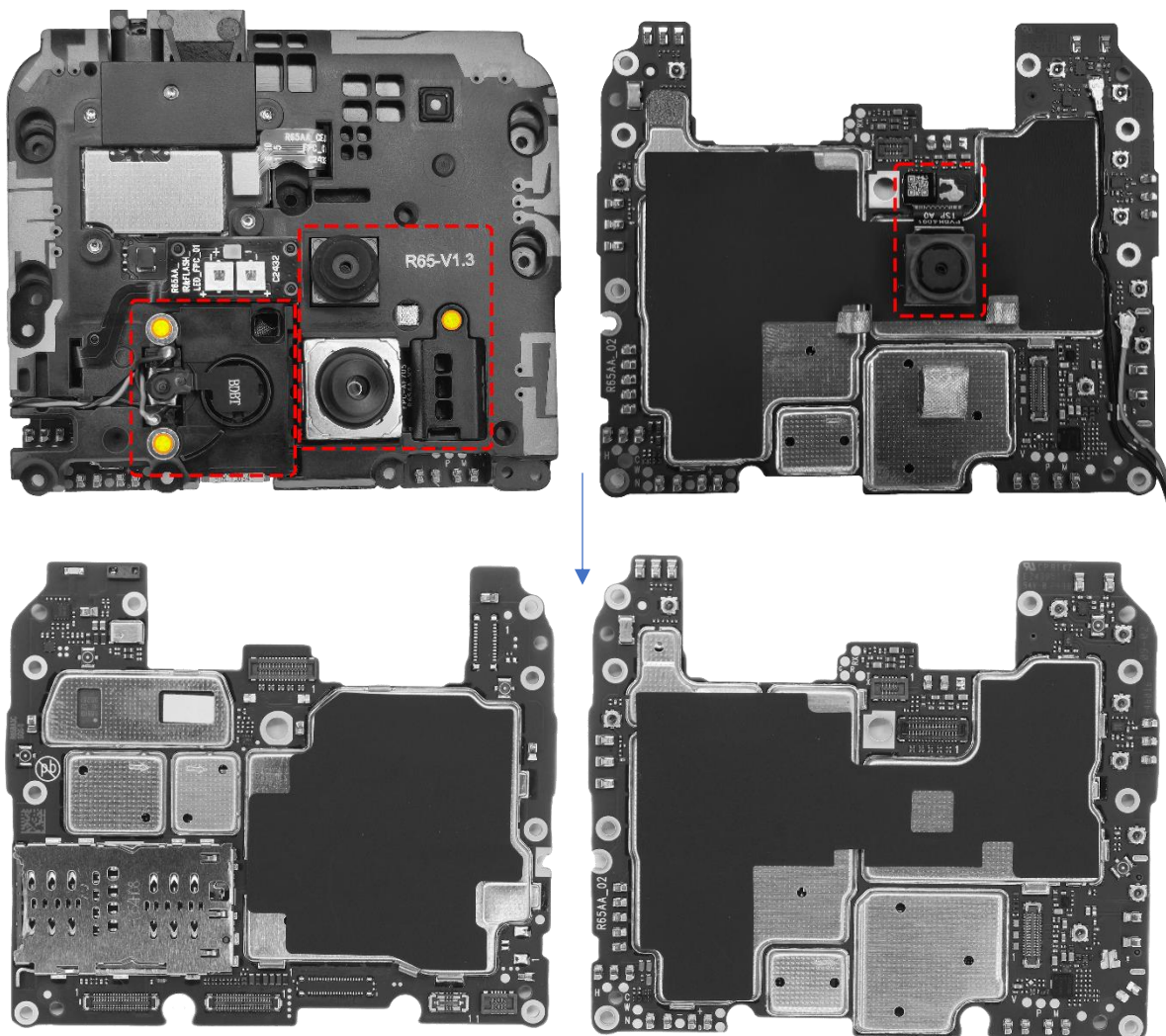
6| Main camera

Required tools

- Philips PH0 screwdriver
- antistatic tweezers

Steps

1. Find the 3 points where the screws are located.
2. Remove all screws using a screwdriver.
3. Remove the cover and disconnect the camera ribbon connectors using antistatic tweezers.
4. Carefully separate the motherboard from its bracket using antistatic tweezers.
5. Disconnect the ribbon connectors and remove the cameras using antistatic tweezers.



7 | Sub-PCBA

Contains: main microphone, USB-C

Required tools

- antistatic tweezers

Steps

1. Carefully grasp the sub-PCBA with round-tipped tweezers and remove it from the case.



8| Buzzer

Required tools

- Philips PH0 screwdriver
- antistatic tweezers

Steps

1. Lift the box with the buzzer using antistatic tweezers and remove it from the device.



9| Battery

Required tools

- IPA (isopropyl alcohol)

Steps

1. Use IPA (isopropyl alcohol) to loosen up the bond between the battery and its adhesive tape.
2. Peel off the plastic tabs from the battery located under the model label sticker.
3. Pull evenly on the plastic tabs to separate the battery from the device.

