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|  | 文 档 名 称 | Lacrosse 维修指南 | | 文 档 版 本 | V1.0 |  |
|  | Product version | 二级维修 | | Product name |  |
| MOTO |  |  |
|  |  |  |  |  |  |
| 密 级 |  |  | 页 数 |  |  |
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|  | Confidentiality level | |  | Total pages |  |
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MOTO-Lacrosse项目手机维修手册

二级维修

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| 拟 | 制: |  | 日 期 | 3.27 |
| Prepared by | | XQW/ZZ | Date |  |
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| 审 | 核: |  | 日 期 |  |
| Reviewed by | |  | Date |  |
|  |  |  |  |  |
| 审 | 核: |  | 日 期 |  |
| Reviewed by | |  | Date |  |
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| 批 | 准: |  | 日 期 |  |
| Granted by | |  | Date |  |
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AMENDMENT HISTORY

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| --- | --- | --- | --- | --- | --- |
| S/N | Rev | Description of Change | Originator | Check | Approval |
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| 1 | 1.0 | Initial |  |  |  |
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1 guide

This document is used to guide the maintenance work of MOTO-Lacrosse second-level maintenance center for MOTO-Lacrosse

2 PCB cosmetic

2.1 Main\_Board



2.2SUB\_BOARD



3failure analysis and repair

3.1can not power on

can not power on

Check the battery connector CON2101

Resoldering or change a new CON2101

N

Y

Connect with power supply, check the current is too large

Y

Refer to PMIC fail

N

Check CON6401

Resolder CON6401

Or change a new

N

Y

connect with power supply , push power button ,to see if VSYS、VCORE、VIO18、VDFS、VDRAM current is ok

N

Refer to PMIC fail

Y

Connect with power supply ,press power button check if 26 MHZ，32KHZ is ok

N

Resolder or change IC

Y

D/L，check if it is ok

Resolder or change U1001、U3101

N

Y

Resolder or change U1001

FTM Check，check if it is PASS

N

Y

end

3.2 PMIC abnormal

Resolder or change the inductor of power

Resolder or change the component

Check the TVS and CAP of Vbat

PMIC abnormal

Leakage current is too large

Standby current large

Power output abnormal

Resolder or change the power rail component

N

Y

Power VCORE、VDRAM、VIO18、VIO28 with power supply，check if the current is ok

Resolder or change U2001

N

Y

Y

Check if the power rail is on abnormally, if that ,resolder or change power IC.

3.3 can not detect charge

Charge not detect

Check J6401if it is ok

Resolder or change J6401

N

Y

Resolder or change J6401

Change a new adaptor

Check the VBUS of MB when connected adaptor to see if it is 5v

Check the temprea

N N

Y

Resolder or change R2103 R2104

TVS2103

resolder or change U2001

N N

Y

resolder or change U2001

Y

End

3.4 USB not detected

USB not detected

Connect adaptor to see if it is ok

Refer to charge issue

N

Y

Check USB\_ID to see if it is 0V

N N

resolder or change D6410,ESD6401

resolder or change

U1001

Y

resolder or change U1001

End

3.5 SIM not detected

SIM not detected

resolder or change the component

End

SIM plugin，check INT\_SIM if it is low

Check SCLK、SRST、SIO if it is ok

resolder or change U1001

resolder or change R4008、D4009

resolder or change C4002、C4004

resolder or change CON4001,CON4002

checkCON4001,

CON4002

N N

Y

Check VSIM 3V/1.8V or not

N N

Y

N N

Y

N N

Y

3.6 receiver fail

Check GND impedance of REC-、REC+

resolder or change U7001

resolder or change R6004、R6005

Receiver fail

resolder or change D6004 C6031

D6003 C6032

N N

Y

Check the impedance between REC- and REC+

resolder or change C6025

resolder or change U2001

N N

Y

Check R6014、R6015

N

Y

resolder or change U2001

End

3.7 speaker fail

Speaker fail

Check B6400 B6401 C6400 C6401 SPK\_P SPK\_N

resolder or change the component

N

Y

Check U6403’s power

resolder or change the component

N

Y

Check the imput signal of U6403

resolder or change the resistor of the signal

N

Y

resolder or change U6403

End

3.8 MIC fail

Check AU\_VIN1\_P AU\_VIN1\_N signal if it is ok

resolder or change U2001

resolder or change the component of signal

Check MICBIAS0 voltage if it is ok

resolder or change U2001

resolder or change D1001 C1012

resolder or change U1002

Check U1002 if it is ok

MIC fail

N

Y

N N

Y

N

Y

End

3.9 Earphone fail—can not detected

END

resolder or change R6030或R6017

Insert earphone，check ACCDET

resolder or change U2001

resolder or change D6008,R6005

Refer to PMIC output fail

Check the voltage of VIO18\_PMU

resolder or change J6001

Ear phone can not detected

Y

Check J6001

N

Y

N

Y

Insert earphone，check HP\_DET

N N

Y

N

Y

3.10 Earphone fail——no output

END

resolder or change U2001

resolder or change B6004

B6005

Insert earphone and check if there have waveform of HP\_L and HP\_R

resolder or change U2001

resolder or change the component of NET

Check HP\_L

HP\_R to see if them

short to GND

resolder or change J6001

Check J6001

Earphone no output

N

Y

Y N

N

N N

Y

3.11 vibrator fail

resolder or change a new vibrator

Check the vibrator if it is OK

resolder or change L1001

Check the voltage of L1001

Vibrator fail

N

Y

N

Y

End

3.12 LCM fail

resolder or change U1001

resolder or change

U6101

U6102 U6103 U6104 U6105

Check U6101

U6102 U6103 U6104 U6105 if there is waveform

resolder or change

U2304

resolder or change C2301 C2302

Check the voltage of AVDD /AVEE

resolder or change U2001

resolder or change the CAP

Check the voltage of VIO18\_PMU

resolder or change CON6103

Check CON6103

LCM fail

N

Y

N N

Y

N N

Y

N N

Y

End

3.13 TP fail

End

resolder or change U1001

resolder or change TVS6101 TVS6102 or D6111 C6120

Check SDA1 SCL1

EINT\_CTP GPIO\_CTP\_RSTB

resolder or change U2001

resolder or change U2001

Check the voltage of VGP1

resolder or change CON 6102

Check CON6102

TP fail

N

Y

N N

Y

N N

Y

3.14 Camera fail –front camera

End

resolder or change U1001

resolder or change U1001

resolder or change

R6219-R6221，R6224-R6226

resolder or change the component

Open camera and check the voltage of R6203 R6201 C6203 C6200

resolder or change CON6202

Check CON6202

Front camera fail

N

Y

N

Y

Open camera and check the signal of R6219-R6221，R6224-R6226

N N

Y

3.15 Camera fail —rear camera

resolder or change U1001

resolder or change the component

resolder or change CON6201

Check CON6201

Rear camera fail

N

Y

Open camera and check the voltage R6217 C6205 C6204 C6201 R6208 C6208 C6211

电压是否正常

N

Y

Open camera and check the signal R6222 R6223 R6209 R6210 R6211 R6212 R6213 R6214 R6215 R6216

resolder or change

R6222 R6223 R6209 R6210 R6211 R6212 R6213 R6214 R6215 R6216

N N

Y

resolder or change U1001

End

3.16 Front flash fail

Check the signal of FRONT\_FLASHLED\_EN

resolder or change U1001

resolder or change U2305

Check R2300

resolder or change R2300

resolder or change the LED

Check the flash LED

Front flash fail

Y

N

Y

N

Y

N N

End

3.17 Rear flash fail

End

resolder or change U1001

resolder or change R2301 R2307 L2301

Check R2301 R2307 L2301

resolder or change U1001

resolder or change U2301

resolder or change U2301

Check the output of U2301

resolder or change the LED

Check the flash LED

Rear flash fail

N

Y

N

Y

Open flash ,check GPIO\_FLASH\_ENM，GPIO\_FLASH\_ENF

N N

Y

N

Y

3.18 G-Sensor fail

End

resolder or change U6303

resolder or change U1001

Remove U6303，check the impedance between EINT\_ACC and GND

resolder or change

U1001

resolder or change the component of I2C2

Open G-Sensor APK，Check the signal of SCL2，SDA2

resolder or change U2001

resolder or change U6303

Check the voltage of C6320 C6303

Gyro\_Sensor 不良

N

Y

N N

Y

N

Y

3.19 GPS system fail

GPS not work

Check the connection of GPS antenna and PCBA

Change LNA U5004 and L5003 C5031

Resolder U5004 and L5003 C5011 C5004

Check LNA U5004 L5003 C5011

Change U5003

Resolder U5003

Check U5003

Reinforce the antenna and ANT5003

End

Resolder the chip

Check U5001 and U2001

Change U5001 and U2001

3.20 Bluetooth fail

bluetooth，WLAN not work

Check the connection of antenna and PCBA

Reinforce the antenna and ANT5003

Y

N

Y

Change F5001 and U5002

Resolder F5001 and U5005

Check F5001 and U5005

N N

Y

Change U5001

Resolder it

Check U5001

N N

End

3.21 GSM850/900/1800/1900 fail

GSM no network or signal is bad

Y

Check the connection of antenna and sub PCBA

Reinforce the ANT1003 ANT1001

N

Y

Check U1001 CON1001 / CON3301 in main board

Resolder or change U1001/CON1001/ CON3301

N

Y

Resolder or change U3301

Check U3301

N

Y

Check U3101

Resolder or change U3101

N

Y

End

3.22 LTE TDD Band 38/40&& LTE FDD Band 1/3/5/7/8/20问题

LTE fail

Y

Check the connection of antenna and sub PCBA

Reinforce the ANT1003 ANT1001

N

Y

Check U1001 CON1001 / CON3301 in main board

N

Resolder or change U1001/CON1001/ CON3301

Y

Resolder or change U3301

Check U3301

N

Y

Check U3201

N

Resolder or change U3201

Y

Check U3101

Resolder or change U3101

N

END

3.23 WCDMA Band 1/2/5/8 fail

WCDMA fail

Y

Reinforce the ANT1003 ANT1001

Check the connection of antenna and sub PCBA

密接触

N

Y

Check U1001 CON1001 / CON3301 in main board

N

Resolder or change U1001/CON1001/ CON3301

Y

Check U3301

Resolder or change U3301

N

Y

Check U3201

Resolder or change U3201

N

Y

End