

# SAMSUNG

## Mobile Device

### SM-A042F/A042M

### /M045F Common

# ***SERVICE*** *Manual*

## Contents

# - Level 2 -

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# 1. SVC Tech Information

## 1-1. Calibration Items

- ‘O’ mark items must be calibrated after repairing/replacing each part.

TSP Cal.	-	Force Touch Cal.	-	Optical Finger print Cal.	-
Speaker Cal.	-	Digital Hall IC Cal.	-	TOF Camera Cal.	-
Water Resistance	-	Ranging Sensor Cal	-	UWB Cal.	-
Multi Camera Cal.	O	mmWave RF Cal. (Only for USA/Japan)	-	UDC Cal.	-
Motor Cal.	-				

## 1-2. Part list which must be changed after reassembly

- No parts must to be changed after reassembly. (Hook Type)

## 1-3. JIG

- N/A

## 1-4. WRT Test Information

- It does not support water resistance. The test is not available.

## 1-5. AOD Setting Information

- It does not support AOD.

# 2. SVC Model Information

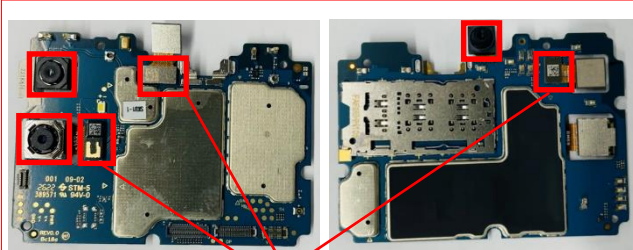
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## 2-1. RAM & Storage size by region

Model Name	Region		SKU CODE Rule	Memory		SIM		
				RAM	ROM			
A04e	Global	CIS		SM-A042F**D***	3	32	2-Nano	
				SM-A042F**H***	3	64		
				SM-A042F**K***	4	128		
		Latin America		Campinas	SM-A042M**D***	3	32	2-Nano
					SM-A042M**H***	3	64	
					SM-A042M**K***	4	128	
					SM-A042M**A***	3	32	Nano
					SM-A042M**F***	3	64	
					SM-A042M**M***	4	128	
				Manaus	SM-A042M**R***	3	32	2-Nano
					SM-A042M**P***	3	64	
					SM-A042M**Q***	4	128	
		SEA		SM-A042F**D***	3	32	2-Nano	
				SM-A042F**H***	3	64		
				SM-A042F**K***	4	128		
		SWA		SM-A042F**D***	3	32	2-Nano	
				SM-A042F**H***	3	64		
				SM-A042F**K***	4	128		
		MEA		SM-A042F**D***	3	32	2-Nano	
				SM-A042F**H***	3	64		
				SM-A042F**K***	4	128		
		Africa		SM-A042F**D***	3	32	2-Nano	
				SM-A042F**H***	3	64		
				SM-A042F**K***	4	128		
				SM-A042F**A***	3	32	Nano	
				SM-A042F**F***	3	64		
				SM-A042F**I***	4	128		
M04	SWA	SWA		SM-M045F**D***	3	32	2-Nano	
				SM-M045F**H***	3	64		
				SM-M045F**G***	4	64		
				SM-M045F**K***	4	128		

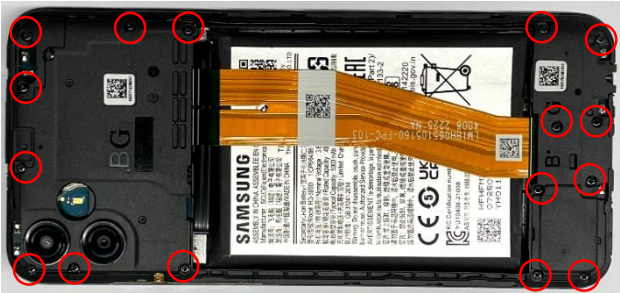
# 2. SVC Model Information

## 2-2. Disassembly & Reassembly (Important management points)

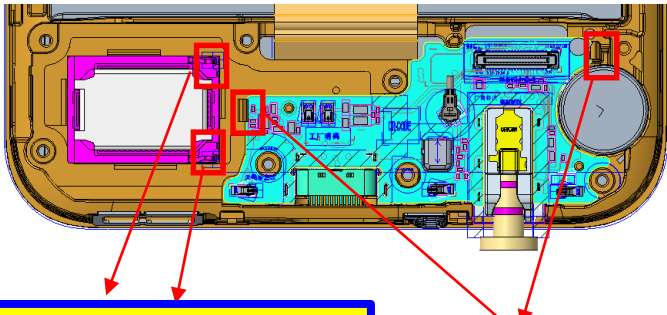


Connector 3ea on PBA.

[Important management]  
DO NOT touch the Camera lens without gloves.



Screws position



Note that the two shrapnel are on the right side to prevent leakage and reverse loading.

SUB PBA buckle

First align the plastic buckle on the right side and then tilt it to submerge it. Then align the small plate with the positioning column of the A shell and assemble it. Then push the earphone holder of the small plate with your thumb in the direction of the motor, and then vertically apply force to buckle the plastic buckle on the left side.

# 2. SVC Model Information

## 2-3. Disassembly & Reassembly (Battery replacement)

Do not reuse the battery after it has been removed. It must be replaced with a new battery.

**\* Reusing a removed battery could lead to potential safety hazards**

Type	Structure
<p>The diagram illustrates the front assembly components. A dashed blue box encloses the 'Display' (grey rectangle) and 'Bracket' (blue rectangle), which are labeled as an 'Inseparable part (Front Assy)'. Below this box is the 'Battery' (dark grey rectangle). The labels 'Display', 'Bracket', and 'Battery' are written in blue, blue, and red respectively.</p>	<p>Display and Bracket are inseparable</p> <p>Battery replacement is required when Front Assy components are defected</p>

# 3. Product Function

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## 3-1. Main Function

Item	Description
OS	Android S
Network	<p><b>2G</b></p> <p>GSM : GSM850 / GSM900 / DCS1800 / PCS1900</p> <p><b>3G</b></p> <p>WCDMA : B1 / B2 / B4 / B5 / B8</p> <p><b>4G</b></p> <p>- FDD : B1 / B2 / B3 / B4 / B5 / B7 / B8 / B12 / B13 / B17 / B26 / B28 / B66</p> <p>- TDD : B38 / B40 / B41 (2496MHz~2690MHz. Full Band)</p>
Battery	5,000 mAh
Processor	MT6765V/CBA ×1. OCTA Core (2.3GHz Quad(A53) + 1.8GHz Quad(A53)
Connectivity	GPS, GLONASS, Galileo, Beidou,BT5.0, USB 2.0 Type-C, OTG, Wi-Fi 802.11 802.11 b/g/n
Camera	<p><b>Rear</b></p> <p>- Main : 13MP A/F, F2.2</p> <p>- Depth : 2MP, A/F, F2.4</p> <p><b>Front</b> : 5MP, F/F, F2.2</p>
Display	6.517" HD+ 2.5D,Incell, V-cut panel. 60Hz. 720 x 1600
RAM	3 / 4 GB
ROM	32 / 64 GB
Sensor	Accelerometer, Proximity Sensor, Light Sensor

# 4. Exploded View and Parts List

## 4-1. Electronical Part List

: Refer to '[01-SM-A042F\\_Common\\_Main Part List](#)' file which uploaded separately

## 4-2. Cellular phone Exploded View

: Refer to '[02-SM-A042F\\_Common\\_Exploded View](#)' file which uploaded separately

## 4-3. Cellular phone Parts list

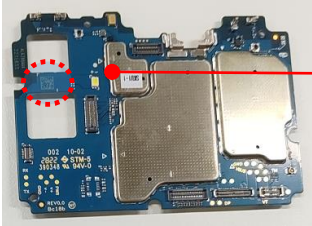






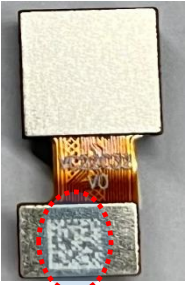

: Refer to SVC PPL



The image displays two views of a smartphone disassembly. The left view shows the back cover with labels: DIV ANT, 3N1 ANT, FLASH LENS, Side Key, and MAIN ANT. The right view shows the internal components with labels: Front CAM, RCV, 2M CAM, 13M CAM, SIM Socket (under Main PBA), Side Key FPC, Coaxial line, LCM\_FPC, Battery, Speaker, and Motor.

# 5. Components Layout

## 5-2. QR code Location

Part	Location	
PBA		
Display		
Battery		
Camera	 <div>5M</div>  <div>2M</div>  <div>13M</div>	

# 6. Trouble Shooting (L2)

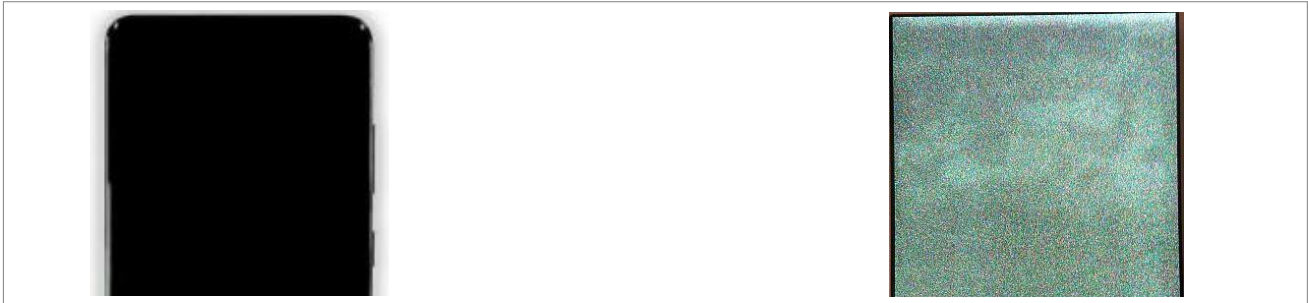
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- 6-1. Display
- 6-2. Touch
- 6-3. Power, Charging
- 6-4. Camera
- 6-5. Audio
- 6-6. Sensor
- 6-7. Connectivity (Wi-Fi, GPS)
- 6-8. No SVC
- 6-9. USIM

# 6-1. Display

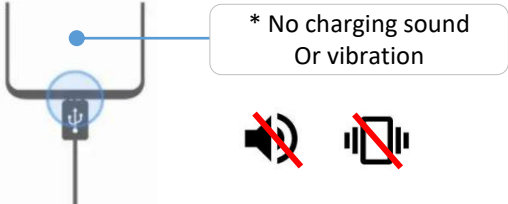
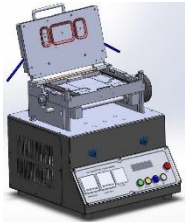
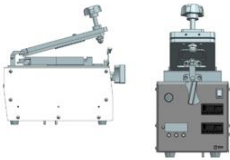



## 6-1-1. Black Display

- 1) Symptom
- Description : No display after power on. Temporary no display or dimmed display



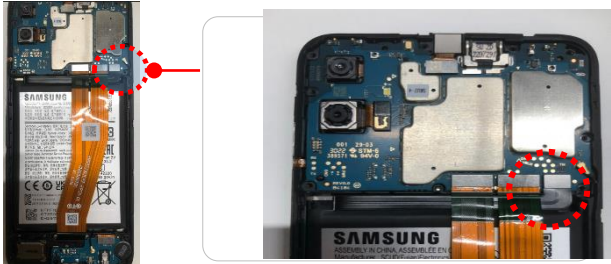
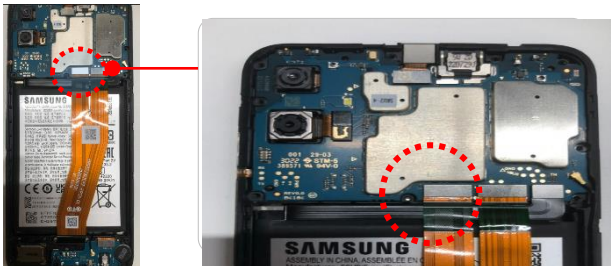
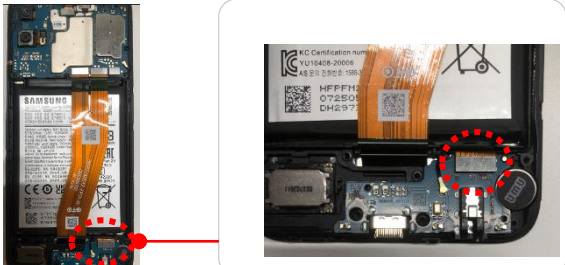


- 2) Defect Decision Conditions
- Noised images on the screen after turning on
- Check booting sound and no vibration .

- 3) Repair Guide
- **Caution : Disconnect battery connector first when it shows.**

Image	Description
	<div>1. Check the charging notification sound or vibration when connected to charger.</div> <div>- Should be no sound and no vibration.</div> <div>- The device keep 'No display' status.</div>
<div> [AOD Jig]</div> <div> [AOD mini]</div>	<div>2. Disassemble the device.</div> <div>- Refer to '<b><u>Disassembly and assembly video guide for Galaxy A04e</u></b>' from the GSPN.</div>
<div> Water indicator tripped</div> <div> USB charging port burnt</div> <div> Cracked case</div>	<div>3. Check the disassembled device for OOW.</div> <div>- Water damage.</div> <div>- Part burnt.</div> <div>(Charging port, PBA, Battery and others)</div> <div>- Broken traces and others.</div>



## 6-1-1. Black Display (L2)

Image	Description
	<p><b>[Attention]</b></p> <p>4. Disconnect Battery Connector at first.</p>
	<p>5. Check the 'PBA &lt;=&gt; Display' connector and connect it again when it connected improperly. After that, connect battery connector again and check the display.</p>
	<p>6. Check the UB C2C connector and connect it again when it connected improperly. After that, connect battery connector again and check the display.</p>
 <div data-bbox="372 1342 639 1413">* Need to change with battery</div>	<p>7. Exchange the display module with new one and check the device.</p>
	<p>8. If not, finally, exchange the PBA with new one and check the device.</p>

# 6-1. Display

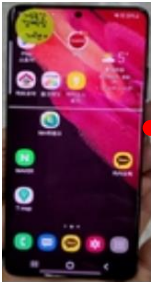
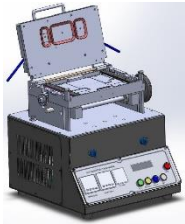
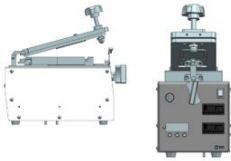

## 6-1-2. Bit defect (Horizontal line) (L2)

- 1) Symptom
- Description : Bit defect(Horizontal line) after power on.



- 2) Defect Decision Conditions
- Description : Even if the screen changes or the device reboots, the bit failure phenomenon remains.

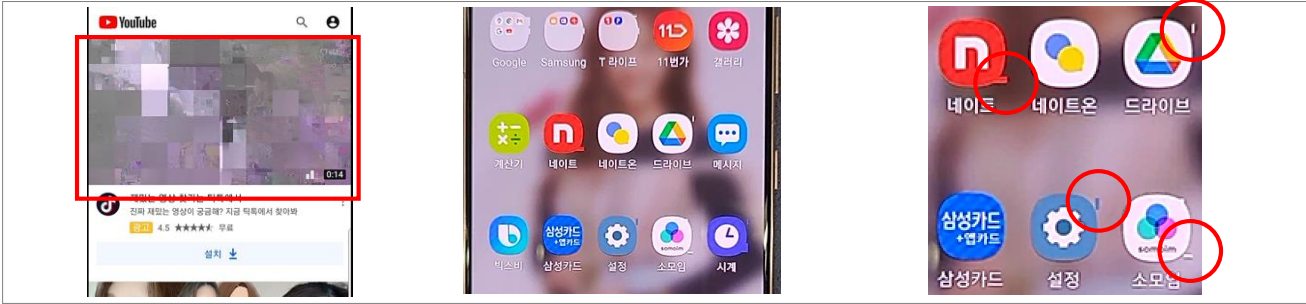
- 3) Repair Guide
- **Caution** : First of all, check if there is any damage of external impact on the device.

Image	Description
 <div>* Checking external damage of the device</div>	1. Check if there is any damage of external impact on the device. (especially, Front Window)
 <div>[AOD Jig]</div>  <div>[AOD mini]</div>	2. Disassemble the device. - Refer to ' <b>Disassembly and assembly video guide for Galaxy A04e</b> ' from the GSPN.
 <div>* Need to change with battery</div>	3. Exchange the <u>display module</u> with new one and check the device.

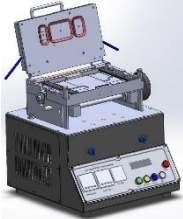
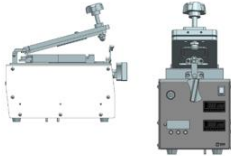



# 6-1. Display

## 6-1-3. Screen overlap / shaking / flicker (L2)

- 1) Symptom
- Description : Screen overlap / shaking / blinking after power on. Temporary symptom or continuous maintenance.

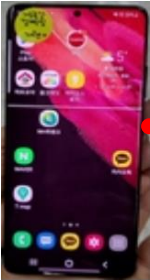





- 2) Defect Decision Conditions
- Description : You can see that symptom when something is changed or something is played on the screen of device. (ex : contents of Youtube[Mosaic Pattern], swap menu block on screen [ICON Crack])
- 3) Repair Guide
- Caution : Disconnect battery connector first when it shows.

Image	Description
<div><p>[AOD Jig]</p></div> <div><p>[AOD mini]</p></div>	<div>1. Disassemble the device.</div> <div>- Refer to '<u>Disassembly and assembly video guide for Galaxy A04e</u>' from the GSPN.</div>
<div><p>* Need to change with battery</p></div>	<div>2. Exchange the display module with new one and check the device.</div>
<div></div>	<div>3. If not, finally, exchange the PBA with new one and check the device.</div>


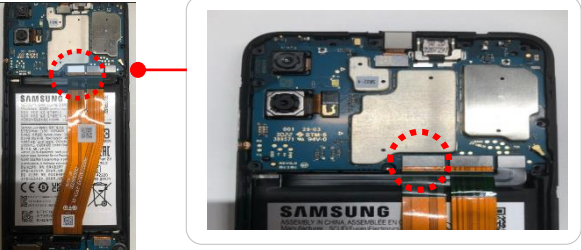


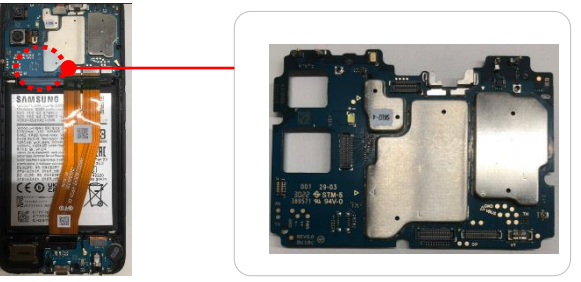
## 6-2-1. Touch Malfunction

- 1) Symptom
- Description : Abnormal touch(Ghost touch), No Touch and others
- 2) Defect Decision Conditions
- Description : Abnormal touch(Ghost touch), No Touch and others
- 3) Repair Guide
- Caution : First of all, check if there is any damage of external impact on the device.

Image	Description
 <div>Checking external damage of the device.</div>	<div>1. Check if there is any damage of external impact on the device. (especially, Front Window)</div>
	<div>2. If possible, Input key string *#2663#, click TSP FW update(General). After that, check the *#0*# tsp test.</div> <div>If the touch test is not work normally, check the next step.</div>
 <div>[AOD Jig]</div> <div>[AOD mini]</div>	<div>3. Disassemble the device.</div> <div>- Refer to '<b><u>Disassembly and assembly video guide for Galaxy A04e</u></b>' from the GSPN.</div>
 <div>* Need to change with battery</div>	<div>4. Exchange the display module. with new one and check the device.</div>



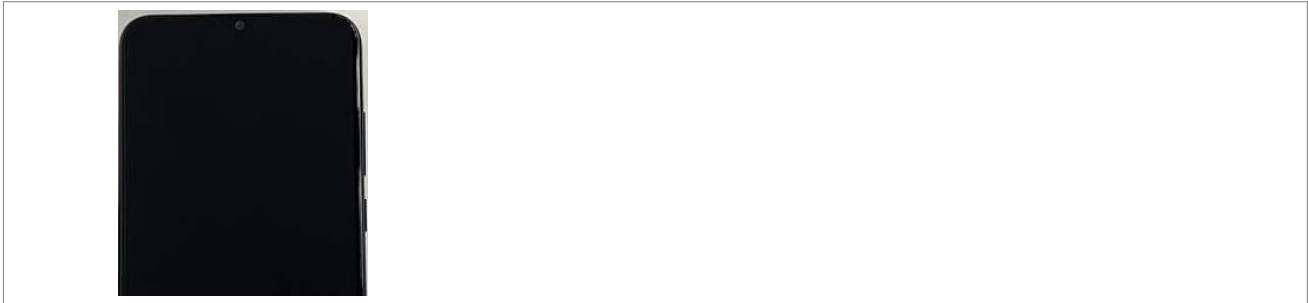
## 6-2-1. Abnormal touch(Ghost touch)

Image	Description
	<p><b>[Attention]</b></p> <p>5. Disconnect Battery Connector (Ref. SOC401) at first.</p>
	<p>6. Check the 'PBA &lt;=&gt; Display' connector and connect it again when it connected improperly. After that, connect battery connector again and check the display.</p>
	<p>7. Check the UB C2C connector and connect it again when it connected improperly. After that, connect battery connector again and check the display.</p>
 <div data-bbox="371 1357 639 1425">* Need to change with battery</div>	<p>8. Exchange the display module. with new one and check the device.</p>
	<p>9. If not, finally, exchange the PBA. with new one and check the device.</p>

# 6-3. Power, Charging

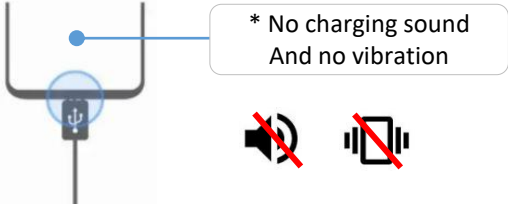
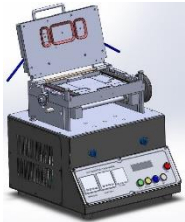
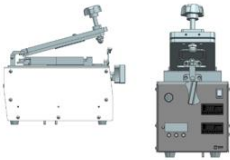



## 6-3-1. No Power

- 1) Symptom
- Description : No display & vibration after press power key.



- 2) Defect Decision Conditions
- Description : The phone no any display & vibration after booting.

- 3) Repair Guide
- **Caution : Disconnect battery connector first when it shows.**

Image	Description
	<div>1. Check the charging notification sound or vibration when connected to charger.</div> <div>- Should be no sound and no vibration.</div> <div>- The device keep 'No Power' status.</div>
<div> [AOD Jig]</div> <div> [AOD mini]</div>	<div>2. Disassemble the device.</div> <div>- Refer to '<b><u>Disassembly and assembly video guide for Galaxy A04e</u></b>' from the GSPN.</div>
<div> Water indicator tripped</div> <div> USB charging port burnt</div> <div> Cracked case</div>	<div>3. Check the disassembled device for OOW.</div> <div>- Water damage.</div> <div>- Part burnt. (Charging port, PBA, Battery and others)</div> <div>- Broken traces and others.</div>

# 6-3. Power, Charging

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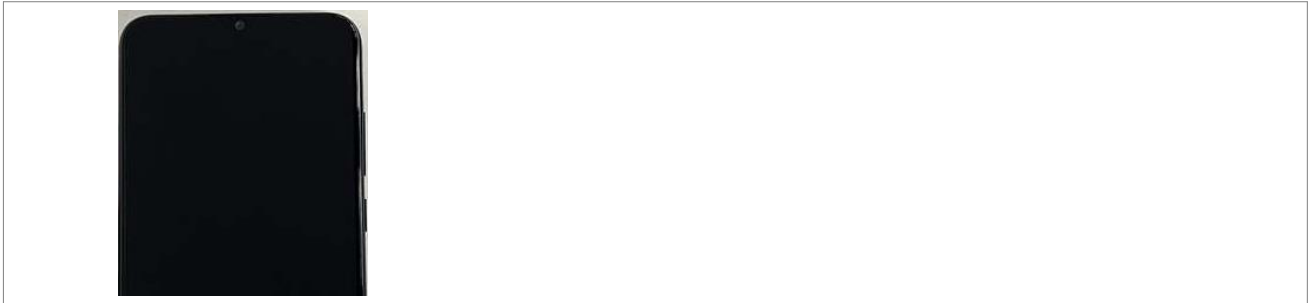
## 6-3-1. No Power (L2)

Image	Description
	1. Check battery voltage(Ref. C7160) at first. (It's normal over 3.5v) If battery voltage is under 3.5v, charge the phone with charger.
	2. Check the 'PBA ↔ Battery' connector(SOC11003) and connect it again when it connected improperly. After that, check to turn on the phone.
	3. Check the 'PBA ↔ FPCB' for dirt(SOC11000) and clean it up when it's dirty. After that, check to turn on the phone.
	4. Check the 'PBA ↔ LCD' connector(SOC12002) and connect it again when it connected improperly. After that, check to turn on the phone.
	5. Exchange the Front Assy. with new one and check the device.
	6. If not, finally, exchange the <u>PBA</u> . with new one and check the device.

# 6-3. Power, Charging

## 6-3-2. Reboot during Power on

- 1) Symptom
  - Description : reboot during power on




- 2) Defect Decision Conditions
  - Description : The phone is rebooting during power on.

- 3) Repair Guide
  - **Caution : Disconnect battery connector first when it shows.**

Image	Description
	1. Check power on current with Power Supply and ANYWAY JIG.
	1-1. Push down Anyway Jig switch 7,8 1-2. Power supply set to 4.4v 1-3. During booting, check current.
	2. If current is under 4A, check the battery connector connection and battery condition.

# 6-3. Power, Charging

## 6-3-2. Reboot during Power on

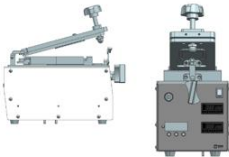
Image	Description
	<p>3. If not, replace PBA.</p>

# 6-3. Power, Charging

## 6-3-3. Sudden Discharge in the idle state (L2)

- 1) Symptom
- Description : Battery level decreases rapidly in the idle state.
- 2) Defect Decision Conditions
- Description : Battery level decreases rapidly in the idle state by abnormal current consumption.

### 3) Repair Guide

Image	Description
	<div>1. Check Power-off leakage current.</div> <div>1-1. Push down Anyway Jig switch 6,7,8</div> <div>1-2. Check Power-off leakage current.</div>
	<div>2-1. Check sleep current.</div> <div>. Push down Anyway Jig switch 7,8</div> <div>. After booting, Check sleep current.</div> <div>2-2. Check <math>-1\text{mA} \leq \text{Power-off leakage} \leq 2\text{mA}</math></div> <div>2-3. Check sleep current <math>\leq 13.5\text{mA}</math></div>
<div> [AOD Jig]</div> <div> [AOD mini]</div>	<div>3-1 If there is Power-off leakage problem.</div> <div>3-2. Disassemble the device.</div> <div>- Refer to '<b><u>Disassembly and assembly video guide for Galaxy A04e</u></b>' from the GSPN.</div>




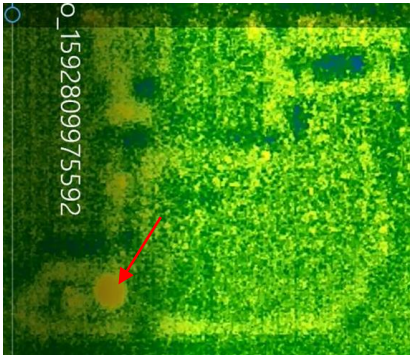

# 6-3. Power, Charging

## 6-3-3. Sudden Discharge in the idle state (L2)

Image	Description
	<p>4-1. If there is a thermal camera, check if there is a hot part and replace the hot part.</p> <p>4-2. If there isn't a thermal camera OR you can't find a hot part, detach the following parts one by one and recheck the leakage current. (Camera module, VT CAM, Sub FPCB &amp; UB FPCB, B to B connector)</p> <p>4-3. If leakage current goes down by detaching the part, replace the detached part by normal one.</p>
	<p>5. If leakage current doesn't go down OR the hot part can't be replaced, replace the PBA.</p>

# 6-3. Power, Charging

## 6-3-3. Sudden Discharge in the idle state

Image	Description
	6-1. If there is a thermal camera, check if there is a hot part on PCB in the idle state and replace the hot part.
	(Thermal camera sample image) Search where the hotspot appears.
	6-2. If there isn't a thermal camera OR you can't find a hot part OR the hot part can't be replaced, replace the PBA.



# 6-3. Power, Charging

## 6-3-5. No charging (Wire charging)

No charging Condition

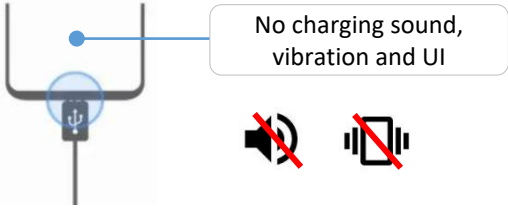
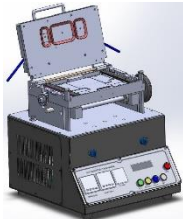
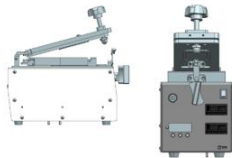
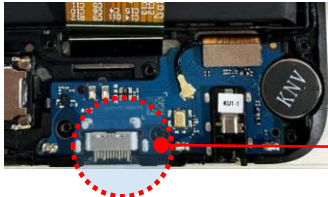
cf. Normal Condition

58%

Super fast charging 2.0  
30 min until full

- 2) Defect Decision Conditions
- Description : No charging notification sound, vibration and UI when inserted TA.


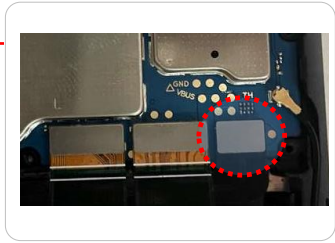
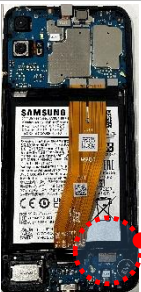




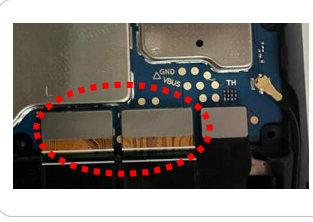


- 3) Repair Guide
- **Caution : Disconnect battery connector first when it shows.**

Image	Description
	<div>1. Check the charging notification sound or vibration when connected to charger.</div> <ul style="list-style-type: none"><li>- Should be no sound, no vibration and no UI.</li><li>- Save the log and analyze it.</li></ul>
<div> [AOD Jig]</div> <div> [AOD mini]</div>	<div>2. Disassemble the device.</div> <ul style="list-style-type: none"><li>- Refer to '<b>Disassembly and assembly video guide for Galaxy A04e</b>' from the GSPN.</li></ul>
<div></div>	<div>3. Check the disassembled device for OOW.</div> <ul style="list-style-type: none"><li>- Water damage.</li><li>- Part burnt. (Charging port, PBA, Battery and others)</li><li>- Damaged USB port pin.</li><li>- Broken traces and others.</li></ul>

# 6-3. Power, Charging


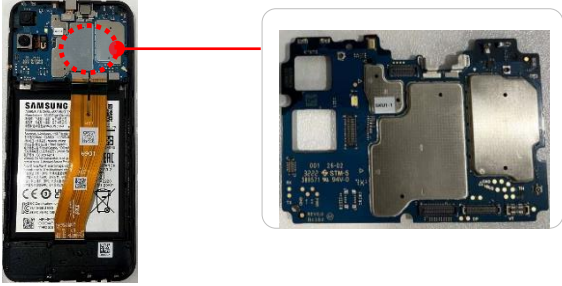
CONFIDENTIAL

## 6-3-5. No charging (Wire charging)

Image	Description
 	<p><b>[Attention]</b></p> <p>4. Disconnect Battery Connector at first.</p>
 	<p>5. Check the 'IF SUB PBA ↔ C2C connector' and connect it again when it connected improperly. After that, connect battery connector again and check wire charging when inserted TA.</p>
 	<p><b>[Attention]</b></p> <p>6. Disconnect Battery Connector at first.</p>
 	<p>7. Check the 'MAIN PBA ↔ C2C connector' and connect it again when it connected improperly. After that, connect battery connector again and check wire charging when inserted TA.</p>
 	<p>8. Exchange the IF SUB PBA with new one and check the device.</p>

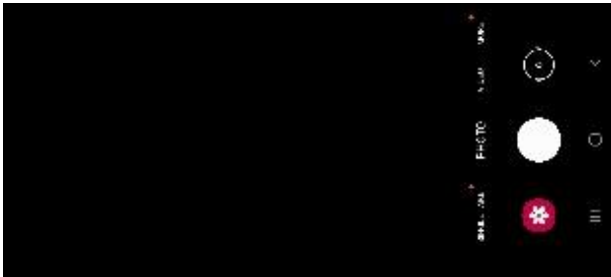
# 6-3. Power, Charging

## 6-3-5. No charging (Wire charging)

Image		Description
		9. If not, exchange the lcd with C2C connector with new one and check the device.
		13. If the device is not working normally after replacing the 'capacitors' and 'Charger IC', replace the MAIN PBA

## 6-4-1. Entry Fail(Front Camera)

- 1) Symptom
- Description : Black display and can't turn on the front camera

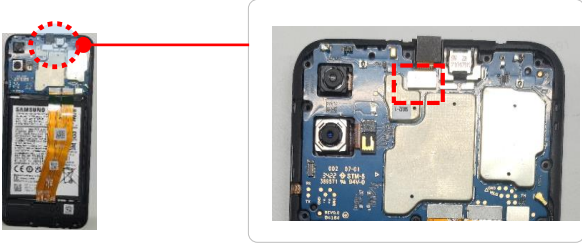
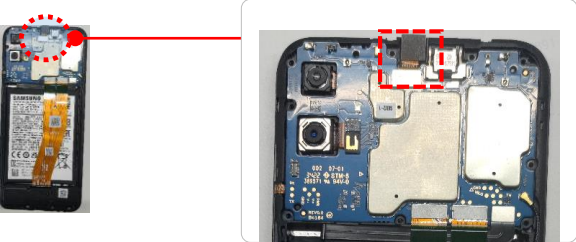
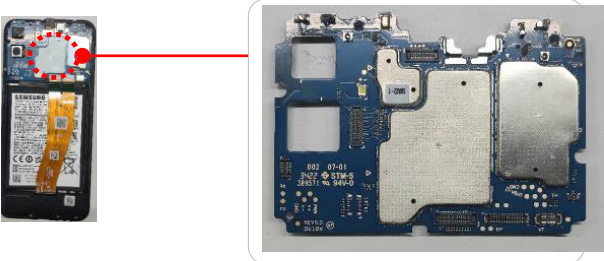


- 2) Defect Decision Conditions
- Description : Black display instead of preview image or return to home screen

- 3) Repair Guide
- Caution : Disconnect battery connector first when it shows.

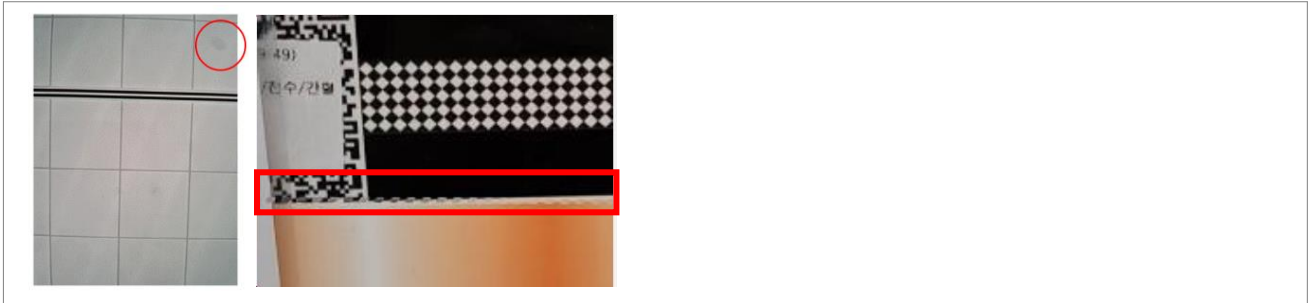
Image		Description
		1. Execute Front Cam test of <b>*##88#*##</b> .
		2. Disassemble the device. - Refer to ' <b>Disassembly and assembly video guide for Galaxy A04e</b> ' from the GSPN.
		<b>[Attention]</b> 3. Disconnect Battery Connector (SOC11003) at first.

## 6-4-1. Entry Fail(Front Camera)

Image	Description
	4. Check if the connector is disengaged at first.
	5. If connector is okay, replace the camera module with new one and check the device. (SOC9003)
	6. If not, finally, exchange the PBA.

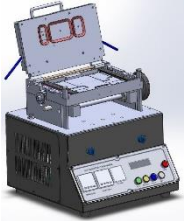
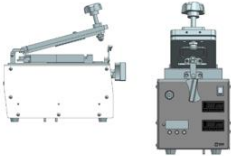

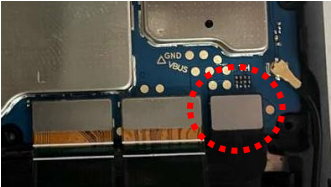
## 6-4-2. Abnormal Preview(Front Camera)

- 1) Symptom
- Description : Abnormal display of front camera

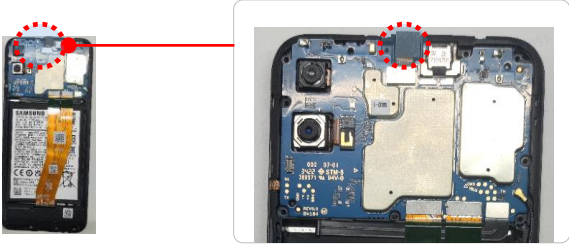


- 2) Defect Decision Conditions
- Description : Blemishes or dots on image

- 3) Repair Guide
- Caution : Disconnect battery connector first when it shows.

Image	Description
	<div>1. Check the camera hole.</div> <div>- Should be clean and no particle.</div>
<div> [AOD Jig]</div> <div> [AOD mini]</div>	<div>2. Disassemble the device.</div> <div>- Refer to '<b><u>Disassembly and assembly video guide for Galaxy A04e</u></b>' from the GSPN.</div>
<div></div> <div></div>	<div>[Attention]</div> <div>3. Disconnect Battery Connector (SOC11003) at first.</div>

## 6-4-2. Abnormal Preview(Front Camera)

Image	Description
	<p>4. Replace the camera module with new one and check the device. (SOC9003)</p>



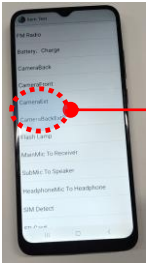
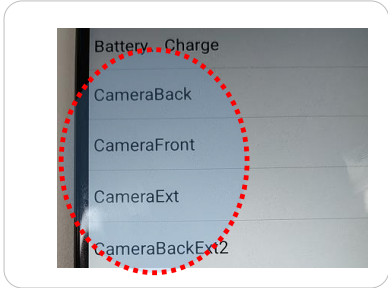
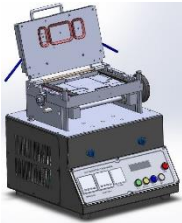
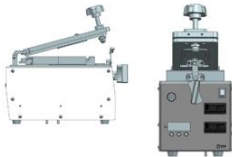

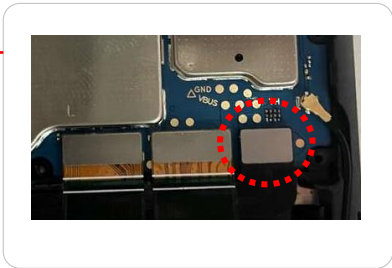
## 6-4-3. Abnormal Preview(Front Camera)

- 1) Symptom
- Description : Black display and can't turn on the rear camera



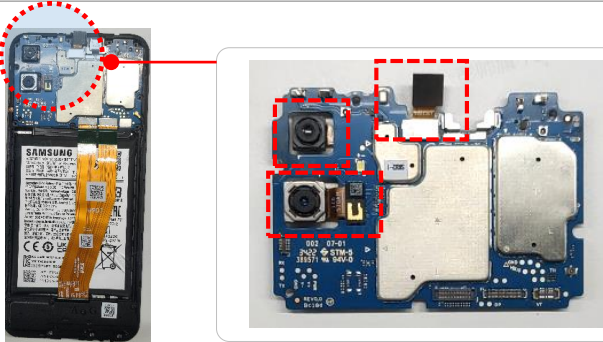
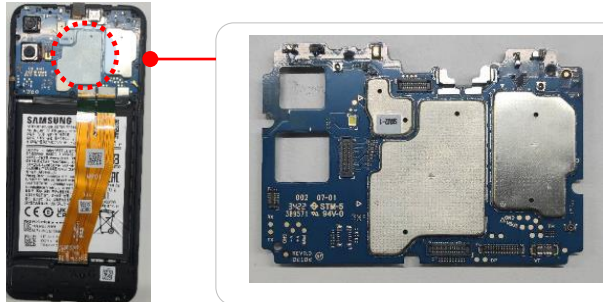
- 2) Defect Decision Conditions
- Description : Black display instead of preview image or return to home screen

- 3) Repair Guide
- **Caution : Disconnect battery connector first when it shows.**

Image		Description
		<p>1. Execute cam test of *##88##*.to figure out which camera has defect.</p> <ul style="list-style-type: none"><li>- Camera back : rear camera</li><li>- Camera Front : Front camera</li><li>- Camera backext : Depth camera</li></ul>
 <p>[AOD Jig]</p>	 <p>[AOD mini]</p>	<p>2. Disassemble the device.</p> <ul style="list-style-type: none"><li>- Refer to '<b><u>Disassembly and assembly video guide for Galaxy A04e</u></b>' from the GSPN.</li></ul>
		<p><b>[Attention]</b></p> <p>3. Disconnect Battery Connector (SOC11003) at first.</p>



6-4-3. Abnormal Preview(Front Camera)

Image	Description
	<p>4. Check if the connector is disengaged at first.</p> <p>If connector is okay, replace the camera module with new one and check the device.</p> <ul style="list-style-type: none"><li>- upper : Front camera</li><li>- middle : Depth camera</li><li>- lower : rear camera</li></ul>
	<p>5. If not, finally, exchange the PBA.</p>

6-4-4. Abnormal AF(Rear Camera)

- 1) Symptom
  - Description : Out of focus for rear camera


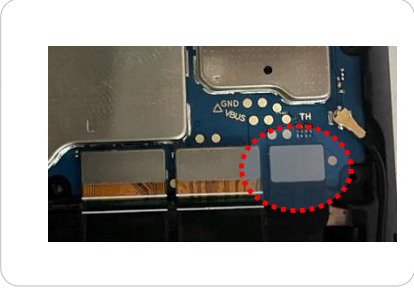

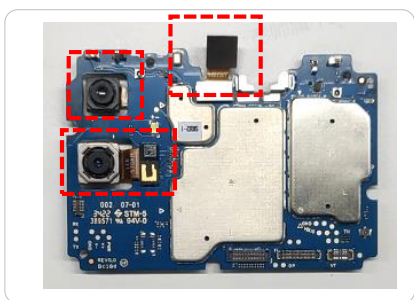

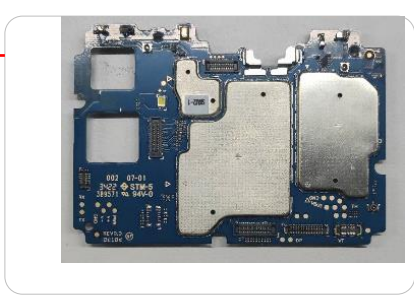


- 2) Defect Decision Conditions
  - Description : The image of rear camera is out of focus.

- 3) Repair Guide
  - **Caution : Disconnect battery connector first when it shows.**

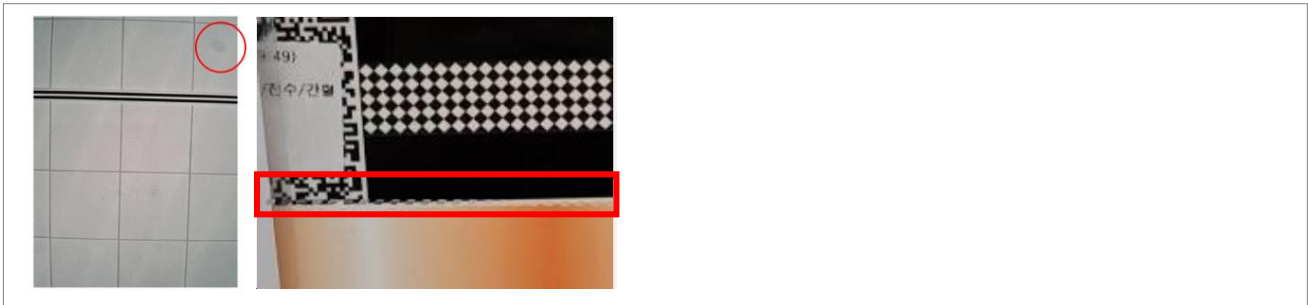
Image	Description
	<div>1. Check the camera deco glass.<ul style="list-style-type: none"><li>- Should be clean and no particle.</li></ul></div>
<div></div>	<div>2. Execute cam test of *##88##*.to figure out which camera has defect.<ul style="list-style-type: none"><li>- Camera back : rear camera</li><li>- Camera Front : Front camera</li><li>- Camera backext : Depth camera</li></ul></div>
<div><p>[AOD Jig]</p><p>[AOD mini]</p></div>	<div>3. Disassemble the device.<ul style="list-style-type: none"><li>- Refer to '<b><u>Disassembly and assembly video guide for Galaxy A04e</u></b>' from the GSPN.</li></ul></div>

6-4-4. Abnormal AF(Rear Camera)

Image		Description
		<div><b>[Attention]</b></div> <div>4. Disconnect Battery Connector (SOC11003) at first.</div>
		<div>5. Replace the camera module with new one and check the device.</div> <div><div>- upper : Front camera</div><div>- middle : Depth camera</div><div>- lower : rear camera</div></div>
		<div>6. If the device is not working normally with new resistors, exchange the PBA.</div>

## 6-4-5. Abnormal Preview(Rear Camera)

- 1) Symptom
- Description : Abnormal display of rear camera

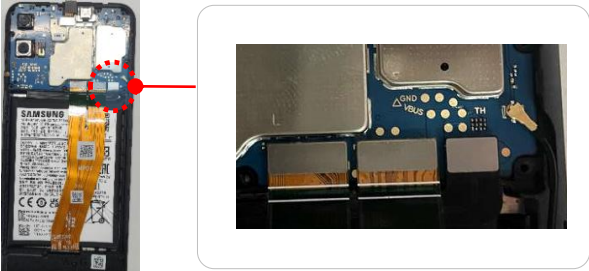
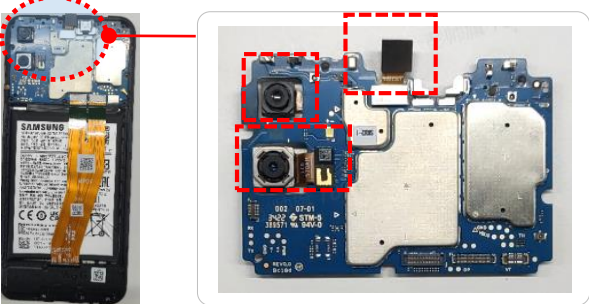


- 2) Defect Decision Conditions
- Description : Blemishes or dots on image

- 3) Repair Guide
- Caution : Disconnect battery connector first when it shows.

Image	Description
	<div>1. Check the camera deco glass and lens.</div> <div>- Should be clean and no particle.</div>
<div></div>	<div>2. Execute cam test of *#0*# to figure out which camera has defect.</div> <div>- Camera back : rear camera</div> <div>- Camera Front : Front camera</div> <div>- Camera backext : Depth camera</div>
<div><div>[AOD Jig]</div></div> <div><div>[AOD mini]</div></div>	<div>3. Disassemble the device.</div> <div>- Refer to '<u>Disassembly and assembly video guide for Galaxy A04e</u>' from the GSPN.</div>



6-4-5. Abnormal Preview(Rear Camera)

Image		Description
		<p><b>[Attention]</b></p> <p>4. Disconnect Battery Connector (SOC11003) at first.</p>
		<p>5. Replace the camera module with new one and check the device.</p> <ul style="list-style-type: none"><li>- upper : Front camera</li><li>- middle : Depth camera</li><li>- lower : rear camera</li></ul>

## 6-5-1. SPK sound abnormal



- 1) Symptom
- Description : SPK sound is abnormal ( low、 zizi noise、 mute .etc )
- 2) Defect Decision Conditions
- Description : The phone sounds abnormally

- 3) Repair Guide
- **Caution : Shut down device before exchanging the material**

Image	Description
	1. Execute (*#*#88#*#*) on dial-board to enter engineering mode
	2.Click “Main Speaker” to reproduce NG item or check SPK function.  -For further confirm ,please do following step s including cosmetic checking and swap module verification



6-5-1. SPK sound abnormal

Image	Description
<div></div> <div><p>SPK Hole Cosmetic</p><p>SPK foam</p></div>	<p>3.Checking SPK hole Cosmetic: nothing is abnormal(without damage and residual material .etc) If it is ok,please disassemble device,and check SPK foam whether is ok. If all are OK, please reassemble to check.</p> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>
<div></div> <div><p>SPK back cavity sealing box</p></div>	<p>4.If step 3 is ok.then you need to check cosmetic of SPK back cavity sealing box , to confirm whether it is ok. If ok,you need further reassemble them.</p> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>
<div></div> <div><p>SUB PB</p></div>	<p>5. Check KB Cosmetic and connector,if it is OK .please reassemble KB, If still OK, you need exchange a new KB to double check</p> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>

6-5-1. SPK sound abnormal

Image	Description
	<p>6. Separate B shell from MB, check MB cosmetic. If it is OK, need to further check connector. If above checking points all OK, please reassemble MB, if still OK, you need exchange a new MB to double check.</p> <p>-For every checking item, that need to be verified whether device is working properly. If verify is OK, please continue next step.</p>
	<p>7. Check SPK Cosmetic, if it is OK. Please reassemble SPK component, if still OK, you need exchange a new SPK to double check.</p> <p>-For every checking item, that need to be verified whether device is working properly. If verify is OK, please continue next step.</p>
	<p>8. If above checking points all are OK, you need check FPC (that is connected to screen). If cosmetic is OK, need to exchange a new FPC, then do further verification.</p> <p>-For every checking item, that need to be verified whether device is working properly.</p>



## 6-5-2. Earphone sound abnormal (TX&RX)

1) Symptom


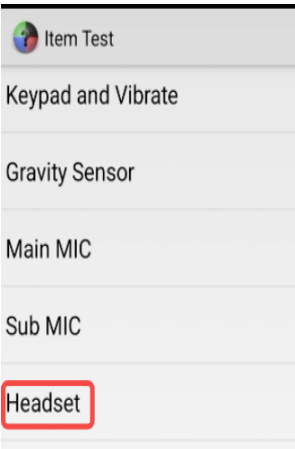
- Description : Earphone sound is abnormal (low、zizi noise、mute .etc)

2) Defect Decision Conditions

- Description : The phone sounds abnormally

3) Repair Guide

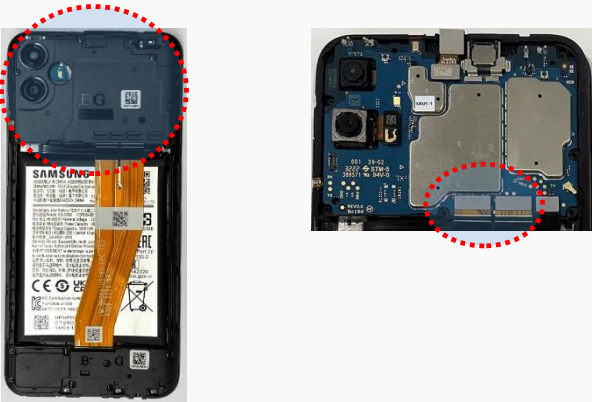

- **Caution : Shut down device before exchanging the material**

Image	Description
	1. Execute (*#*#88#*#*) on dial-board to enter engineering mode
	2.Click “Headset” to reproduce NG item or check Headset function. -For further confirm ,please do following steps including cosmetic checking and swap module verification

## 6-5-2. Earphone sound abnormal (TX&RX)

Image	Description
<div><p>Earphone plugin/out Hole</p><p>Earphone socket</p></div>	<p>3.Checking EP plugin/out hole Cosmetic: nothing is abnormal(without damage and residual material .etc) If it is ok,please disassemble device,and check EP socket whether is ok If OK, please reassemble to check.</p> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>
<div></div>	<p>4. Check KB Cosmetic and connector,if it is OK .please reassemble KB,if still OK,you need exchange a new KB to double check</p> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>

6-5-2. Earphone sound abnormal (TX&RX)

Image	Description
	<p>5. Separate B shell from MB, check MB cosmetic. If it is OK, need to further check connector. If above checking points all OK, please reassemble MB, if still OK, you need exchange a new MB to double check.</p> <p>-For every checking item, that need to be verified whether device is working properly. If verify is OK, please continue next step.</p>
	<p>6. If above checking points all are OK, you need check FPC (that is connected to screen). If cosmetic is OK, need to exchange a new FPC, then do further verification.</p> <p>-For every checking item, that need to be verified whether device is working properly.</p>

## 6-5-3. RCV sound abnormal

### 1) Symptom



- Description : RCV sound is abnormal ( low、 zizi noise、 mute .etc )

### 2) Defect Decision Conditions

- Description : The phone sounds abnormally

### 3) Repair Guide

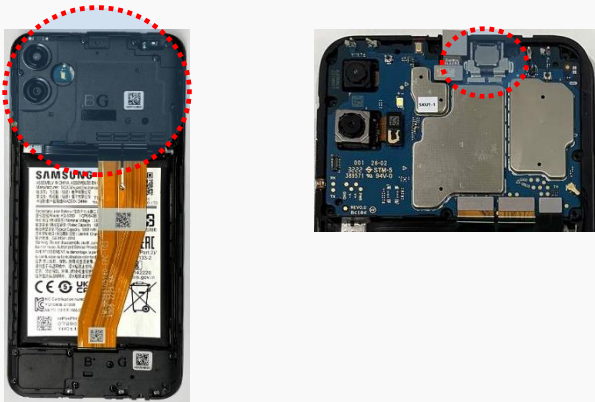


- **Caution : Shut down device before exchanging the material**

Image	Description
	1. Execute (*##88#*##*) on dial-board to enter engineering mode
	2.Click “Receiver” to reproduce NG item or check RCV function. -For further confirm ,please do following steps including cosmetic checking and swap module verification

6-5-3. RCV sound abnormal

Image	Description
<div></div> <div>RCV Deco</div>	<p>3.Checking RCV hole Cosmetic: nothing is abnormal(without damage and residual material .etc)</p> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>
<div></div> <div>SUB PBA</div> <div></div> <div>Connector</div>	<p>4. Check KB Cosmetic and connector,if it is OK .please reassemble KB,if still OK,you need exchange a new KB to double check</p> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>


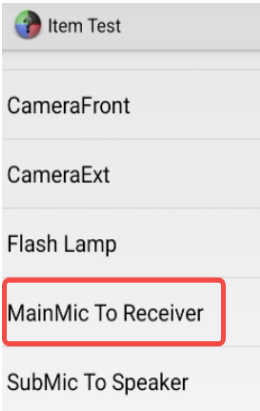
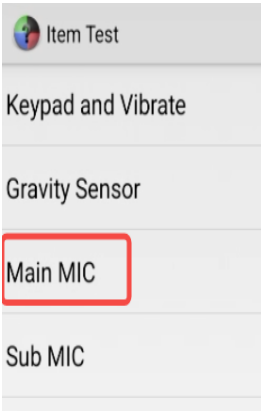
6-5-3. RCV sound abnormal

Image	Description
	<p>5. Separate B shell from MB, check MB cosmetic、connector、RCV magnet steel&amp;spring steel.If above checking points all OK, please reassemble MB,if still OK,you need exchange a new MB to double check.</p> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>
	<p>6.After separating MB,check RCV Component whether it is damaged or poor connect with MB.If all are OK, please reassemble RCV,if still OK,you need exchange a new RCV to double check.</p> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>
	<p>7.If above checking points all are OK,you need check FPC(that is connected to screen).if cosmetic is ok ,need to exchange a new FPC ,then do further verification.</p> <p>-For every checking item,that need to be verified whether device is working properly.</p>



## 6-5-4. Bottom MIC sound abnormal

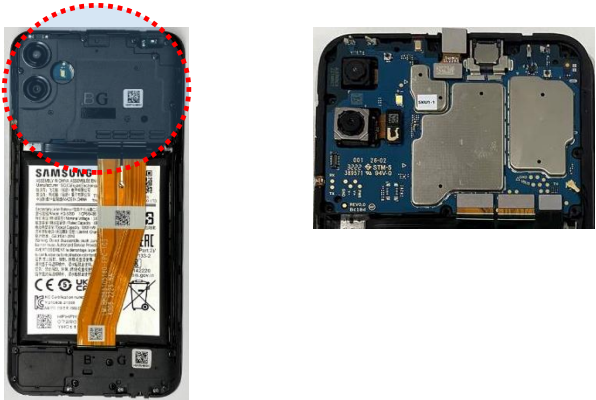

- 1) Symptom
  - Description : Bottom MIC sound is abnormal ( low、 zizi noise、 mute .etc )
- 2) Defect Decision Conditions
  - Description : The phone sounds abnormally
- 3) Repair Guide
  - **Caution : Shut down device before exchanging the material**

Image	Description
	1. Execute (*##88#*##*) on dial-board to enter engineering mode
<div></div>	<div>2.Click “Main MIC”&amp;”MainMic To Receiver” to reproduce NG item or check Bottom MIC function.</div> <div>-Note:when checking “MainMic To Receiver”,need to guarantee RCV is OK.</div> <div>-For further confirm ,please do following step s including cosmetic checking and swap module verification</div>

6-5-4. Bottom MIC sound abnormal


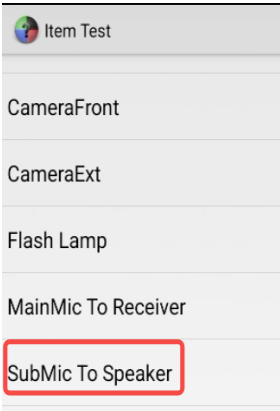
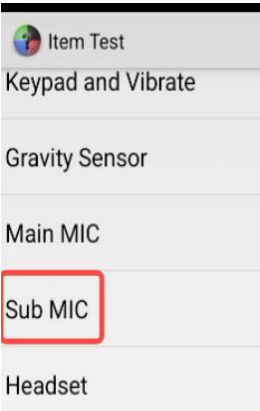
Image	Description
<div><p>Bottom MIC Hole</p><p>Sealing Rubber</p></div>	<p>3.Checking Bottom MIC hole Cosmetic: nothing is abnormal(without damage and residual material .etc)</p> <p>If it is ok,please disassemble device,and check Sealing Rubber,whether is ok.if all are ok,please reassemble to check performance.if their cosmetic is bad,please exchange new material,then reassemble to check.</p> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>
<div></div>	<p>4. Check KB Cosmetic especially MIC and connector.meanwhile disassemble KB to check MIC foam .</p> <p>-1、 if all are OK ,please reassemble KB,</p> <p>-2、 if foam is damaged, need to exchange new foam , then reassemble to check</p> <p>-3、 if above verifications still OK,you need exchange a new KB to double check</p> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>

6-5-4. Bottom MIC sound abnormal

Image	Description
	<p>5. Separate B shell from MB, check MB cosmetic&amp;connector.If above checking points all OK, please reassemble MB,if still OK,you need exchange a new MB to double check.</p> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>
	<p>6.If above checking points all are OK,you need check FPC(that is connected to screen).if cosmetic is ok ,need to exchange a new FPC ,then do further verification.</p> <p>-For every checking item,that need to be verified whether device is working properly.</p>

## 6-5-5. Top MIC sound abnormal



- 1) Symptom
  - Description : Bottom MIC sound is abnormal ( low、 zizi noise、 mute .etc )
- 2) Defect Decision Conditions
  - Description : The phone sounds abnormally
- 3) Repair Guide
  - **Caution : Shut down device before exchanging the material**

Image	Description
	1. Execute (*#*#88#*#*) on dial-board to enter engineering mode
<div></div>	<div>2.Click “Sub MIC”&amp;”SubMic To Speaker” to reproduce NG item or check Top MIC function.</div> <div>-Note:when checking “SubMic To Speaker”,need to guarantee SPK is OK.</div> <div>-For further confirm ,please do following step s including cosmetic checking and swap module verification</div>

6-5-5. Top MIC sound abnormal

Image	Description
<div><p>Top MIC Hole</p><p>Sealing Rubber</p></div>	<p>3.Checking Top MIC hole Cosmetic: nothing is abnormal(without damage and residual material .etc)</p> <p>If it is ok,please disassemble device,and check Sealing Rubber,whether is ok.if all are ok,please reassemble to check performance.if their cosmetic is bad,please exchange new material,then reassemble to check.</p> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>
<div><p>(SUB MIC)</p><p>Foam</p></div>	<p>4. Separate B shell from MB,check MB Cosmetic especially MIC and connector.meanw hile disassemble MB to check MIC foam .</p> <ul style="list-style-type: none"><li>-1、 if all are OK ,please reassemble MB,</li><li>-2、 if foam is damaged , need to exchange ne w foam , then reassemble to check</li><li>-3、 if above verifications still OK,you need exchange a new MB to double check</li></ul> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>

6-5-5. Top MIC sound abnormal

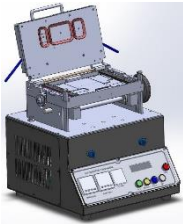
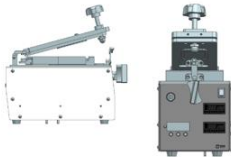

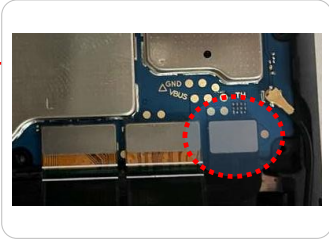


Image	Description
<div><p>SUB PBA</p></div>	<p>5. Check KB Cosmetic and connector,if it is OK .please reassemble KB,if still OK,you need exchange a new KB to double check</p> <p>-For every checking item,that need to be verified whether device is working properly.if verify is ok,please continue next step.</p>
<div><p>Connector</p></div>	<p>6.If above checking points all are OK,you need check FPC(that is connected to screen).if cosmetic is ok ,need to exchange a new FPC ,then do further verification.</p> <p>-For every checking item,that need to be verified whether device is working properly.</p>





## 6-6-1. Sensors and Sensor Hub Problem

- 1) Symptom
- Description : Any or all Sensors do not work. (6Axis, Magnetic, Barometer, Proximity/Ambient Light)
- 2) Defect Decision Conditions
- Description : No response.
- 3) Repair Guide
- Caution : Disconnect battery connector first when it shows.

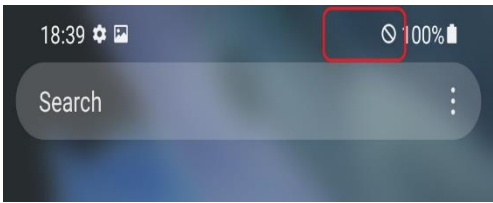
Image	Description
<div><p>[AOD Jig]</p></div> <div><p>[AOD mini]</p></div>	<div>1. Disassemble the device.</div> <div>- Refer to '<b><u>Disassembly and assembly video guide for Galaxy A04e</u></b>' from the GSPN.</div>
<div></div> <div></div>	<div>[Attention]</div> <div>2. Disconnect Battery Connector (SOC11003) at first.</div>
<div></div> <div></div>	<div>3. Exchange the PBA with new one and check the device.</div>

# 6-7. Connectivity (Wi-Fi, GPS)

## 6-7-1. Wi-Fi Connection Problem

### 1) Symptom

- Description : Wi-Fi Connection Problem after Wi-Fi On.  
No Connection to AP or frequent disconnection

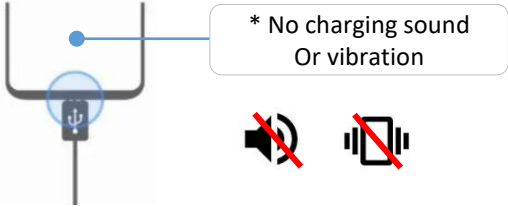
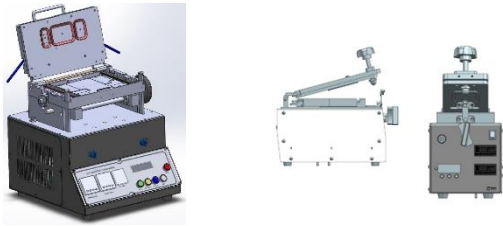
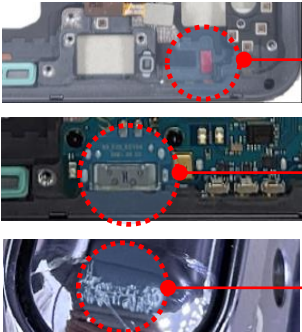


### 2) Defect Decision Conditions

- The phone shows Wi-Fi on without problem after rebooting.  
But It won't connect to AP or will be disconnected automatically after connection.  
Also, It shows weak Wi-Fi signal bar than normal device.
- Setting > Wi-Fi > SCAN : Number of APs is less than normal device when searching AP

### 3) Repair Guide


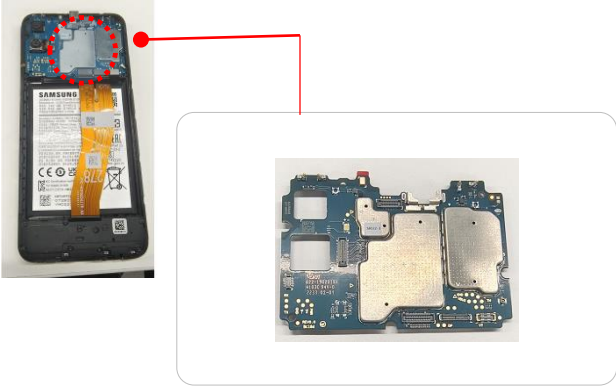
- **Caution : Disconnect battery connector first when it shows.**

Image	Description
	<p>1. Check the charging notification sound or vibration when connected to charger.</p> <ul style="list-style-type: none"><li>- Should be no sound and no vibration.</li><li>- The device keep 'No display' status.</li></ul>
 <div>[AOD Jig] [AOD mini]</div>	<p>2. Disassemble the device.</p> <ul style="list-style-type: none"><li>- Refer to '<b><u>Disassembly and assembly video guide for Galaxy A04e</u></b>' from the GSPN.</li></ul>
 <div>Water indicator tripped</div> <div>USB charging port burnt</div> <div>Cracked case</div>	<p>3. Check the disassembled device for OOW.</p> <ul style="list-style-type: none"><li>- Water damage.</li><li>- Part burnt. (Charging port, PBA, Battery and others)</li><li>- Broken traces and others.</li></ul>

# 6-7. Connectivity (Wi-Fi, GPS)

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## 6-7-1. Wi-Fi Connection Problem

Image	Description
	<div>1. Check Wi-Fi Function On</div> <div>- Enable Wi-Fi function</div> <div>- If it is ok, turn off the phone</div>
	<div>2. Check the back cover</div> <div>- If there is a magnetic on the back cover, remove it</div>
	<div>3-1 . Replace the PBA</div>

# 6-7. Connectivity (Wi-Fi, GPS)

## 6-7-2. GPS Problem

### 1) Symptom

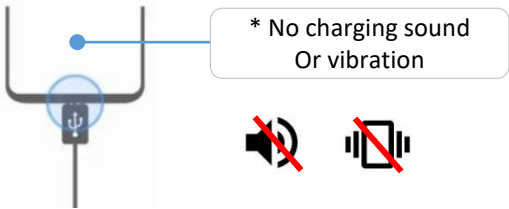
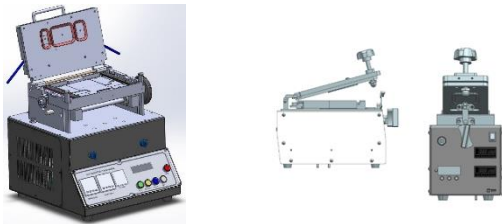
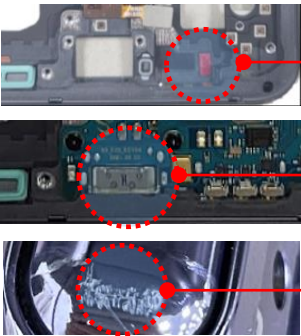
- Description : Received GPS signal problem after GPS On.

### 2) Defect Decision Conditions

- The phone shows GPS on without problem after rebooting.  
But It won't receive GPS signal after GPS On.  
Also, it shows weak performance than normal device while driving or using map

### 3) Repair Guide

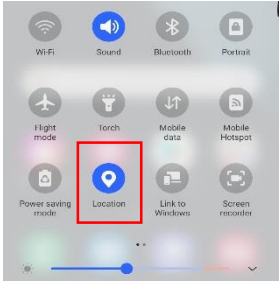
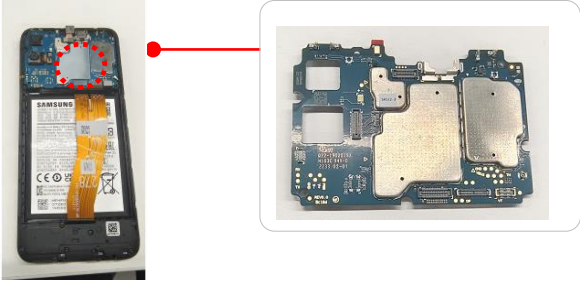
- **Caution : Disconnect battery connector first when it shows.**

Image	Description
	<p>1. Check the charging notification sound or vibration when connected to charger.</p> <ul style="list-style-type: none"><li>- Should be no sound and no vibration.</li><li>- The device keep 'No display' status.</li></ul>
 <p>[AOD Jig]                      [AOD mini]</p>	<p>2. Disassemble the device.</p> <ul style="list-style-type: none"><li>- Refer to '<b><u>Disassembly and assembly video guide for Galaxy A04e</u></b>' from the GSPN.</li></ul>
 <p>Water indicator tripped</p> <p>USB charging port burnt</p> <p>Cracked case</p>	<p>3. Check the disassembled device for OOW.</p> <ul style="list-style-type: none"><li>- Water damage.</li><li>- Part burnt. (Charging port, PBA, Battery and others)</li><li>- Broken traces and others.</li></ul>

# 6-7. Connectivity (Wi-Fi, GPS)

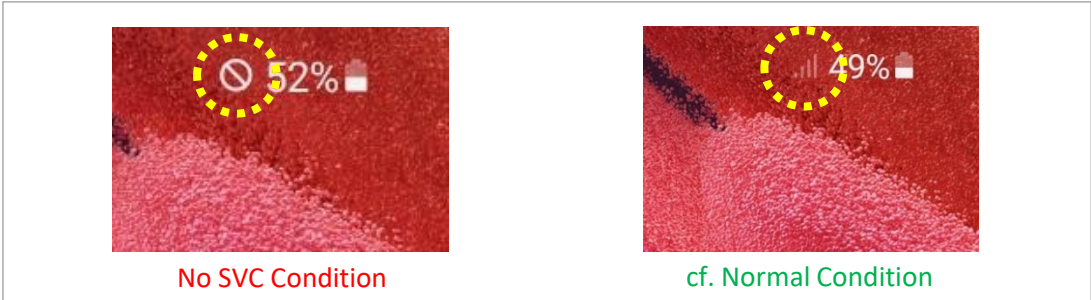
CONFIDENTIAL

## 6-7-2. GPS Problem

Image	Description
	1-1. Check GPS is working properly - Setting - enable GPS function
	1-2. If not, replace the PBA

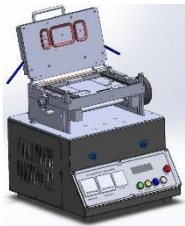
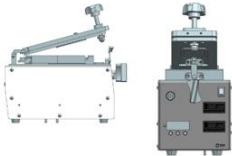


6-8-1. NO SVC

- 1) Symptom
- Description : A prohibition mark shows on the right of the status bar instead of the antenna bars.



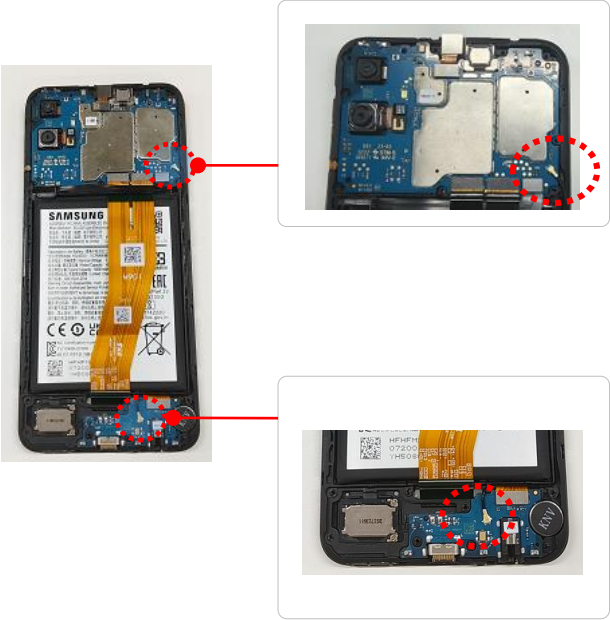
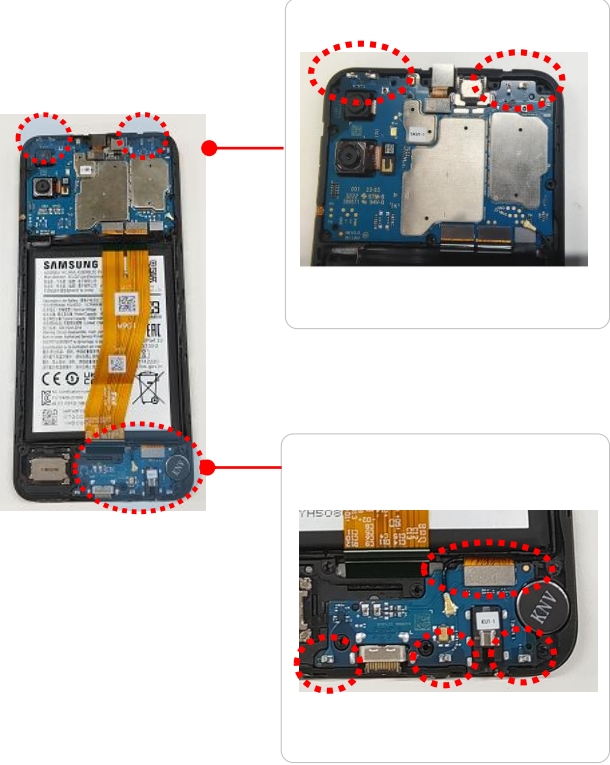
- 2) Defect Decision Conditions
- The phone continues to show this prohibition mark after rebooting or turning on and off airplane mode.
- Other phones around the phone maintain the normal condition.

- 3) Repair Guide
- **Caution : Disconnect battery connector first when it shows.**

Image	Description
<div><p>[AOD Jig]</p><p>[AOD mini]</p></div>	<div>1. Disassemble the device.</div> <div>- Refer to '<u>Disassembly and assembly video guide for Galaxy A04e</u>' from the GSPN.</div>
<div></div>	<div>[Attention]</div> <div>2. Disconnect Battery Connector at first.</div>



6-8-1. NO SVC

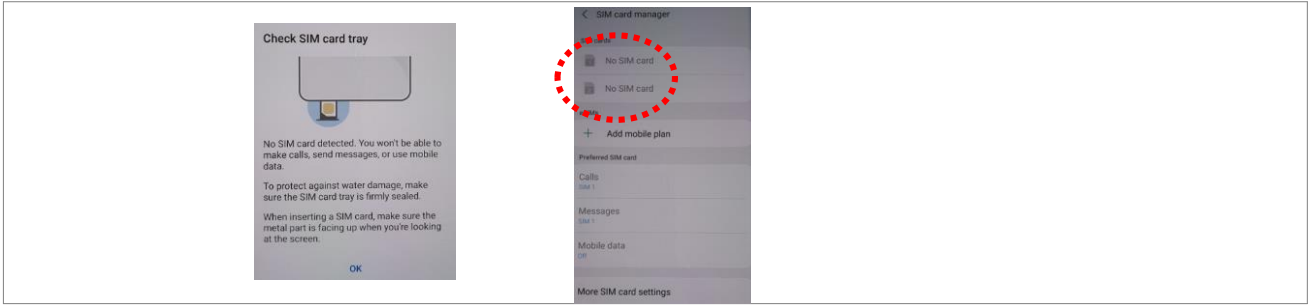
Image	Description
	<p>3. Check Antenna FPCB connectors are OK.</p> <p>Also, check FPCB condition.</p> <ul style="list-style-type: none"><li>- Broken traces and others.</li><li>- Little particles or dust which can disturb connections.</li></ul>
	<p>4. Check Antenna C-clip is damaged.</p> <p>Also, check antenna contact points.</p>

6-8-1. NO SVC

Image	Description
	6-1. Check whether the SIM card slot of the mobile phone is properly inserted.
	6-2. If not, exchange the <u>SUB PBA</u> with new one and check the device
	7. Check the soldering status of RF chips and other electronic components on the PBA, and resolder it if the soldering status is not ok. After that, check the device is working normally.  If not, exchange the PBA.

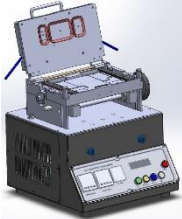
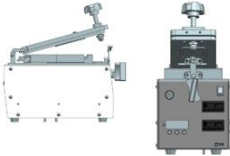


6-9-1. Abnormal USIM

- 1) Symptom
  - Description : USIM card is not recognized.

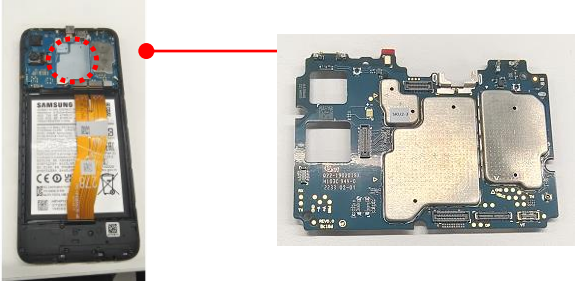


- 2) Defect Decision Conditions
  - Description : The changed SIM card is not recognized.

- 3) Repair Guide
  - **Caution : Disconnect battery connector first when it shows.**

Image	Description
	<div>1. Check the USIM Card.<ul style="list-style-type: none"><li>- Check if there is any problem using a normal SIM card.</li></ul></div>
<div> [AOD Jig]</div> <div> [AOD mini]</div>	<div>2. Disassemble the device.<ul style="list-style-type: none"><li>- Refer to '<b><u>Disassembly and assembly video guide for Galaxy A04e</u></b>' from the GSPN.</li></ul></div>
<div></div> <div></div>	<div><b>[Attention]</b></div> <div>3. Disconnect Battery Connector (Ref. SOC11003) at first.</div>

6-9-1. Abnormal USIM

Image	Description
	<p>4. Reboot, check the device is working normally.</p> <p>If not, exchange the PBA.</p>

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