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Report No.: GTI20161071F-1

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FCC TEST REPORT

Product name : LTE/WCDMA/GSM(GPRS) Mutil-Mode Digital Mobile Phone

Trademark..... : /

Model No...... : ZTE BLADE V8 SE, ZTE BLADE V0820,
ZTE BLADE V8 LITE, BLADE V8 SE

FCC ID : SRQ-BLADEV8SE

Test Standards..... : FCC CFR Title 47 Part 15 Subpart B

Applicant..... : ZTE CORPORATION

Address of applicant..... : ZTE Plaza, #55 Keji Road South, Hi-Tech, Industrial Park, Nanshan
District, Shenzhen, Guangdong, 518057, P.R. China Shenzhen

Date of Receipt..... : Dec. 26, 2016

Date of Test Date..... : Dec. 27, 2016 - Dec. 30, 2016

Date of issue..... : Jan. 02, 2017

Test result :	Pass *
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* In the configuration tested, the EUT complied with the standards specified above



GENERAL DESCRIPTION OF EUT

Equipment	LTE/WCDMA/GSM(GPRS) Mutil-Mode Digital Mobile Phone
Model name	ZTE BLADE V8 SE, ZTE BLADE V0820, ZTE BLADE V8 LITE, BLADE V8 SE
Model Difference	All models are the Circuit Design identical, only different on model number, the test is performed on model: ZTE BLADE V8 SE
Manufacturer	ZTE CORPORATION
Manufacturer Address	ZTE Plaza, #55 Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R. China Shenzhen
Power Rating	DC 3.85V form 2500mAh by Rechargeable Li-ion Battery
Adapter:	Model: STC-A515A-Z Input: AC 100-240V, 50Hz/60Hz, 300mA Output: DC 5V, 1500mA

Testing Engineer : Greg Zhang
(Greg Zhang)

Reviewed By : Winner Zhang
(Winner Zhang)

Approved Signatory : Walter Chen
(Walter Chen)

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1. TEST SUMMARY

Test procedures according to the technical standards:

EMC Emission				
Standard	Test Item	Limit	Result	Remark
FCC CFR Title 47 Part 15 Subpart B ANSI C63.4: 2014	Conducted Emission	Class B	PASS	/
	Radiated Emission	Class B	PASS	/

NOTE:

(1) "N/A" denotes test is not applicable in this Test Report

1.1 TEST FACILITY

Shenzhen General Testing & Inspection Technology Co., Ltd.

Add. : 1F, 2 Block, Jiaquan Building, Guanlan High-tech Park Baoan District, Shenzhen

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U , (dB)	NOTE
GTIC01	ANSI	150 KHz ~ 30MHz	3.2	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	U , (dB)	NOTE
GTIA01	ANSI	30MHz ~ 1000MHz	4.7	
		1GHz ~6GHz	5.0	

2. GENERAL INFORMATION

2.1 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation model or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

As the function of the EUT, test mode selected to test as below to conform this standard.

test Mode	Description				
	PC (Downloading)	Recordding	Video Playing	Music Playing	FM
Mode 1	■				
Mode 2		■			
Mode 3			■		
Mode 4				■	
Mode 5					■

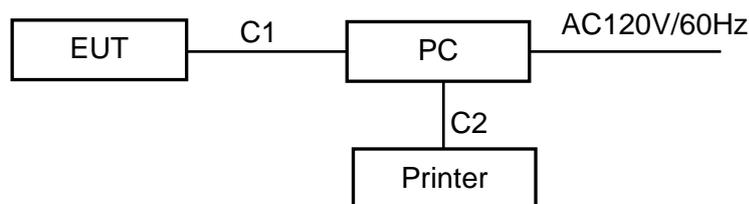
■ is function state of EUT operation

Pre-scan above all test mode, found below test mode which it was worse case mode.

Test Item	Test Mode (worse case)	Test voltage (worse case)
Conducted Emission Test	Mode 1	120Vac/60Hz
Radiated Emission Test	Mode 1	120Vac/60Hz

2.2 DESCRIPTION OF TEST SETUP

EUT was tested in normal configuration (Please See following Block diagrams)



2.3 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
1	LTE/WCDMA/GSM(GPRS) Mutil-Mode Digital Mobile Phone	/	ZTE BLADE V0820	/	EUT
2	PC	Lenovo	8985	L3C8543	AE
3	Keyboard	DELL	SK-8185	N/A	AE
4	Mouse	DELL	M-BT96a	N/A	AE
	Printer	HP	D4360	N/A	AE

Item	Shielded Type	Ferrite Core	Length	Note
C1	YES	NO	1.0m	USB Cable
C2	YES	NO	1.5m	USB Cable

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 「Length」 column.
- (3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

2.4 MEASUREMENT INSTRUMENTS EQUIPMENTS LIST

2.4.1 CONDUCTED EMISSION

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	LISN	R&S	ENV216	101112	Jan. 07, 2017
2	Test Receiver	R&S	ESCI	100920	Jan. 07, 2017

2.4.2 RADIATED EMISSION (3M)

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	Bilog Antenna	Schwarzbeck	CBL6141A	4180	Jan. 07, 2017
2	Horn Antenna	Schwarzbeck	BBHA 9120D	647	Jan. 07, 2017
3	Low Noise Pre-Amplifier	HP	8447D	1937A03050	Jan. 07, 2017
4	Low Noise Pre-Amplifier	EMCI	EMC051835	980075	Jan. 07, 2017
5	Test Receiver	R&S	ESCI7	100967	Jan. 07, 2017
6	Antenna Mast	UC	UC3000	N/A	N/A
7	Turn Table	UC	UC3000	N/A	N/A

Note: 1. The Cal. Interval was one year.

2. The cable loss has calculated in test result which connection between each test instruments.

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

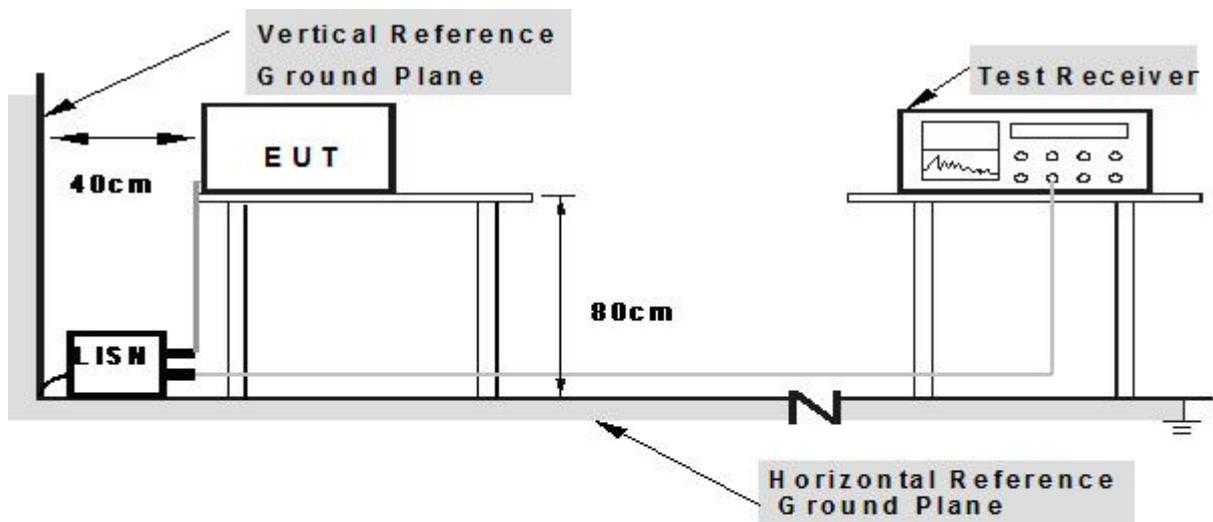
The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.1.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 TEST SETUP



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 EUT OPERATING CONDITIONS

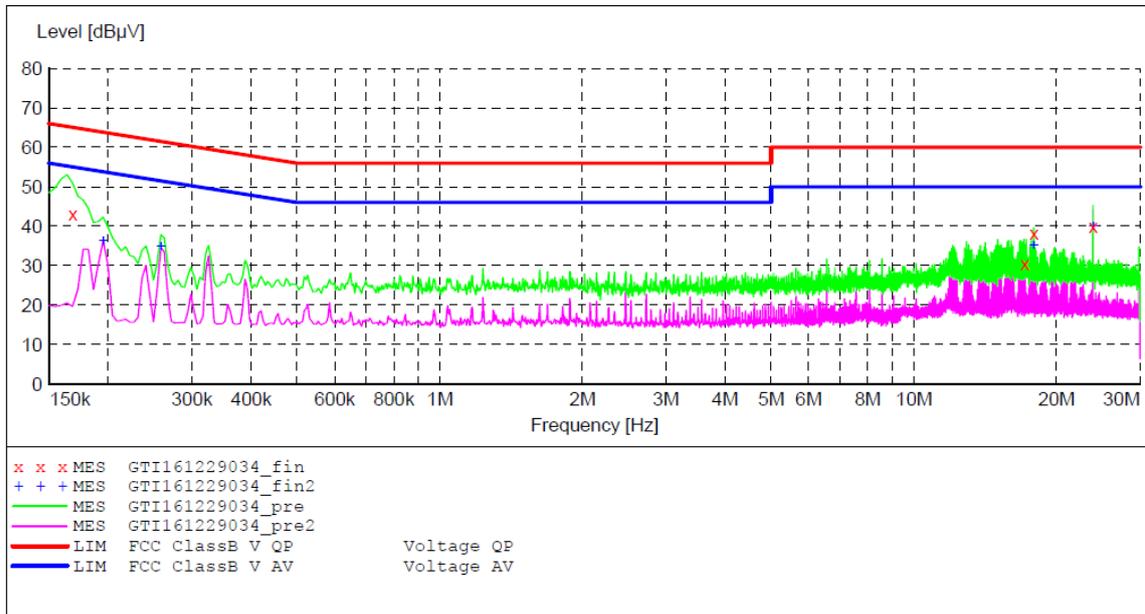
The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.



3.1.5 TEST RESULTS

EUT:	LTE/WCDMA/GSM(GPRS) MULTI-MODE DIGITAL MOBILE PHONE	Model Name.:	ZTE BLADE V0820
Temperature:	23 °C	Relative Humidity:	60%
Pressure:	101 Kpa	Test Date:	2016-12-29
Test Mode:	Mode 1	Phase:	L
Test Voltage:	AC 120V/60Hz		

SCAN TABLE: "Vol (9K-30M) FIN-N"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "GTI161229034_fin"

12/29/2016 4:02PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.168000	43.20	9.8	65	21.9	QP	L1	GND
17.150000	30.60	10.7	60	29.4	QP	L1	GND
17.915000	38.10	10.7	60	21.9	QP	L1	GND
23.891000	39.80	11.1	60	20.2	QP	L1	GND

MEASUREMENT RESULT: "GTI161229034_fin2"

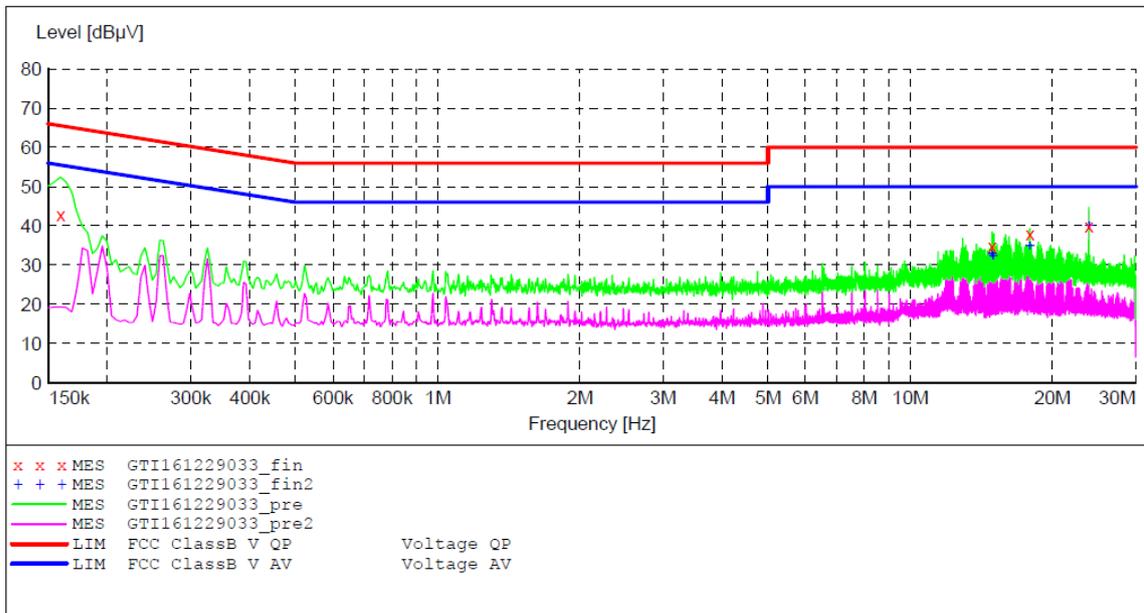
12/29/2016 4:02PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.195000	36.20	9.7	54	17.6	AV	L1	GND
0.258000	34.80	9.7	52	16.7	AV	L1	GND
17.915000	35.10	10.7	50	14.9	AV	L1	GND
23.891000	39.90	11.1	50	10.1	AV	L1	GND



EUT:	LTE/WCDMA/GSM(GPRS) MUTIL-MODE DIGITAL MOBILE PHONE	Model Name.:	ZTE BLADE V0820
Temperature:	23 °C	Relative Humidity:	60%
Pressure:	101 Kpa	Test Date:	2016-12-29
Test Mode:	Mode 1	Phase:	N
Test Voltage:	AC 120V/60Hz		

SCAN TABLE: "Vol (9K-30M) FIN-N"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "GTI161229033_fin"

12/29/2016 3:54PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.159000	42.70	9.5	66	22.8	QP	N	GND
14.909000	34.70	10.3	60	25.3	QP	N	GND
17.915000	37.80	10.4	60	22.2	QP	N	GND
23.891000	39.80	10.8	60	20.2	QP	N	GND

MEASUREMENT RESULT: "GTI161229033_fin2"

12/29/2017 3:54PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
14.909000	32.80	10.3	50	17.2	AV	N	GND
14.972000	32.30	10.3	50	17.7	AV	N	GND
17.915000	34.70	10.4	50	15.3	AV	N	GND
23.891000	40.00	10.8	50	10.0	AV	N	GND

3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT (Below 1000MHz)

FREQUENCY (MHz)	Class A (at 10m)	Class B (at 3m)
	dBuV/m	dBuV/m
30 ~ 88	39.0	40.0
88 ~ 216	43.5	43.5
216 ~ 960	46.5	46.0
Above 960	49.5	54.0

3.2.2 LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (at 3m) dBuV/m		Class B (at 3m) dBuV/m	
	Peak	Avg	Peak	Avg
Above 1000	80	60	74	54

Notes:

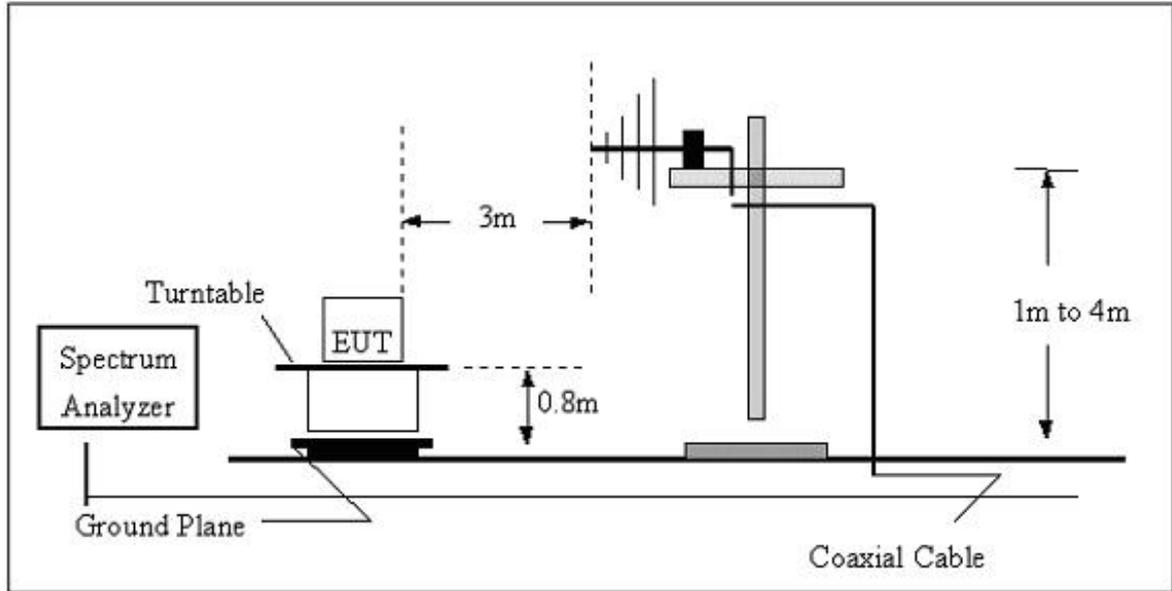
- (1) The limit for radiated test was performed according to as following:
FCC PART 15B /ICES-003.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

3.2.3 TEST PROCEDURE

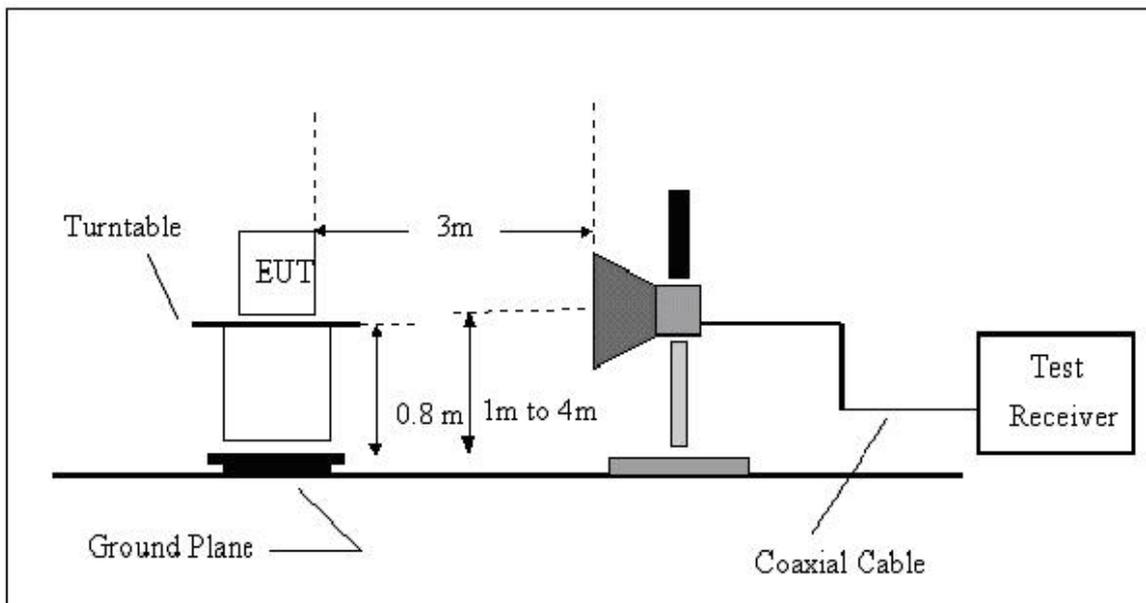
- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting radiated emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured, above 1G Average detector mode will be instead.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP(AV) Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.2.4 TEST SETUP

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz

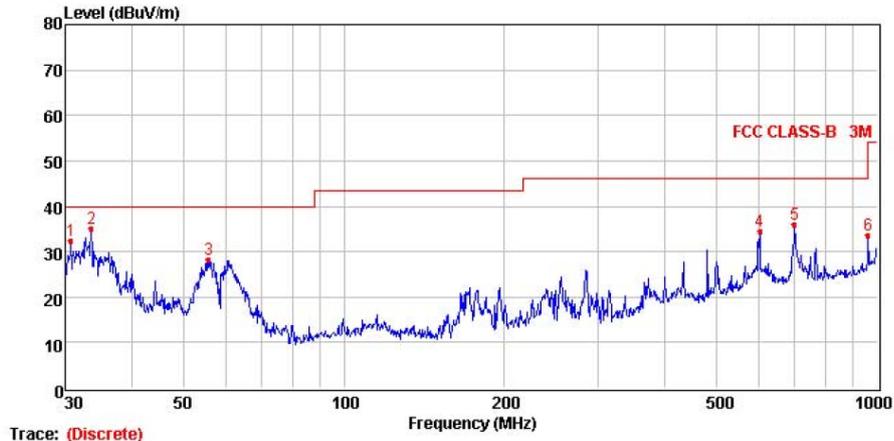


3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.1** Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.6 TEST RESULTS

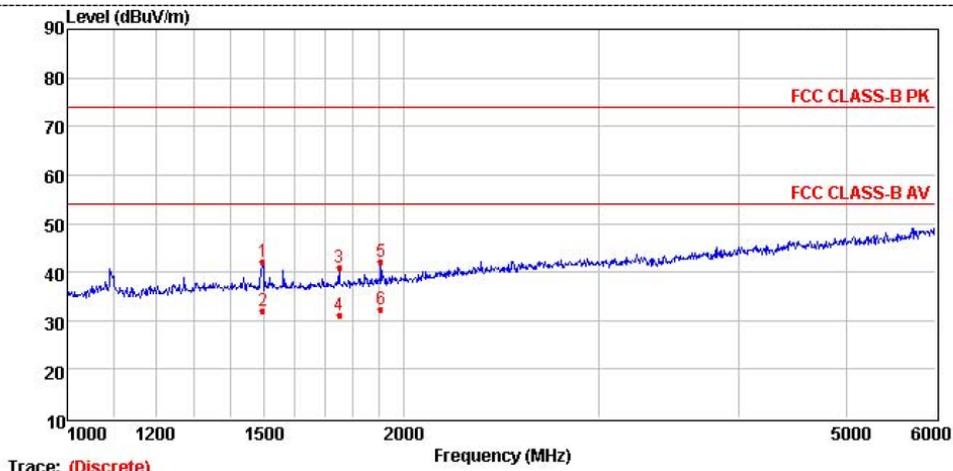
Test Model:	ZTE BLADE V0820	Test mode:	Mode 1	Polarization:	Vertical
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Trace: (Discrete)

Mark	Frequency MHz	Level dBuV	Factor dB	Reading dBuV	Limit dB	Margin dB	Polarization	Detector
1	30.75	32.44	-4.98	37.42	40.00	7.56	VERTICAL	QP
2	33.56	35.06	-6.15	41.21	40.00	4.94	VERTICAL	QP
3	55.80	28.36	-13.74	42.10	40.00	11.64	VERTICAL	QP
4	601.43	34.54	-6.51	41.05	46.00	11.46	VERTICAL	QP
5	699.30	36.07	-5.85	41.92	46.00	9.93	VERTICAL	QP
6	962.16	33.68	-1.47	35.15	54.00	20.32	VERTICAL	QP

30~1000MHz

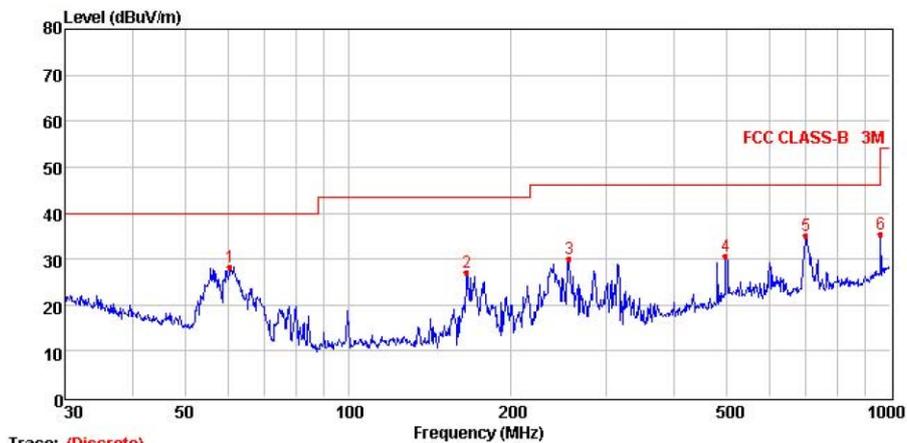


Trace: (Discrete)

Mark	Frequency MHz	Level dBuV	Factor dB	Reading dBuV	Limit dB	Margin dB	Polarization	Detector
1	1496.53	42.24	-13.57	55.81	74.00	31.76	VERTICAL	Peak
2	1496.53	32.06	-13.57	45.63	54.00	21.94	VERTICAL	Average
3	1752.11	41.04	-13.19	54.23	74.00	32.96	VERTICAL	Peak
4	1752.11	31.02	-13.19	44.21	54.00	22.98	VERTICAL	Average
6	1909.47	32.42	-12.56	44.98	54.00	21.58	VERTICAL	Average

1000~6000MHz

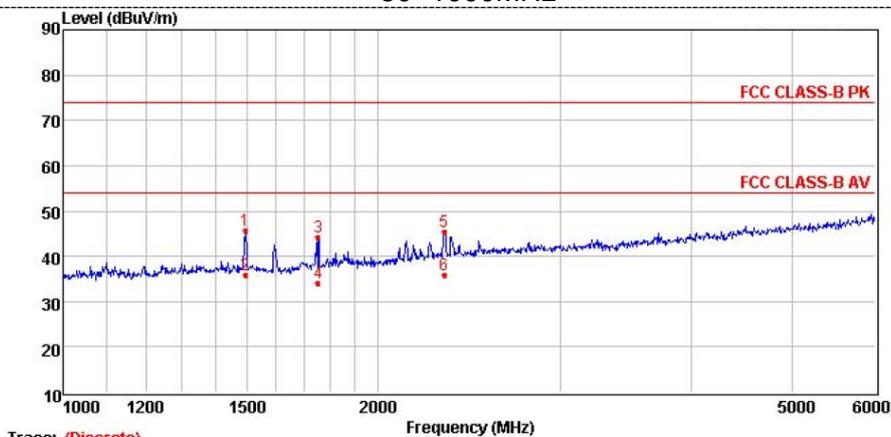
Test Model: ZTE BLADE V0820 Test mode: Mode 1 Polarization: Horizontal



Trace: (Discrete)

Mark	Frequency MHz	Level dBuV	Factor dB	Reading dBuV	Limit dB	Margin dB	Polarization	Detector
1	60.49	28.24	-15.29	43.53	40.00	11.76	HORIZONTAL	QP
2	165.49	26.98	-16.24	43.22	43.50	16.52	HORIZONTAL	QP
3	255.62	30.17	-13.01	43.18	46.00	15.83	HORIZONTAL	QP
4	497.68	30.75	-8.23	38.98	46.00	15.25	HORIZONTAL	QP
5	699.30	34.97	-5.85	40.82	46.00	11.03	HORIZONTAL	QP
6	962.16	35.34	-1.47	36.81	54.00	18.66	HORIZONTAL	QP

30~1000MHz



Trace: (Discrete)

Mark	Frequency MHz	Level dBuV	Factor dB	Reading dBuV	Limit dB	Margin dB	Polarization	Detector
1	1493.85	45.70	-13.57	59.27	74.00	28.30	HORIZONTAL	Peak
2	1493.85	35.79	-13.57	49.36	54.00	18.21	HORIZONTAL	Average
3	1755.25	44.14	-13.17	57.31	74.00	29.86	HORIZONTAL	Peak
4	1755.25	34.19	-13.17	47.36	54.00	19.81	HORIZONTAL	Average
5	2317.14	45.52	-10.55	56.07	74.00	28.48	HORIZONTAL	Peak
6	2317.14	35.84	-10.55	46.39	54.00	18.16	HORIZONTAL	Average

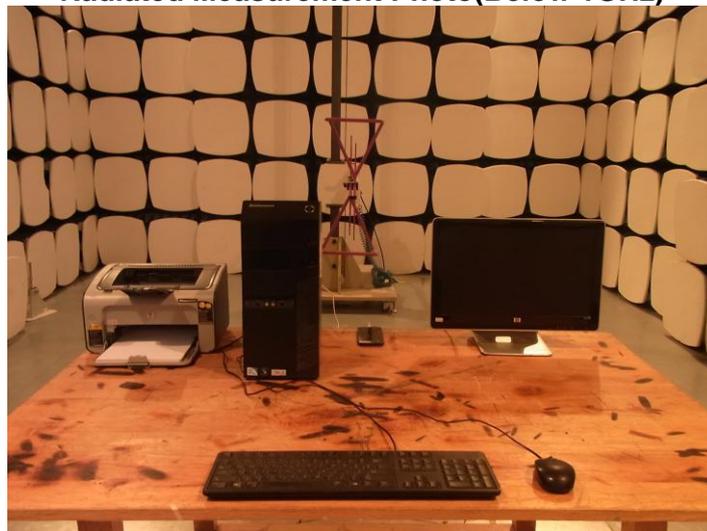
1000~6000MHz

4. EUT TEST PHOTO

Conducted Measurement Photo



Radiated Measurement Photo(Below 1GHz)



Radiated Measurement Photo(Above 1GHz)



5. PHOTOGRAPHS OF EUT

Photo1



Photo2

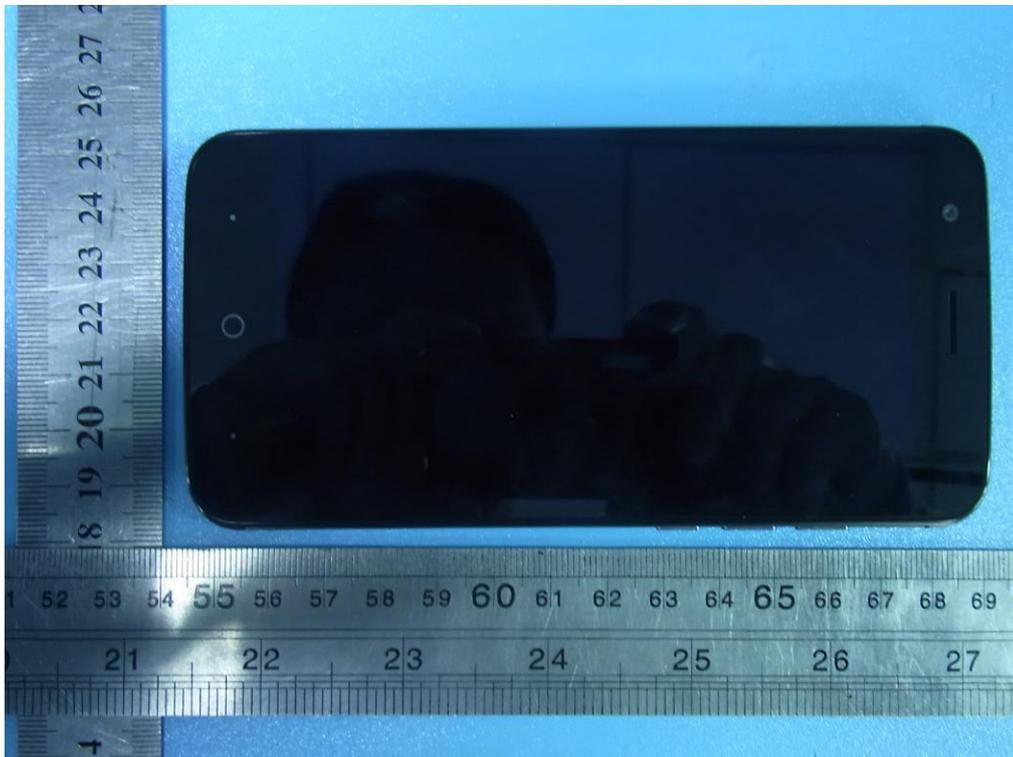


Photo3

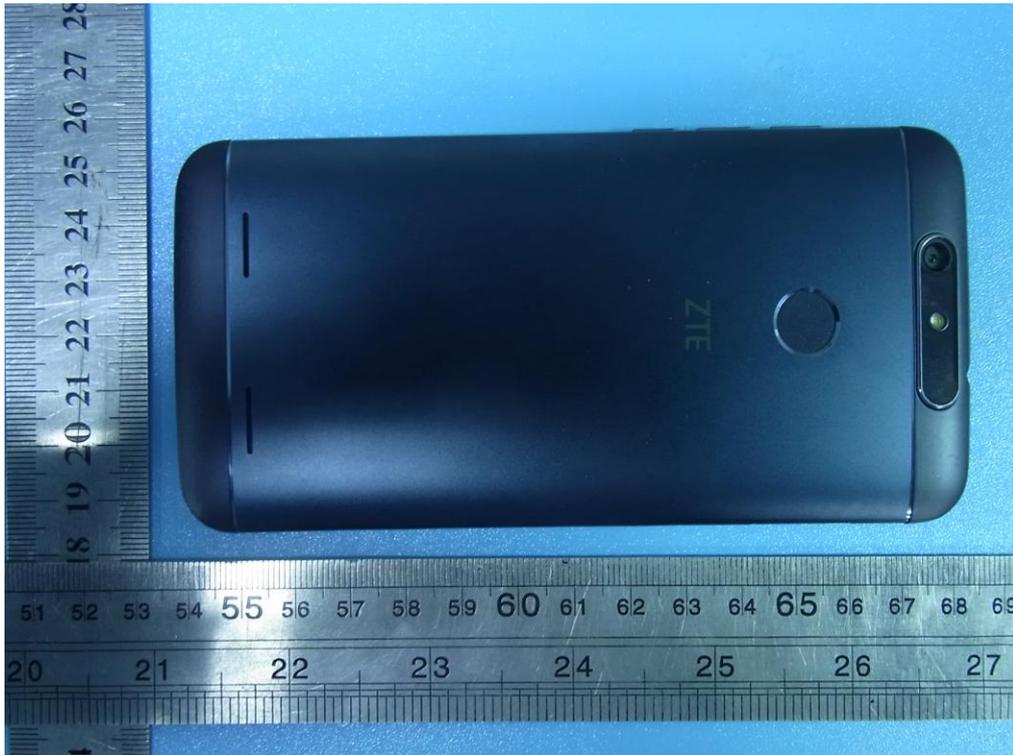


Photo4

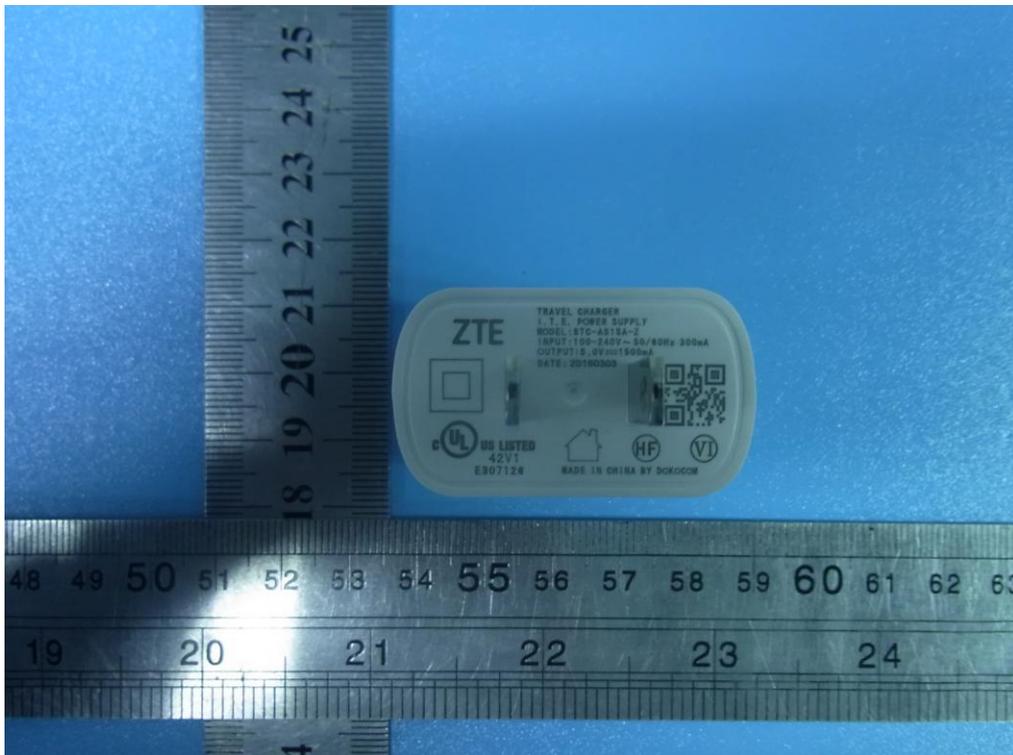


Photo5



Photo6

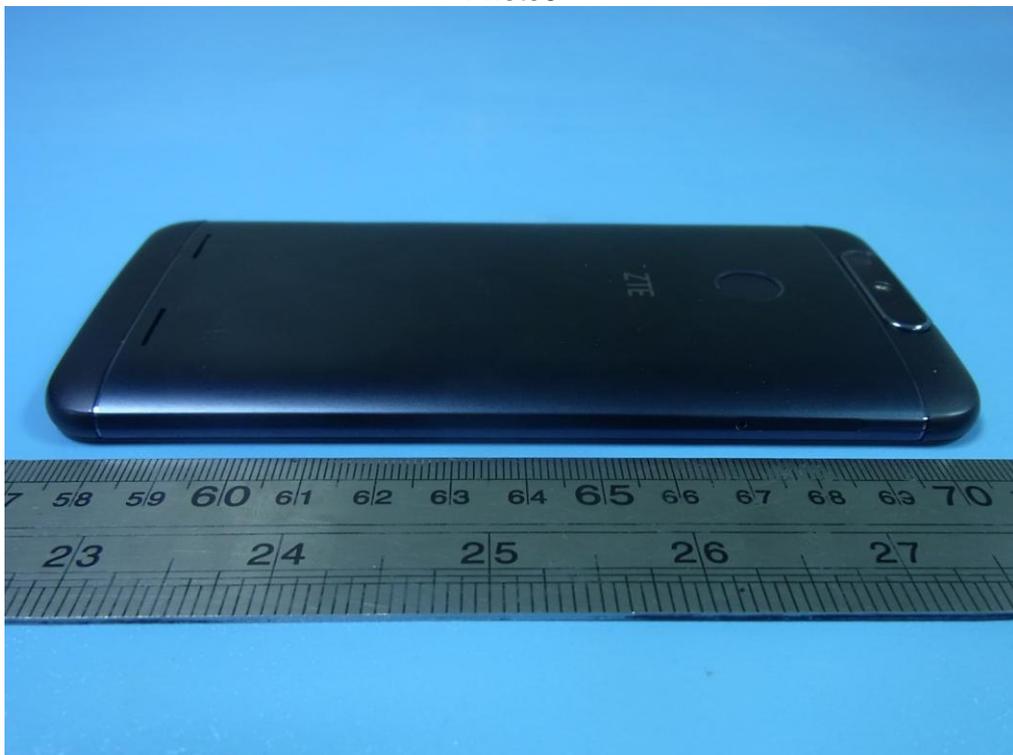


Photo7

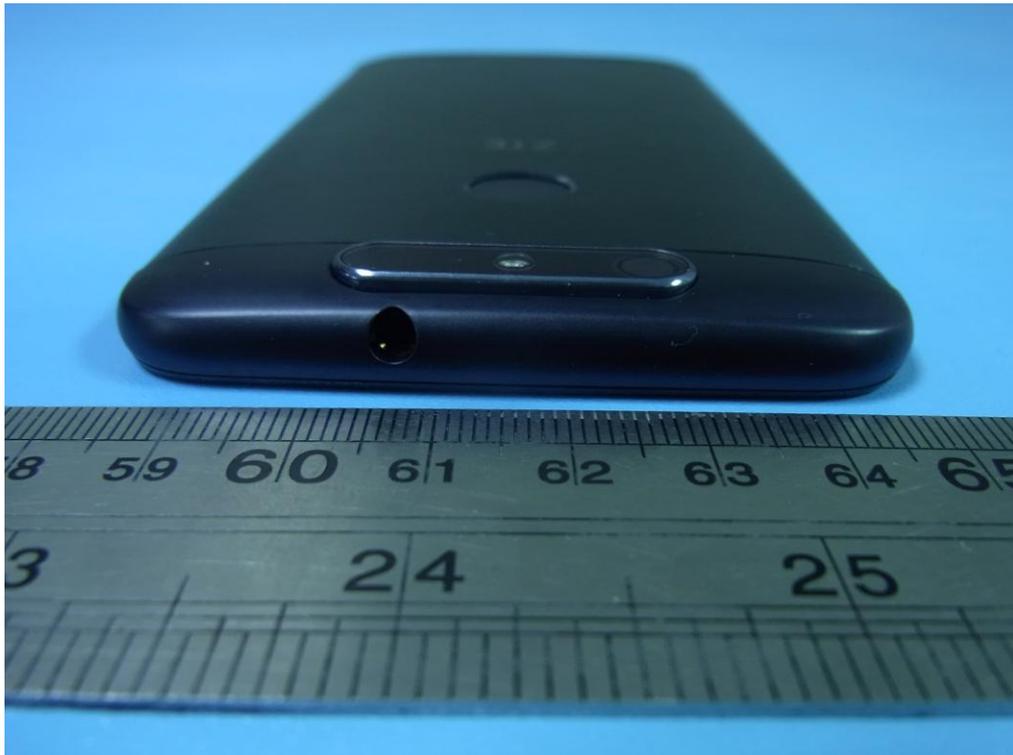


Photo8



Photo9

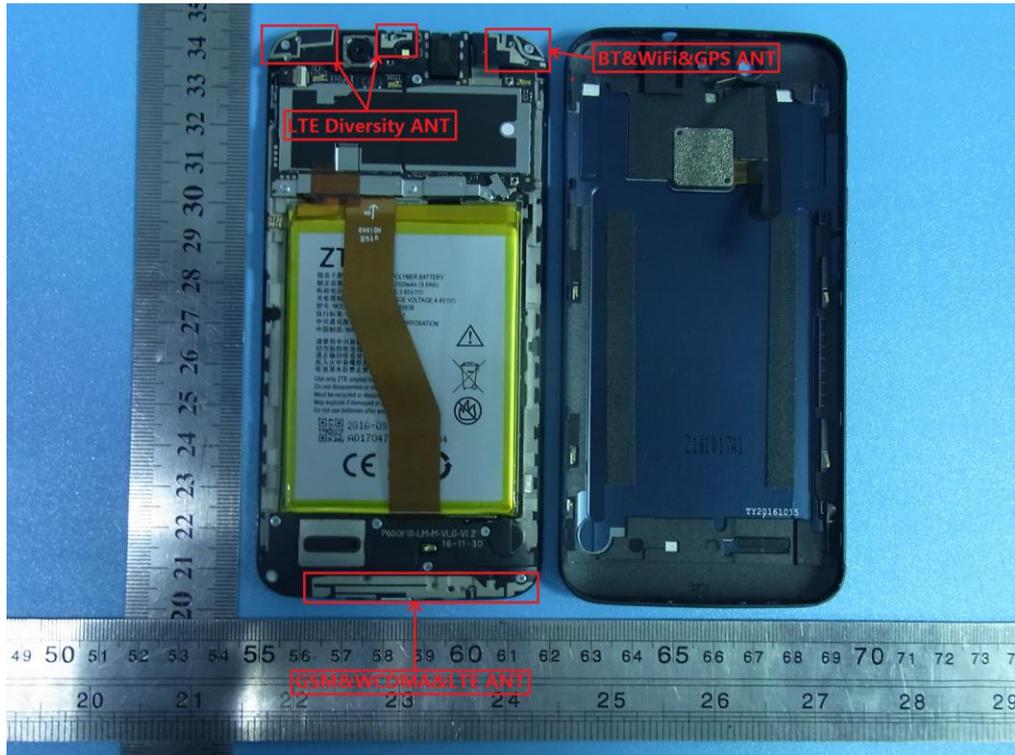


Photo10

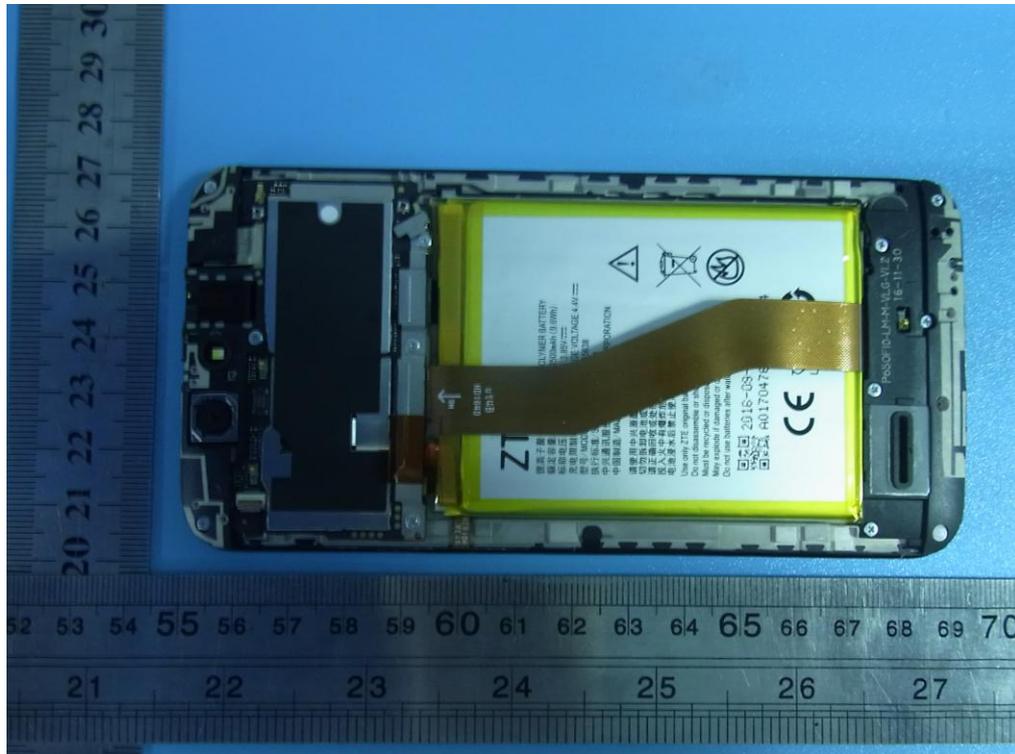


Photo11

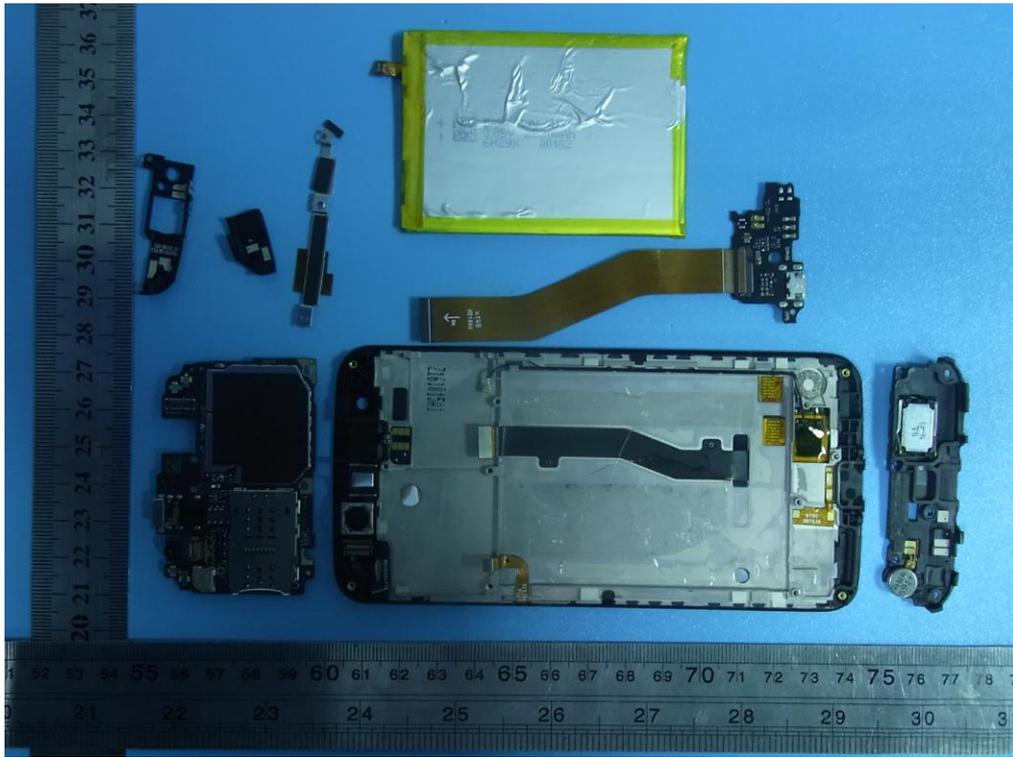


Photo12

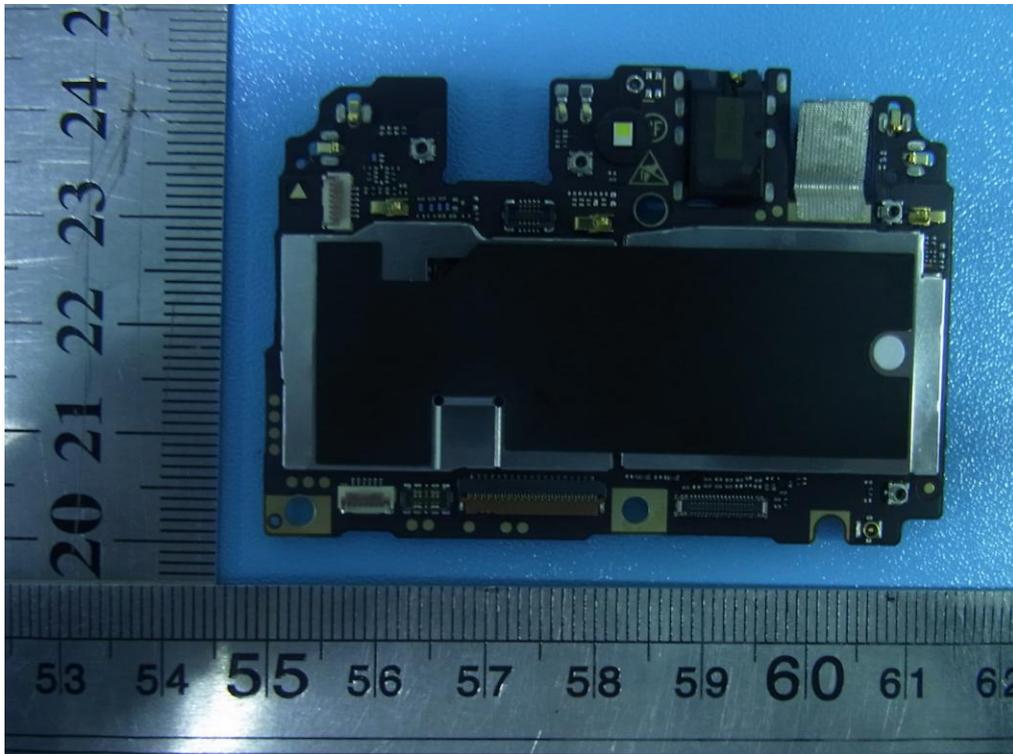


Photo13

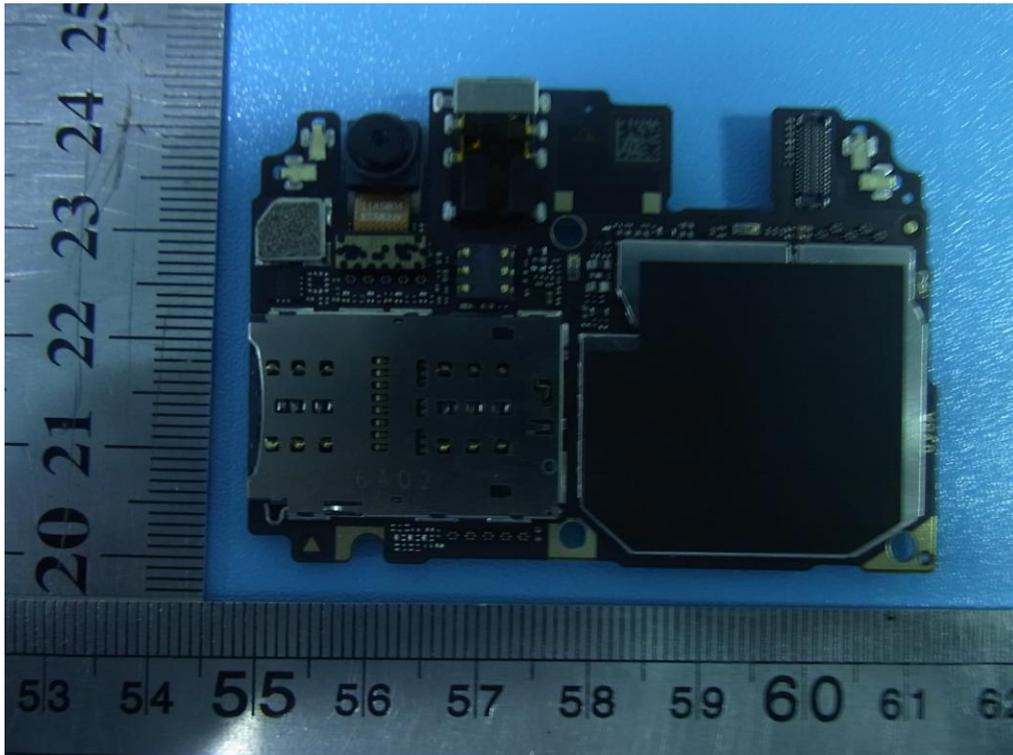


Photo14

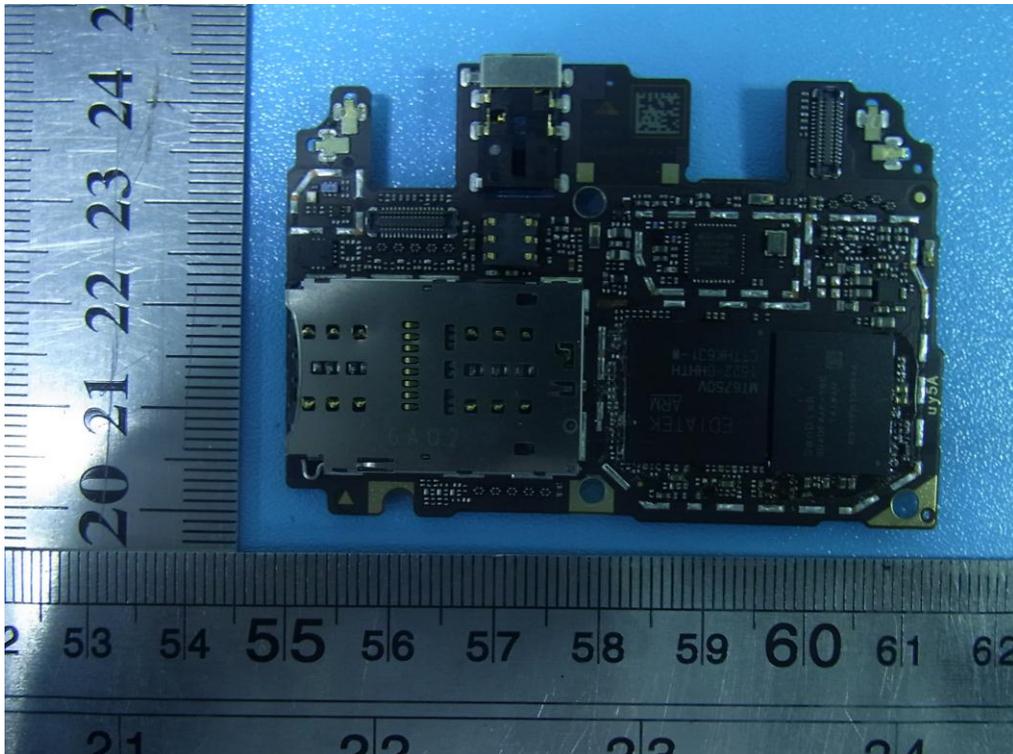


Photo15

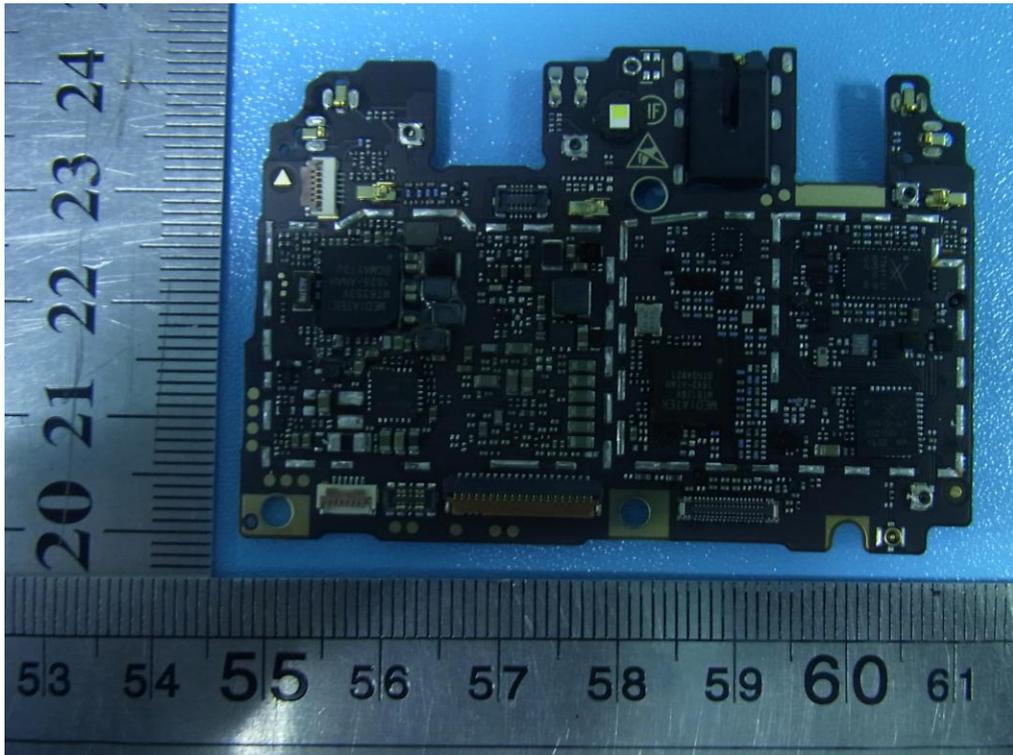


Photo16

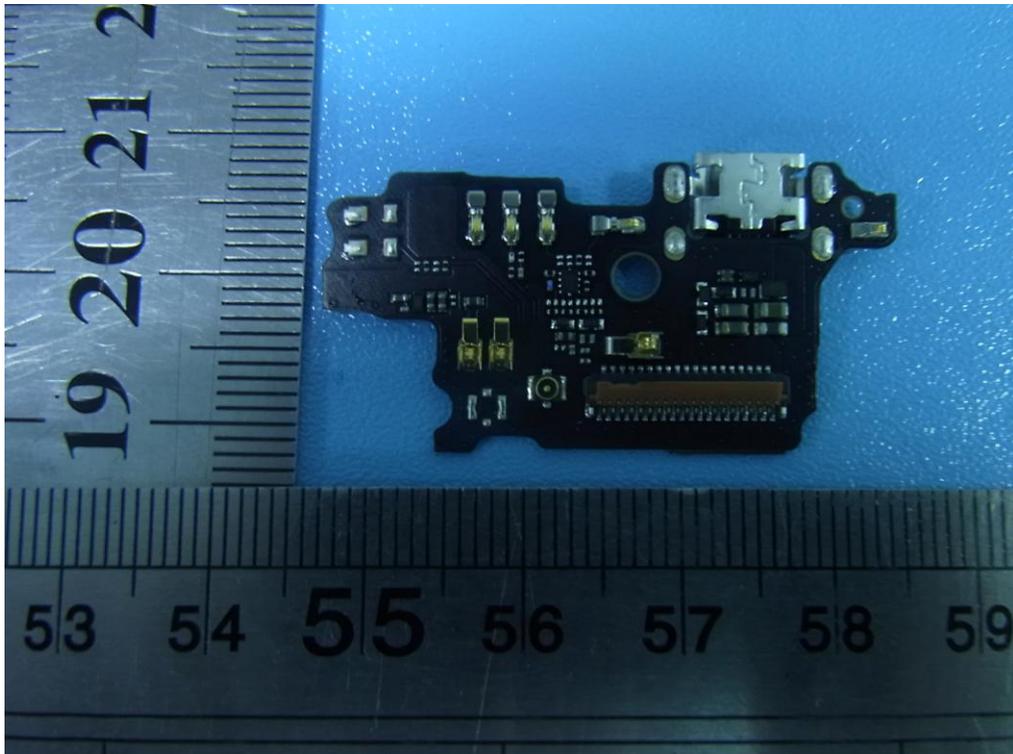


Photo17

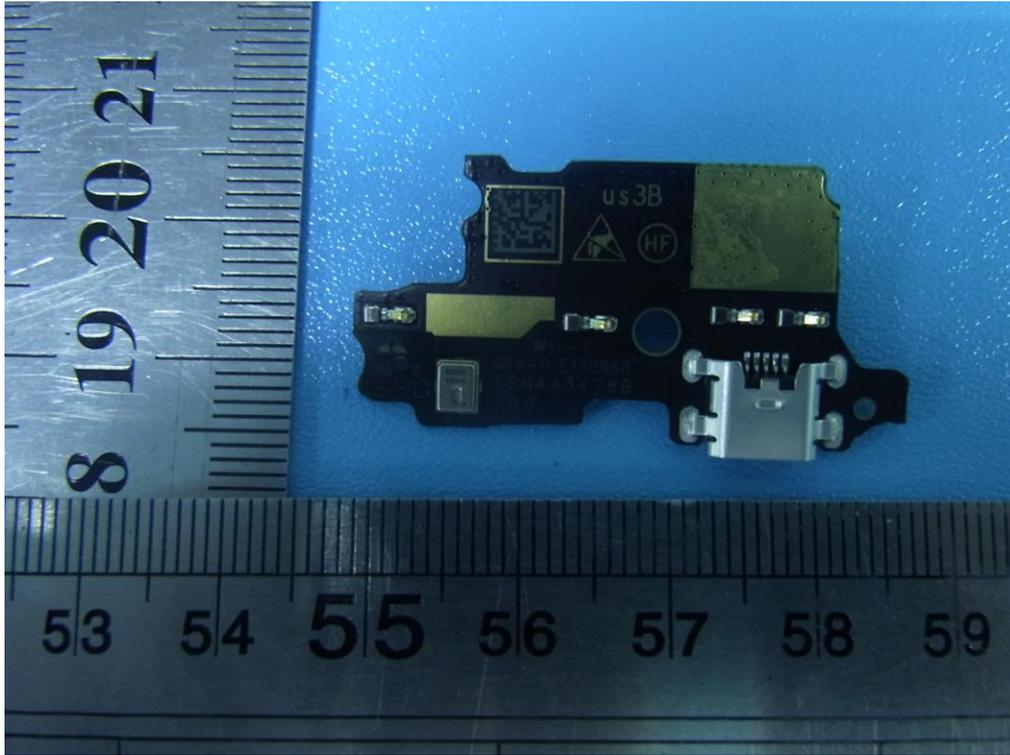


Photo18



Photo19

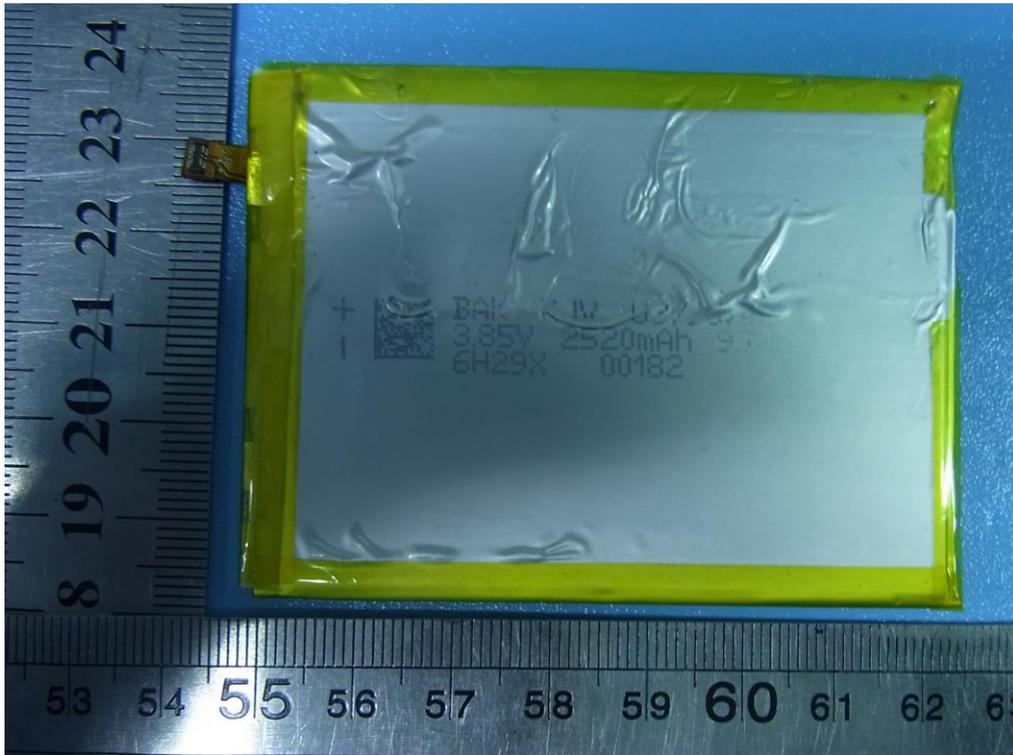


Photo20

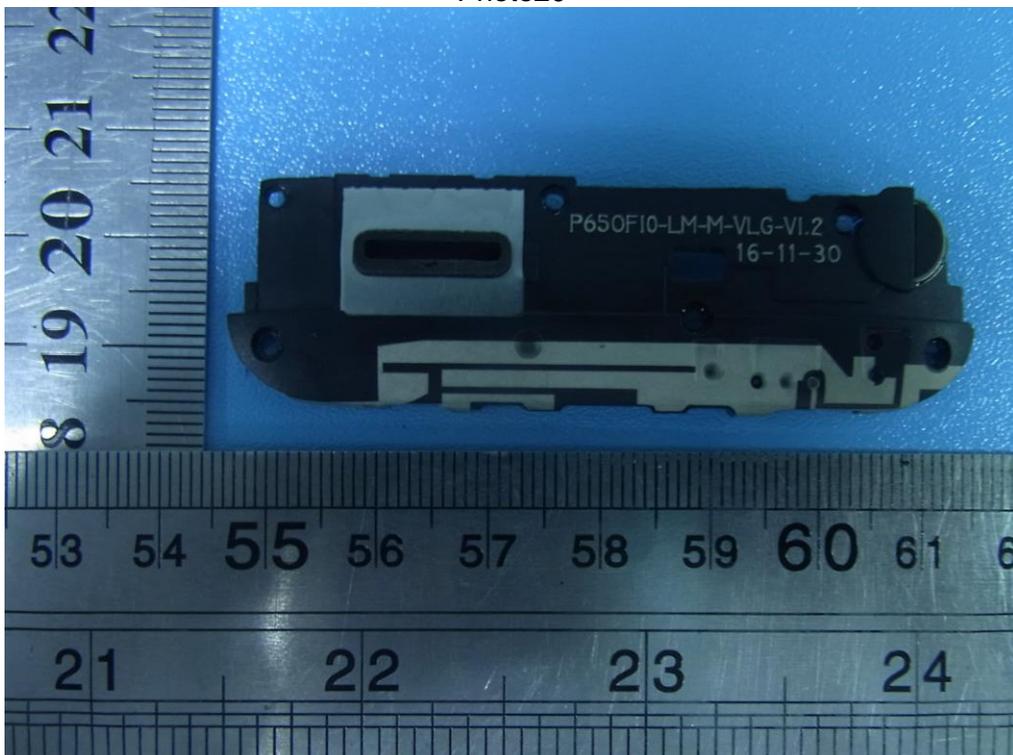
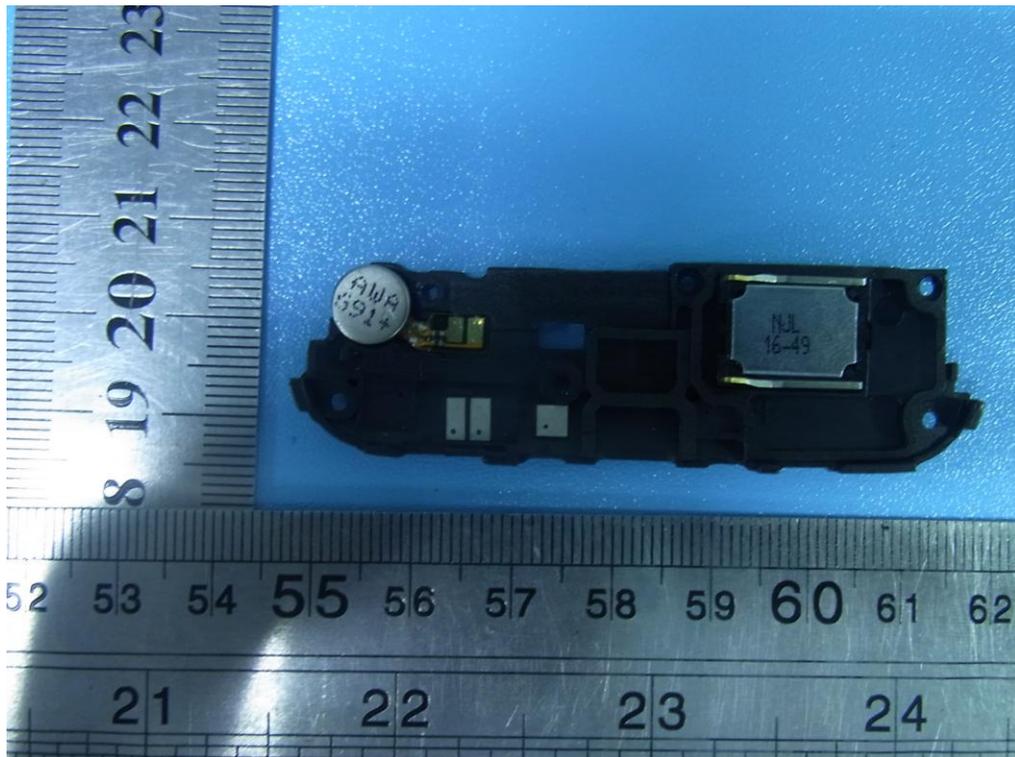


Photo21



==== End of Test Report ====