FCC Test Report

Application Purpose	:	Original grant
Applicant Name:	:	INFINIX MOBILITY LIMITED
FCC ID	:	2AIZN-X571
Equipment Type	:	Mobile phone
Model Name	:	X571
Report Number	:	FCC17060520A-7
Standard(S)	:	FCC Part 15 Subpart E
Date Of Receipt	:	June 14, 2017
Date Of Issue	:	June 30, 2017

Test By :

(Dekun Liu)

Reviewed By :

(Sol Qin)

Authorized by :

(Michal Ling)

Prepared by :

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Registration Number: 588523

REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	June 30, 2017	Valid	Original Report

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1. GENERAL INFORMATION

GENERAL DESCRIPTION OF EUT

Test Model	X571
Applicant	INFINIX MOBILITY LIMITED
Address	RMS 05-15, 13A/F SOUTH TOWER WORLD FINANCE CTR HARBOUR CITY 17 CANTON RD TST KLN HONG KONG
Manufacturer	SHENZHEN TECNO TECHNOLOGY CO.,LTD.
Address	1-4th Floor,3rd Building,Pacific Industrial Park,No.2088,Shenyan Road,Yantian District,Shenzhen,Guangdong,China
Equipment Type	Mobile phone
Brand Name	**Infinix**
Hardware version:	V1.1
Software version:	X571-H5311B-N-PR2-170511V85
Extreme Temp. Tolerance	-10℃ to +65℃
Battery information:	Li-Polymer Battery : BL-44AX Voltage: 3.85V Capacity: 4400mAh/4500mAh(min/typ) Limited Charge Voltage: 4.4V
Adapter Information:	Adapter: CQ-25JX Input: AC 100-240V 50/60Hz 0.8A Output: DC 5V⎓2A/5V⎓5A Max
Operating Frequency	see the below table
Channels	see the below table
Channel Spacing	see the below table
Modulation Type	see the below table
Antenna Type:	PIFA Antenna
Antenna gain:	-5dBi
Data of receipt	June 14, 2017
Date of test	June 14, 2017 to June 29, 2017
Deviation	None
Condition of Test Sample	Normal

EUT Specification:

Items	Description	
Modulation	IEEE 802.11a: OFDM IEEE 802.11n: see the below table IEEE 802.11ac: see the below table	
Data Modulation	IEEE 802.11a/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) IEEE 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)	
Data Rate (Mbps)	IEEE 802.11a: OFDM 6,9,12,18,24,36,48, and 54 Mbps IEEE 802.11n: MCS 0-15 up to 150 Mbps IEEE 802.11ac: MCS 0-9 up to 866.7 Mbps	
Frequency Range	Band 1: 5150 MHz ~ 5250 MHz Band 4: 5725 MHz ~ 5850 MHz	
Channel Number	13 for 20MHz bandwidth ; 6 for 40MHz bandwidth ;	
Communication Mode	☒IP Based (Load Based)	☐Frame Based
TPC Function	☐With TPC	☒Without TPC
Weather Band	☐With 5600~5650MHz	☒Without 5600~5650MHz
Beamforming Function	☐With beamforming	☒Without beamforming
Operating Mode	☐Outdoor access point	☐Indoor access point
	☐Fixed point-to-point access points	☒Mobile and portable client devices
	☐Master	☐Slave with radar detection
	☐Slave without radar detection	

Antenna	One (TX)	
Band width Mode	20 MHz	40 MHz
IEEE 802.11a	V	X
IEEE 802.11n	V	V
IEEE 802.11ac	V	V

Protocol	Number of Transmit Chains (NTX)	Data Rate / MCS
802.11n (HT20)	1	MCS 0-15
802.11n (HT40)	1	MCS 0-15
802.11ac (HT20)	1	MCS 0-9
802.11ac (HT40)	1	MCS 0-9

Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 (HT: High Throughput).
Then EUT supports HT20 and HT40.
Note 2: Modulation modes consist of below configuration:
HT20/HT40: IEEE 802.11n
HT20/HT40/: IEEE 802.11ac

We hereby certify that:

All measurement facilities used to collect the measurement data are located at QTC Certification & Testing Co., Ltd.

Registration Number: 588523

The data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C 63.4:2014 and TIA/EIA 603. The sample tested as described in this report is in compliance with the FCC Rules Part15 Subpart E.
All the testing was referenced KDB NO. 789033.
The test results of this report relate only to the tested sample identified in this report.

8. BAND EDGE EMISSIONS

8. 1 Test Equipment

Please refer to Section 4 this report.

8. 2 Test Procedure

Band Edge Emissions Measurement:	
Test Method:	a.)The EUT was tested according to ANSI C63.10. b)The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 1.5 m. All set up is according to ANSI C63.10. c)The frequency spectrum from 9 kHz to 40 GHz was investigated. All readings from 9 kHz to 150 kHz are quasi-peak values with a resolution bandwidth of 200 Hz. All readings from 150 kHz to 30 MHz are quasi-peak values with a resolution bandwidth of 9 KHz. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 KHz. All readings are above 1 GHz , peak values with a resolution bandwidth of 1 MHz . Measurements were made at 3 meters. d)The emissions from the EUT were measured continuously at every azimuth by rotating the turntable. The Receiving antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency. Emissions below 30MHz were measured with a loop antenna while emission above 30MHz were measured using a broadband E-field antenna. e) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "**QP**" in the data table. f)Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 8 and 13 of ANSI C63.10.
Band Edge Emissions Measurement:	
Test Equipment Setting:	
a)Attenuation: Auto b)Span Frequency: 100 MHz c)RBW/VBW (Emission in restricted band): 1MHz / 3MHz for Peak, 1MHz / 1/T for Average	d)RBW/VBW(Emission in non-restricted band) 1MHz / 3MHz for peak

8. 3 Test Setup

Same as section 2.2 of this report

8. 4 Configuration of the EUT

Same as section 2.2 of this report

8. 5 EUT Operating Condition

Same as section 2.2 of this report.

8. 6 Limit

Spurious Radiated Emission & Band Edge Emissions Measurement:	
Limit:	For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz. For transmitters operating in the 5.725-5.85 GHz band: (i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. (ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.
Note: Applies to harmonics/spurious emissions that fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209. 47 CFR § 15.237(c): The emission limits as specified above are based on measurement instrument employing an average detector. The provisions in section 15.35 for limiting peak emissions apply.	

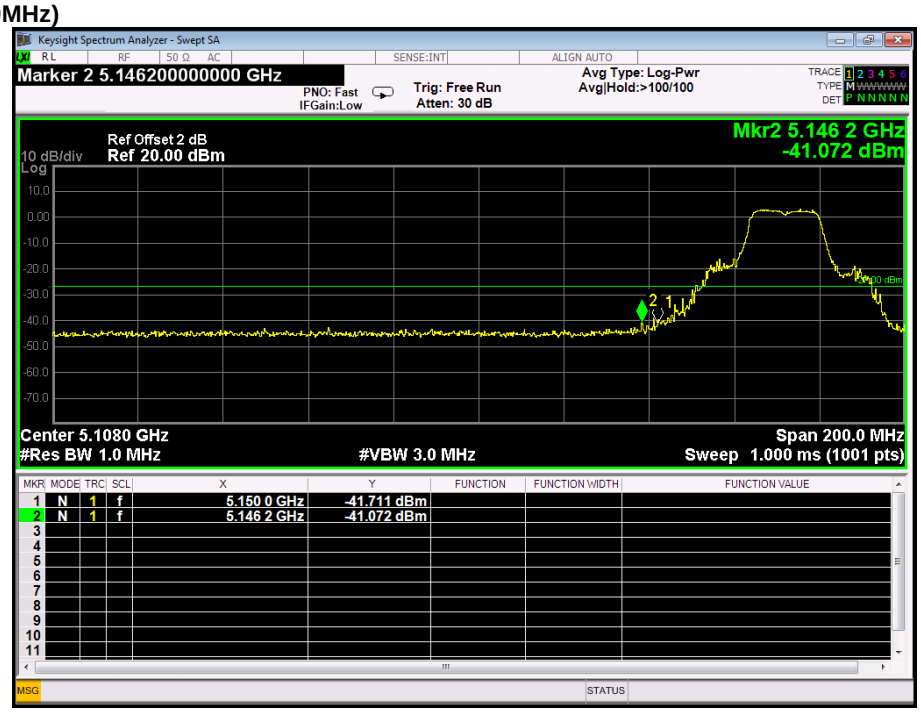
8. 7 Test Result

Band Edge and Fundamental Emissions

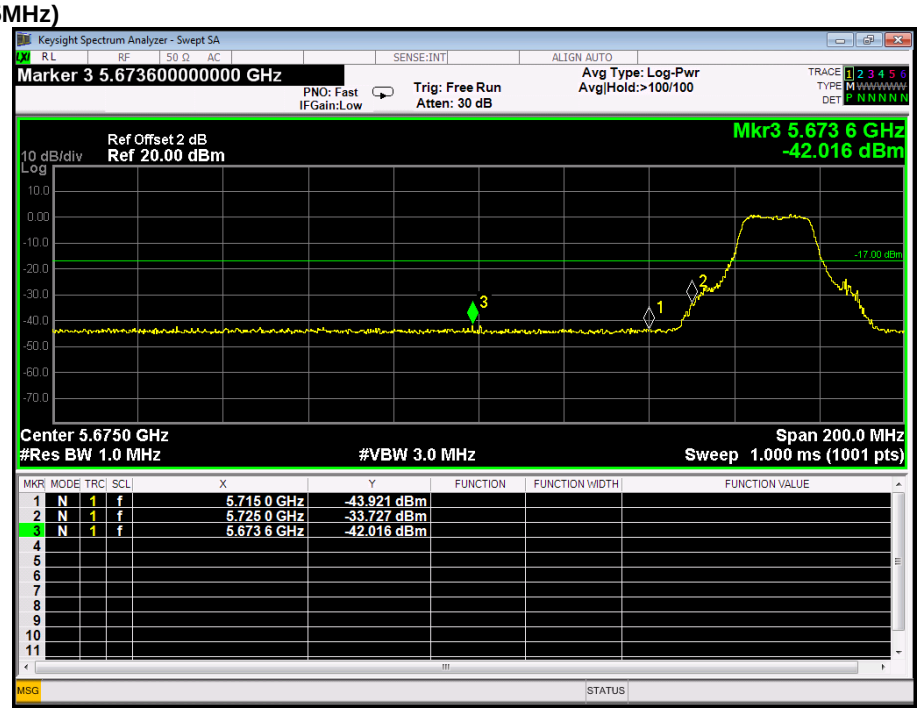
Product:	Mobile Phone	Test Mode:	IEEE 802.11a/n/ac 5G
Test Item:	Band Edge and Fundamental Emissions	Temperature:	25 ℃
Test Voltage:	3.85V	Humidity:	56%RH
Test Result:	**PASS**		

IEEE 802.11a

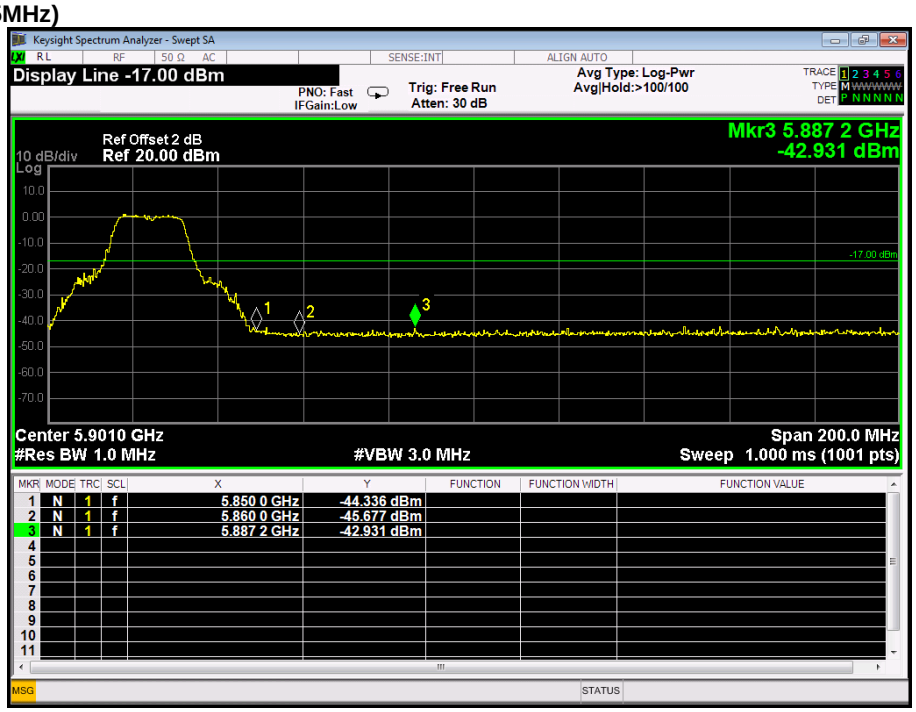
Channel Low (5180MHz)



Channel Low (5745MHz)

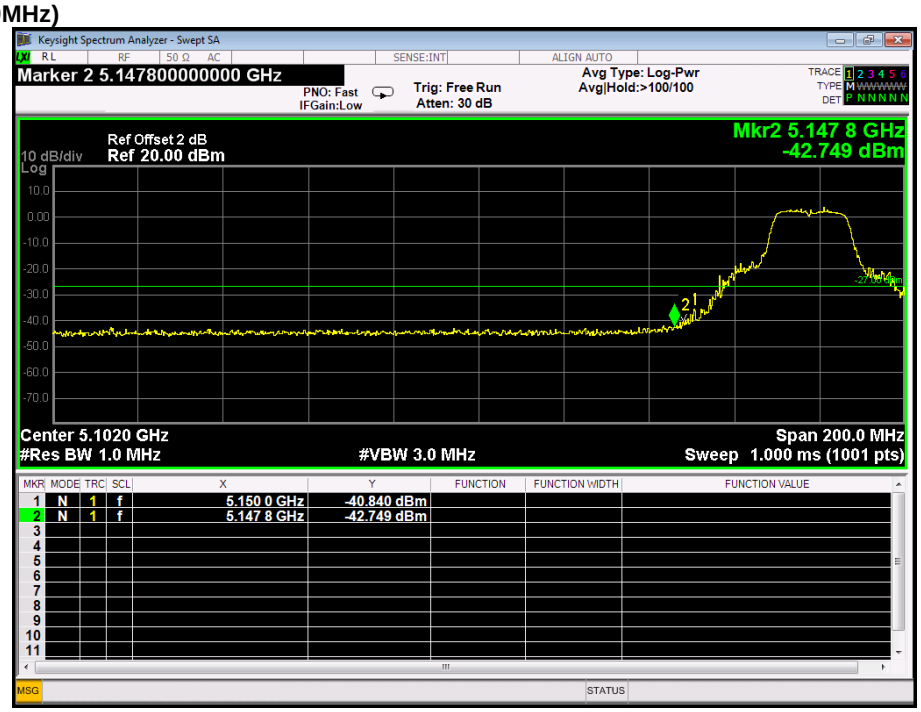


Channel High (5825MHz)



IEEE 802.11n 20MHz

Channel Low (5180MHz)



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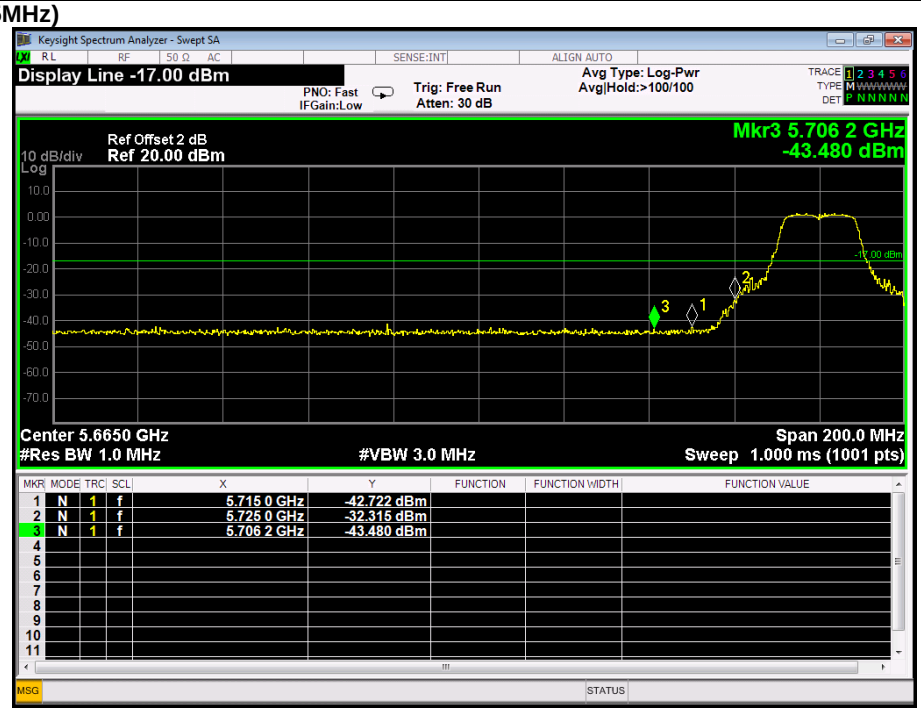

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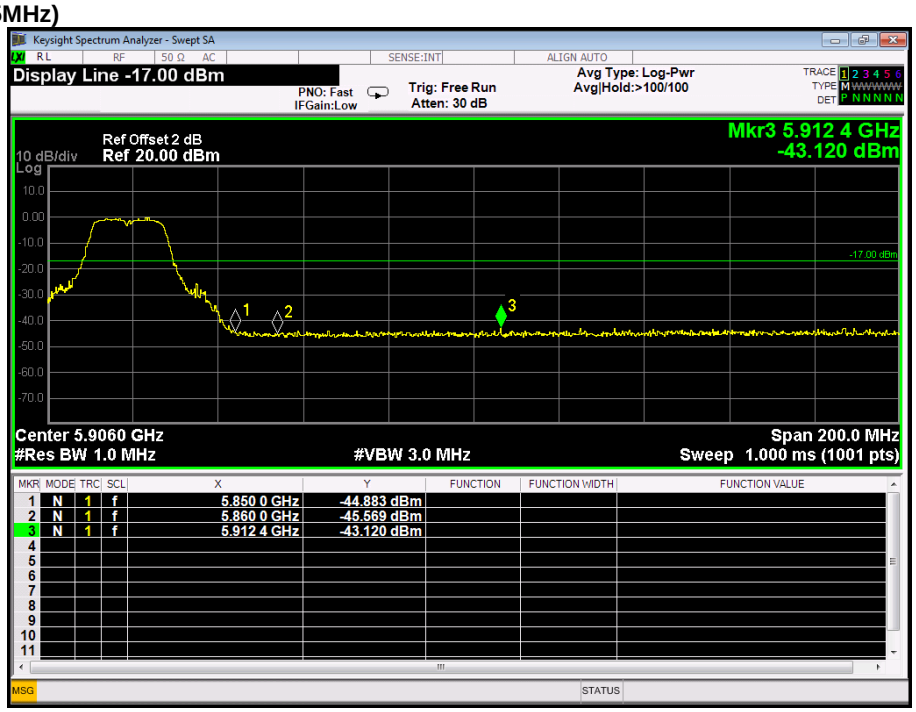
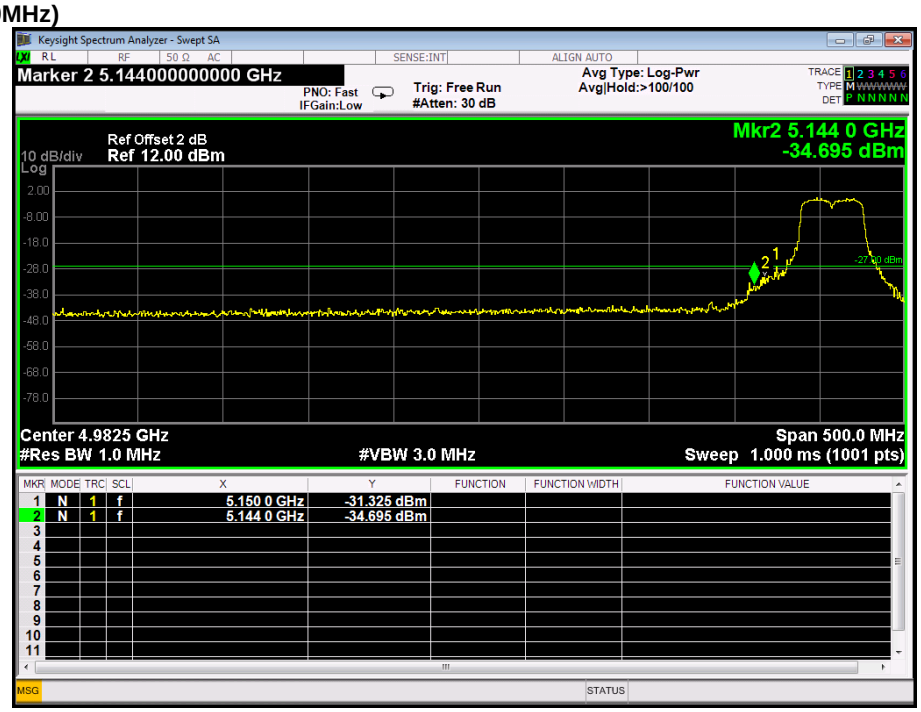
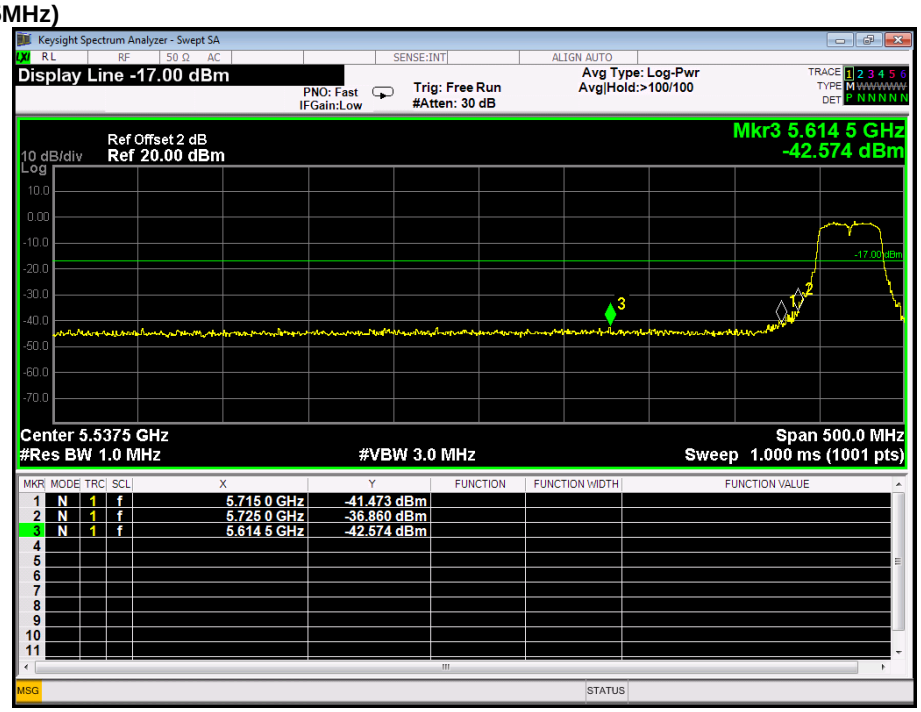


IEEE 802.11n 40MHz

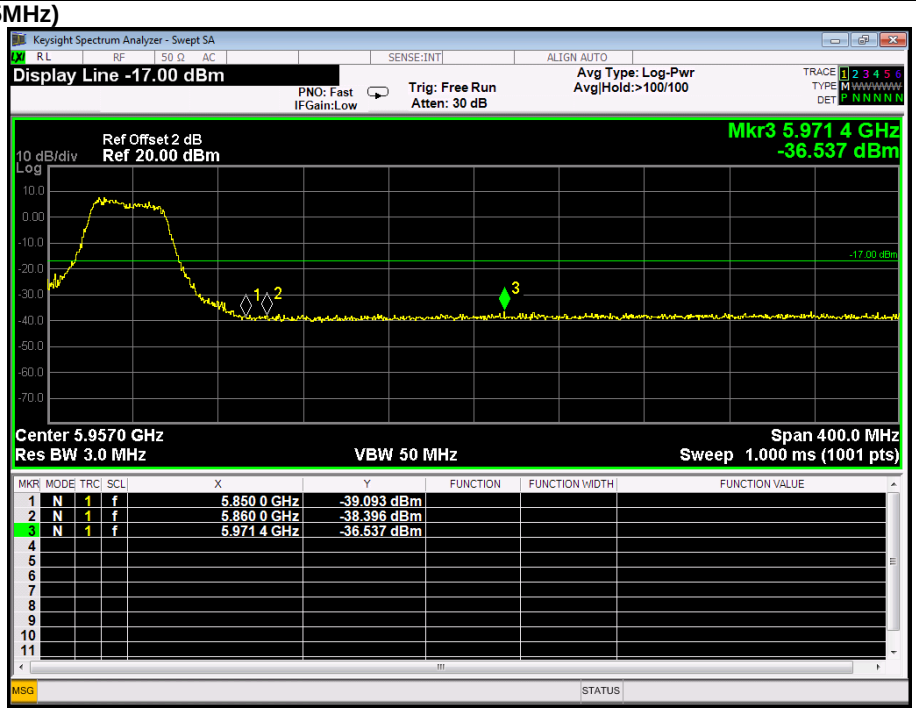
Channel Low (5190MHz)



Channel Low (5755MHz)

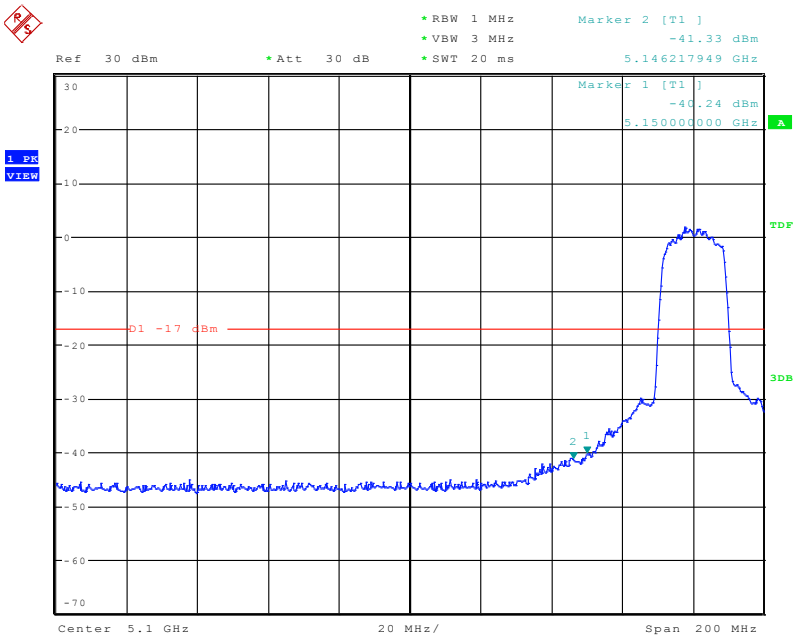


Channel High (5795MHz)



IEEE 802.11ac 20MHz

Channel Low (5180MHz)



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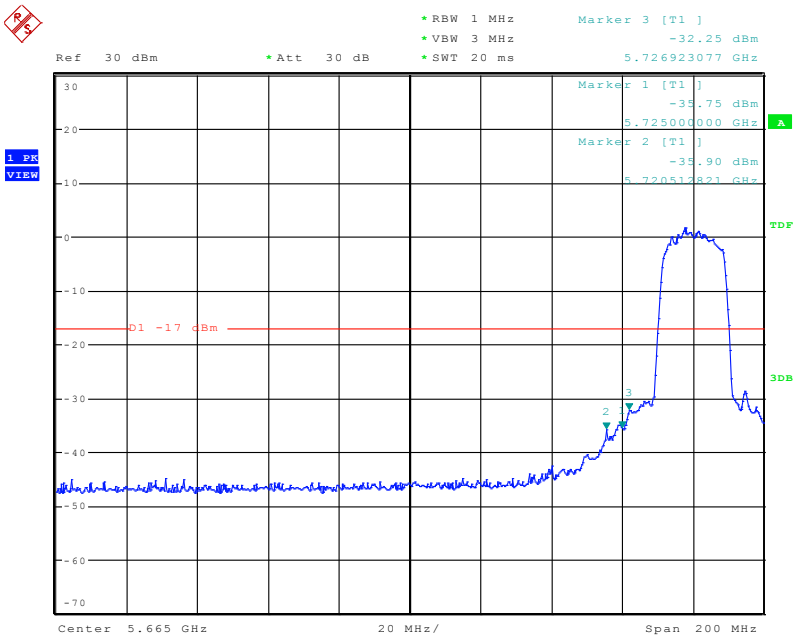
Channel Low (5745MHz)



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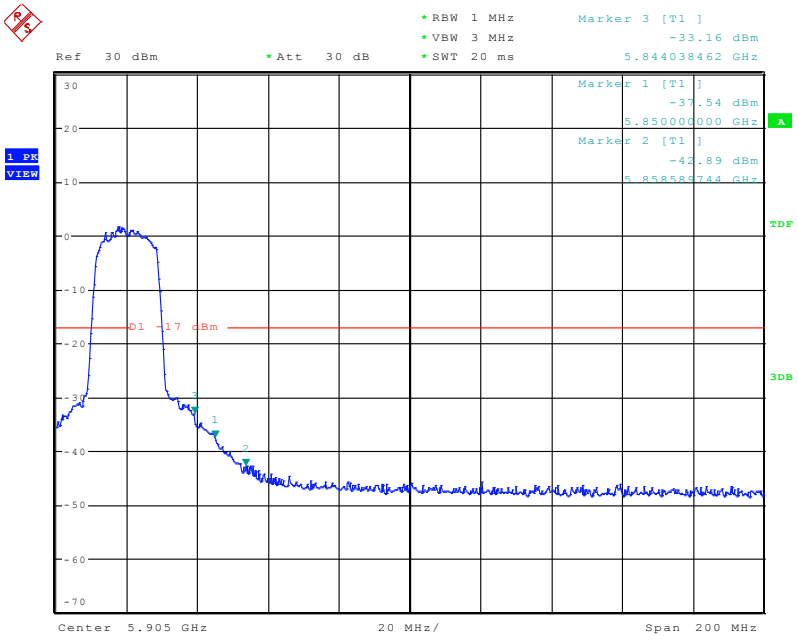
Channel High (5825MHz)



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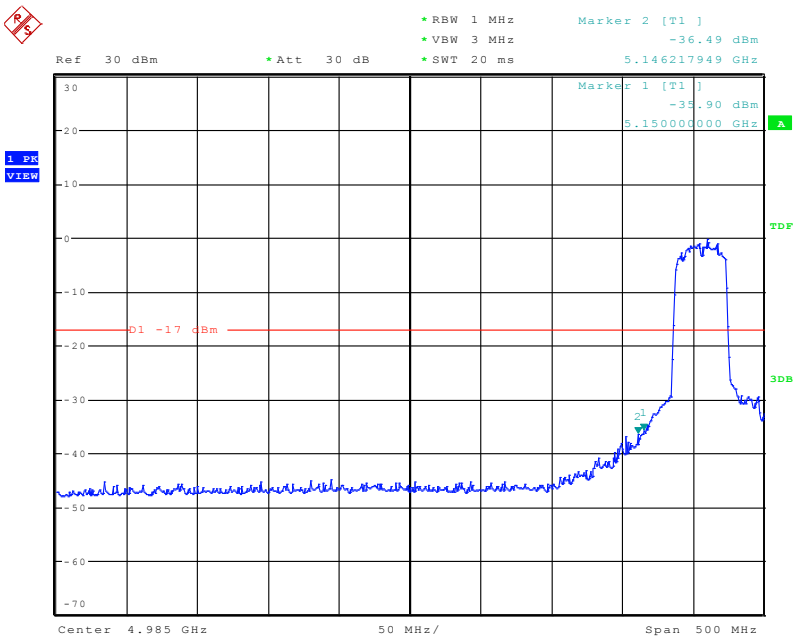
IEEE 802.11n 40MHz

Channel Low (5190MHz)



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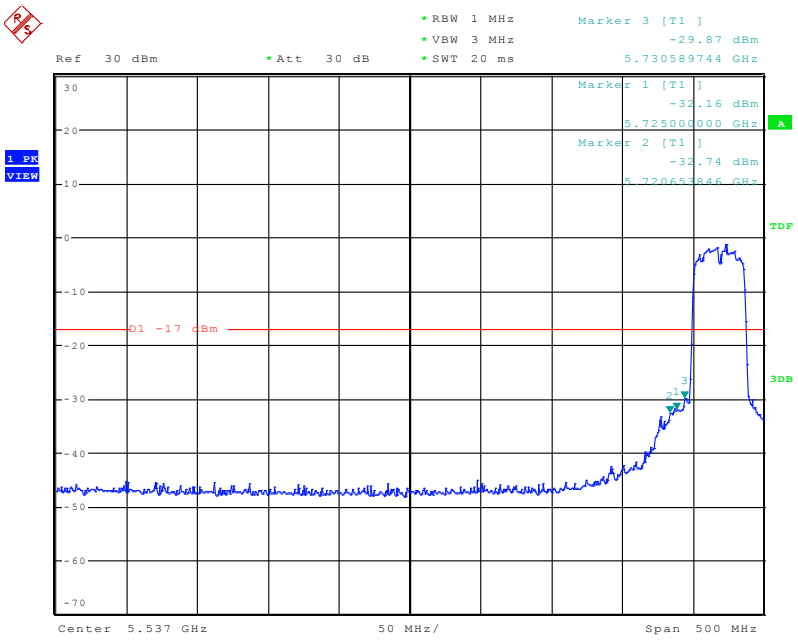
Channel Low (5755MHz)



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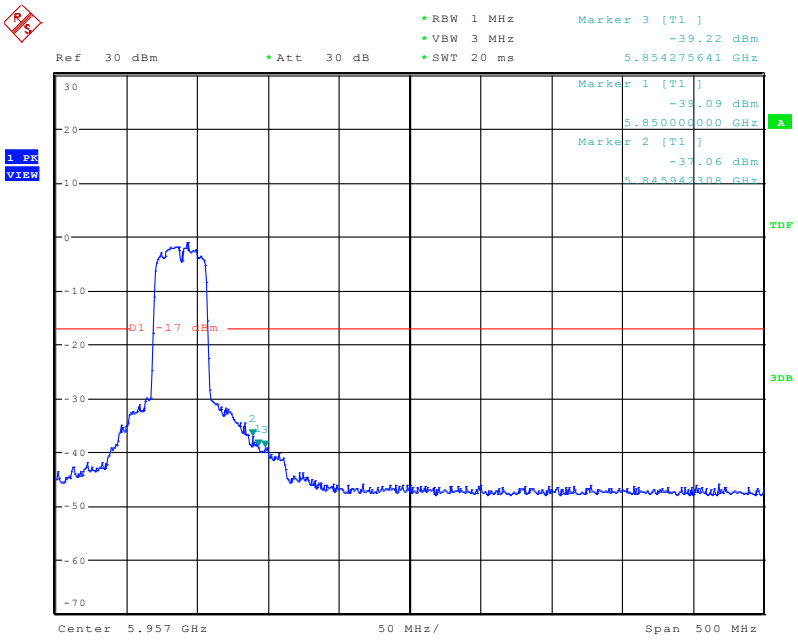
Channel High (5795MHz)



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9. IN RESTRICTED BAND

Test Requirement: FCC 47 CFR Part 15 Subpart E Section 15.407 (b)(1)(2)(3)(4)(6)
FCC 47 CFR Part 15 Subpart C Section 15.209/205

Test Method: KDB 789033 D02 v01r04 Section G.2

a) For all measurements, follow the requirements in II.G.3. “General Requirements for Unwanted Emissions Measurements.”

b) At frequencies below 1000 MHz, use the procedure described in II.G.4. “Procedure for Unwanted Emissions Measurements Below 1000 MHz.”

c) At frequencies above 1000 MHz, use the procedure for maximum emissions described in II.G.5., “Procedure for Unwanted Emissions Measurements Above 1000 MHz.”

(i) Sections 15.407(b)(1) to (b)(3) specify the unwanted emission limits for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of 27 dBm/MHz.3

(ii) Section 15.407(b)(4) specifies the unwanted emission limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are in terms of a Peak detector. An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the devices using the alternative limit.4

d) If radiated measurements are performed, field strength is then converted to EIRP as follows:

(i) EIRP = ((E×d)^2) / 30 where:
E is the field strength in V/m;
d is the measurement distance in meters;
EIRP is the equivalent isotropically radiated power in watts.

(ii) Working in dB units, the above equation is equivalent to:
EIRP[dBm] = E[dBμ V/m] + 20 log (d[meters]) -104.77

(iii) Or, if d is 3 meters:
EIRP[dBm] = E[dBμ V/m] -95.2

§15.205 Restricted bands of operation.

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2]Above 38.6

Test result

802.11a
Band1:5180MHz

Indicated		result (PK/AV)	Antenna Polar (H/V)	Correction Factor					
Frequency (MHz)	Receiver Reading (dBμV/m)			Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5150	30.83	AV	V	30.3	4.1	33.1	32.13	54	21.87
5150	29.61	AV	H	30.3	4.1	33.1	30.91	54	23.09
5150	40.20	PK	V	30.3	4.1	33.1	41.50	74	32.50
5150	40.13	PK	H	30.3	4.1	33.1	41.43	74	32.57
5050	31.13	AV	V	31	4.4	32.7	33.83	54	20.17
5050	30.13	AV	H	31	4.4	32.7	32.83	54	21.17
5050	39.42	PK	V	31	4.4	32.7	42.12	74	31.88
5050	39.28	PK	H	31	4.4	32.7	41.98	74	32.02

802.11n/H20
Band1:5180MHz

Indicated		result (PK/AV)	Antenna Polar (H/V)	Correction Factor					
Frequency (MHz)	Receiver Reading (dBμV/m)			Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5150	34.99	AV	V	30.3	4.1	33.1	36.29	54	17.71
5150	34.55	AV	H	30.3	4.1	33.1	35.85	54	18.15
5150	49.76	PK	V	30.3	4.1	33.1	51.06	74	22.94
5150	52.00	PK	H	30.3	4.1	33.1	53.30	74	20.70
5050	31.56	AV	V	31	4.4	32.7	34.26	54	19.74
5050	30.48	AV	H	31	4.4	32.7	33.18	54	20.82
5050	41.19	PK	V	31	4.4	32.7	43.89	74	30.11
5050	40.99	PK	H	31	4.4	32.7	43.69	74	30.31

802.11ac/H20
Band1:5180MHz

Indicated		result (PK/AV)	Antenna Polar (H/V)	Correction Factor					
Frequency (MHz)	Receiver Reading (dBμV/m)			Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5150	37.92	AV	V	30.3	4.1	33.1	39.22	54	14.78
5150	36.64	AV	H	30.3	4.1	33.1	37.94	54	16.06
5150	52.38	PK	V	30.3	4.1	33.1	53.68	74	20.32
5150	52.62	PK	H	30.3	4.1	33.1	53.92	74	20.08
5050	33.63	AV	V	31	4.4	32.7	36.33	54	17.67
5050	33.52	AV	H	31	4.4	32.7	36.22	54	17.78
5050	45.91	PK	V	31	4.4	32.7	48.61	74	25.39
5050	45.63	PK	H	31	4.4	32.7	48.33	74	25.67

802.11n/H40
Band1:5190MHz

Indicated		result (PK/AV)	Antenna Polar (H/V)	Correction Factor					
Frequency (MHz)	Receiver Reading (dBμV/m)			Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5150	29.25	AV	V	30.3	4.1	33.1	30.55	54	23.45
5150	29.60	AV	H	30.3	4.1	33.1	30.90	54	23.10
5150	42.00	PK	V	30.3	4.1	33.1	43.30	74	30.70
5150	41.49	PK	H	30.3	4.1	33.1	42.79	74	31.21
5050	30.43	AV	V	31	4.4	32.7	33.13	54	20.87
5050	32.03	AV	H	31	4.4	32.7	34.73	54	19.27
5050	40.75	PK	V	31	4.4	32.7	43.45	74	30.55
5050	41.32	PK	H	31	4.4	32.7	44.02	74	29.98

802.11ac/H40
Band1:5190MHz

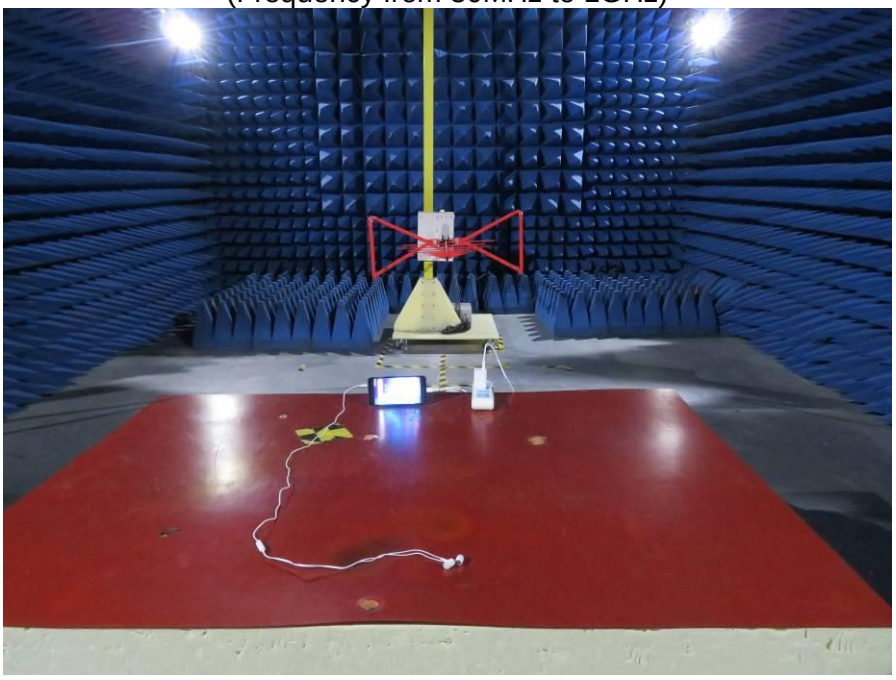
Indicated		result (PK/AV)	Antenna Polar (H/V)	Correction Factor					
Frequency (MHz)	Receiver Reading (dBμV/m)			Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5150	34.39	AV	V	30.3	4.1	33.1	35.69	54	18.31
5150	34.75	AV	H	30.3	4.1	33.1	36.05	54	17.95
5150	51.81	PK	V	30.3	4.1	33.1	53.11	74	20.89
5150	49.27	PK	H	30.3	4.1	33.1	50.57	74	23.43
5050	30.42	AV	V	31	4.4	32.7	33.12	54	20.88
5050	29.48	AV	H	31	4.4	32.7	32.18	54	21.82
5050	41.39	PK	V	31	4.4	32.7	44.09	74	29.91
5050	41.12	PK	H	31	4.4	32.7	43.82	74	30.18

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
And only worst case is presented in this report.

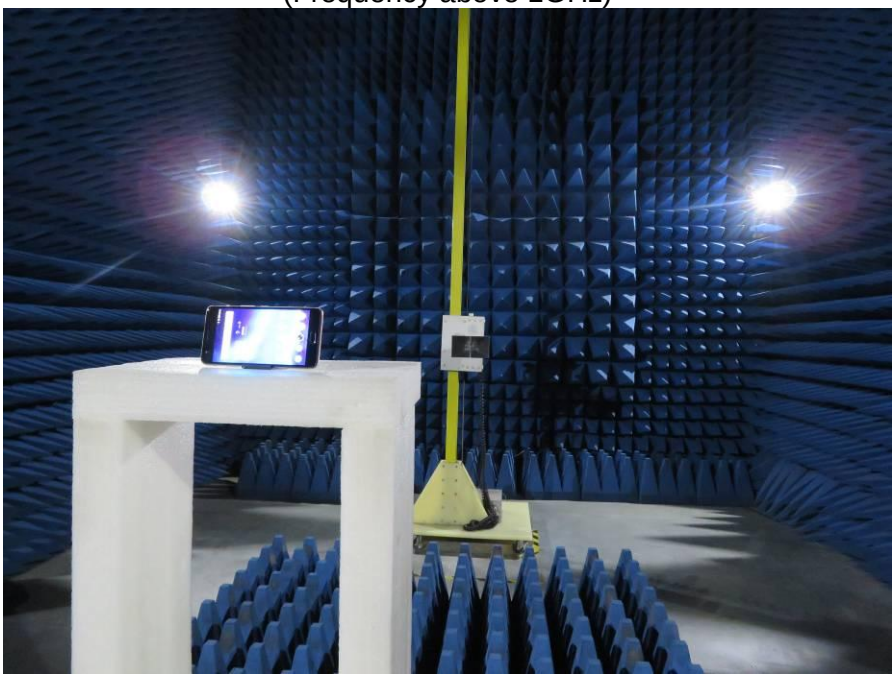
10. EUT TEST PHOTO

CONDUCTED EMISSION TEST

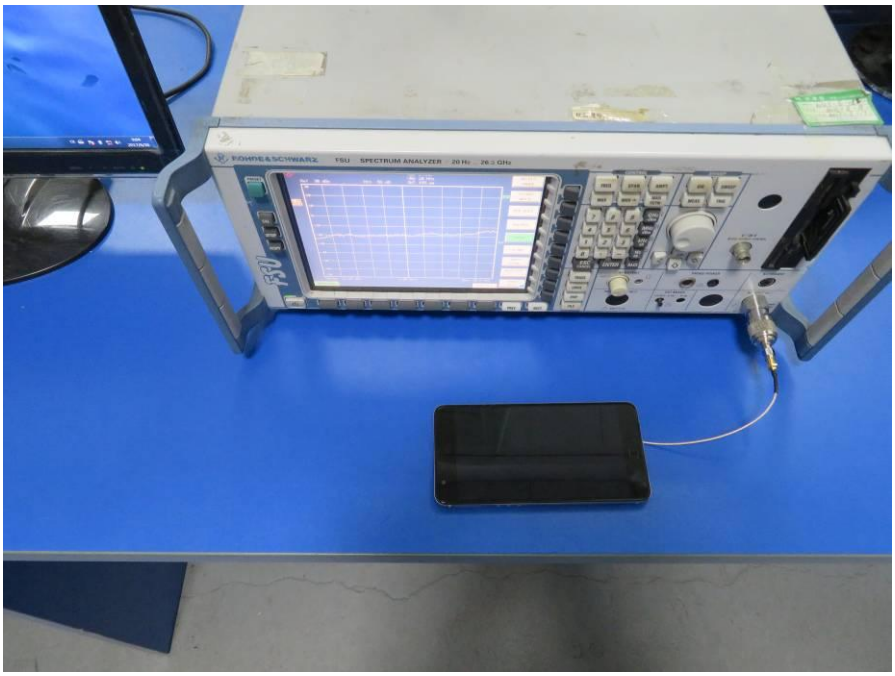
RADIATED EMISSION TEST
(Frequency from 30MHz to 1GHz)



RADIATED EMISSION TEST
(Frequency above 1GHz)



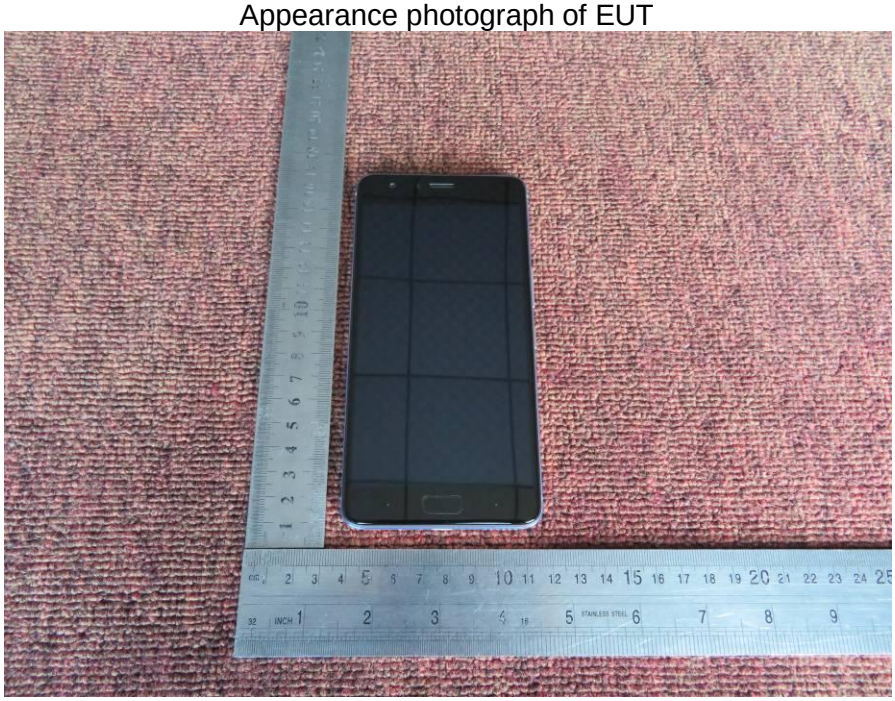
RF TEST



11. PHOTOGRAPHS OF EUT

Appearance photograph of EUT

Appearance photograph of EUT



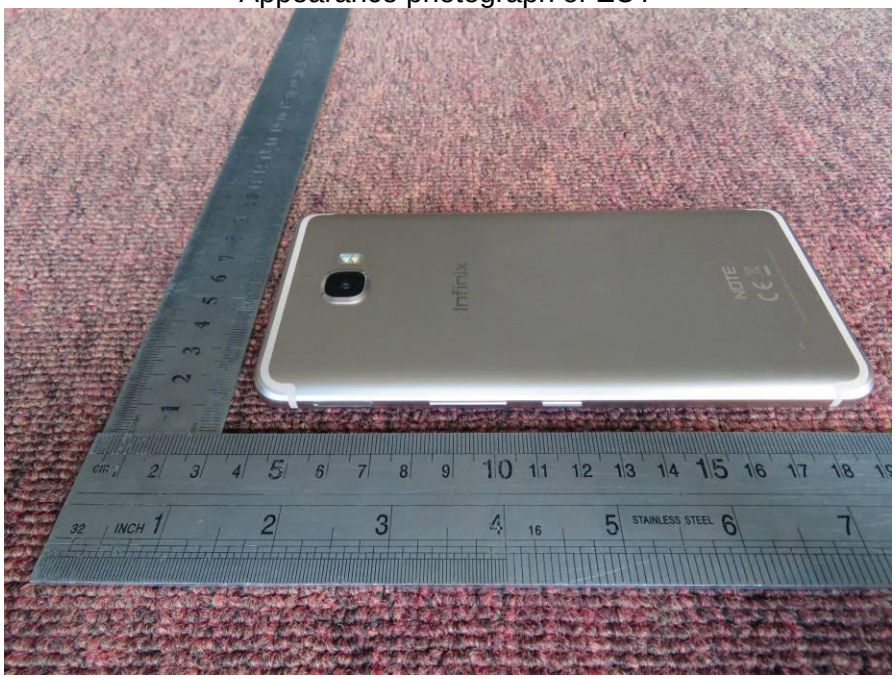
Appearance photograph of EUT

Appearance photograph of EUT

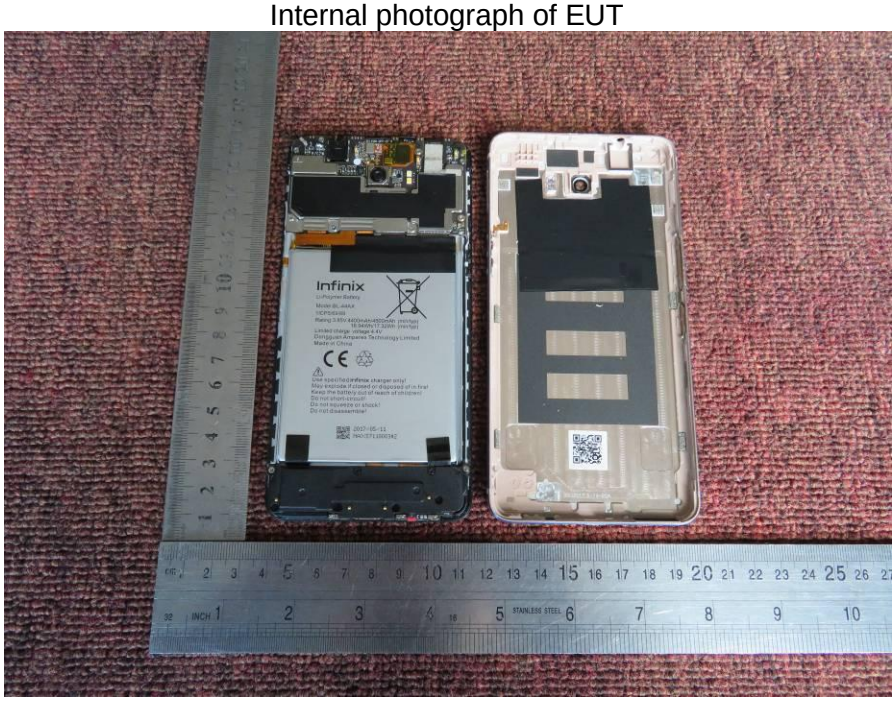
Appearance photograph of EUT

Appearance photograph of EUT

Appearance photograph of EUT



Internal photograph of EUT



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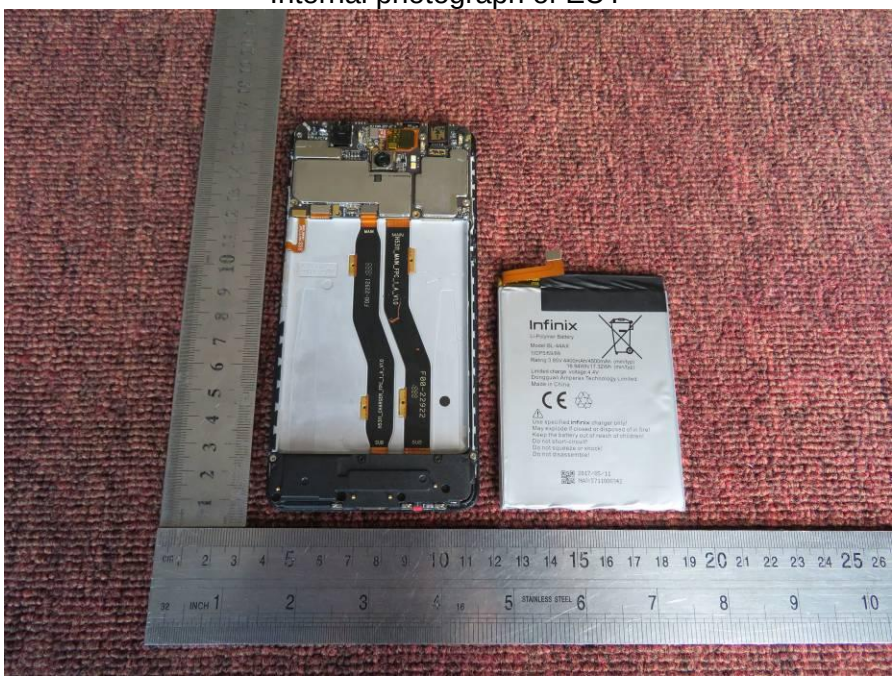
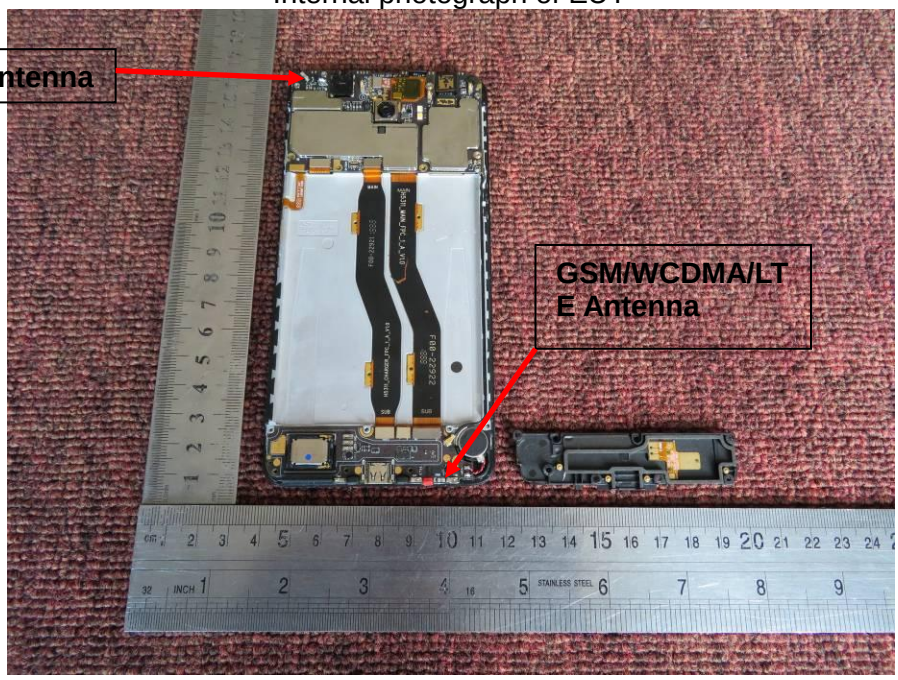


Internal photograph of EUT

Internal photograph of EUT

Internal photograph of EUT



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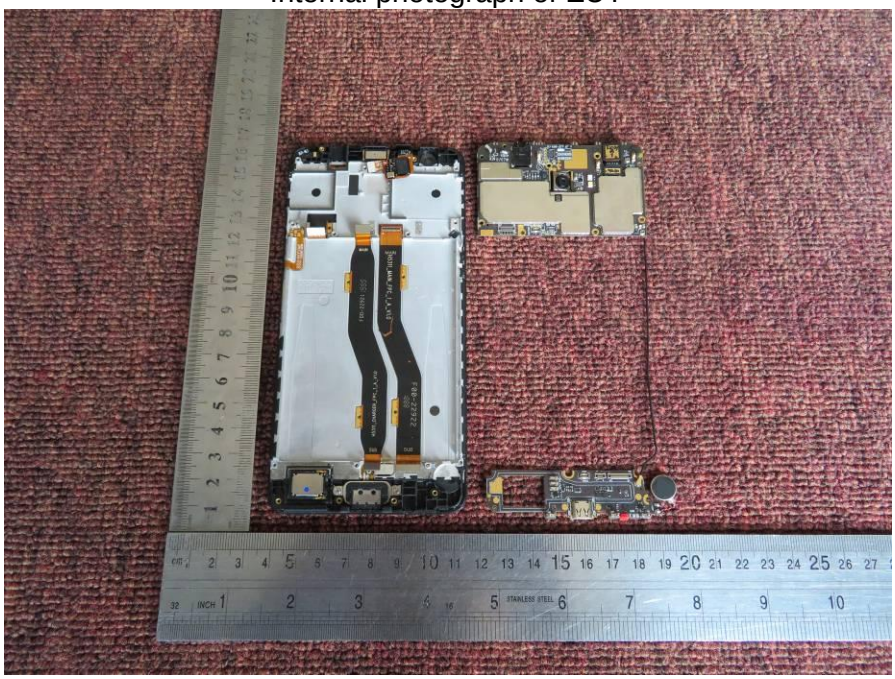

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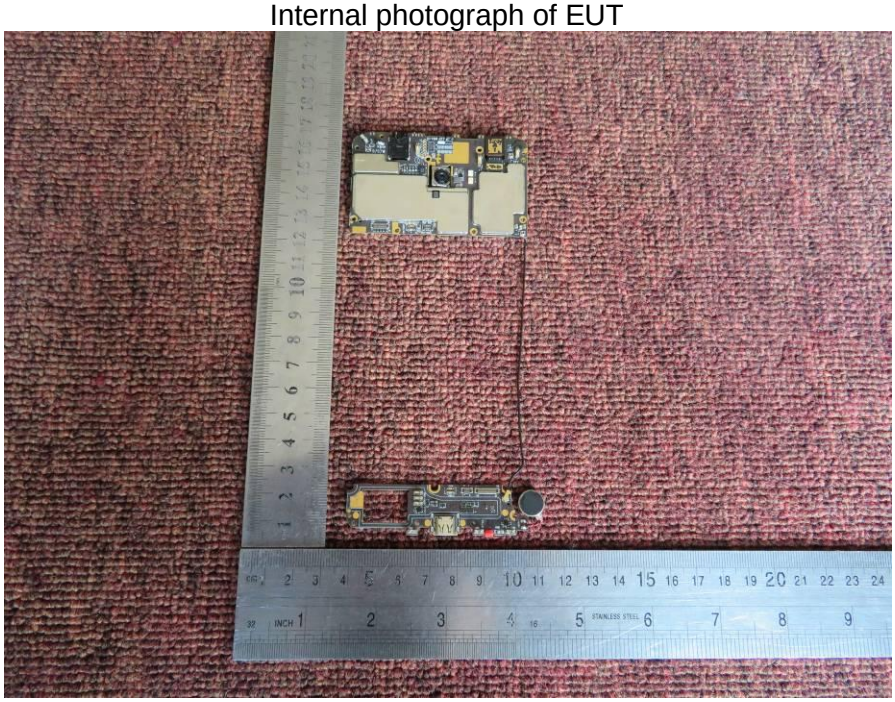

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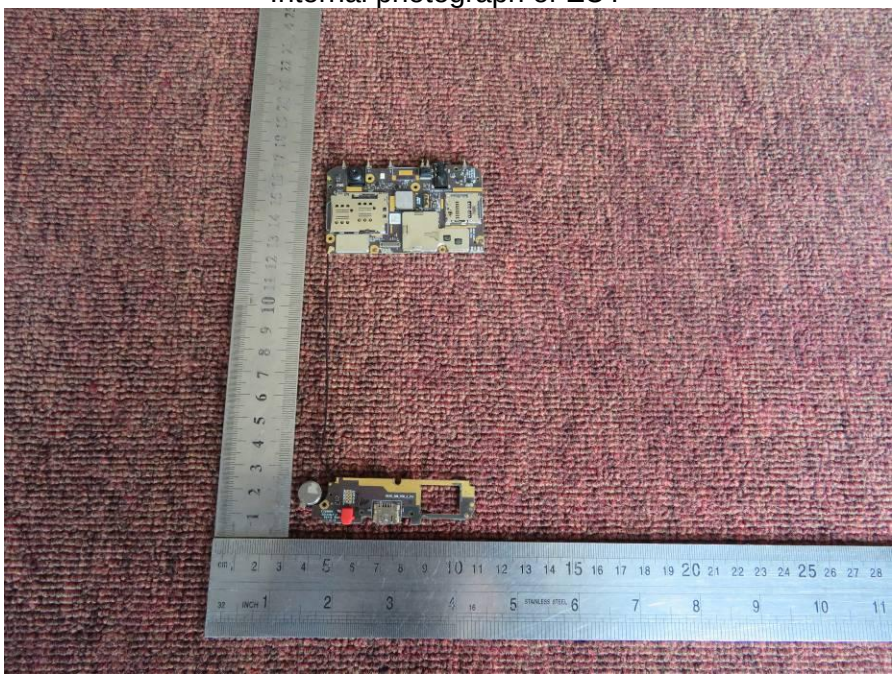

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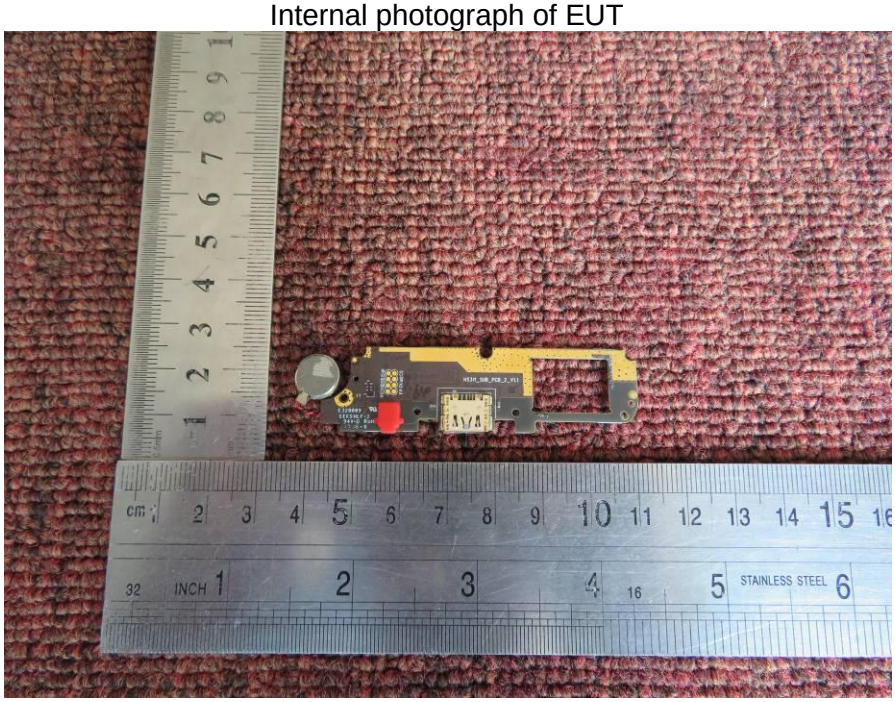

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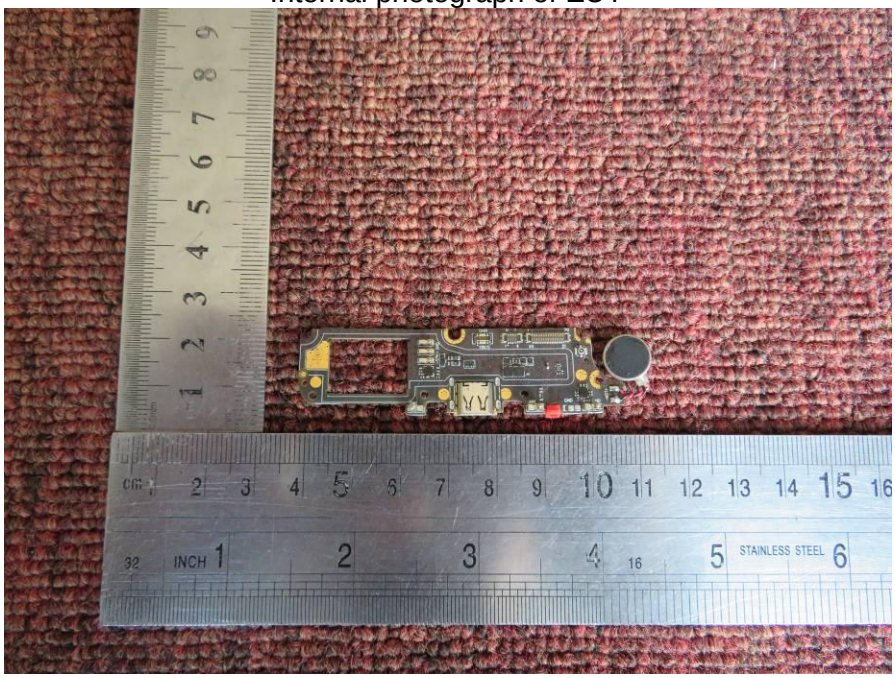

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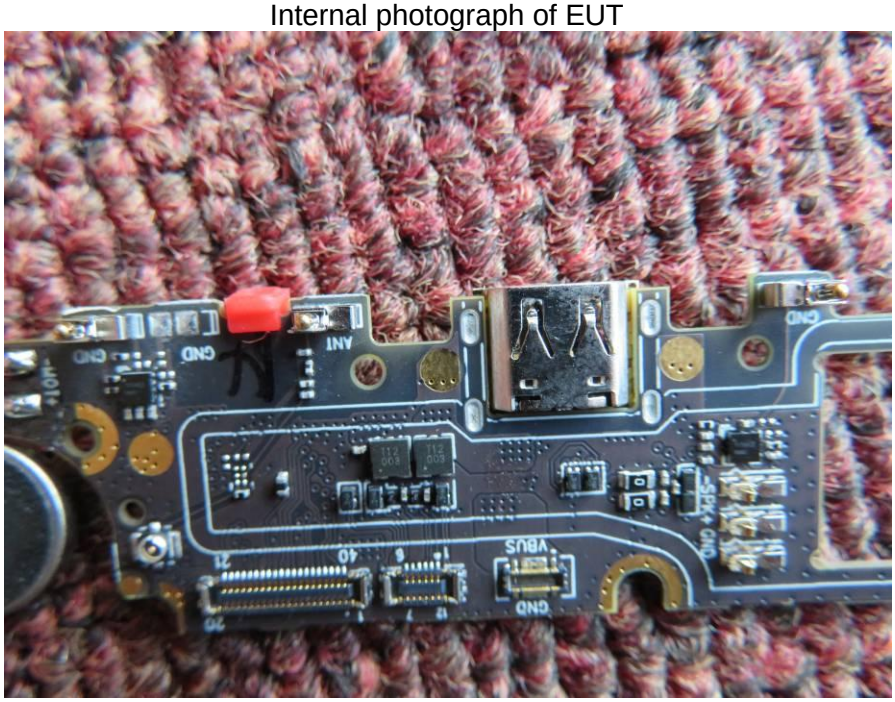

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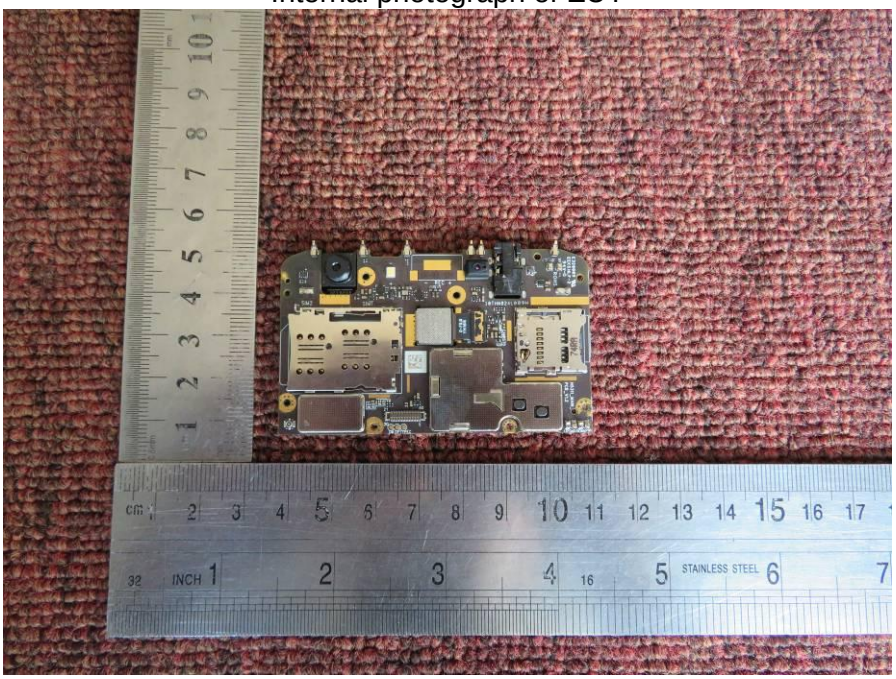

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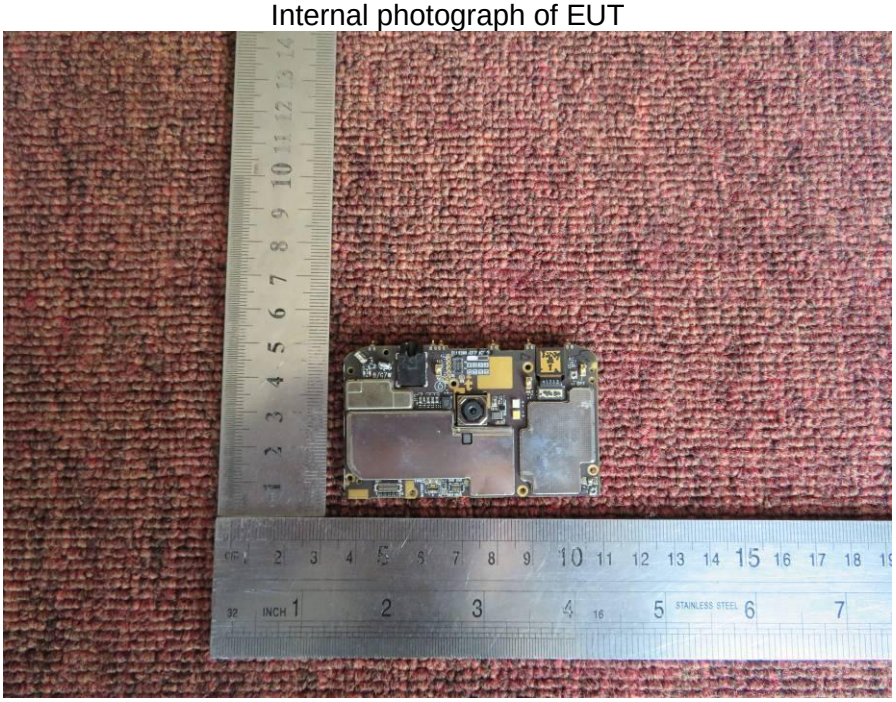

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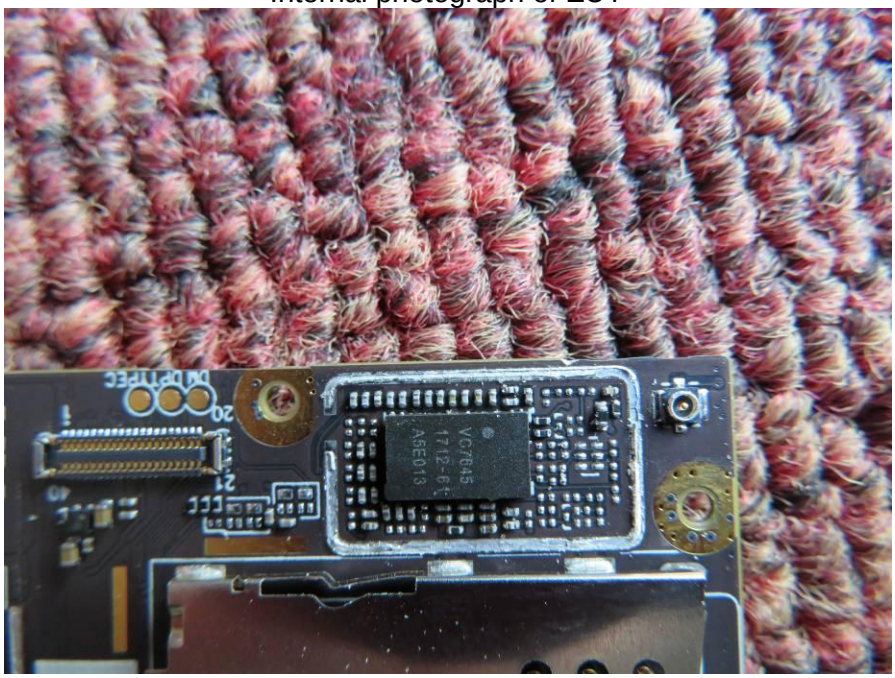

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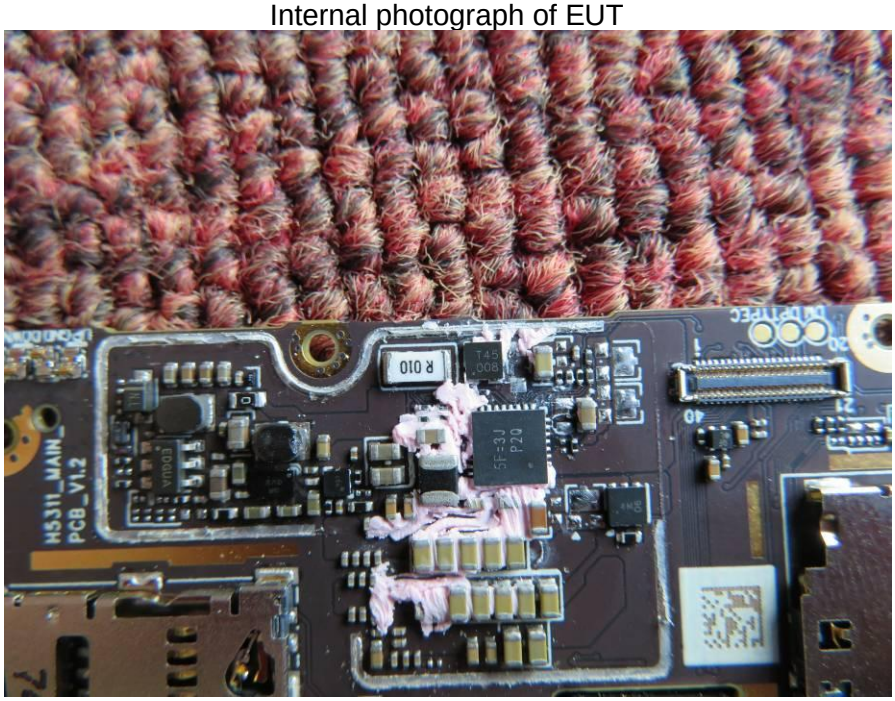

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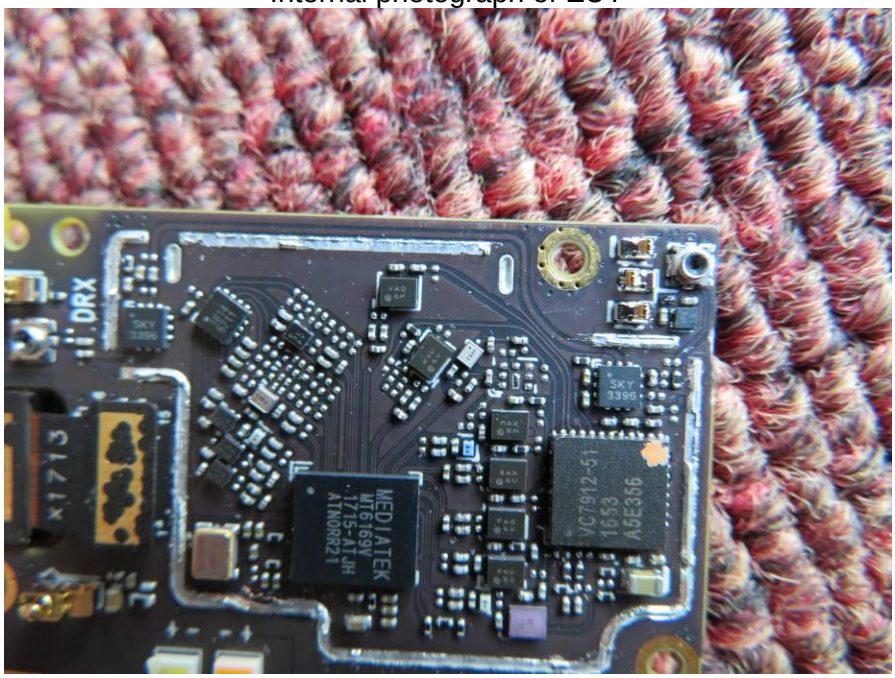

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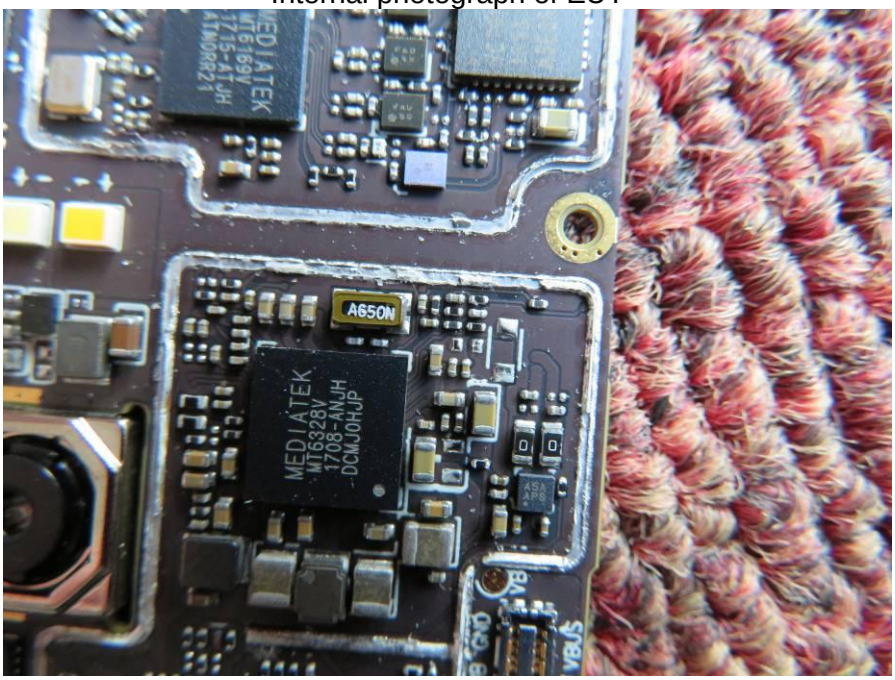
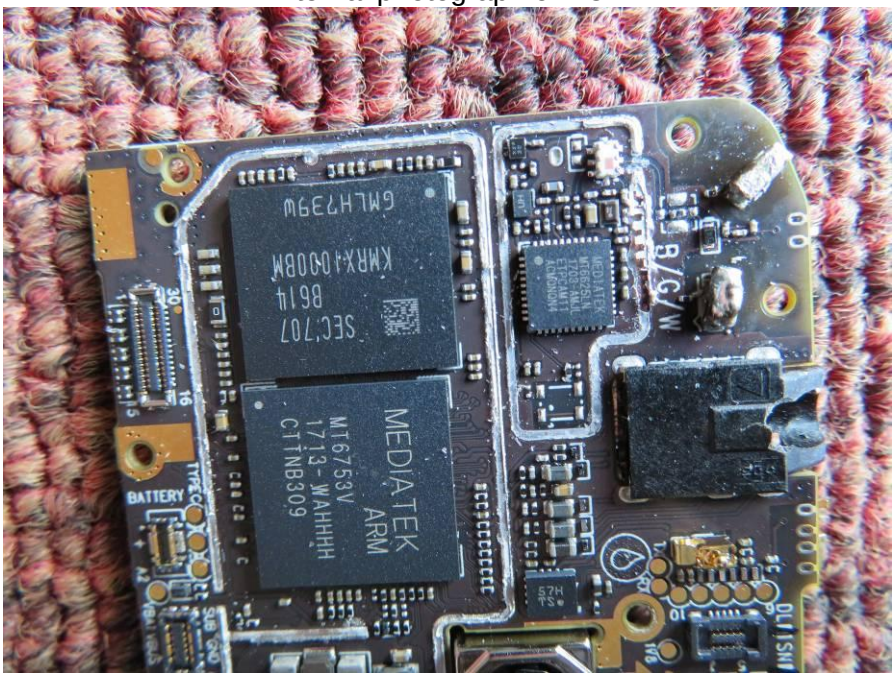


Internal photograph of EUT



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