

# FCC Test Report

**Application Purpose** : Original grant  
**Applicant Name:** INFINIX MOBILITY LIMITED  
**FCC ID** : 2AIZN-X522  
**Equipment Type** : Mobile phone  
**Model Name** : X522  
**Report Number** : FCC17010001A-7  
**Standard(S)** : FCC Part 15 Subpart E  
**Date Of Receipt** : January 04, 2017  
**Date Of Issue** : February 15, 2017

**Test By**

:  
  
\_\_\_\_\_  
(Daisy Qin)

**Reviewed By**

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\_\_\_\_\_  
(Sol Qin)

**Authorized by**

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\_\_\_\_\_  
(Michal Ling)

**Prepared by**

:  
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518000China. **Registration Number: 588523**

**REPORT REVISE RECORD**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	February 15, 2017	Valid	Original Report

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## 1. GENERAL INFORMATION

### GENERAL DESCRIPTION OF EUT

Test Model	X522
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	<b>Infinix</b>
Hardware version:	H539_B1_V1.2
Software version:	X522-H539D1-M-161206V23
Extreme Temp. Tolerance	-10°C to +65°C
Battery information:	Li-Polymer Battery : BL-30SX Voltage: 3.85V Capacity: 3000mAh Limited Charge Voltage: 4.4V
Adapter Information:	Adapter: A88-502000 Input: 100~240V 50/60Hz 350mA Output: 5V~2A
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:	1.0dBi
Date of receipt	January 04, 2017
Date of test	January 05, 2017 to February 14 , 2017
Deviation	None
Condition of Test Sample	Normal

**EUT Specification:**

Items	Description	
<b>Modulation</b>	IEEE 802.11a: OFDM IEEE 802.11n: see the below table IEEE 802.11ac: see the below table	
<b>Data Modulation</b>	IEEE 802.11a/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) IEEE 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)	
<b>Data Rate (Mbps)</b>	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	
<b>Frequency Range</b>	Band 1: 5150 MHz ~ 5250 MHz Band 2: 5250 MHz ~ 5350 MHz Band 4: 5725 MHz ~ 5850 MHz	
<b>Channel Number</b>	13 for 20MHz bandwidth ; 6 for 40MHz bandwidth ; 3 for 80MHz bandwidth	
<b>Communication Mode</b>	<input checked="" type="checkbox"/> IP Based (Load Based) <input type="checkbox"/> Frame Based	
<b>TPC Function</b>	<input type="checkbox"/> With TPC <input checked="" type="checkbox"/> Without TPC	
<b>Weather Band</b>	<input type="checkbox"/> With 5600~5650MHz <input checked="" type="checkbox"/> Without 5600~5650MHz	
<b>Beamforming Function</b>	<input type="checkbox"/> With beamforming <input checked="" type="checkbox"/> Without beamforming	
<b>Operating Mode</b>	<input type="checkbox"/> Outdoor access point <input type="checkbox"/> Indoor access point	
	<input type="checkbox"/> Fixed point-to-point access points <input checked="" type="checkbox"/> Mobile and portable client devices	
	<input type="checkbox"/> Master <input type="checkbox"/> Slave with radar detection	
	<input checked="" type="checkbox"/> Slave without radar detection	

Antenna	One (TX)		
<b>Band width Mode</b>	20 MHz	40 MHz	80 MHz
<b>IEEE 802.11a</b>	V	X	X
<b>IEEE 802.11n</b>	V	V	X
<b>IEEE 802.11ac</b>	V	V	V

Protocol	Number of Transmit Chains (NTX)	Data Rate / MCS
<b>802.11n (HT20)</b>	1	MCS 0-15
<b>802.11n (HT40)</b>	1	MCS 0-15
<b>802.11ac (HT20)</b>	1	MCS 0-9
<b>802.11ac (HT40)</b>	1	MCS 0-9
<b>802.11ac (HT80)</b>	1	MCS 0-9

Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 and HT80 (HT: High Throughput). Then EUT supports HT20 and HT40 and HT80.

Note 2: Modulation modes consist of below configuration:

HT20/HT40: IEEE 802.11n

HT20/HT40/HT80: 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:	<p>a.)The EUT was tested according to ANSI C63.10.</p> <p>b)The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high <u>1.5</u> m. All set up is according to ANSI C63.10.</p> <p>c)The frequency spectrum from <u>9</u> kHz to 40 GHz was investigated. All readings from <u>9</u> kHz to <u>150</u> kHz are quasi-peak values with a resolution bandwidth of <u>200</u> Hz. All readings from <u>150</u> kHz to <u>30</u> MHz are quasi-peak values with a resolution bandwidth of <u>9</u> KHz. All readings from <u>30</u> MHz to <u>1</u> GHz are quasi-peak values with a resolution bandwidth of <u>120</u> KHz. All readings are above <u>1</u> GHz , peak values with a resolution bandwidth of <u>1</u> MHz . Measurements were made at <u>3</u> meters.</p> <p>d)The emissions from the EUT were measured continuously at every azimuth by rotating the turntable. The Receiving antenna high is varied from <u>1</u> m to <u>4</u> 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.</p> <p>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.</p> <p>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.</p>
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#### Band Edge Emissions Measurement:

##### Test Equipment Setting:

a)Attenuation: Auto	d)RBW/VBW(Emission in non-restricted band) 1MHz / 3MHz for peak
b)Span Frequency: 100 MHz c)RBW/VBW (Emission in restricted band): 1MHz / 3MHz for Peak, 1MHz / 1/T for Average	

### 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:	<p>For transmitters operating in the 5.15-5.35 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.</p> <p>For transmitters operating in the 5.470-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.</p> <p>For transmitters operating in the 5.725-5.85 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.</p> <p>In any 100 KHz bandwidth outside the operating frequency band, the radio frequency power that is produced by modulation products of the spreading sequence, the information sequence and the carrier frequency shall be either at least 20 dB below that in any 100 KHz bandwidth within the band that contains the highest level of the desired power or shall not exceed the general levels specified in section 15.209(a), which lesser attenuation.</p> <p>All other emissions inside restricted bands specified in section 15.205(a) shall not exceed the general radiated emission limits specified in section 15.209(a)</p>
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### 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.

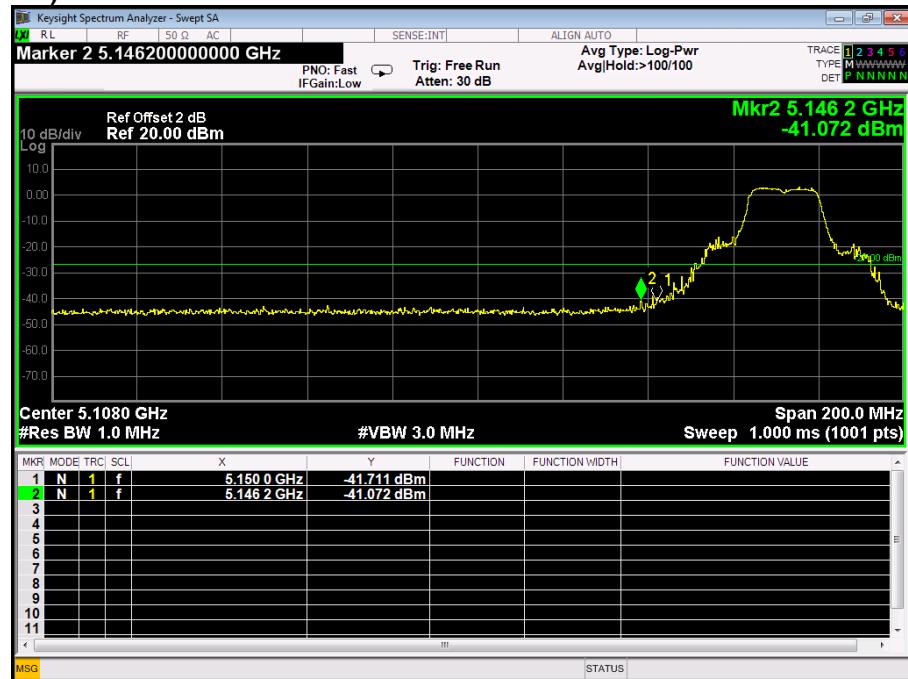
## 8. 7 Test Result

### Band Edge and Fundamental Emissions

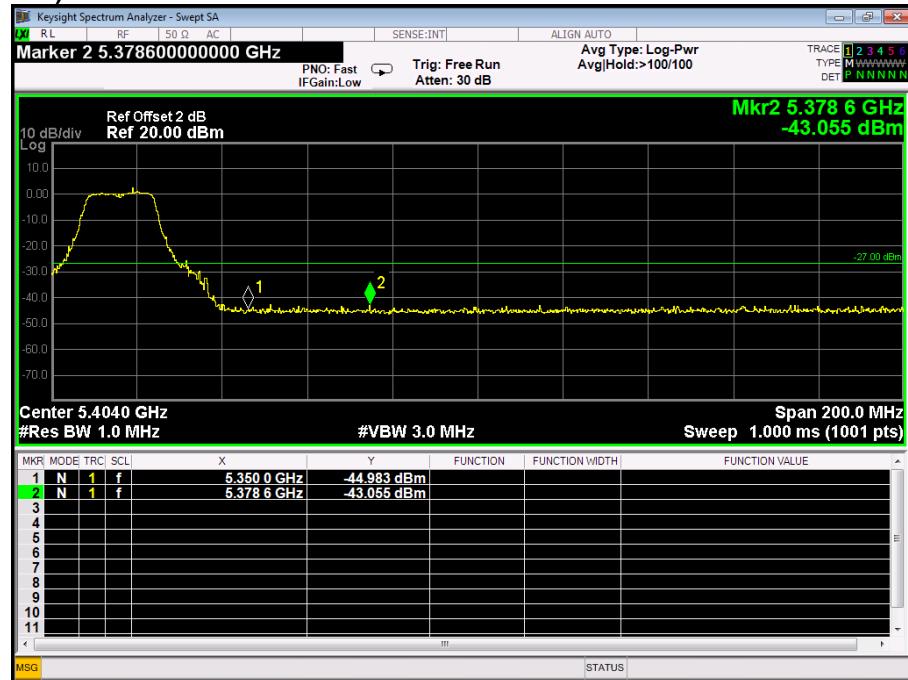
<b>Product:</b>	Mobile Phone	<b>Test Mode:</b>	IEEE 802.11a/n/ac 5G
<b>Test Item:</b>	Band Edge and Fundamental Emissions	<b>Temperature:</b>	25 °C
<b>Test Voltage:</b>	DC 5V	<b>Humidity:</b>	56%RH
<b>Test Result:</b>	PASS		

### IEEE 802.11a

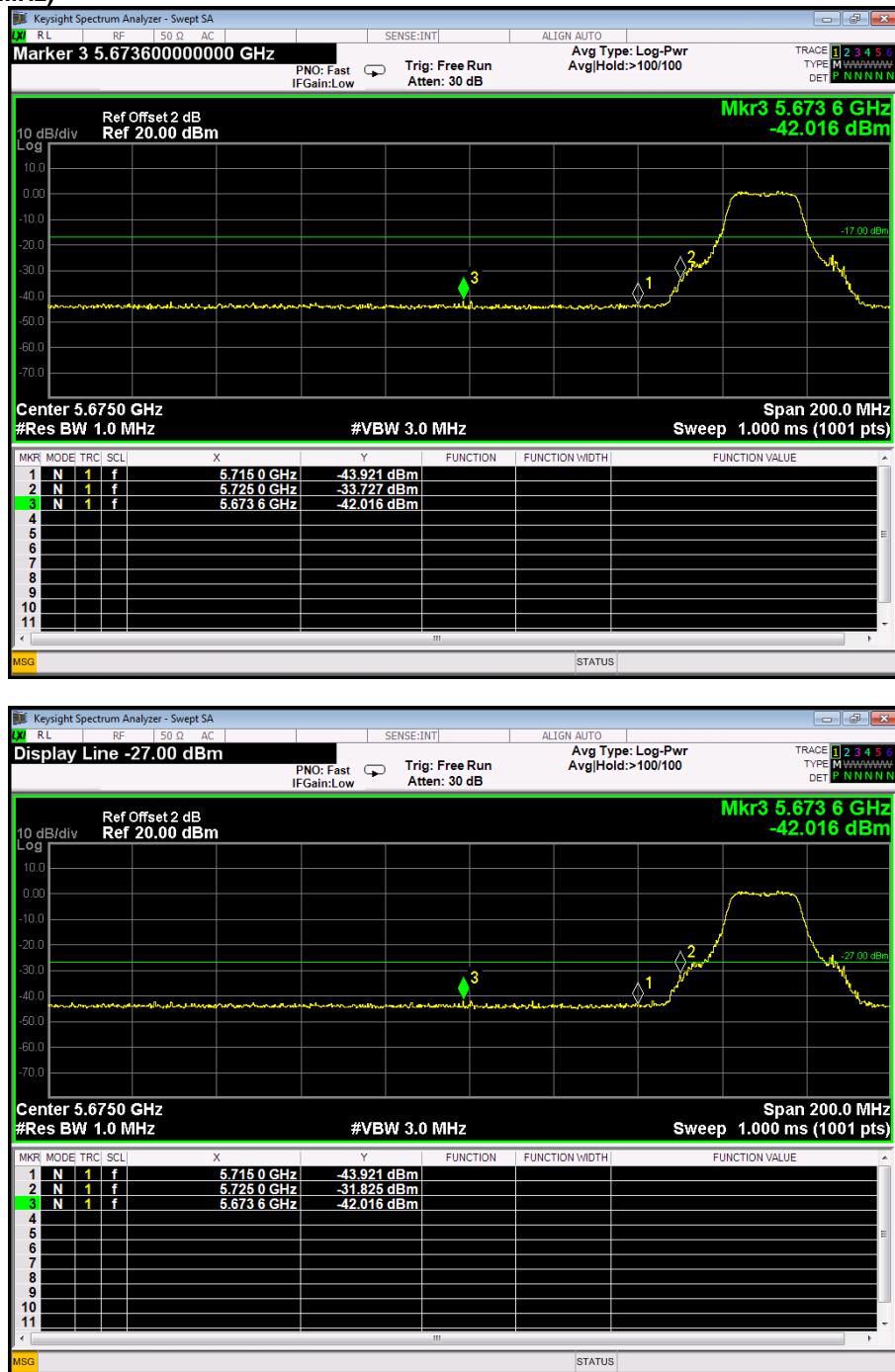
#### Channel Low (5180MHz)



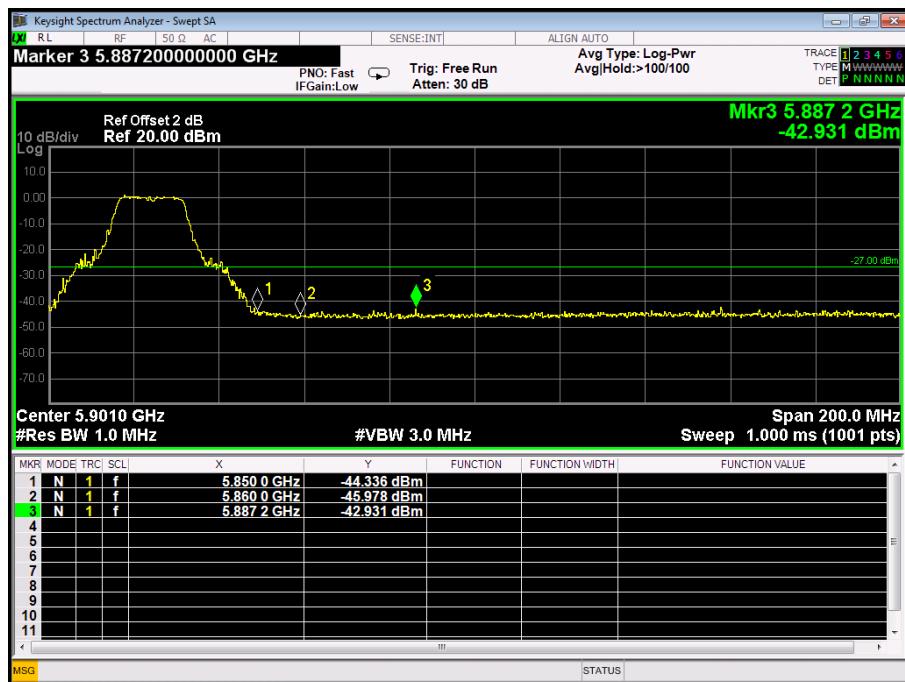
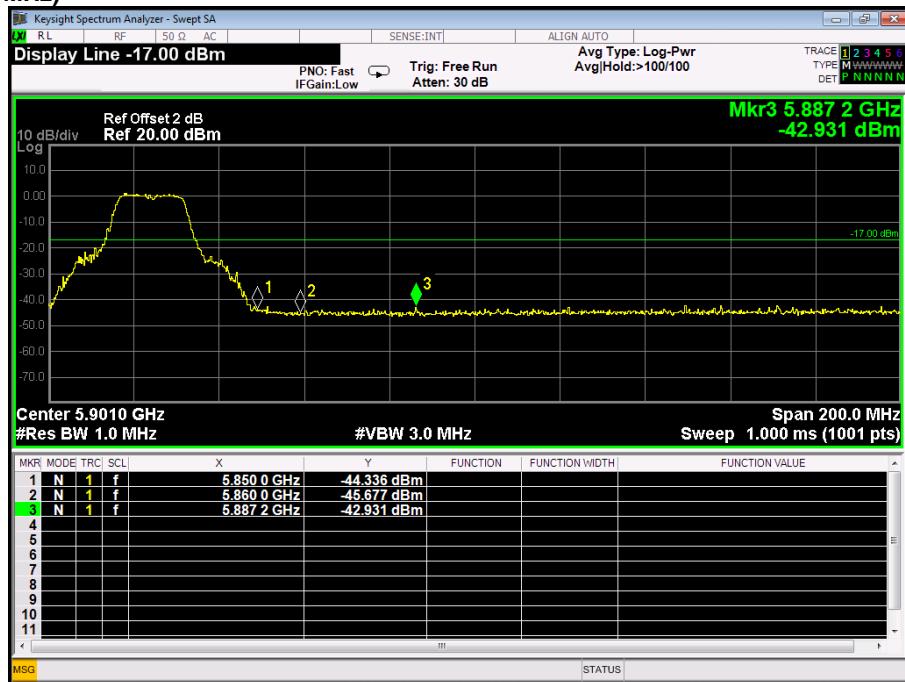
#### Channel High (5320MHz)



## Channel Low (5745MHz)

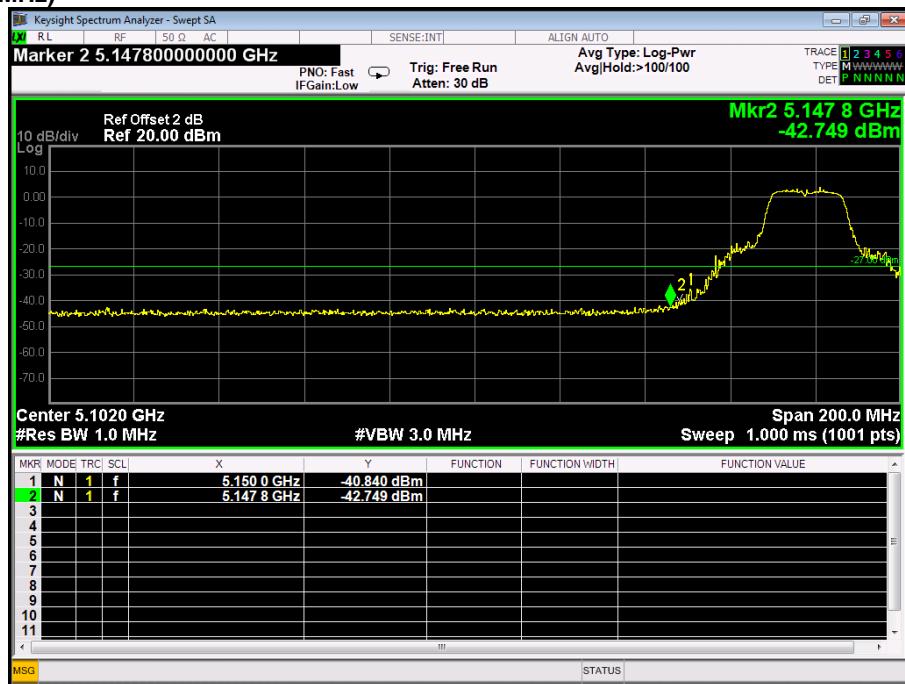


## Channel High (5825MHz)

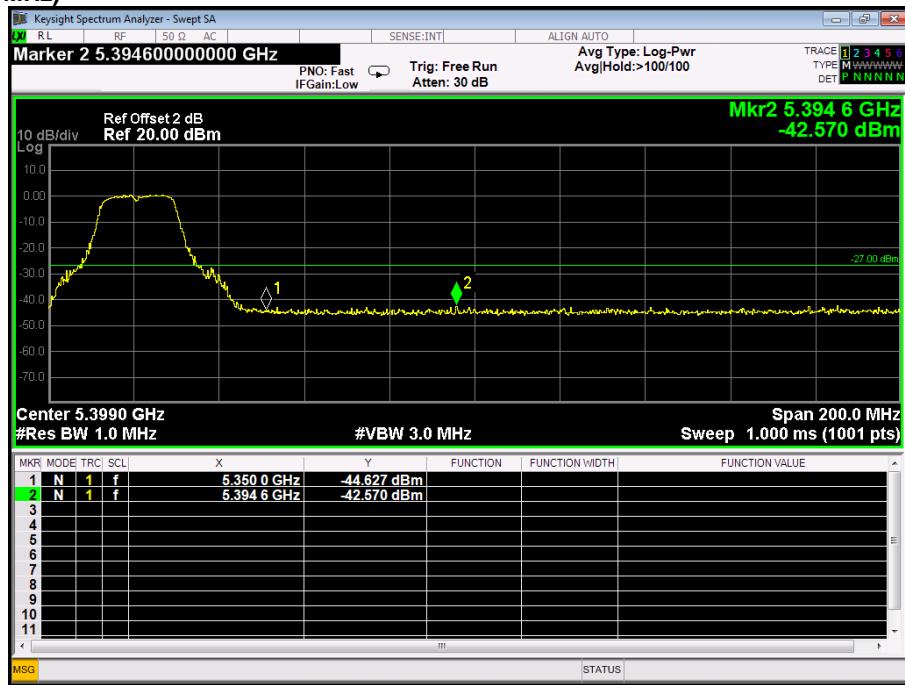


## IEEE 802.11n 20MHz

## Channel Low (5180MHz)



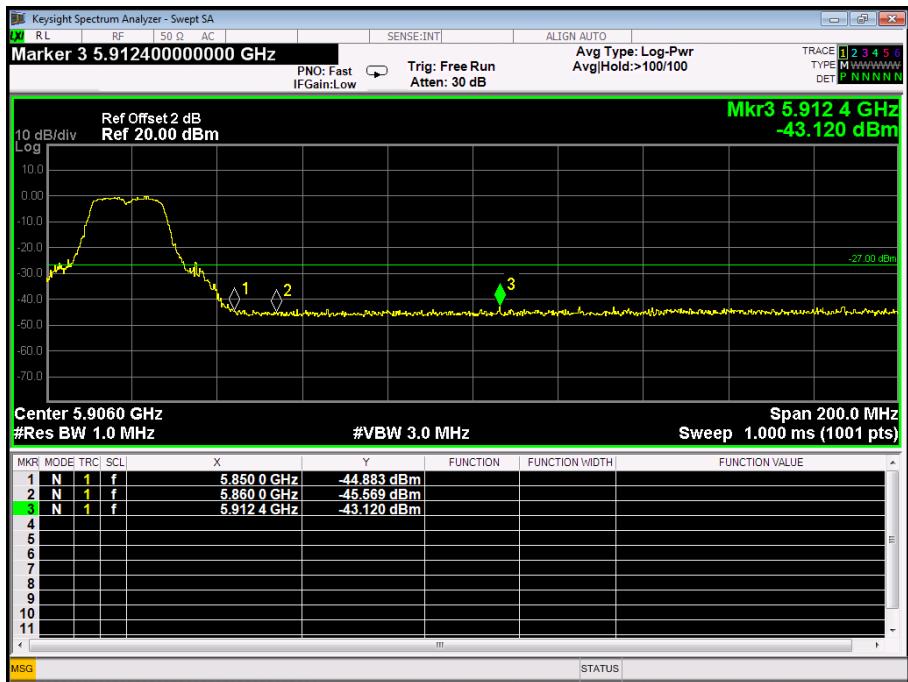
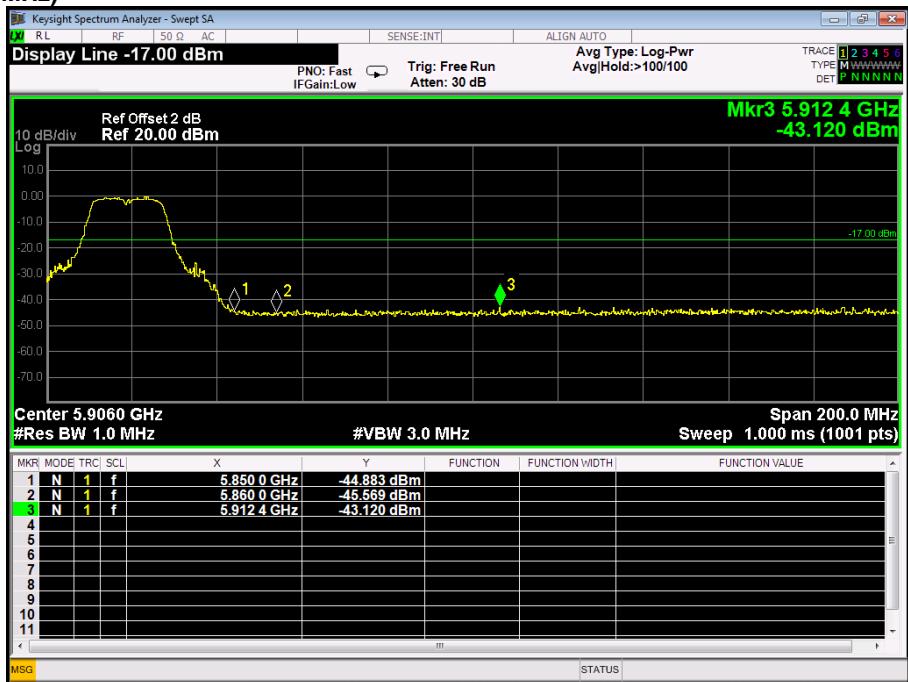
## Channel High (5320MHz)



## Channel Low (5745MHz)

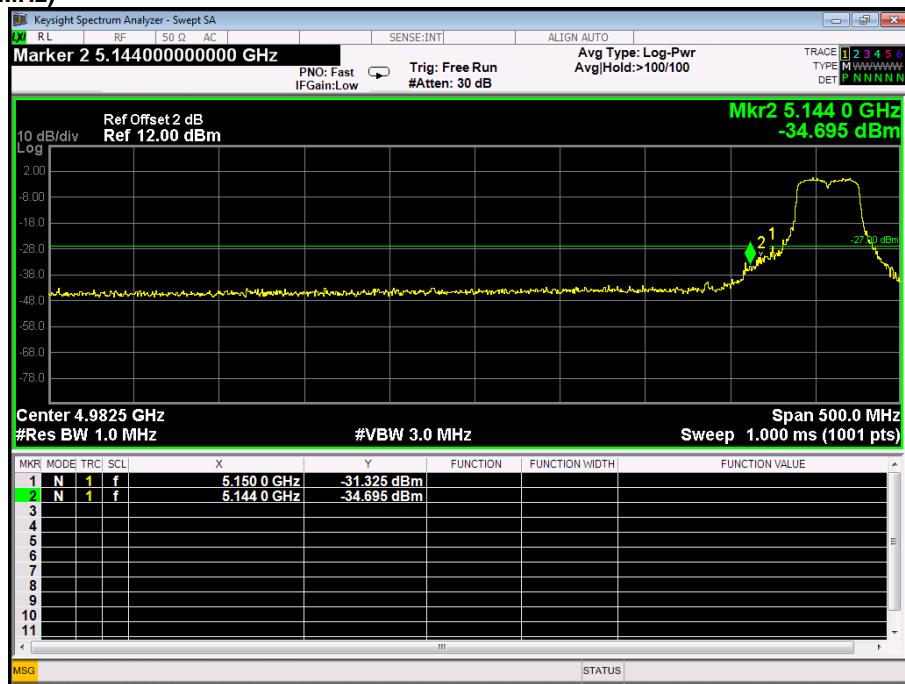


## Channel High (5825MHz)

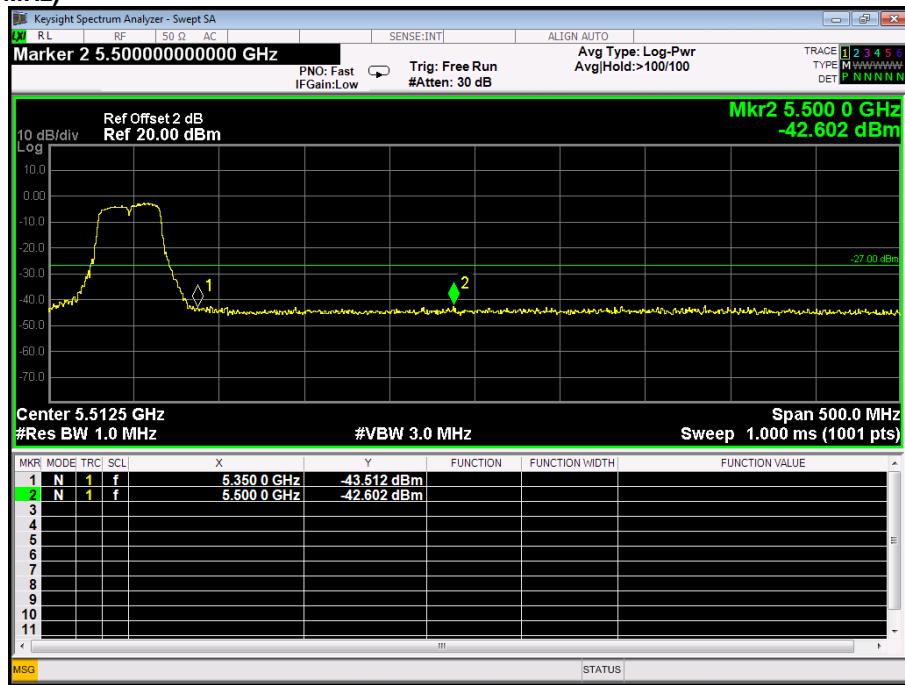


## IEEE 802.11n 40MHz

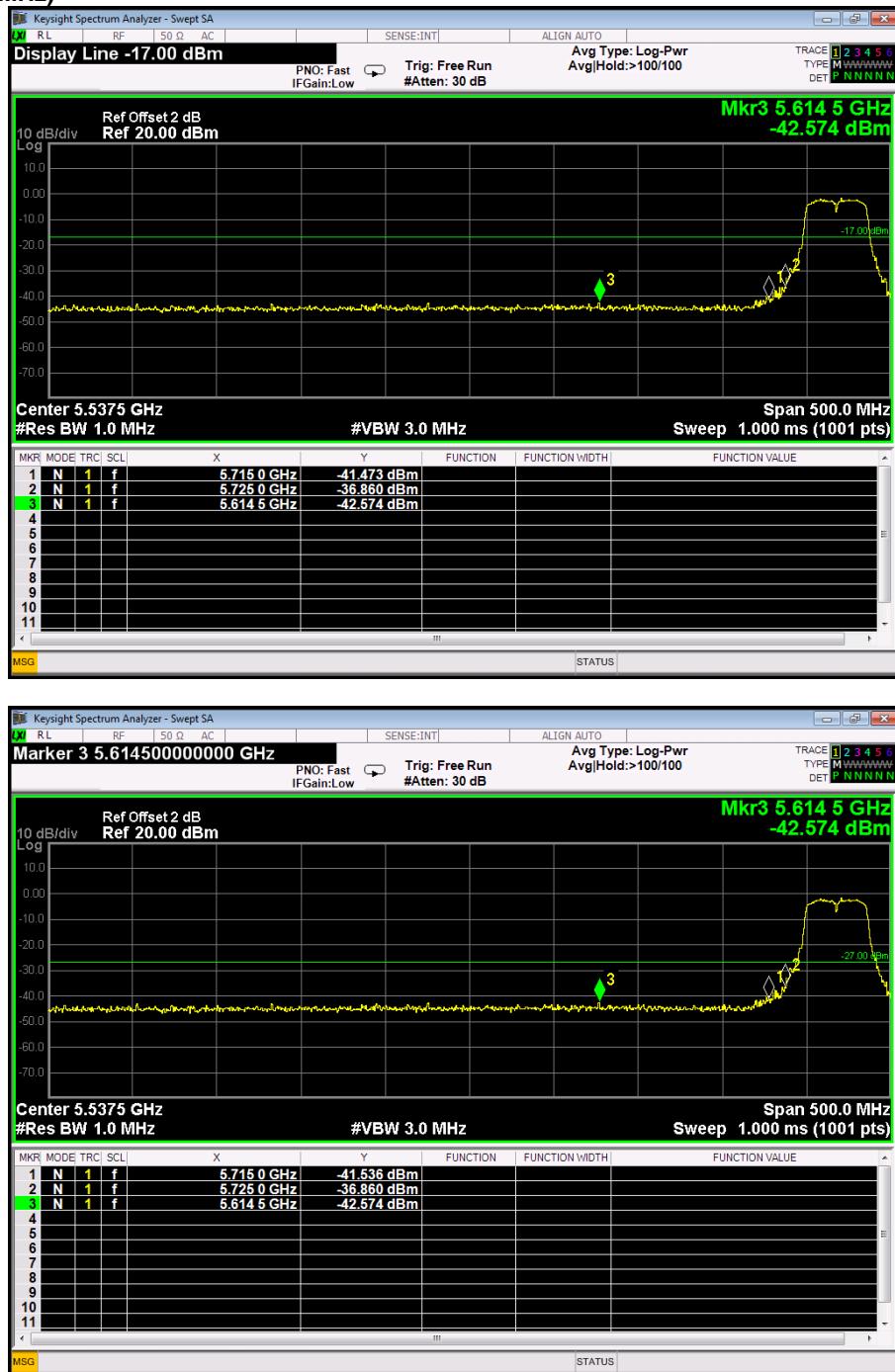
## Channel Low (5190MHz)



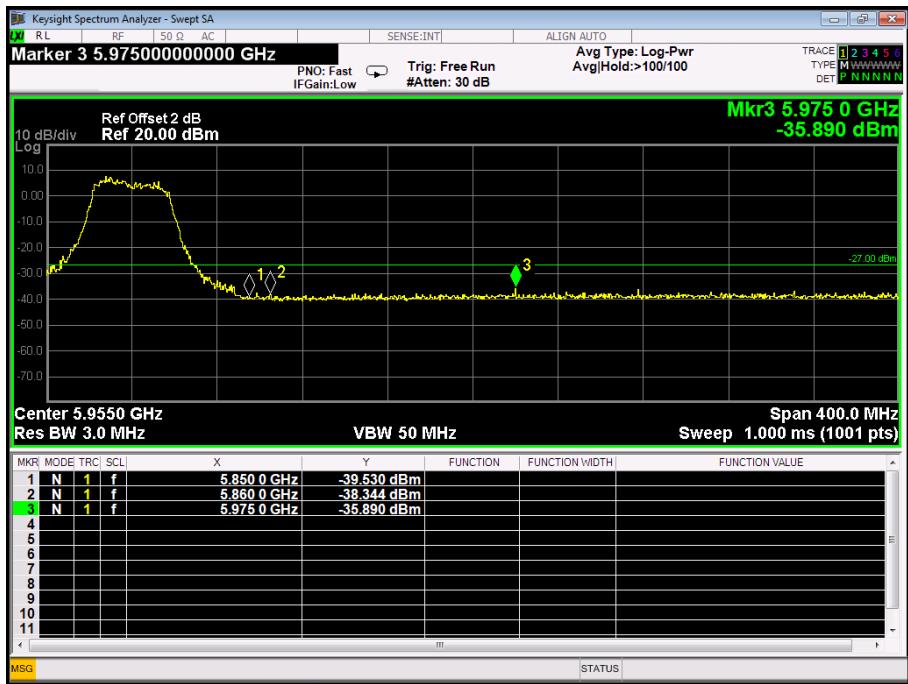
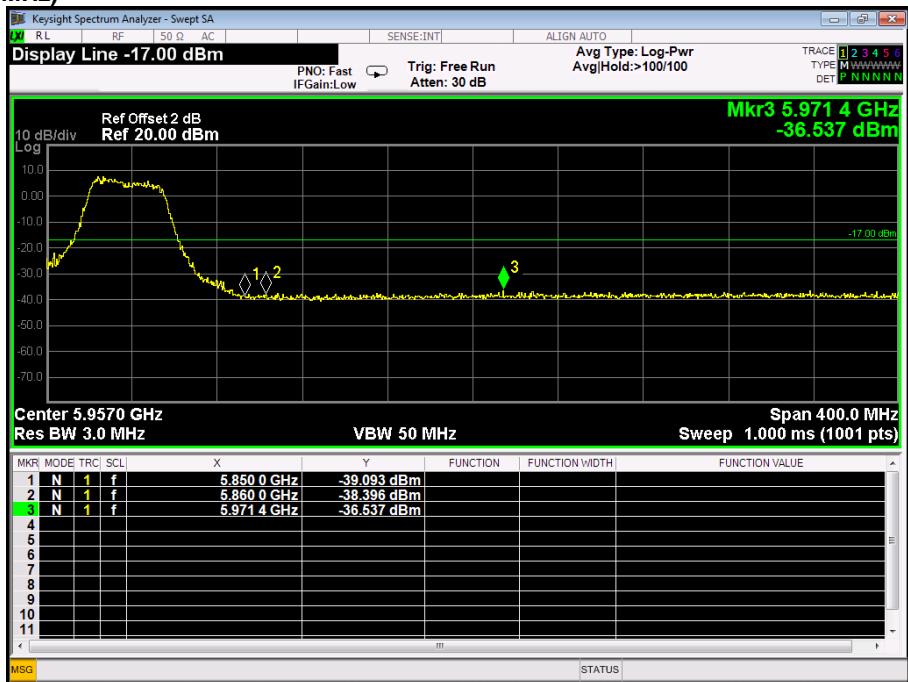
## Channel High (5310MHz)



## Channel Low (5755MHz)

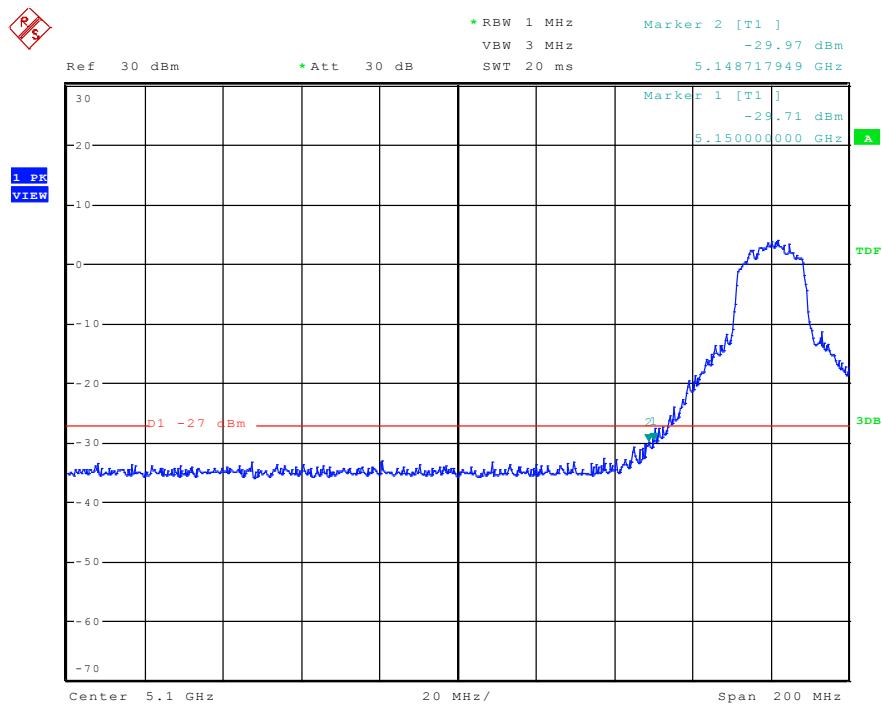


## Channel High (5795MHz)

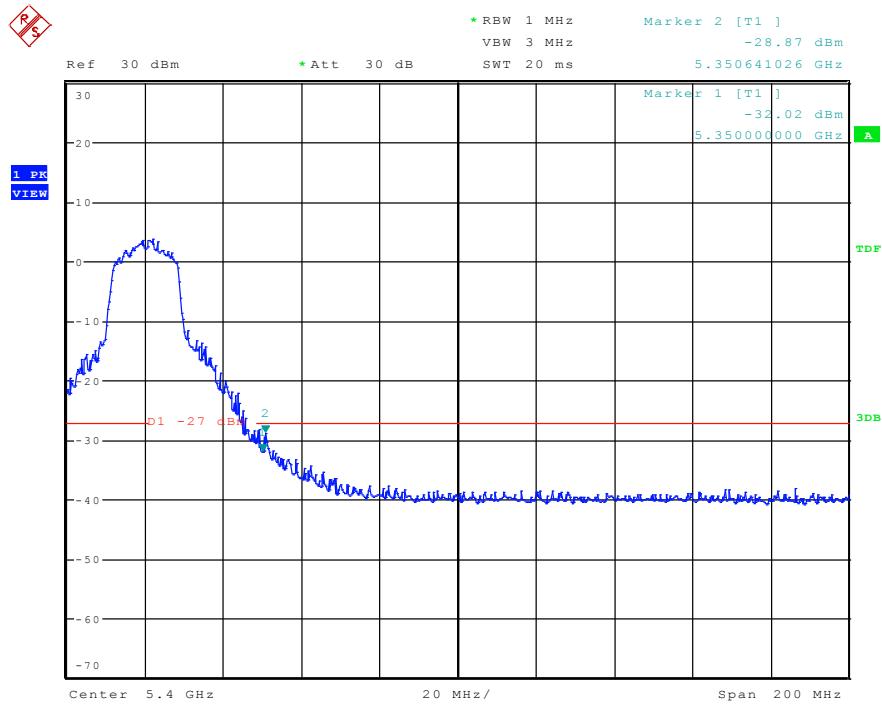


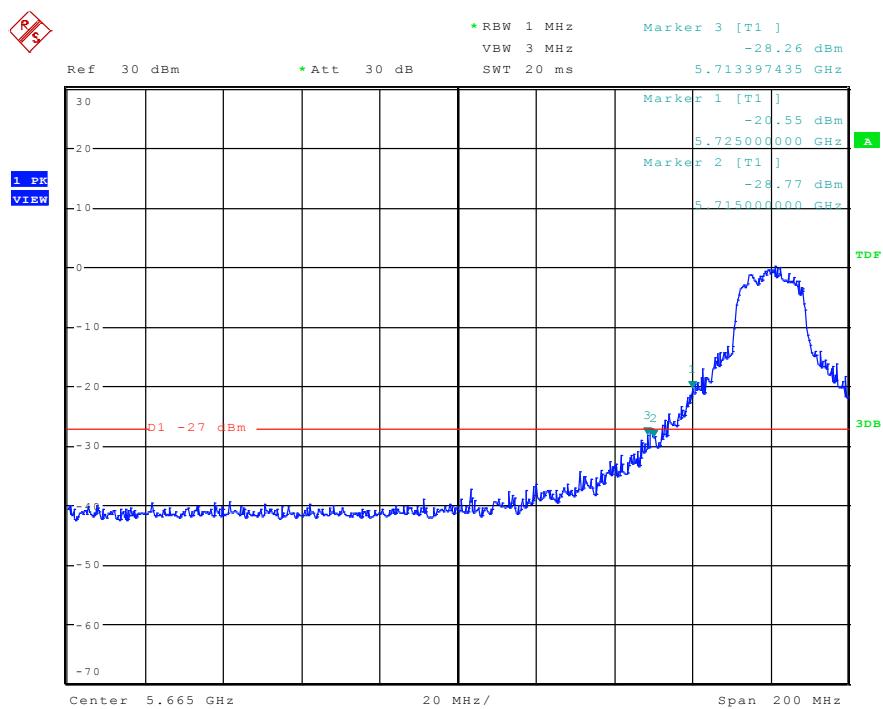
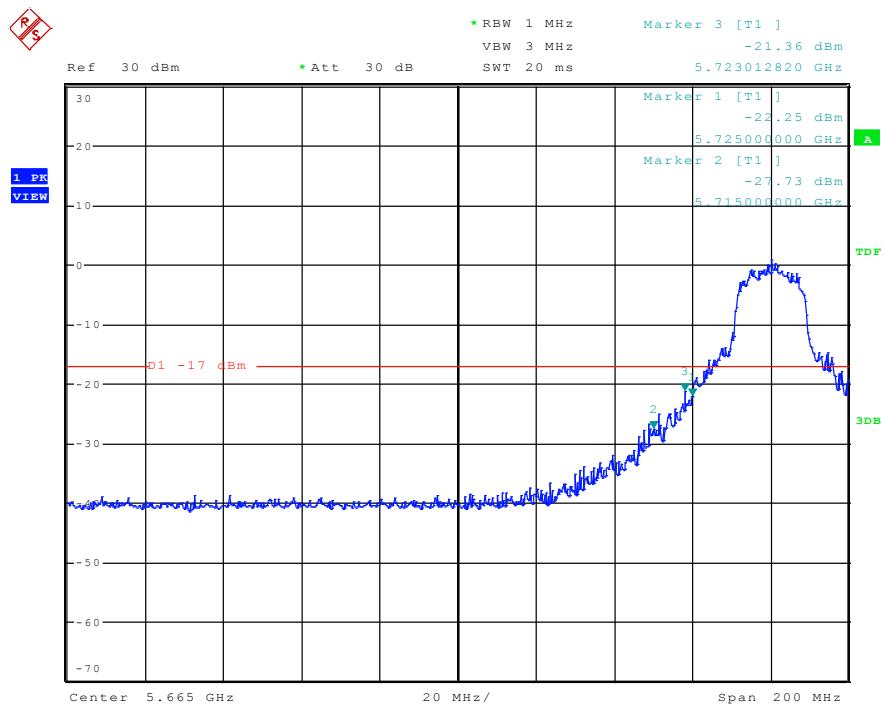
## IEEE 802.11ac 20MHz

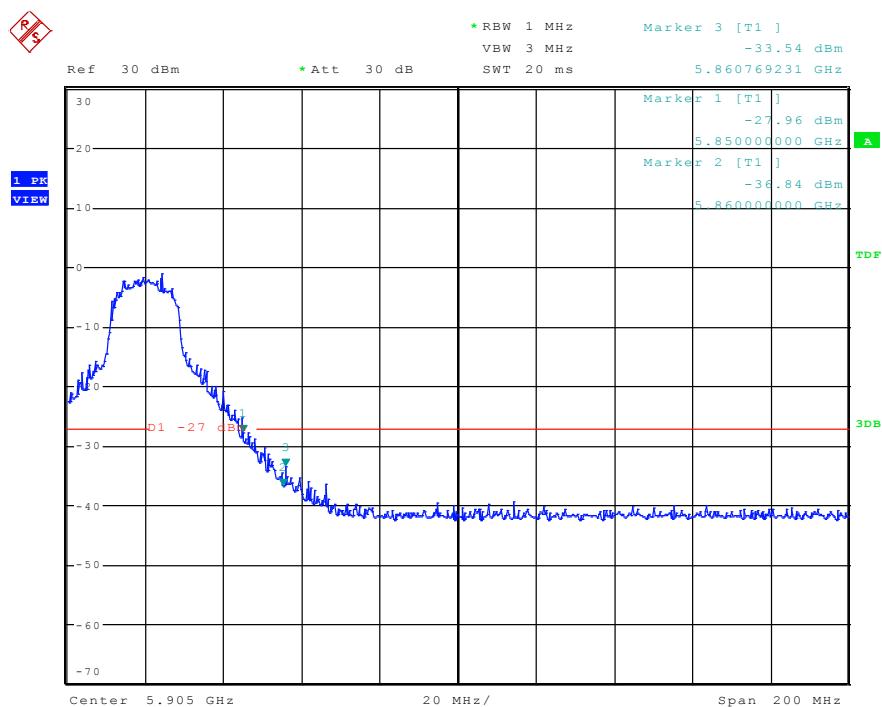
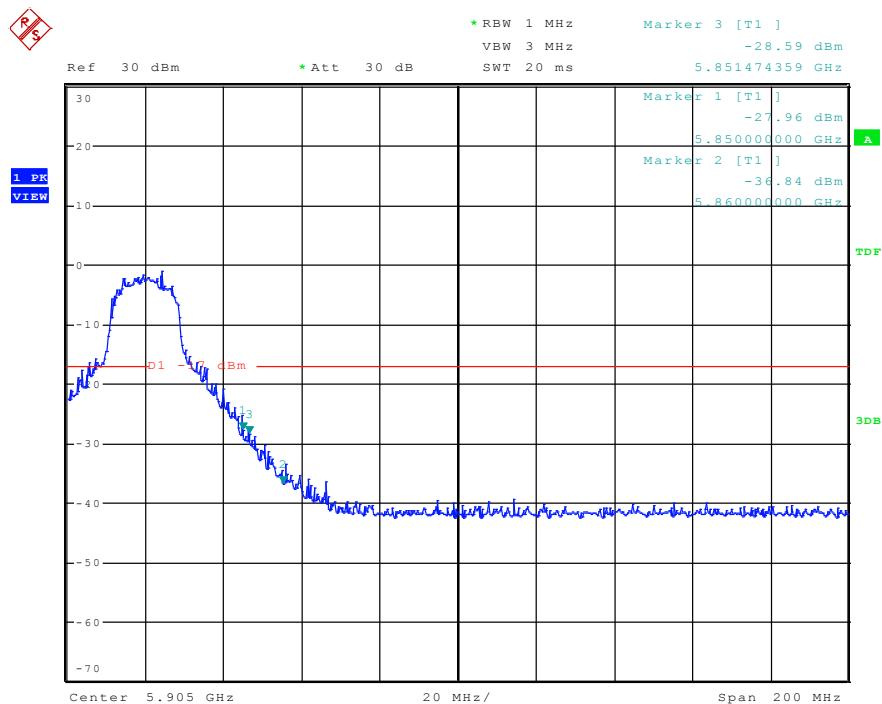
## Channel Low (5180MHz)



## Channel High (5320MHz)

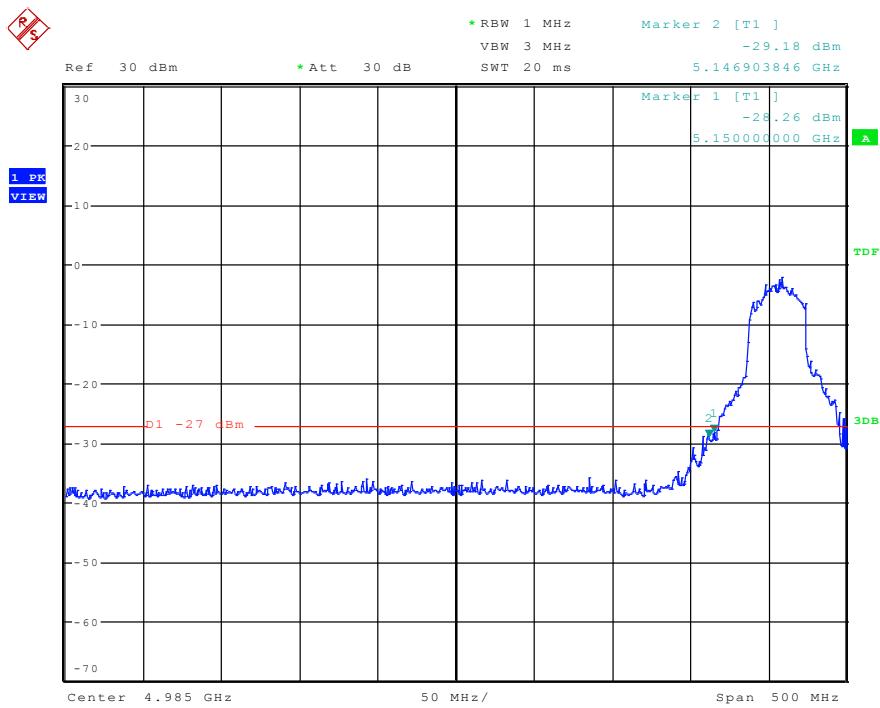


**Channel Low (5745MHz)**

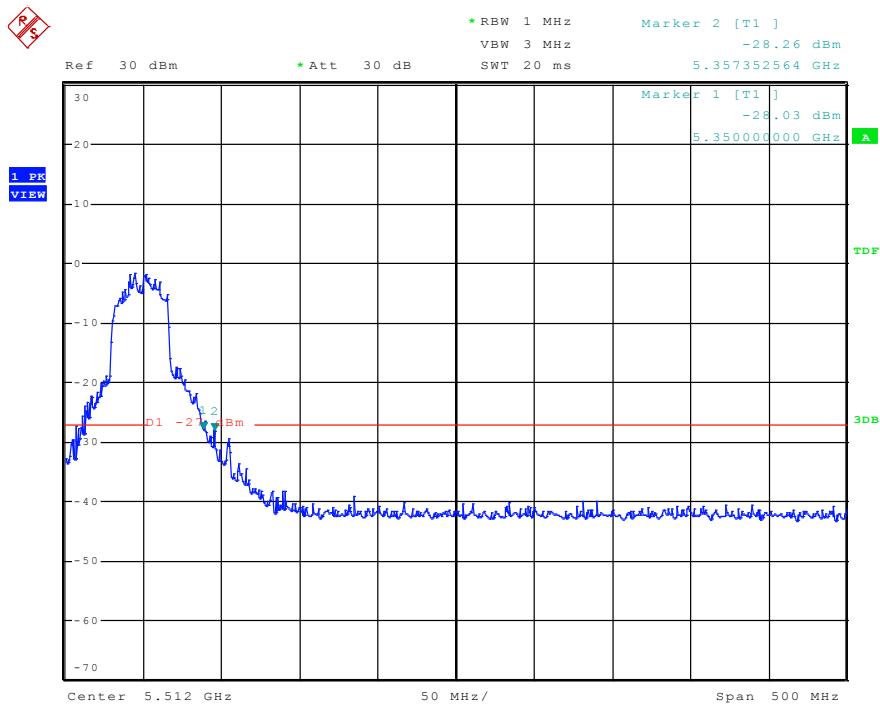
**Channel High (5825MHz)**

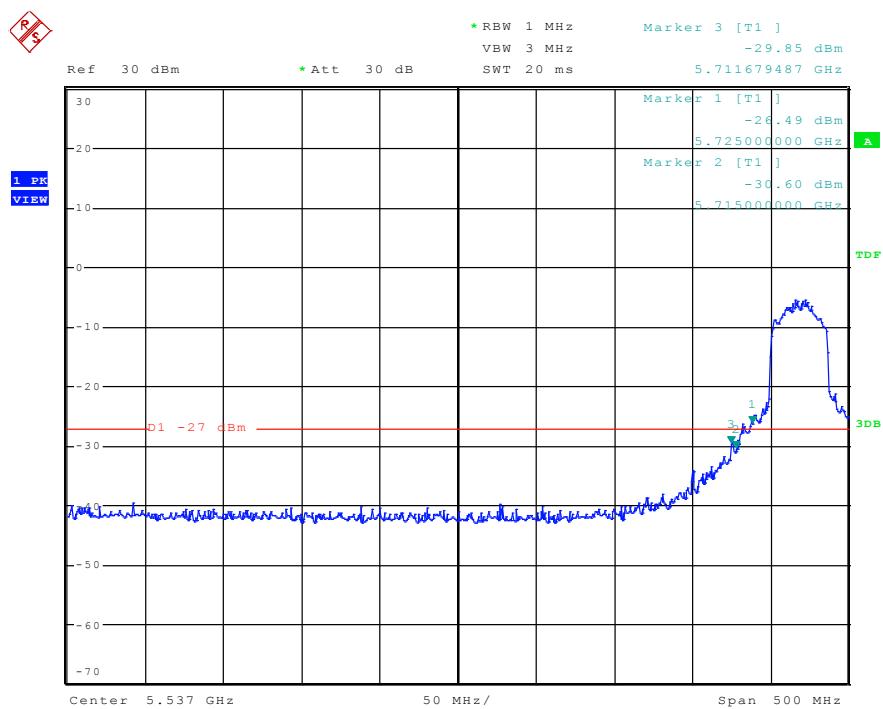
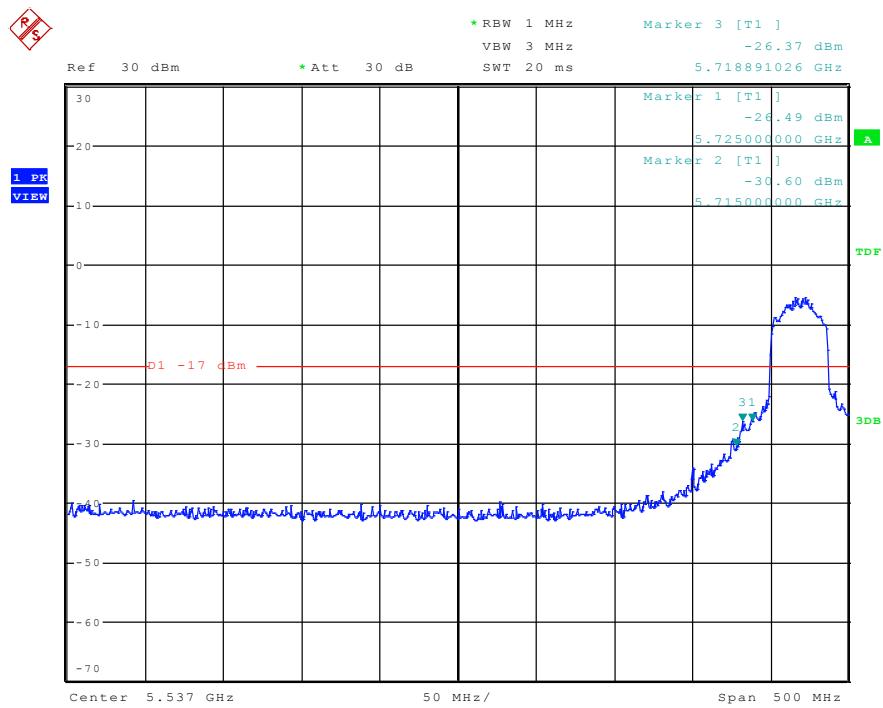
## IEEE 802.11n 40MHz

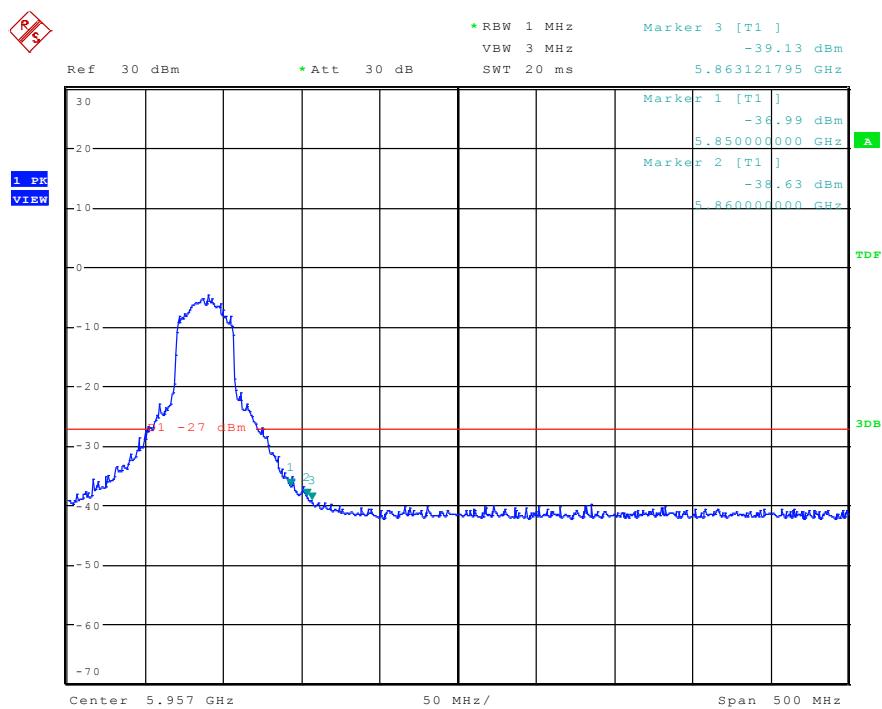
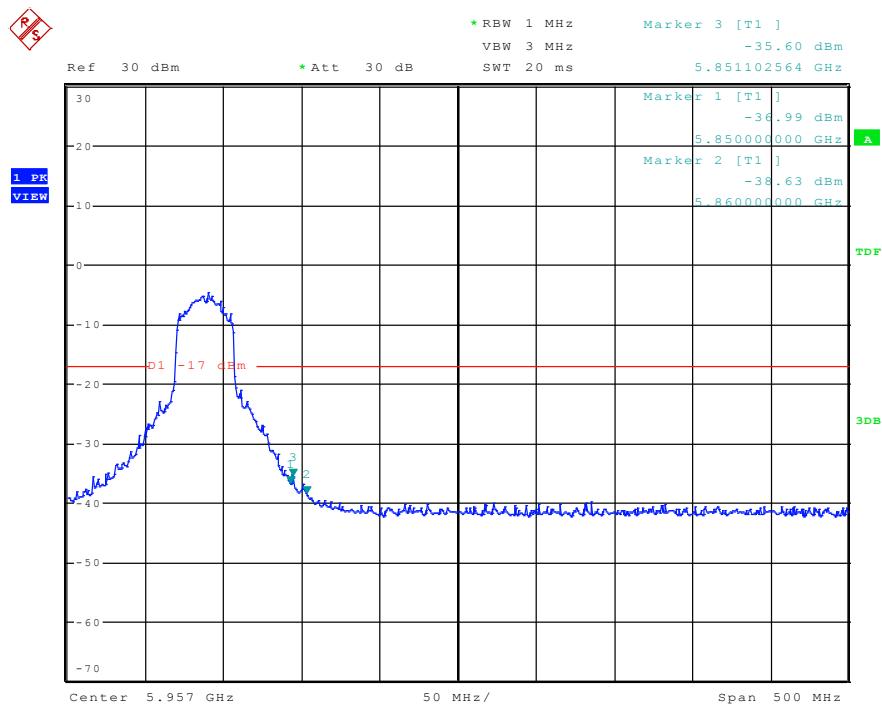
## Channel Low (5190MHz)

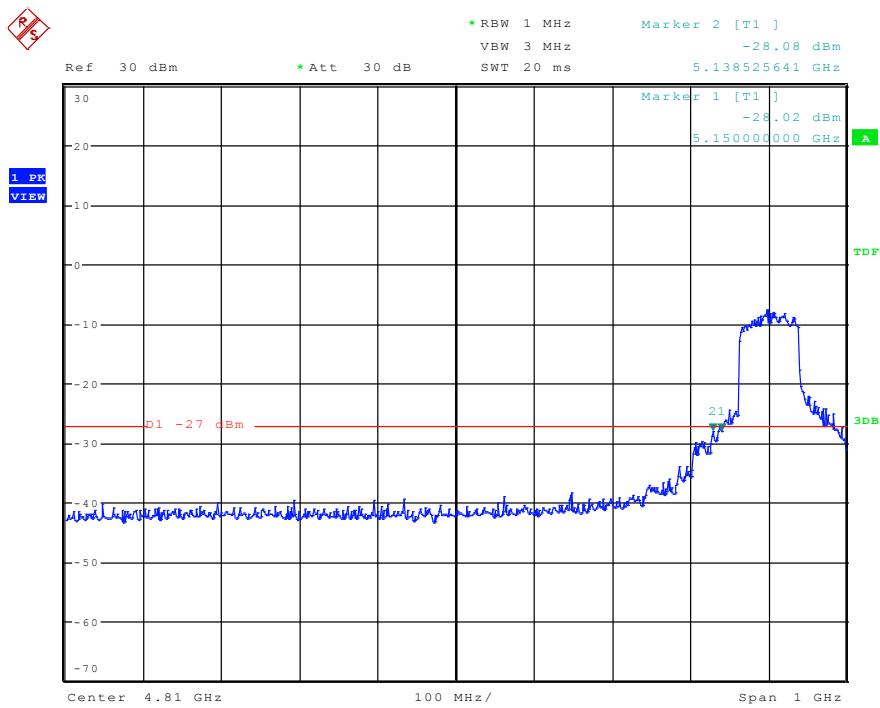
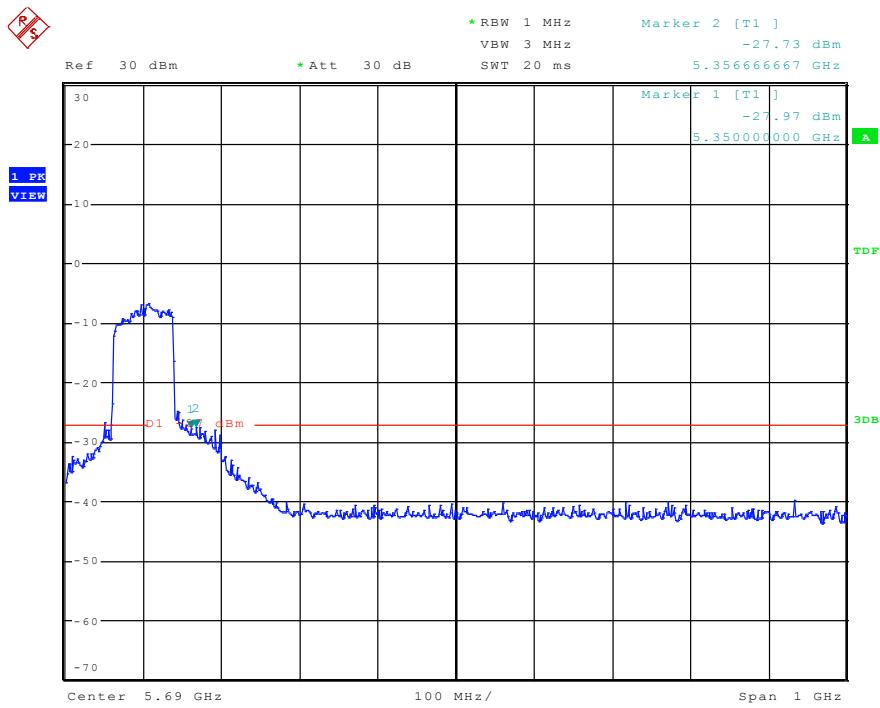


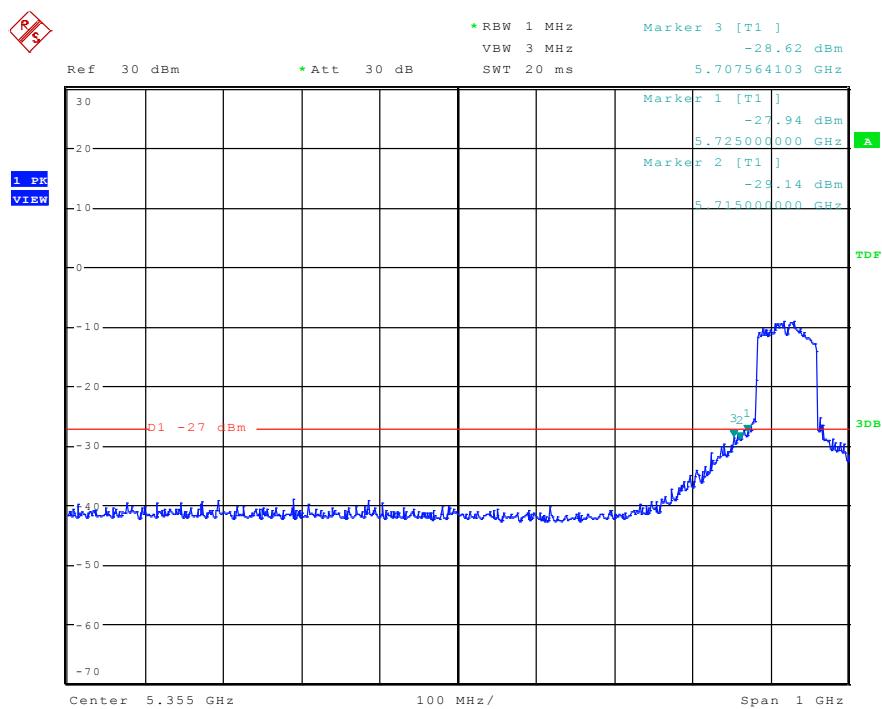
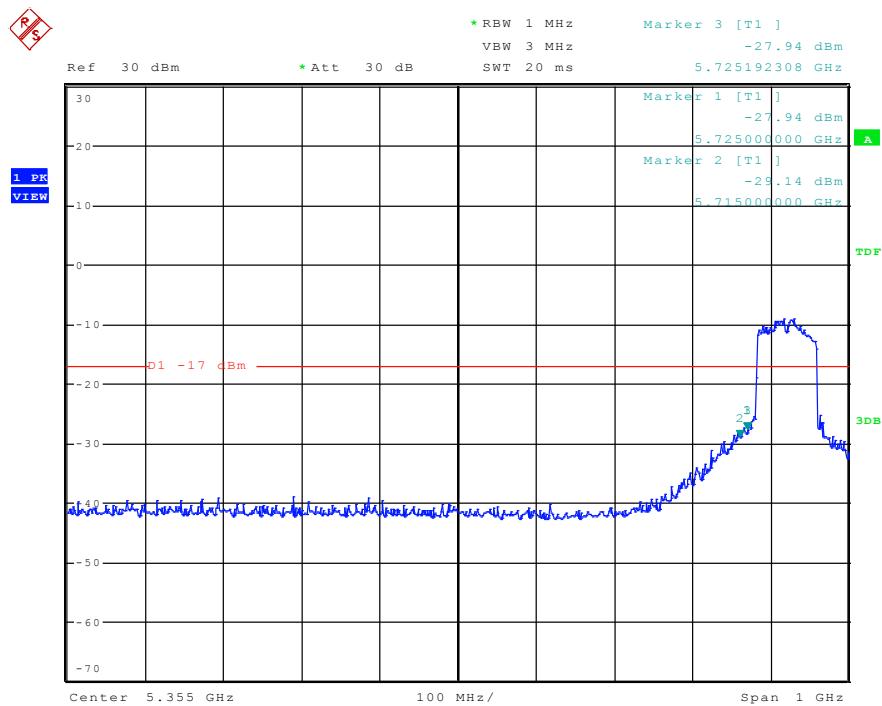
## Channel High (5310MHz)



**Channel Low (5755MHz)**

**Channel High (5795MHz)**

**IEEE 802.11n 80MHz****Channel Low (5210MHz)****Channel High (5290MHz)**

**Channel Low (5775MHz)**

## **9. DYNAMIC FREQUENCY SELECTION (DFS)**

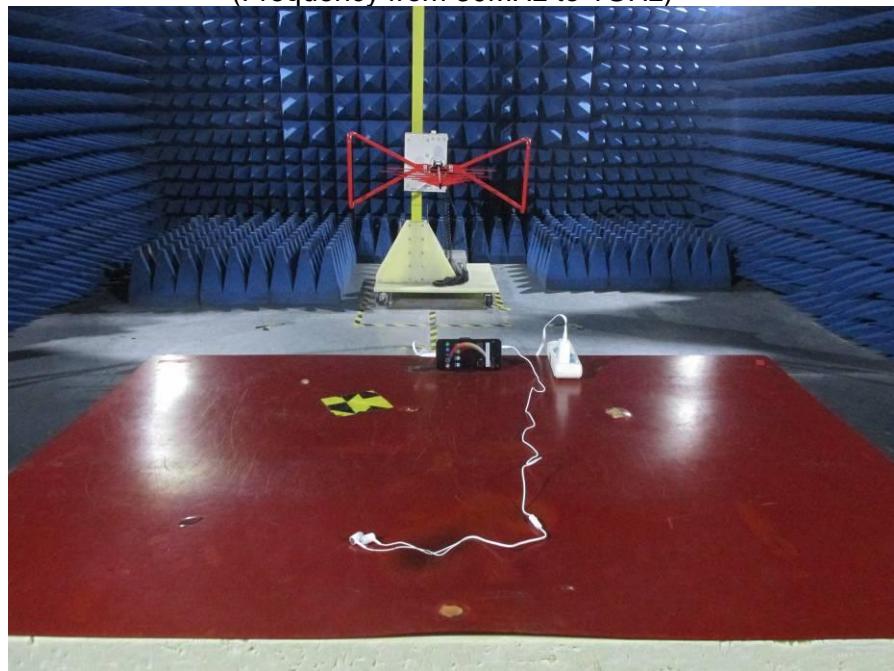
Please refer to: X522 WSCT-FCC16093968A-8 DFS

## 10. EUT TEST PHOTO

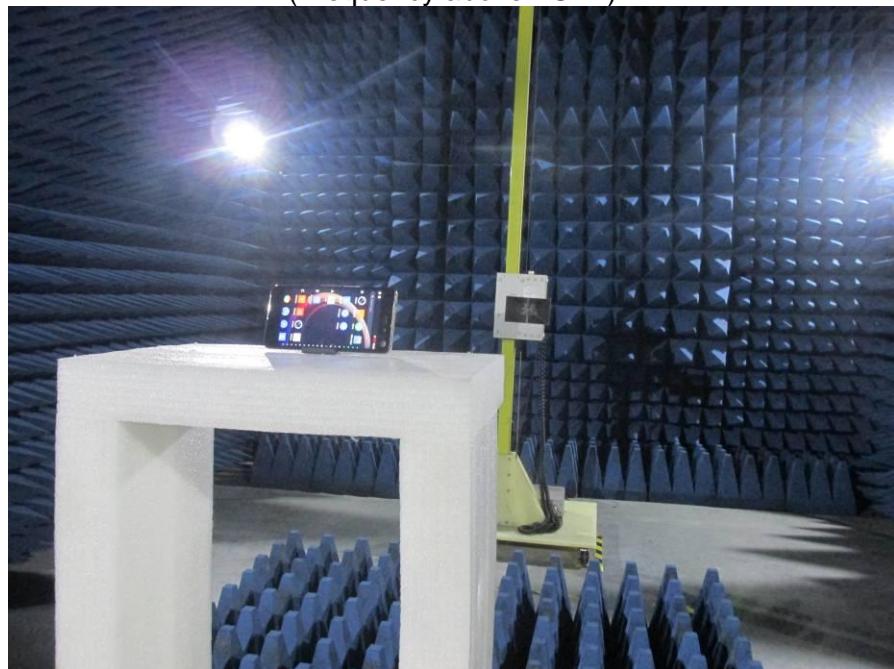
CONDUCTED EMISSION TEST



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



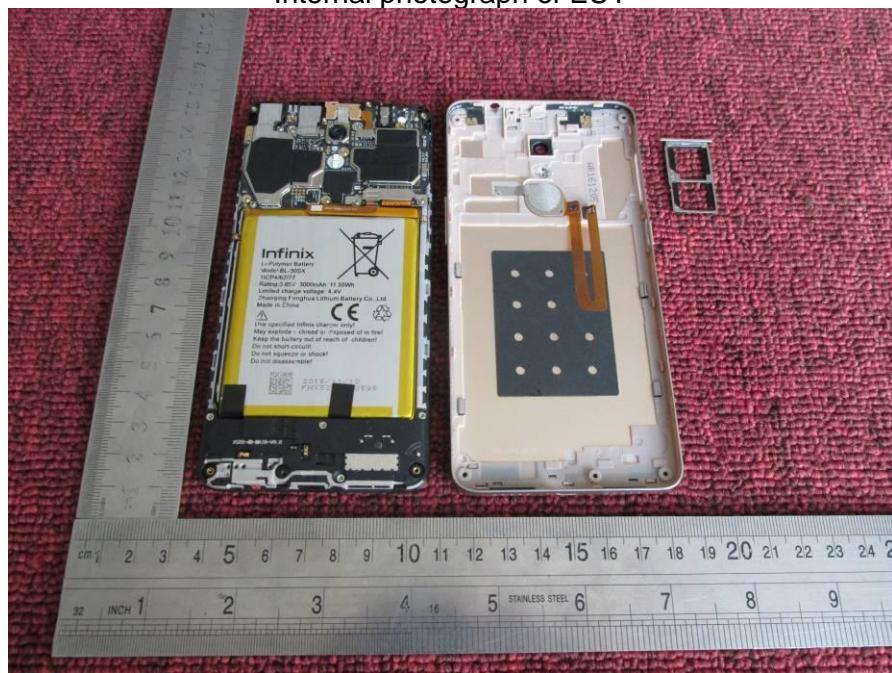
Appearance photograph of EUT



Appearance photograph of EUT



Internal photograph of EUT



Internal photograph of EUT



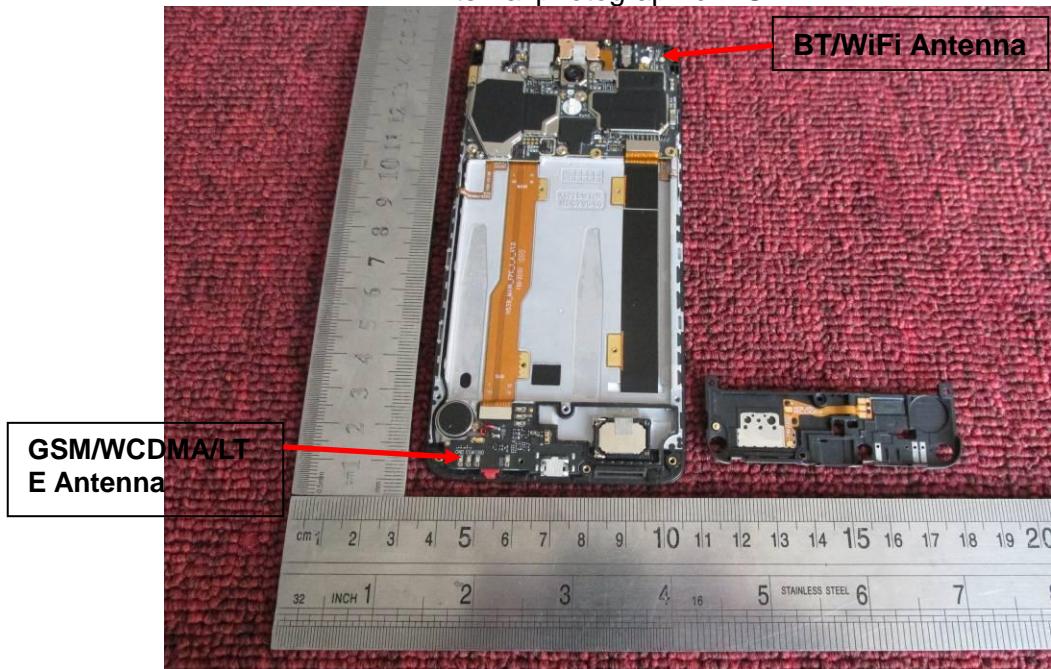
Internal photograph of EUT



Internal photograph of EUT



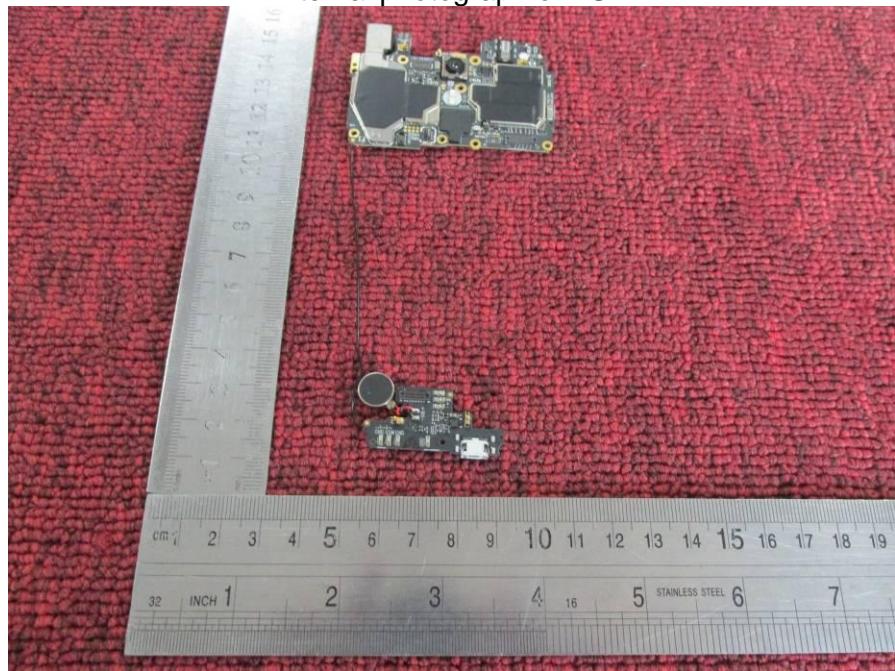
Internal photograph of EUT



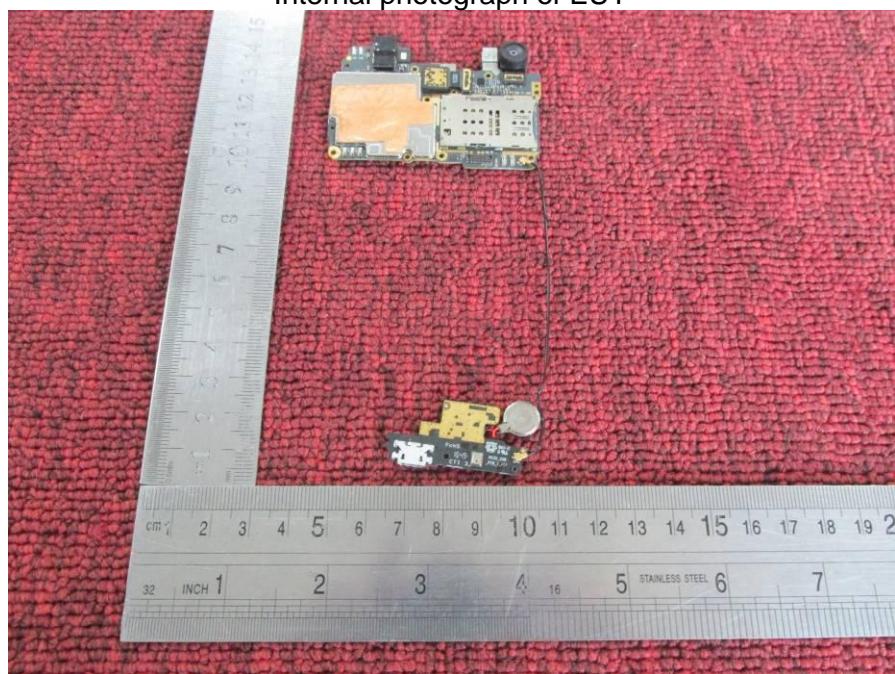
Internal photograph of EUT



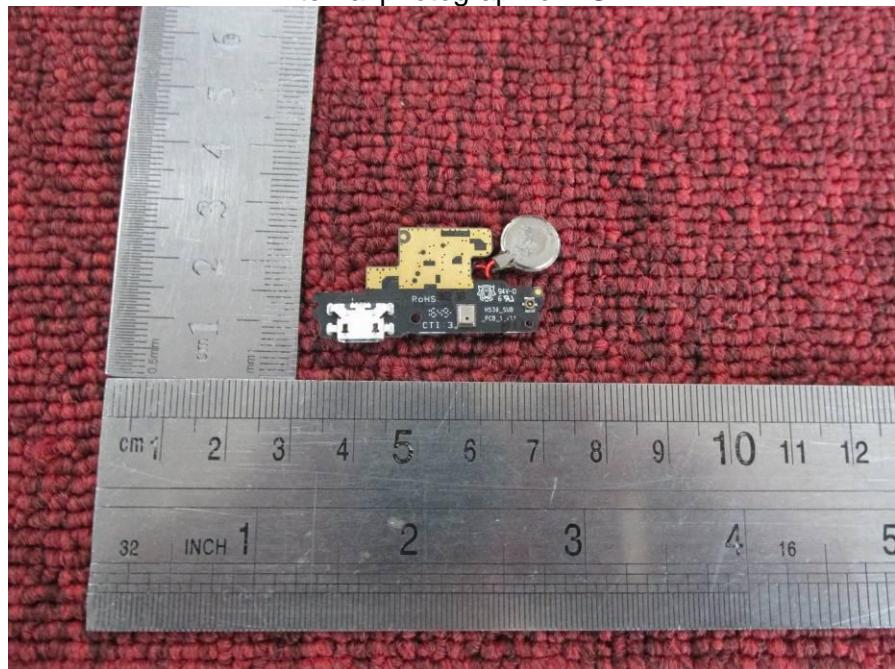
Internal photograph of EUT



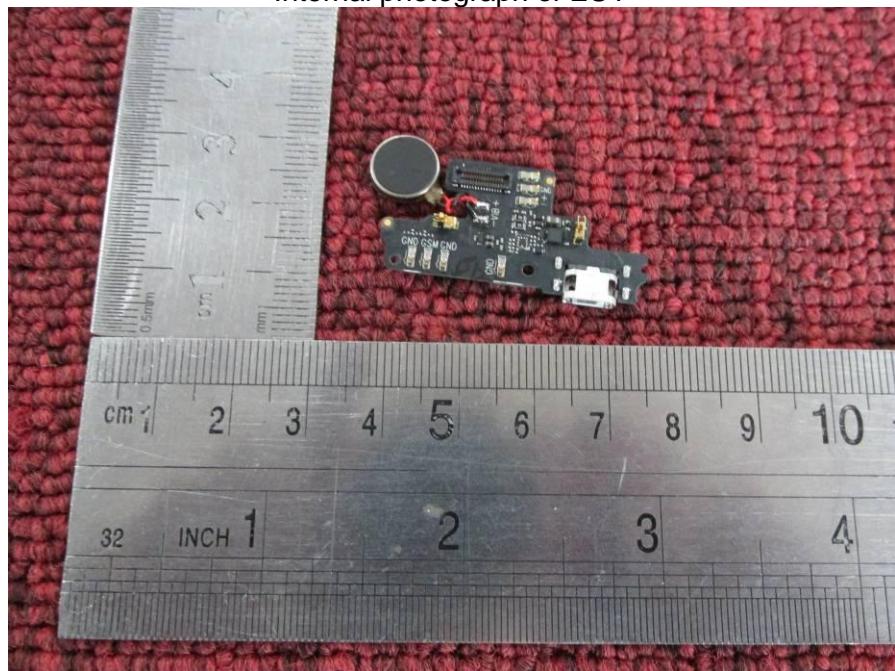
Internal photograph of EUT



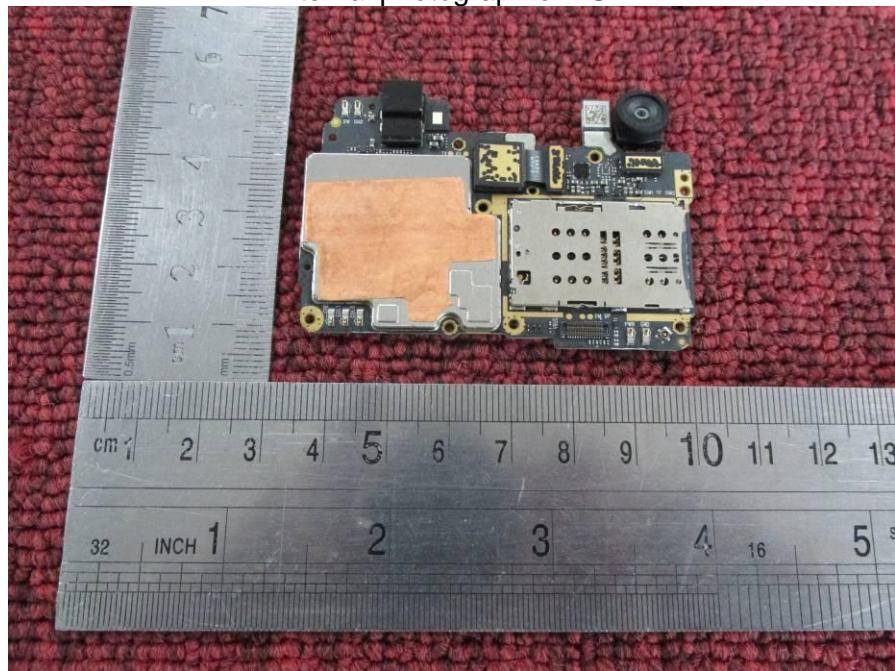
Internal photograph of EUT



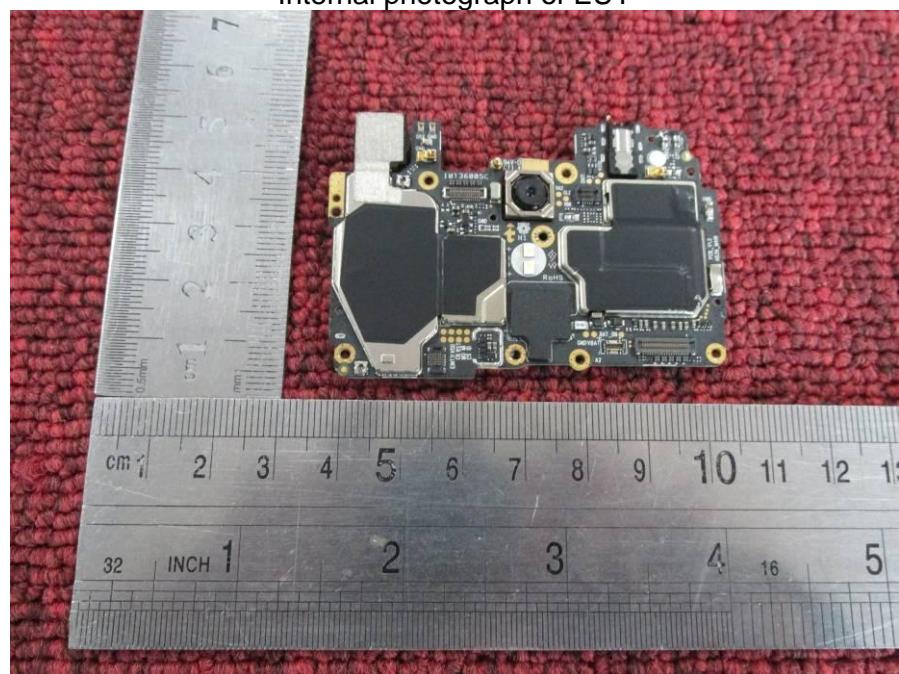
Internal photograph of EUT



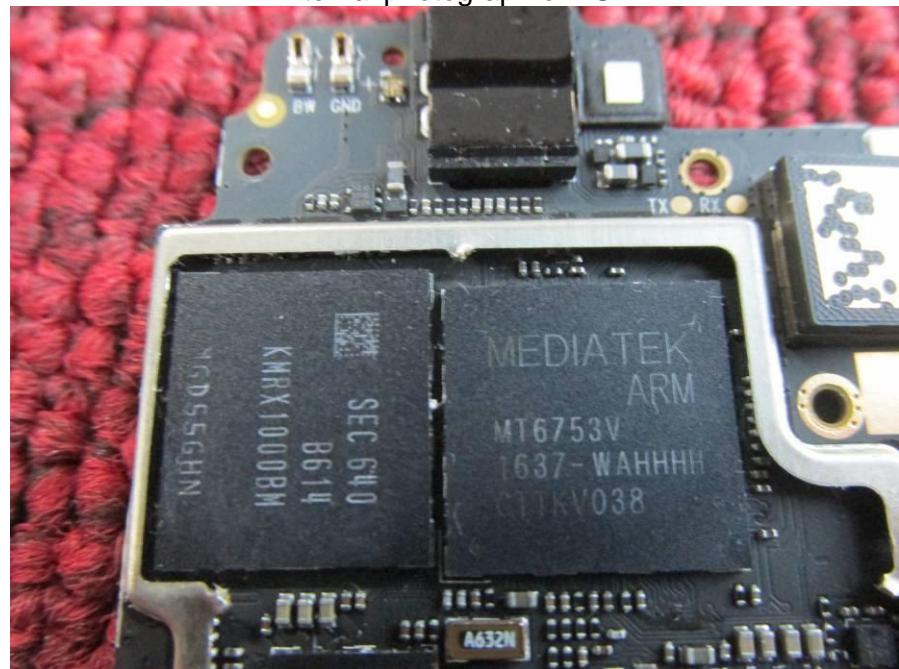
Internal photograph of EUT



Internal photograph of EUT



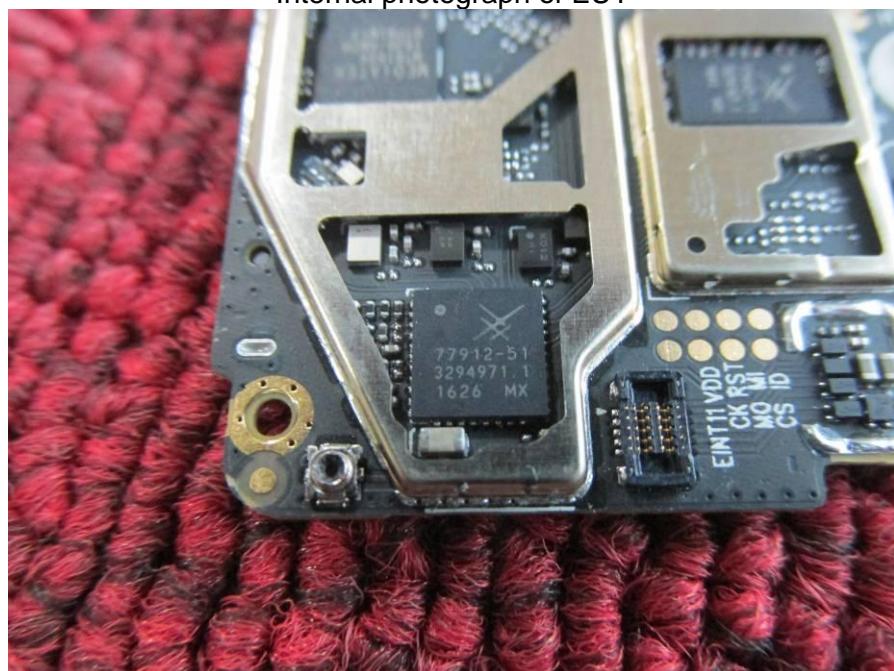
Internal photograph of EUT



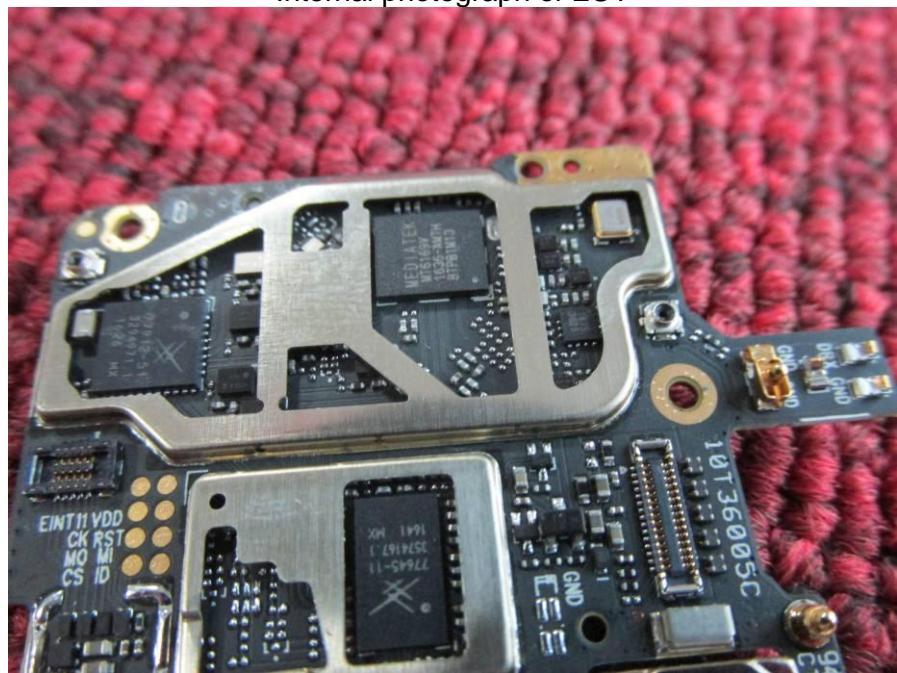
Internal photograph of EUT



Internal photograph of EUT



Internal photograph of EUT



**---END OF REPORT---**