

VARIANT FCC TEST REPORT

(Part 15, Subpart E)

Applicant:	Honeywell International Inc
Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States

Manufacturer or Supplier:	Honeywell International Inc
Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States
Product:	Mobile Computer
Brand Name:	Honeywell
Model Name:	CT45-L0N
FCC ID:	HD5-CT45L0N
Date of tests:	Oct, 09, 2025 ~ Dec. 12, 2025

The tests have been carried out according to the requirements of the following standard:

☒ FCC Part 15, Subpart E, Section 15.407

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Hanwen Xu Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
	
Date: Dec. 12, 2025	Date: Dec. 12, 2025

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**RELEASE CONTROL RECORD**

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RFBGDJ-W7L-P21060011-6	Original release	Jul. 14, 2021
PSU-QBJ2512030314RF03	Based on the original report, the new product add alternate parts, the electrical specs of the alternate part is equivalent to the current part. This report update the SW version, verify power, CE and RSE worst case. The verify results of conducted power are similar or lower. So this report updates CE and the low frequency data and the high frequency data (802.11ac(40MHz)_CH38&802.11ac(40MHz)_CH62 &802.11ac(80MHz)_CH138&802.11ac(40MHz)_CH151) of RSE, other data please refer to original report.	Dec. 12, 2025



1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E		
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT
15.407(b)(9)	AC Power Conducted Emission	Compliance
15.407(b) (1/2/3/4/5)	Radiated Emission & Band Edge Measurement	Compliance
15.407(a/1/2/3)	Maximum conducted output Power	See note
15.407(a/1/2/3)	Peak Power Spectral Density	See note
15.407(a)(2)(12)	26 dB Bandwidth	See note
15.407(e)	6 dB Bandwidth	See note
15.203	Antenna Requirement	See note

NOTE:: Please refer to report RFBGDJ-W7L-P21060011-6 (FCC ID: HD5-CT45L0N).

*Test Lab Information Reference

Lab A:

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

Lab Address:

Tower N, Innovation Center, 88 Zuyi Road, High-tech District, Suzhou City, Anhui Province, China

Accredited Test Lab Cert 6613.01

The FCC Site Registration No. is 434559; The Designation No. is CN1325.

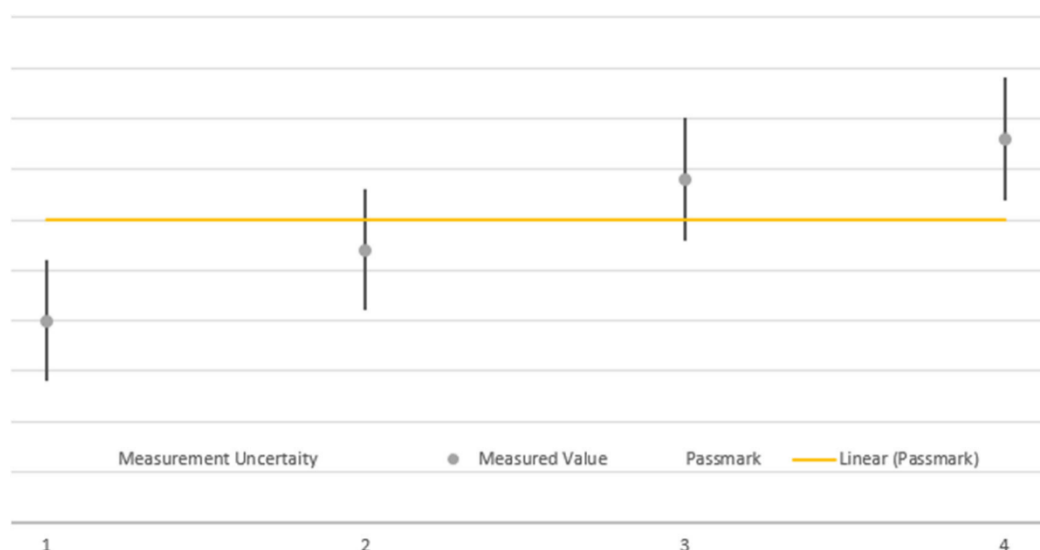


1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
AC Power Conducted emissions	$\pm 2.70\text{dB}$
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions (30MHz~1GHz)	$\pm 4.98\text{dB}$
Radiated emissions (1GHz ~6GHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GHz ~18GHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GHz ~40GHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Conducted Output power	$\pm 2.06\text{dB}$
Power Spectral Density	$\pm 0.85\text{ dB}$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.



The verdicts in this test report are given according the above diagram:

Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	above pass mark	within pass mark	Failed
4	above pass mark	above pass mark	Failed

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.



2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT*	Mobile Computer	
BRAND NAME*	Honeywell	
MODEL NAME*	CT45-L0N	
NOMINAL VOLTAGE*	5Vdc (adapter) 3.85Vdc (Lithium-ion cell, battery)	
MODULATION *	OFDM	
TRANSFER RATE*	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps	
	802.11n: up to MCS7	
	802.11ac: up to 390.0Mbps	
OPERATING FREQUENCY*	5180~5240MHz, 5260~5320MHz	
	5500~5720MHz, 5745~5825MHz	
NUMBER OF CHANNEL	5180~5240MHz	4 for 802.11a,802.11n/ac (20MHz)
		2 for 802.11n/ac (40MHz)
		1 for 802.11ac (80MHz)
	5260~5320MHz	4 for 802.11a,802.11n/ac(20MHz)
		2 for 802.11n/ac(40MHz)
		1 for 802.11ac(80MHz)
	5500~5720MHz	12 for 802.11a, 802.11n/ac (20MHz)
		6 for 802.11n/ac (40MHz)
		3 for 802.11ac(80MHz)
	5745~5825MHz	5 for 802.11a, 802.11n/ac (20MHz)
		2 for 802.11n/ac (40MHz)
		1 for 802.11ac (80MHz)
MAX. OUTPUT POWER	81.47mW for 5180 ~ 5240MHz	
	62.60mW for 5260 ~ 5320MHz	
	66.53mW for 5500 ~ 5720MHz	



	73.79mW for 5745 ~ 5825MHz	
ANTENNA TYPE*	LDS type Antenna	
ANTENNA GAIN*	☒ Provided by client	
	5180 ~ 5240MHz	1.1dBi
	5260 ~ 5320MHz	1.3dBi
	5500 ~ 5720MHz	1.5dBi
	5745 ~ 5825MHz	1.3dBi
HW VERSION*	V1.0	
SW VERSION*	311.C0.00.0343-N	
I/O PORTS*	Refer to user's manual	
CABLE SUPPLIED*	USB cable: shielded without ferrite, 1.25 meter Earphone cable: unshielded without ferrite, 1.27 meter	

NOTE:

1. *Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, Test Lab is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.
2. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
3. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receiver.

MODULATION MODE	TX FUNCTION
802.11a	1TX/1RX
802.11n/802.11ac (20MHz)	1TX/1RX
802.11n/802.11ac (40MHz)	1TX/1RX
802.11ac (80MHz)	1TX/1RX

4. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
5. Antenna gain and EUT conducted cable loss are provided by the customer, and the laboratory will record the results based on these items that involve these two parameters.



6. This product includes the following four SKU which hardware is exactly same, the difference is described as following, Sample 1 was full test, sample 2 verify the worst case, check worst case Radiated emission;

SAMPL E	EUT CONFIGURATION INFORMATION
1	SKU ID:CT45-L0N-27D100G ,Assembled Scanner Imager: 7-S0703
2	SKU ID:CT45-L0N-28D100G ,Assembled Scanner Imager: 8 - N6308/S0803
3	SKU ID: CT45-L0N-28D200G, The device is same #2, only software is none GMS package
4	SKU ID: CT45-L0N-27D200G, The device is same #1, only software is none GMS package

7. List of Accessory:

ACCESSORIES	BRAND	MODEL	SPECIFICATION
Battery	Honeywell	CT50-BTSC	Capacity: 3.85vdc 4020mAh
AC Adapter	HONOR	ADS-12B-06 05010E	I/P:100-240Vac, 0.3A O/P: 5Vdc, 2A
USB Cable	Honeywell	CT40-SN	Shielded, 1.25meter
Earphone	Honeywell	PTE-300N 3.5L	Shielded, 1.27meter



2.2 DESCRIPTION OF TEST MODES

FOR 5180 ~ 5240MHz

4 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n, 802.11ac(40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac(80MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
42	5210 MHz		

FOR 5260 ~ 5320MHz

4 channels are provided for 802.11a, 802.11n, 802.11ac(20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n, 802.11ac (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac(80MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
58	5290 MHz		



FOR 5500 ~ 5700MHz

12 channels are provided for 802.11a, 802.11n, 802.11ac(20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500 MHz	124	5620MHz
104	5520 MHz	128	5640MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

6 channels are provided for 802.11n, 802.11ac (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
102	5510 MHz	126	5630MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

3 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
106	5530 MHz	122	5610 MHz
138	5690 MHz		

FOR 5745 ~ 5825MHz

5 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745 MHz	161	5805 MHz
153	5765 MHz	165	5825 MHz
157	5785 MHz		

2 channels are provided for 802.11n, 802.11ac (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
142	5710 MHz	159	5795 MHz
151	5755 MHz		

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY
155	5775 MHz



2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	APCM	
A	√	√	√	-	Powered by Adapter with wifi(5G) link
B	-	-	-	√	Powered by Battery with wifi(5G) link
C	-	-	-	-	Powered by USB with wifi(5G) link

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz

RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

NOTE:

The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.

NOTE: "-" means no effect

RADIATED EMISSION TEST (BELOW 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11ac(40MHz)	5180-5240	38 to 46	38	OFDM	MCS0

RADIATED EMISSION TEST (ABOVE 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11ac(40MHz)	5180-5240	38 to 46	38	OFDM	MCS0
A	802.11ac(40MHz)	5260-5320	54 to 62	62	OFDM	MCS0
A	802.11ac(80MHz)	5500-5720	106 to 138	138	OFDM	MCS0
A	802.11ac (40MHz)	5745-5825	151 to 159	151	OFDM	MCS0



BUREAU VERITAS Test Report No.: PSU-QBJ2512030314RF03
POWER LINE CONDUCTED EMISSION TEST:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11ac(40MHz)	5180-5240	38 to 46	38	OFDM	MCS0

TEST CONDITION			
APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE<1G	23deg. C, 70%RH	DC 5.0V By Adapter	Hanwen Xu
RE≥1G	23deg. C, 70%RH	DC 5.0V By Adapter	Hanwen Xu
PLC	25deg. C, 52%RH	DC 5.0V By Adapter	Hanwen Xu



2.3 DUTY CYCLE OF TEST SIGNAL

Please refer to report RFBGDJ-W7L-P21060011-6 (FCC ID: HD5-CT45L0N).

2.4 DESCRIPTION OF SUPPORT UNITS

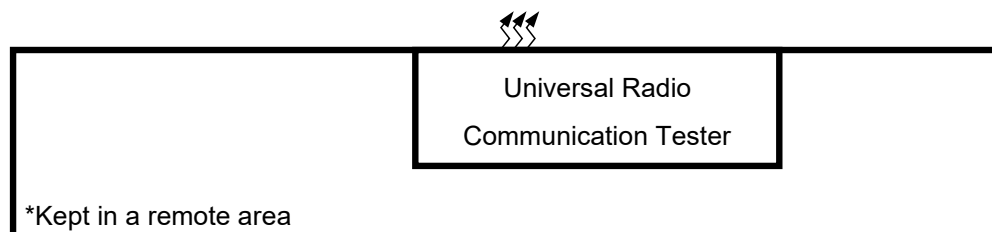
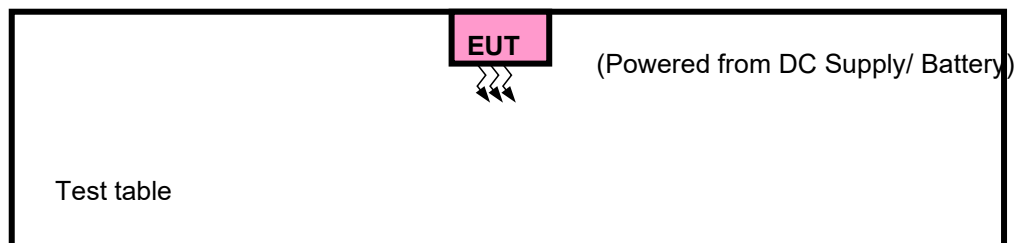
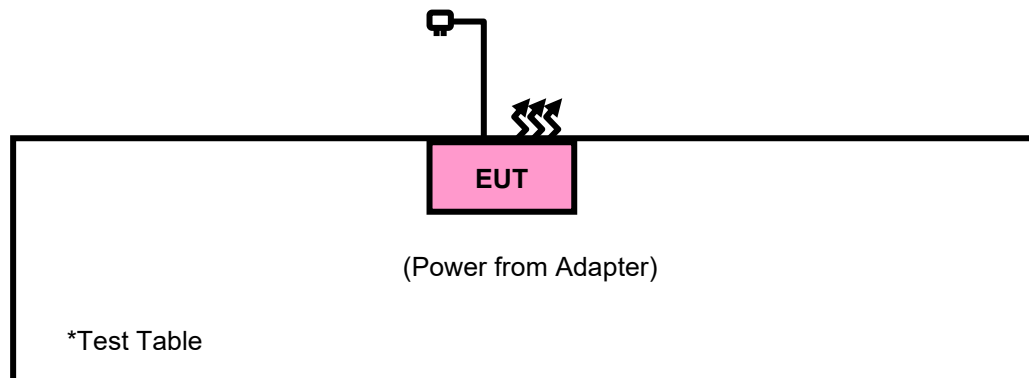
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Laptop	Lenovo	Thinkpad E14	SL10W47313	N/A
2	PC Adapter	Lenovo	ADLX65YCC3D	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	USB Line: Shielded, Detachable 1.25m;
2	PC USB Line: Unshielded, Detachable, 1.0m;



2.4.1 CONFIGURATION OF SYSTEM UNDER TEST





2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart E (15.407)

KDB 789033 D02 General U-NII Test Procedures New Rules v02r01

ANSI C63.10-2020

All test items have been performed and recorded as per the above standards.

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (Certification). The test report has been issued separately.



3 TEST TYPES AND RESULTS

3.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

3.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



3.1.2 LIMITS OF UNWANTED EMISSION

RESTRICTED BANDS	APPLICABLE TO	LIMIT	
	789033 D02 General UNII Test Procedures New Rules v02r01	FIELD STRENGTH AT 3m (dBµV/m)	
		PK : 74	AV : 54
OUT OF THE RESTRICTED BANDS	APPLICABLE TO	EIRP LIMIT (dBm/MHz)	EQUIVALENT FIELD STRENGTH AT 3m (dBµV/m)
	15.407(b)(1)	PK : -27	PK : 68.2
	15.407(b)(2)		
	15.407(b)(3)		
	15.407(b)(4)	See note 2 (FCC 16-24)	

NOTE:

- The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m}, \text{ where } P \text{ is the eirp (Watts).}$$
- 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.



3.1.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pre-Amplifier	R&S	SCU18F1	100815	Aug.29,25	Aug.28,27
Pre-Amplifier	R&S	SCU08F1	101028	Jan.22,24	Jan.21,26
Signal Generator	R&S	SMB100A	182185	Mar.29,24	Mar.28,26
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.24,22	Nov.23,25
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.23,25	Nov.22,28
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-02Chamber	Aug.20,25	Aug.19,28
EMI TEST Receiver	R&S	ESW44	101973	Mar.28,24	Mar.27,26
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Jul.04,25	Jul.03,27
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.20,25	Aug.19,27
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Jul.15,24	Jul.14,26
Horn Antenna	Steatite Q-par Antennas	QMS 00208	23485	Mar.22,25	Mar.21,27
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Jul.08,25	Jul.07,27
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.19,24	Jun.18,26
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	N/A	N/A
DC Source	HYELEC	HY3010B	551016	Jul.31,25	Jul.30,27
Hygrothermograph	DELI	20210528	SZ014	Mar.18,25	Mar.17,27
6DB attenuator	Tonscend Technology Co., Ltd	N/A	23062787	N/A	N/A
PC	LENOVO	E14	HRSW0024	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-7.00M	N/A	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-4.00M	N/A	N/A	N/A
CABLE	R&S	W13.02	N/A	Apr.26,25	Apr.25,26
CABLE	R&S	W12.14	N/A	Apr.26,25	Apr.25,26

NOTE:

1. The calibration interval of the above test instruments is 12/ 24 / 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in 3m Chamber.
3. The FCC Site Registration No. is 434559; The Designation No. is CN1325.

3.1.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3-meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise, the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated, and the worst-case emissions are reported.

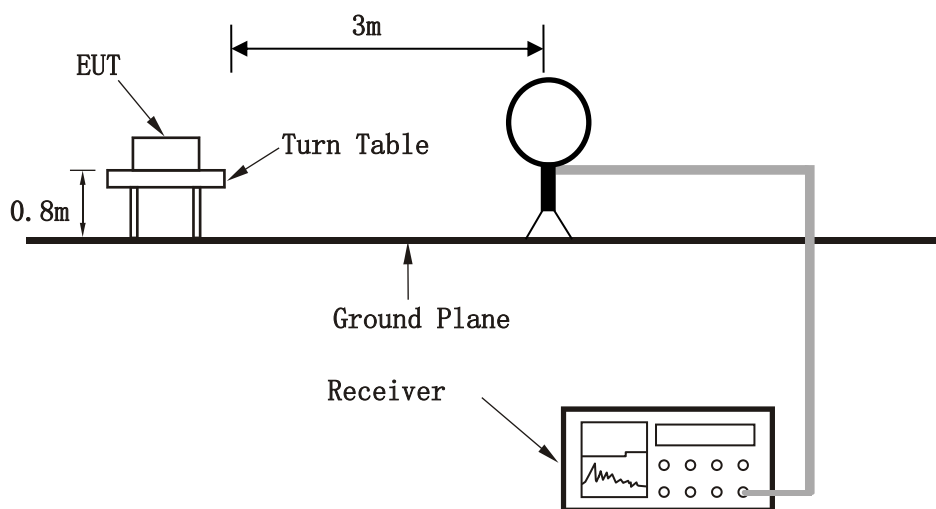
3.1.5 DEVIATION FROM TEST STANDARD

No deviation.

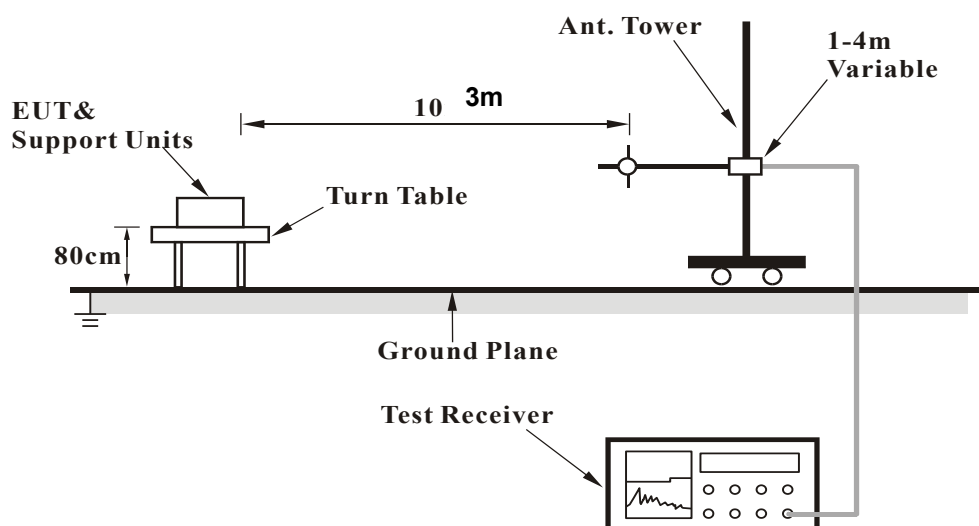


3.1.6 TEST SETUP

<Frequency Range 9KHz~30MHz >

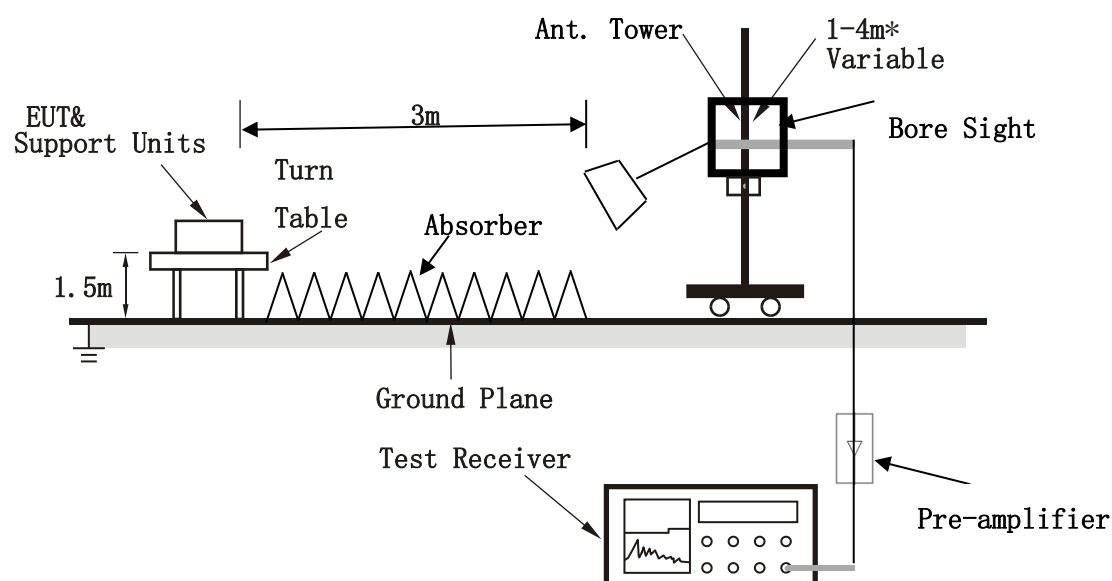


< Frequency Range 30MHz~1GHz >





<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.1.7 EUT OPERATING CONDITION

- Set the EUT under full load condition and placed them on a testing table.
- Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.
- The necessary accessories enable the EUT in full functions.



3.1.8 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

BAND EDGE MEASUREMENT

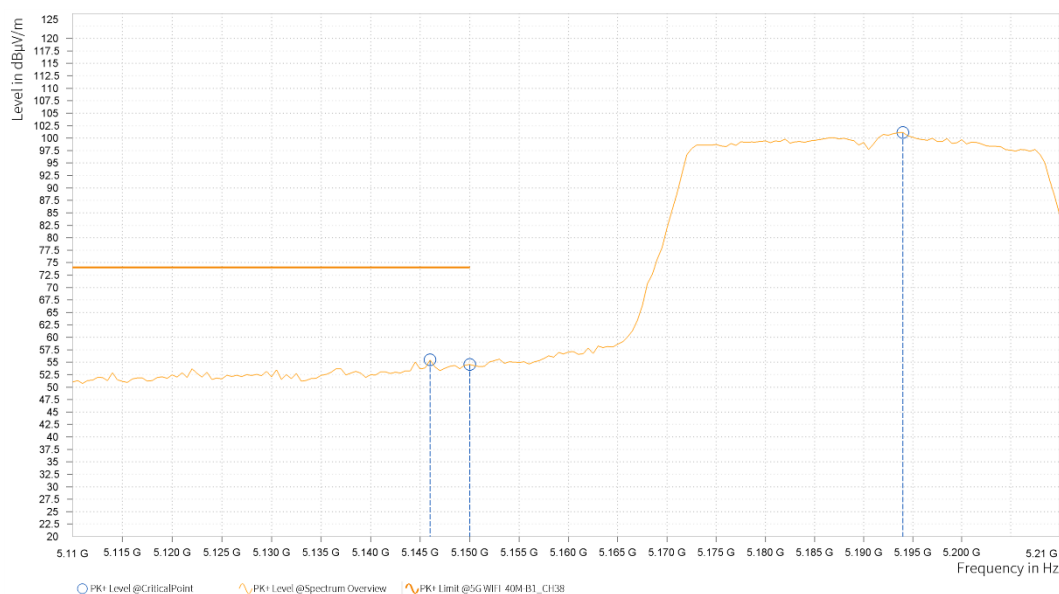
BADN 1

802.11ac (40MHz)

CHANNEL	TX Channel 38	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	5,146.000	55.47	74.00	18.53	12.00	H	313	2.00
1	5,150.000	54.55	74.00	19.45	12.03	H	204.8	1.00
1	5,194.000	101.14			12.13	H	152.2	1.00





ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

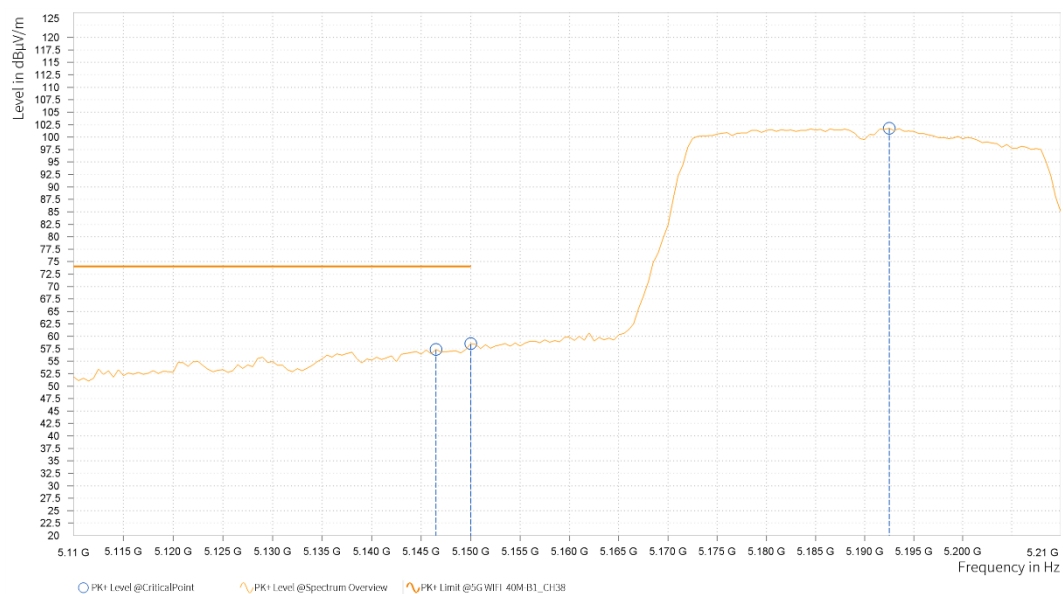
Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	5,142.500	40.43	54.00	13.57	11.98	H	207.1	1.00
1	5,150.000	41.34	54.00	12.66	12.03	H	154.6	1.00
1	5,188.000	90.55			12.12	H	154.6	1.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	5,146.500	57.37	74.00	16.63	12.00	V	207.8	2.00
1	5,150.000	58.53	74.00	15.47	12.03	V	207.8	2.00
1	5,192.500	101.80			12.13	V	99.6	1.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	5,149.000	43.70	54.00	10.30	12.02	V	203	2.00
1	5,150.000	43.80	54.00	10.20	12.03	V	203	2.00
1	5,187.500	91.86			12.12	V	203	2.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5180MHz: Fundamental frequency.



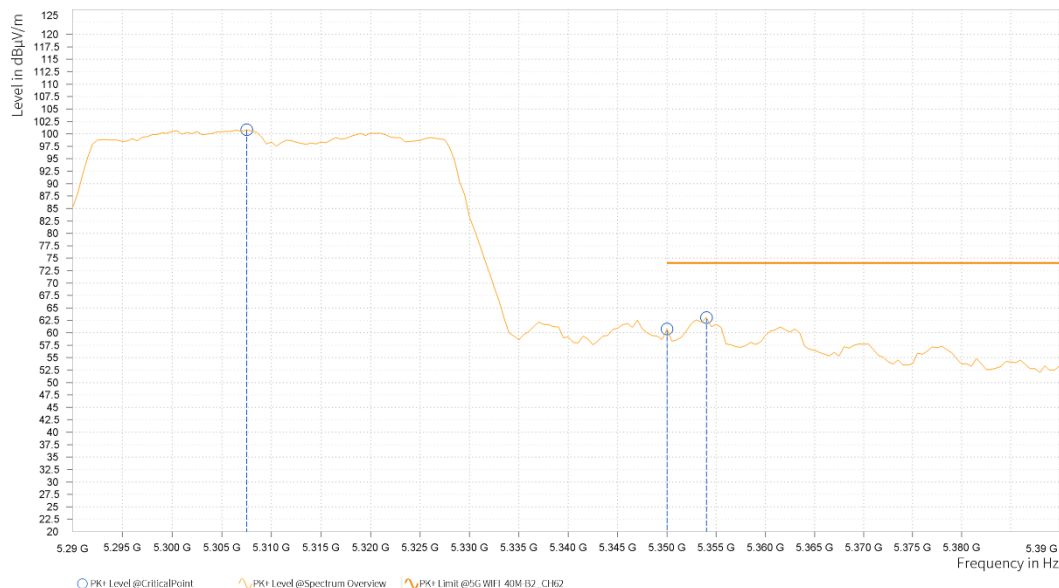
Band 2

802.11ac (40MHz)

CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

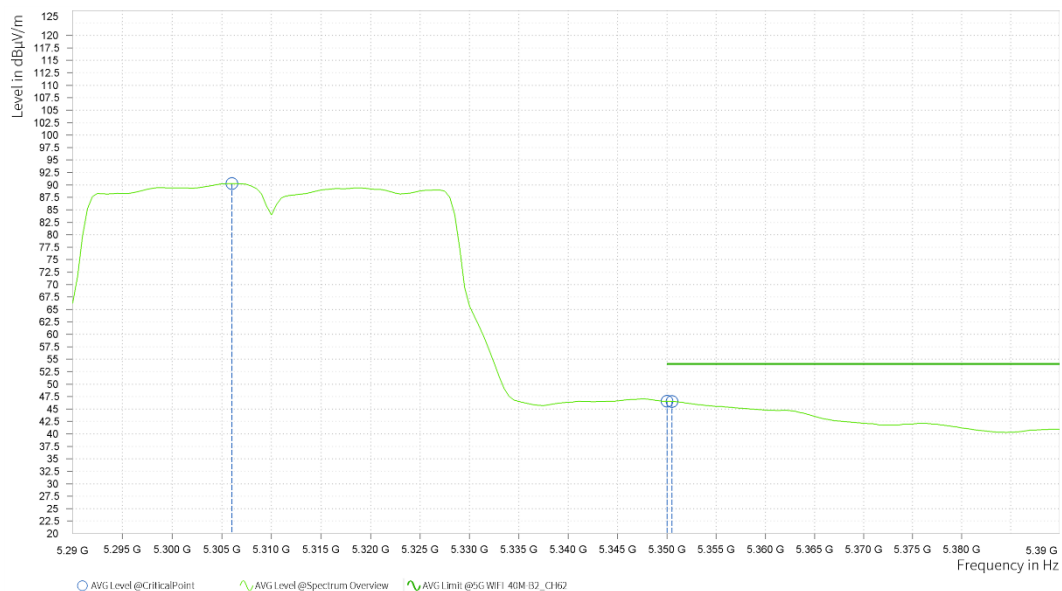
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,307.500	100.84			12.02	H	232.2	1.00
4	5,350.000	60.76	74.00	13.24	12.06	H	153.4	1.00
4	5,354.000	63.08	74.00	10.92	12.09	H	153.4	1.00





ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,306.000	90.29			12.02	H	233.4	1.00
4	5,350.000	46.57	54.00	7.43	12.06	H	153.4	1.00
4	5,350.500	46.54	54.00	7.46	12.07	H	153.4	1.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,305.000	104.23			12.02	V	153.4	1.00
4	5,350.000	58.05	74.00	15.95	12.06	V	74.6	1.00
4	5,353.500	61.55	74.00	12.45	12.08	V	74.6	1.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,312.000	91.69			12.02	V	195.8	2.00
4	5,350.000	44.58	54.00	9.42	12.06	V	114.5	2.00
4	5,365.000	43.71	54.00	10.29	12.16	V	82.9	1.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5260MHz: Fundamental frequency.



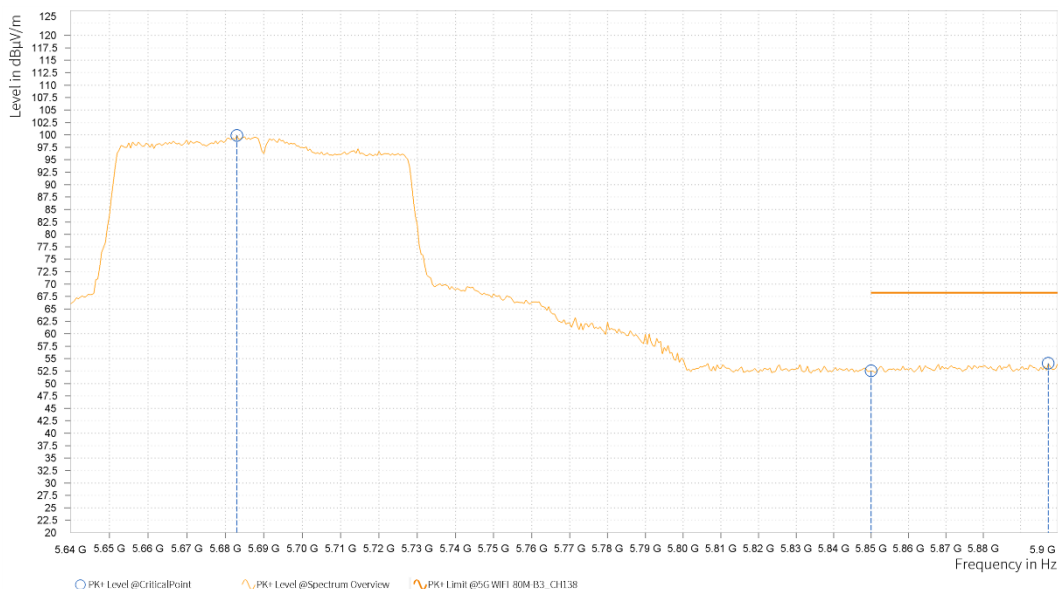
Band 3

802.11ac (80MHz)

CHANNEL	TX Channel 138	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

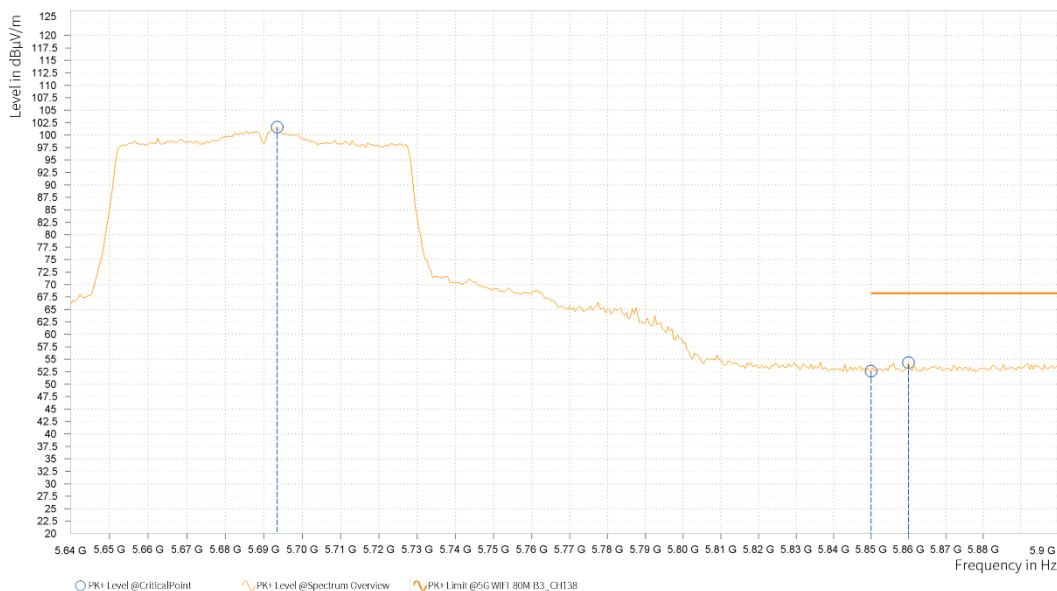
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	5,683.000	99.91			13.05	H	182	1.00
5	5,850.000	52.53	68.20	15.67	13.81	H	239.4	1.00
5	5,897.500	54.05	68.20	14.15	14.10	H	182	1.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	5,693.500	101.61			13.08	V	194.6	2.00
5	5,850.000	52.59	68.20	15.61	13.81	V	188.1	1.00
5	5,860.000	54.30	68.20	13.90	13.89	V	1	2.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5700MHz: Fundamental frequency.
4. #: Out of restricted band.



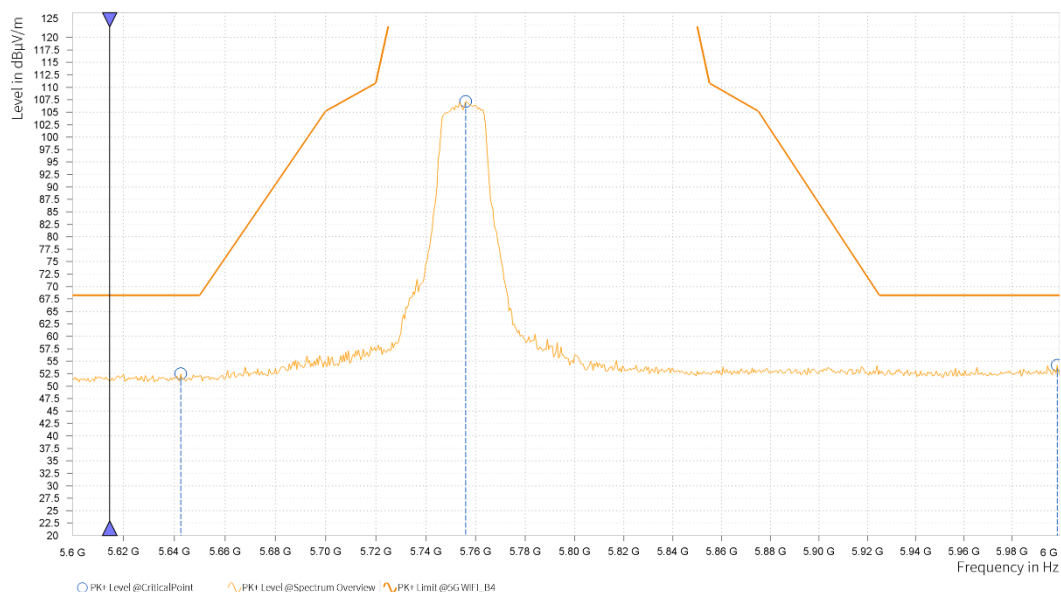
BAND 4

802.11ac (40MHz)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

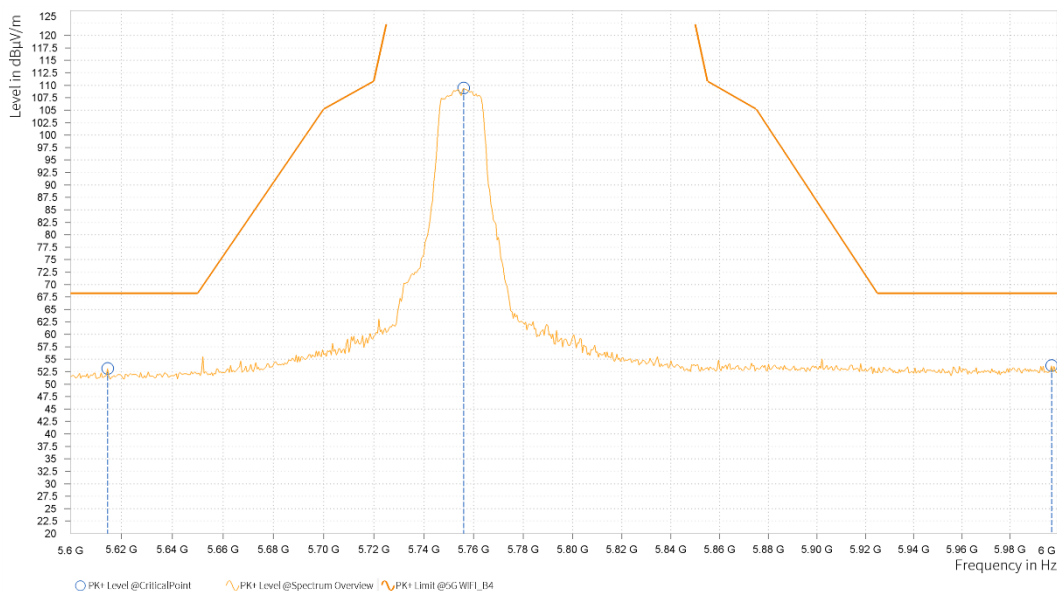
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
12	5,642.500	52.51	68.20	15.69	12.90	H	111.5	1.00
12	5,756.000	107.14			13.12	H	53	1.00
12	5,999.000	54.22	68.20	13.98	13.85	H	171.4	1.00



**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
12	5,614.500	53.16	68.20	15.04	12.76	V	359	1.00
12	5,756.000	109.44			13.12	V	345.8	1.00
12	5,997.500	53.70	68.20	14.50	13.84	V	13.4	2.00

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5745MHz: Fundamental frequency.



RADIATED EMISSION

BELOW 1GHz WORST-CASE DATA

Band 1

802.11ac (40MHz)

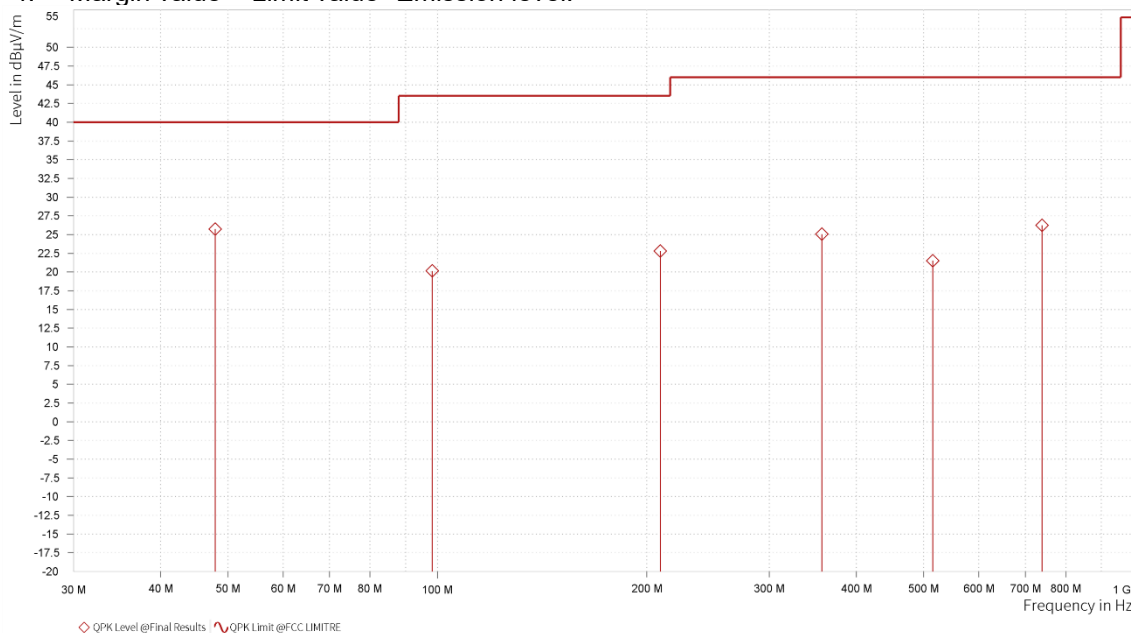
CHANNEL	TX Channel 38	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	47.945	25.73	40.00	14.27	-10.14	H	308.8	1.00	120.000
1	98.288	20.13	43.50	23.37	-12.35	H	0.9	2.00	120.000
1	209.159	22.80	43.50	20.70	-11.48	H	153.4	1.00	120.000
1	356.793	25.06	46.00	20.94	-5.44	H	359.1	1.00	120.000
1	514.952	21.48	46.00	24.52	-3.67	H	359.1	1.00	120.000
1	739.895	26.23	46.00	19.77	-0.40	H	4.2	1.00	120.000

REMARKS:

1. Emission level (dBμV/m) = Read level (dBμV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.





CHANNEL	Channel 38	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	33.347	28.50	40.00	11.50	-13.01	V	158.2	1.00	120.000
1	95.039	22.05	43.50	21.45	-13.03	V	4.9	1.00	120.000
1	249.463	16.72	46.00	29.28	-8.81	V	1	1.00	120.000
1	333.513	20.51	46.00	25.49	-6.17	V	158.2	1.00	120.000
1	485.221	20.76	46.00	25.24	-3.95	V	355.8	2.00	120.000
1	733.832	24.92	46.00	21.08	-0.89	V	1	1.00	120.000

REMARKS:

1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.

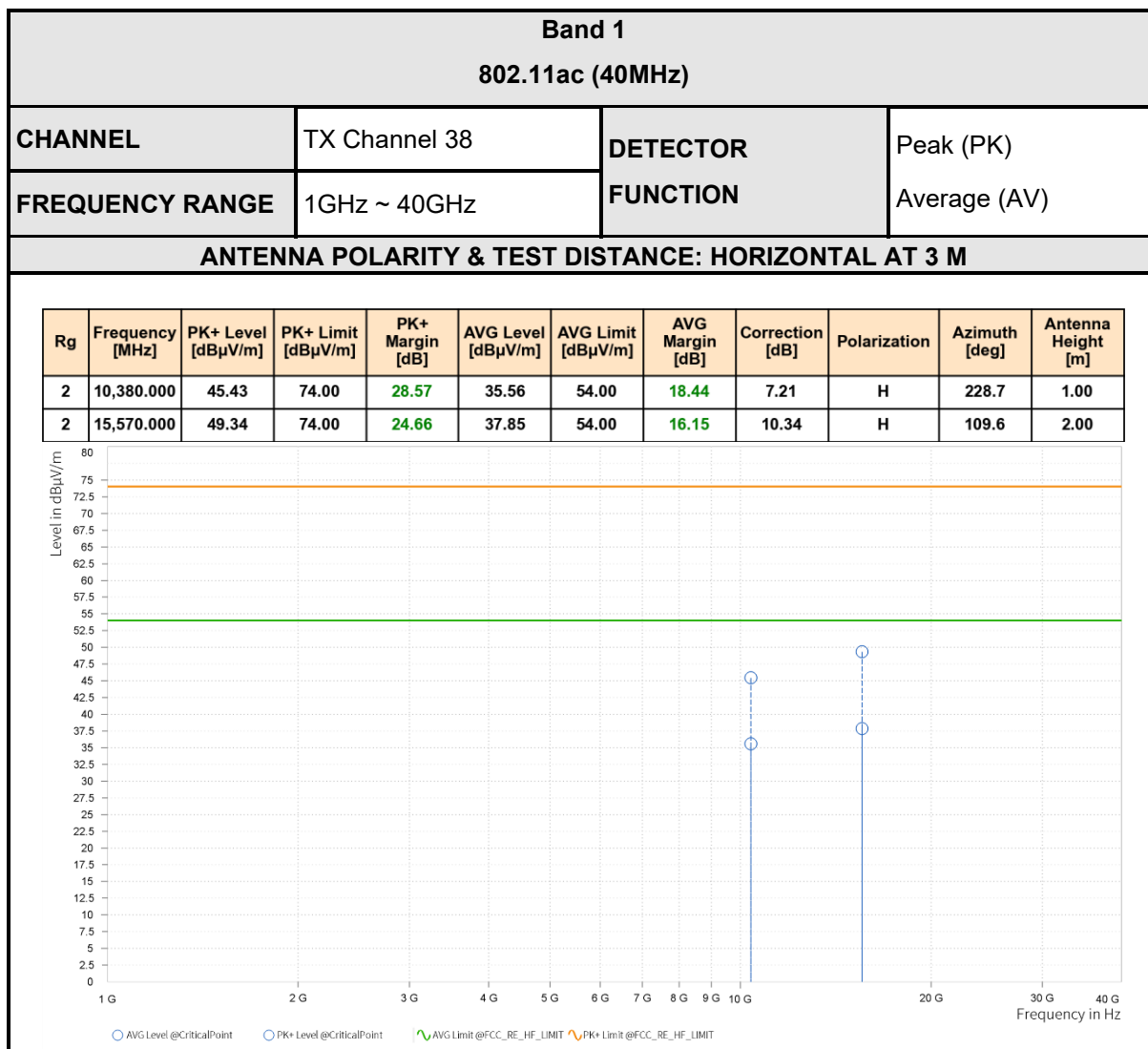




ABOVE 1GHz WORST-CASE DATA

Note: 1. For higher frequency, the emission is too low to be detected.

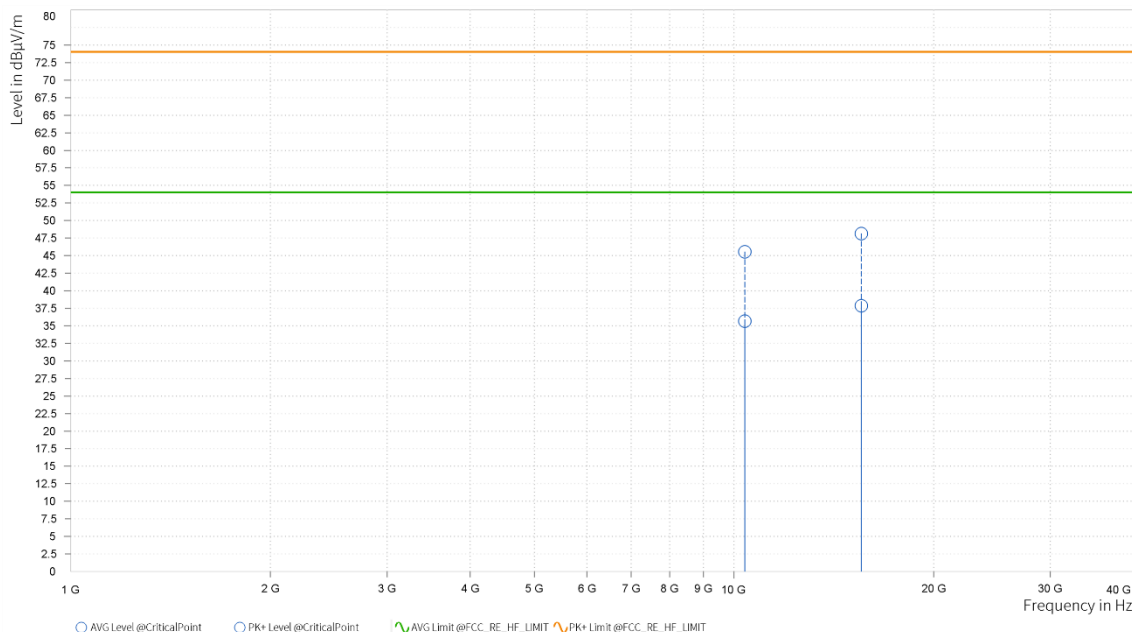
2. For radiated emission testing, all supported channels, bandwidths and modes have been tested, the report only shown the worst-case data of each sub-band.





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	10,380.000	45.55	74.00	28.45	35.66	54.00	18.34	7.21	V	231.1	1.00
2	15,570.000	48.15	74.00	25.85	37.85	54.00	16.15	10.34	V	0.9	2.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5210MHz: Fundamental frequency.



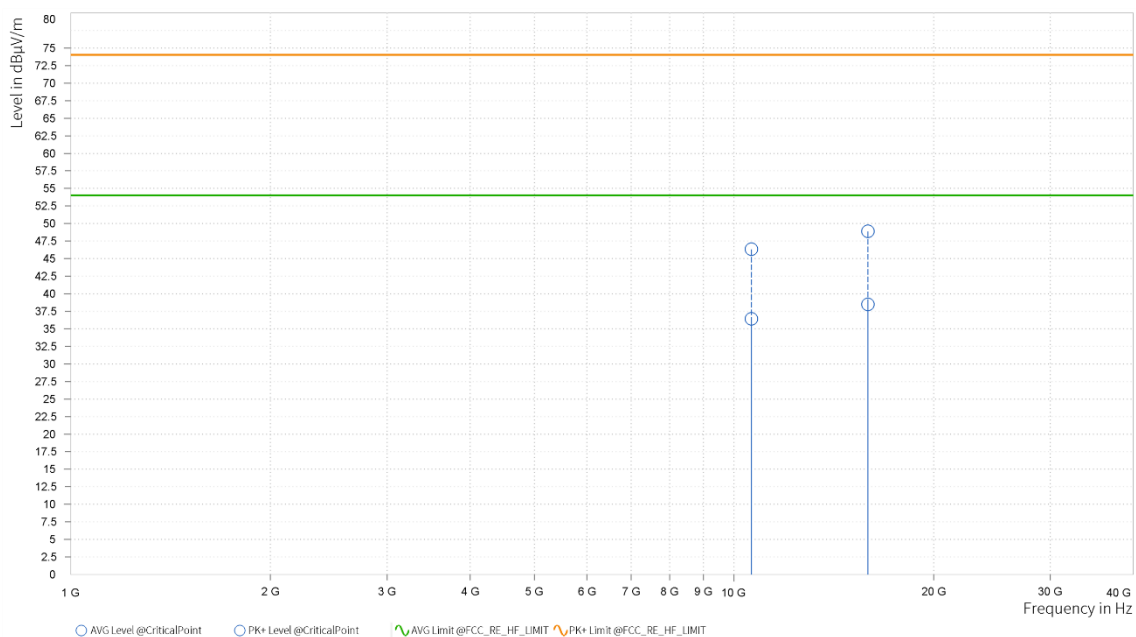
Band 2

802.11ac (40MHz)

CHANNEL	TX Channel 62	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

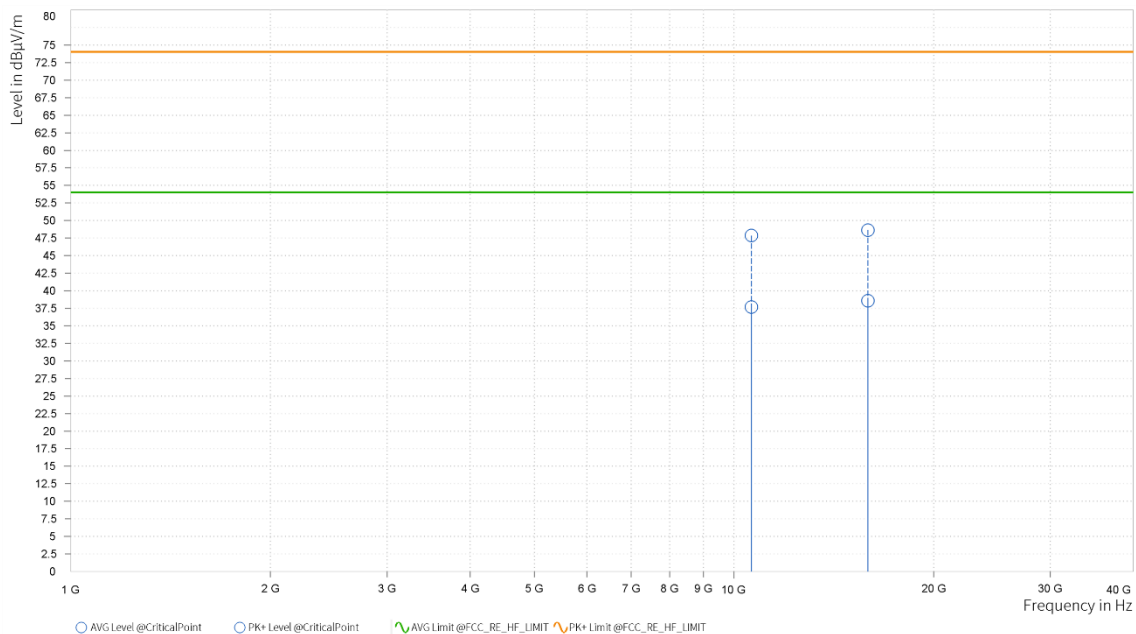
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	10,620.000	46.34	74.00	27.66	36.42	54.00	17.58	7.37	H	267.5	2.00
2	15,930.000	48.88	74.00	25.12	38.47	54.00	15.53	10.72	H	359	2.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	10,620.000	47.86	74.00	26.14	37.67	54.00	16.33	7.37	V	1	2.00
2	15,930.000	48.64	74.00	25.36	38.55	54.00	15.45	10.72	V	1	2.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5290MHz: Fundamental frequency.



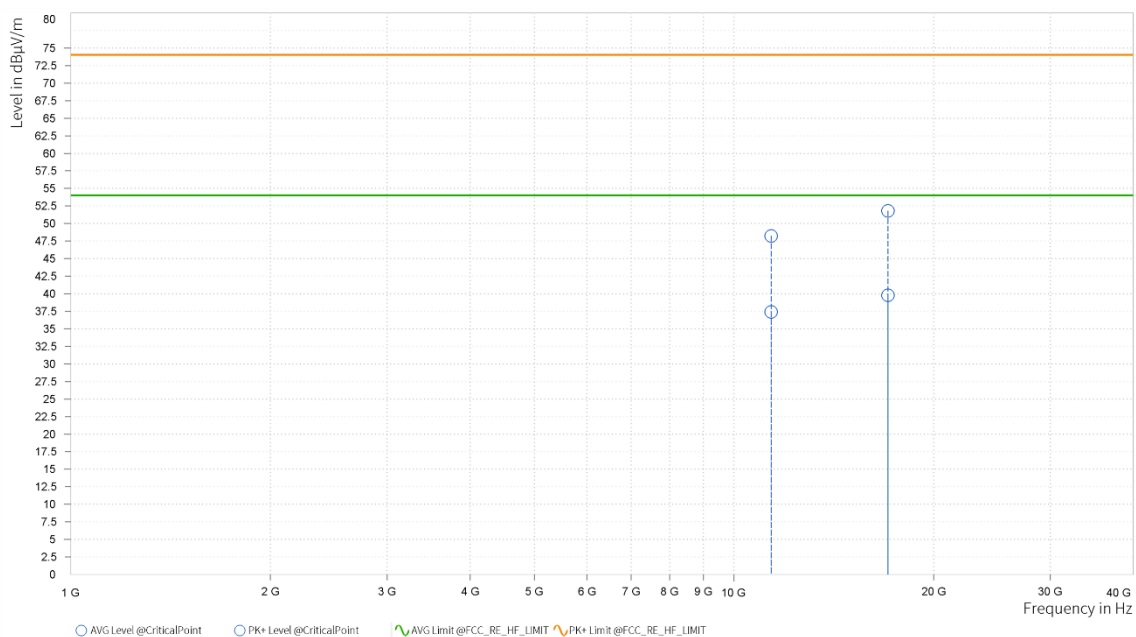
Band 3

802.11ac (80MHz)

CHANNEL	TX Channel 138	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	11,380.000	48.25	74.00	25.75	37.43	54.00	16.57	8.39	H	359.1	1.00
2	17,070.000	51.81	74.00	22.19	39.76	54.00	14.24	13.06	H	0.9	2.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	11,380.000	47.82	74.00	26.18	38.38	54.00	15.62	8.39	V	358.4	1.00
2	17,070.000	51.29	74.00	22.71	39.95	54.00	14.05	13.06	V	0.9	2.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5530MHz: Fundamental frequency.
4. #: Out of restricted band.



Band 4

802.11ac (40MHz)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

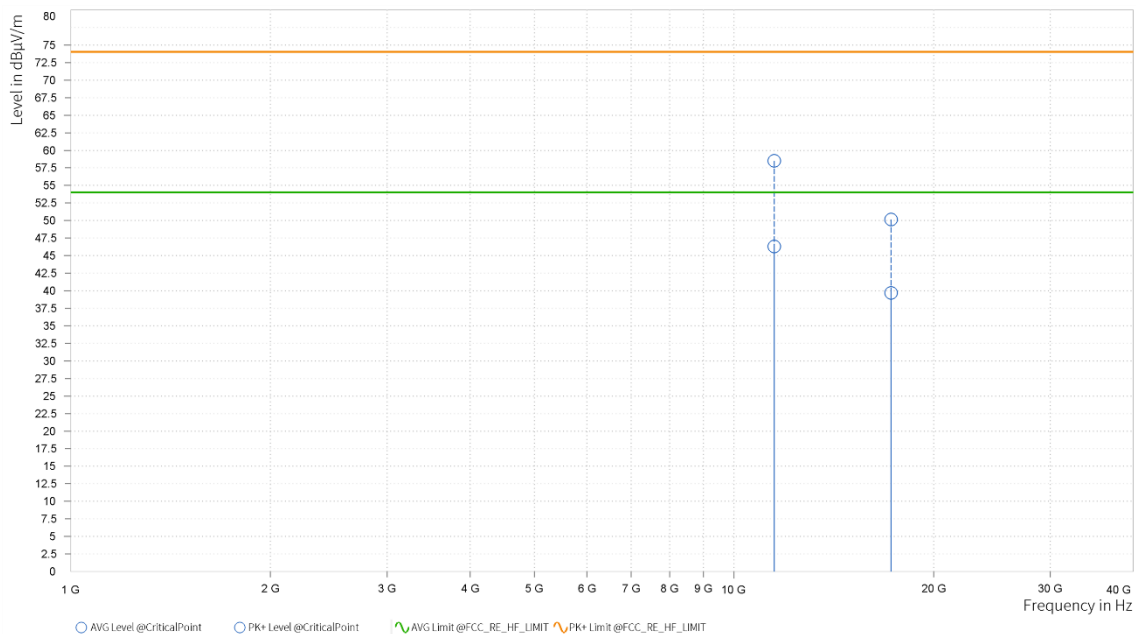
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	11,510.500	55.19	74.00	18.81	43.00	54.00	11.00	8.85	H	357.8	1.00
2	17,265.000	50.72	74.00	23.28	39.88	54.00	14.12	13.34	H	357.8	1.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	11,508.500	58.49	74.00	15.51	46.28	54.00	7.72	8.86	V	359.1	1.00
2	17,265.000	50.13	74.00	23.87	39.69	54.00	14.31	13.34	V	359	2.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5785MHz: Fundamental frequency.



3.2 CONDUCTED EMISSION MEASUREMENT

3.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE:

- 1 The lower limit shall apply at the transition frequencies.
- 2 The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
- 3 All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR3	102749	Mar.28,24	Mar.27,26
ELEKTRA test software	Rohde&Schwarz	ELEKTRA	NA	N/A	N/A
LISN network	Rohde&Schwarz	ENV216	102640	Mar.28,24	Mar.27,26
CABLE	Rohde&Schwarz	W61.01	N/A	Apr.26,25	Apr.25,26
CABLE	Rohde&Schwarz	W601	N/A	Apr.26,25	Apr.25,26

NOTE:

1. The test was performed in CE shielded room.
2. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

**3.2.3 TEST PROCEDURES**

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

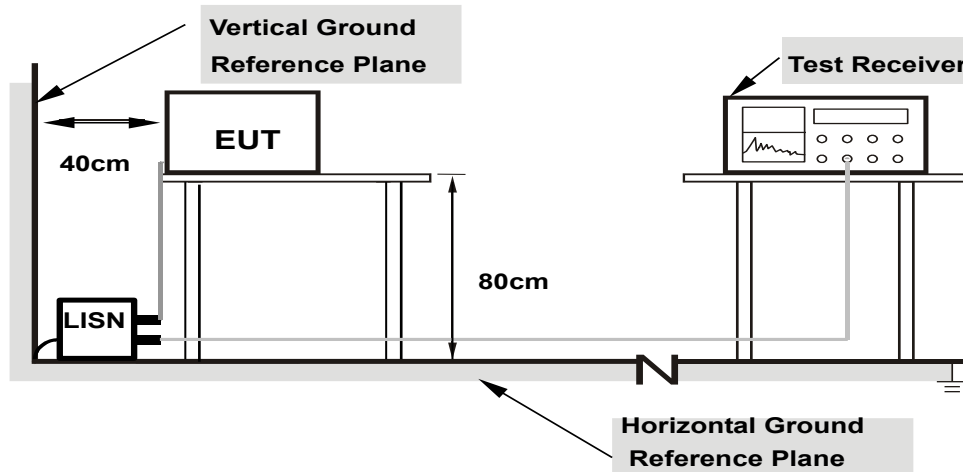
NOTE: All modes of operation were investigated and the worst-case emissions are reported.



3.2.4 DEVIATION FROM TEST STANDARD

No deviation.

3.2.5 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 from other units and other metal planes

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.2.6 EUT OPERATING CONDITIONS

Same as 3.1.7.



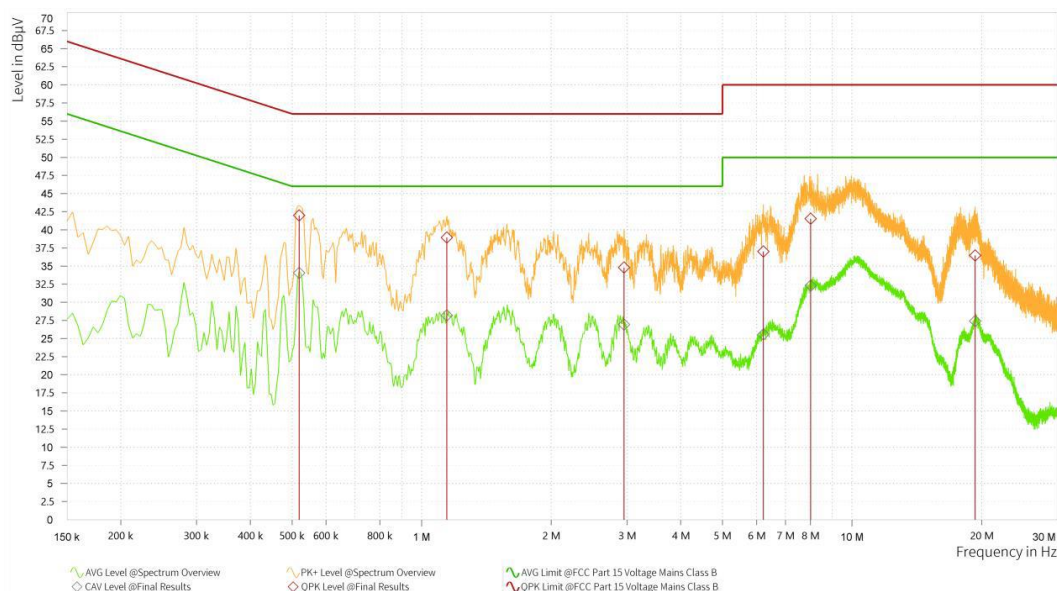
3.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA			
FREQUENCY RANGE	150KHz ~ 30MHz	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak (QP) / Average (AV), 9 kHz
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	26deg. C, 51%RH
TESTED BY	Hanwen Xu		

Rg	Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	CAV Level [dBμV]	CAV: AVG Limit [dBμV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.519	41.97	56.00	14.03	34.06	46.00	11.94	9.75	L1	9.000
1	1.145	38.95	56.00	17.05	28.18	46.00	17.82	9.77	L1	9.000
1	2.954	34.82	56.00	21.18	26.93	46.00	19.07	9.94	L1	9.000
1	6.221	37.01	60.00	22.99	25.56	50.00	24.44	10.31	L1	9.000
1	8.016	41.55	60.00	18.45	32.31	50.00	17.69	10.63	L1	9.000
1	19.320	36.47	60.00	23.53	27.41	50.00	22.59	13.37	L1	9.000

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and
3. measurement with the average detector is unnecessary.
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Limit value - Emission level
6. Correction factor = Insertion loss + Cable loss
7. Emission Level = Correction Factor + Reading Value.





FREQUENCY RANGE	150KHz ~ 30MHz	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak (QP) / Average (AV), 9 kHz
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	26deg. C, 51%RH
TESTED BY	Hanwen Xu		

Rg	Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	CAV Level [dBμV]	CAV: AVG Limit [dBμV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.524	38.55	56.00	17.45	26.90	46.00	19.10	9.75	N	9.000
1	1.208	37.97	56.00	18.03	25.40	46.00	20.60	9.78	N	9.000
1	3.372	37.64	56.00	18.36	25.16	46.00	20.84	9.99	N	9.000
1	7.998	45.12	60.00	14.88	35.03	50.00	14.97	10.62	N	9.000
1	10.010	44.93	60.00	15.07	36.00	50.00	14.00	10.98	N	9.000
1	19.239	38.67	60.00	21.33	30.60	50.00	19.40	13.35	N	9.000

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and
3. measurement with the average detector is unnecessary.
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Limit value - Emission level
6. Correction factor = Insertion loss + Cable loss
7. Emission Level = Correction Factor + Reading Value.





4. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



5. MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.



BUREAU Test Report No.: PSU-QBJ2512030314RF03
VERITAS

6. APPENDIX: THE ORIGINAL REPORT

RADIO TEST REPORT

(FCC Part 15 Subpart E / IC RSS-247)

Applicant:	Honeywell International Inc Honeywell Safety and Productivity Solutions
Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States

Manufacturer:	Honeywell International Inc Honeywell Safety and Productivity Solutions
Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States
Product:	Mobile Computer
Brand Name:	Honeywell
Model Name:	CT45-L0N
FCC ID:	HD5-CT45L0N
Date of tests:	2021-06-11 to 2021-07-13

The tests have been carried out according to the requirements of the following standard:

☒ **Part 15 Subpart E §15. 407 / IC RSS-247 issue 2**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Simon Wang Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
 Date: Jul. 14, 2021	 Date: Jul. 14, 2021

This report is governed by, and incorporates by reference, CPS Conditions of Service as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	2021.07.14	Valid	Original Report

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Summary of Test Result

FCC Rule	IC Rule	Description	Limit	Result	Remark
2.1049 15.403(i)	RSS-247 Section 6	26dB & 99% Bandwidth	-	Pass	U-NII-1 U-NII-2A U-NII-2C
			>500kHz	Pass	U-NII-3
15.407(a)	RSS-247 Section 6	Maximum Conducted Output Power	≤24dBm	Pass	U-NII-1 U-NII-2A U-NII-2C
			≤30dBm	Pass	U-NII-3
15.407(a)	RSS-247 Section 6	Power Spectral Density	≤11dBm/MHz	Pass	U-NII-1 U-NII-2A U-NII-2C
			≤30dBm/500kHz	Pass	U-NII-3
15.407(b)	RSS-247 Section 6	Unwanted Emissions	15.407(b) 15.209(a) RSS-247(6.2) RSS-GEN(8.9 Table 4, Table 5 and Table 6	Pass	Under limit 3.02 dB at 17235 MHz
15.207	RSS-Gen 8.8	AC Conducted Emission	15.207(a) RSS-Gen(8.8 Table 3)	Pass	Under limit 17.16 dB at 0.497 MHz
15.407(g)	RSS-Gen 6.11	Frequency Stability	Within Operation Band	Pass	
15.407(c)	RSS-247 6.4(a)	Automatically Discontinue Transmission	Discontinue Transmission	Pass	
15.203 & 15.407(a)	RSS-Gen 6.7 RSS-Gen 8.3	Antenna Requirement	N/A	Pass	



1 General Description

1.1 Applicant

Honeywell International Inc
Honeywell Safety and Productivity Solutions
9680 Old Bailes Road, Fort Mill, SC 29707 United States

1.2 Manufacturer

Honeywell International Inc
Honeywell Safety and Productivity Solutions
9680 Old Bailes Road, Fort Mill, SC 29707 United States

1.3 General Description Of EUT

Product	Mobile Computer
Model No.	CT45-L0N
Additional No.	N/A
Difference Description	N/A
HW Version	V1.0
SW Version	OS.11.001
Power Supply	3.85Vdc for EUT
Modulation Technology	256QAM,64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Type	802.11a/n/ac : OFDM
Operating Frequency	U-NII-1:5150~5250MHz U-NII-2A:5250~5350MHz U-NII-2C:5470~5725MHz U-NII-3:5725~5850MHz
Max. Output Power	802.11a : 19.17 dBm (0.0826 W) 802.11n HT20 SISO: 18.15 dBm (0.0653 W) 802.11n HT40 SISO: 18.56 dBm (0.0718 W) 802.11ac VHT20 SISO : 18.19 dBm (0.0659 W) 802.11ac VHT40 SISO: 17.84 dBm (0.0608 W) 802.11ac VHT80 SISO: 16.58 dBm (0.0455 W)
Antenna Type	LDS type Antenna
Antenna Gain (dBi)	1.1dBi Gainat U-NII-1 1.3dBi Gainat U-NII-2A 1.5dBi Gainat U-NII-2C 1.3dBi Gainat U-NII-3
I/O Ports	Refer to user's manual



NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

1.4 Modification of EUT

No modifications are made to the EUT during all test items.

1.5 Applicable Standards and lab information

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart E §15.407
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ IC RSS-247 Issue 2
- ♦ IC RSS-Gen Issue 5

Remark:

1. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
2. The FCC Site Registration No. is 525120; The Designation No. is CN1171.
3. The IC test Site Registration No. is 21771-1; The CAB Identifier No. is CN0007



2 Test Configuration of Equipment Under Test

2.1 Carrier Frequency and Channel

U-NII-1

Channel	Frequency	Channel	Frequency
36	5180 MHz	46	5230 MHz
38	5190 MHz	48	5240 MHz
40	5200 MHz		
42	5210 MHz		

U-NII-2A

Channel	Frequency	Channel	Frequency
52	5260 MHz	62	5310 MHz
54	5270 MHz	64	5320 MHz
56	5280 MHz		
58	5290 MHz		

U-NII-2C

Channel	Frequency	Channel	Frequency
100	5500 MHz	134	5670 MHz
102	5510 MHz	138	5690 MHz
106	5530 MHz	140	5700 MHz
110	5550 MHz	142	5710 MHz
116	5580 MHz	144	5720 MHz
122	5610 MHz		

TDWR

Channel	Frequency	Channel	Frequency
118	5590 MHz	124	5620 MHz
120	5600 MHz	126	5630 MHz
122	5610 MHz	128	5640 MHz

U-NII-3

Channel	Frequency	Channel	Frequency
149	5745 MHz	159	5795 MHz
151	5755 MHz	165	5825 MHz
155	5775 MHz		
157	5785 MHz		



2.2 Test Mode

Based on the baseline scan, the worst - case data rates were:

802.11a mode: 6 Mbps

802.11n HT20 mode: MCS0

802.11n HT40 mode: MCS0

802.11ac VHT20 mode: MCS0

802.11ac VHT40 mode: MCS0

802.11ac VHT80 mode: MCS0

2.2.1 Antenna Port Conducted Measurement

Summary table of Test Cases				
Test Item	Modulation			
	802.11 a	802.11n HT20/ 802.11ac VHT20	802.11n HT40/ 802.11ac VHT40	802.11ac VHT80
U-NII-1	Mode 1: CH36	Mode 1: CH36	Mode 1: CH38	Mode 1: CH42
	Mode 2: CH40	Mode 2: CH40	Mode 2: CH46	Mode 2: -
	Mode 3: CH48	Mode 3: CH48	Mode 3: -	Mode 3: -

Summary table of Test Cases				
Test Item	Modulation			
	802.11 a	802.11n HT20/ 802.11ac VHT20	802.11n HT40/ 802.11ac VHT40	802.11ac VHT80
U-NII-2A	Mode 1: CH52	Mode 1: CH52	Mode 1: CH54	Mode 1: CH58
	Mode 2: CH56	Mode 2: CH56	Mode 2: CH62	Mode 2: -
	Mode 3: CH64	Mode 3: CH64	Mode 3: -	Mode 3: -

Summary table of Test Cases				
Test Item	Modulation			
	802.11 a	802.11n HT20/ 802.11ac VHT20	802.11n HT40/ 802.11ac VHT40	802.11ac VHT80
U-NII-2C	Mode 1: CH100	Mode 1: CH100	Mode 1: CH102	Mode 1: CH106
	Mode 2: CH116	Mode 2: CH116	Mode 2: CH110	Mode 2: CH138
	Mode 3: CH140	Mode 3: CH140	Mode 3: CH134	Mode 3: -
	Mode 4: CH144	Mode 4: CH144	Mode 4: CH142	

Summary table of Test Cases				
Test Item	Modulation			
	802.11 a	802.11n HT20/ 802.11ac VHT20	802.11n HT40/ 802.11ac VHT40	802.11ac VHT80
U-NII-3	Mode 1: CH149 Mode 2: CH157 Mode 3: CH165	Mode 1: CH149 Mode 2: CH157 Mode 3: CH165	Mode 1: CH151 Mode 2: CH159	Mode 1: CH155 Mode 2: - Mode 3: -

2.2.2 Radiated Emission Test (Below 1GHz)

Radiated Test Cases	802.11n HT40
	Mode 1: CH62

Note : 1. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis, antenna ports (if EUT with antenna diversity architecture) and packet type. It was determined that Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y orientation.

2. Following channel(s) was (were) selected for the final test as listed above

2.2.3 Radiated Bandedge and Radiated Emission Test (Above 1GHz)

Summary table of Test Cases				
Test Item	Modulation			
	802.11 a	802.11n HT20/ 802.11ac VHT20 SISO	802.11n HT40/ 802.11ac VHT40 SISO	802.11ac VHT80 SISO
U-NII-1 & U-NII-2A	Mode 1: CH36 Mode 2: CH48 Mode 3: CH64	Mode 1: CH36 Mode 2: CH48 Mode 3: CH64	Mode 1: CH38 Mode 2: CH46 Mode 3: CH62	Mode 1: CH42 Mode 2: CH58

Summary table of Test Cases				
Test Item	Modulation			
	802.11 a	802.11n HT20/ 802.11ac VHT20	802.11n HT40/ 802.11ac VHT40	802.11ac VHT80
U-NII-2C	Mode 1: CH100 Mode 2: CH116 Mode 3: CH140 Mode 4: CH144	Mode 1: CH100 Mode 2: CH116 Mode 3: CH140 Mode 4: CH144	Mode 1: CH102 Mode 2: CH110 Mode 3: CH134 Mode 4: CH142	Mode 1: CH106 Mode 2: CH122 Mode 3: CH138

Summary table of Test Cases				
Test Item	Modulation			
	802.11 a	802.11n HT20/ 802.11ac VHT20	802.11n HT40/ 802.11ac VHT40	802.11ac VHT80
U-NII-3	Mode 1: CH149 Mode 2: CH157 Mode 3: CH165	Mode 1: CH149 Mode 2: CH157 Mode 3: CH165	Mode 1: CH151 Mode 2: CH159	Mode 1: CH155 Mode 2: - Mode 3: -

- Note :
1. The power under SISO is greater than the power under SISO, so the radiated spurious test under SISO
 2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis, antenna ports (if EUT with antenna diversity architecture) and packet type. It was determined that Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y orientation.
 3. Following channel(s) was (were) selected for the final test as listed above
 4. For frequency above 18GHz, the measured value is much lower than the limit, therefore, it is not reflected in the report.

2.2.4 Power Line Conducted Emission Test:

AC Conducted Emission	Mode 1 :RLAN Linking + Earphone + Adapter
--------------------------------------	---

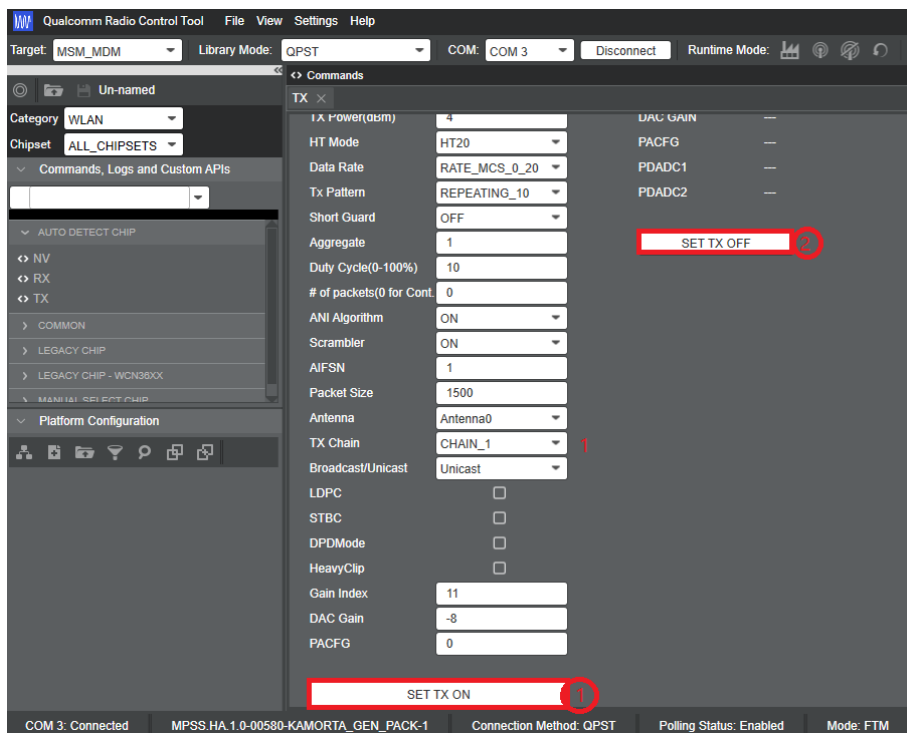
2.3 Support Equipment

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	NETGARE	R7800	PY315100319	N/A	unshielded AC I/P cable1.2 m
2.	Notebook	Lenovo	E470C	FCC sDoC	N/A	shielded cable DC O/P 1.8 m unshielded AC I/P cable1.2 m
3.	Earphone	Honeywell	PTE-300N	FCC sDoC	N/A	N/A
4.	Adapter	Honeywell	ADS-12B-06 05010E	FCC sDoC	N/A	N/A

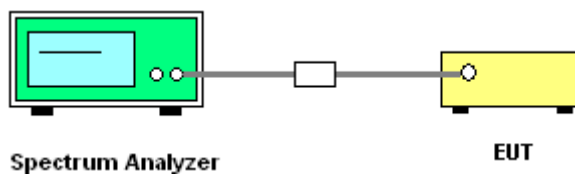
2.4 Test Setup

EUT was set in the Hidden menu mode to enable RLAN communications.

The following picture is a screenshot of the test software

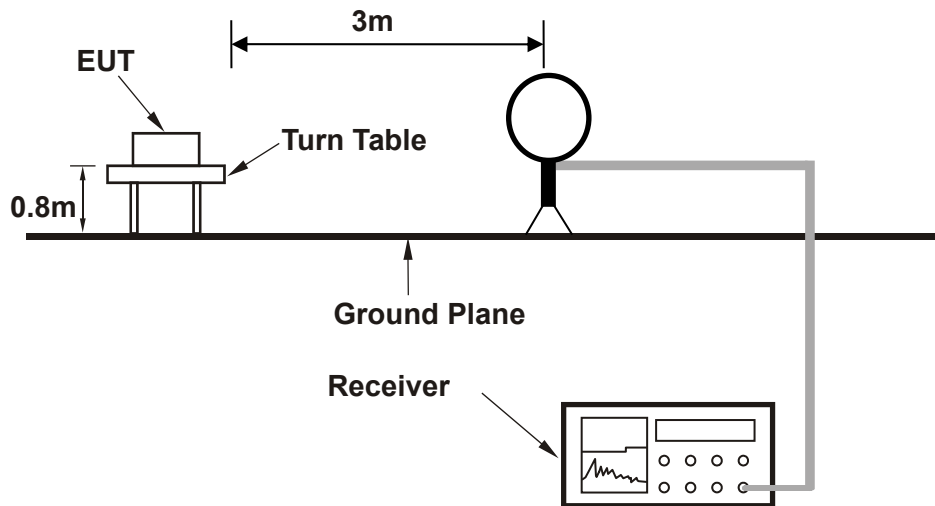


Setup diagram for Conducted Test

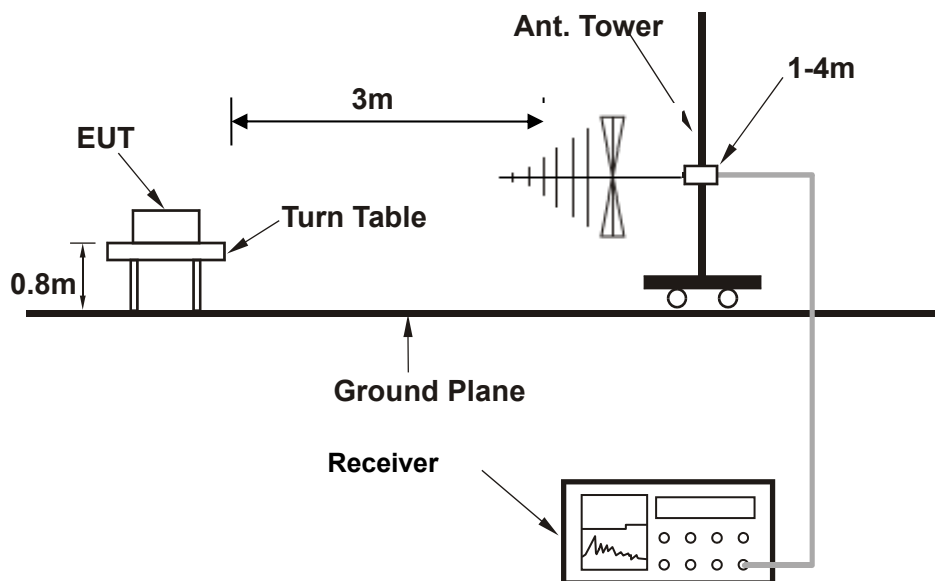




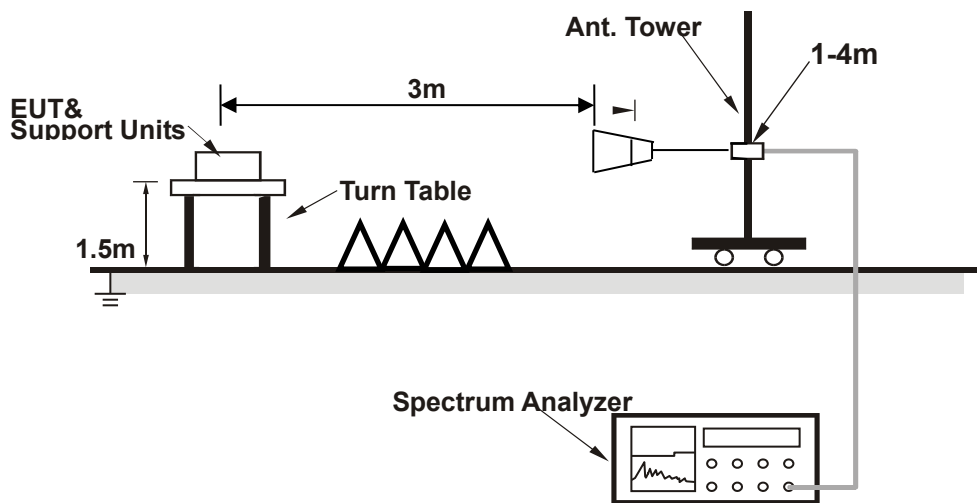
Setup diagram for Radiation(9KHz~30MHz) Test



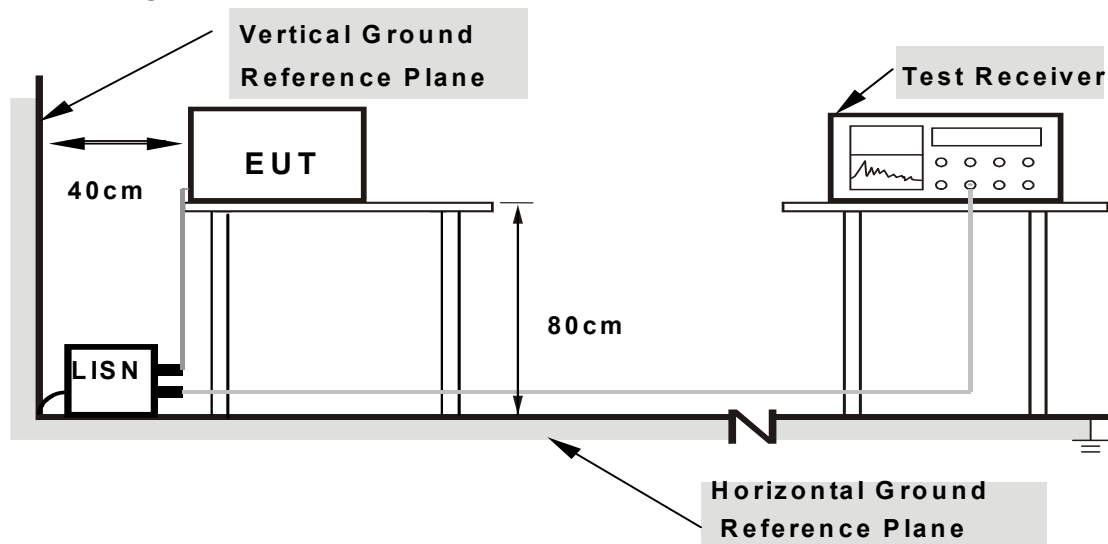
Setup diagram for Radiation(Below 1G) Test



Setup diagram for Radiation(Above1G) Test



Setup diagram for AC Conducted Emission Test



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

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



2.5 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 5 dB and 10dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 5 + 10 = 15 \text{ (dB)}\end{aligned}$$

For all radiated test items:

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

Over Limit (dB μ V/m) = Level(dB μ V/m) - Limit Level (dB μ V/m)