TEST REPORT

Part 15 Subpart E 15.407

Equipment under test	Flat Panel Digital X-ray Detector
Model name	BT-DA22W
Derivative Model	BT-DB22W
FCC ID	2AVRHBT-DA22W
Applicant	BONTECH Co., Ltd.
Manufacturer	BONTECH Co., Ltd.
Date of test(s)	2020.02.12 ~ 2020.02.21
Date of issue	2020.02.24

Issued to
BONTECH Co., Ltd.
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Test and report completed by :	**Report approval by :**
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Revision history

Revision	Date of issue	Test report No.	Description
-	2020.02.24	KES-RF-20T0033	Initial

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1. General information

Applicant:	BONTECH Co., Ltd.
Applicant address:	Digital Empire D-building #1201~#1204, 16, Deogyeong-daero 1556 beon-gil, Yeongtong-gu, Suwon-si, Gyeonggi-do, Korea
Test site:	KES Co., Ltd.
Test site address:	3701, 40, Simin-daero 365beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea 473-21, Gayeo-ro, Yeoju-si, Gyeonggi-do, Korea
FCC/IC rule part(s):	15.407
FCC ID:	2AVRHBT-DA22W
Test device serial No.:	☒ Production ☐ Pre-production ☐ Engineering

1.1. EUT description

Equipment under test	Flat Panel Digital X-ray Detector	
Frequency range		2 422 ㎒ ~ 2 452 ㎒ (11n_HT40)
	UNII-1	5 210 ㎒ (11ac_VHT80)
	UNII-3	5 775 ㎒ (11ac_VHT80)
Model:	BT-DA22W	
Derivative Model	BT-DB22W	
Modulation technique	DSSS, OFDM	
Number of channels	2 422 ㎒ ~ 2 452 ㎒ (11n_HT40) : 7 ch 5 210 ㎒ (11ac_VHT80) : 1ch 5 775 ㎒ (11ac_VHT80) : 1ch	
Antenna specification	Antenna type(2.4 ㎓ WIFI) : PCB antenna, Peak gain : 2.5 ㏈i Antenna type(5 ㎓ WIFI) : PCB antenna, Peak gain : 4.5 ㏈i	
Power source	AC 120 V (Adapter DC output 12 V)	
H/W version	V1.0	
S/W version	V1.1	

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1.2. Test configuration

The **BONTECH Co., Ltd. // BT-DA22W // FCC ID: 2AVRHBT-DA22W** was tested according to the specification of EUT, the EUT must comply with following standards and KDB documents.

FCC Part 15.407
KDB 789033 D02 v02r01
ANSI C63.10-2013

1.3. Device modifications

N/A

1.4. Information about derivative model

Division	Basic model	Variant model
	BT-DA22W	BT-DB22W
Dimension	(384 x 460 x 15) ㎜	(384 x 460 x 15) ㎜
Scintillator type	CsI	Gdos

1.5. Accessory information

Equipment	Manufacturer	Model	Serial No.
Control box	BONTECH Co., Ltd.	BT-CB02	-
Switching Power Supply	SINPRO	MPU51-105	-

1.6. Measurement Uncertainty

Test Item		Uncertainty
Uncertainty for Conduction emission test		2.62 dB
Uncertainty for Radiation emission test (include Fundamental emission)	9㎑ - 30㎒	4.54 dB
	30㎒ - 1㎓	4.36 dB
	Above 1㎓	5.00 dB
Note. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.		

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1.7. Frequency/channel operations

UNII-1 802.11ac_VHT80

Ch.	Frequency (㎒)	Mode
42	5 210	802.11ac_VHT80

UNII-3 802.11ac_VHT80

Ch.	Frequency (㎒)	Mode
155	5 775	802.11ac_VHT80

1.8. Worst case data rate

1. Worst-case data rates were: 802.11ac_VHT80 : **MCS8**

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2. Summary of tests

Section in FCC Part 15	Parameter	Test results
15.407(a)	26 dB bandwidth & 99 % bandwidth	N/A[1)]
15.407(e)	6 dB bandwidth (UNII-3)	N/A[1)]
15.407(a)	Maximum conducted output power	N/A[1)]
15.407(a)	Power spectral density	N/A[1)]
15.407(g)	Frequency stability	N/A[1)]
15.205 15.209 15.407(d)	Radiated restricted band and emission	Pass
15.207	AC power line conducted emissions	Pass

Note :

1) Please Refer to the approved Module Report (Report No.: 1503RSU02902) for result of existing test items.
2) The output power setting is same as original module and confirmed that RF conducted tests of original report remain valid for this filing.

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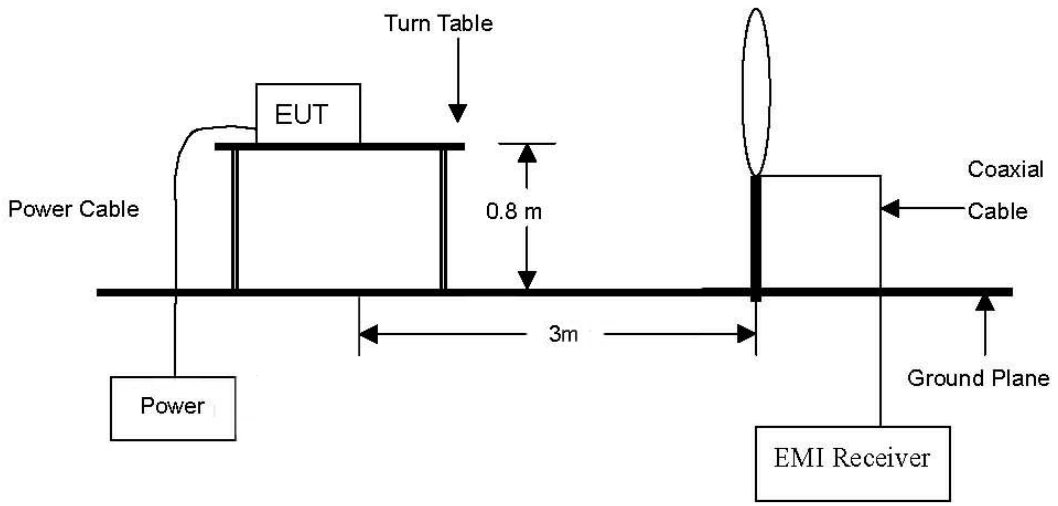
3. Test results

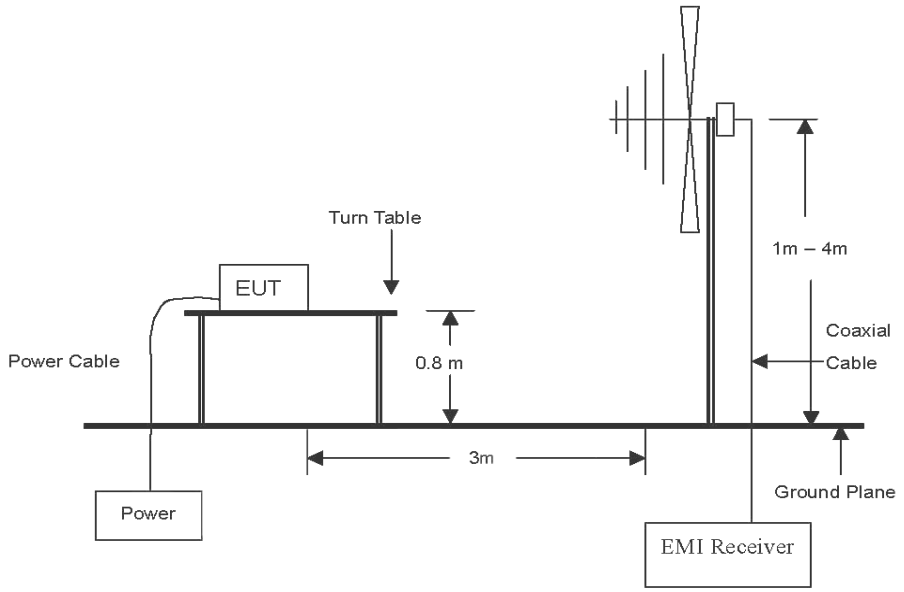
3.1. Radiated restricted band and emissions

Test setup

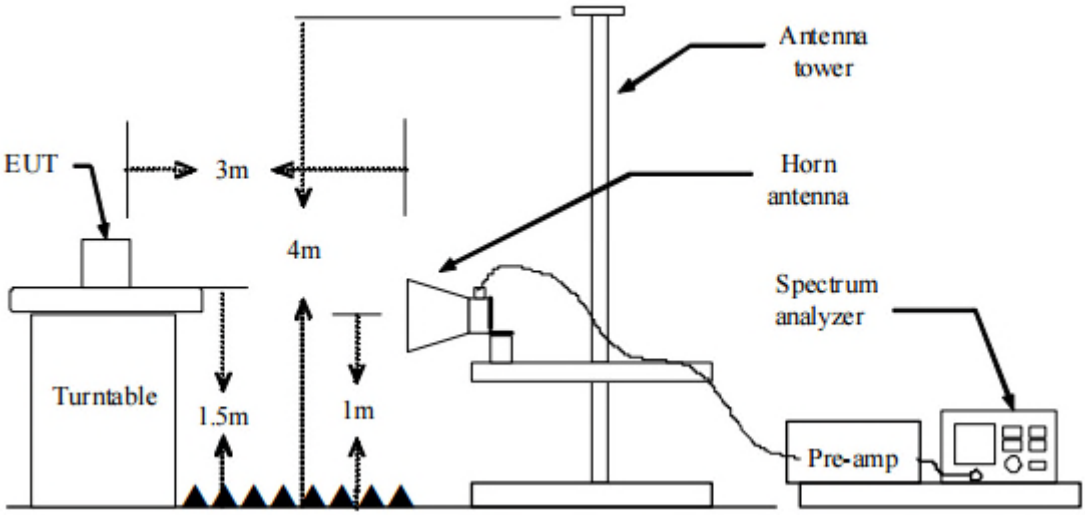
The diagram below shows the test setup that is utilized to make the measurements for emission from 9 ㎑ to 30 ㎒ Emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission from 30 ㎒ to 1 ㎓ emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission from 1 ㎓ to the tenth harmonic of the highest fundamental frequency or to 40 ㎓ emissions, whichever is lower.



Test procedure

Radiated emissions from the EUT were measured according to the dictates in section 11.11 & 11.12 of ANSI C63.10-2013.

Test procedure below 30 ㎒

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
2. Then antenna is a loop antenna is fixed at one meter above the ground to determine the maximum value of the field strength. Both parallel, ground parallel and perpendicular of the antenna are set to make the measurement. It was determined that **parallel** was worst-case orientation; therefore, all final radiated testing was performed with the EUT in **parallel.**
3. For each suspected emission, the EUT was arranged to its worst case and then the table was turned from 0 degrees to 360 degrees to find the maximum reading.
4. The test-receiver system was set to average or quasi peak detect function and Specified Bandwidth with Maximum hold mode.

Test procedure above 30 ㎒

1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The antenna is a bi-log antenna, a horn antenna ,and its height are 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.
3. 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 table was turned from 0 degrees to 360 degrees to find the maximum reading.
4. The test receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

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5. Spectrum analyzer settings for $f < 1$ ㎓:
   ① Span = wide enough to fully capture the emission being measured
   ② RBW = 100 ㎑
   ③ VBW ≥ RBW
   ④ Detector = quasi peak
   ⑤ Sweep time = auto
   ⑥ Trace = max hold
6. Spectrum analyzer settings for $f \geq 1$ ㎓: Peak
   ① Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
   ② RBW = 1 ㎒
   ③ VBW ≥ 3 ㎒
   ④ Detector = peak
   ⑤ Sweep time = auto
   ⑥ Trace = max hold
   ⑦ Trace was allowed to stabilize

7. Spectrum analyzer settings for $f \geq 1$ ㎓: Average
   ① Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
   ② RBW = 1 ㎒
   ③ VBW ≥ 3 × RBW
   ④ Detector = RMS, if span/(# of points in sweep) ≤ (RBW/2). Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.
   ⑤ Averaging type = power(i.e., RMS)
      1) As an alternative, the detector and averaging type may be set for linear voltage averaging.
      2) Some instruments require linear display mode in order to use linear voltage averaging. Log or ㏈ averaging shall not be used.
   ⑥ Sweep = auto
   ⑦ Trace = max hold
   ⑧ Perform a trace average of at least 100 traces.
   ⑨ A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:
      1) If power averaging (RMS) mode was used in step ⑤, then the applicable correction factor is 10 log(1/x), where x is the duty cycle.
      2) If linear voltage averaging mode was used in step ⑤, then the applicable correction factor is 20 log(1/x), where x is the duty cycle.
      3) If a specific emission is demonstrated to be continuous (≥ 98 percent duty cycle) rather than turning on and off with the transmit cycle, then no duty cycle correction is required for that emission.

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Note.

1. f <30 ㎒, extrapolation factor of 40 ㏈/decade of distance. $F_d = 40\log(D_m/Ds)$
   f ≥30 ㎒, extrapolation factor of 20 ㏈/decade of distance. $F_d = 20\log(D_m/Ds)$
   Where:
   F_d = Distance factor in ㏈
   D_m = Measurement distance in meters
   D_s = Specification distance in meters
2. Field strength(㏈㎶/m) = Level(㏈㎶) + CF (㏈) + or DCF(㏈)
3. Margin(㏈) = Limit(㏈㎶/m) - Field strength(㏈㎶/m)
4. Emissions below 18 ㎓ were measured at a 3 meter test distance while emissions above 18 ㎓ were measured at a 1 meter test distance with the application of a distance correction factor.
7. The fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z, it was determined that **X orientation** was worst-case orientation; therefore, all final radiated testing was performed with the EUT in **X orientation.**
8. The worst-case emissions are reported however emissions whose levels were not within 20 ㏈ of respective limits were not reported.
9. According to exploratory test no any obvious emission were detected from 9 ㎑ to 30 ㎒. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30 m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

Limit

According to 15.209(a), for an intentional radiator devices, the general required of field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values：

Frequency (㎒)	Distance (Meters)	Radiated (㎶/m)
0.009 ~ 0.490	300	2400/F(㎑)
0.490 ~ 1.705	30	24000/F(㎑)
1.705 ~ 30.0	30	30
30 ~ 88	3	100**
88 ~ 216	3	150**
216 ~ 960	3	200**
Above 960	3	500

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54 ~ 72 ㎒, 76 ~ 88 ㎒, 174 ~ 216 ㎒ or 470 ~ 806 ㎒. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

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According to 15.407(b), (b) Undesirable emission limits: Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15–5.25 ㎓ band: all emissions outside of the 5.15–5.35 ㎓ band shall not exceed an e.i.r.p of –27 ㏈m/㎒.
(2) For transmitters operating in the 5.25-5.35 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.
(3) For transmitters operating in the 5.47-5.725 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.
(4) 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.
(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 ㎒.
A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 ㎒.
(6) Unwanted emissions below 1 ㎓ must comply with the general field strength limits set forth in § 15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in § 15.207.
(7) The provisions of §15.205 apply to intentional radiators operating under this section.
(8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

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According to RSS-247 6.2 The equipment output power and e.i.r.p. shall be measured in terms of average value. If the transmission is in bursts, the provisions of RSS-Gen for pulsed operation shall apply.

(1) For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth (i.e. 99% bandwidth), above 5250 MHz. The 26 dB bandwidth may fall into the 5250-5350 MHz band; however, if the occupied bandwidth also falls within the 5250-5350 MHz band, the transmission is considered as intentional and the devices shall comply with all requirements in the band 5250-5350 MHz including implementing dynamic frequency selection (DFS) and TPC, on the portion of the emission that resides in the 5250-5350 MHz band.

(2) For transmitters operating in the band 5250-5350 MHz Devices shall comply with the following:
a) All emissions outside the band 5250-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p.; or
b) All emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. and its power shall comply with the spectral power density for operation within the band 5150-5250 MHz. The device, except devices installed in vehicles, shall be labelled or include in the user manual the following text “for indoor use only.”

(3) For transmitters operating in the band 5470-5600 MHz and 5650-5725 MHz, Emissions outside the band 5470-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p. However, devices with bandwidth overlapping the band edge of 5725 MHz can meet the emission limit of -27 dBm/MHz e.i.r.p. at 5850 MHz instead of 5725 MHz.

(4) For the band 5725-5850 MHz, Devices operating in the band 5725-5850 MHz with antenna gain greater than 10 dBi can have unwanted emissions that comply with either the limits in this section or in section 5.5 until six (6) months after the publication date of this standard for certification. Certified devices that do not comply with emission limits in this section shall not be manufactured, imported, distributed, leased, offered for sale or sold after April 1, 2018.
Devices operating in the band 5725-5850 MHz with antenna gain of 10 dBi or less can have unwanted emissions that comply with either the limits in this section or in section 5.5 until April 1, 2018 for certification. Certified devices that do not comply with emission limits in this section shall not be manufactured, imported, distributed, leased, offered for sale or sold after April 1, 2020.
Devices operating in the band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following:
a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;
b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;
c) 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and
d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

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Duty cycle

Regarding to KDB 789033 D02 v02r01, B)2)b), the maximum duty cycles of all modes were investigated and set the spectrum analyzer as below.

Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value. Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T, where T is defined in II.B.1.a), and the number of sweep points across duration T exceeds 100.

Test mode	T_{on} time (㎳)	Period (㎳)	Duty cycle (Linear)	Duty cycle (%)	Duty cycle correction factor (㏈)
802.11ac_VHT80	0.248	0.310	0.800	80.0	-0.969

Note:

Duty cycle (Linear) = T_{on} time/Period

DCF(Duty cycle correction factor (㏈)) = 10log(1/duty cycle)

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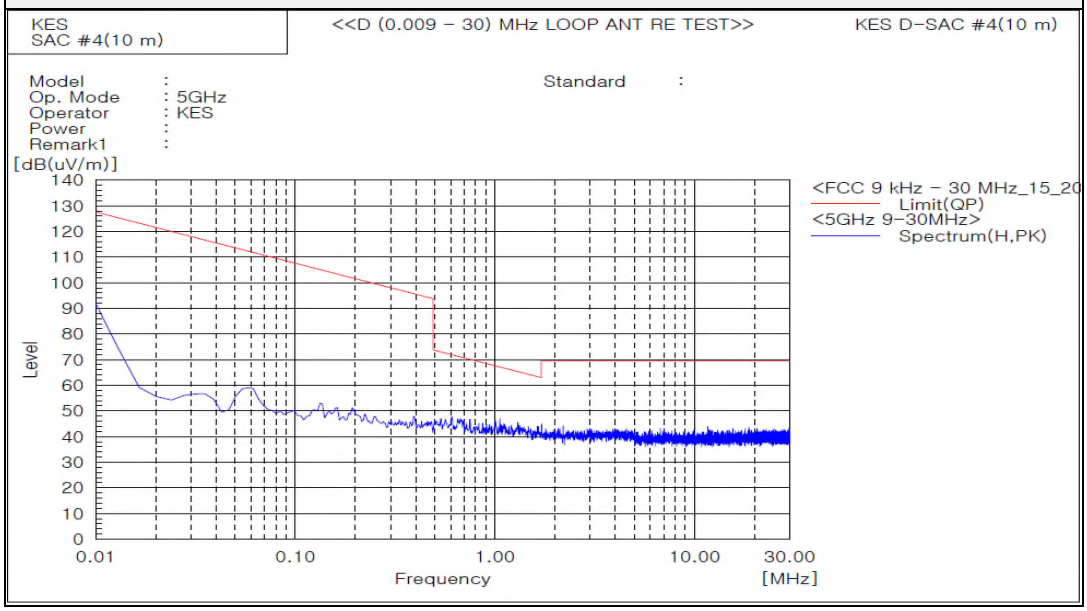
Test results (Below 30 ㎒)

Mode:	802.11ac_VHT80
Distance of measurement:	3 meter
Channel:	42 (Worst case)

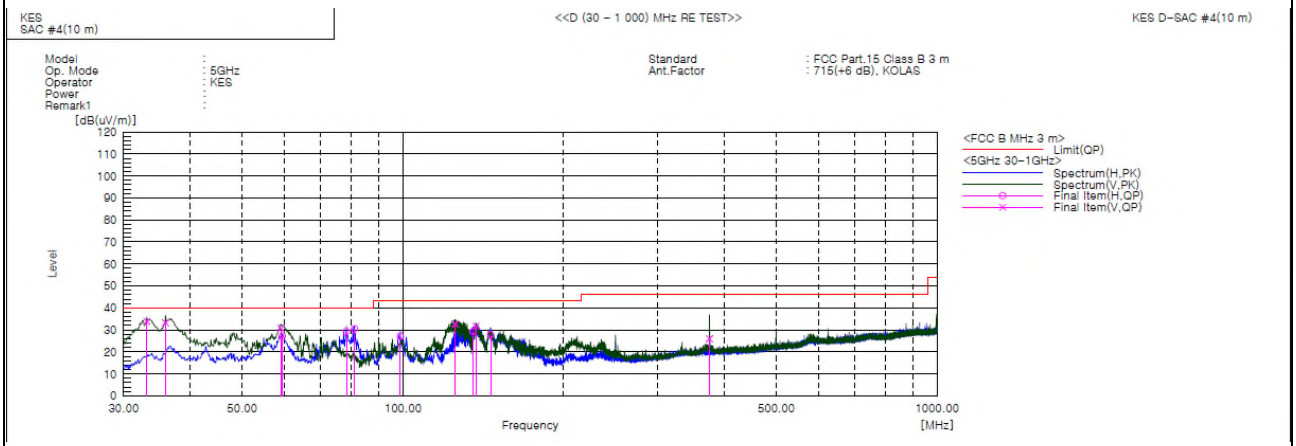
Parallel



Test results (Below 1 000 ㎒) – Worst case

Mode:	802.11ac_VHT80
Distance of measurement:	3 meter
Channel:	42 (Worst case)

Horizontal // Vertical



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	33.153	V	59.5	-25.6	33.9	40.0	6.1	126.0	247.0	
2	35.941	V	58.7	-25.4	33.3	40.0	6.7	100.0	120.0	
3	59.100	V	53.8	-23.0	30.8	40.0	9.2	134.0	310.0	
4	59.464	H	50.2	-23.0	27.2	40.0	12.8	263.0	277.0	
5	78.379	H	57.6	-28.3	29.3	40.0	10.7	336.0	253.0	
6	81.168	H	58.7	-28.2	30.5	40.0	9.5	325.0	293.0	
7	98.870	H	50.6	-23.4	27.2	43.5	16.3	314.0	293.0	
8	125.303	V	58.4	-25.7	32.7	43.5	10.8	225.0	179.0	
9	135.245	H	56.2	-26.8	29.4	43.5	14.1	192.0	131.0	
10	137.064	V	58.8	-26.9	31.9	43.5	11.6	100.0	239.0	
11	145.915	H	54.8	-26.9	27.9	43.5	15.6	400.0	115.0	
12	374.956	V	43.2	-17.2	26.0	46.0	20.0	100.0	243.0	

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Test results (Above 1 000 ㎒)

Mode: 802.11ac_VHT80

Distance of measurement: 3 meter

Channel: 42

- **Spurious**

Frequency (㎒)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	AF (dB)	AMP+CL (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1 188.23	47.13	Peak	H	24.23	-31.43	-	39.93	74.00	34.07
2 408.61	44.75	Peak	H	29.45	-29.45	-	44.75	68.23	23.48
1 013.75	46.99	Peak	V	23.74	-32.15	-	38.58	74.00	35.42
2 410.41	46.45	Peak	V	29.45	-29.44	-	46.46	68.23	21.77

- **Band edge**

Frequency (㎒)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	AF (dB)	AMP+CL (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
4 975.26	43.99	Peak	V	33.96	-25.05	-	52.90	74.00	21.10
4 975.26	31.03	Average	V	33.96	-25.05	-19.03	20.91	54.00	33.09
5 150.00	48.50	Peak	V	34.01	-24.42	-	58.09	74.00	15.91
5 150.00	34.01	Average	V	34.01	-24.42	-19.03	24.57	54.00	29.43

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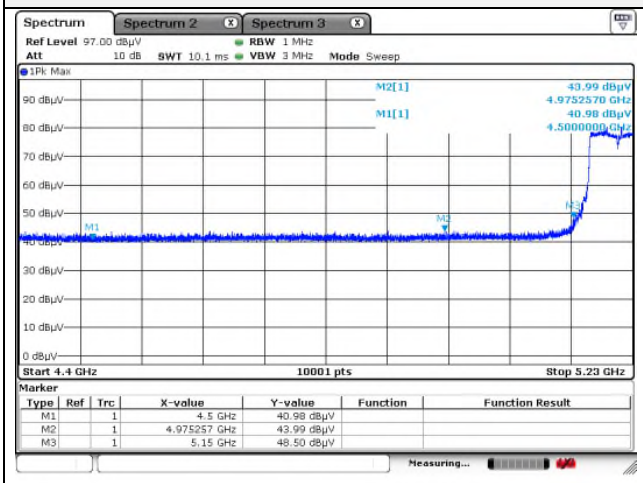
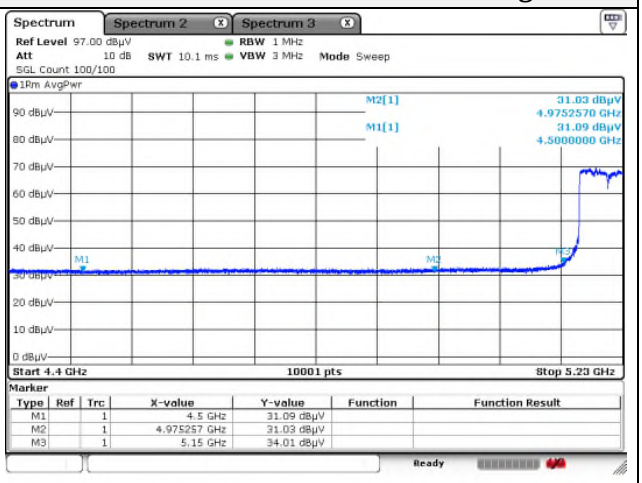
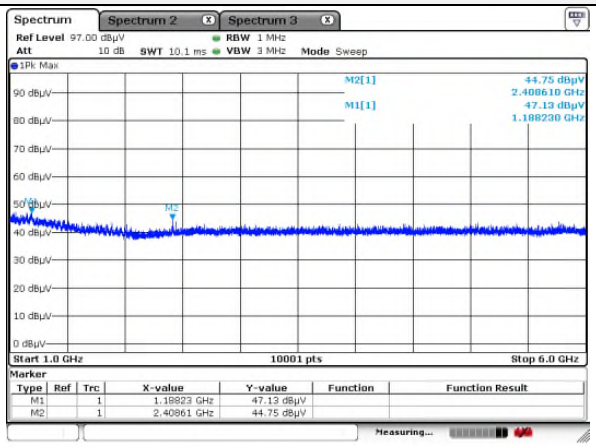
Restricted band // Vertical // Peak



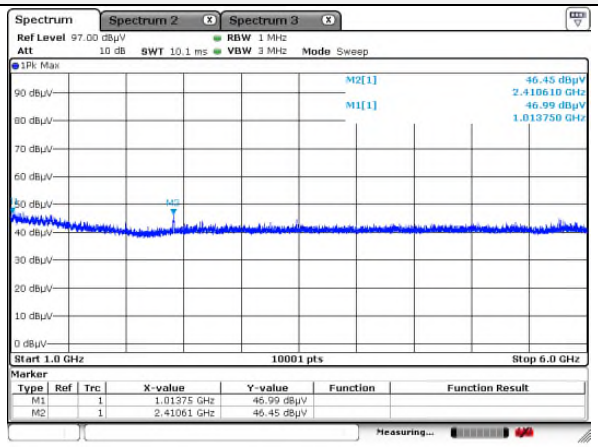
Restricted band // Vertical // Average



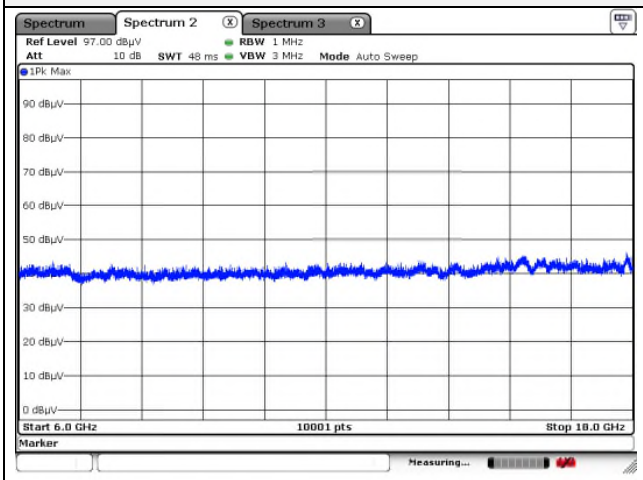
Horizontal // Peak for 1 ㎓ to 6 ㎓



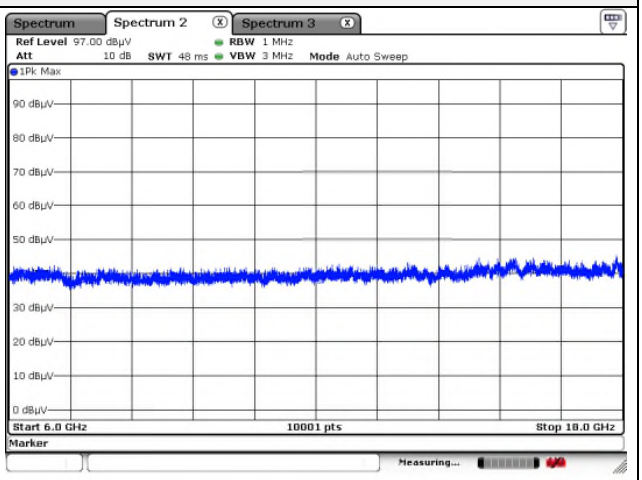
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



Note.
1. No spurious emission were detected above 6 ㎓.
2. Average test would be performed if the peak result were greater than the average limit.

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Mode: 802.11ac_VHT80

Distance of measurement: 3 meter

Channel: 155

- **Spurious**

Frequency (㎒)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	AF (dB)	AMP+CL (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1 173.73	46.70	Peak	H	24.19	-31.49	-	39.40	74.00	34.60
2 411.11	44.28	Peak	H	29.46	-29.43	-	44.31	68.23	23.92
1 028.75	46.61	Peak	V	23.78	-32.08	-	38.31	74.00	35.69
2 412.11	46.54	Peak	V	29.46	-29.42	-	46.58	68.23	21.65

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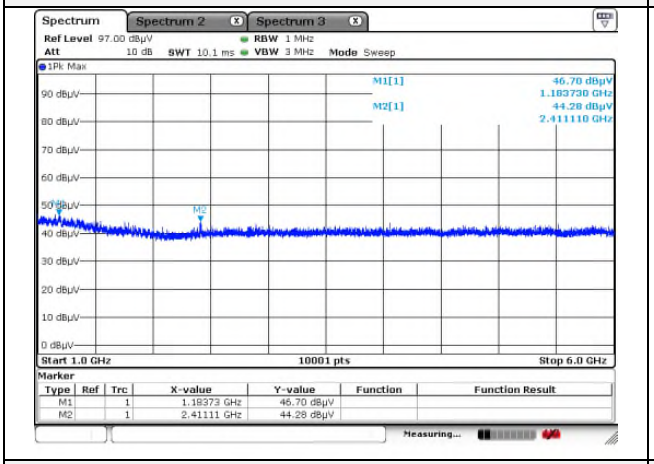
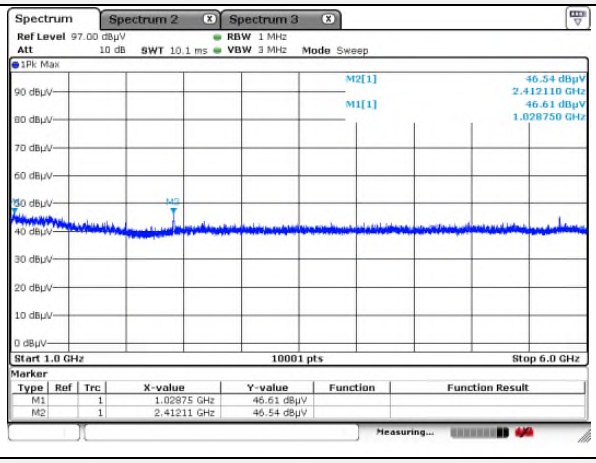
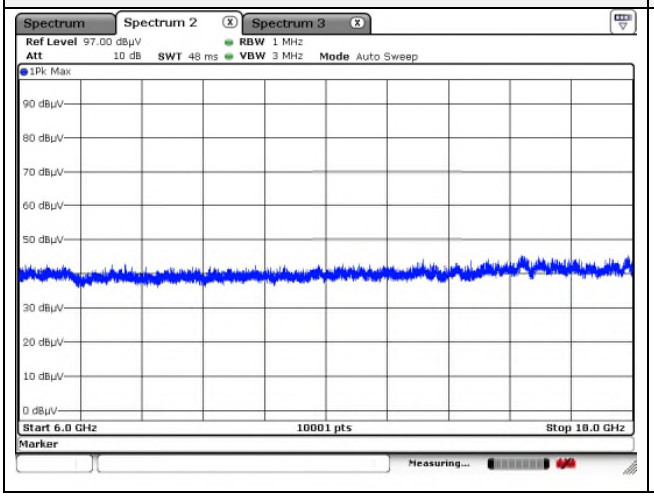
Horizontal // Peak for 1 ㎓ to 6 ㎓



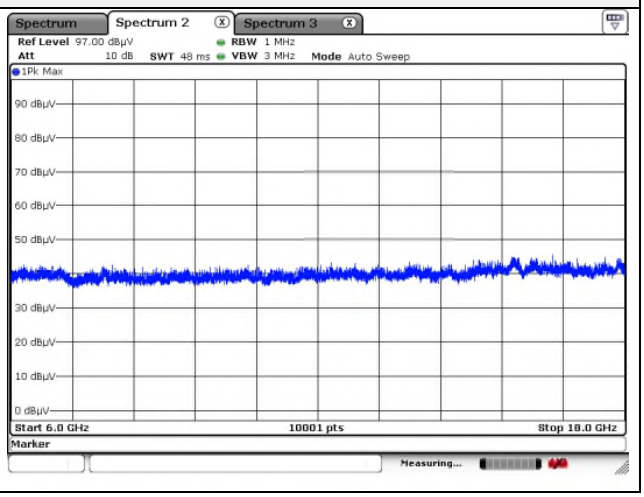
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



Note.

1. No spurious emission were detected above 6 ㎓.
2. Average test would be performed if the peak result were greater than the average limit.

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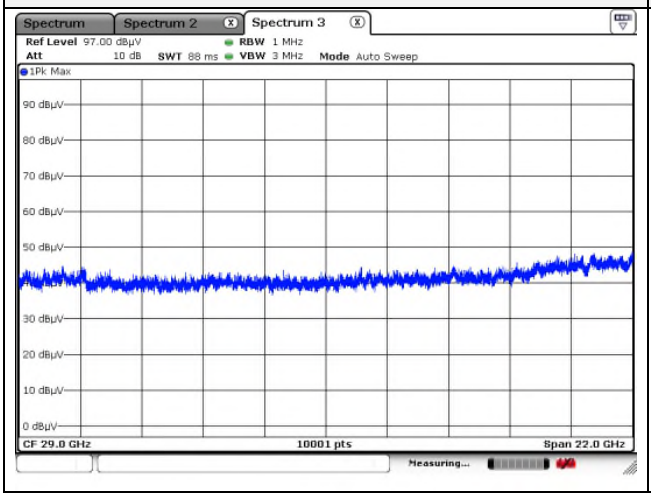
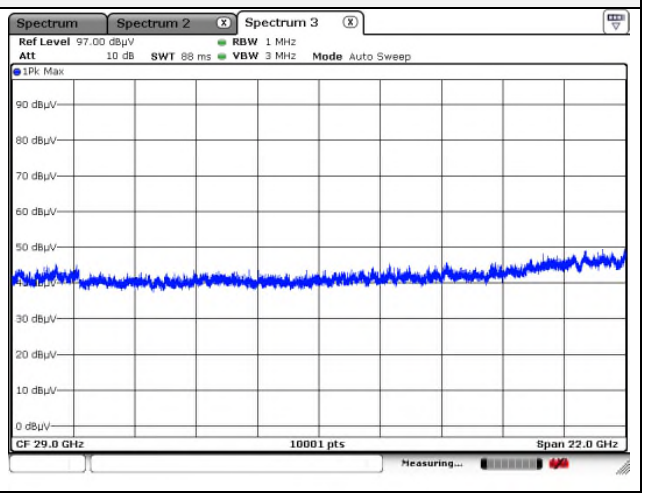
Test results (18 ㎓ to 40 ㎓)

Mode:	802.11ac_VHT80
Distance of measurement:	3 meter
Channel:	42 (Worst case)

Horizontal // 18 GHz ~ 40 GHz	Vertical // 18 GHz ~ 40 GHz
	

Note.

1. No spurious emission were detected above 18 ㎓.

3.2. AC conducted emissions

Limit

According to 15.207(a), for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 ㎑ to 30 ㎒, shall not exceed the limits in the following table, as measured using a 50uH/50 ohm line impedance stabilization network (LISN). Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequencies ranges.

Frequency of Emission (㎒)	Conducted limit (dBμV/m)	
	Quasi-peak	Average
0.15 – 0.50	66 - 56*	56 - 46*
0.50 – 5.00	56	46
5.00 – 30.0	60	50

Note:

1. All AC line conducted spurious emission are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and the appropriate frequencies. All data rates and modes were investigated for conducted spurious emission. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section.
2. Both Cable loss and LISN factor are included in measurement level(QP Level or AV Level)

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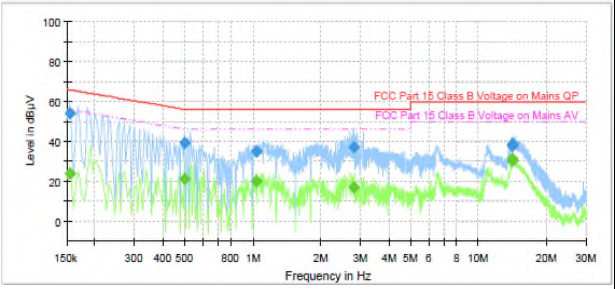
Test results

Hot Line

Common Information

Test Description: Conducted Emission
Model No.:
Mode 5GHz
Operator Name: KES



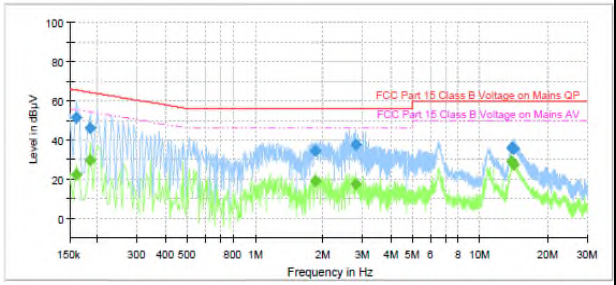
Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.155000	---	23.69	55.73	32.04	1000.0	9.000	L1	10.0
0.155000	53.98	---	65.73	11.75	1000.0	9.000	L1	10.0
0.500000	---	21.44	46.00	24.56	1000.0	9.000	L1	11.0
0.500000	39.02	---	56.00	16.98	1000.0	9.000	L1	11.0
1.035000	---	20.10	46.00	25.90	1000.0	9.000	L1	11.3
1.035000	35.16	---	56.00	20.84	1000.0	9.000	L1	11.3
2.790000	---	17.04	46.00	28.96	1000.0	9.000	L1	10.3
2.790000	36.97	---	56.00	19.03	1000.0	9.000	L1	10.3
14.150000	---	31.12	50.00	18.88	1000.0	9.000	L1	11.0
14.150000	38.40	---	60.00	21.60	1000.0	9.000	L1	11.0
14.190000	---	30.17	50.00	19.83	1000.0	9.000	L1	11.0
14.190000	37.85	---	60.00	22.15	1000.0	9.000	L1	11.0

Neutral Line

Common Information

Test Description: Conducted Emission
Model No.:
Mode 5GHz
Operator Name: KES



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.160000	---	22.04	55.46	33.42	1000.0	9.000	N	10.0
0.160000	51.52	---	65.46	13.94	1000.0	9.000	N	10.0
0.185000	---	29.41	54.26	24.85	1000.0	9.000	N	10.0
0.185000	45.85	---	64.26	18.41	1000.0	9.000	N	10.0
1.860000	---	18.83	46.00	27.17	1000.0	9.000	N	9.9
1.860000	34.64	---	56.00	21.36	1000.0	9.000	N	9.9
2.795000	---	17.56	46.00	28.44	1000.0	9.000	N	10.3
2.795000	37.84	---	56.00	18.16	1000.0	9.000	N	10.3
13.885000	---	29.00	50.00	21.00	1000.0	9.000	N	11.0
13.885000	35.83	---	60.00	24.17	1000.0	9.000	N	11.0
14.045000	---	27.45	50.00	22.55	1000.0	9.000	N	11.0
14.045000	35.34	---	60.00	24.66	1000.0	9.000	N	11.0

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Appendix A. Measurement equipment

Equipment	Manufacturer	Model	Serial No.	Calibration interval	Calibration due.
Spectrum Analyzer	R&S	FSV30	101389	1 year	2021.01.15
Spectrum Analyzer	R&S	FSV40	101002	1 year	2020.06.24
8360B Series Swept Signal Generator	HP	83630B	3844A00786	1 year	2021.01.15
Vector Signal Generator	R&S	SMBV100A	1407.6004K02	1 year	2020.06.25
Power Meter	Anritsu	ML2495A	1438001	1 year	2021.01.15
Pulse Power Sensor	Anritsu	MA2411B	1339205	1 year	2021.01.15
Attenuator	HP	8494B	2630A12857	1 year	2021.01.15
Attenuator	KEYSIGHT	8493C	82506	1 year	2021.01.14
Loop Antenna	Schwarzbeck	FMZB1513	225	2 years	2021.02.15
Trilog-broadband antenna	SCHWARZBECK	VULB 9163	715	2 years	2020.09.20
Horn Antenna	A.H	SAS-571	414	1 year	2021.02.11
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA 9170550	1 year	2021.01.20
High Pass Filter	Wainwright Instrument Gmbh	WHJS3000-10TT	1	1 year	2020.06.25
Band Reject Filter	MICRO-TRONICS	BRM50702	G272	1 year	2021.01.15
Low Pass Filter	Wainwright Instrument Gmbh	WLK1.0/18G-10TT	1	1 year	2020.06.24
Broadband Amplifier	Schwarzbeck	BBV9721	PS9721-003	1 year	2021.01.17
Preamplifier	AGILENT	8449B	3008A01742	1 year	2021.01.02
Amplifier	R&S	SCU 01	100603	1 year	2020.11.25
EMI Test Receiver	R&S	ESU26	100551	1 year	2020.04.09
EMI Test Receiver	R&S	ESR3	101781	1 year	2020.04.22
DC Power supply	Agilent	6632B	MY43004090	1 year	2020.06.25
LISN	R&S	ENV216	101786	1 year	2021.01.20

Peripheral devices

Device	Manufacturer	Model No.	Serial No.
Notebook Computer	HP	HP-6530B	CNU8313PMW
Test Jig Board	N/A	N/A	N/A

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