FCC RADIO TEST REPORT

FCC ID	:	2AWL7-AC01WF
Equipment	:	Motion sensor
Brand Name	:	Abilliant Care; BestShape Care
Model Name	:	AC01WF
Applicant	:	WISTRON MEDICAL TECHNOLOGY CORPORATION 5F., NO.5, XIN-AN RD., SCIENCE-BASED INDUSTRIAL PARK, HSINCHU CITY 30076, TAIWAN, R.O.C.
Manufacturer	:	WISTRON MEDICAL TECHNOLOGY CORPORATION 5F., NO.5, XIN-AN RD., SCIENCE-BASED INDUSTRIAL PARK, HSINCHU CITY 30076, TAIWAN, R.O.C.
Standard	:	47 CFR FCC Part 15.245

The product was received on Apr. 15, 2020 , and testing was started from Apr. 15, 2020 and completed on Jul. 31, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Cliff Chang

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issued Date
FR022715-01	01	Initial issue of report	Dec. 15, 2020

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.207	AC Power Conducted Emissions	PASS	-
3.2	15.215(c)	Occupied Bandwidth	PASS	-
3.3	15.245(b)	Field Strength of Fundamental	PASS	-
3.4	15.245(b)	Transmitter Spurious Emissions	PASS	-
3.5	15.203	Antenna Requirements	PASS	-

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Wendy Pan

1 General Description

1.1 Information

1.1.1 RF General Information

RF General Information				
Power Type	From adapter or host system			
Frequency Range	24.075 – 24.175 GHz			
Operation Frequency	24.092 – 24.16 GHz			
Modulation	CW			
Channel List	Channel No.	Channel Frequency	Channel No.	Channel Frequency
	1	24092 MHz	10	24128 MHz
	2	24096 MHz	11	24132 MHz
	3	24100 MHz	12	24136 MHz
	4	24104 MHz	13	24140 MHz
	5	24108 MHz	14	24144 MHz
	6	24112 MHz	15	24148 MHz
	7	24116 MHz	16	24152 MHz
	8	24120 MHz	17	24156 MHz
	9	24124 MHz	18	24160 MHz

Note: The above information was declared by manufacturer.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Rmark
1	Wistron	A43Ro4350B10Mil	Array Ant.	N/A	12.5	TX
		A45Ro4350B10Mil	Array Ant.	N/A	15	RX

Note 1: The above information was declared by manufacturer.

Note 2: Only Ant.1 can be used as transmitting/receiving antenna.

1.1.3 Table for Multiple Listing

The brand names in the following table are all refer to the identical product.

Brand Name	Model Name	Description
Abilliant Care	AC01WF	All the brand names are identical, the different brand names served as marketing strategy.
BestShape Care		

Note: The above information was declared by manufacturer.

1.1.4 Field Strength of Fundamental

Field Strength of Fundamental							
Applicable power levels:	☐ Conducted ☐ EIRP ☒ Field Strength at 3m						
Frequency	Highest setting (P_{high}): (dBuV/m)						
	Power Setting	Modulation	Data Rate (Mb/s)	Average Level	Peak Level	Average Level Limit	Peak Level Limit
24.092 – 24.16 GHz	N/A	CW	N/A	109.38	110.18	128	148

Note: Field Strength of Fundamental = measurement level at 1m - distance extrapolation factor [9.54 dB].

1.2 Accessories

Accessories			
Equipment Name	**Brand Name**	**Model Name**	**Rating**
Adapter	APD	WB-10G05FU	Input: 100-240V ~ 50-60Hz, 0.4A Max Output: 5V, 2A
Other			
USB cable*1: Shielded, 0.3m			

1.3 Support Equipment

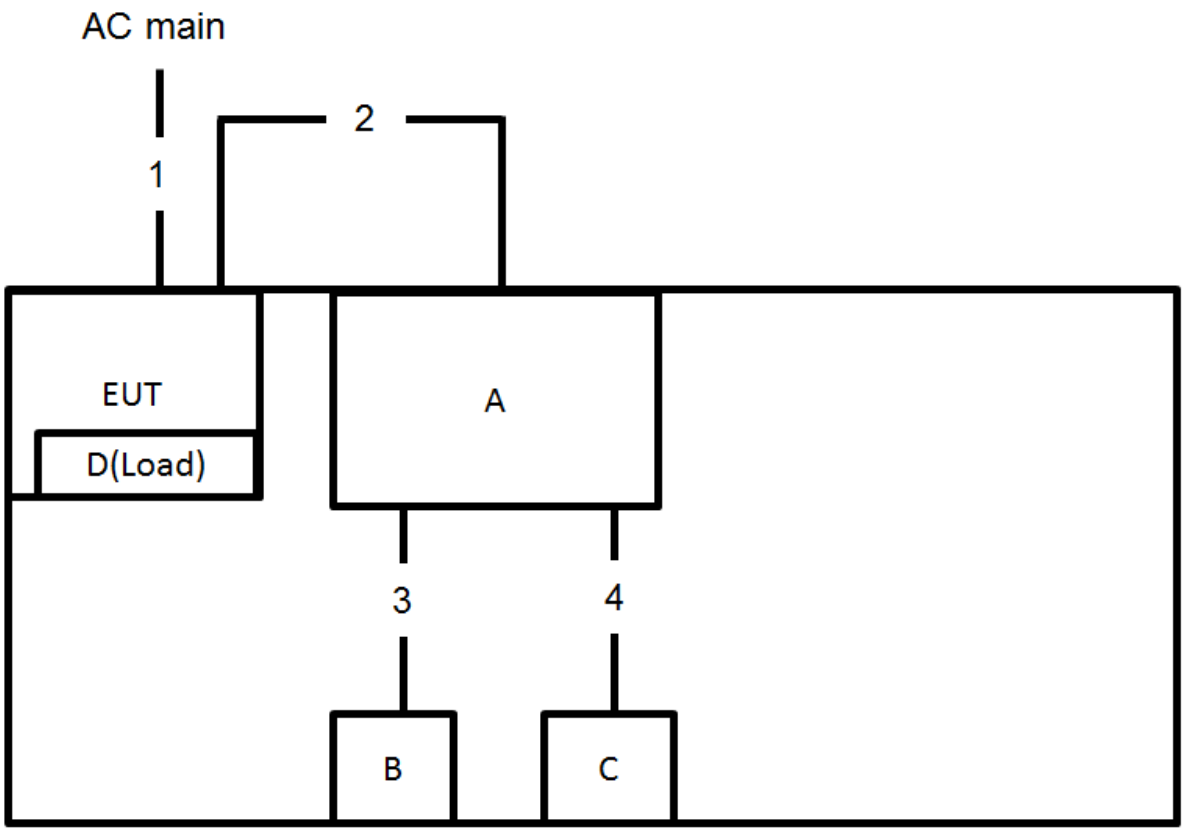
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A

For AC Power Conducted Emissions test:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E6430	N/A
B	Earphone	e-Power	S90W	N/A
C	Mouse	Logitech	M-U0026	N/A
D	Micro SD Card	Transcend	TS16GUSDHC10	N/A

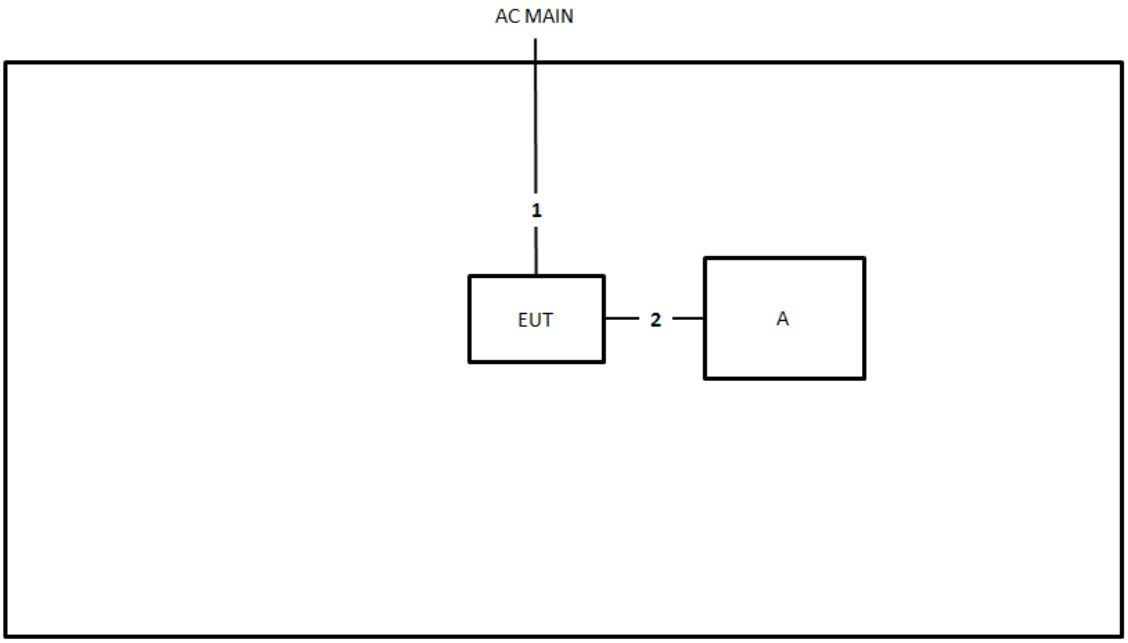
1.4 EUT Setups

AC Power Conducted Emissions



Item	Connection	Shielded	Length
1	USB cable	Yes	0.3m
2	USB cable	Yes	0.3m
3	Audio cable	No	1.8m
4	USB cable	Yes	1.8m

Transmitter Spurious Emissions



Item	Connection	Shielded	Length
1	USB Cable	Yes	0.38m
2	USB Cable	Yes	0.3m

1.5 Applicable Standards

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

- ANSI C63.10-2013
- 47 CFR FCC Part 15.245

The following reference test guidance is not within the scope of accreditation of TAF.

- FCC KDB 414788 D01 v01r01

1.6 Testing Location Information

Testing Location							
☐	HWA YA	ADD	:	No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)			
		TEL	:	886-3-327-3456	FAX	:	886-3-327-0973
☒	JHUBEI	ADD	:	No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.			
		TEL	:	886-3-656-9065	FAX	:	886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction (Test Mode: Mode 1)	CO01-CB	Ryo Fan	21~22°C / 63~64%	Jun. 10, 2020
AC Conduction (Test Mode: Mode 2)	CO01-CB	Wei Li	23~24°C / 60~62%	Jul. 31, 2020
Radiated (Occupied Bandwidth and Below 1GHz test)	03CH05-CB	Brian Sun	22.3-24.4°C / 51-55%	Apr. 15, 2020 ~ Jul. 31, 2020
Radiated (Field Strength of Fundamental and Above 1GHz test)	03CH05-CB	Brian Sun	22.3-24.4°C / 51-55%	Apr. 15, 2020

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.

2 Test Configuration of Equipment under Test

2.1 Test Channel Frequencies

Test Channel Frequencies			
Frequency Band	**Low Channel**	**Middle Channel**	**High Channel**
24.075 – 24.175 GHz	24.092GHz	24.124GHz	24.160GHz

2.2 Conformance Tests and Related Test Frequencies

Test	Test Frequencies (GHz)
AC Power Conducted Emissions	24.160
Emission Bandwidth	24.092, 24.124, 24.160
Field Strength of Fundamental	24.092, 24.124, 24.160
Transmitter Spurious Emissions Below 1GHz	24.160
Transmitter Spurious Emissions Above 1GHz	24.092, 24.124, 24.160

Note: The manufacturer defines that the SD function can not be used by the end-user.

AC Power Conducted Emissions

Mode 1: EUT CTX_24GHz Powered from the power adapter

Mode 2: EUT CTX_24GHz Powered from the host system

Mode 1 is the worst case and it was record in this test report.

Transmitter Spurious Emissions:

<Below 1GHz>

The EUT was performed at X axis, Y axis and Z axis position for Radiated emission above 1GHz test, and the worst case was found at X axis. So the measurement will follow this same test configuration.

Mode 1: EUT in X axis CTX_24GHz Powered from the power adapter

Mode 2: EUT in X axis CTX_24GHz Powered from the host system

Mode 1 is the worst case and it was record in this test report.

<Above 1GHz>

The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found at X axis. So the measurement will follow this same test configuration.

Mode 1: EUT in X axis _24GHz

2.3 Duty Cycle

On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
100.000	100.000	100.00%	0.00	0.01

3 Transmitter Test Result

3.1 AC Power Conducted Emissions

3.1.1 Limit of AC Power Conducted Emissions

AC Power Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

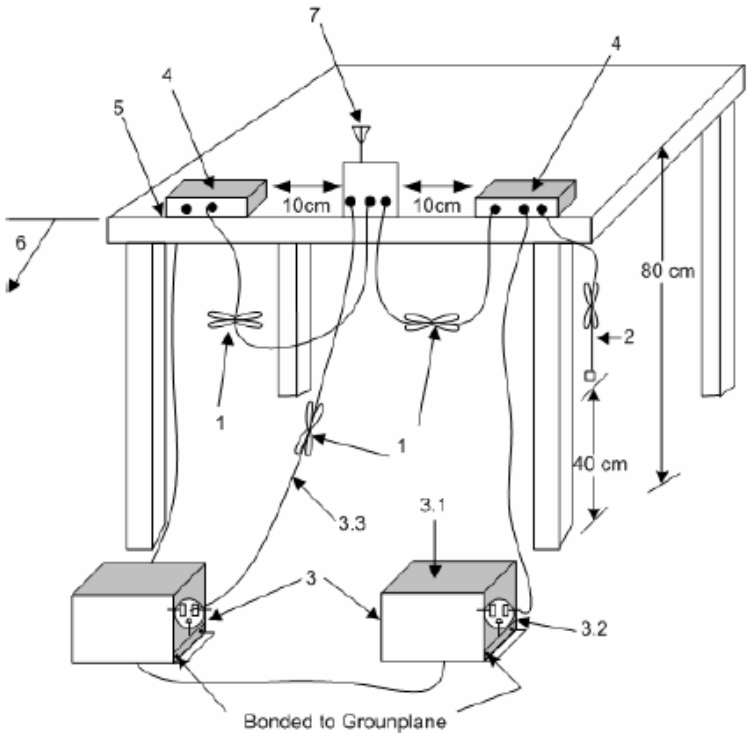
Refer a measuring instruments list in this test report.

3.1.3 Test Procedures

Method of measurement: Refer as ANSI C63.10-2013, clause 6.2.

3.1.4 Test Setup

AC Power Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

3.1.5 Measurement Results Calculation

The measured Level is calculated using:

a. Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level

b. Margin = -Limit + Level

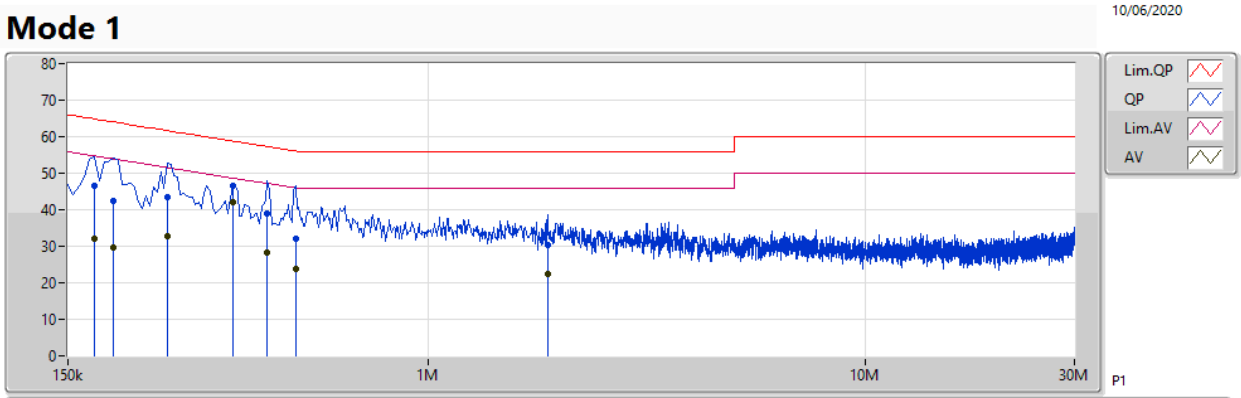
3.1.6 Test Result of AC Power Conducted Emissions

Test Conditions:	see ANSI C63.10, clause 5.11
Test Setup:	see ANSI C63.10, clause 6.2.3

Note 1: If equipment having different channel plan and nominal channel bandwidth modes, the measurements are uninfluenced by different channel plan and nominal channel bandwidth modes, may not need to be repeated for all modes. If equipment having different transmit operating modes, the measurements are uninfluenced by different transmit operating modes, may not need to be repeated for all the operating modes. Similar, if the equipment supports different modulations and/or data rates, the measurements described in ANSI C63.10, clause 5.12 may not need to be repeated for all these modulations and data rates. Simple comparison of engineering test across all operating modes, modulations and data rates may need to be performed to define the worse case combination to be used for the conformance testing.

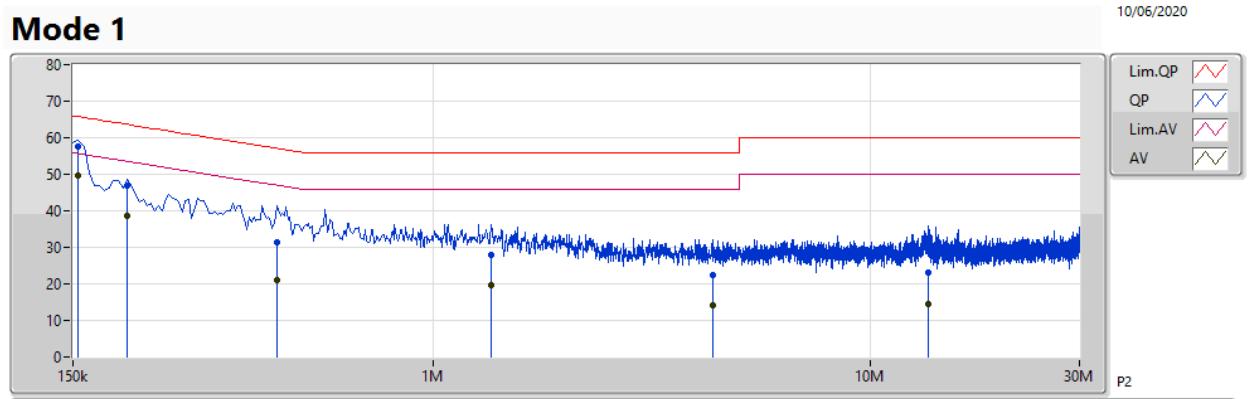
Note 2: ">20dB" means the tables in this clause should only list values of spurious emissions that exceed the level of 20 dB below the applicable limit, see ANSI C63.4, clause 10.1.8.1.

Phase	Line	Configuration	CTX



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	AF	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	172.5k	46.63	64.83	-18.20	9.87	Line	-	36.76	0.05	0.03	9.79
AV	172.5k	32.17	54.83	-22.66	9.87	Line	-	22.30	0.05	0.03	9.79
QP	190.5k	42.37	64.01	-21.64	9.86	Line	-	32.51	0.04	0.03	9.79
AV	190.5k	29.66	54.01	-24.35	9.86	Line	-	19.80	0.04	0.03	9.79
QP	253.5k	43.51	61.64	-18.13	9.87	Line	-	33.64	0.04	0.03	9.80
AV	253.5k	32.76	51.64	-18.88	9.87	Line	-	22.89	0.04	0.03	9.80
QP	357k	46.62	58.79	-12.17	9.88	Line	-	36.74	0.04	0.03	9.81
AV	357k	42.18	48.79	-6.61	9.88	Line	"Worst"	32.30	0.04	0.03	9.81
QP	429k	38.88	57.28	-18.40	9.88	Line	-	29.00	0.04	0.03	9.81
AV	429k	28.35	47.28	-18.93	9.88	Line	-	18.47	0.04	0.03	9.81
QP	496.5k	32.02	56.06	-24.04	9.88	Line	-	22.14	0.04	0.03	9.81
AV	496.5k	23.94	46.06	-22.12	9.88	Line	-	14.06	0.04	0.03	9.81
QP	1.874M	30.51	56.00	-25.49	9.96	Line	-	20.55	0.06	0.07	9.83
AV	1.874M	22.49	46.00	-23.51	9.96	Line	-	12.53	0.06	0.07	9.83

Phase	Neutral	Configuration	CTX



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	AF	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	154.5k	57.67	65.75	-8.08	9.86	Neutral	-	47.81	0.04	0.03	9.79
AV	154.5k	49.49	55.75	-6.26	9.86	Neutral	"Worst"	39.63	0.04	0.03	9.79
QP	199.5k	46.93	63.63	-16.70	9.86	Neutral	-	37.07	0.04	0.03	9.79
AV	199.5k	38.52	53.63	-15.11	9.86	Neutral	-	28.66	0.04	0.03	9.79
QP	438k	31.25	57.11	-25.86	9.88	Neutral	-	21.37	0.04	0.03	9.81
AV	438k	20.99	47.11	-26.12	9.88	Neutral	-	11.11	0.04	0.03	9.81
QP	1.356M	27.91	56.00	-28.09	9.93	Neutral	-	17.98	0.06	0.05	9.82
AV	1.356M	19.74	46.00	-26.26	9.93	Neutral	-	9.81	0.06	0.05	9.82
QP	4.344M	22.41	56.00	-33.59	10.05	Neutral	-	12.36	0.10	0.13	9.82
AV	4.344M	14.19	46.00	-31.81	10.05	Neutral	-	4.14	0.10	0.13	9.82
QP	13.574M	23.24	60.00	-36.76	10.32	Neutral	-	12.92	0.19	0.21	9.92
AV	13.574M	14.45	50.00	-35.55	10.32	Neutral	-	4.13	0.19	0.21	9.92

3.2 Occupied Bandwidth

3.2.1 Limit of Occupied Bandwidth

20dB Bandwidth (see Note 1)	None
99% Occupied Bandwidth (see Note 2)	None

Note 1: Refer as 15.215(c). Ensure that the 20 dB occupied bandwidth shall be fall in the specified operating frequency range.

Note 2: The 99% occupied bandwidth is the frequency bandwidth of the signal power at the 99% channel power of occupied bandwidth when resolution bandwidth should be approximately 1 % to 5 % of the occupied bandwidth (OBW). These measurements shall also be performed at normal test conditions.

3.2.2 Measuring Instruments

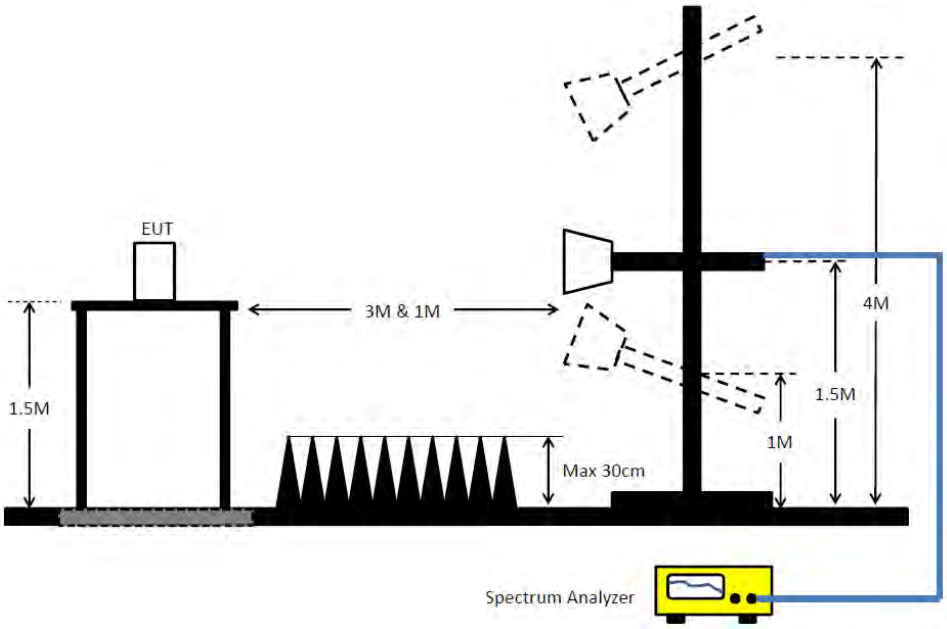
Refer a measuring instruments list in this test report.

3.2.3 Test Procedures

Method of measurement: Refer as ANSI C63.10-2013, clauses 6.6 and 6.9.1.

3.2.4 Test Setup

Occupied Bandwidth



3.2.5 Test Result of Occupied Bandwidth

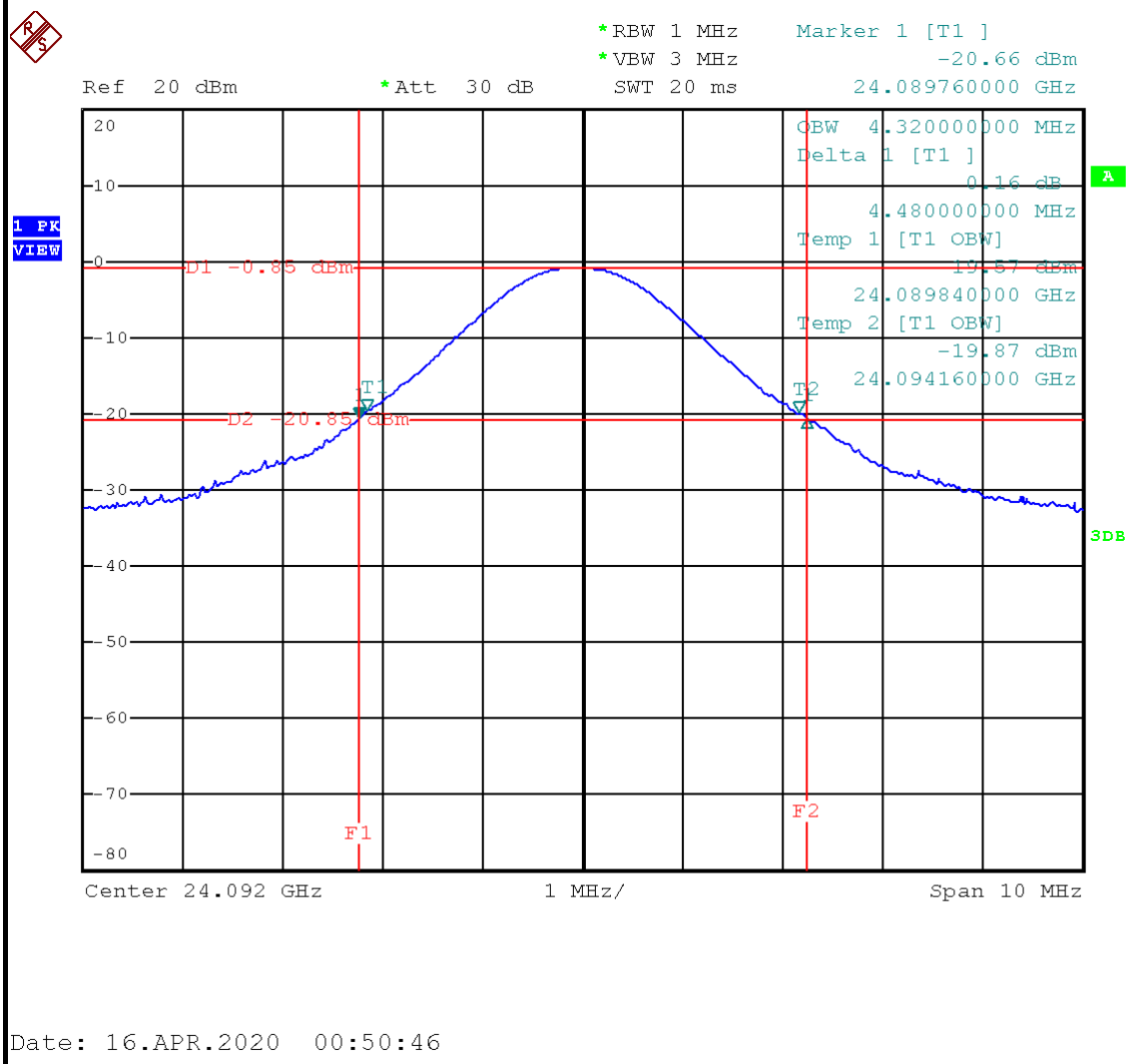
Test Conditions:	see ANSI C63.10, clause 5.11
Test Setup:	see ANSI C63.10, clause 6.6
Note: If equipment having different transmit operating modes, the measurements are uninfluenced by different transmit operating modes, may not need to be repeated for all the operating modes. Similar, if the equipment supports different modulations and/or data rates, the measurements described in ANSI C63.10, clause 5.12 may not need to be repeated for all these modulations and data rates. Simple comparison of engineering test across all operating modes, modulations and data rates may need to be performed to define the worse case combination to be used for the conformance testing. Refer as ANSI C63.10, clause 6.9.1, observe and record with plotted graphs or photographs the worst-case (i.e., widest) occupied bandwidth produced by these different modulation sources.	

Test Conditions: see ANSI C63.10, clause 5.12

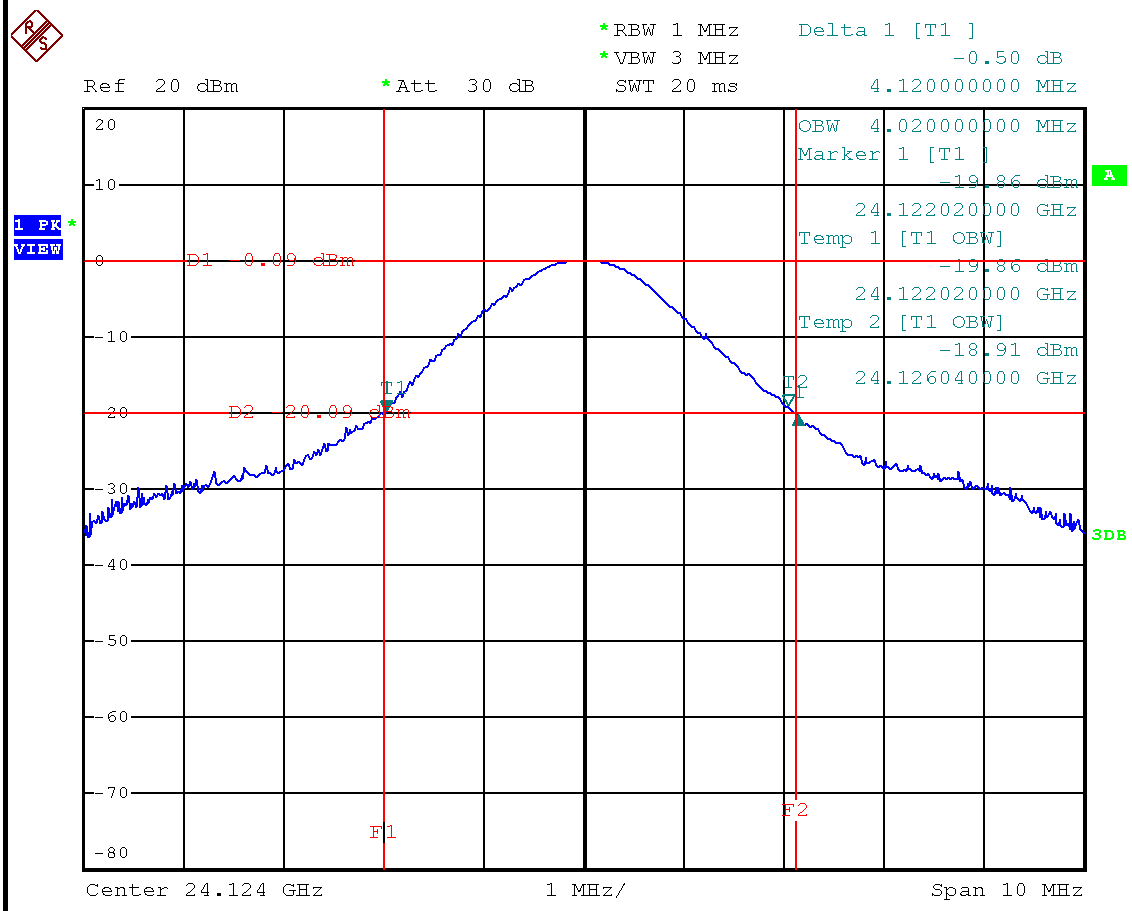
Test Frequency	Test Results			
	20dB Bandwidth (kHz)	99% Bandwidth (kHz)	Frequency range (GHz) $f_L > 24.075$ GHz	Frequency range (GHz) $f_H < 24.175$ GHz
24.092GHz	4.480	4.320	24089.7600	24094.1600
24.124GHz	4.120	4.020	24122.0200	24126.0400
24.160GHz	3.680	3.540	24158.1400	24161.7400

3.2.6 Occupied Bandwidth Plots

Test Frequency 24092 MHz



Test Frequency 24124 MHz



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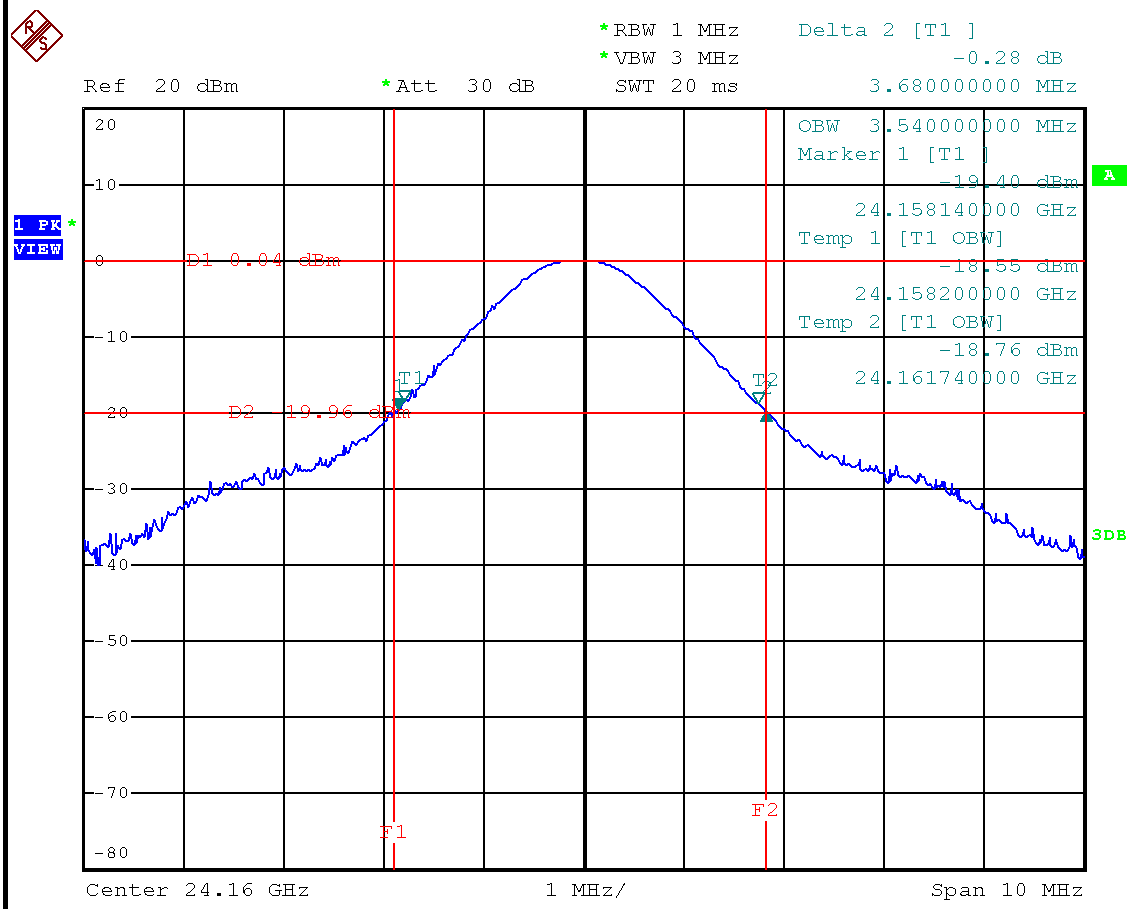
Test Frequency 24160 MHz



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3.3 Field Strength of Fundamental

3.3.1 Limit of Field Strength of Fundamental

Frequencies (MHz)	Field Strength (mV/meter)	Field Strength (dBuV/m) at 3m
902~928 MHz	500 at 3m	114 (Average)
902~928 MHz	5000 at 3m	134 (Peak)
2435~2465MHz	500 at 3m	114 (Average)
2435~2465MHz	5000 at 3m	134 (Peak)
5785~5815 MHz	500 at 3m	114 (Average)
5785~5815 MHz	5000 at 3m	134 (Peak)
10.5~10.55 GHz	2500 at 3m	128 (Average)
10.5~10.55 GHz	25000 at 3m	148 (Peak)
24.075~24.175 GHz	2500 at 3m	128 (Average)
24.075~24.175 GHz	25000 at 3m	148 (Peak)
Note1: For the applicable limit, see 15.245(b) Note2: The limit shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1m. Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1m]) (dB); Limit line = specific limits (dBuV) + distance extrapolation factor [9.54 dB].		

3.3.2 Measuring Instruments

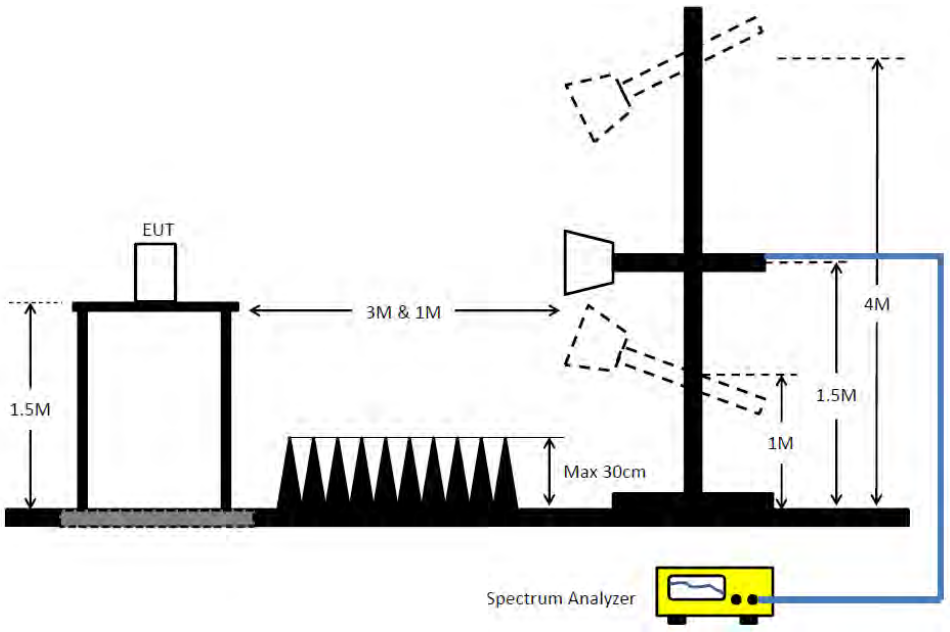
Refer a measuring instruments list in this test report.

3.3.3 Test Procedures

Method of measurement: Refer as ANSI C63.10-2013, clause 6.6.

3.3.4 Test Setup

Field Strength of Fundamental



3.3.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level

3.3.6 Test Result of Field Strength of Fundamental

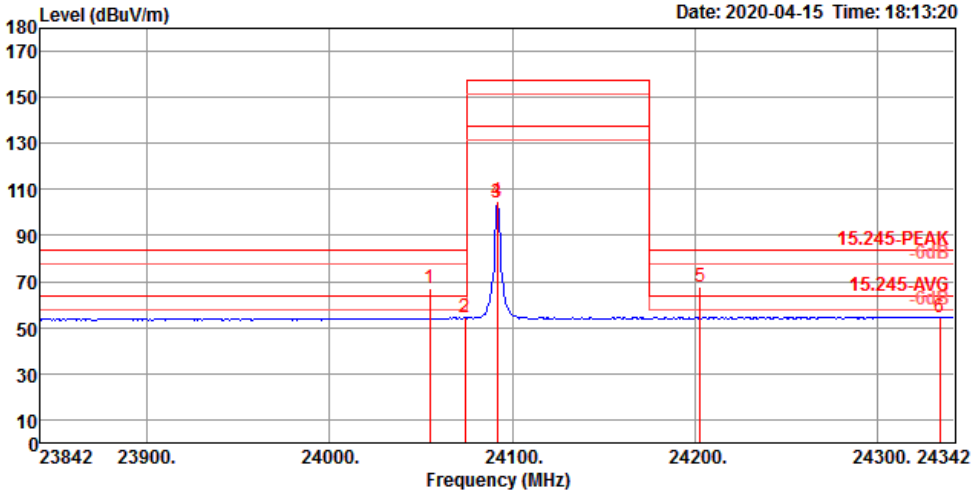
Test Conditions:	see ANSI C63.10, clause 5.11
Test Setup:	see ANSI C63.10, clause 6.6

Note1: If the equipment supports different modulations and/or data rates, the measurements described in ANSI C63.10, clause 5.12 may not need to be repeated for all these modulations and data rates. Simple comparison of engineering test across all operating modes, modulations and data rates may need to be performed to define the worse case combination to be used for the conformance testing.

Note2: Conformance tests have to be performed over the frequency range(s) that has been declared with this Field Strength of Fundamental and using the antenna gain of the antenna with the highest gain among those that have been declared with this Field Strength of Fundamental. For smart antenna systems, the antenna beam forming gain may have to be taken into account as well.

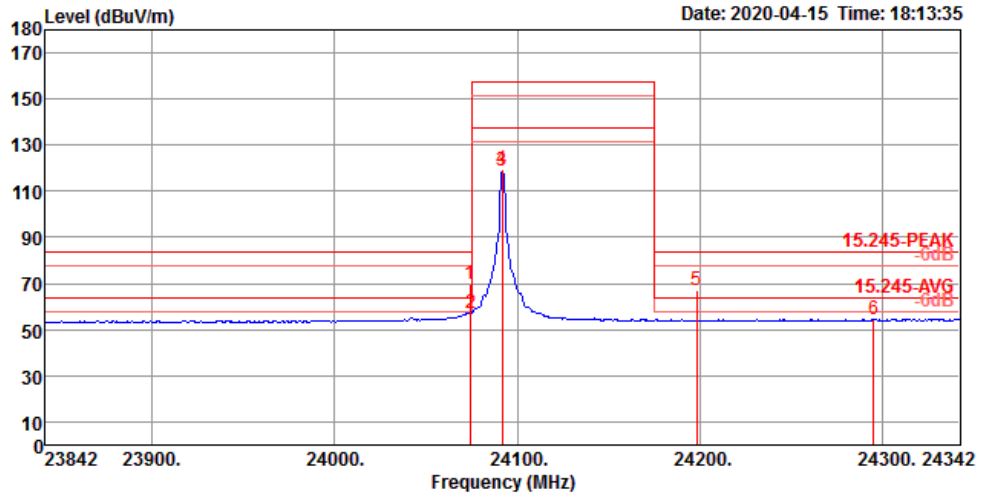
3.3.7 Test Result of Field Strength of Fundamental

Test Frequency: 24.092GHz	Field Strength of Fundamental Plots
	Polarization: Vertical
	Test Distance: 1 m



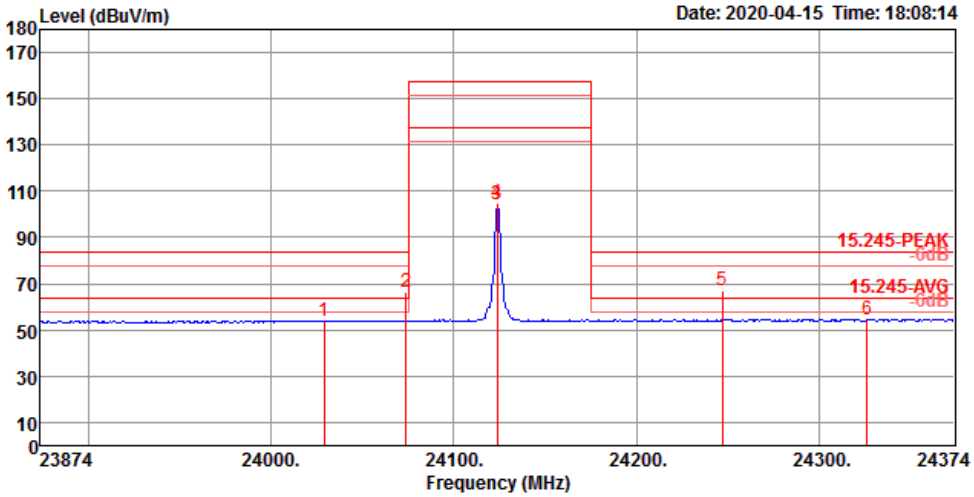
	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	24055.00	67.10	83.54	-16.44	60.76	16.03	38.89	48.58	149	328	Peak	VERTICAL
2	24074.00	54.23	63.54	-9.31	47.88	16.04	38.88	48.57	149	328	Average	VERTICAL
3	24092.00	104.34	137.54	-33.20	97.98	16.04	38.88	48.56	149	328	Average	VERTICAL
4	24092.00	104.83	157.54	-52.71	98.47	16.04	38.88	48.56	149	328	Peak	VERTICAL
5	24203.00	67.52	83.54	-16.02	61.08	16.10	38.86	48.52	149	328	Peak	VERTICAL
6	24334.00	54.53	63.54	-9.01	48.00	16.16	38.83	48.46	149	328	Average	VERTICAL

Test Frequency: 24.092GHz	Field Strength of Fundamental Plots
	Polarization: Horizontal
	Test Distance: 1 m



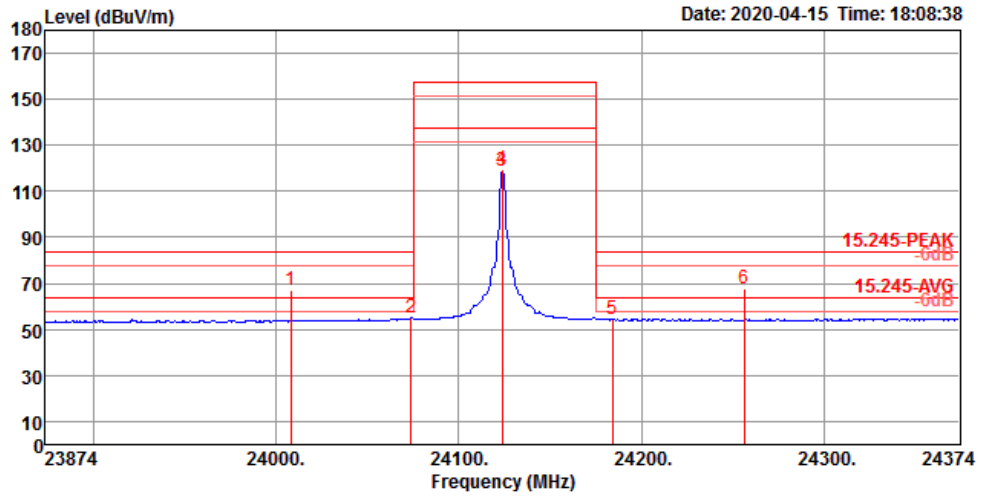
	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	24074.00	70.04	83.54	-13.50	63.69	16.04	38.88	48.57	154	336	Peak	HORIZONTAL
2	24074.50	57.26	63.54	-6.28	50.91	16.04	38.88	48.57	154	336	Average	HORIZONTAL
3	24092.00	118.74	137.54	-18.80	112.38	16.04	38.88	48.56	154	336	Average	HORIZONTAL
4	24092.00	119.41	157.54	-38.13	113.05	16.04	38.88	48.56	154	336	Peak	HORIZONTAL
5	24198.00	66.94	83.54	-16.60	60.50	16.10	38.86	48.52	154	336	Peak	HORIZONTAL
6	24295.00	54.40	63.54	-9.14	47.90	16.14	38.84	48.48	154	336	Average	HORIZONTAL

Test Frequency: 24.124GHz	Field Strength of Fundamental Plots
	Polarization: Vertical
	Test Distance: 1 m



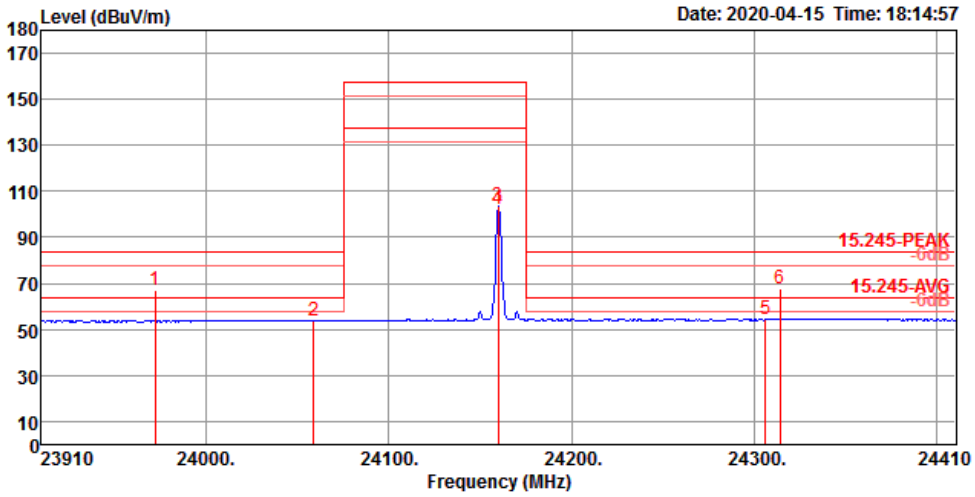
	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	24029.00	54.11	63.54	-9.43	47.78	16.02	38.89	48.58	150	328	Average	VERTICAL
2	24074.00	66.71	83.54	-16.83	60.36	16.04	38.88	48.57	150	328	Peak	VERTICAL
3	24124.00	104.27	137.54	-33.27	97.89	16.06	38.87	48.55	150	328	Average	VERTICAL
4	24124.00	104.82	157.54	-52.72	98.44	16.06	38.87	48.55	150	328	Peak	VERTICAL
5	24247.00	67.13	83.54	-16.41	60.66	16.12	38.85	48.50	150	328	Peak	VERTICAL
6	24326.00	54.57	63.54	-8.97	48.06	16.15	38.83	48.47	150	328	Average	VERTICAL

Test Frequency: 24.124GHz	Field Strength of Fundamental Plots
	Polarization: Horizontal
	Test Distance: 1 m



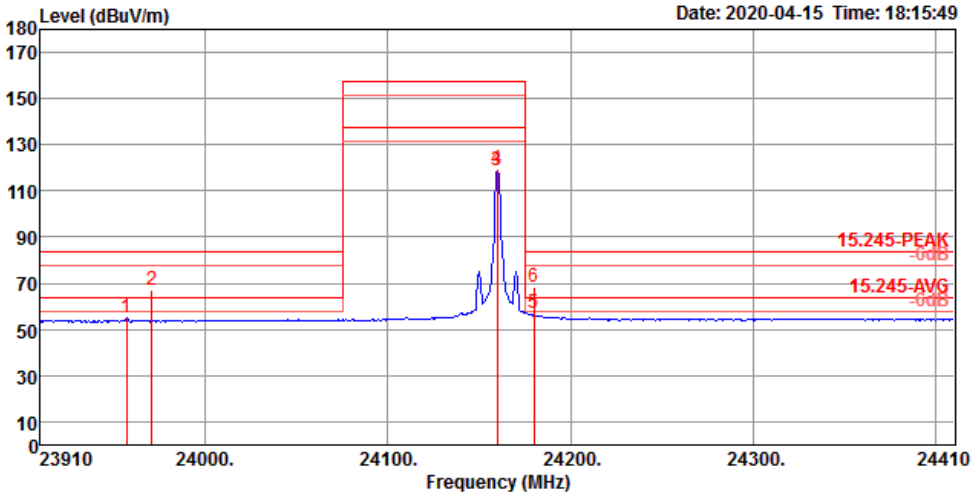
	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	24008.00	67.23	83.54	-16.31	60.91	16.01	38.90	48.59	154	332	Peak	HORIZONTAL
2	24074.00	55.19	63.54	-8.35	48.84	16.04	38.88	48.57	154	332	Average	HORIZONTAL
3	24124.00	118.79	137.54	-18.75	112.41	16.06	38.87	48.55	154	332	Average	HORIZONTAL
4	24124.00	119.37	157.54	-38.17	112.99	16.06	38.87	48.55	154	332	Peak	HORIZONTAL
5	24184.00	54.48	63.54	-9.06	48.05	16.09	38.86	48.52	154	332	Average	HORIZONTAL
6	24256.00	67.60	83.54	-15.94	61.12	16.12	38.85	48.49	154	332	Peak	HORIZONTAL

Test Frequency: 24.160GHz	Field Strength of Fundamental Plots
	Polarization: Vertical
	Test Distance: 1 m



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	23972.00	67.08	83.54	-16.46	60.79	15.99	38.91	48.61	152	330	Peak	VERTICAL
2	24059.00	54.12	63.54	-9.42	47.78	16.03	38.89	48.58	152	330	Average	VERTICAL
3	24160.00	103.62	137.54	-33.92	97.20	16.08	38.87	48.53	152	330	Average	VERTICAL
4	24160.00	102.31	157.54	-55.23	95.89	16.08	38.87	48.53	152	330	Peak	VERTICAL
5	24306.00	54.42	63.54	-9.12	47.92	16.14	38.84	48.48	152	330	Average	VERTICAL
6	24314.00	67.43	83.54	-16.11	60.92	16.15	38.83	48.47	152	330	Peak	VERTICAL

Test Frequency: 24.160GHz	Field Strength of Fundamental Plots
	Polarization: Horizontal
	Test Distance: 1 m



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	23957.00	54.98	63.54	-8.56	48.69	15.99	38.92	48.62	154	338	Average	HORIZONTAL
2	23971.00	66.93	83.54	-16.61	60.64	15.99	38.91	48.61	154	338	Peak	HORIZONTAL
3	24160.00	118.92	137.54	-18.62	112.50	16.08	38.87	48.53	154	338	Average	HORIZONTAL
4	24160.00	119.72	157.54	-37.82	113.30	16.08	38.87	48.53	154	338	Peak	HORIZONTAL
5	24180.00	57.33	63.54	-6.21	50.90	16.09	38.86	48.52	154	338	Average	HORIZONTAL
6	24180.00	68.40	83.54	-15.14	61.97	16.09	38.86	48.52	154	338	Peak	HORIZONTAL

3.4 Transmitter Spurious Emissions

3.4.1 Limit of Transmitter Spurious Emissions

Transmitter Spurious Emissions
1. 902 - 928MHz, Field disturbance sensors
♦ Harmonic emissions in the restricted bands: 15.209 limit ♦ Harmonic emissions in the non-restricted bands: 1.6mV/m ♦ Except harmonic emissions, spurious emissions: FCC 15.209 limit or 50 dB below the fundamental, whichever is the lesser attenuation.
2. 2435 - 2465MHz, 5785 - 5815MHz, Field disturbance sensors
♦ Harmonic emissions in the restricted bands at and below 17.7 GHz: 15.209 limit ♦ Harmonic emissions in the restricted bands at and above 17.7 GHz: 7.5mV/m ♦ Harmonic emissions in the non-restricted bands: 1.6mV/m ♦ Except harmonic emissions, spurious emissions: FCC 15.209 limit or 50 dB below the fundamental, whichever is the lesser attenuation.
3. 10500 – 10550MHz, Field disturbance sensors
♦ Harmonic emissions in the restricted bands at and above 17.7 GHz: 7.5mV/m ♦ Harmonic emissions in the non-restricted bands: 25mV/m ♦ Except harmonic emissions, spurious emissions: FCC 15.209 limit or 50 dB below the fundamental, whichever is the lesser attenuation.
4. 24075-24175 MHz, Field disturbance sensors
♦ Second and third harmonics: 25 mV/m ♦ Except harmonic emissions, spurious emissions: FCC 15.209 limit or 50 dB below the fundamental, whichever is the lesser attenuation.

Note: The limit shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1m.

Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1m]) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [9.54 dB].

3.4.2 Measuring Instruments

Refer a measuring instruments list in this test report.

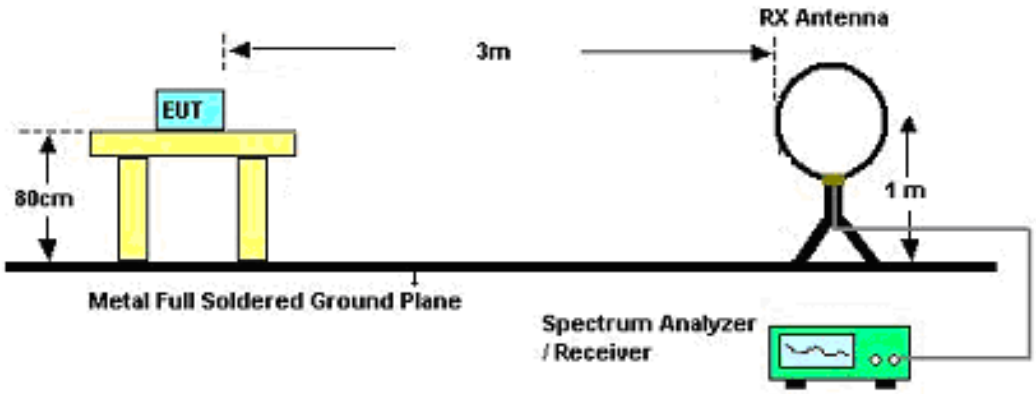
3.4.3 Test Procedures

Method of measurement: Refer as ANSI C63.10-2013, clauses 6.3, 6.4, 6.5, 6.6 and 9.12.

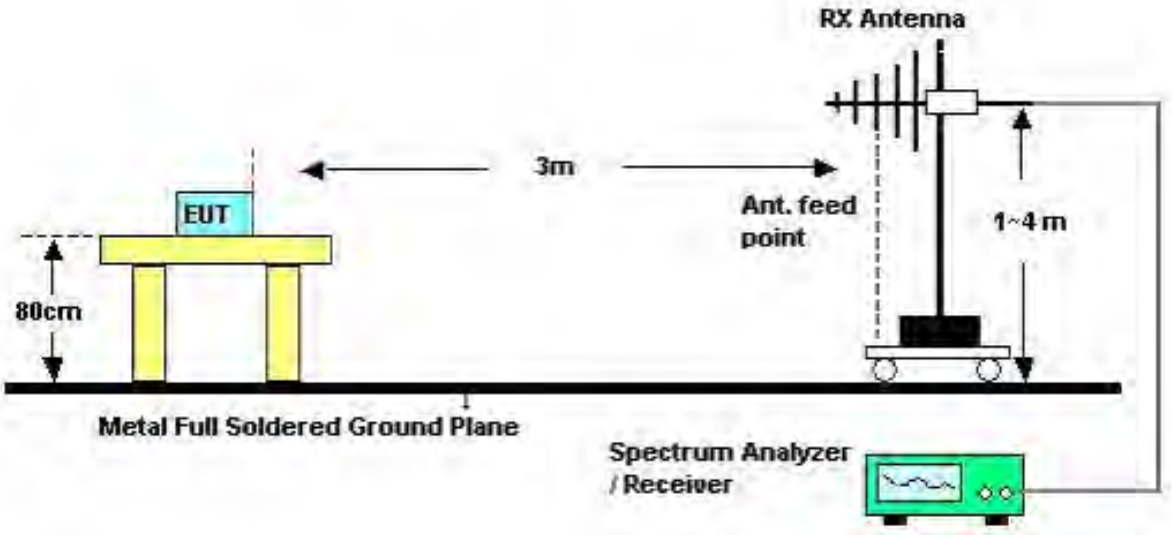
3.4.4 Test Setup

Transmitter Spurious Emissions

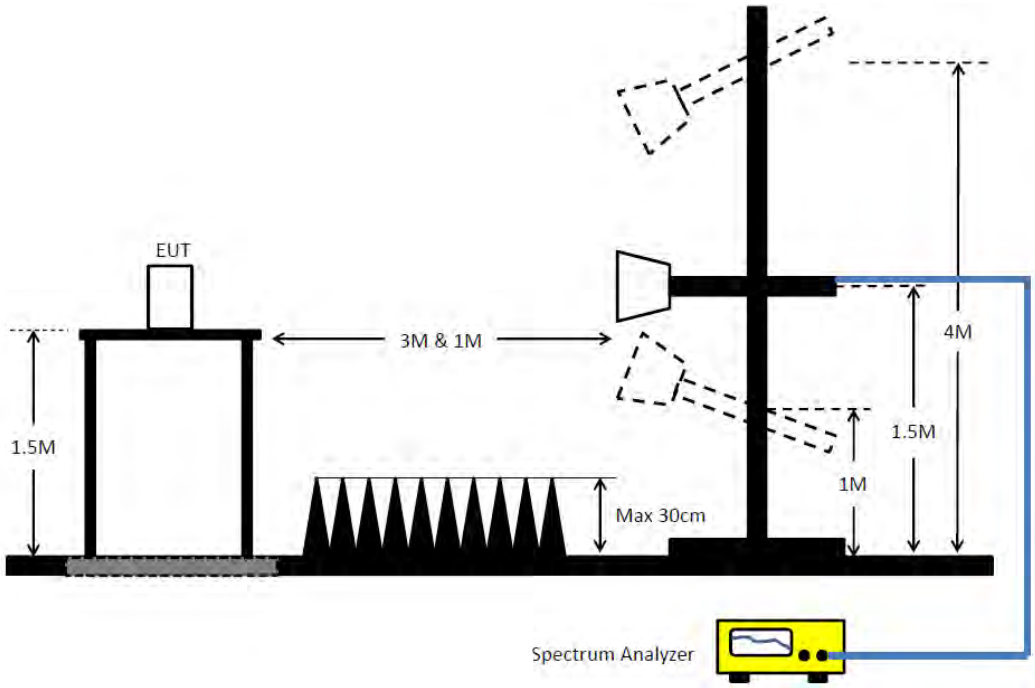
9kHz ~30MHz



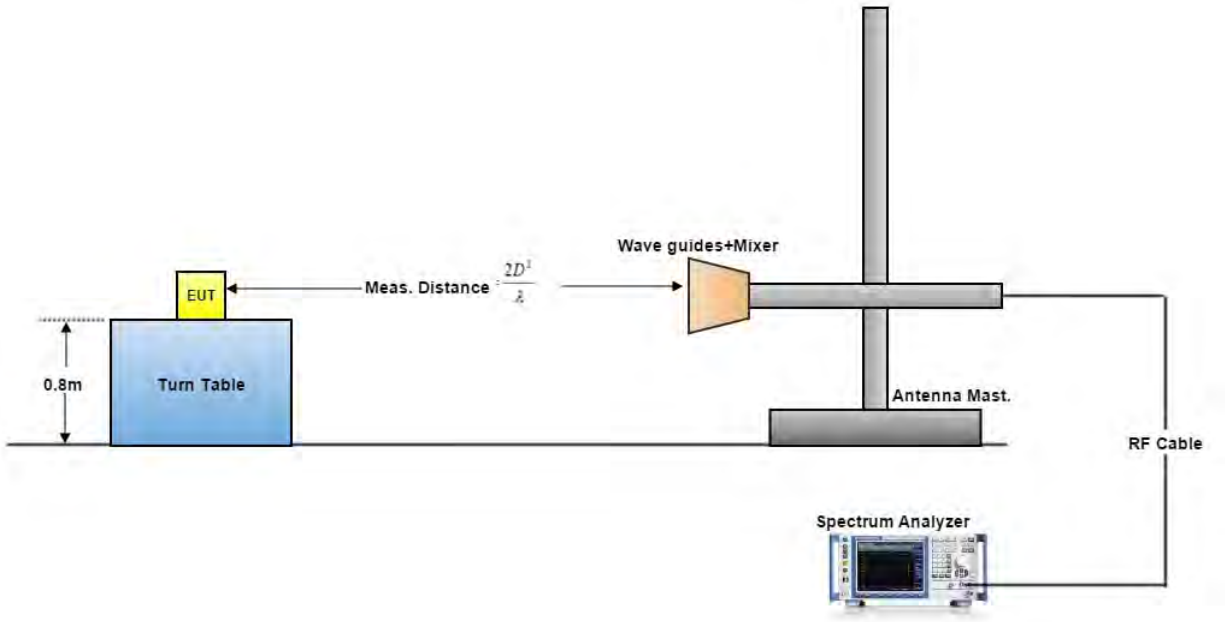
30MHz~1GHz



1GHz ~40GHz



Above 40GHz



A measuring distance of at 3 m shall be used for measurements at frequencies up to 15 GHz. For frequencies above 15 GHz, any suitable measuring distance may be used. The measurement distance is chosen up to far field distance, depending on the test system noise floor for detecting spurious emission signals. Then above 15 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from spec. distance (3 m) to measurement distance. Distance extrapolation factor = 20 log (spec. distance [3 m] / measurement distance [N m]) (dB) .The measurements described in ANSI C63.10, clause 7.8.6. If the emission cannot be detected at 1 m, reduce the RBW to increase system sensitivity. Note the value. If the emission still cannot be detected, move the horn closer to the EUT, noting the distance at which a measurement is made.

3.4.5 Measurement Results Calculation

The measured Level is calculated using:

For below 40GHz

Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level

For above 40GHz

EIRP = Meas. Level - RX Antenna Gain + 20*log(4*Pi(3.14159)*D/(300/(Frequency*1000)))

3.4.6 Test Result of Transmitter Spurious Emissions

Test Conditions:	see ANSI C63.10, clause 5.11
Test Setup:	see ANSI C63.10, clauses 6.3, 6.4, 6.5, 6.6 and 9.12

Note1: If equipment having different channel plan and nominal channel bandwidth modes, the measurements are uninfluenced by different channel plan and nominal channel bandwidth modes, may not need to be repeated for all modes.

Note2: Note: Conformance tests have to be performed over the frequency range(s) that has been declared with this Field Strength of Fundamental and using the antenna gain of the antenna with the highest gain among those that have been declared with this Field Strength of Fundamental. For smart antenna systems, the antenna beam forming gain may have to be taken into account as well.

Test Frequency: 24.160GHz		**Test Range:** 9 kHz - 30 MHz			
		Test Results			
Test Range	**Emission Frequency (MHz)**	**Emission Observed (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Remark**
9 kHz - 30 MHz	N/F	N/F	-	-	Peak

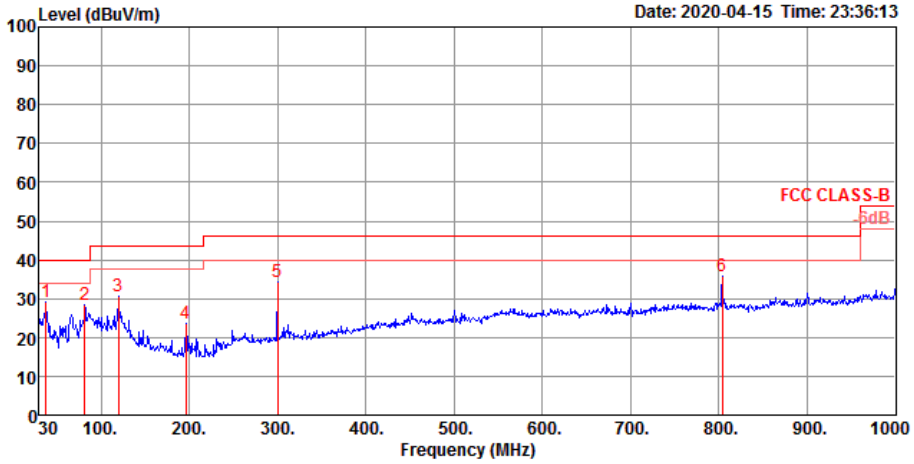
Note:

1.“N/F” means Nothing Found (No spurious emissions were detected.)

2.There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

Test Frequency:	24.160GHz	**Test Range:**	30 MHz – 1000 MHz
		Polarization:	Vertical
		Test Distance:	3m

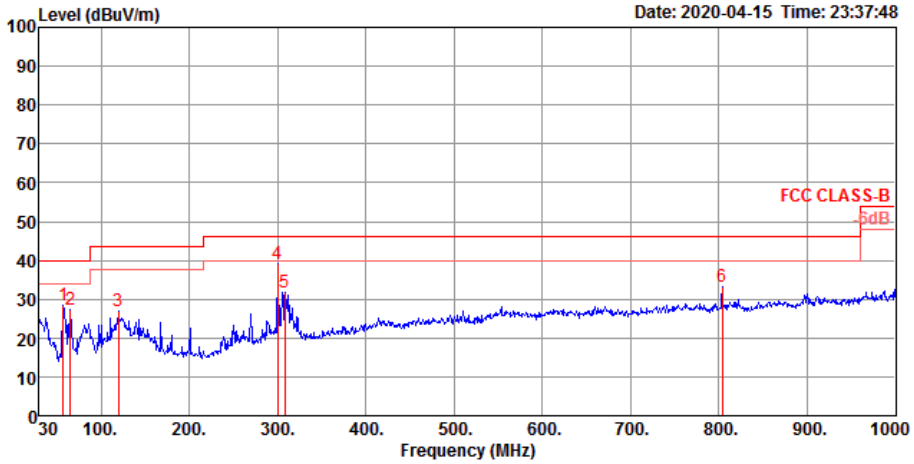
Test Results



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	37.76	28.98	40.00	-11.02	38.93	1.36	20.19	31.50	300	54	Peak	VERTICAL
2	81.41	28.58	40.00	-11.42	45.99	1.40	13.05	31.86	300	207	Peak	VERTICAL
3	119.24	30.59	43.50	-12.91	42.52	1.70	18.12	31.75	100	170	Peak	VERTICAL
4	195.87	23.76	43.50	-19.74	38.63	1.98	15.10	31.95	100	300	Peak	VERTICAL
5	299.66	34.30	46.00	-11.70	45.31	2.49	18.58	32.08	150	93	Peak	VERTICAL
6	804.06	35.83	46.00	-10.17	38.98	3.93	25.24	32.32	100	152	Peak	VERTICAL

Test Frequency:	24.160GHz	**Test Range:**	30 MHz – 1000 MHz
		Polarization:	Horizontal
		Test Distance:	3m

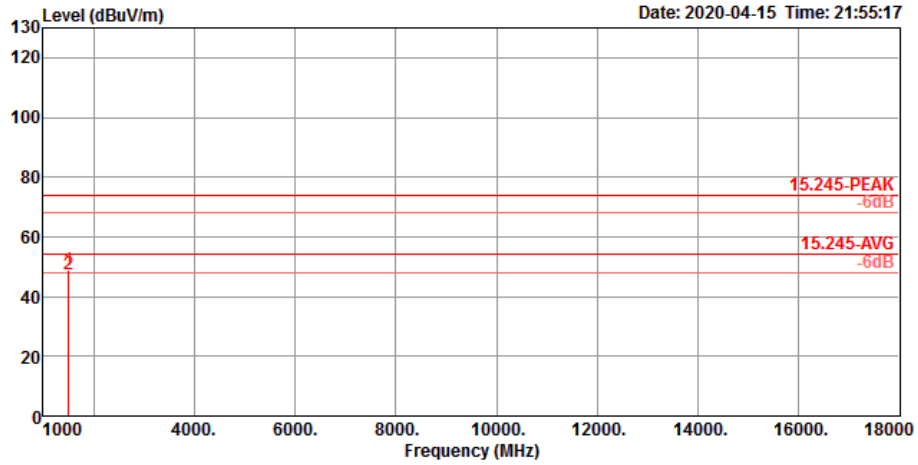
Test Results



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	57.16	28.44	40.00	-11.56	46.33	1.14	12.79	31.82	125	248	Peak	HORIZONTAL
2	64.92	27.43	40.00	-12.57	45.63	1.20	12.47	31.87	100	37	Peak	HORIZONTAL
3	119.24	26.92	43.50	-16.58	38.85	1.70	18.12	31.75	300	136	Peak	HORIZONTAL
4	299.66	39.16	46.00	-6.84	50.17	2.49	18.58	32.08	100	335	Peak	HORIZONTAL
5	308.39	31.58	46.00	-14.42	42.32	2.52	18.83	32.09	125	0	Peak	HORIZONTAL
6	804.06	33.35	46.00	-12.65	36.50	3.93	25.24	32.32	125	187	Peak	HORIZONTAL

Test Frequency:	24.092GHz	**Test Range:**	1 GHz – 18 GHz
		Polarization:	Vertical
		Test Distance:	3m

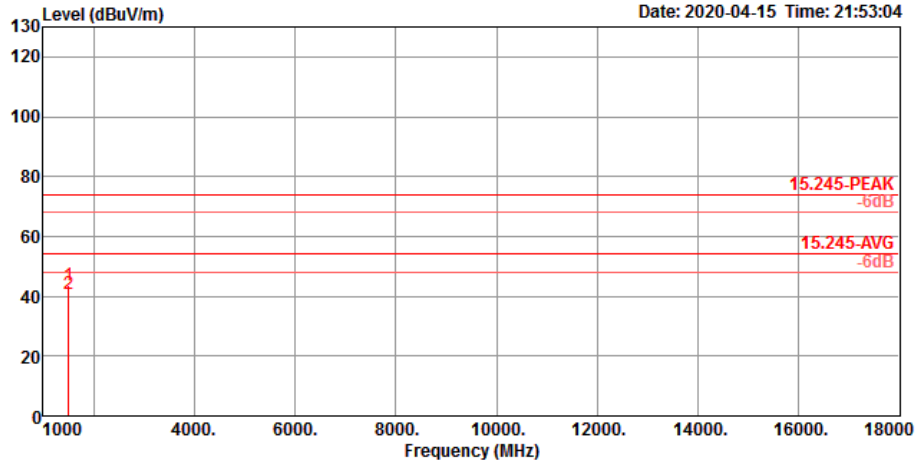
Test Results



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1505.73	48.74	74.00	-25.26	56.84	3.30	25.55	36.95	115	0	Peak	VERTICAL
2	1505.74	47.47	54.00	-6.53	55.57	3.30	25.55	36.95	115	0	Average	VERTICAL

Test Frequency:	24.092GHz	**Test Range:**	1 GHz – 18 GHz
		Polarization:	Horizontal
		Test Distance:	3m

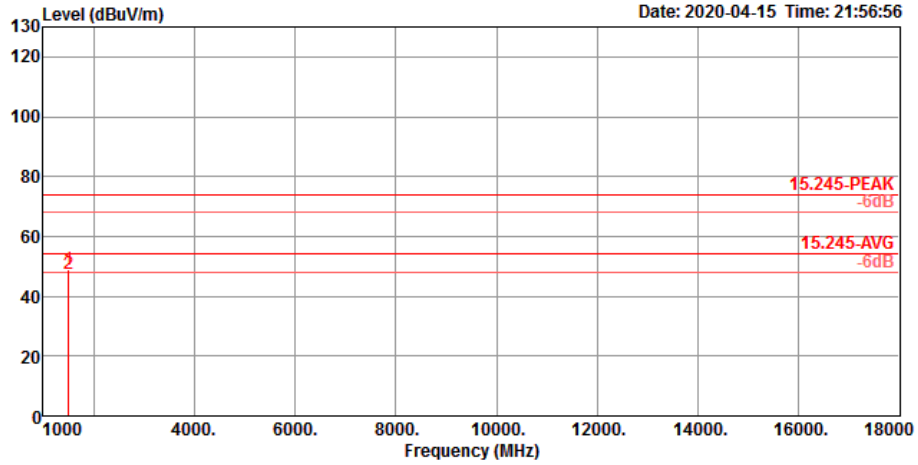
Test Results



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1505.74	43.48	74.00	-30.52	51.58	3.30	25.55	36.95	146	289	Peak	HORIZONTAL
2	1505.75	40.68	54.00	-13.32	48.78	3.30	25.55	36.95	146	289	Average	HORIZONTAL

Test Frequency:	24.124GHz	**Test Range:**	1 GHz – 18 GHz
		Polarization:	Vertical
		Test Distance:	3m

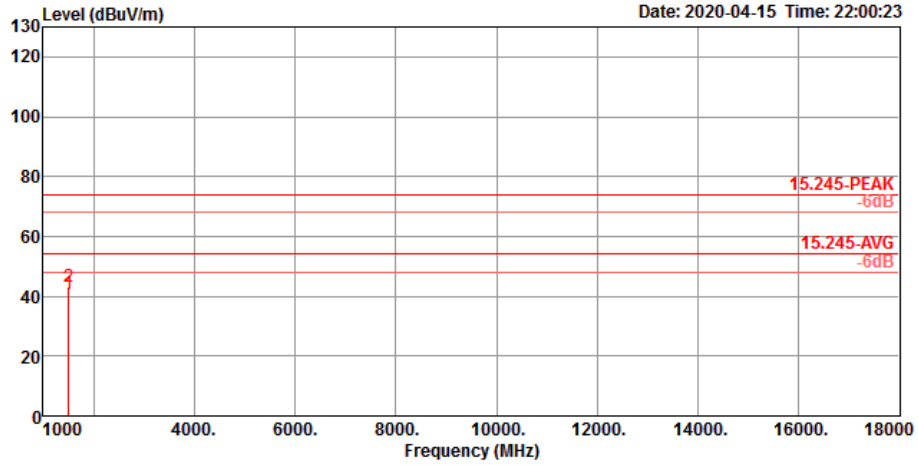
Test Results



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1507.73	49.02	74.00	-24.98	57.12	3.30	25.55	36.95	118	7	Peak	VERTICAL
2	1507.76	47.57	54.00	-6.43	55.67	3.30	25.55	36.95	118	7	Average	VERTICAL

Test Frequency:	24.124GHz	**Test Range:**	1 GHz – 18 GHz
		Polarization:	Horizontal
		Test Distance:	3m

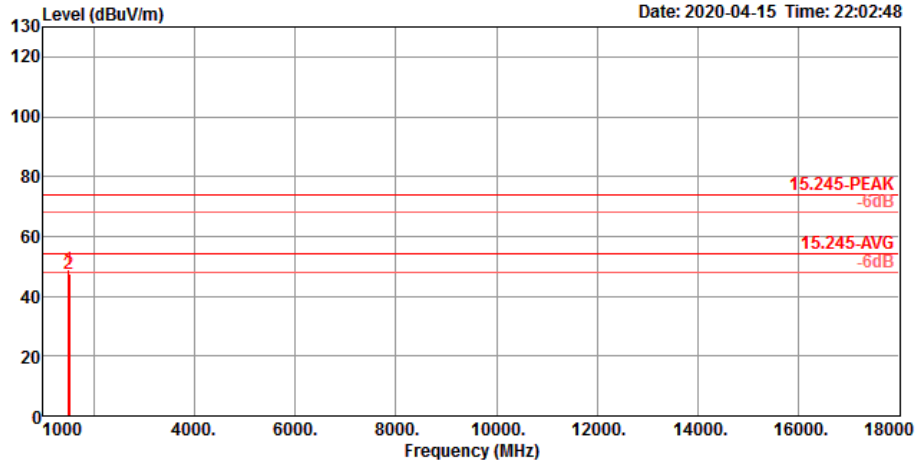
Test Results



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1507.73	40.60	54.00	-13.40	48.70	3.30	25.55	36.95	152	279	Average	HORIZONTAL
2	1507.75	43.18	74.00	-30.82	51.28	3.30	25.55	36.95	152	279	Peak	HORIZONTAL

Test Frequency:	24.160GHz	**Test Range:**	1 GHz – 18 GHz
		Polarization:	Vertical
		Test Distance:	3m

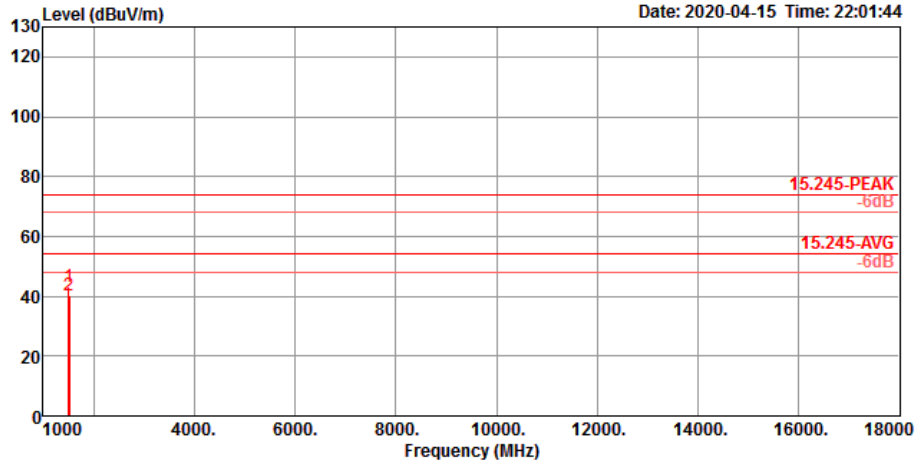
Test Results



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1509.95	48.76	74.00	-25.24	56.88	3.31	25.52	36.95	121	360	Peak	VERTICAL
2	1509.99	47.35	54.00	-6.65	55.47	3.31	25.52	36.95	121	360	Average	VERTICAL

Test Frequency:	24.160GHz	**Test Range:**	1 GHz – 18 GHz
		Polarization:	Horizontal
		Test Distance:	3m

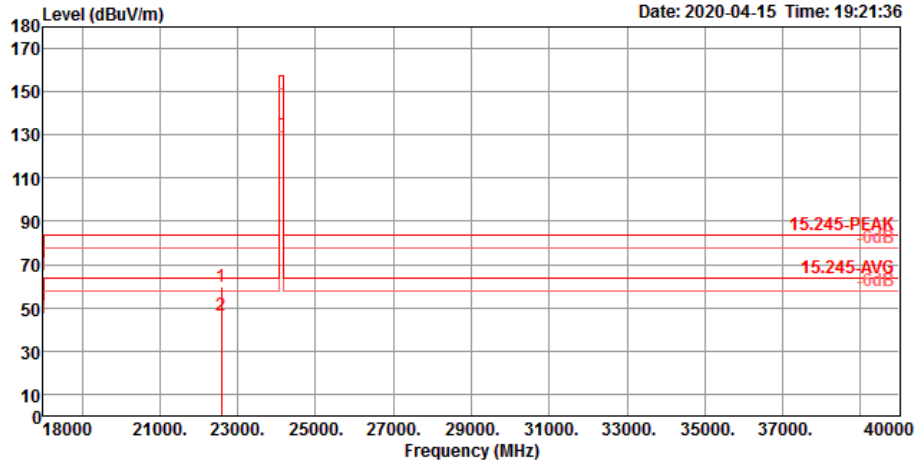
Test Results



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1509.91	43.30	74.00	-30.70	51.42	3.31	25.52	36.95	150	282	Peak	HORIZONTAL
2	1510.01	40.32	54.00	-13.68	48.44	3.31	25.52	36.95	150	282	Average	HORIZONTAL

Test Frequency:	24.092GHz	**Test Range:**	18 GHz – 40 GHz
		Polarization:	Vertical
		Test Distance:	1m

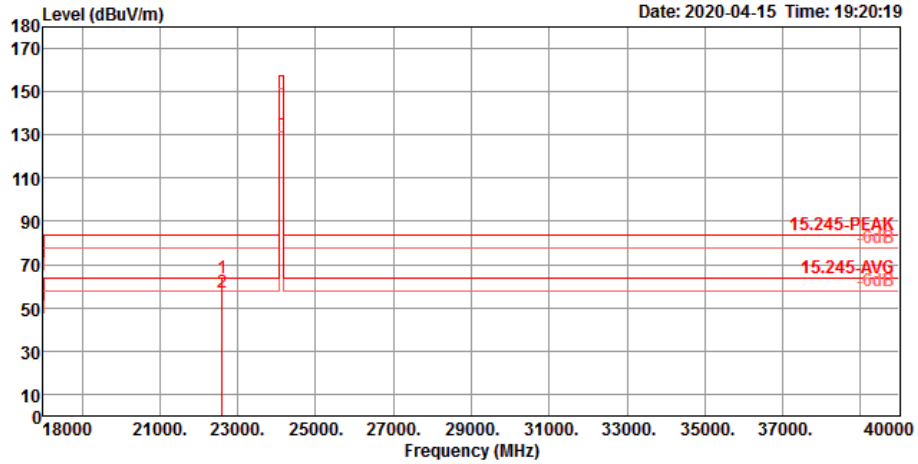
Test Results



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	22584.07	59.84	83.54	-23.70	55.38	15.51	38.11	49.16	147	333	Peak	VERTICAL
2	22584.63	46.40	63.54	-17.14	41.94	15.51	38.11	49.16	147	333	Average	VERTICAL

Test Frequency:	24.092GHz	**Test Range:**	18 GHz – 40 GHz
		Polarization:	Horizontal
		Test Distance:	1m

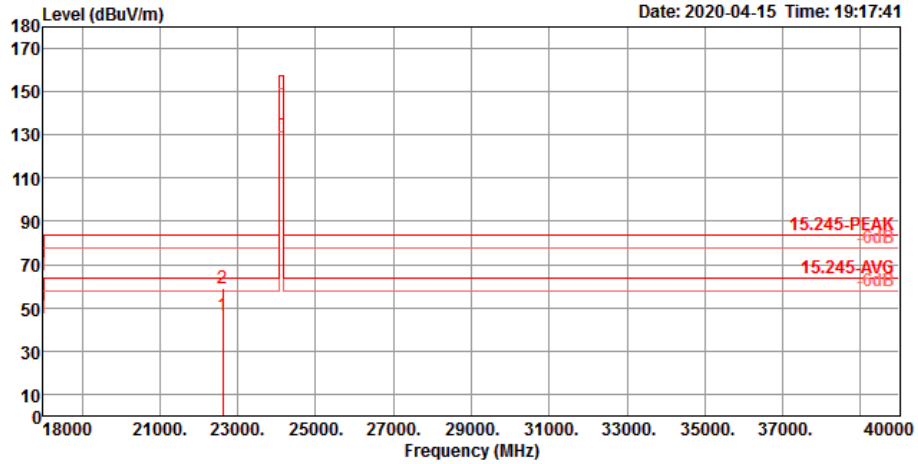
Test Results



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	22586.14	63.79	83.54	-19.75	59.33	15.51	38.11	49.16	156	327	Peak	HORIZONTAL
2	22586.17	57.36	63.54	-6.18	52.90	15.51	38.11	49.16	156	327	Average	HORIZONTAL

Test Frequency:	24.124GHz	**Test Range:**	18 GHz – 40 GHz
		Polarization:	Vertical
		Test Distance:	1m

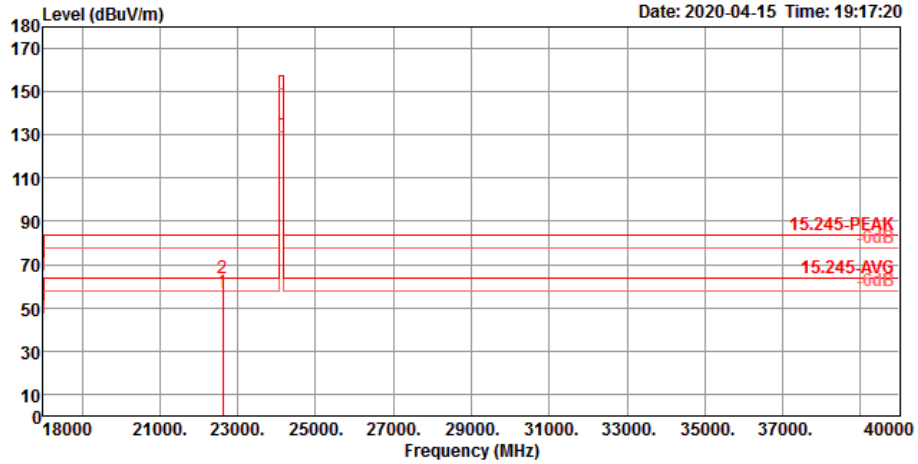
Test Results



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	22616.11	46.40	63.54	-17.14	41.88	15.52	38.15	49.15	147	339	Average	VERTICAL
2	22616.44	59.41	83.54	-24.13	54.89	15.52	38.15	49.15	147	339	Peak	VERTICAL

Test Frequency:	24.124GHz	**Test Range:**	18 GHz – 40 GHz
		Polarization:	Horizontal
		Test Distance:	1m

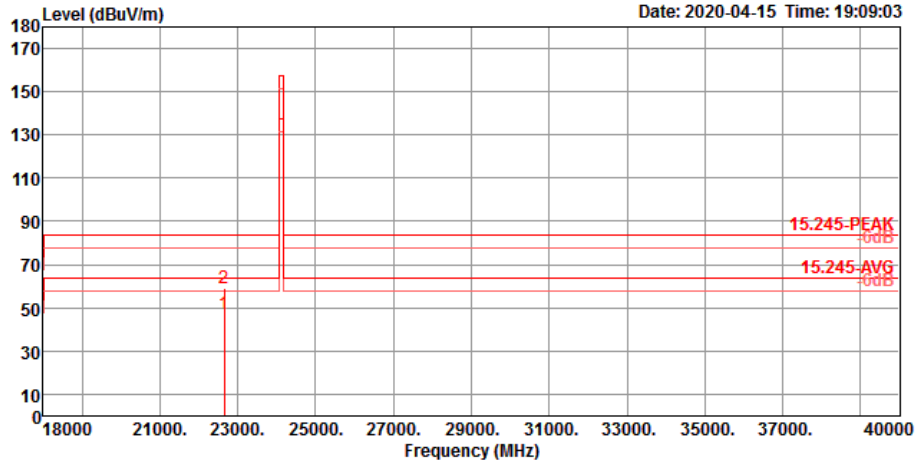
Test Results



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	22616.14	57.43	63.54	-6.11	52.91	15.52	38.15	49.15	156	328	Average	HORIZONTAL
2	22616.18	63.59	83.54	-19.95	59.07	15.52	38.15	49.15	156	328	Peak	HORIZONTAL

Test Frequency:	24.160GHz	**Test Range:**	18 GHz – 40 GHz
		Polarization:	Vertical
		Test Distance:	1m

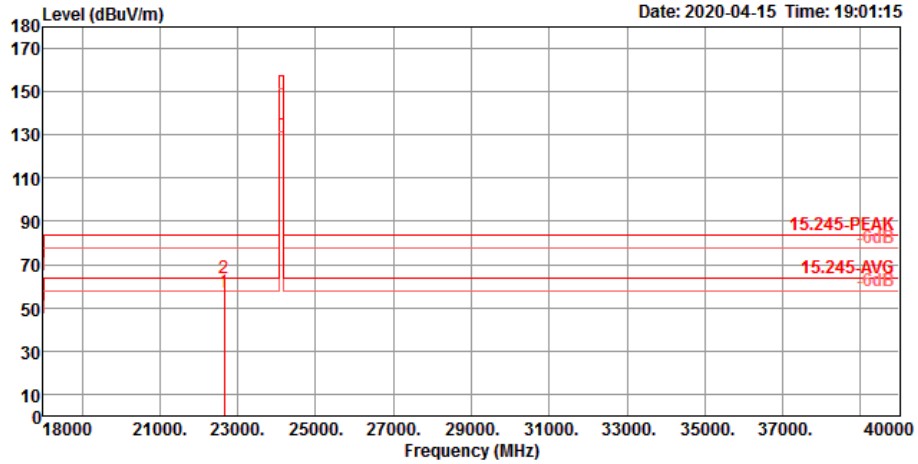
Test Results



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	22649.94	47.09	63.54	-16.45	42.50	15.54	38.19	49.14	154	313	Average	VERTICAL
2	22650.06	59.01	83.54	-24.53	54.42	15.54	38.19	49.14	154	313	Peak	VERTICAL

Test Frequency:	24.160GHz	**Test Range:**	18 GHz – 40 GHz
		Polarization:	Horizontal
		Test Distance:	1m

Test Results



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	22649.93	57.07	63.54	-6.47	52.48	15.54	38.19	49.14	149	330	Average	HORIZONTAL
2	22649.98	63.96	83.54	-19.58	59.37	15.54	38.19	49.14	149	330	Peak	HORIZONTAL

Test Frequency:	24.092GHz	Test Range:	40 GHz – 100 GHz
		Test Distance:	0.5m

Test Results

Freq. (GHz)	Measurement Distance (m)	Measurement Peak (dBm)	Rx Antenna Gain (dBi)	Measurement EIRP (dBm)	Measurement Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
48.184	1	-62.37	23.9	-20.17	84.570	117.50	-32.930
Freq. (GHz)	**Measurement Distance (m)**	**Measurement Average (dBm)**	**Rx Antenna Gain (dBi)**	**Measurement EIRP (dBm)**	**Measurement Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**
48.184	1	-63.54	23.9	-21.34	83.400	97.50	-14.100

Test Frequency:	24.124GHz	Test Range:	40 GHz – 100 GHz
		Test Distance:	0.5m

Test Results

Freq. (GHz)	Measurement Distance (m)	Measurement Peak (dBm)	Rx Antenna Gain (dBi)	Measurement EIRP (dBm)	Measurement Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
48.248	1	-62.39	23.9	-20.18	84.561	117.50	-32.939
Freq. (GHz)	**Measurement Distance (m)**	**Measurement Average (dBm)**	**Rx Antenna Gain (dBi)**	**Measurement EIRP (dBm)**	**Measurement Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**
48.248	1	-63.51	23.9	-21.30	83.441	97.50	-14.059

Test Frequency:	24.160GHz	Test Range:	40 GHz – 100 GHz
		Test Distance:	0.5m

Test Results

Freq. (GHz)	Measurement Distance (m)	Measurement Peak (dBm)	Rx Antenna Gain (dBi)	Measurement EIRP (dBm)	Measurement Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
48.320	1	-61.45	23.9	-19.23	85.514	117.50	-31.986
Freq. (GHz)	**Measurement Distance (m)**	**Measurement Average (dBm)**	**Rx Antenna Gain (dBi)**	**Measurement EIRP (dBm)**	**Measurement Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**
48.320	1	-62.23	23.9	-20.01	84.734	97.50	-12.766

3.5 Antenna Requirements

3.5.1 Limit of Antenna Requirements

Limits for Antenna Requirements
The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited

3.5.2 EUT Antenna

See test report clause 1.1.2, EUT antenna complied with antenna requirements.

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Feb. 26, 2020	Feb. 25, 2021	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 25, 2019	Dec. 24, 2020	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Feb. 25, 2020	Feb. 24, 2021	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Jan. 31, 2020	Jan. 30, 2021	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO 01	9kHz ~ 30MHz	May 20, 2020	May 19, 2021	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10.7	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 27, 2020	Mar. 26, 2021	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1291	1GHz~18GHz	Oct. 05, 2019	Oct. 04, 2020	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 12, 2019	Jun. 11, 2020	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	May 01, 2019	Apr. 30, 2020	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 28, 2020	Apr. 27, 2021	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz – 26.5GHz	Apr. 16, 2019	Apr. 15, 2020	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz – 26.5GHz	Apr. 15, 2020	Apr. 14, 2021	Radiation (03CH05-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH05-CB)
Amplifier	-	-	TF-130N-R1	18GHz ~ 40GHz	Jun. 19, 2020	Jun. 18, 2021	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Aug. 15, 2019	Aug. 14, 2020	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 15, 2019	May 14, 2020	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 13, 2020	May 12, 2021	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	LOW Cable-04+23	30MHz~1GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH05-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Feb. 01, 2020	Jan. 31, 2021	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH05-CB)
Test Software	Audix	E3	6.120210m	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
Standard Horn Antenna	Custom Microwave	M19RH	U91113-A	40 ~ 60 GHz	N.C.R	N.C.R	Radiation (03CH05-CB)
Standard Horn Antenna	Custom Microwave	M12RH	E91113-A	60 ~ 90 GHz	N.C.R	N.C.R	Radiation (03CH05-CB)
Standard Horn Antenna	Custom Microwave	M08RH	F91113-A	90 ~ 140 GHz	N.C.R	N.C.R	Radiation (03CH05-CB)
Mixer*	OML	M19HWA	U91113-1	40 ~ 60 GHz	Oct. 01 2019	Sep. 30, 2020	Radiation (03CH05-CB)
Mixer*	OML	M12HWA	E91113-1	60 ~ 90 GHz	Oct. 25 2019	Oct. 24, 2020	Radiation (03CH05-CB)
Mixer*	OML	M08HWA	F91113-1	90 ~ 140 GHz	Oct. 25 2019	Oct. 24, 2020	Radiation (03CH05-CB)

Note: Calibration Interval of instruments listed above is one year.

"*" Calibration Interval of instruments listed above is two years.

N.C.R means Non-Calibration required.

5 Measurement Uncertainty

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	5.0 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.6 dB	Confidence levels of 95%
Radiated Emission (40GHz ~ 60GHz)	3.9 dB	Confidence levels of 95%
Radiated Emission (60GHz ~ 90GHz)	4.5 dB	Confidence levels of 95%
Radiated Emission (90GHz ~ 200GHz)	5.3 dB	Confidence levels of 95%

Appendix A. Test Photos

TEL : 886-3-656-9065
FAX : 886-3-656-9085