FCC RADIO TEST REPORT

FCC ID	:	2AMP5K60X
Equipment	:	60 GHz Outdoor Distribution System
Brand Name	:	Kwibit
Model Name	:	K60x
Applicant	:	Kwikbit, Inc 7801 E. Bush Lake Rd Suite 300 Minneapolis Minnesota United States 55439
Manufacturer	:	Kwikbit, Inc 7801 E. Bush Lake Rd Suite 300 Minneapolis Minnesota United States 55439
Standard	:	47 CFR FCC Part 15.255

The product was received on Feb. 05, 2020, and testing was started from Apr. 14, 2020 and completed on May 07, 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, 47 CFR FCC Part 15.255 and Millimeter Wave Test Procedures, FCC KDB 414788 D01 v01r01 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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: Sam Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FR020302	01	Initial issue of report	May 11, 2020

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	FCC 15.207	AC Power Conducted Emissions	PASS	-
3.2	FCC 15.255(e)	Occupied Bandwidth	PASS	-
3.3	FCC 15.255(c)	EIRP Power	PASS	-
3.4	FCC 15.255(c)	Peak Conducted Power	PASS	-
3.5	FCC 15.255(d)	Transmitter Spurious Emissions	PASS	-
3.6	FCC 15.255(f)	Frequency Stability	PASS	-
3.7	FCC 15.255(a),(h)	Operation Restriction and Group Installation	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: Sandy Chuang

1 General Description

1.1 Information

1.1.1 RF General Information

RF General Information	
Frequency Range	57-71 GHz
The Channel Plan(s)	Channel 1: 58.32 GHz Channel 2: 60.48 GHz Channel 3: 62.64 GHz

1.1.2 Modulation

MCS Index	Modulation	Code rate	Data rate (Mbit/s)
1	π/2-BPSK	1/2	385
2	π/2-BPSK	1/2	770
3	π/2-BPSK	5/8	962.5
4	π/2-BPSK	3/4	1155
5	π/2-BPSK	13/16	1251.25
6	π/2-QPSK	1/2	1540
7	π/2-QPSK	5/8	1925
8	π/2-QPSK	3/4	2310

1.1.3 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	WNC	XEAG-V01	Patch Antenna	N/A	24.9

Note: The above information was declared by manufacturer.

1.1.4 Table for I/O port

Port	Speed (Base-T)	PoE source	PoE Spec
1	10/100/1000/2.5G	Input	802.3at/802.3bt
2	10/100/1000/2.5G	Output	802.3at (30W)
3	10/100/1000	Output	802.3at (15W)

1.1.5 Operating Conditions

Operating Conditions				
☒ -30 °C to + 55 °C				
☐ 0 °C to +40 °C				
☐ Other:				
EUT Power Type	From PoE			
Supply Voltage	☐ AC	State AC voltage		V
Supply Voltage	☒ DC	State DC voltage	55	V

1.1.6 Equipment Use Condition

Equipment Use Condition
☐ Fixed field disturbance sensors at 61-61.5GHz
☐ Except fixed field disturbance sensors at 61-61.5GHz
☒ Except fixed field disturbance sensors

1.1.7 User Condition

Intended Operation
☐ Indoor
☒ Outdoor (except outdoor fixed Point to Point)
☐ Outdoor fixed Point to Point

Note: The above information was declared by manufacturer.

1.1.8 Duty Cycle

Duty Cycle	Duty Cycle Factor (dB)
100 %	0

1.2 Applicable Standards

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

- 47 CFR FCC Part 15.255
- ANSI C63.10-2013 Section 9. “Procedures for testing millimeter-wave systems”

1.3 Testing Location

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	CO02-CB	Max Lin	22~23°C / 59~60 %	Apr. 30, 2020
Radiated <Below 1GHz>	03CH05-CB	Eason Chen	23-24°C / 54-56 %	Apr. 16, 2020~ Apr. 29, 2020
Radiated <Above 1GHz>	03CH05-CB	Eason Chen	23-24°C / 54-56 %	Apr. 17, 2020~ May 07, 2020
RF Conducted	TH01-CB	Eddie Weng	23.2-24.5°C / 53-55 %	Apr. 14, 2020~ May 07, 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 Configuration	
Low Channel (GHz)	58.32
Middle Channel (GHz)	60.48
High Channel (GHz)	62.64

2.2 Conformance Tests and Related Test Frequencies

Test Item	Test Frequencies (GHz)
AC Power Conducted Emissions	Random Frequency
Occupied Bandwidth	58.32, 60.48, 62.64
EIRP Power	58.32, 60.48, 62.64
Peak Conducted Power	58.32, 60.48, 62.64
Transmitter Spurious Emissions (below 1 GHz)	Random Frequency
Transmitter Spurious Emissions (1 GHz-40 GHz)	58.32, 60.48, 62.64
Transmitter Spurious Emissions (above 40 GHz)	58.32, 60.48, 62.64
Frequency Stability	60.48

Note: The EUT can only be used at Y axis.

2.3 EUT Operation during Test

During the test, executed the test program to control the EUT continuously transmit RF signal.

2.4 Accessories

Accessories			
Equipment Name	**Brand Name**	**Model Name**	**Rating**
PoE	PowerDsine	PD-9601G/AC	Input: 100-240V~, 50-60Hz, 1.35A Output: 55V, 1.75A
Other			
AC power cable*1: Non-Shielded, 1.8m			
RJ-45 cable*3: Non-Shielded, 3m			

2.5 Support Equipment

For AC Conduction test:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	PoE 15W Load NB	DELL	E6430	N/A
B	PoE LAN PC	DELL	T3400	N/A
C	Device	Kwikbit	K60x	2AMP5K60X
D	Device PC	DELL	T3400	N/A
E	PoE Switch	N/A	N/A	N/A
F	PoE switch PC	DELL	T3400	N/A
G	PoE 15W Load	N/A	N/A	N/A

For Radiated <Below 1GHz>:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Device	Kwikbit	K60x	2AMP5K60X
B	PoE Switch	N/A	N/A	N/A
C	PoE 15W Load	N/A	N/A	N/A
D	NB	DELL	E4300	N/A
E	NB	DELL	E4300	N/A
F	NB	DELL	E4300	N/A
G	NB	DELL	E4300	N/A

For Radiated <Above 1GHz> and RF Conducted tests:

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

2.6 Far Field Boundary Calculations

The far-field boundary is given as:

far field = (2 * L^2) /**λ**

where:

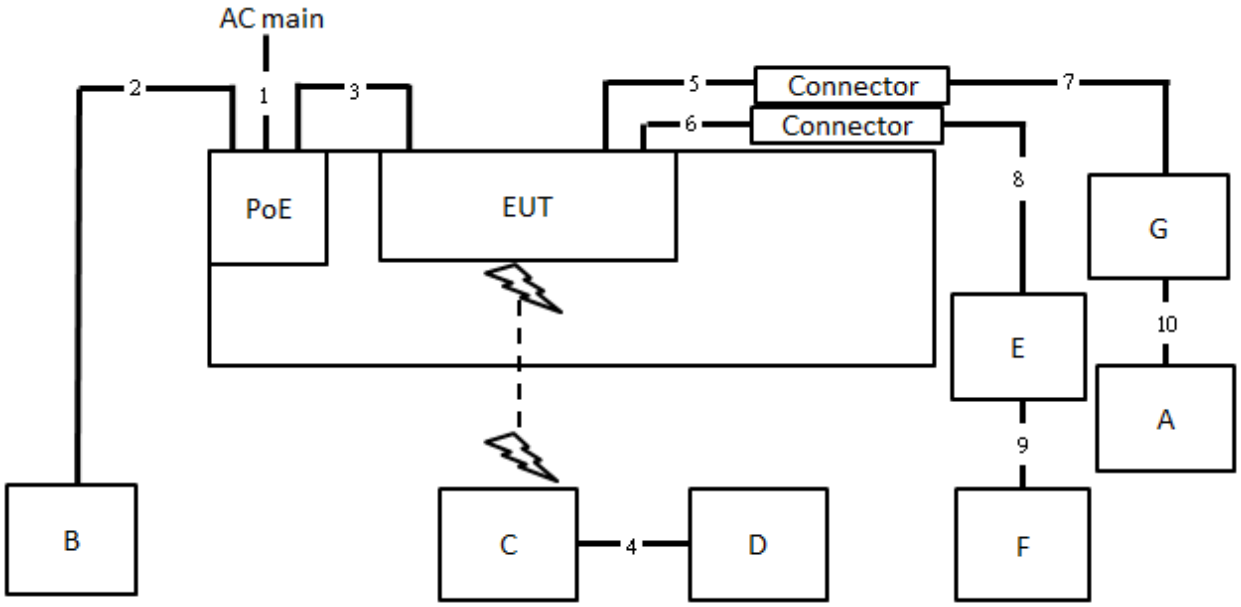
L = Largest Antenna Dimension, including the reflector, in meters

λ= wavelength in meters

Far Field (m)				
Frequency (GHz)	**L (m)**	**Lambda (m)**	**d(Far Field) (m)**	**d(Far Field) (cm)**
58.32	0.005	0.0051440	0.010	0.97
60.48	0.005	0.0049603	0.010	1.01
62.64	0.005	0.0047893	0.010	1.04

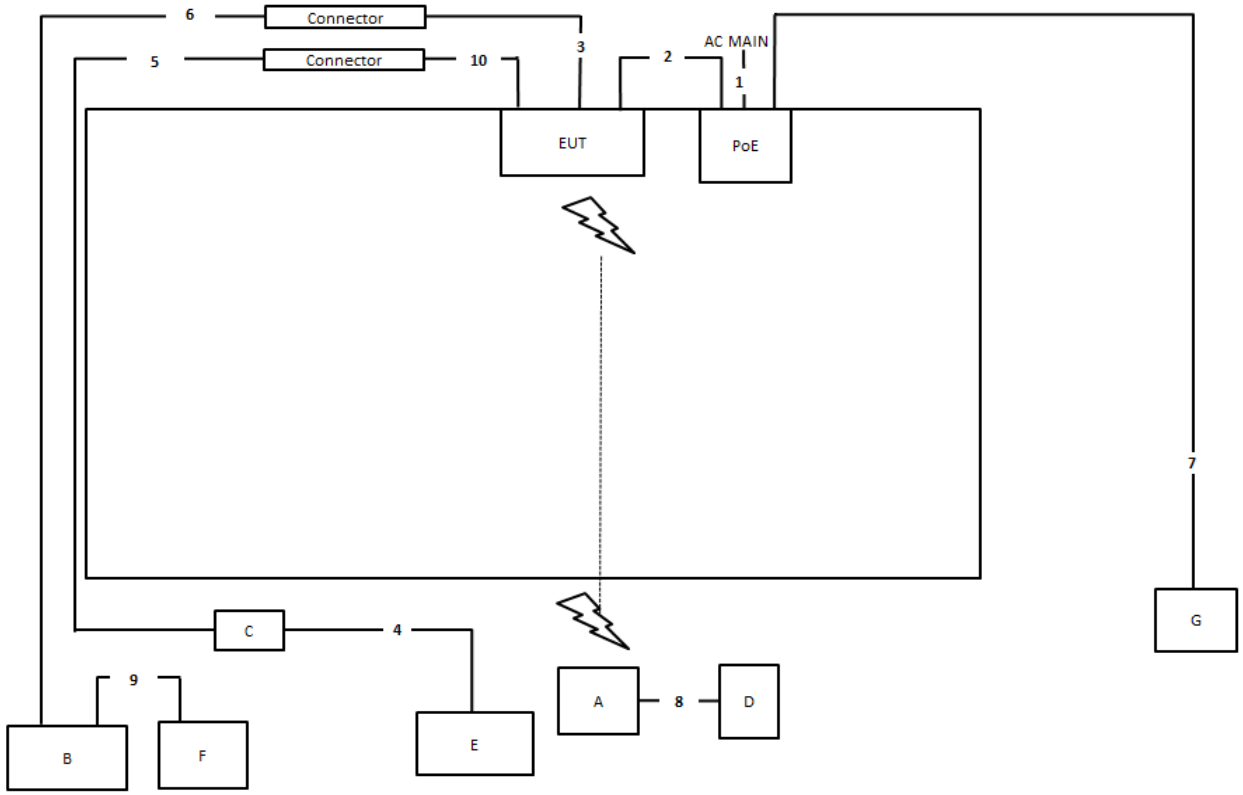
2.7 Test Setup Diagram

Test Setup Diagram - AC Power Conducted Emissions



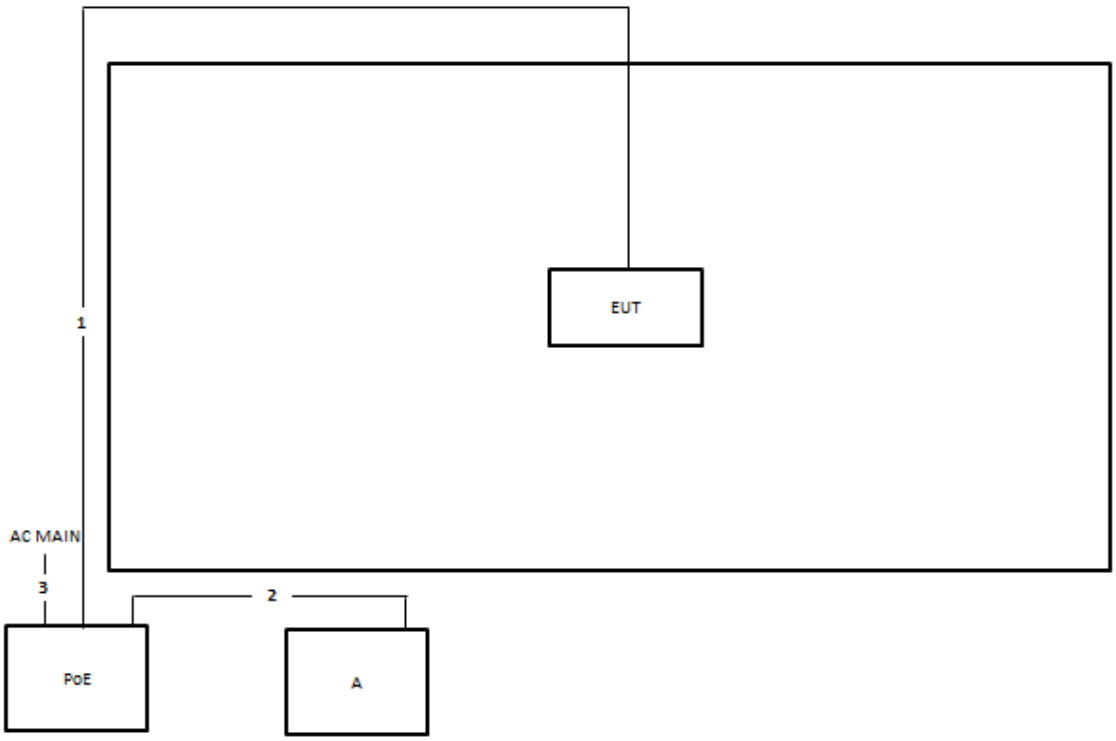
Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	3m
4	RJ-45 cable	No	3m
5	RJ-45 cable	No	3m
6	RJ-45 cable	No	3m
7	RJ-45 cable	No	10m
8	RJ-45 cable	No	10m
9	RJ-45 cable	No	3m
10	RJ-45 cable	No	3m

Test Setup Diagram - Transmitter Spurious Emissions below 1 GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	RJ-45 cable	No	3m
3	RJ-45 cable	No	3m
4	RJ-45 cable	No	1.5m
5	RJ-45 cable	No	10m
6	RJ-45 cable	No	10m
7	RJ-45 cable	No	10m
8	RJ-45 cable	No	1.5m
9	RJ-45 cable	No	1.5m
10	RJ-45 cable	No	1.8m

Test Setup Diagram - Transmitter Spurious Emissions above 1 GHz



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	1.5m
3	Power cable	No	1.8m

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

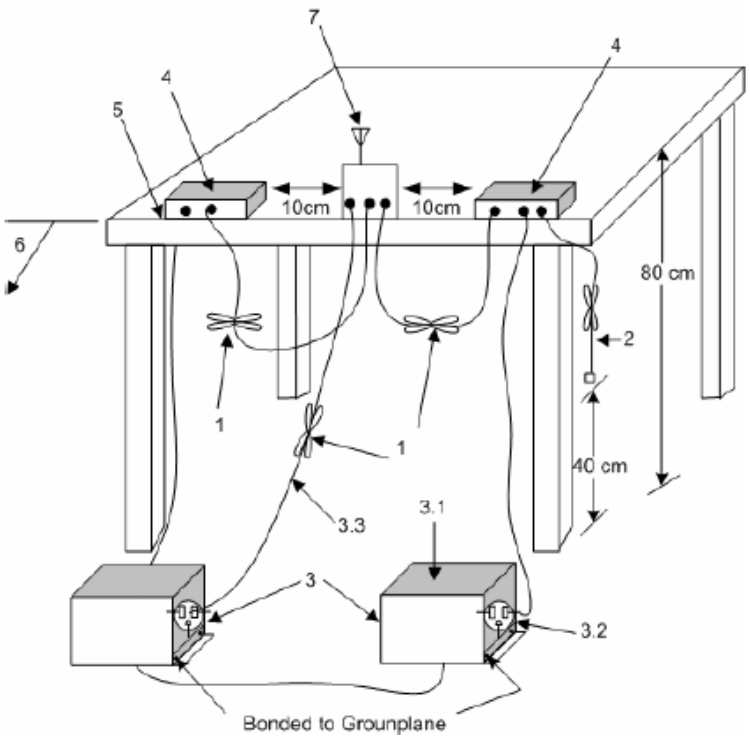
Refer a measuring instruments list in this test report.

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.

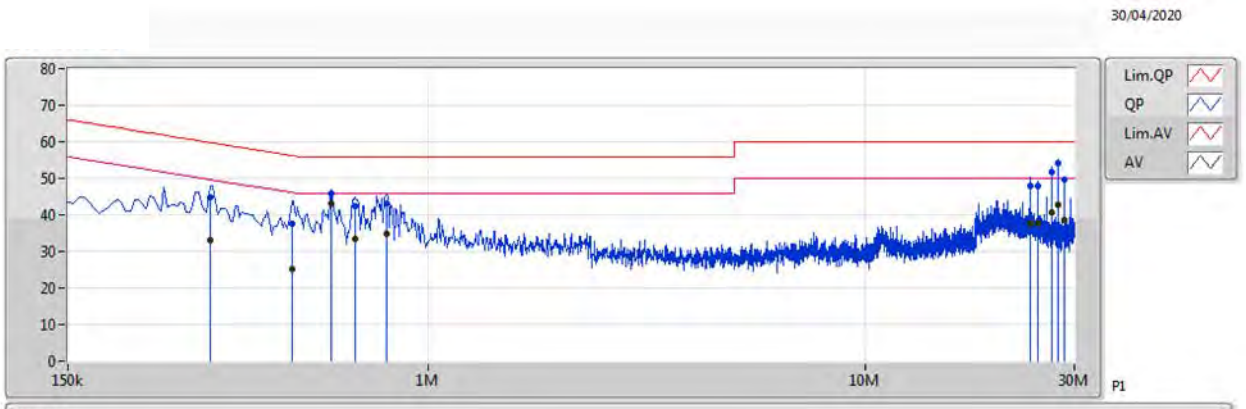
3.1.5 Test Result of AC Power Conducted Emissions

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 (see test report clause 1.1.1), 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 (see test report clause 1.1.2), 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.

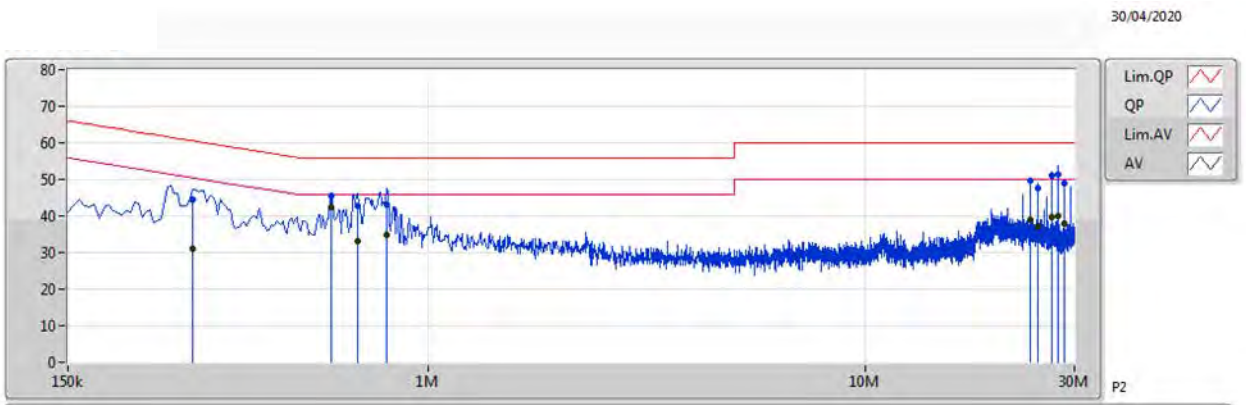
NOTE 2: ">20dB" means the tables in this clause should only list values of spurious emissions that exceed the level of 20 dB below the applicable limit, see ANSI C63.4, clause 10.1.8.1.

Phase	Line	Configuration	Normal Link



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	AF	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	316.5k	44.86	59.80	-14.94	10.23	Line	-	34.63	0.05	0.08	10.10
AV	316.5k	33.01	49.80	-16.79	10.23	Line	-	22.78	0.05	0.08	10.10
QP	487.5k	37.47	56.21	-18.74	10.24	Line	-	27.23	0.05	0.09	10.10
AV	487.5k	25.13	46.21	-21.08	10.24	Line	-	14.89	0.05	0.09	10.10
QP	600k	45.86	56.00	-10.14	10.25	Line	-	35.61	0.05	0.10	10.10
AV	600k	42.99	46.00	-3.01	10.25	Line	"Worst"	32.74	0.05	0.10	10.10
QP	681k	42.54	56.00	-13.46	10.26	Line	-	32.28	0.06	0.10	10.10
AV	681k	33.34	46.00	-12.66	10.26	Line	-	23.08	0.06	0.10	10.10
QP	802.5k	42.95	56.00	-13.05	10.27	Line	-	32.68	0.06	0.11	10.10
AV	802.5k	34.69	46.00	-11.31	10.27	Line	-	24.42	0.06	0.11	10.10
QP	23.748M	48.02	60.00	-11.98	10.85	Line	-	37.17	0.50	0.23	10.12
AV	23.748M	37.58	50.00	-12.42	10.85	Line	-	26.73	0.50	0.23	10.12
QP	24.702M	48.00	60.00	-12.00	10.87	Line	-	37.13	0.52	0.23	10.12
AV	24.702M	37.60	50.00	-12.40	10.87	Line	-	26.73	0.52	0.23	10.12
QP	26.601M	51.64	60.00	-8.36	10.91	Line	-	40.73	0.56	0.23	10.12
AV	26.601M	40.68	50.00	-9.32	10.91	Line	-	29.77	0.56	0.23	10.12
QP	27.551M	54.04	60.00	-5.96	10.95	Line	-	43.09	0.58	0.24	10.13
AV	27.551M	42.80	50.00	-7.20	10.95	Line	-	31.85	0.58	0.24	10.13
QP	28.5M	49.73	60.00	-10.27	10.97	Line	-	38.76	0.60	0.24	10.13
AV	28.5M	38.60	50.00	-11.40	10.97	Line	-	27.63	0.60	0.24	10.13

Phase	Neutral	Configuration	Normal Link



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	AF	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	289.5k	44.49	60.53	-16.04	10.23	Neutral	-	34.26	0.05	0.08	10.10
AV	289.5k	31.20	50.53	-19.33	10.23	Neutral	-	20.97	0.05	0.08	10.10
QP	600k	45.45	56.00	-10.55	10.25	Neutral	-	35.20	0.05	0.10	10.10
AV	600k	42.43	46.00	-3.57	10.25	Neutral	"Worst"	32.18	0.05	0.10	10.10
QP	690k	42.66	56.00	-13.34	10.26	Neutral	-	32.40	0.06	0.10	10.10
AV	690k	33.11	46.00	-12.89	10.26	Neutral	-	22.85	0.06	0.10	10.10
QP	802.5k	43.27	56.00	-12.73	10.27	Neutral	-	33.00	0.06	0.11	10.10
AV	802.5k	34.73	46.00	-11.27	10.27	Neutral	-	24.46	0.06	0.11	10.10
QP	23.753M	49.66	60.00	-10.34	10.66	Neutral	-	39.00	0.31	0.23	10.12
AV	23.753M	39.13	50.00	-10.87	10.66	Neutral	-	28.47	0.31	0.23	10.12
QP	24.702M	47.67	60.00	-12.33	10.67	Neutral	-	37.00	0.32	0.23	10.12
AV	24.702M	37.21	50.00	-12.79	10.67	Neutral	-	26.54	0.32	0.23	10.12
QP	26.601M	50.87	60.00	-9.13	10.69	Neutral	-	40.18	0.34	0.23	10.12
AV	26.601M	39.57	50.00	-10.43	10.69	Neutral	-	28.88	0.34	0.23	10.12
QP	27.551M	51.44	60.00	-8.56	10.72	Neutral	-	40.72	0.35	0.24	10.13
AV	27.551M	39.87	50.00	-10.13	10.72	Neutral	-	29.15	0.35	0.24	10.13
QP	28.505M	49.12	60.00	-10.88	10.73	Neutral	-	38.39	0.36	0.24	10.13
AV	28.505M	38.01	50.00	-11.99	10.73	Neutral	-	27.28	0.36	0.24	10.13

3.2 Occupied Bandwidth

3.2.1 Limit of Occupied Bandwidth

6dBc Bandwidth (see Note 1)	None
99% Occupied Bandwidth (see Note 2)	None

NOTE 1: The 6dBc bandwidth is the frequency bandwidth of the signal power at the -6 dBc points when measured with a 100 kHz resolution bandwidth. These measurements shall also be performed at normal test conditions.

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

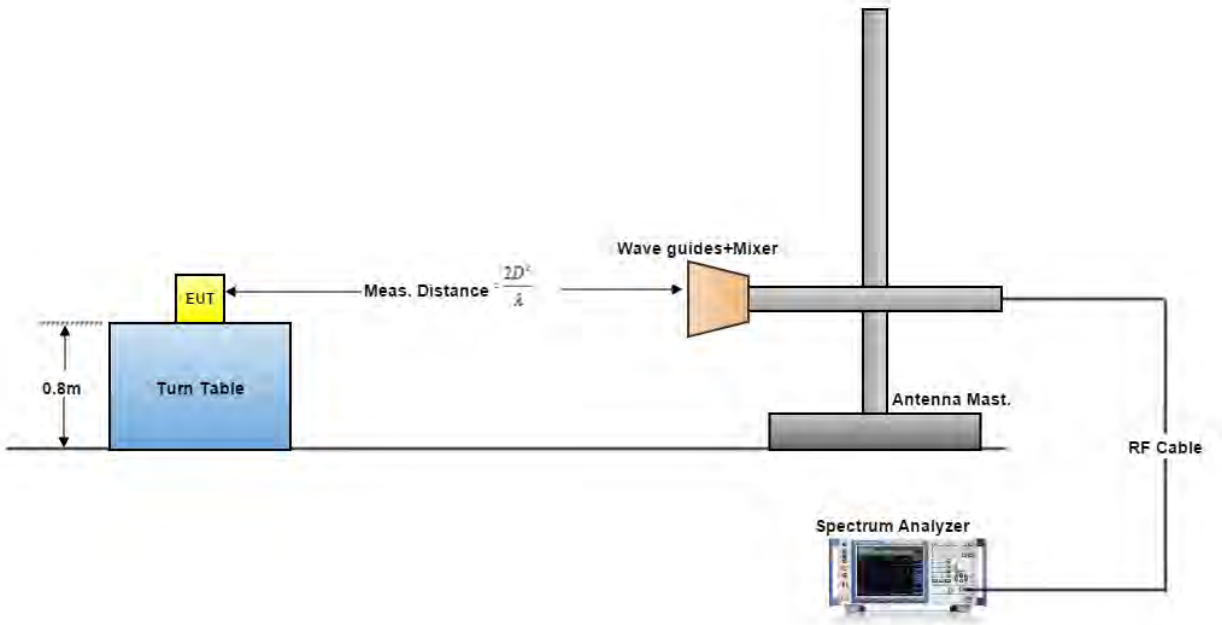
Refer a measuring instruments list in this test report.

3.2.3 Test Procedures

Method of measurement: Refer as ANSI C63.10-2013, clauses 6.9.2.

3.2.4 Test Setup

Occupied Channel 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 6.9.2

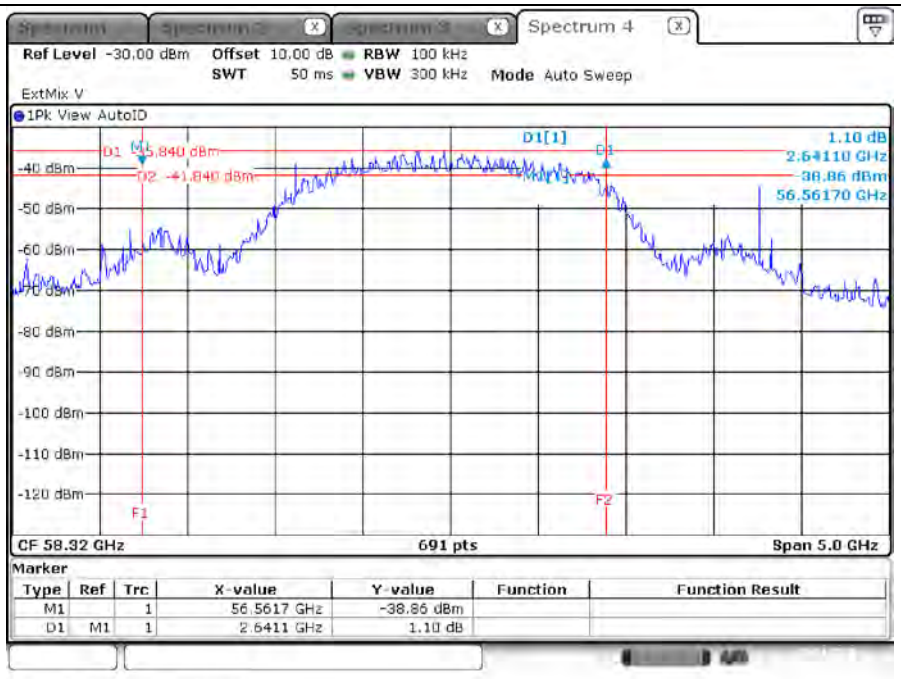
NOTE: If equipment having different transmit operating modes (see test report clause 1.1.2), the measurements are uninfluenced by different transmit operating modes, may not need to be repeated for all the operating modes. Similar, if the equipment supports different modulations and/or data rates, the measurements described in ANSI C63.10, clause 5.11 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 15, observe and record with plotted graphs or photographs the worst-case (i.e., widest) occupied bandwidth produced by these different modulation sources.

Test Results			
Test Freq. (GHz)	**6 dBc Bandwidth (MHz)**	**99% Occupied Bandwidth (MHz)**	**Limit (MHz)**
58.32	2641.10	2000.43	N/A
60.48	2641.10	2677.27	N/A
62.64	2387.80	1982.63	N/A

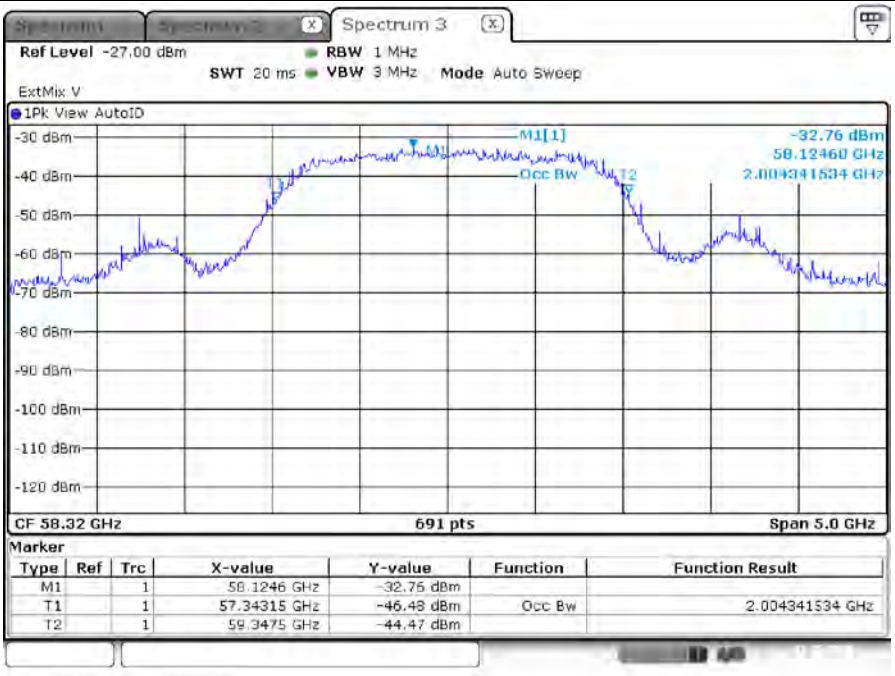
3.2.5.1 Bandwidth Plots

Test Frequency: 58.32 GHz

6 dBc Bandwidth

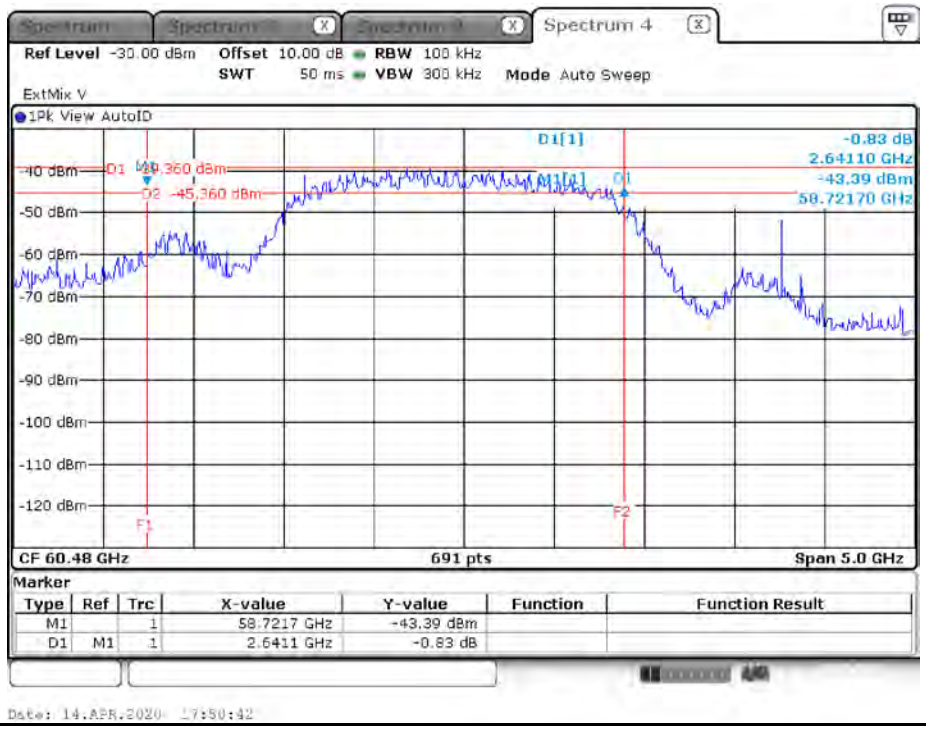


Occupied Bandwidth

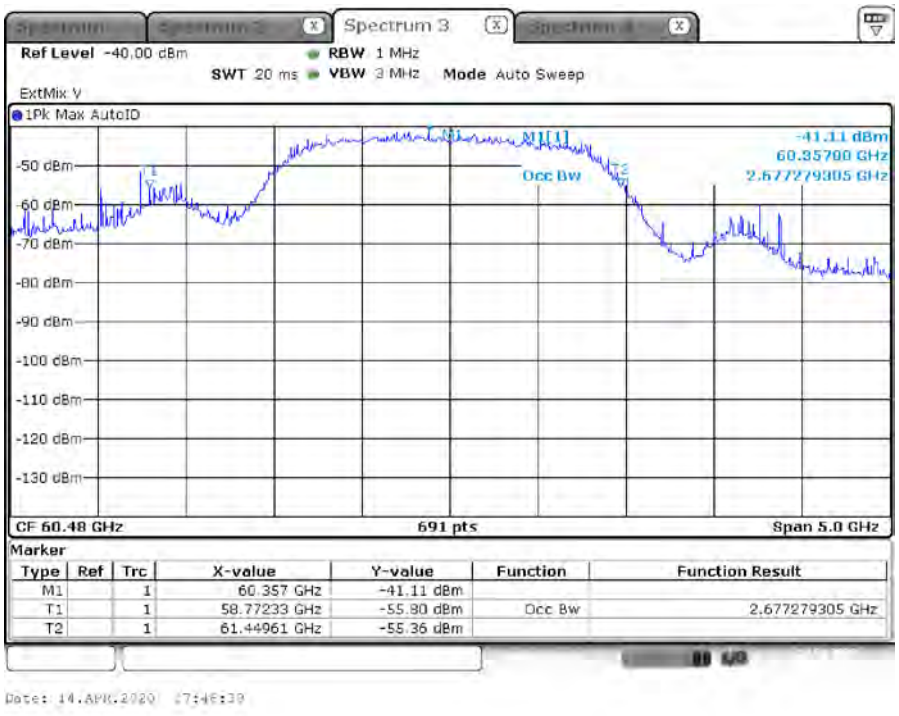


Test Frequency: 60.48 GHz

6 dBc Bandwidth

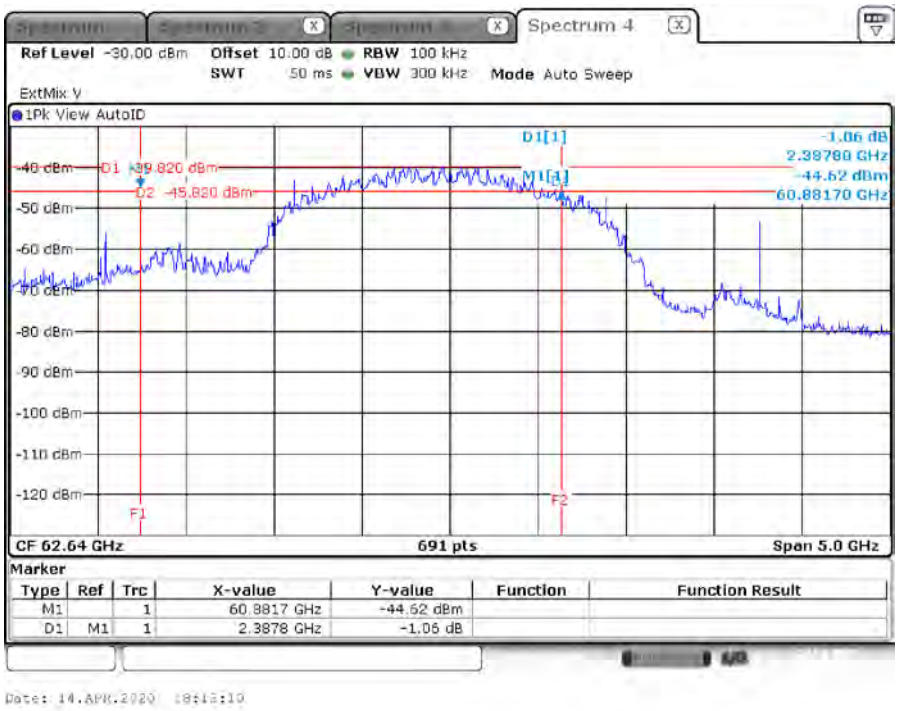


Occupied Bandwidth

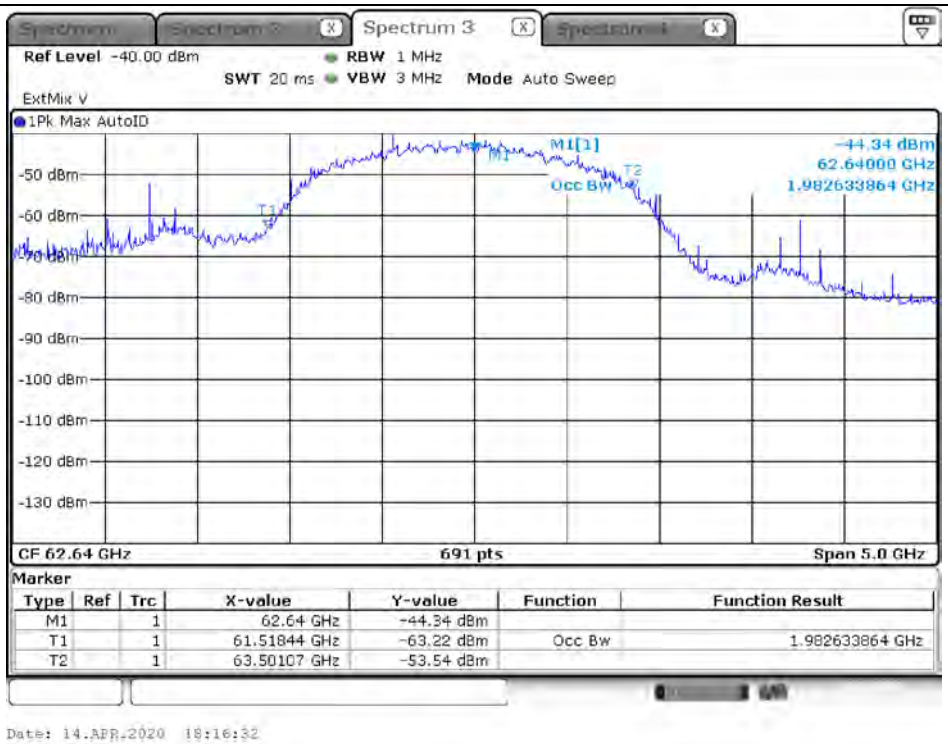


Test Frequency: 62.64 GHz

6 dBc Bandwidth



Occupied Bandwidth



3.3 EIRP Power

3.3.1 Limit of EIRP Power

EIRP Power Limit		
Use Condition	**EIRP Average Power**	**EIRP Peak Power**
Fixed field disturbance sensors at within the frequency band 61-61.5GHz	40 dBm	43 dBm
Fixed field disturbance sensors at outside of the band 61-61.5GHz	10 dBm	13 dBm
Except fixed field disturbance sensors at 61-61.5GHz	N/A	10 dBm
Except outdoor fixed Point to Point	40 dBm	43 dBm
Outdoor fixed Point to Point	82 dBm	85 dBm
Note: For fixed point-to-point transmitters located outdoors, the average power of any emission shall not exceed 82 dBm, and shall be reduced by 2 dB for every dB that the antenna gain is less than 51 dBi. The peak power of any emission shall not exceed 85 dBm, and shall be reduced by 2 dB for every dB that the antenna gain is less than 51 dBi.		

NOTE: For the applicable limit, see FCC 15.255 (c)

3.3.2 Measuring Instruments

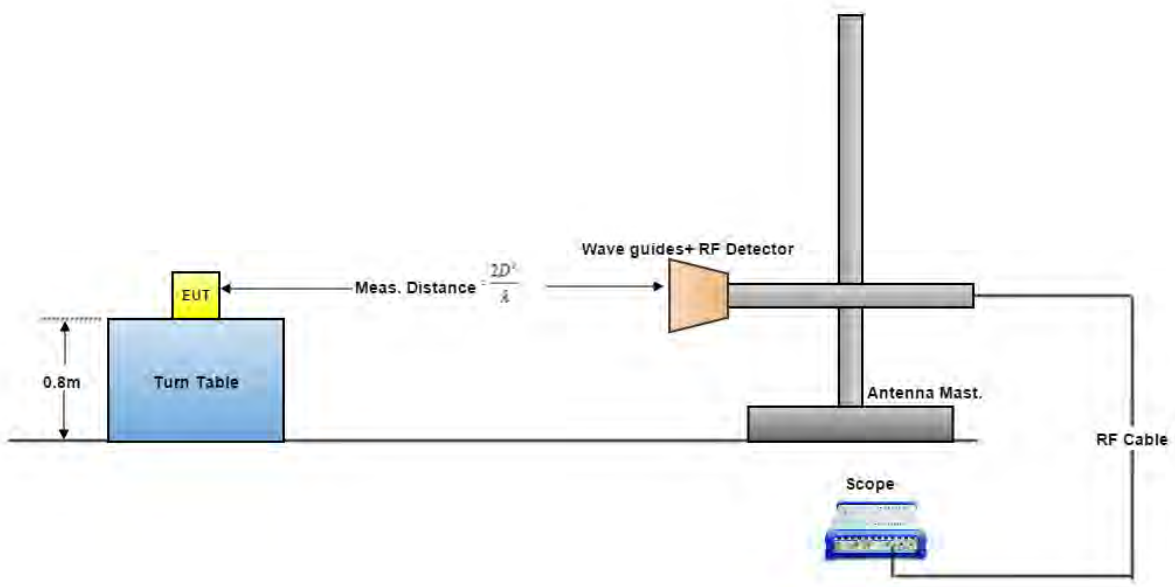
Refer a measuring instruments list in this test report.

3.3.3 Test Procedures

Method of measurement: Refer as ANSI C63.10-2013 clause 9.3 & 9.5.

3.3.4 Test Setup

EIPR Power



3.3.5 Test Result of EIRP Power

Test Conditions	see ANSI C63.10, clause 5.11 & clause 9
Test Setup	see ANSI C63.10, clause 9.11

NOTE: If the equipment supports different modulations and/or data rates, the measurements described in ANSI C63.10, clause 5.11 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 worst case combination to be used for the conformance testing.

3.3.5.1 Test Result of EIRP Power

Test Distance				1.5m							
Test Results											
Test Freq. (GHz)	Rx Gain (dBi)	DSO (mV)		Power Measured (dBm)		E_{Meas} (dBuV/m)		EIRP (dBm)		EIRP Limit (dBm) (note 1)	
		Peak	AV	Peak	AV	Peak	AV	Peak	AV	Peak	AV
58.32	23.6	284.43	189.05	-5.77	-8.85	143.20	140.12	41.93	38.85	43	40
60.48	23.6	255.16	163.75	-6.64	-9.85	142.65	139.44	41.37	38.16	43	40
62.64	23.6	241.44	154.72	-7.08	-10.24	142.51	139.35	41.24	38.08	43	40

The measured power level is converted to EIRP using the Friis equation:

For radiated emissions, calculate the field strength (E) in dBμV/meter.

$E = 126.8 – 20\log(\lambda) + P - G$

where:

E : is the field strength of the emission at the measurement distance, in dBμV/m

P : is the power measured at the output of the test antenna, in dBm

λ: is the wavelength of the emission under investigation [300/fMHz], in m

G : is the gain of the test antenna, in dBi For radiated emissions, calculate the EIRP (dBm). If the measurement was performed in the far field, calculate the EIRP.

EIRP = E-meas +20log(d-meas)-104.7

where:

EIRP : is the equivalent isotopically radiated power, in dBm

E-meas. : is the field strength of the emission at the measurement distance, in dBμV/m

d-meas. : is the measurement distance, in m

NOTE 1: For the applicable limit, see FCC 15.255 (c)

NOTE 2: The comparison method which replaces EUT with a signal generator is used to find the correct conversion factor between “DSO(mV)” & “Power Measured(dBm)”.

3.4 Peak Conducted Power

3.4.1 Limit of Peak Conducted Power

Peak Conducted Power Limit	
6dBc Bandwidth	**Peak Conducted Power (note 1)**
> 100MHz	500mW
≤ 100MHz	500mW x (BW/100) (see note 2)
NOTE 1: For the applicable limit, see FCC 15.255(c) NOTE 2: BW= 6dB bandwidth (measured at RBW 100kHz)	

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, clause 9.5

3.4.4 Test Result of Peak Conducted Power

Test Conditions	see ANSI C63.10, clause 5.11 & clause 9
Test Setup	see ANSI C63.10, clause 9.11
NOTE: If the equipment supports different modulations and/or data rates, the measurements described in ANSI C63.10, clause 5.11 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 worst case combination to be used for the conformance testing.	

3.4.4.1 Peak Conducted Power

Test Results						
Test Freq. (GHz)	**EIRP (dBm)**	**Max. Ant. Gain (dBi)**	**Peak Power (dBm)** (note1)	**Peak Power (mW)**	**6dBc BW (MHz)** (note2)	**Peak Power Limit (mW)** (note3)
58.32	41.93	24.9	17.03	50.417	2641.10	500.00
60.48	41.37	24.9	16.47	44.378	2641.10	500.00
62.64	41.24	24.9	16.34	43.017	2387.80	500.00

NOTE 1: Because EUT used for the integral antenna without temporary RF connector provided. Therefore peak conducted power is equal to EIRP power subtract the antenna gain.

NOTE 2: For the 6dBc bandwidth, see test report clause 3.2.5.

NOTE 3: For the applicable limit, see FCC 15.255(c)

NOTE 4: For radiated emission measurements, calculate conducted transmitter output power P(cond)(dBm)

P(cond) = EIRP - G(dBi)

where:

G(dBi) is gain of EUT antenna.

3.5 Transmitter Spurious Emissions

3.5.1 Limit of Transmitter Spurious Emissions

Frequency Range	Limit
Radiated emissions below 40 GHz	FCC 15.209
Radiated emissions above 40 GHz – 200GHz	90 pW/cm^2 @ 3 m (Equivalent EIRP 102 μW, -9.91dBm)
NOTE 1: For the applicable limit, see FCC 15.255(d)	
NOTE 2: Spurious emissions shall not exceed the level of the fundamental emission.	

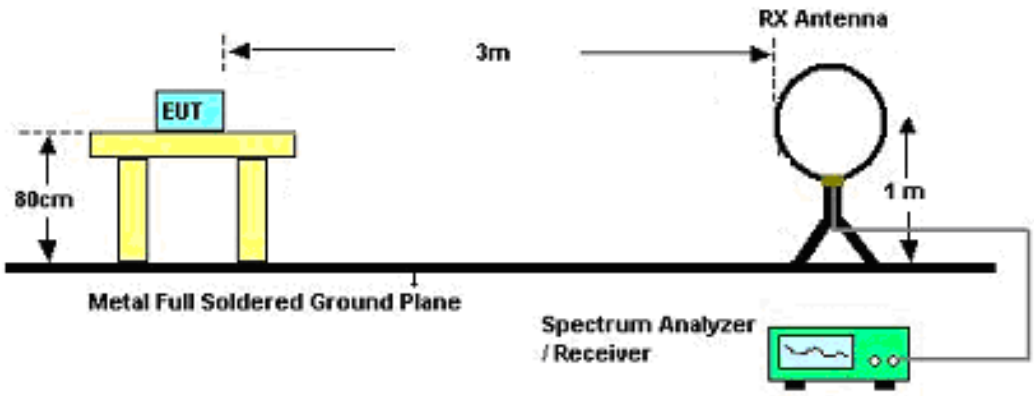
3.5.2 Test Procedures

Method of measurement: Refer as ANSI C63.10-2013, clause 9.12

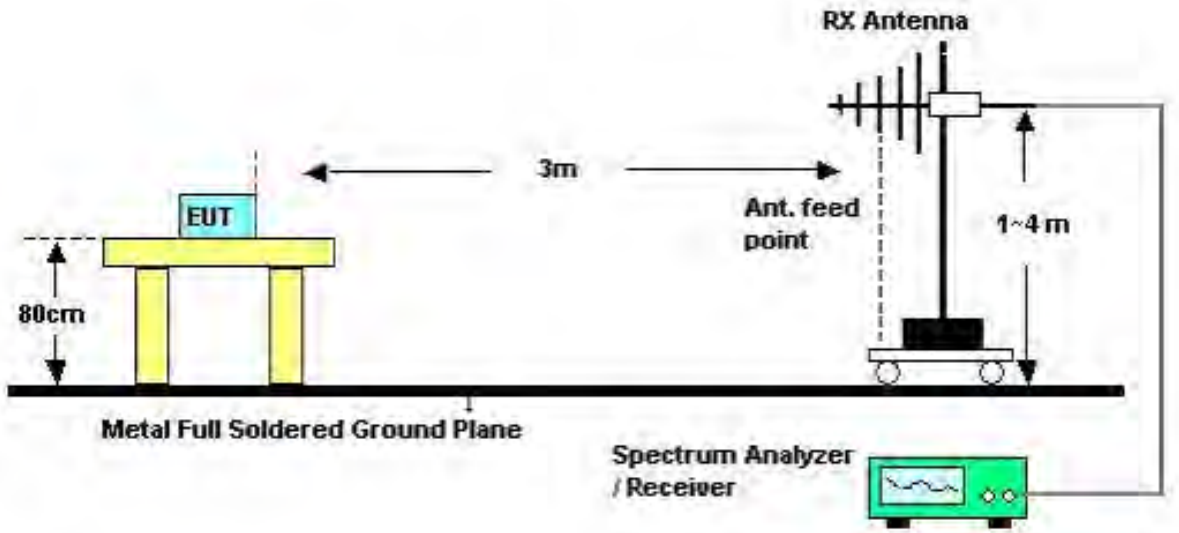
3.5.3 Test Setup

Transmitter Spurious Emissions

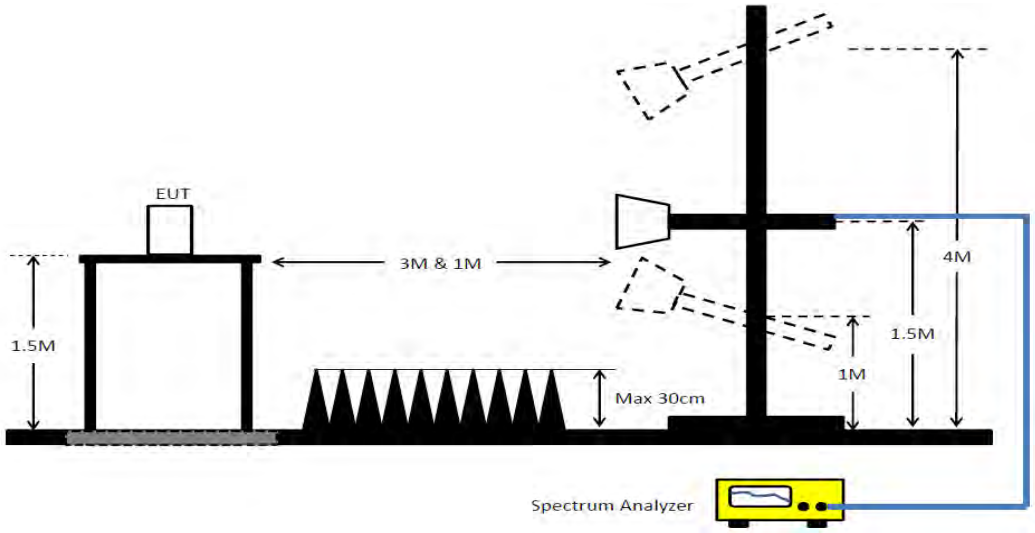
9kHz ~30MHz



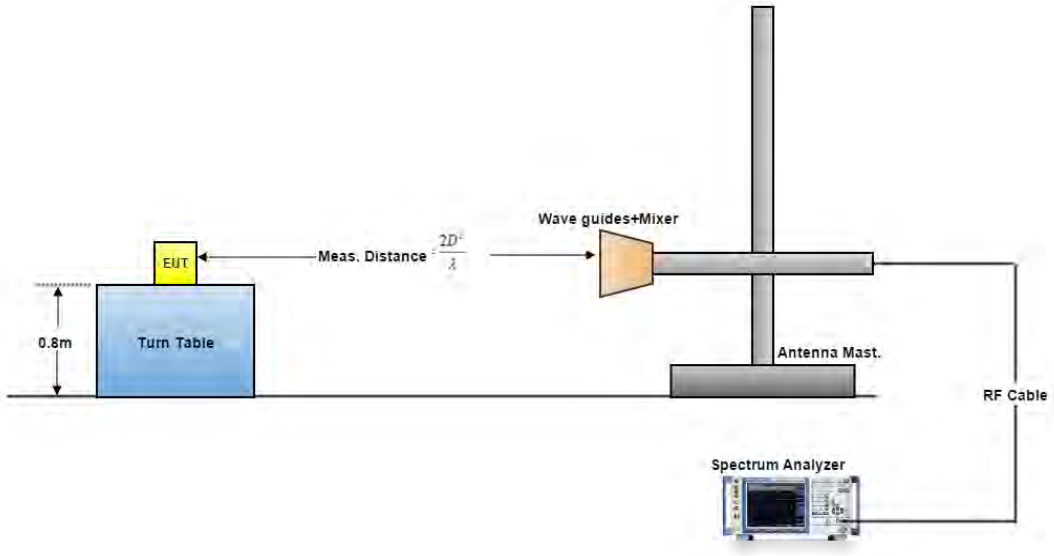
30MHz~1GHz



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.

3.5.4 Test Result of Transmitter Spurious Emissions

Test Conditions	see ANSI C63.10, clause 5.11 & clause 9
Test Setup	see ANSI C63.10, clause 9.12 、9.13
NOTE: If equipment having different channel plan and nominal channel bandwidth modes (see test report clause 1.1.1), the measurements are uninfluenced by different channel plan and nominal channel bandwidth modes, may not need to be repeated for all modes.	

3.5.5 Measurement Results Calculation

The measured Level is calculated using:

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

3.5.5.1 Test Result of Transmitter Spurious Emissions (Below 30MHz)

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.

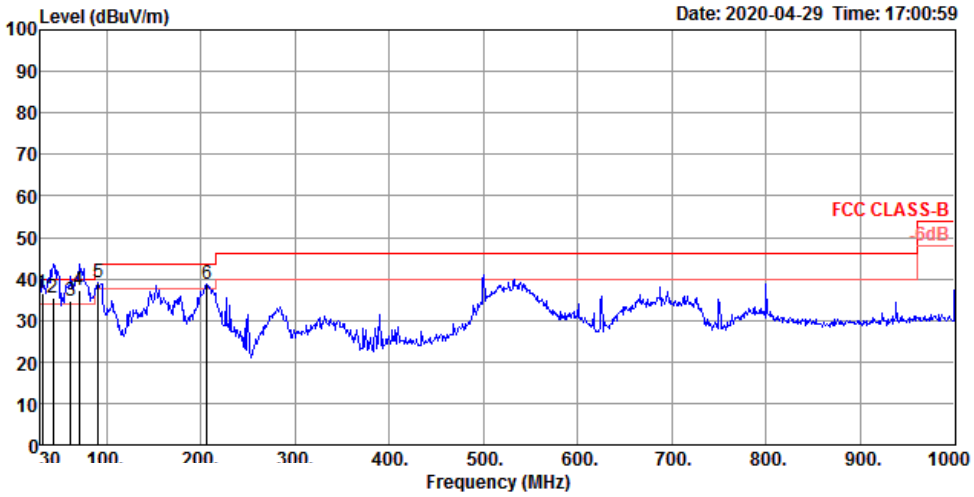
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10 harmonic or 40 GHz, whichever is appropriate.

3.5.5.2 Test Result of Transmitter Spurious Emissions

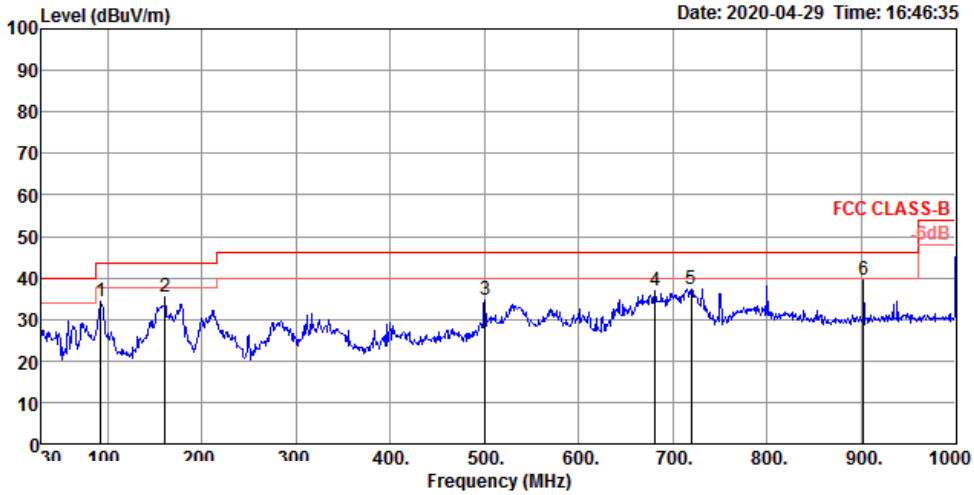
Test Range	30 MHz – 1000 MHz	Test Distance	3 m
Test Configuration	Normal Link		

Vertical



	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	31.94	36.45	40.00	-3.55	43.52	1.24	23.23	31.54	100	134	QP	VERTICAL
2	43.58	35.42	40.00	-4.58	48.51	1.26	17.22	31.57	100	173	QP	VERTICAL
3	62.01	34.76	40.00	-5.24	52.87	1.20	12.55	31.86	222	172	QP	VERTICAL
4	70.74	37.32	40.00	-2.68	55.35	1.30	12.55	31.88	125	214	QP	VERTICAL
5	91.11	39.00	43.50	-4.50	54.35	1.42	15.14	31.91	100	142	Peak	VERTICAL
6	206.54	38.90	43.50	-4.60	54.03	2.03	14.79	31.95	100	355	Peak	VERTICAL

Horizontal



	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	93.05	34.16	43.50	-9.34	49.27	1.46	15.36	31.93	200	153	Peak	HORIZONTAL
2	160.95	35.45	43.50	-8.05	48.54	1.81	16.93	31.83	200	284	Peak	HORIZONTAL
3	500.45	34.76	46.00	-11.24	41.18	3.11	22.95	32.48	100	288	Peak	HORIZONTAL
4	680.87	36.79	46.00	-9.21	41.11	3.72	24.47	32.51	150	335	Peak	HORIZONTAL
5	719.67	37.33	46.00	-8.67	41.29	3.88	24.59	32.43	150	340	Peak	HORIZONTAL
6	902.03	39.61	46.00	-6.39	41.51	4.59	25.90	32.39	150	111	Peak	HORIZONTAL

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

Test Range	1 GHz – 18 GHz	Test Distance	3 m
Test Freq. (GHz)	58.32		

Vertical

	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	7290.01	45.98	54.00	-8.02	37.37	7.36	36.52	35.27	159	9	Average	VERTICAL
2	7290.13	52.74	74.00	-21.26	44.13	7.36	36.52	35.27	159	9	Peak	VERTICAL

Horizontal

	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	7289.90	53.34	74.00	-20.66	44.73	7.36	36.52	35.27	197	17	Peak	HORIZONTAL
2	7290.04	47.27	54.00	-6.73	38.66	7.36	36.52	35.27	197	17	Average	HORIZONTAL

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

Test Range	1 GHz – 18 GHz	Test Distance	3 m
Test Freq. (GHz)	60.48		

Vertical

	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	7559.95	54.75	74.00	-19.25	46.06	7.26	36.54	35.11	159	6	Peak	VERTICAL
2	7560.04	48.98	54.00	-5.02	40.29	7.26	36.54	35.11	159	6	Average	VERTICAL

Horizontal

	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	7560.00	56.20	74.00	-17.80	47.51	7.26	36.54	35.11	183	58	Peak	HORIZONTAL
2	7560.00	51.36	54.00	-2.64	42.67	7.26	36.54	35.11	183	58	Average	HORIZONTAL

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

Test Range	1 GHz – 18 GHz	Test Distance	3 m
Test Freq. (GHz)	62.64		

Vertical

	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	7559.97	55.40	74.00	-18.60	46.71	7.26	36.54	35.11	158	7	Peak	VERTICAL
2	7560.00	50.45	54.00	-3.55	41.76	7.26	36.54	35.11	158	7	Average	VERTICAL

Horizontal

	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	7829.98	49.38	54.00	-4.62	40.73	7.30	36.60	35.25	186	52	Average	HORIZONTAL
2	7830.02	54.58	74.00	-19.42	45.93	7.30	36.60	35.25	186	52	Peak	HORIZONTAL

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

Test Range	18 GHz – 40 GHz	Test Distance	1 m
Test Freq. (GHz)	58.32		

Vertical

	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	19999.78	49.99	63.54	-13.55	47.39	14.50	37.90	49.80	100	37	Average	VERTICAL
2	19999.91	58.73	83.54	-24.81	56.13	14.50	37.90	49.80	100	37	Peak	VERTICAL

Horizontal

	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	19999.78	58.34	83.54	-25.20	55.74	14.50	37.90	49.80	100	319	Peak	HORIZONTAL
2	19999.80	48.89	63.54	-14.65	46.29	14.50	37.90	49.80	100	319	Average	HORIZONTAL

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

Test Range	18 GHz – 40 GHz	Test Distance	1 m
Test Freq. (GHz)	60.48		

Vertical

	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	19999.83	57.85	83.54	-25.69	55.25	14.50	37.90	49.80	100	28	Peak	VERTICAL
2	19999.84	48.21	63.54	-15.33	45.61	14.50	37.90	49.80	100	28	Average	VERTICAL

Horizontal

	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	19999.53	56.89	83.54	-26.65	54.29	14.50	37.90	49.80	100	320	Peak	HORIZONTAL
2	19999.80	48.79	63.54	-14.75	46.19	14.50	37.90	49.80	100	320	Average	HORIZONTAL

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

Test Range	18 GHz – 40 GHz	Test Distance	1 m
Test Freq. (GHz)	62.64		

Vertical

	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	19999.74	56.36	83.54	-27.18	53.76	14.50	37.90	49.80	100	26	Peak	VERTICAL
2	19999.78	46.87	63.54	-16.67	44.27	14.50	37.90	49.80	100	26	Average	VERTICAL

Horizontal

	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	19999.80	47.51	63.54	-16.03	44.91	14.50	37.90	49.80	100	321	Average	HORIZONTAL
2	19999.83	55.93	83.54	-27.61	53.33	14.50	37.90	49.80	100	321	Peak	HORIZONTAL

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

Test Range	40GHz – 200GHz

Test Frequency (GHz)	Rx Antenna Gain (dBi)	Measurement Distance (m)	Read Worse Frequency (GHz)	Read Level (dBm)
58.32	23.6	1.50	56.56	-57.78
EIRP (dBm)	**Specification Distance (m)**	**Power Density (pW/cm^2)**	**Limit (pW/cm^2)**	**Test Result**
-10.37	3	81.2663	90.00	PASS

Test Frequency (GHz)	Rx Antenna Gain (dBi)	Measurement Distance (m)	Read Worse Frequency (GHz)	Read Level (dBm)
60.48	23.6	1.50	40.26	-55.35
EIRP (dBm)	**Specification Distance (m)**	**Power Density (pW/cm^2)**	**Limit (pW/cm^2)**	**Test Result**
-10.89	3	72.0463	90.00	PASS

Test Frequency (GHz)	Rx Antenna Gain (dBi)	Measurement Distance (m)	Read Worse Frequency (GHz)	Read Level (dBm)
62.64	23.6	1.50	41.84	-55.66
EIRP (dBm)	**Specification Distance (m)**	**Power Density (pW/cm^2)**	**Limit (pW/cm^2)**	**Test Result**
-10.86	3	72.4517	90.00	PASS

Note:
EIRP = Prx – Grx + Free Space Path Loss = Prx – Grx + 20Log(4πd/ λ)2
Which
Prx = Read Level.
Grx = Rx Antenna Gain.
A distance factor is offset and the formula is 20LOG(D1/D2)
Which
D1 = Specification Distance
D2 = Measurement Distance

3.6 Frequency Stability

3.6.1 Limit of Frequency Stability

Frequency Stability	Limit
Refer as FCC 15.255(f) and ANSI C63.10-2013, clause 9.14	within the frequency bands
Note: These measurements shall also be performed at normal and extreme test conditions.	

3.6.2 Measuring Instruments

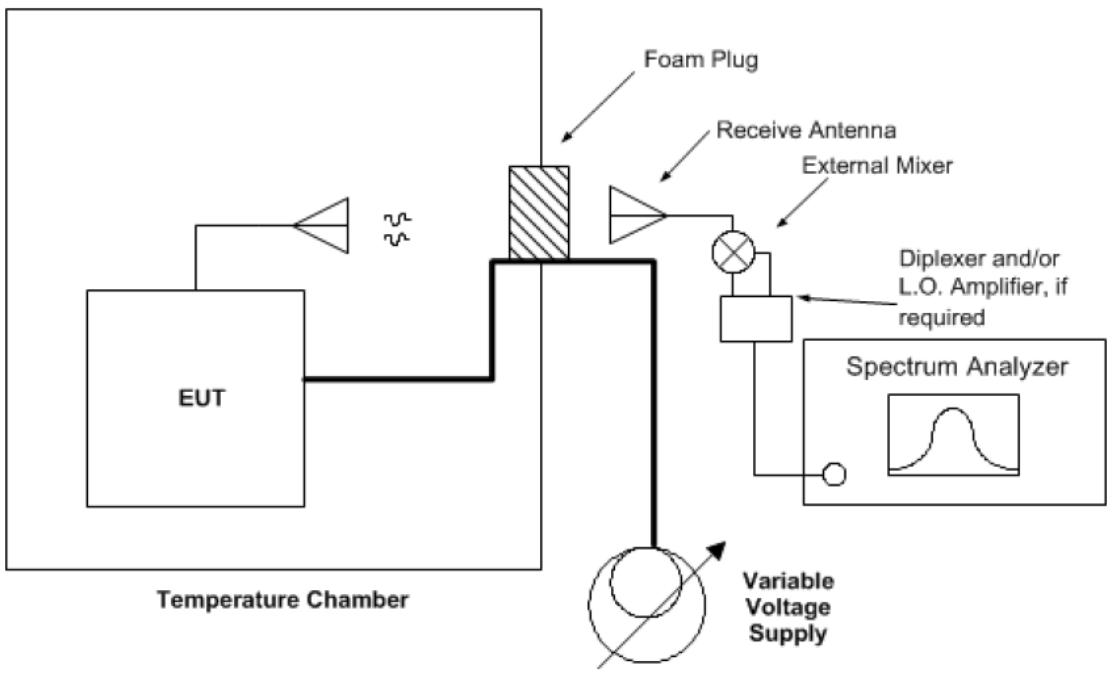
Refer a measuring instruments list in this test report.

3.6.3 Test Procedures

Method of measurement: Refer as ANSI C63.10-2013, clauses 9.14.

3.6.4 Test Setup

Frequency Stability



3.6.5 Test Result of Frequency Stability

Test Conditions	see ANSI C63.10, clause 5.11 & clause 9
Test Setup	see ANSI C63.10, clause 9.14
NOTE: If equipment having different channel plan and nominal channel bandwidth modes (see test report clause 1.1.1), the measurements are uninfluenced by different channel plan and nominal channel bandwidth modes, may not need to be repeated for all modes.	

3.6.5.1 Frequency Stability with Respect to Ambient Temperature

Frequency Stability with Respect to Ambient Temperature			
Test Results			
Test Temp.erature (°C)	**Measured Frequency (MHz)**	**Delta Frequency (kHz)**	**Limit (±kHz)**
-30	60472.84	290	Within band
-20	60472.84	290	Within band
-10	60472.58	30	Within band
0	60472.63	80	Within band
10	60472.84	290	Within band
20	60472.55	Reference	Within band
30	60472.48	-70	Within band
40	60472.63	80	Within band
50	60472.48	-70	Within band
55	60472.22	-330	Within band
NOTE: The manufacturer’s specified temperature range of -30 to 55°C.			

3.6.5.2 Frequency Stability When Varying Supply Voltage

Frequency Stability When Varying Supply Voltage			
Test Results			
Test Voltage: (Vdc)	Measured Frequency (MHz)	Delta Frequency (kHz)	Limit (±kHz)
46.75	60110.54	-410	Within band
55	60110.95	Reference	Within band
63.25	60110.95	0	Within band
NOTE: For the applicable limit, see FCC 15.255(f).			

3.7 Operation Restriction and Group Installation

3.7.1 Limit of Operation Restriction and Group Installation

Item	Limit
Operation Restriction	Operation is not permitted for the following products: ♦ Equipment used on aircraft or satellites. (Refer as FCC 15.255 (a)) ♦ Field disturbance sensors, including vehicle radar systems, unless the field disturbance sensors are employed for fixed operation. (Refer as FCC 15.255 (a))
Group Installation	Operation is not permitted for the following products: ♦ External phase-locking (Refer as FCC 15.255 (h))

3.7.2 Result of Operation Restriction

Manufacturer declares that EUT will not been used on aircraft or satellites. Then user manual will include a statement to caution EUT is not permitted for used on aircraft or satellites.

3.7.3 Result of Group Installation

The frequency, amplitude and phase of the transmit signal are set within the EUT. There are no external phase-locking inputs or any other means of combining two or more units together to realize a beam-forming array.

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 21, 2019	Nov. 20, 2020	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Oct. 30, 2019	Oct. 29, 2020	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Feb. 26, 2020	Feb. 25, 2021	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Oct. 21, 2019	Oct. 20, 2020	Conduction (CO02-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO02-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)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 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	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)
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)
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)
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Oct. 07, 2019	Oct. 06, 2020	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#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH05-CB)
Mixer	OML	M19HWA	U91113-1	40 ~ 60 GHz	Oct. 01 2019	Sep. 30, 2020	Radiation (03CH05-CB)
Mixer	OML	M15HWA	V91113-1	50 ~ 75 GHz	Oct. 25 2019	Oct. 24, 2020	Radiation (03CH05-CB)
Mixer	OML	M12HWA	E91113-1	60 ~ 90 GHz	Oct. 25 2019	Oct. 24, 2020	Radiation (03CH05-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Mixer	OML	M08HWA	F91113-1	90 ~ 140 GHz	Oct. 25 2019	Oct. 24, 2020	Radiation (03CH05-CB)
Mixer	OML	M05HW/A	G91113-1	140 ~ 220 GHz	Oct. 25 2019	Oct. 24, 2020	Radiation (03CH05-CB)
Detector	Millitech	DET-15-RPF W0	#A17807(067)	50 ~ 75 GHz	Dec. 12, 2019	Dec. 11, 2020	Radiation (03CH05-CB)
Pico Scope	Pico	Pico Scope 6402C	CX372/002	N/A	Jul. 07, 2019	Jul. 06, 2020	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	M15RH	V91113-A	50 ~ 75 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)
Standard Horn Antenna	Custom Microwave	M05RH	G91113-A	140 ~ 220 GHz	N.C.R	N.C.R	Radiation (03CH05-CB)
Temp. and Humidity Chamber	Gaint Force	GTH-408-40-CP-AR	MAA1410-011	-40~100 degree	Sep. 12, 2019	Sep. 11, 2020	Conducted (TH03-CB)

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

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)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	5.1 dB	Confidence levels of 95%
Radiated Emission (40GHz ~ 60GHz)	4.6 dB	Confidence levels of 95%
Radiated Emission (60GHz ~ 90GHz)	5.1 dB	Confidence levels of 95%
Radiated Emission (90GHz ~ 200GHz)	5.6 dB	Confidence levels of 95%
Temperature	1°C	Confidence levels of 95%