



RF TEST REPORT

Product Name: DTEN D7X 75"

Model Name: DB71475, DB71475-S1

FCC ID: 2AQ7Q-DB71475

Issued For : DTEN Inc

97 E Brokaw Road suite 180 San Jose CA 95112

Issued By : Shenzhen LGT Test Service Co., Ltd.

Room 205, Building 13, Zone B, Chen Hsong Industrial Park,
No.177 Renmin West Road, Jinsha Community, Kengzi
Street, Pingshan New District, Shenzhen, China

Report Number: LGT22J013RF17

Sample Received Date: Oct. 13, 2022

Date of Test: Oct. 13, 2022 – Jan. 05, 2023

Date of Issue: Jan. 05, 2023

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TEST REPORT CERTIFICATION

Applicant DTEN Inc
Address 97 E Brokaw Road suite 180 San Jose CA 95112
Manufacturer DTEN Inc
Address 97 E Brokaw Road suite 180 San Jose CA 95112
Product Name DTEN D7X 75"
Trade Mark DTEN
Model Name DB71475, DB71475-S1
Sample Status: Normal

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC Part 15.407 ANSI C63.10-2013	PASS

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Approved by:

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Technical Director





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Revision History

Rev.	Issue Date	Contents
00	Jan. 05, 2023	Initial Issue



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part 15.407		
FCC standard	Test Item	Results
15.207	AC Conducted Emission	PASS
15.407 (a) /15.407 (e)	26dB/6dB &99% Bandwidth	PASS
15.407(a)	Maximum Conducted Output Power	PASS
15.407(b)/15.205/15.209	Radiated Emission And (bandedge Emissions) Measurement	PASS
15.407(a)	Power Spectral Density	PASS
15.407(c)	Automatically Discontinue Transmission	PASS
15.407(d)	Contention Based Protocol	PASS
15.407(g)	Frequency Stability	PASS
15.203	Antenna Requirement	PASS

NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report.
- (2) All tests are according to ANSI C63.10-2013.
- (3) For model DB71475 and DB71475-S1, the TP control board have two types of A and B, this do not affect RF parameters. DB71475 with type A was selected as the typical model for all necessary tests performed. For the details of type A&B, please refer to the EUT photos.



1.1 TEST FACTORY

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Chen Hsong Industrial Park, No.177 Renmin West Road, Jinsha Community, Kengzi Street, Pingshan New District, Shenzhen, China
Accreditation Certificate	A2LA Certificate No.: 6727.01
	FCC Registration No.: 746540
	CAB ID: CN0136

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately **95 %**.

Parameter	Uncertainty
Occupied Channel Bandwidth	$\pm 3.2 \%$
RF Output Power, Conducted	$\pm 0.71\text{dB}$
Power Spectral Density, Conducted	$\pm 1.57 \text{ dB}$
Unwanted Emission, Conducted	$\pm 0.63\text{dB}$
Conducted emission	$\pm 2.80\text{dB}$
All Emissions, Radiated (0.009-30MHz)	$\pm 2.16\text{dB}$
All Emissions, Radiated (30MHz-1GHz)	$\pm 4.40\text{dB}$
All Emissions, Radiated (1GHz-18GHz)	$\pm 5.49\text{dB}$
Temperature	$\pm 0.5^\circ\text{C}$
Humidity	$\pm 2\%$
Duty Cycle	$\pm 2.3\%$



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	DTEN D7X 75"	
Trade Mark	DTEN	
Model Name	DB71475	
Series Model	DB71475-S1	
Model Difference	Only the model name and shipping packaging method are different.	
Product Description	The EUT is a DTEN D7X 75"	
	Operation Frequency:	IEEE 802.11ax(HE20): 5.935GHz-7.115GHz IEEE 802.11ax(HE40): 5.969GHz-7.085GHz IEEE 802.11ax(HE80): 5.985GHz-7.025GHz IEEE 802.11ax(HE160): 6.025GHz-6.985GHz
	Modulation Type:	802.11ax: OFDM-BPSK,QPSK,16-QAM,64-QAM,256-QAM and 1024QAM
	Antenna Designation:	Please refer to the Note 3.
	Antenna Gain	ANT 1: 2.22 ANT 2: 2.22 MIMO: 5.23
More details of EUT technical specification, please refer to the User Manual.		
Test Channel	Please refer to the Note 2.	
Rating	100-240V~ 50/60Hz 4.0A	
Hardware Version Number	OPSC17_V12	
Software Version Number	3.0.10	
Connecting I/O Port(s)	Please refer to the Note 1.	

Note

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.



In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

802.11a ax HE20							
UNII-5		UNII-6		UNII-7		UNII-8	
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	5955	93	6415	117	6535	189	6895
45	6175	97	6435	149	6695	229	7095
93	6415	105	6475	181	6855		

802.11a ax HE40							
UNII-5		UNII-6		UNII-7		UNII-8	
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
3	5965	99	6445	123	6565	195	6925
43	6165	107	6485	147	6685	203	6965
91	6405	115	6525	179	6845	227	7085

802.11a ax HE80							
UNII-5		UNII-6		UNII-7		UNII-8	
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
7	5985	87	6385	119	6545	199	6945
39	6145	103	6465	139	6625	215	7025
				151	6705		
				163	6785		
				183	6865		

802.11a ax HE160							
UNII-5		UNII-6		UNII-7		UNII-8	
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
3	5965	99	6445	123	6565	195	6925
43	6165	107	6485	147	6685	203	6965
91	6405	115	6525	179	6845	227	7085

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Carrier Frequency Channel

KDB 662911 D01 Multiple Transmitter Output v02r01

2) Directional Gain Calculations for In-Band Measurements

a) Basic methodology with NANT transmit antennas, each with the same directional gain GANT dBi, being driven by NANT transmitter outputs of equal power. Directional gain is to be computed as follows:

(i) If any transmit signals are correlated with each other,
Directional gain = $2.2 + 10 \log(2.2)$ dBi=5.23 dBi



Ant	Brand	Model Name	Ant Type	Connector	Gain (dBi)	NOTE
A	DONGGUAN SEYAN ELECTRONIC COMMUNICATION CO.,LTD	SY-W6E8412147BR050C1-L01	Copper tube antenna	N/A	ANT 1:2.22 ANT 2:2.22 MIMO:5.23	WLAN Ant

Note: The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report.

2.2 TEST SOFTWARE AND POWER LEVEL

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_1 Power Class	ANT_2 Power Class	Software For Testing
WIFI(6E)	(5925~6425 MHz)	802.11ax(VHT20)	ANT 1:2.22 ANT 2:2.22 MIMO:5.23	10	10	DRTU
		802.11ax(VHT40)		10	10	
		802.11ax(VHT80)		10	10	
		802.11ax(VHT160)		10	10	



2.3 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

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

Accessories Equipment

Description	Manufacturer	Model	S/N	Rating
USB C-to-C cable	DTEN	N/A	N/A	1.9m
stylus	DTEN	N/A	N/A	N/A
Power cord	XIEKANG ELECTRONIC	N/A	N/A	3m, US plug
Camera	DTEN	N/A	N/A	2pcs

Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
N/A	N/A	N/A	N/A	N/A

Note:

(1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



2.4 EQUIPMENTS LIST FOR ALL TEST ITEMS

Conducted Emission					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
EMI Test Receiver	R&S	ESU8	100372	2022.04.12	2023.04.11
LISN	COM-POWER	LI-115	02032	2022.04.13	2023.04.12
LISN	SCHWARZBECK	NNLK 8121	00847	2022.08.19	2023.08.18
CE Cable	N.A	C01	N.A	2022.05.05	2023.05.04
Transient Limiter	CYBERTEK	EM5010A	E2250100049	2022.08.19	2023.08.18
Temperature & Humidity	KTJ	TA218B	N.A	2022.05.05	2023.05.04
Testing Software	EMC-I_V1.4.0.3_SKET				

Radiated Test equipment					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
EMI Test Receiver	R&S	ESU8	100372	2022.04.12	2023.04.11
Active loop Antenna	R&S	HFH2-Z2	POS871398181	2022.06.02	2024.06.01
Spectrum Analyzer	Kesight	N9010B	MY60242508	2022.04.29	2023.04.28
Bilog Antenna	SCHAFFNER	CBL6112B	2705	2022.06.05	2024.06.04
Horn Antenna	Schwarzbeck	3115	10SL0060	2022.06.02	2024.06.01
Pre-amplifier(0.1M-3GHz)	HP	8447D	2727A05655	2022.04.11	2023.04.10
Pre-amplifier(1-26.5G)	Agilent	8449B	3008A4722	2022.04.13	2023.04.12
RE Cable (9K-1G)	N.A	R01	N.A	2022.05.05	2023.05.04
RE Cable (1-26G)	N.A	R02	N.A	2022.05.05	2023.05.04
Wireless Communications Test Set	R&S	CMW 500	137737	2022.04.29	2023.04.28
Temperature & Humidity	KTJ	TA218B	N.A	2022.05.05	2023.05.04
Testing Software	EMC-I_V1.4.0.3_SKET				

Conducted Test equipment					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
Signal Analyzer	Keysight	N9010B	MY60242508	2022.04.29	2023.04.28
RF Automatic Test system	MW	MW200-RFCB	MW220322LG	2022.04.29	2023.04.28
MXG Vector Signal Generator	Keysight	N5182B	MY59100717	2022.06.02	2023.06.01
Temperature & Humidity	KTJ	TA218B	N.A	2022.05.05	2023.05.04
Temperature & Humidity test chamber	AISRY	LX-1000L	171200018	2022.05.10	2023.05.09
Attenuator	eastsheep	90db	N.A	2022.04.29	2023.04.28
Router	WAVLINK	WL-WN575A2	WL1512260336	N.C.R	N.C.R
Router	TP-LINK	TL-WR885N	1125074010735	N.C.R	N.C.R
Testing Software	MTS8310_V2.0.0.0_MW				



3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class B (dBuV)		Standard
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	56.00	46.00	CISPR
5.0 -30.0	60.00	50.00	CISPR

0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of “ * ” marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

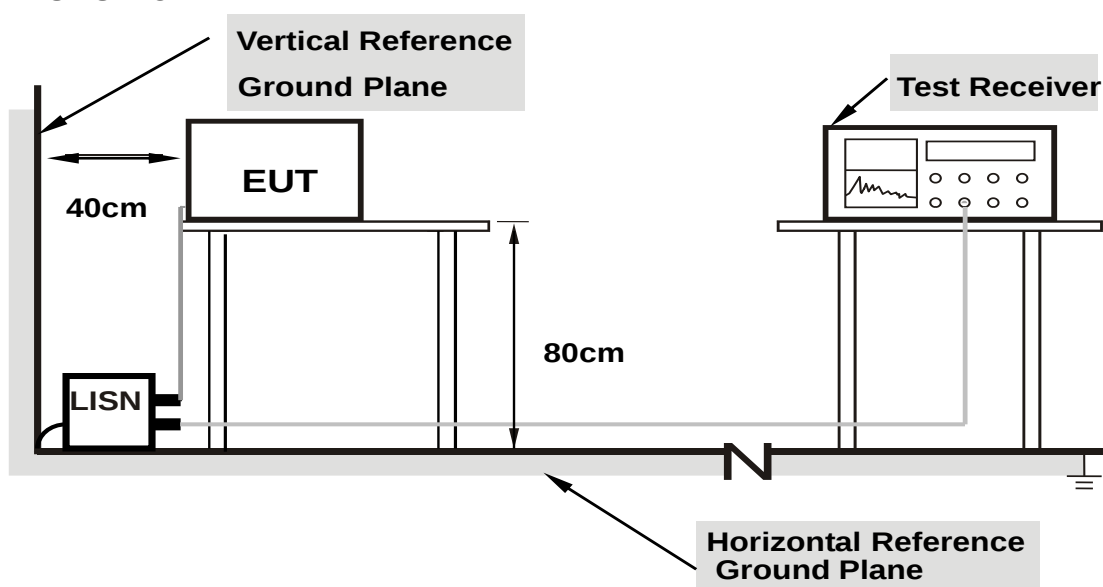
3.1.2 TEST PROCEDURE

- The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- 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 to 40 cm long.
- I/O cables that are not connected to a peripheral 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.
- LISN is at least 80 cm from the nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



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

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

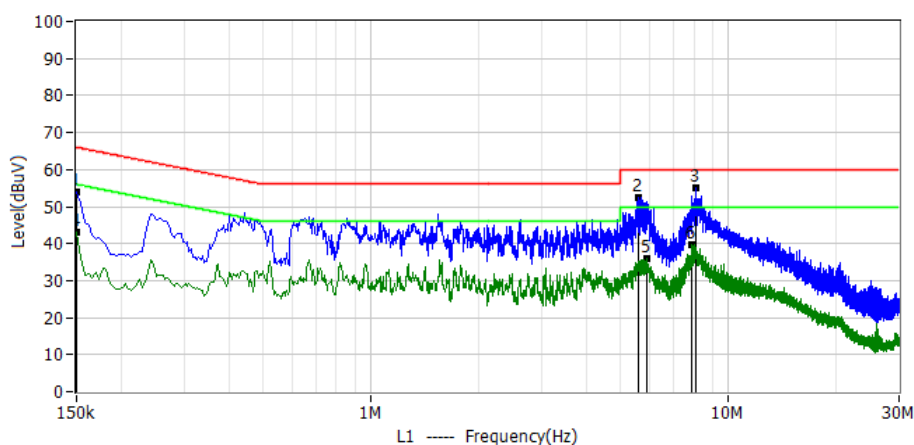
3.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

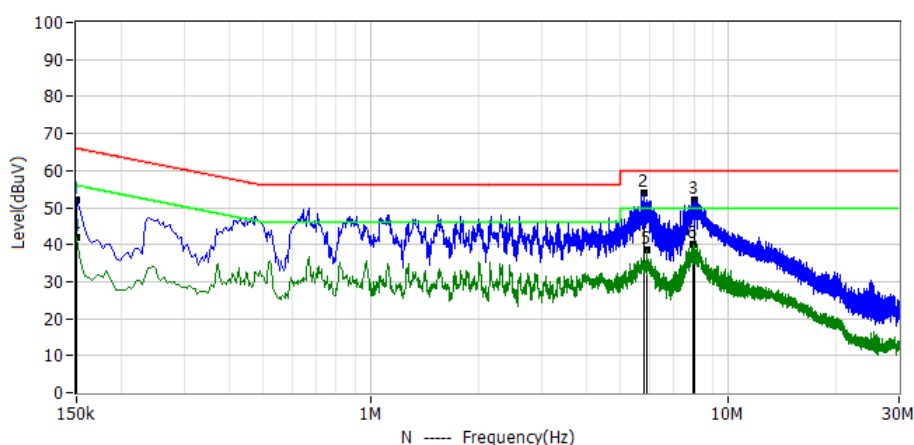


3.1.6 TEST RESULTS

Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Temperature: 25.1°C
M/N: DB71475	Humidity: 48%RH
Test Voltage: AC 120V/60Hz	Test Data: 2022-10-26
Test Mode: TX 6GHz	
Note:	



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	150.000kHz	43.44	10.50	53.94	66.00	-12.06	PK	L1
2*	5.618MHz	41.50	10.83	52.33	60.00	-7.67	PK	L1
3*	8.114MHz	44.26	10.90	55.16	60.00	-4.84	PK	L1
4*	150.000kHz	32.53	10.50	43.03	56.00	-12.97	AV	L1
5*	5.922MHz	24.99	10.84	35.83	50.00	-14.17	AV	L1
6*	7.906MHz	28.92	10.90	39.82	50.00	-10.18	AV	L1



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	150.000kHz	41.38	10.50	51.88	66.00	-14.12	PK	N
2*	5.798MHz	42.93	10.84	53.77	60.00	-6.23	PK	N
3*	7.998MHz	41.31	10.91	52.22	60.00	-7.78	PK	N
4*	150.000kHz	31.42	10.50	41.92	56.00	-14.08	AV	N
5*	5.926MHz	27.71	10.85	38.56	50.00	-11.44	AV	N
6*	7.934MHz	29.28	10.90	40.18	50.00	-9.82	AV	N



3.2 RADIATED EMISSION AND (BANDEDGE) MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

In case the emission fall within the restricted band specified on 15.407(b)7&15.205/209(a), then the limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	68.2	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15E.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RESTRICTED FREQUENCY BANDS

FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

Note: In case the emission radiated emission above 1000MHz fall within the restricted band the restricted frequency bands, the peak limit is 74 dBuV/m.



Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier harmonic (Peak/AV)
RB / VB (emission in restricted band)	1 MHz / 1 MHz, AV=1 MHz /3 MHz

For Band edge

Spectrum Parameter	Setting
Detector	Peak
RB / VB (emission in restricted band)	1 MHz / 1 MHz, AV=1 MHz /3 MHz

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP



3.2.2 TEST PROCEDURE

- The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
- The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and QuasiPeak detector mode will be re-measured.
- If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

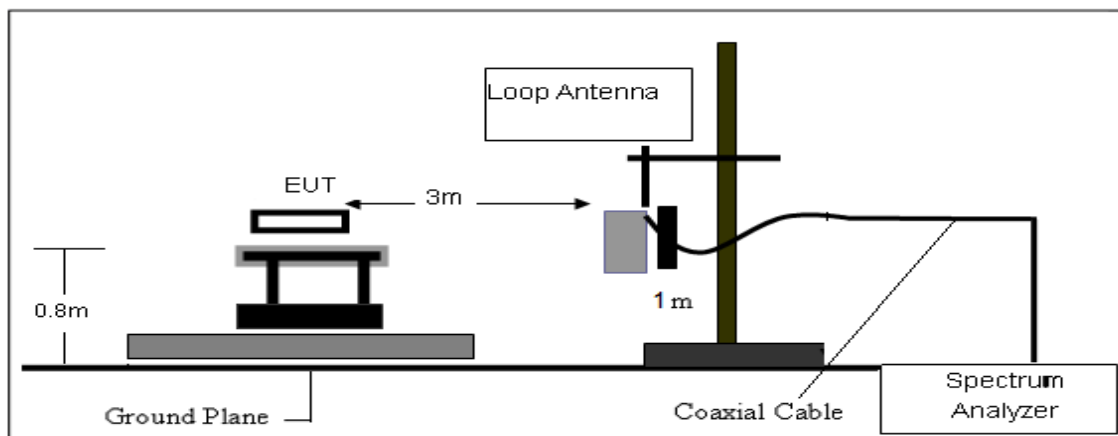
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

3.2.2 DEVIATION FROM TEST STANDARD

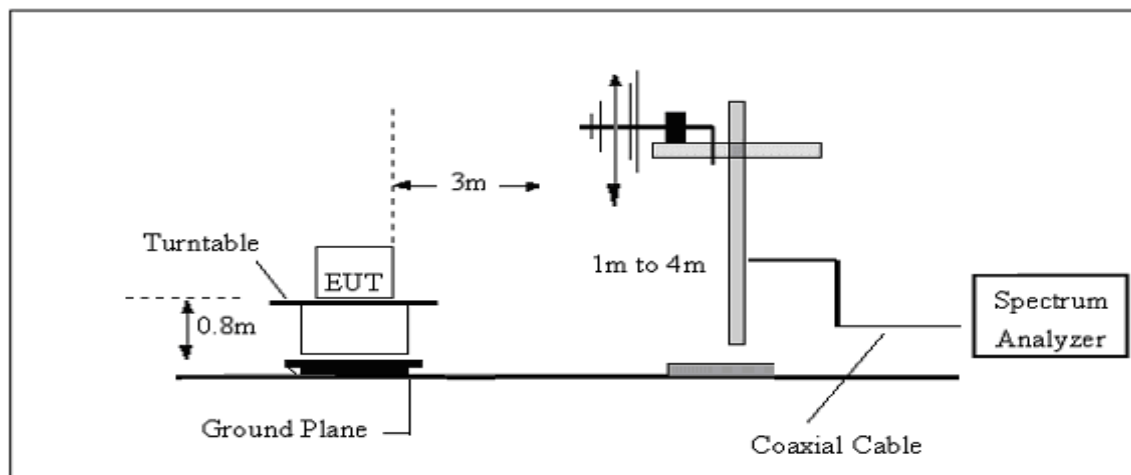
No deviation

3.2.3 TEST SETUP

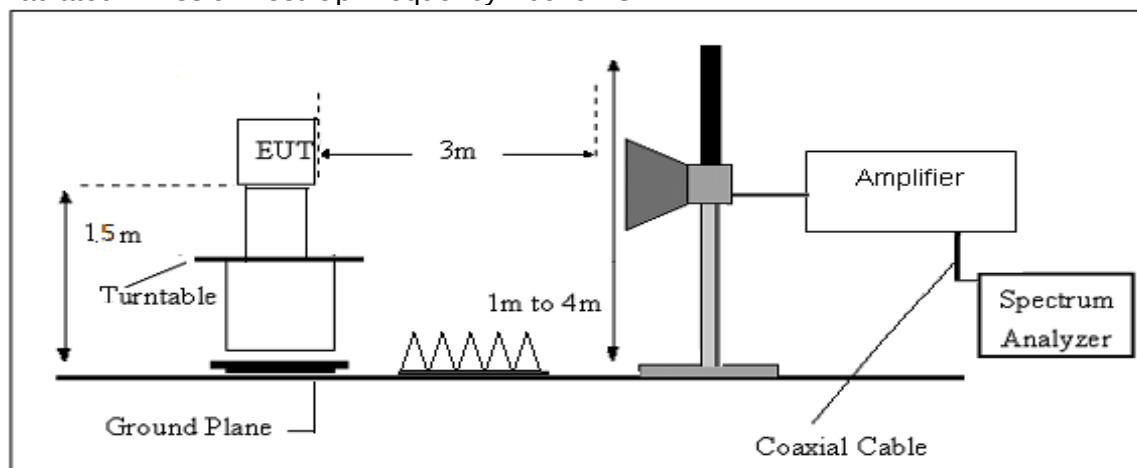
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz





3.2.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where

FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

For example

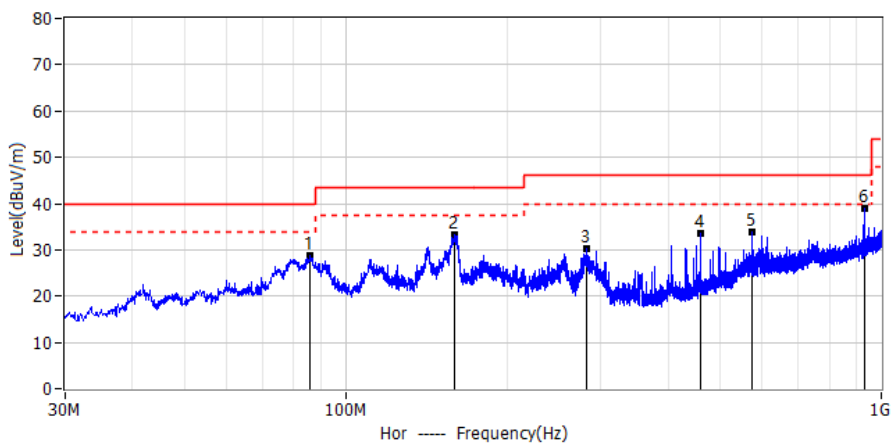
Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dB μ V/m)	(dB μ V/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

$$\text{Factor} = \text{AF} + \text{CL} - \text{AG}$$

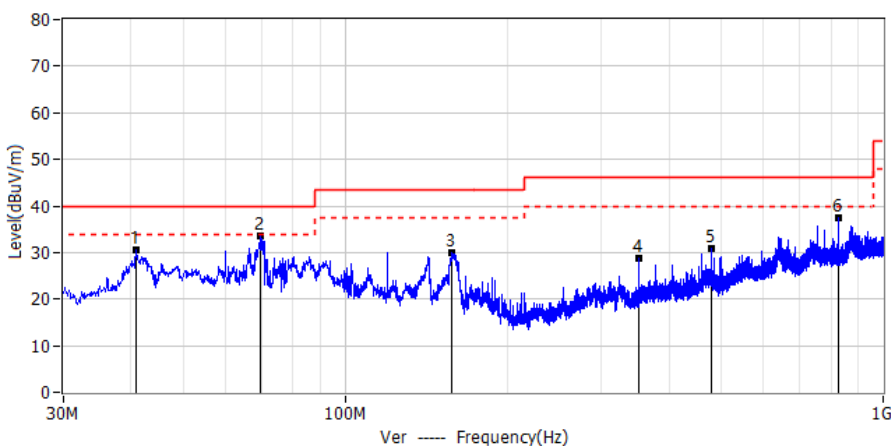


3.2.6 TEST RESULTS

Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 43%RH
Temperature: 24.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-17
Test Mode: TX 6GHz	
Note:	



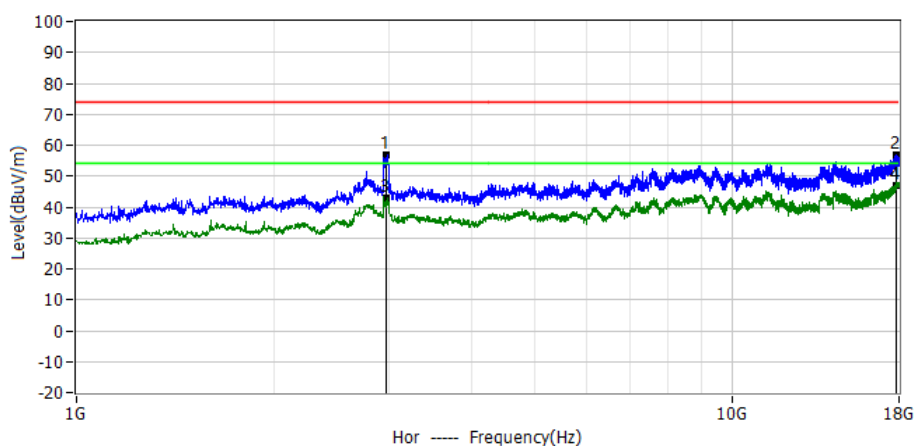
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	85.775MHz	19.21	9.51	28.72	40.00	-11.28	PK	Hor
2*	159.738MHz	19.12	14.20	33.32	43.50	-10.18	PK	Hor
3*	281.109MHz	16.60	13.81	30.41	46.00	-15.59	PK	Hor
4*	458.983MHz	15.06	18.64	33.70	46.00	-12.30	PK	Hor
5*	573.321MHz	12.37	21.42	33.79	46.00	-12.21	PK	Hor
6*	933.191MHz	11.76	27.33	39.09	46.00	-6.91	PK	Hor



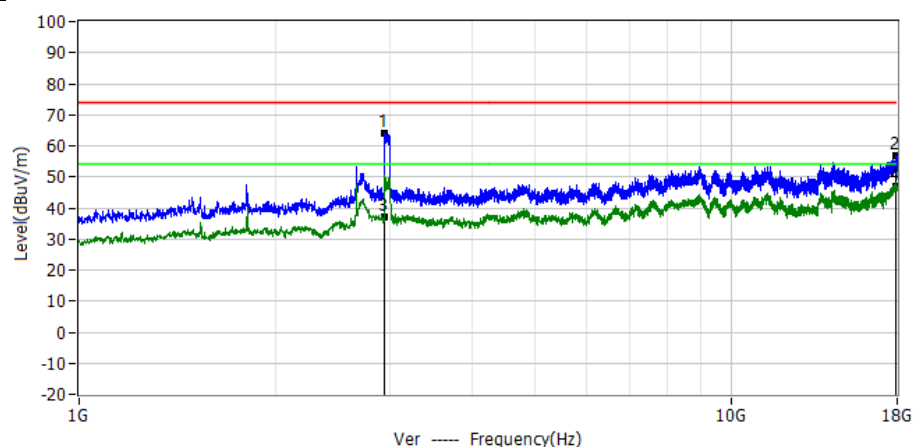
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	40.913MHz	16.82	13.89	30.71	40.00	-9.29	PK	Ver
2*	69.770MHz	22.04	11.56	33.60	40.00	-6.40	PK	Ver
3*	158.161MHz	15.74	14.20	29.94	43.50	-13.56	PK	Ver
4*	350.949MHz	12.89	15.77	28.66	46.00	-17.34	PK	Ver
5*	480.080MHz	12.04	18.96	31.00	46.00	-15.00	PK	Ver
6*	824.794MHz	11.65	25.88	37.53	46.00	-8.47	PK	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11ax160 6025	
Note:	



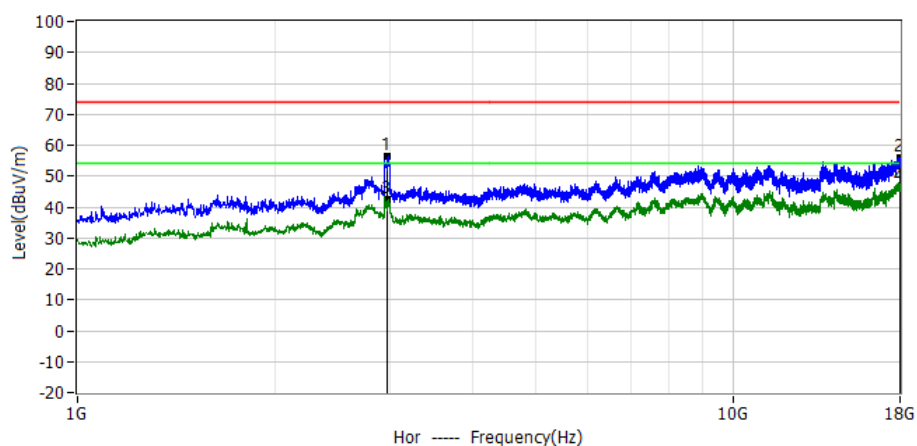
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.976GHz	65.36	-8.47	56.89	74.00	-17.11	PK	Hor
2*	17.834GHz	48.35	8.40	56.75	74.00	-17.25	PK	Hor
3*	2.976GHz	51.37	-8.47	42.90	54.00	-11.10	AV	Hor
4*	17.834GHz	38.50	8.40	46.90	54.00	-7.10	AV	Hor



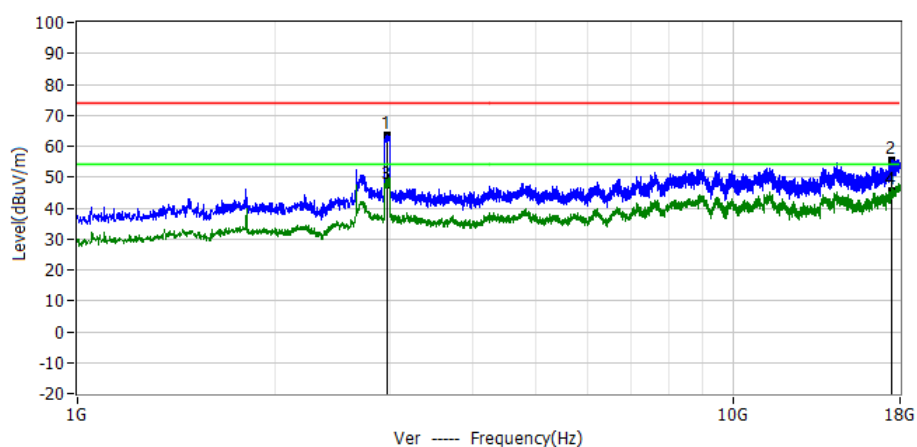
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.940GHz	72.69	-8.66	64.03	74.00	-9.97	PK	Ver
2*	17.955GHz	48.31	8.49	56.80	74.00	-17.20	PK	Ver
3*	2.940GHz	45.96	-8.66	37.30	54.00	-16.70	AV	Ver
4*	17.955GHz	38.41	8.49	46.90	54.00	-7.10	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11ax160 6185	
Note:	



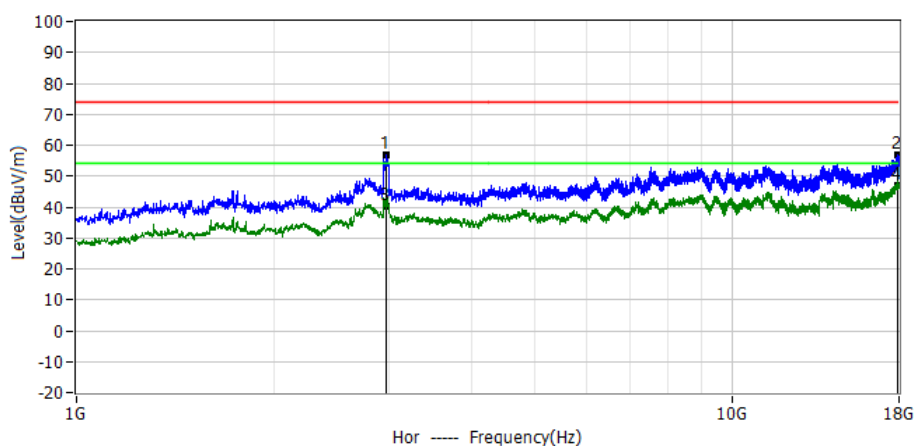
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.976GHz	64.81	-8.47	56.34	74.00	-17.66	PK	Hor
2*	17.981GHz	47.43	8.51	55.94	74.00	-18.06	PK	Hor
3*	2.976GHz	50.77	-8.47	42.30	54.00	-11.70	AV	Hor
4*	17.981GHz	38.09	8.51	46.60	54.00	-7.40	AV	Hor



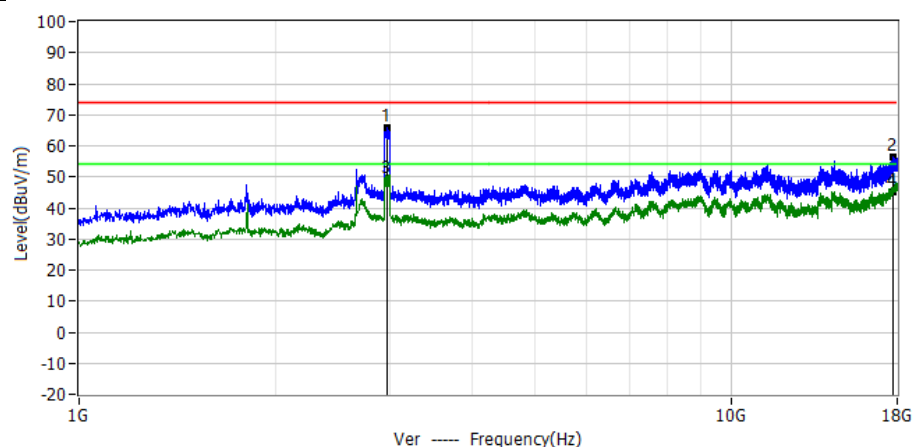
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.974GHz	72.20	-8.48	63.72	74.00	-10.28	PK	Ver
2*	17.477GHz	47.44	8.15	55.59	74.00	-18.41	PK	Ver
3*	2.974GHz	56.08	-8.48	47.60	54.00	-6.40	AV	Ver
4*	17.477GHz	37.35	8.15	45.50	54.00	-8.50	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11ax160 6345	
Note:	



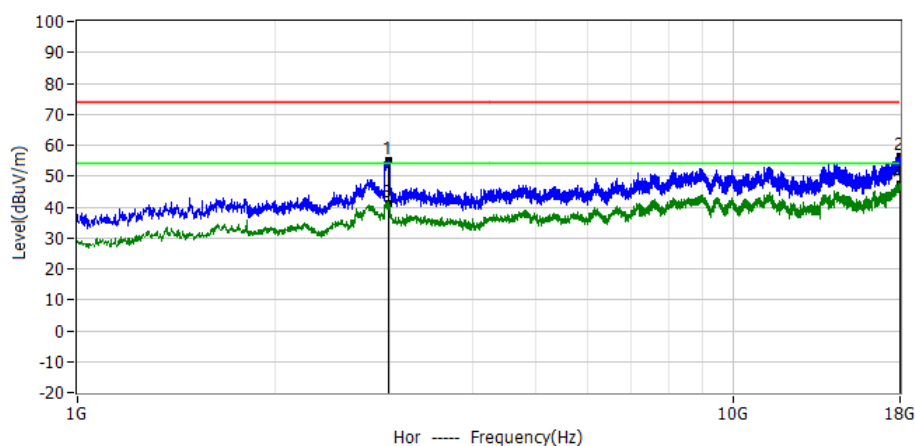
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.974GHz	65.11	-8.48	56.63	74.00	-17.37	PK	Hor
2*	17.894GHz	48.57	8.45	57.02	74.00	-16.98	PK	Hor
3*	2.974GHz	48.58	-8.48	40.10	54.00	-13.90	AV	Hor
4*	17.894GHz	38.35	8.45	46.80	54.00	-7.20	AV	Hor



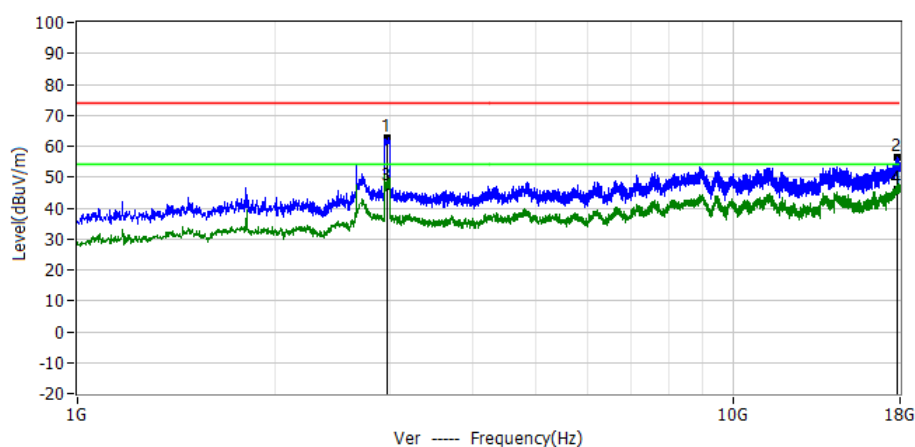
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.974GHz	74.19	-8.48	65.71	74.00	-8.29	PK	Ver
2*	17.728GHz	47.87	8.33	56.20	74.00	-17.80	PK	Ver
3*	2.974GHz	57.58	-8.48	49.10	54.00	-4.90	AV	Ver
4*	17.728GHz	36.87	8.33	45.20	54.00	-8.80	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11ax160 6505	
Note:	



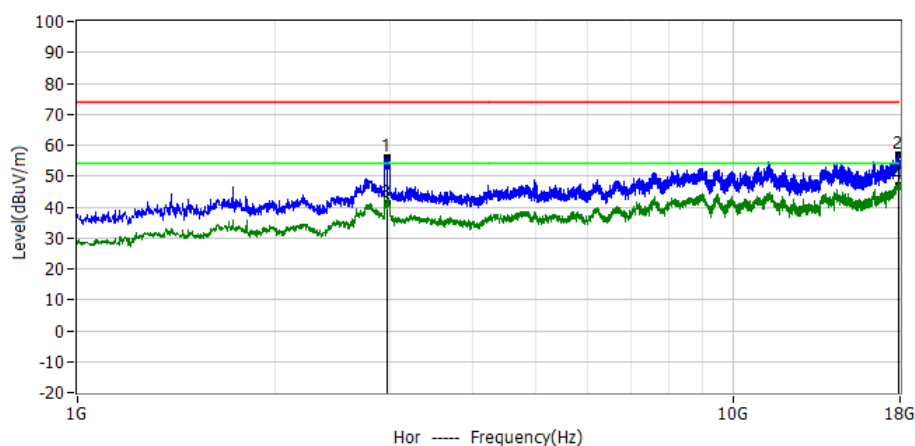
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.978GHz	63.47	-8.45	55.02	74.00	-18.98	PK	Hor
2*	17.962GHz	47.95	8.49	56.44	74.00	-17.56	PK	Hor
3*	2.978GHz	49.75	-8.45	41.30	54.00	-12.70	AV	Hor
4*	17.962GHz	39.01	8.49	47.50	54.00	-6.50	AV	Hor



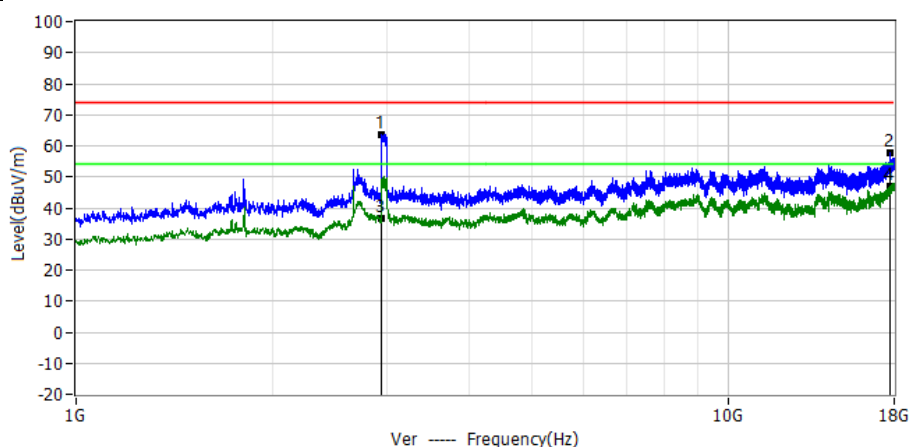
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.976GHz	70.95	-8.47	62.48	74.00	-11.52	PK	Ver
2*	17.813GHz	48.06	8.39	56.45	74.00	-17.55	PK	Ver
3*	2.976GHz	55.47	-8.47	47.00	54.00	-7.00	AV	Ver
4*	17.813GHz	37.81	8.39	46.20	54.00	-7.80	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11ax160 6665	
Note:	



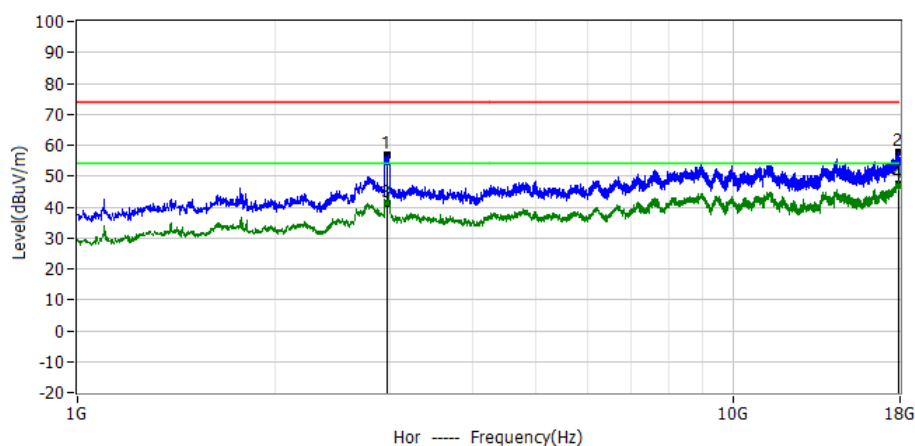
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.976GHz	64.43	-8.47	55.96	74.00	-18.04	PK	Hor
2*	17.909GHz	48.27	8.46	56.73	74.00	-17.27	PK	Hor
3*	2.976GHz	49.47	-8.47	41.00	54.00	-13.00	AV	Hor
4*	17.909GHz	38.34	8.46	46.80	54.00	-7.20	AV	Hor



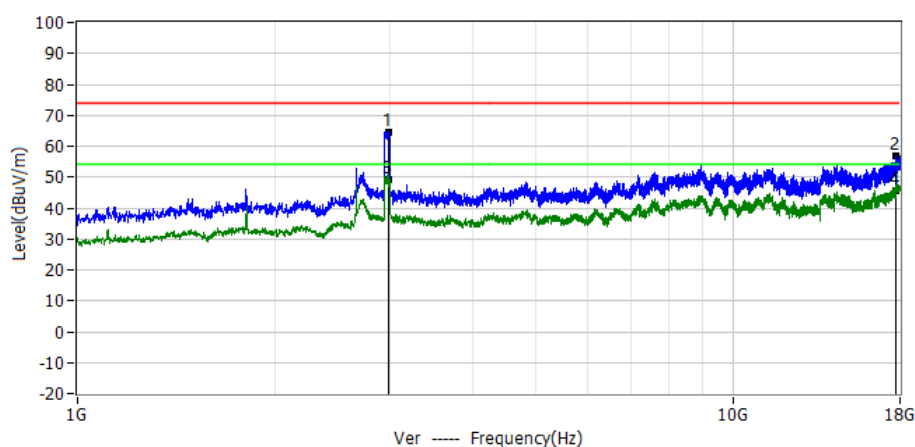
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.940GHz	72.38	-8.66	63.72	74.00	-10.28	PK	Ver
2*	17.722GHz	49.35	8.33	57.68	74.00	-16.32	PK	Ver
3*	2.940GHz	45.36	-8.66	36.70	54.00	-17.30	AV	Ver
4*	17.722GHz	38.47	8.33	46.80	54.00	-7.20	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11ax160 6825	
Note:	



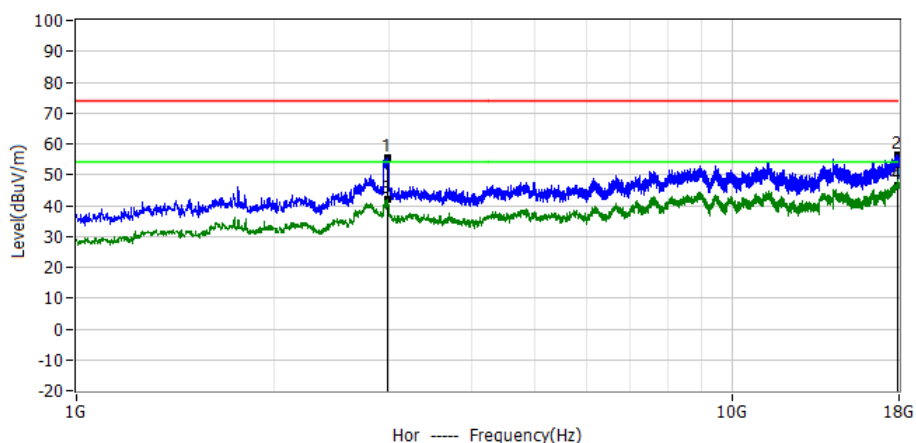
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.976GHz	65.32	-8.47	56.85	74.00	-17.15	PK	Hor
2*	17.943GHz	49.19	8.48	57.67	74.00	-16.33	PK	Hor
3*	2.976GHz	49.57	-8.47	41.10	54.00	-12.90	AV	Hor
4*	17.943GHz	39.02	8.48	47.50	54.00	-6.50	AV	Hor



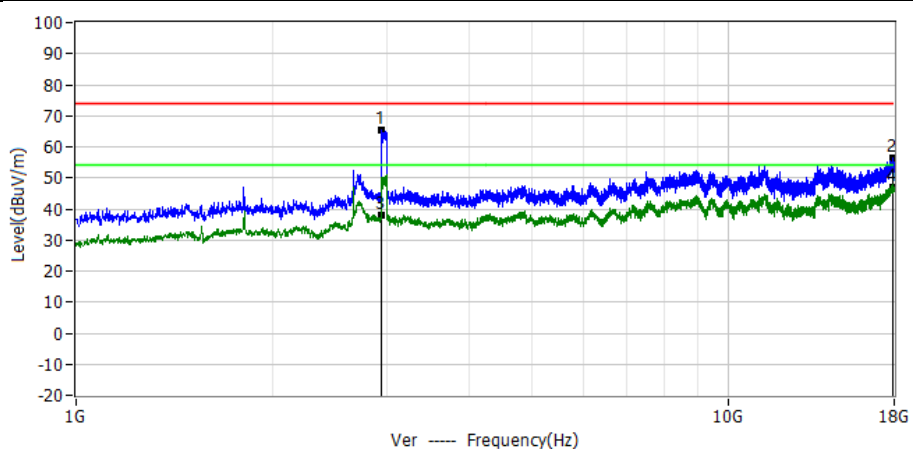
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.989GHz	72.98	-8.40	64.58	74.00	-9.42	PK	Ver
2*	17.717GHz	48.44	8.32	56.76	74.00	-17.24	PK	Ver
3*	2.989GHz	57.40	-8.40	49.00	54.00	-5.00	AV	Ver
4*	17.717GHz	37.48	8.32	45.80	54.00	-8.20	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11ax160 6985	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.981GHz	64.15	-8.44	55.71	74.00	-18.29	PK	Hor
2*	17.919GHz	48.10	8.46	56.56	74.00	-17.44	PK	Hor
3*	2.981GHz	50.54	-8.44	42.10	54.00	-11.90	AV	Hor
4*	17.919GHz	38.14	8.46	46.60	54.00	-7.40	AV	Hor

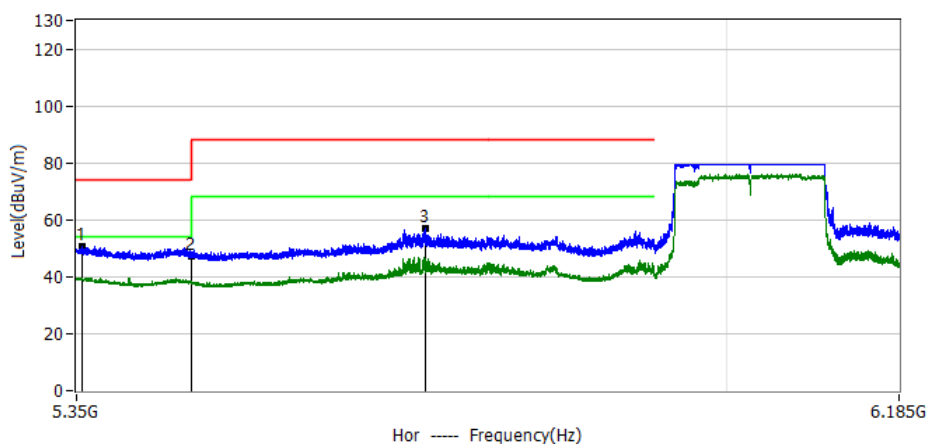


No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.940GHz	73.97	-8.66	65.31	74.00	-8.69	PK	Ver
2*	17.900GHz	47.89	8.45	56.34	74.00	-17.66	PK	Ver
3*	2.940GHz	46.76	-8.66	38.10	54.00	-15.90	AV	Ver
4*	17.900GHz	38.45	8.45	46.90	54.00	-7.10	AV	Ver

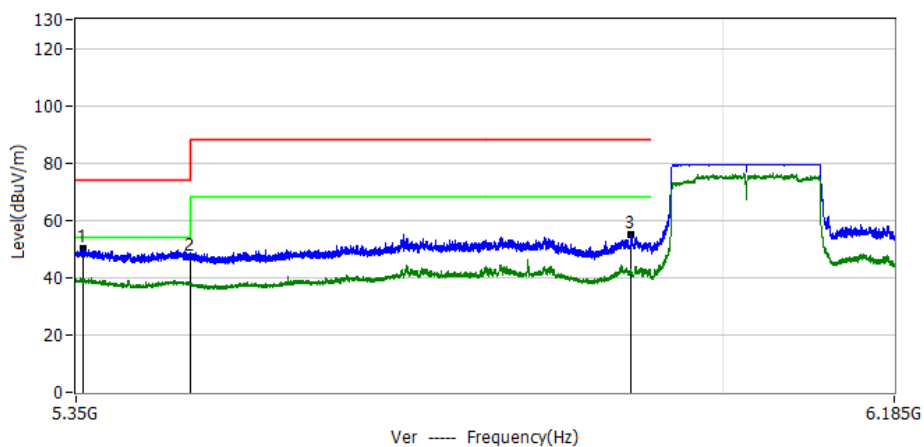


3.2.7 Radiated Band Edge

Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: 802.11ax160 6025	
Note:	



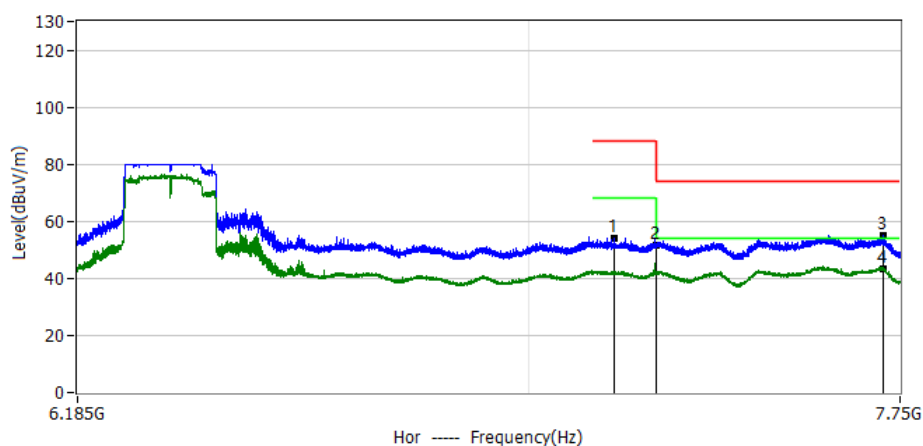
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.355GHz	57.81	-7.28	50.53	74.00	-23.47	PK	Hor
2*	5.460GHz	54.81	-7.61	47.20	86.70	-39.40	PK	Hor
3*	5.689GHz	64.78	-7.66	57.12	88.20	-31.08	PK	Hor



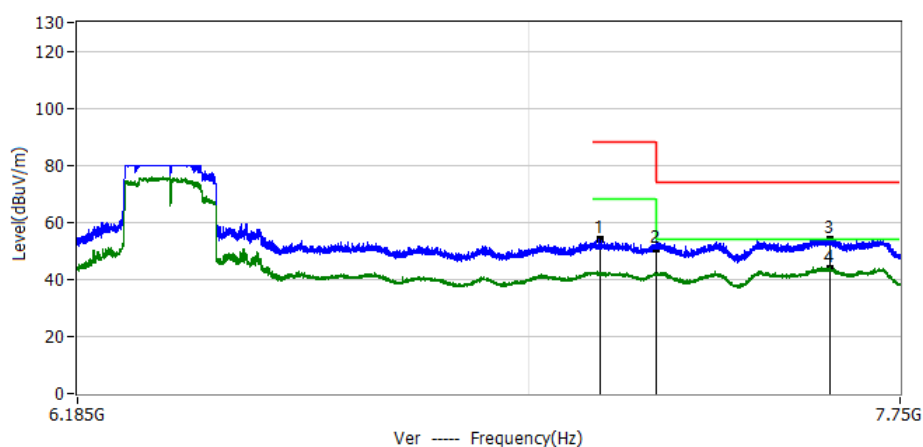
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.357GHz	57.35	-7.28	50.07	74.00	-23.93	PK	Ver
2*	5.460GHz	55.01	-7.61	47.40	86.70	-39.20	PK	Ver
3*	5.903GHz	62.46	-7.58	54.88	88.20	-33.32	PK	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: 802.11ax160 6345	
Note:	



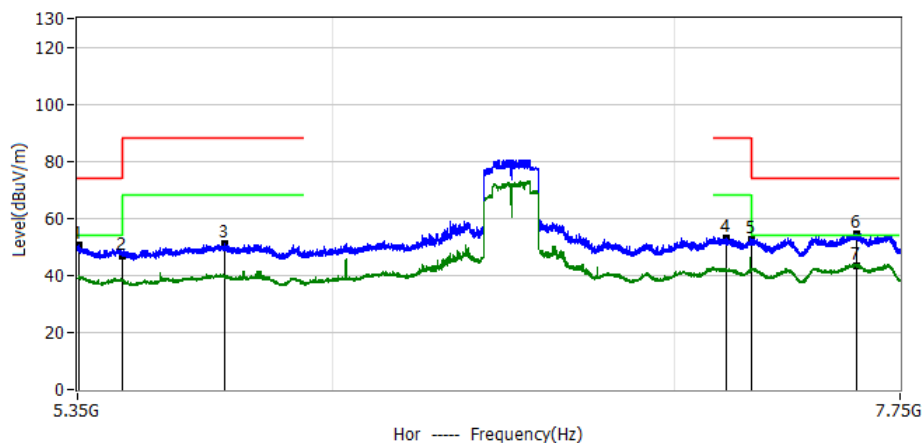
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	7.166GHz	59.46	-5.23	54.23	88.20	-33.97	PK	Hor
2*	7.250GHz	56.39	-4.99	51.40	86.90	-35.50	PK	Hor
3*	7.715GHz	59.23	-4.17	55.06	74.00	-18.94	PK	Hor
4*	7.715GHz	47.47	-4.17	43.30	54.00	-10.70	AV	Hor



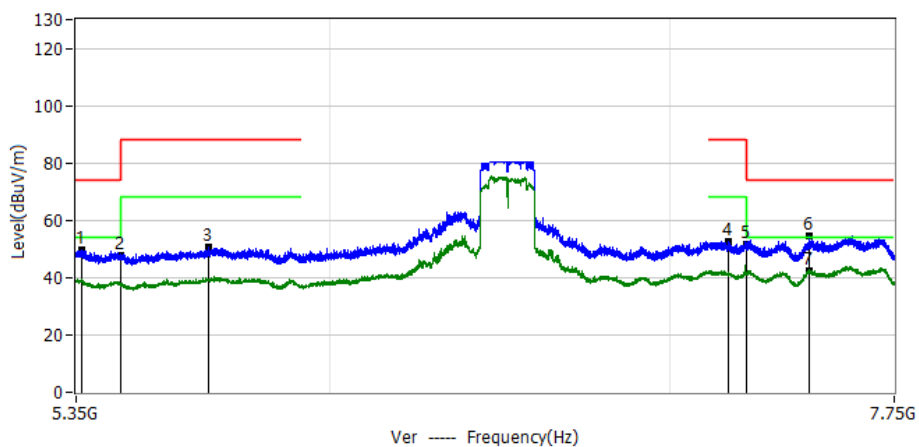
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	7.137GHz	59.27	-5.31	53.96	88.20	-34.24	PK	Ver
2*	7.250GHz	55.69	-4.99	50.70	86.90	-36.20	PK	Ver
3*	7.603GHz	58.49	-4.23	54.26	74.00	-19.74	PK	Ver
4*	7.603GHz	47.83	-4.23	43.60	54.00	-10.40	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: 802.11ax160 6505	
Note:	



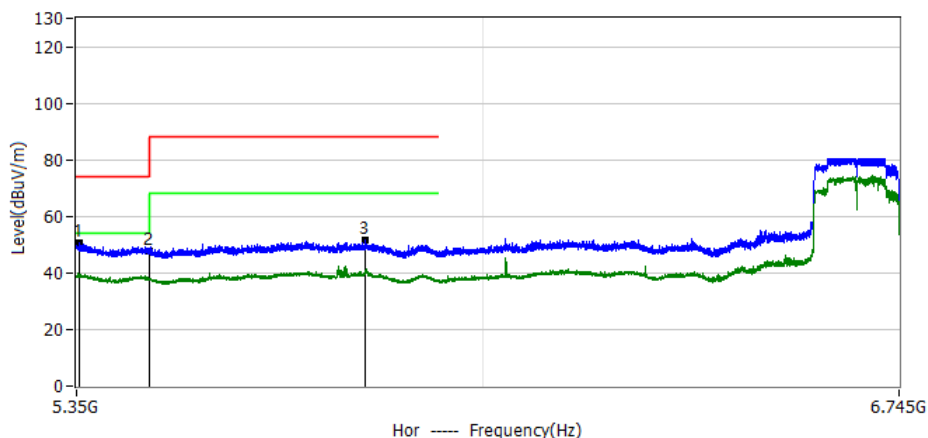
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.352GHz	57.79	-7.27	50.52	74.00	-23.48	PK	Hor
2*	5.460GHz	54.51	-7.61	46.90	83.50	-36.60	PK	Hor
3*	5.715GHz	58.89	-7.65	51.24	88.20	-36.96	PK	Hor
4*	7.166GHz	58.54	-5.23	53.31	88.20	-34.89	PK	Hor
5*	7.250GHz	57.59	-4.99	52.60	83.50	-30.90	PK	Hor
6*	7.602GHz	58.69	-4.23	54.46	74.00	-19.54	PK	Hor
7*	7.602GHz	47.33	-4.23	43.10	54.00	-10.90	AV	Hor



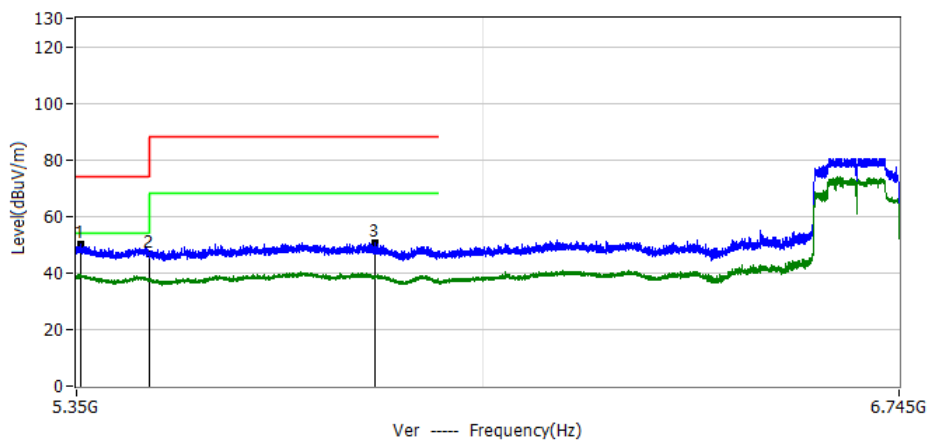
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.363GHz	56.83	-7.30	49.53	74.00	-24.47	PK	Ver
2*	5.460GHz	55.11	-7.61	47.50	83.50	-36.00	PK	Ver
3*	5.679GHz	58.50	-7.67	50.83	88.20	-37.37	PK	Ver
4*	7.188GHz	57.83	-5.17	52.66	88.20	-35.54	PK	Ver
5*	7.250GHz	56.39	-4.99	51.40	83.50	-32.10	PK	Ver
6*	7.457GHz	58.90	-4.42	54.48	74.00	-19.52	PK	Ver
7*	7.457GHz	46.62	-4.42	42.20	54.00	-11.80	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: 802.11ax160 6665	
Note:	



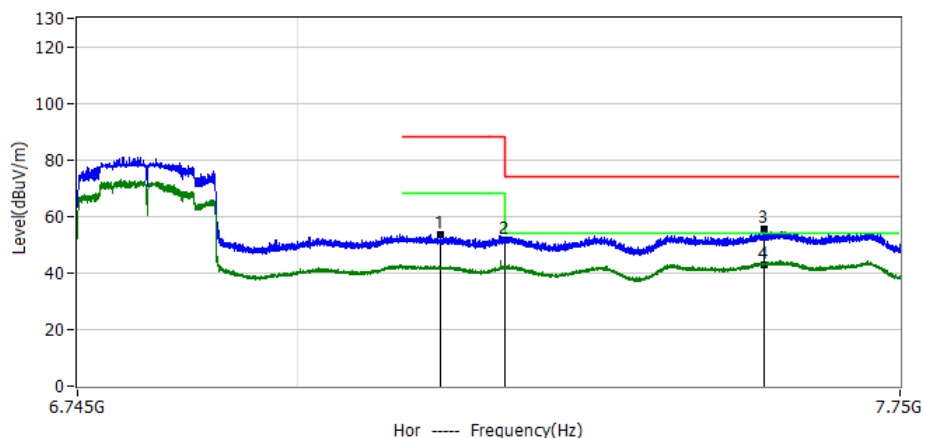
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.354GHz	58.00	-7.27	50.73	74.00	-23.27	PK	Hor
2*	5.460GHz	55.31	-7.61	47.70	85.70	-38.00	PK	Hor
3*	5.804GHz	58.99	-7.62	51.37	88.20	-36.83	PK	Hor



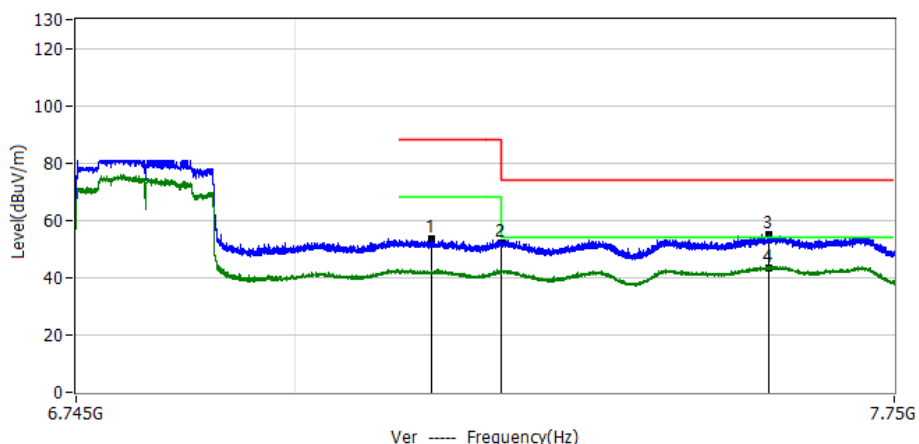
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.357GHz	57.31	-7.28	50.03	74.00	-23.97	PK	Ver
2*	5.460GHz	54.31	-7.61	46.70	85.70	-39.00	PK	Ver
3*	5.819GHz	58.23	-7.61	50.62	88.20	-37.58	PK	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: 802.11ax160 6825	
Note:	



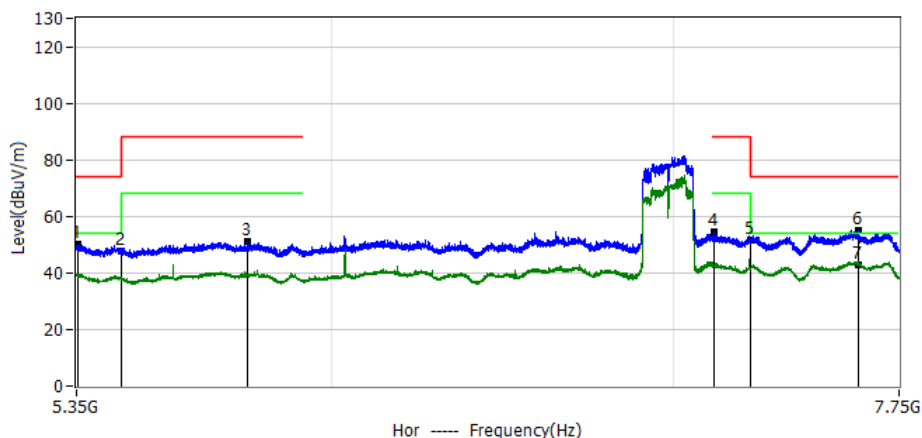
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	7.171GHz	58.95	-5.21	53.74	88.20	-34.46	PK	Hor
2*	7.250GHz	56.69	-4.99	51.70	75.40	-23.70	PK	Hor
3*	7.574GHz	59.71	-4.25	55.46	74.00	-18.54	PK	Hor
4*	7.574GHz	47.05	-4.25	42.80	54.00	-11.20	AV	Hor



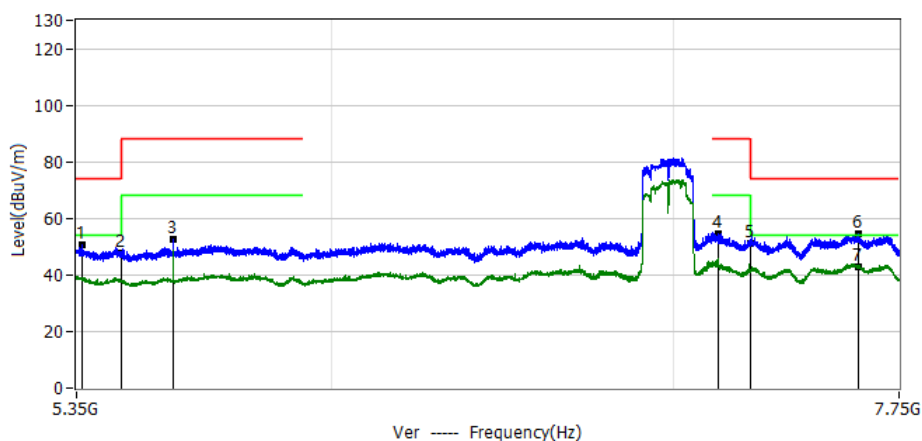
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	7.164GHz	58.55	-5.23	53.32	88.20	-34.88	PK	Ver
2*	7.250GHz	56.89	-4.99	51.90	75.40	-23.50	PK	Ver
3*	7.586GHz	59.24	-4.24	55.00	74.00	-19.00	PK	Ver
4*	7.586GHz	47.54	-4.24	43.30	54.00	-10.70	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: 802.11ax160 6985	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.353GHz	57.23	-7.27	49.96	74.00	-24.04	PK	Hor
2*	5.460GHz	55.21	-7.61	47.60	83.50	-35.90	PK	Hor
3*	5.778GHz	58.66	-7.63	51.03	88.20	-37.17	PK	Hor
4*	7.132GHz	59.74	-5.32	54.42	88.20	-33.78	PK	Hor
5*	7.250GHz	56.79	-4.99	51.80	83.50	-31.70	PK	Hor
6*	7.609GHz	59.11	-4.23	54.88	74.00	-19.12	PK	Hor
7*	7.609GHz	47.13	-4.23	42.90	54.00	-11.10	AV	Hor



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.365GHz	57.72	-7.31	50.41	74.00	-23.59	PK	Ver
2*	5.460GHz	55.41	-7.61	47.80	83.50	-35.70	PK	Ver
3*	5.588GHz	60.31	-7.70	52.61	88.20	-35.59	PK	Ver
4*	7.143GHz	59.80	-5.29	54.51	88.20	-33.69	PK	Ver
5*	7.250GHz	55.99	-4.99	51.00	83.50	-32.50	PK	Ver
6*	7.611GHz	58.73	-4.23	54.50	74.00	-19.50	PK	Ver
7*	7.611GHz	47.13	-4.23	42.90	54.00	-11.10	AV	Ver



4. BANDWIDTH MEASUREMENT

4.1 EMISSION BANDWIDTH (EBW) 26 BANDWID PROCEDURES/LIMIT

The maximum transmitter channel bandwidth for UNII devices in the 5.925-5.7125GHz band is 320MHz.

4.2 TEST PROCEDURE

26dB Bandwidth

1. Set RBW=approximately 1% of the emission bandwidth.
2. Set the VBW $\geq$ RBW.
3. Trace mode = max hold.
4. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

Occupied Bandwidth

- 1.Set RBW=1% to 5% of the OBW.
- 2 Set VBW $\geq$ 3RBW
- 3.Sample detection and single sweep modes shall be used
- 4.Use the 99% power bandwidth function of the instrument.

4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP



4.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

4.6 TEST RESULTS

For the measurement records, refer to the appendix I.



5. MAXIMUM CONDUCTED OUTPUT POWER

5.1 LIMIT

Frequency Band	Operating Mode	Maximum EIRP Limit
5925-7125MHz	☒ Indoor access point	30
	☐ Subordinate Device	30
	☐ Client device	24

5.2 TEST PROCEDURE

Method PM-G(Measurement using using a gated average power meter)

1.Measurement is preformed using a wideband gated RF power meter provided that the gate parameters are adjusts such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

Spectrum analyzer(For channel that extends across the 6.525/ 6.825G boundary)

1.Set RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector=RMS.

2.Trace average at least 100 trace in power averaging mode.

3.Compute power by integrating the spectrum across the 26dB EBW

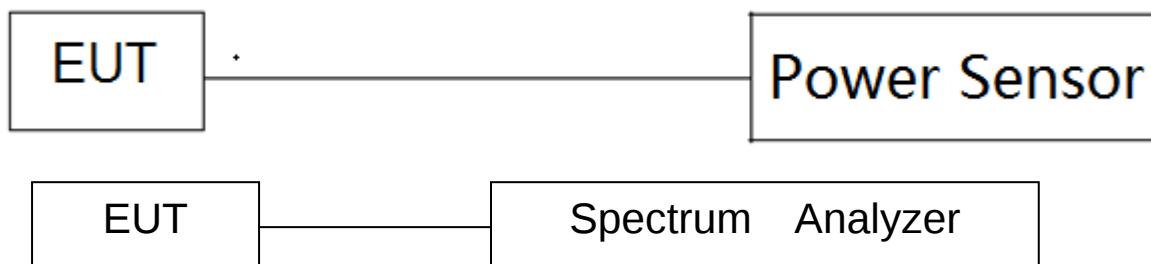
4.Add $10 \log(1/X)$, X:Duty cycle if duty cycle is <98%)

5.EIRP=Measured conducted power+Antenna

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP



5.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 5 Unless otherwise a special operating condition is specified in the follows during the testing.

5.6 TEST RESULTS

For the measurement records, refer to the appendix I.



6. PEAK POWER SPECTRAL DENSITY

6.1 LIMIT

Frequency Band	Operating Mode	Maximum EIRP Limit
5925-7125MHz	☒ Indoor access point	30
	☐ Subordinate Device	30
	☐ Client device	24

6.2 TEST PROCEDURES

Duty cycle $\geq 98\%$

1. Set RBW=1MHz/VBW=3MHz, Sweptime=auto Detector=RMS
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximum amplitude level
4. EIRPPSD=Measured conducted power density+Antenna gain

Duty cycle < 98%

1. Set RBW=1MHz/VBW=3MHz Detector=RMS
2. Set sweep time $\geq 10 \times (\text{number of points in sweep}) \times (\text{total on/off period of the transmitted signal})$
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level
5. Add $10\log(1/x)$ where x is the duty cycle.
6. EIRP PSD=Measured conducted power density+Antenna gain.

6.3 TEST RESULTS

For the measurement records, refer to the appendix I.



7. IN-BAND EMISSIONS

7.1 LIMIT

Power spectral density must be suppressed by 20 dB at 1MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

7.2 TEST PROCEDURES

1. Connect output of the antenna port to a spectrum analyzer
2. Set the reference level of the measuring equipment
3. Measure the 26 dB EBW
4. Measure the power spectral density (which will be used for emissions mask reference) using the following procedure:
 - a) Set the span to encompass the entire 26 dB EBW of the signal
 - b) Set RBW=same RBW used for 26 dB EBW measurement.
 - c) Set VBW $\geq 3X$ RBW
 - d) Number of points in sweep $\geq [2X \text{ span/RBW}]$
 - e) Sweep time=auto.
 - f) Detector=RMS (i.e., power averaging)
 - g) Trace average at least 100 traces in power averaging (rms) mode.
 - h) Use the peak search function on the instrument to find the peak of the spectrum
5. For the purposes of developing the emission mask the channel bandwidth is defined as the 26 dB EBW
6. Using the measuring equipment limit line function develop the emissions mask based on the power spectral density (in dB) as follows following
 - a. Suppressed by 20 dB at 1 MHz outside of the channel edge. (The channel edge is defined as the 26-dB point on either side of the carrier center frequency)
 - b. Suppressed by 28 dB at one channel bandwidth from the channel center.
 - c. Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center
7. Adjust the span to encompass the entire mask as necessary
8. Clear trace
9. Trace average at least 100 traces in power averaging (rms) mode
10. Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask

7.3 TEST RESULTS

For the measurement records, refer to the appendix I.



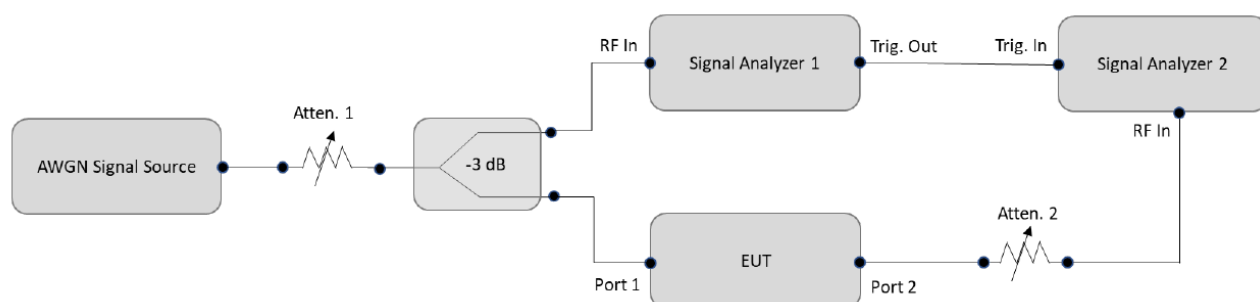
8. CONTENTION BASED PROTOCOL

8.1 LIMIT

Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel (in which incumbent signal is transmitted) and stay off the incumbent channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm)¹. The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain.

To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

8.2 TEST PROCEDURES



1. Configure the EUT to transmit with a constant duty cycle.
2. Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
3. Set the signal analyzer center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2, as shown in Figure 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
4. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step two.
5. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
6. Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT as shown in Figure 2.
7. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
8. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
9. (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
10. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 5, choose a different center frequency for the AWGN signal and repeat the process.

Note: Detection Level = Injected AWGN Power (dBm) – Antenna Gain (dBi) + Path Loss (dB)

8.3 TEST RESULTS

For the measurement records, refer to the appendix I.



9. ANTENNA REQUIREMENT

9.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

9.2 EUT ANTENNA

The EUT antenna is Copper tube Antenna with RP-SMA connector. It comply with the standard requirement.



APPENDIX I:TEST RESULTS

DUTY CYCLE

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	ax160	6025	Ant1	98.52	0	0.38
NVNT	ax160	6185	Ant1	98.52	0	0.38
NVNT	ax160	6345	Ant1	98.52	0	0.38
NVNT	ax160	6505	Ant1	98.52	0	0.38
NVNT	ax160	6665	Ant1	98.52	0	0.38
NVNT	ax160	6825	Ant1	98.52	0	0.38
NVNT	ax160	6985	Ant1	98.52	0	0.38
NVNT	ax160	6025	Ant2	98.52	0	0.38
NVNT	ax160	6185	Ant2	98.52	0	0.38
NVNT	ax160	6345	Ant2	98.6	0	0.38
NVNT	ax160	6505	Ant2	98.52	0	0.38
NVNT	ax160	6665	Ant2	98.52	0	0.38
NVNT	ax160	6825	Ant2	98.52	0	0.38
NVNT	ax160	6985	Ant2	98.52	0	0.38
NVNT	ax160	6025	Sum	98.06	0	0.44
NVNT	ax160	6185	Sum	98.06	0	0.44
NVNT	ax160	6345	Sum	98.1	0	0.44
NVNT	ax160	6505	Sum	98.06	0	0.44
NVNT	ax160	6665	Sum	98.1	0	0.44
NVNT	ax160	6825	Sum	98.06	0	0.44
NVNT	ax160	6985	Sum	98.15	0	0.44
NVNT	ax20	5955	Ant1	98.48	0	0.39
NVNT	ax20	6175	Ant1	98.48	0	0.39
NVNT	ax20	6415	Ant1	98.48	0	0.39
NVNT	ax20	6435	Ant1	98.48	0	0.39
NVNT	ax20	6475	Ant1	99.83	0	0.83
NVNT	ax20	6515	Ant1	98.44	0	0.39
NVNT	ax20	6535	Ant1	98.48	0	0.39
NVNT	ax20	6695	Ant1	98.44	0	0.39
NVNT	ax20	6855	Ant1	98.44	0	0.39
NVNT	ax20	6895	Ant1	98.48	0	0.39
NVNT	ax20	7115	Ant1	98.55	0	0.39
NVNT	ax20	5955	Ant2	98.51	0	0.39
NVNT	ax20	6175	Ant2	98.48	0	0.39
NVNT	ax20	6415	Ant2	98.48	0	0.39
NVNT	ax20	6435	Ant2	98.48	0	0.39
NVNT	ax20	6475	Ant2	98.48	0	0.39
NVNT	ax20	6515	Ant2	98.51	0	0.39
NVNT	ax20	6535	Ant2	98.48	0	0.39
NVNT	ax20	6695	Ant2	98.51	0	0.39
NVNT	ax20	6855	Ant2	98.48	0	0.39
NVNT	ax20	6895	Ant2	98.48	0	0.39
NVNT	ax20	7115	Ant2	98.55	0	0.39
NVNT	ax20	5955	Sum	98.28	0	0.39
NVNT	ax20	6175	Sum	98.28	0	0.39
NVNT	ax20	6415	Sum	98.32	0	0.39
NVNT	ax20	6435	Sum	98.32	0	0.39
NVNT	ax20	6475	Sum	98.32	0	0.39
NVNT	ax20	6515	Sum	98.28	0	0.39
NVNT	ax20	6535	Sum	98.43	0	0.39
NVNT	ax20	6695	Sum	98.43	0	0.39
NVNT	ax20	6855	Sum	98.4	0	0.39
NVNT	ax20	6895	Sum	98.39	0	0.39
NVNT	ax20	7115	Sum	98.39	0	0.39
NVNT	ax40	5965	Ant1	98.48	0	0.39
NVNT	ax40	6165	Ant1	98.51	0	0.39
NVNT	ax40	6405	Ant1	98.51	0	0.39
NVNT	ax40	6445	Ant1	98.48	0	0.39



NVNT	ax40	6485	Ant1	98.48	0	0.39
NVNT	ax40	6525	Ant1	98.51	0	0.39
NVNT	ax40	6565	Ant1	98.51	0	0.39
NVNT	ax40	6685	Ant1	98.48	0	0.39
NVNT	ax40	6845	Ant1	98.48	0	0.39
NVNT	ax40	6885	Ant1	98.48	0	0.39
NVNT	ax40	6925	Ant1	98.51	0	0.39
NVNT	ax40	6965	Ant1	98.48	0	0.39
NVNT	ax40	7085	Ant1	98.48	0	0.39
NVNT	ax40	5965	Ant2	98.51	0	0.39
NVNT	ax40	6165	Ant2	98.48	0	0.39
NVNT	ax40	6405	Ant2	98.48	0	0.39
NVNT	ax40	6445	Ant2	98.48	0	0.39
NVNT	ax40	6485	Ant2	98.48	0	0.39
NVNT	ax40	6525	Ant2	98.48	0	0.39
NVNT	ax40	6565	Ant2	98.48	0	0.39
NVNT	ax40	6685	Ant2	98.48	0	0.39
NVNT	ax40	6845	Ant2	98.48	0	0.39
NVNT	ax40	6885	Ant2	98.48	0	0.39
NVNT	ax40	6925	Ant2	98.48	0	0.39
NVNT	ax40	6965	Ant2	98.51	0	0.39
NVNT	ax40	7085	Ant2	98.48	0	0.39
NVNT	ax40	5965	Sum	98.32	0	0.39
NVNT	ax40	6165	Sum	98.28	0	0.39
NVNT	ax40	6405	Sum	98.32	0	0.39
NVNT	ax40	6445	Sum	98.28	0	0.39
NVNT	ax40	6485	Sum	98.28	0	0.39
NVNT	ax40	6525	Sum	98.28	0	0.39
NVNT	ax40	6565	Sum	98.32	0	0.39
NVNT	ax40	6685	Sum	98.32	0	0.39
NVNT	ax40	6845	Sum	98.28	0	0.39
NVNT	ax40	6885	Sum	98.28	0	0.39
NVNT	ax40	6925	Sum	98.28	0	0.39
NVNT	ax40	6965	Sum	98.32	0	0.39
NVNT	ax40	7085	Sum	98.32	0	0.39
NVNT	ax80	5985	Ant1	98.55	0	0.39
NVNT	ax80	6145	Ant1	98.51	0	0.39
NVNT	ax80	6385	Ant1	98.51	0	0.39
NVNT	ax80	6465	Ant1	98.51	0	0.39
NVNT	ax80	6545	Ant1	98.48	0	0.39
NVNT	ax80	6625	Ant1	98.48	0	0.39
NVNT	ax80	6705	Ant1	98.48	0	0.39
NVNT	ax80	6785	Ant1	98.48	0	0.39
NVNT	ax80	6865	Ant1	98.48	0	0.39
NVNT	ax80	6945	Ant1	98.51	0	0.39
NVNT	ax80	7025	Ant1	98.51	0	0.39
NVNT	ax80	5985	Ant2	98.55	0	0.39
NVNT	ax80	6145	Ant2	98.51	0	0.39
NVNT	ax80	6385	Ant2	98.51	0	0.39
NVNT	ax80	6465	Ant2	98.51	0	0.39
NVNT	ax80	6545	Ant2	98.51	0	0.39
NVNT	ax80	6625	Ant2	98.48	0	0.39
NVNT	ax80	6705	Ant2	98.48	0	0.39
NVNT	ax80	6785	Ant2	98.51	0	0.39
NVNT	ax80	6865	Ant2	98.51	0	0.39
NVNT	ax80	6945	Ant2	98.51	0	0.39
NVNT	ax80	7025	Ant2	98.48	0	0.39
NVNT	ax80	5985	Sum	98.33	0	0.39
NVNT	ax80	6145	Sum	98.29	0	0.39
NVNT	ax80	6385	Sum	98.29	0	0.39
NVNT	ax80	6465	Sum	98.29	0	0.39



NVNT	ax80	6545	Sum	98.29	0	0.39
NVNT	ax80	6625	Sum	98.33	0	0.39
NVNT	ax80	6705	Sum	98.33	0	0.39
NVNT	ax80	6785	Sum	98.29	0	0.39
NVNT	ax80	6865	Sum	98.33	0	0.39
NVNT	ax80	6945	Sum	98.33	0	0.39
NVNT	ax80	7025	Sum	98.29	0	0.39



