RADIO TEST REPORT

Product	:	Speakerphone
Model Name	:	SL525
FCC ID	:	2AYYS-SL525
Test Regulation	:	FCC 47 CFR Part 15 Subpart C (Section 15.247)
Received Date	:	2024/12/23
Test Date	:	2024/12/26 ~ 2025/01/02
Issued Date	:	2025/2/5
Applicant	:	Luxshare Precision Industry Co., Ltd. Floor 2,Block A,Sanyo New Industrial Area, West Haoyi Community,Shajing Subdistrict Office, Bao an District Shenzhen, P. R. China
Issued By	:	Underwriters Laboratories Taiwan Co., Ltd. Building A, B and E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Testing Laboratory
3398

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REVISION HISTORY

Original Test Report No.: 4791490988-US-R0-V0

Revision	Test report No.	Date	Page revised	Contents
Original	4791490988-US-R0-V0	2025/2/5	-	Initial issue

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1. Attestation of Test Results

APPLICANT:	Luxshare Precision Industry Co., Ltd. Floor 2,Block A,Sanyo New Industrial Area, West Haoyi Community,Shajing Subdistrict Office, Bao an District Shenzhen, P. R. China
MANUFACTURER:	Luxshare Precision Industry Co., Ltd. 2nd floor,A building,Sanyo New Industrial Area,West of Maoyi,Shajing Street,Ban'an District,Shenzhen City,Guangdong Province,China
EUT DESCRIPTION:	Speakerphone
BRAND:	DELL
MODEL:	SL525
SAMPLE STAGE:	Engineering Verification Test Sample
DATE of TESTED:	2024/12/26 ~ 2025/01/02

APPLICABLE STANDARDS	
STANDARD	**Test Results**
FCC 47 CFR PART 15 Subpart C (Section 15.247)	PASS

Underwriters Laboratories Taiwan Co., Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by Underwriters Laboratories Taiwan Co., Ltd. based on interpretations and/or observations of test results. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Underwriters Laboratories Taiwan Co., Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Underwriters Laboratories Taiwan Co., Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Prepared By:

Sally Lu Date : 2025/2/5
Project Handler

Approved and Authorized By:

Eric Lee Date : 2025/2/5
Senior Laboratory Engineer

2. Summary of Test Results

Summary of Test Results		
FCC Clause	**Test Items**	**Result**
15.247(a)(1) (iii)	Number of Hopping Frequency Used	PASS
15.247(a)(1) (iii)	Dwell Time on Each Channel	PASS
15.247(a)(1)	1. Hopping Channel Separation 2. Spectrum Bandwidth of a Frequency Hopping Sequence Spread Spectrum System	PASS
15.247(b)	Conducted Output Power	PASS
15.247(d)	Antenna Port Emission	PASS
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	PASS
15.207	AC Power Conducted Emission	PASS
15.203	Antenna Requirement	PASS

3. Test Methodology and Reference Procedures

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2, KDB558074 D01 Meas Guidance v05r02, KDB414788 D01 Radiated Test Site v01r01, ANSI C63.10-2013.

4. Facilities and Accreditation

Test Location	Underwriters Laboratories Taiwan Co., Ltd.
Address	Building A, B and E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan
Accreditation Certificate	Underwriters Laboratories Taiwan Co., Ltd. is accredited by TAF, Laboratory Code 3398.

5. Measurement Uncertainty

For statement of conformity, Simple acceptance (Section 3.1.4 of IEC Guide 115) was applied as decision rule for measurement in this test report.

The following uncertainties have been calculated to provide a confidence level of 95 % using a coverage factor k=2.

Determining compliance based on the results of the compliance measurement, not considering measurement instrumentation uncertainty.

Measurement	Frequency	Uncertainty
Conducted disturbance at mains terminals ports	150kHz ~ 30MHz	3.1 dB
RF Conducted	9 kHz - 40GHz	2.3 dB
Radiated disturbance below 30MHz	9 kHz - 30 MHz	3.2 dB
Radiated disturbance below 1 GHz	30MHz ~ 1GHz	6.1 dB
Radiated disturbance above 1 GHz	1GHz ~ 40GHz	5.1 dB

6. Equipment under Test

6.1. Description of EUT

Product	Speakerphone
Brand Name	DELL
Model Name	SL525
Normal Voltage	5Vdc from Host

Operating Frequency	2402MHz ~ 2480MHz
Modulation	GFSK, π/4-DQPSK and 8DPSK
Transfer Rate	Up to 3 Mbps
Maximum Output Power	8.91 dBm
Sample ID	Conducted Test:7967436
	Radiated Test:7967435

Note:
1. The EUT contains following accessory devices:

Product	Brand	Model	Description
Battery	EVE Energy	A0750	3.6Vdc, 3100mAh
USB dongle	Dell	UD2403	-
USB C TO A Adapter	HAOYANG	USB C TO A Adapter	-

2. The above EUT information is declared by manufacturer and for more detailed features description, please refer the manufacturer's or user's manual, the laboratory shall not be held responsible.

6.2. Channel List

79 channels are provided for BT-BR/EDR mode:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461	-	-

6.3. Test Condition

Test Item	Test Site No.	Environmental	Input Power	Test Date	Tested by
Antenna Port Conducted Measurement	SR4	24℃/ 66%RH	5Vdc	2024/12/26	Eric Peng
Radiated Spurious Emission	966-2	22~26℃/ 62~68%RH	5Vdc	2024/12/30~ 2025/01/02	Eric Peng
AC power Line Conducted Emission	SR1	23℃/ 62%RH	110Vac/ 60Hz	2025/01/02	Eric Peng

Sample Calculation:

Antenna Port Conducted Measurement:

- Where relevant, the follow sample calculation is provided:
  Result Value (dBm) = Reading Value (dBm) +Attenuator Factor (dB) + Cable Loss (dB).
  Example: Result Value (10dBm) = Reading Value (-2dBm) +Attenuator Factor (10dB) + Cable Loss(2dB).
  *Test plot only shown the “Result Value”.

Radiated Spurious Emission:

- Where relevant, the follow sample calculation is provided:
  Result Value (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
  Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - Preamp Factor (dB).
  Example: Result Value (34.5dBuV/m) = Reading Value (40.1dBuV) + Antenna Factor (18.7dB/m) + Cable Loss (4.2dB) - Preamp Factor (28.5dB).

AC power Line Conducted Emission:

- Where relevant, the follow sample calculation is provided:
  Result Value (dBuV) = Reading Value (dBuV) + Correction Factor (dB).
  Correction Factor (dB) = Insertion loss(dB) + Cable loss(dB).
  Example: Result Value (53.7dBuV) = Reading Value (35.1dBuV) + Insertion loss(18.1dB) + Cable loss(0.5dB).

6.4. Description of Available Antennas

Ant. No.	Transmitter Circuit	Frequency Range	Brand Name	Model Name	Maximum Gain (dBi)	Ant. Type	Connector Type
1	Chain0	2400MHz ~ 2500MHz	Cirocomm	PCAKFS00-10	2.85	Chip	On board

Note: The above antenna information was provided from customer and for more detailed features description, please refer the manufacturer's specification or user's manual, the laboratory shall not be held responsible.

6.5. Test Mode Applicability and Tested Channel Detail

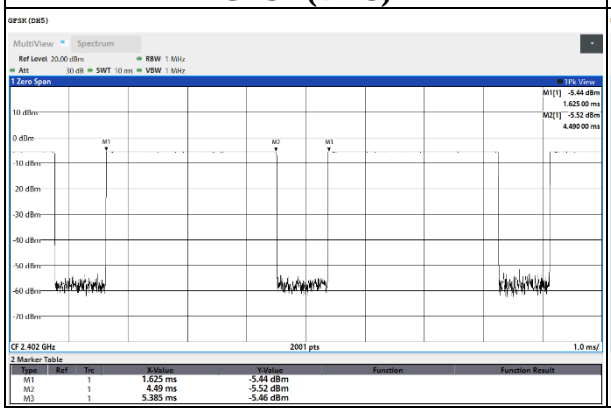
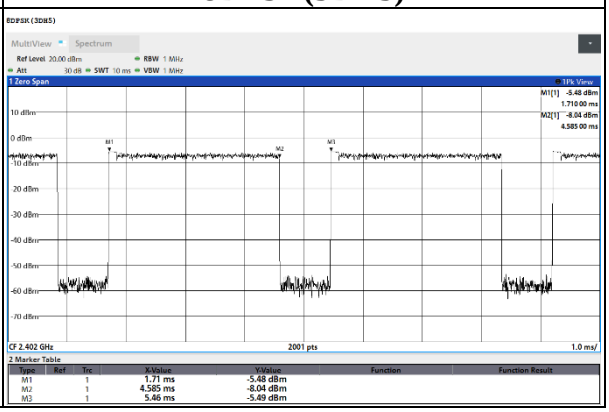
Test Item	Modulation Type	Available Channel	Test Channel	Packet Type
Radiated Emissions (Above 1GHz)	GFSK	0 to 78	0,39,78	DH5
	8DPSK	0 to 78	0,39,78	3DH5
	Charging mode	-	-	-
Radiated Emissions (Below 1GHz)	GFSK	0 to 78	78	3DH5
AC Power Line Conducted Emission	GFSK	0 to 78	78	3DH5
	Charging mode	-	-	-
Antenna Port Conducted Measurement	GFSK	0 to 78	0,39,78	DH1*,DH3*,DH5
	8DPSK	0 to 78	0,39,78	3DH1*,3DH3*, 3DH5

* Only for Dwell Time on Each Channel test

- The fundamental of the EUT was investigated in three orthogonal axes X-Y/Y-Z/X-Z, it was determined that X-Y plane was worst-case. Therefore, all final radiated testing was performed with the EUT in X-Y plane.
- The EUT is power by rechargeable battery. after pre-scan battery capacity at 0%, 50% and 100% , the worst case was found in the 100%. Therefore only the test data of the 100% of battery capacity was recorded in this report.
- In the transmit mode, GFSK 3DH5 channel 78 has the highest RF output power. Therefore, the AC conduction and spurious emission (below 1GHz) were performed using this worst-case mode.
- The Packet Type for DH1, DH3, and DH5 have all been pre-tested, the fundamental worst case of the Packet Type was found in the DH5. Therefore, only DH5 Packet Type is recorded in the report. (Except Dwell Time).
- The modulation and bandwidth are similar for π/4-DQPSK mode and 8DPSK mode, therefore investigated 8DPSK mode to representative mode in test report.
- For Antenna Port Conducted Measurement, this item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Since the DUT is a Bluetooth device, the AFH mode and non-AFH mode follow the Bluetooth timing protocol, and the same timing level has the same time interval, but the non-AFH mode has worse results, therefore only the test data of this type were recorded in this report.

6.6. Duty cycle

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle	Duty Factor (dB)	VBW Set (above 1GHz)
GFSK(DH5)	2.865	3.760	0.7620	1.18	510Hz
8DPSK(3DH5)	2.875	3.750	0.7667	1.15	510Hz

GFSK(DH5)	8DPSK(3DH5)
	

7. Test Equipment

Test Equipment List					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date**	**Expired date**
Radiated Spurious Emission					
Spectrum Analyzer	Keysight	N9010A	MY56070827	2024/3/29	2025/3/28
EMI Test Receiver	Rohde & Schwarz	ESR7	101754	2024/12/24	2025/12/23
Loop Antenna	ETS lindgren	6502	00213440	2024/12/11	2025/12/10
Trilog-Broadband Antenna with 5dB Attenuator	Schwarzbeck & EMCI	VULB 9168 & N-6-05	774 & AT-N0538	2024/1/5	2025/1/4
Horn Antenna (1-18 GHz)	Schwarzbeck	BBHA 9120 D	01690	2024/11/27	2025/11/26
Horn Antenna (18-40 GHz)	Schwarzbeck	BBHA 9170	781	2024/12/18	2025/12/17
Preamplifier (30-1000 MHz)	EMCI	EMC330E	980405	2024/5/28	2025/5/27
Preamplifier (1-18 GHz)	EMCI	EMC051835BE	980406	2024/1/23	2025/1/22
Preamplifier (18-40GHz)	EMCI	EMC184040SEE	980426	2024/4/16	2025/4/15
Cables (9k-18 GHz)	Hanyitek	K1K50-UP0264-K1K50-2500	170214-4 & 170425-2	2024/11/22	2025/11/21
Cables (18-40GHz)	Hanyitek	K1K50-UP0264-K1K50-2500	170214-1 & 170214-2	2024/11/22	2025/11/21

Test Equipment List					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date**	**Expired date**
Antenna Port Conducted Measurement					
Signal Analyzer	Rohde & Schwarz	FSVA3044	101281	2024/3/18	2025/3/17
Signal Analyzer	Rohde & Schwarz	FSV40	101490	2024/7/1	2025/6/30
Attenuator	EMCI	EMC-40ATK2W10	17002	2024/11/13	2025/11/12
USB Power Sensor	Anritsu	MA24408A	12031	2024/7/13	2025/7/12
Temperature &Humidity Test Chamber	GIANT FORCE	GTH-150- 40-CP-AR	MAA1701-010	2024/3/6	2025/3/5
AC power Line Conducted Emission					
EMI Test Receiver	Rohde & Schwarz	ESR7	101753	2024/10/1	2025/9/30
Two-Line V-Network	Rohde & Schwarz	ENV216	102136	2024/5/14	2025/5/13
Impuls-Begrenzer Pulse Limiter	Rohde & Schwarz	ESH3-Z2	102219-Qt	2024/8/29	2025/8/28
Cables	TITAN	CFD200	T0732ACFD 20020A300-2	2024/5/14	2025/5/13

UL Software		
Description	**Name**	**Version**
Radiated measurement	e3	6.191211 (V6)
Conducted measurement	RF-Conducted-FCC 15247	ver 1.0
AC power Line Conducted Emission	EZ_EMC	UL-3A1.2

8. Description of Test Setup

Tx Mode

Support Equipment

ID	Equipment	Brand Name	Model Name	S/N	Remark
A	USB C TO A Adapter	HAOYANG	USB C TO A Adapter	N/A	Supplied by Client
B	Laptop	DELL	Latitude E5470	CXSKWF2	Provide by Lab
C	Battery	EVE Energy	A0750	N/A	Supplied by Client

Charging Mode

Support Equipment

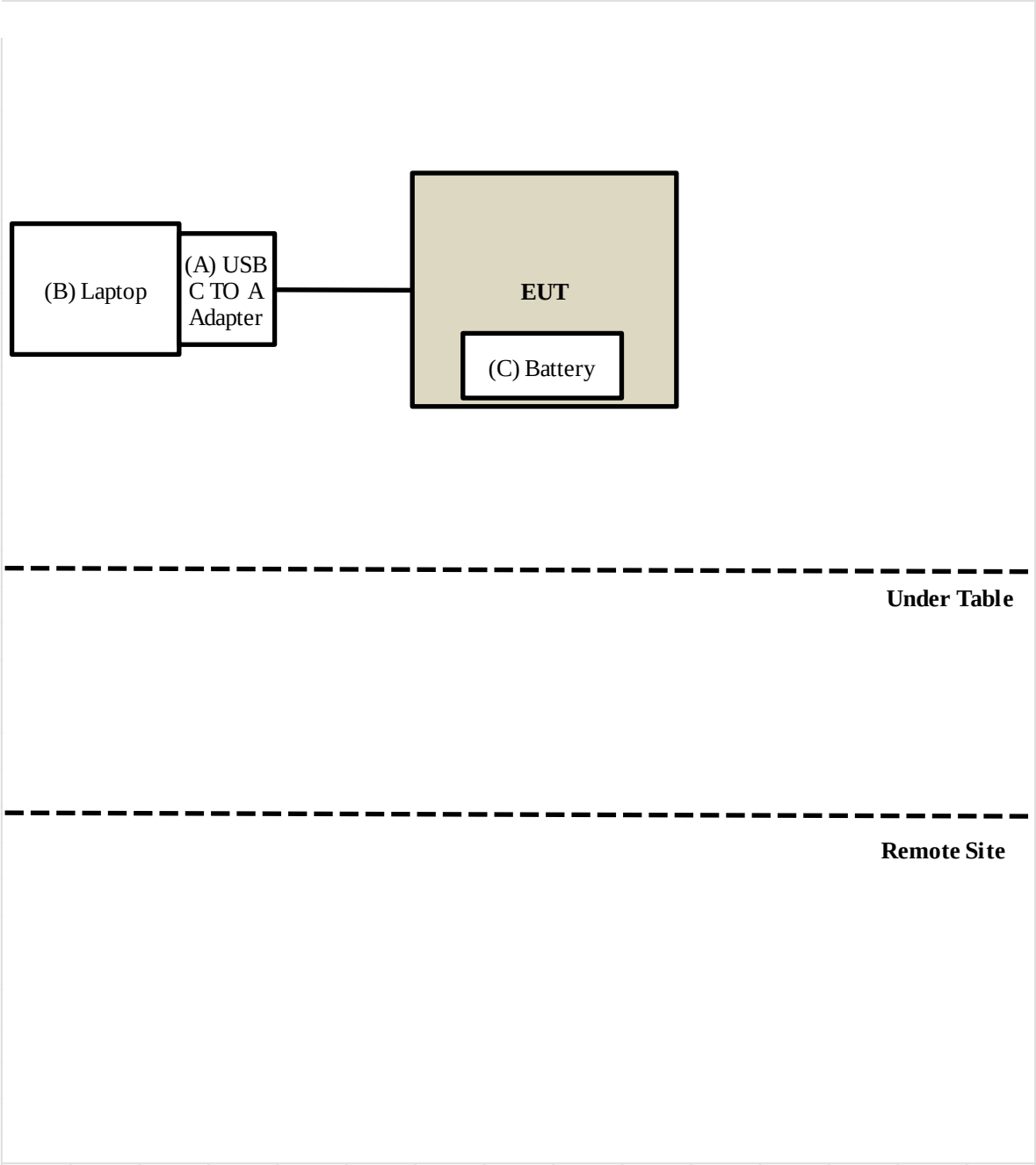
ID	Equipment	Brand Name	Model Name	S/N	Remark
A	USB C TO A Adapter	HAOYANG	USB C TO A Adapter	N/A	Supplied by Client
B	Laptop	DELL	Latitude E5470	CXSKWF2	Provide by Lab
C	Battery	EVE Energy	A0750	N/A	Supplied by Client

Test Setup

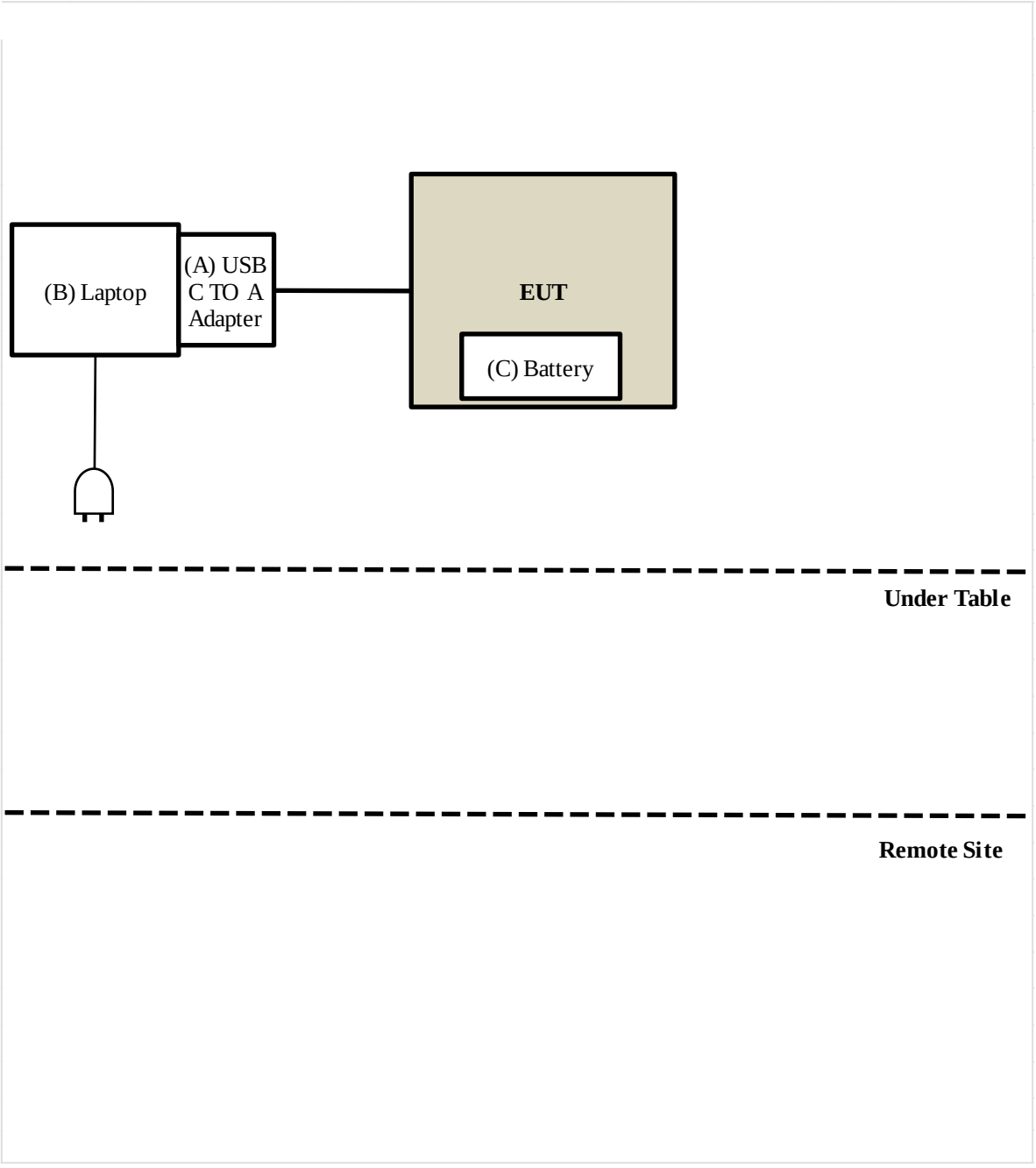
Controlled using a bespoke application (Airoha_Tool_Kit_v5.3.0.3) on a test Notebook. The application was used to enable a continuous transmission mode and to select the test channels, data rates, modulation schemes and power setting as required.

Setup Diagram for Test

Tx Mode



Charging Mode



9. Test Results

9.1. Channel Bandwidth

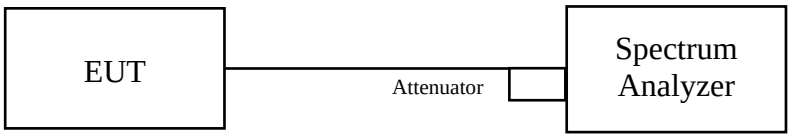
Requirements

For frequency hopping system operating in the 2400-2483.5MHz, If the 20dB bandwidth of hopping channel is greater than 25kHz, two-thirds 20dBbandwidth of hopping channel shall be a minimum limit for the hopping channel separation.

Test procedure

a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
b. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
c. Measure the frequency difference of two frequencies that were attenuated 20dB from the reference level. Record the frequency difference as the emission bandwidth.
d. Repeat above procedures until all frequencies measured were complete.

Test Setup

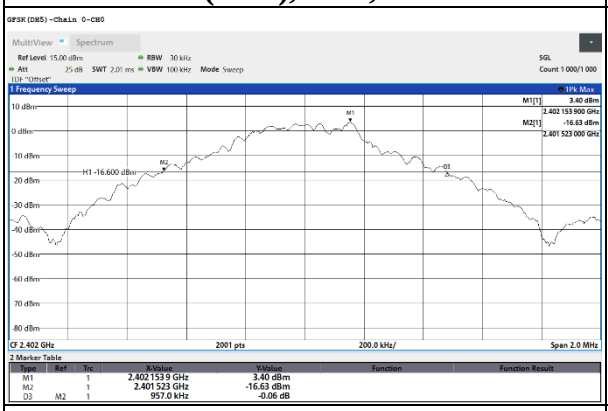


The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.

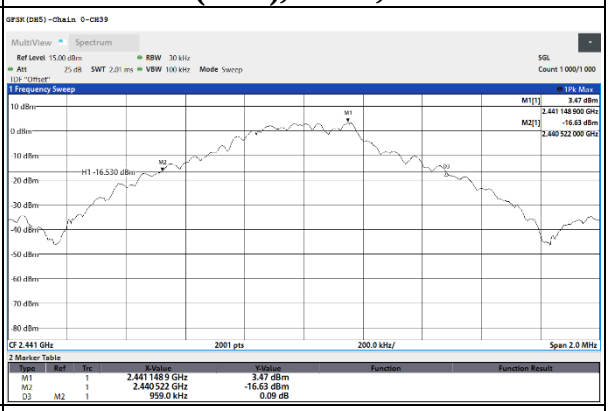
Test Data

Mode	CH	Freq (MHz)	Chain	20dB BW (MHz)	Limit (MHz)	Result
GFSK(DH5)	0	2402	Chain 0	0.957	N/A	Pass
GFSK(DH5)	39	2441	Chain 0	0.959	N/A	Pass
GFSK(DH5)	78	2480	Chain 0	0.956	N/A	Pass
8DPSK(3DH5)	0	2402	Chain 0	1.268	N/A	Pass
8DPSK(3DH5)	39	2441	Chain 0	1.270	N/A	Pass
8DPSK(3DH5)	78	2480	Chain 0	1.269	N/A	Pass

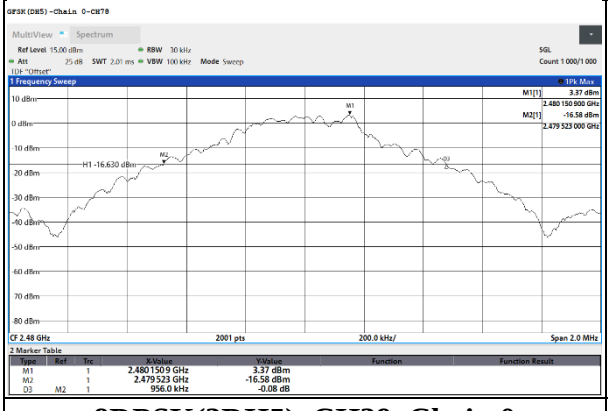
GFSK(DH5), CH0, Chain 0



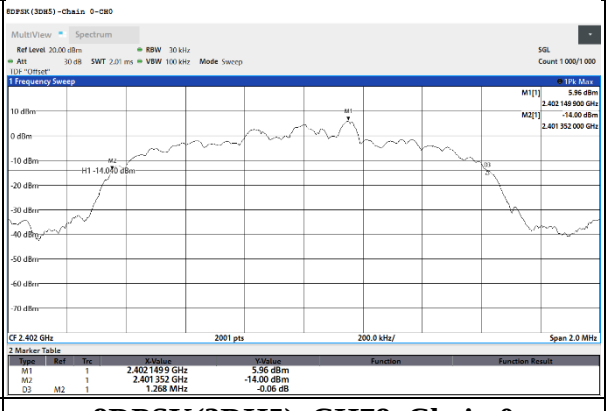
GFSK(DH5), CH39, Chain 0



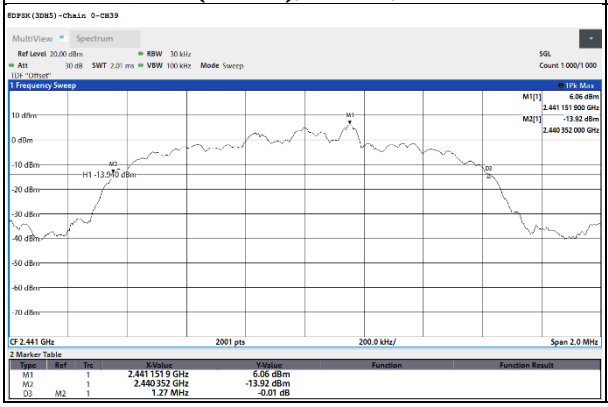
GFSK(DH5), CH78, Chain 0



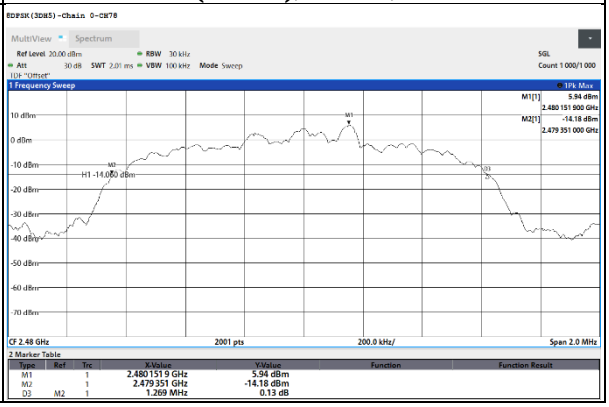
8DPSK(3DH5), CH0, Chain 0



8DPSK(3DH5), CH39, Chain 0



8DPSK(3DH5), CH78, Chain 0



9.2. Conducted Output Power

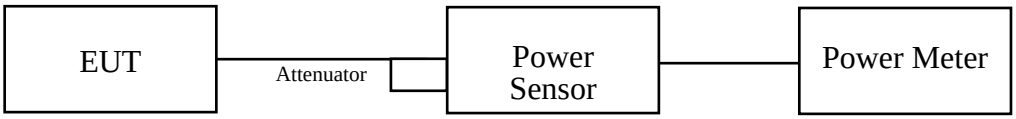
Requirements

The Maximum Output Power Measurement is 125mW.

Test Procedure

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

Test Setup



The loss between RF output port of the EUT and the input port of the Power Meter has been taken into consideration.

Test Data

Mode	CH	Freq. (MHz)	Peak Power (dBm)	Total Power (mW)	Total Power (dBm)	AVG Power (dBm)	Total Power (mW)	Total Power (dBm)	Limit (dBm)	Result
			Chain 0			Chain 0				
BT-GFSK	0	2402	6.22	4.188	6.22	6.12	4.093	6.12	20.97	Pass
	39	2441	6.4	4.365	6.4	6.25	4.217	6.25	20.97	Pass
	78	2480	6.4	4.365	6.4	6.27	4.236	6.27	20.97	Pass
BT-8DPSK	0	2402	8.81	7.603	8.81	6.16	4.13	6.16	20.97	Pass
	39	2441	8.89	7.745	8.89	6.29	4.256	6.29	20.97	Pass
	78	2480	8.91	7.78	8.91	6.3	4.266	6.3	20.97	Pass

Note: Average Power is for reference Only.

9.3. Hopping Channel Separation

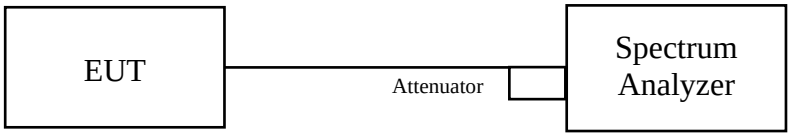
Requirements

At least 25kHz or two-third of 20dB hopping channel bandwidth (whichever is greater).

Test procedure

a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
b. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range.
c. By using the MaxHold function record the separation of two adjacent channels.
d. Measure the frequency difference of these two adjacent channels by SA MARK function. And then plot the result on SA screen.

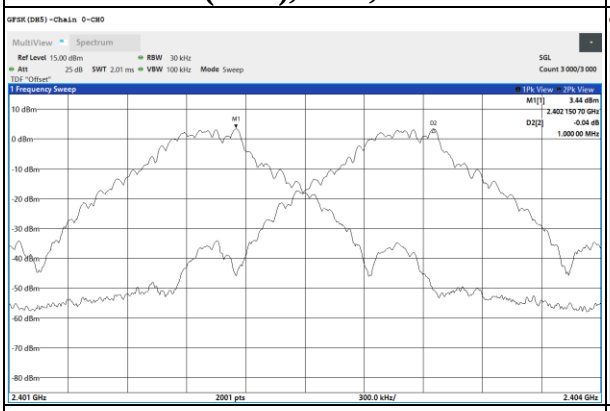
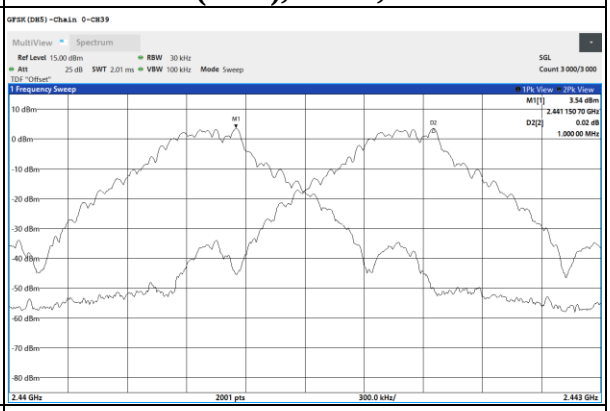
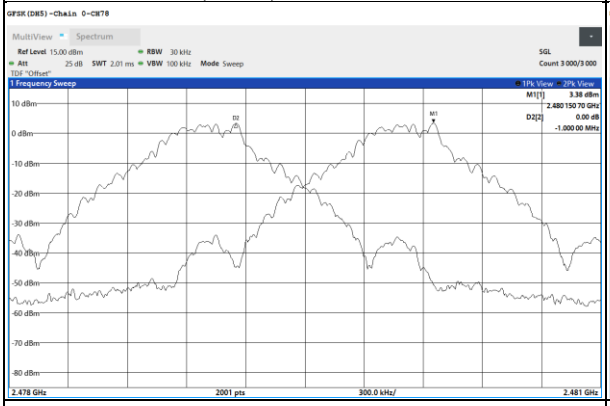
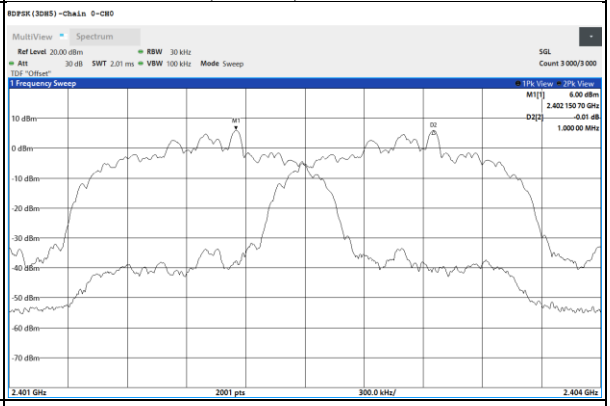
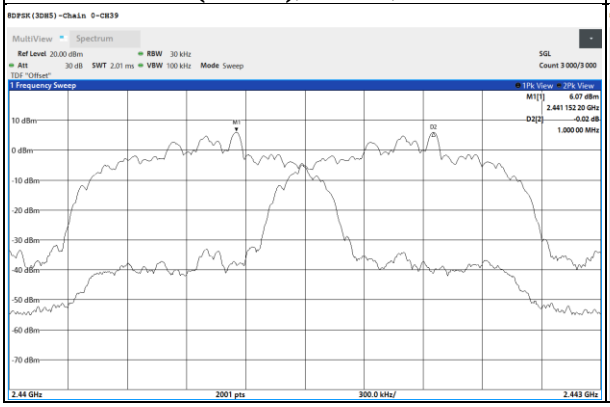
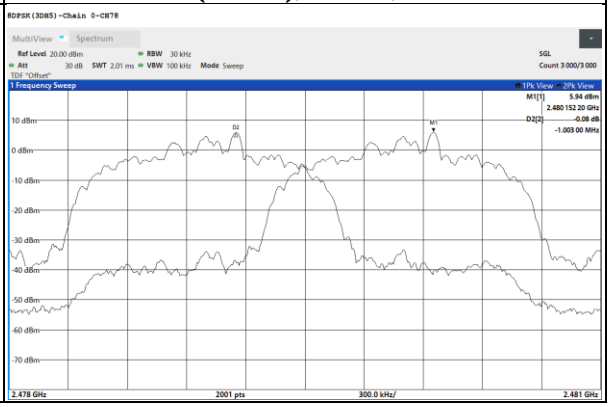
Test Setup



The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.

Test Data

Mode	CH	Freq (MHz)	Chain	Channel Separation (MHz)	> Limit (MHz)
GFSK(DH5)	0	2402	Chain 0	1	0.638
GFSK(DH5)	39	2441	Chain 0	1	0.639
GFSK(DH5)	78	2480	Chain 0	1	0.637
8DPSK(3DH5)	0	2402	Chain 0	1	0.845
8DPSK(3DH5)	39	2441	Chain 0	1	0.847
8DPSK(3DH5)	78	2480	Chain 0	1.003	0.846

GFSK(DH5), CH0, Chain 0	GFSK(DH5), CH39, Chain 0
	
GFSK(DH5), CH78, Chain 0	**8DPSK(3DH5), CH0, Chain 0**
	
8DPSK(3DH5), CH39, Chain 0	**8DPSK(3DH5), CH78, Chain 0**
	

9.4. Number of Hopping Frequency Used

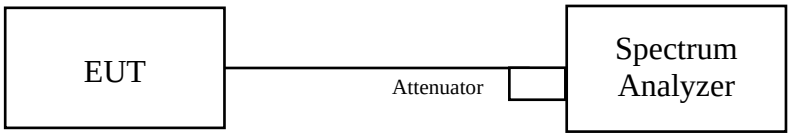
Requirements

At least 15 channels frequencies, and should be equally spaced.

Test procedure

a. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
b. Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
c. Set the SA on MaxHold Mode, and then keep the EUT in hopping mode. Record all the signals from each channel until each one has been recorded.
d. Set the SA on View mode and then plot the result on SA screen.
e. Repeat above procedures until all frequencies measured were complete.

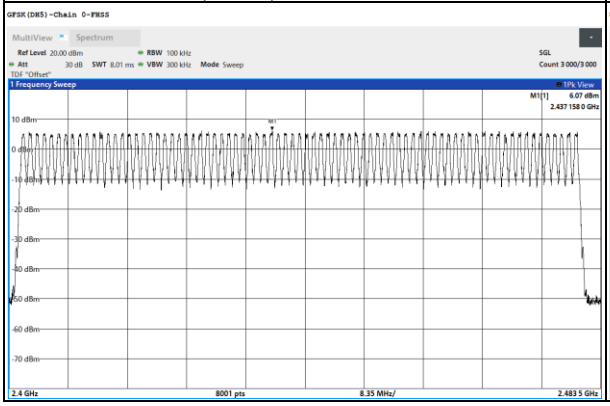
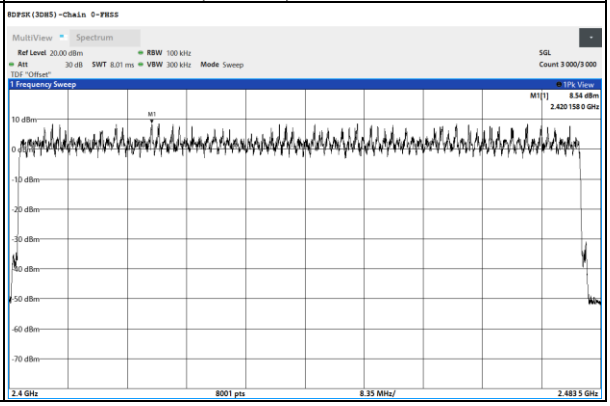
Test Setup



The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.

Test Data

There are 79 hopping frequencies in the hopping mode. On the plots, it shows that the hopping frequencies are equally spaced.

GFSK(DH5), FHSS, Chain 0	8DPSK(3DH5), FHSS, Chain 0
	

9.5. Dwell Time on Each Channel

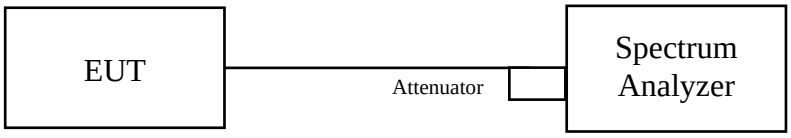
Requirements

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

Test procedure

a. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
b. Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
c. Adjust the center frequency of SA on any frequency be measured and set SA to zero span mode. And then, set RBW and VBW of spectrum analyzer to proper value.
d. Measure the time duration of one transmission on the measured frequency. And then plot the result with time difference of this time duration.
e. Repeat above procedures until all different time-slot modes have been completed.
f. Measure the maximum time duration of one single pulse.
A Period Time = (channel number)*0.4
For normal mode:
DH1 Time Slot: Reading * (1600/2)*31.6/(channel number)
DH3 Time Slot: Reading * (1600/4)*31.6/(channel number)
DH5 Time Slot: Reading * (1600/6)*31.6/(channel number)
For AFH mode:
DH1 Time Slot: Reading * (800/2)*31.6/(channel number)
DH3 Time Slot: Reading * (800/4)*31.6/(channel number)
DH5 Time Slot: Reading * (800/6)*31.6/(channel number)

Test Setup

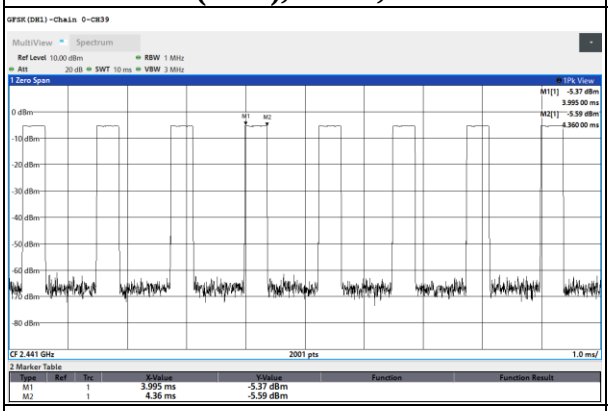


The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.

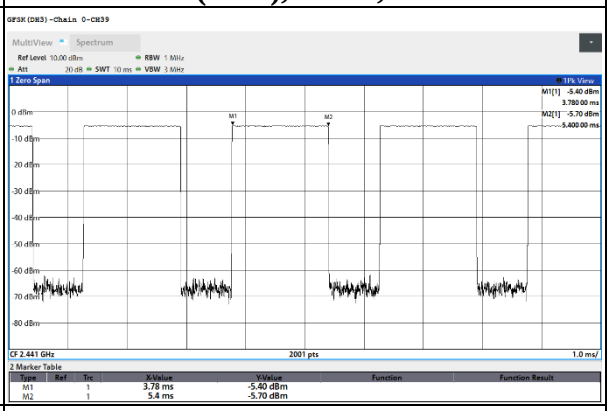
Test Data

Mode	Freq (MHz)	Chain	Length of transmission time (ms)	Dwell Time (ms)	Limit (ms)	Result
GFSK(DH1)	2441	Chain 0	0.365	116.800	400	PASS
GFSK(DH3)	2441	Chain 0	1.620	259.200	400	PASS
GFSK(DH5)	2441	Chain 0	2.860	305.067	400	PASS
8DPSK(3DH1)	2441	Chain 0	0.370	118.400	400	PASS
8DPSK(3DH3)	2441	Chain 0	1.625	260.000	400	PASS
8DPSK(3DH5)	2441	Chain 0	2.875	306.667	400	PASS

GFSK(DH1), CH39, Chain 0

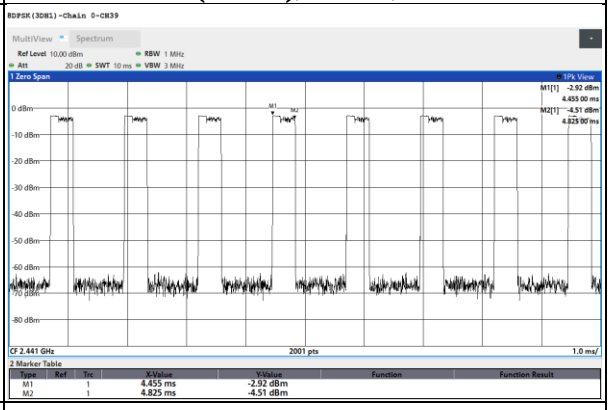


GFSK(DH3), CH39, Chain 0

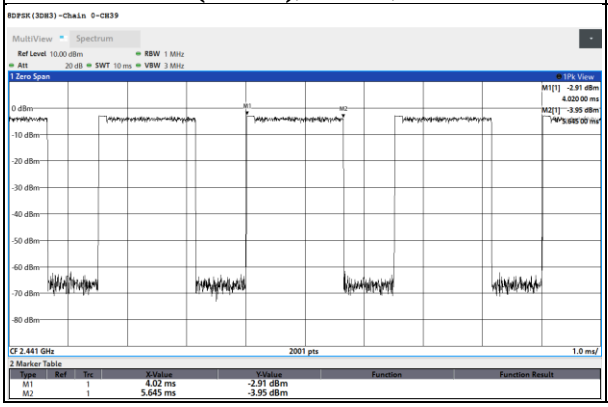


GFSK(DH5), CH39, Chain 0

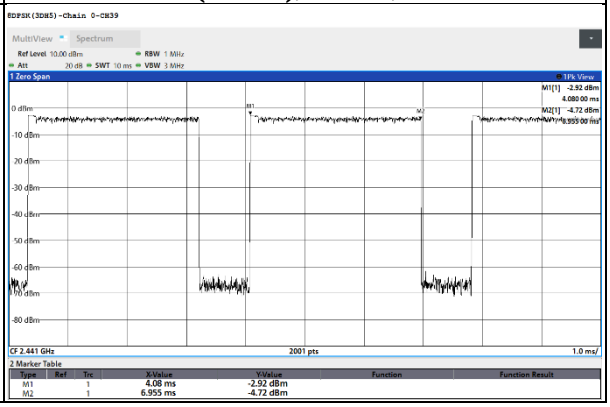
8DPSK(3DH1), CH39, Chain 0



8DPSK(3DH3), CH39, Chain 0



8DPSK(3DH5), CH39, Chain 0



9.6. Conducted Out of Band Emission

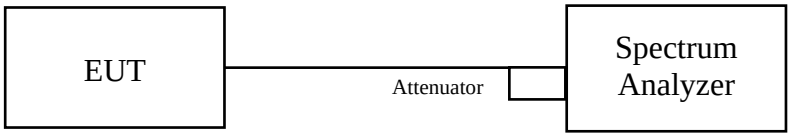
Requirements

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b) (3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209 (a) is not required.

Test procedure

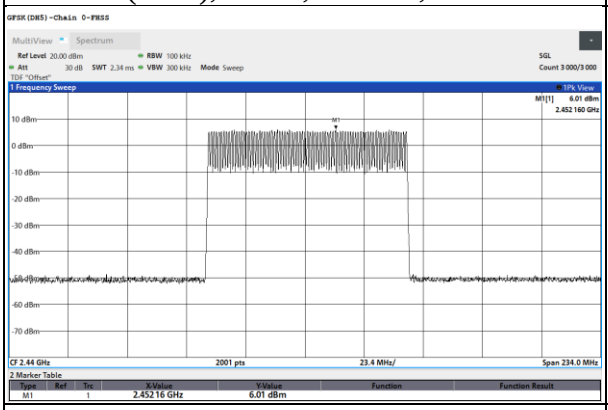
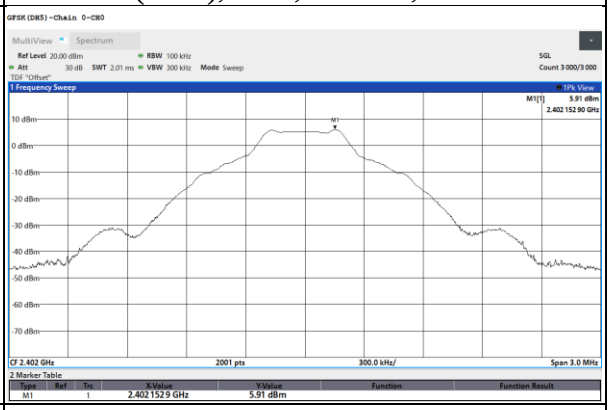
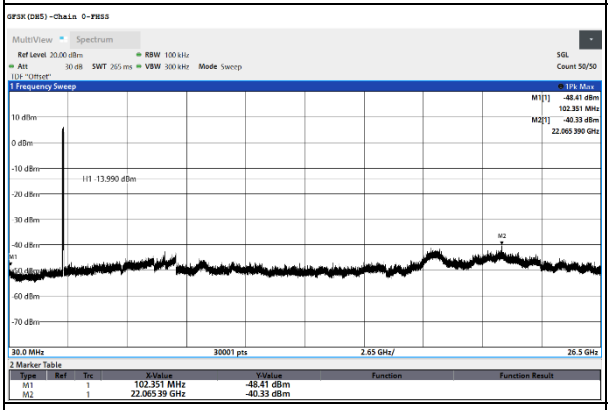
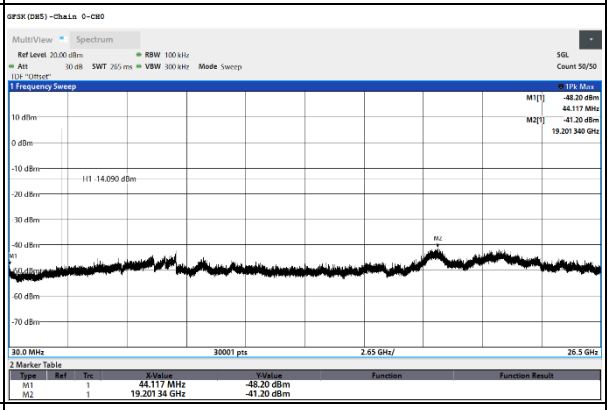
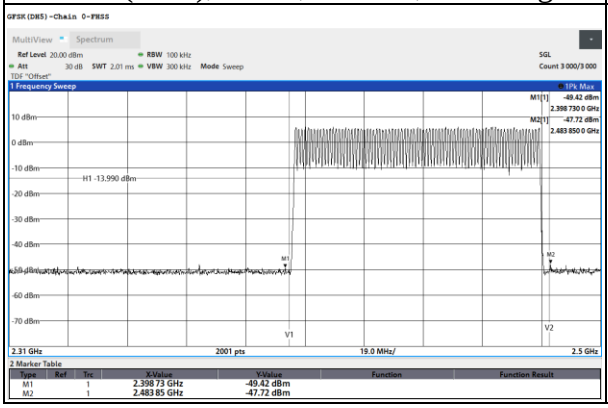
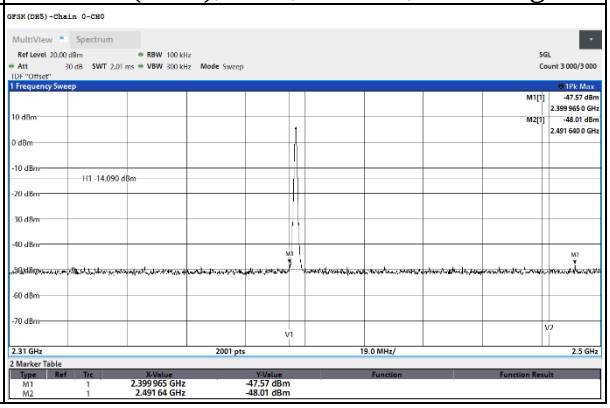
The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 100 kHz and 300 kHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

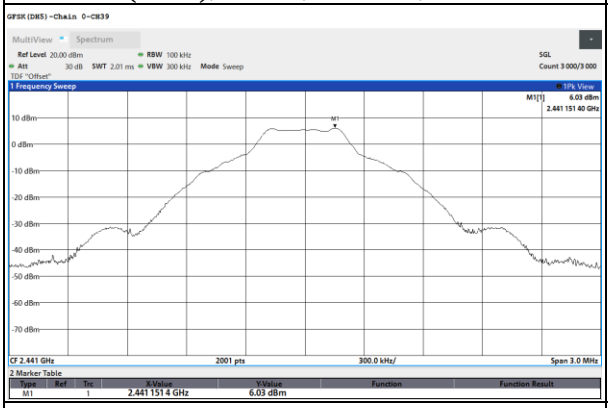
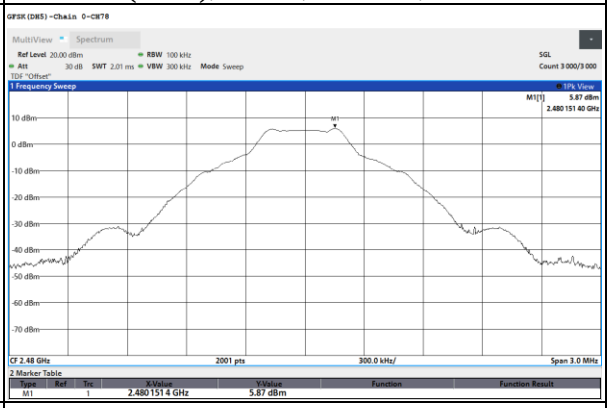
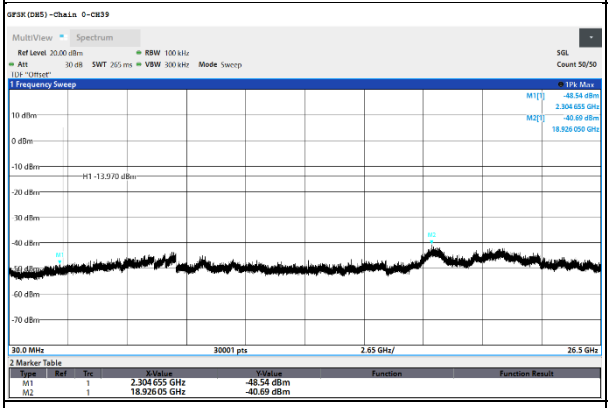
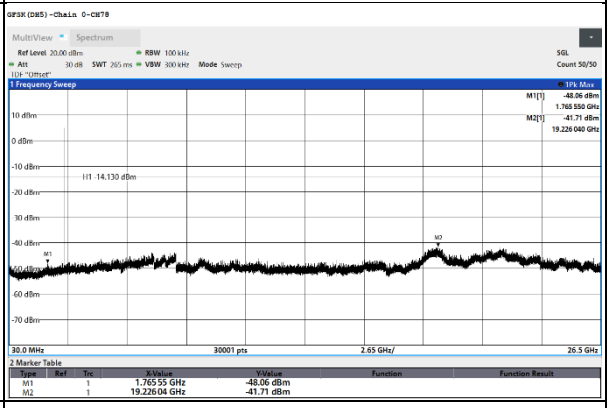
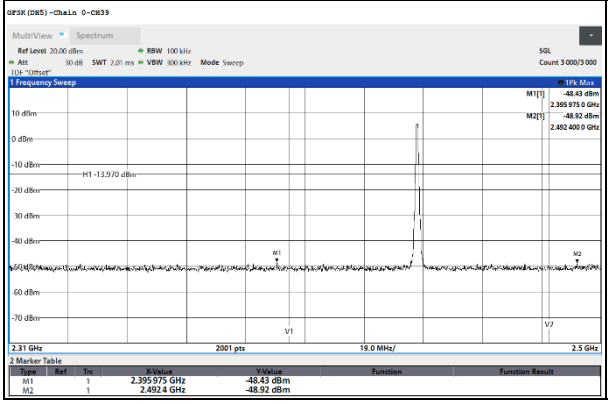
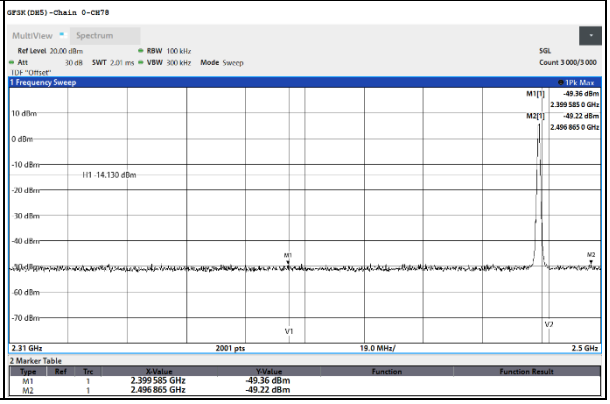
Test Setup

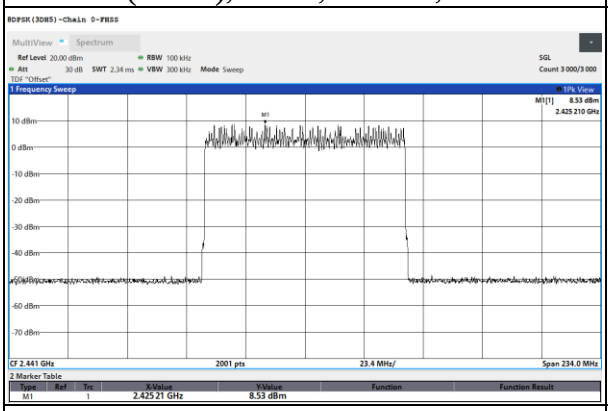
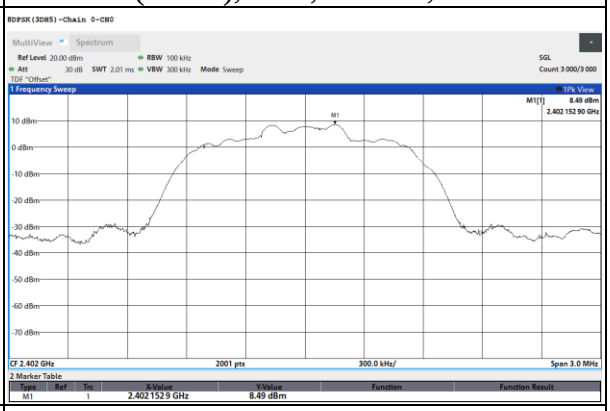
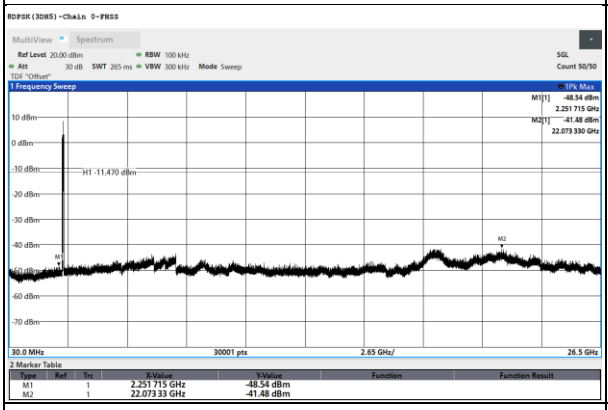
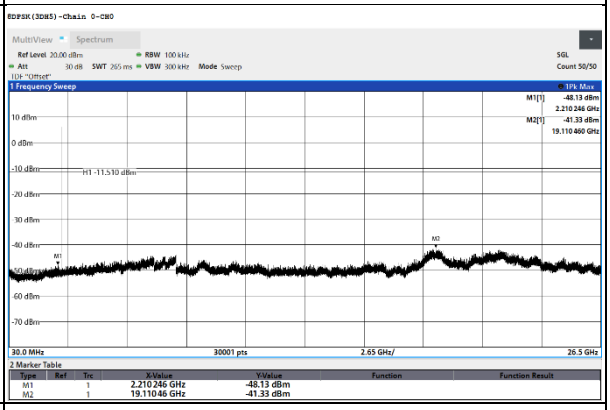
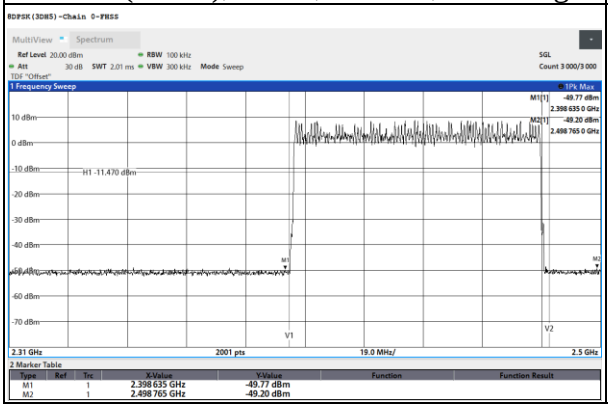
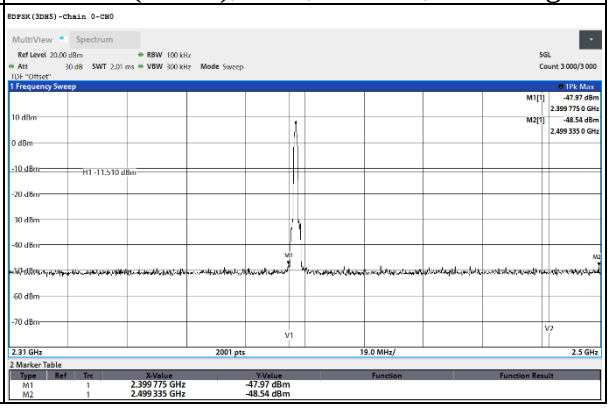


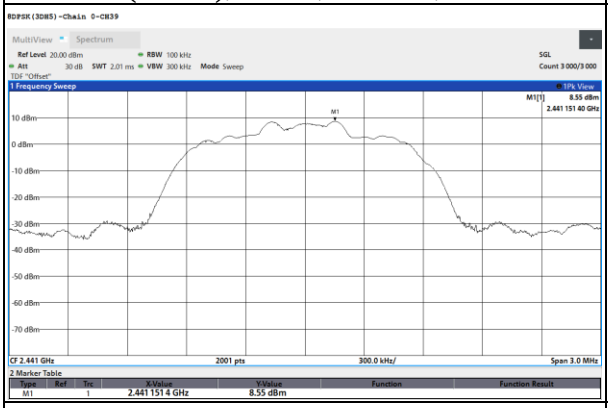
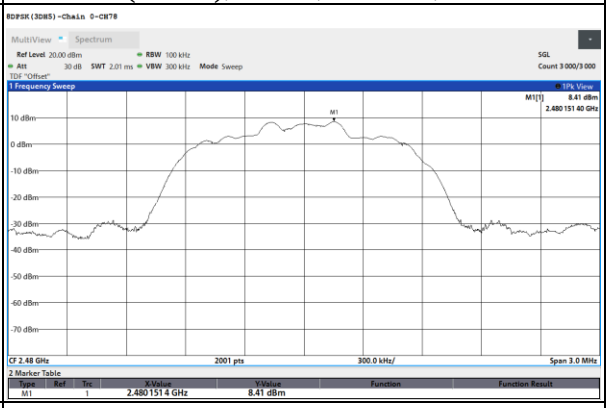
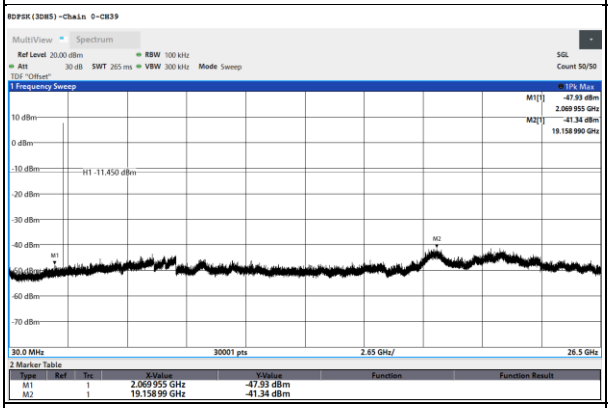
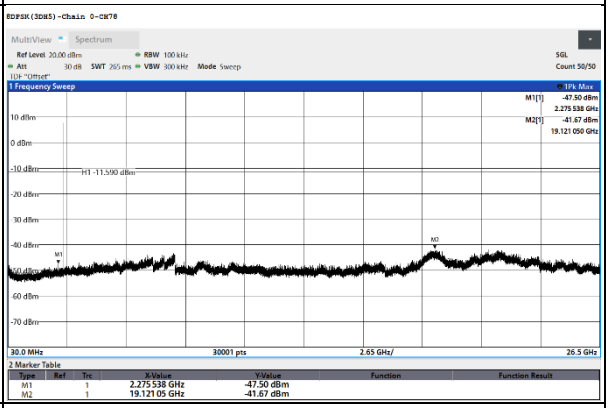
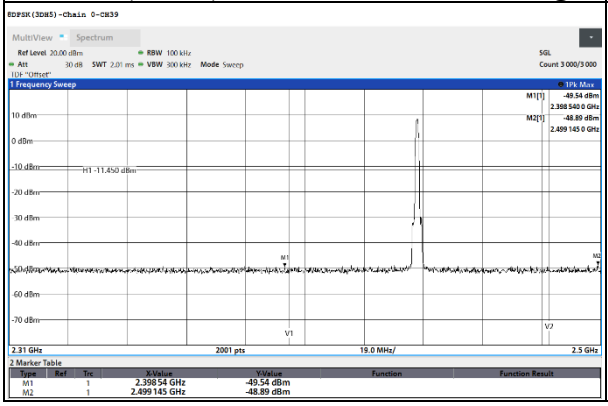
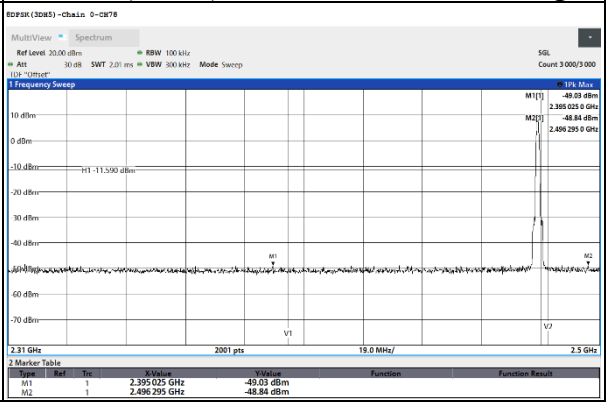
The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.

Test Data

GFSK(DH5), FHSS, Chain 0, Reference	GFSK(DH5), CH0, Chain 0, Reference
	
GFSK(DH5), FHSS, Chain 0, Conducted Emission	GFSK(DH5), CH0, Chain 0, Conducted Emission
	
GFSK(DH5), FHSS, Chain 0, Band edge	GFSK(DH5), CH0, Chain 0, Band edge
	

GFSK(DH5), CH39, Chain 0, Reference	GFSK(DH5), CH78, Chain 0, Reference
	
GFSK(DH5), CH39, Chain 0, Conducted Emission	GFSK(DH5), CH78, Chain 0, Conducted Emission
	
GFSK(DH5), CH39, Chain 0, Band edge	GFSK(DH5), CH78, Chain 0, Band edge
	

8DPSK(3DH5), FHSS, Chain 0, Reference	8DPSK(3DH5), CH0, Chain 0, Reference
	
8DPSK(3DH5), FHSS, Chain 0, Conducted Emission	8DPSK(3DH5), CH0, Chain 0, Conducted Emission
	
8DPSK(3DH5), FHSS, Chain 0, Band edge	8DPSK(3DH5), CH0, Chain 0, Band edge
	

8DPSK(3DH5), CH39, Chain 0, Reference	8DPSK(3DH5), CH78, Chain 0, Reference
	
8DPSK(3DH5), CH39, Chain 0, Conducted Emission	8DPSK(3DH5), CH78, Chain 0, Conducted Emission
	
8DPSK(3DH5), CH39, Chain 0, Band edge	8DPSK(3DH5), CH78, Chain 0, Band edge
	

9.7. Radiated Spurious Emission

Requirements

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

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

Test Procedures

[For 9 kHz ~ 30 MHz]

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. For measurement below 30MHz, 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 then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

NOTE:
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

[For above 30 MHz]

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. For measurement below 1GHz, 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 then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

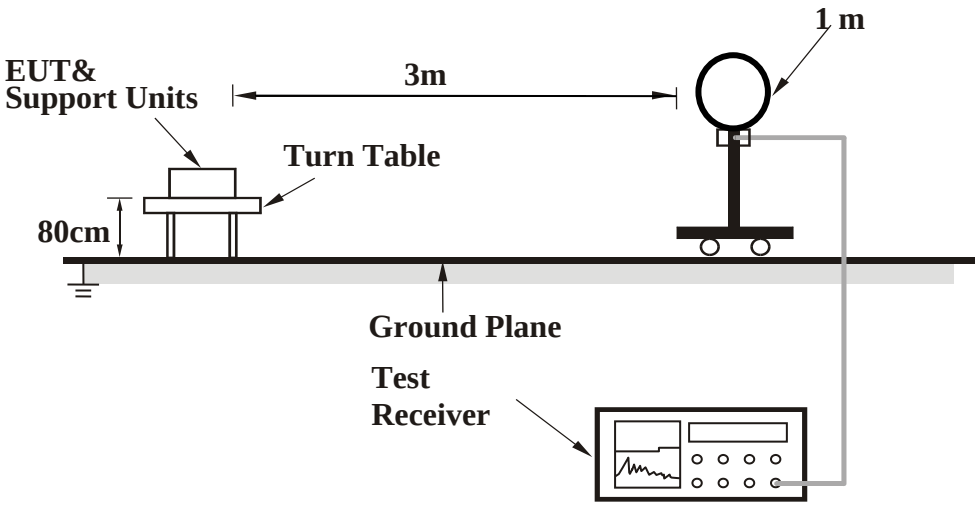
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.

Configuration	Average	
	RBW	VBW
Bluetooth	1MHz	Refer to section 6.6 for duty cycle.

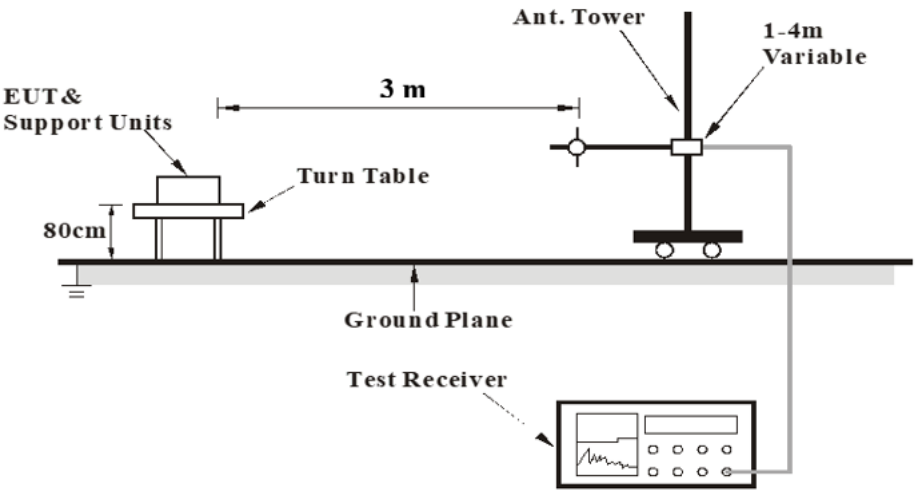
4. All modes of operation were investigated (includes all external accessories) and the worst-case emissions are reported, the other emission levels were low against the limit.
5. Test data of Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
6. Test data of Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
7. Test data of Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - Preamp Factor (dB).
8. Test data of Notation "@" = Fundamental Frequency
9. Test data of Notation " * " = The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.

Test Setup

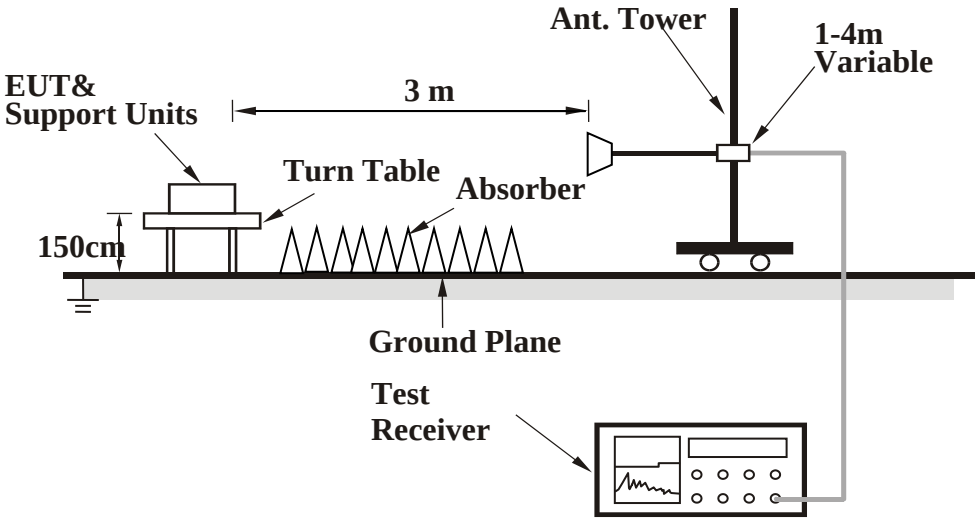
<Frequency Range 9 kHz ~ 30 MHz>



<Frequency Range 30 MHz ~ 1 GHz >



<Frequency Range above 1 GHz>



For the actual test configuration, please refer to the Setup Configurations.

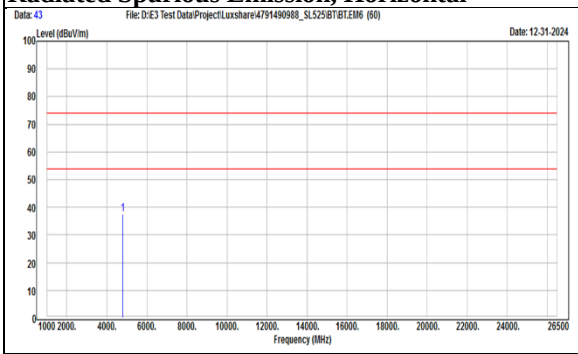
Test Data

Above 1 GHz

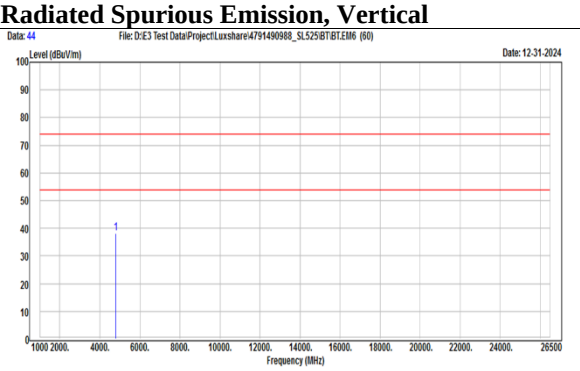
Mode	GFSK	Channel	0

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2351.04	28.73	19.4	48.13	54	-5.87	AVG
		2351.61	40.57	19.4	59.97	74	-14.03	PK
	@	2402	79.26	19.14	98.4	N/A	N/A	PK
	@	2402	79.06	19.14	98.2	N/A	N/A	AVG
	*	4804	34.85	2.65	37.5	74	-36.5	PK
Vertical		2317.22	40.95	19.35	60.3	74	-13.7	PK
		2347.81	28.59	19.41	48	54	-6	AVG
	@	2402	78.66	19.14	97.8	N/A	N/A	PK
	@	2402	78.47	19.14	97.61	N/A	N/A	AVG
	*	4804	35.44	2.65	38.09	74	-35.91	PK

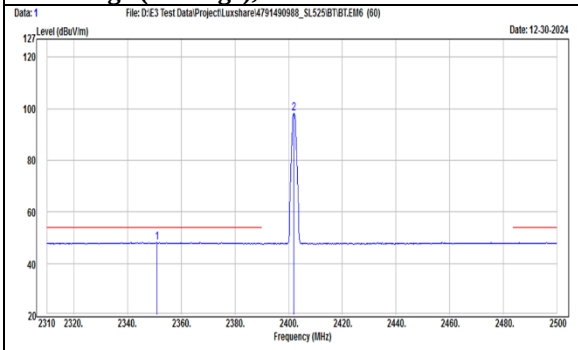
TX, GFSK (Ch 0)
Radiated Spurious Emission, Horizontal



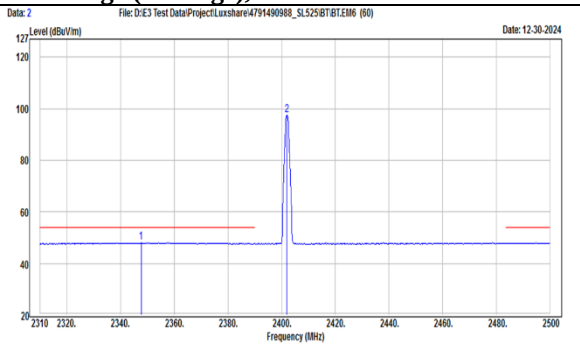
TX, GFSK (Ch 0)
Radiated Spurious Emission, Vertical



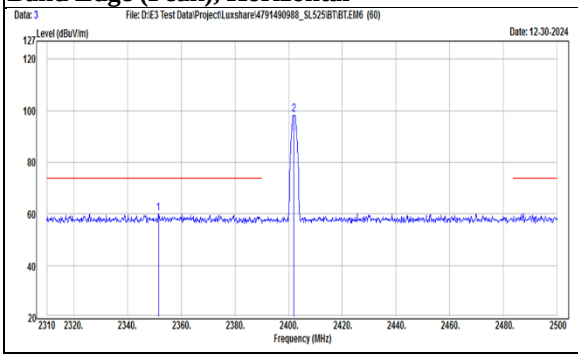
TX, GFSK (Ch 0)
Band Edge (Average), Horizontal



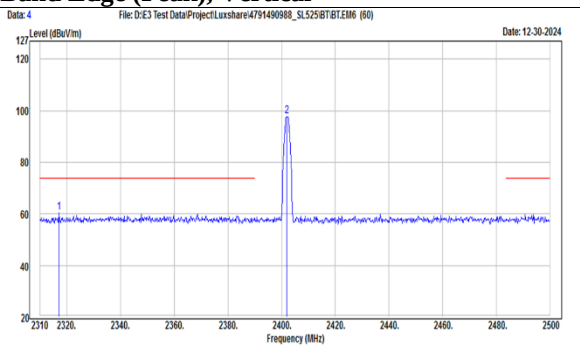
TX, GFSK (Ch 0)
Band Edge (Average), Vertical



TX, GFSK (Ch 0)
Band Edge (Peak), Horizontal

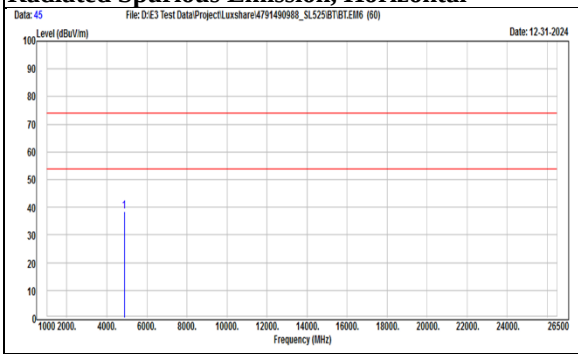
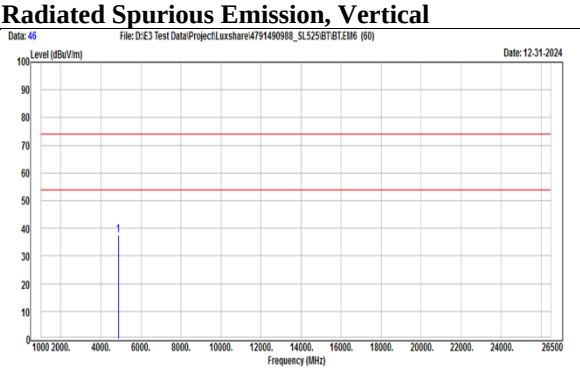
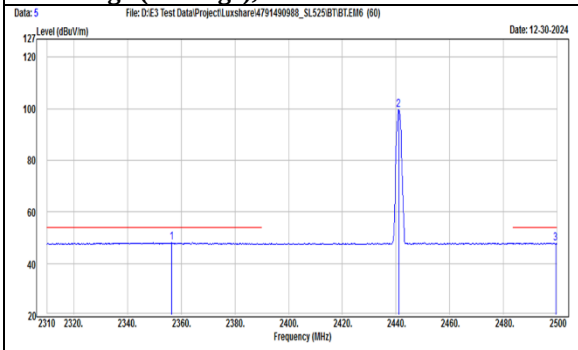
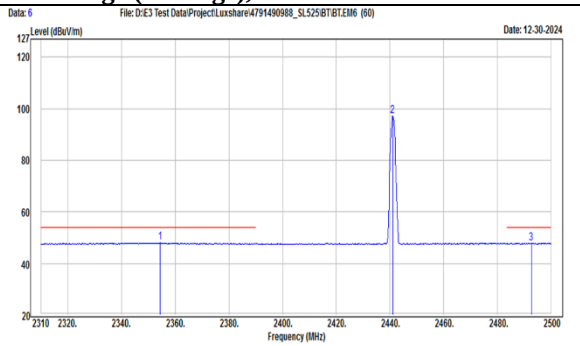
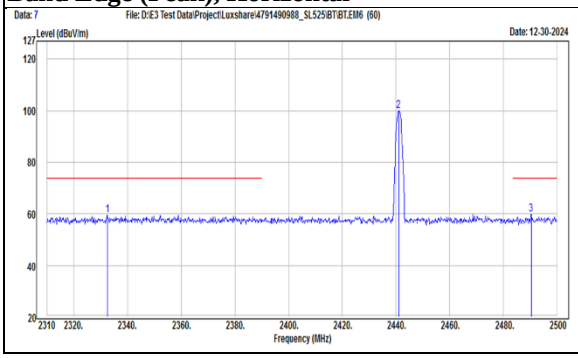
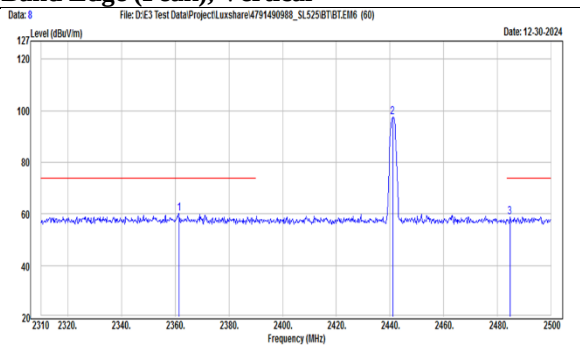


TX, GFSK (Ch 0)
Band Edge (Peak), Vertical



Mode	GFSK	Channel	39

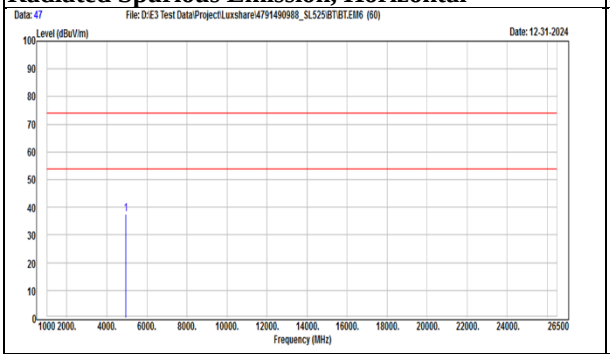
Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2332.61	40.16	19.39	59.55	74	-14.45	PK
		2356.55	28.63	19.38	48.01	54	-5.99	AVG
	@	2441	80.7	19.2	99.9	N/A	N/A	PK
	@	2441	80.52	19.2	99.72	N/A	N/A	AVG
		2490.31	40.71	19.2	59.91	74	-14.09	PK
		2499.43	28.74	19.2	47.94	54	-6.06	AVG
	*	4882	35.91	2.71	38.62	74	-35.38	PK
Vertical		2354.46	28.59	19.38	47.97	54	-6.03	AVG
		2361.49	40.7	19.35	60.05	74	-13.95	PK
	@	2441	78.25	19.2	97.45	N/A	N/A	PK
	@	2441	77.97	19.2	97.17	N/A	N/A	AVG
		2484.61	39.66	19.2	58.86	74	-15.14	PK
		2492.59	28.7	19.2	47.9	54	-6.1	AVG
	*	4882	34.91	2.71	37.62	74	-36.38	PK

TX, GFSK (Ch 39) **Radiated Spurious Emission, Horizontal**	**TX, GFSK (Ch 39)** **Radiated Spurious Emission, Vertical**
	
TX, GFSK (Ch 39) **Band Edge (Average), Horizontal**	**TX, GFSK (Ch 39)** **Band Edge (Average), Vertical**
	
TX, GFSK (Ch 39) **Band Edge (Peak), Horizontal**	**TX, GFSK (Ch 39)** **Band Edge (Peak), Vertical**
	

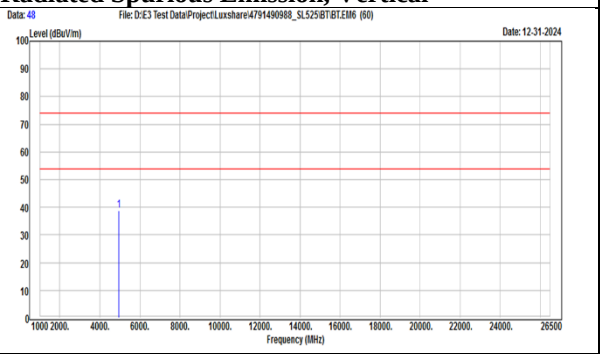
Mode	GFSK	Channel	78

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	@	2480	79.1	19.2	98.3	N/A	N/A	PK
	@	2480	78.78	19.2	97.98	N/A	N/A	AVG
		2483.66	40.54	19.2	59.74	74	-14.26	PK
		2484.23	28.63	19.2	47.83	54	-6.17	AVG
	*	4960	34.77	2.84	37.61	74	-36.39	PK
Vertical	@	2480	78.27	19.2	97.47	N/A	N/A	PK
	@	2480	78.03	19.2	97.23	N/A	N/A	AVG
		2491.64	40.13	19.2	59.33	74	-14.67	PK
		2495.44	28.63	19.2	47.83	54	-6.17	AVG
	*	4960	35.87	2.84	38.71	74	-35.29	PK

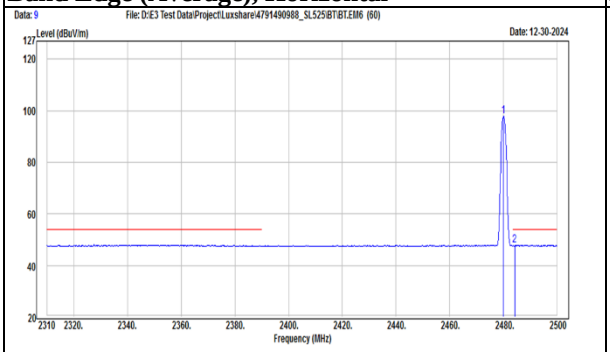
TX, GFSK (Ch 78)
Radiated Spurious Emission, Horizontal



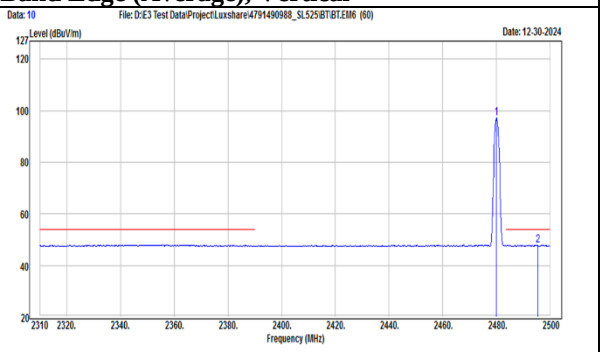
TX, GFSK (Ch 78)
Radiated Spurious Emission, Vertical



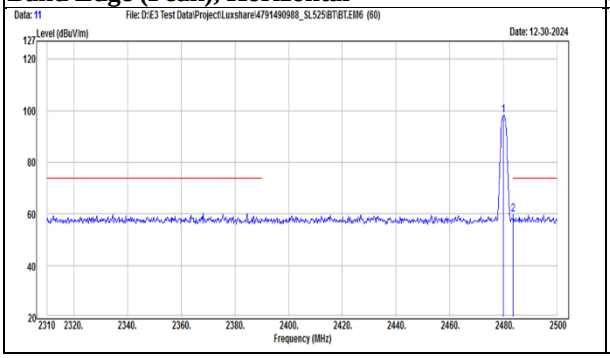
TX, GFSK (Ch 78)
Band Edge (Average), Horizontal



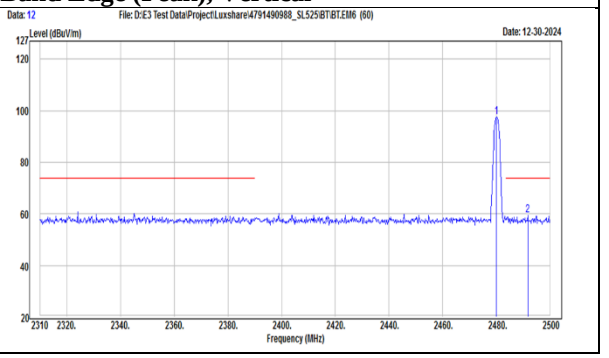
TX, GFSK (Ch 78)
Band Edge (Average), Vertical



TX, GFSK (Ch 78)
Band Edge (Peak), Horizontal

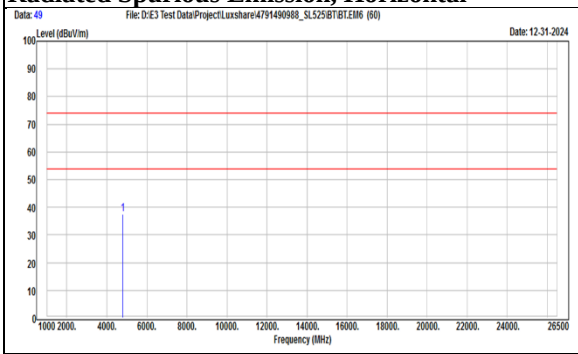
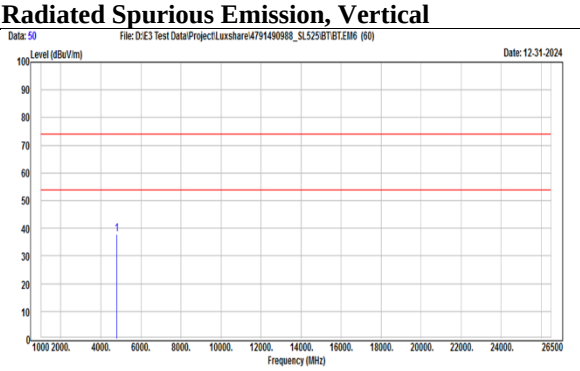
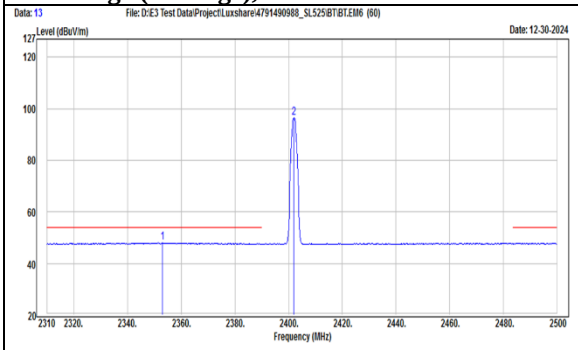
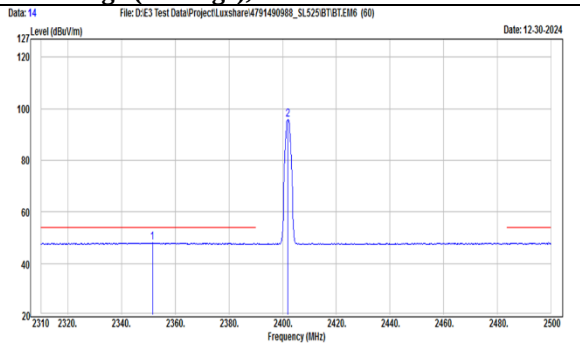
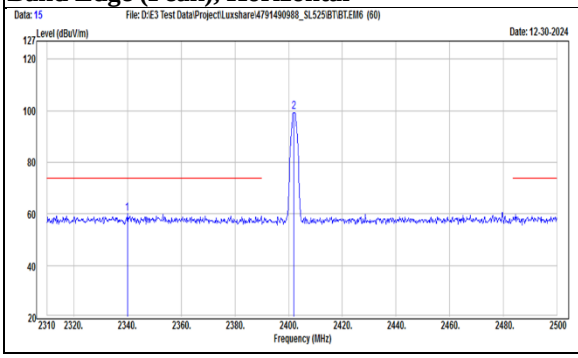
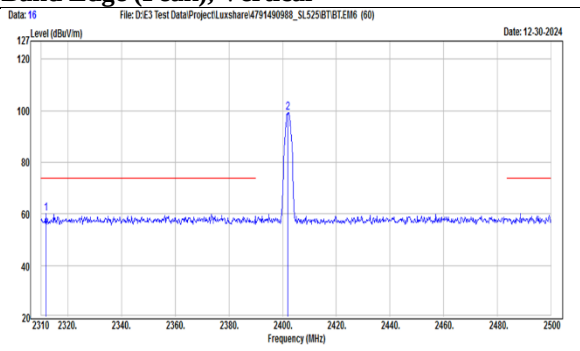


TX, GFSK (Ch 78)
Band Edge (Peak), Vertical



Mode	8DPSK	Channel	0

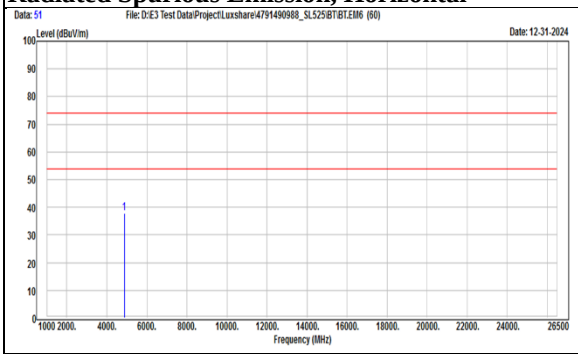
Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2340.02	40.86	19.4	60.26	74	-13.74	PK
		2353.13	28.59	19.39	47.98	54	-6.02	AVG
	@	2402	80.36	19.14	99.5	N/A	N/A	PK
	@	2402	77.33	19.14	96.47	N/A	N/A	AVG
	*	4804	35.01	2.65	37.66	74	-36.34	PK
Vertical		2311.9	40.76	19.34	60.1	74	-13.9	PK
		2351.61	28.56	19.4	47.96	54	-6.04	AVG
	@	2402	80.18	19.14	99.32	N/A	N/A	PK
	@	2402	76.8	19.14	95.94	N/A	N/A	AVG
	*	4804	35.16	2.65	37.81	74	-36.19	PK

TX, 8DPSK (Ch 0) **Radiated Spurious Emission, Horizontal**	**TX, 8DPSK (Ch 0)** **Radiated Spurious Emission, Vertical**
	
TX, 8DPSK (Ch 0) **Band Edge (Average), Horizontal**	**TX, 8DPSK (Ch 0)** **Band Edge (Average), Vertical**
	
TX, 8DPSK (Ch 0) **Band Edge (Peak), Horizontal**	**TX, 8DPSK (Ch 0)** **Band Edge (Peak), Vertical**
	

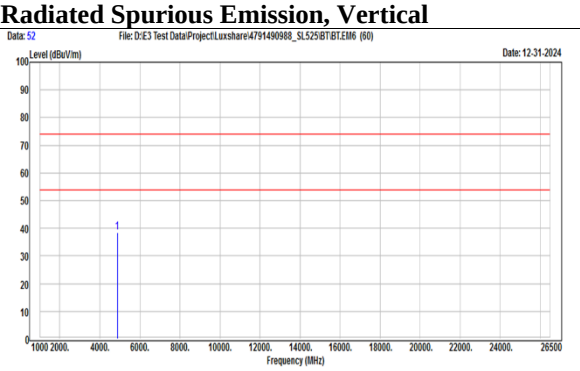
Mode	8DPSK	Channel	39

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2324.44	40.66	19.37	60.03	74	-13.97	PK
		2342.3	28.71	19.4	48.11	54	-5.89	AVG
	@	2441	81.71	19.2	100.91	N/A	N/A	PK
	@	2441	79.06	19.2	98.26	N/A	N/A	AVG
		2487.84	39.72	19.2	58.92	74	-15.08	PK
		2492.4	28.67	19.2	47.87	54	-6.13	AVG
	*	4882	35.22	2.71	37.93	74	-36.07	PK
Vertical		2329	40.82	19.38	60.2	74	-13.8	PK
		2354.08	28.68	19.39	48.07	54	-5.93	AVG
	@	2441	79.17	19.2	98.37	N/A	N/A	PK
	@	2441	76.51	19.2	95.71	N/A	N/A	AVG
		2494.68	28.67	19.2	47.87	54	-6.13	AVG
		2498.29	40.38	19.2	59.58	74	-14.42	PK
	*	4882	35.72	2.71	38.43	74	-35.57	PK

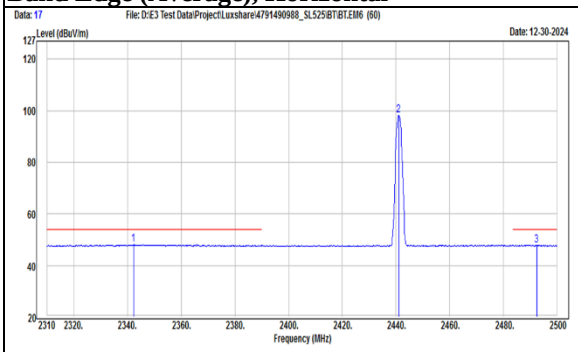
TX, 8DPSK (Ch 39)
Radiated Spurious Emission, Horizontal



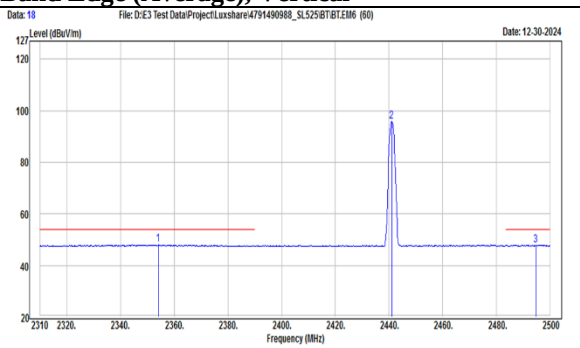
TX, 8DPSK (Ch 39)
Radiated Spurious Emission, Vertical



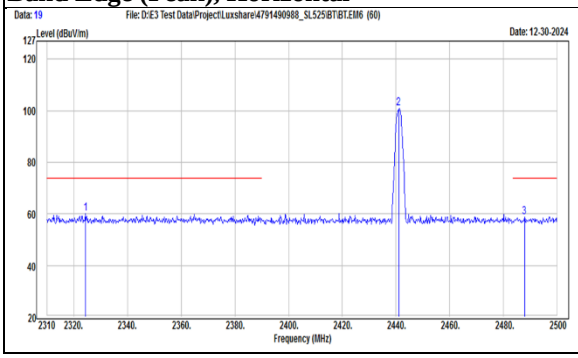
TX, 8DPSK (Ch 39)
Band Edge (Average), Horizontal



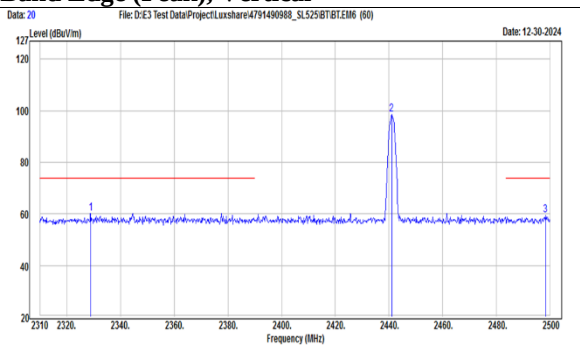
TX, 8DPSK (Ch 39)
Band Edge (Average), Vertical



TX, 8DPSK (Ch 39)
Band Edge (Peak), Horizontal



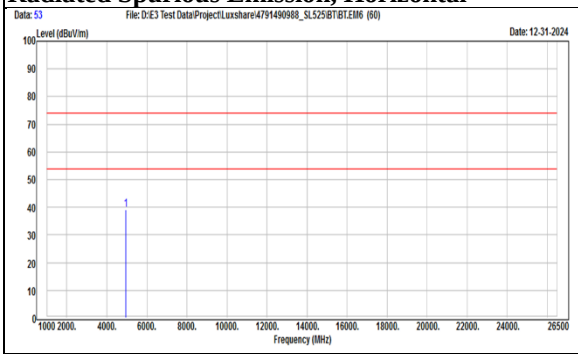
TX, 8DPSK (Ch 39)
Band Edge (Peak), Vertical



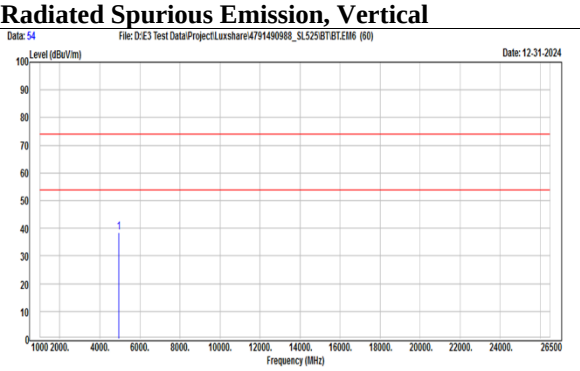
Mode	8DPSK	Channel	78

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	@	2480	81.13	19.2	100.33	N/A	N/A	PK
	@	2480	77.52	19.2	96.72	N/A	N/A	AVG
		2483.85	40.44	19.2	59.64	74	-14.36	PK
		2496.96	28.65	19.2	47.85	54	-6.15	AVG
	*	4960	36.1	2.84	38.94	74	-35.06	PK
Vertical	@	2480	79.13	19.2	98.33	N/A	N/A	PK
	@	2480	76.55	19.2	95.75	N/A	N/A	AVG
		2484.23	28.68	19.2	47.88	54	-6.12	AVG
		2493.16	40.4	19.2	59.6	74	-14.4	PK
	*	4960	35.49	2.84	38.33	74	-35.67	PK

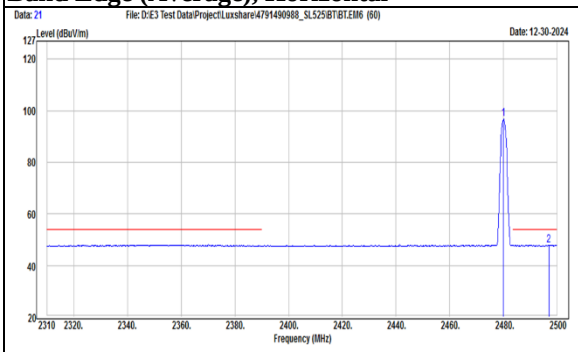
TX, 8DPSK (Ch 78)
Radiated Spurious Emission, Horizontal



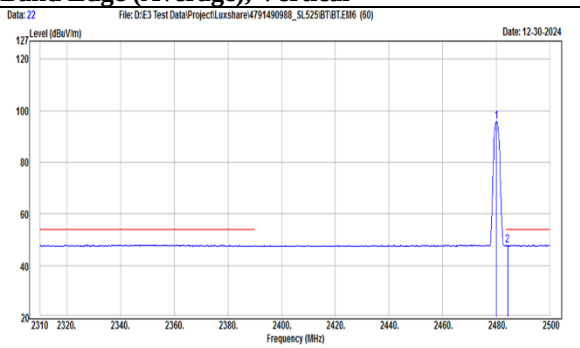
TX, 8DPSK (Ch 78)
Radiated Spurious Emission, Vertical



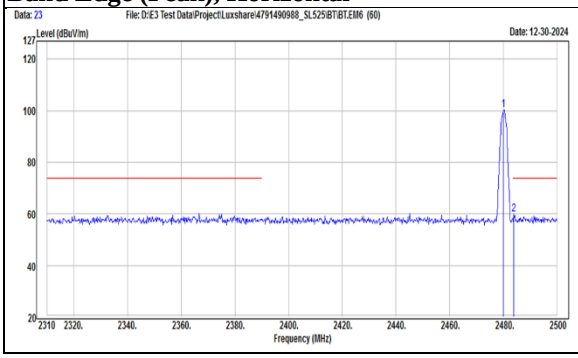
TX, 8DPSK (Ch 78)
Band Edge (Average), Horizontal



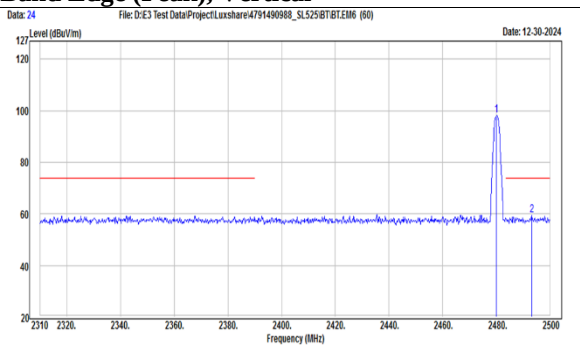
TX, 8DPSK (Ch 78)
Band Edge (Average), Vertical



TX, 8DPSK (Ch 78)
Band Edge (Peak), Horizontal



TX, 8DPSK (Ch 78)
Band Edge (Peak), Vertical

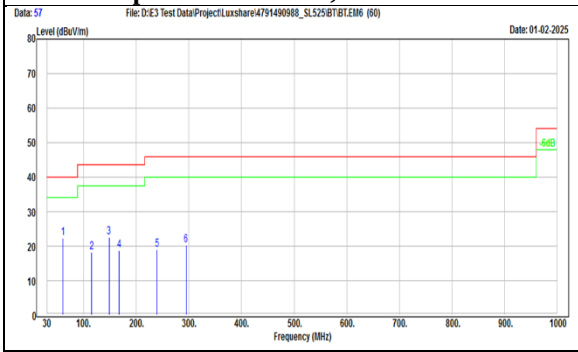


Below 1 GHz

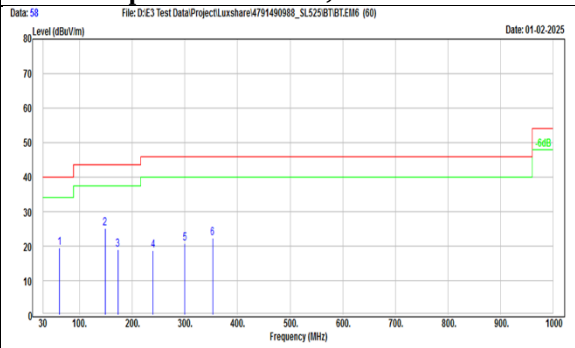
Mode	8DPSK	Channel	78

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		61.04	34.28	-12.05	22.23	40	-17.77	PK
		115.36	32.46	-14.38	18.08	43.5	-25.42	PK
		148.34	34.56	-11.96	22.6	43.5	-20.9	PK
		167.74	30.36	-11.7	18.66	43.5	-24.84	PK
		239.52	31.67	-12.7	18.97	46	-27.03	PK
		294.81	30.79	-10.51	20.28	46	-25.72	PK
Vertical		62.01	31.59	-12.23	19.36	40	-20.64	PK
		148.34	37.03	-11.96	25.07	43.5	-18.43	PK
		172.59	31	-12	19	43.5	-24.5	PK
		239.52	31.42	-12.7	18.72	46	-27.28	PK
		299.66	31.32	-10.49	20.83	46	-25.17	PK
		353.01	31.4	-9.12	22.28	46	-23.72	PK

TX, 8DPSK (Ch 78)
Radiated Spurious Emission, Horizontal



TX, 8DPSK (Ch 78)
Radiated Spurious Emission, Vertical



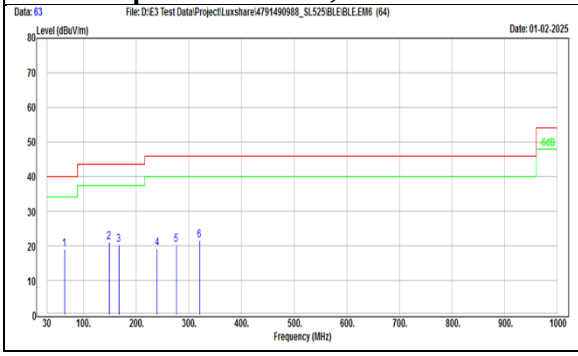
Charging Mode

Below 1 GHz

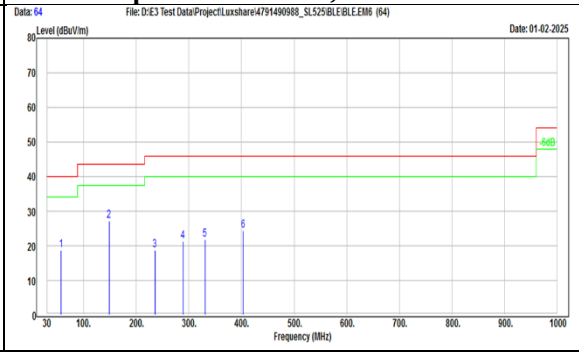
Mode	Charging Mode (Laptop)	Channel	N/A

Polarization	Notation @	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		63.95	31.21	-12.31	18.9	40	-21.1	PK
		148.34	33.05	-11.96	21.09	43.5	-22.41	PK
		166.77	32.06	-11.68	20.38	43.5	-23.12	PK
		239.52	32.01	-12.7	19.31	46	-26.69	PK
		276.38	31.46	-11.16	20.3	46	-25.7	PK
		320.03	31.29	-9.82	21.47	46	-24.53	PK
Vertical		57.16	30.41	-11.63	18.78	40	-21.22	PK
		148.34	39.13	-11.96	27.17	43.5	-16.33	PK
		235.64	31.94	-13.15	18.79	46	-27.21	PK
		288.99	31.95	-10.66	21.29	46	-24.71	PK
		330.7	31.14	-9.32	21.82	46	-24.18	PK
		403.45	31.76	-7.52	24.24	46	-21.76	PK

TX, Charging Mode (Laptop) (Ch N/A)
Radiated Spurious Emission, Horizontal



TX, Charging Mode (Laptop) (Ch N/A)
Radiated Spurious Emission, Vertical



9 kHz ~ 30 MHz Data:

For 9 kHz to 30 MHz radiated emission have performed all modes of operation were investigated. The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

No non-compliance noted:

KDB 414788 D01 OATS and Chamber Correlation Justification

- Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

- OATs and chamber correlation testing had been performed and chamber measured test results is the worst case test result.

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

9.8. AC Power Line Conducted Emission

Requirements

Frequency (MHz)	Conducted limit (dBµV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

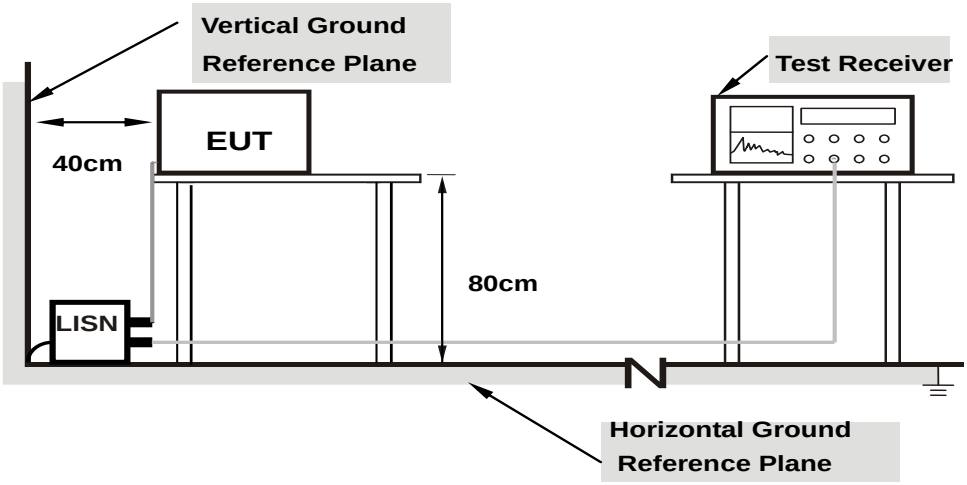
Note:
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

Test Procedures

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

NOTE:
1. The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.
2. All modes of operation were investigated (includes all external accessories) and the worst-case emissions are reported, the other emission levels were low against the limit.
3. Test data of Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB).
4. Test data of Margin(dB) = Result value (dBuV) - Limit value (dBuV).
5. Test data of Correction Factor (dB) = Insertion loss(dB) + Cable loss(dB).

Test Setup



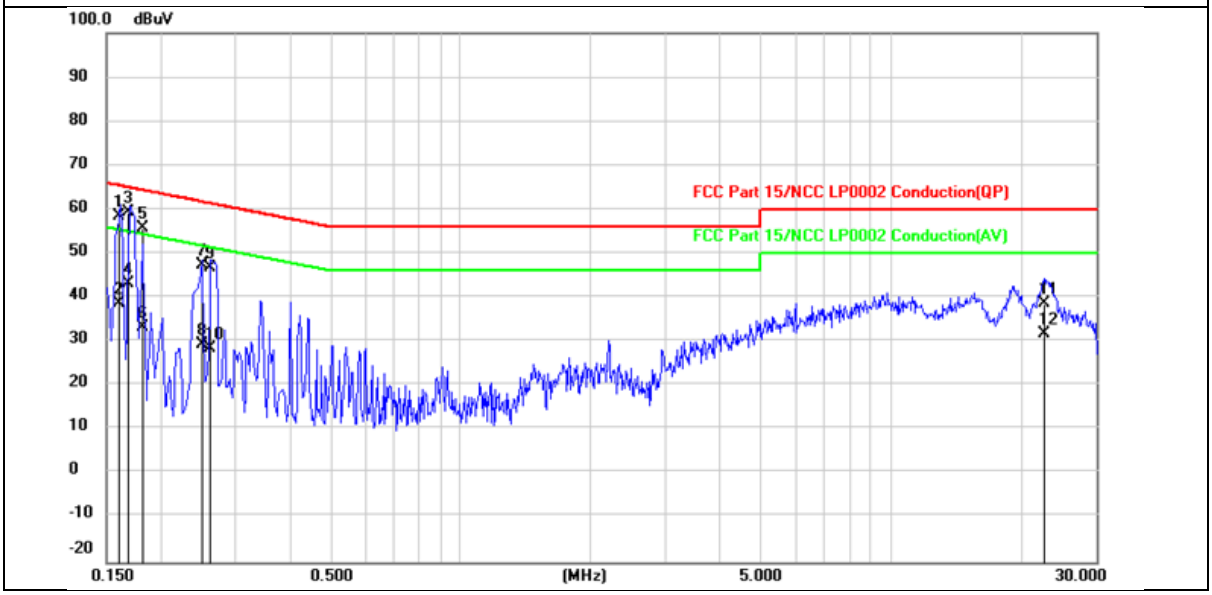
Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the Setup Configurations.

Test Data

Mode	8DPSK_TX2480	Channel	78

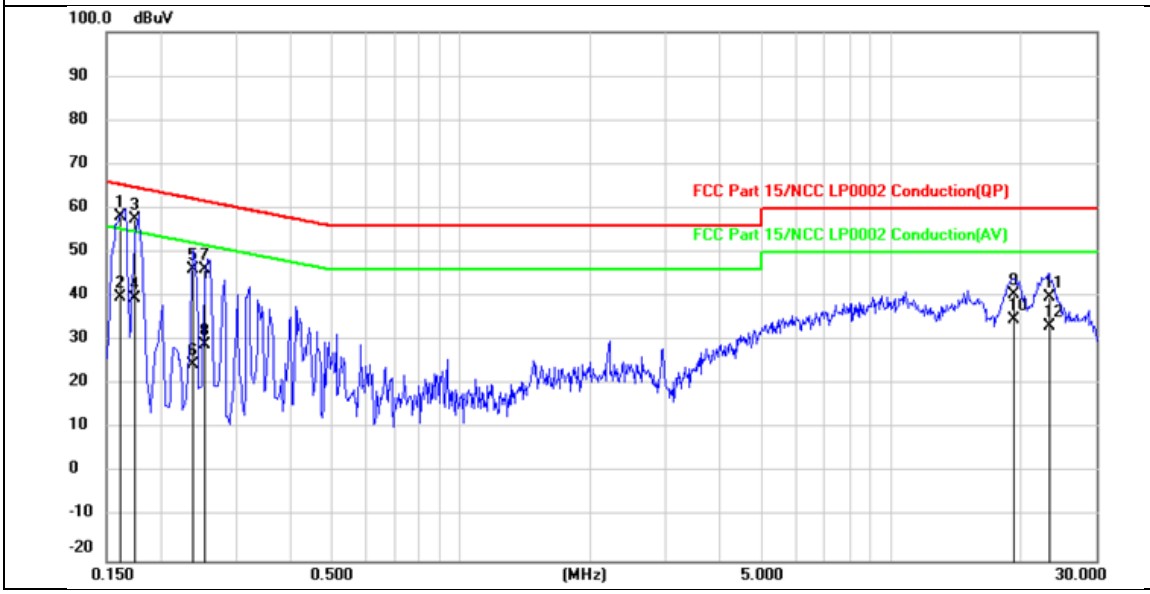
Phase: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1597	48.58	9.96	58.54	65.48	-6.94	QP
2	0.1597	28.72	9.96	38.68	55.48	-16.80	AVG
3	0.1677	49.38	9.96	59.34	65.07	-5.73	QP
4	0.1677	33.25	9.96	43.21	55.07	-11.86	AVG
5	0.1813	45.73	9.96	55.69	64.43	-8.74	QP
6	0.1813	23.34	9.96	33.30	54.43	-21.13	AVG
7	0.2483	37.46	9.96	47.42	61.81	-14.39	QP
8	0.2483	19.37	9.96	29.33	51.81	-22.48	AVG
9	0.2590	36.71	9.96	46.67	61.46	-14.79	QP
10	0.2590	18.42	9.96	28.38	51.46	-23.08	AVG
11	22.7594	27.89	10.62	38.51	60.00	-21.49	QP
12	22.7594	21.14	10.62	31.76	50.00	-18.24	AVG

Mode	8DPSK_TX2480	Channel	78

Phase: Neutral

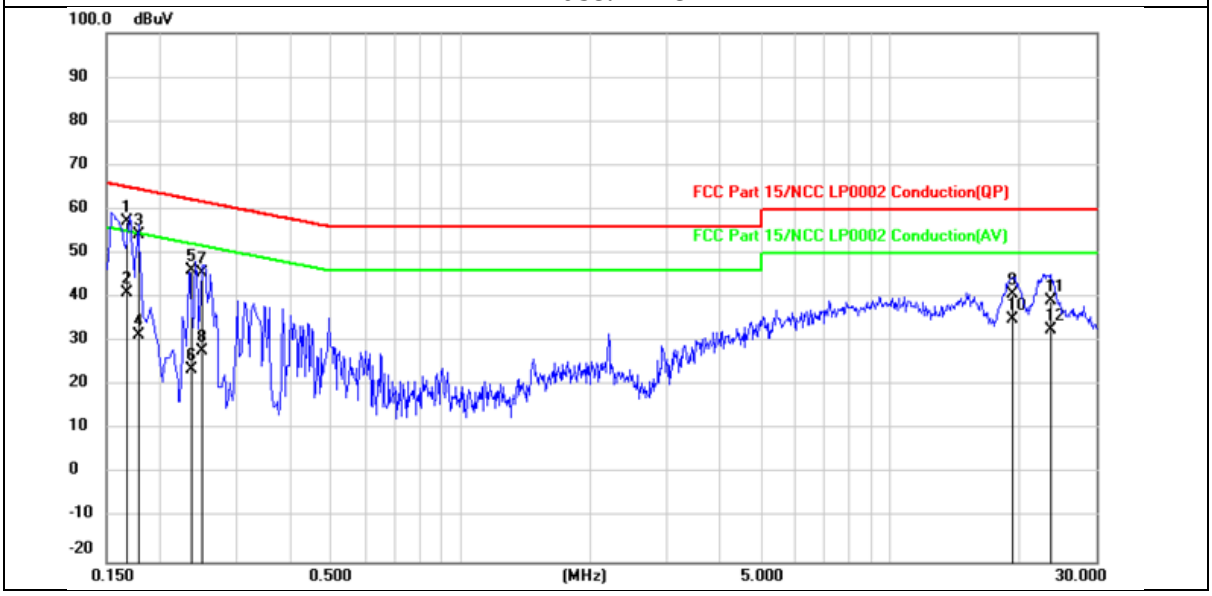


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1612	48.18	9.96	58.14	65.40	-7.26	QP
2	0.1612	29.75	9.96	39.71	55.40	-15.69	AVG
3	0.1741	47.45	9.96	57.41	64.76	-7.35	QP
4	0.1741	29.56	9.96	39.52	54.76	-15.24	AVG
5	0.2390	36.19	9.95	46.14	62.13	-15.99	QP
6	0.2390	14.52	9.95	24.47	52.13	-27.66	AVG
7	0.2539	36.30	9.95	46.25	61.63	-15.38	QP
8	0.2539	19.00	9.95	28.95	51.63	-22.68	AVG
9	19.2908	29.83	10.54	40.37	60.00	-19.63	QP
10	19.2908	24.19	10.54	34.73	50.00	-15.27	AVG
11	23.2912	29.33	10.67	40.00	60.00	-20.00	QP
12	23.2912	22.72	10.67	33.39	50.00	-16.61	AVG

Charging Mode

Mode	Charging Mode	Channel	N/A

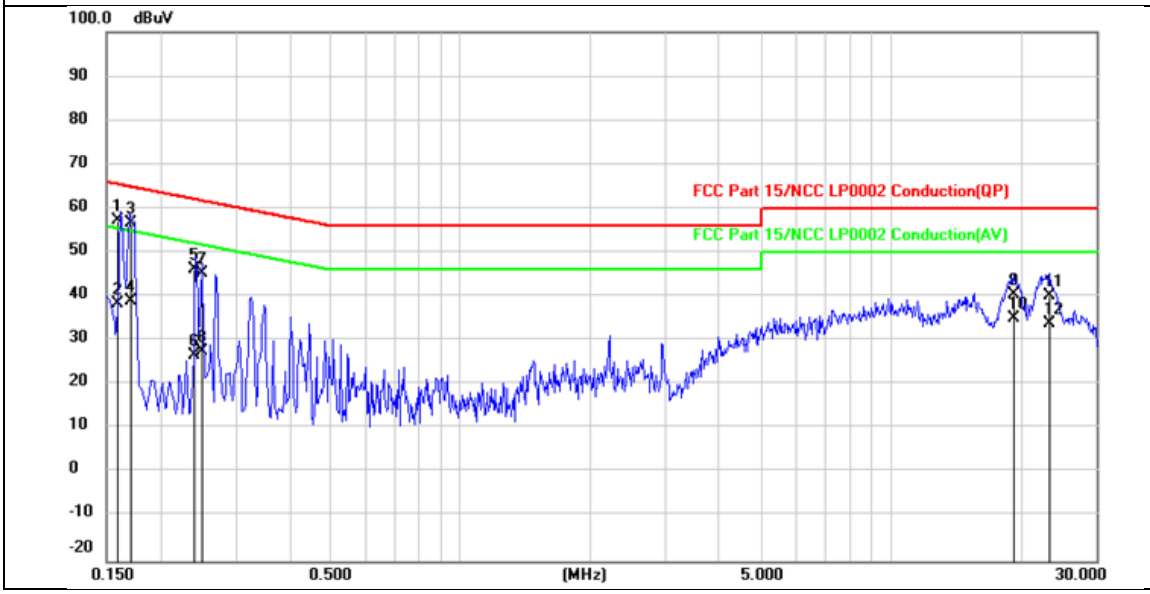
Phase: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1666	47.38	9.96	57.34	65.13	-7.79	QP
2	0.1666	31.18	9.96	41.14	55.13	-13.99	AVG
3	0.1780	44.42	9.96	54.38	64.58	-10.20	QP
4	0.1780	21.63	9.96	31.59	54.58	-22.99	AVG
5	0.2379	36.05	9.96	46.01	62.17	-16.16	QP
6	0.2379	13.70	9.96	23.66	52.17	-28.51	AVG
7	0.2491	35.59	9.96	45.55	61.79	-16.24	QP
8	0.2491	17.92	9.96	27.88	51.79	-23.91	AVG
9	19.2063	30.14	10.51	40.65	60.00	-19.35	QP
10	19.2063	24.55	10.51	35.06	50.00	-14.94	AVG
11	23.6047	28.61	10.64	39.25	60.00	-20.75	QP
12	23.6047	21.93	10.64	32.57	50.00	-17.43	AVG

Mode	Charging Mode	Channel	N/A

Phase: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1582	47.29	9.96	57.25	65.56	-8.31	QP
2	0.1582	28.37	9.96	38.33	55.56	-17.23	AVG
3	0.1708	46.60	9.96	56.56	64.92	-8.36	QP
4	0.1708	29.00	9.96	38.96	54.92	-15.96	AVG
5	0.2400	36.07	9.95	46.02	62.10	-16.08	QP
6	0.2400	16.84	9.95	26.79	52.10	-25.31	AVG
7	0.2491	35.42	9.95	45.37	61.79	-16.42	QP
8	0.2491	17.74	9.95	27.69	51.79	-24.10	AVG
9	19.2863	30.01	10.54	40.55	60.00	-19.45	QP
10	19.2863	24.42	10.54	34.96	50.00	-15.04	AVG
11	23.3966	29.50	10.67	40.17	60.00	-19.83	QP
12	23.3966	23.05	10.67	33.72	50.00	-16.28	AVG

END OF REPORT