



TEST REPORT

Test item description: Children Printer
FCC ID: 2BLE5-G3A
Trademark(s): N/A
Model/Type reference: G3A, G3B, G5, G7
Applicant's name: Shenzhen Tuob Education Electronic Multimedia Co., Ltd
Address: 401, Building B1, Fuhe Industrial Park, No. 18, He xiuxi Road, Fuhai Street, Bao'an District, Shenzhen, China
Manufacturer: Shenzhen Tuob Education Electronic Multimedia Co., Ltd
Address: 401, Building B1, Fuhe Industrial Park, No. 18, He xiuxi Road, Fuhai Street, Bao'an District, Shenzhen, China
Prepared By: Shenzhen CTB Testing Technology Co., Ltd.
Address: 1&2/F., Building A, No.26, Xinhe Road, Xinqiao, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date: Apr. 21, 2026
Sample tested Date: Apr. 21, 2026 to May. 30, 2026
Issue Date: May. 30, 2026
Report No.: CTB26042101306RF01
Test Standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247
ANSI C63.10:2020
Test Results: PASS
Remark: This is Bluetooth radio test report.
Compiled by: Reviewed by: Approved by:

Kai Chen

Kai Chen

Martin Feng

Martin FengBin Mei / Director

Note: If there is any objection to the inspection results in this report, please submit a written report to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. The tested sample(s) and the sample information are provided by the applicant. The authenticity, accuracy, and completeness of the provided information are the sole responsibility of the applicant. Without written approval of Shenzhen CTB Testing Technology Co., Ltd. this report can't be reproduced except in full. The result decision rules of our laboratory are based solely on the direct comparison between the actual measured values of test results and the standard limits, without considering the measurement uncertainty. "★" indicates the testing items were fulfilled by subcontracted lab. "◇" indicates the items are not in CNAS accreditation scope.

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(Note: N/A means not applicable)

**1. VERSION**

Report No.	Issue Date	Description	Approved
CTB26042101306RF01	May. 30, 2026	Original	Valid

2. TEST SUMMARY

The Product has been tested according to the following specifications:

Test Item	Test Requirement	Test method	Result
AC Power Line Conducted Emission	47 CFR Part 15 Subpart C Section 15.207	ANSI C63.10-2020	PASS
Radiated Spurious emissions	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2020	PASS
Band edge and RF Conducted Spurious Emissions	47 CFR Part 15 Subpart C Section 15.247(d)/15.205(a)	ANSI C63.10-2020	PASS
Conducted Peak Output Power	47 CFR Part 15 Subpart C Section 15.247 (b)(1)	ANSI C63.10-2020	PASS
20dB Occupied Bandwidth	47 CFR Part 15 Subpart C Section 15.247 (a)(1)	ANSI C63.10-2020	PASS
Carrier Frequencies Separation	47 CFR Part 15 Subpart C Section 15.247 (a)(1)	ANSI C63.10-2020	PASS
Hopping Channel Number	47 CFR Part 15 Subpart C Section 15.247 (b)	ANSI C63.10-2020	PASS
Dwell Time	47 CFR Part 15 Subpart C Section 15.247 (a)(1)	ANSI C63.10-2020	PASS
Pseudorandom Frequency Hopping Sequence	47 CFR Part 15 Subpart C Section 15.247(a)&TCB Exclusion List (7 July 2002)	ANSI C63.10-2020	PASS
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203/15.247 (b)	/	PASS
RF Exposure Evaluation	47 CFR Part 15 Subpart C Section 15.247 (i)/1.1310/2.1093	KDB447498D01v06	PASS

Remark:

Test according to ANSI C63.10-2020.

3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Item	Uncertainty
Occupancy bandwidth	54.3kHz
Conducted output power above 1G	0.9dB
Conducted output power below 1G	0.9dB
Power Spectral Density , Conduction	0.9dB
Conduction spurious emissions	2.0dB
Out of band emission	2.0dB
3m camber Radiated spurious emission(9kHz-30MHz)	4.8dB
3m camber Radiated spurious emission(30MHz-1GHz)	4.6dB
3m chamber Radiated spurious emission(1GHz-18GHz)	5.1dB
3m chamber Radiated spurious emission(18GHz-40GHz)	3.4dB
Humidity uncertainty	5.5%
Temperature uncertainty	0.63°C
Frequency	1×10 ⁻⁷
Conducted Emission(150kHz-30MHz)	3.2 dB
Radiated Emission(30MHz ~ 1000MHz)	4.8 dB
Radiated Emission(1GHz ~6GHz)	4.9 dB

4. PRODUCT INFORMATION AND TEST SETUP

4.1 Product Information

Model/Type reference:	G3A, G3B, G5, G7
Model Description:	All the model are the same circuit and RF module, only the model names are different. Test sample model: G3A
Bluetooth Version:	Bluetooth 5.0
Hardware Version:	V1.0
Software Version:	V1.0
Operation Frequency:	Bluetooth: 2402-2480MHz Bluetooth
Max. RF output power:	Module 1: 6.86dBm Module 2: 1.89dBm
Type of Modulation:	Bluetooth: GFSK, $\pi/4$ DQPSK, 8DPSK
Antenna installation:	Bluetooth: PCB antenna
Antenna Gain:	Bluetooth: -0.76dBi
Ratings:	DC 5V charging from adapter DC 3.7V by battery

4.2 Test Setup Configuration

See test photographs attached in EUT TEST SETUP PHOTOGRAPHS for the actual connections between Product and support equipment.

4.3 Support Equipment

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
1.	Adapter	JIYIN	JY-05100C	/	AE

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)
0	2402	1	2403	2	2404	3	2405
4	2406	5	2407	6	2408	7	2409
8	2410	9	2411	10	2412	11	2413
12	2414	13	2415	14	2416	15	2417
16	2418	17	2419	18	2420	19	2421
20	2422	21	2423	22	2424	23	2425
24	2426	25	2427	26	2428	27	2429
28	2430	29	2431	30	2432	31	2433
32	2434	33	2435	34	2436	35	2437
36	2438	37	2439	38	2440	39	2441
40	2442	41	2443	42	2444	43	2445
44	2446	45	2447	46	2448	47	2449
48	2450	49	2451	50	2452	51	2453
52	2454	53	2455	54	2456	55	2457
56	2458	57	2459	58	2460	59	2461
60	2462	61	2463	62	2464	63	2465
64	2466	65	2467	66	2468	67	2469
68	2470	69	2471	70	2472	71	2473
72	2474	73	2475	74	2476	75	2477
76	2478	77	2479	78	2480	79	/

4.5 Test Mode

All test mode(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests, the worst data were recorded and reported.

Test mode	Low channel	Middle channel	High channel
Transmitting (GFSK, $\pi/4$ DQPSK, 8DPSK)	2402MHz	2441MHz	2480MHz
Receiving (GFSK, $\pi/4$ DQPSK, 8DPSK)	2402MHz	2441MHz	2480MHz

4.6 Test Environment

Humidity(%):	54
Atmospheric Pressure(kPa):	101
Normal Voltage(AC):	120V
Normal Temperature($^{\circ}$ C)	23
Low Temperature($^{\circ}$ C)	0
High Temperature($^{\circ}$ C)	40

5. TEST FACILITY AND TEST INSTRUMENT USED

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at 1&2F., Building A, No. 26, Xinhe Road, Xinqiao, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: CN1276

5.2 Test Instrument Used

No.	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Calibrated Date	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY52090073	A.14.16	2026/5/14	2027/5/13
2	Power Sensor	Agilent	U2021XA	MY56120032	/	2026/5/14	2027/5/13
3	Power Sensor	Agilent	U2021XA	MY56120034	/	2026/5/14	2027/5/13
4	Communication test set	R&S	CMW500	108058	V3.5.80	2026/5/14	2027/5/13
5	Spectrum Analyzer	KEYSIGHT	N9020A	MY51289897	A.14.16	2026/5/14	2027/5/13
6	Signal Generator	Agilent	N5181A	MY50140365	A.01.60	2026/5/14	2027/5/13
7	Vector signal generator	Agilent	N5182A	MY47420195	A.01.87	2026/5/14	2027/5/13
8	Communication test set	Agilent	E5515C	MY50102567	B.19.07 (E1962B)	2026/5/14	2027/5/13
9	2.4 GHz Filter	Shenxiang	MSF2400-2483.5MS-1154	20181015001	/	2026/5/16	2027/5/15
10	5 GHz Filter	Shenxiang	MSF5150-5850 MS-1155	20181015001	/	2026/5/16	2027/5/15
11	Filter	Xingbo	XBLBQ-DZA120	190821-1-1	/	2026/5/16	2027/5/15
12	BT&WI-FI Automatic test software	Microwave	MTS8310	Ver. 2.0.0.0	/	/	/
13	Rohde & Schwarz SFU Broadcast Test System	R&S	SFU	101017	/	2025/10/20	2026/10/19
14	Temperature humidity chamber	Hongjing	TH-80CH	DG-15174	/	2025/7/13	2026/7/12
15	234G Automatic test software	Microwave	MTS8200	Ver. 2.0.0.0	/	/	/
16	966 chamber	C.R.T.	966	/	/	2024/6/23	2027/6/22

17	Receiver	R&S	ESPI	100362	RF_ATTEN_7 (104489/003)	2026/5/15	2027/5/14
18	Amplifier	HP	8447E	2945A02747	/	2026/5/15	2027/5/14
19	Amplifier	Agilent	8449B	3008A01838	/	2026/5/14	2027/5/13
20	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	00869	/	2026/5/17	2027/5/16
21	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA9120D	01911	/	2026/5/15	2027/5/14
22	EMI test software	Fala	EZ-EMC	FA-03A2 RE	/	/	/
23	Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-224	/	2026/5/17	2027/5/16
24	loop antenna	ZHINAN	ZN30900A	GTS534	/	/	/
25	40G Horn antenna	A/H/System	SAS-574	588	/	2025/6/2	2026/6/1
26	Amplifier	AEROFLEX	Aeroflex	097	/	2025/6/2	2026/6/1
27	Power Meter	KEYSIGHT	N1912AP	N/A	A.05.00	2025/6/2	2026/6/1

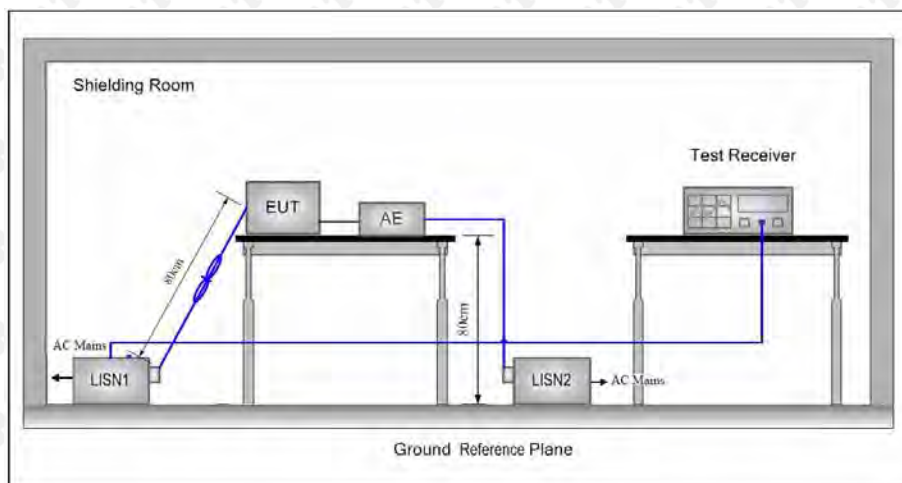
Continuous disturbance							
No.	Equipment	Manufacturer	Model No.	Serial No.	Firmware version	Calibrated Date	Calibrated until
1	843 Shield Room	C/ R/ T	843	/	/	2024/6/22	2027/6/21
2	LISN	ROHDE&SCHWARZ	ESH3-Z5	831551852	/	2026/5/14	2027/5/13
3	EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100428	V4.42.SP3	2026/5/15	2027/5/14
4	Coaxial cable	ZDECL	Z302S	18091904	/	2026/5/14	2027/5/13
5	ISN	Schwarzbeck	NTFM8158	183	/	2026/5/18	2027/5/17
6	Voltage sensor	Schwarzbeck	TK 9420	01189	/	2026/5/16	2027/5/15
7	EZ-EMC	Frad	EMC-con3A1.1	/	/	/	/
8	Current Probe	FCC	F-52B	199453	/	2026/5/22	2027/5/21
9	Communication test set	R&S	CMW500	108058	B.19.07 (E1962B)	2026/5/14	2027/5/13
10	Communication test set	Agilent	E5515C	MY50102567	V3.5.80	2026/5/14	2027/5/13

Radiated emission(No.1 Chamber)							
No.	Equipment	Manufacturer	Model No.	Serial No.	Firmware version	Calibrated until	Calibrated until
1	966 Chamber	C/ R/ T	966	/	/	2024/6/23	2027/6/22
2	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA 9120 D	01911	/	2026/5/15	2027/5/14

3	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	00869	/	2026/5/17	2027/5/16
4	Amplifier	Agilent	8449B	3008A01838	/	2026/5/14	2027/5/13
5	Amplifier	HP	8447E	2945A02747	/	2026/5/15	2027/5/14
6	loop antenna	Schwarzbeck	FMZB 1519B	1519B-224	/	2026/5/17	2027/5/16
7	EMI TEST RECEIVER	ROHDE&SCHWARZ	ESPI	100362	RF_ATTEN_7 (104489/003)	2026/5/15	2027/5/14
8	Spectrum Analyzer	KEYSIGHT	N9020A	MY51289897	A.14.16	2026/5/14	2027/5/13
9	Coaxial cable	ETS	RFC-SNS-100-NMS-80	/	/	2026/5/14	2027/5/13
10	Coaxial cable	ETS	RFC-SN-100-NMS-20	/	/	2026/5/14	2027/5/13
11	Coaxial cable	ETS	RFC-SNS-100-SMS-20	/	/	2026/5/14	2027/5/13
12	Coaxial cable	ETS	RFC-NNS-100-NMS-300	/	/	2026/5/14	2027/5/13
13	EMI test software	Frad	EZ-EMC	Ver/ FA-03A2 RE	/	/	/
14	Communication test set	R&S	CMW500	108058	B.19.07 (E1962B)	2026/5/14	2027/5/13
15	Communication test set	Agilent	E5515C	MY50102567	V3.5.80	2026/5/14	2027/5/13

6. AC POWER LINE CONDUCTED EMISSION

6.1 Block Diagram Of Test Setup



6.2 Limit

Table 4 - AC power-line conducted emissions limits

Frequency (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 ^{Note 1}	56 to 46 ^{Note 1}
0.5 - 5	56	46
5 - 30	60	50

Note 1: The level decreases linearly with the logarithm of the frequency.

* Decreasing linearly with the logarithm of the frequency

6.3 Test procedure

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane.

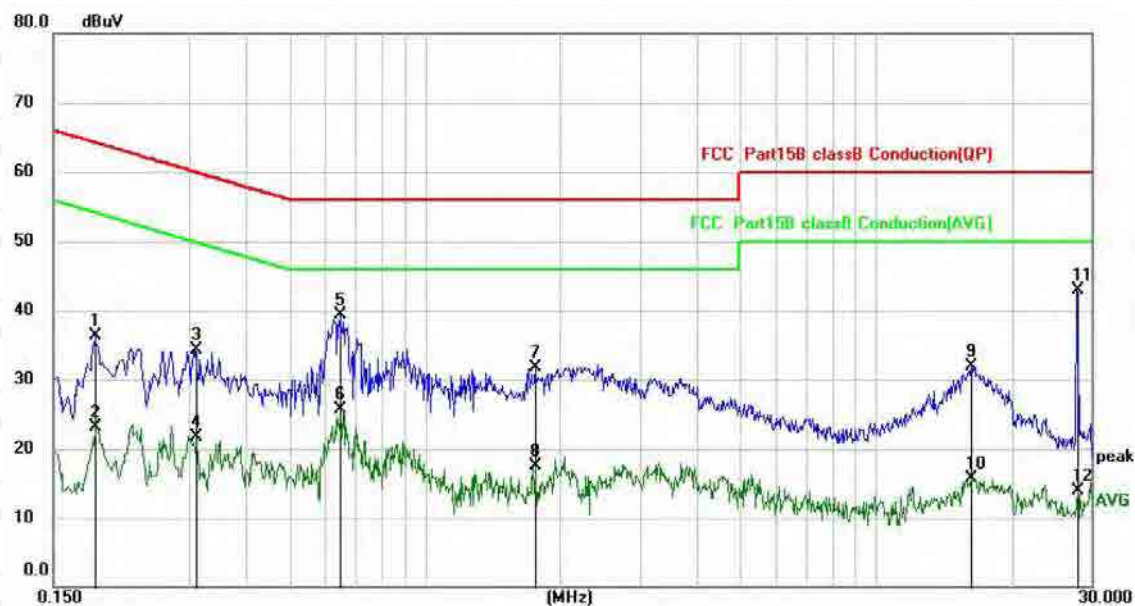
This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.

- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2020 on conducted measurement.
- 6) All modes were tested at AC 120V and 240V, only the worst result of AC 120V 60Hz was reported.
- 7) If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.

6.4 Test Result

Module 1

L: Worst case-GFSK(low channel)

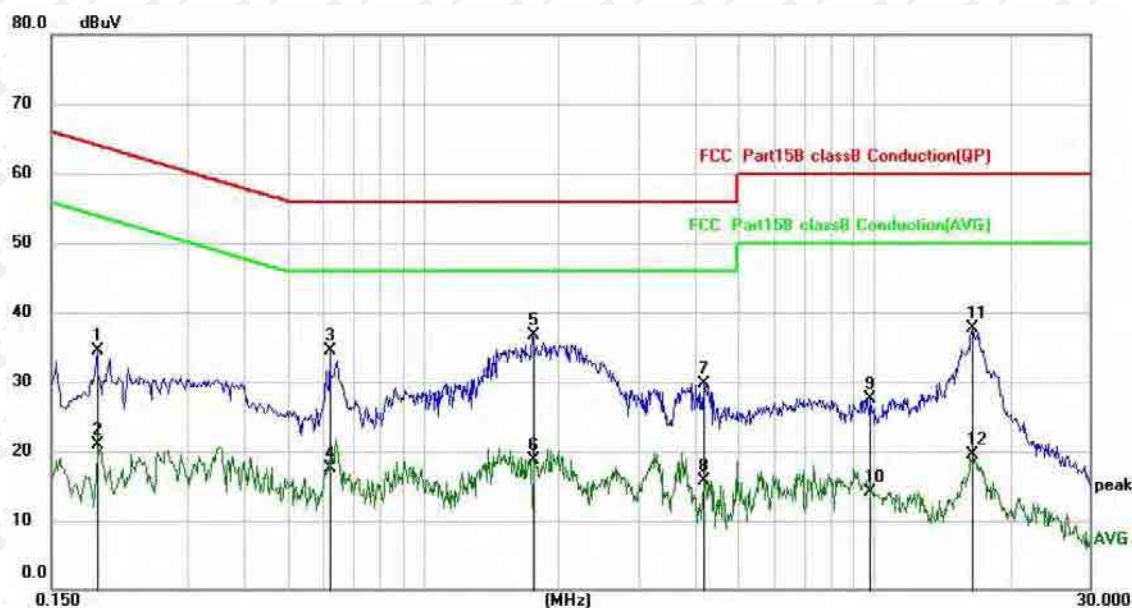


No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
		MHz	Level	Factor	ment			Detector
			dBuV	dB	dBuV	dBuV	dB	
1		0.1859	26.17	10.08	36.25	64.22	-27.97	QP
2		0.1859	13.10	10.08	23.18	54.22	-31.04	AVG
3		0.3100	24.24	10.08	34.32	59.97	-25.65	QP
4		0.3100	11.65	10.08	21.73	49.97	-28.24	AVG
5	*	0.6500	29.24	10.10	39.34	56.00	-16.66	QP
6		0.6500	15.64	10.10	25.74	46.00	-20.26	AVG
7		1.7580	21.64	10.16	31.80	56.00	-24.20	QP
8		1.7580	7.25	10.16	17.41	46.00	-28.59	AVG
9		16.2337	21.21	10.79	32.00	60.00	-28.00	QP
10		16.2337	4.93	10.79	15.72	50.00	-34.28	AVG
11		27.9020	31.76	11.22	42.98	60.00	-17.02	QP
12		27.9020	2.68	11.22	13.90	50.00	-36.10	AVG

Remark:

Factor = Cable loss + LISN factor, Margin = Measurement – Limit

N: Worst case-GFSK(low channel)



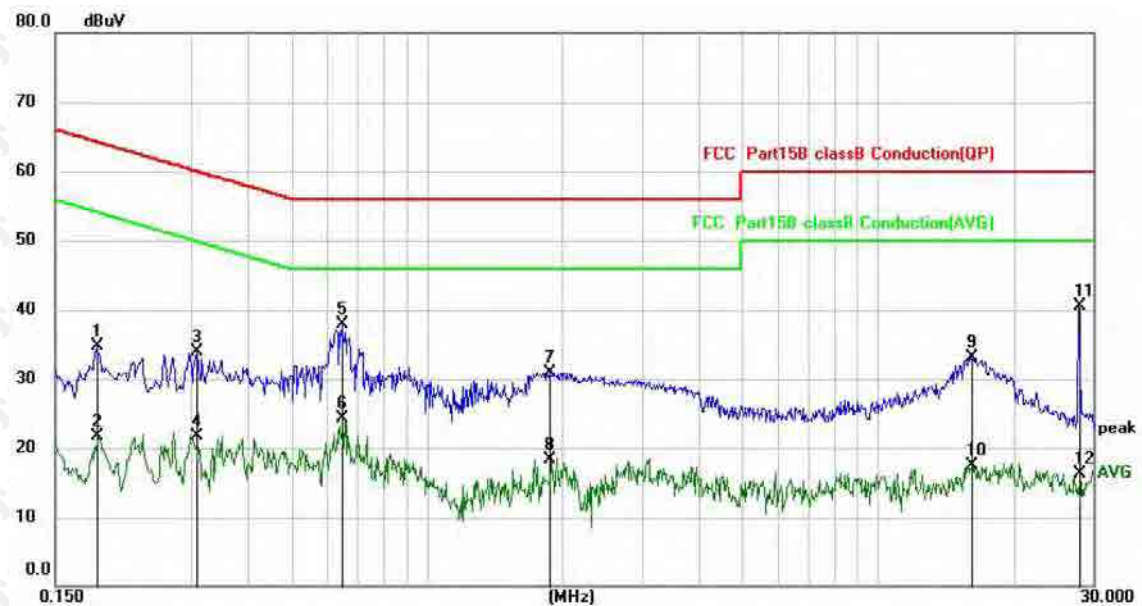
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1894	24.34	10.08	34.42	64.06	-29.64	QP
2		0.1894	10.78	10.08	20.86	54.06	-33.20	AVG
3		0.6205	24.35	10.10	34.45	56.00	-21.55	QP
4		0.6205	7.40	10.10	17.50	46.00	-28.50	AVG
5	*	1.7437	26.47	10.16	36.63	56.00	-19.37	QP
6		1.7437	8.50	10.16	18.66	46.00	-27.34	AVG
7		4.2018	19.50	10.25	29.75	56.00	-26.25	QP
8		4.2018	5.53	10.25	15.78	46.00	-30.22	AVG
9		9.8085	17.01	10.44	27.45	60.00	-32.55	QP
10		9.8085	3.66	10.44	14.10	50.00	-35.90	AVG
11		16.4856	26.88	10.80	37.68	60.00	-22.32	QP
12		16.4856	8.65	10.80	19.45	50.00	-30.55	AVG

Remark:

Factor = Cable loss + LISN factor, Margin = Measurement – Limit

Module 2

L: Worst case-GFSK(low channel)

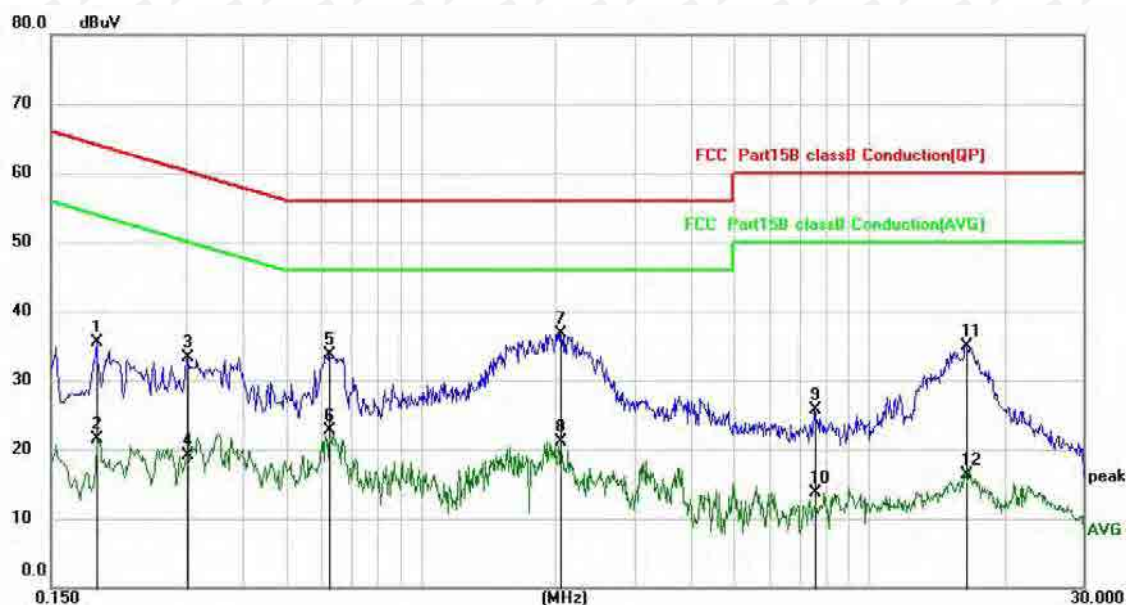


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1859	24.67	10.08	34.75	64.22	-29.47	QP
2		0.1859	11.60	10.08	21.68	54.22	-32.54	AVG
3		0.3082	23.80	10.08	33.88	60.02	-26.14	QP
4		0.3082	11.65	10.08	21.73	50.02	-28.29	AVG
5	*	0.6500	27.74	10.10	37.84	56.00	-18.16	QP
6		0.6500	14.14	10.10	24.24	46.00	-21.76	AVG
7		1.8740	20.79	10.16	30.95	56.00	-25.05	QP
8		1.8740	8.24	10.16	18.40	46.00	-27.60	AVG
9		16.1100	22.39	10.78	33.17	60.00	-26.83	QP
10		16.1100	6.68	10.78	17.46	50.00	-32.54	AVG
11		27.9020	29.26	11.22	40.48	60.00	-19.52	QP
12		27.9020	5.15	11.22	16.37	50.00	-33.63	AVG

Remark:

Factor = Cable loss + LISN factor, Margin = Measurement – Limit

N: Worst case-GFSK(low channel)



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1900	25.34	10.08	35.42	64.04	-28.62	QP
2		0.1900	11.47	10.08	21.55	54.04	-32.49	AVG
3		0.3020	23.25	10.08	33.33	60.19	-26.86	QP
4		0.3020	8.95	10.08	19.03	50.19	-31.16	AVG
5		0.6260	23.61	10.10	33.71	56.00	-22.29	QP
6		0.6260	12.54	10.10	22.64	46.00	-23.36	AVG
7	*	2.0500	26.45	10.17	36.62	56.00	-19.38	QP
8		2.0500	10.91	10.17	21.08	46.00	-24.92	AVG
9		7.5619	15.34	10.39	25.73	60.00	-34.27	QP
10		7.5619	3.24	10.39	13.63	50.00	-36.37	AVG
11		16.4500	24.01	10.80	34.81	60.00	-25.19	QP
12		16.4500	5.50	10.80	16.30	50.00	-33.70	AVG

Remark:

Factor = Cable loss + LISN factor, Margin = Measurement – Limit

7. RADIATED SPURIOUS EMISSION

7.1 Block Diagram Of Test Setup

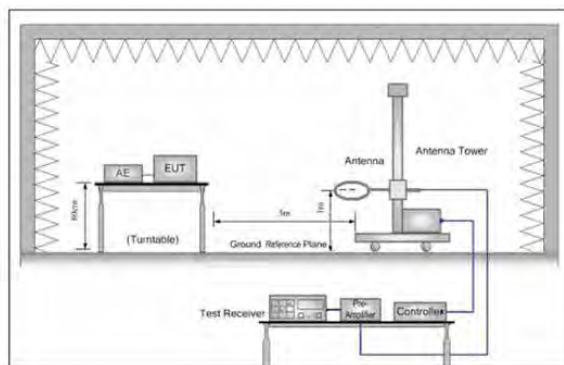


Figure 1. Below 30MHz

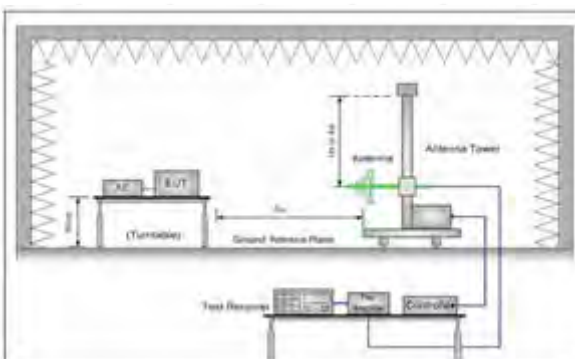


Figure 2. 30MHz to 1GHz

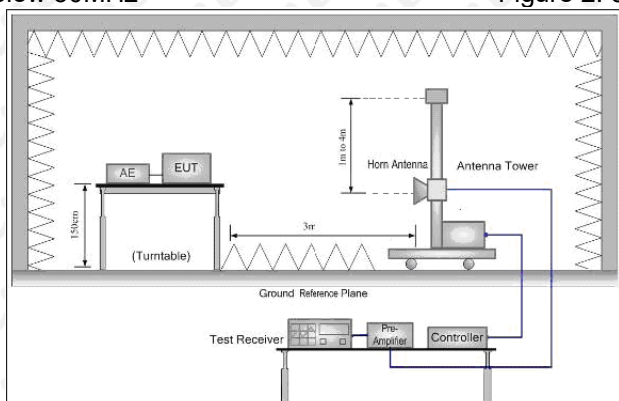


Figure 3. Above 1GHz

7.2 Limit

Spurious Emissions:

Frequency	Field strength (microvolt/meter)	Limit (dB μ V/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

7.3 Test procedure

Below 1GHz test procedure as below:

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height 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.
- 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rota table table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

- Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).
- Test the EUT in the lowest channel ,the middle channel ,the Highest channel
- Repeat above procedures until all frequencies measured was complete.
- Full battery is used during test.

Receiver set:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30KHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30KHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30KHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30KHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30KHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120 kHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

7.4 Test Result

Module 1

Below 1GHz Test Results:

Antenna polarity: H

Worst case-GFSK(low channel)



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		45.6946	25.87	-6.20	19.67	40.00	-20.33	QP
2		88.1872	28.09	-8.08	20.01	43.50	-23.49	QP
3		144.0817	29.47	-4.98	24.49	43.50	-19.01	QP
4		300.8942	30.18	-2.51	27.67	46.00	-18.33	QP
5		384.6055	31.54	-1.15	30.39	46.00	-15.61	QP
6	*	639.4886	31.56	4.93	36.49	46.00	-9.51	QP

Remark: Factor = Cable lose + Antenna factor - Pre-amplifier; Margin = Measurement- Limit

Antenna polarity: V
Worst case-GFSK(low channel)



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		45.6946	31.49	-6.20	25.29	40.00	-14.71	QP
2		146.6303	35.07	-4.73	30.34	43.50	-13.16	QP
3		266.1419	34.14	-4.03	30.11	46.00	-15.89	QP
4		374.6225	37.56	-1.31	36.25	46.00	-9.75	QP
5		518.1556	36.96	1.49	38.45	46.00	-7.55	QP
6	*	803.1933	32.65	8.59	41.24	46.00	-4.76	QP

Remark: Factor = Cable lose + Antenna factor - Pre-amplifier; Margin = Measurement- Limit

Module 2

Below 1GHz Test Results:

Antenna polarity: H

Worst case-GFSK(low channel)



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		47.3253	28.49	-6.29	22.20	40.00	-17.80	QP
2		124.1329	28.84	-5.93	22.91	43.50	-20.59	QP
3		164.3300	25.53	-3.40	22.13	43.50	-21.37	QP
4		245.9507	27.82	-4.89	22.93	46.00	-23.07	QP
5		384.6055	32.04	-1.15	30.89	46.00	-15.11	QP
6	*	639.4886	33.06	4.93	37.99	46.00	-8.01	QP

Remark: Factor = Cable lose + Antenna factor - Pre-amplifier; Margin = Measurement- Limit

Antenna polarity: V
Worst case-GFSK(low channel)



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		42.6000	30.39	-6.01	24.38	40.00	-15.62	QP
2		146.6303	33.57	-4.73	28.84	43.50	-14.66	QP
3		266.1419	33.14	-4.03	29.11	46.00	-16.89	QP
4		374.6225	38.06	-1.31	36.75	46.00	-9.25	QP
5		518.1556	36.96	1.49	38.45	46.00	-7.55	QP
6	*	803.1933	32.65	8.59	41.24	46.00	-4.76	QP

Remark: Factor = Cable lose + Antenna factor - Pre-amplifier; Margin = Measurement- Limit

Module 1

Above 1 GHz Test Results:

CH Low (2402MHz)

Horizontal:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4804	58.47	-3.65	54.82	74.00	-19.18	peak
4804	48.04	-3.65	44.39	54.00	-9.61	AVG
7206	59.93	-0.95	58.98	74.00	-15.02	peak
7206	40.00	-0.95	39.05	54.00	-14.95	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4804	57.08	-3.65	53.43	74.00	-20.57	peak
4804	50.58	-3.65	46.93	54.00	-7.07	AVG
7206	58.93	-0.95	57.98	74.00	-16.02	peak
7206	41.46	-0.95	40.51	54.00	-13.49	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

CH Middle (2441MHz)

Horizontal:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4882.00	57.98	-3.54	54.44	74.00	-19.56	peak
4882.00	48.63	-3.54	45.09	54.00	-8.91	AVG
7323.00	56.93	-0.81	56.12	74.00	-17.88	peak
7323.00	44.24	-0.81	43.43	54.00	-10.57	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Vertical:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4882.00	56.83	-3.54	53.29	74.00	-20.71	peak
4882.00	48.66	-3.54	45.12	54.00	-8.88	AVG
7323.00	58.73	-0.81	57.92	74.00	-16.08	peak
7323.00	42.65	-0.81	41.84	54.00	-12.16	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

CH High (2480MHz)
Horizontal:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4960	57.85	-3.43	54.42	74.00	-19.58	peak
4960	47.27	-3.44	43.83	54.00	-10.17	AVG
7440	58.67	-0.77	57.90	74.00	-16.10	peak
7440	41.96	-0.77	41.19	54.00	-12.81	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Vertical:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4960	58.88	-3.43	55.45	74.00	-18.55	peak
4960	49.94	-3.44	46.50	54.00	-7.50	AVG
7440	60.97	-0.77	60.20	74.00	-13.80	peak
7440	42.24	-0.77	41.47	54.00	-12.53	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

The test range is 9K ~10 times the main wave, and other spurious below the limit of 20dB will not be reflected in the report

Restricted bands around fundamental frequency (Radiated)

Hopping
Operation Mode: TX CH Low (2402MHz)
Horizontal (Worst case-GFSK)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310.00	57.88	-5.81	52.07	54.00	-1.93	peak
2310.00	/	-5.81	/	54.00	/	AVG
2390.00	56.49	-5.84	50.65	54.00	-3.35	peak
2390.00	/	-5.84	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310.00	55.99	-5.81	50.18	54.00	-3.82	peak
2310.00	/	-5.81	/	54.00	/	AVG
2390.00	55.18	-5.84	49.34	54.00	-4.66	peak
2390.00	/	-5.84	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

When the peak value is smaller than the AVG limit, AVG is not reflected.

Operation Mode: TX CH High (2480MHz)
Horizontal (Worst case-GFSK)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.50	54.98	-5.81	49.17	54.00	-4.83	peak
2483.50	/	-5.81	/	54.00	/	AVG
2500.00	54.09	-6.06	48.03	54.00	-5.97	peak
2500.00	/	-6.06	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.50	57.72	-5.81	51.91	54.00	-2.09	peak
2483.50	/	-5.81	/	54.00	/	AVG
2500.00	54.80	-6.06	48.74	54.00	-5.26	peak
2500.00	/	-6.06	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						
Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.						

When the peak value is smaller than the AVG limit, AVG is not reflected.

NO hopping

Operation Mode: TX CH Low (2402MHz)
Horizontal (Worst case-GFSK)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310.00	55.15	-5.81	49.34	54.00	-4.66	peak
2310.00	/	-5.81	/	54.00	/	AVG
2390.00	54.06	-5.84	48.22	54.00	-5.78	peak
2390.00	/	-5.84	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310.00	56.40	-5.81	50.59	54.00	-3.41	peak
2310.00	/	-5.81	/	54.00	/	AVG
2390.00	53.29	-5.84	47.45	54.00	-6.55	peak
2390.00	/	-5.84	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

When the peak value is smaller than the AVG limit, AVG is not reflected.

Operation Mode: TX CH High (2480MHz)
Horizontal (Worst case-GFSK)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.50	57.14	-5.81	51.33	54.00	-2.67	peak
2483.50	/	-5.81	/	54.00	/	AVG
2500.00	56.05	-6.06	49.99	54.00	-4.01	peak
2500.00	/	-6.06	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.50	55.70	-5.81	49.89	54.00	-4.11	peak
2483.50	/	-5.81	/	54.00	/	AVG
2500.00	55.01	-6.06	48.95	54.00	-5.05	peak
2500.00	/	-6.06	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						
Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.						

When the peak value is smaller than the AVG limit, AVG is not reflected.

Module 2

Above 1 GHz Test Results:

CH Low (2402MHz)

Horizontal:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4804	59.27	-3.65	55.62	74.00	-18.38	peak
4804	49.14	-3.65	45.49	54.00	-8.51	AVG
7206	60.56	-0.95	59.61	74.00	-14.39	peak
7206	41.05	-0.95	40.10	54.00	-13.90	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4804	58.81	-3.65	55.16	74.00	-18.84	peak
4804	49.61	-3.65	45.96	54.00	-8.04	AVG
7206	61.58	-0.95	60.63	74.00	-13.37	peak
7206	40.06	-0.95	39.11	54.00	-14.89	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

CH Middle (2441MHz)

Horizontal:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4882.00	60.21	-3.54	56.67	74.00	-17.33	peak
4882.00	49.03	-3.54	45.49	54.00	-8.51	AVG
7323.00	57.85	-0.81	57.04	74.00	-16.96	peak
7323.00	44.12	-0.81	43.31	54.00	-10.69	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Vertical:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4882.00	57.42	-3.54	53.88	74.00	-20.12	peak
4882.00	49.65	-3.54	46.11	54.00	-7.89	AVG
7323.00	56.32	-0.81	55.51	74.00	-18.49	peak
7323.00	42.53	-0.81	41.72	54.00	-12.28	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

CH High (2480MHz)
Horizontal:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4960	58.17	-3.43	54.74	74.00	-19.26	peak
4960	48.42	-3.44	44.98	54.00	-9.02	AVG
7440	59.88	-0.77	59.11	74.00	-14.89	peak
7440	39.63	-0.77	38.86	54.00	-15.14	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Vertical:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4960	58.73	-3.43	55.30	74.00	-18.70	peak
4960	48.55	-3.44	45.11	54.00	-8.89	AVG
7440	59.28	-0.77	58.51	74.00	-15.49	peak
7440	40.74	-0.77	39.97	54.00	-14.03	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

The test range is 9K ~10 times the main wave, and other spurious below the limit of 20dB will not be reflected in the report

Restricted bands around fundamental frequency (Radiated)

Hopping
Operation Mode: TX CH Low (2402MHz)
Horizontal (Worst case-GFSK)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310.00	56.72	-5.81	50.91	54.00	-3.09	peak
2310.00	/	-5.81	/	54.00	/	AVG
2390.00	56.18	-5.84	50.34	54.00	-3.66	peak
2390.00	/	-5.84	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310.00	55.61	-5.81	49.80	54.00	-4.20	peak
2310.00	/	-5.81	/	54.00	/	AVG
2390.00	55.56	-5.84	49.72	54.00	-4.28	peak
2390.00	/	-5.84	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

When the peak value is smaller than the AVG limit, AVG is not reflected.

Operation Mode: TX CH High (2480MHz)
Horizontal (Worst case-GFSK)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.50	55.98	-5.81	50.17	54.00	-3.83	peak
2483.50	/	-5.81	/	54.00	/	AVG
2500.00	54.50	-6.06	48.44	54.00	-5.56	peak
2500.00	/	-6.06	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.50	55.84	-5.81	50.03	54.00	-3.97	peak
2483.50	/	-5.81	/	54.00	/	AVG
2500.00	53.50	-6.06	47.44	54.00	-6.56	peak
2500.00	/	-6.06	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						
Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.						

When the peak value is smaller than the AVG limit, AVG is not reflected.

NO hopping

Operation Mode: TX CH Low (2402MHz)
Horizontal (Worst case-GFSK)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310.00	56.16	-5.81	50.35	54.00	-3.65	peak
2310.00	/	-5.81	/	54.00	/	AVG
2390.00	54.89	-5.84	49.05	54.00	-4.95	peak
2390.00	/	-5.84	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310.00	56.41	-5.81	50.60	54.00	-3.40	peak
2310.00	/	-5.81	/	54.00	/	AVG
2390.00	53.55	-5.84	47.71	54.00	-6.29	peak
2390.00	/	-5.84	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

When the peak value is smaller than the AVG limit, AVG is not reflected.

Operation Mode: TX CH High (2480MHz)
Horizontal (Worst case-GFSK)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.50	55.17	-5.81	49.36	54.00	-4.64	peak
2483.50	/	-5.81	/	54.00	/	AVG
2500.00	56.68	-6.06	50.62	54.00	-3.38	peak
2500.00	/	-6.06	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						

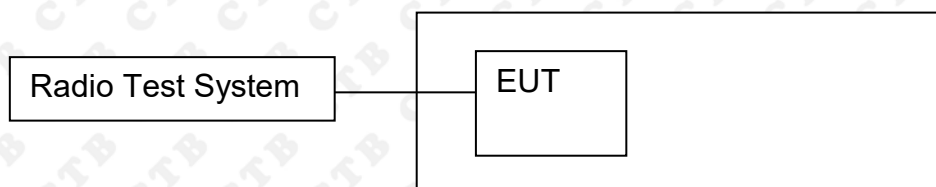
Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.50	55.03	-5.81	49.22	54.00	-4.78	peak
2483.50	/	-5.81	/	54.00	/	AVG
2500.00	54.56	-6.06	48.50	54.00	-5.50	peak
2500.00	/	-6.06	/	54.00	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits						
Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.						

When the peak value is smaller than the AVG limit, AVG is not reflected.

8. BAND EDGE AND RF CONDUCTED SPURIOUS EMISSIONS

8.1 Block Diagram Of Test Setup



8.2 Limit

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. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

8.3 Test procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer:

Below 30MHz:

RBW = 100kHz, VBW = 300kHz, Sweep = auto

Detector function = peak, Trace = max hold

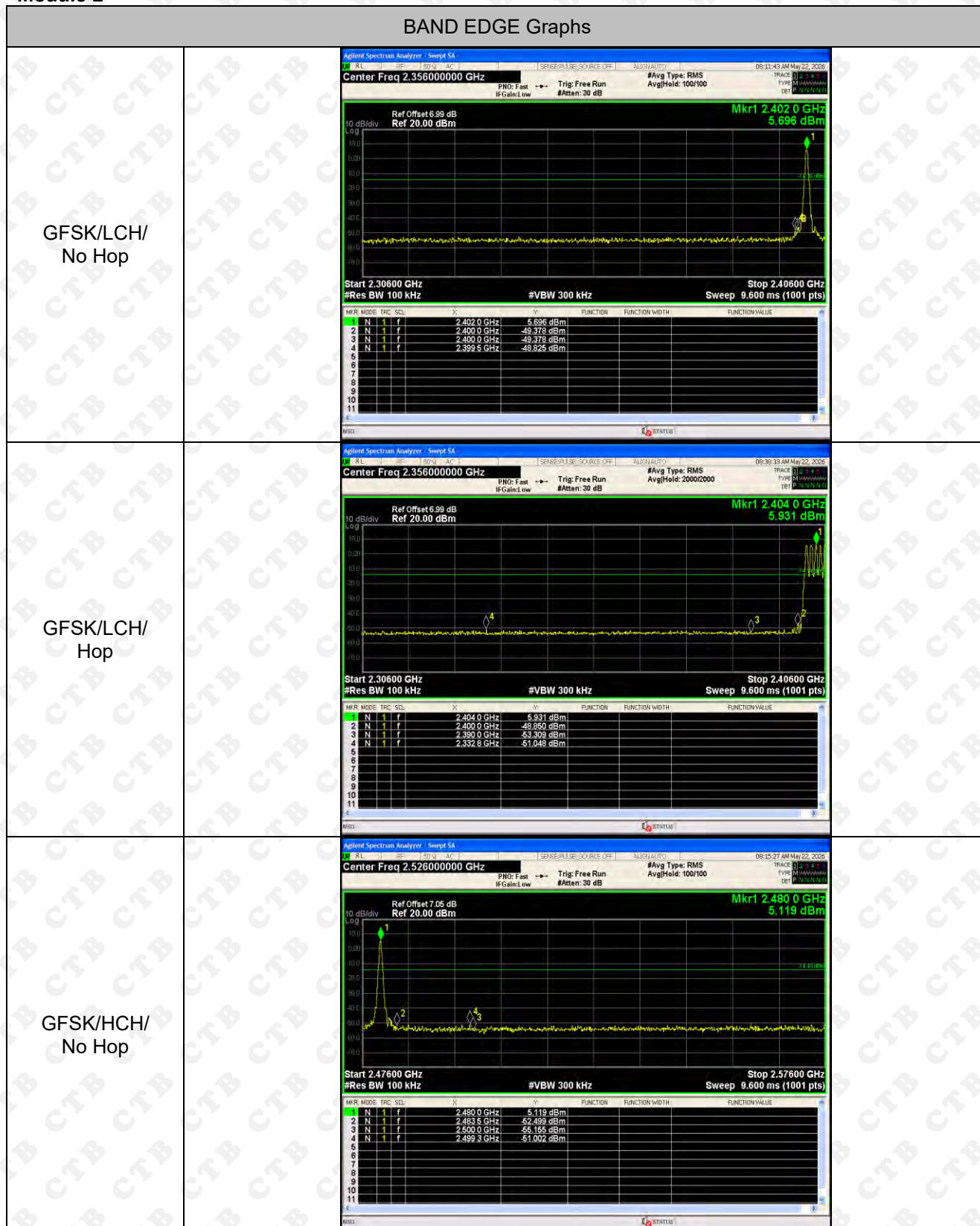
Above 30MHz:

RBW = 100kHz, VBW = 300kHz, Sweep = auto

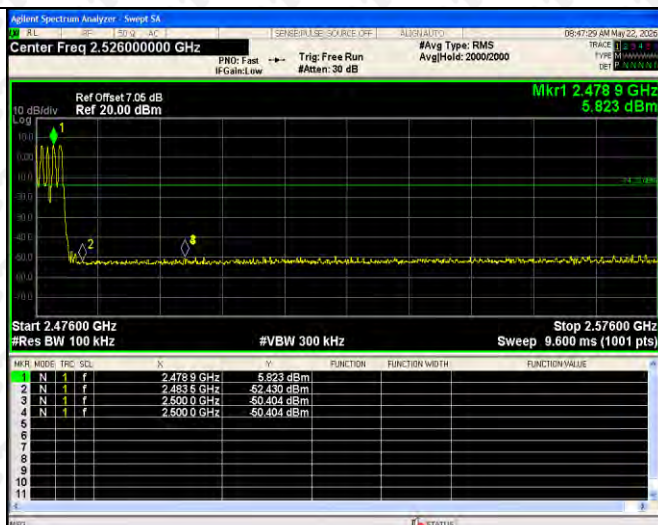
Detector function = peak, Trace = max hold

8.4 Test Result

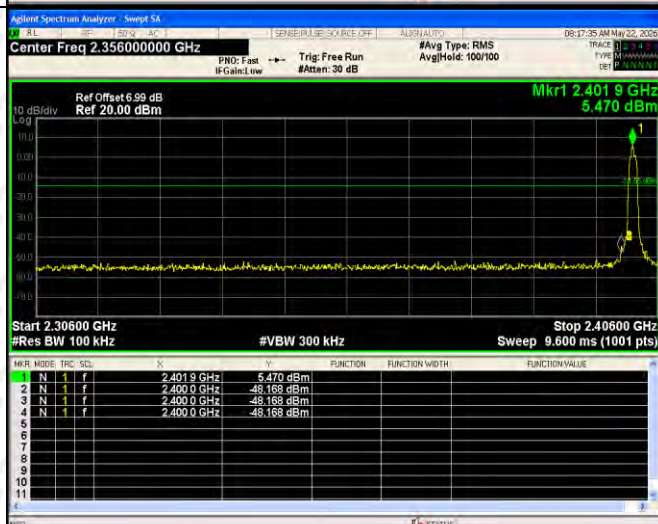
Module 1



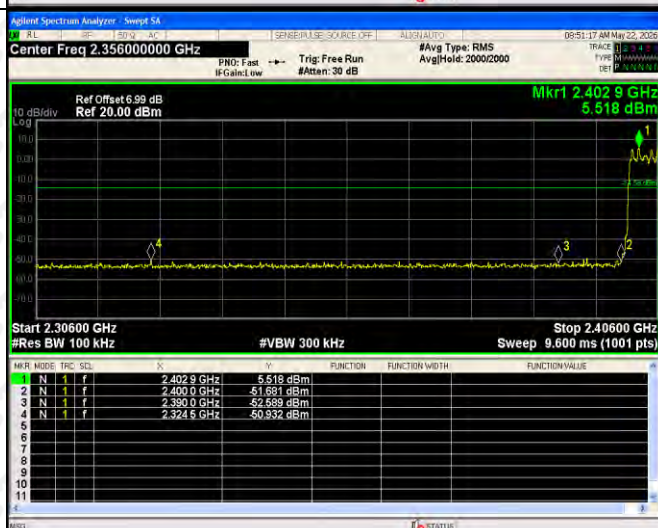
GFSK/HCH/
Hop

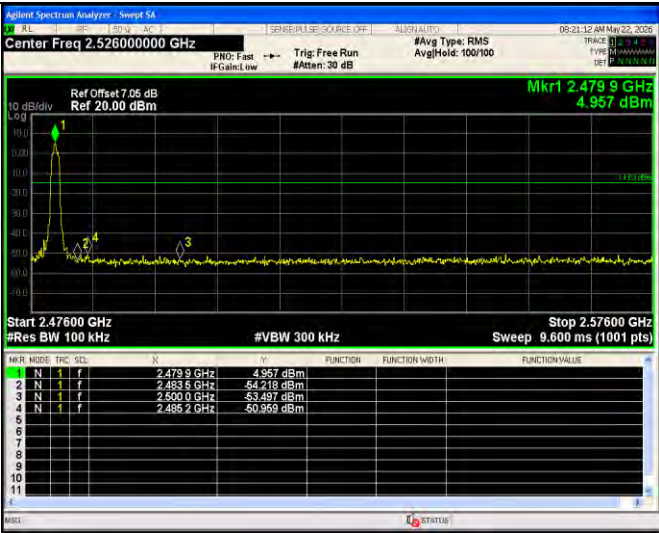
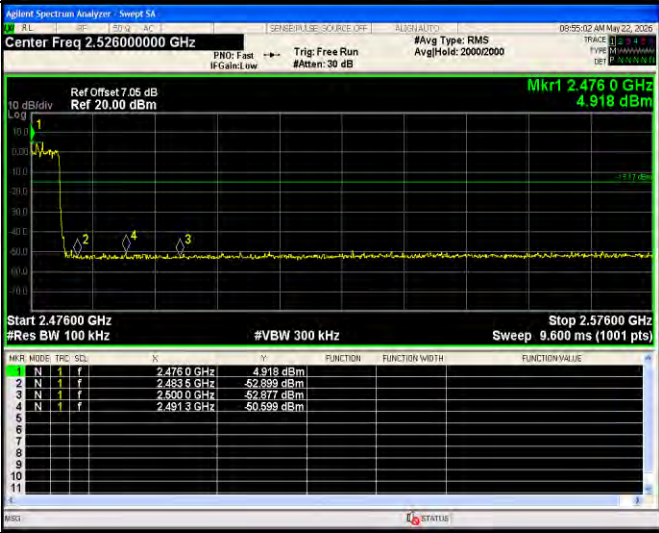
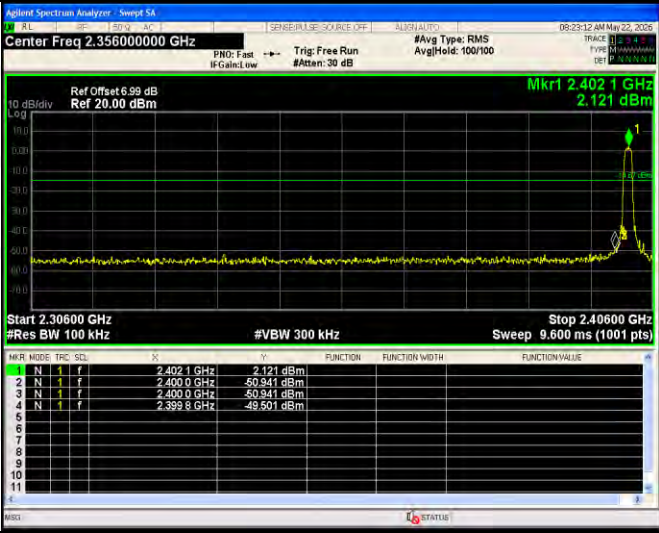


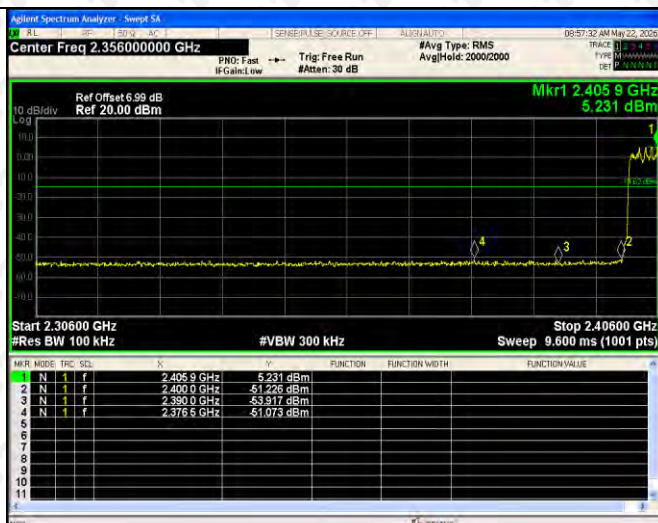
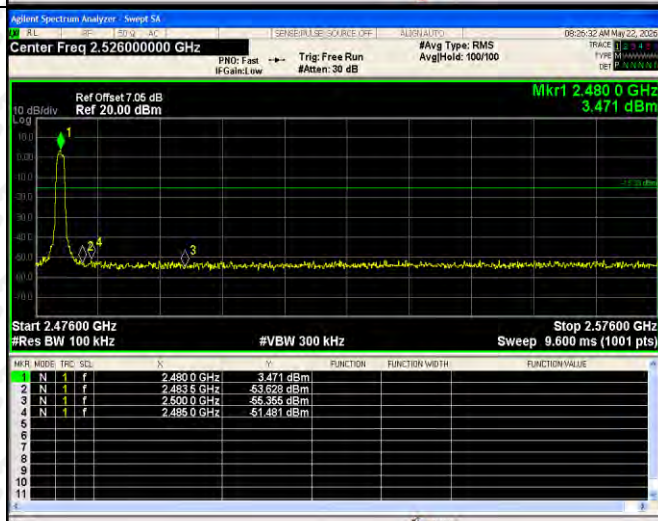
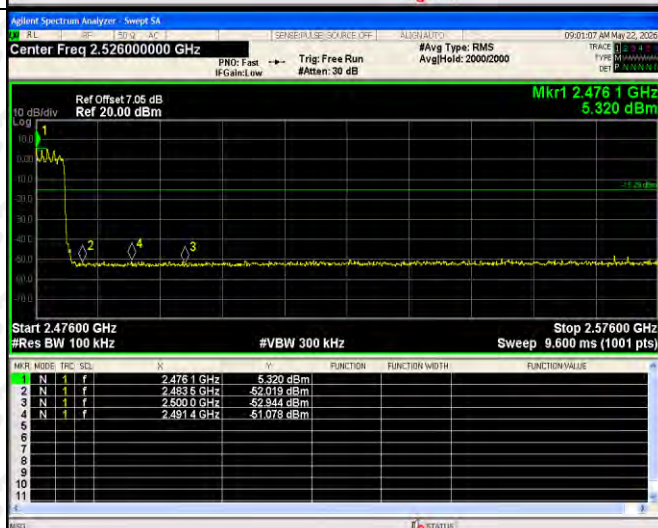
π /4DQPSK/LCH/
No Hop



π /4DQPSK/LCH/
Hop

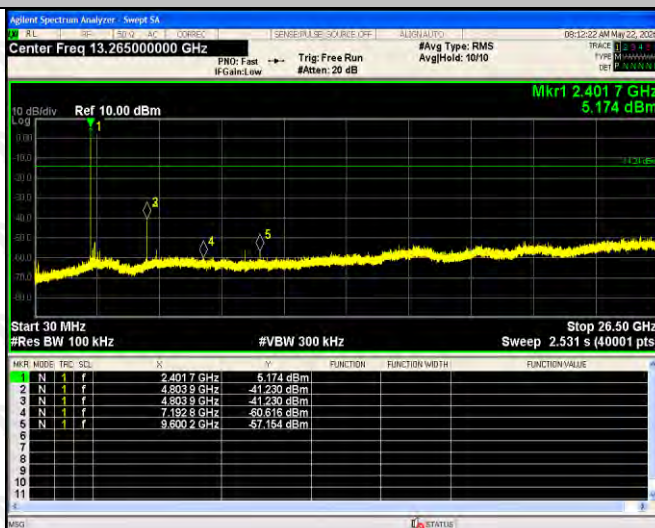


$\pi/4$DQPSK/HCH/ No Hop	
$\pi/4$DQPSK/HCH/ Hop	
8DPSK/LCH/No Hop	

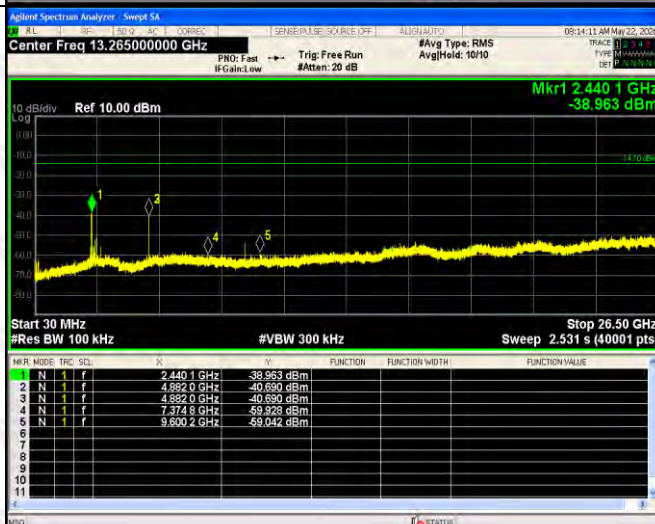
8DPSK
/LCH/Hop

8DPSK /HCH/No
Hop

8DPSK
/HCH/Hop


RF Conducted Spurious Emissions Graphs

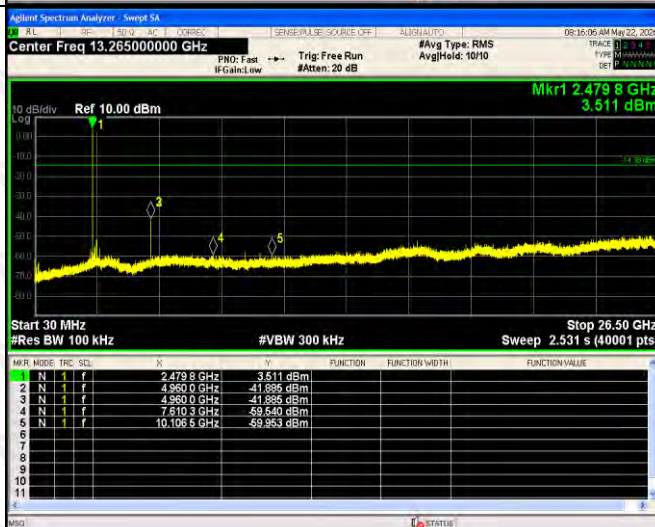
GFSK/LCH



GFSK/MCH

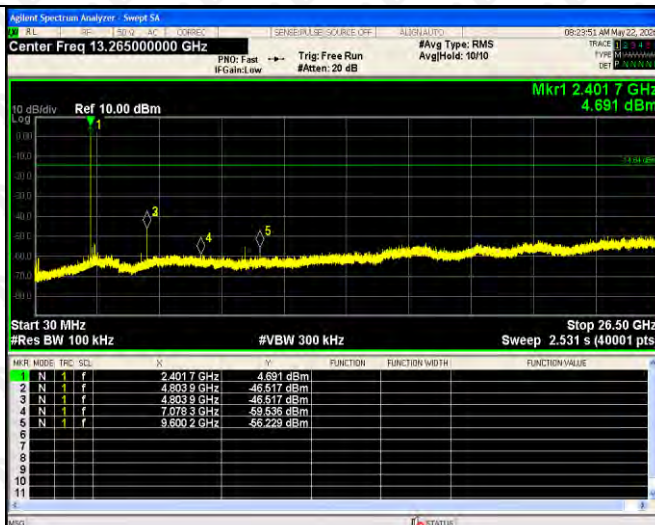


GFSK/HCH

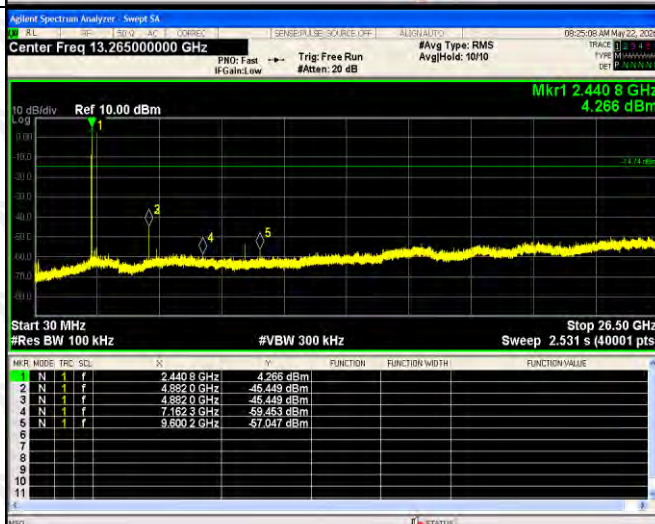


$\pi/4$ DQPSK /LCH	Agilent Spectrum Analyzer - Sweep SA Center Freq 13.265000000 GHz Ref 10.00 dBm Mkr1 2.401 7 GHz 5.057 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 26.50 GHz Sweep 2.531 s (40001 pts) <table><thead><tr><th>MNR</th><th>MODE</th><th>FREQ</th><th>POWER</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr></thead><tbody><tr><td>1</td><td>N</td><td>2.401 7 GHz</td><td>5.057 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>4.803 9 GHz</td><td>-46.233 dBm</td><td></td><td></td><td></td></tr><tr><td>3</td><td>N</td><td>4.803 9 GHz</td><td>-46.233 dBm</td><td></td><td></td><td></td></tr><tr><td>4</td><td>N</td><td>7.148 4 GHz</td><td>-60.203 dBm</td><td></td><td></td><td></td></tr><tr><td>5</td><td>N</td><td>9.600 2 GHz</td><td>-57.774 dBm</td><td></td><td></td><td></td></tr></tbody></table>	MNR	MODE	FREQ	POWER	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	2.401 7 GHz	5.057 dBm				2	N	4.803 9 GHz	-46.233 dBm				3	N	4.803 9 GHz	-46.233 dBm				4	N	7.148 4 GHz	-60.203 dBm				5	N	9.600 2 GHz	-57.774 dBm			
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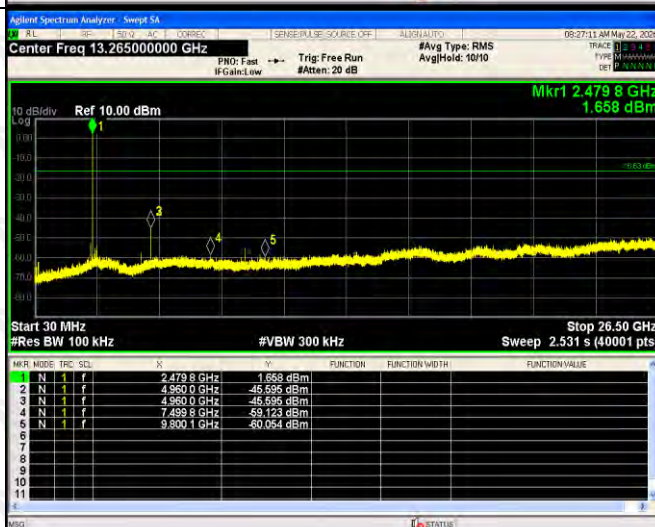
8DPSK /LCH



8DPSK /MCH

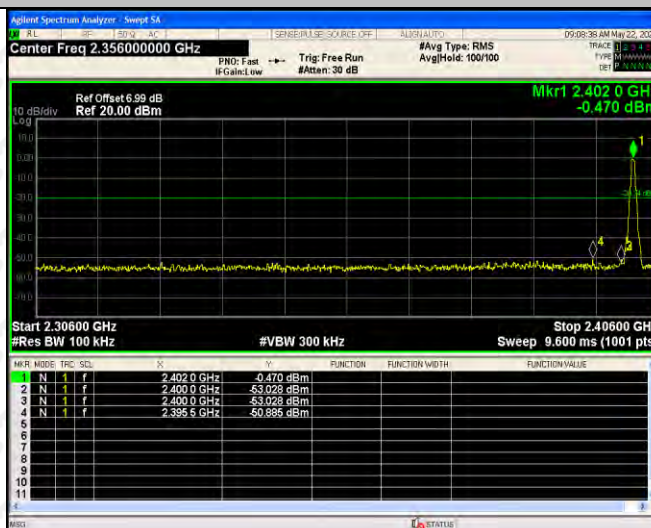
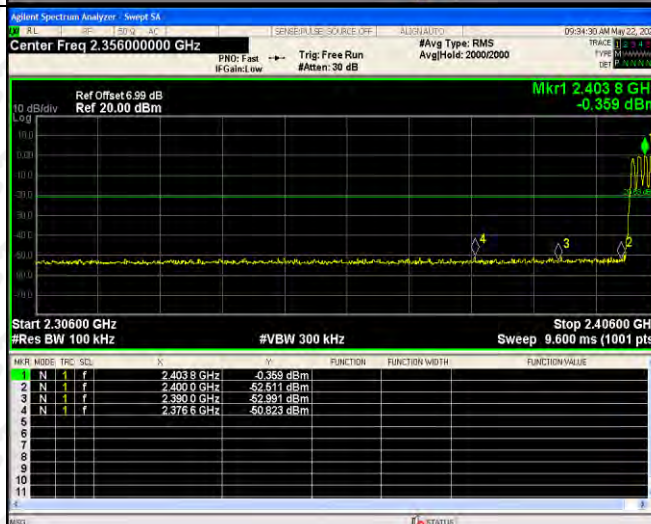
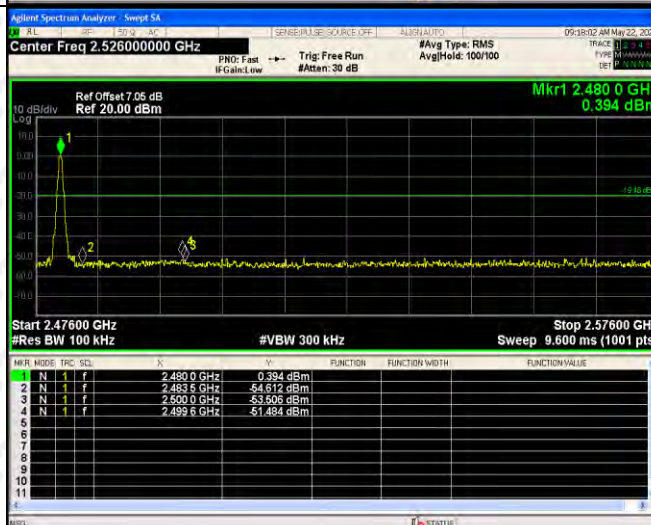


8DPSK /HCH

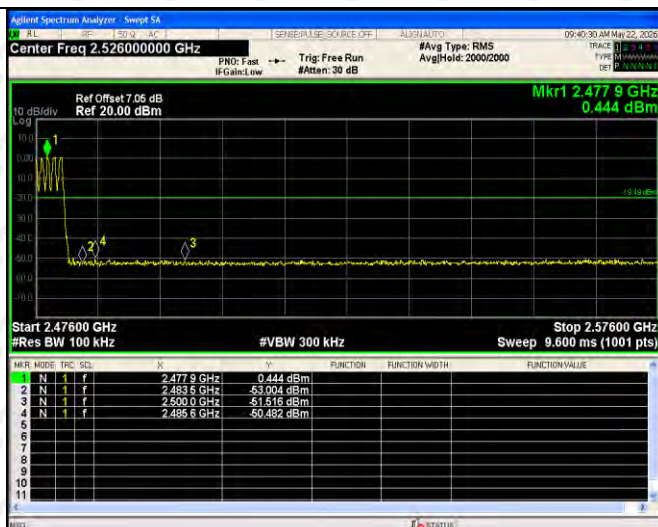


Module 2

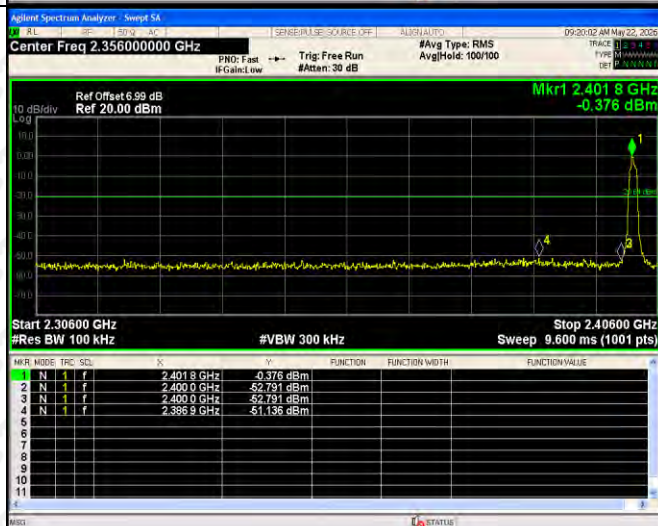
BAND EDGE Graphs

GFSK/LCH/
No Hop

GFSK/LCH/
Hop

GFSK/HCH/
No Hop


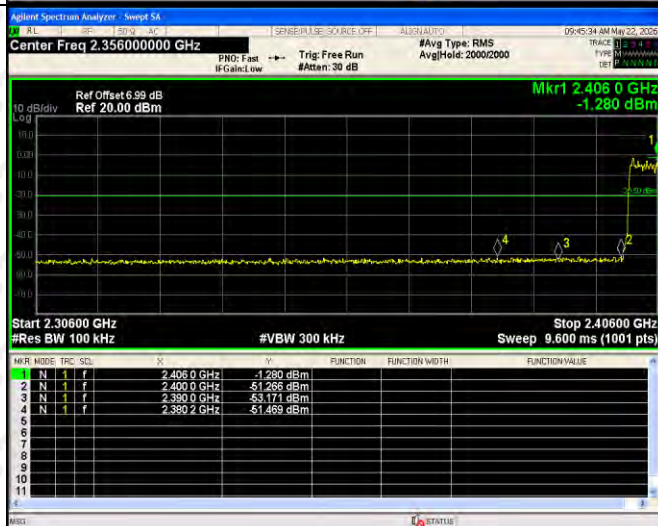
GFSK/HCH/
Hop



$\pi/4$ DQPSK/LCH/
No Hop

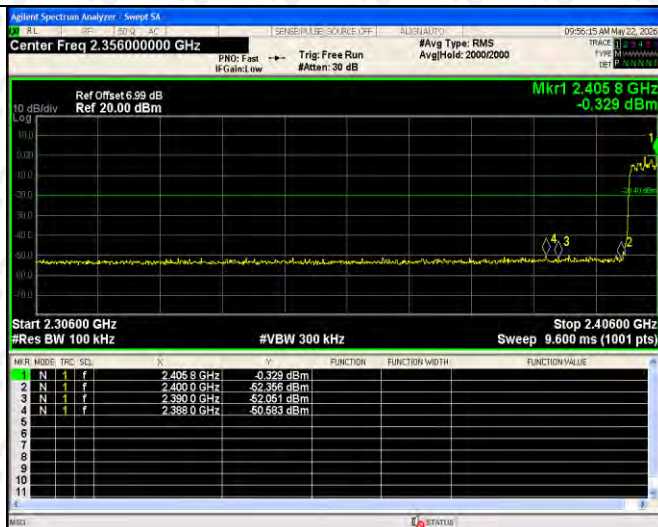


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Hop

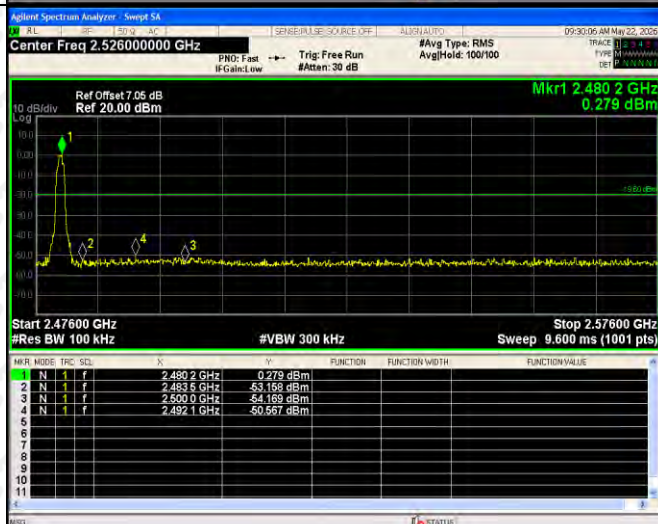


$\pi/4$ DQPSK/HCH/ No Hop	<table><thead><tr><th>Mkr</th><th>Freq</th><th>Power</th></tr></thead><tbody><tr><td>1</td><td>2.4801 GHz</td><td>-1.996 dBm</td></tr><tr><td>2</td><td>2.4833 GHz</td><td>-56.137 dBm</td></tr><tr><td>3</td><td>2.5000 GHz</td><td>-52.889 dBm</td></tr><tr><td>4</td><td>2.4906 GHz</td><td>-50.514 dBm</td></tr></tbody></table>	Mkr	Freq	Power	1	2.4801 GHz	-1.996 dBm	2	2.4833 GHz	-56.137 dBm	3	2.5000 GHz	-52.889 dBm	4	2.4906 GHz	-50.514 dBm
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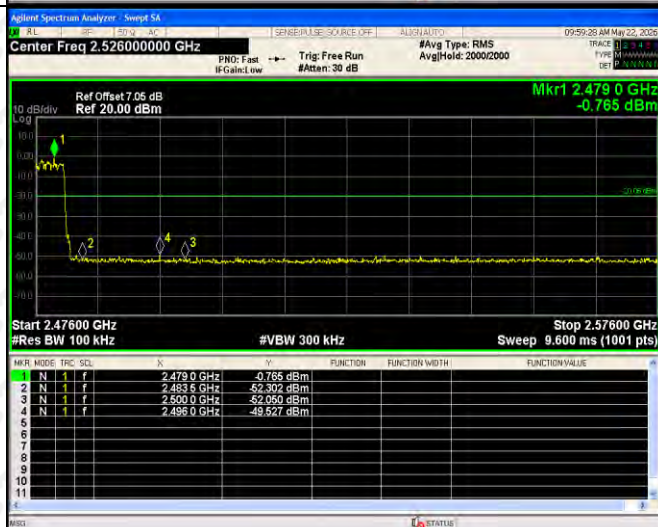
8DPSK
/LCH/Hop



8DPSK /HCH/No
Hop

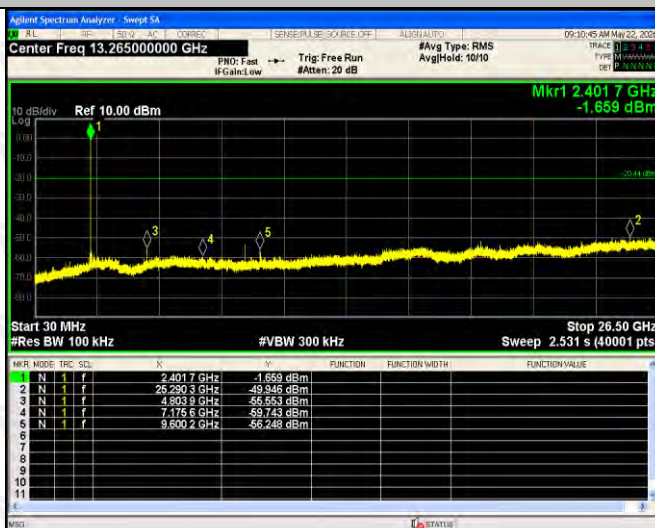


8DPSK
/HCH/Hop

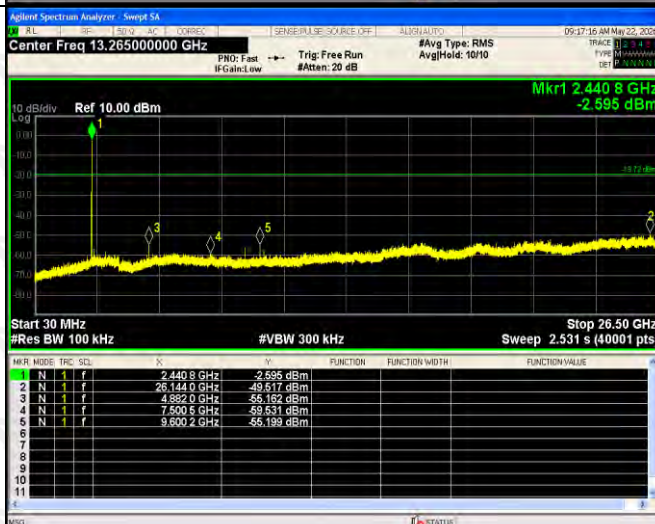


RF Conducted Spurious Emissions Graphs

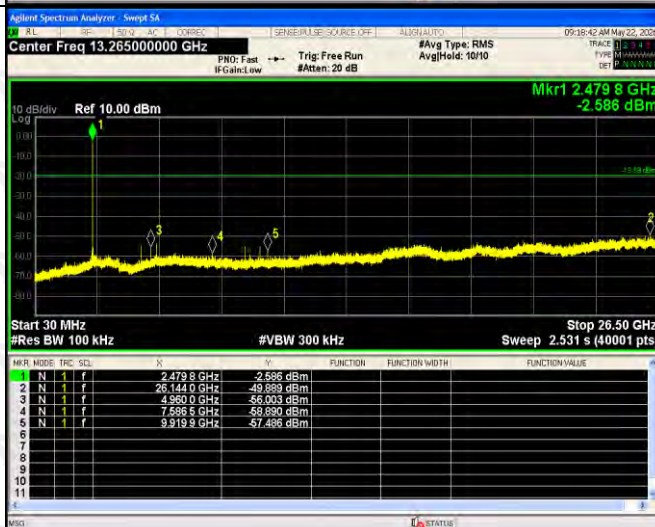
GFSK/LCH



GFSK/MCH

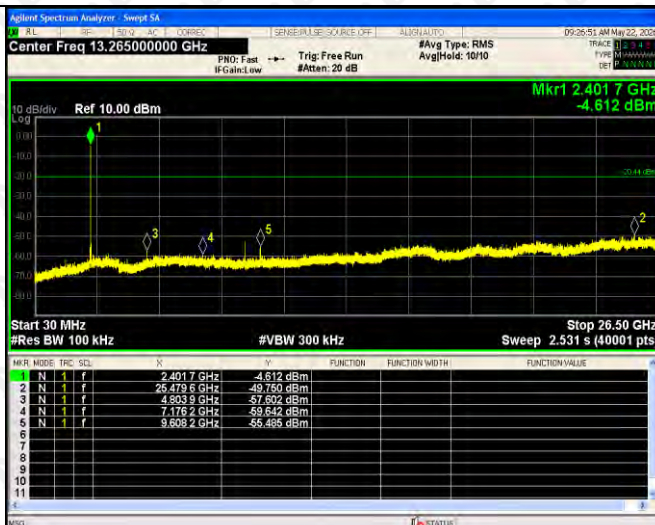


GFSK/HCH

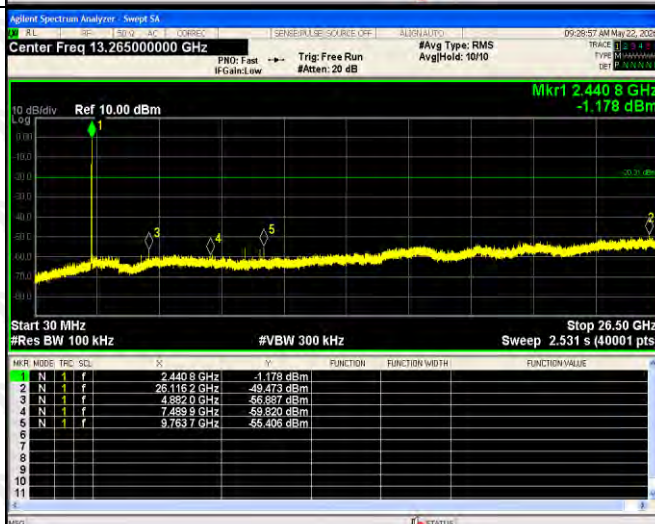


$\pi/4$ DQPSK /LCH	Agilent Spectrum Analyzer - Swept SA Center Freq 13.265000000 GHz Ref 10.00 dBm Mkr1 2.401 7 GHz -2.659 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 26.50 GHz Sweep 2.531 s (40001 pts) <table><thead><tr><th>MNR</th><th>MODE</th><th>FREQ</th><th>SQL</th><th>X</th><th>Y</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr></thead><tbody><tr><td>1</td><td>N</td><td>1</td><td>f</td><td>2.401 7 GHz</td><td>-2.659 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>26.263 8 GHz</td><td>-49.920 dBm</td><td></td><td></td><td></td></tr><tr><td>3</td><td>N</td><td>1</td><td>f</td><td>4.803 9 GHz</td><td>-48.149 dBm</td><td></td><td></td><td></td></tr><tr><td>4</td><td>N</td><td>1</td><td>f</td><td>7.163 1 GHz</td><td>-49.733 dBm</td><td></td><td></td><td></td></tr><tr><td>5</td><td>N</td><td>1</td><td>f</td><td>9.608 2 GHz</td><td>-46.772 dBm</td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>	MNR	MODE	FREQ	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.401 7 GHz	-2.659 dBm				2	N	1	f	26.263 8 GHz	-49.920 dBm				3	N	1	f	4.803 9 GHz	-48.149 dBm				4	N	1	f	7.163 1 GHz	-49.733 dBm				5	N	1	f	9.608 2 GHz	-46.772 dBm				6									7									8									9									10									11								
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2	N	1	f	26.263 8 GHz	-49.920 dBm																																																																																																								
3	N	1	f	4.803 9 GHz	-48.149 dBm																																																																																																								
4	N	1	f	7.163 1 GHz	-49.733 dBm																																																																																																								
5	N	1	f	9.608 2 GHz	-46.772 dBm																																																																																																								
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