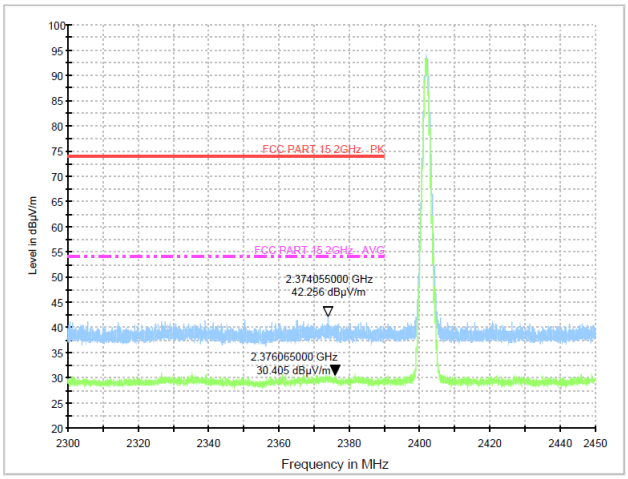
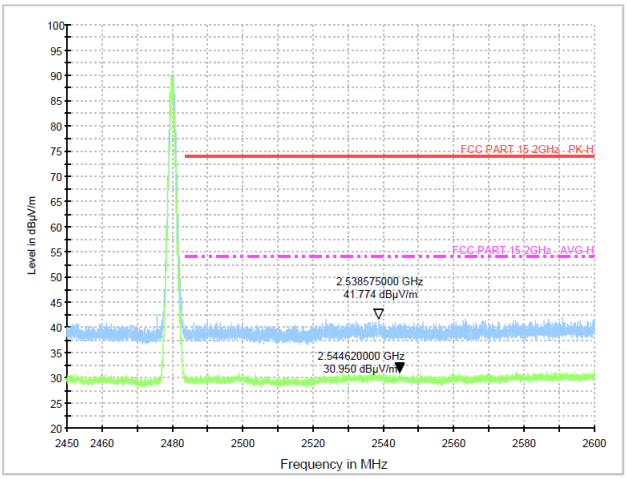
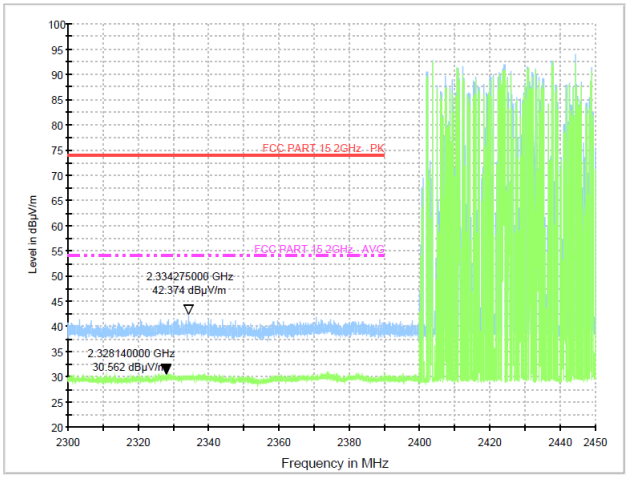
Test Mode: GFSK-Low Hopping-off



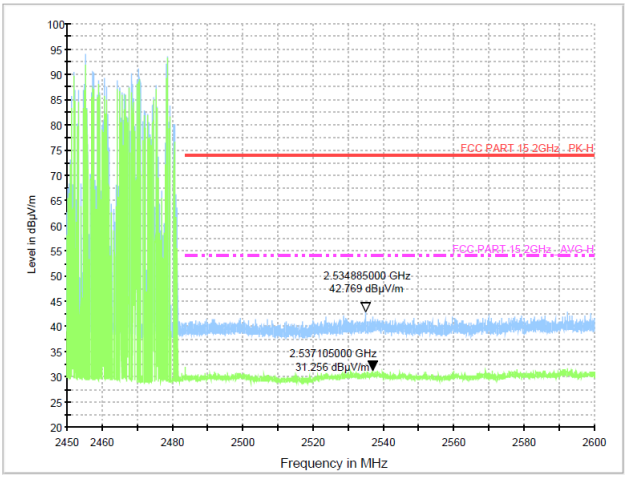
Test Mode: GFSK-High Hopping-off



Test Mode: GFSK-Low Hopping-on



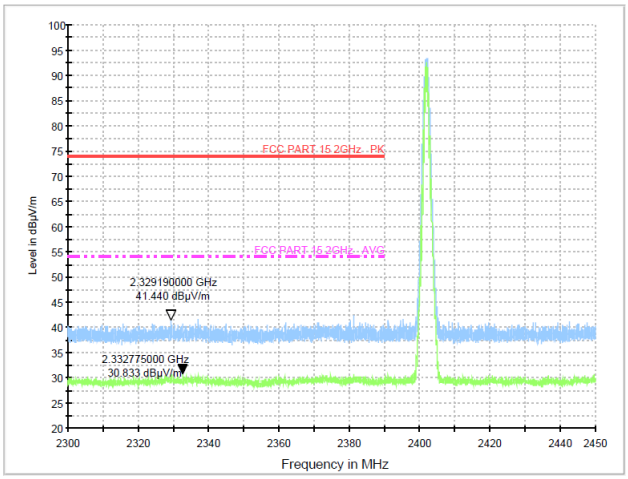
Test Mode: GFSK-High Hopping-on



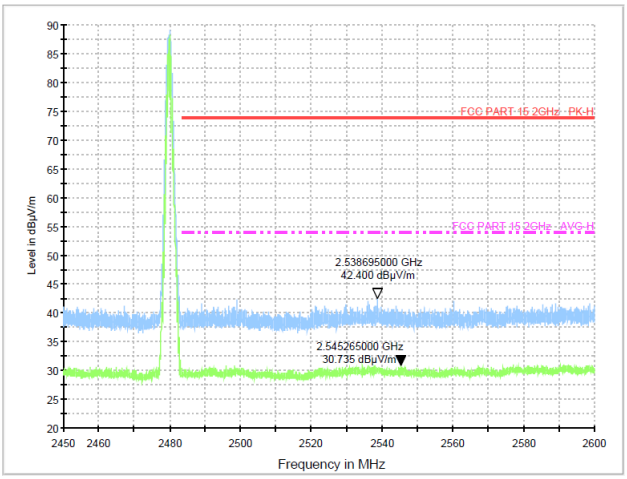
Note: 1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

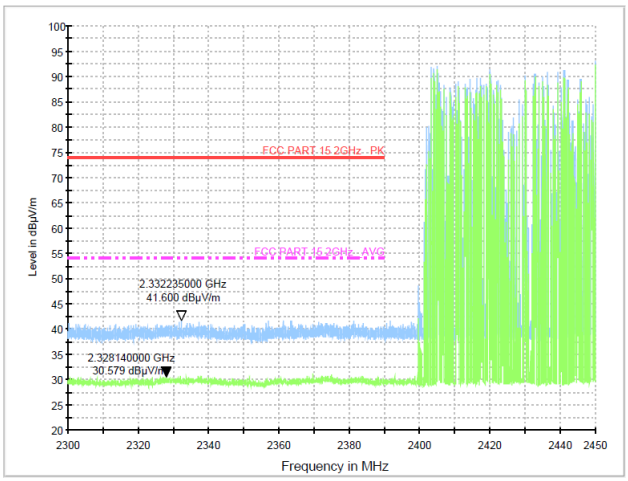
Test Mode: π/4 DQPSK-Low Hopping-off



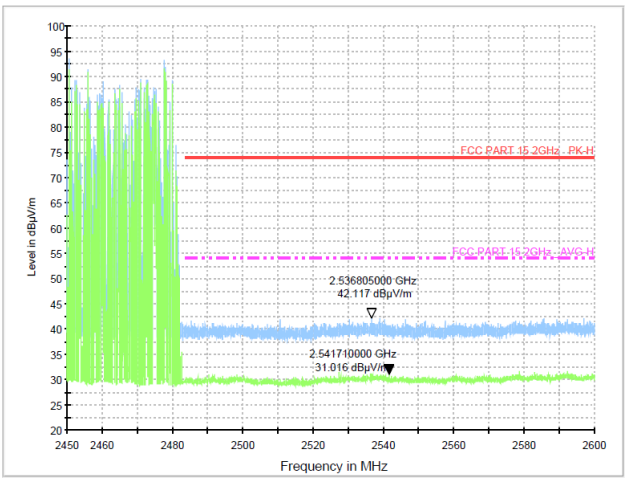
Test Mode: π/4 DQPSK-High Hopping-off



Test Mode: π/4 DQPSK-Low Hopping-on



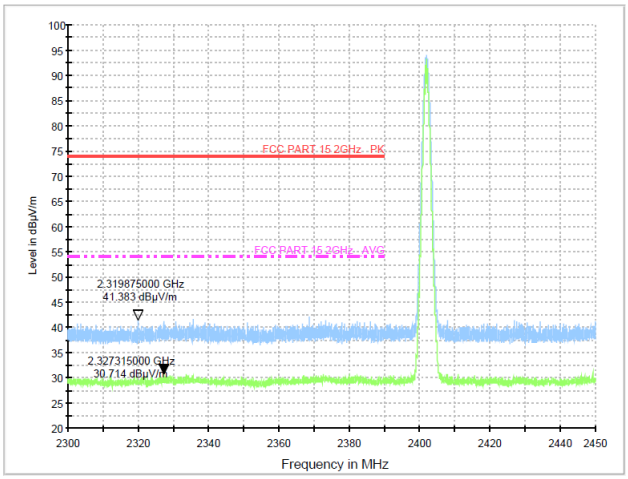
Test Mode: π/4 DQPSK-High Hopping-on



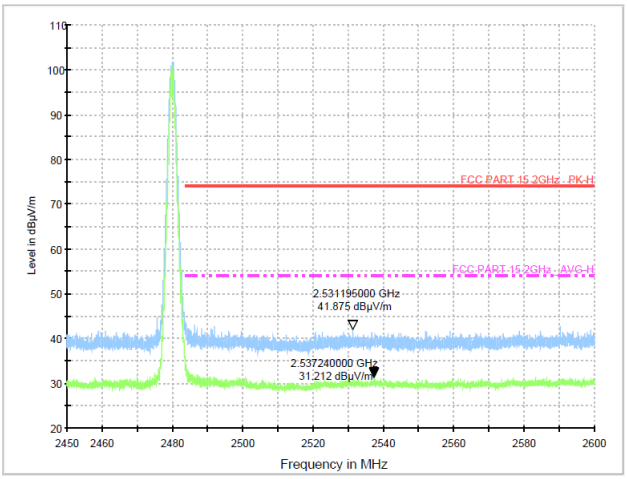
Note: 1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

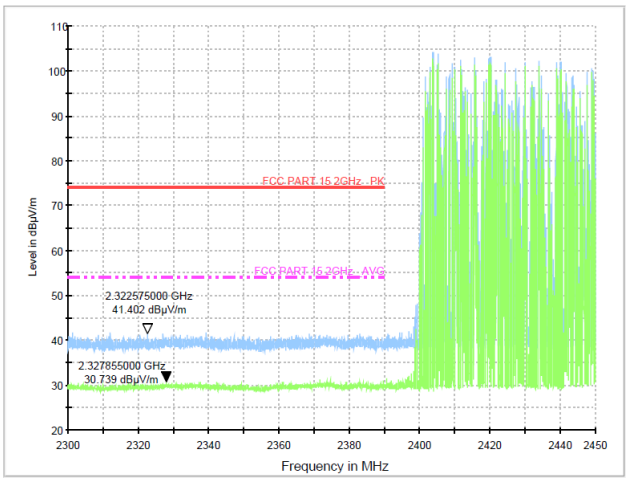
Test Mode: 8DPSKLow Hopping-off



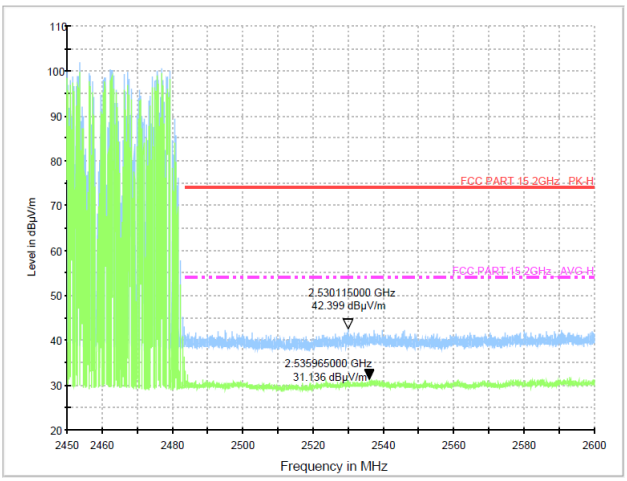
Test Mode: 8DPSK-High Hopping-off



Test Mode: 8DPSK-Low Hopping-on

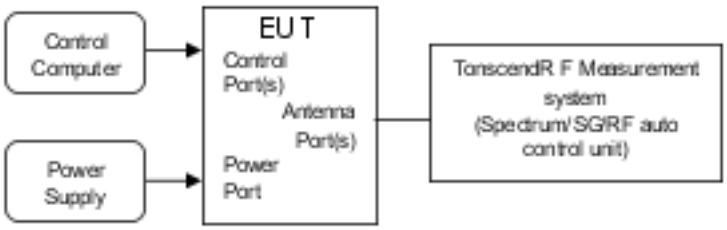


Test Mode: 8DPSK-High Hopping-on



11. BAND EDGE (CONDUCTED)

11.1.Block Diagram of Test Setup



11.2.Test Limits

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.

11.3.Test Procedure

Details see the KDB 558074 D01 15.247 Meas Guidance v05r02

Place the EUT on the table and set it in transmitting mode.

11.3.1. Place the EUT on the table and set it in transmitting mode.

11.3.2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

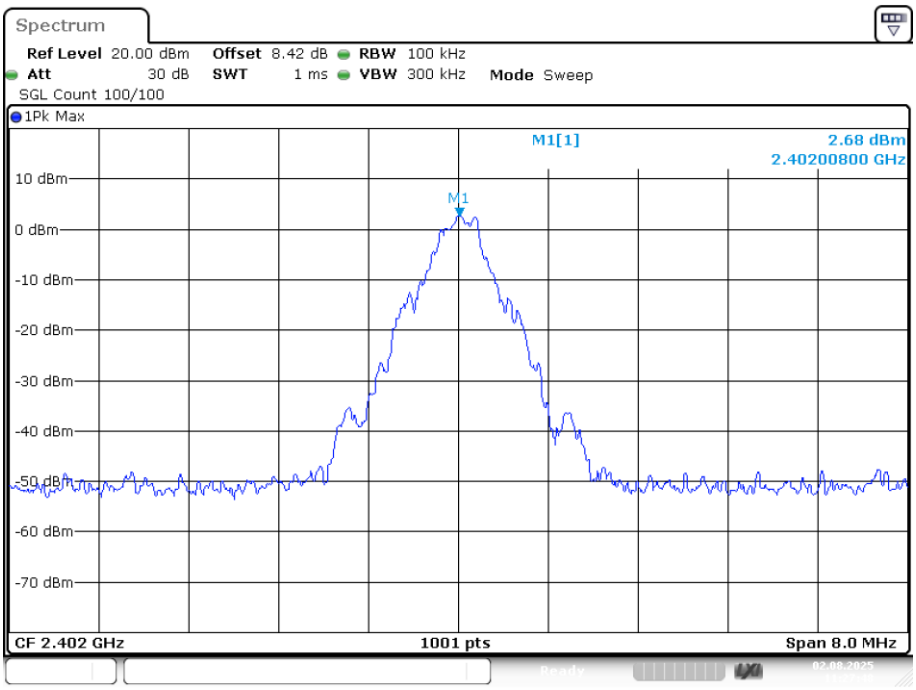
11.3.3. Set the spectrum analyzer as RBW=100KHz, VBW=300KHz, Sweep = auto.

11.3.4. Repeat above procedures until all frequency measured were complete..

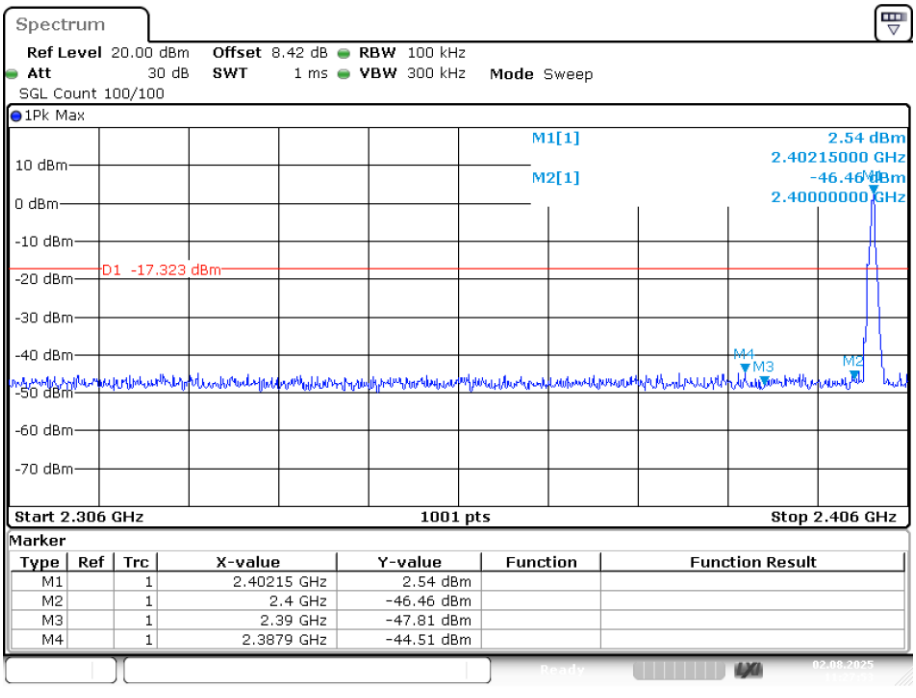
11.4.Test Results

Pass

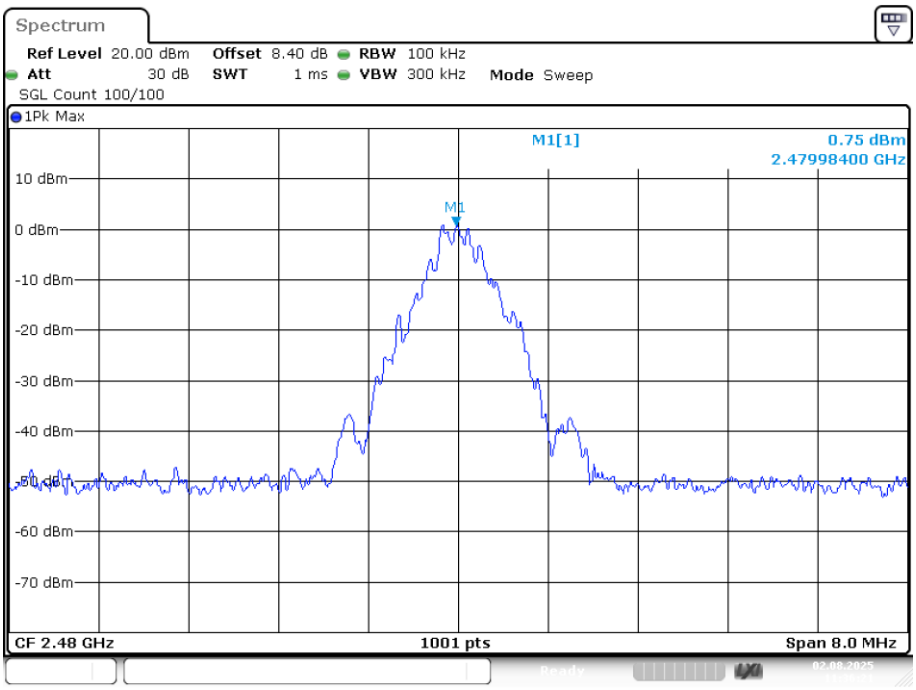
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



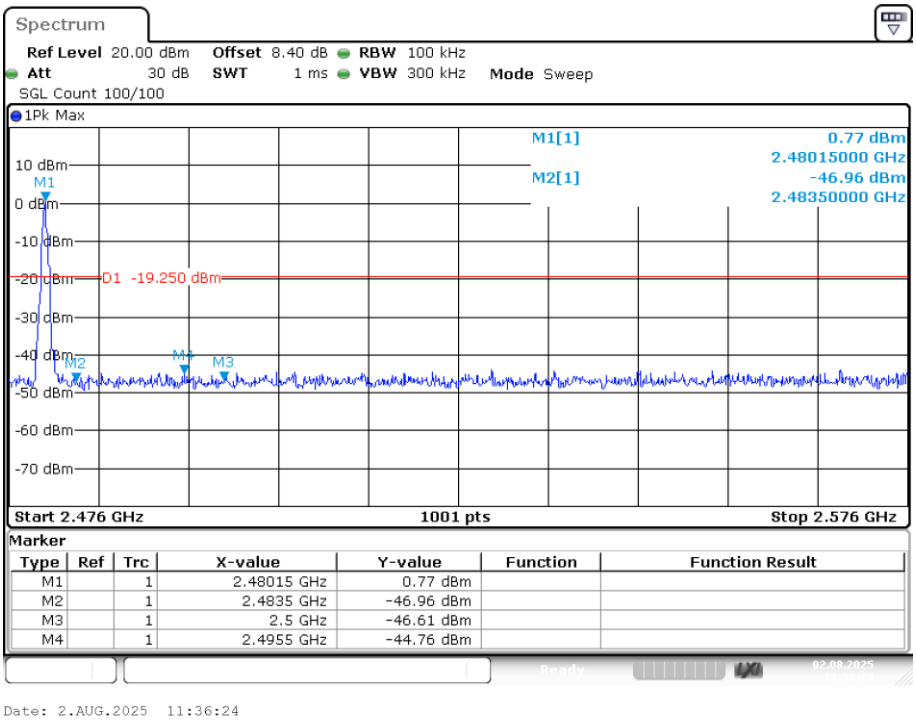
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



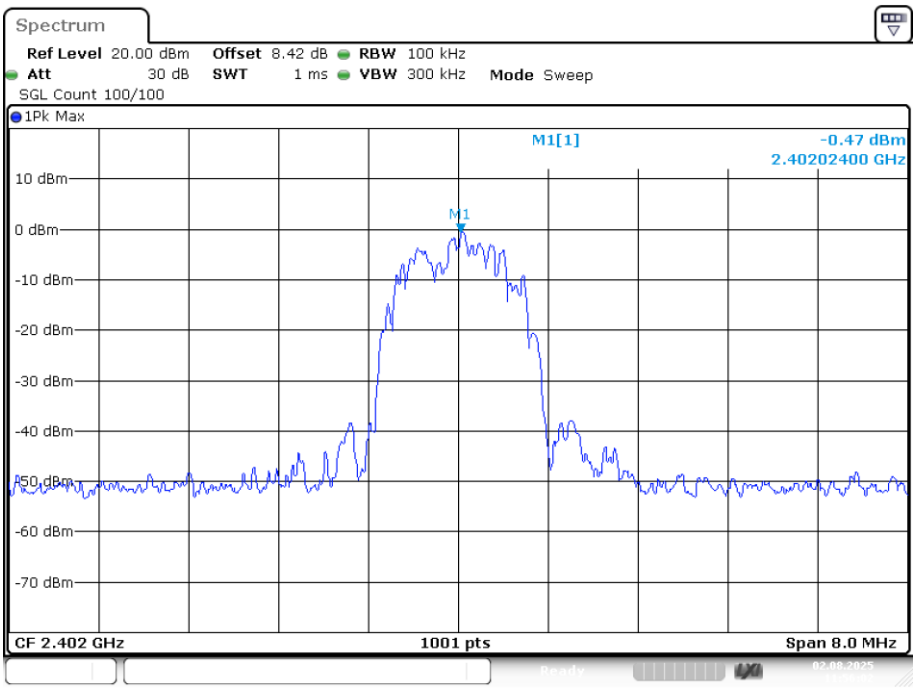
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



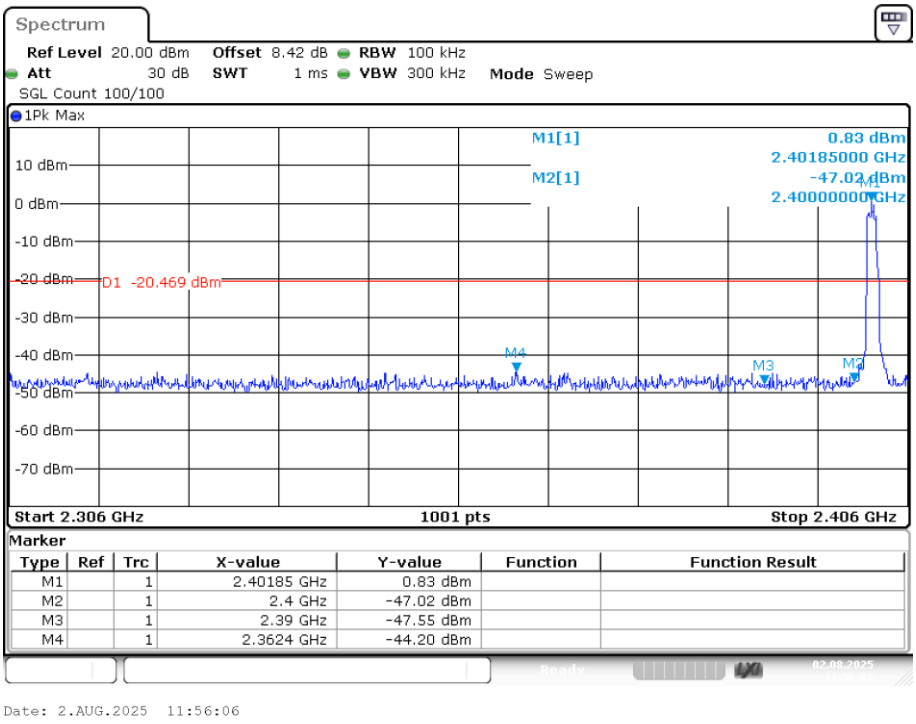
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



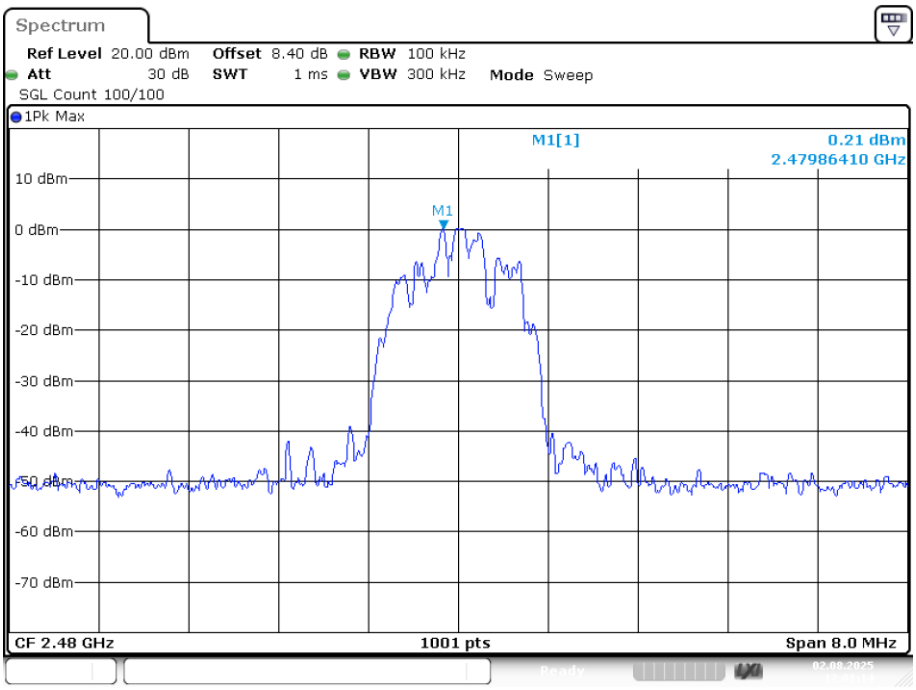
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



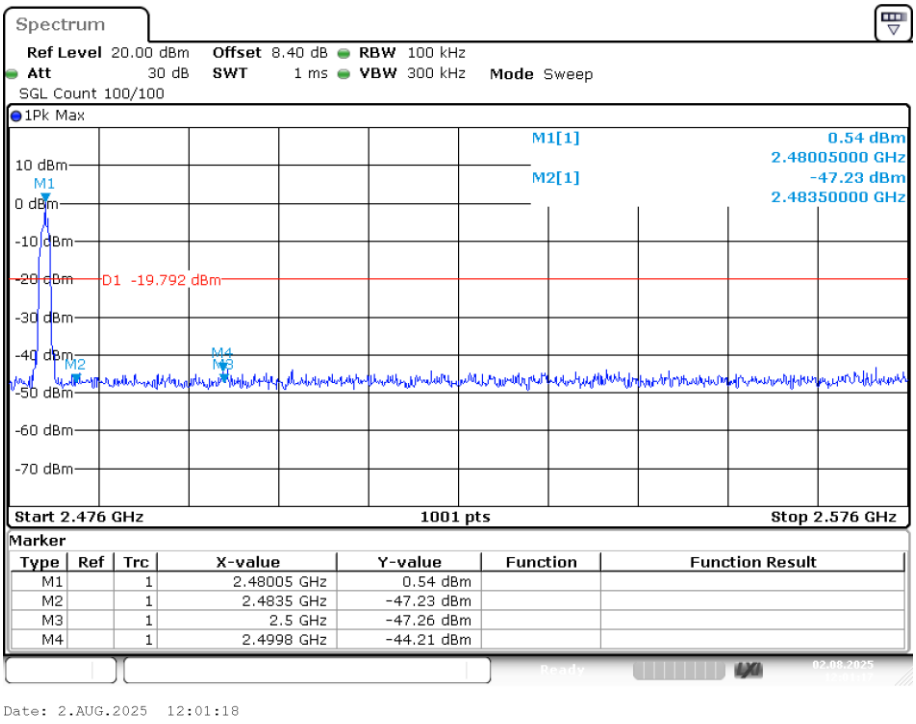
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



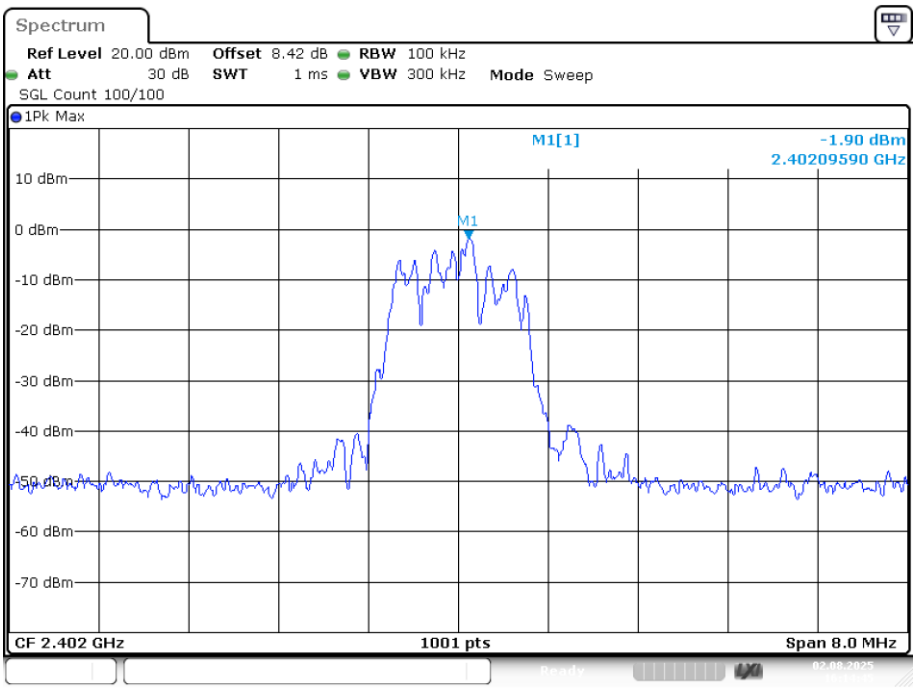
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

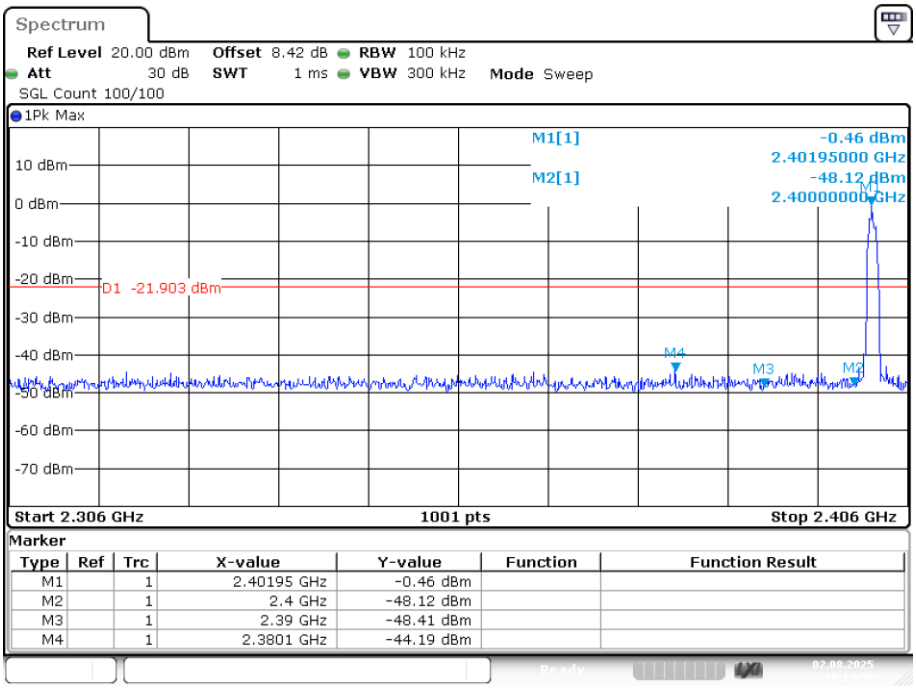


Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



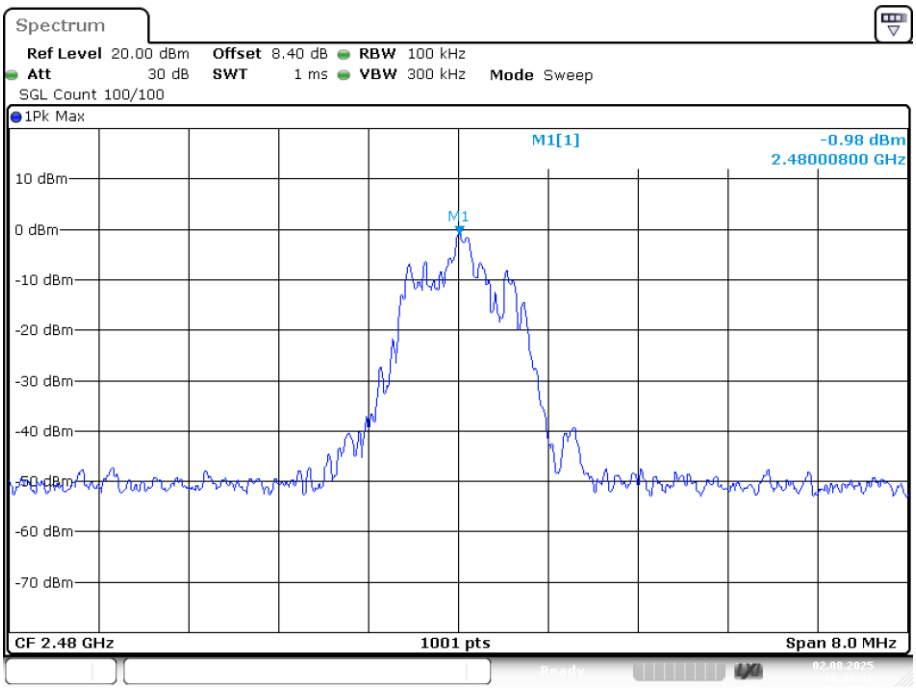
Date: 2.AUG.2025 16:14:45

Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



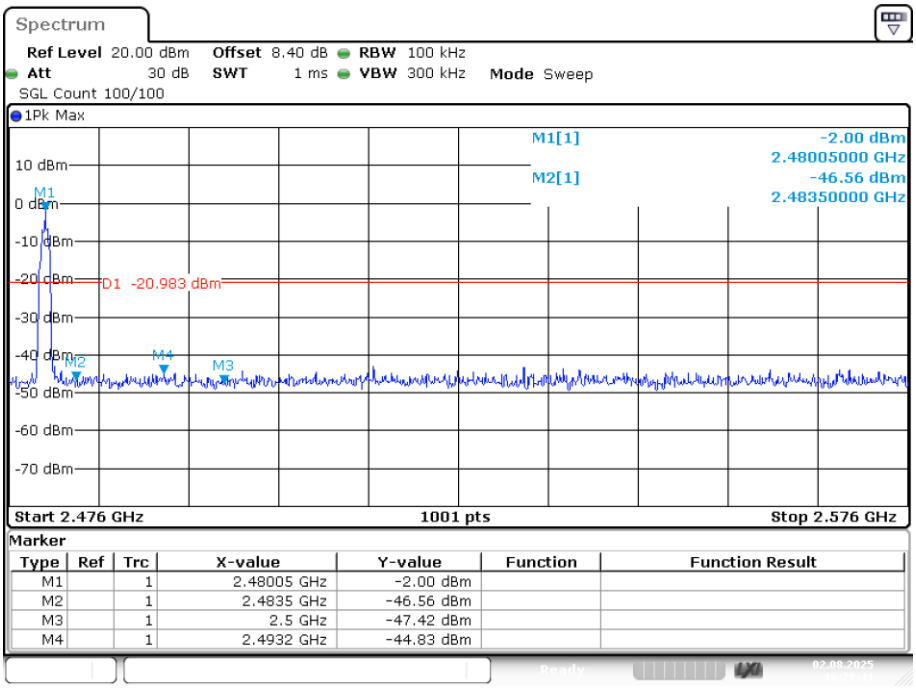
Date: 2.AUG.2025 16:14:49

Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



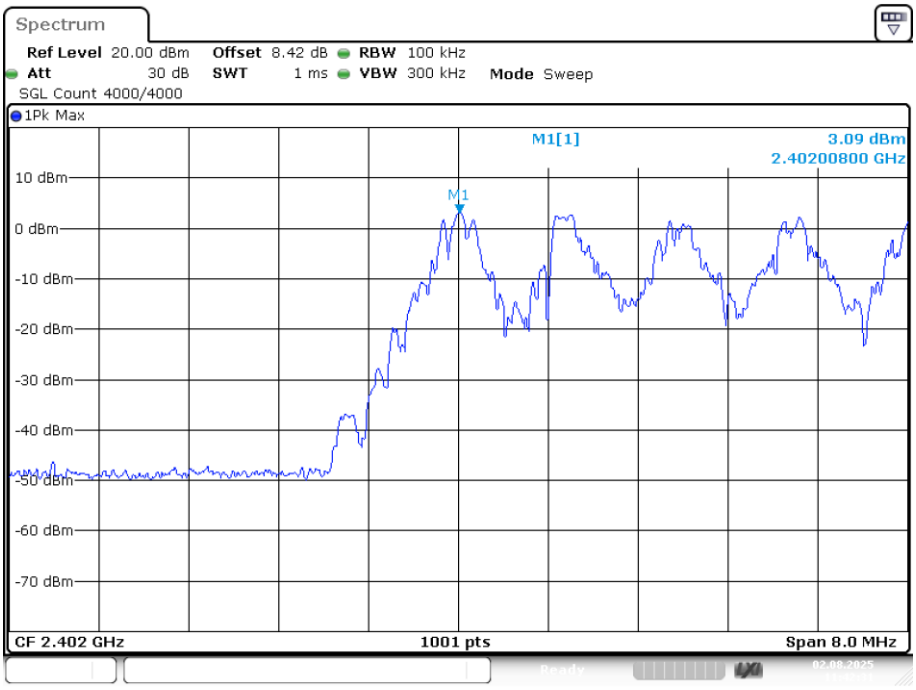
Date: 2.AUG.2025 16:29:38

Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Emission



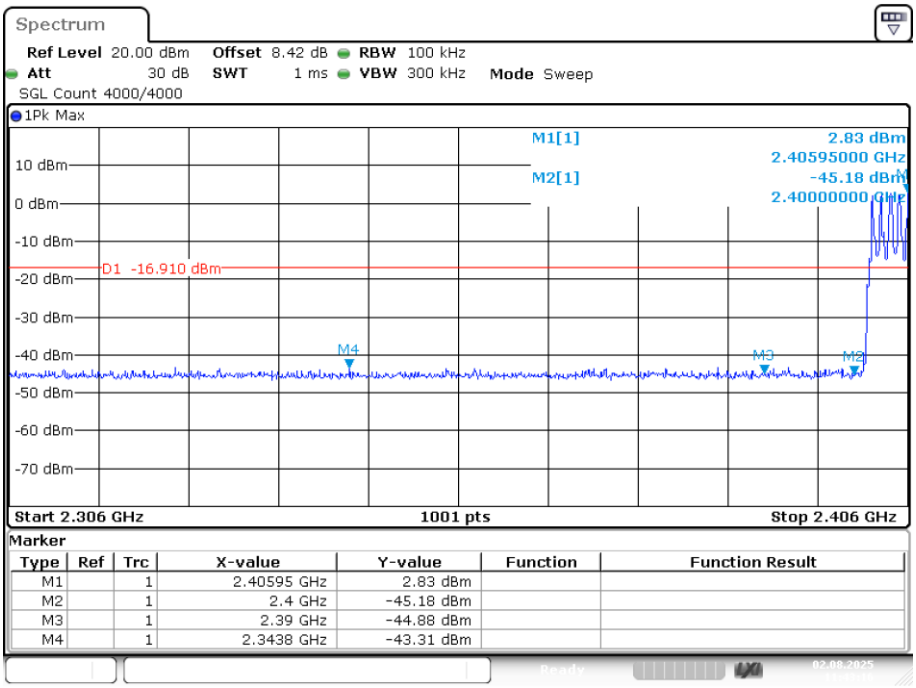
Date: 2.AUG.2025 16:29:42

Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



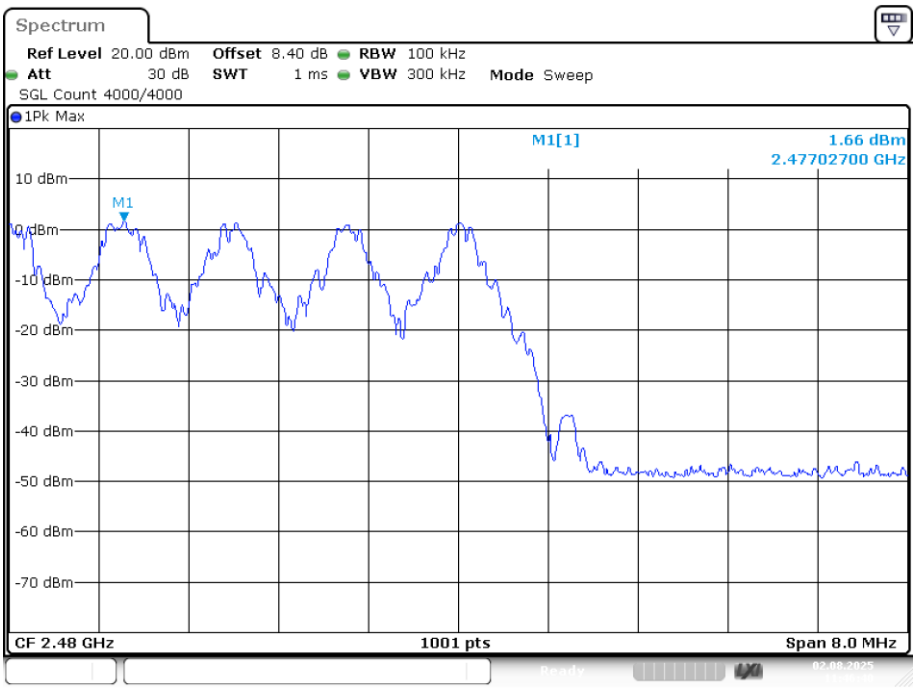
Date: 2.AUG.2025 11:42:31

Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

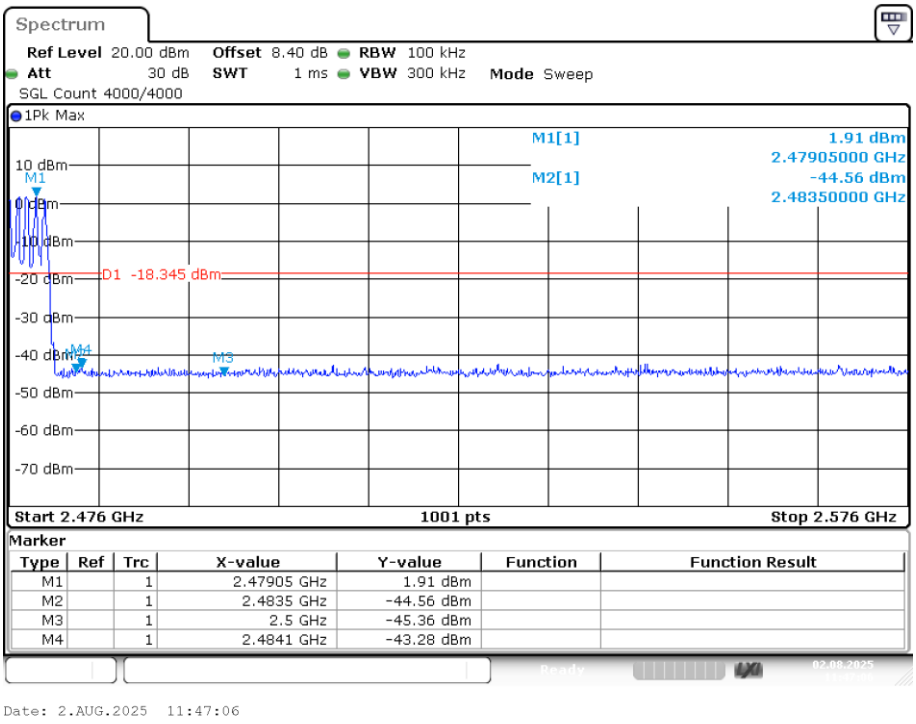


Date: 2.AUG.2025 11:43:16

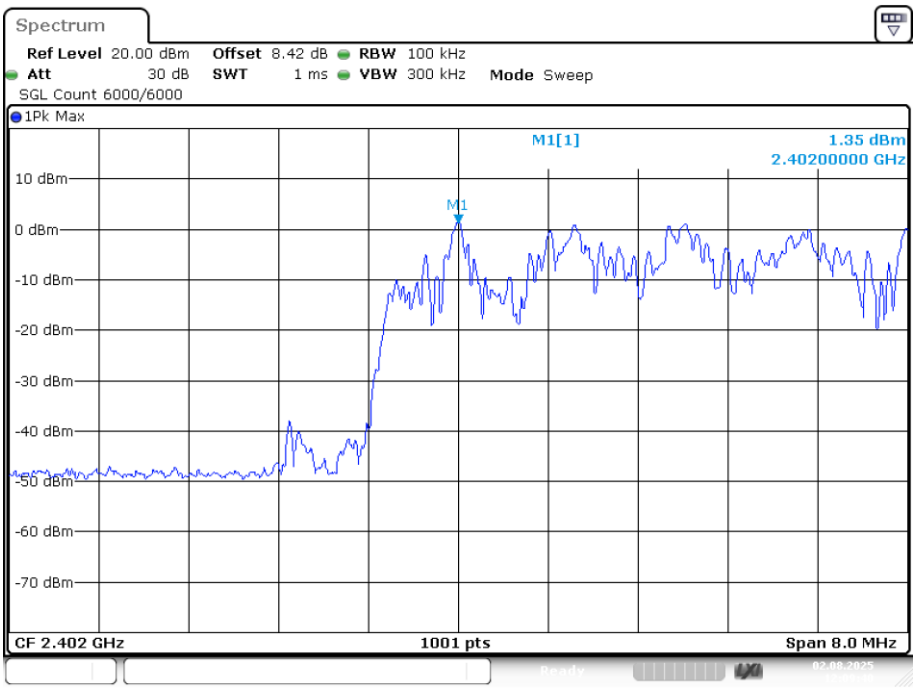
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



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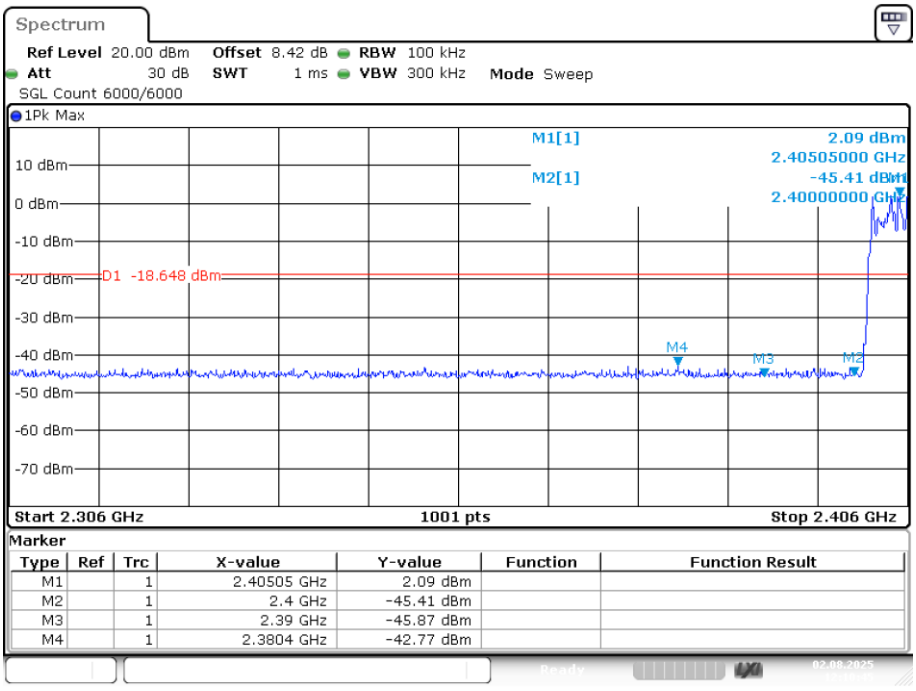
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



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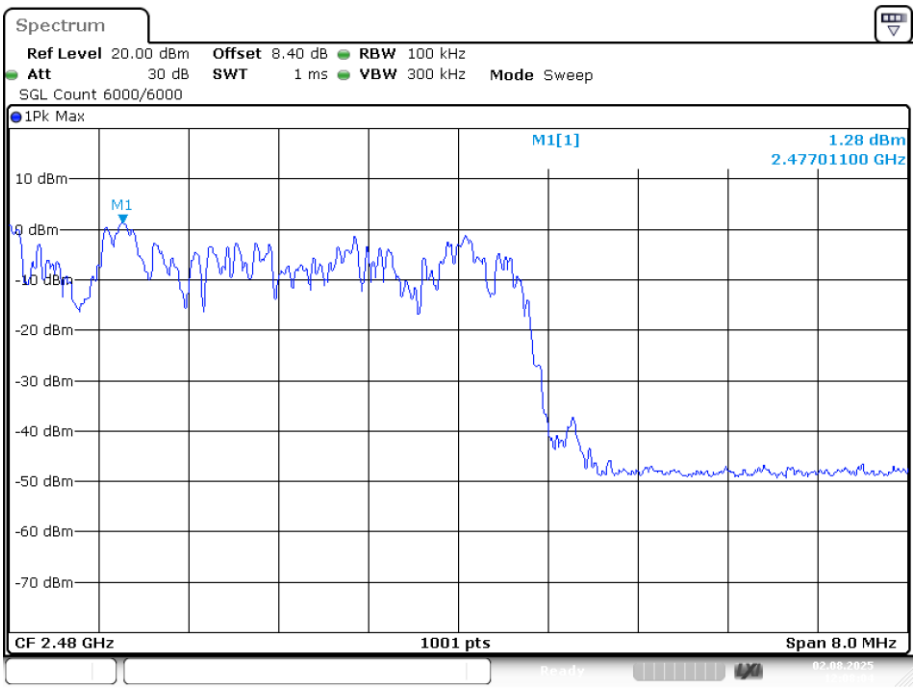
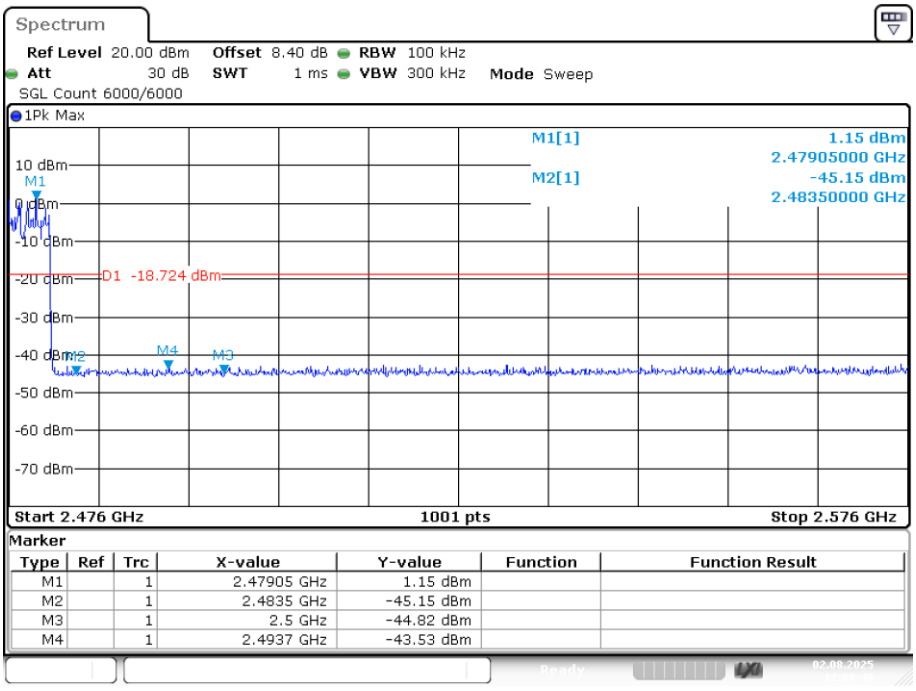
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



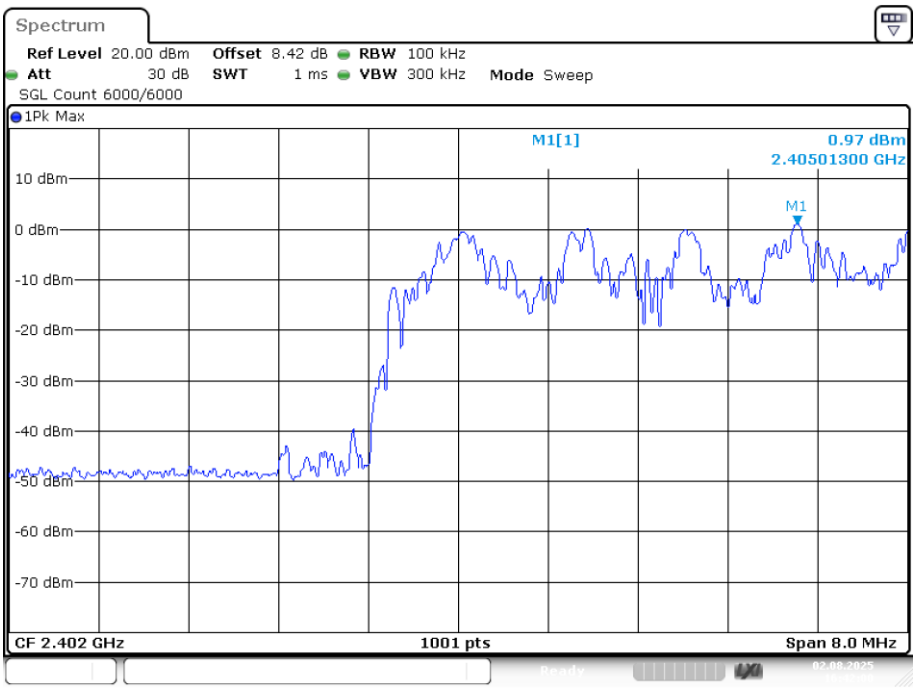
Date: 2.AUG.2025 12:08:03

Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission



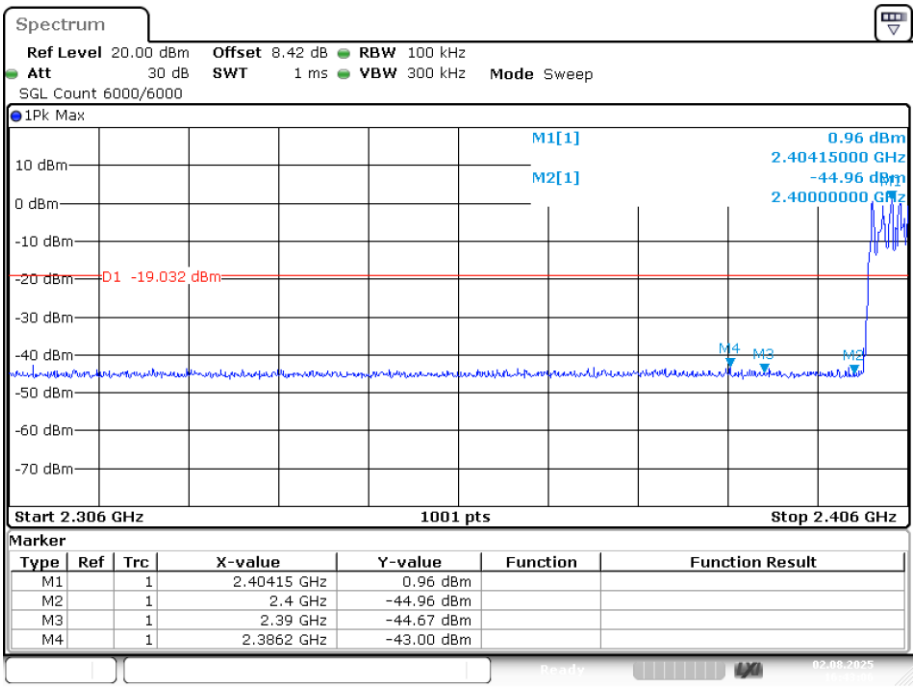
Date: 2.AUG.2025 12:08:40

Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref



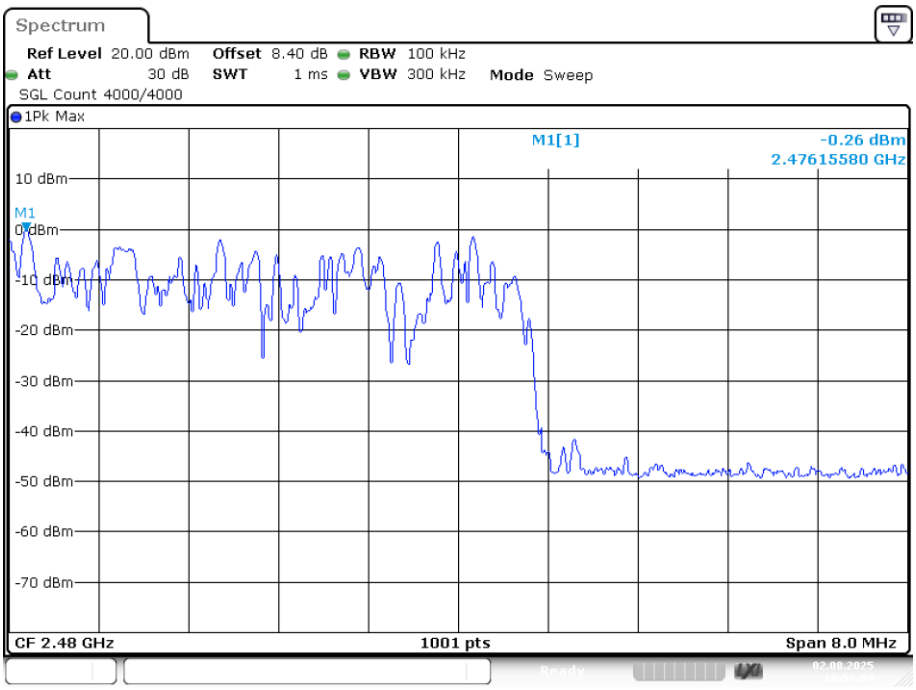
Date: 2.AUG.2025 16:42:00

Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



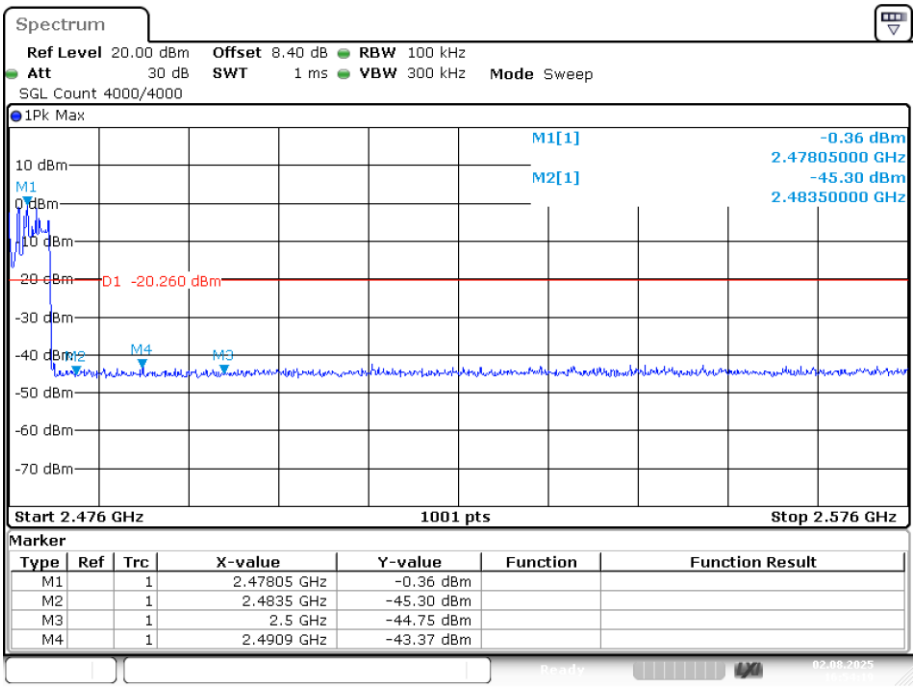
Date: 2.AUG.2025 16:43:05

Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



Date: 2.AUG.2025 16:53:54

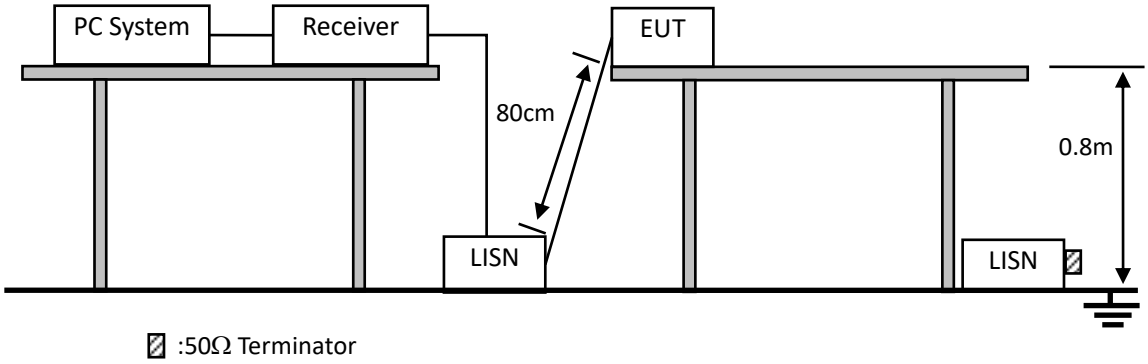
Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Emission



Date: 2.AUG.2025 16:54:19

12. POWER LINE CONDUCTED EMISSIONS

12.1.Block Diagram of Test Setup



:50Ω Terminator

12.2.Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

12.3.Test Procedure

(1) The EUT was placed on a non-metallic table, 80cm above the ground plane.

(2) Setup the EUT and simulator as shown in 10.1

(3) The EUT Power connected to the power mains through a power adapter and a line impedance stabilization network (L.I.S.N1). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N2), this provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 :2013on conducted Emission test.

(4) The bandwidth of test receiver is set at 10KHz.

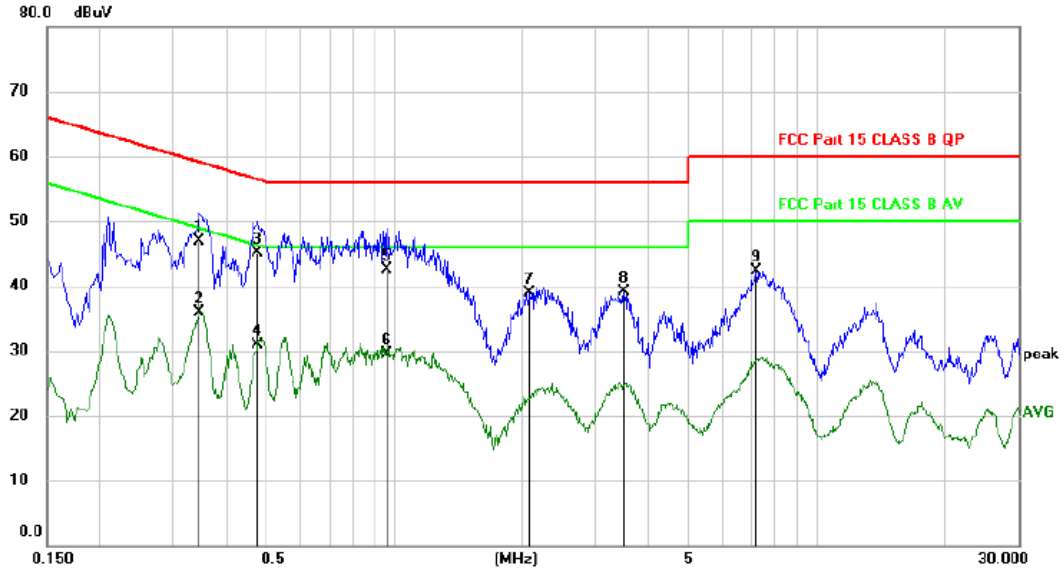
(5) The frequency range from 150 KHz to 30MHz is checked.

12.4.Test Result

PASS. (See below detailed test data)

Note: If peak Result comply with AV limit, QP and AV Result is deemed to comply with AV limit

Line:

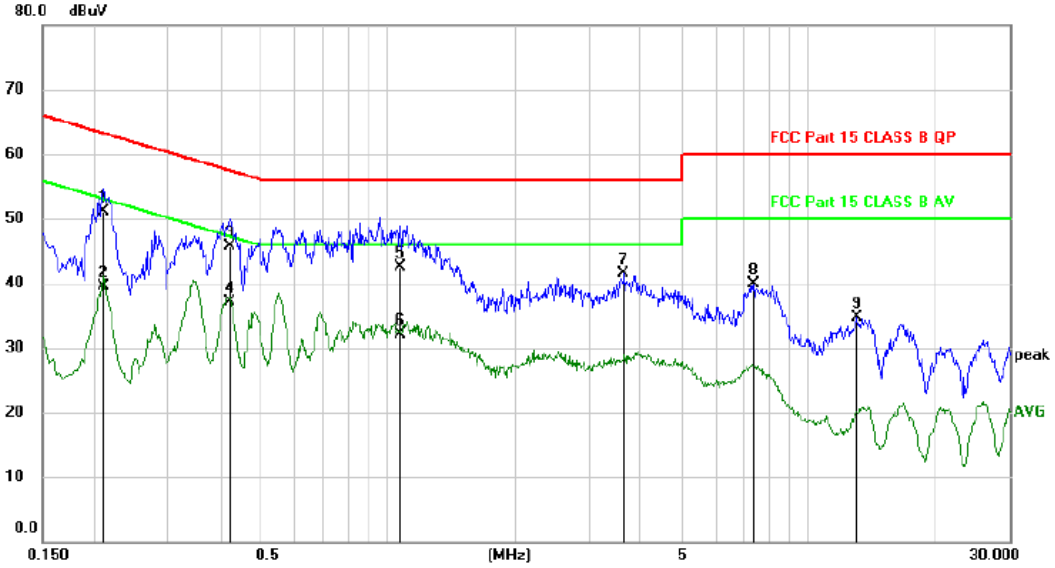


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.3450	36.88	9.95	46.83	59.08	-12.25	QP	
2		0.3450	26.05	9.95	36.00	49.08	-13.08	AVG	
3	*	0.4740	35.08	9.95	45.03	56.44	-11.41	QP	
4		0.4740	20.99	9.95	30.94	46.44	-15.50	AVG	
5		0.9630	32.54	9.94	42.48	56.00	-13.52	QP	
6		0.9630	19.63	9.94	29.57	46.00	-16.43	AVG	
7		2.0789	28.98	9.88	38.86	56.00	-17.14	peak	
8		3.4950	29.16	9.96	39.12	56.00	-16.88	peak	
9		7.1880	32.12	10.13	42.25	60.00	-17.75	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

Neutral:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2100	41.22	9.93	51.15	63.21	-12.06	QP	
2		0.2100	29.52	9.93	39.45	53.21	-13.76	AVG	
3		0.4200	35.71	9.94	45.65	57.45	-11.80	QP	
4	*	0.4200	27.15	9.94	37.09	47.45	-10.36	AVG	
5		1.0710	32.64	9.91	42.55	56.00	-13.45	QP	
6		1.0710	22.28	9.91	32.19	46.00	-13.81	AVG	
7		3.6300	31.46	9.96	41.42	56.00	-14.58	peak	
8		7.3950	29.75	10.13	39.88	60.00	-20.12	peak	
9		13.0320	24.35	10.28	34.63	60.00	-25.37	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

Note: All modes and channels have been tested and only the GFSK 2402MHz mode with the worst data is listed.

13. ANTENNA REQUIREMENTS

13.1.Limit

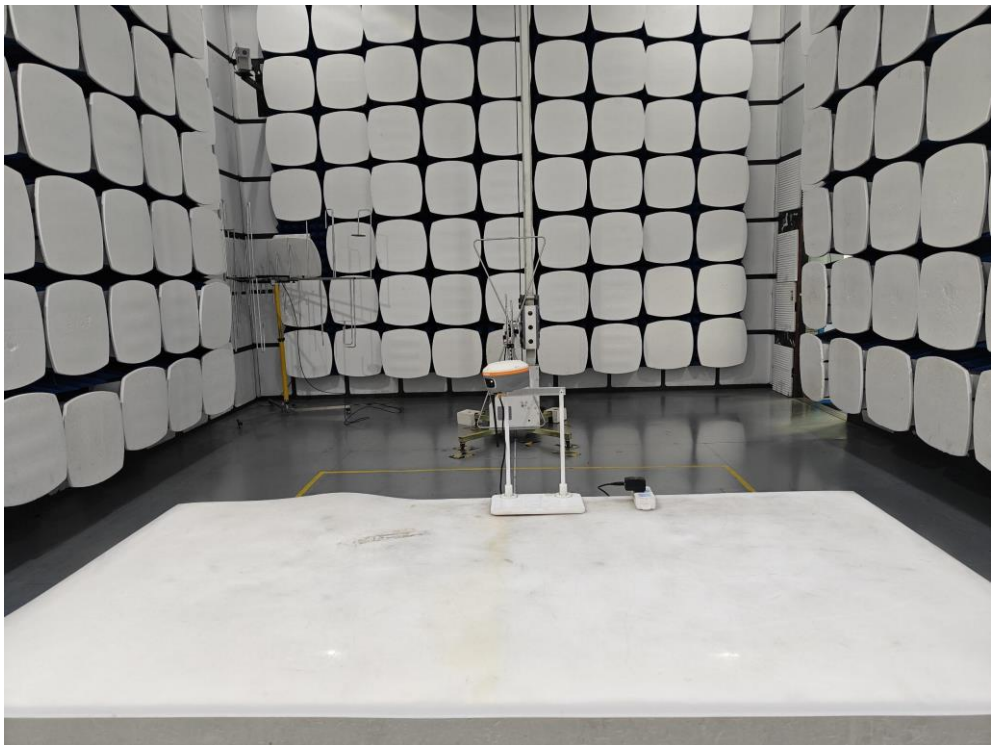
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

13.2.Result

The EUT antenna is PCB Antenna. It complies with the standard requirement.

14. TEST SETUP PHOTO

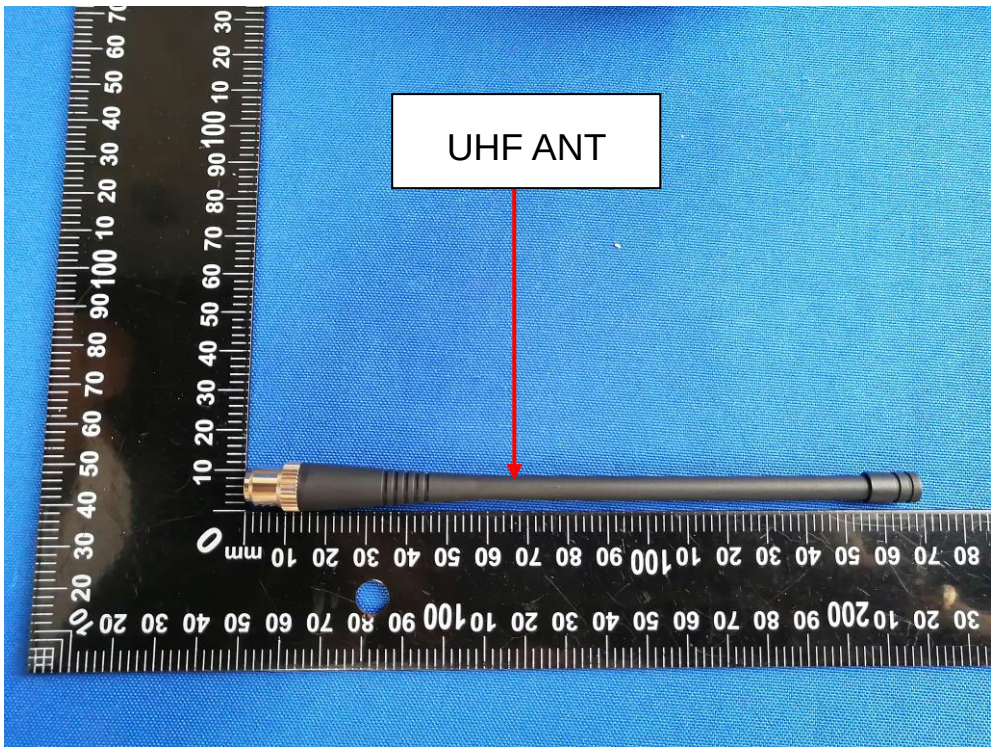
14.1.Photo of Radiated Emission Test

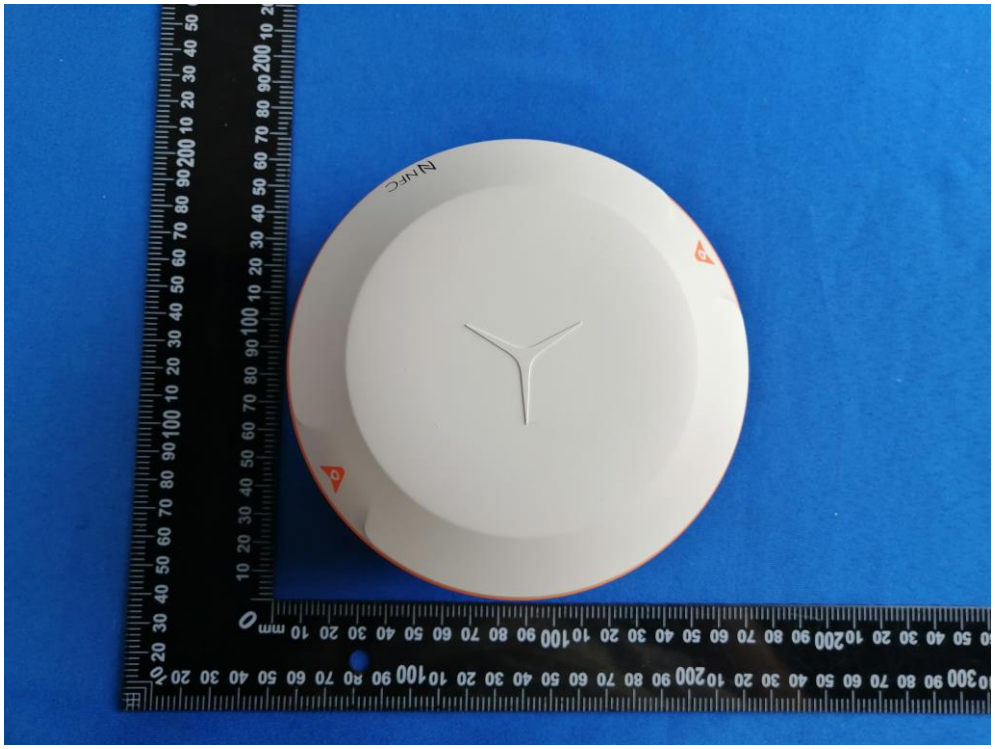


14.2.Photo of Conducted Emission Test

15. EUT PHOTO

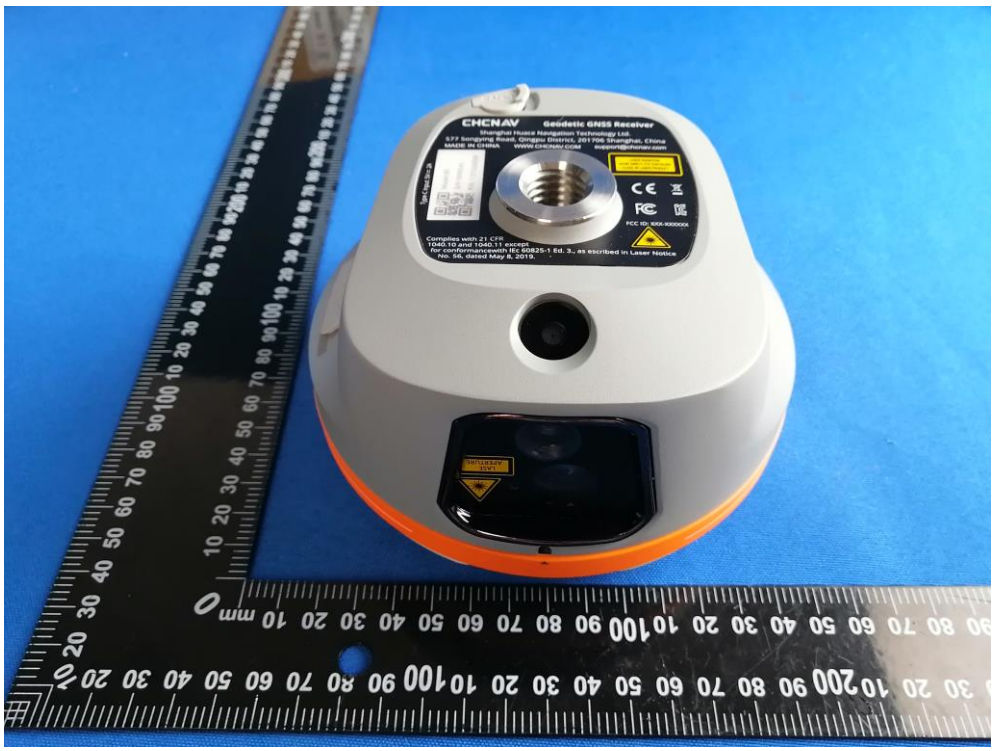
EDAC EDACPOWER ELEC.
AC Adapter 电源适配器 电源供应器
Model 型号 型號 :EA1012AVRU-050
AC Input 输入 输入 :100-240Vac, 1.0A, 50-60Hz
DC Output 输出 输出 :5.0V⎓2.4A 12.0W
CAUTION 注意注意:
FOR INDOOR USE ONLY 室内产品使用
I.T.E. USE ONLY 室内產品使用
S/N:252001817
D- D+
LISTED
I.T.E. POWER SUPPLY
41TJ
E209833
LPS
R33147
RoHS
制造商:翌胜电子股份有限公司
1312810120991
MADE IN CHINA 中国制造 中國製造


UHF ANT



CHCNAV
Geodetic GNSS Receiver

CHCNAV
Geodetic GNSS Receiver

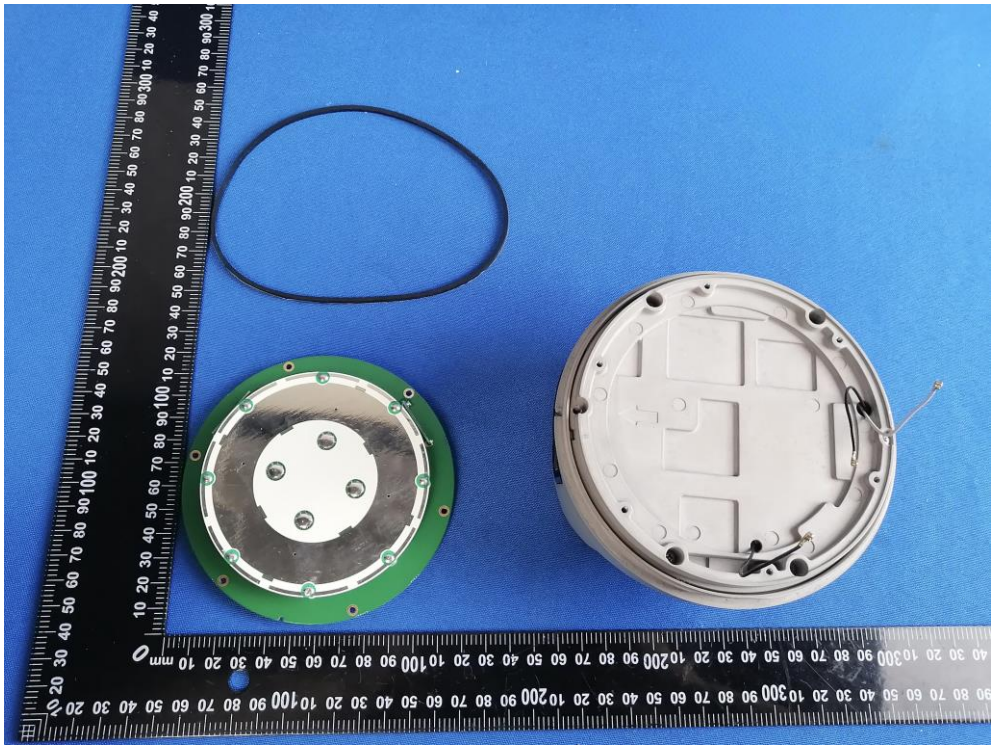

CHCNAV
Geodetic GNSS Receiver

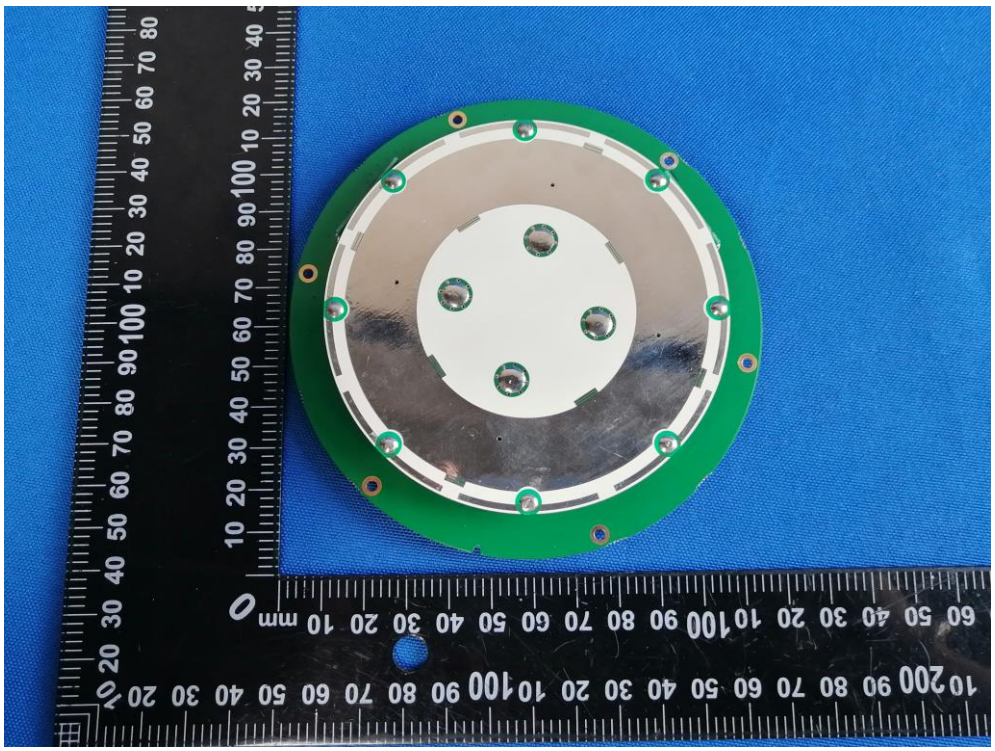
CHCNAV
Geodetic GNSS Receiver

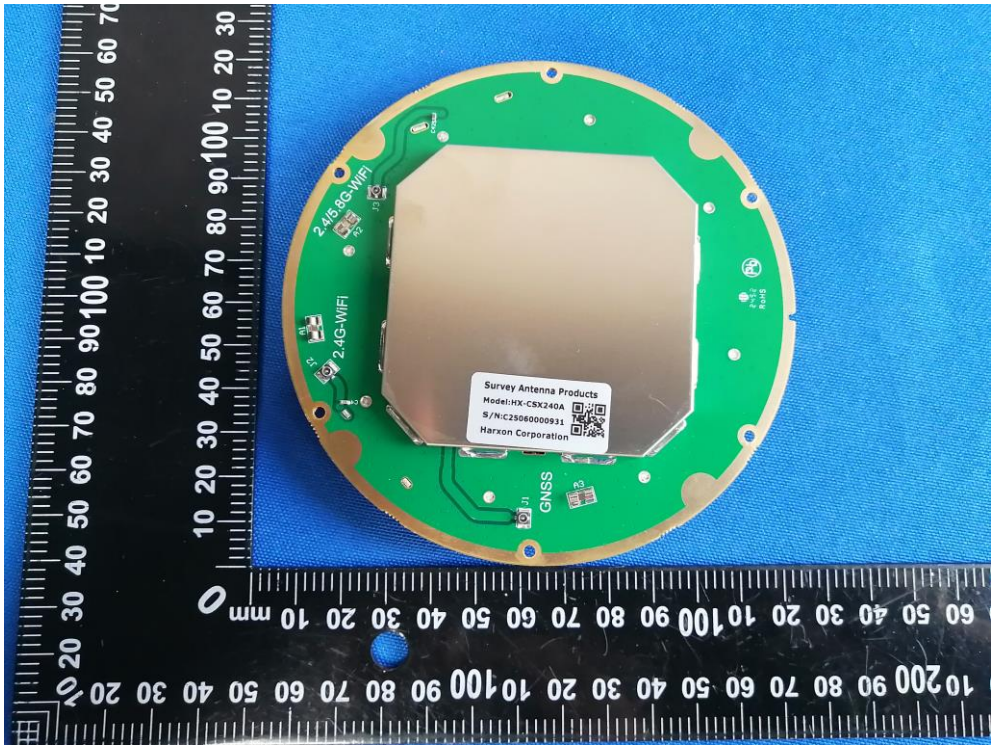
CHCNAV
Geodetic GNSS Receiver
RADIO

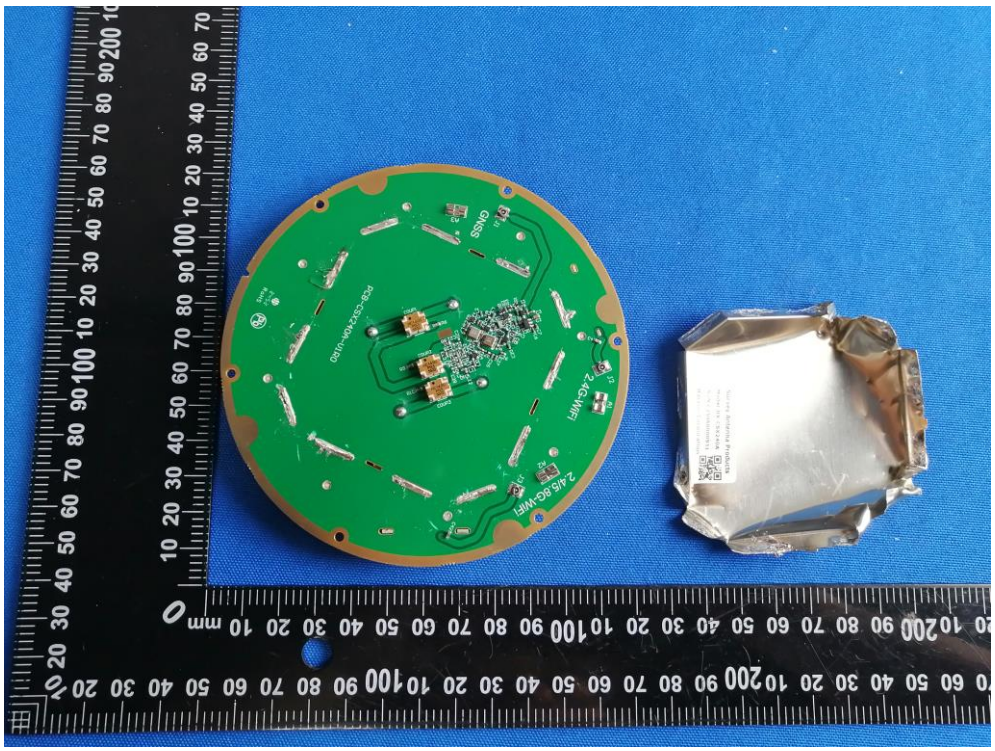
Type-C Input: 5V 2A
Model:i85
S/N: 9999545
P/N: 1101020029
CHCNAV
Geodetic GNSS Receiver
Shanghai Huace Navigation Technology Ltd.
577 Songying Road, Qingpu District, 201706 Shanghai, China
MADE IN CHINA www.CHCNAV.COM support@chcnav.com
RADIO
LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS 1M LASER PRODUCT
FCC ID: XXX-XXXXXX
Complies with 21 CFR 1040.10 and 1040.11 except for conformancewith IEC 60825-1 Ed. 3., as escribed in Laser Notice No. 56, dated May 8, 2019.

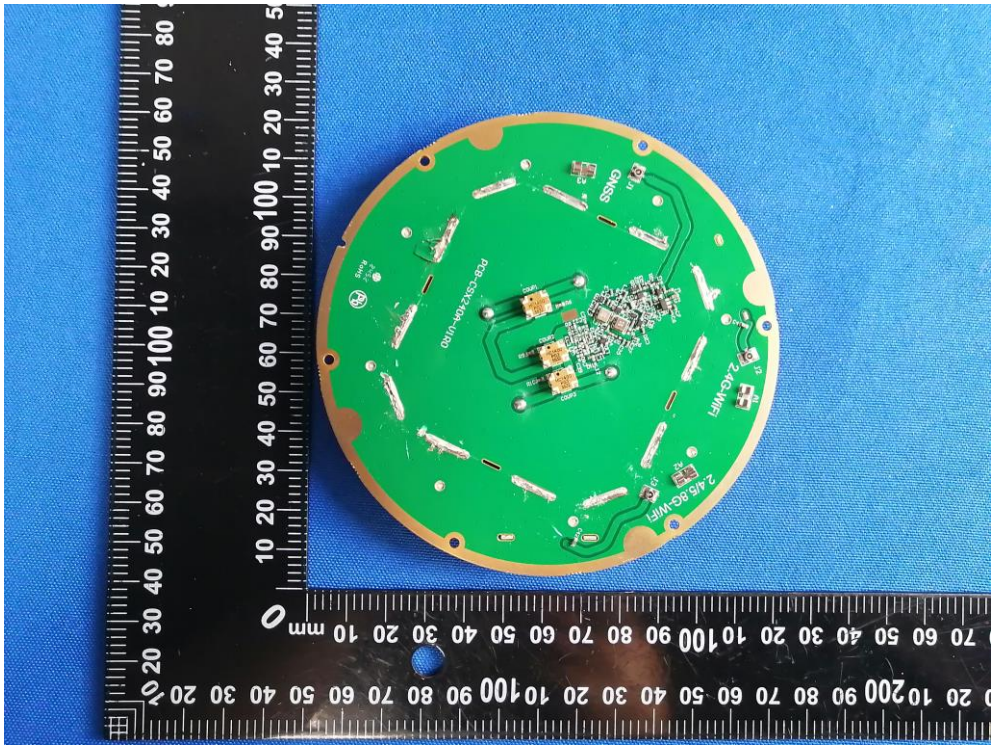
CHCNAV
Shanghai Huace Naviga
577 Songying Road, Qingpu Dis

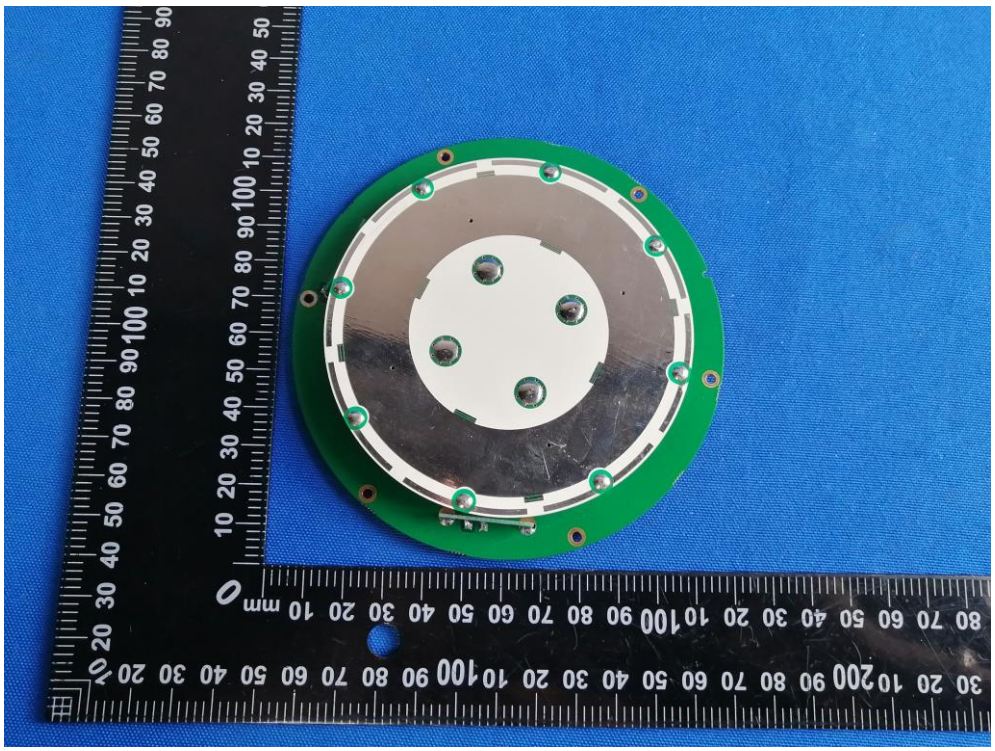


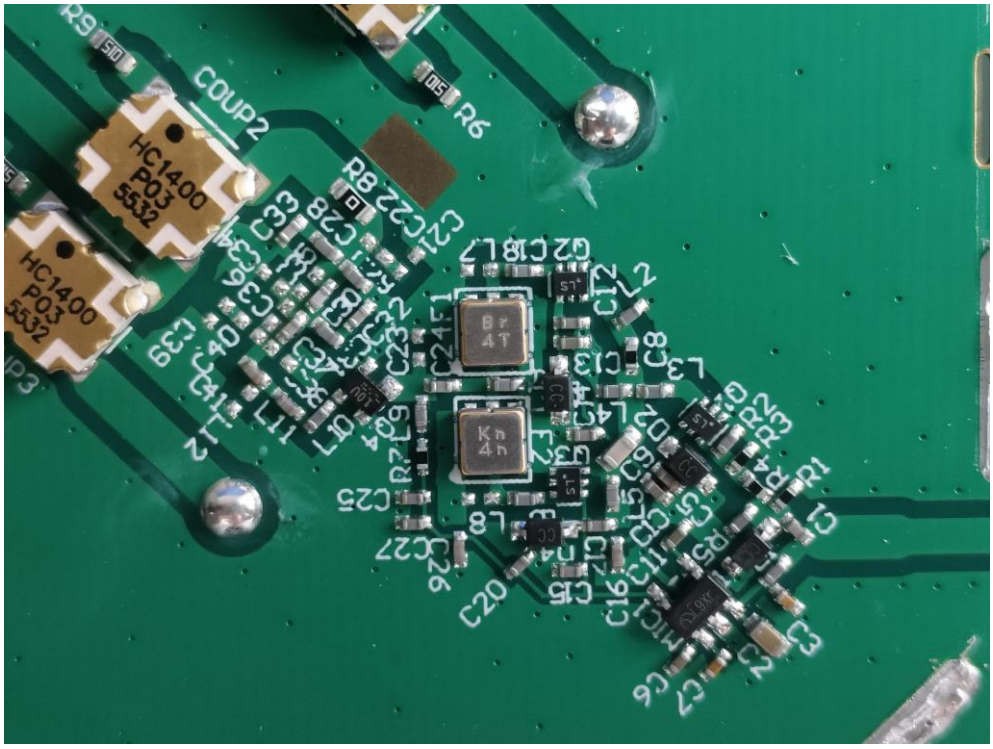


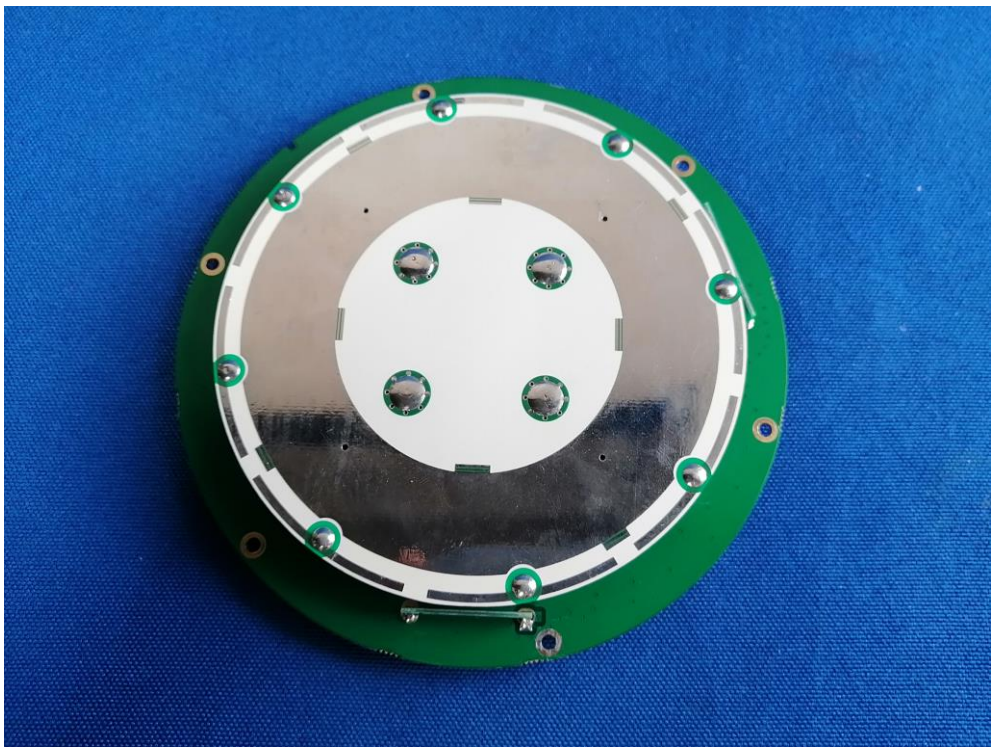

2.4/5.8G-WIFI
2.4G-WIFI
GNSS
Survey Antenna Products
Model:HX-CSX240A
S/N:C2S060000931
Harxon Corporation

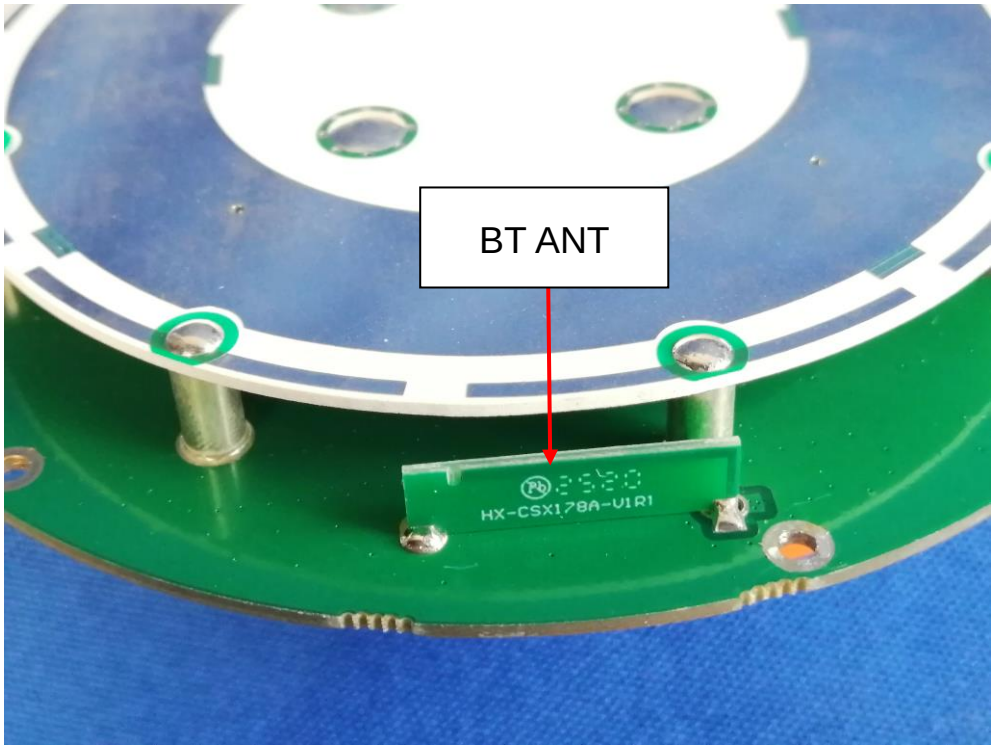

GNSS
2.4G-WiFi
2.4/5.8G-WiFi


GNSS
2.4G-WiFi
2.4/5.8G-WiFi




COUP2
HC1400
P03
5532
HC1400
P03
5532
R6
R8
R9




BT ANT
HX-CSX178A-V1R1