FCC PART 15.407
TEST REPORT

On Behalf of

Zhiwei Robotics Corp.
Room 603, 2 Boyun Road, Pudong, Shanghai P.R.China

FCC ID: 2AIDMLPDF1091
Model: DFR1080, DFR1081, DFR1090, DFR1091

November 2, 2024

This Report Concerns:	**Equipment Type:**
☒ Original Report	LattePanda Sigma

Test Engineer:	LBi Li / LBi Li
Report Number:	**QCT24JR-0163E-04**
Test Date:	October 18, 2024 ~ November 2, 2024
Reviewed By:	Vincent Yang / Vincent Yang
Approved By:	Kendy Wang / Kendy Wang
Prepared By:	**Shenzhen QC Testing Laboratory Co., Ltd.** East of 1/F., Building E, Xinghong Science Park, No.111, Shuiku Road, Fenghuanggang, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China **Tel: 0755-23008269** **Fax: 0755-23726780**

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Revision History of This Test Report

Report Number	Description	Issued Date
QCT24JR-0163E-04	Initial Issue	2024-11-02

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1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Description	LattePanda Sigma
Model No.	DFR1080, DFR1081, DFR1090, DFR1091
Model Difference	all the models are electrical identical including the same software parameter and hardware design (i.e., circuit design, PCB Layout, RF module/circuit, antenna type(s) and antenna location, components on PCB, etc.,), same mechanical structure and design (including product enclosure, materials, etc.,), the only differences are capacity of Memory and SSD. All tests were conducted on the models (DFR1091) and the test result was passed. Difference testing was performed on the model (DFR1081), testing Conducted Emission and spurious emission (30MHz - 1GHz).
Tested Model	DFR1091, DFR1081
Sample(s) Status	Engineer sample
Operation Frequency:	U-NII-1: 5180MHz~5240MHz U-NII-2A: 5260MHz~5320MHz U-NII-2C: 5500MHz~5720MHz U-NII-3: 5745MHz~5825MHz
Modulation type:	802.11a: BPSK, QPSK, 16QAM, 64QAM 802.11n: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM,
Antenna Type:	Internal Antenna
Antenna gain*1:	0.67dBi max for 2.4GHz Ant1 0.67dBi max for 2.4GHz Ant2 Note: Antenna 1 and Antenna 2 support MIMO mode, so directional gain value as below: Directional Gain=$10*\log[(10^{0.67/20}+10^{0.67/20})^2/2]=3.68$dBi
Power supply:	DC 19V/4.7A (Powered by adapter)
Accessories:	Adapter Model: ADP-90MD H Input:100-240V~, 1.5A, 50-60Hz Output:19V/4.7A, 90.1W Manufacturer: DELTA ELECTRONICS, INC.
TPC Support	No
DFS	Slaver device without radar detection function
Trade Mark:	N/A
Applicant	Zhiwei Robotics Corp.
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Manufacturer	Zhiwei Robotics Corp.
Address	Room 603, 2 Boyun Road, Pudong, Shanghai P.R.China
Sample No.	Y24J0163E01WC(DFR1091), Y24J0163E02WC(DFR1081)

Note: *1This information provided by Manufacturer, SZ QC Lab is not responsible for the accuracy of this information.

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1.2 System Test Configuration

1.2.1 Channel List

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5180~5240MHz (U-NII-1)	36	5180 MHz	44	5220 MHz
	38	5190 MHz	46	5230 MHz
	40	5200 MHz	48	5240 MHz
	42	5210 MHz		
For 20 MHz Bandwidth, use channel 36, 40, 44, 48. For 40 MHz Bandwidth, use channel 38, 46. For 80 MHz Bandwidth, use channel 42.				
5260~5320MHz (U-NII-2A)	50	5250 MHz	58	5290 MHz
	52	5260 MHz	60	5300 MHz
	54	5270 MHz	62	5310 MHz
	56	5280 MHz	64	5320 MHz
For 20 MHz Bandwidth, use channel 52, 56, 60, 64. For 40 MHz Bandwidth, use channel 54, 62. For 80 MHz Bandwidth, use channel 58. For 160 MHz Bandwidth, use channel 50.				
5500~5720MHz (U-NII-2C)	100	5500 MHz	122	5610 MHz
	102	5510 MHz	124	5620 MHz
	104	5520 MHz	126	5630 MHz
	106	5530 MHz	128	5640 MHz
	108	5540 MHz	132	5660 MHz
	110	5550 MHz	134	5680 MHz
	112	5560 MHz	138	5690 MHz
	114	5570 MHz	140	5700 MHz
	116	5580 MHz	142	5710 MHz
	118	5590 MHz	144	5720 MHz
	120	5600 MHz		
For 20 MHz Bandwidth, use channel 100, 104, 108, 112. 116, 112, 124, 128, 132, 136, 140, 144 For 40 MHz Bandwidth, use channel 102, 110, 118, 126, 134, 142. For 80 MHz Bandwidth, use channel 106, 122, 138. For 160 MHz Bandwidth, use channel 114.				
5745~5825MHz (U-NII-3)	149	5745 MHz	157	5785 MHz
	151	5755 MHz	159	5795 MHz
	153	5765 MHz	161	5805 MHz
	155	5775 MHz	165	5825 MHz
For 20 MHz Bandwidth, use channel 149, 153, 157, 161, 165. For 40 MHz Bandwidth, use channel 151, 159. For 80 MHz Bandwidth, use channel 155.				

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

Test Mode	Channel (MHz)		
	5G Wi-Fi UNII-1		
802.11a 802.11n HT20 802.11ac VHT20 802.11ax HE20	CH36 (5180MHz)	CH40 (5200MHz)	CH48 (5200MHz)
	5G Wi-Fi UNII-2A		
	CH52 (5260MHz)	CH60 (5300MHz)	CH64 (5320MHz)
	5G Wi-Fi UNII-2C		
	CH100 (5500MHz)	CH116 (5580MHz)	CH140 (5700MHz)
	CH144 (5720MHz)		
	5G Wi-Fi UNII-3		
	CH149 (5745MHz)	CH157 (5785MHz)	CH165 (5825MHz)

Test Mode	Channel (MHz)		
	5G Wi-Fi UNII-1		
02.11n HT40 802.11ac VHT40 802.11ax HE40	CH38 (5190MHz)	CH46 (5230MHz)	
	5G Wi-Fi UNII-2A		
	CH54 (5270MHz)	CH62 (5310MHz)	
	5G Wi-Fi UNII-2C		
	CH102 (5510MHz)	CH110 (5550MHz)	CH134 (5670MHz)
	CH142 (5710MHz)		
	5G Wi-Fi UNII-3		
	CH151 (5755MHz)	CH159 (5795MHz)	

Test Mode	Channel (MHz)		
	5G Wi-Fi UNII-1		
802.11ac VHT80 802.11ax HE80	CH42 (5210MHz)		
	5G Wi-Fi UNII-2A		
	CH58 (5290MHz)		
	5G Wi-Fi UNII-2C		
	CH106 (5530MHz)	CH122 (5610MHz)	CH138 (5690MHz)
	5G Wi-Fi UNII-3		

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	CH155 (5775MHz)

Test Mode	Channel (MHz)
	5G Wi-Fi UNII-2A
802.11ac VHT160 802.11ax HE160	CH50 (5250MHz)
	5G Wi-Fi UNII-2C
	CH114 (5570MHz)

1.2.2 EUT Exercise Software

The test software (DRTU) was used to control EUT work in Continuous TX mode, and select test channel, wireless mode:

Mode	Data Rate (Mbps)	Power Level
802.11a	6	Default
802.11n	HT0	Default
802.11ac	VHT0	Default
802.11ax	HE0	Default

1.2.3 Support Equipment

Manufacturer	Description	Model	Remark
Keyboard	HP	6CB78PA#AB2	1.5m，un-shielding， No Core
Mouse	DELL	CN-049PRO	1.5m，un-shielding， No Core
Flat Panel Monitor	DELL	S2721QS	Input: 100-240V~, 50/60Hz, 1.5A
Technity	Intelligent Wireless Access Point	TS-MWI3000W4P	FCC ID:2ATAZ-MWI3000W4P

1.2.4 Test mode

1. Transmitting mode: Keep the EUT in continuously transmitting.
2. 802.11ax mode only support Full RU.
3. The built-in test software can control the single antenna transmission, and can also control the double antenna transmission together.

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1.3 Test Facility

Test Firm : Shenzhen QC Testing Laboratory Co., Ltd.

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19. The testing quality system of our laboratory meets with ISO/IEC-17025 requirements. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAS – Registration No.: L8464

The EMC Laboratory has been accredited by CNAS, and in compliance with ISO/IEC 17025:2017 General Requirements for testing Laboratories.

A2LA Certificate Number: 6759.01

The EMC Laboratory has been accredited by A2LA, and in compliance with ISO/IEC 17025:2017 General Requirements for testing Laboratories.

FCC Registration Number: 561109

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission.

IC Registration Number: 29628

CAB identifier: CN0141

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada.

1.4 Measurement Uncertainty

Parameter	Uncertainty
Occupied Channel Bandwidth	±1.42 x10^{-4}%
RF output power, conducted	±1.06dB
Power Spectral Density, conducted	±1.06dB
Unwanted Emissions, conducted	±2.51dB
AC Power Line Conducted Emission	±1.80dB
Radiated Spurious Emission test (9kHz-30MHz)	±2.66dB
Radiated Spurious Emission test (30MHz-1000MHz)	±4.04dB
Radiated Spurious Emission test (1000MHz-18000MHz)	±4.70 dB
Radiated Spurious Emission test (18GHz-40GHz)	±4.80dB
Temperature	±0.8℃
Humidity	±3.2%
DC and low frequency voltages	±0.1%
Time	±5%
Duty cycle	±5%

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2

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2. Summary of Test Results

Test Item	Section	Result
Antenna Requirement	§15.203	Pass
AC Power Line Conducted Emission	§15.207	Pass
Maximum Conducted Output Power	§15.407(a)(1), (a)(3)	Pass
Emission Bandwidth	§15.407(a)(2)	Pass
Maximum Power Spectral Density	§15.407(a)(1), (a)(3)	Pass
Band Edge	§15.407(b)(1), (b)(2), (b)(3), (b)(4)	Pass
Unwanted Emission	§15.205/§15.209/§15.407(b)(1), (b)(2), (b)(3), (b)(4), (b)(8), (b)(9)	Pass
Frequencies Stability	§15.407(g)	Pass
Dynamic Frequency Selection (DFS)	§15.407(h)	Pass

Note: 1. Pass: The EUT complies with the essential requirements in the standard,

2. Test according to ANSI C63.10:2013, KDB662911 D01 v02r01,

3. The Frequency Stability item is declared by the manufacturer,

4. All indications of Pass/Fail in this report are opinions expressed by Shenzhen QC Testing Laboratory Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.

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3. List of Test and Measurement Instruments

3.1 Conducted Emission Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
1	EMI Test Receiver	Rohde&Schwarz	ESIB 7	2277573376	2024.03.14	2025.03.13
2	EMI Test Receiver	Rohde&Schwarz	ESCI3	101820	2024.08.06	2025.08.05
3	Artificial Mains Network	SCHWARZBECK	NSLK8126	8126200	2024.08.06	2025.08.05
4	PULSE LIMITER	Rohde&Schwarz	ESH3-Z2	100058	2024.03.14	2025.03.13
Conducted Emission Measurement Software: TS+ JS32-CE Ver 5.0.0						

3.2 Radiated Emission Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
1.	EMI Test Receiver	R&S	ESIB 7	2277573376	2024.03.14	2025.03.13
2.	EMI Test Receiver	ESPI3	ESPI3	101131	2024.03.14	2025.03.13
3.	Spectrum Analyzer	Rohde&Schwarz	FSV 40	101458	2024.03.14	2025.03.13
4.	TRILOG Broadband Test-Antenna	SCHWARZBECK	VULB9168	VULB9168-588	2023.04.01	2025.03.31
5.	Loop Antenna	EMCO	6502	2133	2023.03.18	2025.03.17
6.	horn antenna	SCHWARZBECK	BBHA9120D	2069	2023.04.01	2025.03.31
7.	Horn Antenna	COM-MW	ZLB7-18-40G -950	12221225	2023.01.12	2025.01.09
8.	Pre-amplifier	MITEQ	TTA0001-18	2063645	2024.03.27	2025.03.26
9.	Pre-amplifier	COM-MW	DLAN-18000 -40000-02	10229104	2024.03.14	2025.03.13
10.	966 Camber	ZhongYU	9*6*6	/	2023.05.08	2026.05.07
Radiated Emission Measurement Software: EZ_EMC Ver QCT03A2 RE+						

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3.3 RF Conducted test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
1.	Wideband Radio Communication Tester	Rohde & Schwarz	CW500	151583	2024.03.14	2025.03.13
2.	Spectrum Analyzer	ROHDE& SCHWARZ	FSV 40	101458	2024.03.14	2025.03.13
3.	Signal Generator	Agilent	N5182A	MY50141563	2024.03.14	2025.03.13
4.	RF Automatic Test System	MW	MW100-RFCB/ MW100-PSB	MW2007004	2024.03.14	2025.03.13
RF Conducted Measurement Software: MTS 8310 Ver 2.0.0.0						

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4. Antenna requirement

Standard requirement: FCC Part15 C Section 15.203

15.203 requirement:
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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna: The EUT uses an Internal Integrated Metal Antenna, which gain is 0.67dBi max for 5GHz Ant1,0.67dBi max for 5GHz Ant2, In accordance to FCC Part15 C Section 15.203, it is considered sufficiently to comply with the provisions of this section. reference to the Internal photo for details.

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5. Conducted Emissions

5.1 Applicable Standard

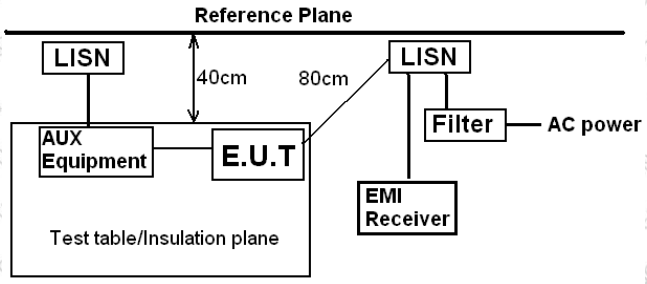
FCC Part15 C Section 15.207

5.2 Limit

Frequency range (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

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

5.3 Test setup



Remark:
E.U.T: Equipment Under Test
LISN: Line Impedence Stabilization Network
Test table height=0.8m

5.4 EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.
RBW=9 kHz, VBW=30 kHz, Sweep time=auto

5.5 Test procedure

1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment.
2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).
3. Both sides of A.C. line are checked for maximum conducted interference. 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 on conducted measurement.

5.6 Test Data

Temperature	23 ℃	Humidity	52%
ATM Pressure	101.1kPa	Antenna Gain	Ant1: 0.67dBi Ant2: 0.67dBi
Test by	LBi Li	Test result	PASS

Test Voltage: AC 120V/60Hz

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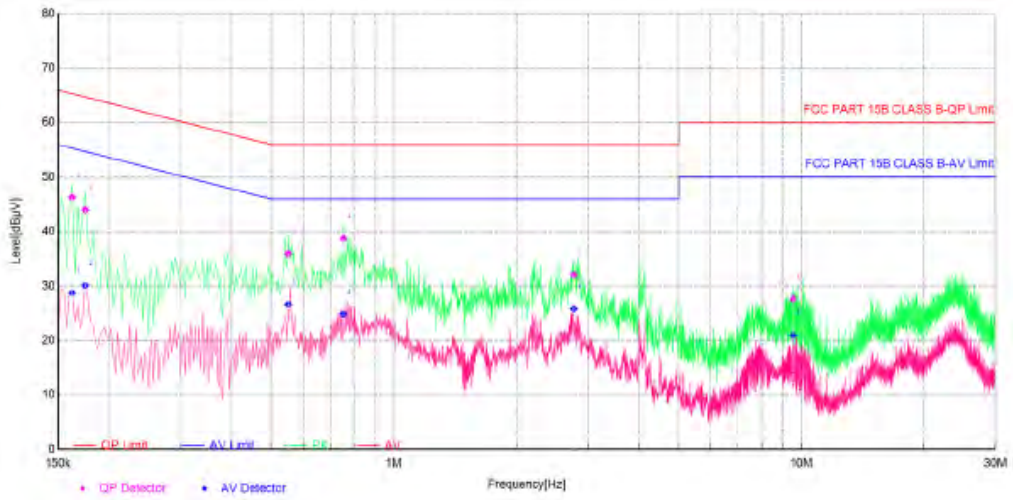
Model: DFR1091

Measurement data:

Pre-scan all test modes, found worst case at 802.11ac mode 5180MHz, and so only show the test result of 802.11ac mode 5180MHz

Line:



Final Data List

NO.	Freq. [MHz]	Factor[dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Phase	Verdict
1	0.1625	10.60	46.30	65.34	19.04	28.79	55.34	26.55	L	PASS
2	0.175	10.62	43.96	64.72	20.76	30.10	54.72	24.62	L	PASS
3	0.55	10.74	35.93	56.00	20.07	26.62	46.00	19.38	L	PASS
4	0.7525	10.75	38.72	56.00	17.28	24.85	46.00	21.15	L	PASS
5	2.765	10.70	32.08	56.00	23.92	25.79	46.00	20.21	L	PASS
6	9.551	10.79	27.63	60.00	32.37	20.96	50.00	29.04	L	PASS

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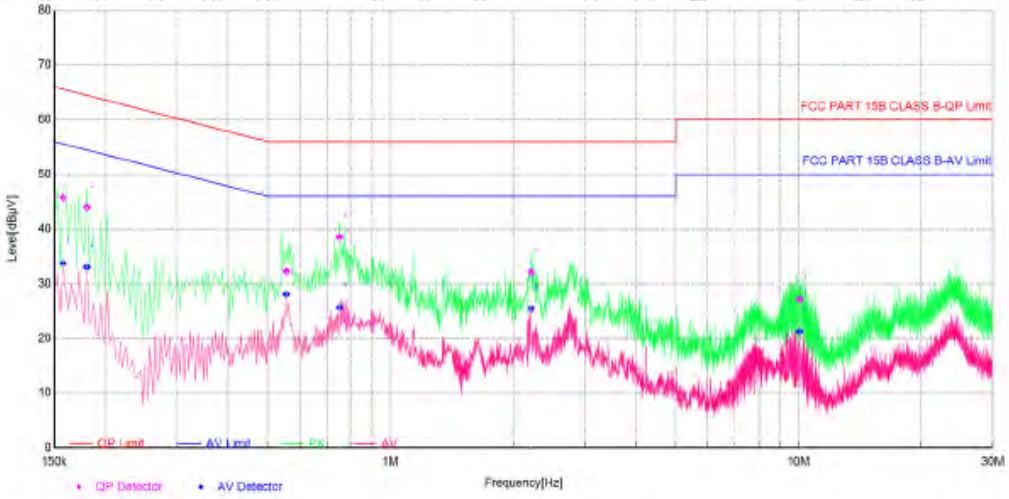
Neutral:



Final Data List

NO.	Freq. [MHz]	Factor[dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Phase	Verdict
1	0.1575	10.48	45.79	65.59	19.80	33.77	55.59	21.82	N	PASS
2	0.18	10.48	43.96	64.49	20.53	33.07	54.49	21.42	N	PASS
3	0.555	10.64	32.29	56.00	23.71	28.06	46.00	17.94	N	PASS
4	0.75	10.74	38.53	56.00	17.47	25.73	46.00	20.27	N	PASS
5	2.2115	10.66	32.12	56.00	23.88	25.45	46.00	20.55	N	PASS
6	10.0595	10.77	27.13	60.00	32.87	21.26	50.00	28.74	N	PASS

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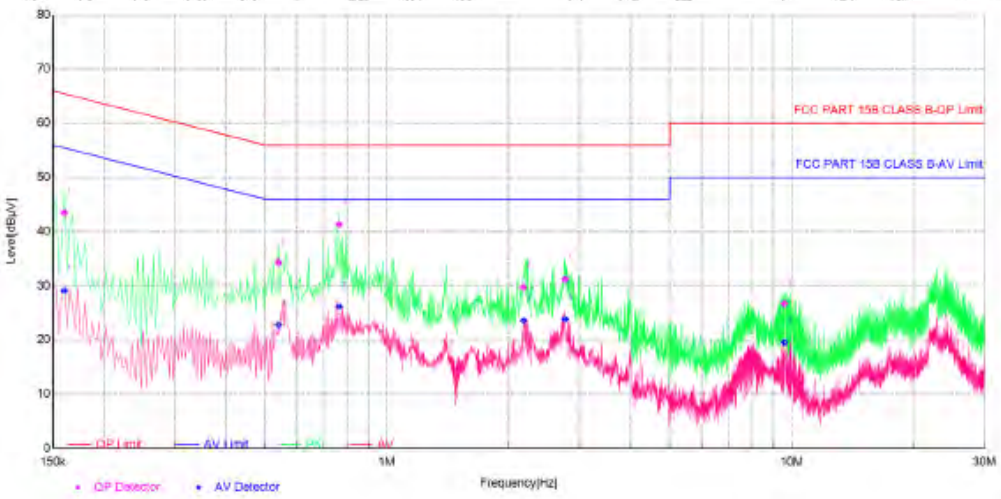
Model: DFR1081

Measurement data:

Pre-scan all test modes, found worst case at 802.11ac mode 5180MHz, and so only show the test result of 802.11ac mode 5180MHz

Line:



Final Data List

NO.	Freq. [MHz]	Factor[dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Phase	Verdict
1	0.16	10.59	43.47	65.46	21.99	29.13	55.46	26.33	L	PASS
2	0.54	10.74	34.31	56.00	21.69	22.83	46.00	23.17	L	PASS
3	0.7625	10.74	41.31	56.00	14.69	26.17	46.00	19.83	L	PASS
4	2.1755	10.69	29.72	56.00	26.28	23.57	46.00	22.43	L	PASS
5	2.7605	10.70	31.21	56.00	24.79	23.85	46.00	22.15	L	PASS
6	9.605	10.79	26.69	60.00	33.31	19.54	50.00	30.46	L	PASS

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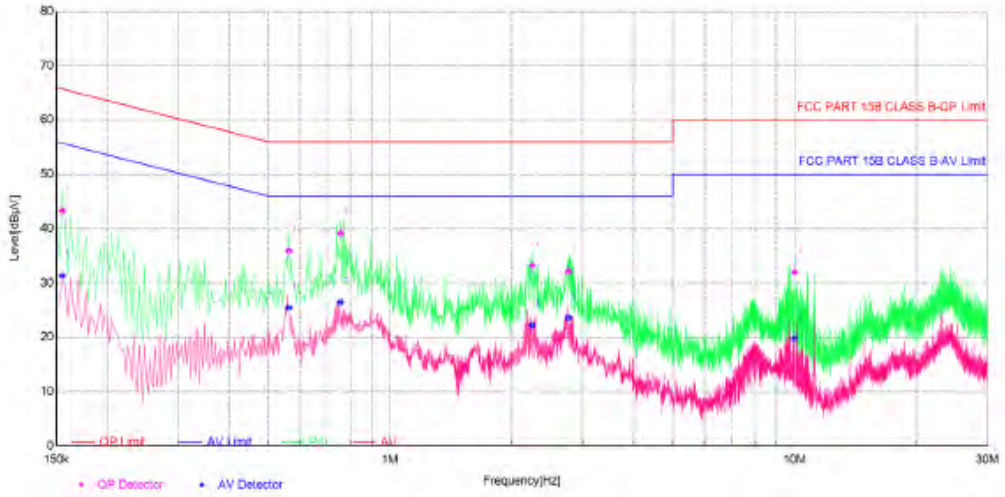

Final Data List										
NO.	Freq. [MHz]	Factor[dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Phase	Verdict
1	0.155	10.48	43.26	65.73	22.47	31.33	55.73	24.40	N	PASS
2	0.5625	10.65	35.88	56.00	20.12	25.43	46.00	20.57	N	PASS
3	0.755	10.74	39.15	56.00	16.85	26.44	46.00	19.56	N	PASS
4	2.2475	10.66	33.16	56.00	22.84	22.29	46.00	23.71	N	PASS
5	2.7605	10.66	32.10	56.00	23.90	23.64	46.00	22.36	N	PASS
6	10.001	10.77	31.94	60.00	28.06	19.85	50.00	30.15	N	PASS

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.

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6. Emission Bandwidth

The EUT was placed on 0.8m height table, the RE output of EUT was connected to the test receiver by RF cable. The path loss was compensated to the results for each measurement.

6.1 Test Method of 26dB Bandwidth

According to KDB789033 D02

a) Set RBW=approximately 1% of the emission bandwidth.

b) Set the VBW > RBW.

c) Detector = Peak.

d) Trace mode = max hold.

e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

Limit: No limit

6.2 Test Method of 6dB Bandwidth

According to KDB789033 D02

a) Set center frequency to the nominal EUT channel center frequency.

b) Set RBW= 100kHz.

c) Set the video bandwidth (VBW)≥3 x RBW

d) Detector = Peak.

e) Trace mode = max hold.

f) Sweep= No faster than coupled (auto) time.

g) Allow the trace to stabilize.

h) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

i) Record the results in the test report.

Limit: ≥500kHz

6.3 Test Method of 99% Bandwidth

According to KDB789033 D02

a) Set center frequency to the nominal EUT channel center frequency

b) Set span = 1.5 times to 5.0 times the OBW.

c) Set RBW= 1 % to 5% of the OBW

d) Set VBW ≥3 RBW

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e) Trace mode=max hold.

f) Sweep auto couple.

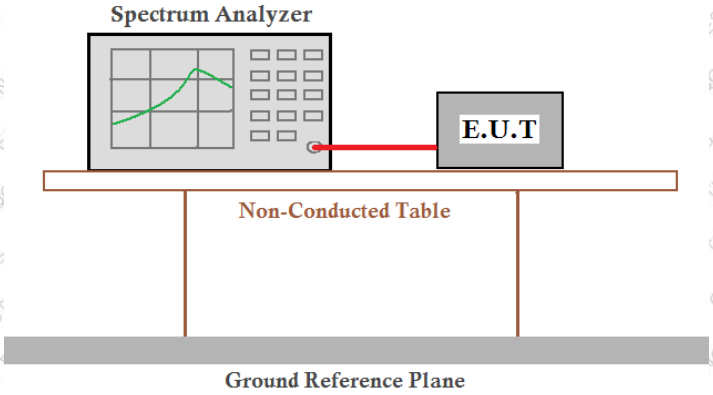
g) Allow the trace to stabilize.

h) Use the 99 % power bandwidth function of the instrument.

i) Record the results in the test report.

Limit: No limit

6.4 Test setup



6.5 Test Data

Temperature	22 ℃	Humidity	50%
ATM Pressure	101.1kPa	Antenna Gain	Ant1: 0.67dBi Ant2: 0.67dBi
Test by	LBi Li	Test result	PASS

Please refer to following table and plots.

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26dB Bandwidth Test result:

Mode	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
			Result	Limit (MHz)	
802.11a	5180	1	23.742	/	PASS
		2	23.457	/	PASS
	5200	1	23.58	/	PASS
		2	24.276	/	PASS
	5240	1	23.631	/	PASS
		2	23.667	/	PASS
	5260	1	23.793	/	PASS
		2	23.442	/	PASS
	5300	1	24.627	/	PASS
		2	23.112	/	PASS
	5320	1	23.964	/	PASS
		2	23.301	/	PASS
	5500	1	23.79	/	PASS
		2	23.988	/	PASS
	5580	1	23.28	/	PASS
		2	23.466	/	PASS
	5700	1	24.204	/	PASS
		2	24.177	/	PASS
	5720	1	23.979	/	PASS
		2	23.517	/	PASS
802.11n (HT20)	5180	1	24.105	/	PASS
		2	23.91	/	PASS
	5200	1	24.087	/	PASS
		2	24.081	/	PASS
	5240	1	24.39	/	PASS
		2	24.006	/	PASS
	5260	1	24.177	/	PASS
		2	23.412	/	PASS
	5300	1	23.919	/	PASS
		2	24.042	/	PASS
	5320	1	24.051	/	PASS
		2	23.484	/	PASS
	5500	1	24.57	/	PASS
		2	24.36	/	PASS
	5580	1	23.964	/	PASS
		2	23.466	/	PASS
	5700	1	24.405	/	PASS
		2	24.339	/	PASS
	5720	1	23.463	/	PASS
		2	24.291	/	PASS
802.11n (HT40)	5190	1	43.188	/	PASS
		2	45.816	/	PASS
	5230	1	43.146	/	PASS
		2	42.888	/	PASS
	5270	1	50.088	/	PASS
		2	51.834	/	PASS
	5310	1	43.8	/	PASS
		2	43.47	/	PASS
	5510	1	43.488	/	PASS

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		2	59.376	/	PASS
	5550	1	43.524	/	PASS
		2	43.044	/	PASS
	5670	1	43.044	/	PASS
		2	43.47	/	PASS
	5710	1	43.716	/	PASS
		2	43.134	/	PASS
802.11ac (VHT20)	5180	1	24.375	/	PASS
		2	24.087	/	PASS
	5200	1	23.964	/	PASS
		2	24.312	/	PASS
	5240	1	24.375	/	PASS
		2	24.024	/	PASS
	5260	1	23.805	/	PASS
		2	23.748	/	PASS
	5300	1	24.258	/	PASS
		2	23.796	/	PASS
	5320	1	24.147	/	PASS
		2	23.625	/	PASS
	5500	1	24.285	/	PASS
		2	24.63	/	PASS
	5580	1	24.015	/	PASS
		2	23.58	/	PASS
	5700	1	24.36	/	PASS
		2	24.315	/	PASS
	5720	1	24.474	/	PASS
		2	24.555	/	PASS
802.11ac (VHT40)	5190	1	42.366	/	PASS
		2	43.308	/	PASS
	5230	1	42.816	/	PASS
		2	44.022	/	PASS
	5270	1	44.802	/	PASS
		2	45.654	/	PASS
	5310	1	44.964	/	PASS
		2	42.87	/	PASS
	5510	1	43.014	/	PASS
		2	43.704	/	PASS
	5550	1	42.99	/	PASS
		2	44.118	/	PASS
	5670	1	43.356	/	PASS
		2	43.536	/	PASS
	5710	1	44.142	/	PASS
		2	42.792	/	PASS
802.11ac (VHT80)	5210	1	84.648	/	PASS
		2	84.876	/	PASS
	5290	1	87.828	/	PASS
		2	84.768	/	PASS
	5530	1	84.6	/	PASS
		2	85.728	/	PASS
	5610	1	85.188	/	PASS
		2	84.504	/	PASS
	5690	1	83.988	/	PASS
		2	84.78	/	PASS
802.11ac	5570	1	170.664	/	PASS

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(VHT160)		2	168.168	/	PASS
	5250	1	176.832	/	PASS
		2	187.392	/	PASS
802.11ax (HEW20)	5180	1	22.695	/	PASS
		2	23.532	/	PASS
	5200	1	23.28	/	PASS
		2	23.37	/	PASS
	5240	1	23.676	/	PASS
		2	23.37	/	PASS
	5260	1	24.057	/	PASS
		2	23.118	/	PASS
	5300	1	23.706	/	PASS
		2	23.637	/	PASS
	5320	1	23.538	/	PASS
		2	23.046	/	PASS
	5500	1	23.595	/	PASS
		2	23.295	/	PASS
	5580	1	23.04	/	PASS
		2	23.628	/	PASS
	5700	1	23.232	/	PASS
		2	23.205	/	PASS
	5720	1	23.508	/	PASS
		2	23.382	/	PASS
802.11ax (HEW40)	5190	1	41.502	/	PASS
		2	41.58	/	PASS
	5230	1	42.09	/	PASS
		2	41.784	/	PASS
	5270	1	43.056	/	PASS
		2	42.888	/	PASS
	5310	1	42.87	/	PASS
		2	41.436	/	PASS
	5510	1	42.27	/	PASS
		2	41.766	/	PASS
	5550	1	42.138	/	PASS
		2	42.36	/	PASS
	5670	1	42.486	/	PASS
		2	43.236	/	PASS
	5710	1	41.55	/	PASS
		2	42.144	/	PASS
802.11ax (HEW80)	5210	1	82.632	/	PASS
		2	82.944	/	PASS
	5290	1	83.088	/	PASS
		2	83.736	/	PASS
	5530	1	82.44	/	PASS
		2	83.652	/	PASS
	5610	1	83.652	/	PASS
		2	82.38	/	PASS
	5690	1	82.452	/	PASS
		2	81.84	/	PASS
802.11ax (HEW160)	5570	1	172.32	/	PASS
		2	172.944	/	PASS
	5250	1	175.8	/	PASS
		2	168.84	/	PASS

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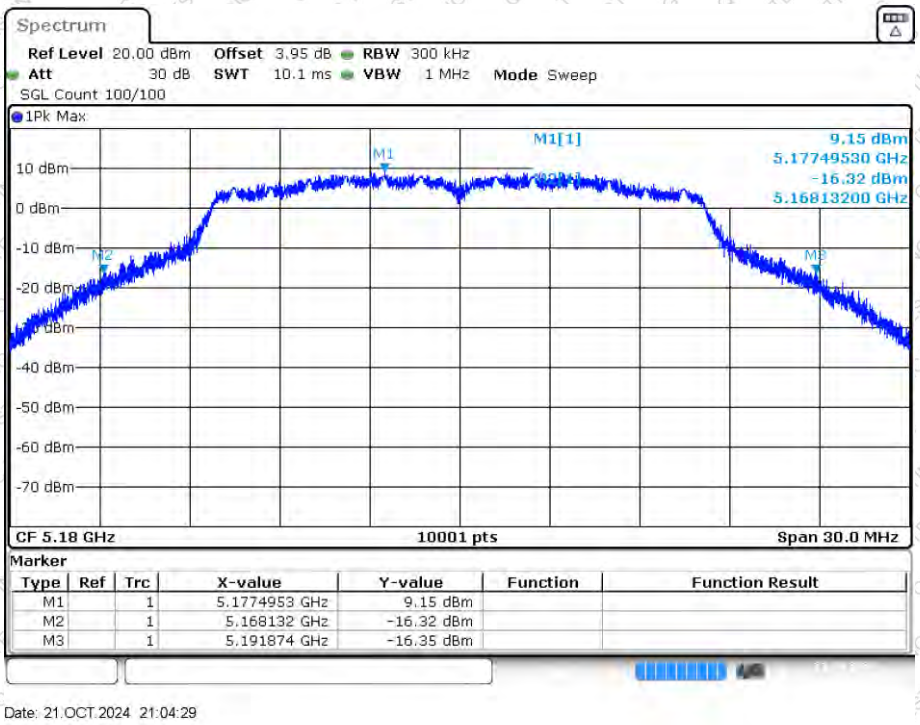
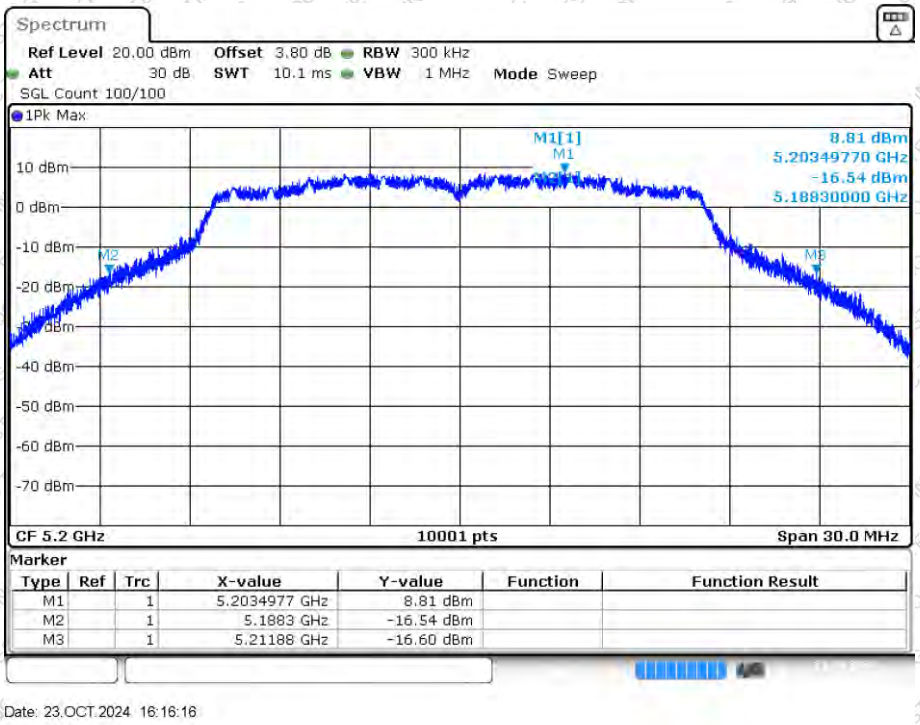
-26dB Bandwidth NVNT a 5180MHz Ant1



-26dB Bandwidth NVNT a 5200MHz Ant1



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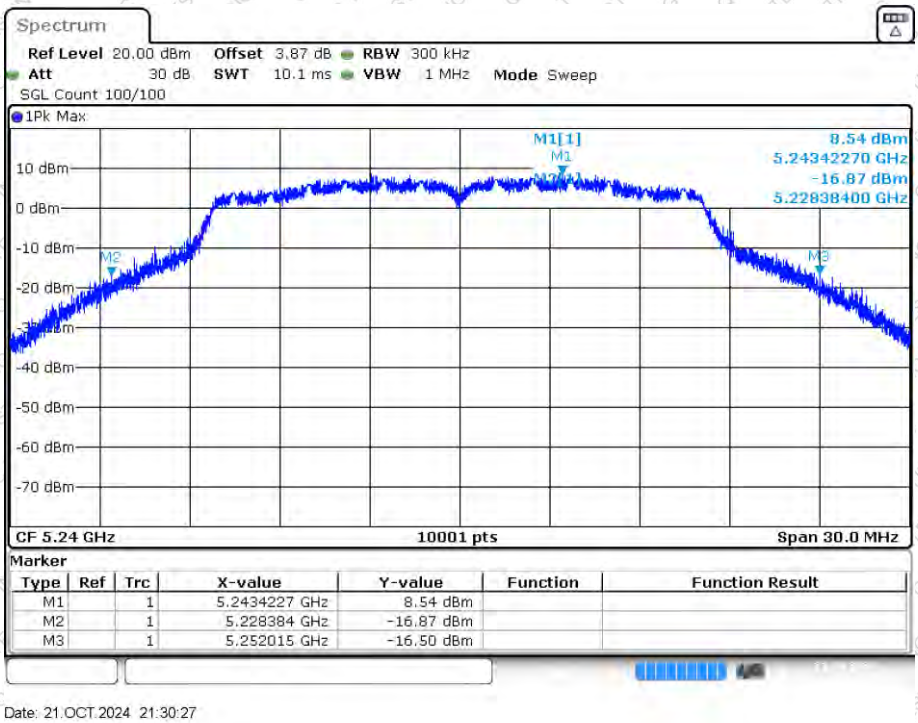
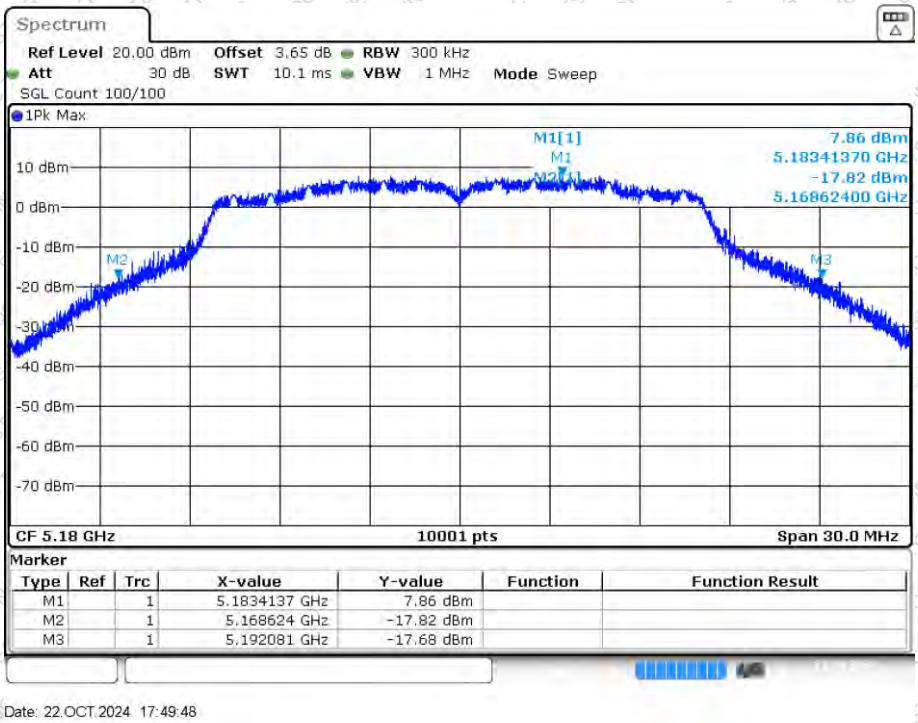
-26dB Bandwidth NVNT a 5240MHz Ant1



-26dB Bandwidth NVNT a 5180MHz Ant2



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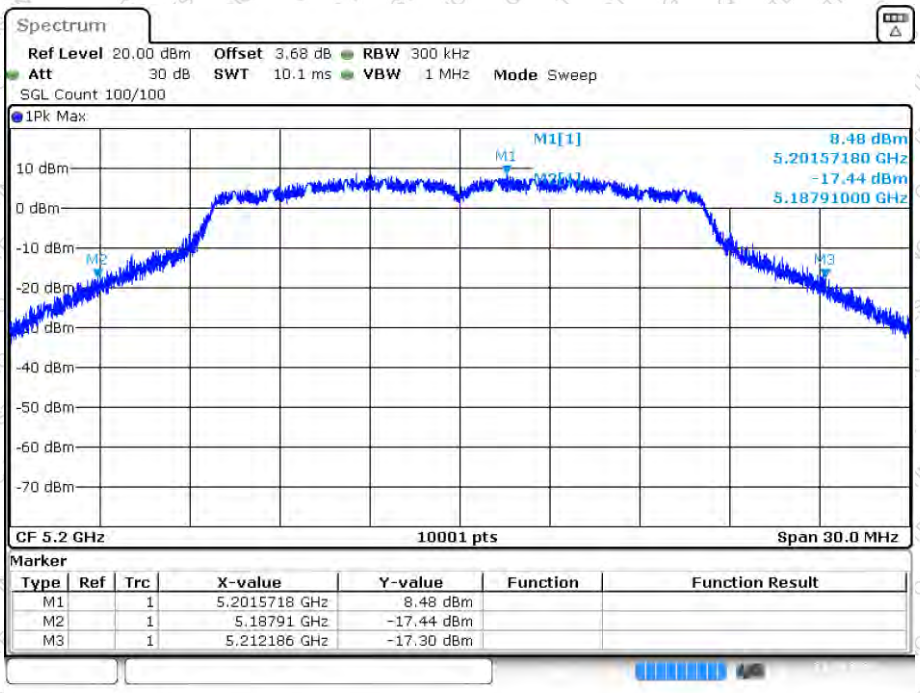
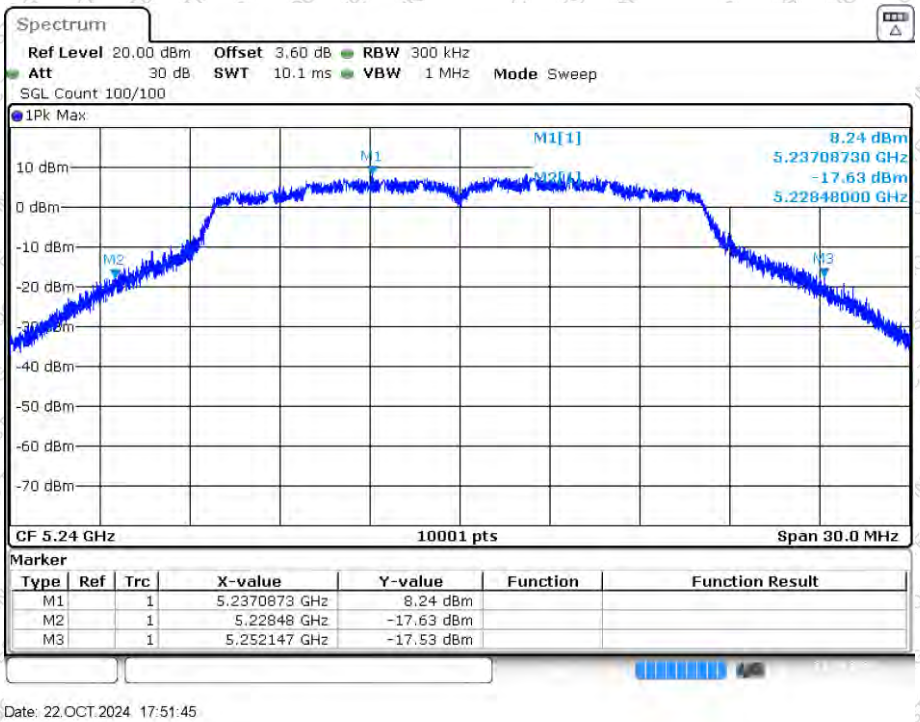
-26dB Bandwidth NVNT a 5200MHz Ant2



-26dB Bandwidth NVNT a 5240MHz Ant2



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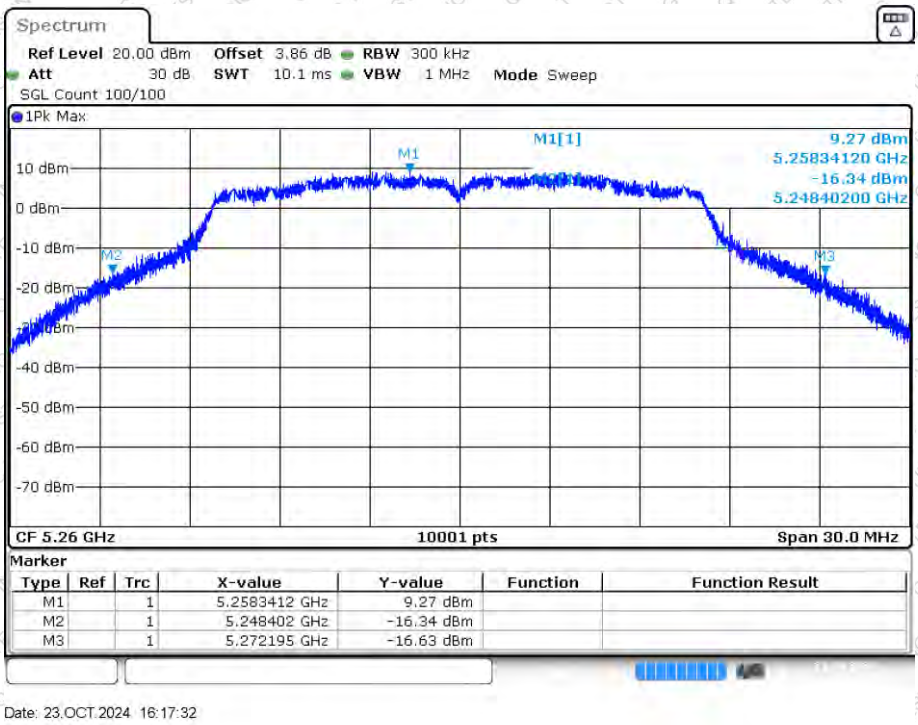
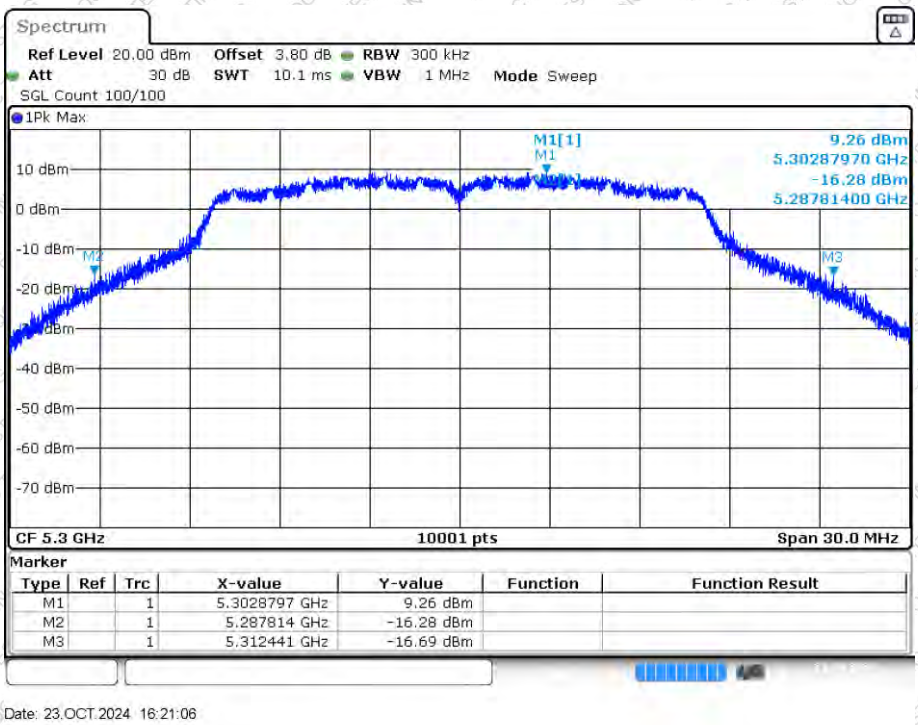
-26dB Bandwidth NVNT a 5260MHz Ant1



-26dB Bandwidth NVNT a 5300MHz Ant1



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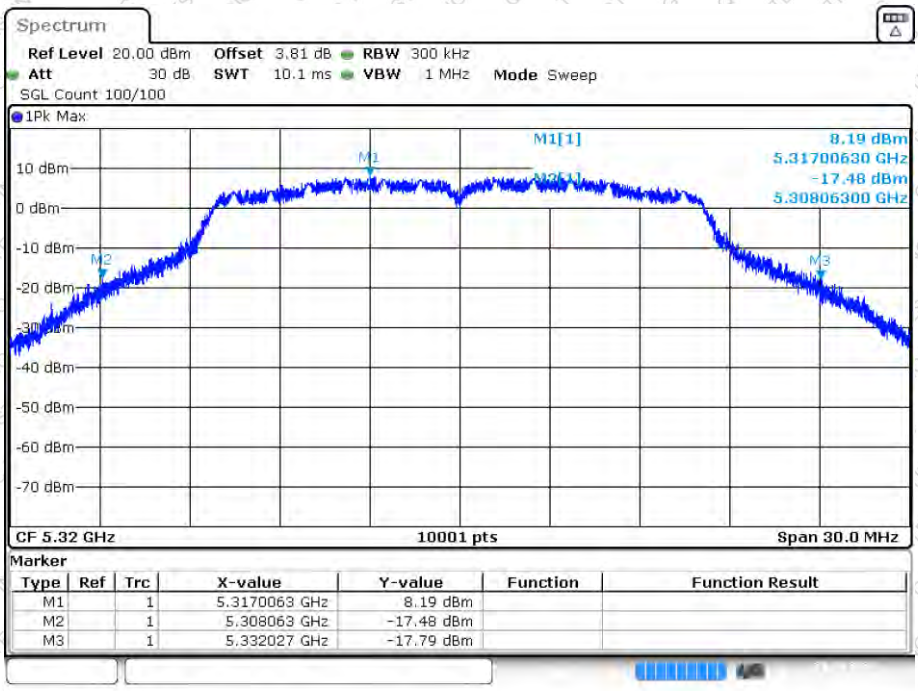
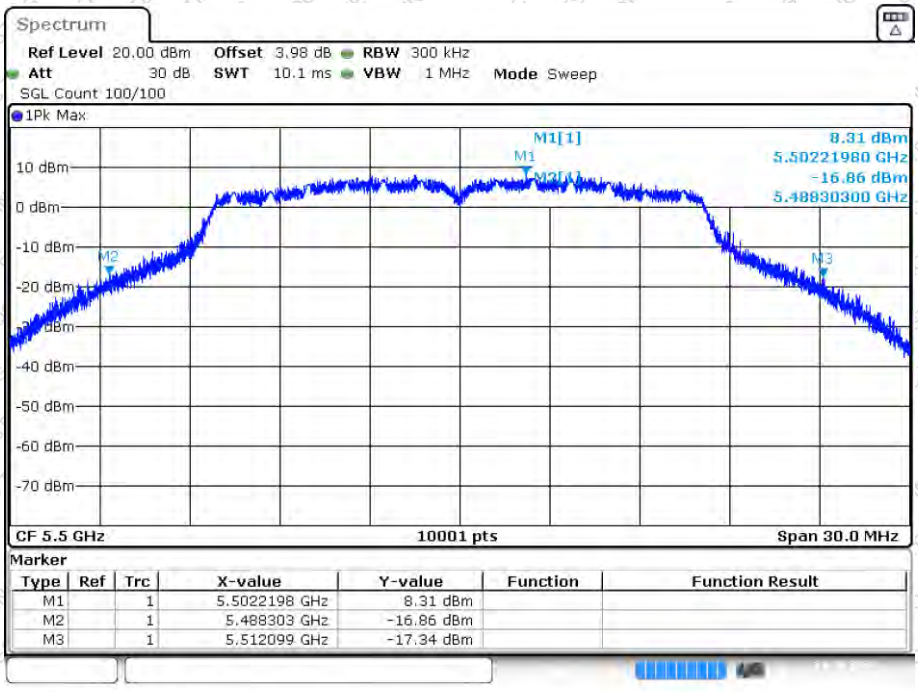
-26dB Bandwidth NVNT a 5320MHz Ant1



-26dB Bandwidth NVNT a 5500MHz Ant1



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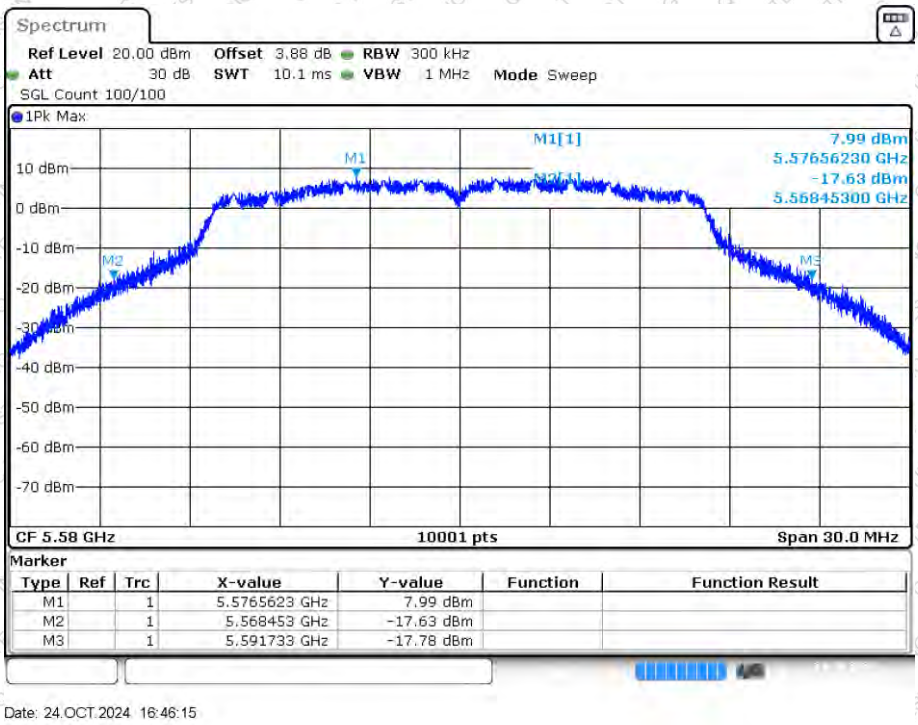
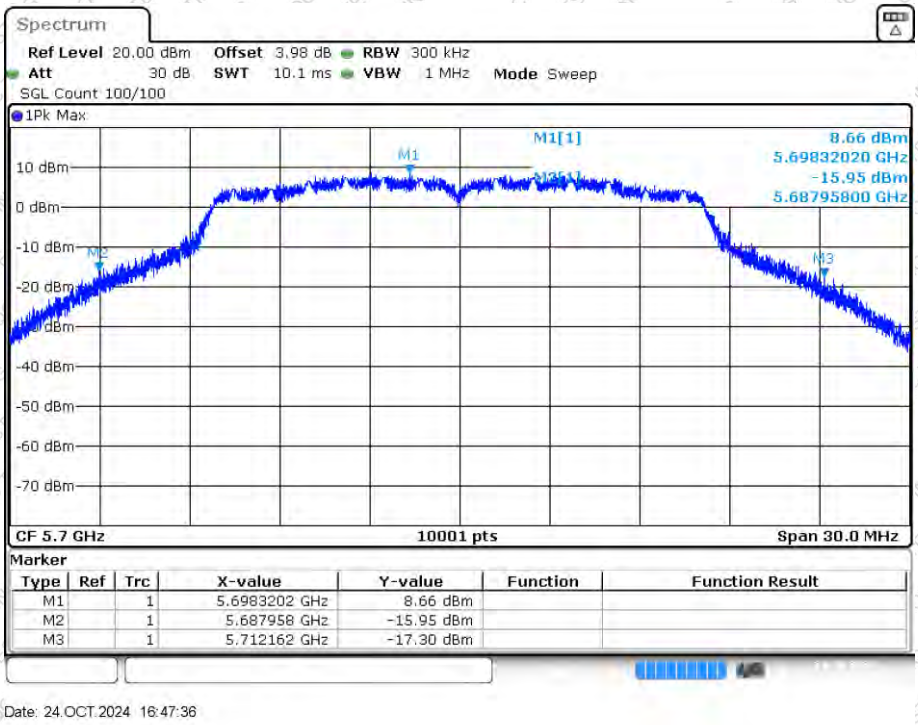
-26dB Bandwidth NVNT a 5580MHz Ant1



-26dB Bandwidth NVNT a 5700MHz Ant1



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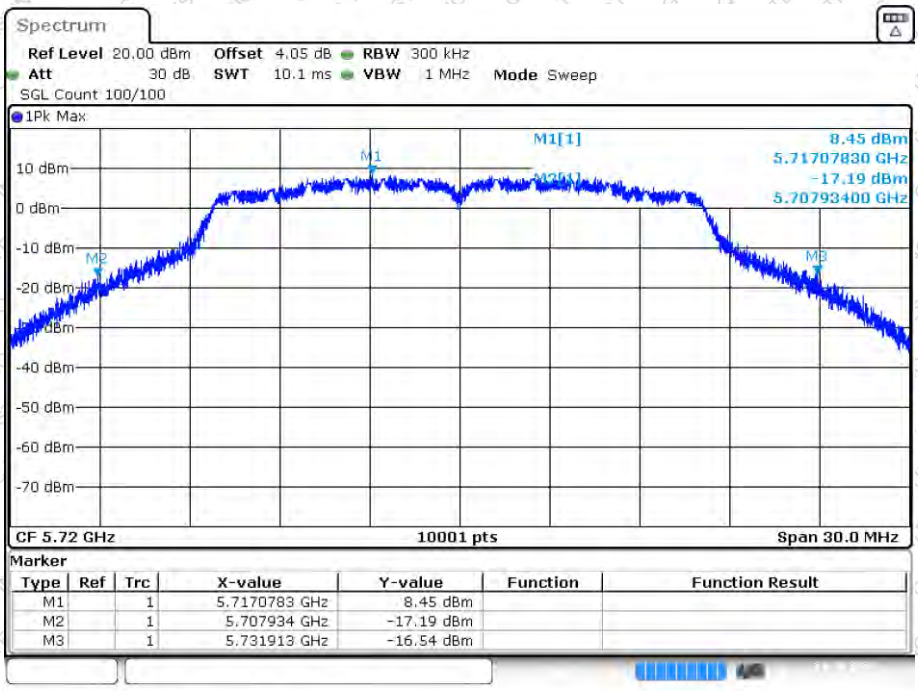
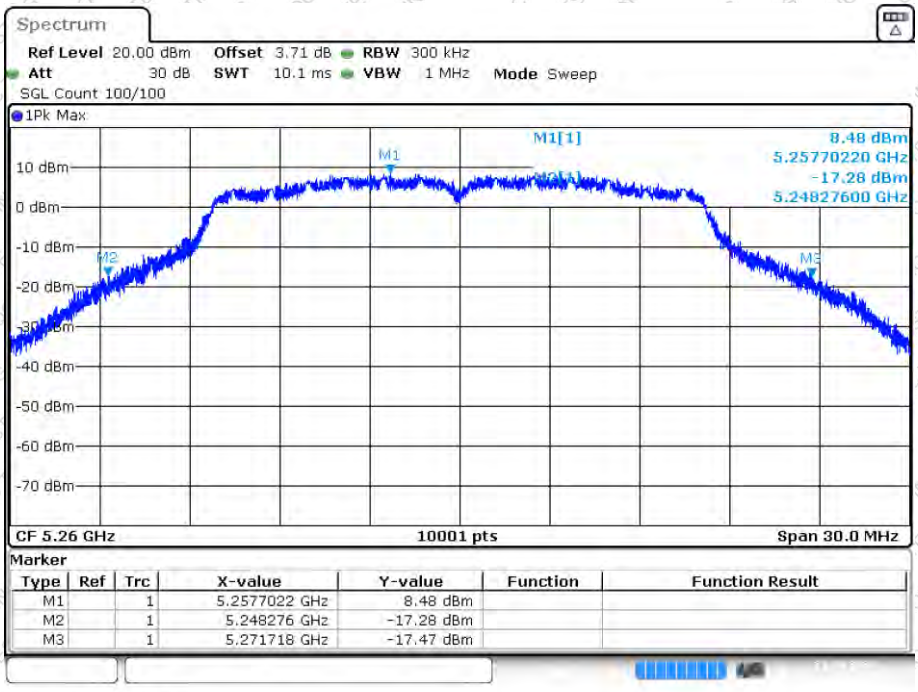
-26dB Bandwidth NVNT a 5720MHz Ant1



Date: 24.OCT.2024 16:50:08

-26dB Bandwidth NVNT a 5260MHz Ant2



Date: 23.OCT.2024 17:36:53

Address: East of 1/F., Building E, Xinghong Science Park, No.111, Shuiku Road, Fenghuanggang, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China
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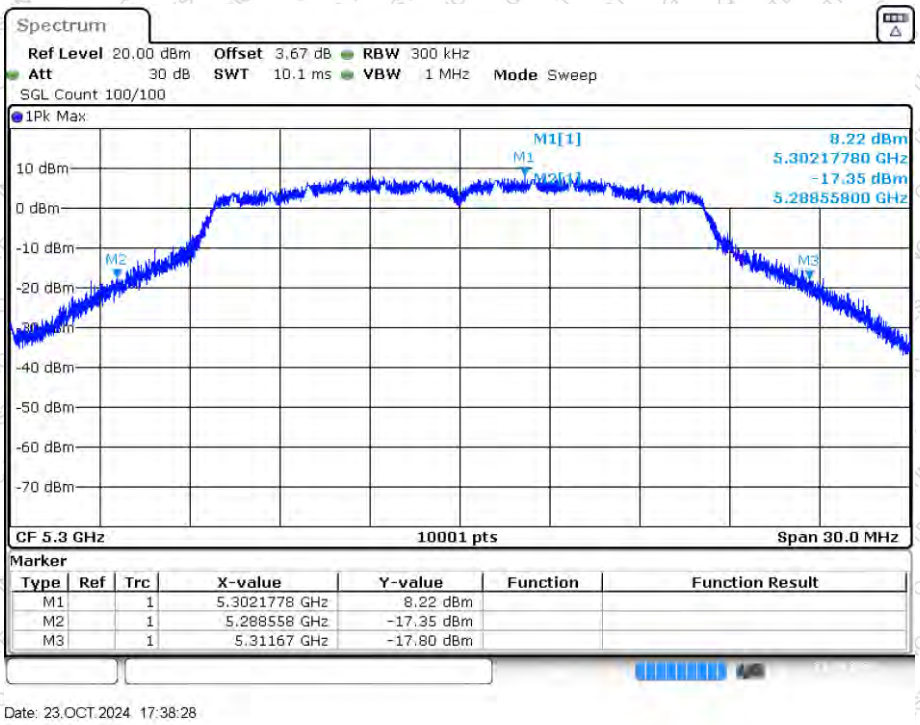
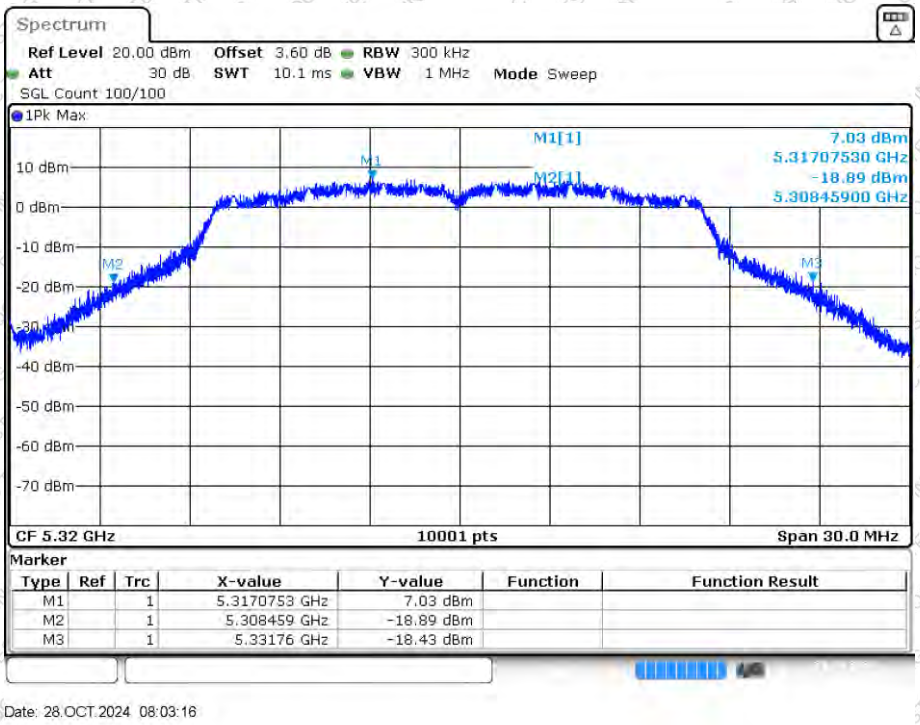
-26dB Bandwidth NVNT a 5300MHz Ant2



-26dB Bandwidth NVNT a 5320MHz Ant2



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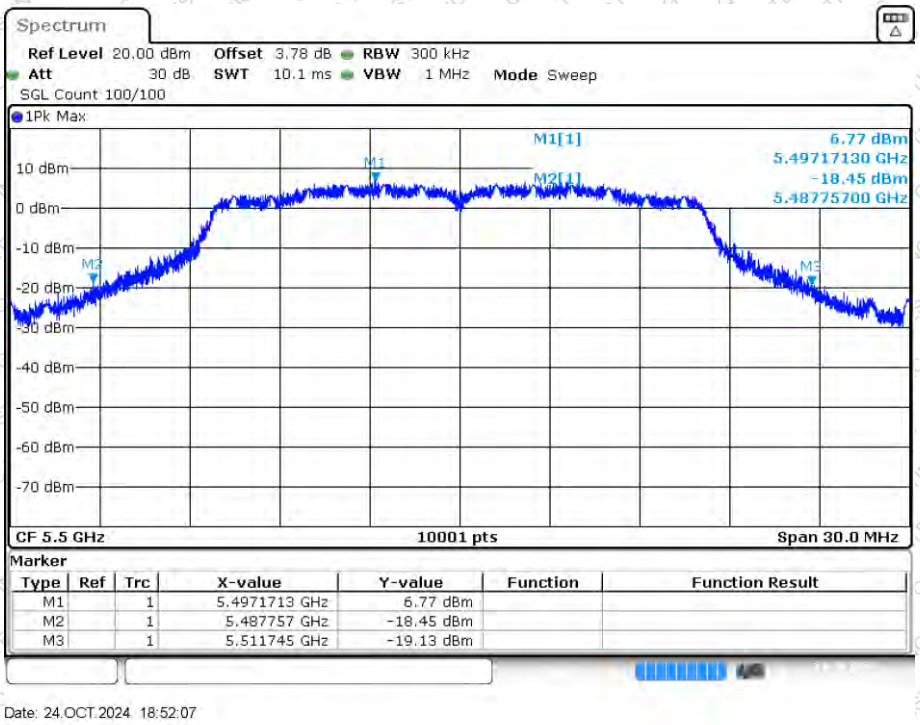
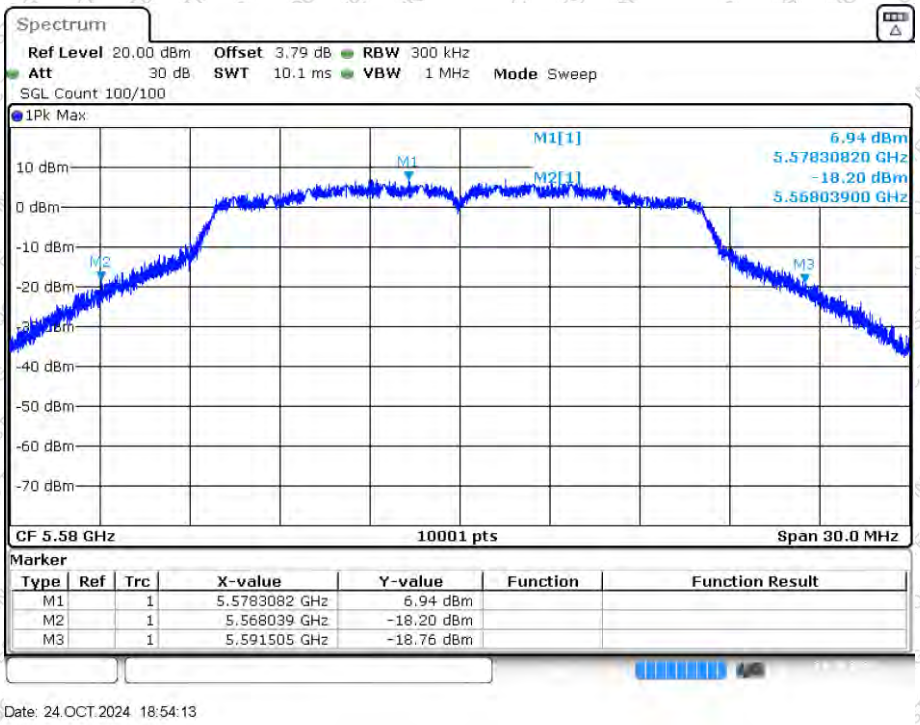
-26dB Bandwidth NVNT a 5500MHz Ant2



-26dB Bandwidth NVNT a 5580MHz Ant2



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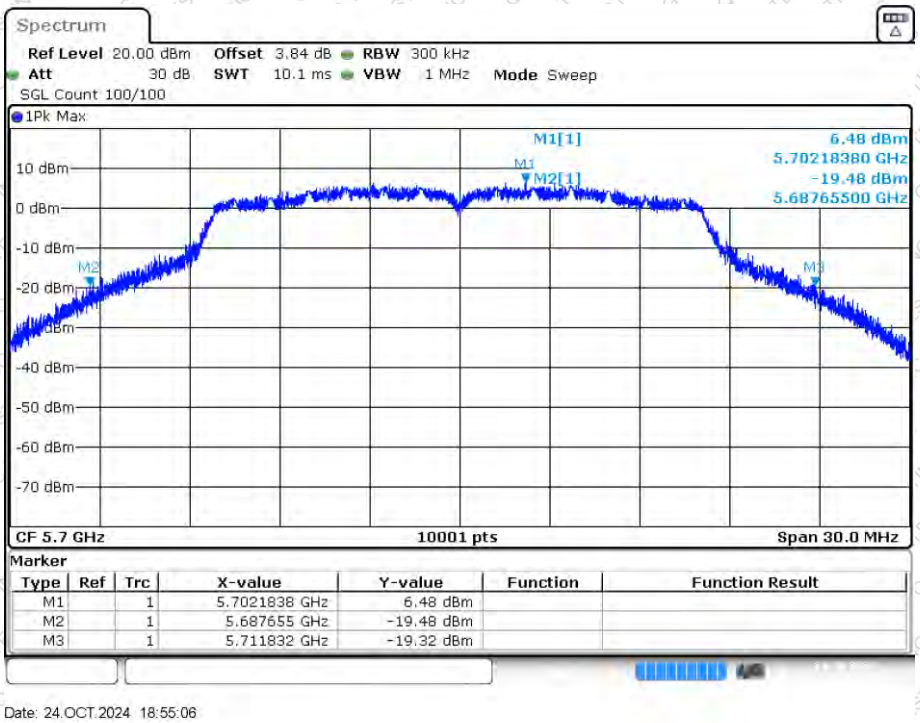
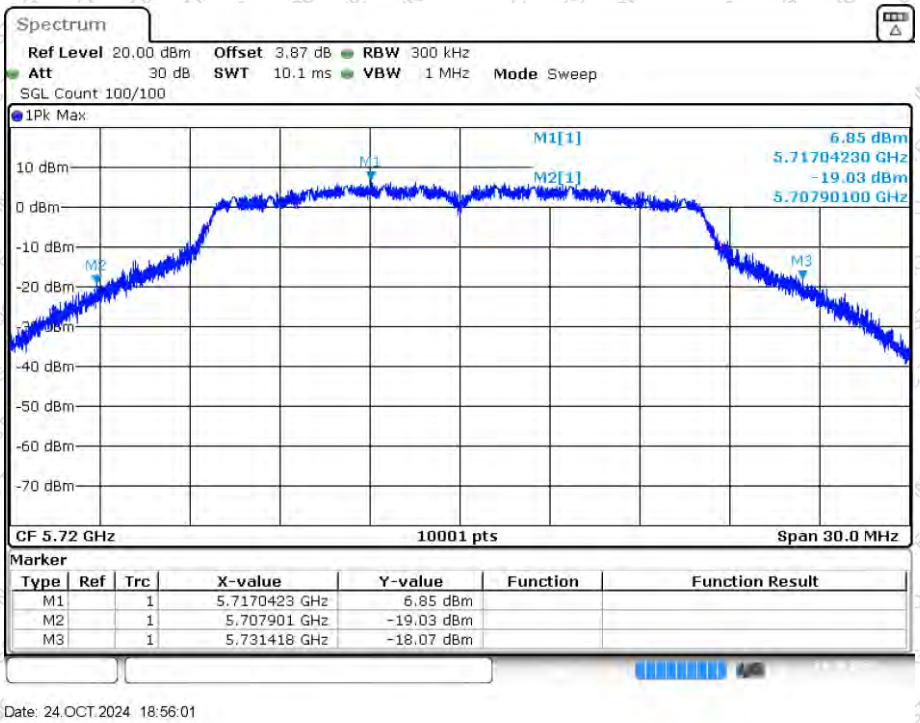
-26dB Bandwidth NVNT a 5700MHz Ant2



Date: 24.OCT.2024 18:55:06

-26dB Bandwidth NVNT a 5720MHz Ant2



Date: 24.OCT.2024 18:56:01

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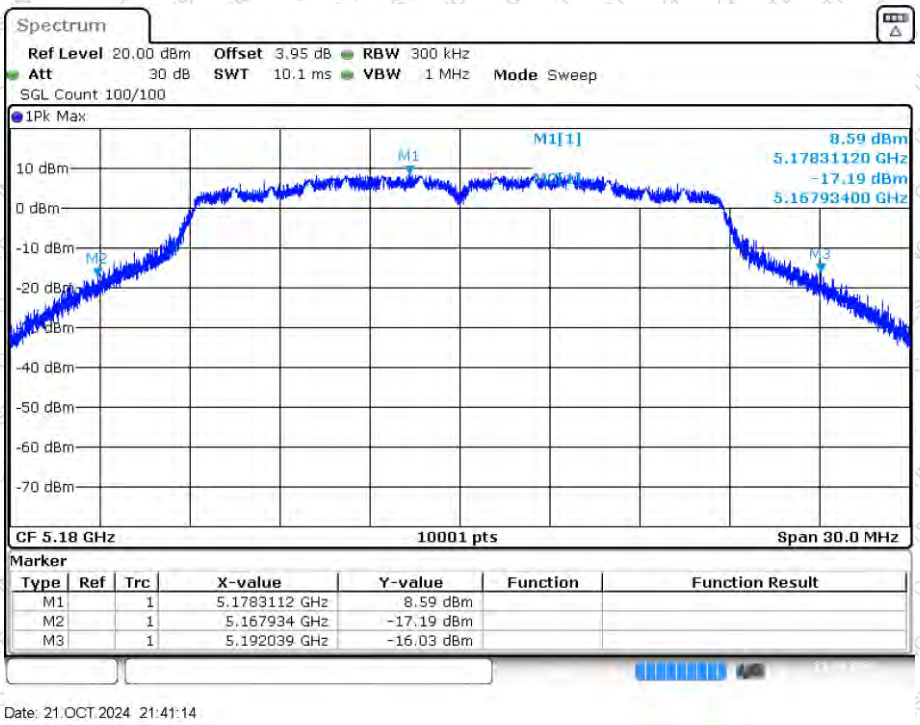
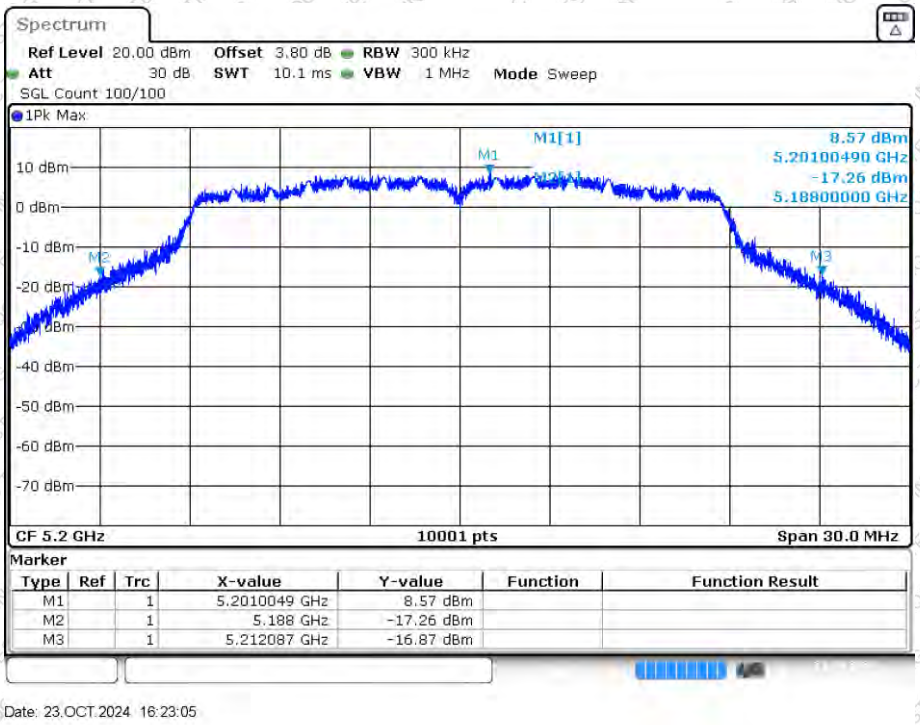
-26dB Bandwidth NVNT n20 5180MHz Ant1



-26dB Bandwidth NVNT n20 5200MHz Ant1



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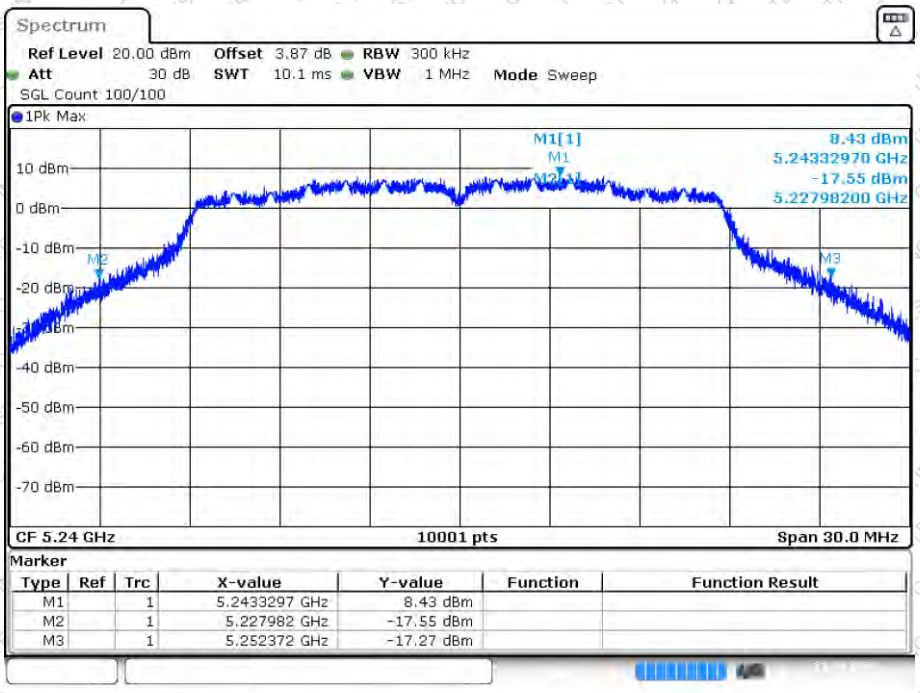
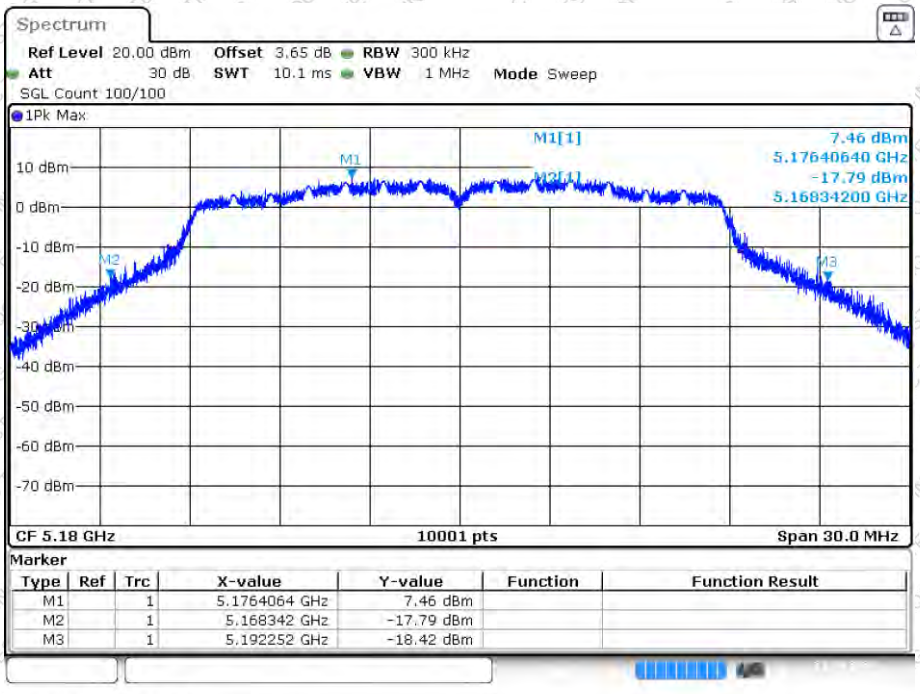
-26dB Bandwidth NVNT n20 5240MHz Ant1



-26dB Bandwidth NVNT n20 5180MHz Ant2



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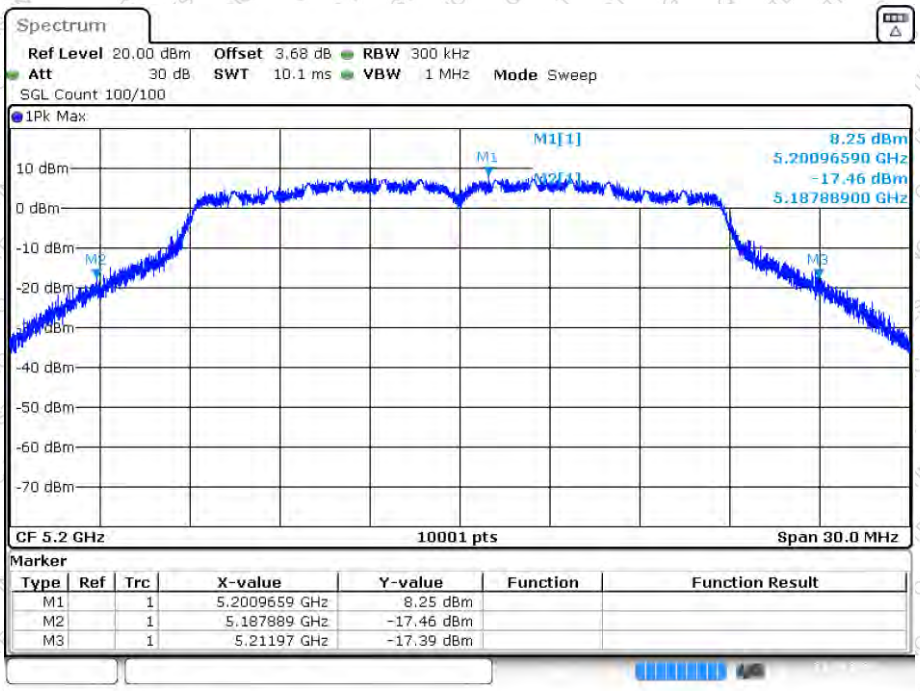
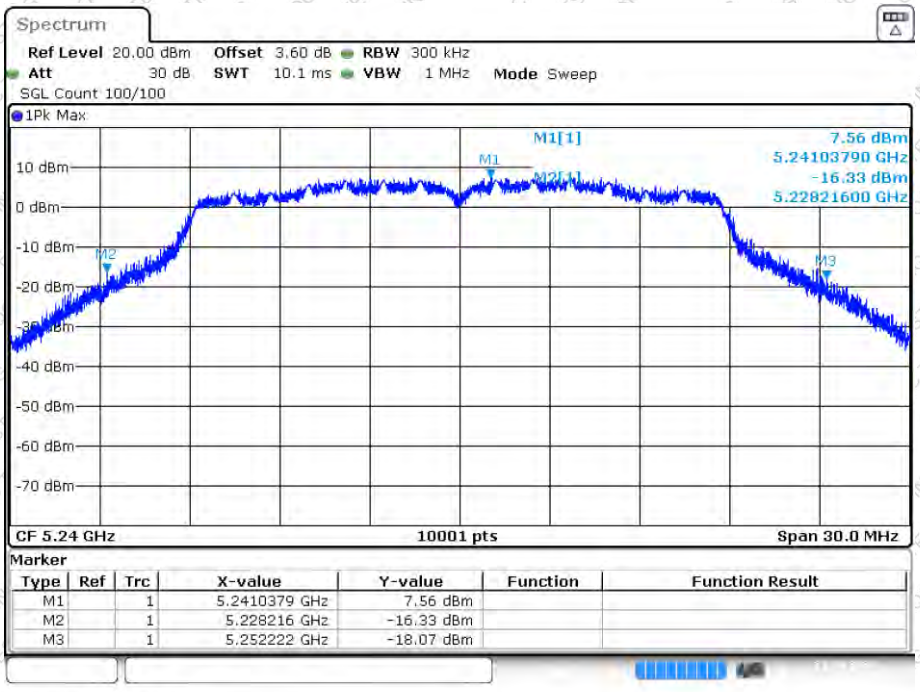
-26dB Bandwidth NVNT n20 5200MHz Ant2



Date: 23.OCT.2024 17:40:00

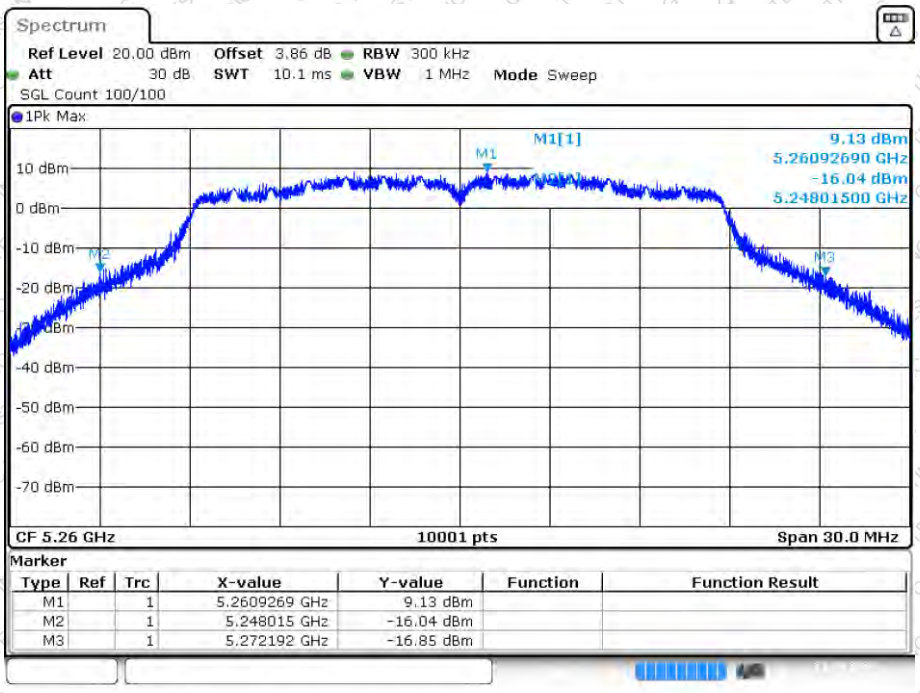
-26dB Bandwidth NVNT n20 5240MHz Ant2



Date: 22.OCT.2024 17:59:38

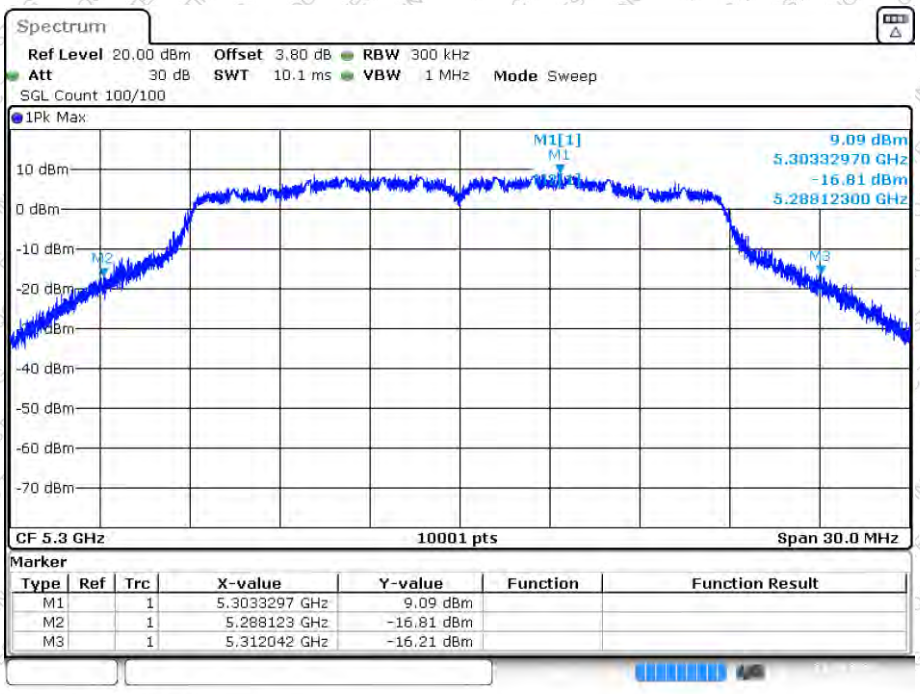
Address: East of 1/F., Building E, Xinghong Science Park, No.111, Shuiku Road, Fenghuanggang, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China
Tel: 0755-23008269 Fax: 0755-23726780 www.qctest.com.cn

-26dB Bandwidth NVNT n20 5260MHz Ant1



Date: 23.OCT.2024 16:24:28

-26dB Bandwidth NVNT n20 5300MHz Ant1



Date: 23.OCT.2024 16:25:32

Address: East of 1/F., Building E, Xinghong Science Park, No.111, Shuiku Road, Fenghuanggang, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China
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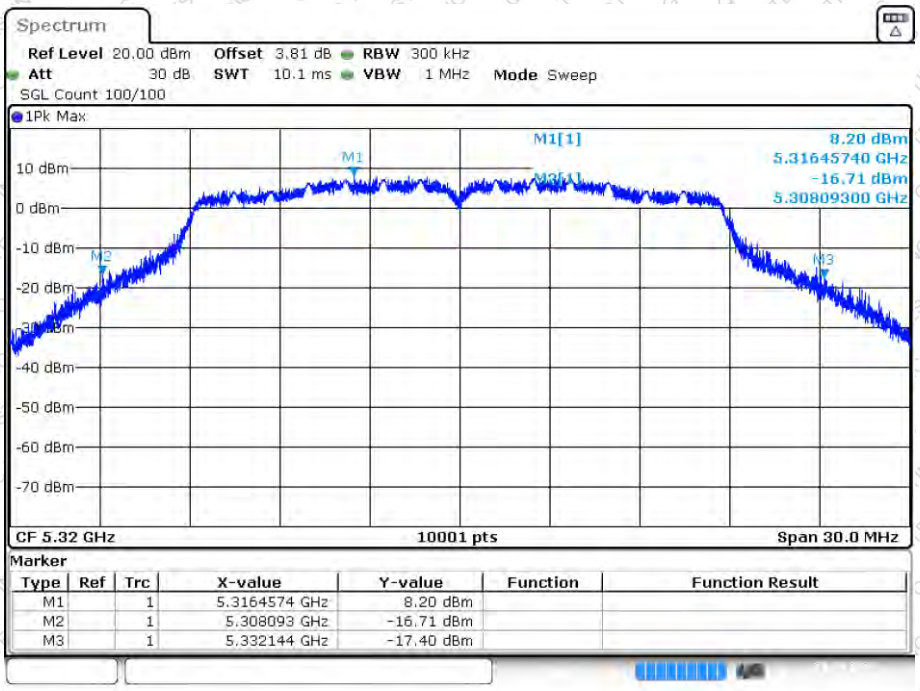
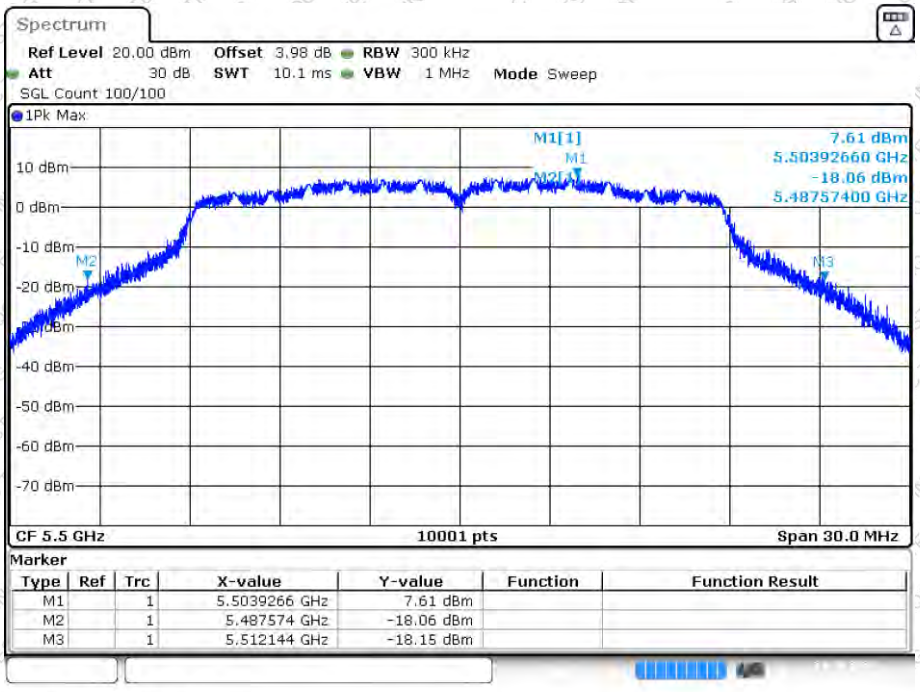
-26dB Bandwidth NVNT n20 5320MHz Ant1



Date: 28.OCT.2024 07:56:09

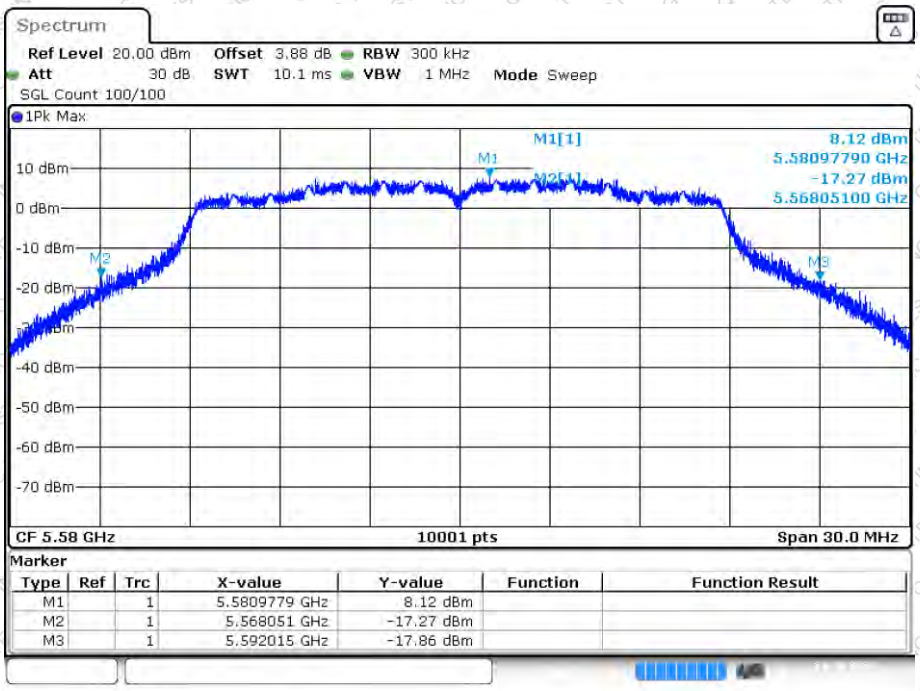
-26dB Bandwidth NVNT n20 5500MHz Ant1



Date: 24.OCT.2024 16:53:40

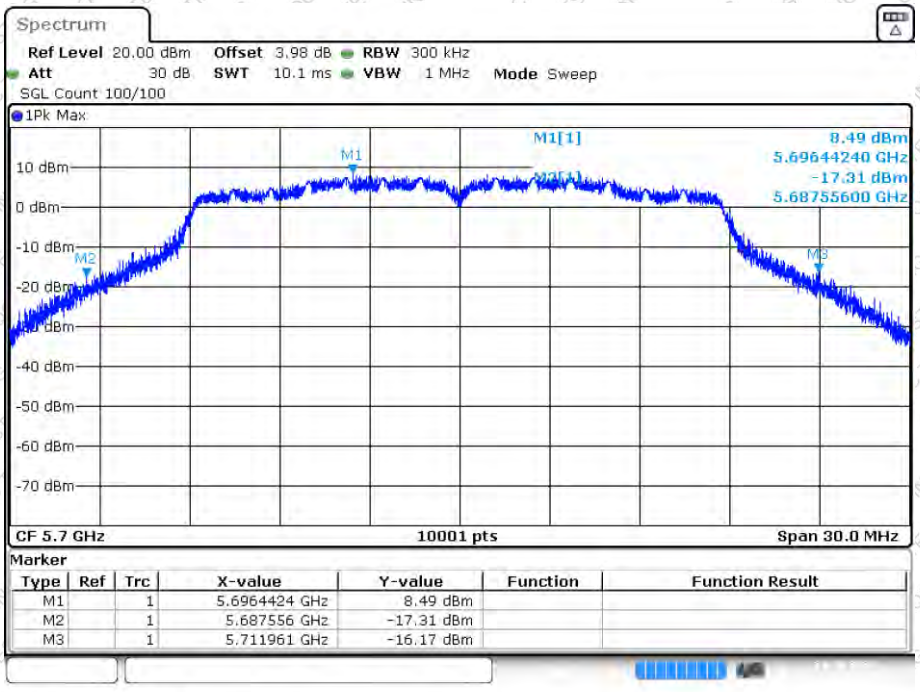
Address: East of 1/F., Building E, Xinghong Science Park, No.111, Shuiku Road, Fenghuanggang, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China
Tel: 0755-23008269 Fax: 0755-23726780 www.qctest.com.cn

-26dB Bandwidth NVNT n20 5580MHz Ant1



Date: 24.OCT.2024 16:55:10

-26dB Bandwidth NVNT n20 5700MHz Ant1



Date: 24.OCT.2024 16:57:10

Address: East of 1/F., Building E, Xinghong Science Park, No.111, Shuiku Road, Fenghuanggang, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China
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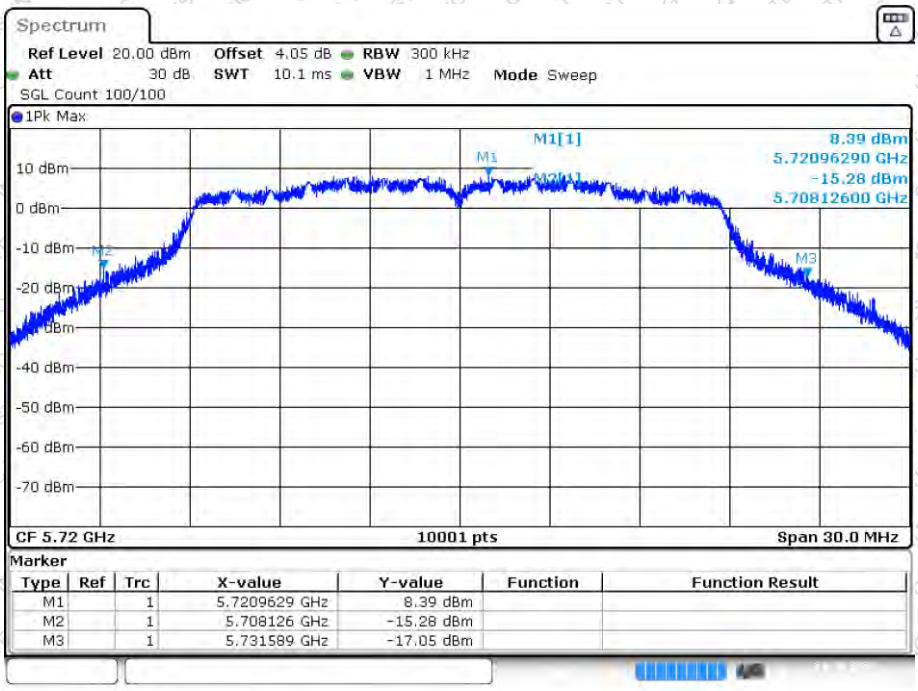
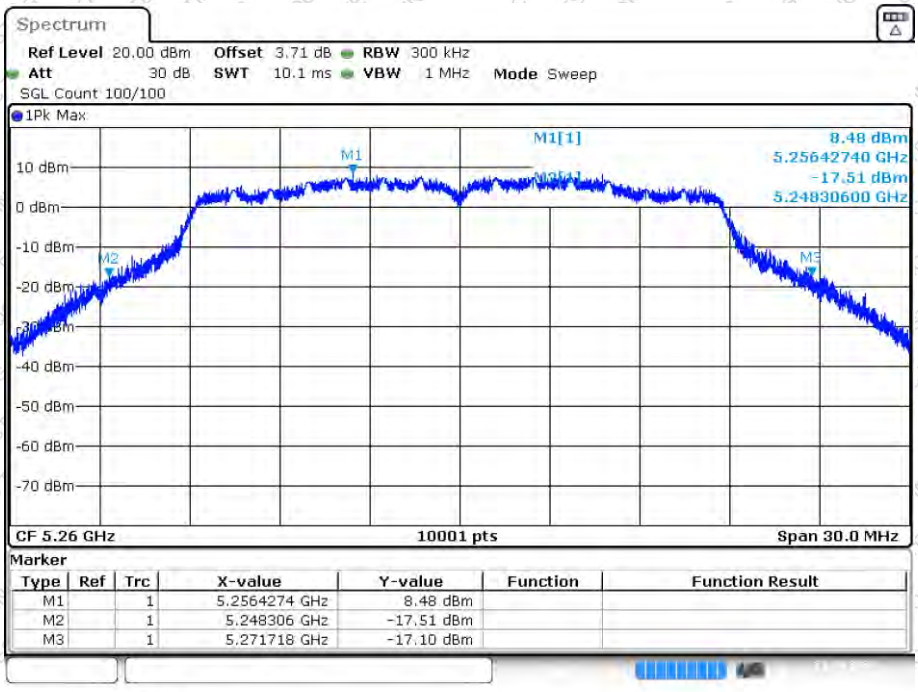
-26dB Bandwidth NVNT n20 5720MHz Ant1



Date: 24.OCT.2024 16:58:37

-26dB Bandwidth NVNT n20 5260MHz Ant2



Date: 23.OCT.2024 17:42:16

Address: East of 1/F., Building E, Xinghong Science Park, No.111, Shuiku Road, Fenghuanggang, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China
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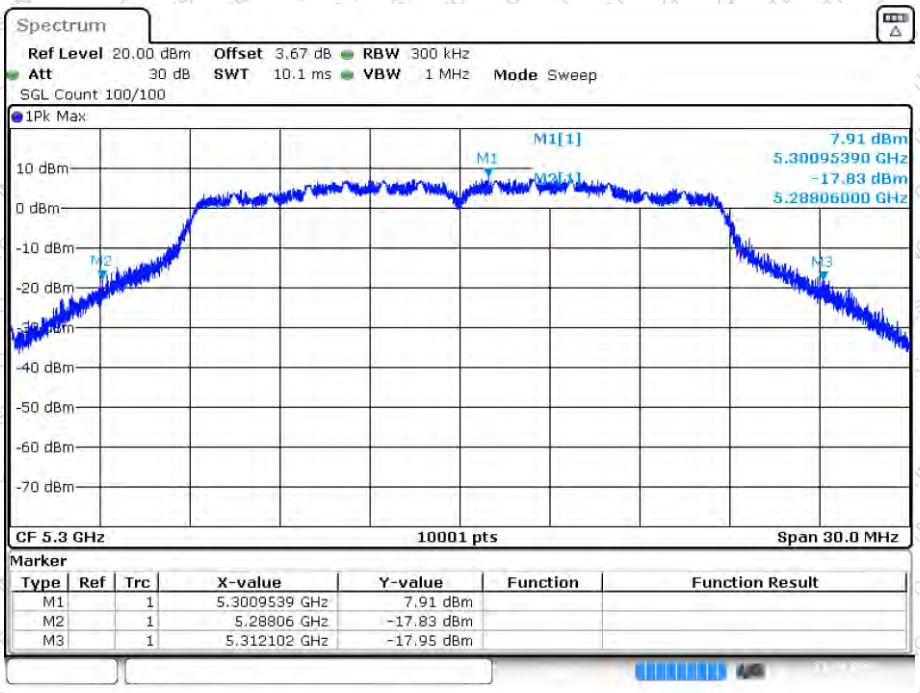
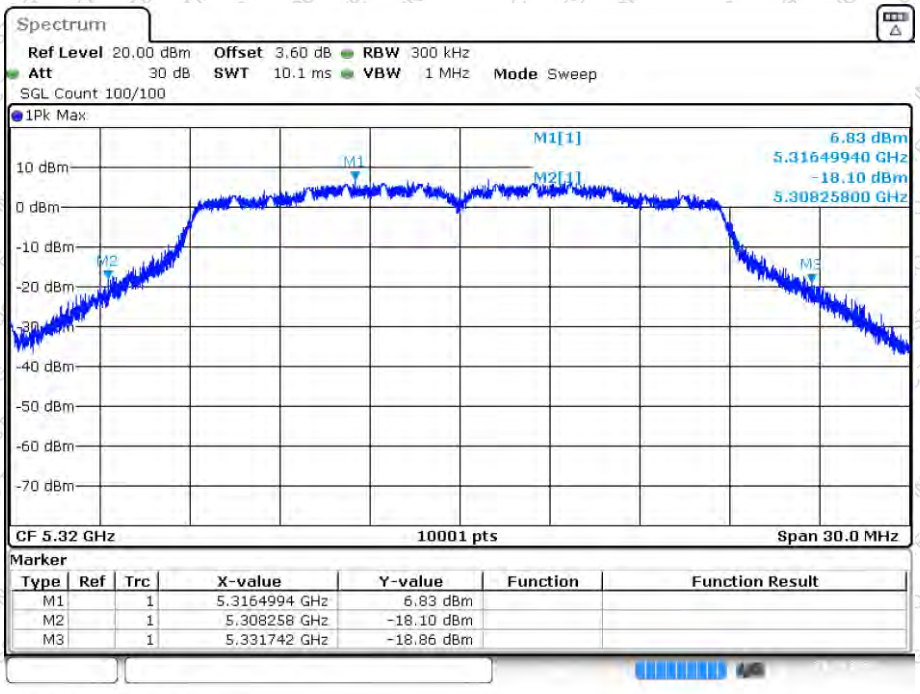
-26dB Bandwidth NVNT n20 5300MHz Ant2



Date: 23.OCT.2024 17:43:18

-26dB Bandwidth NVNT n20 5320MHz Ant2



Date: 28.OCT.2024 08:04:30

Address: East of 1/F., Building E, Xinghong Science Park, No.111, Shuiku Road, Fenghuanggang, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China
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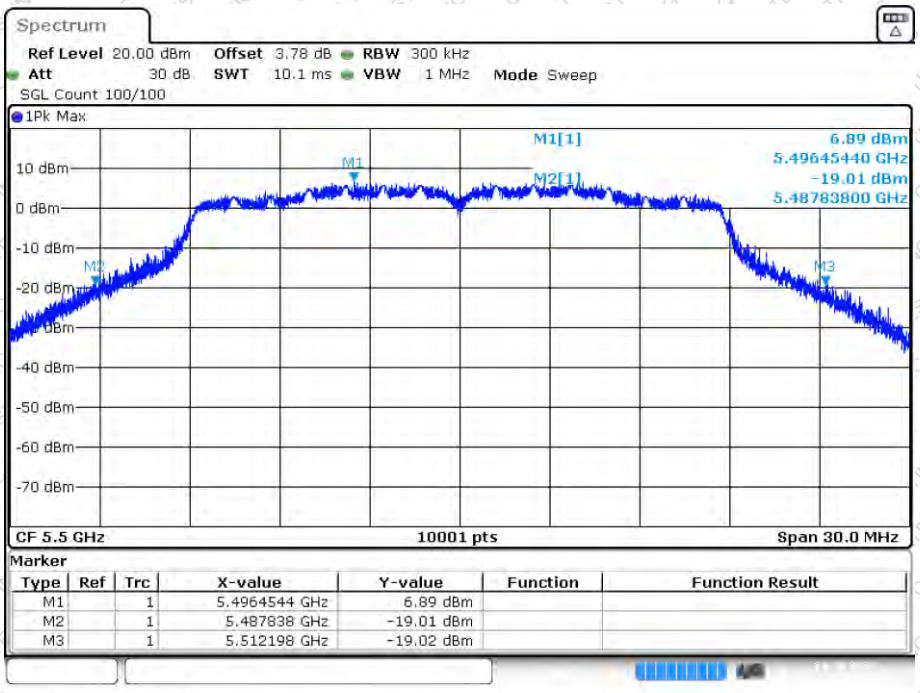
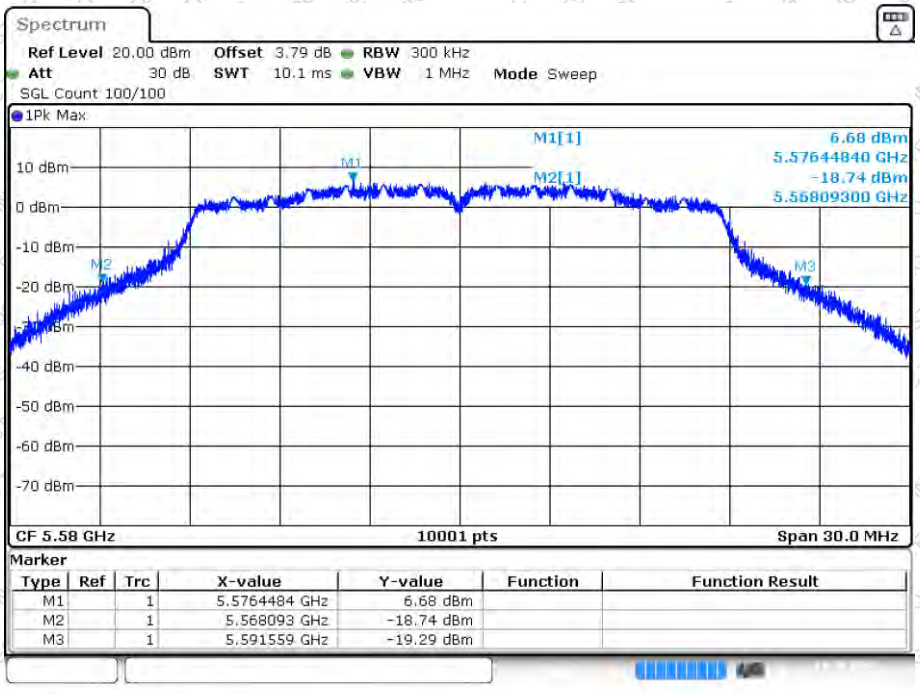
-26dB Bandwidth NVNT n20 5500MHz Ant2



Date: 24.OCT.2024 18:57:45

-26dB Bandwidth NVNT n20 5580MHz Ant2



Date: 24.OCT.2024 18:58:48

Address: East of 1/F., Building E, Xinghong Science Park, No.111, Shuiku Road, Fenghuanggang, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China
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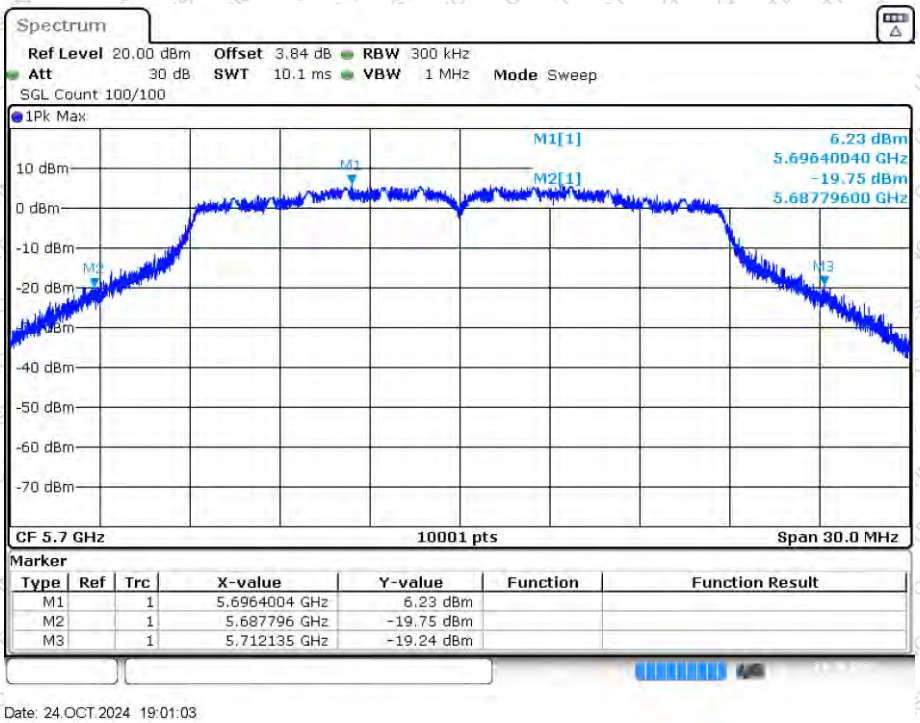
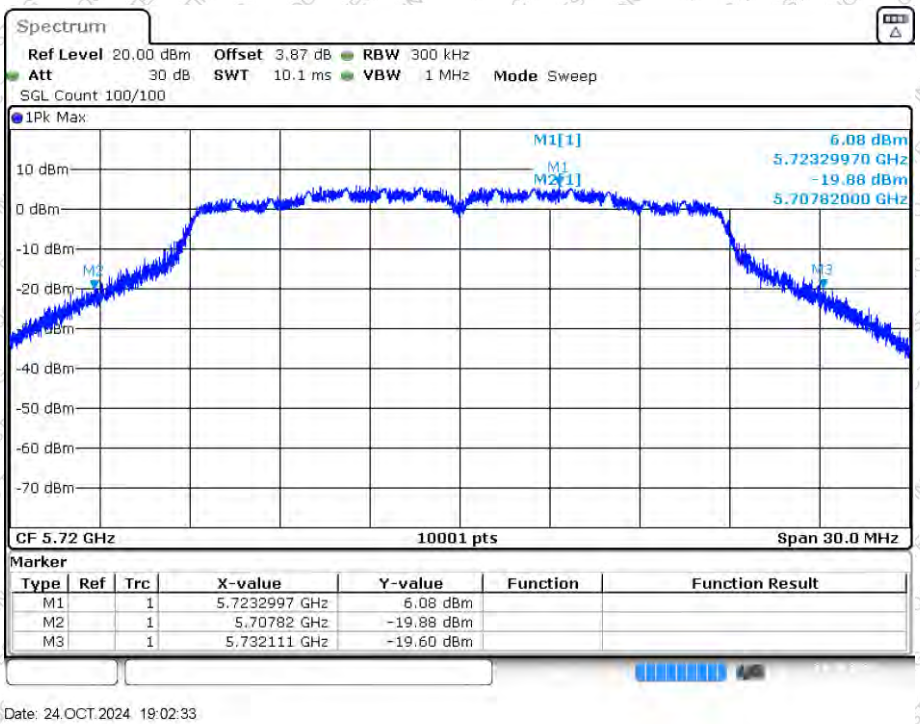
-26dB Bandwidth NVNT n20 5700MHz Ant2



Date: 24.OCT.2024 19:01:03

-26dB Bandwidth NVNT n20 5720MHz Ant2



Date: 24.OCT.2024 19:02:33

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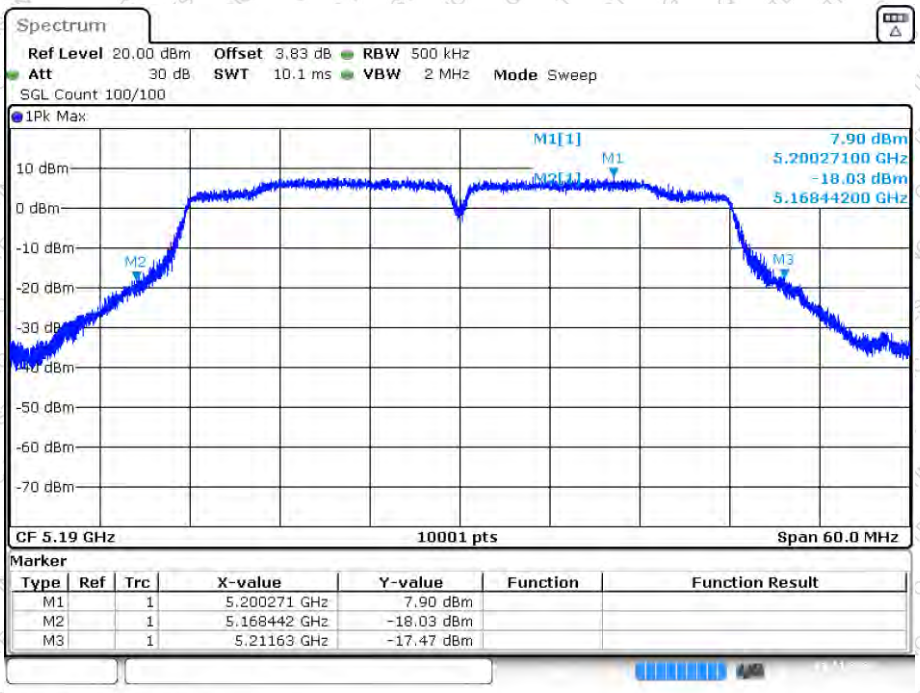
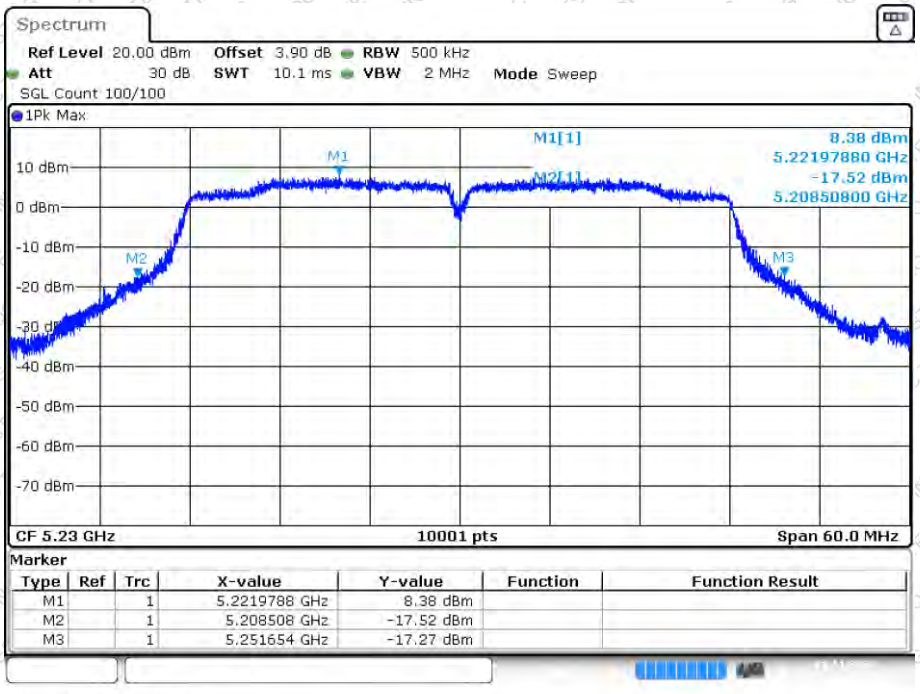
-26dB Bandwidth NVNT n40 5190MHz Ant1



-26dB Bandwidth NVNT n40 5230MHz Ant1



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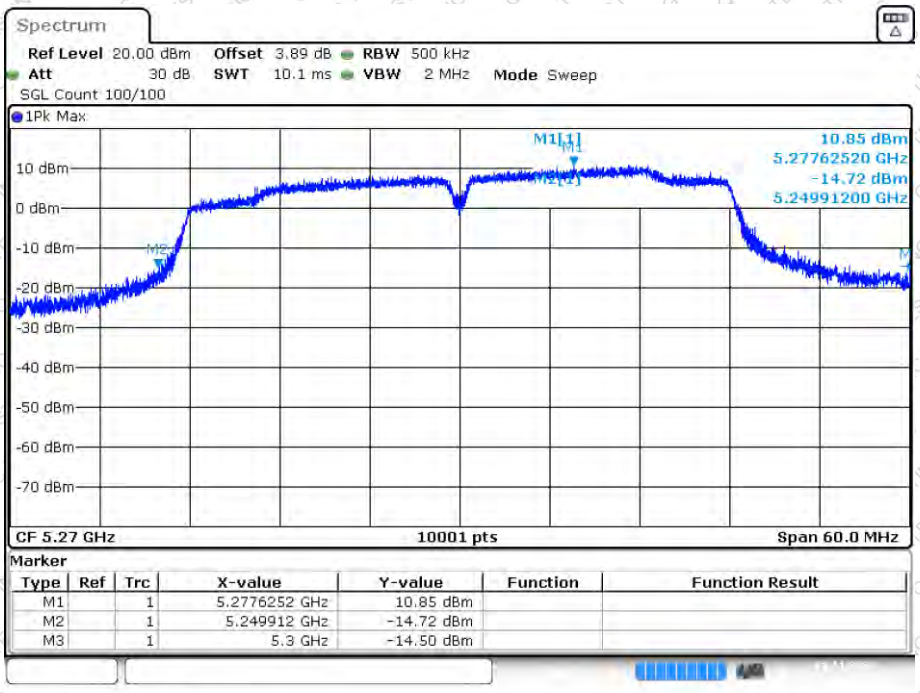
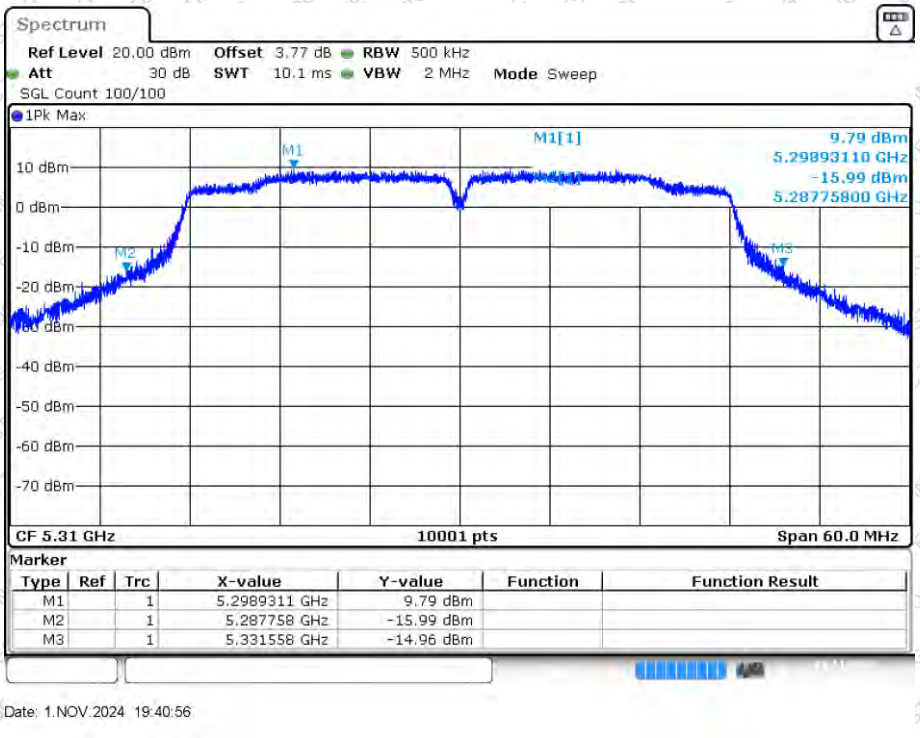
Tel: 0755-23008269 Fax: 0755-23726780 www.qctest.com.cn

-26dB Bandwidth NVNT n40 5270MHz Ant1



-26dB Bandwidth NVNT n40 5310MHz Ant1



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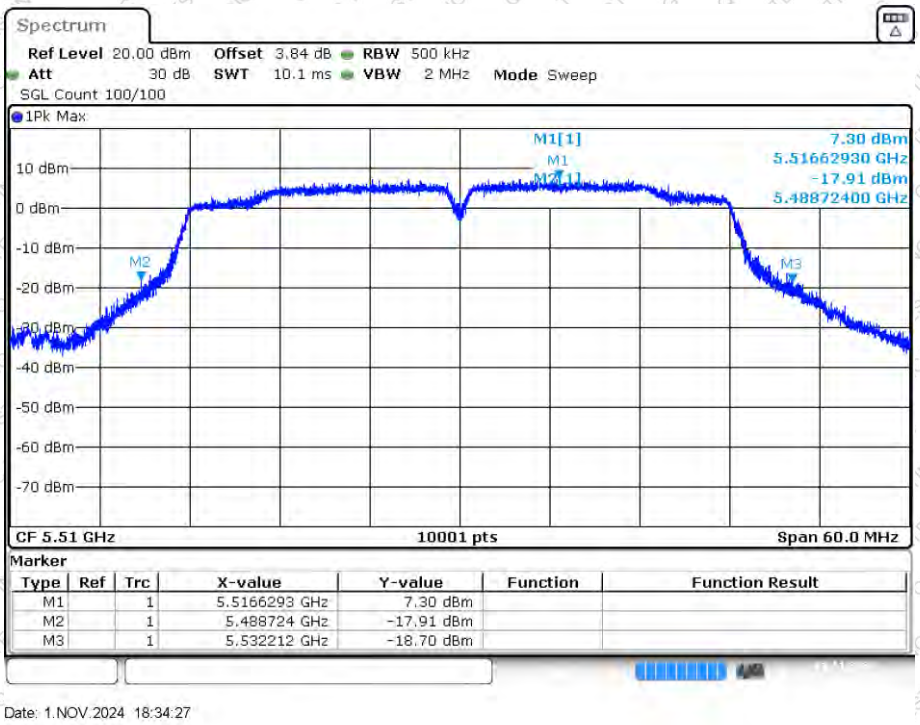
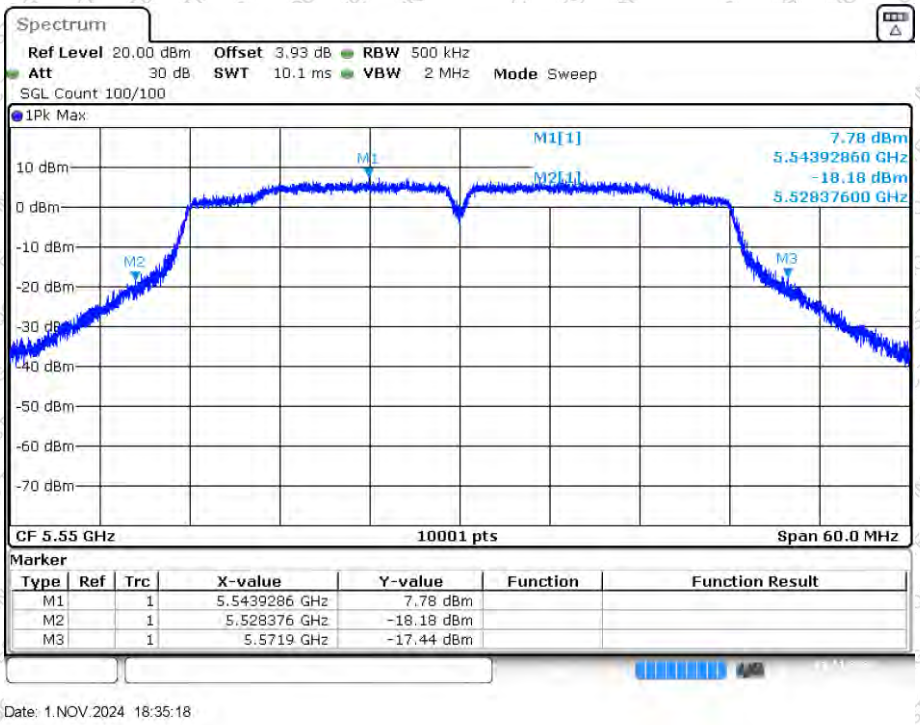
Tel: 0755-23008269 Fax: 0755-23726780 www.qctest.com.cn

-26dB Bandwidth NVNT n40 5510MHz Ant1



-26dB Bandwidth NVNT n40 5550MHz Ant1



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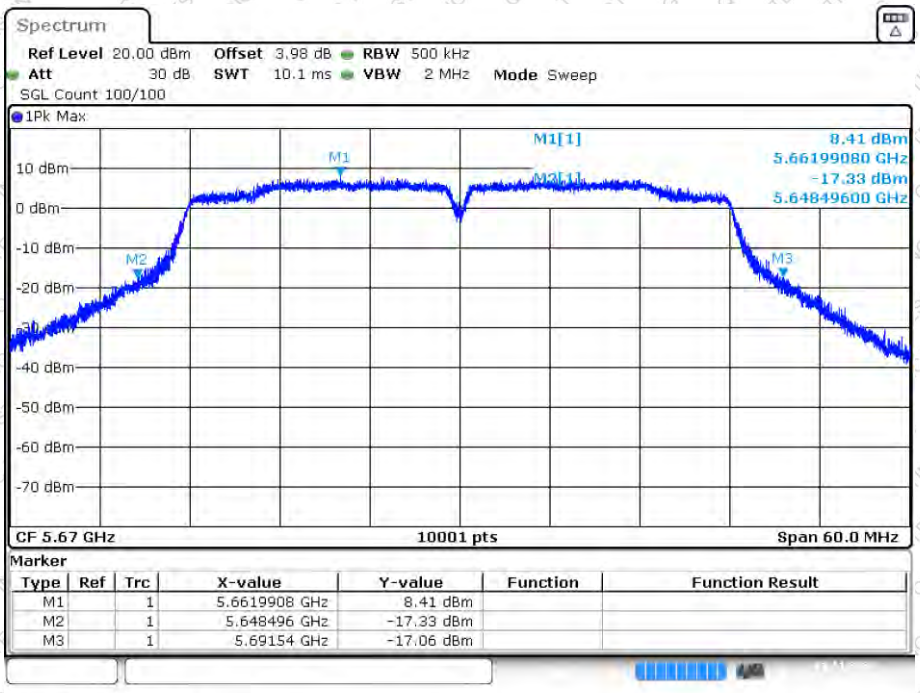
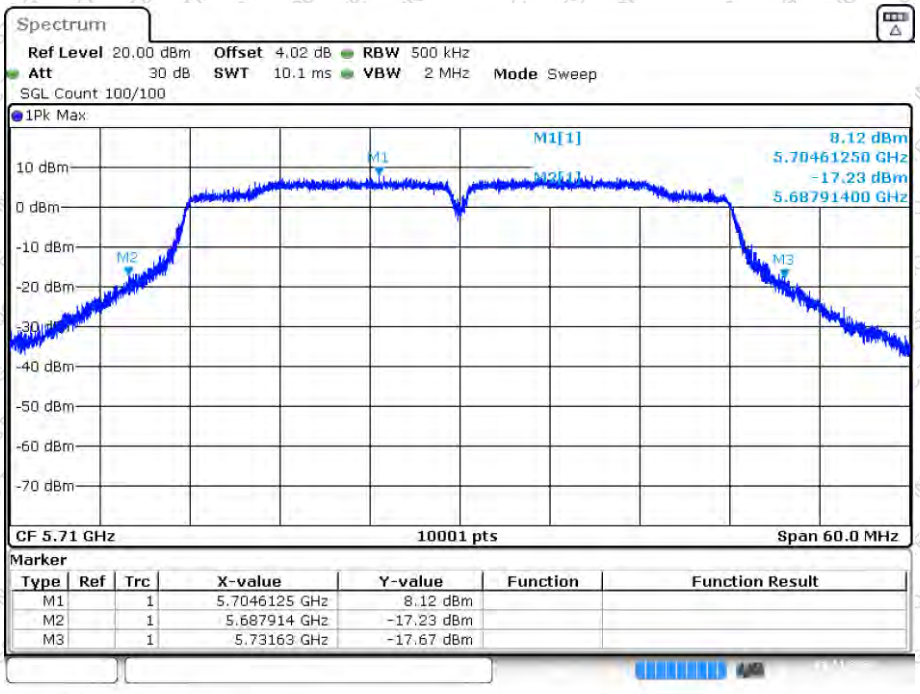
Tel: 0755-23008269 Fax: 0755-23726780 www.qctest.com.cn

-26dB Bandwidth NVNT n40 5670MHz Ant1



Date: 1.NOV.2024 18:35:40

-26dB Bandwidth NVNT n40 5710MHz Ant1



Date: 1.NOV.2024 18:36:04

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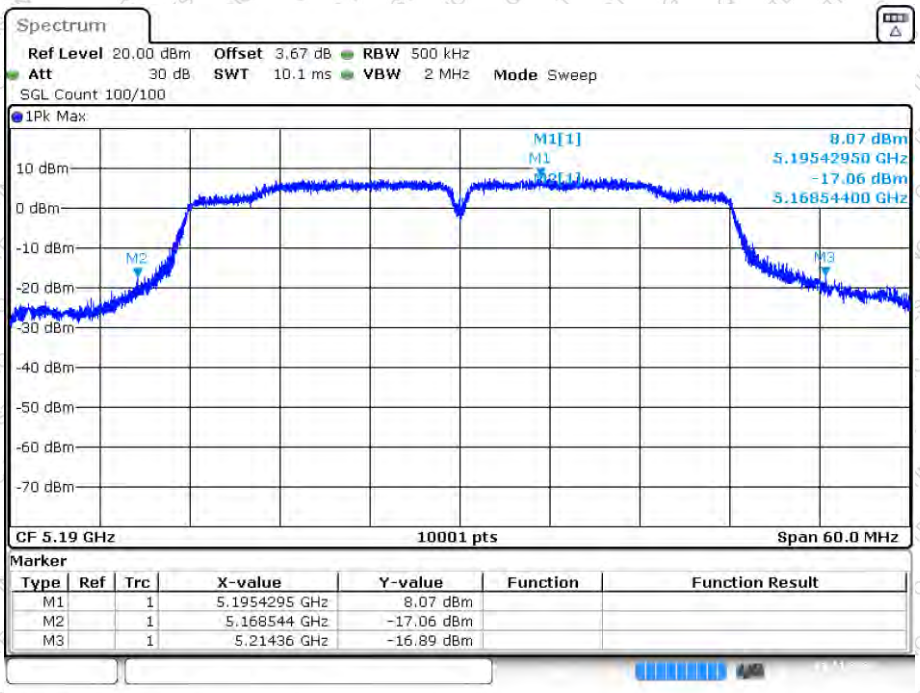
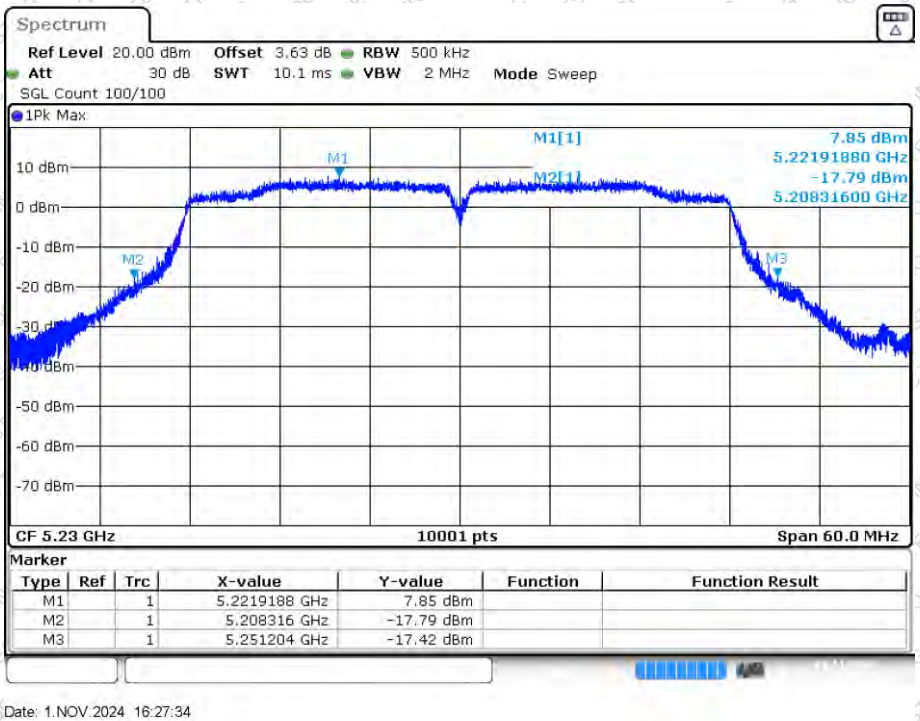
-26dB Bandwidth NVNT n40 5190MHz Ant2



-26dB Bandwidth NVNT n40 5230MHz Ant2



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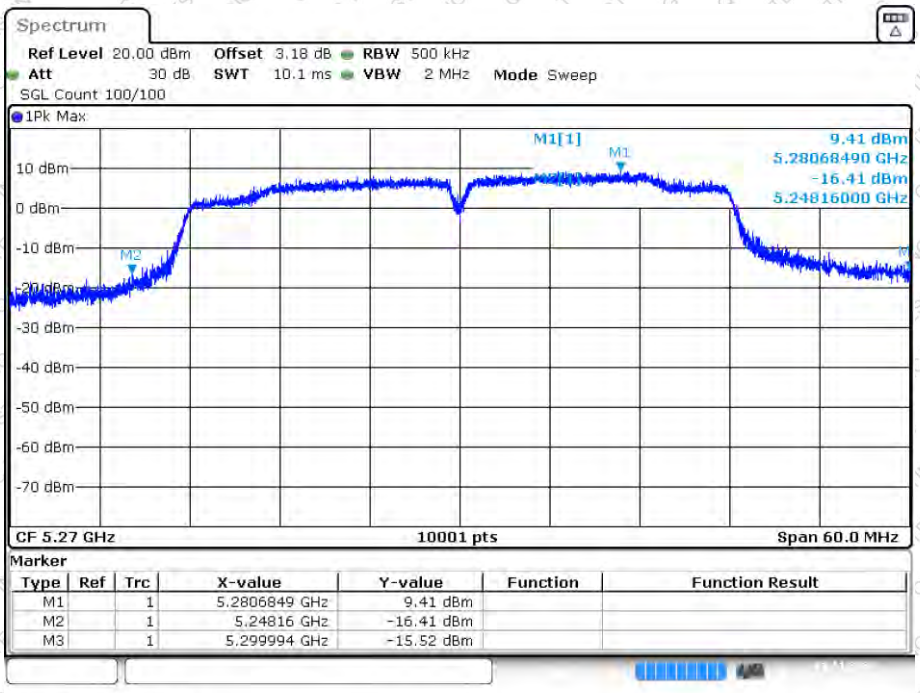
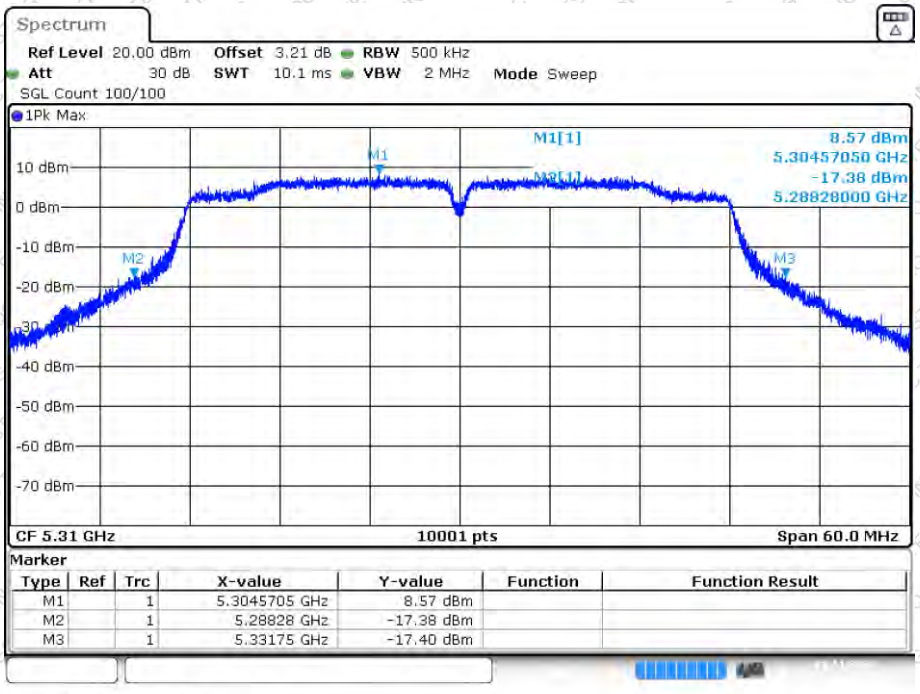
-26dB Bandwidth NVNT n40 5270MHz Ant2



Date: 1.NOV.2024 19:44:32

-26dB Bandwidth NVNT n40 5310MHz Ant2



Date: 1.NOV.2024 19:45:26

Address: East of 1/F., Building E, Xinghong Science Park, No.111, Shuiku Road, Fenghuanggang, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China
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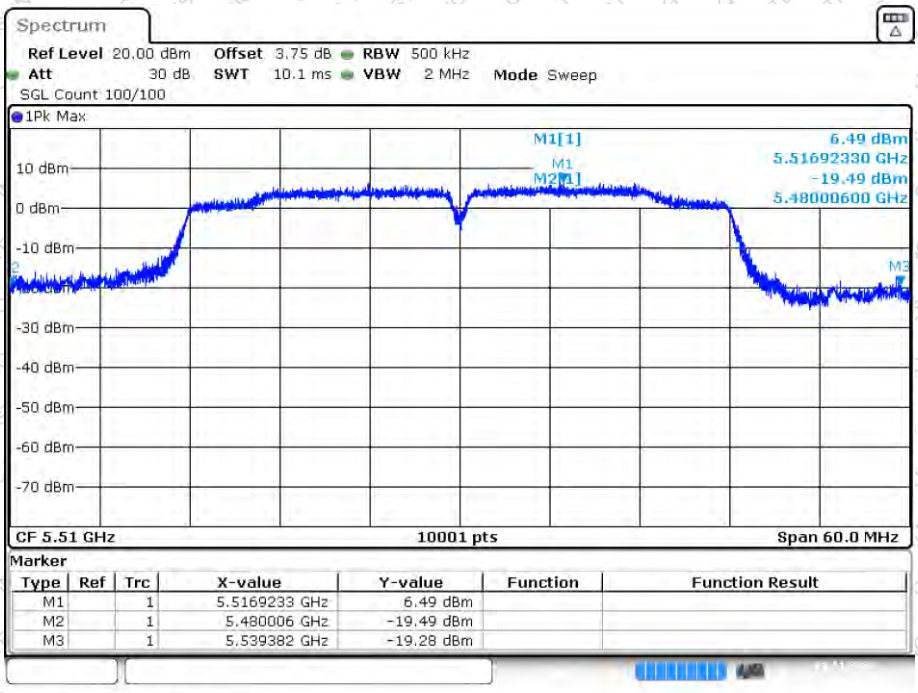
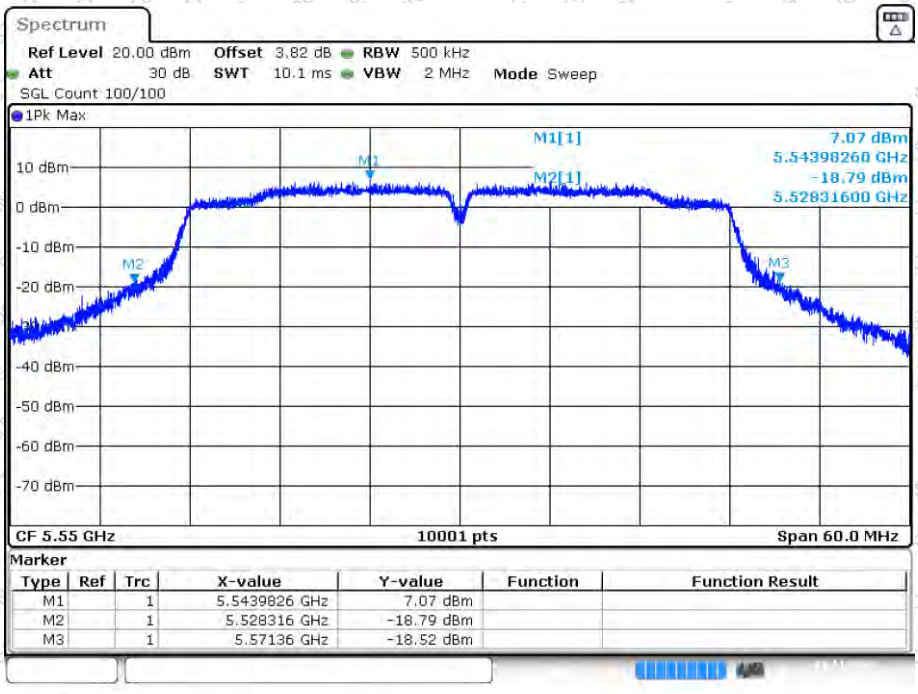
-26dB Bandwidth NVNT n40 5510MHz Ant2



Date: 1.NOV.2024 18:46:20

-26dB Bandwidth NVNT n40 5550MHz Ant2



Date: 1.NOV.2024 18:48:06

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