TEST REPORT

Application No.:	SUCR2503000170AT
Applicant:	Shanghai Sunmi Technology Co.,Ltd.
Address of Applicant:	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
Manufacturer:	Shanghai Sunmi Technology Co.,Ltd.
Address of Manufacturer:	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
EUT Description:	Smart Interactive Terminal
Model No.:	F961A, F9E1A ♣
♣	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Trade Mark:	SUNMI
FCC ID:	2AH25F961A
Standards:	FCC 47 CFR Part 15, Subpart C 15.225
Date of Receipt:	May 24, 2025
Date of Test:	May 9, 2025 to June 14, 2025
Date of Issue:	June 16, 2025
Test Result :	**PASS ***

* In the configuration tested, the EUT detailed in this report complied with the standards specified above.

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Version

Revision Record			
Version	**Description**	***Date***	***Remark***
01	Original	June 16, 2025	/

Authorized for issue by:				
Tested By		Hayley Zhang **Hayley Zhang / Project Manager**		
Approved By		Cloud Peng **Cloud Peng/Technical Manager**		

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1 Test Summary

Test Item	FCC Rules No.	Test Method	Test Result	Result
Antenna Requirement	15.203	--	Clause 5.1	PASS
AC Power Line Conducted Emission	15.207	ANSI C63.10 2013 Section 6.2	Clause 5.3	PASS
20dB Spectrum Bandwidth & 99% Occupied Bandwidth	15.215(c)	ANSI C63.10 2013 Section 6.9.3	Clause 5.4	PASS
Frequency Stability	15.225(e)	ANSI C63.10 2013 Section 6.8	Clause 5.5	PASS
Field Strength of Fundamental Emissions	15.225(a)(b)(c)	ANSI C63.10 2013 Section 6.4.7	Clause 5.6	PASS
Radiated Spurious Emissions	15.225(d)/15.209	ANSI C63.10 2013 Section 6.4/6.5	Clause 5.7	PASS

2 General Information

2.1 Details of Client

Applicant:	Shanghai Sunmi Technology Co.,Ltd.
Address of Applicant:	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
Manufacturer:	Shanghai Sunmi Technology Co.,Ltd.
Address of Manufacturer:	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China

2.2 Test Location

Company:	SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.
Address:	South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone
Post code:	215000
Test engineer:	King-p.Li

2.3 Test Facility

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

- **A2LA (Certificate No. 6336.01)**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

- **FCC –Designation Number: CN1312**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number: 717327

2.4 General Description of EUT

Hardware Version:	6490Coreboard_MB_V3.0	
Software Version:	4.0.24	
Power Supply:	20V	
IMEI:	RSE & AC power line	862117061291315/869489051895162
Operation Frequency:	13.56MHz	
Modulation Type:	ASK	
Antenna Type:	FPC	
Remark: As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.		

2.5 Test Environment

Environment Parameter	101 kPa Selected Values During Tests	
Relative Humidity	44-46 % RH Ambient	
Value	**Temperature(℃)**	**Voltage(V)**
NTNV	22~23	20
Remark: The extreme Voltage and extreme Temperature are refer to the test data of Frequency Stability.		

2.6 Description of Support Units

The EUT has been tested as an independent unit.

3 Equipment List

9*6*6 Test Equipment					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Semi-Anechoic Chamber	Brilliant-emc	N/A	SUWI-04-02-01	6/3/2023	6/02/2026
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-05	2/13/2025	2/12/2026
Signal Analyzer	ROHDE&SCHWARZ	FSW43	SUWI-01-02-04	1/20/2025	1/19/2026
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	1/15/2025	1/14/2026
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	VULB 9168	SUWI-01-11-04	8/22/2024	8/21/2026
Active Loop Antenna	SCHWRZBECK MESS-ELEKTRONIK	FMZB 1519B	SUWI-01-21-01	5/13/2025	5/12/2027
Amplifier	Tonscend	TAP9K3G40	SUWI-01-14-01	1/16/2025	1/15/2026
Measurement Software	Tonscend	JS32-RE V4.0.0.0	SUWI-02-09-04	NCR	NCR

Conduction Test Equipment					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	1/15/2025	1/14/2026
Wideband Radio Communication Tester	Anritsu	MT8820C	SUWI-01-26-01	9/10/2024	9/9/2025
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-06	2/13/2025	2/12/2026
Artificial network	ROHDE&SCHWARZ	ENV216	SUWI-01-19-03	5/8/2025	5/7/2026
Artificial network	ROHDE&SCHWARZ	ENV216	SUWI-01-19-04	5/8/2025	5/7/2026

Remark: NCR=No Calibration Requirement.

4 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	1%
2	Occupied Bandwidth	1%
3	Conduction Emission	± 2.90dB (150kHz to 30MHz)
4	Radiated Emission	± 3.13dB (9k -30MHz)
		± 4.88dB (30M -1GHz)

Remark:
The U_{lab} (lab Uncertainty) is less than $U_{cispr/ETSI}$ (CISPR/ETSI Uncertainty), so the test results
– compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
– non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

5 Test results and Measurement Data

5.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C 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 shall be considered sufficient to comply with the provisions of this section.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.	
The antenna of the EUT are permanently attached.	

5.2 Worst-case configuration and mode

The fundamental of the EUT was investigated under three orthogonal orlentations X, Y, and Z. The X orientation was determined to be the worst-case orientation.

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

5.3 AC Power Line Conducted Emissions

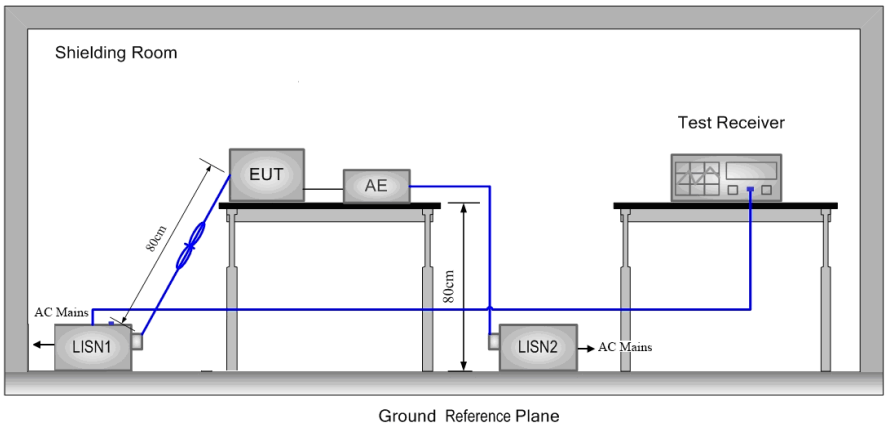
Test Requirement:	47 CFR Part 15C Section 15.207
Test Method:	ANSI C63.10: 2013
Test Frequency Range:	150kHz to 30MHz
Limit:	

Frequency range(MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
* Decreases with the logarithm of the frequency.		

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 50Ω/50μH + 5Ω 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: 2013 on conducted measurement.

Test Setup:



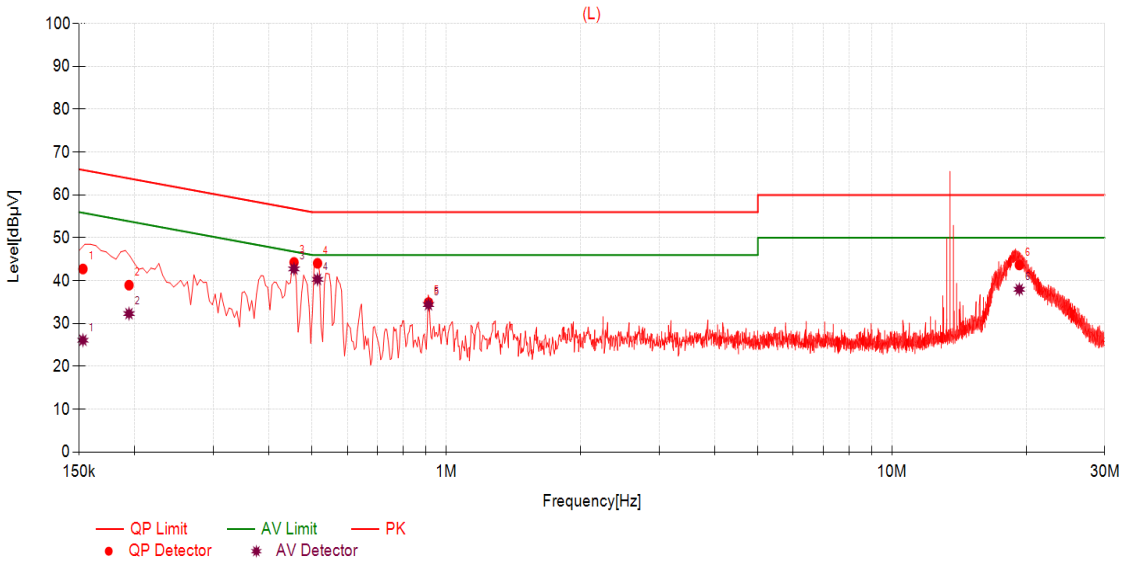
Instruments Used:	Refer to section 3 for details.
Test Results:	Pass

Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Phase:	Line

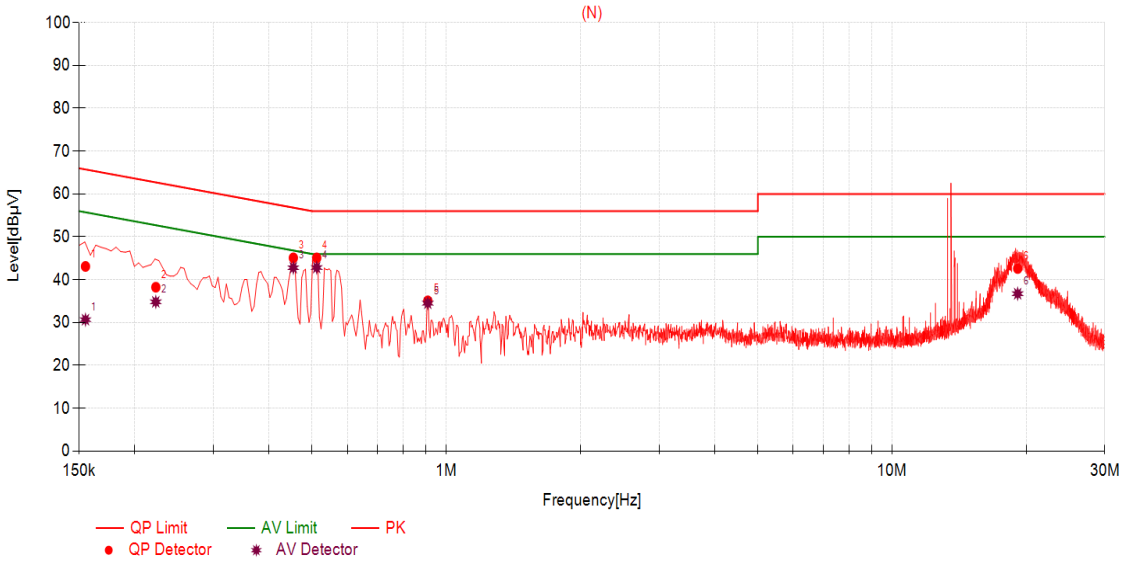


Final Data List

NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBμV]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict
1	0.1530	9.86	32.88	42.74	65.84	23.10	16.25	26.11	55.84	29.73	PASS
2	0.1941	9.84	29.12	38.96	63.86	24.90	22.48	32.32	53.86	21.54	PASS
3	0.4552	9.87	34.40	44.27	56.78	12.51	32.88	42.75	46.78	4.03	PASS
4	0.5140	9.89	34.17	44.06	56.00	11.94	30.42	40.31	46.00	5.69	PASS
5	0.9118	9.87	25.03	34.90	56.00	21.10	24.53	34.40	46.00	11.60	PASS
6	19.2956	10.25	33.43	43.68	60.00	16.32	27.73	37.98	50.00	12.02	PASS

Remark:
1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Value =Reading[dBμV] + Factor(Lisn factor[dB] + cable loss[dB]).
3. Margin = Limit[dBμV] – Value[dBμV]
4. The high point before 10M-30M is RF signal which comes from NFC, and which can be ignored.

Phase:	Neutral

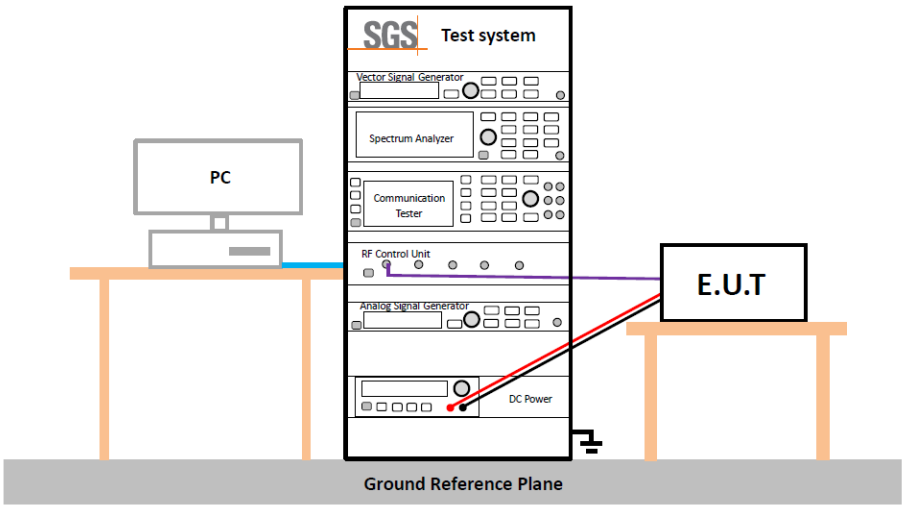


Final Data List

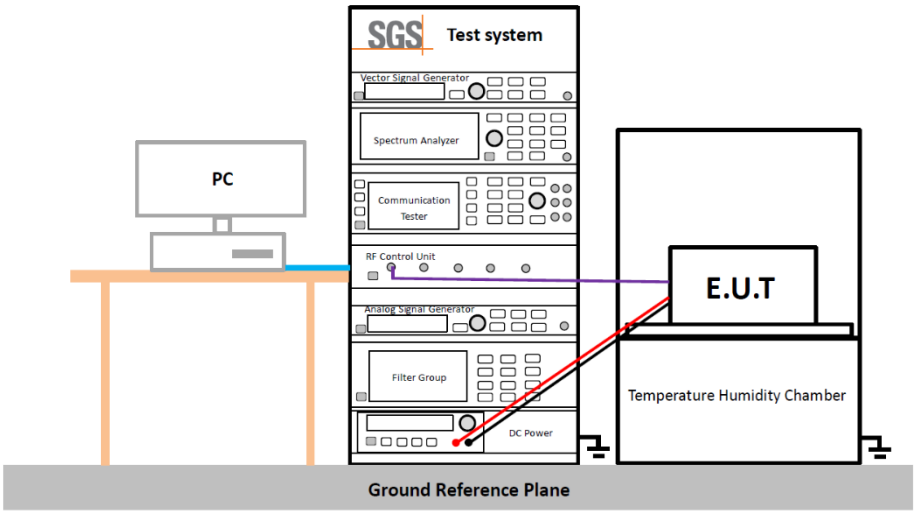
NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBµV]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Reading [dBµV]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Verdict
1	0.1550	9.78	33.32	43.10	65.73	22.63	20.89	30.67	55.73	25.06	PASS
2	0.2229	9.83	28.42	38.25	62.71	24.46	25.00	34.83	52.71	17.88	PASS
3	0.4536	9.84	35.26	45.10	56.81	11.71	32.95	42.79	46.81	4.02	PASS
4	0.5118	9.87	35.23	45.10	56.00	10.90	32.96	42.83	46.00	3.17	PASS
5	0.9087	9.82	25.25	35.07	56.00	20.93	24.70	34.52	46.00	11.48	PASS
6	19.1376	10.26	32.36	42.62	60.00	17.38	26.47	36.73	50.00	13.27	PASS

Remark:
1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Value =Reading[dBµV] + Factor(Lisn factor[dB] + cable loss[dB]).
3. Margin = Limit[dBµV] – Value[dBµV]
4. The high point before 10M-30M is RF signal which comes from NFC, and which can be ignored.

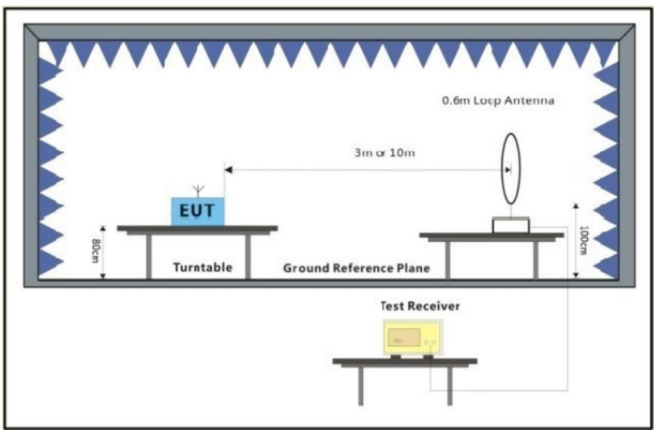
5.4 20dB Spectrum Bandwidth & 99% Occupied Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.215(c)
Test Method:	ANSI C63.10: 2013 Section 6.9.3
Test Setup:	
Instruments Used:	Refer to section 3 for details
Limit:	Intentional radiators must be designed to ensure that the 20dB and 99% emission bandwidth in the specific band 13.553~13.567MHz.
Test Results:	Pass
The detailed test data see: **Appendix**	

5.5 Frequency Stability

Test Requirement:	47 CFR Part 15C Section 15.225(e)
Test Method:	ANSI C63.10: 2013 Section 6.8
Test Setup:	
Instruments Used:	Refer to section 3 for details
Limit:	The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% (100ppm) of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery. While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.
Test Results:	Pass
The detailed test data see: **Appendix**	

5.6 Field Strength of Fundamental Emissions

Test Requirement:	47 CFR Part 15C Section 15.225				
Test Method:	ANSI C63.10 :2013 Section 6.4.7				
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Limit:	Frequency	Field Strength (μV/m) at 30m	Field Strength (dBμV/m) at 30m	Field Strength (dBμV/m) at 10m	Field Strength (dBμV/m) at 3m
	1.705~13.110 MHz	30	29.5	48.58	69.5
	13.110-13.410 MHz	106	40.5	59.58	80.5
	13.410-13.553 MHz	334	50.5	69.58	90.5
	13.553-13.567 MHz	15,848	84.0	103.08	124.0
	13.567-13.710 MHz	334	50.5	69.58	90.5
	13.710-14.010 MHz	106	40.5	59.58	80.5
	14.010~30.000 MHz	30	29.5	48.58	69.5
Test Setup:	 Figure 1. Below 30MHz				
Test Procedure:	a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. 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. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters(for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the X axis positioning which it is worse case. g. Repeat above procedures until all frequencies measured was complete. h. RBW set to 9kHz.				
Exploratory Test	Transmitting with modulation.				

Mode:	Adapter + Transmitting mode.
Final Test Mode:	**Transmitting with modulation.** Pretest the EUT at Adapter + Transmitting mode.Only the worst case is recorded in the report.
Instruments Used:	Refer to section 3 for details
Test Results:	Pass
The detailed test data see: **Appendix**	

5.7 Radiated Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.225
Test Method:	ANSI C63.10 :2013 Section 6.4&6.5
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)

Limit:

Frequency	Field strength (microvolt/meter)	Limit (dBuV/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
Above 960MHz	500	54.0	Quasi-peak	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

Test Setup:

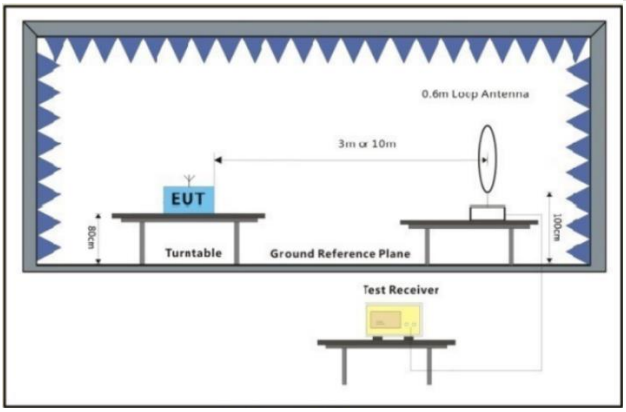


Figure 1. Below 30MHz

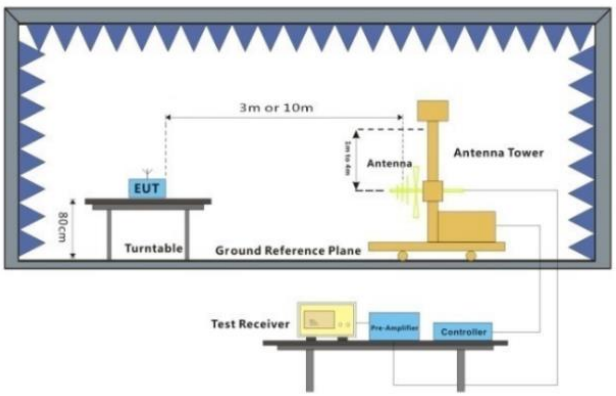


Figure 2. Above 30MHz

Test Procedure:

i. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.

j. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

k. 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.

l. 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 rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

m. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

n. The radiation measurements are performed in X, Y, Z axis positioning for

	Transmitting mode, And found the X axis positioning which it is worse case. o. Repeat above procedures until all frequencies measured was complete.
Exploratory Test Mode:	Transmitting with modulation. Adapter + Transmitting mode.
Final Test Mode:	Transmitting with modulation. Pretest the EUT at Adapter + Transmitting mode.Only the worst case is recorded in the report.
Instruments Used:	Refer to section 3 for details
Test Results:	Pass
The detailed test data see: **Appendix**	

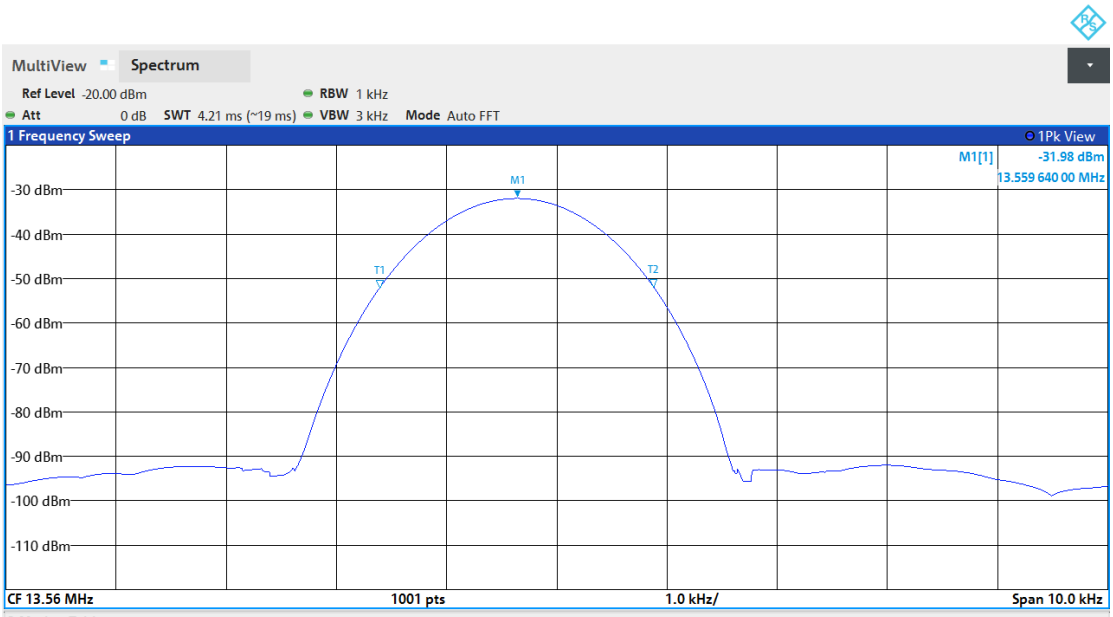
6 Photographs - Setup Photos

Refer to Appendix A.3 NFC Setup Photos.

7 Appendix

F961A

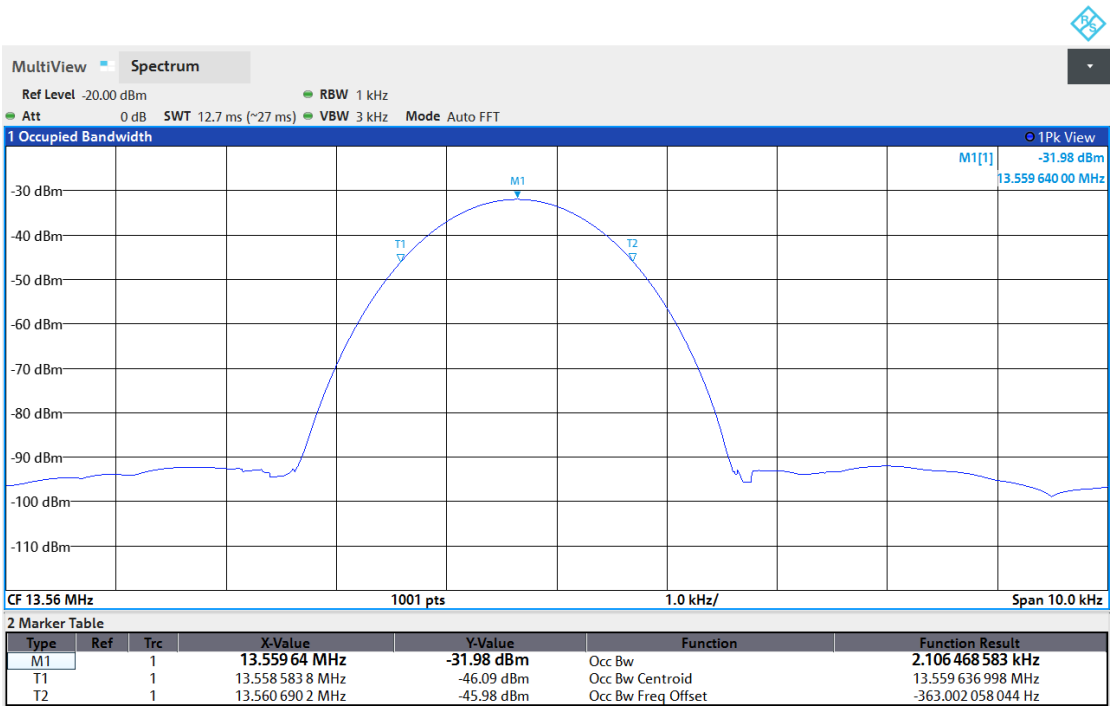
20dB Bandwidth



2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	13.559 64 MHz	-31.98 dBm	ndB	20.0 dB
T1		1	13.558 392 MHz	-52.08 dBm	ndB down BW	2.49 kHz
T2		1	13.560 879 MHz	-51.97 dBm	Q Factor	5 451.1

99%



Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	13.559 64 MHz	-31.98 dBm	Occ Bw	2.106 468 583 kHz
T1		1	13.558 583 8 MHz	-46.09 dBm	Occ Bw Centroid	13.559 636 998 MHz
T2		1	13.560 690 2 MHz	-45.98 dBm	Occ Bw Freq Offset	-363.002 058 044 Hz

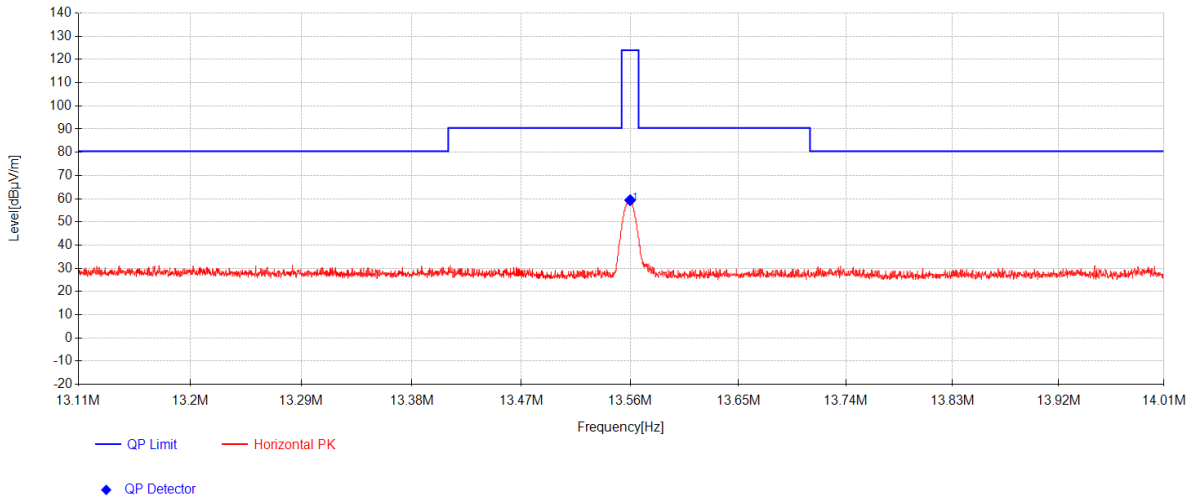
Declared Frequency (MHz)	13.56MHz				
Startup					
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Frequency Tolerance (%)	Limit (%)	Result
50	3.85	13.55996	0.0001	±0.01	Pass
40		13.55997	0.0001		Pass
30		13.55997	0.0003		Pass
20		13.55996	0.0001		Pass
10		13.55993	0.0001		Pass
0		13.55995	0.0001		Pass
-10		13.55997	0.0003		Pass
-20		13.55996	0.0003		Pass
20	4.40	13.55997	0.0001		Pass
	3.60	13.55998	0.0001		Pass

Declared Frequency (MHz)	13.56MHz				
2mins					
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Frequency Tolerance (%)	Limit (%)	Result
50	3.85	13.55996	0.0001	±0.01	Pass
40		13.55998	0.0001		Pass
30		13.55994	0.0001		Pass
20		13.55996	0.0003		Pass
10		13.55997	0.0002		Pass
0		13.55998	0.0002		Pass
-10		13.55996	0.0003		Pass
-20		13.55998	0.0003		Pass
20	4.40	13.55996	0.0003		Pass
	3.60	13.55998	0.0001		Pass

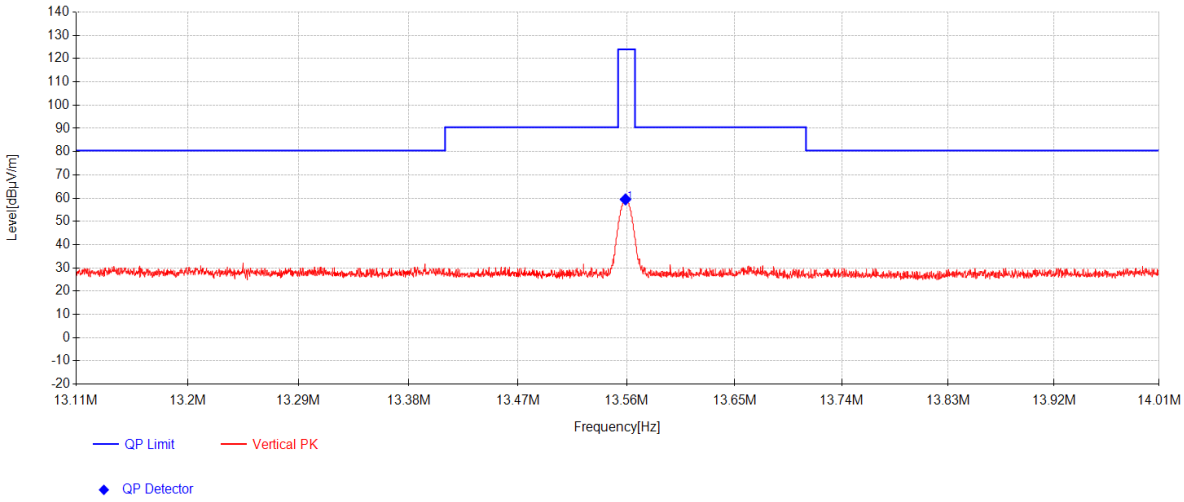
Declared Frequency (MHz)	13.56MHz				
5mins					
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Frequency Tolerance (%)	Limit (%)	Result
50	3.85	13.55995	0.0001	±0.01	Pass
40		13.55998	0.0001		Pass
30		13.55998	0.0001		Pass
20		13.55997	0.0003		Pass
10		13.55996	0.0002		Pass
0		13.55999	0.0001		Pass
-10		13.55996	0.0002		Pass
-20		13.55997	0.0001		Pass
20	4.40	13.55998	0.0001		Pass
	3.60	13.55996	0.0003		Pass

Declared Frequency (MHz)	13.56MHz				
10mins					
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Frequency Tolerance (%)	Limit (%)	Result
50	3.85	13.55998	0.0001	±0.01	Pass
40		13.55997	0.0001		Pass
30		13.55995	0.0001		Pass
20		13.55996	0.0003		Pass
10		13.55998	0.0003		Pass
0		13.55998	0.0001		Pass
-10		13.55999	0.0003		Pass
-20		13.55998	0.0002		Pass
20	4.40	13.55997	0.0001		Pass
	3.60	13.55996	0.0001		Pass

NFC_Emission Mask

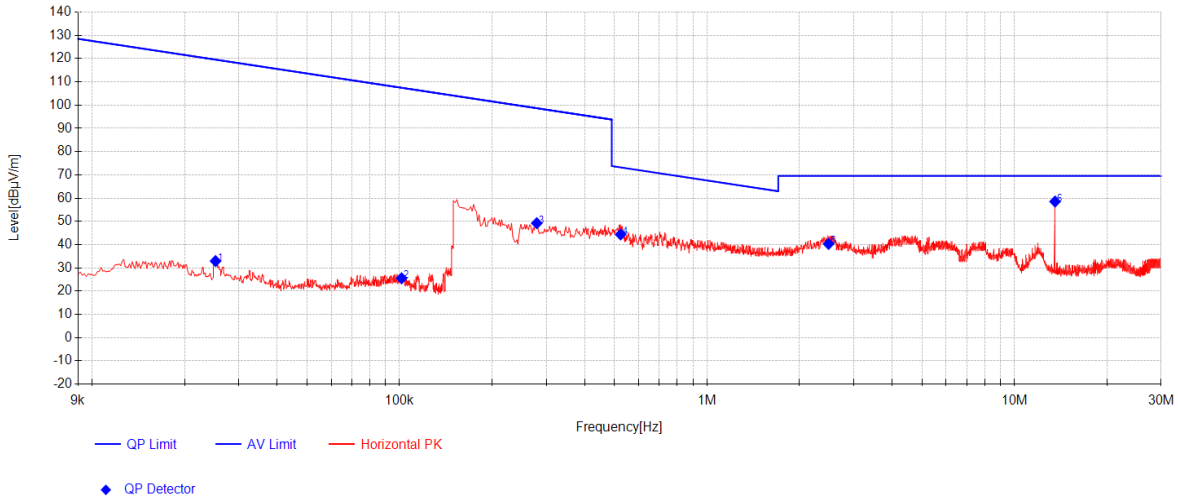


Final Data List										
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	13.56	38.87	19.80	0.69	59.36	124.00	64.64	100	81	Coaxial

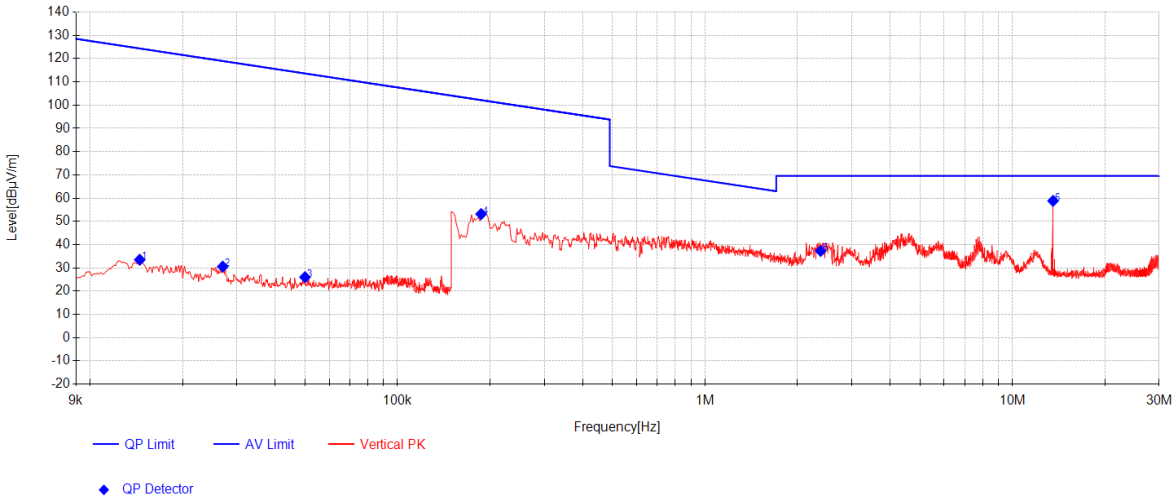


Final Data List										
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	13.5591	38.96	19.80	0.69	59.45	124.00	64.55	100	93	Coplanar

NFC_RSE below 30M

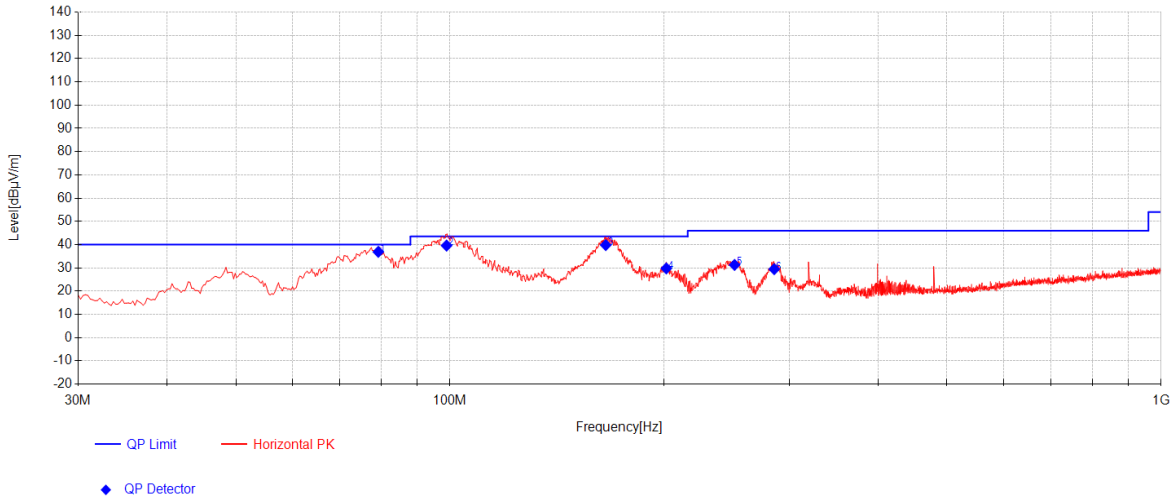


Final Data List										
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
2	0.1015	4.86	20.21	0.43	25.51	107.47	81.96	100	267	Coaxial
4	0.5237	23.75	20.19	0.44	44.38	73.22	28.84	100	64	Coaxial
5	2.486	20.01	19.83	0.48	40.31	69.54	29.23	100	0	Coaxial
6	13.559	38.04	19.80	0.69	58.53	69.54	11.01	100	90	Coaxial
NO.	Frequency [MHz]	AV Reading [dBµV]	AF [dB/m]	Factor [dB]	AV Value [dBµV/m]	AV Limit [dBµV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	0.0252	12.43	20.07	0.43	32.93	119.57	86.64	100	277	Coaxial
3	0.2795	28.52	20.26	0.44	49.22	98.68	49.46	100	258	Coaxial

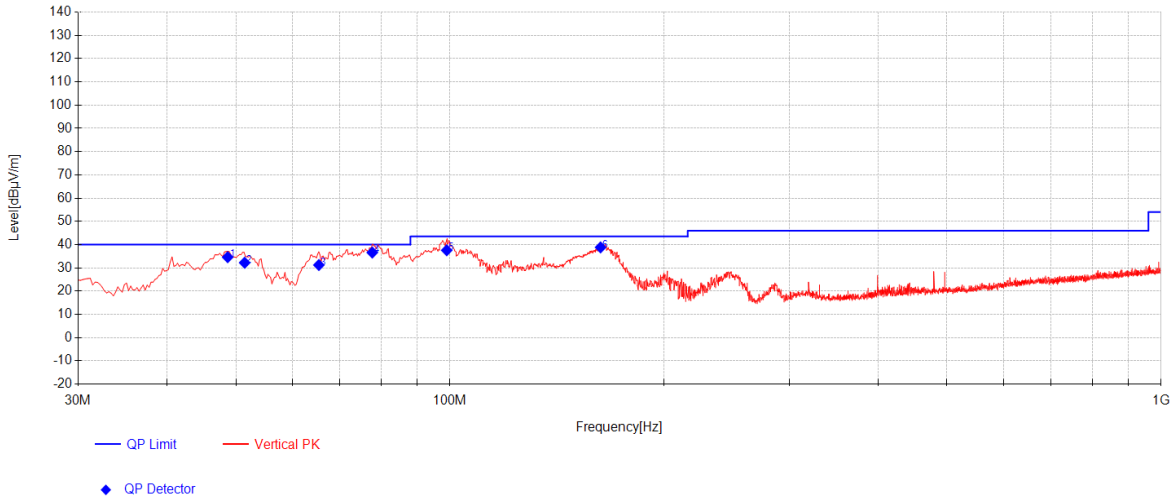


Final Data List										
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
5	2.378	16.99	19.83	0.48	37.30	69.54	32.24	100	53	Coplanar
6	13.559	38.33	19.80	0.69	58.82	69.54	10.72	100	82	Coplanar
NO.	Frequency [MHz]	AV Reading [dBµV]	AF [dB/m]	Factor [dB]	AV Value [dBµV/m]	AV Limit [dBµV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	0.0145	13.07	19.99	0.43	33.49	124.37	90.88	100	313	Coplanar
2	0.027	10.06	20.08	0.43	30.57	118.97	88.40	100	34	Coplanar
3	0.05	5.48	20.10	0.43	26.01	113.62	87.61	100	238	Coplanar
4	0.187	32.43	20.29	0.43	53.15	102.16	49.01	100	358	Coplanar

NFC_RSE above 30M



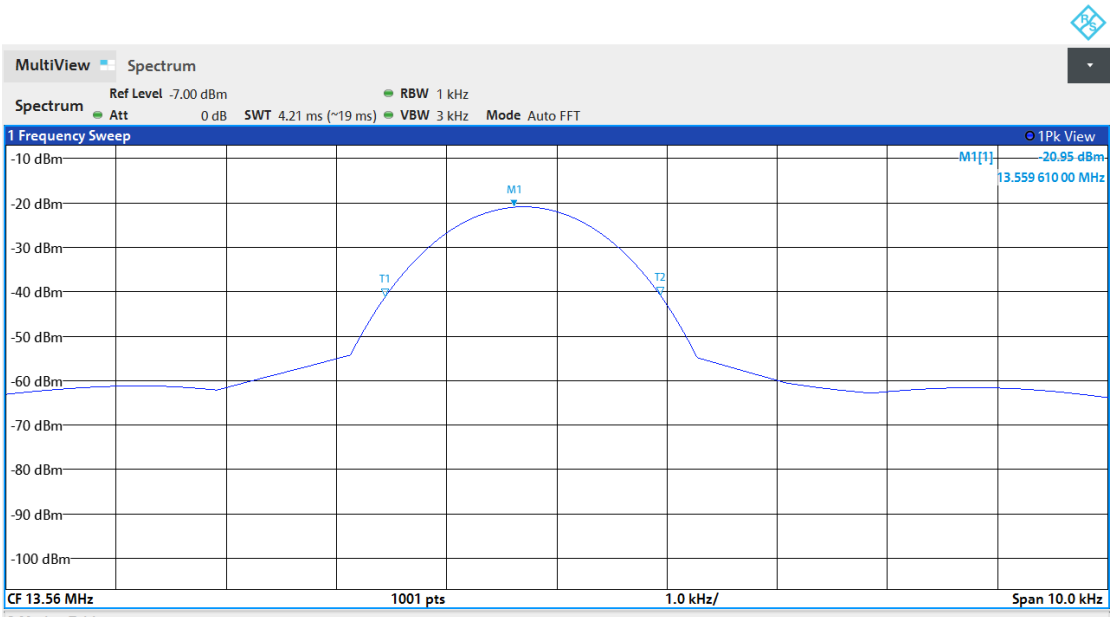
Final Data List										
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	79.3078	55.18	15.06	-33.34	36.90	40.00	3.10	220	231	Horizontal
2	98.9174	58.23	14.51	-33.14	39.60	43.50	3.90	189	208	Horizontal
3	165.6332	53.49	18.82	-32.48	39.83	43.50	3.67	112	305	Horizontal
4	201.5044	46.61	15.41	-32.24	29.78	43.50	13.72	119	342	Horizontal
5	251.3296	46.30	16.94	-31.96	31.28	46.00	14.72	120	231	Horizontal
6	285.7427	43.06	18.11	-31.71	29.46	46.00	16.54	110	355	Horizontal



Final Data List										
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	48.6989	49.51	18.80	-33.71	34.60	40.00	5.40	185	315	Vertical
2	51.4481	47.42	18.47	-33.67	32.22	40.00	7.78	263	278	Vertical
3	65.4197	47.46	17.24	-33.48	31.22	40.00	8.78	254	92	Vertical
4	77.7719	54.65	15.32	-33.36	36.61	40.00	3.39	174	315	Vertical
5	98.9719	56.21	14.51	-33.14	37.58	43.50	5.92	152	311	Vertical
6	162.8605	52.43	18.91	-32.52	38.82	43.50	4.68	224	356	Vertical

F9E1A

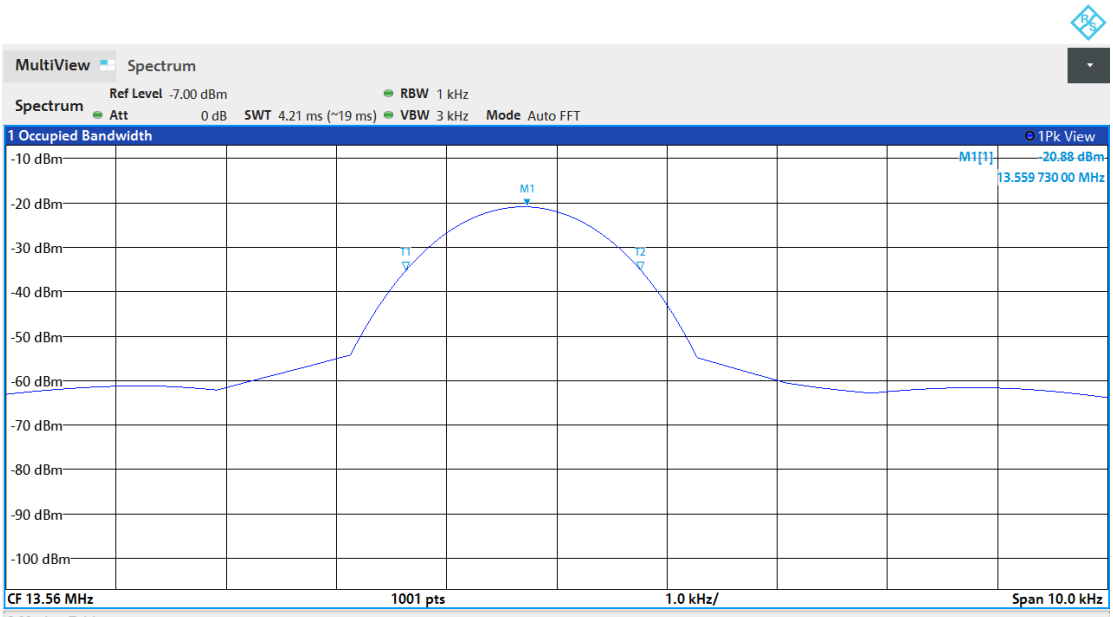
20dB Bandwidth



2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**13.559 61 MHz**	**-20.95 dBm**	ndB	20.0 dB
T1		1	13.558 442 MHz	-41.13 dBm	ndB down BW	**2.50 kHz**
T2		1	13.560 939 MHz	-40.81 dBm	Q Factor	5 429.3

99%



2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**13.559 73 MHz**	**-20.88 dBm**	Occ Bw	**2.131 291 107 kHz**
T1		1	13.558 629 1 MHz	-35.10 dBm	Occ Bw Centroid	13.559 694 752 MHz
T2		1	13.560 760 4 MHz	-35.12 dBm	Occ Bw Freq Offset	-305.247 997 819 Hz

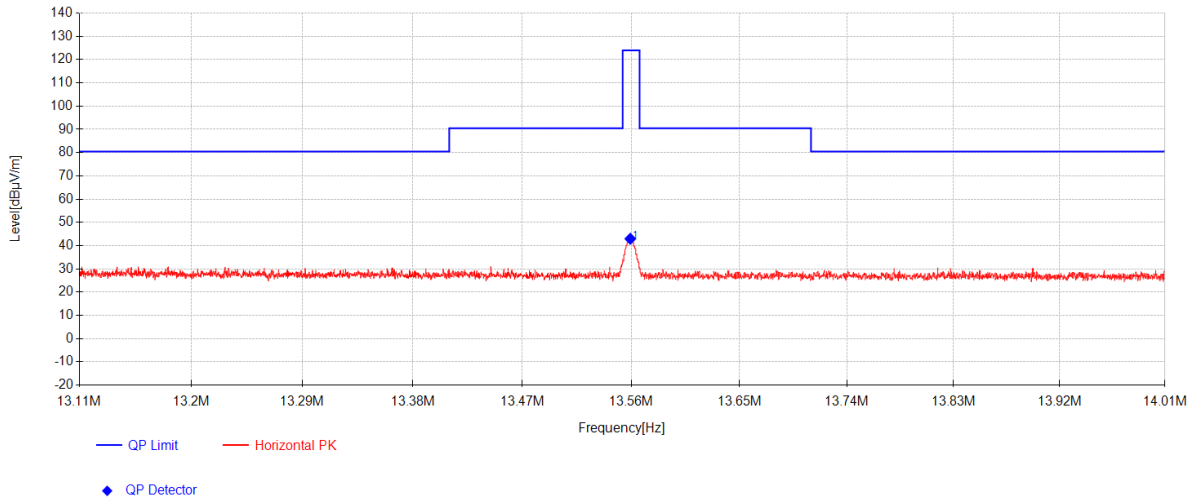
Declared Frequency (MHz)	13.56MHz				
Startup					
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Frequency Tolerance (%)	Limit (%)	Result
50	3.85	13.55995	0.0001	±0.01	Pass
40		13.55996	0.0001		Pass
30		13.55994	0.0003		Pass
20		13.55992	0.0001		Pass
10		13.55993	0.0001		Pass
0		13.55996	0.0001		Pass
-10		13.55998	0.0003		Pass
-20		13.55994	0.0003		Pass
20	4.40	13.55996	0.0001		Pass
	3.60	13.55996	0.0001		Pass

Declared Frequency (MHz)	13.56MHz				
2mins					
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Frequency Tolerance (%)	Limit (%)	Result
50	3.85	13.55995	0.0001	±0.01	Pass
40		13.55997	0.0001		Pass
30		13.55995	0.0001		Pass
20		13.55999	0.0003		Pass
10		13.55998	0.0002		Pass
0		13.55997	0.0002		Pass
-10		13.55998	0.0003		Pass
-20		13.55997	0.0003		Pass
20	4.40	13.55995	0.0003		Pass
	3.60	13.55997	0.0001		Pass

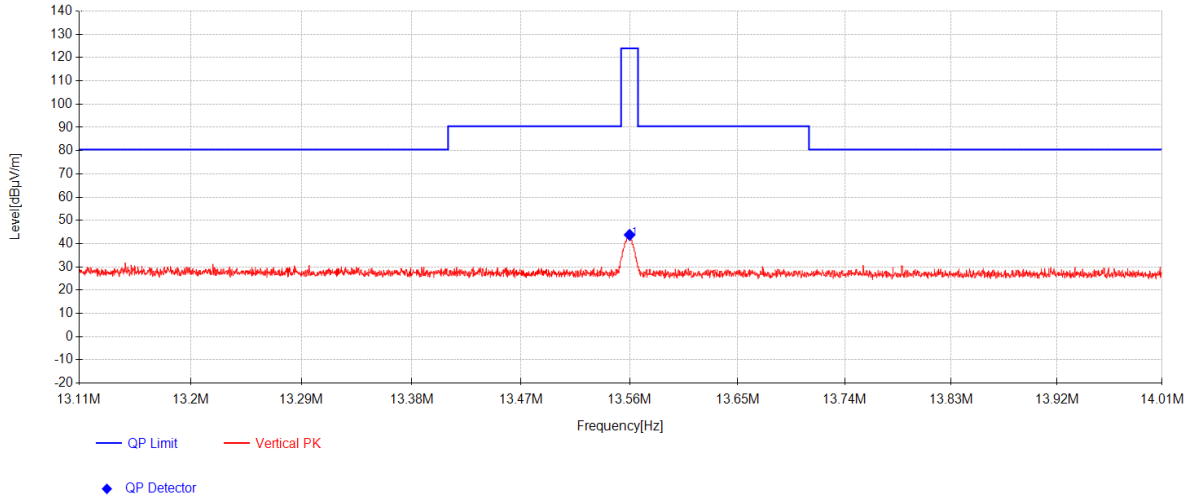
Declared Frequency (MHz)	13.56MHz				
5mins					
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Frequency Tolerance (%)	Limit (%)	Result
50	3.85	13.55993	0.0001	±0.01	Pass
40		13.55996	0.0001		Pass
30		13.55997	0.0001		Pass
20		13.55999	0.0003		Pass
10		13.55996	0.0002		Pass
0		13.55998	0.0001		Pass
-10		13.55997	0.0002		Pass
-20		13.55997	0.0001		Pass
20	4.40	13.55996	0.0001		Pass
	3.60	13.55996	0.0003		Pass

Declared Frequency (MHz)		13.56MHz			
10mins					
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Frequency Tolerance (%)	Limit (%)	Result
50	3.85	13.55997	0.0001	±0.01	Pass
40		13.55998	0.0001		Pass
30		13.55997	0.0001		Pass
20		13.55998	0.0003		Pass
10		13.55999	0.0003		Pass
0		13.55998	0.0001		Pass
-10		13.55997	0.0003		Pass
-20		13.55997	0.0002		Pass
20	4.40	13.55996	0.0001		Pass
	3.60	13.55998	0.0001		Pass

NFC_Emission Mask

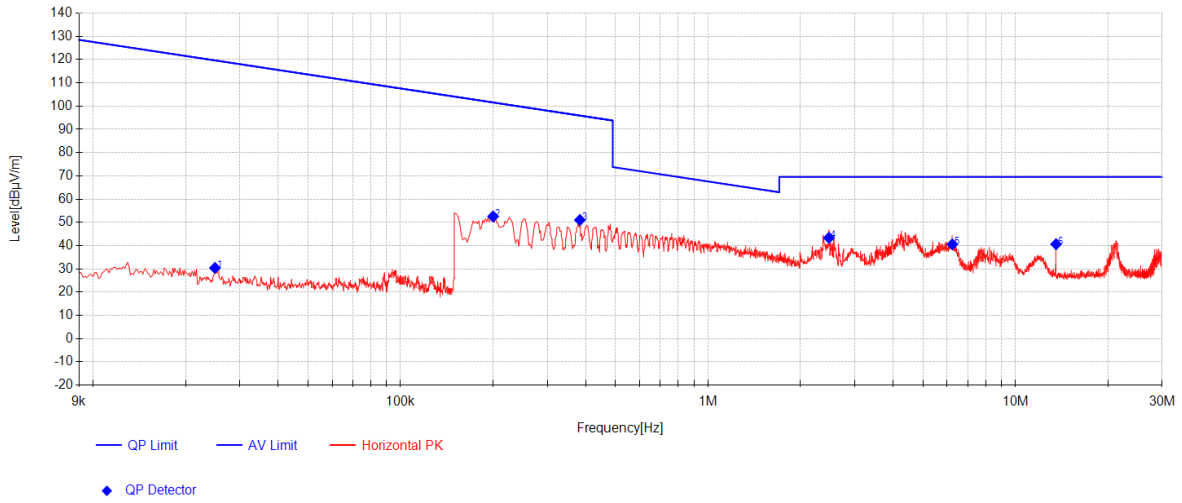


Final Data List										
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	13.5593	22.45	19.80	0.69	42.94	124.00	81.06	100	94	Coaxial

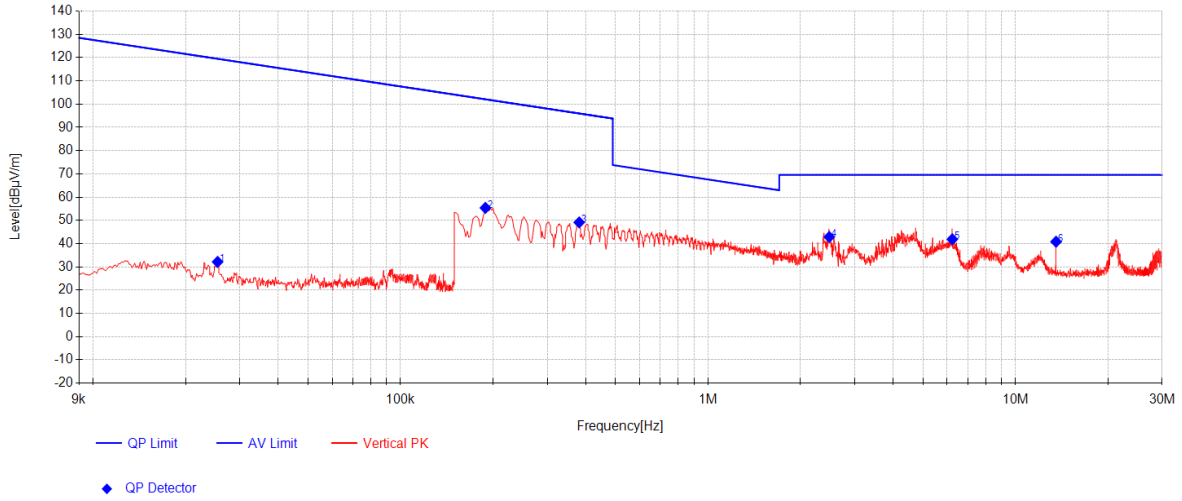


Final Data List										
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	13.56	23.27	19.80	0.69	43.76	124.00	80.24	100	84	Coplanar

NFC_RSE below 30M

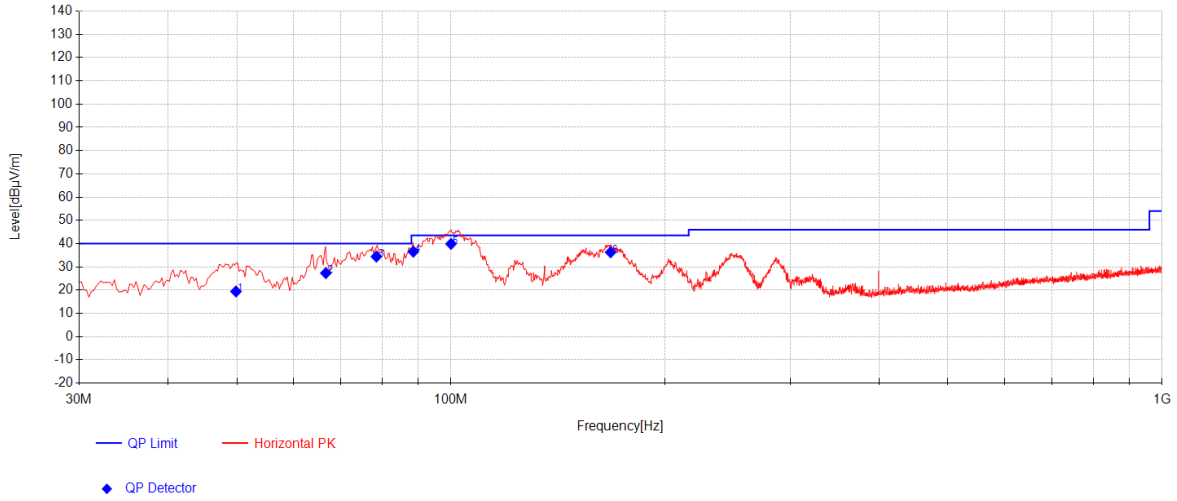


Final Data List										
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
4	2.474	23.05	19.83	0.48	43.35	69.54	26.19	100	3	Coaxial
5	6.236	20.03	19.99	0.55	40.56	69.54	28.98	100	99	Coaxial
6	13.559	20.11	19.80	0.69	40.60	69.54	28.94	100	111	Coaxial
NO.	Frequency [MHz]	AV Reading [dBµV]	AF [dB/m]	Factor [dB]	AV Value [dBµV/m]	AV Limit [dBµV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	0.0249	9.91	20.07	0.43	30.41	119.67	89.26	100	277	Coaxial
2	0.2	31.84	20.29	0.43	52.56	101.58	49.02	100	279	Coaxial
3	0.3831	30.35	20.23	0.44	51.02	95.94	44.92	100	279	Coaxial

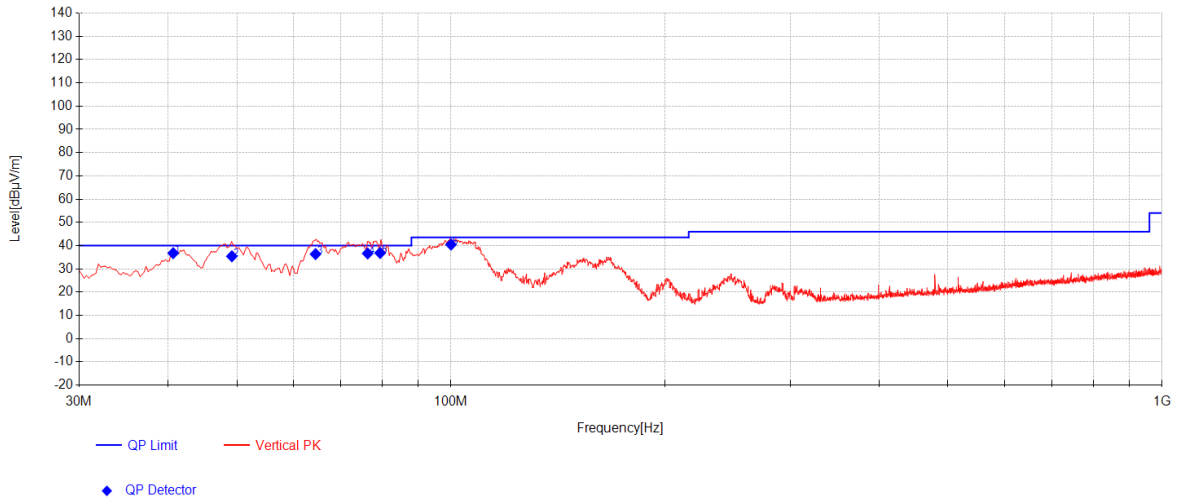


Final Data List										
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
4	2.48	22.57	19.83	0.48	42.87	69.54	26.67	100	167	Coplanar
5	6.236	21.35	19.99	0.55	41.88	69.54	27.66	100	177	Coplanar
6	13.559	20.33	19.80	0.69	40.82	69.54	28.72	100	80	Coplanar
NO.	Frequency [MHz]	AV Reading [dBµV]	AF [dB/m]	Factor [dB]	AV Value [dBµV/m]	AV Limit [dBµV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	0.0254	11.67	20.07	0.43	32.17	119.50	87.33	100	285	Coplanar
2	0.1888	34.66	20.29	0.43	55.38	102.08	46.70	100	351	Coplanar
3	0.3812	28.47	20.23	0.44	49.14	95.98	46.84	100	265	Coplanar

NFC_RSE above 30M



Final Data List										
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	49.8597	34.51	18.62	-33.69	19.44	40.00	20.56	118	356	Horizontal
2	66.7023	43.63	17.18	-33.47	27.34	40.00	12.66	120	1	Horizontal
3	78.5630	52.56	15.23	-33.35	34.44	40.00	5.56	220	232	Horizontal
4	88.5366	55.25	14.56	-33.27	36.54	43.50	6.96	220	207	Horizontal
5	100.0405	58.40	14.62	-33.12	39.90	43.50	3.60	189	224	Horizontal
6	167.7090	49.93	18.80	-32.45	36.28	43.50	7.22	180	321	Horizontal



Final Data List										
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	40.6882	51.82	18.80	-33.85	36.77	40.00	3.23	196	321	Vertical
2	49.1991	50.35	18.77	-33.70	35.42	40.00	4.58	254	73	Vertical
3	64.5165	52.55	17.30	-33.49	36.36	40.00	3.64	174	58	Vertical
4	76.3689	54.69	15.31	-33.37	36.63	40.00	3.37	185	310	Vertical
5	79.5152	55.20	14.99	-33.34	36.85	40.00	3.15	263	342	Vertical
6	100.0423	59.01	14.58	-33.13	40.46	43.50	3.04	221	292	Vertical

---End of Report---