

TEST REPORT

Application No.: SUCR2603000168TL
FCC ID: 2AH25M3L
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: Wireless Data Terminal
Model No.: TF31B
Trade Mark: SUNMI
Standards: FCC 47 CFR Part 15, Subpart C 15.225
Date of Receipt: 2026-03-04
Date of Test: 2026-03-13
Date of Issue: 2026-03-25

Test Result :	PASS *
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* 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	2026-03-25	/

Authorized for issue by:			
Tested By		Hayley Zhang	
		Hayley Zhang/Project Engineer	
Approved By		Cedar cheng	
		Cedar Cheng /Reviewer	

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1 Test Summary

Test Item	FCC Rules No.	Test Method	Result
Antenna Requirement	15.203	--	PASS
Field Strength of Fundamental Emissions	15.225(a)(b)(c)	ANSI C63.10-2020/Cor1-2023 Section 6.4	PASS
Radiated Spurious Emissions	15.225(d)/15.209	ANSI C63.10-2020/Cor1-2023 Section 6.4/6.5	PASS

Remark:

This test report (Report No.: SUCR260300016808 issue on 2026-03-23) is based on the original test report (Report No.: SUCR250100002108 issue on 2025-05-21).

Review this report and original report, this report just changing the parts according to the declaration letter from client.

Considering to the difference, pre-scan were performed on the sample in this report to find the items which can be influential to the result in the original test report for fully retest.

Therefore in this report only Field Strength of Fundamental Emissions and Radiated Spurious Emissions is performed, and other test data in this report are refer to the previous report with report number SUCR250100002108 issue on 2025-05-21.

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).

• **FCC (Designation Number: CN1312)**

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd. has been recognized as an accredited testing laboratory.

Test Firm Registration Number: 717327

• **ISED (CAB Identifier: CN0120)**

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

Company Number: 27594

2.4 General Description of EUT

Power Supply:	3.87V from battery
Operation Frequency:	13.56MHz
Modulation Type:	ASK
Antenna Type:	FPC Antenna
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	102 kPa Selected Values During Tests	
Relative Humidity	44 % RH Ambient	
Value	Temperature(°C)	Voltage(V)
NTNV	23	3.87
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

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
RF Radiated Test						
1	Semi-Anechoic Chamber	Brilliant-emc	N/A	SUWI-04-02-01	6/3/2023	6/2/2026
2	Signal Analyzer	ROHDE&SCHWARZ	FSW43	SUWI-01-02-04	1/14/2026	1/13/2027
3	Signal Analyzer	KEYSIGHT	N9020A	SUWI-01-02-09	11/21/2025	11/20/2026
4	Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	1/14/2026	1/13/2027
5	Signal Generator	ROHDE&SCHWARZ	SMW100A	SUWI-01-18-01	1/14/2026	1/13/2027
6	Receiving antenna	SCHWRZBECK MESS- ELEKTRONIK	VULB 9168	SUWI-01-11-04	9/10/2025	9/9/2027
7	Receiving antenna	SCHWRZBECK MESS- ELEKTRONIK	BBHA 9120D	SUWI-01-11-02	5/7/2025	5/6/2027
8	Receiving antenna	SCHWRZBECK MESS- ELEKTRONIK	BBHA 9170	SUWI-01-11-03	5/7/2025	5/6/2027
9	Active Loop Antenna	SCHWRZBECK MESS- ELEKTRONIK	FMZB 1519B	SUWI-01-21-01	5/7/2025	5/6/2027
10	Amplifier	Tonscend	TAP9K3G40	SUWI-01-14-01	1/14/2026	1/13/2027
11	Amplifier	Tonscend	TAP01018050	SUWI-01-14-02	1/14/2026	1/13/2027
12	Amplifier	Tonscend	TAP18040048	SUWI-01-14-03	1/14/2026	1/13/2027
13	Wideband Radio Communication Tester	Anritsu	MT8820C	SUWI-01-26-01	11/21/2025	11/20/2026
14	Wideband Radio Communication Tester	Anritsu	MT8821C	SUWI-01-26-03	8/25/2025	8/24/2026
15	Wideband Radio Communication Tester	ROHDE&SCHWARZ	CMW500	SUWI-01-16-09	8/26/2025	8/25/2026
16	Radio Communication Analyzer	StarPoint	SP9500E	SUWI-01-28-02	11/21/2025	11/20/2026
17	Signal Generator	ROHDE&SCHWARZ	SMB100A	SUWI-01-08-01	1/14/2026	1/13/2027
18	DC Power Supply	HYELEC	HY3005B	SUWI-01-18-01	1/14/2026	1/13/2027
19	Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-05	2/11/2026	2/10/2027
20	Measurement Software	Tonscend	JS32-RE 4.0.0.0	SUWI-02-09-06	NCR	NCR
21	RF Control unit	Tonscend	JS0806-1	SUWI-02-20-01	NCR	NCR
22	RFCables	Tonscend	NA	SUWI-01-03-02	2026/1/15	2027/1/14

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

No.	Item	Measurement Uncertainty
1	Radio Frequency	±1.0 %
2	Occupied Bandwidth	±1.0 %
3	Conduction Emission	± 2.90dB (150kHz to 30MHz)
4	Radiated Emission	± 3.13dB (9k -30MHz)
		± 4.80dB (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 orientations 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 alternative site prduces results that correlate with the ones of tests made in an ope field based on KDB 414788.
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5.3 Field Strength of Fundamental Emissions

Test Requirement:	47 CFR Part 15C Section 15.225				
Test Method:	ANSI C63.10-2020/Cor1-2023 Section 6.4				
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Limit:	Frequency	Field Strength (μ V/m) at 30m	Field Strength (dB μ V/m) at 30m	Field Strength (dB μ V/m) at 10m	Field Strength (dB μ V/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:

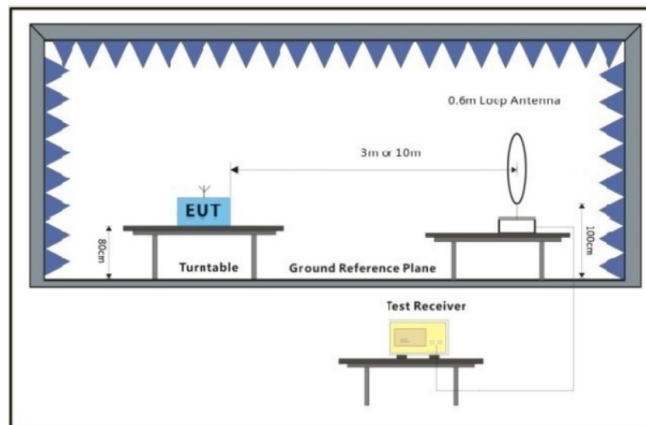


Figure 1. Below 30MHz

Test Procedure:

- 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 chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- 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.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 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 Mode:	Transmitting with modulation. Charge + Transmitting mode.
Final Test Mode:	Transmitting with modulation. Pretest the EUT at Charge + 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	

5.4 Radiated Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.225				
Test Method:	ANSI C63.10-2020/Cor1-2023 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:

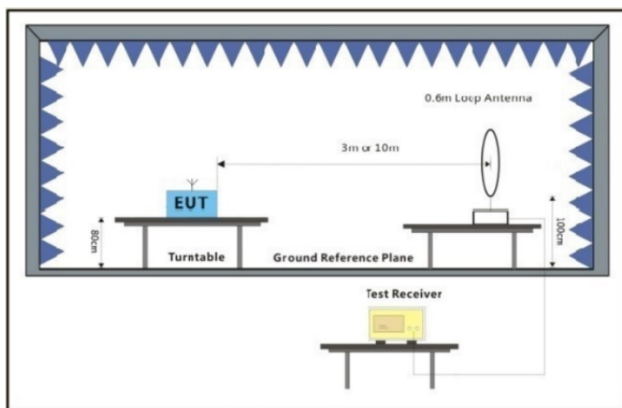


Figure 1. Below 30MHz

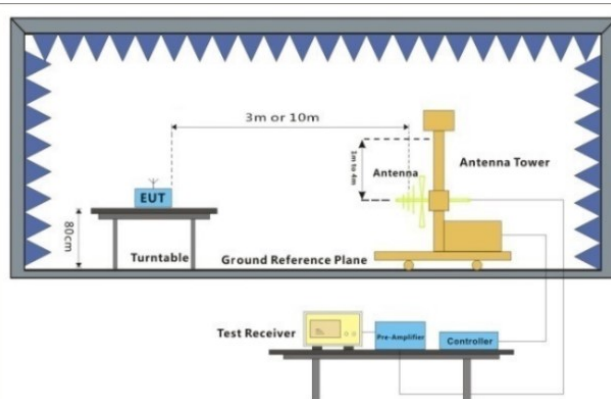


Figure 2. Above 30MHz

Test Procedure:	- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. - The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. - The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. - For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. - The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
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	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. Charge + Transmitting mode.
Final Test Mode:	Transmitting with modulation. Pretest the EUT at Charge + 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 Test Setup Photo

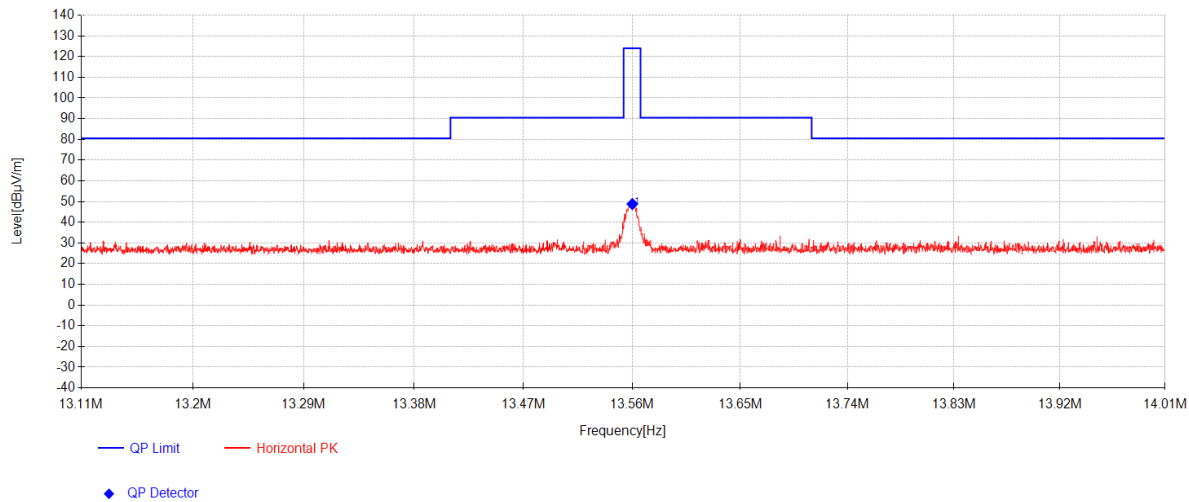
Refer to Appendix_Photographs of Test Setup for SUCR2603000168TL

7 EUT Constructional Details (EUT Photos)

Refer to Appendix_External Photos for SUCR2603000168TL and Appendix_Internal Photos for SUCR2603000168TL

8 Appendix

Field Strength of Fundamental Emissions

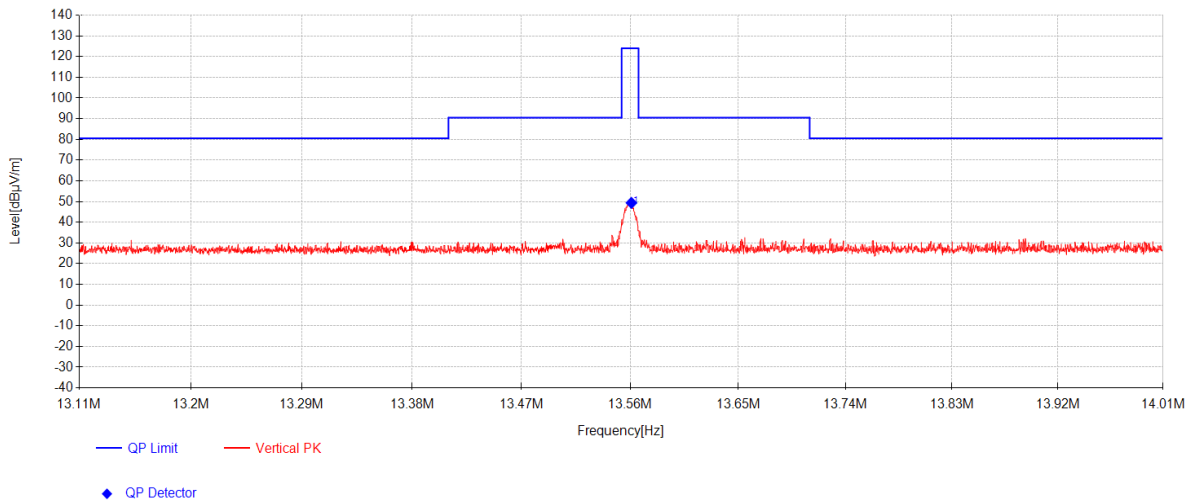


Final Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Polarity
1	13.5602	28.08	20.04	0.69	48.81	124.00	75.19	100	Coaxial

Remark:

1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.



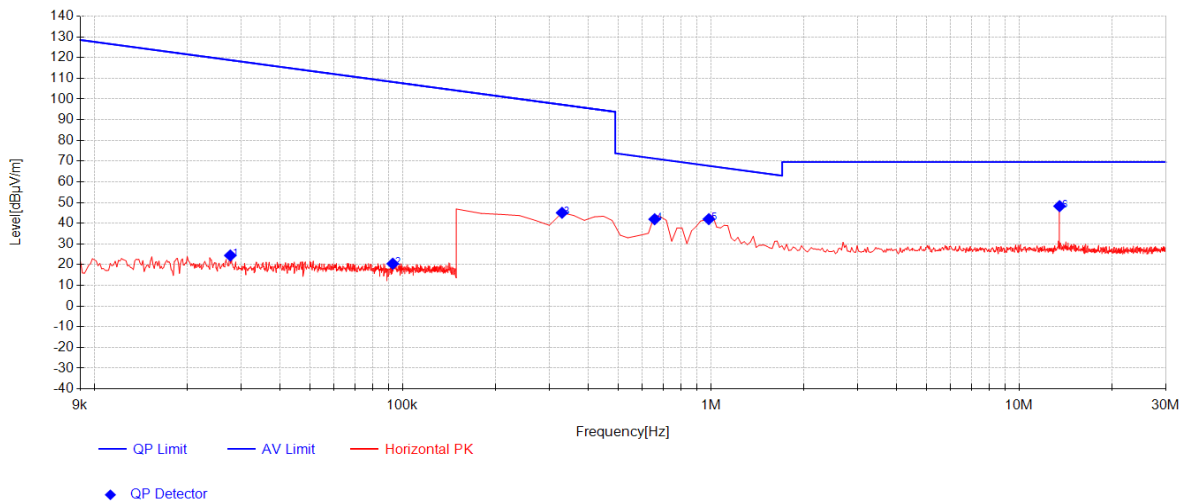
Final Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Polarity
1	13.5611	28.62	20.04	0.69	49.35	124.00	74.65	100	Coplanar

Remark:

1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.

Radiated Spurious Emissions Below 30M

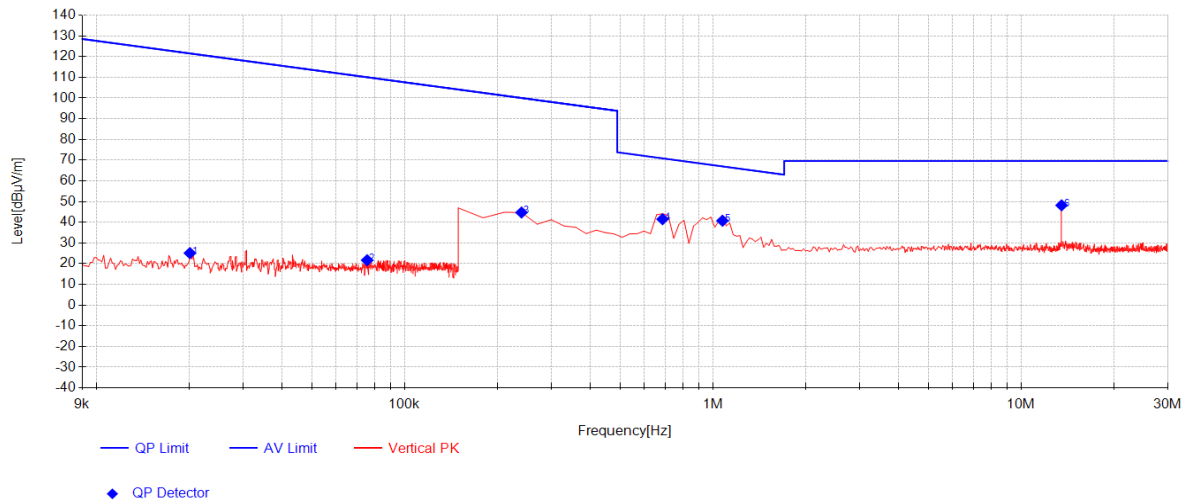


Final Data List

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	0.6574	21.47	20.03	0.44	41.94	71.25	29.31	100	246	Coaxial
5	0.9858	21.45	20.10	0.45	42.00	67.73	25.73	100	205	Coaxial
6	13.5526	27.53	20.04	0.69	48.26	69.54	21.28	100	246	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	0.0276	4.31	19.70	0.43	24.44	118.78	94.34	100	330	Coaxial
2	0.0929	0.10	19.91	0.43	20.44	108.24	87.80	100	359	Coaxial
3	0.3291	24.67	19.95	0.44	45.06	97.26	52.20	100	205	Coaxial

Remark:

1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.



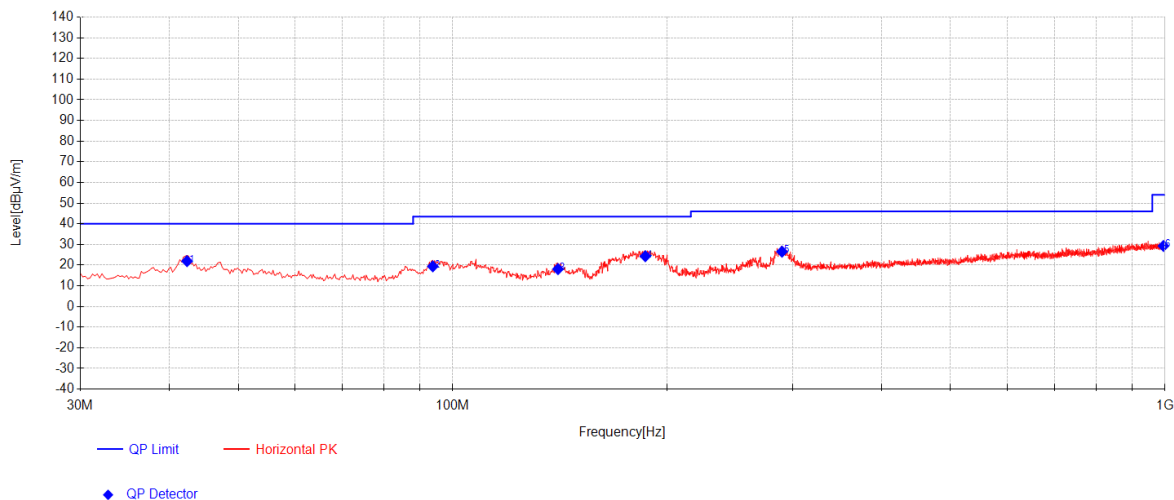
Final Data List

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	0.6873	21	20.04	0.44	41.48	70.86	29.38	100	93	Coplanar
5	1.0754	20.19	20.09	0.45	40.73	66.97	26.24	100	70	Coplanar
6	13.5526	27.44	20.04	0.69	48.17	69.54	21.37	100	246	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	0.0201	4.98	19.70	0.43	25.11	121.53	96.42	100	237	Coplanar
2	0.0756	1.35	19.90	0.43	21.68	110.03	88.35	100	272	Coplanar
3	0.2396	24.36	19.93	0.43	44.72	100.01	55.29	100	222	Coplanar

Remark:

1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.

Above 30M

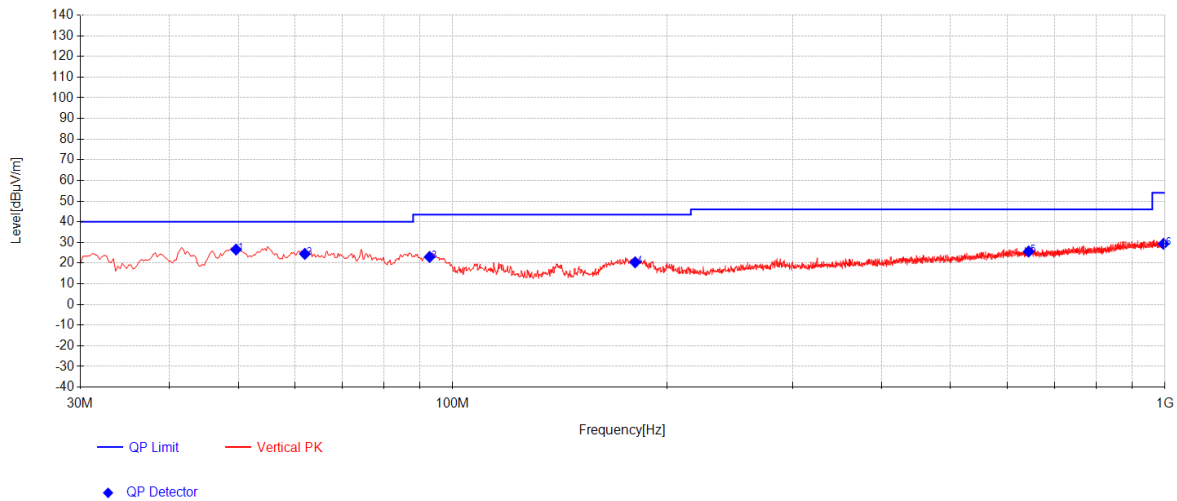


Final Data List

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	42.3675	43.86	19.21	-41.14	21.93	40.00	18.07	131	298	Horizontal
2	93.7775	43.97	15.86	-40.42	19.41	43.50	24.09	190	141	Horizontal
3	140.58	38.67	19.28	-39.86	18.09	43.50	25.41	156	122	Horizontal
4	186.4125	47.18	16.48	-39.33	24.33	43.50	19.17	141	71	Horizontal
5	289.96	45.79	19.10	-38.37	26.52	46.00	19.48	125	304	Horizontal
6	995.15	34.92	28.10	-33.74	29.28	54.00	24.72	101	141	Horizontal

Remark:

1. The Quasi-Peak measurements were performed on the EUT.
2. Final Value Level = Reading + Antenna Factor + Factor.
3. Factor=Cable loss – Preamplifier Factor.



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	49.6425	47.43	20.12	-40.99	26.56	40.00	13.44	127	187	Vertical
2	62.01	47.38	18.00	-40.92	24.46	40.00	15.54	154	231	Vertical
3	92.8075	47.78	15.62	-40.42	22.98	43.50	20.52	163	98	Vertical
4	180.35	43.38	16.30	-39.29	20.39	43.50	23.11	192	17	Vertical
5	643.525	36.49	25.11	-35.97	25.63	46.00	20.37	151	187	Vertical
6	995.635	34.97	28.10	-33.73	29.34	54.00	24.66	133	287	Vertical

Remark:

1. The Quasi-Peak measurements were performed on the EUT.
2. Final Value Level = Reading + Antenna Factor + Factor.
3. Factor=Cable loss – Preamplifier Factor.

---End of Report---