



TEST REPORT

FCC ID: 2ADYY-T1

Product: Megabook

Model No.: T1

Additional Model No.: N/A

Trade Mark: TECNO

Report No.: WSCT-A2LA-R&E220300004A-15B

Issued Date: 01 August 2022

Issued for:

TECNO MOBILE LIMITED

FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI
STREET FOTAN NT HONGKONG

Issued By:

World Standardization Certification & Testing Group(Shenzhen) Co.,Ltd.

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1. Test Certification

Product:	Megabook
Model No.:	T1
Additional Model No.:	N/A
Trade Mark:	TECNO
Applicant:	TECNO MOBILE LIMITED
Address:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Manufacturer:	TECNO MOBILE LIMITED
Address:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Date of Test:	13 July 2022 ~ 27 July 2022
Applicable Standards:	FCC CFR Title 47, Part 15 Subpart B

The above equipment has been tested by World Standardization Certification & Testing Group(Shenzhen) Co., Ltd. and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By:

Wang Xiang

(Wang Xiang)

Checked By:

Li Huaibi

(Li Huaibi)

Approved By:

Wang Fengbing

(Wang Fengbing)

Date:

01 August 2022





2. Test Result Summary

Requirement	CFR 47 Section	Result
CONDUCTED EMISSION	§15.107	PASS
RADIATED EMISSION	§15.109	PASS

Note:

1. PASS: Test item meets the requirement.
2. Fail: Test item does not meet the requirement.
3. N/A: Test case does not apply to the test object.
4. The test result judgment is decided by the limit of test standard.





3. TEST METHODOLOGY

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	Video Recording
Model 2	Video Playing
Mode 3	Transferring with USB Disk (the worst case)
Mode 4	TF Card Playing



4. MEASUREMENT INSTRUMENTS

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibrated	Calibrated until
Test software	--	EZ-EMC	CON-03A	--	--
ESCI Test Receiver	R&S	ESCI	100005	11/05/2021	11/04/2022
LISN	AFJ	LS16	16010222119	11/05/2021	11/04/2022
LISN(EUT)	Mestec	AN3016	04/10040	11/05/2021	11/04/2022
pre-amplifier	CDSI	PAP-1G18-38	--	11/05/2021	11/04/2022
System Controller	CT	SC100	-	11/05/2021	11/04/2022
Bi-log Antenna	Chase	CBL6111C	2576	11/05/2021	11/04/2022
Spectrum analyzer	R&S	FSU26	200409	11/05/2021	11/04/2022
Horn Antenna	SCHWARZBECK	9120D	1141	11/05/2021	11/04/2022
Bi-log Antenna	SCHWABE BECK	VULB9163	9163/340	11/05/2021	11/04/2022
Pre Amplifier	H.P.	HP8447E	2945A02715	11/05/2021	11/04/2022
9*6*6 Anechoic	--	--	--	11/05/2021	11/04/2022





5. Facilities and Accreditations

5.1. Facilities

All measurement facilities used to collect the measurement data are located at **Building A-B, Baoshi Science & Technology Park, Baoshi Road, Bao'an District, Shenzhen, Guangdong, China of the World Standardization Certification & Testing Group(Shenzhen) CO., LTD**

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

5.2. ACCREDITATIONS

China National Accreditation Service for Conformity Assessment (CNAS)

Registration number NO: L3732

American Association for Laboratory Accreditation(A2LA)

Registration NO : 5768.01

Copies of granted accreditation certificates are available for downloading from our web site,
<http://www.wsct-cert.com>





5.3 Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission Test	$\pm 3.2\text{dB}$
2	RF power, conducted	$\pm 0.16\text{dB}$
3	Spurious emissions, conducted	$\pm 0.21\text{dB}$
4	All emissions, radiated(<1GHz)	$\pm 4.7\text{dB}$
5	All emissions, radiated(>1GHz)	$\pm 4.7\text{dB}$
6	Temperature	$\pm 0.5^{\circ}\text{C}$
7	Humidity	$\pm 2.0\%$



6. EMC EMISSION TEST

6.1. CONDUCTED EMISSION MEASUREMENT

6.1.1. POWER LINE CONDUCTED EMISSION LIMITS

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

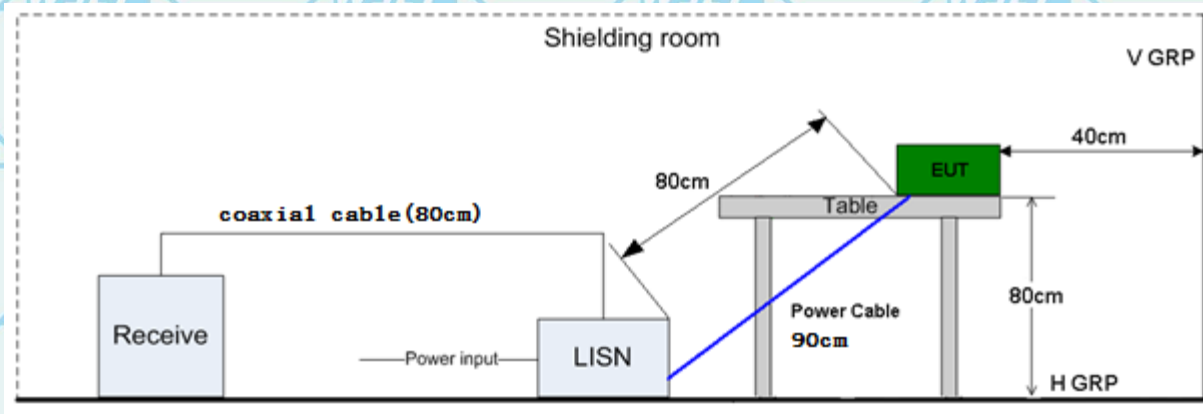


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TEST PROCEDURE

- The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

TEST SETUP





6.1.2. Test Results

Temperature	20 °C	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 3(the worst case)

Conducted Emission on Line Terminal of the power line (150 kHz to 30MHz)



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	*	0.1539	52.07	10.41	62.48	65.78	-3.30	QP
2		0.1580	29.37	10.41	39.78	55.56	-15.78	AVG
3		0.1980	27.19	10.41	37.60	53.69	-16.09	AVG
4		0.2300	44.15	10.42	54.57	62.45	-7.88	QP
5		0.6380	36.08	10.48	46.56	56.00	-9.44	QP
6		0.6740	30.07	10.48	40.55	46.00	-5.45	AVG
7		2.0579	17.77	10.66	28.43	46.00	-17.57	AVG
8		2.2139	29.05	10.66	39.71	56.00	-16.29	QP
9		6.9500	31.24	10.73	41.97	60.00	-18.03	QP
10		6.9500	30.50	10.73	41.23	50.00	-8.77	AVG
11		13.4980	8.71	10.98	19.69	50.00	-30.31	AVG
12		28.9940	17.64	10.96	28.60	60.00	-31.40	QP

Note:

Freq. = Emission frequency in MHz

Reading level (dBuV) = Receiver reading

Corr. Factor (dB) = Antenna factor + Cable loss

Measurement (dBuV) = Reading level (dBuV) + Corr. Factor (dB)

Limit (dBuV) = Limit stated in standard

Margin (dB) = Measurement (dBuV) – Limits (dBuV)

Q.P. = Quasi-Peak

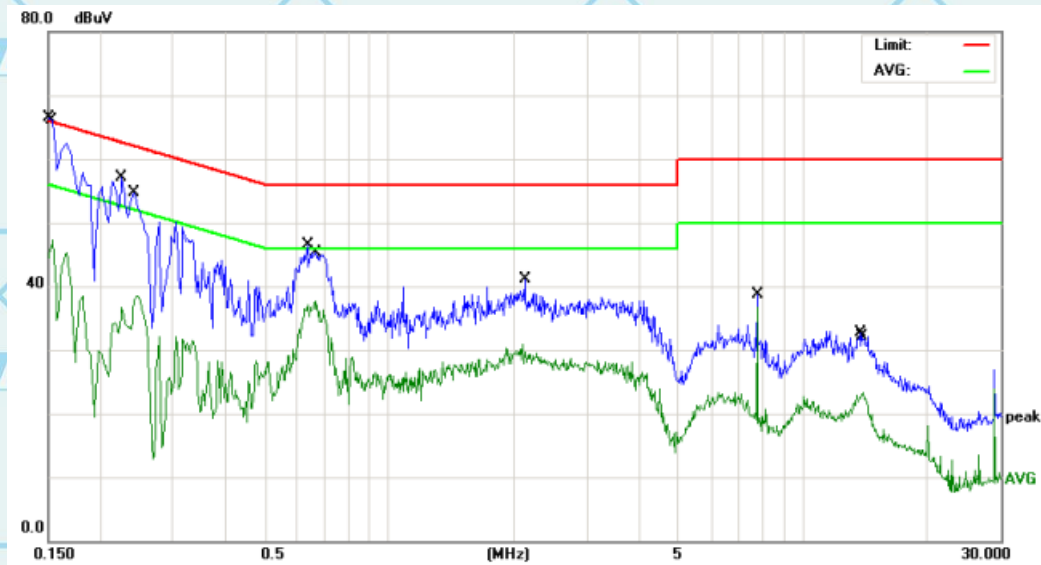
AVG = average

* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz



Conducted Emission on Neutral Terminal of the power line (150 kHz to 30MHz)

For Question,
Please Contact with WSCT
www.wsct-cert.com



No.	Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measure- ment dBμV	Limit dBμV	Over dB	Detector
1	*	0.1500	50.44	10.41	60.85	65.99	-5.14	QP
2		0.1539	36.96	10.41	47.37	55.78	-8.41	AVG
3		0.2260	46.63	10.42	57.05	62.59	-5.54	QP
4		0.2460	28.10	10.42	38.52	51.89	-13.37	AVG
5		0.6340	36.09	10.48	46.57	56.00	-9.43	QP
6		0.6620	27.20	10.48	37.68	46.00	-8.32	AVG
7		2.1099	20.29	10.66	30.95	46.00	-15.05	AVG
8		2.1260	30.47	10.66	41.13	56.00	-14.87	QP
9		7.7580	27.94	10.75	38.69	60.00	-21.31	QP
10		7.7580	25.87	10.75	36.62	50.00	-13.38	AVG
11		13.7380	21.69	10.99	32.68	60.00	-27.32	QP
12		13.9500	12.37	11.00	23.37	50.00	-26.63	AVG

Note1:

Freq. = Emission frequency in MHz

Reading level (dBμV) = Receiver reading

Corr. Factor (dB) = Antenna factor + Cable loss

Measurement (dBμV) = Reading level (dBμV) + Corr. Factor (dB)

Limit (dBμV) = Limit stated in standard

Margin (dB) = Measurement (dBμV) – Limits (dBμV)

Q.P. =Quasi-Peak AVG =average

* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.





6.2.RADIATED EMISSION MEASUREMENT

6.2.1. Radiated Emission Limits

The field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequencies (MHz)	Field Strength (micровolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15B.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 1Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP



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TEST PROCEDURE

- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

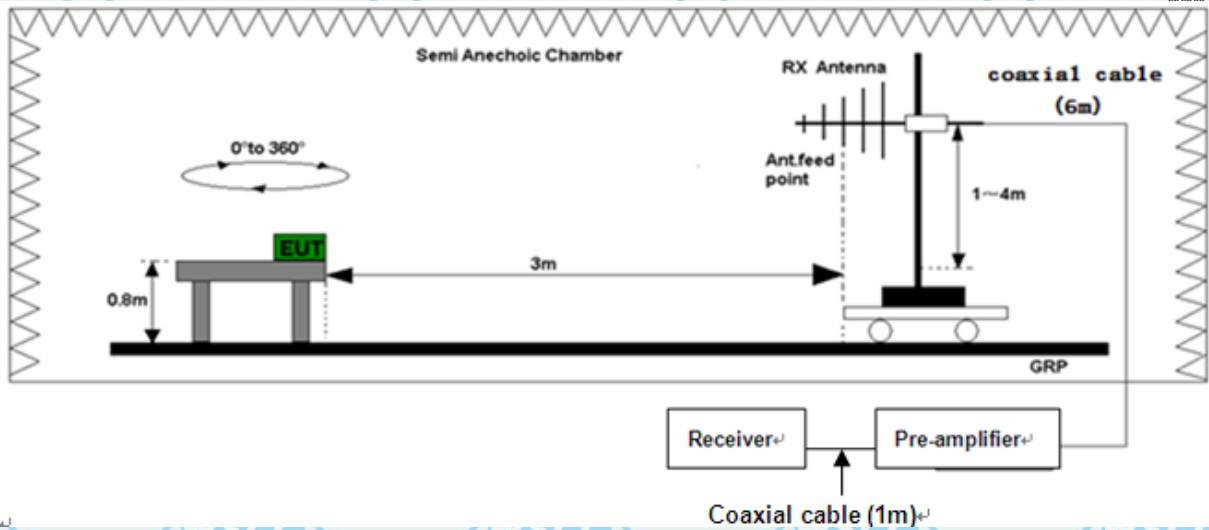




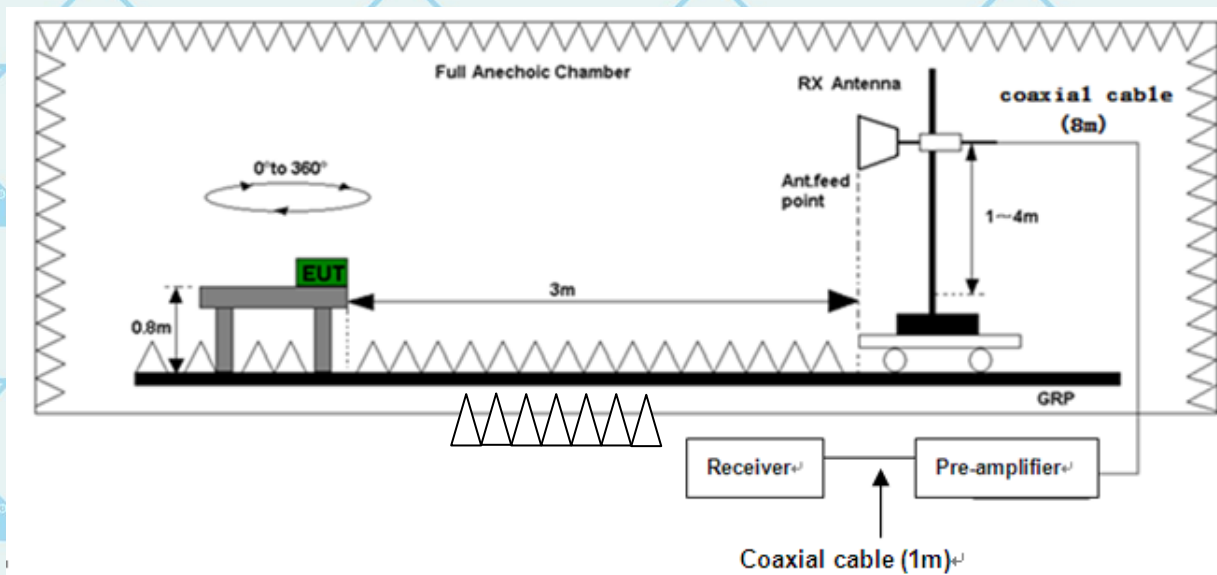
TEST SETUP

(A) Radiated Emission Test-Up Frequency 30MHz~1GHz

For Question,
Please Contact with WSCT
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(B) Radiated Emission Test-Up Frequency Above 1GHz



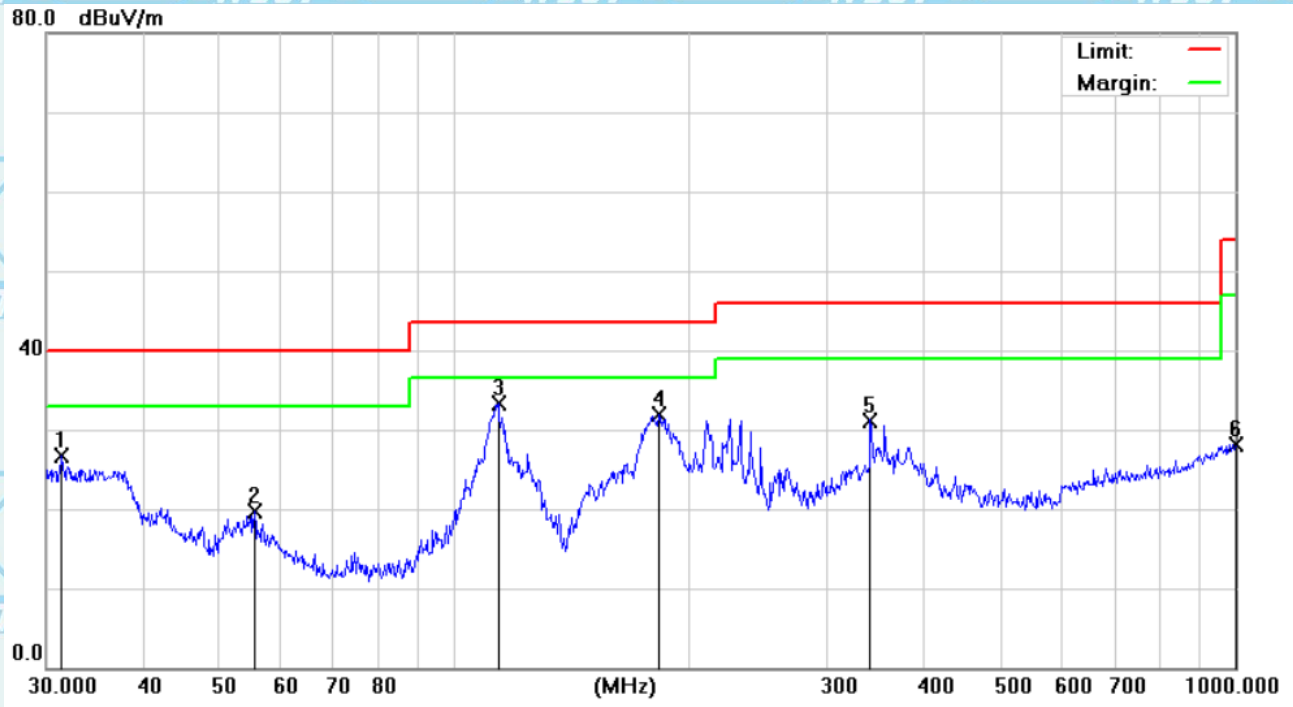


6.2.2. Test Results

Temperature	20 °C	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 3(the worst case)

Please refer to following diagram for individual
Below 1GHz

Horizontal:

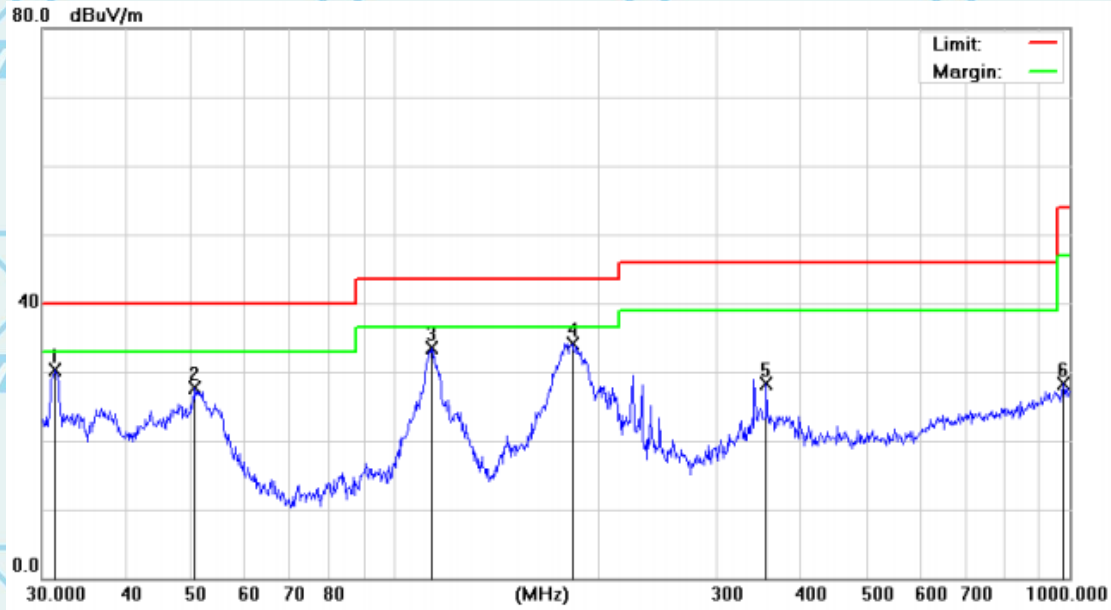


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		31.3992	22.36	4.26	26.62	40.00	-13.38	QP
2		55.4147	25.27	-5.66	19.61	40.00	-20.39	QP
3	*	113.7143	35.57	-2.23	33.34	43.50	-10.16	QP
4		182.5592	39.05	-7.07	31.98	43.50	-11.52	QP
5		340.7817	32.92	-1.72	31.20	46.00	-14.80	QP
6		1000.000	20.86	7.32	28.18	54.00	-25.82	QP





Vertical:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		31.3992	25.99	4.26	30.25	40.00	-9.75	QP
2		50.5860	32.79	-5.09	27.70	40.00	-12.30	QP
3		113.3163	35.78	-2.19	33.59	43.50	-9.91	QP
4	*	183.2005	41.20	-7.08	34.12	43.50	-9.38	QP
5		355.4273	29.91	-1.51	28.40	46.00	-17.60	QP
6		979.1804	21.40	6.94	28.34	54.00	-25.66	QP

Note:

Freq. = Emission frequency in MHz

Reading level (dBuV) = Receiver reading

Corr. Factor (dB) = Antenna factor + Cable loss - Amplifier factor.

Measurement (dBuV) = Reading level (dBuV) + Corr. Factor (dB)

Limit (dBuV) = Limit stated in standard

Margin (dB) = Measurement (dBuV) – Limits (dBuV)





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TEST RESULTS

Above 1GHz(1~26GHz) :(Mode 3—worst case)

Freq. (MHz)	Ant. Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
1552.35	V	65.23	48.50	74	54	-8.77	-5.50
2399.95	V	67.99	50.45	74	54	-6.01	-3.55
1614.23	H	63.04	49.27	74	54	-10.96	-4.73
2333.72	H	67.44	42.01	74	54	-6.56	-11.99

Remark:

All emissions not reported were more than 20dB below the specified limit or in the noise floor.

Freq. = Emission frequency in MHz

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Over= Emission Level - Limit.

All the x/y/z orientation has been investigated, and only worst case is presented in this report.

*******END OF REPORT*******