




Test report No: 2340262R-E3012110001-A

FCC TEST REPORT

Product Name	Peplink Pepwave Wireless Product
Trademark	
Model and /or type reference	MAX BR1 Mini M2M, MAX-BR1-MINI-M2M-LTE-US-T-PRM, MAX-BR1-MINI-M2M-LTEA-US-T-PRM
Applicant's name / address	PISMO LABS TECHNOLOGY LIMITED A8, 5/F, HK Spinners Industrial Building, Phase 6, 481 Castle Peak Road, Cheung Sha Wan, Hong Kong
Manufacturer's name / address	PISMO LABS TECHNOLOGY LIMITED A8, 5/F, HK Spinners Industrial Building, Phase 6, 481 Castle Peak Road, Cheung Sha Wan, Hong Kong
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart B:2021, Class A
Verdict Summary	IN COMPLIANCE
Documented By (Senior Engineering Adm. Specialist / Anita Chou)	
Approved By (Director / Vincent Lin)	
Date of Receipt	2023/04/12
Date of Issue	2023/05/25
Report No.	2340262R-E3012110001-A
Report Version	V1.0

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Test Photos: Please refer to the file: 2340262R-E3012110001-A-Test Photos

Product Photos: Please refer to the file: 2340262R-Product Photos

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DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

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General conditions


1. The test results relate only to the samples tested.
2. The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
3. This report must not be used to claim product endorsement by TAF or any agency of the government.
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5. Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.


Revision History

Report No.	Version	Description	Issued Date
2340262R-E3012110001-A	V1.0	Initial issue of report.	2023-05-25

1. General Information

1.1. EUT Description

Product Name	Peplink Pepwave Wireless Product	
Trademark		
Model No.	MAX BR1 Mini M2M, MAX-BR1-MINI-M2M-LTE-US-T-PRM, MAX-BR1-MINI-M2M-LTEA-US-T-PRM	
EUT Max Frequency	5850 MHz	
EUT Rated Voltage	Power Port	DC 10~30V AC 120V/60Hz to DC 12V (Power by adapter)
	802.3at PoE	DC 50~57V
EUT Test Voltage	AC 120V/60Hz to DC 12V (Power by adapter)	

Component	
Power Adapter	MFR: DVE M/N: DSA-24PFS-12 FUS 120200 Input: 100-240V~ 50/60Hz, 0.8A Output: 12.0V  2.0A, 24.0W Cable Out: Shielded. 1.45m
WWAN Module (1)	MFR: Sierra M/N: EM7411
WWAN Module (2)	MFR: Telit M/N: LE910C4-NF
WLAN Antenna	MFR: YUAN CHEN TECH CO., LTD M/N: ACA-0040-6G1A1-A10 Antenna Type: Omni-directional
GPS Antenna	MFR: Master Wave M/N: 98335KSAF000 Antenna Type: Directional
Cellular Antenna	MFR: INPAQ M/N: DAM-D13-S1-N0-000-08-20 Antenna Type: Omni-directional

Note: Assemble different cellular module for the marketing purpose.

Model No.	Cellular Module
MAX BR1 Mini M2M	Telit LE910C4-NF or Sierra EM7411
MAX-BR1-MINI-M2M-LTE-US-T-PRM	Telit LE910C4-NF
MAX-BR1-MINI-M2M-LTEA-US-T-PRM	Sierra EM7411

1.2. Mode of Operation

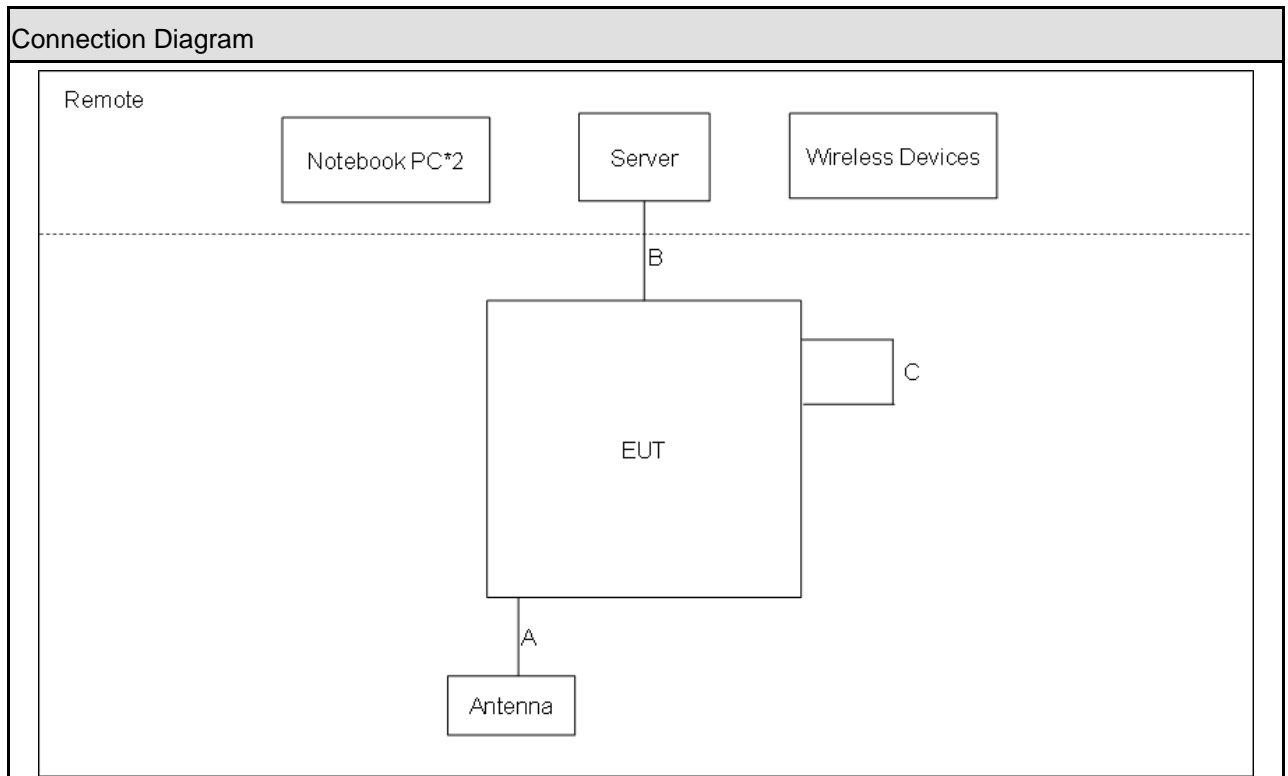
DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Pre-Test Mode
Mode 1: Normal Operation with Worst Mode: AP Mode(RS-232/485 + WiFi 2.4G + WiFi 5G + LAN 1Gbps + WAN 1Gbps + GPS + WWAN Link LTE Band 5 + Sim Card-Slot A, Cellular module: LE910C4-NF), Molex Power port, DC 10V
Mode 2: Normal Operation with Worst Mode: AP Mode(RS-232/485 + WiFi 2.4G + WiFi 5G + LAN 1Gbps + WAN 1Gbps + GPS + WWAN Link WCDMA Band 5 + Sim Card-Slot B, Cellular module: LE910C4-NF), Molex Power port, DC 30V
Mode 3: Normal Operation with Worst Mode: AP Mode(RS-232/485 + WiFi 2.4G + WiFi 5G + LAN 1Gbps + WAN 1Gbps + GPS + WWAN Link LTE Band 5 + Sim Card-Slot A, Cellular module: LE910C4-NF), Adapter:DVE/DSA-24PFS-12 FUS 120200
Mode 4: Normal Operation with Worst Mode: AP Mode(RS-232/485 + WiFi 2.4G + WiFi 5G + PoE 802.3at 1Gbps + WAN 1Gbps + GPS + WWAN Link LTE Band 5 + Sim Card-Slot A, Cellular module: LE910C4-NF), PoE in
Mode 5: Normal Operation with Worst Mode: AP Mode(RS-232/485 + WiFi 2.4G + WiFi 5G + LAN 1Gbps + WAN 1Gbps + GPS + WWAN Link LTE Band 5 + Sim Card-Slot A, Cellular module:Sierra EM7411), Adapter:DVE/DSA-24PFS-12 FUS 120200
Final Test Mode
Conducted Emission
Mode 3: Normal Operation with Worst Mode: AP Mode(RS-232/485 + WiFi 2.4G + WiFi 5G + LAN 1Gbps + WAN 1Gbps + GPS + WWAN Link LTE Band 5 + Sim Card-Slot A, Cellular module: LE910C4-NF), Adapter:DVE/DSA-24PFS-12 FUS 120200
Radiated Emission
Mode 3: Normal Operation with Worst Mode: AP Mode(RS-232/485 + WiFi 2.4G + WiFi 5G + LAN 1Gbps + WAN 1Gbps + GPS + WWAN Link LTE Band 5 + Sim Card-Slot A, Cellular module: LE910C4-NF), Adapter:DVE/DSA-24PFS-12 FUS 120200

Note:

1. Refer to Certified Cellular module report worst band.
2. AP mode is Worst case test.
3. This product supports AP/Client mode, but it does not affect EMC testing after evaluation.

1.3. Configuration & Details of Tested System



Tested System Details

Product	Manufacturer	Model No.	No.	Cable Type & Description
GPS Antenna (EUT)	Master Wave	98335KSAF000	A	Antenna, shielded 3.5m
Server	Lenovo	5464	B	LAN *2, non-shielded 10m
Loopback	N/A	N/A	C	Signal, non-shielded 0.1m
Notebook PC*2	Lenovo	TP00116D		

Wireless Devices Inf.

Product	Manufacturer	Model No.
Wireless Router	ASUS	ROG GAPTURE GT-AXE11000
Wireless Router	ASUS	RT-AC58U
Base Station	R&S	CMW500
UXM 5G Wireless Test Platform	Keysight	E7515B
GPS Simulator	Oroila	GSG-5

CBS: Cambridge SoundWorks

ME: Microphone & Earphone

Note:

- Use Full system setup configuration determines Worst-Case Mode.
- Use 2dB law program determines Max. Cable Configuration and Worst-Case Mode.
- Radiated emission item test: Performed using the Horn Antenna 3dB Beamwidth to 3m from the EUT size sufficient to cover the procedure.
- Radiated emission item test: Performed using the Horn Antenna 3dB Beamwidth non 3m distance sufficient to cover the size of the EUT program.

1.4. EUT Exercise Software

1	Arrange the test object and its surroundings according to the wiring diagram shown.
2	The EUT maintains a connection status with the server via a network cable.
3	The EUT maintains a connection with the Base Station via wireless means.
4	The EUT maintains a connection with the GPS simulator via wireless means.
5	The EUT maintains a connection with the Notebook PC through Wi-Fi.
6	Start the testing.

2. Technical Test

2.1. Summary of Test Result

- No deviations from the test standards
 Deviations from the test standards as below description:

Emission				
Performed Item	Normative References	Test Performed	Test Site	Verdict
Conducted Emission	FCC CFR Title 47 Part 15 Subpart B:2021, Class A CISPR 22:2008 ANSI C63.4-2014, ANSI C63.4a-2017	Yes	HY-SR09	Pass
Radiated Emission	FCC CFR Title 47 Part 15 Subpart B:2021, Class A CISPR 22:2008 ANSI C63.4-2014, ANSI C63.4a-2017	Yes	LK-Site02 HY-CB05	Pass

Note:

1. Test Site information refers to test Laboratory Information.

Test Laboratory:	DEKRA Testing and Certification Co., Ltd. Linkou Laboratory
Address:	No.5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan, R.O.C
Phone number:	+886-2-8601-3788
Fax number:	+886-2-8601-3789
Test Site	
LK: No.5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan, R.O.C	
FS: No.6, Lane 75, Wenlin St., Linkou Dist., New Taipei City, 244017, Taiwan, R.O.C	
HY: No.26, Huaya 1 st Rd., Guishan Dist., Taoyuan City 333411, Taiwan, R.O.C	

2.2. List of Test Equipment

Conducted Emission / HY-SR09

Instrument	Manufacturer	Type No.	Serial No	Cal. Date	Due. Date
EMI TEST RECEIVER	R&S	ESR3	102917	2022/12/16	2023/12/15
Two-Line V-Network	R&S	ENV216	101493	2022/12/12	2023/12/11
Two-Line V-Network	R&S	ENV216	101492	2022/12/21	2023/12/20
Impedance Stabilization Network	TESEQ	ISN T800	61676	2022/6/16	2023/6/15
Impedance Stabilization Network	TESEQ	ISN T8-Cat6	61286	2022/6/7	2023/6/6
Impedance Stabilization Network	TESEQ	ISN ST08	61833	2022/5/27	2023/5/26
Coaxial Cable	SUHNER	RG 400	LC016-RG	2022/6/17	2023/6/16
Note : ISN T800 for LAN 10Mbps to 1Gbps, T8-Cat6 for LAN above 1Gbps, ST08 for Shielded LAN					
Test Software version : E3 210616 Dekra, V9(C) Audix					

Note:Test Receiver Detector:Quasipeak and Average Bandwidth:9kHz

Radiated Emission / LK-Site02 (Site2)

Instrument	Manufacturer	Type No.	Serial No	Cal. Date	Due. Date
Bilog Antenna	Schaffner	CBL6112B	2921	2022/8/23	2023/8/22
EMI Test Receiver	R&S	ESCI	100647	2022/7/5	2023/7/4
Coaxial Cable	SUHNER	RG 214	LC002A-RG LC002B-RG	2022/6/9	2023/6/8
Coaxial Switch	Anritsu	MP59B	6200436230	2022/6/9	2023/6/8
Preamplifier	Jet-Power	JPA-10M1G33	17010100033 0009	2022/6/9	2023/6/8
NSA	DEKRA	N/A	N/A	2022/6/9	2023/6/8
Test Software version : DEKRA Test System V2.0					

Note:Test Receiver Detector:Quasipeak Bandwidth:120kHz

Radiated Emission (Above 1GHz) / HY-CB05

Instrument	Manufacturer	Type No.	Serial No	Cal. Date	Due. Date
Double Ridged Guide Horn Antenna	ETS-Lindgren	3117	00240055	2022/10/27	2023/10/26
Horn Antenna	COM-POWER	AH-840	101088	2021/9/27	2023/9/26
EMI Test Receiver	R&S	ESR7	102502	2023/3/28	2024/3/27
Signal Analyzer	R&S	FSV3044	101245	2023/4/17	2024/4/16
Coaxial Cable	ROSNOL	R-Test EW0630	HC003R	2022/6/18	2023/6/17
Coaxial Cable	ROSNOL	R-Test EW0630	HC005R	2022/6/18	2023/6/17
Coaxial Cable	ROSNOL	R-Test EW0630	HC002R	2022/6/18	2023/6/17
Preamplifier	SGH	SGH118-HS	20220411-2	2023/4/26	2024/4/25
Microwave Preamplifier with cable	SGH	SGH184	20220411-3	2023/4/26	2024/4/25
VSWR	DEKRA	N/A	N/A	2022/10/4	2023/10/3
Test Software version : E3 210616 Dekra, V9(C) Audix					

2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 3.47 dB.

Radiated Emission(Under 1GHz)

The measurement uncertainty is evaluated as ± 5.11 dB.

Radiated Emission(Above 1GHz)

The measurement uncertainty is evaluated as ± 4.22 dB.

2.4. Test Environment

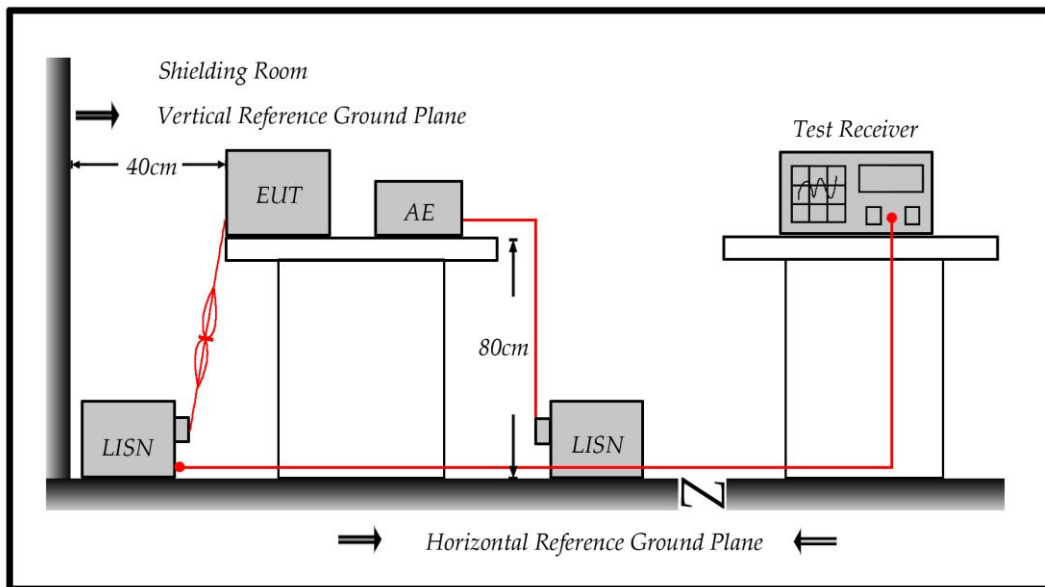
Performed Item	Items	Required
Conducted Emission	Temperature (°C)	10-40
	Humidity (%RH)	10-90
Radiated Emission	Temperature (°C)	10-40
	Humidity (%RH)	10-90

3. Conducted Emission

3.1. Test Specification

According to Standard : FCC Part 15 Subpart B & CISPR 22

3.2. Test Setup



3.3. Limit

Conducted emissions limits (AC mains power terminals)				
Frequency range (MHz)	Class A Quasi-peak (dBuV)	Class A Average (dBuV)	Class B Quasi-peak (dBuV)	Class B Average (dBuV)
0.15 – 0.5	79	66	66 to 56	56 to 46
0.5 - 5	73	60	56	46
5 - 30	73	60	60	50

Note:

1. The more stringent limit applies at transition frequencies.
2. The limit level in dBuV decreases linearly with the logarithm of frequency

3.4. Test Procedure

The EUT 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. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination.

(Please refers to the block diagram of the test setup and photographs.)

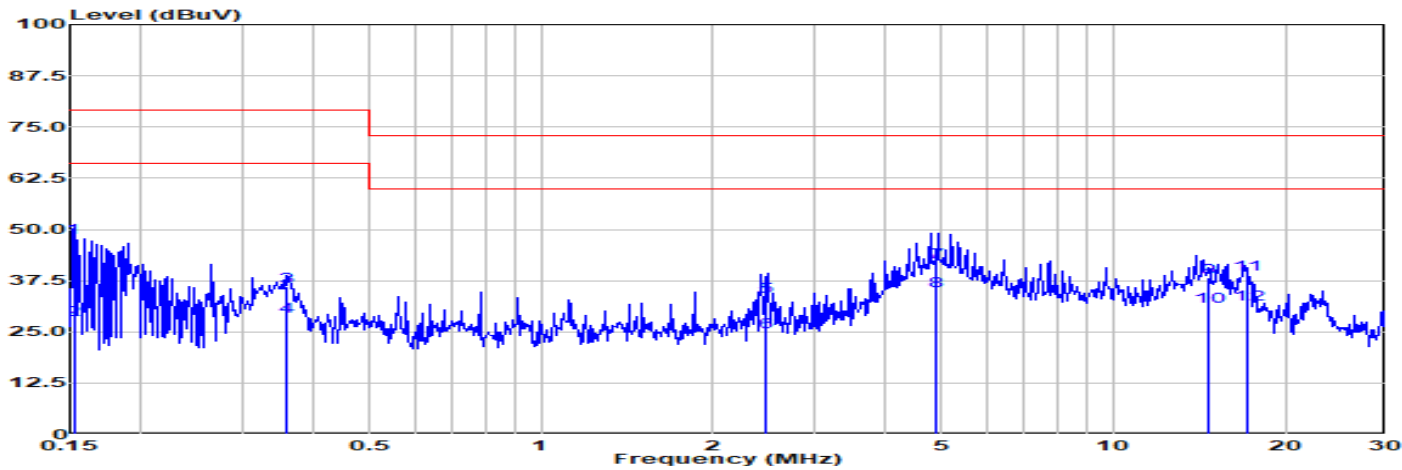
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed on conducted measurement.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Test Result

Model No	MAX-BR1-MINI-M2M-LTE-US-T-PRM	Site	HY-SR09
Test Voltage	AC 120V/60Hz to DC 12V (Power by adapter)	Test Date	2023-05-19
Test Mode	Mode 3	Engineer	Nat Cheng
Phase	Line	Temperature (°C)	24.7
Test Condition	--	Humidity (%RH)	58

FCC CLASS-A



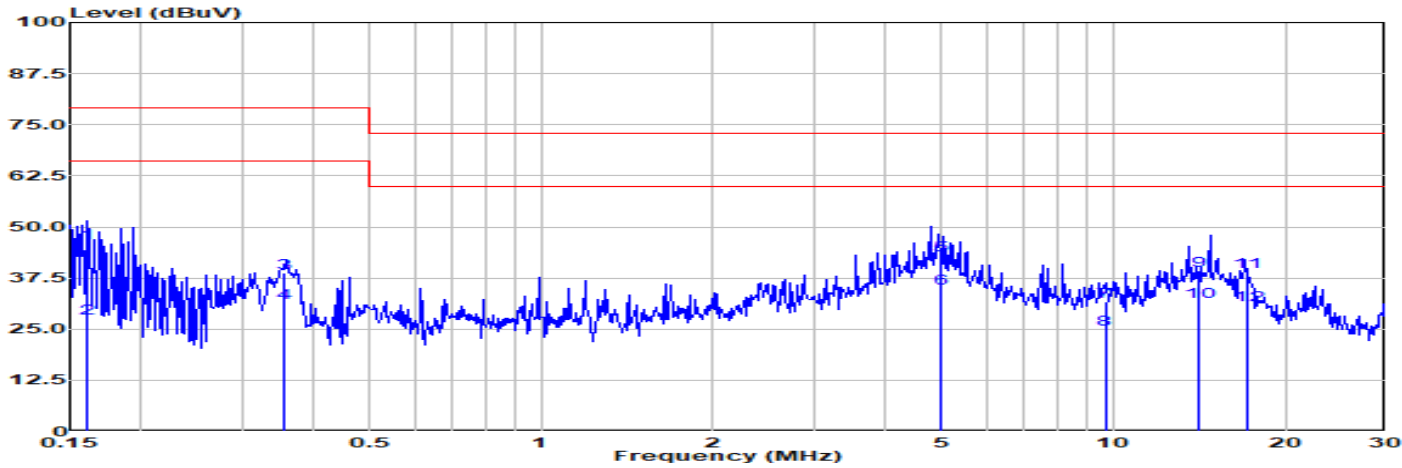
No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.152	47.84	79.00	-31.16	38.20	9.64	QP
2	0.152	27.81	66.00	-38.19	18.17	9.64	Average
3	0.358	35.99	79.00	-43.01	26.34	9.64	QP
4	0.358	28.85	66.00	-37.15	19.20	9.64	Average
5	2.477	33.48	73.00	-39.52	23.73	9.75	QP
6	2.477	24.91	60.00	-35.09	15.16	9.75	Average
7	4.907	41.91	73.00	-31.09	32.07	9.84	QP
8	4.907	35.03	60.00	-24.97	25.19	9.84	Average
9	14.723	38.28	73.00	-34.72	28.22	10.06	QP
10	14.723	31.15	60.00	-28.85	21.09	10.06	Average
11	17.176	38.97	73.00	-34.03	28.87	10.09	QP
12	17.176	31.67	60.00	-28.33	21.58	10.09	Average

Remark:

1. Emission Level=Reading Level + Correct Factor(Correct Factor=LISN Factor+Cable Loss).
2. Margin=Emission Level-Limit

Model No	MAX-BR1-MINI-M2M-LTE-US-T-PRM	Site	HY-SR09
Test Voltage	AC 120V/60Hz to DC 12V (Power by adapter)	Test Date	2023-05-19
Test Mode	Mode 3	Engineer	Nat Cheng
Phase	Neutral	Temperature (°C)	24.7
Test Condition	--	Humidity (%RH)	58

FCC CLASS-A



No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.161	46.20	79.00	-32.80	36.55	9.65	QP
2	0.161	27.59	66.00	-38.41	17.94	9.65	Average
3	0.357	38.76	79.00	-40.24	29.11	9.65	QP
4	0.357	31.51	66.00	-34.49	21.86	9.65	Average
5	5.007	43.04	73.00	-29.96	33.19	9.85	QP
6	5.007	35.02	60.00	-24.98	25.16	9.85	Average
7	9.680	31.59	73.00	-41.41	21.58	10.01	QP
8	9.680	24.80	60.00	-35.20	14.79	10.01	Average
9	14.153	39.42	73.00	-33.58	29.32	10.10	QP
10	14.153	31.68	60.00	-28.32	21.58	10.10	Average
11	17.151	39.10	73.00	-33.90	28.94	10.16	QP
12	17.151	30.98	60.00	-29.02	20.82	10.16	Average

Remark:

1. Emission Level=Reading Level + Correct Factor(Correct Factor=LISN Factor+Cable Loss).
2. Margin=Emission Level-Limit

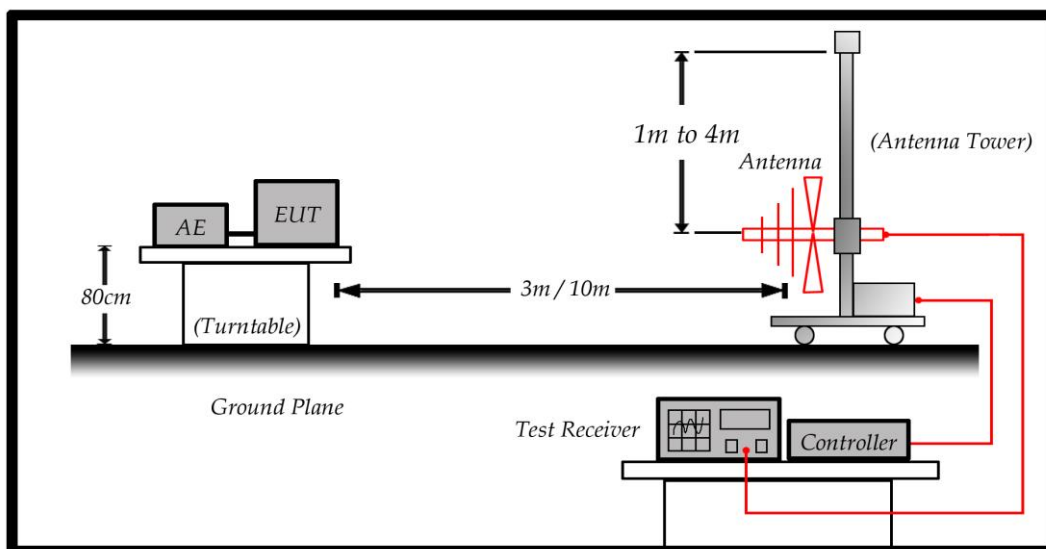
4. Radiated Emission

4.1. Test Specification

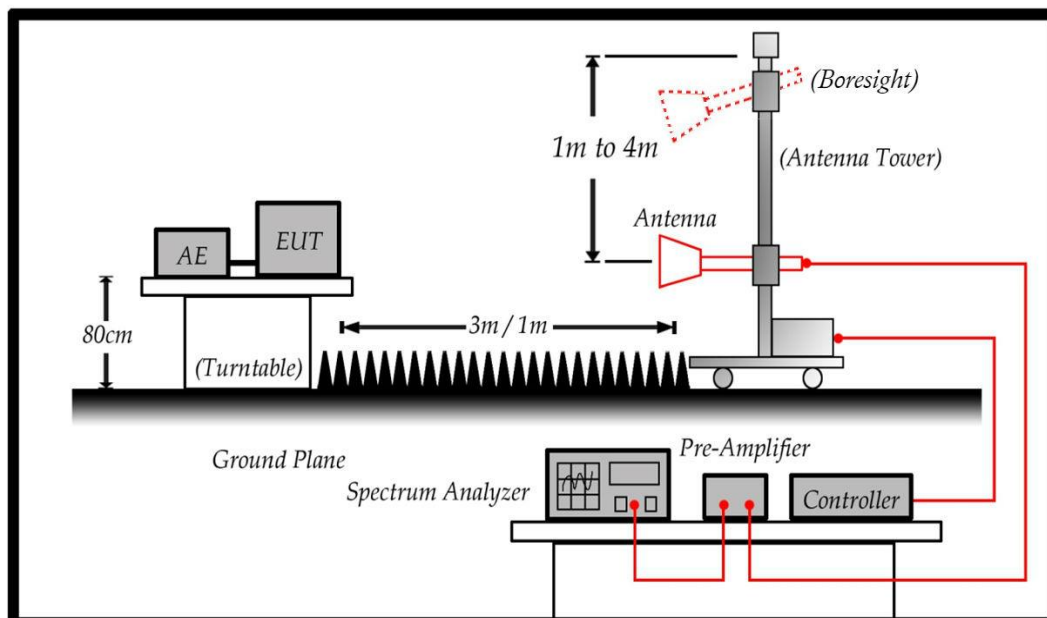
According to Standard : FCC Part 15 Subpart B & CISPR 22

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

Above 1GHz test shall not exceed the following value:

FCC Part 15 Subpart B Paragraph 15.109 Limits (dBuV/m)		
Frequency (MHz)	Distance(m)	dBuV/m
30-88	10	39
88-216	10	43.5
216-960	10	46.4
960-1000	10	49.5
1000-40000	3	60
18000-40000	1	69.5

Remark:

1. The tighter limit shall apply at the edge between two frequency bands.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
3. $RF\ Voltage\ (dBuV/m) = 20\ \log\ RF\ Voltage\ (\mu V/m)$

4.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground.

The turn table can rotate 360 degrees to determine the position of the maximum emission level and the antenna (boresight antenna tower) can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.

For an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

On any frequency or frequencies below or equal to 1000MHz, the radiated limits shown are based on measuring equipment employing a quasi-peak detector function and above 1000MHz, the radiated limits shown are based measuring equipment employing an average detector function.

When average radiated emission measurement are included emission measurement Above 1000MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

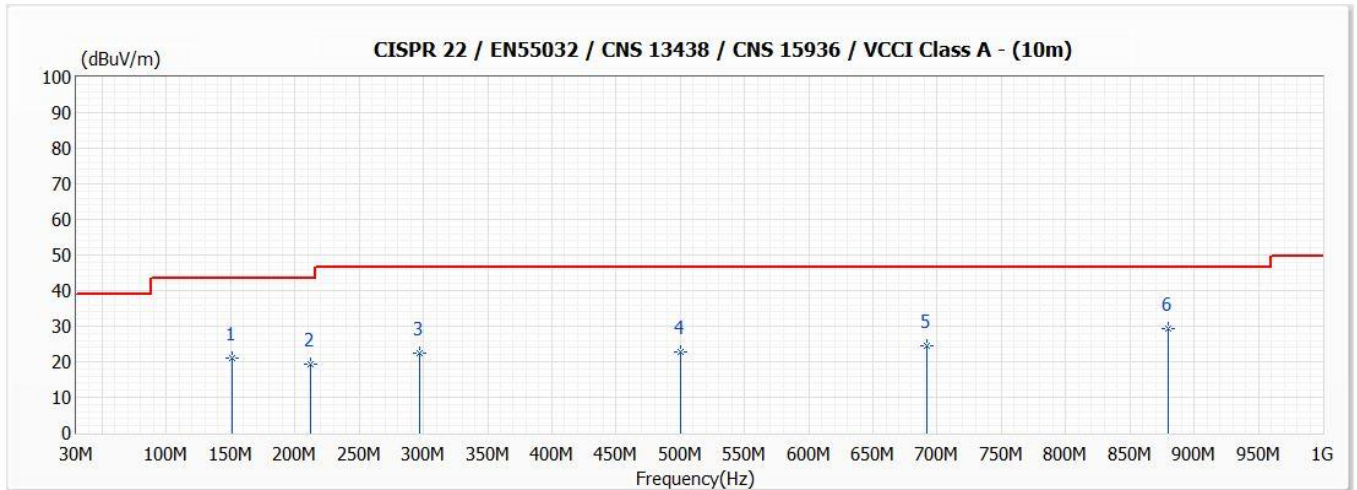
For class A, the measurement distance between the EUT and antenna is 10 meters for under 1GHz and above 1GHz.

For class B, the measurement distance between the EUT and antenna is 10 meters for under 1GHz and 3 meters for above 1GHz.

The bandwidth below 1GHz setting on the field strength meter (Test Receiver) is 120 kHz and above 1GHz is 1MHz.

4.5. Test Result

Model No	MAX-BR1-MINI-M2M-LTE-US-T-PRM	Site	SITE2
Test Voltage	AC 120V/60Hz to DC 12V (Power by adapter)	Test Date	2023/5/16
Test Mode	Mode 3	Engineer	Edward Chi
Polarity	Horizontal	Temperature (°C)	28.3
Test Condition	--	Humidity (%RH)	63.2

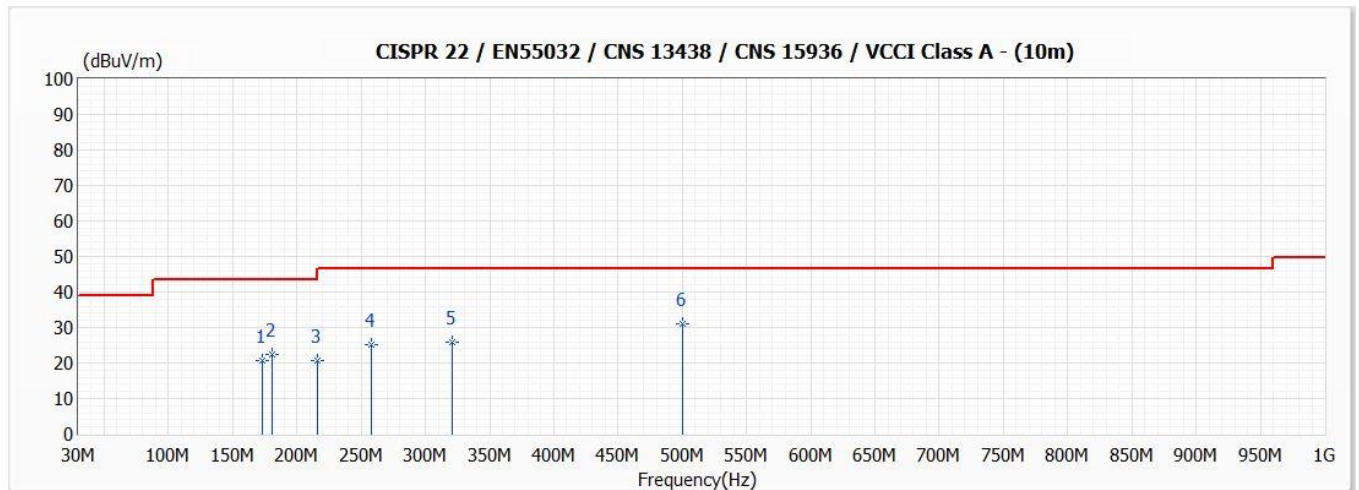


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Ant Pos (cm)	TT Pos (deg)	Detector Type
1	151.000	21.14	43.50	-22.36	34.50	-13.36	370	-92	QP
2	211.800	19.30	43.50	-24.20	33.30	-14.00	370	-48	QP
3	296.700	22.45	46.40	-23.95	31.60	-9.15	370	105	QP
4	500.130	22.83	46.40	-23.57	26.00	-3.17	200	28	QP
5	692.200	24.65	46.40	-21.75	24.50	0.15	100	70	QP
* 6	880.200	29.23	46.40	-17.17	25.80	3.43	100	-69	QP

Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin=Emission Level-Limit.

Model No	MAX-BR1-MINI-M2M-LTE-US-T-PRM	Site	SITE2
Test Voltage	AC 120V/60Hz to DC 12V (Power by adapter)	Test Date	2023/5/16
Test Mode	Mode 3	Engineer	Edward Chi
Polarity	Vertical	Temperature (°C)	28.3
Test Condition	--	Humidity (%RH)	63.2



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Ant Pos (cm)	TT Pos (deg)	Detector Type
1	172.800	20.70	43.50	-22.80	34.70	-14.00	100	-48	QP
2	181.000	22.32	43.50	-21.18	36.60	-14.28	100	73	QP
3	216.000	20.67	43.50	-22.83	34.70	-14.03	100	-94	QP
4	258.200	25.12	46.40	-21.28	34.30	-9.18	100	180	QP
5	321.000	25.93	46.40	-20.47	34.30	-8.37	100	92	QP
* 6	500.000	30.93	46.40	-15.47	34.10	-3.17	300	-96	QP

Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin=Emission Level-Limit.

Model No	MAX-BR1-MINI-M2M-LTE-US-T-PRM	Site	HY-CB05
Test Voltage	AC 120V/60Hz to DC 12V (Power by adapter)	Test Date	2023-05-17
Test Mode	Mode 3	Engineer	Nat Cheng
Polarity	Horizontal	Temperature (°C)	23.9
Test Condition	--	Humidity (%RH)	58

FCC CLASS-A PK



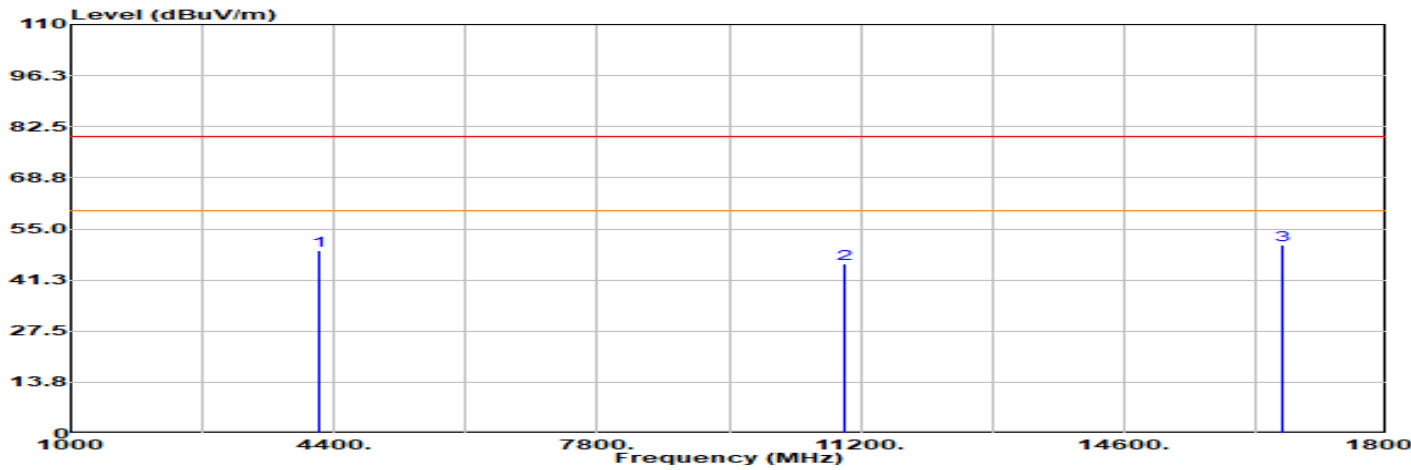
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Ant Pos (cm)	TT Pos (deg)	Detector Type
1	4680.000	43.21	80.00	-36.79	47.15	-3.94	100	351	Peak
2	12310.670	49.45	80.00	-30.55	43.04	6.41	100	12	Peak
3	16923.330	51.50	80.00	-28.50	40.72	10.78	100	11	Peak

Remark:

- 1.Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
- 2.Margin=Emission Level - Limit.
- 3.The above 1 GHz test. When PEAK measures level less than AV limit by 20 dBuV, its average is not measured separately.

Model No	MAX-BR1-MINI-M2M-LTE-US-T-PRM	Site	HY-CB05
Test Voltage	AC 120V/60Hz to DC 12V (Power by adapter)	Test Date	2023-05-17
Test Mode	Mode 3	Engineer	Nat Cheng
Polarity	Vertical	Temperature (°C)	23.9
Test Condition	--	Humidity (%RH)	58

FCC CLASS-A PK



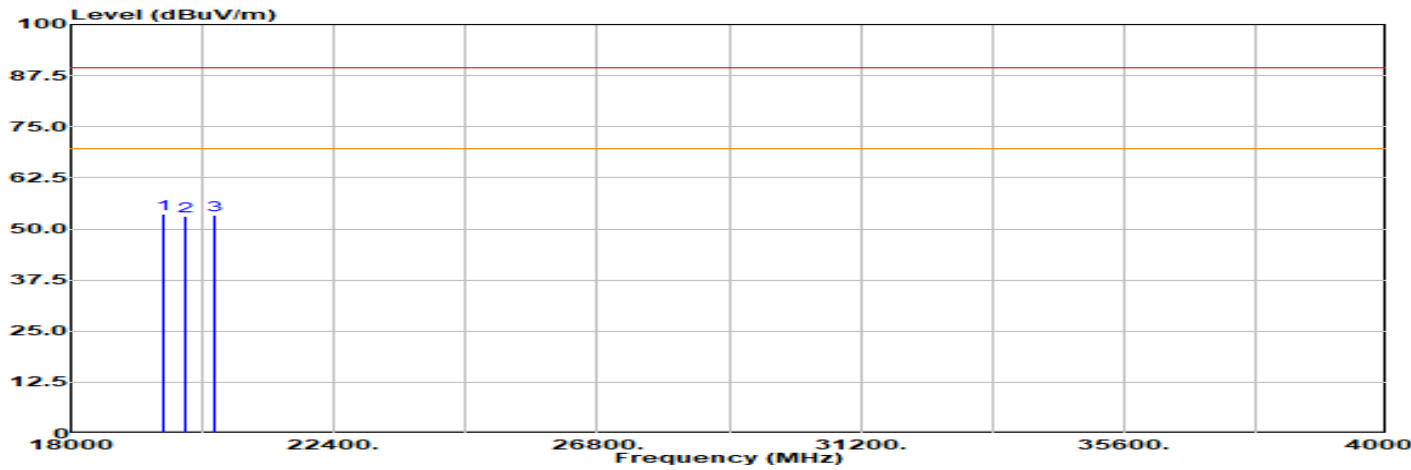
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Ant Pos (cm)	TT Pos (deg)	Detector Type
1	4205.000	49.07	80.00	-30.93	62.56	-13.49	100	355	Peak
2	10979.000	45.72	80.00	-34.28	49.09	-3.37	100	342	Peak
3	16640.000	50.60	80.00	-29.40	48.24	2.36	100	8	Peak

Remark:

- 1.Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
- 2.Margin=Emission Level - Limit.
- 3.The above 1 GHz test. When PEAK measures level less than AV limit by 20 dBuV, its average is not measured separately.

Model No	MAX-BR1-MINI-M2M-LTE-US-T-PRM	Site	HY-CB05
Test Voltage	AC 120V/60Hz to DC 12V (Power by adapter)	Test Date	2023-05-17
Test Mode	Mode 3	Engineer	Nat Cheng
Polarity	Horizontal	Temperature (°C)	23.9
Test Condition	--	Humidity (%RH)	58

FCC CLASS-A PK



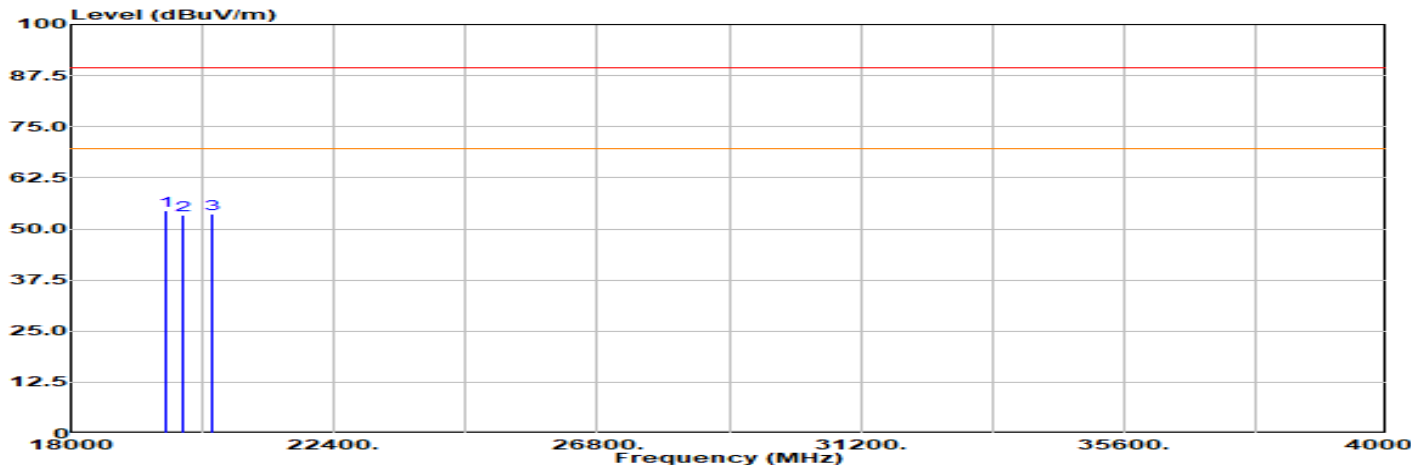
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Ant Pos (cm)	TT Pos (deg)	Detector Type
1	19554.000	53.77	89.54	-35.77	45.68	8.09	100	235	Peak
2	19920.000	53.19	89.54	-36.35	44.50	8.68	100	316	Peak
3	20388.000	53.27	89.54	-36.27	43.91	9.36	100	104	Peak

Remark:

- 1.Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
- 2.Margin=Emission Level - Limit.
- 3.The above 1 GHz test. When PEAK measures level less than AV limit by 20 dBuV, its average is not measured separately.

Model No	MAX-BR1-MINI-M2M-LTE-US-T-PRM	Site	HY-CB05
Test Voltage	AC 120V/60Hz to DC 12V (Power by adapter)	Test Date	2023-05-17
Test Mode	Mode 3	Engineer	Nat Cheng
Polarity	Vertical	Temperature (°C)	23.9
Test Condition	--	Humidity (%RH)	58

FCC CLASS-A PK



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Ant Pos (cm)	TT Pos (deg)	Detector Type
1	19578.000	54.35	89.54	-35.19	46.31	8.04	100	87	Peak
2	19854.000	53.36	89.54	-36.18	45.05	8.31	100	38	Peak
3	20358.000	53.61	89.54	-35.93	44.25	9.35	100	150	Peak

Remark:

- 1.Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
- 2.Margin=Emission Level - Limit.
- 3.The above 1 GHz test. When PEAK measures level less than AV limit by 20 dBuV, its average is not measured separately.