FCC Radio Test Report

FCC ID: 2AMHM-P2-6E-LTE

Report No.	:	BTL-FCCP-2-2105T078
Equipment	:	LTE Module
Model Name	:	EG21-G
Brand Name	:	BOSCH
Applicant	:	Robert Bosch Engineering and Business Solutions Private Limited
Address	:	No.123, Industrial Layout, Hosur Road, Koramangala, Bangalore - 560 095
Radio Function	:	LTE Band 2
FCC Rule Part(s)	:	47 CFR FCC Part 24 Subpart E 47 CFR FCC Part 2
Measurement Procedure(s)	:	ANSI C63.26-2015 ANSI/TIA-603-E-2016 FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
Date of Receipt	:	2021/5/19
Date of Test	:	2021/5/19 ~ 2021/9/9
Issued Date	:	2021/10/6

The above equipment has been tested and found in compliance with the requirement of the above standards by BTL Inc.

Prepared by : Jerry Chuang, Supervisor

Approved by : Peter Chen, Vice Manager

Testing Laboratory
0659

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

BTL's laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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REVISON HISTORY

Report No.	Version	Description	Issued Date
BTL-FCCP-2-2105T078	R00	Original Report.	2021/10/6

1 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards.

FCC Clause No	Description	Test Result	Judgement	Remark
15.207	AC Power Line Conducted Emissions	APPENDIX A	Pass	------
2.1046 24.232(c)	RF Power Output	APPENDIX B	Pass	------
2.1053 24.238(a)	Radiated Spurious Emissions	APPENDIX C	Pass	------

NOTE:
(1) ”N/A” denotes test is not applicable in this Test Report.
(2) The report format version is TP.1.1.1.
(3) This test report is issued for the RF module (FCCID: XMR201906EG21G) to be incorporated to the host device (Model number: AD00 A2 0044 6YE, Product name: Phantom EDGE).
Since the RF module has been certificated, after evaluation, above test items were criticized and reconfirmed in this report.
(4) After spot check, this revision does not change original radio parameters.

1.1 TEST FACILITY

The test facilities used to collect the test data in this report:

No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
The test sites and facilities are covered under FCC RN: 355421 and DN: TW1099.

☒ C05 ☐ CB08 ☐ CB11 ☒ CB15 ☐ CB16
☒ SR05

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**, where expanded uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k = 2**, providing a level of confidence of approximately **95 %**. The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2. The BTL measurement uncertainty is less than the CISPR 16-4-2 U_{cispr} requirement.

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U (dB)
C05	CISPR	150 kHz ~ 30MHz	3.44

B. Radiated emissions test :

Test Site	Measurement Frequency Range	U,(dB)
CB15	0.03 GHz ~ 0.2 GHz	4.17
	0.2 GHz ~ 1 GHz	4.72
	1 GHz ~ 6 GHz	5.21
	6 GHz ~ 18 GHz	5.51
	18 GHz ~ 26 GHz	3.69
	26 GHz ~ 40 GHz	4.23

NOTE:
Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Environment Condition	Test Voltage	Tested by
AC Power Line Conducted Emissions	23 °C, 59 %	AC 120V	William Wei
Output Power & ERP	24.6 °C, 67 %	AC 120V	Paul Shen
Radiated Spurious Emissions	Refer to data	AC 120V	Jay Kao

2 GENERAL INFORMATION

2.1 DESCRIPTION OF EUT

Equipment	LTE Module		
Model Name	EG21-G		
Brand Name	BOSCH		
Model Difference	N/A		
Power Supply Rating	DC 3.3V from host equipment		
Host device information			
Equipment	Phantom EDGE		
Model Name	AD00 A2 0044 6YE		
Brand Name	BOSCH		
Power Source	AC Mains.		
Power Rating	I/P: 90 – 280 V AC , <10W , 50/60Hz		
Products Covered	N/A		
WWAN Module	Quectel / EG21-G		
Operation Frequency	Band	UL Frequency (MHz)	DL Frequency (MHz)
	LTE 2	1850 ~ 1910	1930 ~ 1990
Test Model	AD00 A2 0044 6YE		
Sample Status	Engineering Sample		
EUT Modification(s)	N/A		

NOTE:
(1) For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

(2) Table for Filed Antenna:

Antenna	Manufacture	Model No.	Type	Connector	Gain (dBi)	Note
1	QUECTEL	YE0003AA	Dipole	SMA Male	3.3	

2.2 TEST MODES

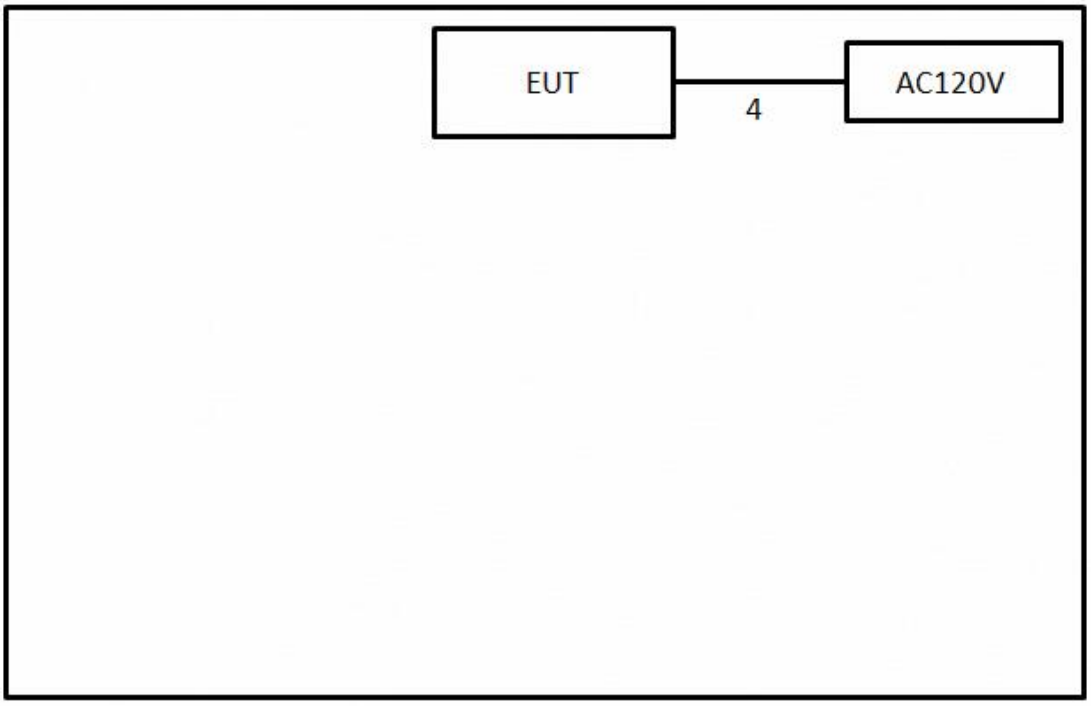
Test Items	Band	Test Mode	Note
AC Power Line Conducted Emissions	-	Normal/Idle	-
Output Power & ERP	LTE Band 2	Refer to data	-
Radiated Spurious Emissions	LTE Band 2	TX Mode (CH 18700/18900/19100)	-

NOTE:
(1) The Radiated emissions test was verified based on the worst conducted power and Bandwidth test results reported in the original report.
(2) All X, Y and Z axes are evaluated, but only the worst case (Y axis) is recorded.

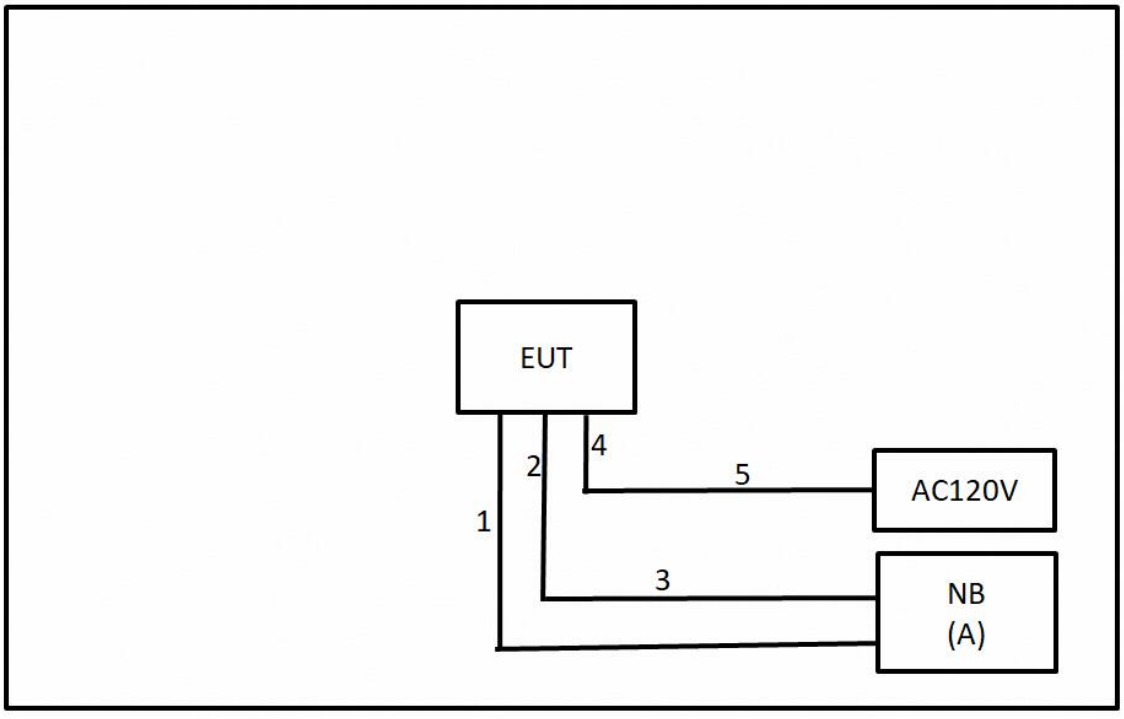
2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Equipment letters and Cable numbers refer to item numbers described in the tables of clause 2.4.

AC Power Line Conducted Emissions Test



Radiated Emissions Test



2.4 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	NB	HP	TPN-I119	N/A	Furnished by test lab.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	N/A	N/A	3m	RJ45 Cable	Supplied by test requester
2	N/A	N/A	1.5m	RS232 to RS232	Supplied by test requester
3	N/A	N/A	1.1m	RS232 to USB	Supplied by test requester
4	N/A	N/A	1m	Power Cord	Supplied by test requester
5	N/A	N/A	1.7m	Power Cord	Furnished by test lab.

3 AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

Frequency (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56 *	56 - 46 *
0.50 - 5.0	56	46
5.0 - 30.0	60	50

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.
(3) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor (if use)
Margin Level = Measurement Value – Limit Value
Calculation example:

Reading Level		Correct Factor		Measurement Value
38.22	+	3.45	=	41.67

Measurement Value		Limit Value		Margin Level
41.67	-	60	=	-18.33

The following table is the setting of the receiver.

Receiver Parameter	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

3.2 TEST PROCEDURE

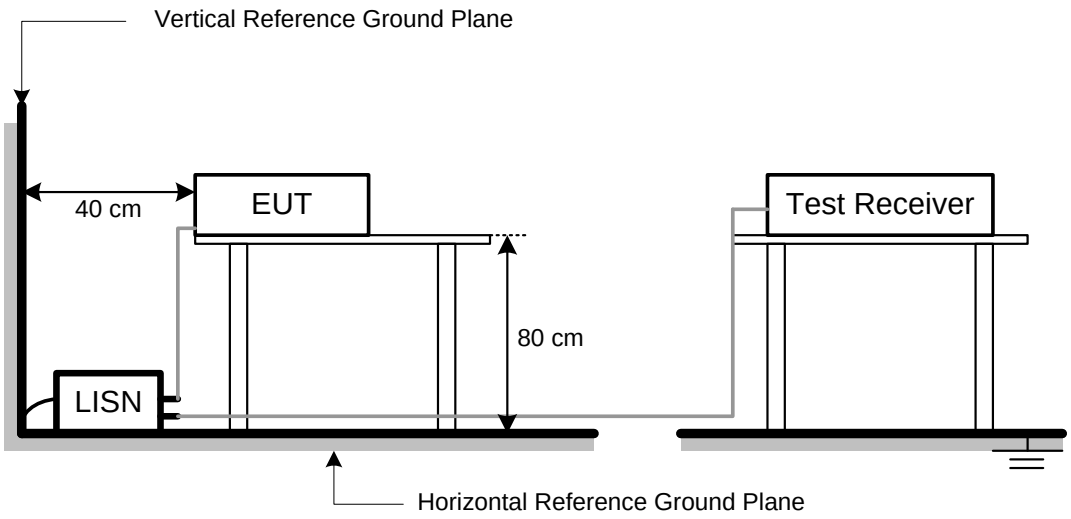
a. The EUT was placed 0.8 m above the horizontal ground plane with the EUT being connected to the power mains through a line impedance stabilization network (LISN).
All other support equipment were powered from an additional LISN(s).
The LISN provides 50 Ohm/50uH of impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle to keep the cable above 40 cm.
c. Excess I/O cables that are not connected to a peripheral shall be bundled in the center.
The end of the cable will be terminated, using the correct terminating impedance.
The overall length shall not exceed 1 m.
d. The LISN is spaced at least 80 cm from the nearest part of the EUT chassis.
e. For the actual test configuration, please refer to the related Item - EUT TEST PHOTO.

NOTE:
(1) In the results, each reading is marked as Peak, QP or AVG per the detector used.
BW=9 kHz (6 dB Bandwidth)
(2) All readings are Peak unless otherwise stated QP or AVG in column of Note. Both the QP and the AVG readings must be less than the limit for compliance.

3.3 DEVIATION FROM TEST STANDARD

No deviation.

3.4 TEST SETUP



3.5 TEST RESULT

Please refer to the APPENDIX A.

4 RF POWER OUTPUT TEST

4.1 LIMIT

Mobile / Portable station are limited to 2 watts e.i.r.p.

4.2 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 5.
EIRP / ERP Power Measurement:
EIRP = Conducted Power + Antenna gain.
ERP power = EIPR power - 2.15 dBi.

Conducted Power Measurement:

The EUT was set up for the maximum power with LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

4.3 DEVIATION FROM TEST STANDARD

No deviation.

4.4 TEST SETUP

Conducted Power Measurement:

4.5 TEST RESULT

Please refer to the APPENDIX B.

5 RADIATED SPURIOUS EMISSIONS MEASUREMENT

5.1 LIMIT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to -13dBm.

NOTE:
(1) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)
Margin Level = Measurement Value - Limit Value
Calculation example:

Reading Level		Correct Factor		Measurement Value
-50.43	+	-2.11	=	-52.54

Measurement Value		Limit Value		Margin Level
-52.54	-	-13	=	-39.54

5.2 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 6.2.

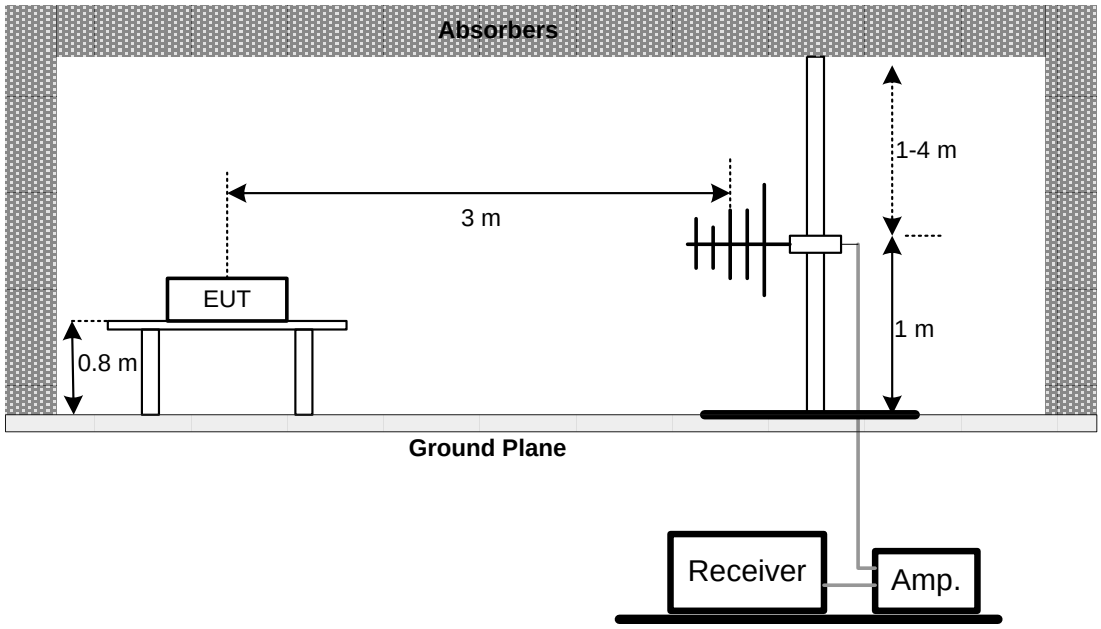
a. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value “ of step a. Record the power level of S.G
c. EIRP = Output power level of S.G - TX cable loss + Antenna gain of substitution horn.
d. ERP power can be calculated form EIRP power by subtracting the gain of dipole,
ERP power = EIRP power - 2.15 dBi.
e. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is1 MHz / 3 MHz.

5.3 DEVIATION FROM TEST STANDARD

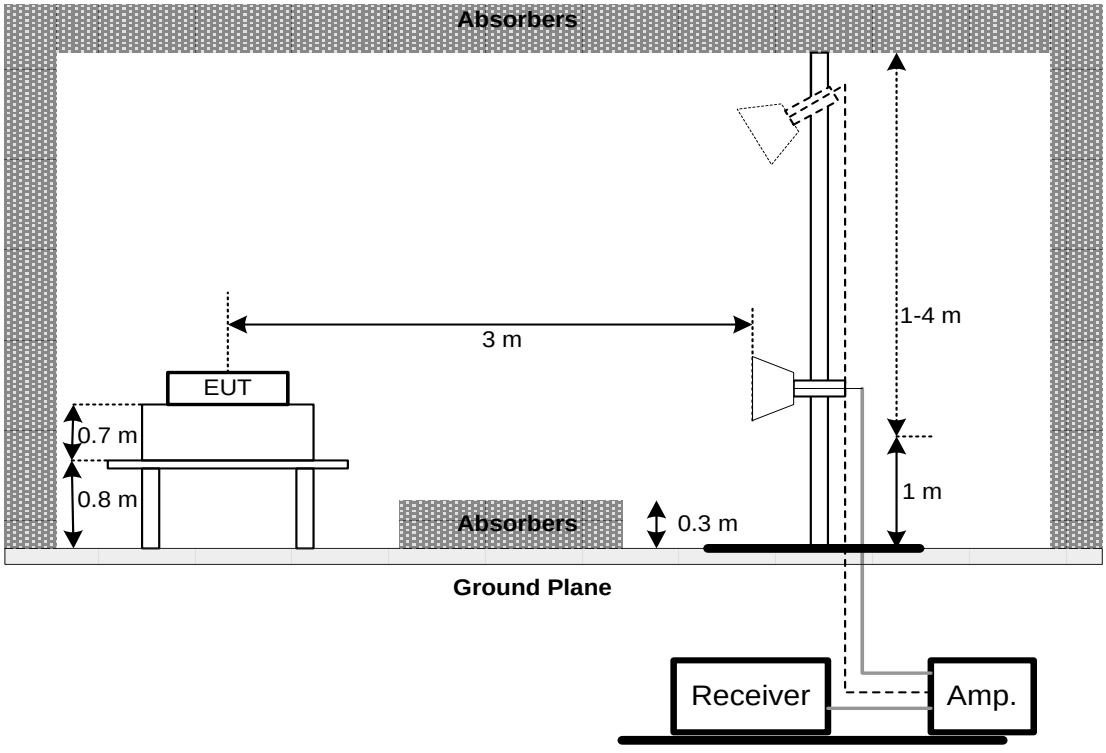
No deviation.

5.4 TEST SETUP

30 MHz to 1 GHz



Above 1 GHz



5.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULT

Please refer to the APPENDIX C.

6 LIST OF MEASURING EQUIPMENTS

AC Power Line Conducted Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	TWO-LINE V-NETWORK	R&S	ENV216	101339	2021/3/10	2022/3/9
2	Test Cable	EMCI	EMCRG58-BM-BM-9000	210501	2021/5/3	2022/5/2
3	EMI Test Receiver	R&S	ESR 7	101433	2020/12/11	2021/12/10
4	Measurement Software	EZ	EZ_EMC (Version NB-03A1-01)	N/A	N/A	N/A

RF Power Output						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Radio Communication Analyzer	Anritsu	MT8820C	6201381608	2021/1/7	2022/1/6

Radiated Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Preamplifier	EMCI	EMC02325B	980217	2021/4/8	2022/4/7
2	Preamplifier	EMCI	EMC012645B	980267	2021/4/8	2022/4/7
3	Test Cable	EMCI	EMC-SM-SM-1000	180809	2021/4/8	2022/4/7
4	Test Cable	EMCI	EMC104-SM-SM-3000	151205	2021/4/8	2022/4/7
5	Test Cable	EMCI	EMC-SM-SM-7000	180408	2021/4/8	2022/4/7
6	MXE EMI Receiver	Agilent	N9038A	MY554200087	2021/5/27	2022/5/26
7	Signal Analyzer	Agilent	N9010A	MY52220990	2021/8/18	2022/8/17
8	Horn Ant	SCHWARZBECK	BBHA 9120D	9120D-1342	2021/6/2	2022/6/1
9	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	VULB 9168-352	2021/8/11	2022/8/10
10	5dB Attenuator	EMCI	EMCI-N-6-05	AT-N0625	2021/8/11	2022/8/10
11	Measurement Software	EZ	EZ_EMC (Version NB-03A1-01)	N/A	N/A	N/A
12	Wideband Radio Communication tester	Rohde & Schwarz	CMW500	154121	2020/11/15	2021/11/14

Remark: “N/A” denotes no model name, no serial no. or no calibration specified.
All calibration period of equipment list is one year.

7 EUT TEST PHOTO

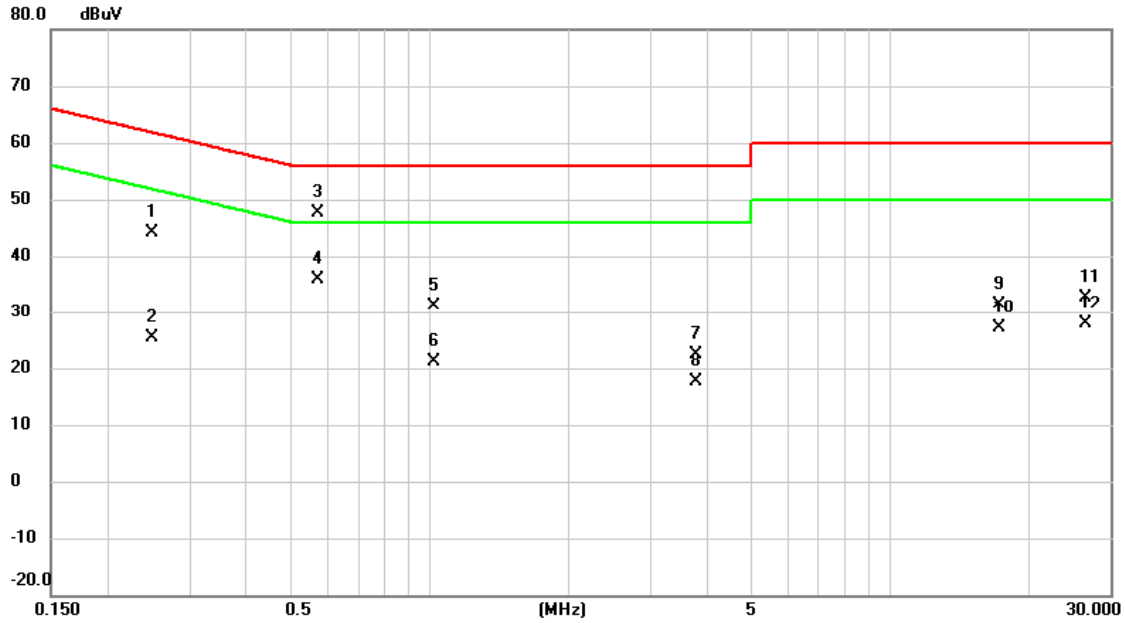
Please refer to document Appendix No.: TP-2105T078-FCCP-1 (APPENDIX-TEST PHOTOS).

8 EUT PHOTOS

Please refer to document Appendix No.: EP-2105T078-1 (APPENDIX-EUT PHOTOS).

APPENDIX A AC POWER LINE CONDUCTED EMISSIONS

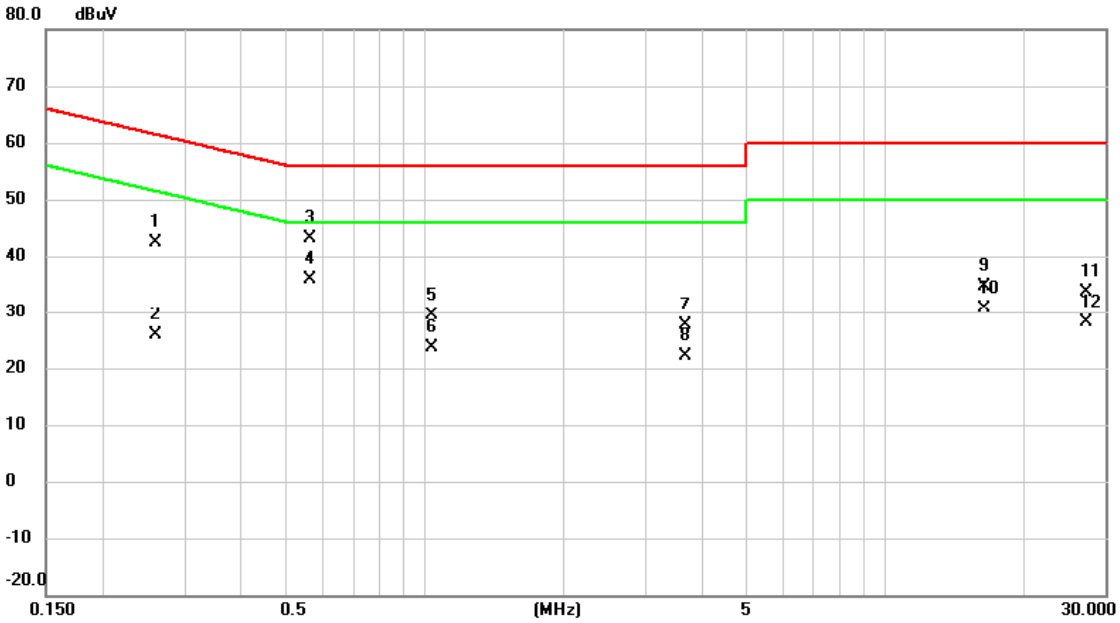
Test Mode	Normal	Tested Date	2021/6/9
Test Frequency	-	Phase	Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2490	34.36	9.72	44.08	61.79	-17.71	QP	
2		0.2490	15.67	9.72	25.39	51.79	-26.40	AVG	
3	*	0.5730	37.89	9.73	47.62	56.00	-8.38	QP	
4		0.5730	26.27	9.73	36.00	46.00	-10.00	AVG	
5		1.0230	21.39	9.74	31.13	56.00	-24.87	QP	
6		1.0230	11.36	9.74	21.10	46.00	-24.90	AVG	
7		3.7635	12.41	9.87	22.28	56.00	-33.72	QP	
8		3.7635	7.87	9.87	17.74	46.00	-28.26	AVG	
9		17.2410	21.14	10.20	31.34	60.00	-28.66	QP	
10		17.2410	16.94	10.20	27.14	50.00	-22.86	AVG	
11		26.4885	22.45	10.24	32.69	60.00	-27.31	QP	
12		26.4885	17.61	10.24	27.85	50.00	-22.15	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

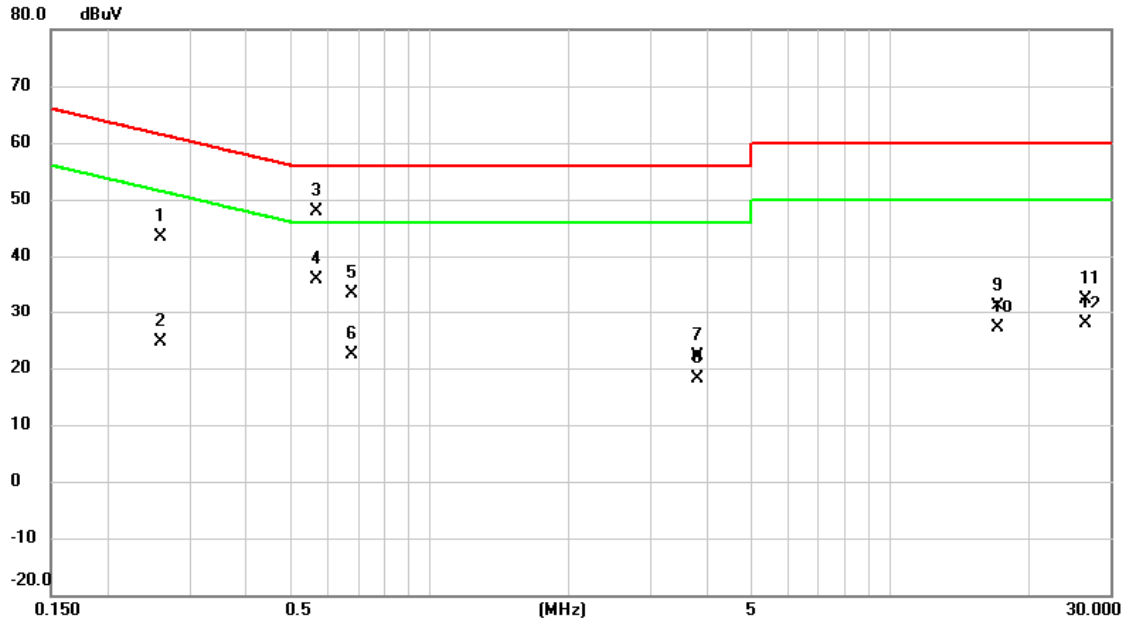
Test Mode	Normal	Tested Date	2021/6/9
Test Frequency	-	Phase	Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2602	32.69	9.73	42.42	61.43	-19.01	QP	
2		0.2602	16.17	9.73	25.90	51.43	-25.53	AVG	
3		0.5640	33.39	9.74	43.13	56.00	-12.87	QP	
4	*	0.5640	26.20	9.74	35.94	46.00	-10.06	AVG	
5		1.0320	19.70	9.75	29.45	56.00	-26.55	QP	
6		1.0320	13.94	9.75	23.69	46.00	-22.31	AVG	
7		3.6690	17.85	9.88	27.73	56.00	-28.27	QP	
8		3.6690	12.36	9.88	22.24	46.00	-23.76	AVG	
9		16.3838	24.33	10.28	34.61	60.00	-25.39	QP	
10		16.3838	20.43	10.28	30.71	50.00	-19.29	AVG	
11		27.3233	23.21	10.44	33.65	60.00	-26.35	QP	
12		27.3233	17.67	10.44	28.11	50.00	-21.89	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

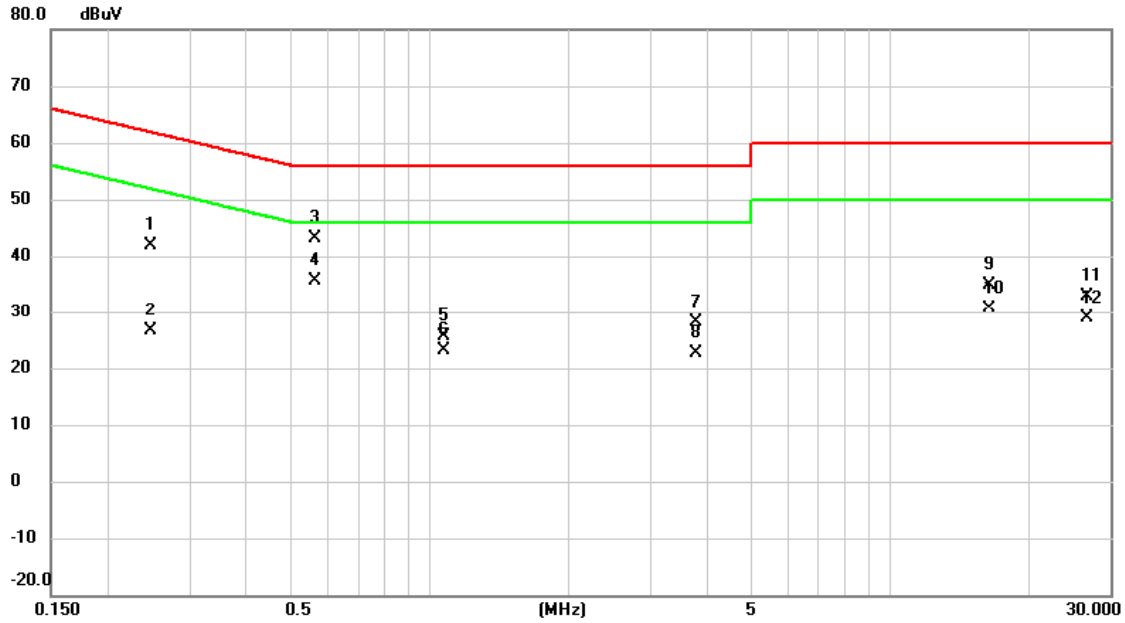
Test Mode	Idle	Tested Date	2021/6/9
Test Frequency	-	Phase	Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2602	33.65	9.73	43.38	61.43	-18.05	QP	
2		0.2602	14.84	9.73	24.57	51.43	-26.86	AVG	
3	*	0.5662	38.09	9.73	47.82	56.00	-8.18	QP	
4		0.5662	26.05	9.73	35.78	46.00	-10.22	AVG	
5		0.6787	23.62	9.73	33.35	56.00	-22.65	QP	
6		0.6787	12.77	9.73	22.50	46.00	-23.50	AVG	
7		3.7950	12.35	9.88	22.23	56.00	-33.77	QP	
8		3.7950	8.15	9.88	18.03	46.00	-27.97	AVG	
9		17.0700	20.94	10.20	31.14	60.00	-28.86	QP	
10		17.0700	17.00	10.20	27.20	50.00	-22.80	AVG	
11		26.5380	22.03	10.24	32.27	60.00	-27.73	QP	
12		26.5380	17.72	10.24	27.96	50.00	-22.04	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	Idle	Tested Date	2021/6/9
Test Frequency	-	Phase	Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2468	32.22	9.72	41.94	61.86	-19.92	QP	
2		0.2468	16.89	9.72	26.61	51.86	-25.25	AVG	
3		0.5640	33.31	9.74	43.05	56.00	-12.95	QP	
4	*	0.5640	25.91	9.74	35.65	46.00	-10.35	AVG	
5		1.0725	15.80	9.75	25.55	56.00	-30.45	QP	
6		1.0725	13.34	9.75	23.09	46.00	-22.91	AVG	
7		3.7725	18.25	9.89	28.14	56.00	-27.86	QP	
8		3.7725	12.63	9.89	22.52	46.00	-23.48	AVG	
9		16.3725	24.71	10.28	34.99	60.00	-25.01	QP	
10		16.3725	20.36	10.28	30.64	50.00	-19.36	AVG	
11		26.6415	22.52	10.43	32.95	60.00	-27.05	QP	
12		26.6415	18.56	10.43	28.99	50.00	-21.01	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX B RF POWER OUTPUT TEST

Output Power (dBm):

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)
2	1.4	18607	1850.7	QPSK	1	0	0	22.84
					1	2	0	22.00
					1	5	0	21.92
					3	0	0	22.84
					3	1	0	22.00
					3	2	0	21.92
					6	0	1	21.02
				16QAM	1	0	1	22.06
					1	2	1	21.18
					1	5	1	21.03
					3	0	1	22.06
					3	1	1	21.18
					3	2	1	21.03
					6	0	2	20.11
		18900	1880.0	QPSK	1	0	0	23.14
					1	2	0	22.09
					1	5	0	21.99
					3	0	0	23.14
					3	1	0	22.09
					3	2	0	21.99
					6	0	1	22.20
				16QAM	1	0	1	22.32
					1	2	1	22.28
					1	5	1	21.06
					3	0	1	22.32
					3	1	1	22.28
					3	2	1	21.06
					6	0	2	20.50
		19192	1909.2	QPSK	1	0	0	23.02
					1	2	0	22.16
					1	5	0	22.07
					3	0	0	23.02
					3	1	0	22.16
					3	2	0	22.07
					6	0	1	22.08
				16QAM	1	0	1	22.20
					1	2	1	22.16
					1	5	1	21.14
					3	0	1	22.20
					3	1	1	22.16
					3	2	1	21.14
					6	0	2	20.60

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)
2	3	18615	1851.5	QPSK	1	0	0	22.89
					1	7	0	22.05
					1	14	0	21.97
					8	0	1	22.04
					8	4	1	21.13
					8	7	1	21.19
					15	0	1	21.07
				16QAM	1	0	1	22.11
					1	7	1	21.23
					1	14	1	21.08
					8	0	2	20.94
					8	4	2	20.23
					8	7	2	20.04
					15	0	2	20.16
		18900	1880.0	QPSK	1	0	0	23.19
					1	7	0	22.14
					1	14	0	22.04
					8	0	1	22.30
					8	4	1	21.18
					8	7	1	21.22
					15	0	1	22.25
				16QAM	1	0	1	22.37
					1	7	1	22.33
					1	14	1	21.11
					8	0	2	21.20
					8	4	2	20.28
					8	7	2	20.07
					15	0	2	21.30
		19184	1908.4	QPSK	1	0	0	23.07
					1	7	0	22.21
					1	14	0	22.12
					8	0	1	22.18
					8	4	1	21.25
					8	7	1	21.30
					15	0	1	22.13
				16QAM	1	0	1	22.25
					1	7	1	22.21
					1	14	1	21.19
					8	0	2	21.08
					8	4	2	20.35
					8	7	2	20.15
					15	0	2	21.10

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)
2	5	18625	1852.5	QPSK	1	0	0	22.94
					1	12	0	22.10
					1	24	0	22.02
					12	0	1	22.09
					12	6	1	21.18
					12	11	1	21.24
					25	0	1	21.12
				16QAM	1	0	1	22.16
					1	12	1	21.28
					1	24	1	21.13
					12	0	2	20.99
					12	6	2	20.28
					12	11	2	20.09
					25	0	2	20.21
		18900	1880.0	QPSK	1	0	0	23.24
					1	12	0	22.19
					1	24	0	22.09
					12	0	1	22.35
					12	6	1	21.23
					12	11	1	21.27
					25	0	1	22.30
				16QAM	1	0	1	22.42
					1	12	1	22.38
					1	24	1	21.16
					12	0	2	21.25
					12	6	2	20.33
					12	11	2	20.12
					25	0	2	21.39
		19175	1907.5	QPSK	1	0	0	23.12
					1	12	0	22.26
					1	24	0	22.17
					12	0	1	22.23
					12	6	1	21.30
					12	11	1	21.35
					25	0	1	22.18
				16QAM	1	0	1	22.30
					1	12	1	22.26
					1	24	1	21.24
					12	0	2	21.13
					12	6	2	20.40
					12	11	2	20.20
					25	0	2	21.27

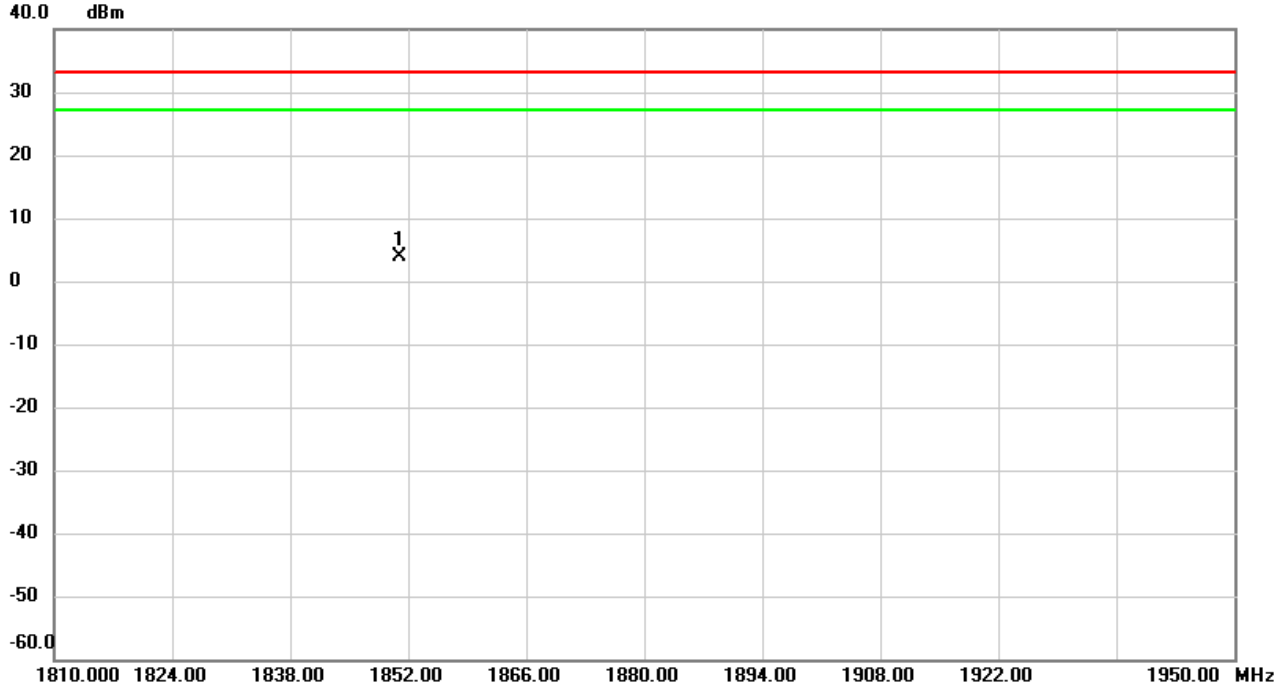
Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)
2	10	18650	1855.0	QPSK	1	0	0	22.99
					1	24	0	22.15
					1	49	0	22.07
					25	0	1	22.14
					25	12	1	21.23
					25	24	1	21.29
					50	0	1	21.17
				16QAM	1	0	1	22.21
					1	24	1	21.33
					1	49	1	21.18
					25	0	2	21.04
					25	12	2	20.33
					25	24	2	20.14
					50	0	2	20.26
		18900	1880.0	QPSK	1	0	0	23.29
					1	24	0	22.24
					1	49	0	22.14
					25	0	1	22.40
					25	12	1	21.28
					25	24	1	21.32
					50	0	1	22.35
				16QAM	1	0	1	22.47
					1	24	1	22.43
					1	49	1	21.21
					25	0	2	21.30
					25	12	2	20.38
					25	24	2	20.17
					50	0	2	21.44
		19150	1905.0	QPSK	1	0	0	23.17
					1	24	0	22.31
					1	49	0	22.22
					25	0	1	22.28
					25	12	1	21.35
					25	24	1	21.40
					50	0	1	22.23
				16QAM	1	0	1	22.35
					1	24	1	22.31
					1	49	1	21.29
					25	0	2	21.18
					25	12	2	20.45
					25	24	2	20.25
					50	0	2	21.32

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)
2	15	18675	1857.5	QPSK	1	0	0	23.04
					1	37	0	22.20
					1	74	0	22.12
					36	0	1	22.19
					36	18	1	21.28
					36	35	1	21.34
					75	0	1	21.22
				16QAM	1	0	1	22.26
					1	37	1	21.38
					1	74	1	21.23
					36	0	2	21.09
					36	18	2	20.38
					36	35	2	20.19
					75	0	2	20.31
		18900	1880.0	QPSK	1	0	0	23.34
					1	37	0	22.29
					1	74	0	22.19
					36	0	1	22.45
					36	18	1	21.33
					36	35	1	21.37
					75	0	1	22.40
				16QAM	1	0	1	22.52
					1	37	1	22.48
					1	74	1	21.26
					36	0	2	21.35
					36	18	2	20.43
					36	35	2	20.22
					75	0	2	21.49
		19125	1902.5	QPSK	1	0	0	23.22
					1	37	0	22.36
					1	74	0	22.27
					36	0	1	22.33
					36	18	1	21.40
					36	35	1	21.45
					75	0	1	22.28
				16QAM	1	0	1	22.40
					1	37	1	22.36
					1	74	1	21.34
					36	0	2	21.23
					36	18	2	20.50
					36	35	2	20.30
					75	0	2	21.37

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)
2	20	18700	1860.0	QPSK	1	0	0	23.09
					1	49	0	22.25
					1	99	0	22.17
					50	0	1	22.20
					50	24	1	21.29
					50	49	1	21.35
					100	0	1	21.23
				16QAM	1	0	1	22.27
					1	49	1	21.39
					1	99	1	21.24
					50	0	2	21.10
					50	24	2	20.39
					50	49	2	20.20
					100	0	2	20.32
		18900	1880.0	QPSK	1	0	0	23.35
					1	49	0	22.30
					1	99	0	22.20
					50	0	1	22.46
					50	24	1	21.34
					50	49	1	21.38
					100	0	1	22.41
				16QAM	1	0	1	22.53
					1	49	1	22.49
					1	99	1	21.27
					50	0	2	21.36
					50	24	2	20.44
					50	49	2	20.23
					100	0	2	21.50
		19100	1900.0	QPSK	1	0	0	23.23
					1	49	0	22.37
					1	99	0	22.28
					50	0	1	22.34
					50	24	1	21.41
					50	49	1	21.46
					100	0	1	22.29
				16QAM	1	0	1	22.41
					1	49	1	22.37
					1	99	1	21.35
					50	0	2	21.24
					50	24	2	20.51
					50	49	2	20.31
					100	0	2	21.38

ERP (dBm):

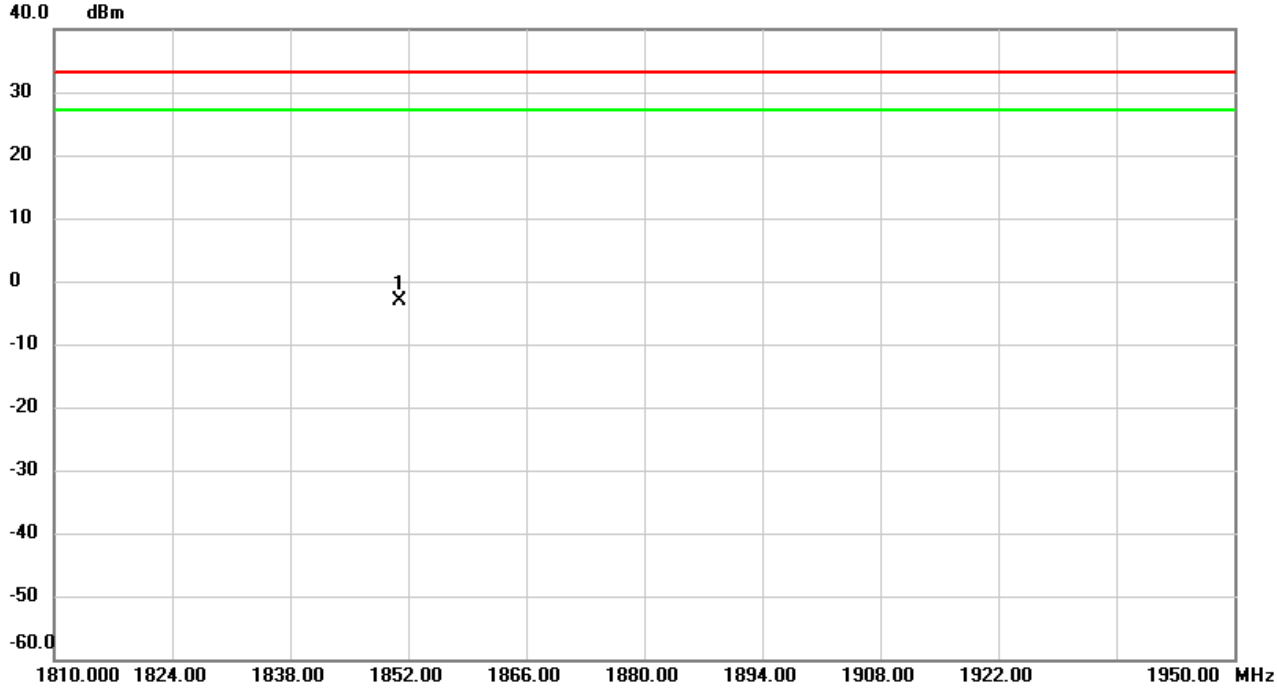
Test Mode	LTE Band 2	Test Date	2021/8/24
Test Channel	CH 18700	Polarization	Vertical
Temp	23°C	Hum.	59%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	1851.062	-35.87	39.67	3.80	33.01	-29.21	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

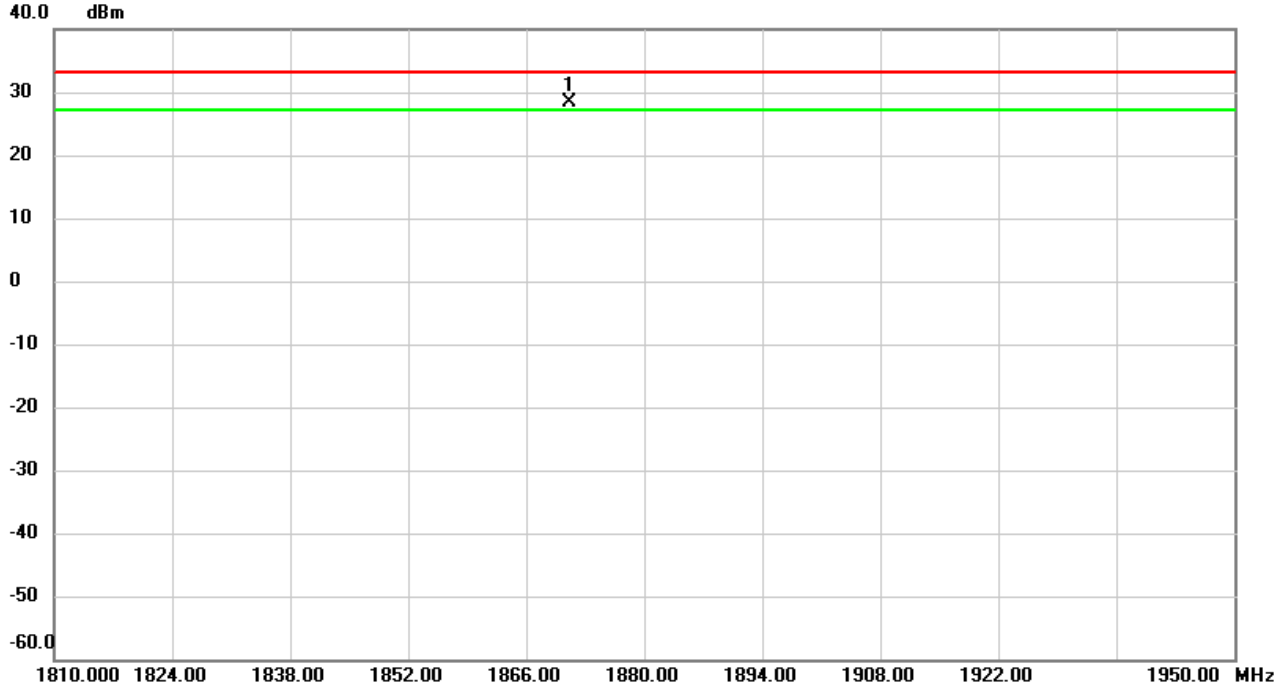
Test Mode	LTE Band 2	Test Date	2021/8/24
Test Channel	CH 18700	Polarization	Horizontal
Temp	23°C	Hum.	59%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	1850.959	-43.73	40.58	-3.15	33.01	-36.16	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

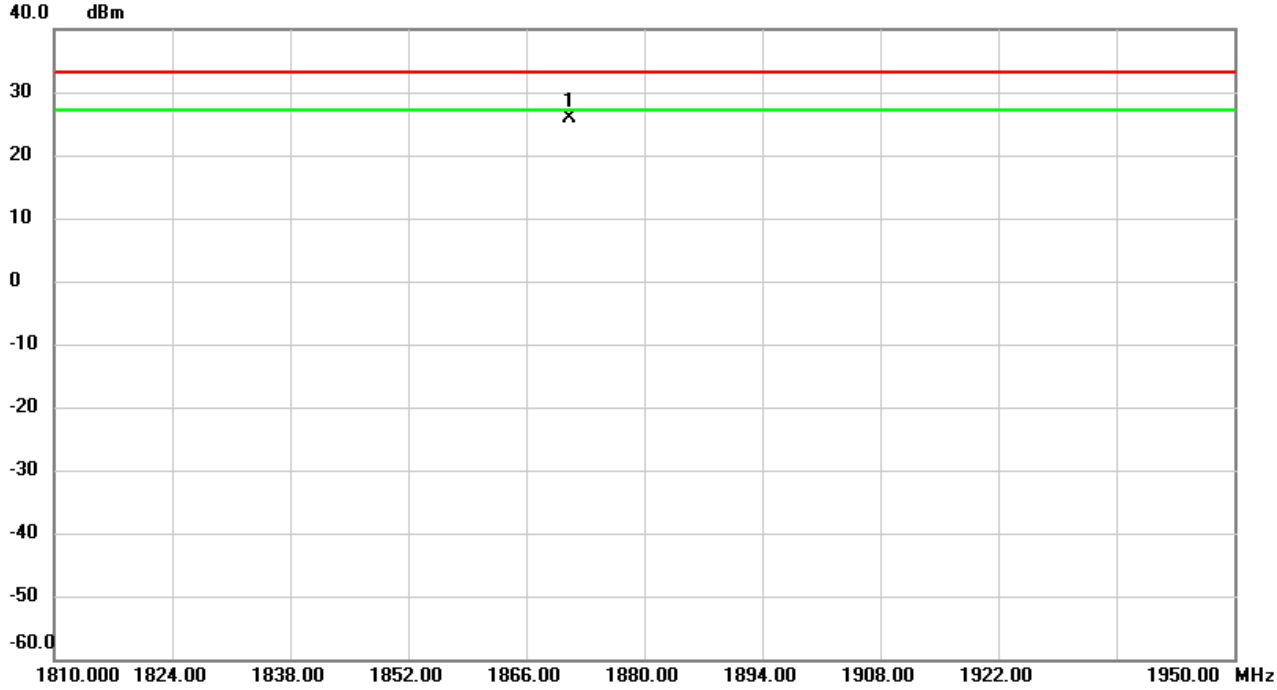
Test Mode	LTE Band 2	Test Date	2021/8/24
Test Channel	CH 18900	Polarization	Vertical
Temp	23°C	Hum.	59%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	1871.077	-11.30	39.75	28.45	33.01	-4.56	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

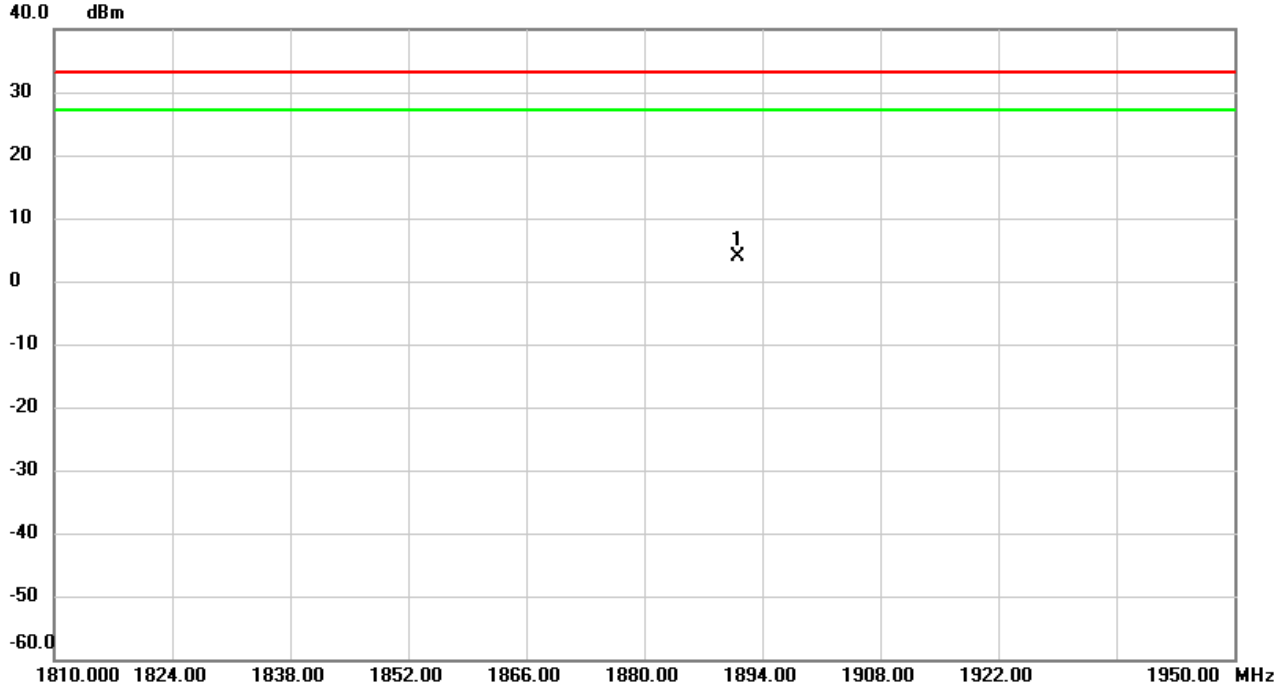
Test Mode	LTE Band 2	Test Date	2021/8/24
Test Channel	CH 18900	Polarization	Horizontal
Temp	23°C	Hum.	59%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	1871.073	-14.87	40.69	25.82	33.01	-7.19	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

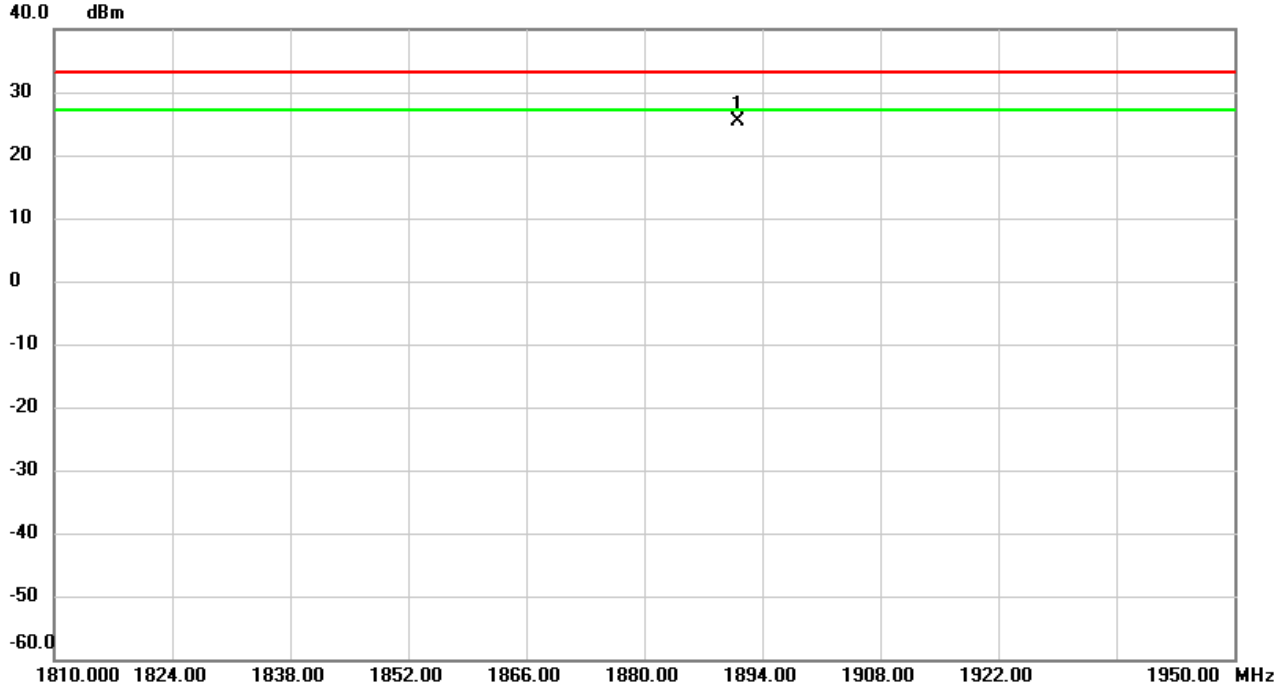
Test Mode	LTE Band 2	Test Date	2021/8/24
Test Channel	CH 19100	Polarization	Vertical
Temp	23°C	Hum.	59%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	1891.060	-36.03	39.83	3.80	33.01	-29.21	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	LTE Band 2	Test Date	2021/8/24
Test Channel	CH 19100	Polarization	Horizontal
Temp	23°C	Hum.	59%

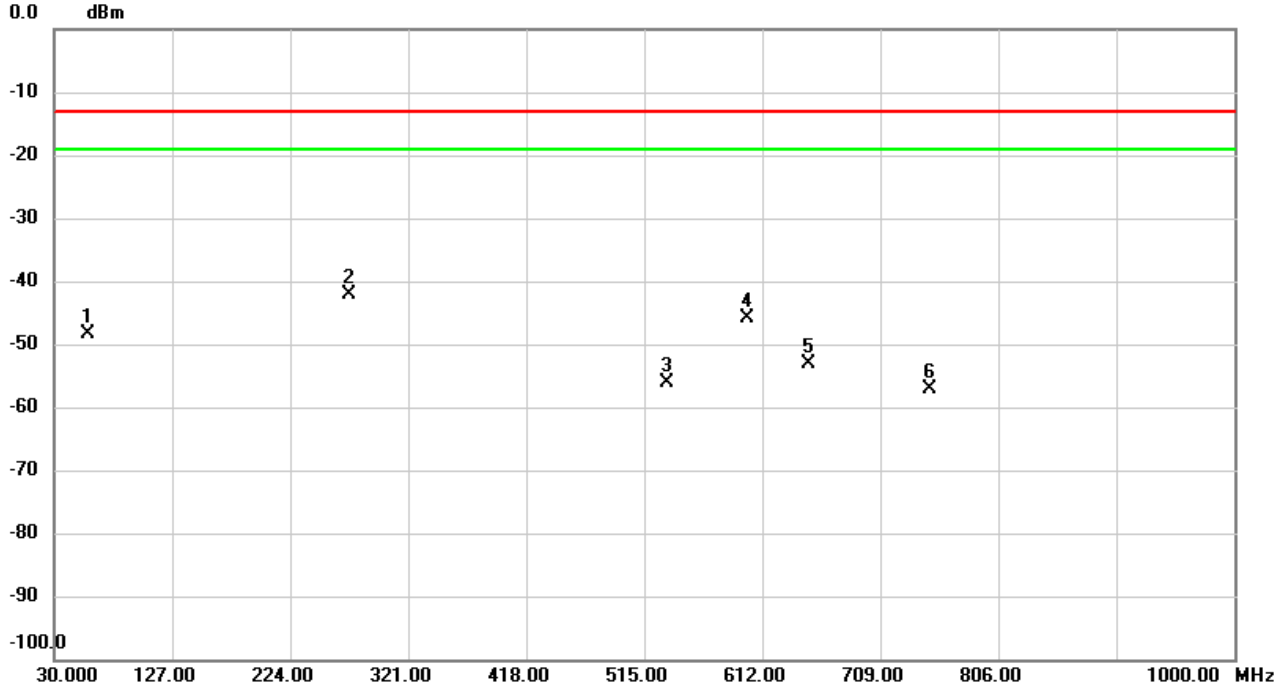


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	1891.037	-15.48	40.79	25.31	33.01	-7.70	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX C RADIATED SPURIOUS EMISSIONS

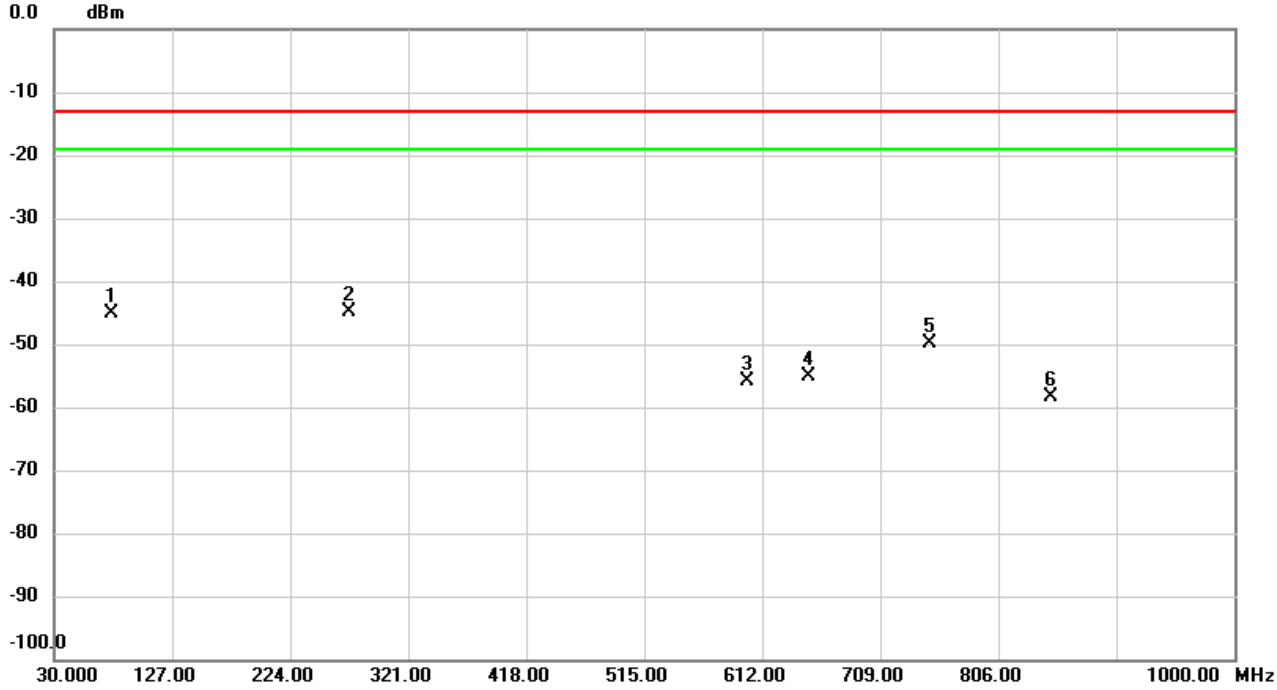
Test Mode	LTE Band 2	Test Date	2021/8/24
Test Channel	CH 18900	Polarization	Vertical
Temp	23°C	Hum.	59%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1		57.5803	-47.11	-1.23	-48.34	-13.00	-35.34	peak	
2	*	272.0150	-49.85	7.67	-42.18	-13.00	-29.18	peak	
3		533.2360	-63.54	7.40	-56.14	-13.00	-43.14	peak	
4		600.0043	-58.55	12.71	-45.84	-13.00	-32.84	peak	
5		649.9917	-66.35	13.27	-53.08	-13.00	-40.08	peak	
6		749.9986	-68.36	11.17	-57.19	-13.00	-44.19	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

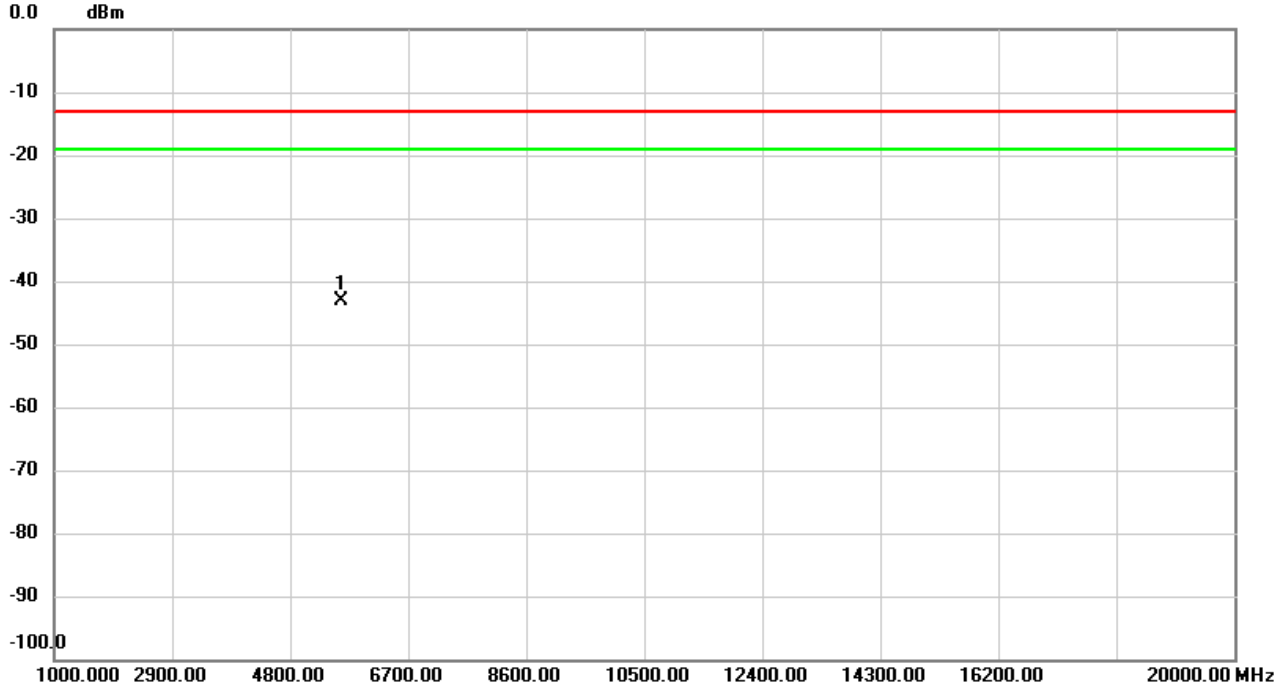
Test Mode	LTE Band 2	Test Date	2021/8/24
Test Channel	CH 18900	Polarization	Horizontal
Temp	23°C	Hum.	59%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1		76.6893	-50.27	5.24	-45.03	-13.00	-32.03	peak	
2	*	272.5323	-44.75	0.00	-44.75	-13.00	-31.75	peak	
3		600.0043	-63.13	7.25	-55.88	-13.00	-42.88	peak	
4		649.9917	-62.38	7.15	-55.23	-13.00	-42.23	peak	
5		749.9986	-62.64	12.76	-49.88	-13.00	-36.88	peak	
6		849.9410	-74.87	16.42	-58.45	-13.00	-45.45	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

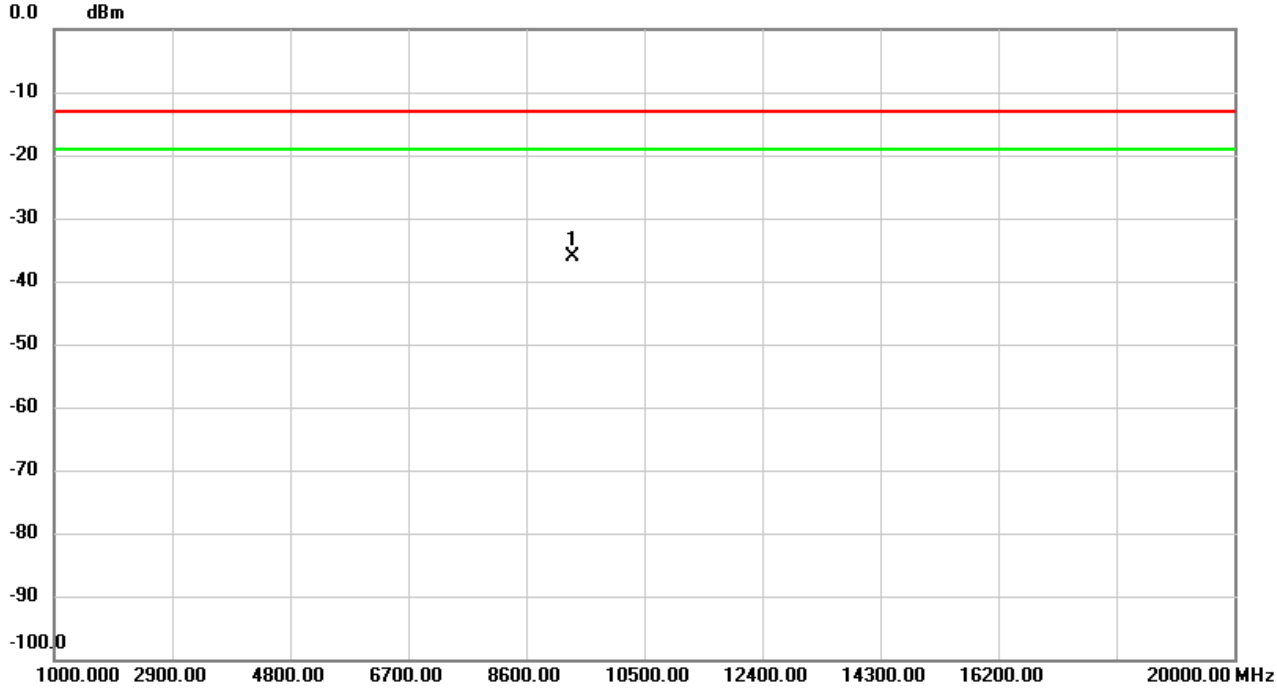
Test Mode	LTE Band 2	Test Date	2021/8/24
Test Channel	CH 18900	Polarization	Vertical
Temp	23°C	Hum.	59%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	5613.833	-45.32	2.14	-43.18	-13.00	-30.18	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	LTE Band 2	Test Date	2021/8/24
Test Channel	CH 18900	Polarization	Horizontal
Temp	23°C	Hum.	59%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	9356.200	-48.85	12.65	-36.20	-13.00	-23.20	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

End of Test Report