VARIANT FCC TEST REPORT

(PART 24)

Applicant:	Fibocom Wireless Inc.
Address:	1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China.

Manufacturer or Supplier:	Fibocom Wireless Inc.
Address:	1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China.
Product:	LTE module
Brand Name:	Fibocom
Model Name:	L850-GL
FCC ID:	ZMOL850GLD-D1
Date of tests:	Jan. 17, 2022 ~ Jan. 19, 2022
The tests have been carried out according to the requirements of the following standard:	
☒ **FCC PART 24, Subpart E** ☒ **FCC PART 2** ☒ **ANSI/TIA/EIA-603-D** ☒ **ANSI/TIA/EIA-603-E** ☒ **ANSI C63.26-2015**	
CONCLUSION: The submitted sample was found to COMPLY with the test requirement	

Prepared by Simon Wang Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
Simon Date: Jan. 19, 2022	Luke Lu Date: Jan. 19, 2022

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF180704C01-1	Original release	Jul. 19, 2018
W7L-181207W001RF02	Based on the original report RF180704C01-1 Changing FCC ID	Dec. 14, 2018
W7L-220113W003RF02	Based on the original report W7L-181207W001RF02 Changing components	Jan. 19, 2022

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 24 & Part 2		
STANDARD SECTION	**TEST TYPE**	**RESULT**
2.1046 24.232	Equivalent Isotropic Radiated Power	Compliance (See Note 1)
2.1055 24.235	Frequency Stability	(See Note 2)
2.1049 24.238(b)	Occupied Bandwidth	(See Note 2)
24.232(d)	Peak to average ratio	(See Note 2)
24.238(b)	Band Edge Measurements	(See Note 2)
2.1051 24.238	Conducted Spurious Emissions	(See Note 2)
2.1053 24.238	Radiated Spurious Emissions	Compliance (See Note 1)

NOTE:
1. Per the change notice provide by manufactory, the difference is changing components, all the change no effect any RF parameter, Therefore only verify the power and radiated emission worse case. The report only show the verify test data.

2. Please refer to original report W7L-181207W001RF02

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	LTE module	
BRAND NAME	Fibocom	
MODEL NAME	L850-GL	
NOMINAL VOLTAGE	3.3Vdc (Form Host Equipment)	
MODULATION TYPE	**WCDMA:** QPSK **LTE Band 2:** QPSK, 16QAM	
FREQUENCY RANGE	**WCDMA**	1852.4MHz ~ 1907.6MHz
	LTE Band 2 **Channel Bandwidth: 1.4MHz**	1850.7MHz ~ 1909.3MHz
	LTE Band 2 **Channel Bandwidth: 3MHz**	1851.5MHz ~ 1908.5MHz
	LTE Band 2 **Channel Bandwidth: 5MHz**	1852.5MHz ~ 1907.5MHz
	LTE Band 2 **Channel Bandwidth: 10MHz**	1855.0MHz ~ 1905.0MHz
	LTE Band 2 **Channel Bandwidth: 15MHz**	1857.5MHz ~ 1902.5MHz
	LTE Band 2 **Channel Bandwidth: 20MHz**	1860.0MHz ~ 1900.0MHz
MAX. EIRP POWER	**WCDMA**	590.20mW
	LTE Band 2 **Channel Bandwidth: 1.4MHz**	612.35mW
	LTE Band 2 **Channel Bandwidth: 3MHz**	598.41mW
	LTE Band 2 **Channel Bandwidth: 5MHz**	599.79mW
	LTE Band 2 **Channel Bandwidth: 10MHz**	595.66mW
	LTE Band 2 **Channel Bandwidth: 15MHz**	605.34mW
	LTE Band 2 **Channel Bandwidth: 20MHz**	606.74mW

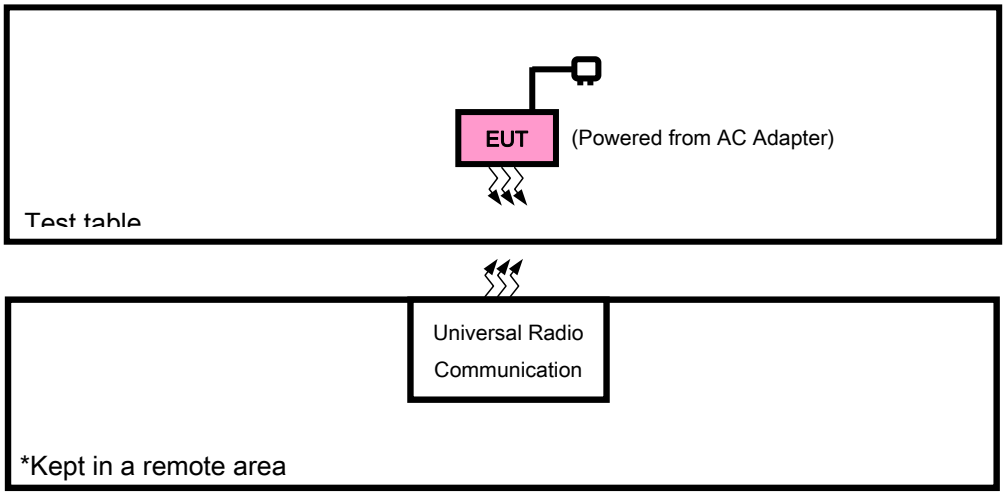
EMISSION DESIGNATOR	**WCDMA**	4M08F9W
	LTE Band 2 Channel Bandwidth: 1.4MHz	1M09G7D
	LTE Band 2 Channel Bandwidth: 3MHz	2M71G7D
	LTE Band 2 Channel Bandwidth: 5MHz	4M50W7D
	LTE Band 2 Channel Bandwidth: 10MHz	9M90G7D
	LTE Band 2 Channel Bandwidth: 15MHz	13M49W7D
	LTE Band 2 Channel Bandwidth: 20MHz	18M00G7D
ANTENNA TYPE	External Antenna with 5.0 dBi gain	
HW VERSION	V1.0.4	
SW VERSION	18500.5001.00.05.27.12	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	N/A	
EXTREME TEMPERATURE	-10-55 ℃	
EXTREME VOLTAGE	3.4V- 4.4V	

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

2.2 CONFIGURATION OF SYSTEM UNDER TEST

FOR RADIATION EMISSION TEST



2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	DC source	Kikusui/JP	PMX18-5A	0000001	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	DC Line: Unshielded, Detachable 1.0m

2.4 TEST ITEM AND TEST CONFIGURATION

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports The worst case in EIRP and radiated emission was found when positioned on Y-plane for WCDMA/ LTE. Following channel(s) was (were) selected for the final test as listed below:

DESCRIPTION
EUT + AC Adapter with WCDMA or LTE link

WCDMA

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
EIRP	9262 to 9538	9262, 9400, 9538	WCDMA

LTE BAND 2

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
EIRP	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK,16QAM	1 RB / 0 RB Offset
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK,16QAM	1 RB / 0 RB Offset
	18625 to 19175	18625, 18900, 19175	5MHz	QPSK,16QAM	1 RB / 0 RB Offset
	18650 to 19150	18650, 18900, 19150	10MHz	QPSK,16QAM	1 RB / 0 RB Offset
	18675 to 19125	18675, 18900, 19125	15MHz	QPSK,16QAM	1 RB / 0 RB Offset
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK,16QAM	1 RB / 0 RB Offset
Radiated Spurious Emissions	18607 to 19193	18900	1.4MHz	QPSK	1 RB / 0 RB Offset
	18615 to 19185	18900	3MHz	QPSK	1 RB / 0 RB Offset
	18625 to 19175	18900	5MHz	QPSK	1 RB / 0 RB Offset
	18650 to 19150	18900	10MHz	QPSK	1 RB / 0 RB Offset
	18675 to 19125	18675, 18900, 19125	15MHz	QPSK	1 RB / 0 RB Offset
	18700 to 19100	18900	20MHz	QPSK	1 RB / 0 RB Offset

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
EIRP	25deg. C, 57%RH	DC 3.3V	Jace Hu
RADIATED EMISSION	23deg. C, 70%RH	DC 3.3V	Jace Hu

2.5 EUT OPERATING CONDITIONS

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

2.6 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 24

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-D

ANSI/TIA/EIA-603-E

ANSI C63.26-2015

NOTE: All test items have been performed and recorded as per the above standards.

3 TEST TYPES AND RESULTS

3.1 OUTPUT POWER MEASUREMENT

3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

Mobile and portable stations are limited to 2 watts EIRP.

3.1.2 TEST PROCEDURES

EIRP MEASUREMENT:

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for determing the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

ERP or EIRP = $P_{Meas} + G_T – L_C$

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively

(expressed in the same units as P_{Meas}, typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

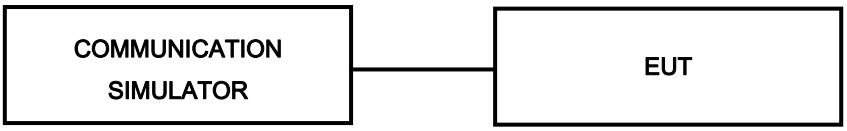
CONDUCTED POWER MEASUREMENT:

The EUT was set up for the maximum power with WCDMA 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.

3.1.3 TEST SETUP

EIRP / ERP Measurement:

CONDUCTED POWER MEASUREMENT:



3.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

Band	WCDMA II			Max. Tune-up Power
Channel	9262	9400	9538	
Frequency	1852.4	1880	1907.6	
RMC 12.2K	22.69	22.62	22.71	24.5
HSDPA Subtest-1	22.53	22.50	22.70	23.5
HSDPA Subtest-2	22.54	22.49	22.67	23.5
HSDPA Subtest-3	21.94	21.92	22.21	23.0
HSDPA Subtest-4	22.02	21.99	22.09	23.0
HSUPA Subtest-1	22.47	22.46	22.72	23.5
HSUPA Subtest-2	20.56	20.49	20.73	21.5
HSUPA Subtest-3	21.59	21.55	21.71	22.5
HSUPA Subtest-4	20.53	20.49	20.77	21.5
HSUPA Subtest-5	22.55	22.52	22.77	23.5

LTE BAND 2

Band/BW	Modulation	RB Size	RB Offset	Low CH 18607 Frequency 1850.7 MHz	Mid CH 18900 Frequency 1880 MHz	High CH 19193 Frequency 1909.3 MHz	MPR
2/ 1.4	QPSK	1	0	22.75	22.71	22.50	0
		1	2	22.47	22.48	22.35	0
		1	5	22.70	22.69	22.54	0
		3	0	22.32	22.34	22.44	0
		3	1	22.87	22.84	22.61	0
		3	3	22.51	22.52	22.61	0
		6	0	21.94	21.81	21.80	1
	16QAM	1	0	21.54	21.59	21.38	1
		1	2	21.55	21.47	21.54	1
		1	5	21.36	21.46	21.42	1
		3	0	21.23	21.05	21.18	1
		3	1	20.97	21.17	21.02	1
		3	3	21.11	21.02	21.10	1
		6	0	20.28	20.21	20.01	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 18615 Frequency 1851.5 MHz	Mid CH 18900 Frequency 1880 MHz	High CH 19185 Frequency 1908.5 MHz	MPR
2/ 3	QPSK	1	0	22.77	22.73	22.49	0
		1	7	22.43	22.49	22.35	0
		1	14	22.66	22.69	22.54	0
		8	0	21.31	21.37	21.44	1
		8	3	21.80	21.84	21.63	1
		8	7	21.48	21.59	21.65	1
		15	0	21.91	21.82	21.74	1
	16QAM	1	0	21.51	21.65	21.41	1
		1	7	21.52	21.50	21.52	1
		1	14	21.39	21.46	21.42	1
		8	0	20.19	20.06	20.18	2
		8	3	20.02	20.12	20.05	2
		8	7	20.13	20.00	20.06	2
		15	0	20.28	20.15	20.04	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 18625 Frequency 1852.5 MHz	Mid CH 18900 Frequency 1880 MHz	High CH 19175 Frequency 1907.5 MHz	MPR
2/ 5	QPSK	1	0	22.78	22.68	22.50	0
		1	12	22.48	22.46	22.35	0
		1	24	22.67	22.68	22.58	0
		12	0	21.34	21.37	21.41	1
		12	6	21.80	21.85	21.64	1
		12	13	21.52	21.55	21.66	1
		25	0	21.89	21.85	21.77	1
	16QAM	1	0	21.52	21.61	21.41	1
		1	12	21.49	21.53	21.51	1
		1	24	21.39	21.46	21.41	1
		12	0	20.19	20.04	20.15	2
		12	6	19.99	20.16	20.01	2
		12	13	20.08	20.02	20.09	2
		25	0	20.28	20.16	20.01	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 18650 Frequency 1855 MHz	Mid CH 18900 Frequency 1880 MHz	High CH 19150 Frequency 1905 MHz	MPR
2/ 10	QPSK	1	0	22.75	22.71	22.50	0
		1	24	22.48	22.46	22.36	0
		1	49	22.64	22.72	22.54	0
		25	0	21.35	21.36	21.44	1
		25	12	21.86	21.79	21.64	1
		25	25	21.50	21.52	21.65	1
		50	0	21.94	21.85	21.74	1
	16QAM	1	0	21.52	21.58	21.37	1
		1	24	21.54	21.49	21.54	1
		1	49	21.39	21.47	21.38	1
		25	0	20.21	20.02	20.21	2
		25	12	20.03	20.10	20.06	2
		25	25	20.07	20.03	20.06	2
		50	0	20.32	20.15	20.05	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 18675 Frequency 1857.5 MHz	Mid CH 18900 Frequency 1880 MHz	High CH 19125 Frequency 1902.5 MHz	MPR
2/ 15	QPSK	1	0	22.82	22.71	22.47	0
		1	37	22.46	22.51	22.31	0
		1	74	22.70	22.75	22.55	0
		36	0	21.32	21.37	21.45	1
		36	19	21.87	21.84	21.64	1
		36	39	21.48	21.53	21.65	1
		75	0	21.94	21.83	21.79	1
	16QAM	1	0	21.56	21.65	21.37	1
		1	37	21.53	21.50	21.54	1
		1	74	21.35	21.52	21.40	1
		36	0	20.25	20.02	20.22	2
		36	19	19.97	20.14	20.02	2
		36	39	20.12	20.01	20.09	2
		75	0	20.33	20.18	19.98	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 18700 Frequency 1860 MHz	Mid CH 18900 Frequency 1880 MHz	High CH 19100 Frequency 1900 MHz	MPR
2/ 20	QPSK	1	0	22.83	22.75	22.55	0
		1	50	22.50	22.54	22.37	0
		1	99	22.72	22.76	22.59	0
		50	0	21.38	21.42	21.46	1
		50	25	21.88	21.86	21.69	1
		50	50	21.56	21.60	21.67	1
		100	0	21.95	21.87	21.82	1
	16QAM	1	0	21.59	21.66	21.43	1
		1	50	21.57	21.55	21.56	1
		1	99	21.41	21.54	21.43	1
		50	0	20.27	20.10	20.23	2
		50	25	20.05	20.18	20.07	2
		50	50	20.15	20.07	20.11	2
		100	0	20.34	20.23	20.06	2

EIRP

WCDMA

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
9262	1852.4	22.69	5	27.69	587.49	2
9400	1880	22.62	5	27.62	578.10	2
9538	1907.6	22.71	5	27.71	590.20	2

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

LTE BAND 2
CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	22.87	5	27.87	612.35	2
18900	1880	22.84	5	27.84	608.14	2
19193	1909.3	22.61	5	27.61	576.77	2

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	21.55	5	26.55	451.86	2
18900	1880	21.59	5	26.59	456.04	2
19193	1909.3	21.54	5	26.54	450.82	2

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	22.77	5	27.77	598.41	2
18900	1880	22.73	5	27.73	592.93	2
19185	1908.5	22.54	5	27.54	567.54	2

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	21.52	5	26.52	448.75	2
18900	1880	21.65	5	26.65	462.38	2
19185	1908.5	21.52	5	26.52	448.75	2

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	22.78	5	27.78	599.79	2
18900	1880	22.68	5	27.68	586.14	2
19175	1907.5	22.58	5	27.58	572.8	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	21.52	5	26.52	448.75	2
18900	1880	21.61	5	26.61	458.14	2
19175	1907.5	21.51	5	26.51	447.71	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855	22.75	5	27.75	595.66	2
18900	1880	22.72	5	27.72	591.56	2
19150	1905	22.54	5	27.54	567.54	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855	21.54	5	26.54	450.82	2
18900	1880	21.58	5	26.58	454.99	2
19150	1905	21.54	5	26.54	450.82	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	22.82	5	27.82	605.34	2
18900	1880	22.75	5	27.75	595.66	2
19125	1902.5	22.55	5	27.55	568.85	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	21.56	5	26.56	452.9	2
18900	1880	21.65	5	26.65	462.38	2
19125	1902.5	21.54	5	26.54	450.82	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	22.83	5	27.83	606.74	2
18900	1880	22.76	5	27.76	597.04	2
19100	1900	22.59	5	27.59	574.12	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	21.59	5	26.59	456.04	2
18900	1880	21.66	5	26.66	463.45	2
19100	1900	21.56	5	26.56	452.9	2

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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.

3.2.2 TEST PROCEDURES

a. Substitution method is used for E.I.R.P measurement. 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.

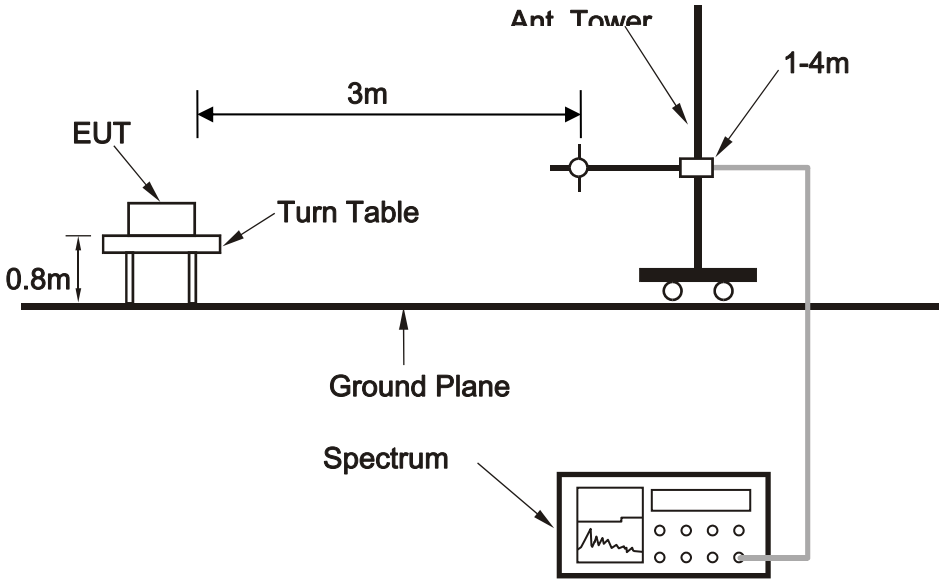
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

3.2.3 DEVIATION FROM TEST STANDARD

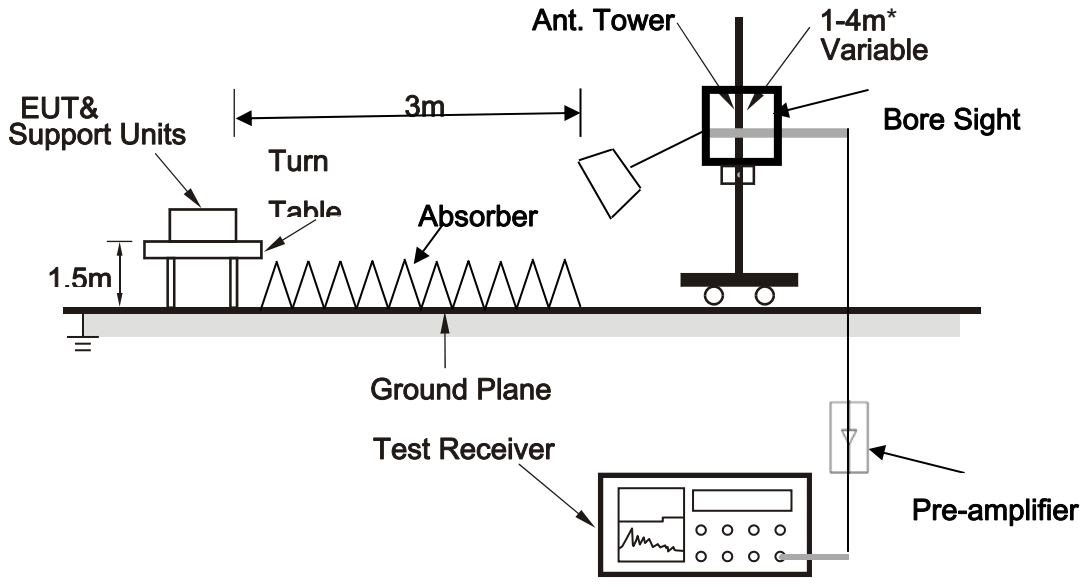
No deviation

3.2.4 TEST SETUP

< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.2.5 TEST RESULTS

BELOW 1GHz WORST-CASE DATA

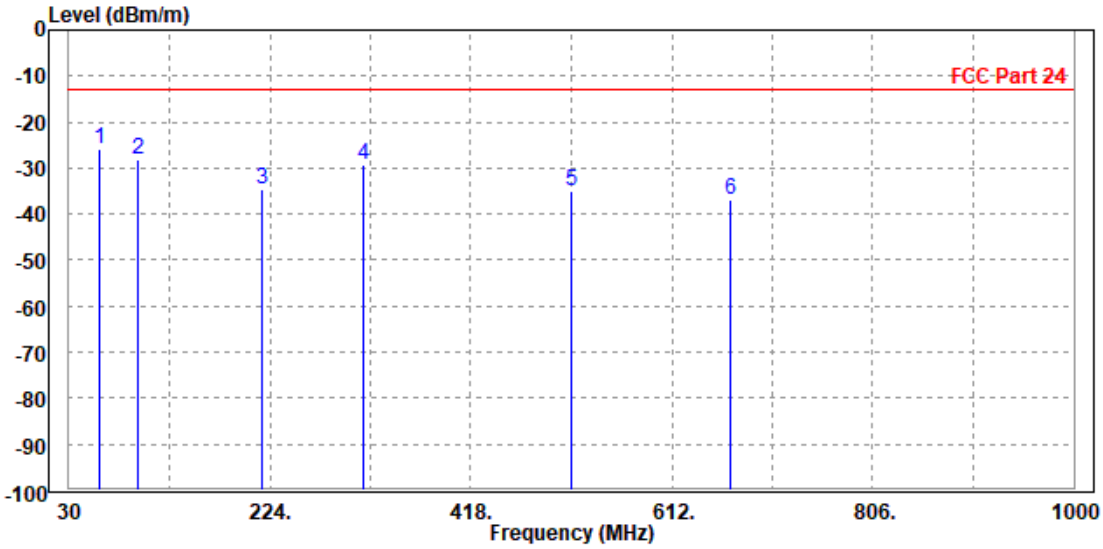
30 MHz – 1GHz data:

LTE Band 2

CHANNEL BANDWIDTH: 10MHz / QPSK

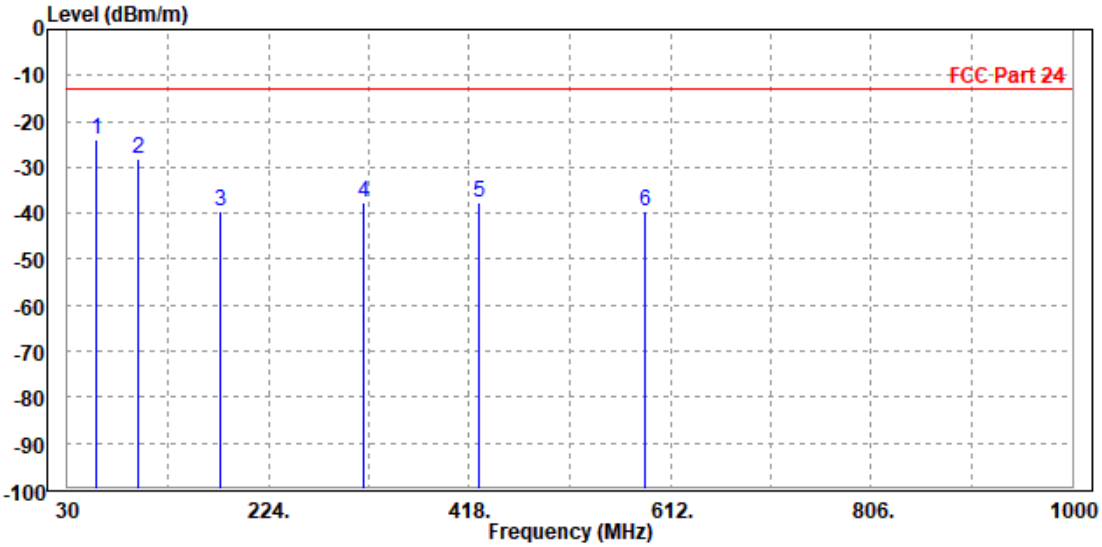
MODE	TX channel 18900	**FREQUENCY RANGE**	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	59.100	-25.92	-33.61	-13.00	-12.92	7.69	Peak	Horizontal
2	95.960	-28.08	-36.12	-13.00	-15.08	8.04	Peak	Horizontal
3	216.240	-34.50	-46.21	-13.00	-21.50	11.71	Peak	Horizontal
4	314.210	-29.26	-43.67	-13.00	-16.26	14.41	Peak	Horizontal
5	515.000	-35.16	-54.16	-13.00	-22.16	19.00	Peak	Horizontal
6	668.260	-36.99	-59.06	-13.00	-23.99	22.07	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	58.130	-23.97	-32.08	-13.00	-10.97	8.11	Peak	Vertical
2	98.870	-28.27	-36.68	-13.00	-15.27	8.41	Peak	Vertical
3	178.410	-39.66	-50.06	-13.00	-26.66	10.40	Peak	Vertical
4	315.180	-37.78	-53.11	-13.00	-24.78	15.33	Peak	Vertical
5	427.700	-37.49	-55.22	-13.00	-24.49	17.73	Peak	Vertical
6	586.780	-39.57	-60.23	-13.00	-26.57	20.66	Peak	Vertical



ABOVE 1GHz DATA

Note: For higher frequency, the emission is too low to be detected.

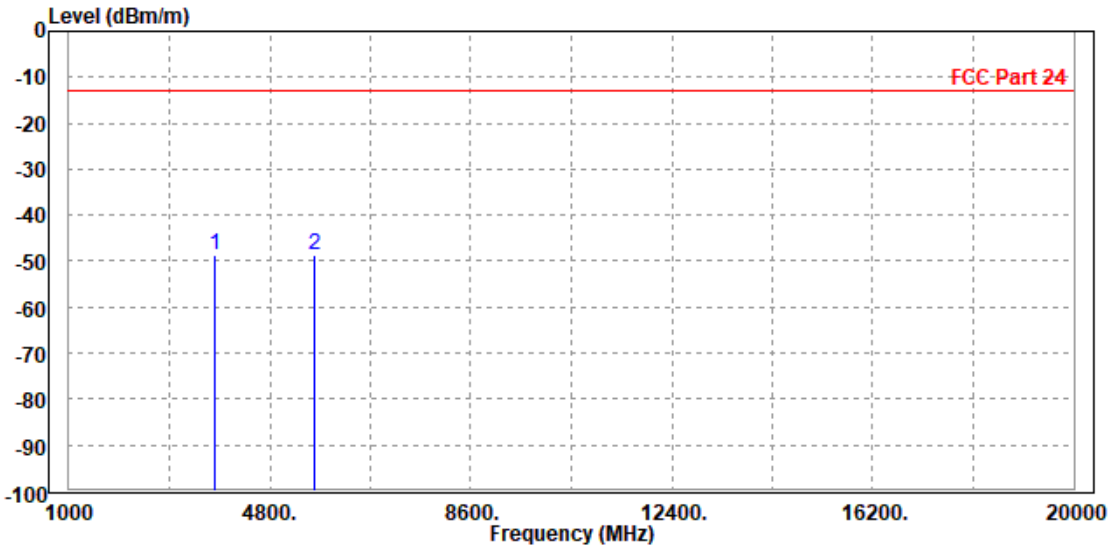
WORST-CASE DATA

LTE Band 2

CHANNEL BANDWIDTH: 1.4MHz / QPSK

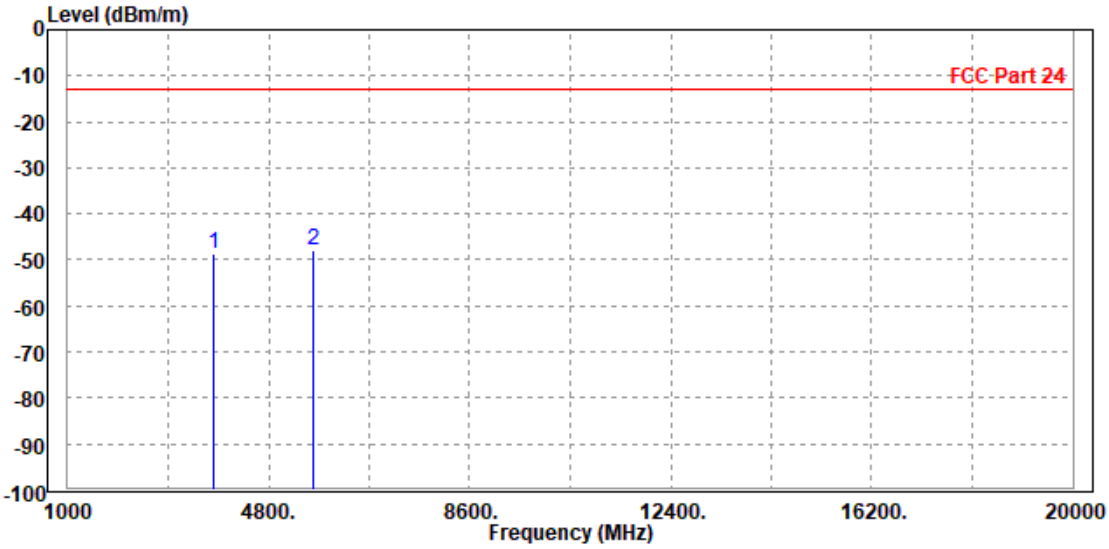
MODE	TX channel 18900	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-48.81	-57.66	-13.00	-35.81	8.85	Peak	Horizontal
2 PP	5640.000	-48.67	-59.15	-13.00	-35.67	10.48	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

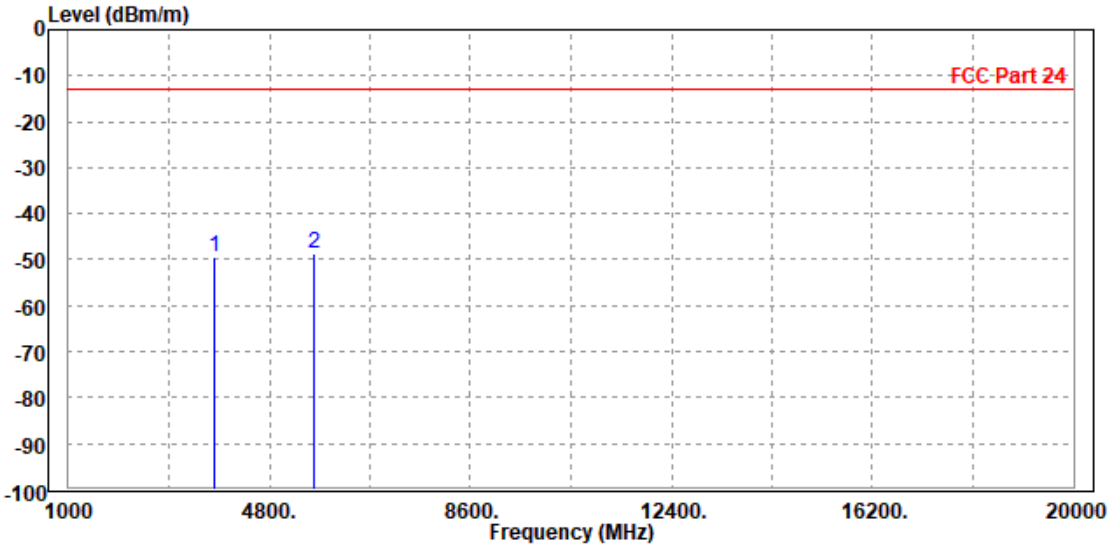
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-48.63	-57.90	-13.00	-35.63	9.27	Peak	Vertical
2 PP	5640.000	-47.95	-58.20	-13.00	-34.95	10.25	Peak	Vertical



CHANNEL BANDWIDTH: 3MHz / QPSK

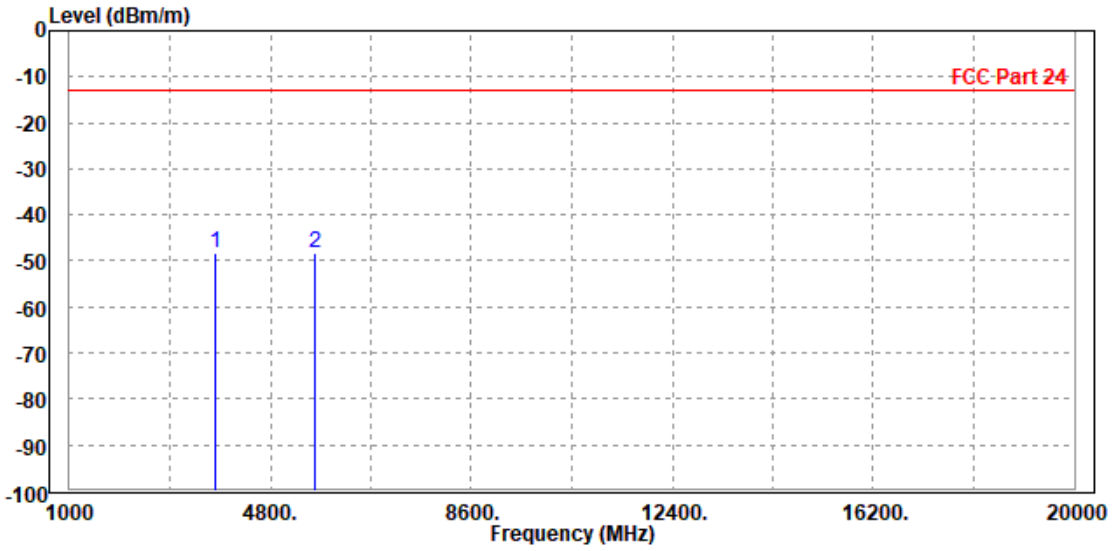
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-49.42	-58.27	-13.00	-36.42	8.85	Peak	Horizontal
2 PP	5640.000	-48.59	-59.07	-13.00	-35.59	10.48	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-48.44	-57.71	-13.00	-35.44	9.27	Peak	Vertical
2 PP	5640.000	-48.44	-58.69	-13.00	-35.44	10.25	Peak	Vertical

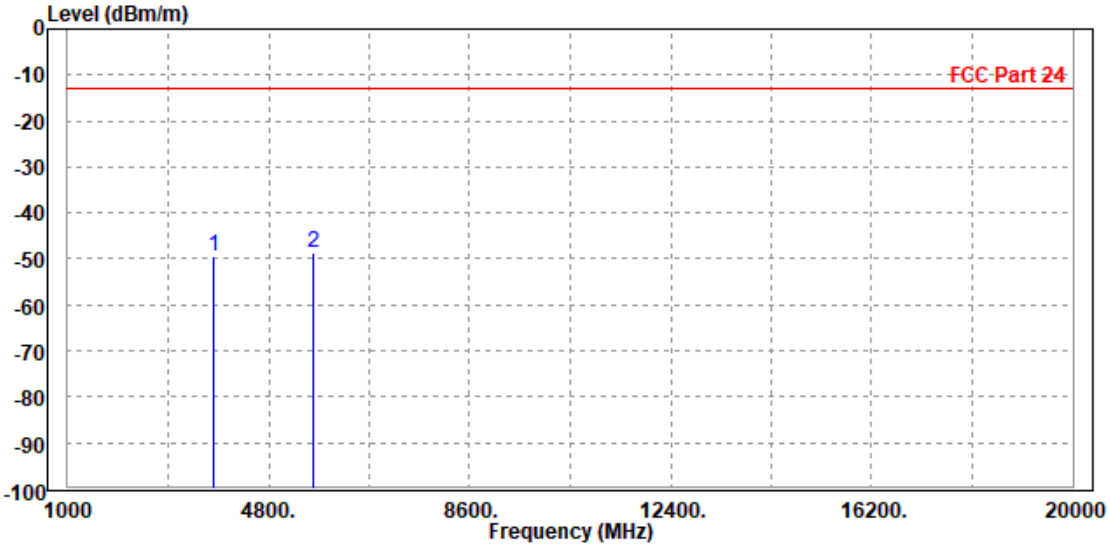


CHANNEL BANDWIDTH: 5MHz / QPSK

CH18900

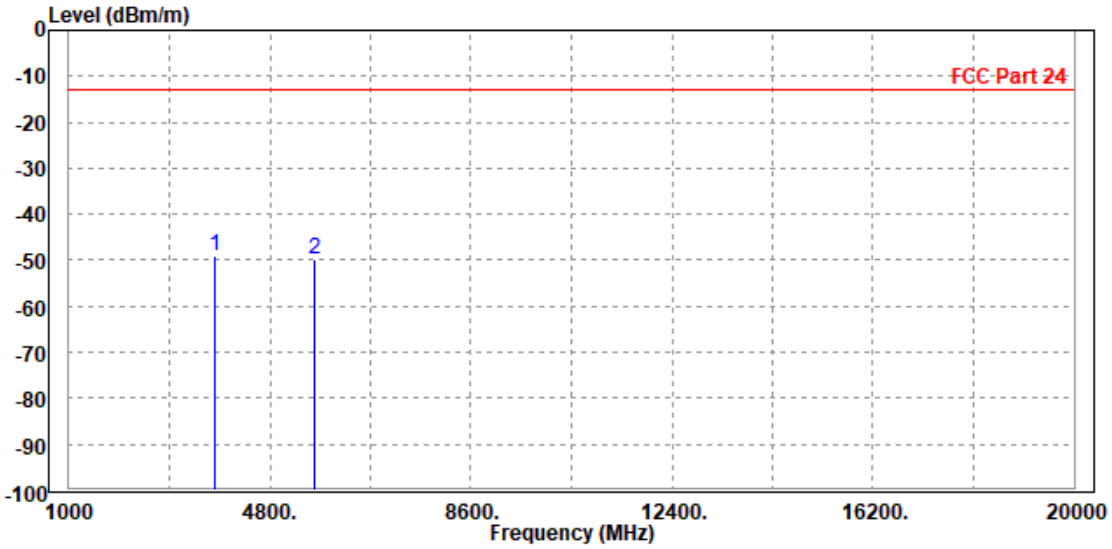
MODE	TX channel 18900	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-49.48	-58.33	-13.00	-36.48	8.85	Peak	Horizontal
2 PP	5640.000	-48.51	-58.99	-13.00	-35.51	10.48	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

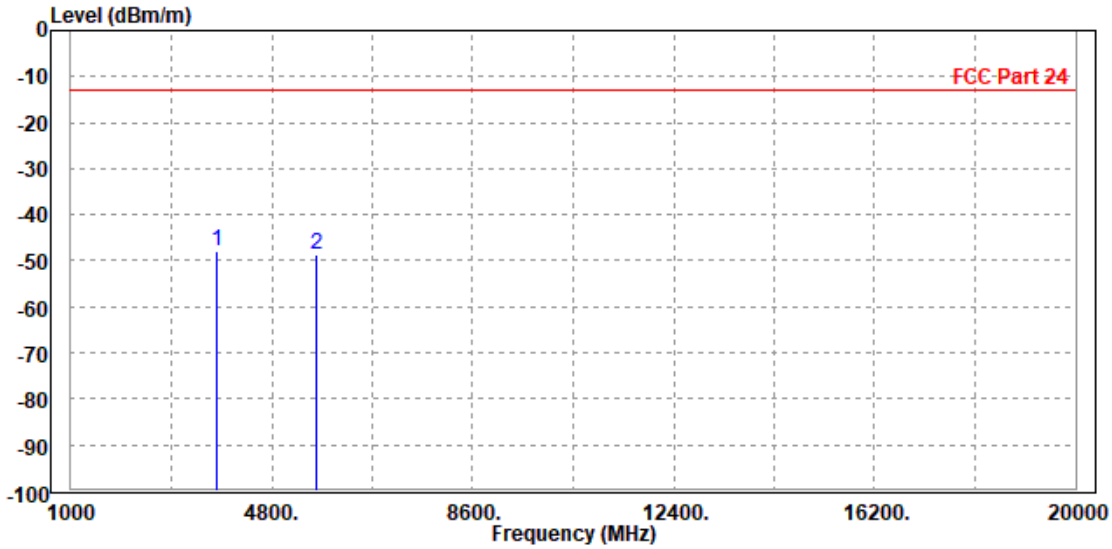
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3755.000	-48.90	-58.17	-13.00	-35.90	9.27	Peak	Vertical
2	5640.000	-49.76	-60.01	-13.00	-36.76	10.25	Peak	Vertical



CHANNEL BANDWIDTH: 10MHz / QPSK

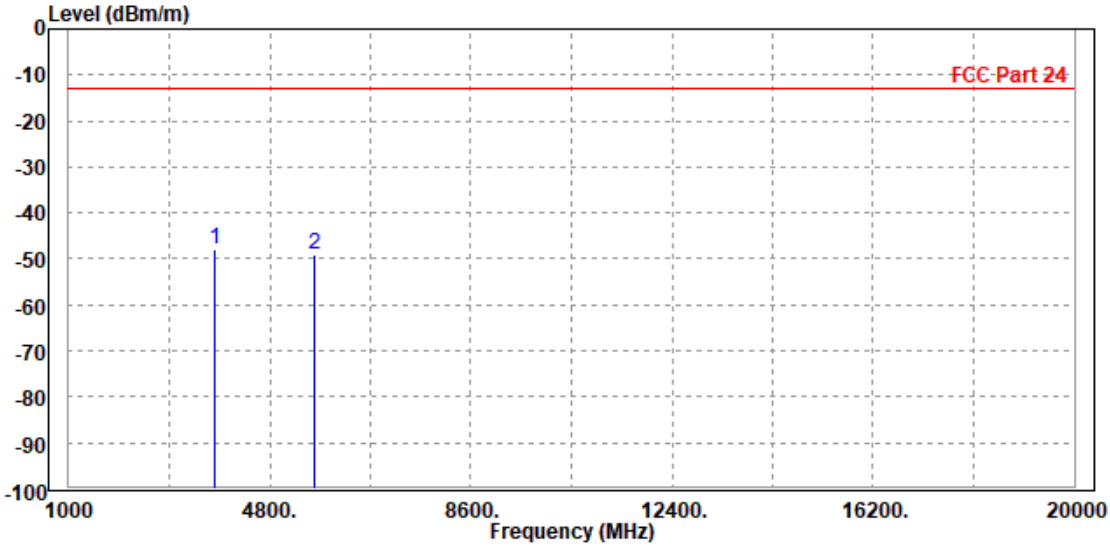
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3755.000	-47.94	-56.79	-13.00	-34.94	8.85	Peak	Horizontal
2	5640.000	-48.57	-59.05	-13.00	-35.57	10.48	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3755.000	-47.96	-57.23	-13.00	-34.96	9.27	Peak	Vertical
2	5640.000	-48.99	-59.24	-13.00	-35.99	10.25	Peak	Vertical

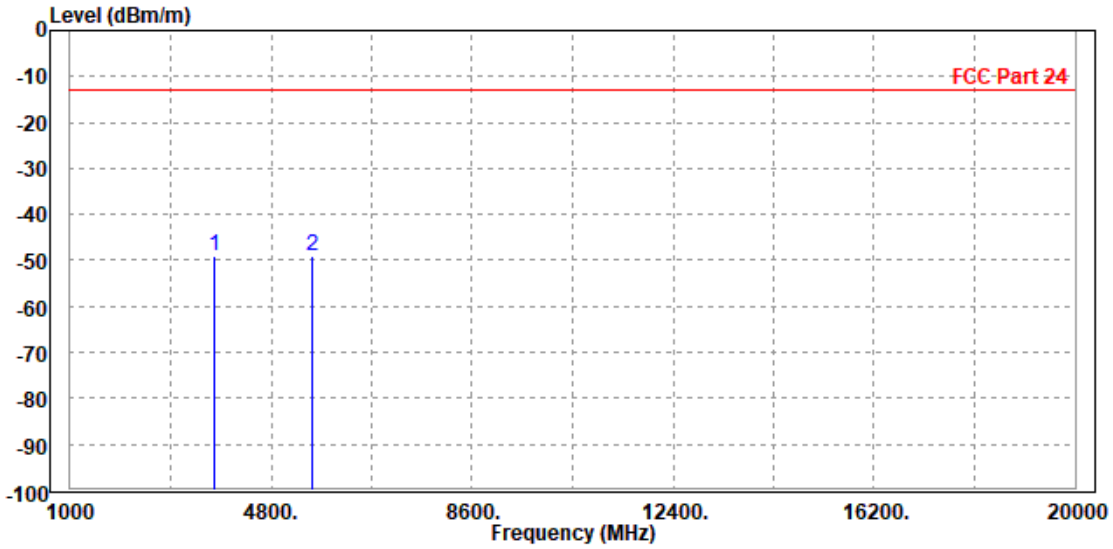


CHANNEL BANDWIDTH: 15MHz / QPSK

CH 18675

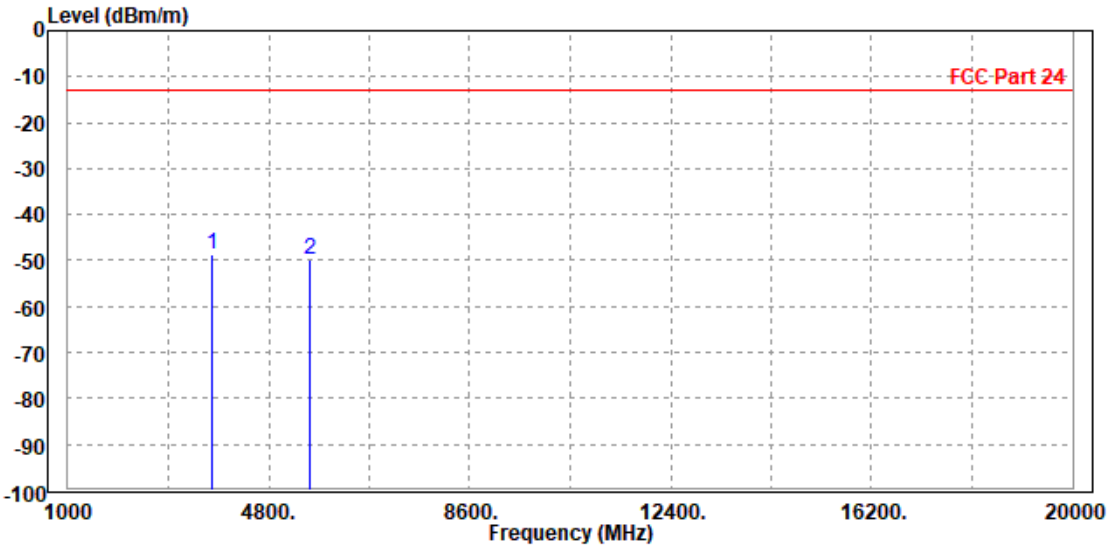
MODE	TX channel 18675	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3717.000	-48.92	-57.73	-13.00	-35.92	8.81	Peak	Horizontal
2	5572.500	-49.04	-59.30	-13.00	-36.04	10.26	Peak	Horizontal



MODE	TX channel 18675	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

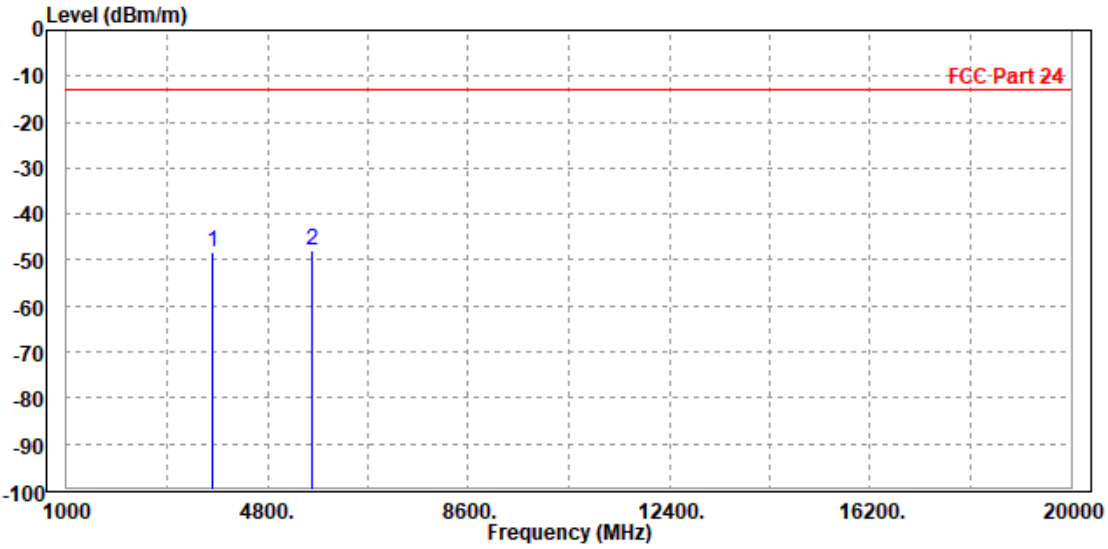
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3717.000	-48.66	-57.92	-13.00	-35.66	9.26	Peak	Vertical
2	5572.500	-49.66	-59.65	-13.00	-36.66	9.99	Peak	Vertical



CH 18900

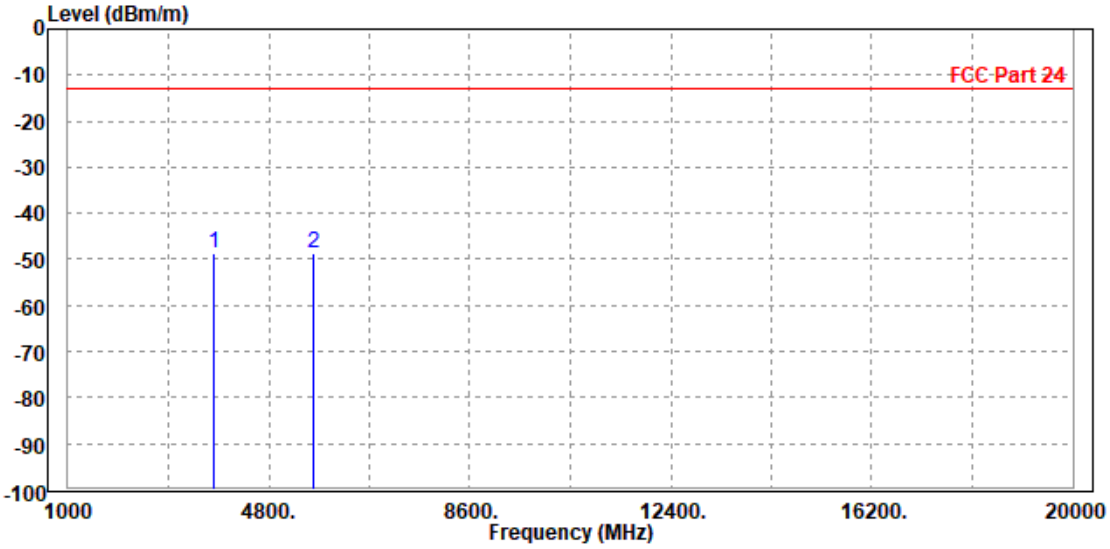
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-48.13	-56.98	-13.00	-35.13	8.85	Peak	Horizontal
2 PP	5640.000	-47.78	-58.26	-13.00	-34.78	10.48	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

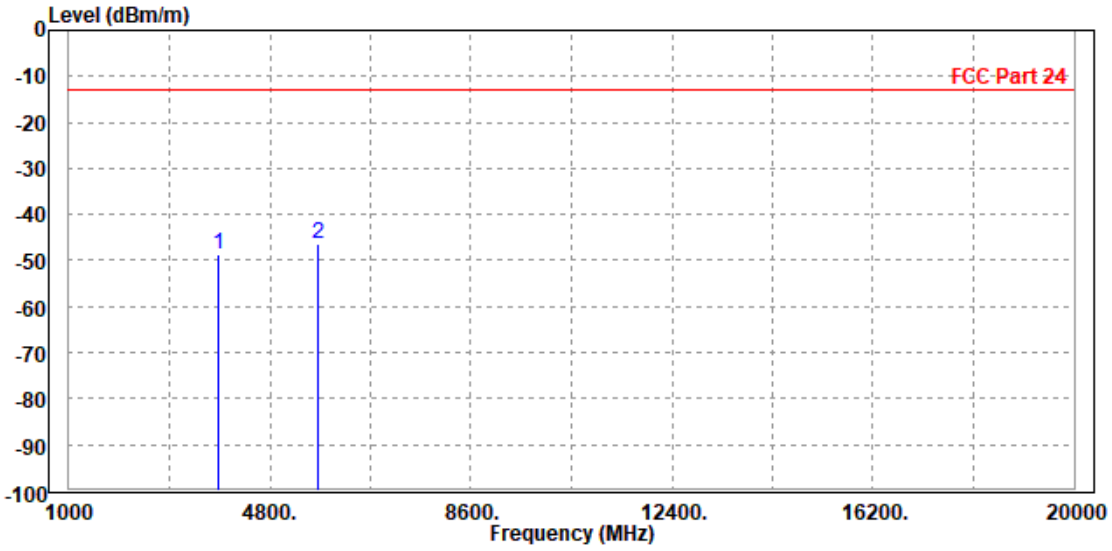
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3755.000	-48.57	-57.84	-13.00	-35.57	9.27	Peak	Vertical
2	5640.000	-48.83	-59.08	-13.00	-35.83	10.25	Peak	Vertical



CH 19125

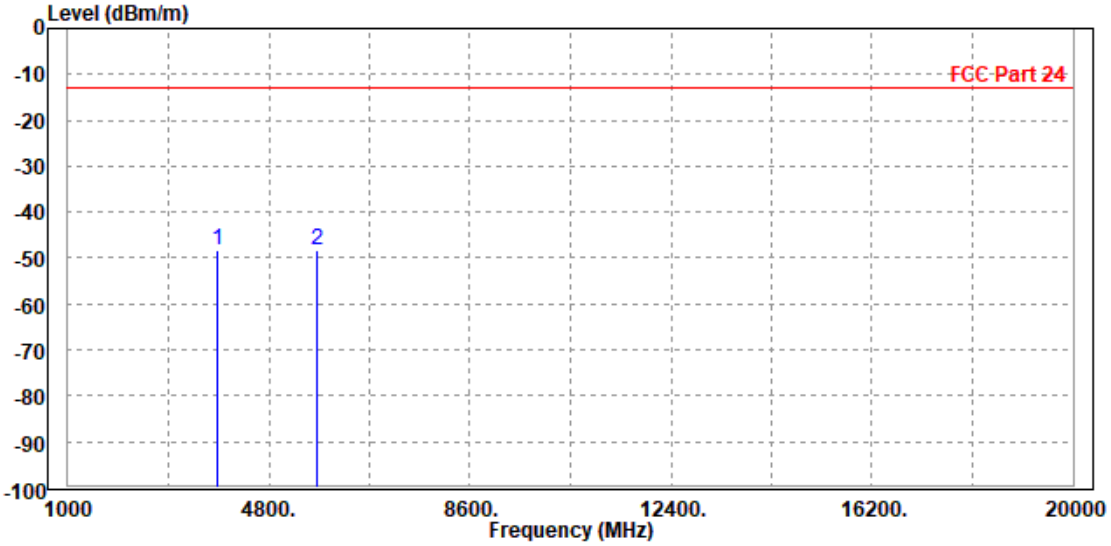
MODE	TX channel 19125	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3812.000	-48.68	-57.59	-13.00	-35.68	8.91	Peak	Horizontal
2 PP	5707.500	-46.25	-56.96	-13.00	-33.25	10.71	Peak	Horizontal



MODE	TX channel 19125	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

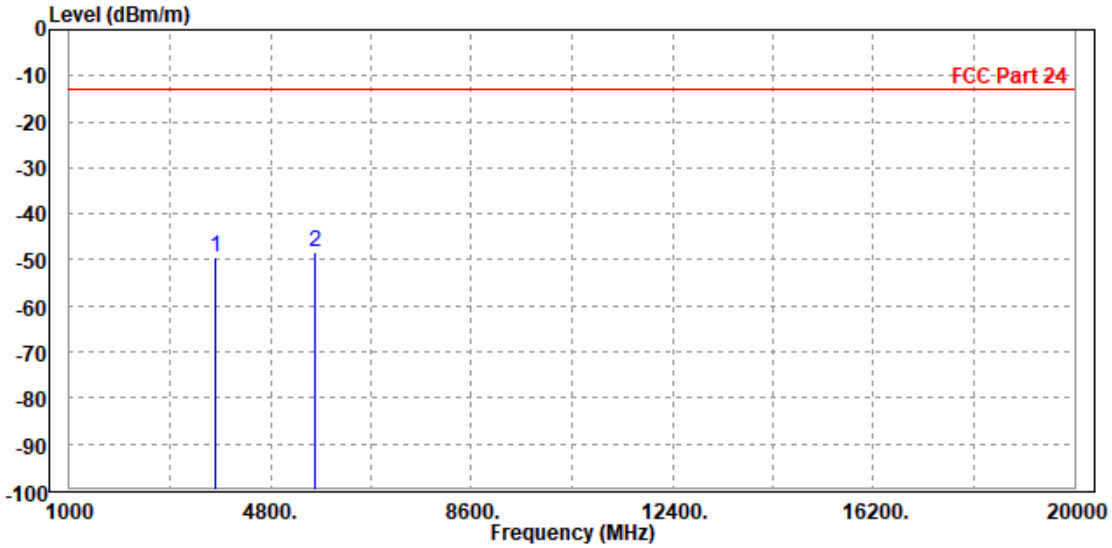
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3812.000	-48.27	-57.56	-13.00	-35.27	9.29	Peak	Vertical
2	5707.500	-48.32	-58.83	-13.00	-35.32	10.51	Peak	Vertical



CHANNEL BANDWIDTH: 20MHz / QPSK

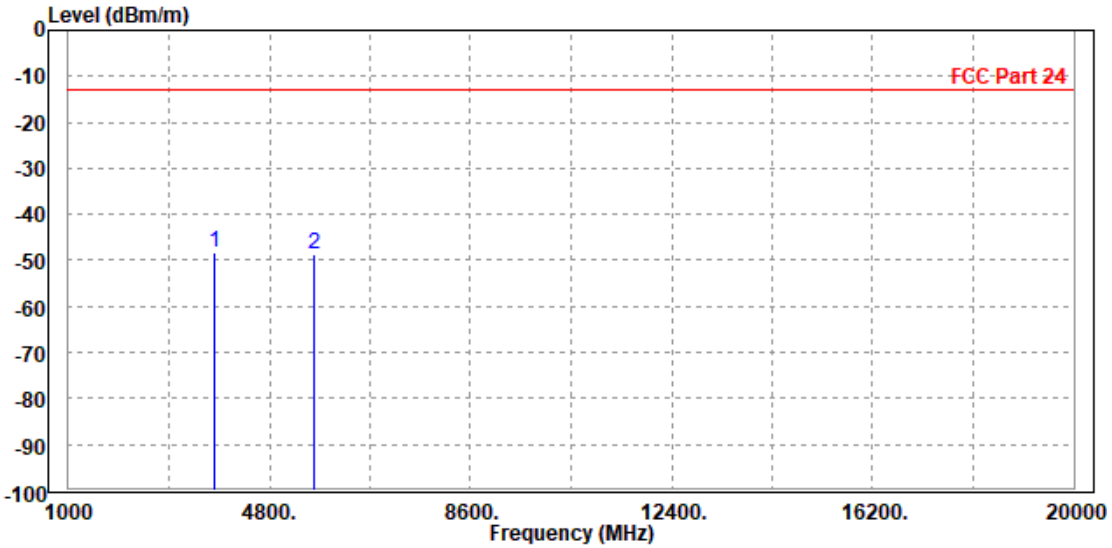
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-49.29	-58.14	-13.00	-36.29	8.85	Peak	Horizontal
2 PP	5640.000	-48.37	-58.85	-13.00	-35.37	10.48	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3755.000	-48.47	-57.74	-13.00	-35.47	9.27	Peak	Vertical
2	5640.000	-48.71	-58.96	-13.00	-35.71	10.25	Peak	Vertical



4 INFORMATION ON THE TESTING LABORATORIES

We, BV 7LAYERS COMMUNICATIONS TECHNOLOGY (SHENZHEN) CO. LTD., were founded in 2015 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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Email: customerservice.sw@bureauveritas.com
Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

5 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---