

VARIANT FCC TEST REPORT

(PART 22)

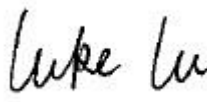
Applicant:	MUNIC
Address:	100 Avenue de Stalingrad 94800 Villejuif – France

Manufacturer or Supplier:	MUNIC
Address:	100 Avenue de Stalingrad 94800 Villejuif – France
Product:	Telematic embedded system
Brand Name:	MUNIC
Model Name:	C4D-4MUSAB_V8
FCC ID:	A6GC4D-4MUSABV8
Date of tests:	Apr. 24, 2022 ~ May. 06, 2022

The tests have been carried out according to the requirements of the following standard:

- ☒ **FCC PART 22, Subpart H** ☒ **FCC Part 2**
☒ **ANSI/TIA/EIA-603-D** ☒ **ANSI C63.26-2015**
☒ **ANSI/TIA/EIA-603-E**

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
	
Date: May. 06, 2022	Date: May. 06, 2022

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Test Report No.: W7L-P22040025RF03

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P21090017RF03	Original release	Nov. 17, 2021
W7L-P22040025RF03	Based on the original report W7L-P21090017RF03 Update components, In this report verify RSE worst case and conducted power, other test data is copied from the original test report W7L-P21090017RF03.	May. 06, 2022

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 22 & Part 2		
STANDARD SECTION	TEST TYPE	RESULT
2.1046 22.913 (a)	Effective Radiated Power	See Note
2.1055 22.355	Frequency Stability	See Note
2.1049 22.917 (b)	Occupied Bandwidth	See Note
22.913 (d)	Peak to average ratio*	See Note
22.917	Band Edge Measurements	See Note
2.1051 22.917	Conducted Spurious Emissions	See Note
2.1053 22.917	Radiated Spurious Emissions	Compliance

* Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01.

Note: Per the change notice provide by manufactory, the difference is changing components, all the change no effect any RF parameter. Therefore only verify the radiated emission worse case and show the verify test data on this report. More test details please refer from the original report W7L-P21090017RF03.

1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
Maximum Peak Output Power	$\pm 2.06\text{dB}$
Frequency Stability	$\pm 76.97\text{Hz}$
Radiated emissions (30MHz~1GMHz)	$\pm 4.98\text{dB}$
Radiated emissions (1GMHz ~6GMHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GMHz ~18GMHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GMHz ~40GMHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$



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Band Edge Measurements	±4.70dB
Peak to average ratio	±0.76dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Apr. 22,22	Apr. 21,23
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	Jun. 03,21	Jun. 02,22
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.05,21	Sep.04,22
Bilog Antenna	ETS-LINDGRE N	3143B	00161964	Feb. 24,22	Feb. 23,23
Horn Antenna	ETS-LINDGRE N	3117	00168692	Mar. 06,22	Mar. 05,23
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Aug. 25, 21	Aug. 24, 22
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 15,22	Feb. 14,23
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jun. 02,21	Jun. 01,22
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jun. 03,21	Jun. 02,22
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Apr. 22,21	Apr. 21,22
3m Semi-anechoic Chamber	ETS-LINDGRE N	9m*6m*6m	Euroshieldpn-CT0001143-1216	May. 19,20	May. 18,23
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	ADT	ADT_Radiated_V 7.6.15.9.2	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 03,21	Jun. 02,22
Power Meter	Anritsu	N1914A	MY52180044	Feb.19,22	Feb.18,23
Power Sensor	Agilent	E9304A H18	MY52050011	Feb.20,22	Feb.19,23
Temperature Chamber	ESPEC	SH-242	93000855	Jun. 02,21	Jun. 01,22
MXG Analog Microwave Signal Generator	KEYSIGHT	N5183A	MY50143024	Mar. 04,22	Mar. 05,23
Power Divider	MCLI/USA	PS2-15	24880	N/A	N/A

- NOTE:**
1. The calibration interval of the above test instruments is 12 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
 2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
 3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
 4. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Telematics Embedded System	
BRAND NAME	MUNIC	
MODEL NAME	C4D-4MUSAB_V8	
NOMINAL VOLTAGE	DC 13.7V	
MODULATION TYPE	GSM/GPRS/EDGE	GMSK, 8PSK
FREQUENCY RANGE	GSM/GPRS/EDGE	824.2MHz ~ 848.8MHz
MAX. ERP POWER	GSM	1180.32mW
	EDGE	259.42mW
EMISSION DESIGNATOR GGN	GSM	247KG7W
	EDGE	238KG7W
ANTENNA TYPE	Fixed Internal Antenna with 0.5dBi gain for GSM 850	
HW VERSION	HC4D-4MUSAB_V8.02	
SW VERSION	SC4D-4MUSAB_V8.02	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	N/A	
EXTREME TEMPERATURE	-30 - 50°C	
EXTREME VOLTAGE	8V-18V	

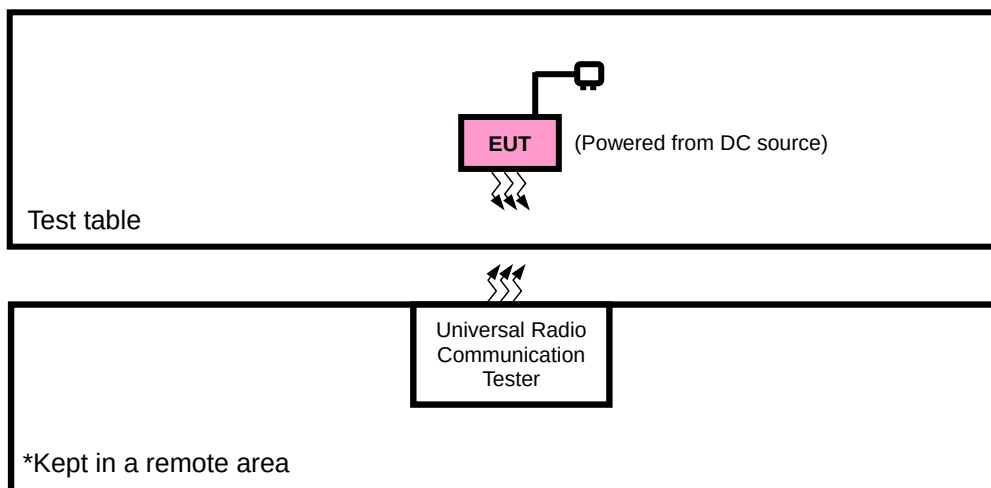
NOTE:

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

List of Accessory:

ACCESSORIES	BRAND	MODEL	SPECIFICATION
Battery	Howell	Li-polymer 552535H	Capacity : Li-ion, 450mAh

2.2 CONFIGURATION OF SYSTEM UNDER TEST FOR RADIATION EMISSION



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 ERP and radiated emission was found when positioned on X-plane for GSM /EDGE /LTE. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION
A	EUT + DC Source with GSM link

GSM MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
A	ERP	128 to 251	128, 189, 251	GSM,EDGE
A	FREQUENCY STABILITY	128 to 251	128, 251	GSM,EDGE
A	OCCUPIED BANDWIDTH	128 to 251	128, 189, 251	GSM,EDGE
A	BAND EDGE	128 to 251	128, 251	GSM,EDGE
A	CONDCUDED EMISSION	128 to 251	128, 189, 251	GSM,EDGE
A	RADIATED EMISSION	128 to 251	128, 189, 251	GSM,EDGE
A	PEAK TO AVERAGE RATIO	128 to 251	128, 189, 251	GSM,EDGE

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP	23deg. C, 70%RH	DC 13.7V	Jace Hu
FREQUENCY STABILITY	23deg. C, 70%RH	DC 13.7V	Jace Hu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC 13.7V	Jace Hu
BAND EDGE	23deg. C, 70%RH	DC 13.7V	Jace Hu
CONDCUDED EMISSION	23deg. C, 70%RH	DC 13.7V	Jace Hu
RADIATED EMISSION	23deg. C, 70%RH	DC 13.7V	Jace Hu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC 13.7V	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



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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 22

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 / Portable station are limited to 7 watts e.r.p.

3.1.2 TEST PROCEDURES

EIRP / ERP 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 determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_{\text{T}} - L_{\text{C}}$$

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	GSM850			Max. Tune-up Power
Channel	128	189	251	
Frequency	824.2	836.4	848.8	
GPRS (GMSK, 1Tx-slot)	32.29	32.18	32.37	33.0
GPRS (GMSK, 2Tx-slot)	32.14	32.08	32.25	33.0
GPRS (GMSK, 3Tx-slot)	30.89	30.87	31.03	32.0
GPRS (GMSK, 4Tx-slot)	29.49	29.59	29.48	30.5
EDGE (8PSK, 1Tx-slot)	25.79	25.78	25.70	26.0
EDGE (8PSK, 2Tx-slot)	25.48	25.65	25.64	26.0
EDGE (8PSK, 3Tx-slot)	25.26	25.43	25.05	26.0
EDGE (8PSK, 4Tx-slot)	25.17	24.89	24.83	26.0

ERP POWER (dBm)

GSM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
128	824.2	32.29	0.5	30.64	1158.78	7
189	836.4	32.18	0.5	30.53	1129.8	7
251	848.8	32.37	0.5	30.72	1180.32	7

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

EDGE

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
128	824.2	25.79	0.5	24.14	259.42	7
189	836.4	25.78	0.5	24.13	258.82	7
251	848.8	25.7	0.5	24.05	254.1	7

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. $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,
 $\text{E.R.P power} = \text{E.I.P.R power} - 2.15\text{dBi}$.

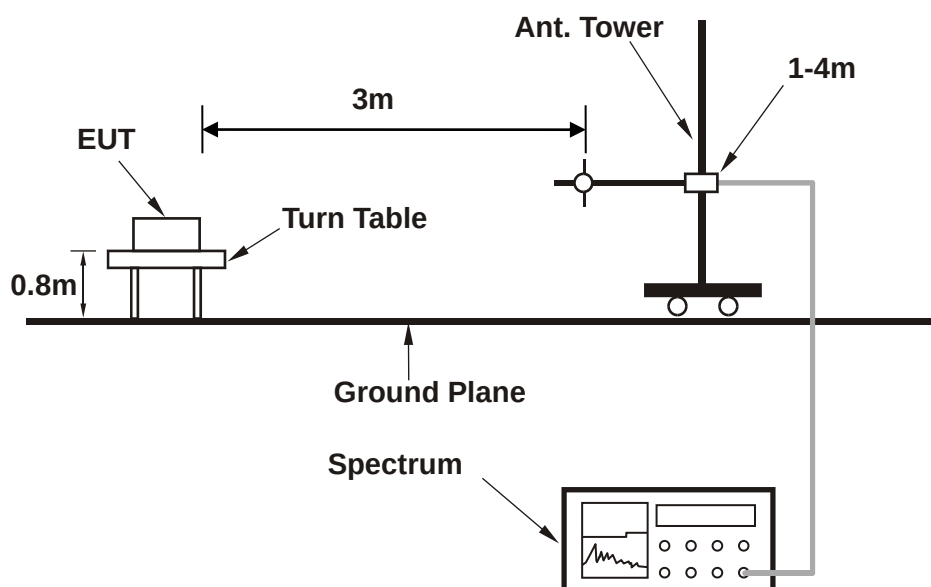
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

3.2.3 DEVIATION FROM TEST STANDARD

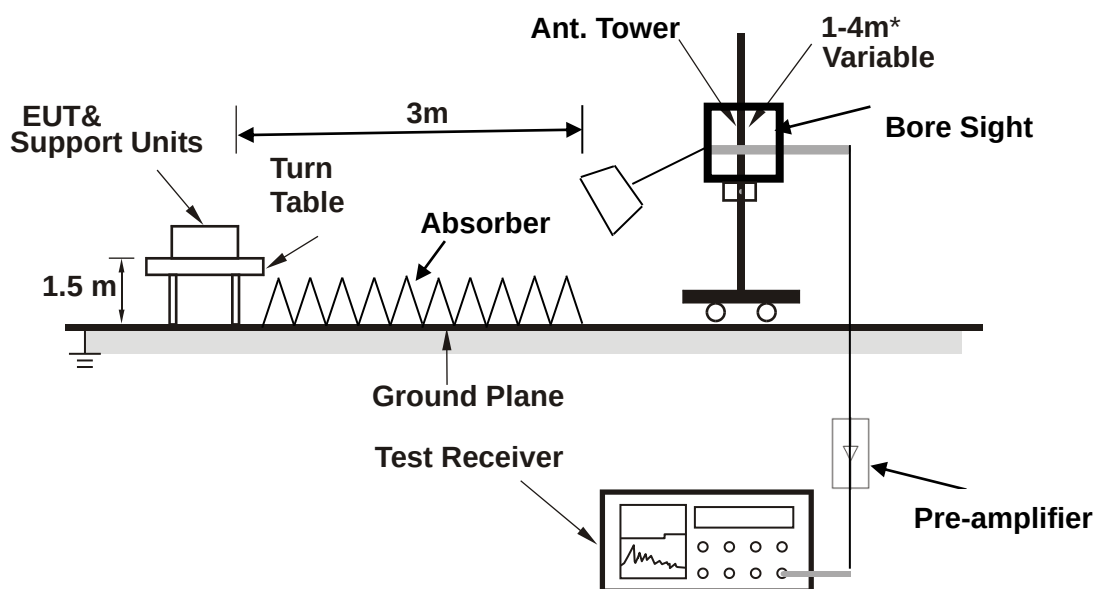
No deviation

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

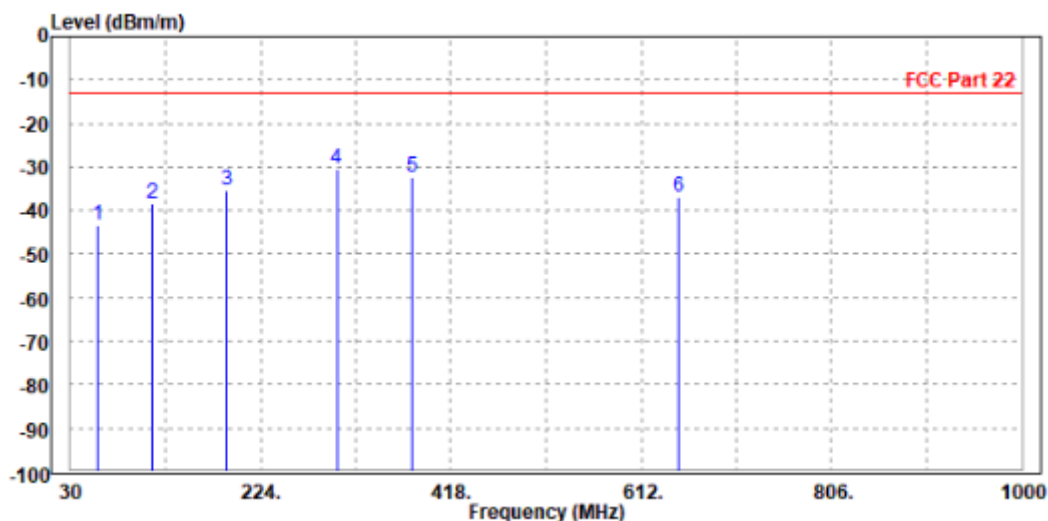
30 MHz – 1GHz data:

GSM 850

CHANNEL BANDWIDTH: 128 ~ 251

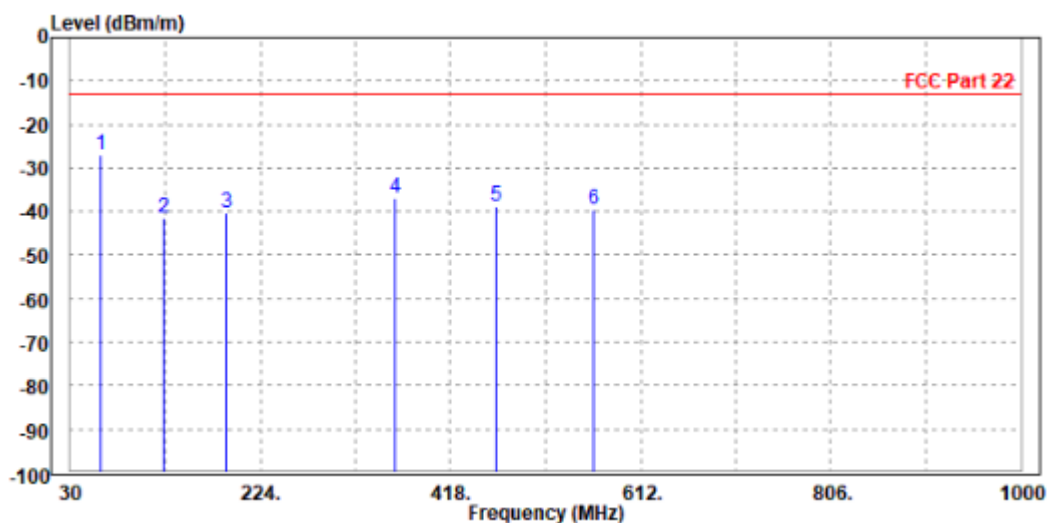
MODE	TX channel 128	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	57.160	-43.24	-52.72	-13.00	-30.24	9.48	Peak	Horizontal
2	113.420	-38.44	-48.20	-13.00	-25.44	9.76	Peak	Horizontal
3	189.080	-35.19	-46.54	-13.00	-22.19	11.35	Peak	Horizontal
4 PP	301.600	-30.43	-44.47	-13.00	-17.43	14.04	Peak	Horizontal
5	378.230	-32.16	-47.88	-13.00	-19.16	15.72	Peak	Horizontal
6	649.830	-36.87	-57.52	-13.00	-23.87	20.65	Peak	Horizontal



MODE	TX channel 128	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	62.010	-27.14	-35.64	-13.00	-14.14	8.50	Peak	Vertical
2	125.060	-41.61	-49.96	-13.00	-28.61	8.35	Peak	Vertical
3	189.080	-40.19	-51.53	-13.00	-27.19	11.34	Peak	Vertical
4	360.770	-37.04	-52.44	-13.00	-24.04	15.40	Peak	Vertical
5	464.560	-38.89	-56.03	-13.00	-25.89	17.14	Peak	Vertical
6	563.500	-39.44	-58.31	-13.00	-26.44	18.87	Peak	Vertical





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ABOVE 1GHz DATA

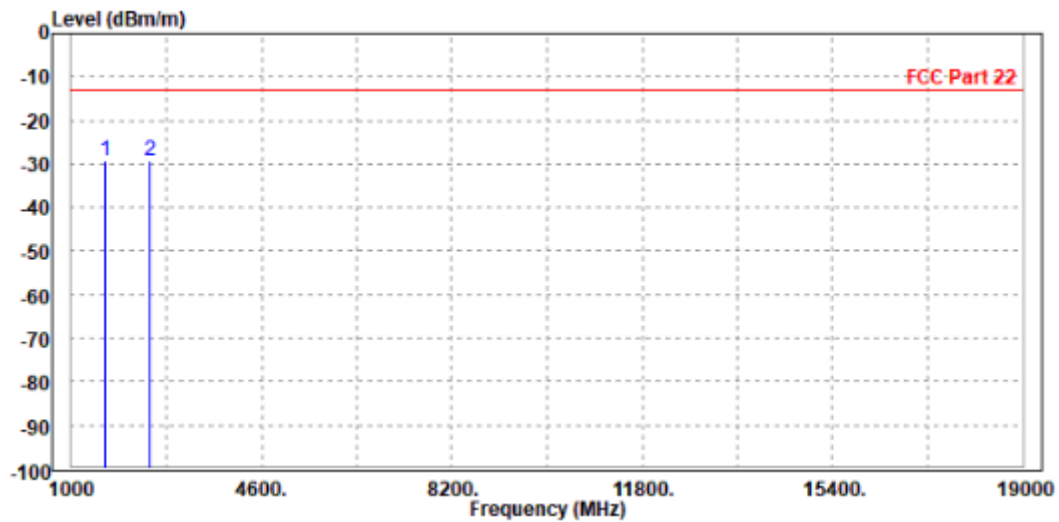
Note: For higher frequency, the emission is too low to be detected.

GSM 850

CH 128:

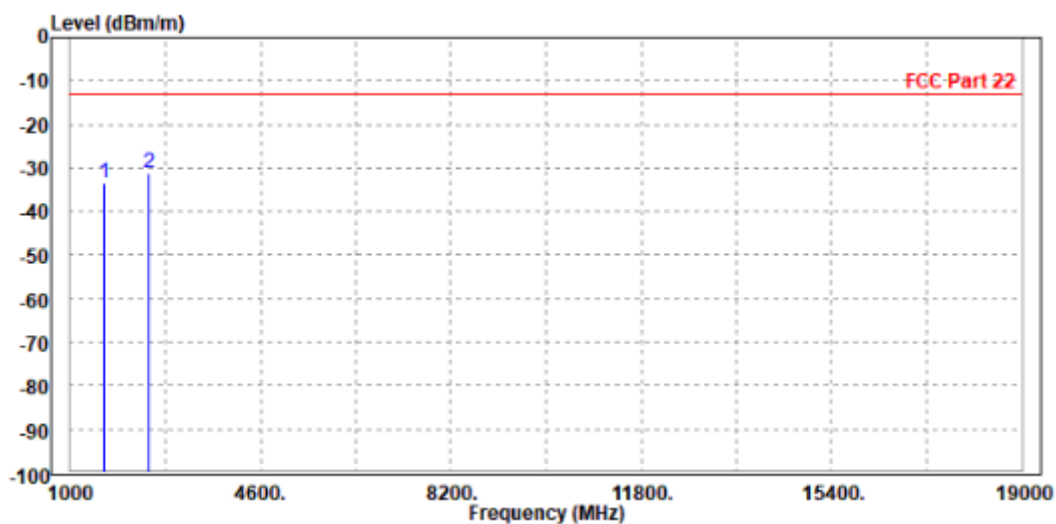
MODE	TX channel 128	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

			Read	Limit	Over			
Freq	Level	Level	Line	Limit	Factor	Remark	Pol/Phase	
MHz	dBm/m	dBm	dBm/m	dB	dB/m			
1 PP 1648.000	-29.39	-32.64	-13.00	-16.39	3.25	Peak	Horizontal	
2 2476.000	-29.42	-37.45	-13.00	-16.42	8.03	Peak	Horizontal	



MODE	TX channel 128	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			

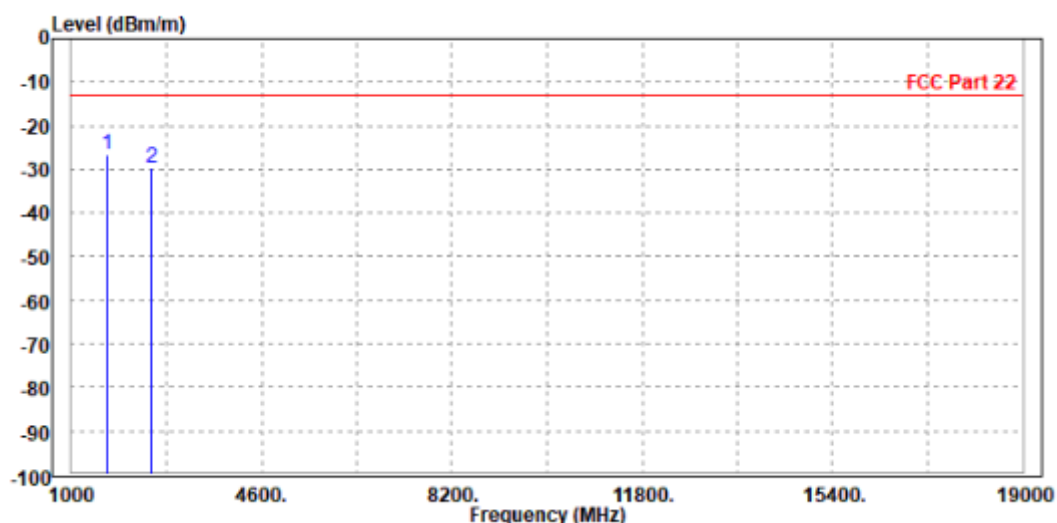
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1648.000	-33.64	-37.02	-13.00	-20.64	3.38	Peak	Vertical
2 PP	2476.000	-31.20	-38.24	-13.00	-18.20	7.04	Peak	Vertical



CH 189:

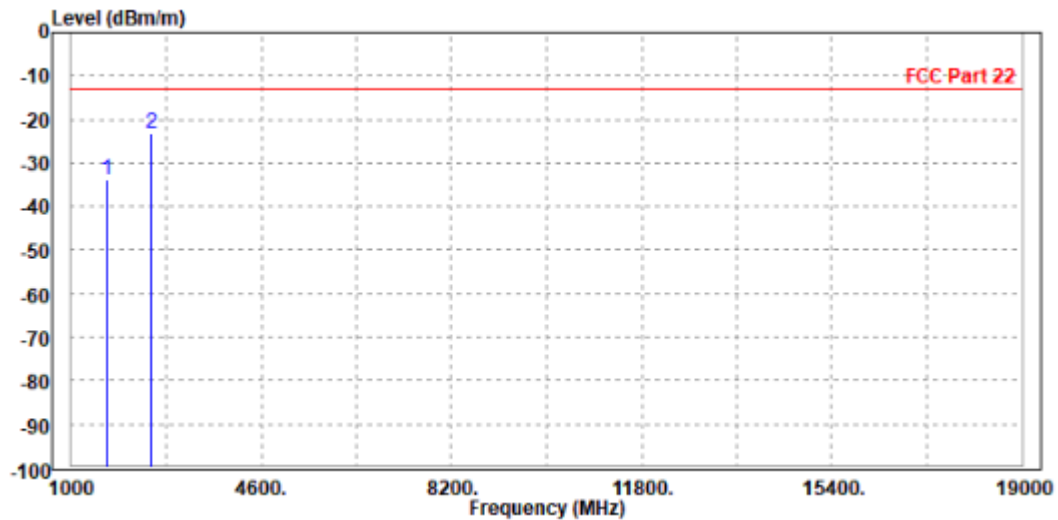
MODE	TX channel 189	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	1666.000	-26.50	-29.97	-13.00	-13.50	3.47	Peak	Horizontal
2	2509.200	-29.48	-37.54	-13.00	-16.48	8.06	Peak	Horizontal



MODE	TX channel 189	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	1672.800	-33.91	-37.52	-13.00	-20.91	3.61	Peak	Vertical
2 PP	2512.000	-23.18	-30.29	-13.00	-10.18	7.11	Peak	Vertical





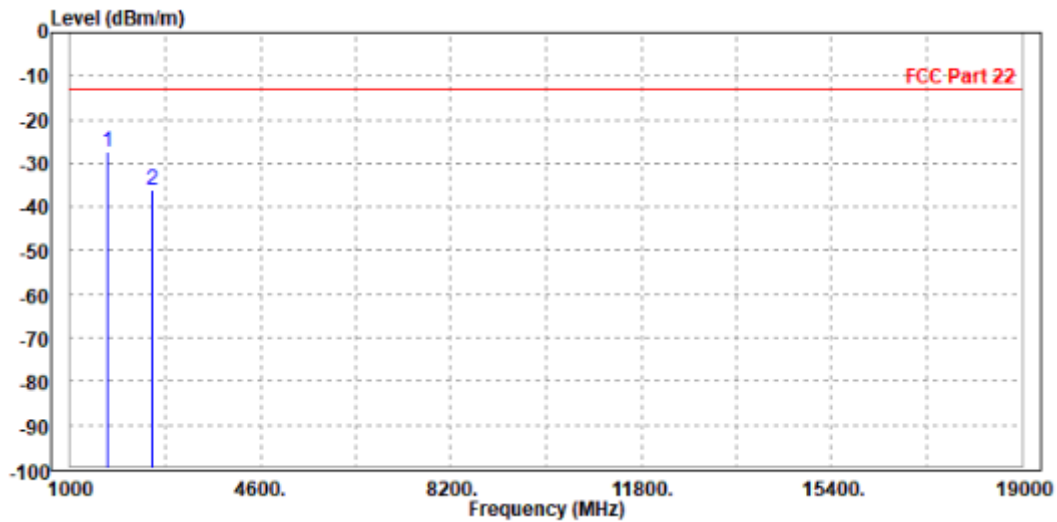
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Test Report No.: W7L-P22040025RF03

CH 251:

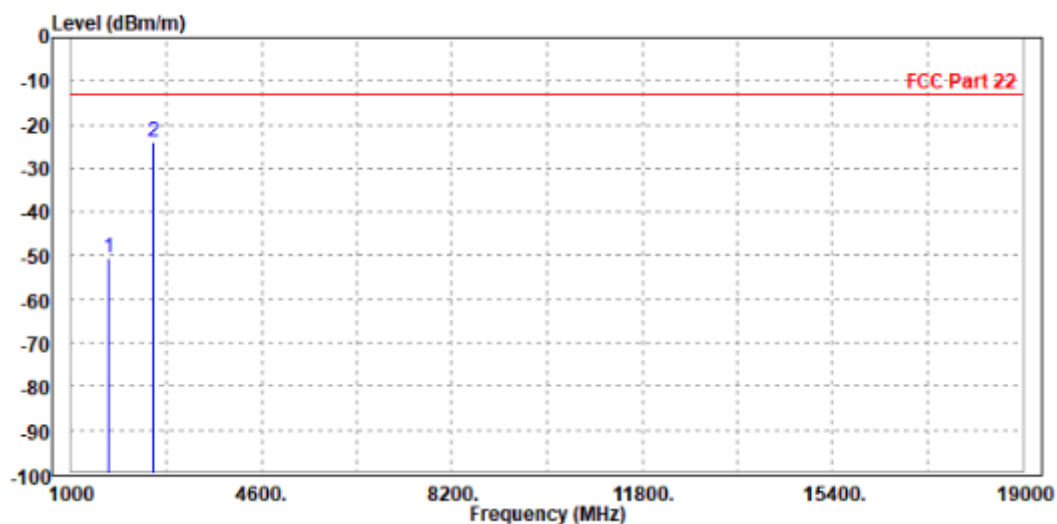
MODE	TX channel 251	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	1702.000	-27.22	-31.13	-13.00	-14.22	3.91	Peak	Horizontal
2		2546.400	-36.03	-44.14	-13.00	-23.03	8.11	Peak	Horizontal



MODE	TX channel 251	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	1697.600	-50.64	-54.47	-13.00	-37.64	3.83	Peak	Vertical
2 PP	2548.000	-23.88	-31.10	-13.00	-10.88	7.22	Peak	Vertical

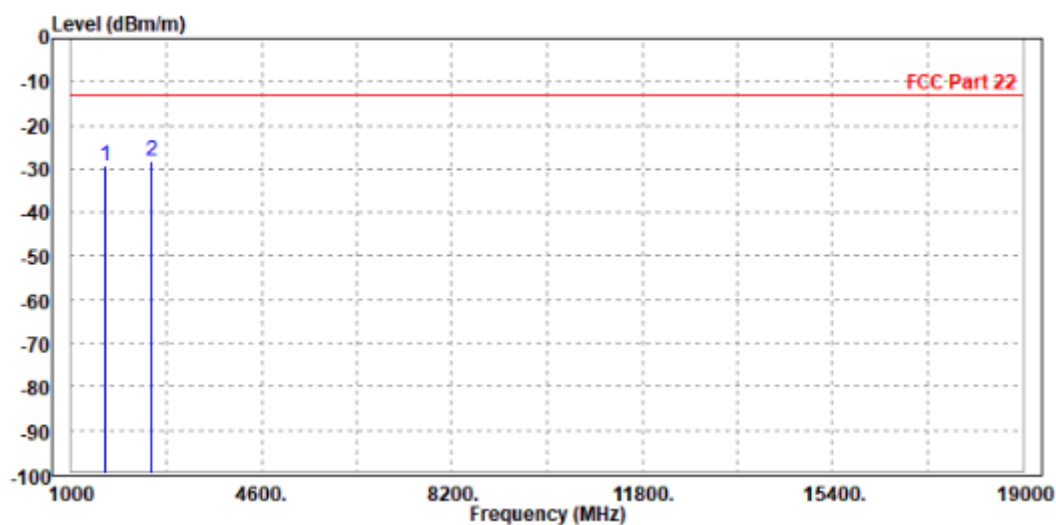


EDGE 850:

CH 128:

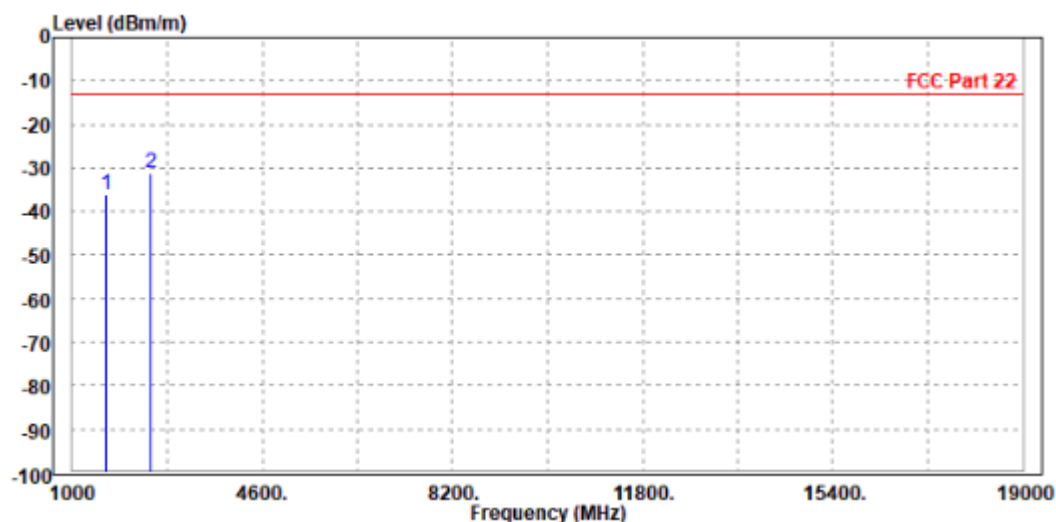
MODE	TX channel 128	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1648.400	-29.33	-32.59	-13.00	-16.33	3.26	Peak	Horizontal
2 PP	2512.000	-27.97	-36.03	-13.00	-14.97	8.06	Peak	Horizontal



MODE	TX channel 128	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			

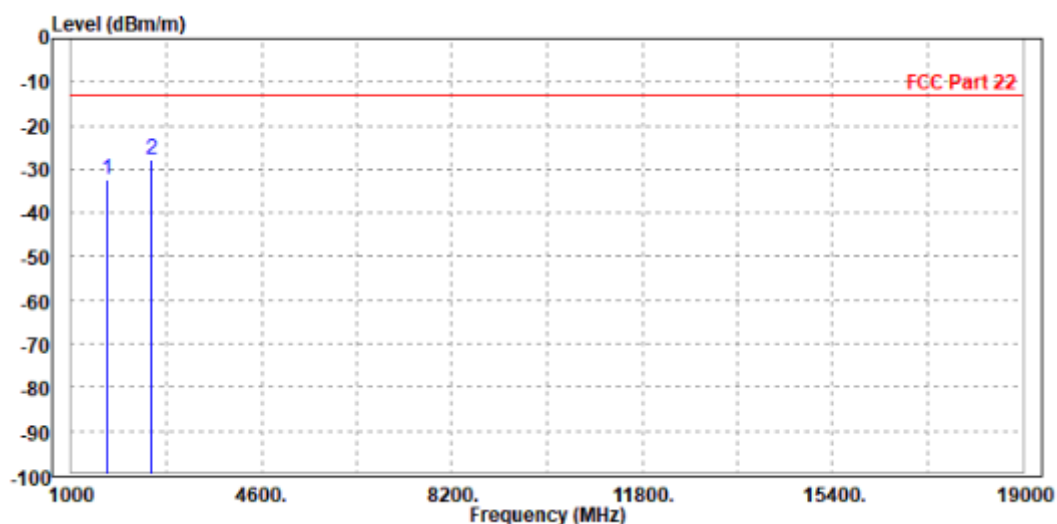
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1648.000	-35.93	-39.31	-13.00	-22.93	3.38	Peak	Vertical
2 PP	2476.000	-31.23	-38.27	-13.00	-18.23	7.04	Peak	Vertical



CH 189:

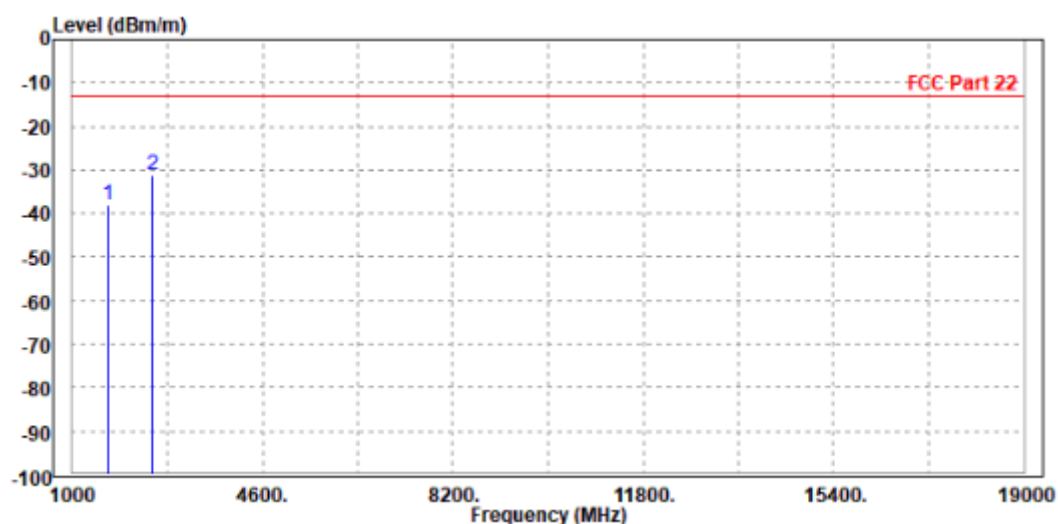
MODE	TX channel 189	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1666.000	-32.26	-35.73	-13.00	-19.26	3.47	Peak	Horizontal
2 PP	2509.200	-27.80	-35.86	-13.00	-14.80	8.06	Peak	Horizontal



MODE	TX channel 189	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	1672.800	-38.04	-41.65	-13.00	-25.04	3.61	Peak	Vertical
2 PP	2512.000	-31.00	-38.11	-13.00	-18.00	7.11	Peak	Vertical





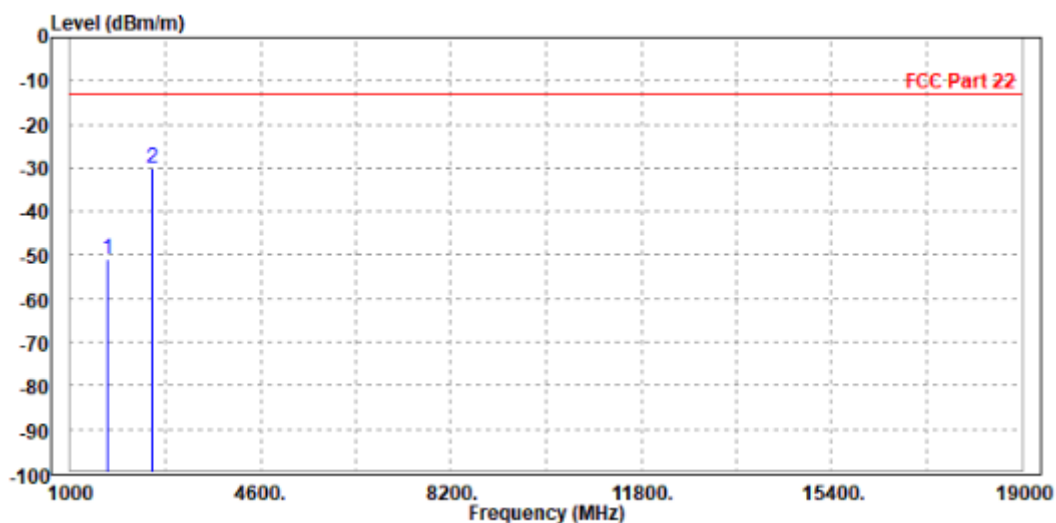
BUREAU
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CH 251:

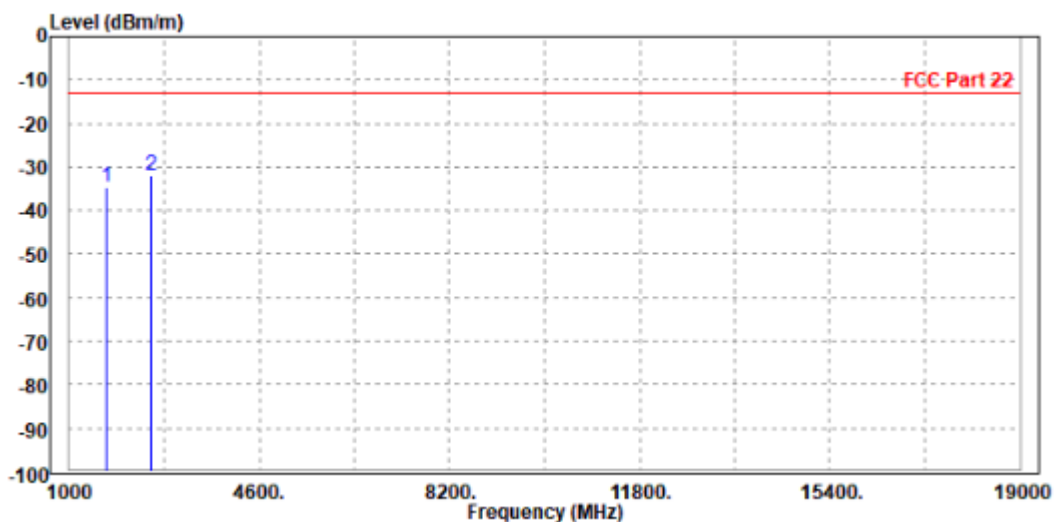
MODE	TX channel 251	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1702.000	-50.82	-54.73	-13.00	-37.82	3.91	Peak	Horizontal
2 PP	2546.400	-30.21	-38.32	-13.00	-17.21	8.11	Peak	Horizontal



MODE	TX channel 251	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	1702.000	-34.47	-38.34	-13.00	-21.47	3.87	Peak	Vertical
2 PP	2546.400	-31.92	-39.14	-13.00	-18.92	7.22	Peak	Vertical





Test Report No.: W7L-P22040025RF03

4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



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5 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.

6 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---