

Partial FCC Test Report

(PART 22)

Report No.: RFBBGM-WTW-P22050652-4

FCC ID: WIYSLM500QA

Test Model: SLM500

Received Date: May 20, 2022

Test Date: Jun. 03 ~ Aug. 02, 2022

Issued Date: Aug. 25, 2022

Applicant: CASTLES TECHNOLOGY CO., LTD.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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Test Location (2): B2F., No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan

FCC Registration / 788550 / TW0003

Designation Number: 427177 / TW0011



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Release Control Record

Issue No.	Description	Date Issued
RFBBGM-WTW-P22050652-4	Original Release	Aug. 25, 2022

1 Certificate of Conformity

Product: Smart module

Brand:  **CASTLES**
TECHNOLOGY

Test Model: SLM500

Sample Status: Identical Prototype

Applicant: CASTLES TECHNOLOGY CO., LTD.

Test Date: Jun. 03 ~ Aug. 02, 2022

Standards: FCC Part 22, Subpart H

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Lena Wang, **Date:** Aug. 25, 2022
Lena Wang / Specialist

Approved by : Jeremy Lin, **Date:** Aug. 25, 2022
Jeremy Lin / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 22 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 22.913 (a)	Effective Radiated Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to Note
22.913 (d)	Peak to Average Ratio	N/A	Refer to Note
2.1055 22.355	Frequency Stability	N/A	Refer to Note
2.1049	Occupied Bandwidth	N/A	Refer to Note
22.917	Band Edge Measurements	N/A	Refer to Note
2.1051 22.917	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 22.917	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -33.33 dB at 190.05 MHz.

Note:

1. This report is a partial report. Therefore, only test item of Effective Radiated Power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to SGS report no.: SZCR210300003005 & SZCR210300003006 & SZCR210300003007 & SHCR220300061701.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 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	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.0400 dB
	30 MHz ~ 200 MHz	2.0153 dB
	200 MHz ~ 1000 MHz	2.0224 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	1.0121 dB
	18 GHz ~ 40 GHz	1.1508 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent	N9038A	MY52260177	Sep. 01, 2021	Aug. 31, 2022
Spectrum Analyzer R&S	FSU43	101261	Apr. 11, 2022	Apr. 10, 2023
Horn Antenna ETS-Lindgren	3117	00143293	Nov. 14, 2021	Nov. 13, 2022
Bi_Log Antenna Schwarzbeck	VULB9168	9168-616	Oct. 27, 2021	Oct. 26, 2022
Horn Antenna Schwarzbeck	BBHA 9170	9170-480	Nov. 14, 2021	Nov. 13, 2022
Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	Apr. 05, 2022	Apr. 04, 2023
Loop Antenna EMCI	EM-6879	269	Sep. 16, 2021	Sep. 15, 2022
MXG Vector signal generator Agilent	N5182B	MY53050430	Nov. 25, 2021	Nov. 24, 2022
Preamplifier Agilent	310N	187226	Jun. 17, 2021	Jun. 16, 2022
			Jun. 14, 2022	Jun. 13, 2023
Preamplifier Agilent	83017A	MY39501357	Jun. 17, 2021	Jun. 16, 2022
			Jun. 14, 2022	Jun. 13, 2023
Pre-Amplifier EMCI	EMC 184045	980116	Oct. 05, 2021	Oct. 04, 2022
Power Meter Anritsu	ML2495A	1012010	Sep. 09, 2021	Sep. 08, 2022
Power Sensor Anritsu	MA2411B	1315050	Sep. 09, 2021	Sep. 08, 2022
RF Coaxial Cable ETS-Lindgren	EMC104-SM-SM-10000	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-4)	Jun. 17, 2021	Jun. 16, 2022
			Jun. 14, 2022	Jun. 13, 2023
RF Coaxial Cable ETS-Lindgren	RFC-SMS-100-SMS-24-IN	Cable-CH1-02(RFC-SMS-100-SMS-24)	Jun. 17, 2021	Jun. 16, 2022
			Jun. 14, 2022	Jun. 13, 2023
Fix tool for Boresight antenna tower BV	BAF-01	10	NA	NA
E3 Software AUDIX	E3	NA	NA	NA
Software BVADT	ADT_Radiated_V8.7.08	NA	NA	NA
Software BVADT	ADT_RF Test Software V6.6.5.4	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Controller Max-Full	MF-7802	NA	NA	NA
Radio Communication Analyzer Anritsu	MT8820C	6201525832	Jan. 25, 2022	Jan. 24, 2023

- Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HsinTien 966 chamber 6

3 General Information

3.1 General Description of EUT

Product	Smart module		
Brand			
Test Model	SLM500		
Status of EUT	Identical Prototype		
Power Supply Rating	5.0 Vdc (host equipment) 3.85 Vdc (Li-ion battery)		
Modulation Type	GSM/GPRS	GMSK	
	EDGE	8PSK	
	WCDMA	BPSK, QPSK	
	HSDPA	BPSK	
	HSUPA	QPSK	
	LTE	QPSK, 16QAM	
Frequency Range	GSM/GPRS/EDGE	824.2 ~ 848.8 MHz	
	WCDMA Band 5	826.4 ~ 846.6 MHz	
	LTE 5 (Channel Bandwidth: 1.4 MHz)	824.7 ~ 848.3 MHz	
	LTE 5 (Channel Bandwidth: 3 MHz)	825.5 ~ 847.5 MHz	
	LTE 5 (Channel Bandwidth: 5 MHz)	826.5 ~ 846.5 MHz	
	LTE 5 (Channel Bandwidth: 10 MHz)	829 ~ 844 MHz	
	LTE 26 (Channel Bandwidth: 1.4 MHz)	824.7 ~ 848.3 MHz	
	LTE 26 (Channel Bandwidth: 3 MHz)	825.5 ~ 847.5 MHz	
	LTE 26 (Channel Bandwidth: 5 MHz)	826.5 ~ 846.5 MHz	
	LTE 26 (Channel Bandwidth: 10 MHz)	829 ~ 844 MHz	
	LTE 26 (Channel Bandwidth: 15 MHz)	831.5 ~ 841.5 MHz	
Max. ERP Power	GSM/GPRS	709.578 mW (28.51dBm)	
	WCDMA Band 5	63.826 mW (18.05dBm)	
		QPSK	16QAM
	LTE 5 (Channel Bandwidth: 1.4 MHz)	94.189 mW (19.74dBm)	71.614 mW (18.55dBm)
	LTE 5 (Channel Bandwidth: 3 MHz)	92.045 mW (19.64dBm)	71.285 mW (18.53dBm)
	LTE 5 (Channel Bandwidth: 5 MHz)	94.189 mW (19.74dBm)	71.779 mW (18.56dBm)
	LTE 5 (Channel Bandwidth: 10 MHz)	95.280 mW (19.79dBm)	71.779 mW (18.56dBm)
	LTE 26 (Channel Bandwidth: 1.4 MHz)	86.696 mW (19.38dBm)	72.111 mW (18.58dBm)
	LTE 26 (Channel Bandwidth: 3 MHz)	85.901 mW (19.34dBm)	71.945 mW (18.57dBm)
	LTE 26 (Channel Bandwidth: 5 MHz)	85.310 mW (19.31dBm)	71.450 mW (18.54dBm)

	LTE 26 (Channel Bandwidth: 10 MHz)	86.099 mW (19.35dBm)	72.277 mW (18.59dBm)
	LTE 26 (Channel Bandwidth: 15 MHz)	88.716 mW (19.48dBm)	73.282 mW (18.65dBm)
Antenna Type	Refer to Note as below		
Accessory Device	N/A		
Data Cable Supplied	N/A		

Note:

1. This report is prepared for FCC class II permissive change. This report is issued as a supplementary report of SGS report no.: SZCR210300003005, SZCR210300003006, SZCR210300003007, SHCR220300061701. The differences from the original report are adding an End-product (POS Terminal (Brand: Adyen, Model: AMS1)). Only Effective Radiated Power and Radiated Spurious Emissions tests were verified and recorded in this report. Other testing data please refer to the original SGS report no.: SZCR210300003005, SZCR210300003006, SZCR210300003007, SHCR220300061701. And Modular has C2PC the Major change is mainly for GSM power retest. When testing, the modified sample is used for testing.

2. The EUT was installed in POS Terminal (Brand: Adyen, Model: AMS1).

3. The POS Terminal contains following accessory devices.

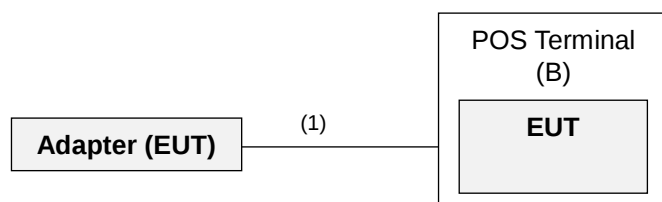
Product	Brand	Model	Description
Adapter	 CASTLES TECHNOLOGY	1A52-UB52A	I/P: 100-240 Vac, 50/60 Hz, 0.3 A O/P: 5 Vdc, 2 A
Battery	CASTLES TECHNOLOGY	S1AMS1	3.85 Vdc
USB Cable	CHANG YANG ELECTRONICS CO.,LTD	CY-AS-HK0059	0.95 m shielded cable w/o core

4. The antenna information of POS Terminal is listed as below.

Antenna Type	PIFA													
Band	GSM		WCDMA			LTE								
	850	1900	II	IV	V	2	4	5	7	12	13	25	26	66
Gain	-0.97	1.06	1.06	1.55	-0.97	1.06	1.55	-0.97	-0.17	-6.48	-1.96	1.06	-0.38	1.55

5. Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.
6. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.
7. BT & WWAN & NFC (FCC ID: WIYAMS1001) technology can transmit at same time.
8. WLAN 2.4G & WWAN & NFC (FCC ID: WIYAMS1001) technology can transmit at same time.
9. WLAN 5G & WWAN & NFC (FCC ID: WIYAMS1001) technology can transmit at same time.

3.2 Configuration of System under Test



Remote site



3.2.1 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
A	Radio Communication Analyzer	Anritsu	MT8820C	6201525832	NA
B	POS Terminal	Adyen	AMS1	NA	NA

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB cable	1	0.95	Y	0	Provided by client

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Items A acted as communication partners to transfer data.

3.3 Test Mode Applicability and Tested Channel Detail

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 was found when positioned on X-plane. Following channel(s) was (were) selected for the final test as listed below.

GSM

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	ERP	128 to 251	128, 189, 251	GSM, GPRS, EDGE
-	Radiated Emission	128 to 251	251	GSM

WCDMA

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	ERP	4132 to 4233	4132, 4182, 4233	WCDMA, HSUPA HSDPA
-	Radiated Emission	4132 to 4233	4233	WCDMA

LTE Band 5

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	ERP	20407 to 20643	20407, 20525, 20643	1.4 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 2 RB Offset 1 RB / 5 RB Offset 3 RB / 0 RB Offset 3 RB / 1 RB Offset 3 RB / 3 RB Offset 6 RB / 0 RB Offset
		20415 to 20635	20415, 20525, 20635	3 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 7 RB Offset 1 RB / 14 RB Offset 8 RB / 0 RB Offset 8 RB / 3 RB Offset 8 RB / 7 RB Offset 15 RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		20450 to 20600	20450, 20525, 20600	10 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset

LTE Band 26

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	ERP	26797 to 27033	26797, 26915, 27033	1.4 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 2 RB Offset 1 RB / 5 RB Offset 3 RB / 0 RB Offset 3 RB / 1 RB Offset 3 RB / 3 RB Offset 6 RB / 0 RB Offset
		26805 to 27025	26805, 26915, 27025	3 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 7 RB Offset 1 RB / 14 RB Offset 8 RB / 0 RB Offset 8 RB / 3 RB Offset 8 RB / 7 RB Offset 15 RB / 0 RB Offset
		26815 to 27015	26815, 26915, 27015	5 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		26840 to 26990	26840, 26915, 26990	10 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
		26865 to 26965	26865, 26915, 26965	15 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 37 RB Offset 1 RB / 74 RB Offset 36 RB / 0 RB Offset 36 RB / 19 RB Offset 36 RB / 39 RB Offset 75 RB / 0 RB Offset
-	Radiated Emission	26840 to 26990	26990	10MHz	QPSK	1 RB / 25 RB Offset

Note: For radiated emissions, select the worst radiated emission channel for final testing.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
ERP	25 deg. C, 65 % RH	120 Vac, 60 Hz	Wayne Lin
Radiated Emission	25 deg. C, 60 % RH	120 Vac, 60 Hz	Charles Hsaio

3.4 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.

3.5 General Description of Applied Standards and references

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

Test Standard:

FCC 47 CFR Part 2

FCC 47 CFR Part 22

ANSI 63.26-2015

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

References Test Guidance:

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-E 2016

Note: All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

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

4.1.2 Test Procedures

Conducted Power Measurement:

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

Maximum EIRP / ERP

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:

$$\text{EIRP} = P_{\text{Meas}} + G_T$$

$$\text{ERP} = P_{\text{Meas}} + G_T - 2.15$$

where

ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively
(expressed in the same units as P_{Meas} , e.g., dBm or dBW)

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)

4.1.3 Test Setup

Conducted Power Measurement:



4.1.4 Test Results

Conducted Output Power (dBm)

Band	GSM850		
Channel	128	189	251
Frequency (MHz)	824.2	836.4	848.8
GSM (GMSK, 1Tx-slot)	31.60	31.58	31.63
GPRS (GMSK, 1Tx-slot)	31.22	31.41	31.55
GPRS (GMSK, 2Tx-slot)	28.76	29.01	29.07
GPRS (GMSK, 3Tx-slot)	26.71	26.89	26.98
GPRS (GMSK, 4Tx-slot)	26.21	26.18	26.24
EDGE (8PSK, 1Tx-slot)	24.63	24.79	24.92
EDGE (8PSK, 2Tx-slot)	24.11	24.23	24.44
EDGE (8PSK, 3Tx-slot)	23.02	23.16	23.46
EDGE (8PSK, 4Tx-slot)	22.05	22.11	22.19

Band	WCDMA V		
Channel	4132	4182	4233
Frequency (MHz)	826.4	836.4	846.6
RMC 12.2K	21.17	21.06	21.01
HSDPA Subtest-1	20.28	20.17	20.12
HSDPA Subtest-2	20.25	20.14	20.09
HSDPA Subtest-3	19.82	19.71	19.66
HSDPA Subtest-4	19.77	19.66	19.61
DC-HSDPA Subtest-1	20.24	20.13	20.08
DC-HSDPA Subtest-2	20.21	20.10	20.05
DC-HSDPA Subtest-3	19.78	19.67	19.62
DC-HSDPA Subtest-4	19.73	19.62	19.57
HSUPA Subtest-1	20.26	20.15	20.10
HSUPA Subtest-2	18.31	18.20	18.15
HSUPA Subtest-3	19.29	19.18	19.13
HSUPA Subtest-4	18.33	18.22	18.17
HSUPA Subtest-5	20.19	20.08	20.03

LTE Band 5						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20407	20525	20643
		Frequency (MHz)		824.7	836.5	848.3
1.4M	QPSK	1	0	22.05	22.50	22.86
		1	2	22.02	22.65	22.42
		1	5	21.57	22.29	22.23
		3	0	22.15	22.62	22.70
		3	1	22.45	22.61	22.80
		3	3	22.47	22.52	22.60
		6	0	21.45	21.55	21.55
	16QAM	1	0	21.29	21.59	21.55
		1	2	21.15	21.57	21.25
		1	5	21.11	21.26	21.23
		3	0	21.22	21.67	21.64
		3	1	21.18	21.56	21.61
		3	3	21.18	21.53	21.42
		6	0	20.09	20.46	20.36
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20415	20525	20635
		Frequency (MHz)		825.5	836.5	847.5
3M	QPSK	1	0	21.99	22.52	22.76
		1	7	21.98	22.61	22.43
		1	14	21.61	22.27	22.18
		8	0	21.15	21.73	21.72
		8	3	21.43	21.61	21.7
		8	7	21.42	21.66	21.64
		15	0	21.32	21.66	21.53
	16QAM	1	0	21.29	21.65	21.43
		1	7	21.11	21.49	21.25
		1	14	21.06	21.35	21.18
		8	0	20.27	20.59	20.64
		8	3	20.2	20.58	20.59
		8	7	20.1	20.59	20.43
		15	0	20.13	20.42	20.39

LTE Band 5						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20425	20525	20625
		Frequency (MHz)		826.5	836.5	846.5
5M	QPSK	1	0	22.05	22.63	22.86
		1	12	22.13	22.65	22.54
		1	24	21.71	22.40	22.25
		12	0	21.27	21.73	21.83
		12	6	21.48	21.74	21.82
		12	13	21.50	21.66	21.70
		25	0	21.45	21.67	21.66
	16QAM	1	0	21.33	21.68	21.58
		1	12	21.24	21.57	21.40
		1	24	21.19	21.40	21.26
		12	0	20.33	20.70	20.72
		12	6	20.30	20.60	20.63
		12	13	20.21	20.67	20.54
		25	0	20.16	20.56	20.48
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20450	20525	20600
		Frequency (MHz)		829	836.5	844
10M	QPSK	1	0	22.14	22.69	22.91
		1	24	22.13	22.68	22.61
		1	49	21.78	22.44	22.34
		25	0	21.33	21.78	21.85
		25	12	21.49	21.75	21.83
		25	25	21.59	21.71	21.79
		50	0	21.48	21.69	21.76
	16QAM	1	0	21.33	21.68	21.61
		1	24	21.32	21.66	21.41
		1	49	21.28	21.44	21.29
		25	0	20.33	20.71	20.79
		25	12	20.31	20.69	20.66
		25	25	20.30	20.68	20.57
		50	0	20.19	20.64	20.50

LTE Band 26						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26797	26915	27033
		Frequency (MHz)		824.7	836.5	848.3
1.4M	QPSK	1	0	21.86	21.72	21.74
		1	2	21.79	21.66	21.72
		1	5	21.53	21.64	21.51
		3	0	21.91	21.64	21.75
		3	1	21.71	21.68	21.8
		3	3	21.71	21.76	21.8
		6	0	20.68	20.72	20.71
	16QAM	1	0	20.53	20.92	21.11
		1	2	20.18	20.33	20.36
		1	5	20.15	20.28	20.16
		3	0	20.61	20.72	20.78
		3	1	20.77	20.72	20.73
		3	3	20.54	20.7	20.71
		6	0	19.79	19.77	19.8
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26805	26915	27025
		Frequency (MHz)		825.5	836.5	847.5
3M	QPSK	1	0	21.85	21.69	21.75
		1	7	21.87	21.58	21.66
		1	14	21.53	21.62	21.65
		8	0	20.94	20.64	20.83
		8	3	20.73	20.72	20.78
		8	7	20.64	20.68	20.76
		15	0	20.70	20.87	20.86
	16QAM	1	0	20.54	20.94	21.10
		1	7	20.24	20.36	20.34
		1	14	20.19	20.19	20.39
		8	0	19.61	19.76	19.87
		8	3	19.68	19.69	19.79
		8	7	19.56	19.68	19.75
		15	0	19.79	19.90	20.00

LTE Band 26						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26815	26915	27015
		Frequency (MHz)		826.5	836.5	846.5
5M	QPSK	1	0	21.72	21.84	21.75
		1	12	21.67	21.78	21.71
		1	24	21.68	21.53	21.64
		12	0	20.86	20.86	20.77
		12	6	20.76	20.67	20.78
		12	13	20.75	20.69	20.79
		25	0	20.76	20.83	20.87
	16QAM	1	0	21.03	20.51	21.07
		1	12	20.3	20.21	20.41
		1	24	20.3	20.14	20.34
		12	0	19.77	19.67	19.91
		12	6	19.69	19.78	19.73
		12	13	19.69	19.45	19.75
		25	0	19.93	19.81	19.98
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26840	26915	26990
		Frequency (MHz)		829	836.5	844
10M	QPSK	1	0	21.82	21.88	21.77
		1	24	21.69	21.88	21.68
		1	49	21.74	21.67	21.73
		25	0	20.87	20.94	20.76
		25	12	20.8	20.74	20.82
		25	25	20.75	20.72	20.83
		50	0	20.79	20.83	20.87
	16QAM	1	0	21.12	20.64	21.06
		1	24	20.33	20.33	20.39
		1	49	20.4	20.27	20.31
		25	0	19.84	19.76	19.86
		25	12	19.79	19.83	19.73
		25	25	19.79	19.59	19.75
		50	0	20.01	19.89	19.92

LTE Band 26						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26865	26915	26965
		Frequency (MHz)		831.5	836.5	841.5
15M	QPSK	1	0	21.84	22.01	21.72
		1	37	21.81	21.92	21.72
		1	74	21.77	21.82	21.73
		36	0	20.93	20.95	20.85
		36	19	20.9	20.84	20.88
		36	39	20.86	20.74	20.83
		75	0	20.91	20.94	20.87
	16QAM	1	0	21.18	20.71	21.12
		1	37	20.48	20.43	20.41
		1	74	20.42	20.35	20.4
		36	0	19.93	19.9	19.93
		36	19	19.89	19.88	19.81
		36	39	19.86	19.73	19.77
		75	0	20.04	19.89	20.02

ERP Power (dBm)

Band	GSM850		
Channel	128	189	251
Frequency (MHz)	824.2	836.4	848.8
GSM (GMSK, 1Tx-slot)	28.48	28.46	28.51
GPRS (GMSK, 1Tx-slot)	28.10	28.29	28.43
GPRS (GMSK, 2Tx-slot)	25.64	25.89	25.95
GPRS (GMSK, 3Tx-slot)	23.59	23.77	23.86
GPRS (GMSK, 4Tx-slot)	23.09	23.06	23.12
EDGE (8PSK, 1Tx-slot)	21.51	21.67	21.80
EDGE (8PSK, 2Tx-slot)	20.99	21.11	21.32
EDGE (8PSK, 3Tx-slot)	19.90	20.04	20.34
EDGE (8PSK, 4Tx-slot)	18.93	18.99	19.07

*ERP = Conducted + antenna gain (-0.97dBi)-2.15

Band	WCDMA V		
Channel	4132	4182	4233
Frequency (MHz)	826.4	836.4	846.6
RMC 12.2K	18.05	17.94	17.89
HSDPA Subtest-1	17.16	17.05	17.00
HSDPA Subtest-2	17.13	17.02	16.97
HSDPA Subtest-3	16.70	16.59	16.54
HSDPA Subtest-4	16.65	16.54	16.49
DC-HSDPA Subtest-1	17.12	17.01	16.96
DC-HSDPA Subtest-2	17.09	16.98	16.93
DC-HSDPA Subtest-3	16.66	16.55	16.50
DC-HSDPA Subtest-4	16.61	16.50	16.45
HSUPA Subtest-1	17.14	17.03	16.98
HSUPA Subtest-2	15.19	15.08	15.03
HSUPA Subtest-3	16.17	16.06	16.01
HSUPA Subtest-4	15.21	15.10	15.05
HSUPA Subtest-5	17.07	16.96	16.91

*ERP = Conducted + antenna gain (-0.97dBi)-2.15

LTE Band 5						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20407	20525	20643
		Frequency (MHz)		824.7	836.5	848.3
1.4M	QPSK	1	0	18.93	19.38	19.74
		1	2	18.90	19.53	19.30
		1	5	18.45	19.17	19.11
		3	0	19.03	19.50	19.58
		3	1	19.33	19.49	19.68
		3	3	19.35	19.40	19.48
		6	0	18.33	18.43	18.43
	16QAM	1	0	18.17	18.47	18.43
		1	2	18.03	18.45	18.13
		1	5	17.99	18.14	18.11
		3	0	18.10	18.55	18.52
		3	1	18.06	18.44	18.49
		3	3	18.06	18.41	18.30
		6	0	16.97	17.34	17.24
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20415	20525	20635
		Frequency (MHz)		825.5	836.5	847.5
3M	QPSK	1	0	18.87	19.40	19.64
		1	7	18.86	19.49	19.31
		1	14	18.49	19.15	19.06
		8	0	18.03	18.61	18.60
		8	3	18.31	18.49	18.58
		8	7	18.30	18.54	18.52
		15	0	18.20	18.54	18.41
	16QAM	1	0	18.17	18.53	18.31
		1	7	17.99	18.37	18.13
		1	14	17.94	18.23	18.06
		8	0	17.15	17.47	17.52
		8	3	17.08	17.46	17.47
		8	7	16.98	17.47	17.31
		15	0	17.01	17.30	17.27

*ERP = Conducted + antenna gain (-0.97dBi)-2.15

LTE Band 5						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20425	20525	20625
		Frequency (MHz)		826.5	836.5	846.5
5M	QPSK	1	0	18.93	19.51	19.74
		1	12	19.01	19.53	19.42
		1	24	18.59	19.28	19.13
		12	0	18.15	18.61	18.71
		12	6	18.36	18.62	18.70
		12	13	18.38	18.54	18.58
		25	0	18.33	18.55	18.54
	16QAM	1	0	18.21	18.56	18.46
		1	12	18.12	18.45	18.28
		1	24	18.07	18.28	18.14
		12	0	17.21	17.58	17.60
		12	6	17.18	17.48	17.51
		12	13	17.09	17.55	17.42
		25	0	17.04	17.44	17.36
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20450	20525	20600
		Frequency (MHz)		829	836.5	844
10M	QPSK	1	0	19.02	19.57	19.79
		1	24	19.01	19.56	19.49
		1	49	18.66	19.32	19.22
		25	0	18.21	18.66	18.73
		25	12	18.37	18.63	18.71
		25	25	18.47	18.59	18.67
		50	0	18.36	18.57	18.64
	16QAM	1	0	18.21	18.56	18.49
		1	24	18.20	18.54	18.29
		1	49	18.16	18.32	18.17
		25	0	17.21	17.59	17.67
		25	12	17.19	17.57	17.54
		25	25	17.18	17.56	17.45
		50	0	17.07	17.52	17.38

*ERP = Conducted + antenna gain (-0.97dBi)-2.15

LTE Band 26						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26797	26915	27033
		Frequency (MHz)		824.7	836.5	848.3
1.4M	QPSK	1	0	19.33	19.19	19.21
		1	2	19.26	19.13	19.19
		1	5	19.00	19.11	18.98
		3	0	19.38	19.11	19.22
		3	1	19.18	19.15	19.27
		3	3	19.18	19.23	19.27
		6	0	18.15	18.19	18.18
	16QAM	1	0	18.00	18.39	18.58
		1	2	17.65	17.80	17.83
		1	5	17.62	17.75	17.63
		3	0	18.08	18.19	18.25
		3	1	18.24	18.19	18.20
		3	3	18.01	18.17	18.18
		6	0	17.26	17.24	17.27
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26805	26915	27025
		Frequency (MHz)		825.5	836.5	847.5
3M	QPSK	1	0	19.32	19.16	19.22
		1	7	19.34	19.05	19.13
		1	14	19.00	19.09	19.12
		8	0	18.41	18.11	18.30
		8	3	18.20	18.19	18.25
		8	7	18.11	18.15	18.23
		15	0	18.17	18.34	18.33
	16QAM	1	0	18.01	18.41	18.57
		1	7	17.71	17.83	17.81
		1	14	17.66	17.66	17.86
		8	0	17.08	17.23	17.34
		8	3	17.15	17.16	17.26
		8	7	17.03	17.15	17.22
		15	0	17.26	17.37	17.47

*ERP = Conducted + antenna gain (-0.38dBi)-2.15

LTE Band 26						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26815	26915	27015
		Frequency (MHz)		826.5	836.5	846.5
5M	QPSK	1	0	19.19	19.31	19.22
		1	12	19.14	19.25	19.18
		1	24	19.15	19.00	19.11
		12	0	18.33	18.33	18.24
		12	6	18.23	18.14	18.25
		12	13	18.22	18.16	18.26
		25	0	18.23	18.30	18.34
	16QAM	1	0	18.50	17.98	18.54
		1	12	17.77	17.68	17.88
		1	24	17.77	17.61	17.81
		12	0	17.24	17.14	17.38
		12	6	17.16	17.25	17.20
		12	13	17.16	16.92	17.22
		25	0	17.40	17.28	17.45
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26840	26915	26990
		Frequency (MHz)		829	836.5	844
10M	QPSK	1	0	19.29	19.35	19.24
		1	24	19.16	19.35	19.15
		1	49	19.21	19.14	19.20
		25	0	18.34	18.41	18.23
		25	12	18.27	18.21	18.29
		25	25	18.22	18.19	18.30
		50	0	18.26	18.30	18.34
	16QAM	1	0	18.59	18.11	18.53
		1	24	17.80	17.80	17.86
		1	49	17.87	17.74	17.78
		25	0	17.31	17.23	17.33
		25	12	17.26	17.30	17.20
		25	25	17.26	17.06	17.22
		50	0	17.48	17.36	17.39

*ERP = Conducted + antenna gain (-0.38dBi)-2.15

LTE Band 26						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26865	26915	26965
		Frequency (MHz)		831.5	836.5	841.5
15M	QPSK	1	0	19.31	19.48	19.19
		1	37	19.28	19.39	19.19
		1	74	19.24	19.29	19.20
		36	0	18.40	18.42	18.32
		36	19	18.37	18.31	18.35
		36	39	18.33	18.21	18.30
		75	0	18.38	18.41	18.34
	16QAM	1	0	18.65	18.18	18.59
		1	37	17.95	17.90	17.88
		1	74	17.89	17.82	17.87
		36	0	17.40	17.37	17.40
		36	19	17.36	17.35	17.28
		36	39	17.33	17.20	17.24
		75	0	17.51	17.36	17.49

*ERP = Conducted + antenna gain (-0.38dBi)-2.15

4.2 Radiated Emission Measurement

4.2.1 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 is equal to -13 dBm.

4.2.2 Test Procedure

- a. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) 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 height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- d. Following C63.26 section 5.5 and 5.2.7
 $EIRP \text{ (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
 $ERP \text{ (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:

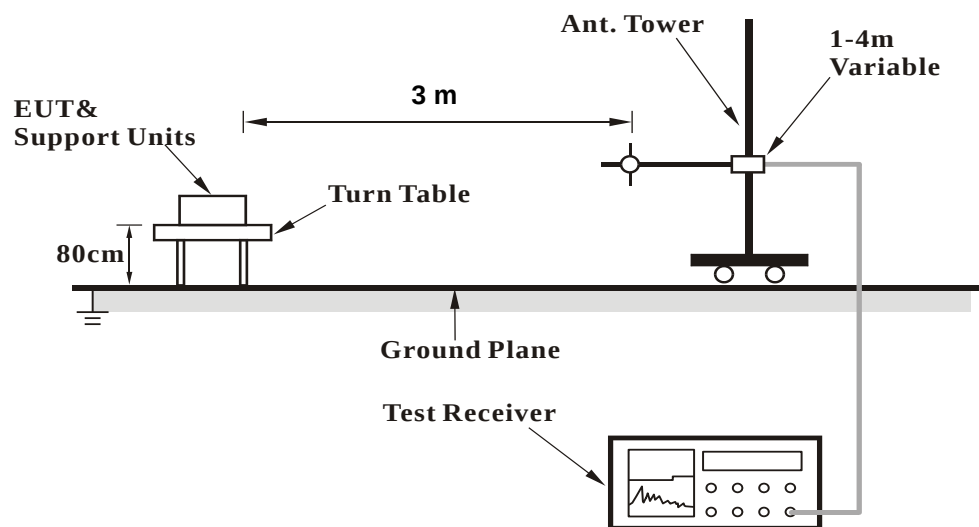
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

4.2.3 Deviation from Test Standard

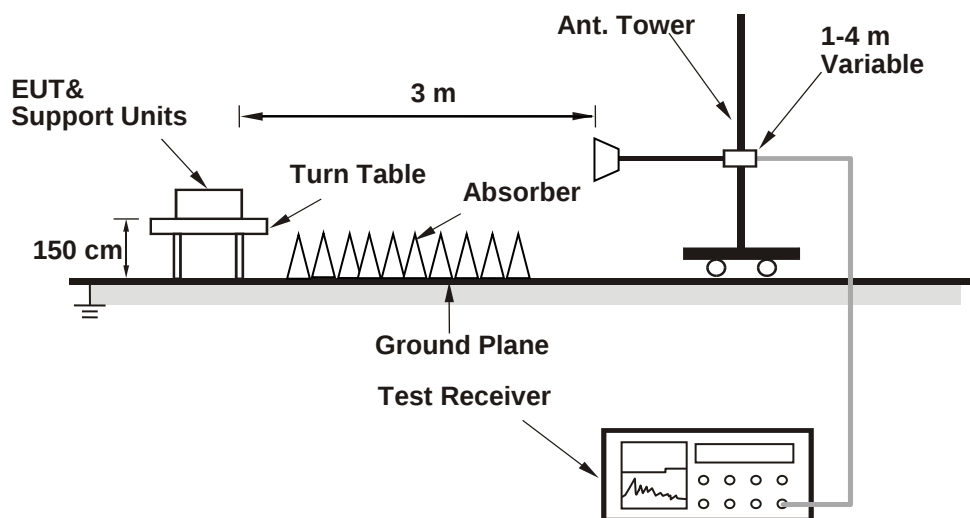
No deviation.

4.2.4 Test Setup

<Radiated Emission below or equal 1 GHz>



<Radiated Emission above 1 GHz>



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

4.2.5 Test Results

Below 1GHz

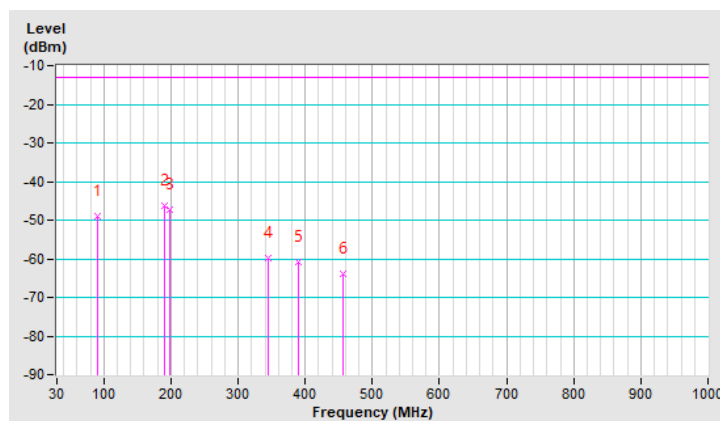
GSM 850

RF Mode	TX GSM 850	Channel	CH 251 : 848.8 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	91.44	-48.82	-13.00	-35.82	1.39 H	278	72.01	-120.83
2	190.05	-46.33	-13.00	-33.33	1.15 H	211	71.60	-117.93
3	198.89	-47.45	-13.00	-34.45	1.34 H	13	70.96	-118.41
4	345.52	-59.70	-13.00	-46.70	1.05 H	2	53.83	-113.53
5	389.94	-60.96	-13.00	-47.96	1.55 H	157	51.39	-112.35
6	455.44	-63.89	-13.00	-50.89	1.39 H	278	46.77	-110.66

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

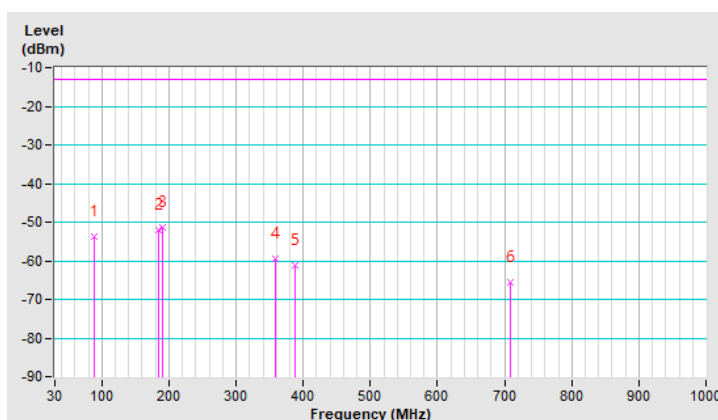


RF Mode	TX GSM 850	Channel	CH 251 : 848.8 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	87.89	-53.65	-13.00	-40.65	1.54 V	250	67.30	-120.95
2	184.74	-51.93	-13.00	-38.93	1.16 V	208	65.35	-117.28
3	190.21	-51.27	-13.00	-38.27	1.15 V	214	66.67	-117.94
4	358.91	-59.33	-13.00	-46.33	1.64 V	316	53.93	-113.26
5	387.40	-61.10	-13.00	-48.10	1.17 V	85	51.30	-112.40
6	709.54	-65.55	-13.00	-52.55	1.19 V	154	40.72	-106.27

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.



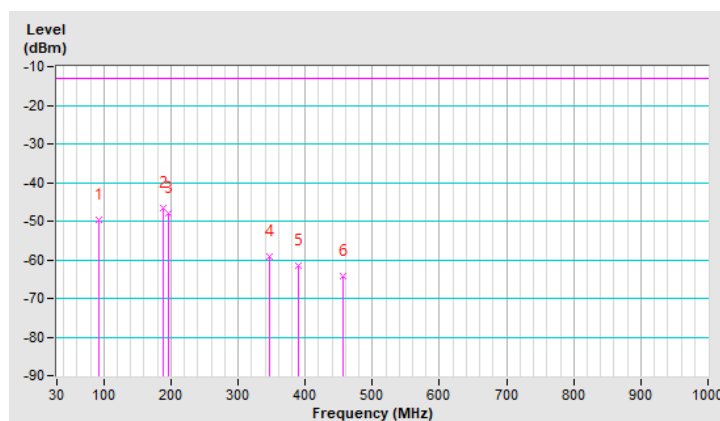
WCDMA Band 5

RF Mode	TX WCDMA Band V	Channel	CH 4233 : 846.6 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	92.44	-49.51	-13.00	-36.51	1.85 H	37	71.23	-120.74
2	189.30	-46.52	-13.00	-33.52	1.18 H	241	71.30	-117.82
3	195.87	-47.83	-13.00	-34.83	1.65 H	333	70.49	-118.32
4	347.62	-59.15	-13.00	-46.15	1.15 H	274	54.32	-113.47
5	388.94	-61.47	-13.00	-48.47	1.45 H	24	50.89	-112.36
6	455.44	-64.38	-13.00	-51.38	1.36 H	177	46.28	-110.66

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

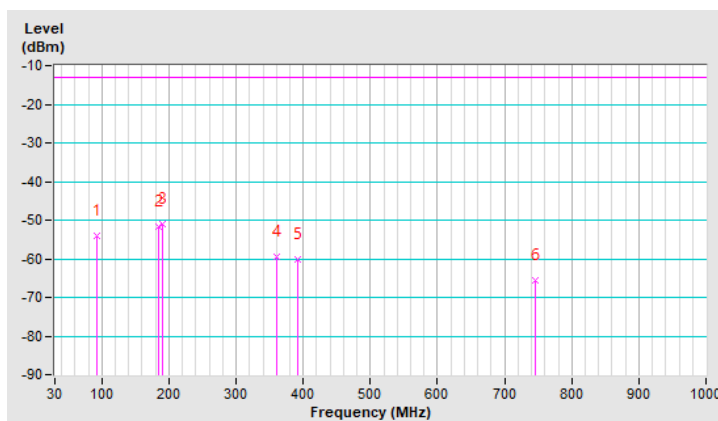


RF Mode	TX WCDMA Band V	Channel	CH 4233 : 846.6 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	91.83	-54.04	-13.00	-41.04	1.14 V	14	66.73	-120.77
2	183.68	-51.79	-13.00	-38.79	1.28 V	208	65.32	-117.11
3	190.32	-51.16	-13.00	-38.16	1.18 V	252	66.78	-117.94
4	359.54	-59.52	-13.00	-46.52	1.64 V	194	53.74	-113.26
5	391.07	-60.22	-13.00	-47.22	1.56 V	115	52.12	-112.34
6	745.54	-65.71	-13.00	-52.71	1.45 V	222	39.78	-105.49

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.



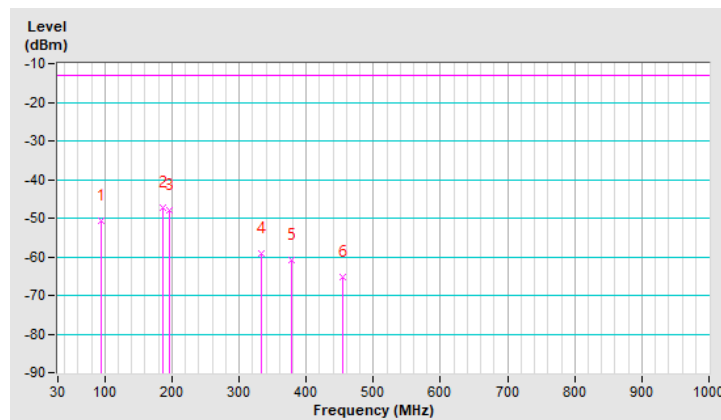
LTE Band 26, Channel Bandwidth: 10MHz

RF Mode	TX LTE Band XXVI-10MHz	Channel	CH 26990 : 844 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	94.56	-50.68	-13.00	-37.68	1.14 H	145	69.84	-120.52
2	185.54	-47.34	-13.00	-34.34	1.15 H	209	70.03	-117.37
3	196.64	-48.08	-13.00	-35.08	1.64 H	192	70.24	-118.32
4	333.00	-59.00	-13.00	-46.00	1.06 H	198	54.59	-113.59
5	378.98	-60.85	-13.00	-47.85	1.61 H	189	51.75	-112.60
6	454.54	-65.09	-13.00	-52.09	1.38 H	39	45.60	-110.69

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

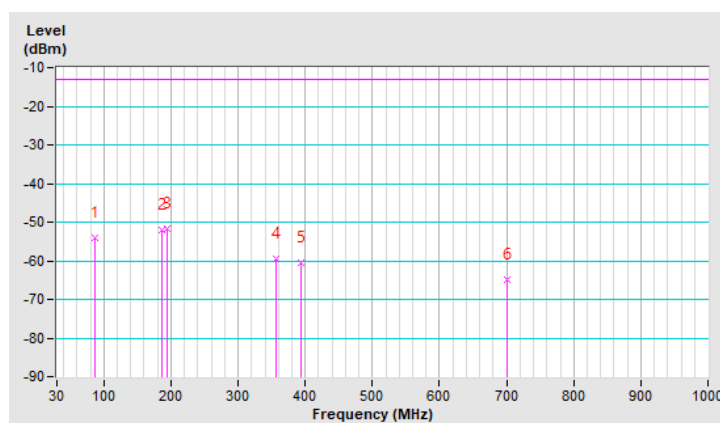


RF Mode	TX LTE Band XXVI-10MHz	Channel	CH 26990 : 844 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	87.54	-53.92	-13.00	-40.92	1.70 V	313	67.05	-120.97
2	186.64	-52.03	-13.00	-39.03	1.21 V	222	65.45	-117.48
3	194.50	-51.74	-13.00	-38.74	1.56 V	69	66.46	-118.20
4	356.60	-59.63	-13.00	-46.63	1.16 V	352	53.66	-113.29
5	394.40	-60.35	-13.00	-47.35	1.56 V	6	51.93	-112.28
6	700.05	-65.07	-13.00	-52.07	1.74 V	189	41.44	-106.51

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.



Above 1GHz
GSM 850

RF Mode	TX GSM 850	Channel	CH 251 : 848.8 MHz
Frequency Range	1GMHz ~ 18GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1697.60	-56.94	-13.00	-43.94	1.42 H	318	38.82	-95.76
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1697.60	-56.70	-13.00	-43.70	1.13 V	325	39.06	-95.76

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

WCDMA Band 5

RF Mode	TX WCDMA Band V	Channel	CH 4233 : 846.6 MHz
Frequency Range	1GMHz ~ 18GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1693.20	-57.43	-13.00	-44.43	1.00 H	240	38.40	-95.83
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1693.20	-56.98	-13.00	-43.98	1.51 V	174	38.85	-95.83

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

LTE Band 26, Channel Bandwidth: 10MHz

RF Mode	TX LTE Band XXVI-10MHz	Channel	CH 26990 : 844 MHz
Frequency Range	1GMHz ~ 18GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1688.00	-56.77	-13.00	-43.77	2.16 H	198	39.17	-95.94
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1688.00	-57.70	-13.00	-44.70	1.21 V	83	38.24	-95.94

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

5 Pictures of Test Arrangements

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

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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Web Site: www.bureauveritas-adt.com

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

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