

FCC Test Report (Part 90 – Cat-M1 B26)

Report No.: RFBBDJ-WTW-P23050444-3

FCC ID: PPQ202005BG95M5

Test Model: BG95-M5

Received Date: May 17, 2023

Test Date: May 30 ~ Jun. 06, 2023

Issued Date: Jul. 20, 2023

Applicant: LITE-ON Technology Corp.

- Address: Bldg. C, 90, Chien 1 Rd., Chung-Ho, New Taipei City 23585, Taiwan (R.O.C.)
- **Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
- Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
- **Test Location (1):** No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
- Test Location (2): No. 70, Wenming Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)

 FCC Registration /
 788550 / TW0003

 Designation Number:
 281270 / TW0032



This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/ and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



Table of Contents

R	eleas	e Control Record	. 3
1	C	Certificate of Conformity	. 4
2	5	Summary of Test Results	. 5
	2.1 2.2	Measurement Uncertainty Test Site and Instruments	. 5 . 6
3	C	General Information	. 7
	3.1 3.2 3.2.1 3.3 3.4 3.5	General Description of EUT Configuration of System under Test Description of Support Units Test Mode Applicability and Tested Channel Detail EUT Operating Conditions General Description of Applied Standards and References	. 7 . 8 . 8 . 9 10 10
4	٦	Fest Types and Results	11
	4.1 4.1.1 4.1.2 4.1.3 4.1.4 4.2 4.2.1 4.2.2 4.2.3 4.2.4 4.2.5	Output Power Measurement Limits of Output Power Measurement Test Procedures Test Setup Test Results Radiated Emission Measurement Limits of Radiated Emission Measurement Test Procedure Deviation from Test Standard Test Setup Test Results	11 11 11 12 14 14 14 15 16
5	F	Pictures of Test Arrangements	19
A	ppend	dix – Information of the Testing Laboratories	20



Release Control Record

Issue No.	Description	Date Issued
RFBBDJ-WTW-P23050444-3	Original Release	Jul. 20, 2023



1 Certificate of Conformity

Product:	Quectel BG95-M5
Brand:	LITEON
Test Model:	BG95-M5
Sample Status:	Engineering Sample
Applicant:	LITE-ON Technology Corp.
Test Date:	May 30 ~ Jun. 06, 2023
Standards:	FCC Part 90, Subpart I, S

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

Lena Wang / Specialist

Date: Jul. 20, 2023

1.

Approved by :

0	er	СW	1	14	Lin	
					_	

Date: Jul. 20, 2023

Jeremy Lin / Project Engineer



2 Summary of Test Results

Applied Standard: FCC Part 90 & Part 2										
FCC Clause	Test Item	Result	Remarks							
2.1046 90.635 (b)	Effective Radiated Power	Pass	Meet the requirement of limit.							
2.1047	Modulation Characteristics	N/A	Refer to Note							
2.1055 90.213	Frequency Stability	N/A	Refer to Note							
2.1049 90.209	Occupied Bandwidth	N/A	Refer to Note							
2.1051 90.691	Emission Masks	N/A	Refer to Note							
-	Band Edge Measurements	N/A	Refer to Note							
2.1051 90.691	Conducted Spurious Emissions	N/A	Refer to Note							
2.1053 90.691	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -20.81dB at 30.97MHz.							

Note:

- 1. Only test item of Effective Isotropic Radiated Power & Radiated Emissions were performed for this report. Other testing data please refer to TA Technology (Shanghai) Co., Ltd. report no.: R2005A0283-R3V1.
- 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) (±)
	9kHz ~ 30MHz	3.00 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	2.91 dB
	200MHz ~1000MHz	2.93 dB
	1GHz ~ 18GHz	1.76 dB
Radiated Emissions above 1 GHz	18GHz ~ 40GHz	1.77 dB



2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver Rohde & Schwarz	N9038A	MY55420137	May 03, 2023	May 02, 2024
Spectrum Analyzer KEYSIGHT	N9020B	MY60110440	Mar. 16, 2023	Mar. 15, 2024
Loop Antenna TESEQ	HLA 6121	45745	Jul. 27, 2022	Jul. 26, 2023
BILOG Antenna SCHWARZBECK	VULB9168	1213	Oct. 20, 2022	Oct. 19, 2023
HORN Antenna RF SPIN	DRH18-E	210103A18E	Nov. 13, 2022	Nov. 12, 2023
HORN Antenna SCHWARZBECK	BBHA 9170	9170	Nov. 13, 2022	Nov. 12, 2023
Loop Antenna EMCI	EM-6879	269	Sep. 19, 2022	Sep. 18, 2023
Preamplifier EMCI	EMC330N	980782	Jan. 16, 2023	Jan. 15, 2024
Preamplifier EMCI	EMC118A45SE	980808	Dec. 29, 2022	Dec. 28, 2023
Preamplifier EMCI	EMC184045SE	980788	Jan. 16, 2023	Jan. 15, 2024
RF signal cable EMCI	EMC104-SM-SM- (9000+2000+1000)	201243+ 201231+ 210102	Jan. 16, 2023	Jan. 15, 2024
RF signal cable EMCI	EMCCFD400-NM- NM- (9000+300+500)	201236+ 201235+ 201233	Jan. 16, 2023	Jan. 15, 2024
RF signal cable EMCI	EMC101G-KM-KM- (5000+3000+2000)	201260+201257+20125 4	Jan. 16, 2023	Jan. 15, 2024
Software BV ADT	ADT_Radiated_V7. 6.15.9.5	NA	NA	NA
Antenna Tower Max-Full	MFT-151SS-0.5T	NA	NA	NA
Turn Table Max-Full	MF-7802BS	NA	NA	NA
Turn Table Controller Max-Full	MF-7802BS	MF780208674	NA	NA
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190004 /MY55190007/MY5521000 5	Jul. 13, 2022	Jul. 12, 2023
Radio Communication Analyzer Anritsu	MT8821C	6201462755	Mar. 03, 2023	Mar. 02, 2024

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 WM Chamber 8.



3 General Information

3.1 General Description of EUT

Product	Quectel BG95-M5									
Prond										
Test Model	BG95-M5									
Sample Status	Engineering Sample									
Power Supply										
Rating	208-240 Vac									
Modulation Type	QPSK, 16QAM									
	Cat-M1 26 (Channel Bandwidth: 1.4 MHz)	814.7MHz ~ 823.3	BMHz							
Operating	Cat-M1 26 (Channel Bandwidth: 3 MHz)	815.5MHz ~ 822.5	5MHz							
Frequency	Cat-M1 26 (Channel Bandwidth: 5 MHz) 816.5MHz ~ 821.5MHz									
	Cat-M1 26 (Channel Bandwidth: 10 MHz) 819.0MHz									
	Cat-M1									
		QPSK	16QAM							
	Cat-M1 26 (Channel Bandwidth: 1 / MHz)	175.792mW	170.608mW							
		(22.45dBm)	(22.32dBm)							
Max ERP Power	Cat-M1 26 (Channel Bandwidth: 3 MHz)	177.828mW	170.608mW							
		(22.50dBm)	(22.32dBm)							
	Cat-M1 26 (Channel Bandwidth: 5 MHz)	176.198mW	170.216mW							
		(22.46dBm)	(22.31dBm)							
	Cat-M1 26 (Channel Bandwidth: 10 MHz)	179.473mW	167.494mW							
(22.54dBm) (22.24d										
Antenna Type	Refer to Note									
Antenna Connector	Refer to Note									
Accessory Device	Refer to Note									
Cable Supplied	N/A									

Note:

1. The EUT is authorized for use in specific End-product. Please refer to below for more details. The model of 'EX-1193-MFD-80' was chosen for final test.

Brand Model		odel	WWAN		RFID	WIFI		Difference			
LITEON	EX-1193-MFD-80 EX-1193-MFD-48		FCC ID: PPQ202005BG9 5	FCC ID: PPQRYORR2L		FCC ID: PPQLILYW131		The difference between EX-1193-MFE 80 and EX-1193-MFD-48 in the rated current (80A/48A)		MFD- ated	
2. The E	2. The End-product contains following accessory devices.										
Product Brand			Brand	Model		Description					
ho	olster		Liteon		N/A	/A -					
3. The a	antenna i	nformatior	n for host is lis	ed as b	elow.						
	Туре	Mon	opole Coupling								
С	Connector	ipex	(MHF)								
	Antenna gain (dBi)										
GSM 850	GSM Cat-M1 Band Cat-M1 NB		NB-IoT	Cat-M1 / NB-IoT Band							

	1900	(Part 22)	(Part 90)	Band 71	2	4	5	12	13	25	66	85
1.9	1.7	1.9	1.1	1.3	1.7	1.5	1.9	1.1	0.7	1.7	1.5	1.1

* Detail antenna specification please refer to antenna datasheet or an antenna gain measurement report.

4. The above EUT information is declared by manufacturer and for more detailed features description,

please refer to the manufacturer's specifications or User's Manual.



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.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
А	Notebook	Lenovo	L440	R9-0GFJKK	N/A	Provided by Lab
В	LOAD	NA	NA	NA	N/A	Provided by Lab
С	AC charging station	LITEON	X-1193-MFD-80	NA	N/A	Provided by Client
D	Radio Communication Analyzer	Anritsu	MT8821C	6201462755	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	POWER CABLE(DC out)	1	5	Y	0	Accessory of EUT
2	RJ-45 Cable	1	1.8	N	0	Provided by Lab
3	LAN Cable	1	10	N	0	Provided by Lab
4	POWER CABLE(AC in)	1	1.8	Y	0	Accessory of EUT



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 Z axis. Following channel(s) was (were) selected for the final test as listed below:

Cat-M1	Band	26

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	26697 to 26783	26697 (814.7MHz), 26740 (819.0MHz), 26783 (823.3MHz)	1.4MHz	QPSK / 16QAM	1 Full
		26705 to 26775	26705 (815.5MHz), 26740 (819.0MHz), 26775 (822.5MHz)	3MHz	QPSK / 16QAM	1 Full
		26715 to 26765	26715 (816.5MHz), 26740 (819.0MHz), 26765 (821.5MHz)	5MHz	QPSK / 16QAM	1 Full
			26740	26740 (819.0MHz)	10MHz	QPSK / 16QAM
-	Radiated Emission Below 1GHz	26740	26740 (819.0MHz)	10MHz	QPSK	1
-	Radiated Emission Above 1GHz	26740	26740 (819.0MHz)	10MHz	QPSK	1

Note:

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation. Therefore, only ERP had been tested under QPSK, 16QAM mode, the other items were performed under QPSK mode only.

2. For radiated emissions, select the worst channel with the maximum power for final testing.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
ERP	22deg. C, 67%RH	120 Vac, 60 Hz	Noah CHANG
Radiated Emission Below 1GHz	22deg. C, 67%RH	120 Vac, 60 Hz	Greg Lin
Radiated Emission Above 1GHz	22deg. C, 67%RH	120 Vac, 60 Hz	Greg Lin



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:

Test Standard:

FCC 47 CFR Part 2 FCC 47 CFR Part 90 ANSI/TIA/EIA-603-E 2016 ANSI 63.26-2015

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

References Test Guidance:

KDB 971168 D01 Power Meas License Digital Systems v03r01KDB 971168 D02 Misc Rev Approv License Devices v02r02

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

The output power shall be according to the specific rule Part 90.635 that "Mobile station are limited to 100 watts e.r.p".

4.1.2 Test Procedures

Conducted Power Measurement:

The EUT was set up for the maximum power with eMTC link data modulation and link up with simulator (Built-in power meter). Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator. The average (rms) power measurement was performed on emulator and power value was measured from power function on emulator. Power measurements use detector average (rms).

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: $EIRP = P_{Meas} + G_T$ $ERP = P_{Meas} + G_T - 2.15$ whereERP 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} P_{Meas} 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)

Cat-M1 Band 26								
		RB Size	RB Offset	Low	Mid	High		
BW	MCS Index	Cha	nnel	26740				
	maox	Frequen	cy (MHz)		819			
		1	0		23.59			
	QPSK	1	6		23.35			
1014		6	0		22.81			
TOM		1	0		23.29			
	16QAM	1	6		23.21			
		6	0		21.89			
DW/	MCS	Cha	nnel	26715	26740	26765		
DVV	Index	Frequen	cy (MHz)	816.5	819	821.5		
		1	0	23.42	23.51	23.41		
	QPSK	1	6	23.30	23.36	23.26		
ENA		6	0	22.72	22.80	22.70		
	16QAM	1	0	23.29	23.31	23.36		
		1	6	23.25	23.30	23.22		
		6	0	21.76	21.83	21.73		
DW/	MCS	Cha	nnel	26705	26740	26775		
DVV	Index	Frequen	cy (MHz)	815.5	819	822.5		
		1	0	23.46	23.55	23.49		
	QPSK	1	6	23.24	23.31	23.25		
3M		6	0	22.73	22.83	22.72		
5101		1	0	23.37	23.37	23.35		
	16QAM	1	6	23.19	23.29	23.18		
		6	0	21.73	21.81	21.70		
BW	MCS	Cha	nnel	26697	26740	26783		
BW	Index	Frequen	cy (MHz)	814.7	819	823.3		
		1	0	23.40	23.50	23.41		
	QPSK	1	6	23.29	23.41	23.32		
1 /1		6	0	22.72	22.82	22.76		
1.411		1	0	23.31	23.37	23.31		
	16QAM	1	6	23.29	23.30	23.33		
		6	0	21.78	21.85	21.78		



ERP Power (dBm)

Cat-M1 Band 26								
		RB Size	RB Offset	Low	Mid	High		
BW	MCS Index	Cha	nnel		26740			
		Frequen	cy (MHz)		819			
		1	0		22.54			
	QPSK	1	6		22.30			
1014		6	0		21.76			
TOM		1	0		22.24			
	16QAM	1	6		22.16			
		6	0		20.84			
DW/	MCS	Cha	nnel	26715	26740	26765		
DW	Index	Frequen	cy (MHz)	816.5	819	821.5		
		1	0	22.37	22.46	22.36		
	QPSK	1	6	22.25	22.31	22.21		
514		6	0	21.67	21.75	21.65		
JIM	16QAM	1	0	22.24	22.26	22.31		
		1	6	22.20	22.25	22.17		
		6	0	20.71	20.78	20.68		
BW	MCS	Cha	nnel	26705	26740	26775		
	Index	Frequen	cy (MHz)	815.5	819	822.5		
	QPSK	1	0	22.41	22.50	22.44		
		1	6	22.19	22.26	22.20		
3M		6	0	21.68	21.78	21.67		
5101		1	0	22.32	22.32	22.30		
	16QAM	1	6	22.14	22.24	22.13		
		6	0	20.68	20.76	20.65		
BW	MCS	Cha	nnel	26697	26740	26783		
	Index	Frequen	cy (MHz)	814.7	819	823.3		
		1	0	22.35	22.45	22.36		
	QPSK	1	6	22.24	22.36	22.27		
1 4M		6	0	21.67	21.77	21.71		
1. TIVI		1	0	22.26	22.32	22.26		
	16QAM	1	6	22.24	22.25	22.28		
		6	0	20.73	20.80	20.73		

*ERP = Conducted + antenna gain (1.1dBi) - 2.15



4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission equal to -13dBm.

For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to -70 dBW/MHz. The limit of emissions is equal to -40 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 (dBm) = E (dBµV/m) + 20log(D) 104.8; where D is the measurement distance (in the far field region) in m.
 - ERP (dBm) = E (dBµV/m) + 20log(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 1MHz/3MHz. Set detector = average.
- 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





4.2.5 Test Results

Below 1GHz

Cat-M1 Band 26, Channel Bandwidth 10MHz

RF Mode	TX Cat-M1 Band 26	Channel	CH 26740 : 819.0MHz	
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	36.79	-46.77	-13.00	-33.77	1.00 H	110	64.55	-111.32			
2	142.52	-50.96	-13.00	-37.96	1.50 H	335	59.82	-110.78			
3	190.05	-47.58	-13.00	-34.58	1.25 H	227	65.78	-113.36			
4	309.36	-54.14	-13.00	-41.14	1.00 H	60	55.68	-109.82			
5	596.48	-55.76	-13.00	-42.76	2.00 H	10	47.33	-103.09			
6	958.29	-58.50	-13.00	-45.50	1.50 H	121	39.37	-97.87			

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) + 20log(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 Cat-M1 Band 26	Channel	CH 26740 : 819.0MHz
Frequency Range	30MHz ~ 1GHz		

	Antenna Polarity & Test Distance : Vertical at 3m									
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)		
1	30.97	-33.81	-13.00	-20.81	1.00 V	317	78.23	-112.04		
2	127.00	-49.87	-13.00	-36.87	1.25 V	81	62.34	-112.21		
3	194.90	-49.39	-13.00	-36.39	1.50 V	81	64.51	-113.90		
4	305.48	-56.96	-13.00	-43.96	1.00 V	143	52.99	-109.95		
5	477.17	-56.06	-13.00	-43.06	1.00 V	55	49.57	-105.63		
6	802.12	-57.48	-13.00	-44.48	1.25 V	84	42.37	-99.85		

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) + 20log(D) 104.8 2.15
- 3. Margin value = ERP Limit value.
- 4. The other ERP levels were very low against the limit.





Above 1GHz Cat-M1 Band 26, Channel Bandwidth 10MHz

RF Mode	TX Cat-M1 Band 26	Channel	CH 26740 : 819.0MHz	
Frequency Range	1GHz ~ 18GHz			

	Antenna Polarity & Test Distance : Horizontal at 3 m									
	Froquency	EDD	Limit	Margin	Antenna	Table	Raw	Correction		
No			(dPm)	(dP)	Height	Angle	Value	Factor		
		(ubiii)	(ubiii)) (ab)	(m)	(Degree)	(dBuV)	(dB/m)		
1	1638.00	-39.36	-13.00	-26.36	1.11 H	345	64.15	-103.51		
		A	Antenna Polai	rity & Test Dis	stance : Verti	cal at 3m				
	Fraguanay	EDD	Limit	Morgin	Antenna	Table	Raw	Correction		
No				(JD)	Height	Angle	Value	Factor		
	(IVIHZ)	(dBm)	(abm)	(dB)	(m)	(Degree)	(dBuV)	(dB/m)		
1	1638.00	-38.69	-13.00	-25.69	2.54 V	39	64.82	-103.51		

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) + 20log(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 and approved according to ISO/IEC 17025.

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

Linko EMC/RF Lab Tel: 886-2-26052180 Fax: 886-2-26051924 Hsin Chu EMC/RF/Telecom Lab Tel: 886-3-6668565 Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab Tel: 886-3-3183232 Fax: 886-3-3270892

Email: <u>service.adt@tw.bureauveritas.com</u> Web Site: <u>http://ee.bureauveritas.com.tw</u>

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

---- END ----