



No. 1 Workshop, M-10, Middle section, Science & Technology
Park, Nanshan District Shenzhen, Guangdong, China 518057
Telephone: +86 (0) 755 2601 2053
Fax: +86 (0) 755 2671 0594
Email: sgs_internet_operations@sgs.com

Report No.: SZEM110900397902
Page : 1 of 26

FCC REPORT

Application No. : SZEM1109003979RF
Applicant: Pixel Enterprise Limited
Product Name: Expert
Operation Frequency: 2404.12MHz -2478.37MHz
FCC ID: X5SEXPRT-402RX
Standards: FCC CFR Title 47 Part 15 Subpart C Section 15.249: 2010
Date of Receipt 2011-10-08
Date of Test 2011-11-02 to 2012-01-04
Date of Issue 2012-02-15

Test Result :	PASS *
----------------------	---------------

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Jack Zhang
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

This Test Report is issued by the Company subject to its General Conditions of Service printed overleaf. Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full, without prior written permission of the Company.

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."



2 Contents

	Page
1 COVER PAGE	1
2 CONTENTS	2
3 TEST SUMMARY	3
4 GENERAL INFORMATION	4
4.1 CLIENT INFORMATION	4
4.2 GENERAL DESCRIPTION OF E.U.T.	4
4.3 E.U.T OPERATION MODE	6
4.4 DESCRIPTION OF SUPPORT UNITS	6
4.5 TEST FACILITY	7
4.6 TEST LOCATION	7
4.7 OTHER INFORMATION REQUESTED BY THE CUSTOMER	7
4.8 TEST INSTRUMENTS LIST:	8
5 TEST RESULTS AND MEASUREMENT DATA	10
5.1 ANTENNA REQUIREMENT:	10
5.2 RADIATED EMISSION	11
5.2.1 Field Strength Of The Fundamental Signal	13
5.2.2 Spurious Emissions	14
5.3 20DB BANDWIDTH	16
5.3.1 Band edge (Radiated Emission)	19-26





3 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Pass
Field strength of the fundamental signal	15.249 (a)	Pass
Spurious emissions	15.249/15.209	Pass
Band edge (Radiated Emission)	15.249(a)/15.205	Pass
20dB Occupied Bandwidth	15.215 (c)	Pass

Remark: Pass: The EUT complies with the essential requirements in the standard.

Fail: The EUT does not comply with the essential requirements in the standard.



4 General Information

4.1 Client Information

Applicant:	Pixel Enterprise Limited
Address of Applicant:	RM1228,12/F,ONE GRAND TOWER, 639 NATHAN RD, MONGKOK, KOWLOON, HONG KONG
Manufacturer:	Pixel Enterprise Limited
Address of Manufacturer:	RM1228,12/F,ONE GRAND TOWER, 639 NATHAN RD, MONGKOK, KOWLOON, HONG KONG
Factory:	Pixel Enterprise Limited
Address of Factory:	RM1228,12/F,ONE GRAND TOWER, 639 NATHAN RD, MONGKOK, KOWLOON, HONG KONG

4.2 General Description of E.U.T.

Product Name:	Expert
Model No.:	W-402 (Video)
Operation Frequency:	2404.120MHz -2478.370MHz
Number of Channel:	67
Channel Separation:	1.125MHz
Modulation Type:	GFSK
Antenna Type:	Integral
Antenna Gain:	0dBi
Power Supply:	6.0V DC (1.5V x 4 'AA' Batteries)



SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

Page : 5 of 26

Operation Frequency of each channel

Hopping	Frequency	Hopping	Frequency	Hopping	Frequency	Hopping	Frequency
1	2404.120	21	2426.620	41	2449.120	61	2471.620
2	2405.245	22	2427.745	42	2450.245	62	2472.745
3	2406.370	23	2428.870	43	2451.370	63	2473.870
4	2407.495	24	2429.995	44	2452.495	64	2474.995
5	2408.620	25	2431.120	45	2453.620	65	2476.120
6	2409.745	26	2432.245	46	2454.745	66	2477.245
7	2410.870	27	2433.370	47	2455.870	67	2478.370
8	2411.995	28	2434.495	48	2456.995	68	
9	2413.120	29	2435.620	49	2458.120	69	
10	2414.245	30	2436.745	50	2459.245	70	
11	2415.370	31	2437.870	51	2460.370	71	
12	2416.495	32	2438.995	52	2461.495	72	
13	2417.620	33	2440.120	53	2462.620	73	
14	2418.745	34	2441.245	54	2463.745	74	
15	2419.870	35	2442.370	55	2464.870	75	
16	2420.995	36	2443.495	56	2465.995	76	
17	2422.120	37	2444.620	57	2467.120	77	
18	2423.245	38	2445.745	58	2468.245	78	
19	2424.370	39	2446.870	59	2469.370	79	
20	2425.495	40	2447.995	60	2470.495		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channels are:

Channel	Frequency
Lowest channel	2404.120MHz
Middle channel	2442.370MHz
Highest channel	2478.370MHz

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."



4.3 E.U.T Operation mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1012mbar
Test mode:	
Transmitting mode:	Keep the EUT transmitting continuous with modulation test signal at the special channel

4.4 Description of Support Units

None



4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

VCCI

The 3m Semi-anechoic chamber, Full-anechoic Chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197, G-416, T-1153 and C-2383 respectively.

FCC – Registration No.: 556682

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 556682.

Industry Canada (IC)

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1.

4.6 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch E&E Lab

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China 518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

4.7 Other Information Requested by the Customer

None.



SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

Page : 8 of 26

4.8 Test Instruments list:

RE in Chamber					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2012-06-10
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEL0023	2012-05-26
3	EMI Test software	AUDIX	E3	SEL0050	N/A
4	Coaxial cable	SGS	N/A	SEL0028	2012-05-29
5	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0015	2012-10-29
6	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0006	2012-10-29
7	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	2012-10-29
8	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	2012-05-26
9	Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEL0168	2012-10-26
11	Band filter	Amindeon	82346	SEL0094	2012-05-26

RF conducted					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)
1	Spectrum Analyzer	Rohde & Schwarz	FSP 30	SEL0154	2012-10-23
2	Coaxial cable	SGS	N/A	SEL0028	2012-05-29



SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

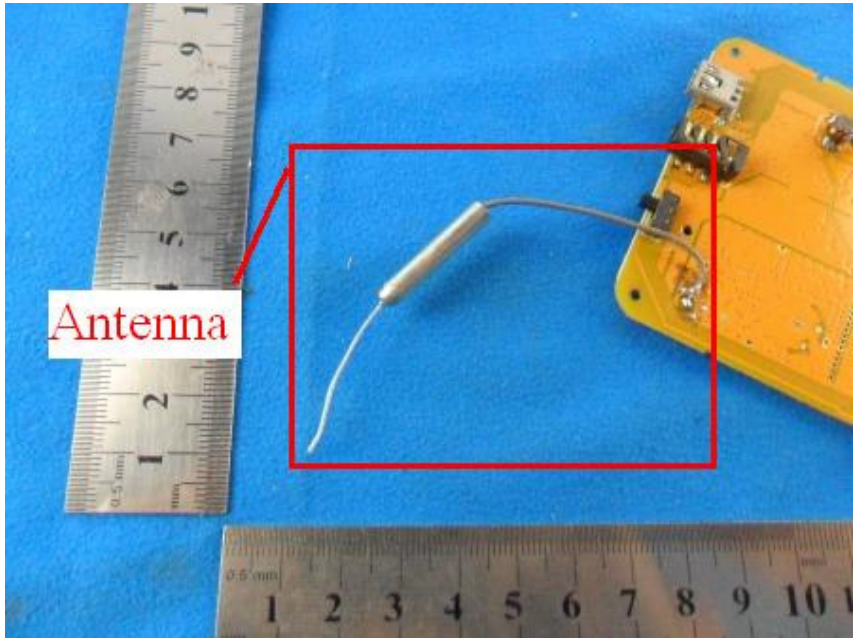
Page : 9 of 26

General used equipment					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)
1	Humidity/ Temperature Indicator	Shanghai	ZJ1-2B	SEL0102 to SEL0103	2012-10-27
2	Humidity/ Temperature Indicator	Shanghai	ZJ1-2B	SEL0101	2012-10-27
3	Barometer	ChangChun	DYM3	SEL0088	2012-05-18

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."

5 Test results and Measurement Data

5.1 Antenna requirement:

Standard requirement:	FCC Part15 C Section 15.203
<p>15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</p>	
E.U.T Antenna:	
<p>The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 0dBi.</p>	



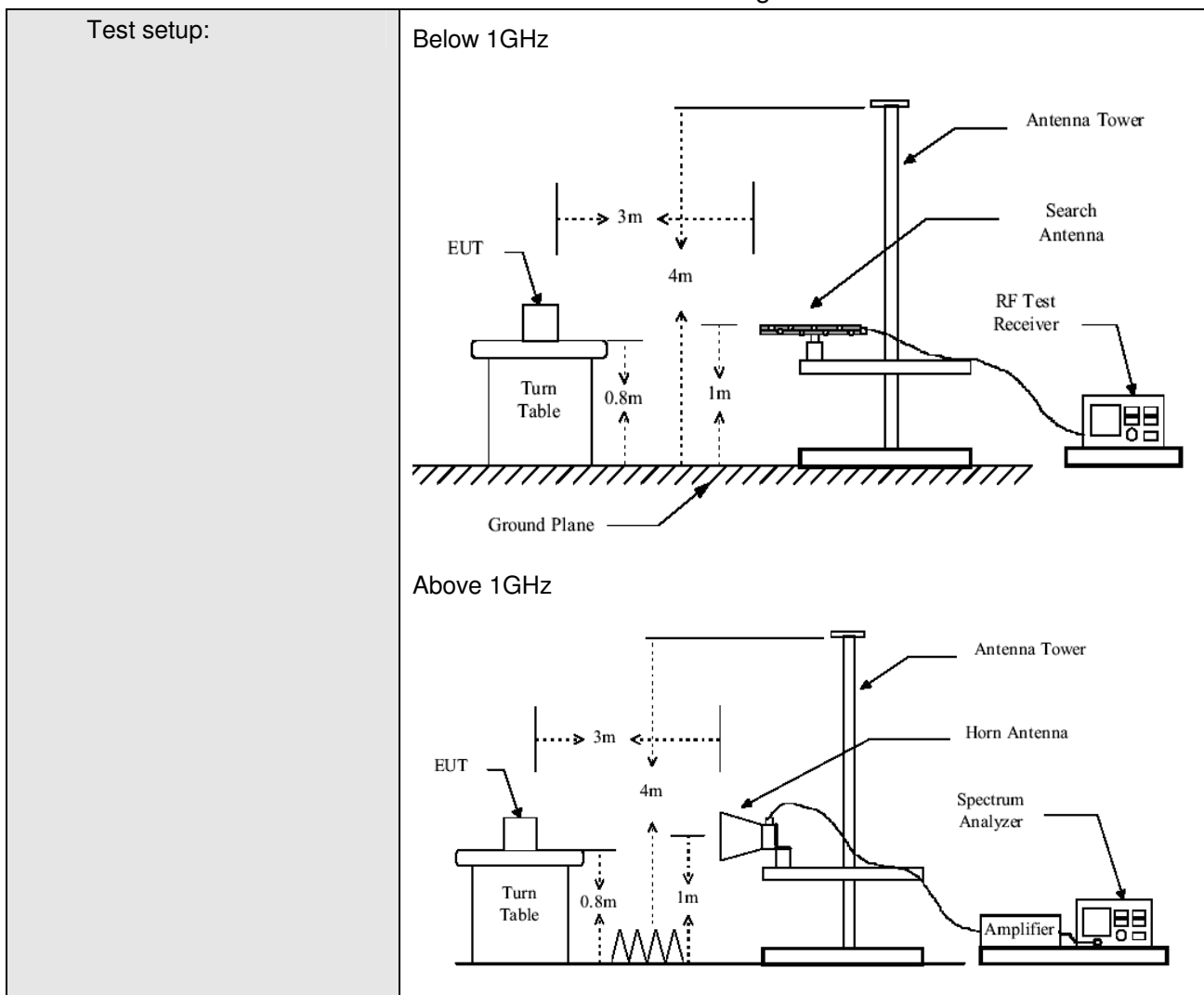
SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

Page : 11 of 26

5.2 Radiated Emission

Test Requirement:	FCC Part15 C Section 15.249, 15.209 and 15.205				
Test Method:	ANSI C63.10: 2009				
Test Frequency Range:	30MHz to 25GHz				
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver setup:					
	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	100kHz	300kHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
Peak		1MHz	10Hz	Average Value	
Limit: (Field strength of the fundamental signal)					
	Frequency		Limit (dBuV/m @3m)		Remark
	2400MHz-2483.5MHz		94.0		Average Value
114.0			Peak Value		
Limit: (Spurious Emissions)					
	Frequency		Limit (dBuV/m @3m)		Remark
	30MHz-88MHz		40.0		Quasi-peak Value
	88MHz-216MHz		43.5		Quasi-peak Value
	216MHz-960MHz		46.0		Quasi-peak Value
	960MHz-1GHz		54.0		Quasi-peak Value
	Above 1GHz	54.0		Average Value	
74.0		Peak Value			
Test Procedure:	<p>The E.U.T and its simulators are placed on a turntable which is 0.8meter above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.</p> <p>Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2009 on radiated measurement.</p>				
Test Instruments:	Refer to section 4.7 for details				
Test mode:	Transmitting mode				
Test result:	Pass				



Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

$$\text{Final Test Level} = \text{Receiver Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Preamplifier Factor}$$





SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

Page : 13 of 26

Measurement Data

5.2.1 Field Strength Of The Fundamental Signal

Peak value:

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Emission Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Antenna Polarization
2404.120	2.99	32.54	39.86	99.72	95.39	114.00	-18.61	Horizontal
2404.120	2.99	32.54	39.86	97.10	92.77	114.00	-21.23	Vertical
2442.370	3.01	32.61	39.89	98.00	93.73	114.00	-20.27	Horizontal
2442.370	3.01	32.61	39.89	96.50	92.23	114.00	-21.77	Vertical
2478.370	3.03	32.67	39.92	99.14	94.92	114.00	-19.08	Horizontal
2478.370	3.03	32.67	39.92	95.48	91.26	114.00	-22.74	Vertical

Average value:

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Emission Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Antenna Polarization
2404.120	2.99	32.54	39.86	91.27	86.94	94.00	-7.06	Horizontal
2404.120	2.99	32.54	39.86	89.25	84.92	94.00	-9.08	Vertical
2442.370	3.01	32.61	39.89	93.00	88.73	94.00	-5.27	Horizontal
2442.370	3.01	32.61	39.89	92.00	87.73	94.00	-6.27	Vertical
2478.370	3.03	32.67	39.92	94.23	90.01	94.00	-3.99	Horizontal
2478.370	3.03	32.67	39.92	91.05	86.83	94.00	-7.17	Vertical



SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

Page : 14 of 26

5.2.2 Spurious Emissions

Above 1GHz

Test mode:	Transmitting	Test channel:	Lowest	Remark:	Peak			
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Emission Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Antenna Polarization
2821.250	3.22	33.14	40.17	47.96	44.15	74.00	-29.85	Vertical
3232.500	3.52	33.31	40.48	48.05	44.40	74.00	-29.60	Vertical
4043.250	4.20	33.94	41.07	48.38	45.45	74.00	-28.55	Vertical
4830.500	4.70	34.68	41.65	54.28	52.01	74.00	-21.99	Vertical
5735.250	5.04	35.29	41.15	50.14	49.32	74.00	-24.68	Vertical
8085.250	6.20	36.03	39.11	48.53	51.65	74.00	-22.35	Vertical
3326.500	3.59	33.27	40.54	48.67	44.99	74.00	-29.01	Horizontal
4795.250	4.68	34.73	41.63	51.06	48.84	74.00	-25.16	Horizontal
6428.500	5.24	36.20	40.55	50.07	50.96	74.00	-23.04	Horizontal
7897.250	6.21	36.00	39.28	48.84	51.77	74.00	-22.23	Horizontal
9248.500	6.08	36.89	38.11	47.50	52.36	74.00	-21.64	Horizontal
10717.250	6.15	38.39	37.74	46.84	53.64	74.00	-20.36	Horizontal

Test mode:		Transmitting		Test channel:		Middle		Remark:		Peak	
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Emission Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Antenna Polarization			
2985.750	3.31	33.38	40.30	48.03	44.42	74.00	-29.58	Vertical			
3902.250	4.08	33.70	40.97	48.59	45.40	74.00	-28.60	Vertical			
5300.500	4.88	34.70	41.53	49.84	47.89	74.00	-26.11	Vertical			
6616.500	5.29	36.20	40.38	50.29	51.40	74.00	-22.60	Vertical			
7274.500	5.85	35.91	39.82	50.21	52.15	74.00	-21.85	Vertical			
9542.250	6.00	37.23	37.85	46.42	51.80	74.00	-22.20	Vertical			
2962.250	3.30	33.33	40.27	48.80	45.16	74.00	-28.84	Horizontal			
3714.250	3.91	33.47	40.83	49.21	45.76	74.00	-28.24	Horizontal			
4701.250	4.62	34.87	41.56	50.31	48.24	74.00	-25.76	Horizontal			
6522.500	5.26	36.28	40.46	50.83	51.91	74.00	-22.09	Horizontal			
7897.250	6.21	36.00	39.28	49.15	52.08	74.00	-21.92	Horizontal			
10470.500	6.09	38.26	37.64	46.16	52.87	74.00	-21.13	Horizontal			

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."



SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

Page : 15 of 26

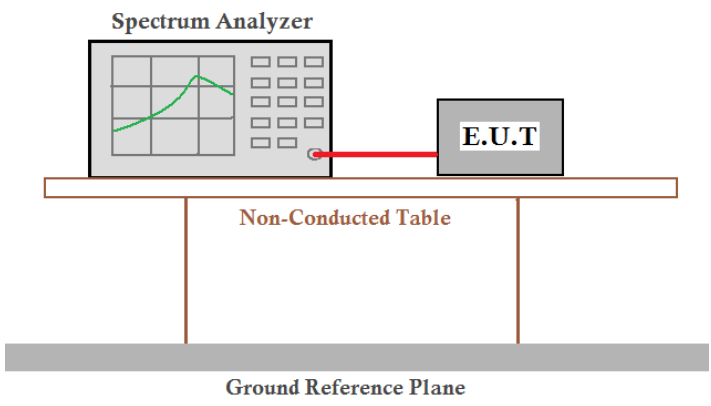
Test mode:	Transmitting	Test channel:	Highest	Remark:	Peak
------------	--------------	---------------	---------	---------	------

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBuV)	Emission Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Antenna Polarization
3279.500	3.55	33.29	40.51	49.24	45.57	74.00	-28.43	Vertical
4360.500	4.40	34.83	41.30	49.84	47.77	74.00	-26.23	Vertical
5582.500	4.98	35.04	41.29	50.28	49.01	74.00	-24.99	Vertical
6428.500	5.24	36.20	40.55	49.80	50.69	74.00	-23.31	Vertical
8179.250	6.20	36.07	39.03	48.20	51.44	74.00	-22.56	Vertical
10200.250	6.02	37.94	37.53	45.28	51.71	74.00	-22.29	Vertical
3197.250	3.49	33.32	40.45	47.92	44.28	74.00	-29.72	Horizontal
4548.500	4.53	35.12	41.44	49.44	47.65	74.00	-26.35	Horizontal
6017.250	5.13	35.72	40.91	51.24	51.18	74.00	-22.82	Horizontal
7568.250	6.19	36.00	39.56	49.19	51.82	74.00	-22.18	Horizontal
9777.250	5.98	37.48	37.65	46.27	52.08	74.00	-21.92	Horizontal
10529.250	6.10	38.31	37.67	45.61	52.35	74.00	-21.65	Horizontal

Remark:

1.As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak measurements were shown in the report.

5.3 20dB Bandwidth

Test Requirement:	FCC Part15 C Section 15.249/15.215
Test Method:	ANSI C63.10:2009
Limit:	Operation Frequency range 2400MHz-2483.5MHz
Test Procedure:	<ol style="list-style-type: none"> 1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. 2. Set the EUT to proper test channel. 3. Max hold the radiated emissions, mark the peak power frequency point and the -20dB upper and lower frequency points. 4. Read 20dB bandwidth.
Test setup:	 <p><i>Remark:</i> Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.</p>
Test Instruments:	Refer to section 4.7 for details
Test mode:	Transmitting mode
Test result:	Pass

Measurement Data

Test channel	20dB bandwidth (MHz)	Result
Lowest	3.640	Pass
Middle	3.640	Pass
Highest	3.760	Pass



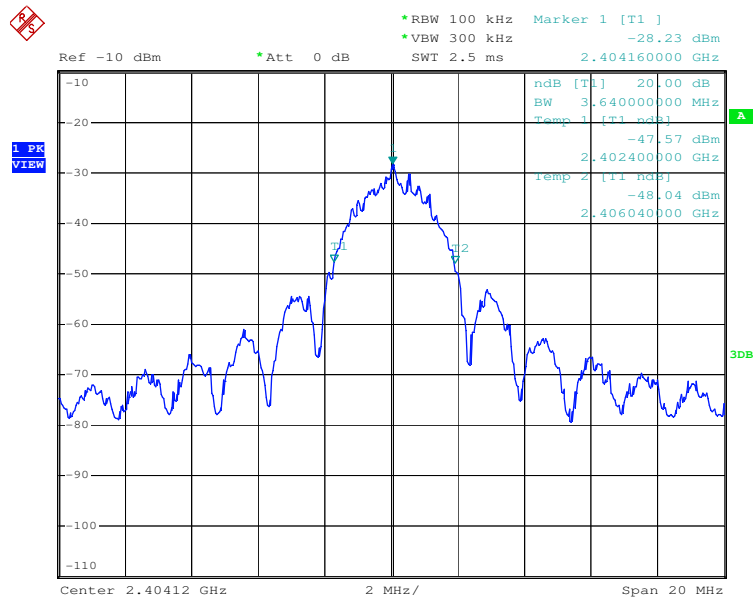
SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

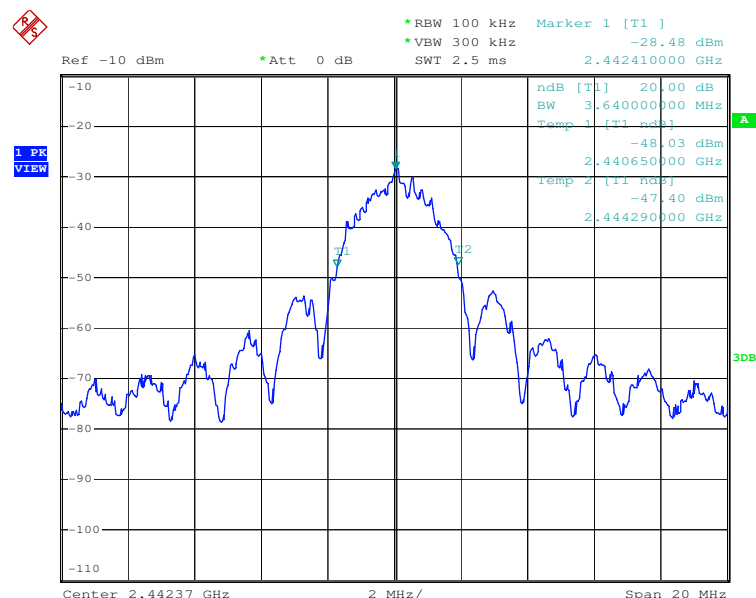
Page : 17 of 26

Test plot as follows:

Test channel:	Lowest	
---------------	--------	--



Test channel:	Middle	
---------------	--------	--



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."

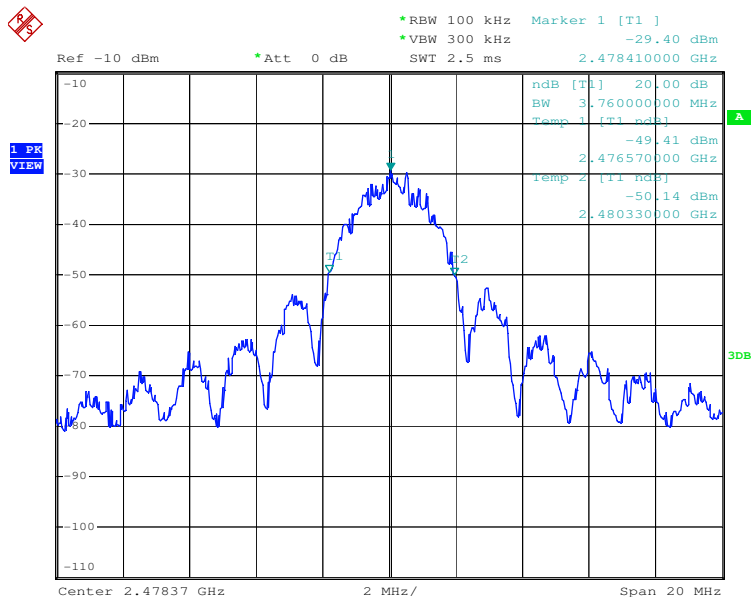


SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

Page : 18 of 26

Test channel:	Highest	
---------------	---------	--



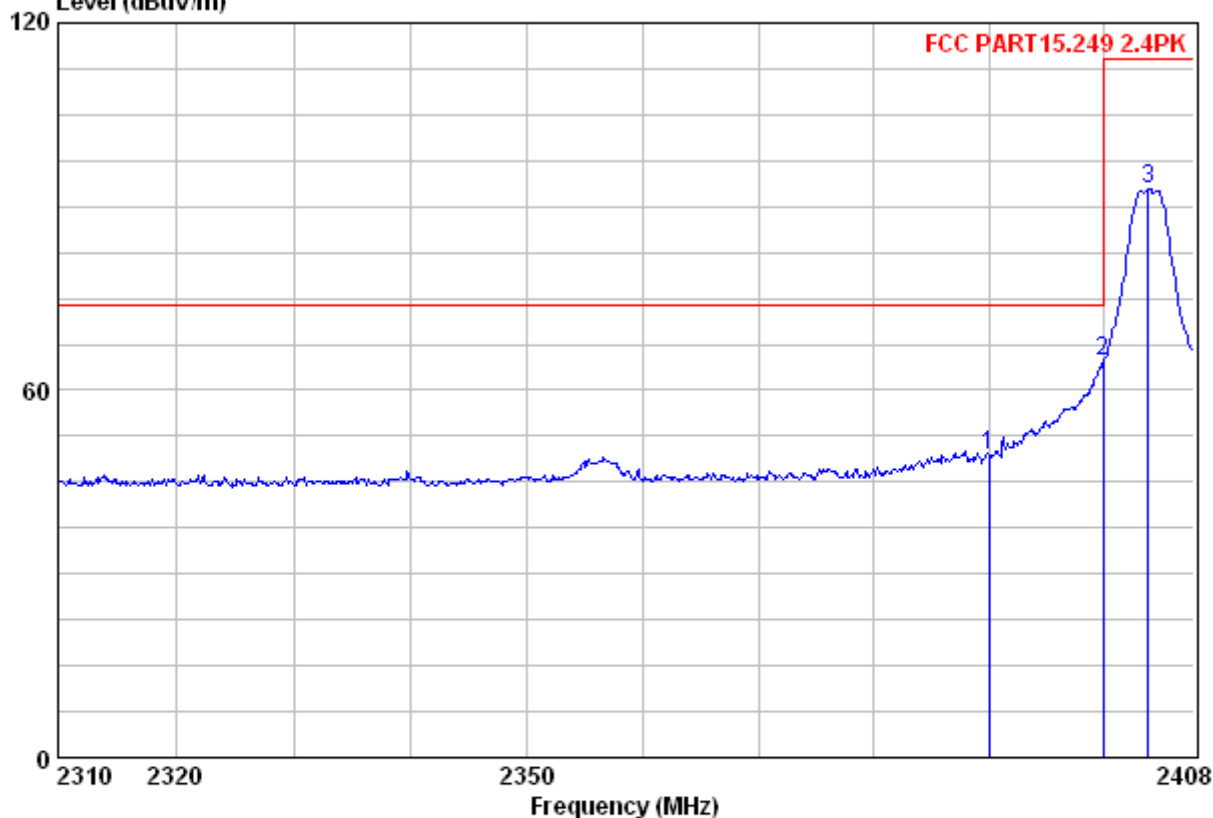
"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."

5.3.1 Band edge (Radiated Emission)

Test mode:	Transmitting	Test channel:	Lowest	Remark:	Peak	Vertical
------------	--------------	---------------	--------	---------	------	----------

Data: 221

Level (dBuV/m)



	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	53.83	49.48	74.00	-24.52
2	2400.000	2.98	32.51	39.86	69.11	64.74	74.00	-9.26
3	2403.982	2.99	32.54	39.86	97.10	92.77	114.00	-21.23



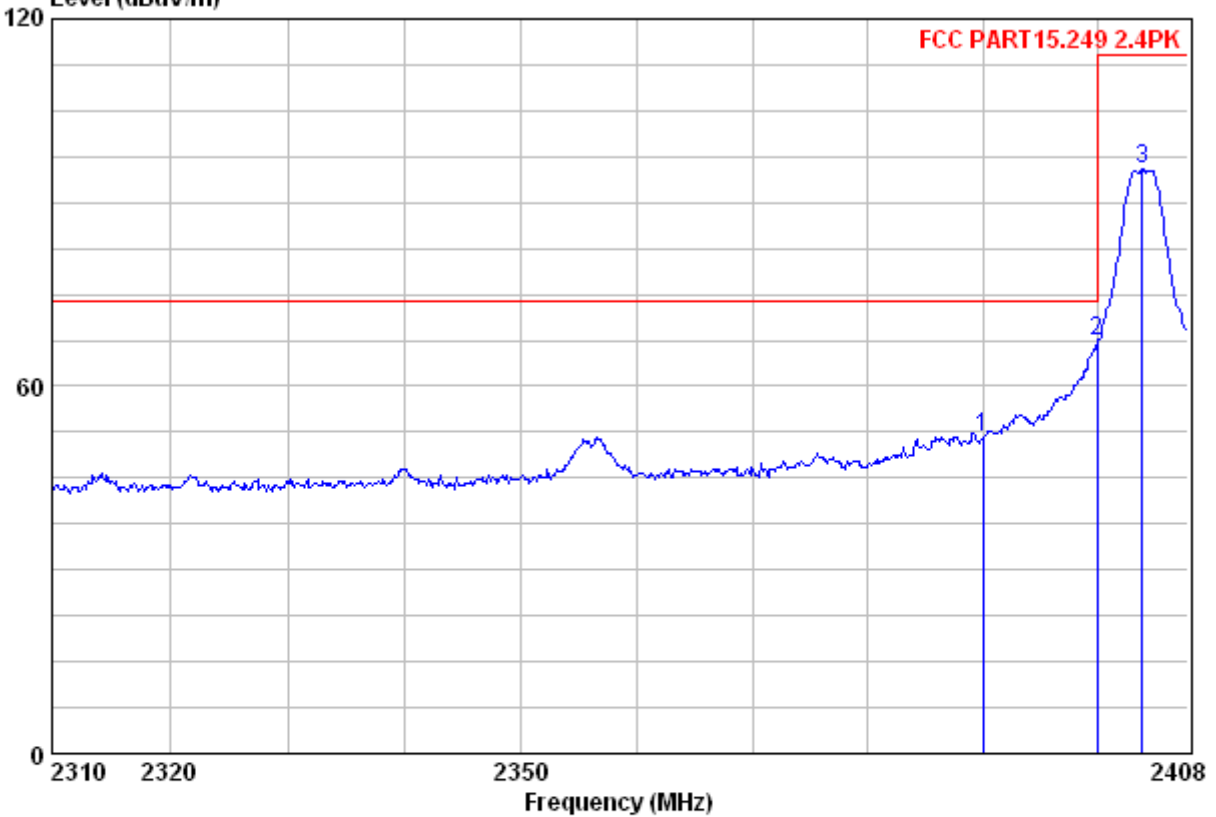
SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

Page : 20 of 26

Test mode:	Transmitting	Test channel:	Lowest	Remark:	Peak	Horizontal
------------	--------------	---------------	--------	---------	------	------------

Data: 219
Level (dBuV/m)



		Cable	Antenna	Preamp	Read		Limit	Over
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	56.02	51.67	74.00	-22.33
2 @	2400.000	2.98	32.51	39.86	71.65	67.28	74.00	-6.72
3	2403.982	2.99	32.54	39.86	99.72	95.39	114.00	-18.61

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."



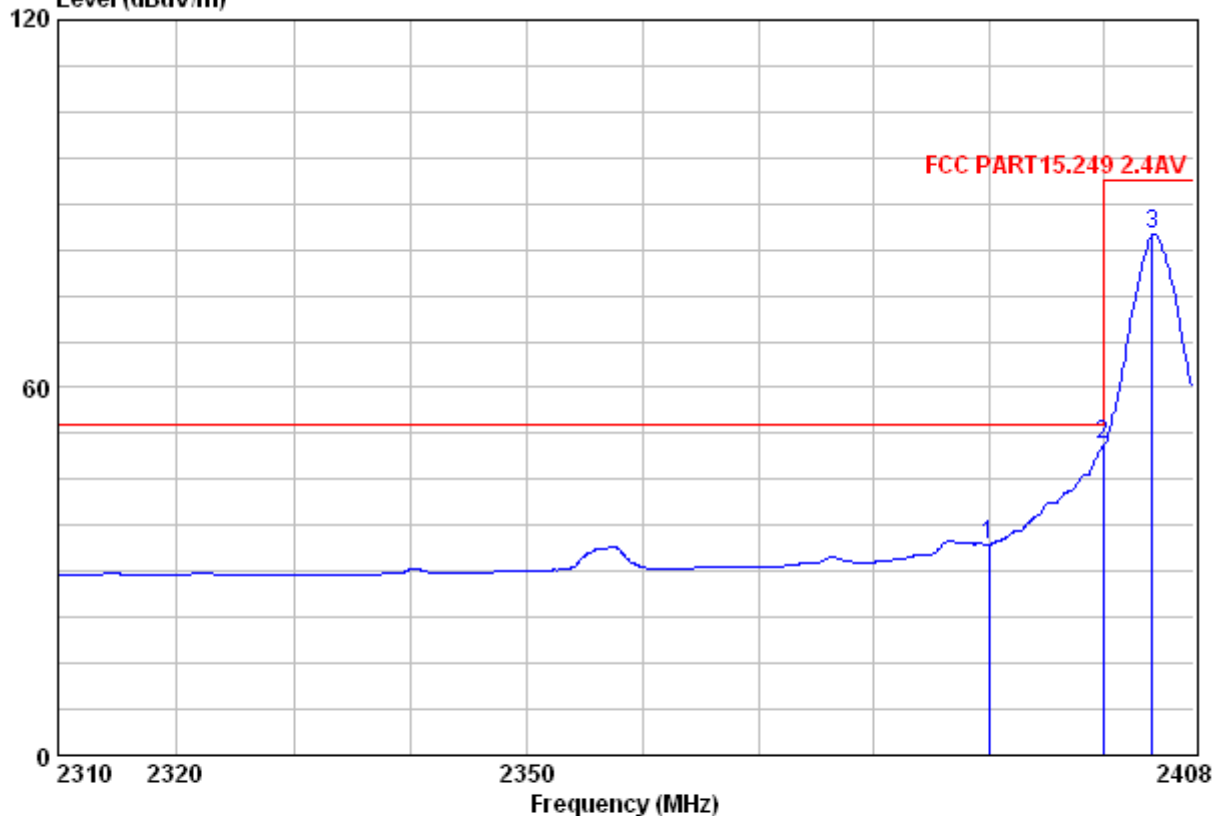
SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

Page : 21 of 26

Test mode:	Transmitting	Test channel:	Lowest	Remark:	Average	Vertical
------------	--------------	---------------	--------	---------	---------	----------

Data: 222
Level (dBuV/m)



	Freq	Cable Loss	Antenna Factor	Preamplifier Factor	Read Level	Level	Limit	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	38.67	34.31	54.00	-19.69
2	2400.000	2.98	32.51	39.86	54.92	50.55	54.00	-3.45
3	2404.374	2.99	32.54	39.86	89.25	84.92	94.00	-9.08

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."



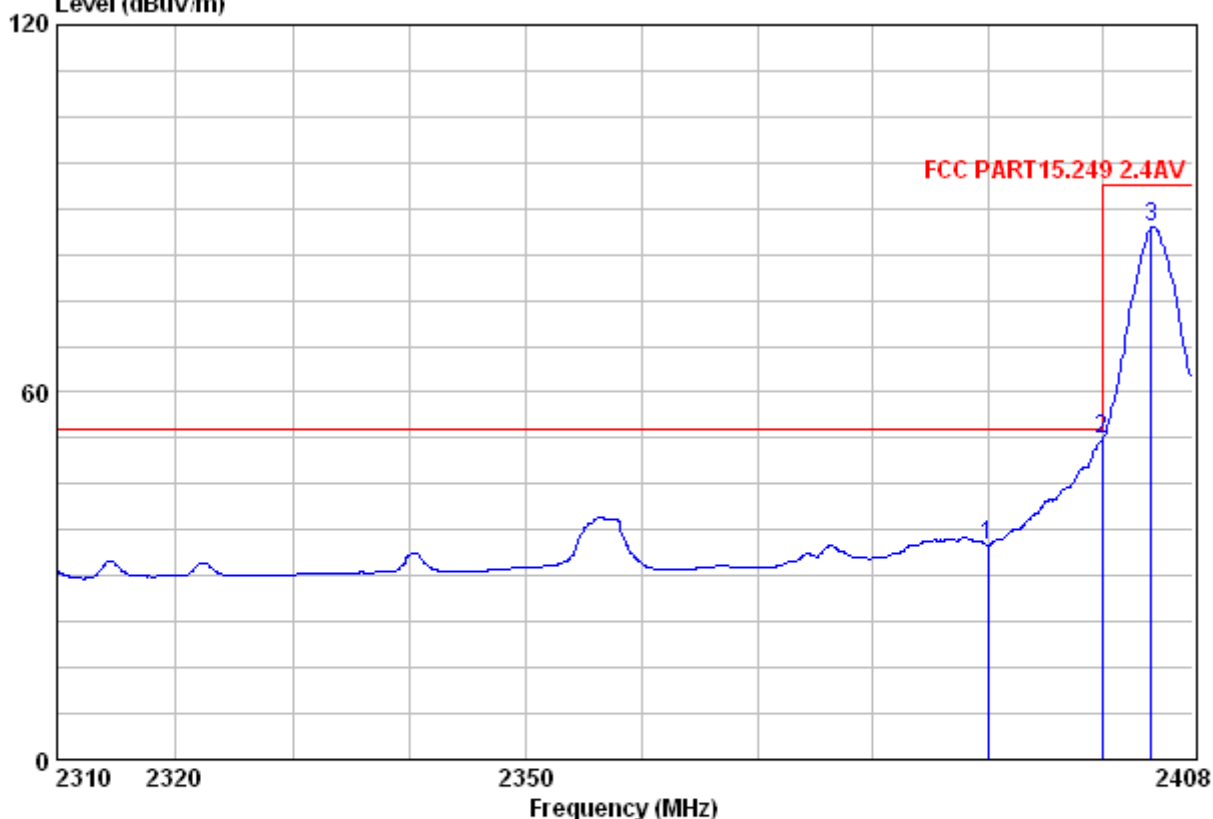
SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

Page : 22 of 26

Test mode:	Transmitting	Test channel:	Lowest	Remark:	Average	Horizontal
------------	--------------	---------------	--------	---------	---------	------------

Data: 220
Level (dBuV/m)



	Cable	Antenna	Preamp	Read	Limit	Over
Freq	Loss	Factor	Factor	Level	Line	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m
1	2.98	32.51	39.85	39.38	35.02	54.00
2	2.98	32.51	39.86	56.72	52.36	54.00
3	2.99	32.54	39.86	91.27	86.94	94.00



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."



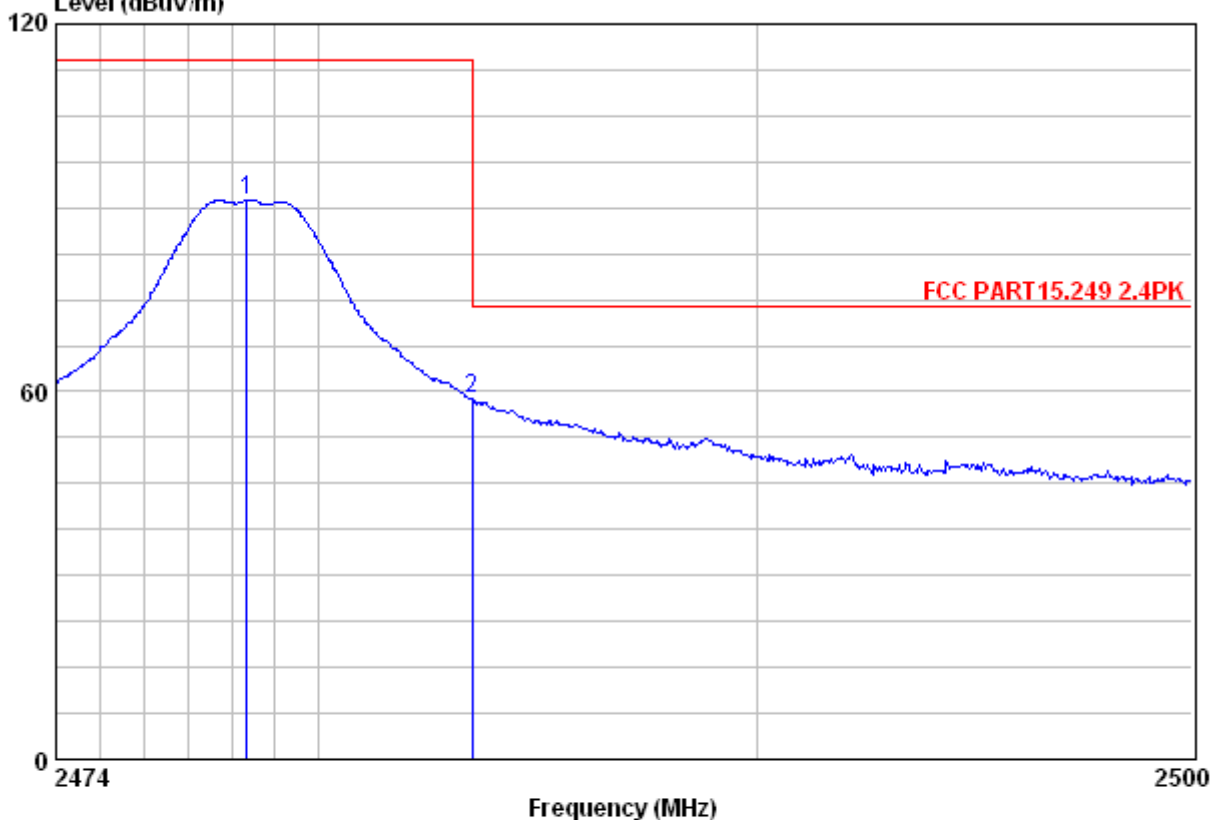
SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

Page : 23 of 26

Test mode:	Transmitting	Test channel:	Highest	Remark:	Peak	Vertical
------------	--------------	---------------	---------	---------	------	----------

Data: 217
Level (dBuV/m)



		Cable	Antenna	Preamp	Read		Limit	Over
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2478.342	3.03	32.67	39.92	95.47	91.26	114.00	-22.74
2	2483.500	3.03	32.67	39.92	62.92	58.70	74.00	-15.30

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."



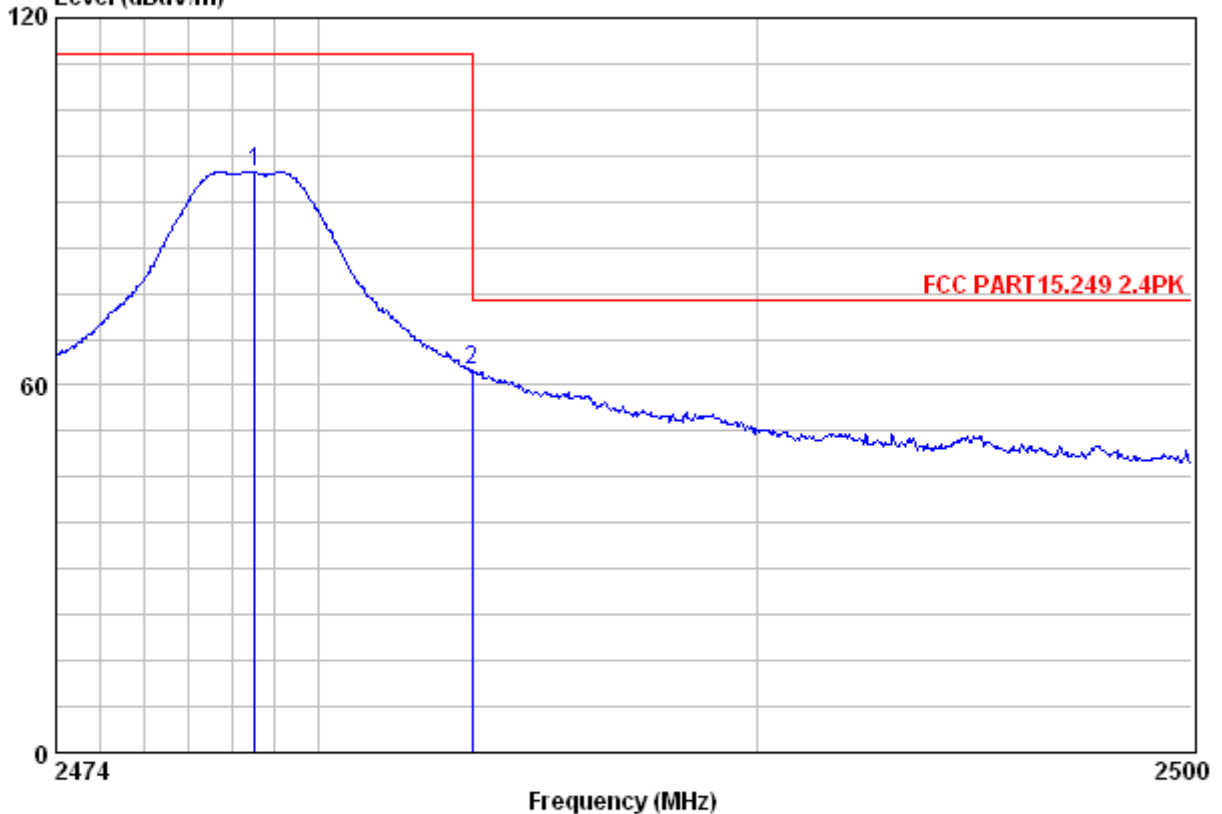
SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

Page : 24 of 26

Test mode:	Transmitting	Test channel:	Highest	Remark:	Peak	Horizontal
------------	--------------	---------------	---------	---------	------	------------

Data: 215
Level (dBuV/m)



		Cable	Antenna	Preamp	Read		Limit	Over
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2478.524	3.03	32.67	39.92	99.14	94.92	114.00	-19.08
2	2483.500	3.03	32.67	39.92	66.56	62.34	74.00	-11.66

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."

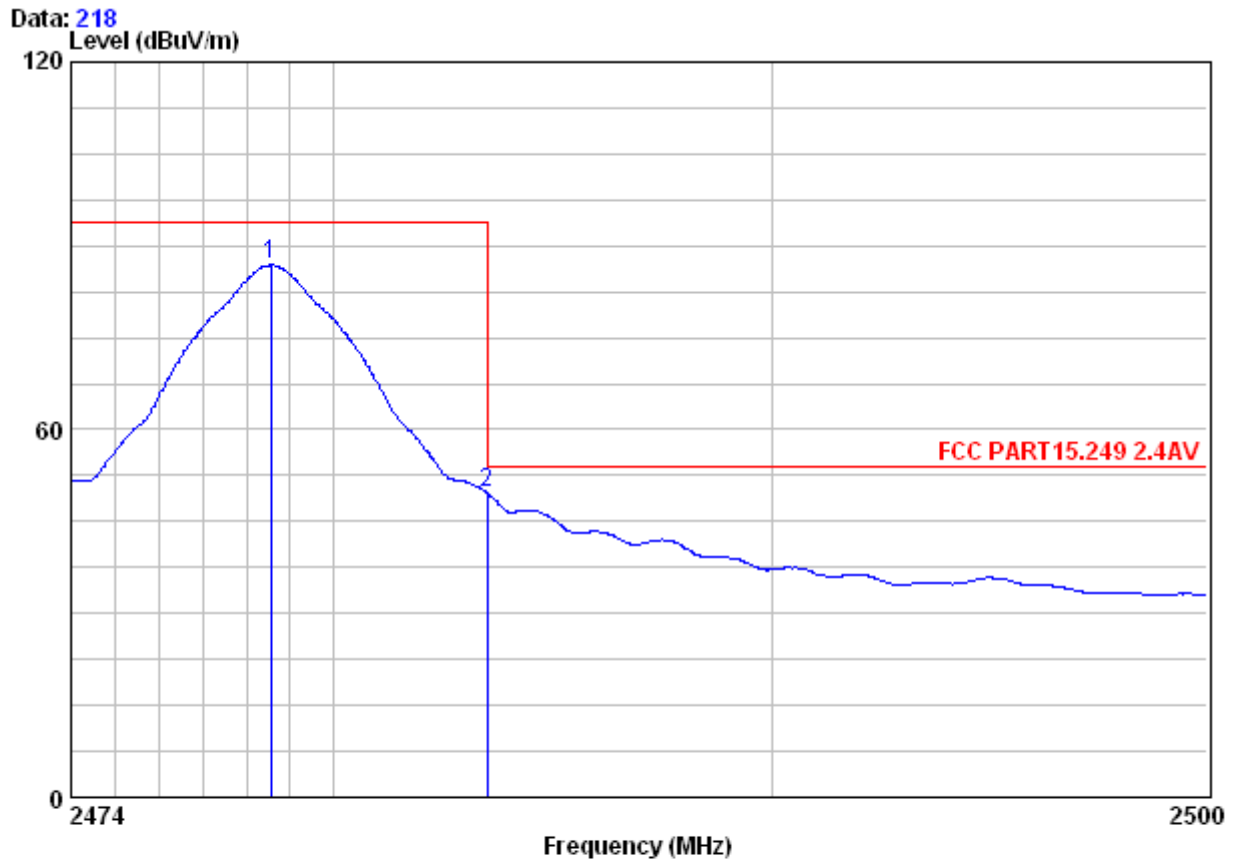


SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

Page : 25 of 26

Test mode:	Transmitting	Test channel:	Highest	Remark:	Average	Vertical
------------	--------------	---------------	---------	---------	---------	----------



		Cable	Antenna	Preamp	Read		Limit	Over
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2478.550	3.03	32.67	39.92	91.05	86.83	94.00	-7.17
2 @	2483.500	3.03	32.67	39.92	53.95	49.73	54.00	-4.27

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."

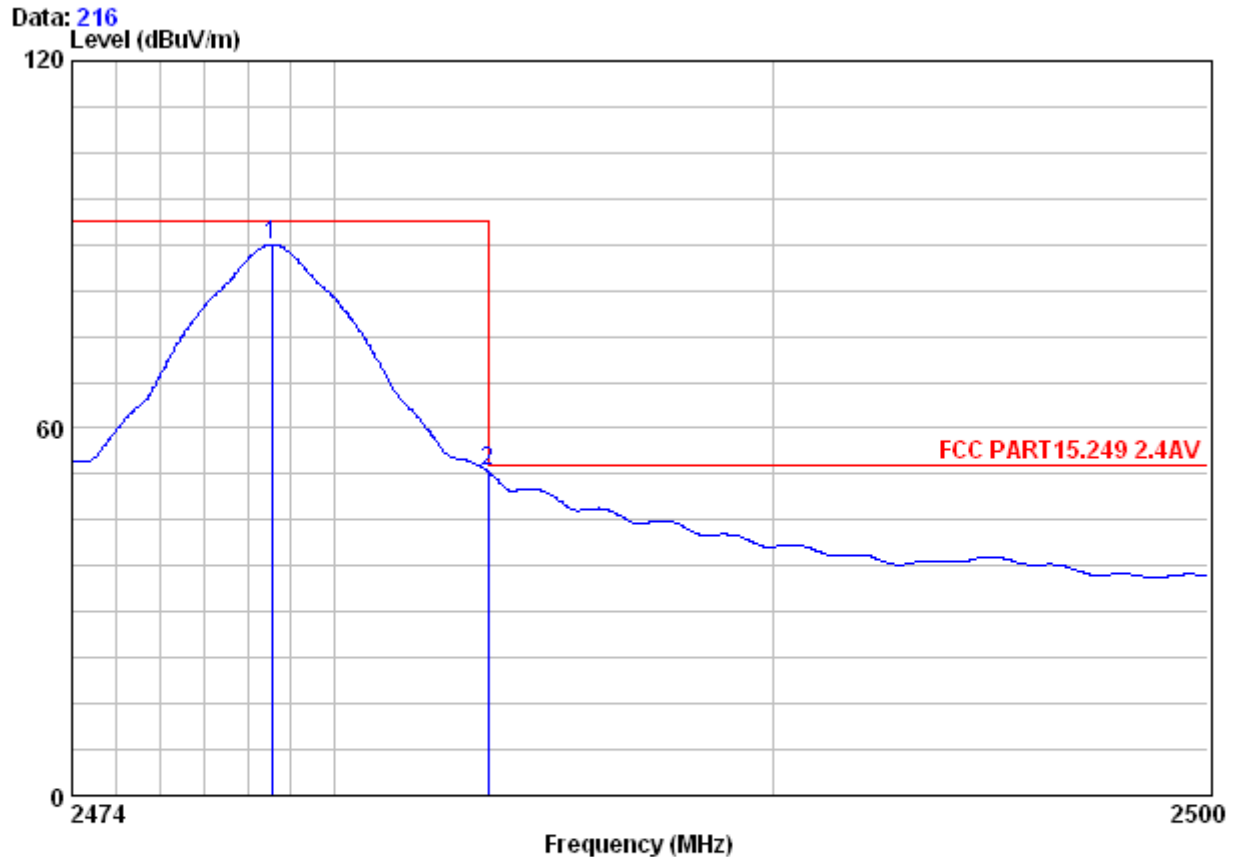


SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM110900397902

Page : 26 of 26

Test mode:	Transmitting	Test channel:	Highest	Remark:	Average	Horizontal
------------	--------------	---------------	---------	---------	---------	------------



		Cable	Antenna	Preamp	Read		Limit	Over
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2478.550	3.03	32.67	39.92	94.23	90.01	94.00	-3.99
2 @	2483.500	3.03	32.67	39.92	57.20	52.98	54.00	-1.02

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."