

<b>Prüfbericht-Nr.:</b> <i>Test Report No.:</i>	<b>17038645 001</b>	<b>Auftrags-Nr.:</b> <i>Order No.:</i>	<b>164011268</b>	<b>Seite 1 von 52</b> <i>Page 1 of 52</i>
<b>Kunden-Referenz-Nr.:</b> <i>Client Reference No.:</i>	<b>N/A</b>	<b>Auftragsdatum:</b> <i>Order date:</i>	<b>25.02.2014</b>	
<b>Auftraggeber:</b> <i>Client:</i>	<b>JDSU Uniphase Corporation, 1100 Perimeter Park Drive, Suite 101, Morrisville, NC 27560</b>			
<b>Prüfgegenstand:</b> <i>Test item:</i>	<b>SmartClass TPS</b>			
<b>Bezeichnung / Typ-Nr.:</b> <i>Identification / Type No.:</i>	<b>SCTPS-AB-CU, CSC-TPSVW-CU, SCTPS-AB, CSC-TPSVW</b>			
<b>Auftrags-Inhalt:</b> <i>Order content:</i>	<b>FCC approval</b>			
<b>Prüfgrundlage:</b> <i>Test specification:</i>	<b>CFR47 FCC Part 15: Subpart C Section 15.247</b> <b>CFR47 FCC Part 15: Subpart C Section 15.207</b> <b>CFR47 FCC Part 15: Subpart C Section 15.209</b> <b>CFR47 FCC Part 15: Subpart B Section 15.107</b> <b>CFR47 FCC Part 15: Subpart B Section 15.109</b>			
<b>Wareneingangsdatum:</b> <i>Date of receipt:</i>	<b>28.02.2014</b>			
<b>Prüfmuster-Nr.:</b> <i>Test sample No.:</i>	<b>A000039287-001, A000039287-002</b>			
<b>Prüfzeitraum:</b> <i>Testing period:</i>	<b>14.03.2014 - 22.05.2014</b>			
<b>Ort der Prüfung:</b> <i>Place of testing:</i>	<b>Accurate Technology Co., Ltd.</b>			
<b>Prüflaboratorium:</b> <i>Testing laboratory:</i>	<b>TÜV Rheinland (Shenzhen) Co., Ltd.</b>			
<b>Prüfergebnis*:</b> <i>Test result*:</i>	<b>Pass</b>			
<b>geprüft von / tested by:</b> <i>Tom Wang</i>		<b>kontrolliert von / reviewed by:</b> <i>Sam Lin</i>		
<b>19.06.2014</b>	<b>Tom Wang / Assistant Project Manager</b>	<b>23.06.2014</b>	<b>Sam Lin / Senior Project Manager</b>	
<b>Datum</b> <i>Date</i>	<b>Name / Stellung</b> <i>Name / Position</i>	<b>Unterschrift</b> <i>Signature</i>	<b>Datum</b> <i>Date</i>	<b>Name / Stellung</b> <i>Name / Position</i>
				<b>Unterschrift</b> <i>Signature</i>
<b>Sonstiges / Other:</b> This report is for DSS equipment class.				
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> <i>Condition of the test item at delivery:</i>		<b>Prüfmuster vollständig und unbeschädigt</b> <i>Test item complete and undamaged</i>		
<b>* Legende: 1 = sehr gut    2 = gut    3 = befriedigend    4 = ausreichend    5 = mangelhaft</b> <b>P(ass) = entspricht o.g. Prüfgrundlage(n)    F(ail) = entspricht nicht o.g. Prüfgrundlage(n)    N/A = nicht anwendbar    N/T = nicht getestet</b> <b>Legend: 1 = very good    2 = good    3 = satisfactory    4 = sufficient    5 = poor</b> <b>P(ass) = passed a.m. test specification(s)    F(ail) = failed a.m. test specification(s)    N/A = not applicable    N/T = not tested</b>				
<b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b> <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

## TEST SUMMARY

**5.1.1 ANTENNA REQUIREMENT***RESULT: Passed***5.1.2 PEAK OUTPUT POWER***RESULT: Passed***5.1.3 20dB BANDWIDTH AND 99% BANDWIDTH***RESULT: Passed***5.1.4 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHZ BANDWIDTH***RESULT: Passed***5.1.5 SPURIOUS EMISSIONS***RESULT: Passed***5.1.6 FREQUENCY SEPARATION***RESULT: Passed***5.1.7 NUMBER OF HOPPING FREQUENCY***RESULT: Passed***5.1.8 TIME OF OCCUPANCY***RESULT: Passed***5.1.9 RADIATED EMISSIONS***RESULT: Passed***5.1.10 CONDUCTED EMISSIONS***RESULT: Passed***6.1.1 MAXIMUM PERMISSIBLE EXPOSURE***RESULT: Passed*

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## **1. General Remarks**

### **1.1 Complementary Materials**

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Results

## **2. Test Sites**

### **2.1 Test Facilities**

Accurate Technology Co., Ltd.

(FCC Registration No.: 752051 & IC Registration Number: 5077A-2)

F1, Bldg A, Changyuan New Material Port, Keyuan Rd., Science & Industry Park,  
Nanshan District, Shenzhen, 518057, P.R. China

The tests at the test site have been conducted under the supervision of a TÜV engineer.

## 2.2 List of Test and Measurement Instruments

**Table 1: List of Test and Measurement Equipment**

Kind of Equipment	Manufacturer	Type	S/N	Calibrated until
<b>Radio Spectrum Test</b>				
EMI Test Receiver	Rohde & Schwarz	ESPI-3	100396/003	2015-01-11
Spectrum Analyzer	Agilent	E7405A	MY45115511	2015-01-11
<b>Conducted emissions</b>				
EMI Test Receiver	Rohde & Schwarz	ESCS30	100307	2015-01-11
LISN	Schwarzbeck	NLSK8126	8126431	2015-01-10
<b>Radiated emissions</b>				
Spectrum Analyzer	Agilent	E7405A	MY45115511	2015-01-11
EMI Test Receiver	Rohde & Schwarz	ESPI3	101526/003	2015-01-11
Pre-Amplifier	Rohde & Schwarz	CBLU1183540-01	3791	2015-01-11
Loop Antenna	Schwarzbeck	FMZB1516	1516131	2015-01-11
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	2015-01-11
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	2015-01-11
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	2015-01-11

## 2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

## 2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

## 2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table,

Items		Extended Uncertainty
CE	Disturbance Voltage (dBuV)	U=1.94dB, k=2, $\sigma$ =95%
RE (9kHz-30MHz)	Field strength (dBuV/m)	U=3.08dB, k=2, $\sigma$ =95%
RE (30-1000MHz)	Field strength (dBuV/m)	U=4.42dB, k=2, $\sigma$ =95%
RE (above 1000MHz)	Field strength (dBuV/m)	U=4.06dB, k=2, $\sigma$ =95%

## 2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix 1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

## 2.7 Status of Facility Used for Testing

The Accurate Technology Co., Ltd. facility located at F1, Bldg A, Changyuan New Material Port, Keyuan Rd., Science & Industry Park, Nanshan District, Shenzhen, 518057, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

## 3. General Product Information

### 3.1 Product Function and Intended Use

The EUTs are an all-in-one tool that fully tests the access network as well as broadband services. It helps field technicians who roll out broadband access networks and services deliver a pristine copper access infrastructure that can support triple-play services and meet critical quality of service (QoS) and quality of experience (QoE) requirements. It can test copper, fiber asymmetrical and very high speed digital subscriber lines including bonded VDSL2 pairs internet protocol (IP) data, voice over IP (VoIP), and IP video with straightforward pass/fail results and detailed analysis of physical-and application-layer-related problems.

It contains the Wi-Fi USB dongle, model name EW-7811Un (FCC ID: NDD9578111008) that manufactured by EDIMAX. Wi-Fi USB dongle supports 802.11 b/g/n 20MHz and 40MHz bandwidth. It supports Bluetooth function, the Bluetooth core specification is Bluetooth 4.0 dual mode.

These four models are identical in main board, copper board and enclosure except for DSL modem board. The EUTs belong to Class A equipment. Details of difference refer to table as below.

Difference				
Model	SCTPS-AB-CU	CSC-TPSVW-CU	SCTPS-AB	CSC-TPSVW
Digital board	√	√	√	√
Copper board	√	√	Removed, add metal shield	Removed, add metal shield
Modem board	√	√	Remove POTS feature	Remove POTS feature

For details refer to the User Manual, Technical Description and Circuit Diagram.

## 3.2 Ratings and System Details

**Table 2: Technical Specification of EUT**

Technical Specification	Value
Kind of Equipment:	SmartClass TPS
Type Designation:	SCTPS-AB-CU, CSC-TPSVW-CU, SCTPS-AB, CSC-TPSVW
FCC ID:	WUW22060931
IC:	9613A-22060931
Type of Equipment:	Class A digital equipment
Equipment Class:	DTS and DSS
Wireless Technology:	Bluetooth 4.0 and Wi-Fi
Operating Frequency Range:	2402-2480MHz for Bluetooth 2412-2462Mhz for Wi-Fi
Channel Number:	79 channels for Bluetooth 4.0 40 channels for Bluetooth 4.0 Low Energy 11 channels for Wi-Fi (802.11b/g/n) 7 channels for Wi-Fi (802.11n HT40 model only)
Channel Separation:	1MHz for Bluetooth 4.0 2MHz for Bluetooth 4.0 Low Energy 5MHz for Wi-Fi
Type of Modulation:	GFSK, 8PSK, $\pi/4$ QDPSK for Bluetooth 4.0 GFSK for Bluetooth 4.0 Low Energy DSSS for Wi-Fi 802.11b OFDM for Wi-Fi 802.11g/n
Operating Voltage:	DC 12V via marketed AC/DC adapter DC 7.2V via Lithium-ion battery
Operating Temperature Range:	0°C to 40°C
Antenna Type:	Ceramic Chip Antenna for Bluetooth Printed Antenna for Wi-Fi
Smart Antenna Systems:	Not Applicable
Number of Antenna:	1 for Bluetooth 1 for Wi-Fi
Antenna Gain:	Max. 1.7 dBi for Bluetooth Max. 3.0 dBi for Wi-Fi

**Table 3: Marketed AC/DC adapter**

Description	Manufacturer	Model	S/N	Rating
AC/DC adapter	Advanced Power Solutions	KSAS02512 00250D5	--	Input: AC 100-240V, 50/60Hz, 0.9A; Output: DC 12V, 2.5A



**Table 4: List of Radio Frequency Channel, Bluetooth 4.0**

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402.00	21	2423.00	42	2444.00	63	2465.00
1	2403.00	22	2424.00	43	2445.00	64	2466.00
2	2404.00	23	2425.00	44	2446.00	65	2467.00
3	2405.00	24	2426.00	45	2447.00	66	2468.00
4	2406.00	25	2427.00	46	2448.00	67	2469.00
5	2407.00	26	2428.00	47	2449.00	68	2470.00
6	2408.00	27	2429.00	48	2450.00	69	2471.00
7	2409.00	28	2430.00	49	2451.00	70	2472.00
8	2410.00	29	2431.00	50	2452.00	71	2473.00
9	2411.00	30	2432.00	51	2453.00	72	2474.00
10	2412.00	31	2433.00	52	2454.00	73	2475.00
11	2413.00	32	2434.00	53	2455.00	74	2476.00
12	2414.00	33	2435.00	54	2456.00	75	2477.00
13	2415.00	34	2436.00	55	2457.00	76	2478.00
14	2416.00	35	2437.00	56	2458.00	77	2479.00
15	2417.00	36	2438.00	57	2459.00	78	2480.00
16	2418.00	37	2439.00	58	2460.00	--	--
17	2419.00	38	2440.00	59	2461.00	--	--
18	2420.00	39	2441.00	60	2462.00	--	--
19	2421.00	40	2442.00	61	2463.00	--	--
20	2422.00	41	2443.00	62	2464.00	--	--

**Table 5: List of Radio Frequency Channel, Bluetooth 4.0 Low Energy**

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402.00	11	2424.00	22	2446.00	33	2468.00
1	2404.00	12	2426.00	23	2448.00	34	2470.00
2	2406.00	13	2428.00	24	2450.00	35	2472.00
3	2408.00	14	2430.00	25	2452.00	36	2474.00
4	2410.00	15	2432.00	26	2454.00	37	2476.00
5	2412.00	16	2434.00	27	2456.00	38	2478.00
6	2414.00	17	2436.00	28	2458.00	39	2480.00
7	2416.00	18	2438.00	29	2460.00	--	--
8	2418.00	19	2440.00	30	2462.00	--	--
9	2420.00	20	2442.00	31	2464.00	--	--
10	2422.00	21	2444.00	32	2466.00	--	--

**Table 6: List of Radio Frequency Channel, Wi-Fi 802.11 b/g/n 20M bandwidth**

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
1	2412.00	5	2432.00	9	2452.00
2	2417.00	6	2437.00	10	2457.00
3	2422.00	7	2442.00	11	2462.00
4	2427.00	8	2447.00	--	--

**Table 7: List of Radio Frequency Channel, Wi-Fi 802.11 n 40M bandwidth**

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
3	2422.00	6	2437.00	9	2452.00
4	2427.00	7	2442.00	--	--
5	2432.00	8	2447.00	--	--

**Table 8: Frequency hopping information**

Technical Specification	Description
Hopping Range	Hereby we declare that the maximum frequency of this device is: 2402-2480MHz. This is according the Bluetooth Core Specification for devices which will be operated in the USA. This was checked during the Bluetooth Qualification tests (Test Case: TRM/CA/04-E).
Hopping Sequence	Example of a 79 hopping sequence in data mode: 33,04,21,44,23,42,53,46,55,48,40,59,72,29,76,31,08,73, 07,75,09,45,60,39,58,13,47,11,77,52,35,50,65,54,67,56, 69,62,71,64, 7,25,27,66,57,70,74,61,78,63,10,41,05,43, 15,44,64,68,02,70,06,01,51,03,55,05,03,66,53,49,36,47,
Receiver input bandwidth	<p>The input bandwidth of the receiver is 1MHz. In every connection one Bluetooth device is the master and the other one is the slave. The master determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master.</p> <p>Additionally the type of connection is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also the slave of the connection will use these settings.</p> <p>Repeating of a packer has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case.</p> <p>That means a repeated packet will not be send on the same frequency, it is send on the next frequency of the hopping sequence.</p>

### 3.3 Independent Operation Modes

The basic operation modes are:

- A. Transmitting
  - 1. Wi-Fi function
    - a. Low Channel
    - b. Mid Channel
    - c. High Channel
  - 2. Bluetooth function
    - a. Low Channel
    - b. Mid Channel
    - c. High Channel
- B. Receiving
- C. Standby
- D. Ethernet TE testing
- E. DSL testing
- F. IP Data testing
- G. VoIP testing
- H. IP Video testing
- I. Copper testing
- J. Battery Charging
- K. Off

### 3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

### 3.5 Submitted Documents

- Bill of Material	- Circuit Diagram
- PCB Layout	- Instruction Manual
- Photo Document	- Rating Label

## 4. Test Set-up and Operation Modes

### 4.1 Principle of Configuration Selection

**Radio Spectrum:** The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

**Emission:** The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

### 4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5.

During testing, test software BlueSuite provided by the applicant was used to control the operating channel as well as output power for Bluetooth operation.

Due to descriptions in clause 3.1, all tests were applied on model SCTPS-AB-CU, but only radiated emissions and conducted emissions were applied on both models.

**Table 9: List of Frequencies under Test, Bluetooth operation**

RF Channel of Bluetooth 4.0		
Channel	Channel number	Frequency (MHz)
Low	0	2402.00
Middle	39	2441.00
High	78	2480.00

### 4.3 Special Accessories and Auxiliary Equipment

Table 10: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Notebook PC	Lenovo	4290-RT8	R9-FW93G	--
Printer	HP	HP Laserjet 1015	CNFG030424	--
Telephone	TCL	HCD868(37) TSD	010YOB20A30811 003108	--
Telephone PAXB System	XINLITONG	108B	--	--
Wireless Router	D-Link	DIR-605L	PK331BC000582	--
VDSL2 CO	Aware	VERITAS 3	ADS-020011001	Input: DC 48V

### 4.4 Countermeasures to achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

## 4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test

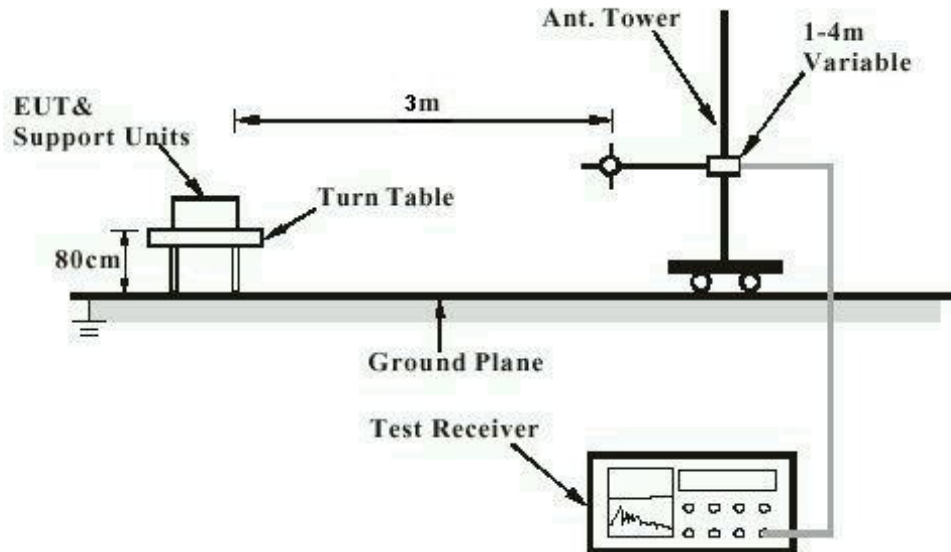
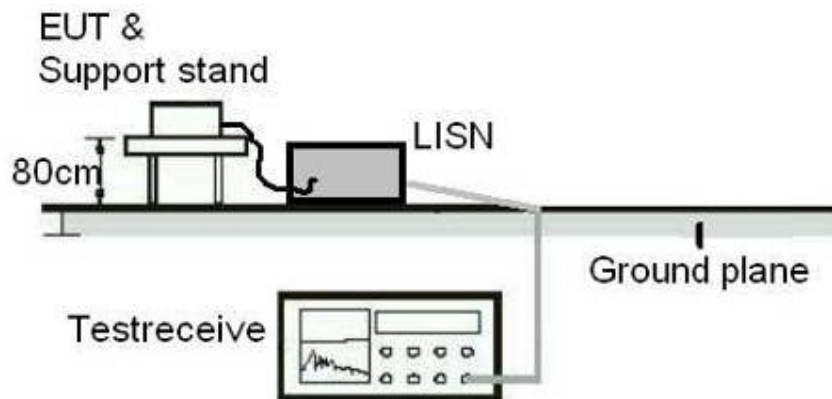
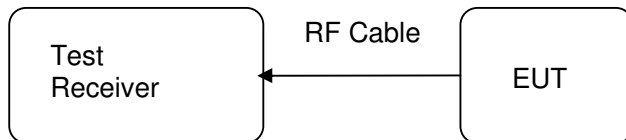


Diagram of Measurement Equipment Configuration for Conduction Measurement



**Diagram of Measurement Equipment Configuration for Transmitter Measurement**



## 5. Test Results

### 5.1 Transmitter Requirement & Test Suites

#### 5.1.1 Antenna Requirement

**RESULT:****Passed**

Test date	:	2014-03-14 to 2014-05-22
Test standard	:	FCC Part 15.247(b)(4) and Part 15.203
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 1.7dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to compliance the provision.

Refer to EUT photo for details.



## 5.1.2 Peak Output Power

**RESULT:**
**Passed**

Test date : 2014-03-14 to 2014-05-22  
 Test standard : FCC Part 15.247(b)(1)  
                   : RSS-210 A8.4(2)  
 Basic standard : ANSI C63.4: 2009  
 Limit : 0.125Watt  
 Kind of test site : Shielded room

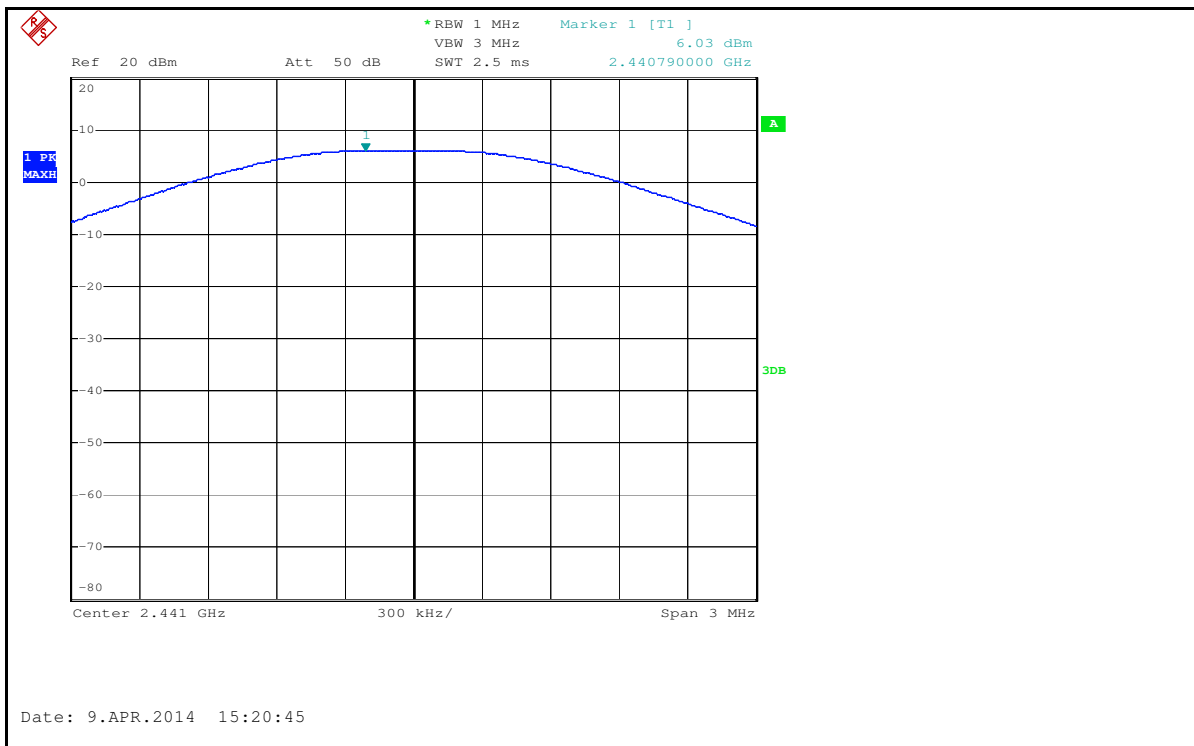
**Test setup**

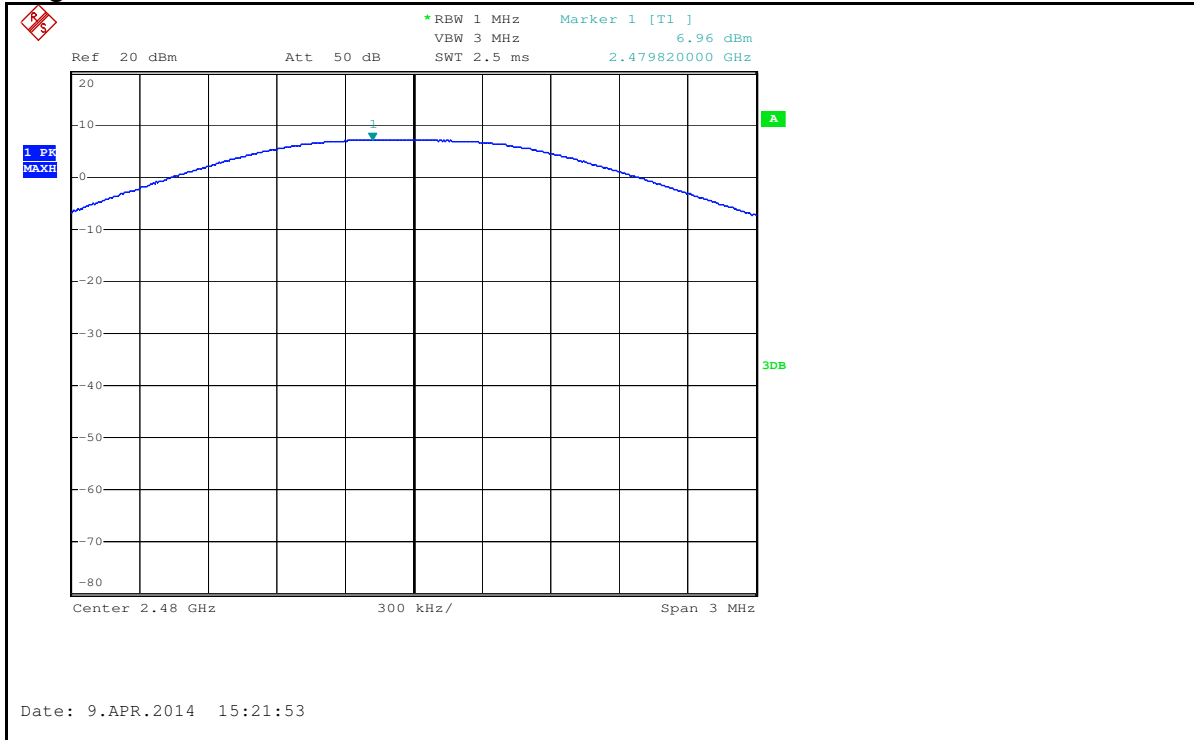
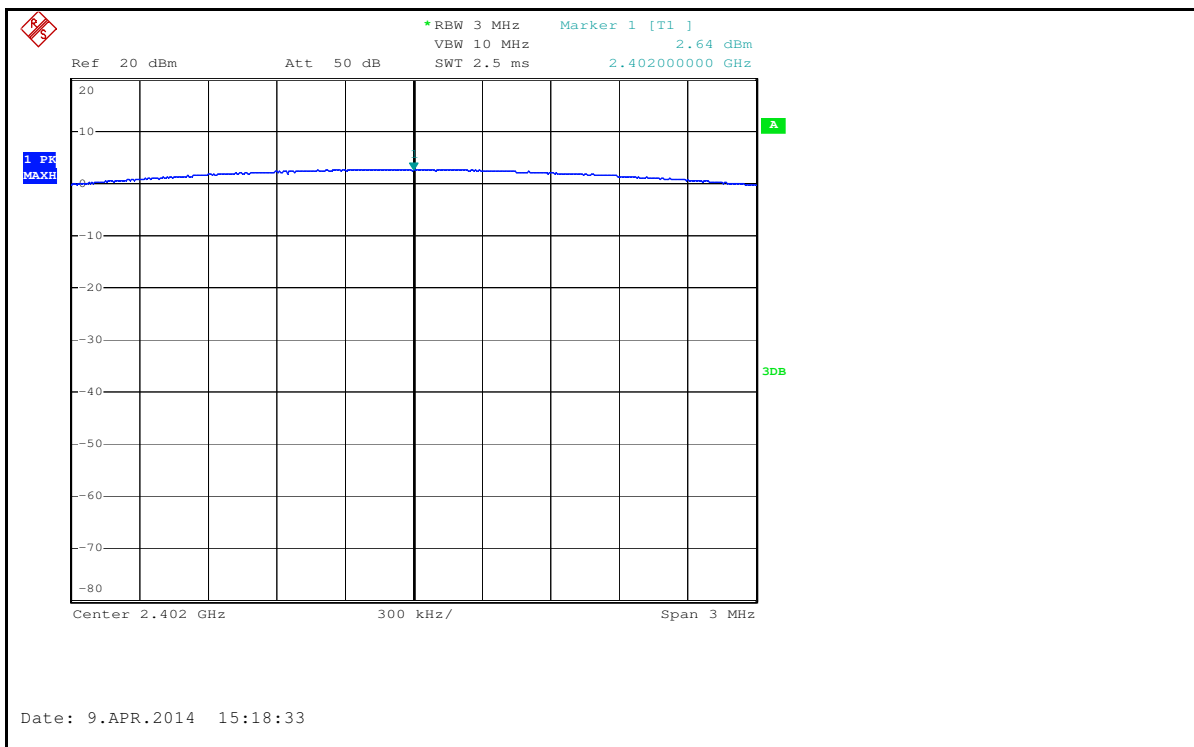
Test Channel : Low/ Middle/ High  
 Operation Mode : A.2  
 Ambient temperature : 22°C  
 Relative humidity : 51%  
 Atmospheric pressure : 101.0 kPa

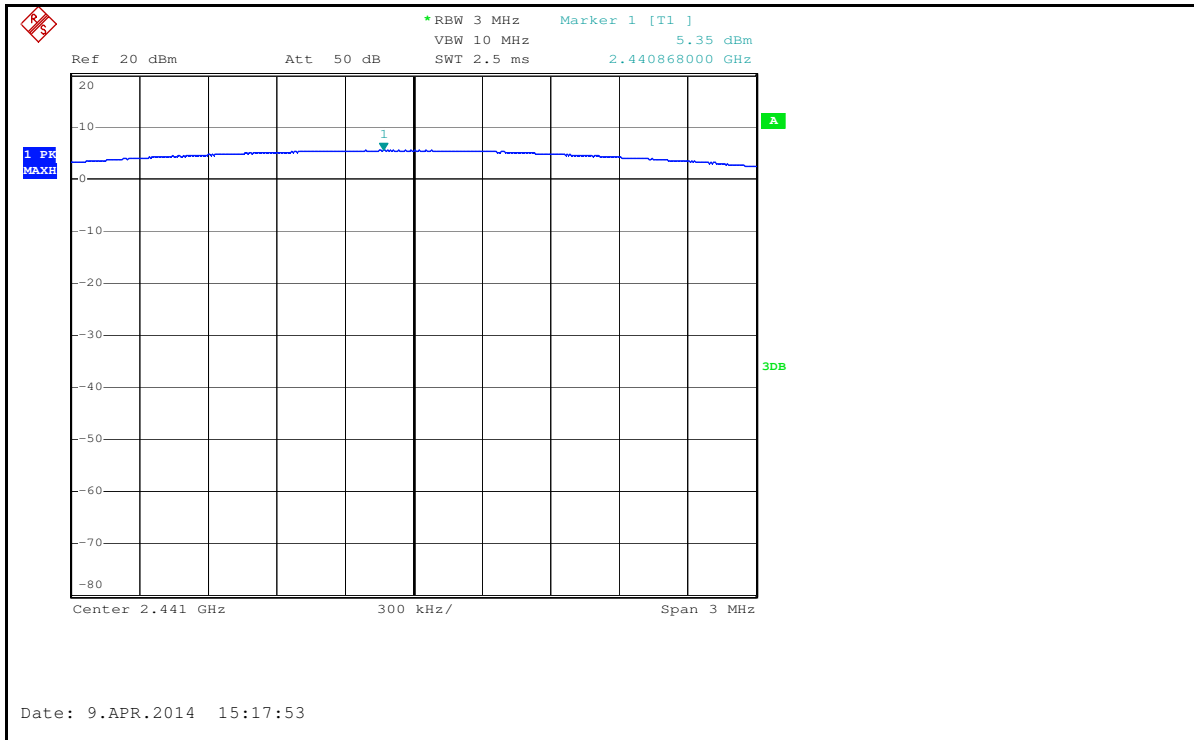
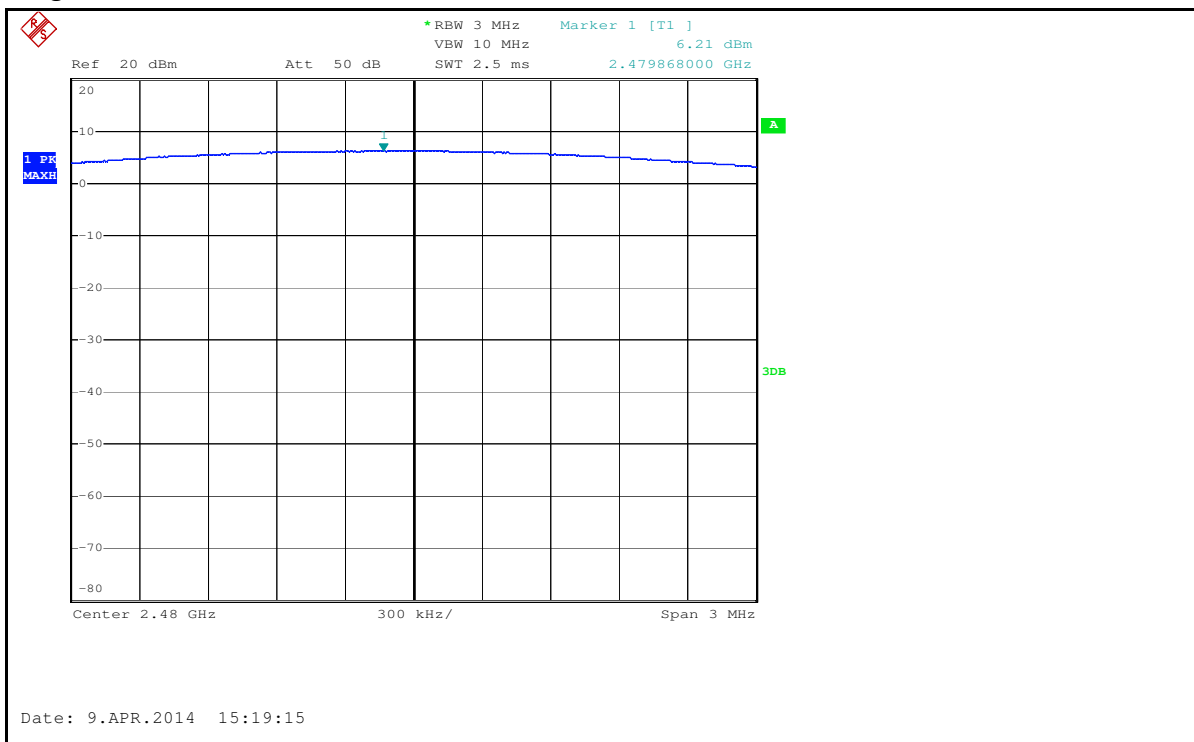
**Table 11: Test result of Peak Output Power**

Channel	Channel Frequency (MHz)	BDR mode		
		Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2402	3.89	0.00245	0.125
Middle Channel	2441	6.03	0.00401	0.125
High Channel	2480	6.96	0.00497	0.125
Channel	Channel Frequency (MHz)	EDR mode		
		Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2402	2.64	0.00184	0.125
Middle Channel	2441	5.35	0.00343	0.125
High Channel	2480	6.21	0.00418	0.125

**Test Graph of Peak Output Power, BDR mode**  
**Low Channel**

**Middle Channel**


**High Channel**

**Test Graph of Peak Output Power, EDR mode**  
**Low Channel**


**Middle Channel**

**High Channel**


### 5.1.3 20dB Bandwidth and 99% Bandwidth

**RESULT:** **Passed**

Date of testing : 2014-03-14 to 2014-05-22  
 Test standard : FCC Part 15.247(a)(1)  
   RSS-210 A8.1(a)  
 Basic standard : ANSI C63.4: 2009  
 Kind of test site : Shielded room

**Test setup**

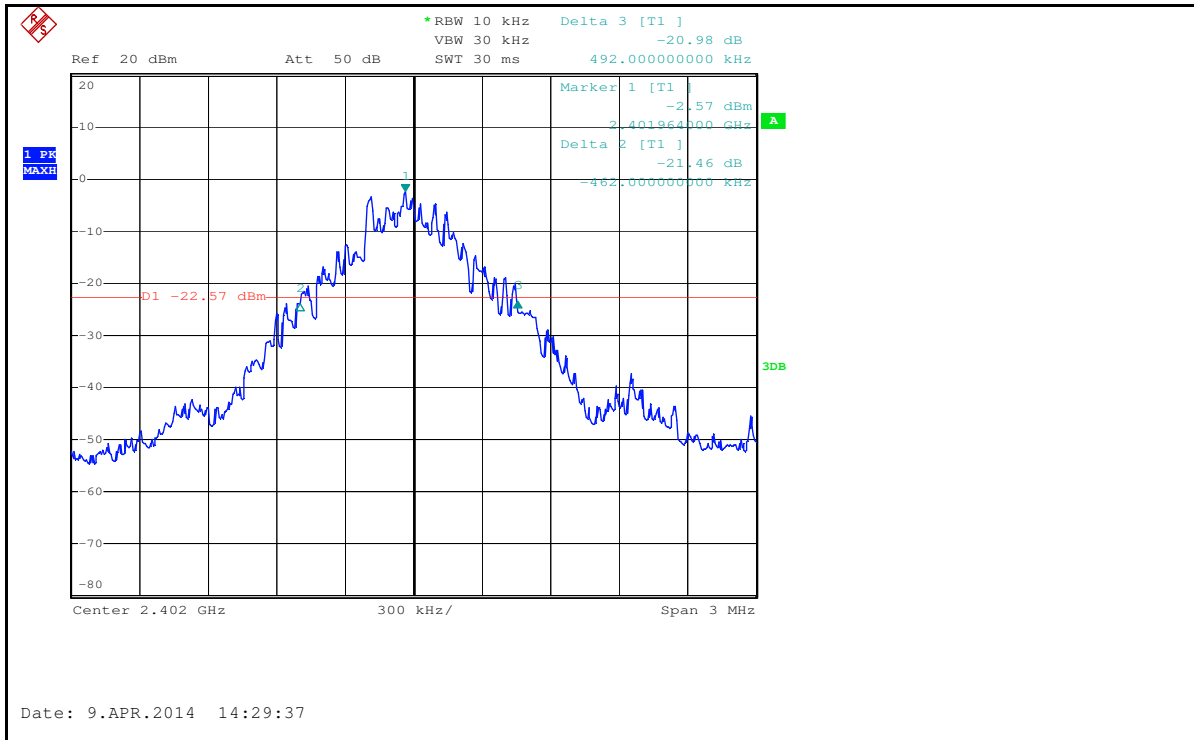
Test Channel : Low/ Middle/ High  
 Operation Mode : A.2  
 Ambient temperature : 22°C  
 Relative humidity : 51%  
 Atmospheric pressure : 101.0 kPa

**Table 12: Test result of 20dB Bandwidth and 99% Bandwidth**

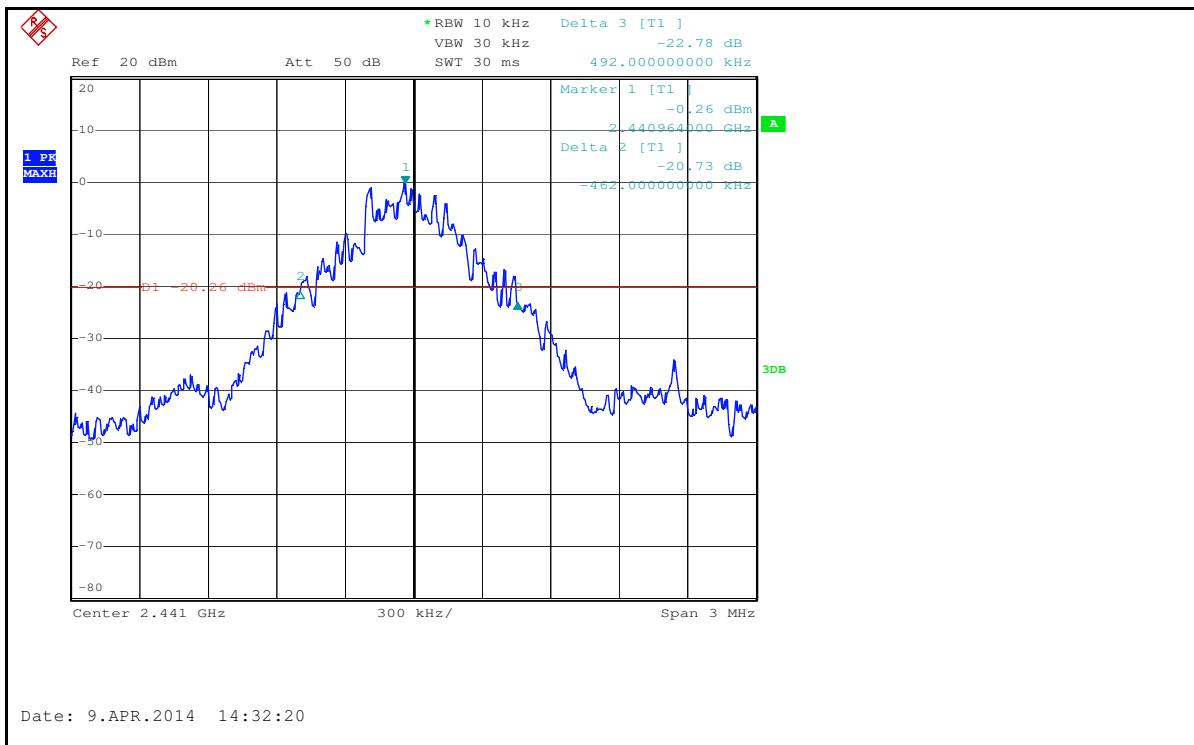
<b>BDR mode</b>				
<b>Channel</b>	<b>Channel Frequency (MHz)</b>	<b>20dB Bandwidth (kHz)</b>	<b>99% Bandwidth (kHz)</b>	<b>Result</b>
Low Channel	2402	954	960	Pass
Mid Channel	2441	954	972	Pass
High Channel	2480	948	972	Pass
<b>EDR mode</b>				
<b>Channel</b>	<b>Channel Frequency (MHz)</b>	<b>20dB Bandwidth (kHz)</b>	<b>99% Bandwidth (kHz)</b>	<b>Result</b>
Low Channel	2402	1236	1206	Pass
Mid Channel	2441	1212	1218	Pass
High Channel	2480	1212	1212	Pass

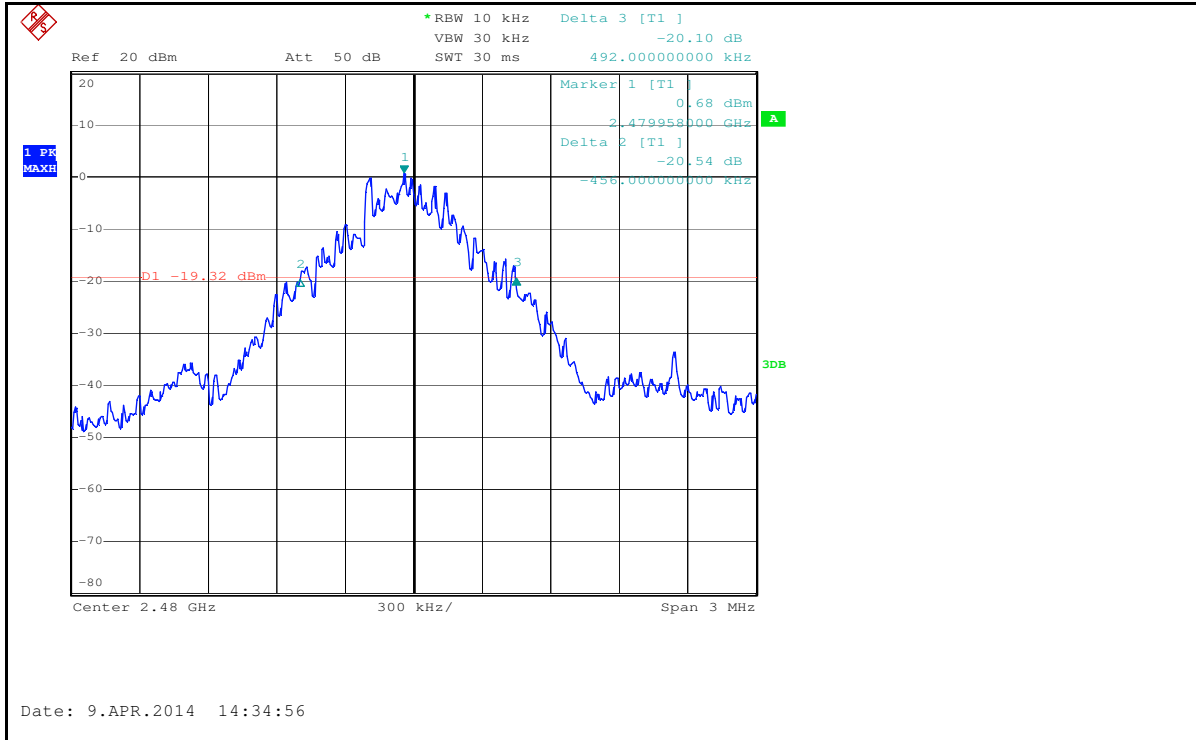
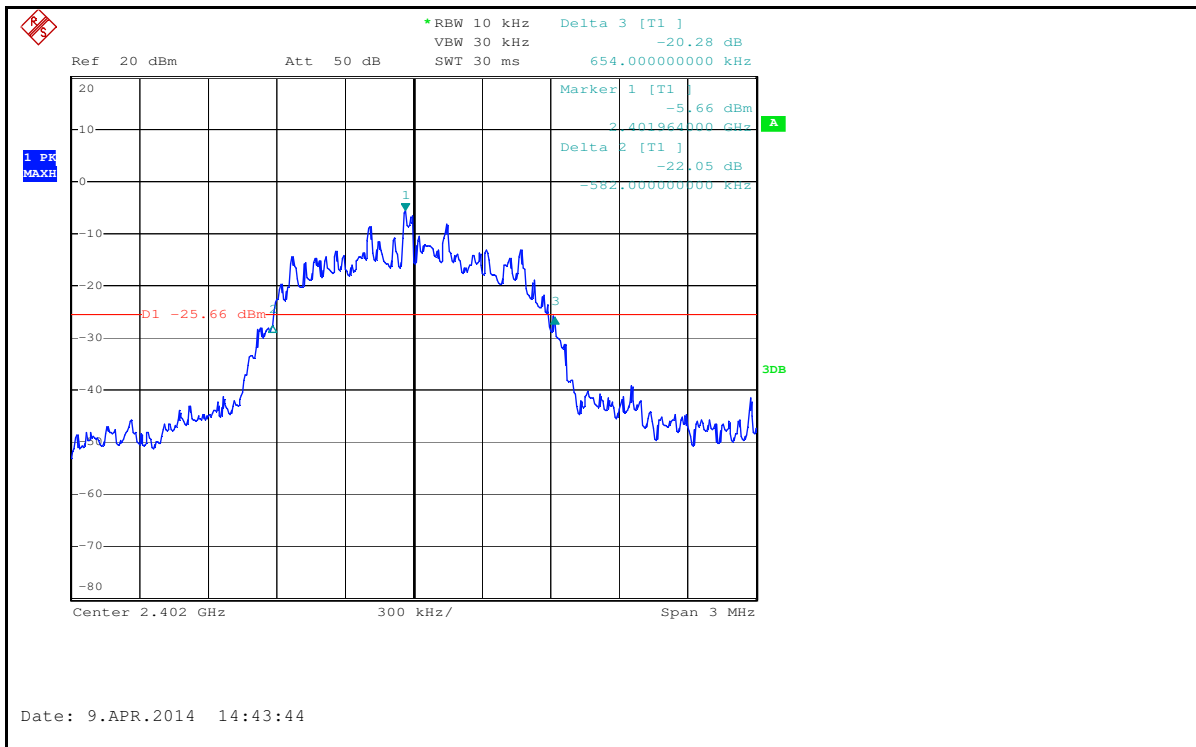
## Test Graph of 20dB Bandwidth, BDR mode

### Low Channel



### Middle Channel

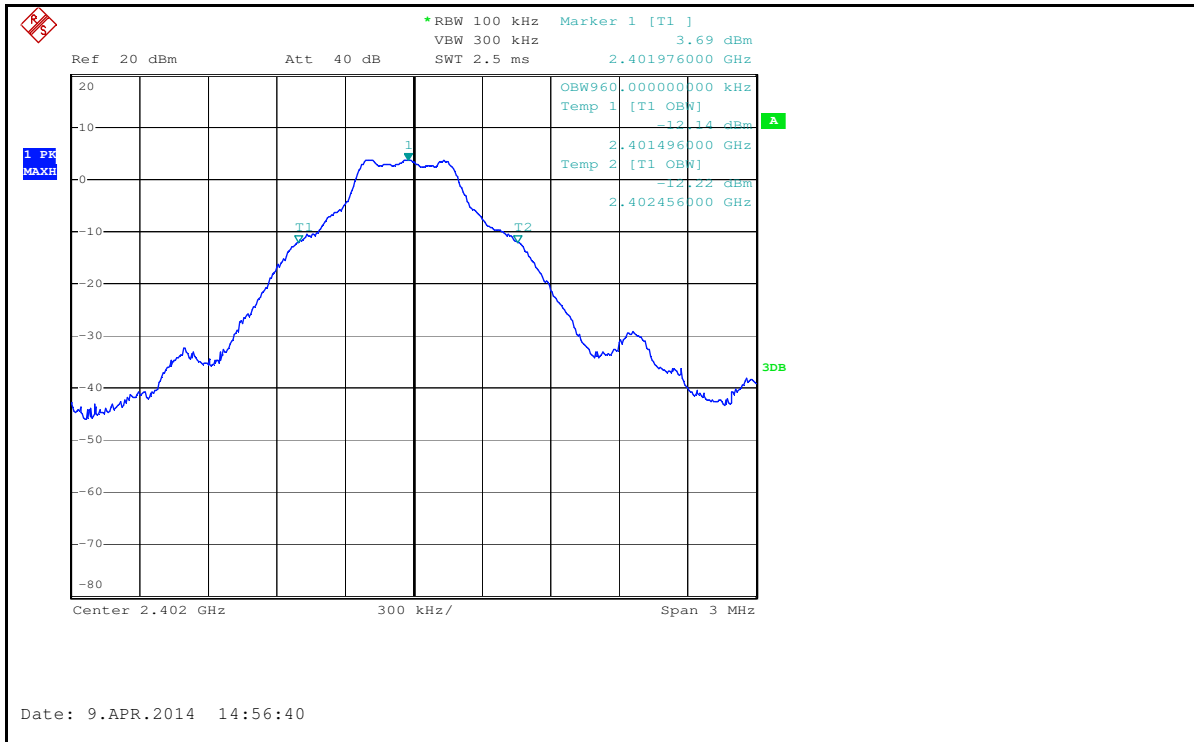
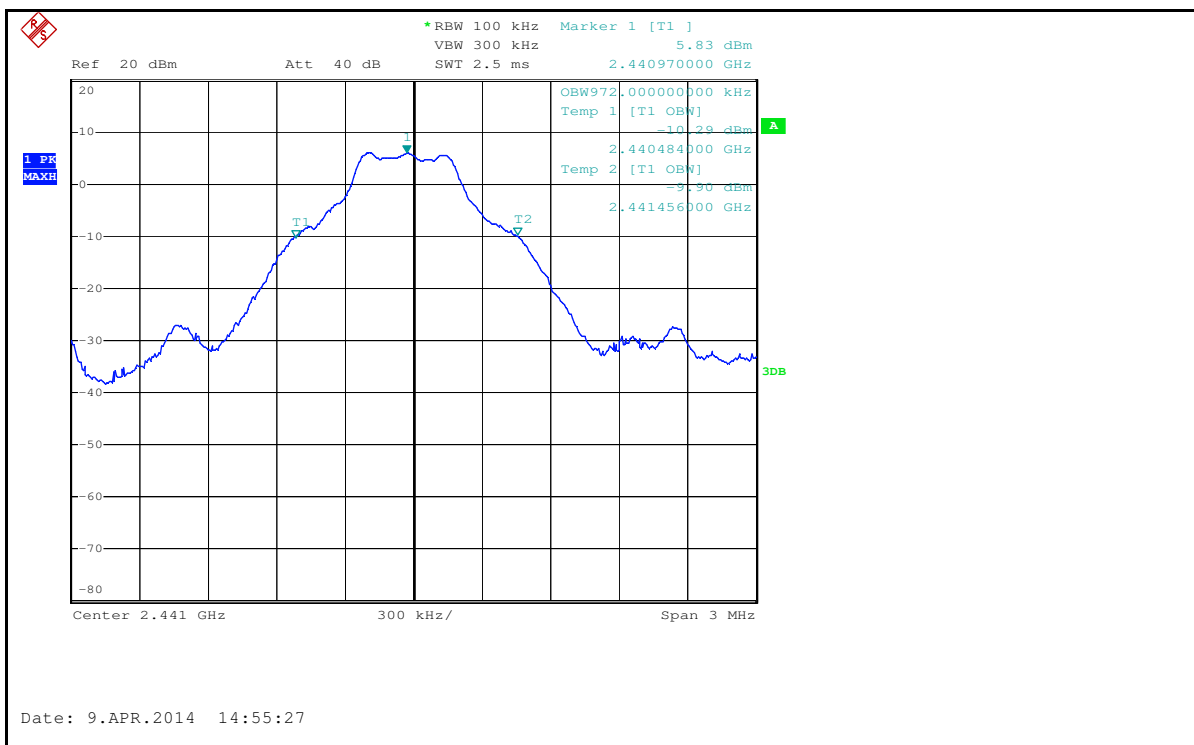


**High Channel**

**Test Graph of 20dB Bandwidth, EDR mode**  
**Low Channel**


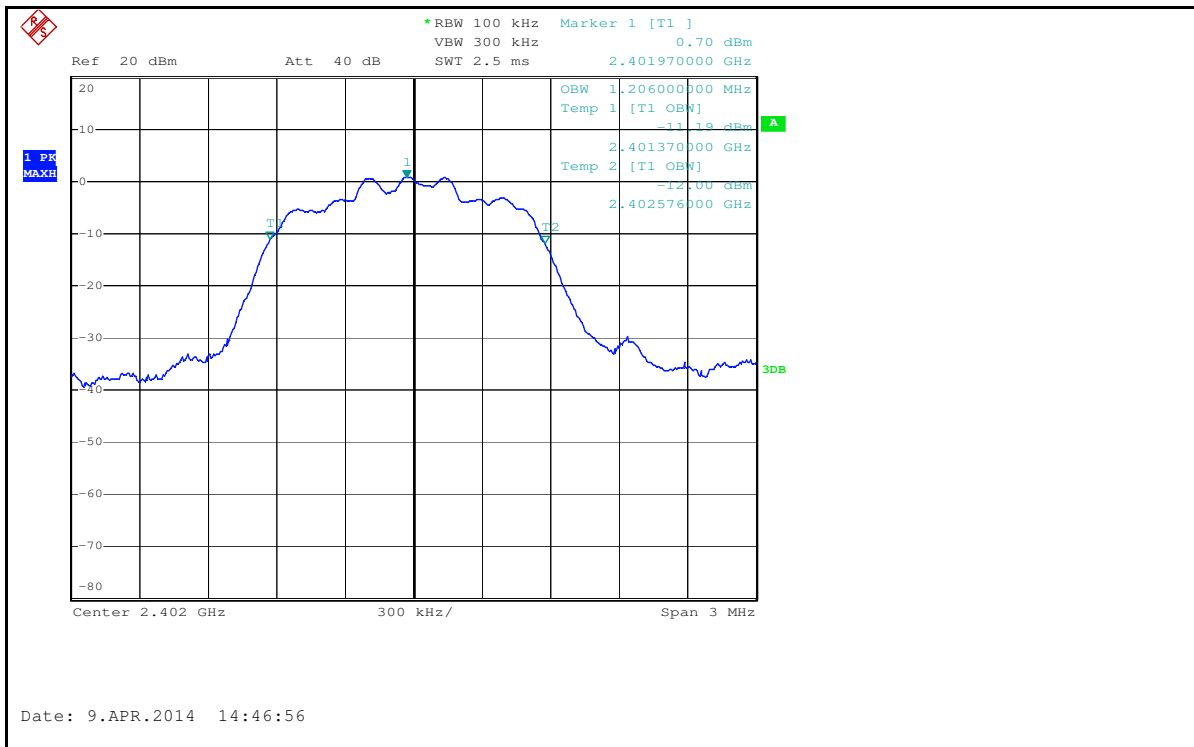
**Middle Channel**

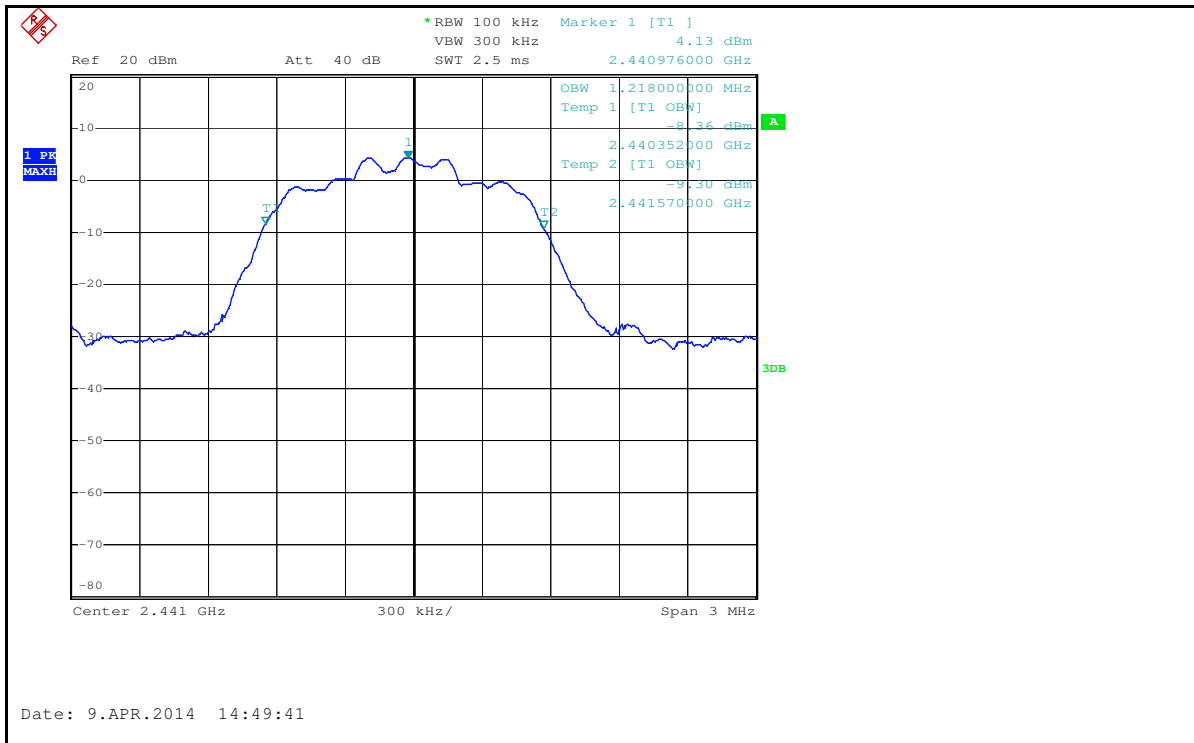
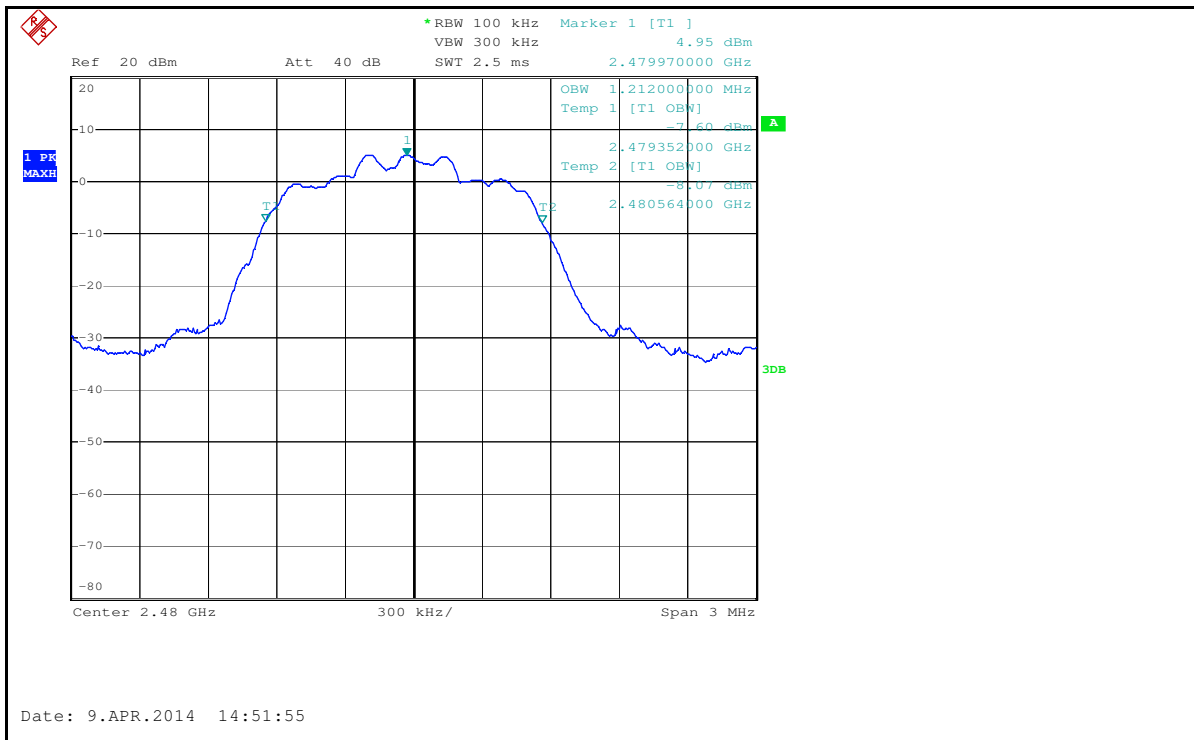
**High Channel**




**Test Graph of 99% Bandwidth, BDR mode**
**Low Channel**

**Middle Channel**


**High Channel**

**Test Graph of 99% Bandwidth, EDR mode**  
**Low Channel**


**Middle Channel**

**High Channel**


#### 5.1.4 Conducted Spurious Emissions measured in 100 kHz Bandwidth

**RESULT:****Passed**

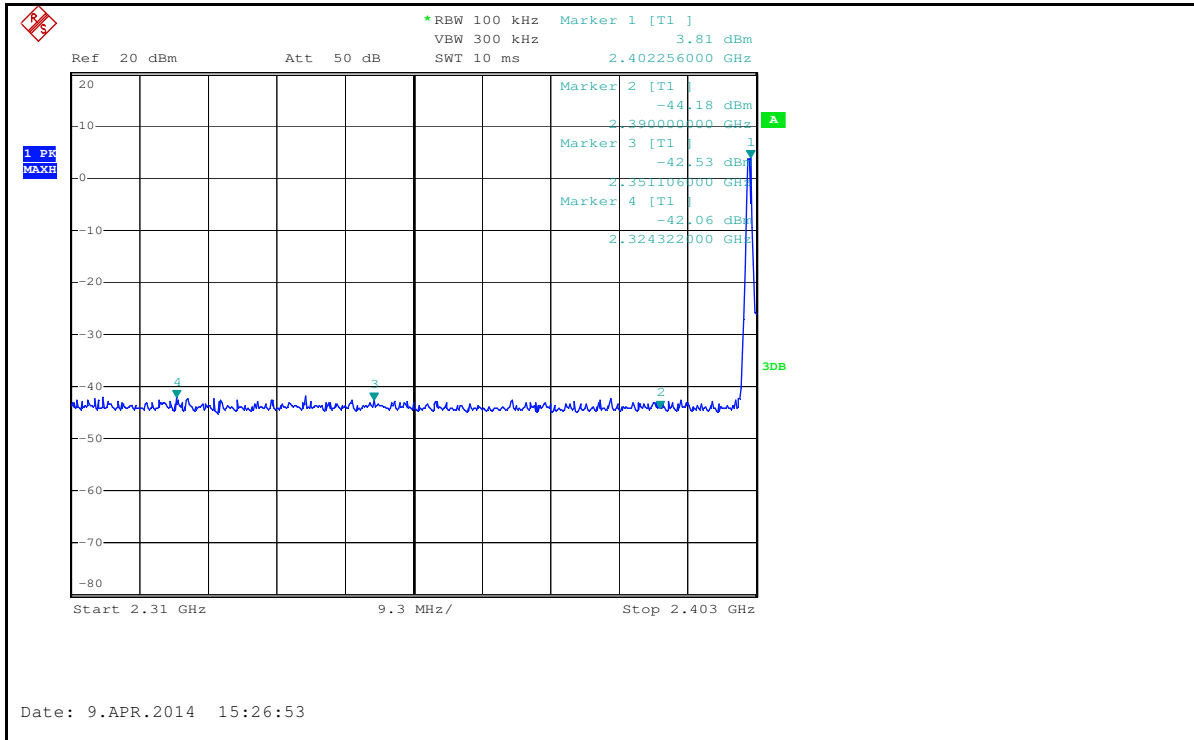
Date of testing	:	2012-03-23 to 2012-05-04
Test standard	:	FCC part 15.247(d) RSS-210 A8.5
Basic standard	:	ANSI C63.4: 2009
Limit	:	20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	:	Shield room

**Test setup**

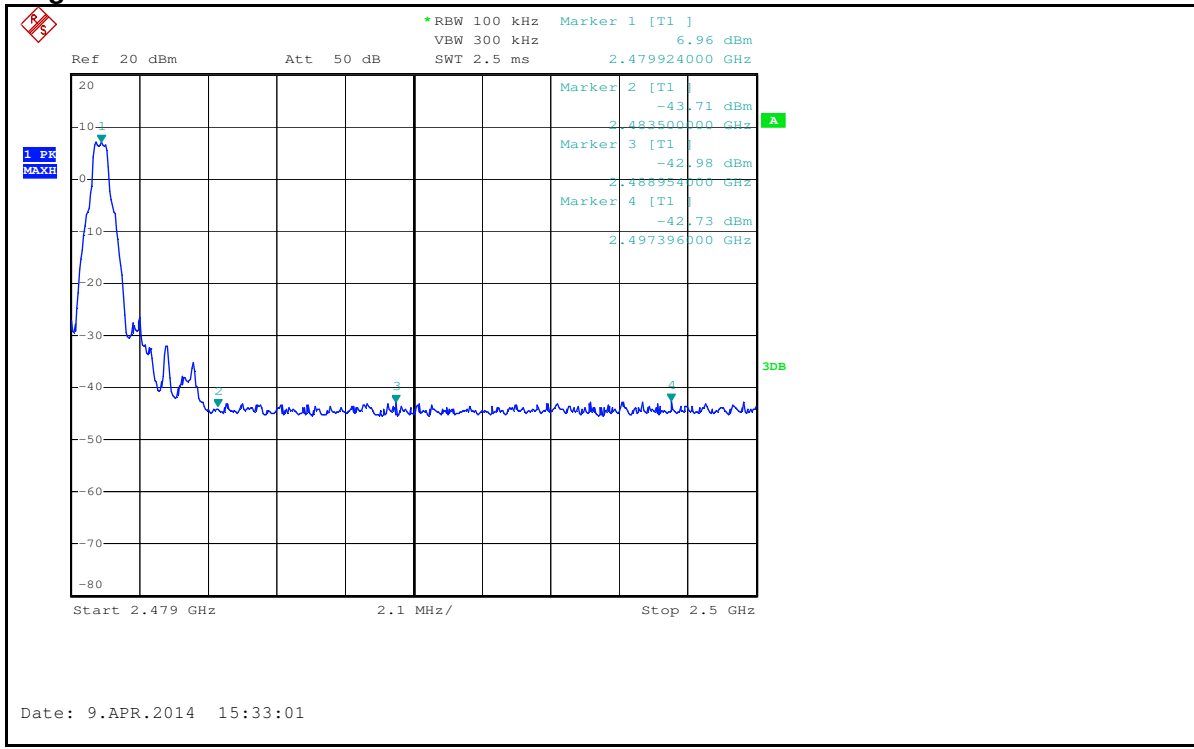
Test Channel	:	Low/ Middle/ High
Operation mode	:	A.2
Ambient temperature	:	22°C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

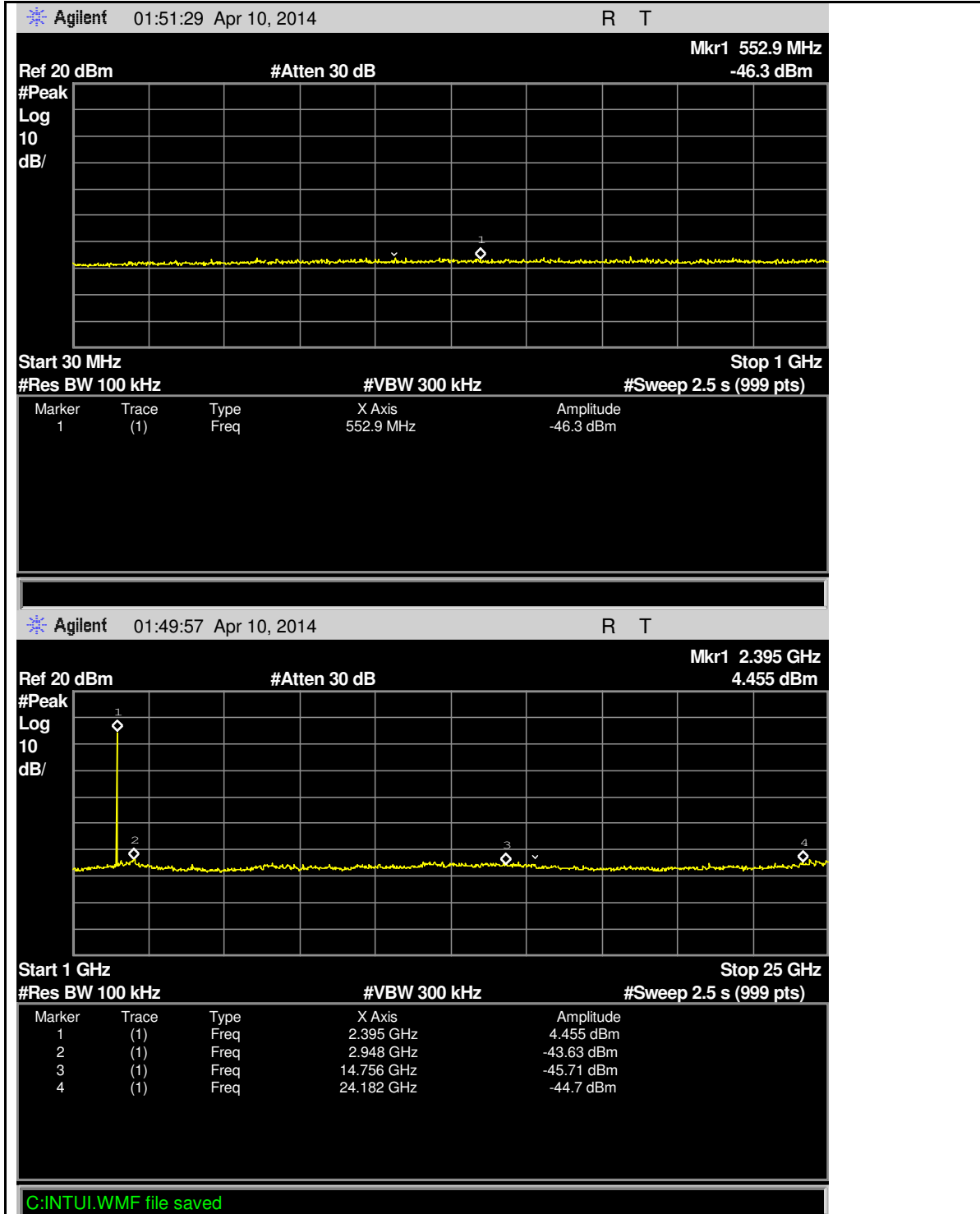
Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to following test graph, and compliance is achieved as well.

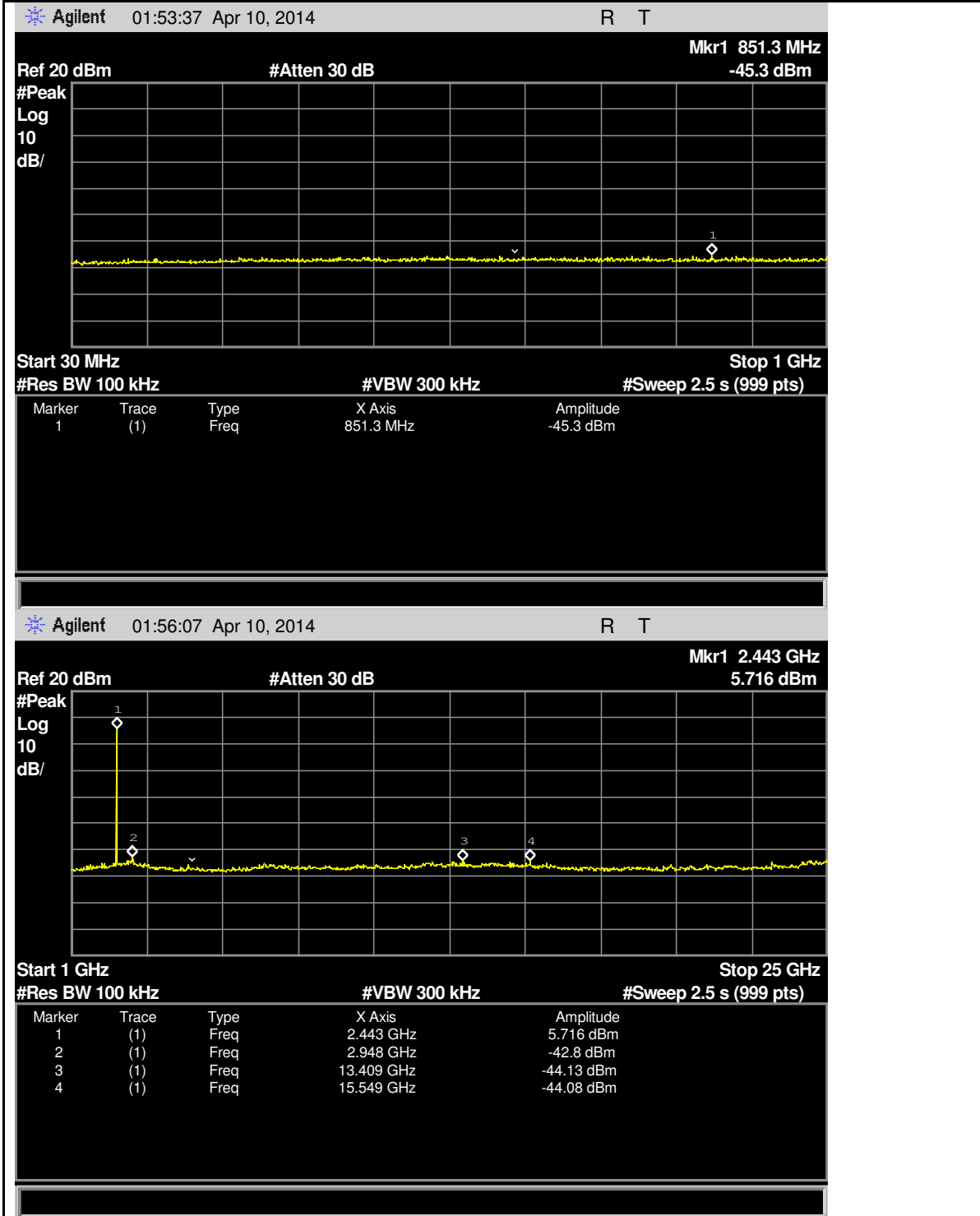
### Test Graph of 100 kHz Bandwidth of Frequency Band Edge, BDR mode Low Channel

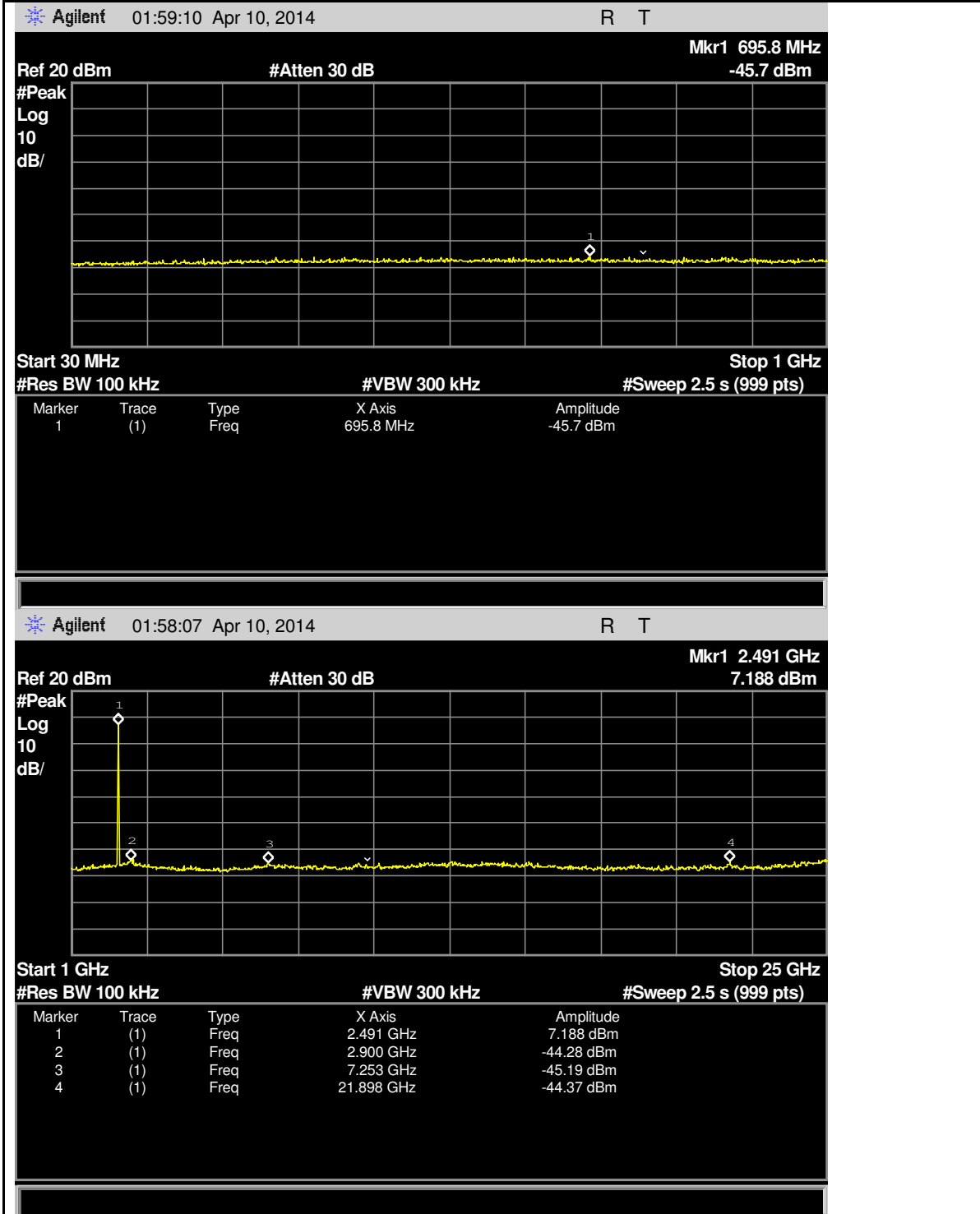


### High Channel



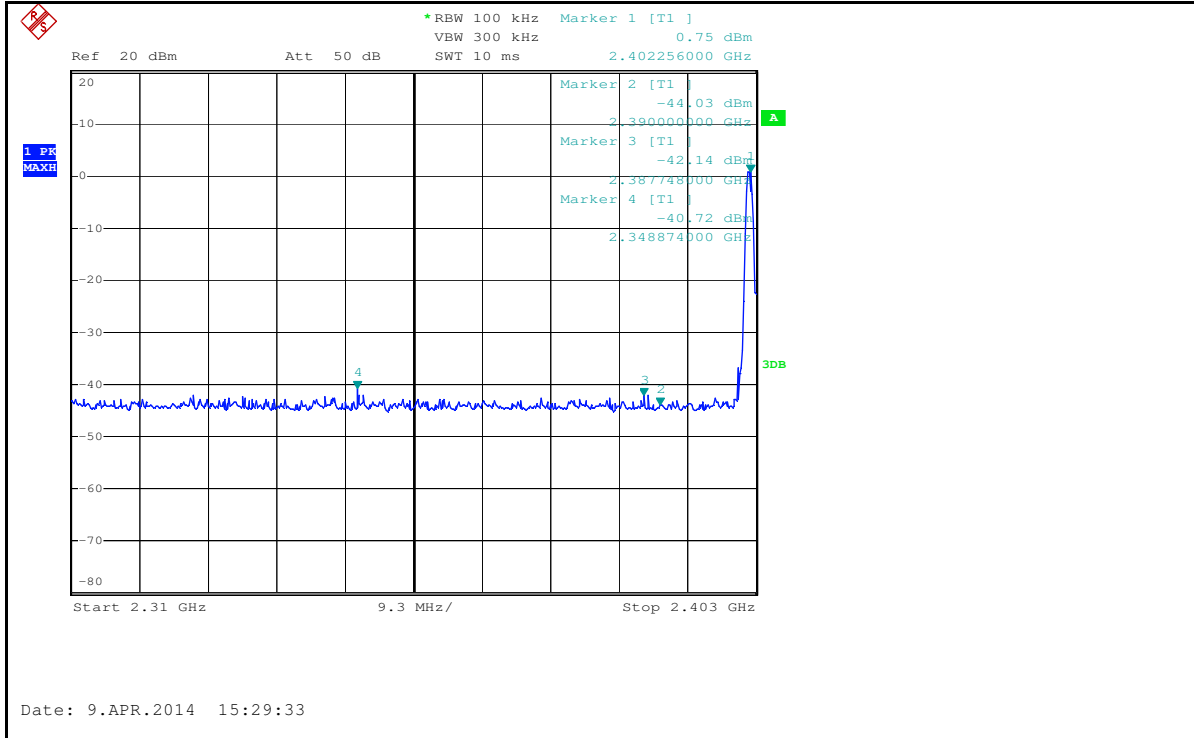
**Test Graph of Conducted spurious emissions measured in  
 100 kHz Bandwidth, BDR mode  
 Low Channel**


**Middle Channel**


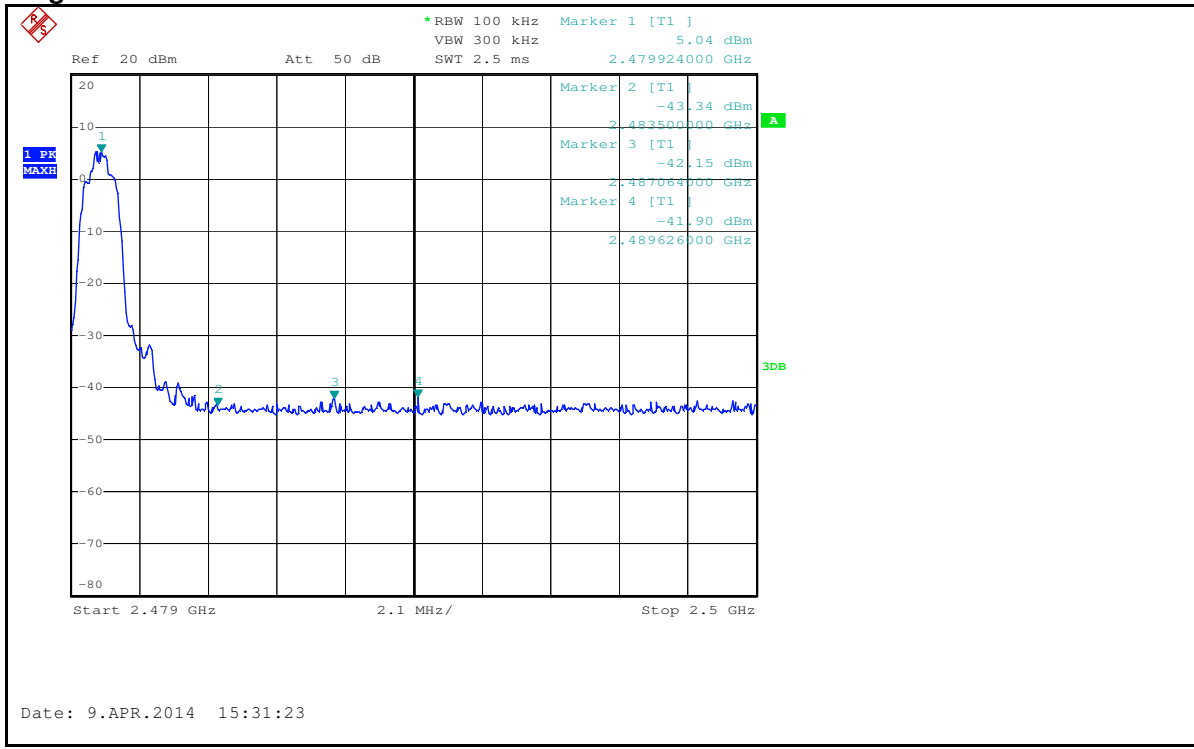
**High Channel**


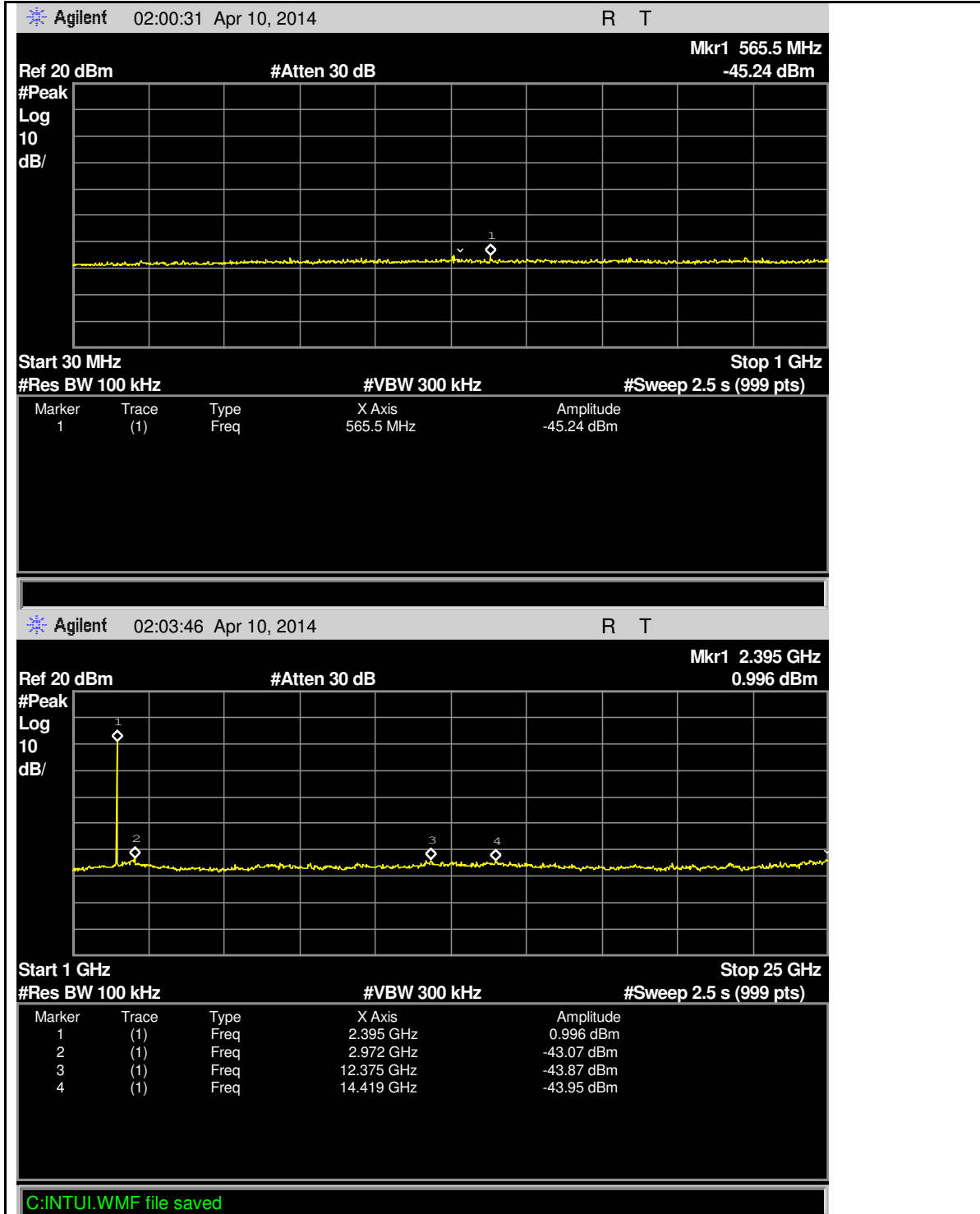


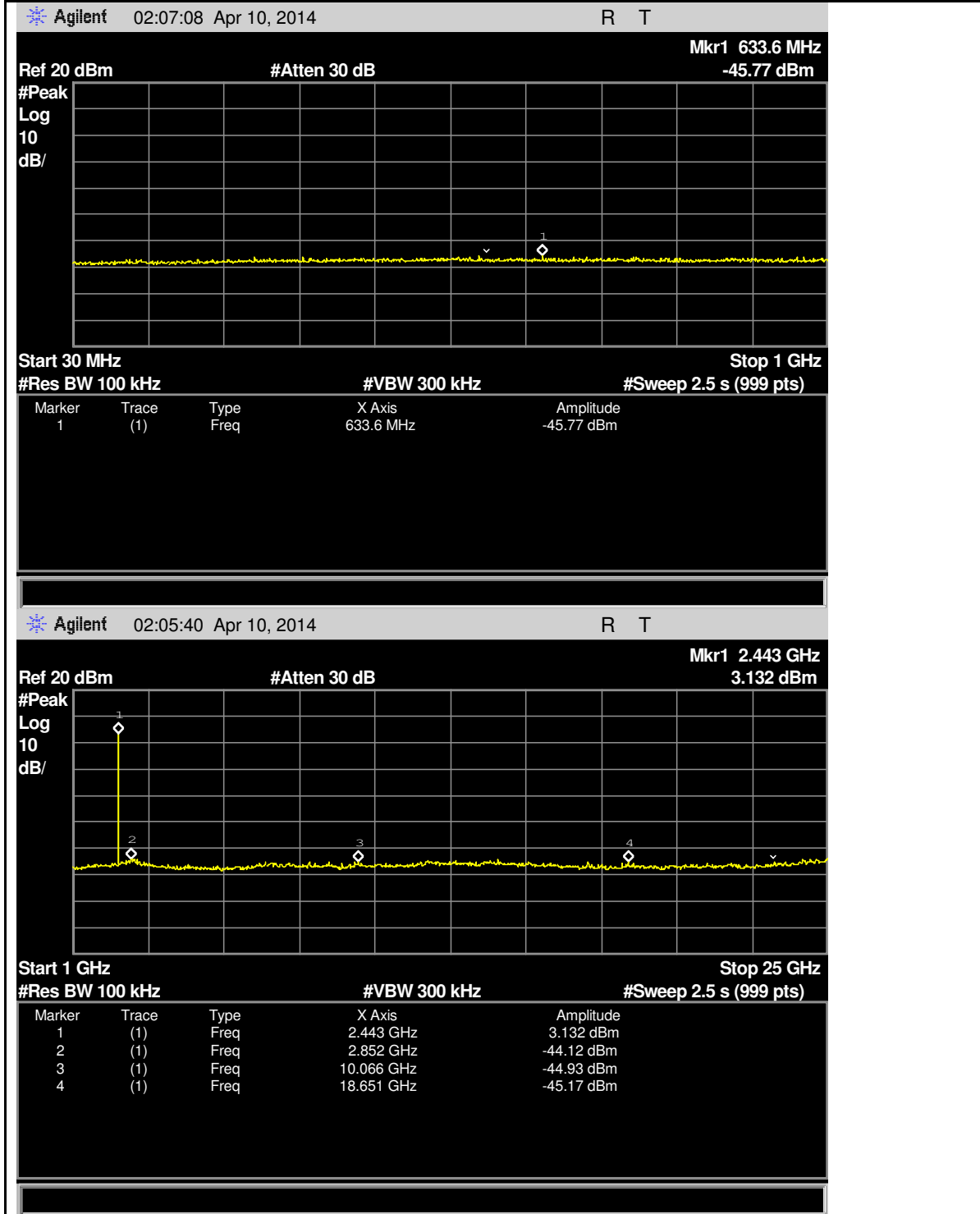
### Test Graph of 100 kHz Bandwidth of Frequency Band Edge, EDR mode Low Channel

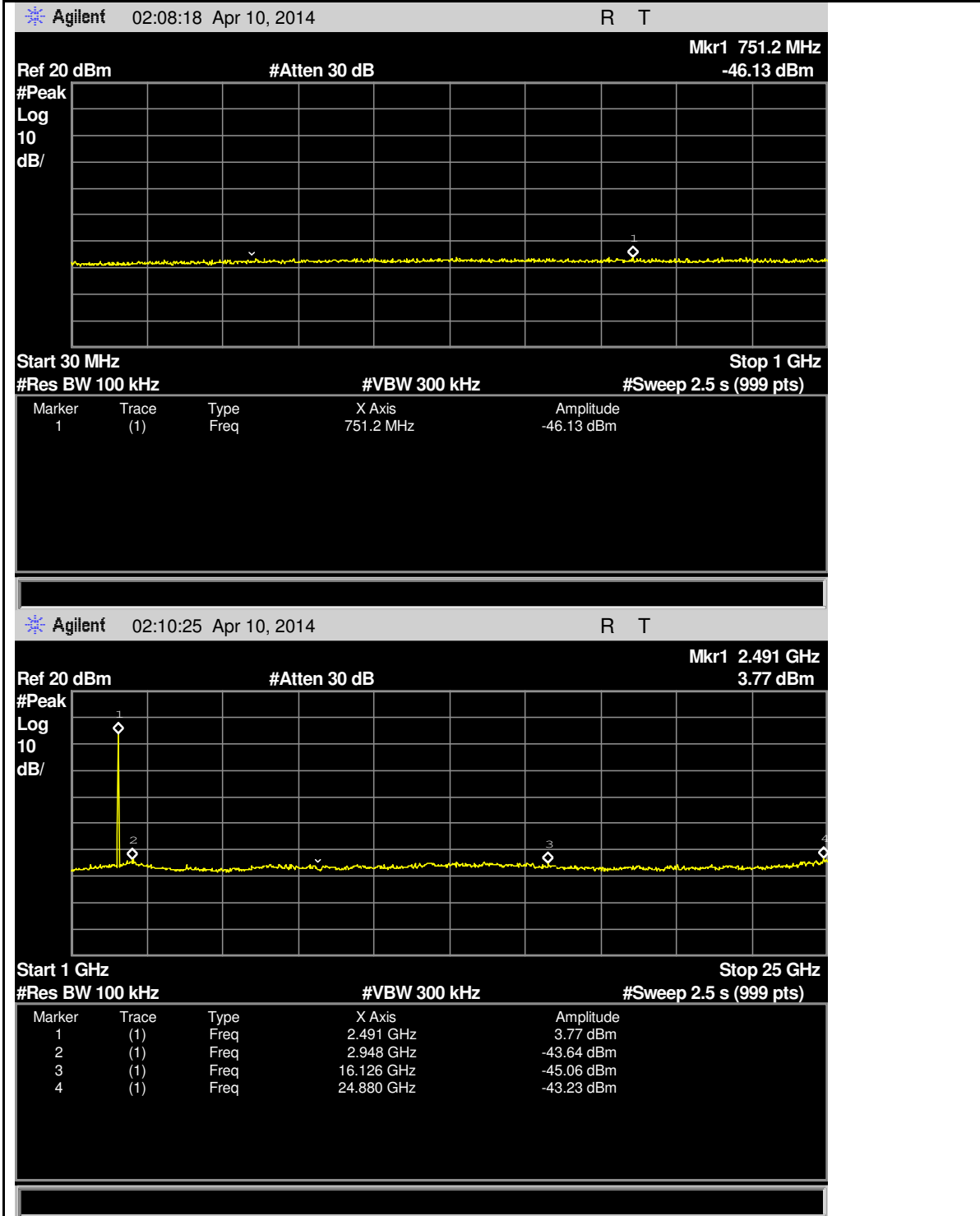


### High Channel



**Test Graph of Conducted spurious emissions measured in  
 100 kHz Bandwidth, EDR mode  
 Low Channel**


**Middle Channel**


**High Channel**


## 5.1.5 Spurious Emissions

**RESULT:****Passed**

Date of testing : 2014-03-14 to 2014-05-22  
Test standard : FCC part 15.247(d)  
Basic standard : ANSI C63.4: 2009  
Limits : Refer to 15.209(a)  
RSS-210 Clause 2.5  
Kind of test site : 3m Semi-Anechoic Chamber

**Test setup**

Test Channel : Low/ Middle/ High  
Operation mode : A.2  
Ambient temperature : 23°C  
Relative humidity : 48%  
Atmospheric pressure : 101.0 kPa

Refer to attached Appendix 1 for details.

### 5.1.6 Frequency Separation

**RESULT:****Passed**

Date of testing : 2014-03-14 to 2014-05-22  
Test standard : FCC part 15.247(a)(1)  
RSS-210 A8.1(b)  
Basic standard : ANSI C63.4: 2009  
Limit :  $\geq 25\text{kHz}$  or two-thirds of 20dB bandwidth, whichever is greater  
Kind of test site : Shield room

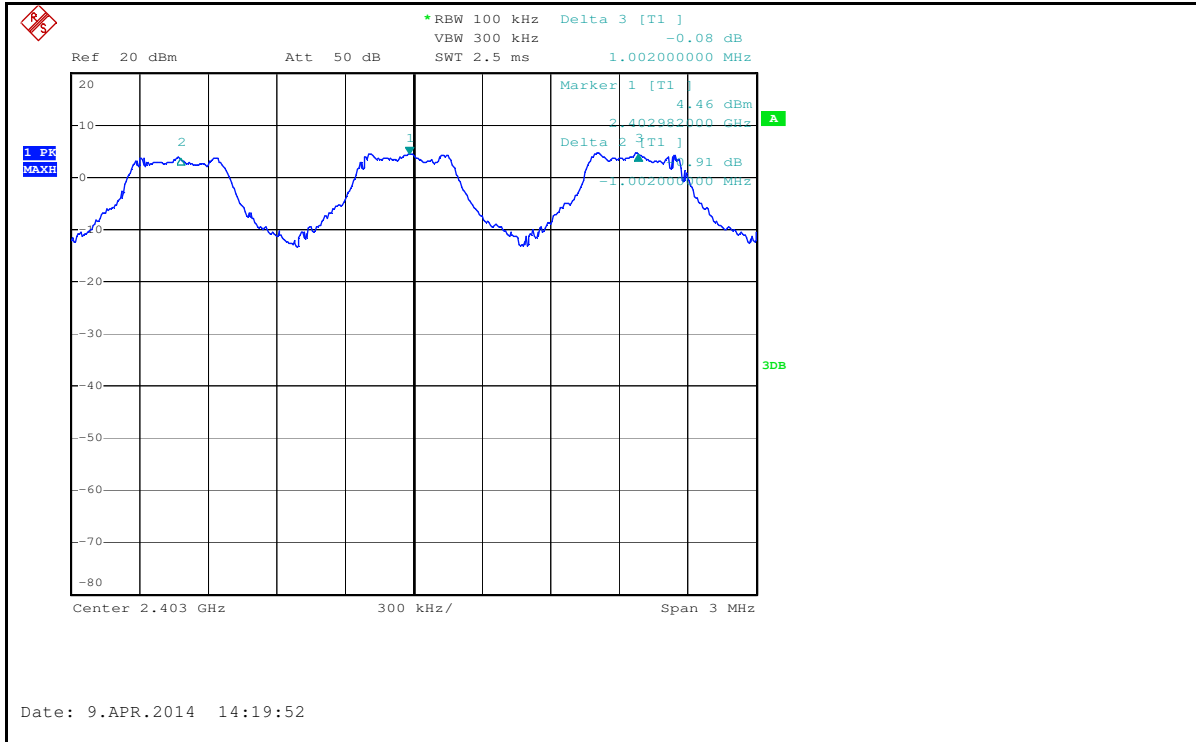
**Test setup**

Test Channel : Low/ Middle/ High  
Operation Mode : A.2  
Ambient temperature : 22°C  
Relative humidity : 51%  
Atmospheric pressure : 101.0 kPa

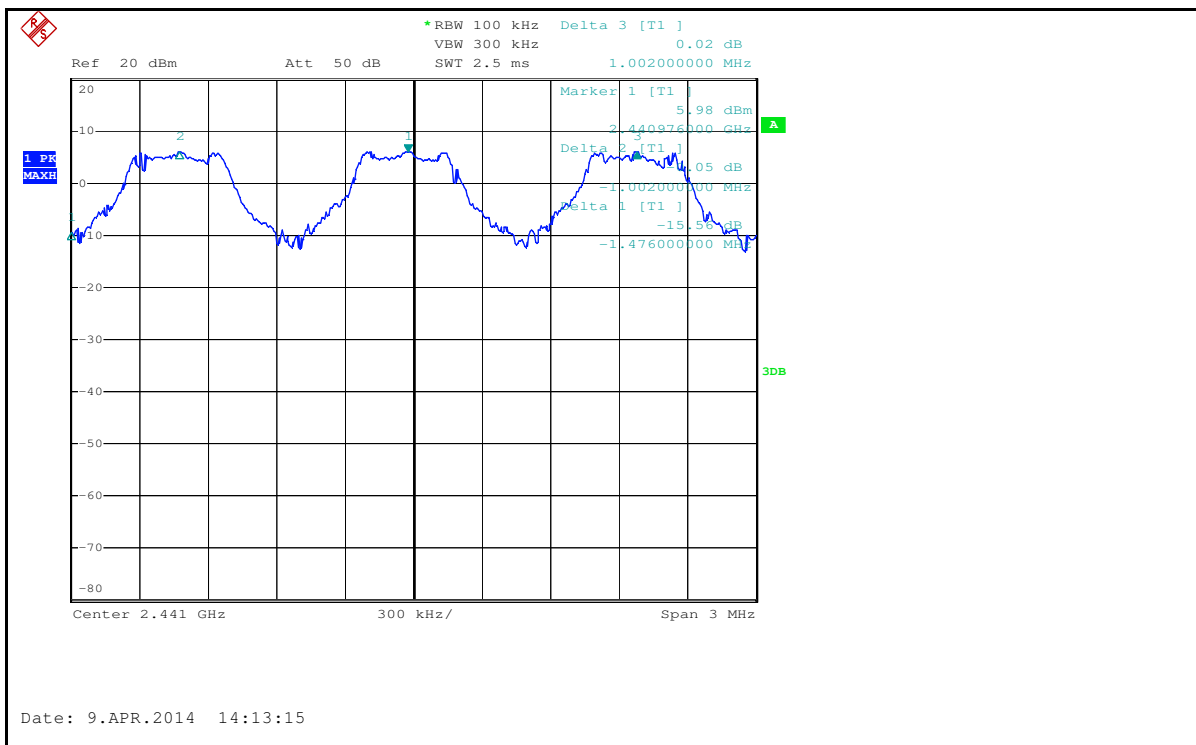
**Table 13: Test result of Frequency Separation**

Channel	Channel Frequency (MHz)	Measured Channel Separation (MHz)	Limit (kHz)	Result
Low Channel	2402	1	$\geq 25\text{kHz}$ or two-thirds of 20dB bandwidth	Pass
Adjacency Channel	2403			
Mid Channel	2441	1	$\geq 25\text{kHz}$ or two-thirds of 20dB bandwidth	Pass
Adjacency Channel	2442			
High Channel	2480	1	$\geq 25\text{kHz}$ or two-thirds of 20dB bandwidth	Pass
Adjacency Channel	2479			

### Test Graph of Frequency Separation Low Channel



### Middle Channel



High Channel





### 5.1.7 Number of hopping frequency

**RESULT:****Passed**

Date of testing : 2014-03-14 to 2014-05-22  
Test standard : FCC part 15.247(a)(1)(iii)  
RSS-210 A8.1(d)  
Basic standard : ANSI C63.4: 2009  
Limits :  $\geq 15$  non-overlapping channels  
Kind of test site : Shield room

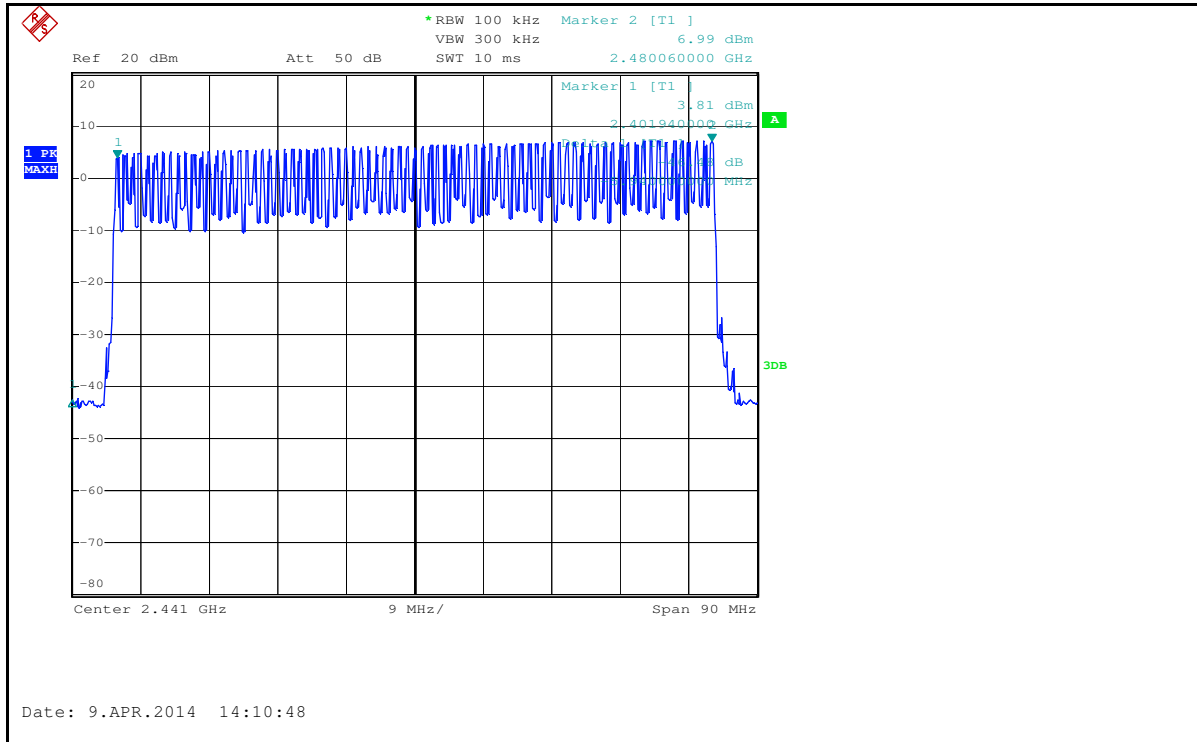
**Test setup**

Test Channel : Low/ Middle/ High  
Operation Mode : A.2  
Ambient temperature : 22°C  
Relative humidity : 51%  
Atmospheric pressure : 101.0 kPa

**Table 14: Test result of Number of hopping frequency**

Frequency Range	Measured Quantity of Hopping Channel	Limit	Result
<u>2400</u> to <u>2483.5</u> MHz	79	$\geq 15$	Pass

### Test Graph of Number of hopping frequency



### 5.1.8 Time of Occupancy

**RESULT:****Passed**

Date of testing : 2014-03-14 to 2014-05-22  
Test standard : FCC part 15.247(a)(1)(iii)  
RSS-210 A8.1(d)  
Basic standard : ANSI C63.4: 2009  
Limits : 0.4s  
Kind of test site : Shield room

**Test setup**

Test Channel : Low/ Middle/ High  
Operation Mode : A.2  
Ambient temperature : 22°C  
Relative humidity : 51%  
Atmospheric pressure : 101.0 kPa

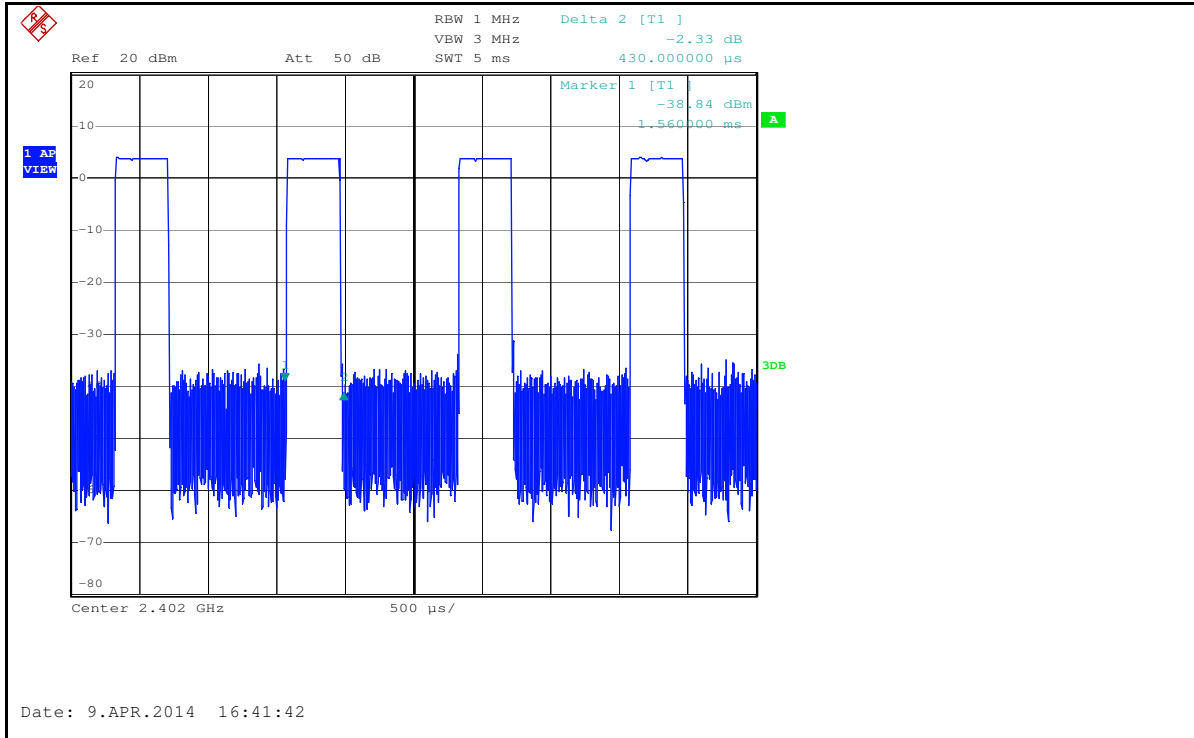
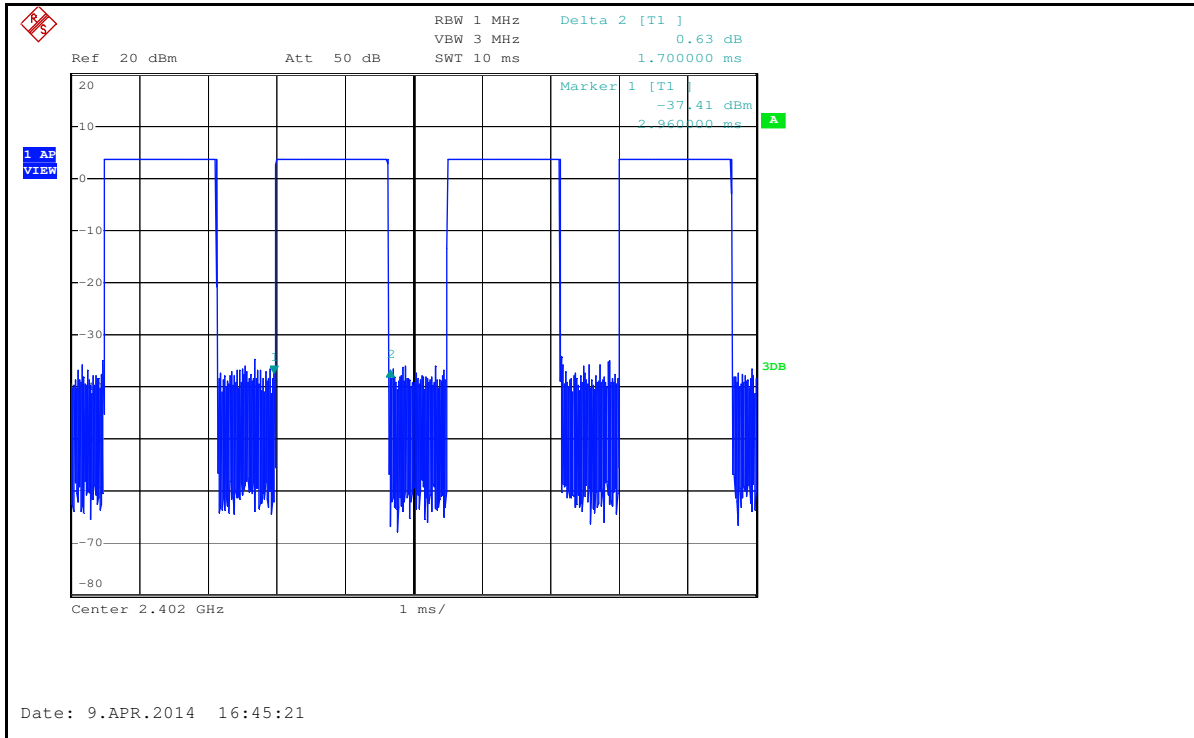
**Table 15: Test result of Time of Occupancy**

Data Mode	Pulse width (ms)	Dwell time (s)	Limit (s)	Result
DH1	0.43	0.14	0.4	Pass
DH3	1.70	0.27	0.4	Pass
DH5	2.99	0.32	0.4	Pass

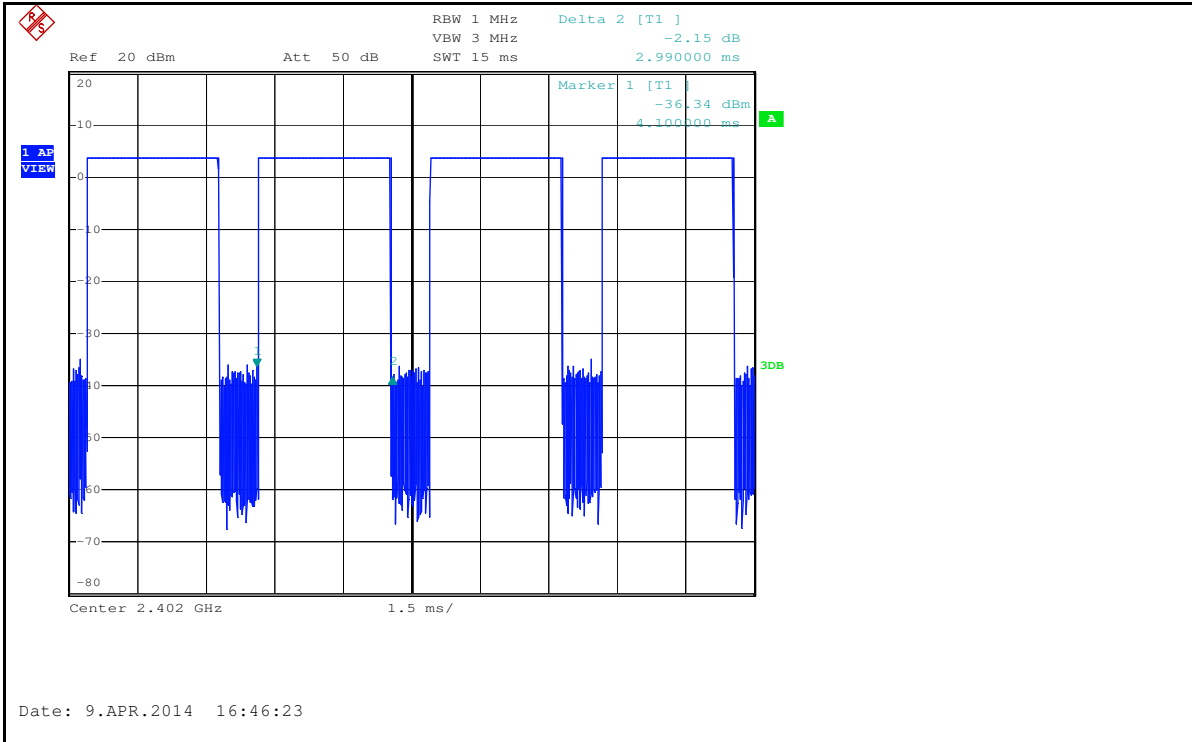
Note:

Dwell time = Pulse width x (Hopping rate / Number of channels) x Period

Period = 0.4 (seconds/ channel) x 79 (channel) = 31.6 seconds

**Test Graph of Time of Occupancy**
**DH1 mode**

**DH3 mode**


DH5 mode



### 5.1.9 Radiated emissions

**RESULT:****Passed**

Date of testing	:	2014-03-14 to 2014-05-22
Test standard	:	FCC Part 15.109 RSS-Gen 7.1.4
Basic standard	:	ANSI C63.4: 2009
Frequency range	:	30 – 6000MHz
Limits	:	FCC Part 15.109(a) ICES-003
Kind of test site	:	3m Semi-Anechoic Chamber

**Test Setup**

Input Voltage	:	DC 12V (via AC/DC adapter)
Operation Mode	:	A+B, D, E, F, G, H, I, J
Ambient temperature	:	23°C
Relative humidity	:	48%
Atmospheric pressure	:	101.0 kPa

Refer to following test graphs for details.

### 5.1.10 Conducted emissions

**RESULT:****Passed**

Date of testing	:	2014-03-14 to 2014-05-22
Test standard	:	FCC Part 15.207 FCC Part 15.107 RSS-210 Clause 2.6
Basic standard	:	ANSI C63.4: 2009
Frequency range	:	0.15MHz – 30MHz
Limits	:	FCC Part 15.207(a) FCC Part 15.107(a) Table 4 of RSS Gen
Kind of test site	:	Shield Room

**Test Setup**

Input Voltage	:	DC 12V (via AC/DC adapter)
Operation Mode	:	A+B, D, E, F, G, H, I, J
Ambient temperature	:	24°C
Relative humidity	:	50%
Atmospheric pressure	:	101.0 kPa

Refer to following test graphs for details.

## 6. Safety Human exposure

### 6.1 Radio Frequency Exposure Compliance

#### 6.1.1 Maximum Permissible Exposure

**RESULT:****Passed**

Test standard : RSS-102 Issue 4  
FCC KDB Publication 447498  
FCC 1.1310

MPE Calculation

According to the formula  $Pd = \frac{P_{out} * G}{4R^2\pi}$

Where

Pd = power density in mW/cm<sup>2</sup>

Pout = output power to antenna in mW

G = Antenna gain in numeric

π = 3.14159

R = Distance between observation point and the center of radiator in cm

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping the safety distance from the antenna should be included in the user manual.

The highest measured power is 6.96dBm at 2480 MHz for Bluetooth operation, hence the Maximum Permissible Exposure (MPE) value:

$$\text{Bluetooth operation: } Pd = \frac{P_{out} * G}{4R^2\pi} = \frac{4.97 * 1.479}{4 * 20^2 * 3.14159} = 0.000146 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

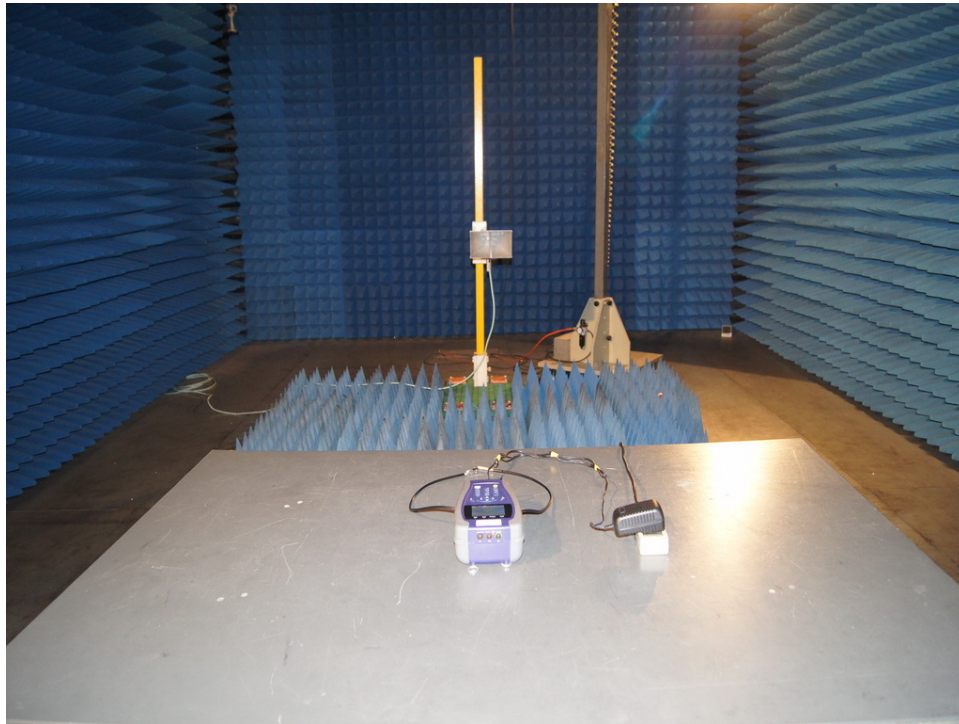
$$\text{Wi-Fi operation: } Pd = \frac{P_{out} * G}{4R^2\pi} = \frac{127.057 * 1.995}{4 * 20^2 * 3.14159} = 0.0504 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

The summed maximum permissible exposure (MPE) level is 0.05055mW/cm<sup>2</sup>. It is less than MPE limit 1mW/cm<sup>2</sup>, therefore the device is exclusion from SAR test, and compliance with MPE limit.

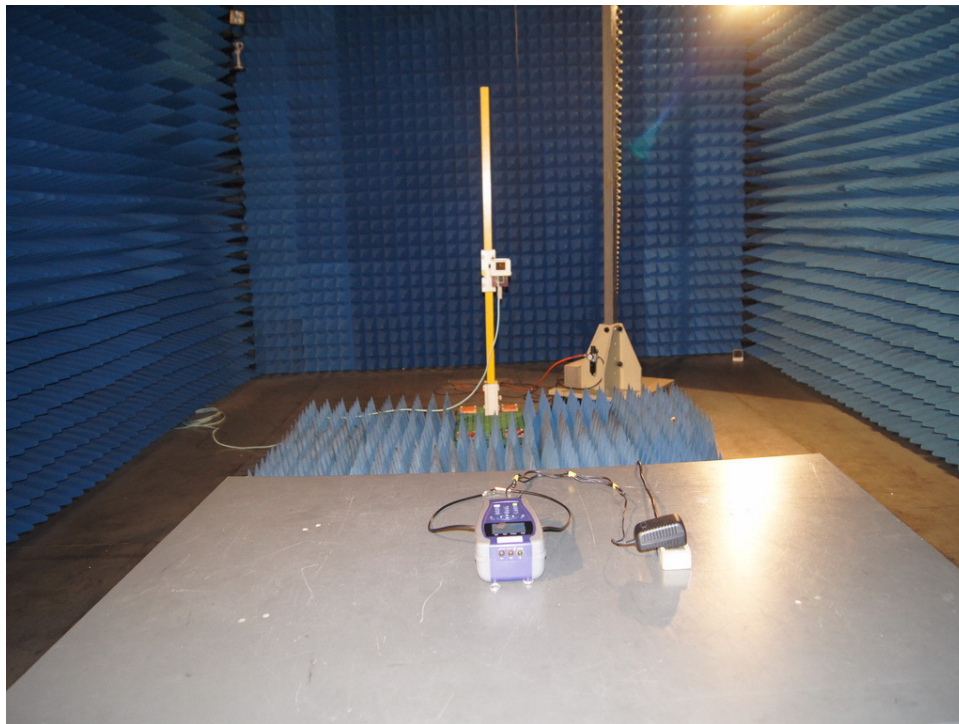


## 7. Photographs of the Test Set-Up

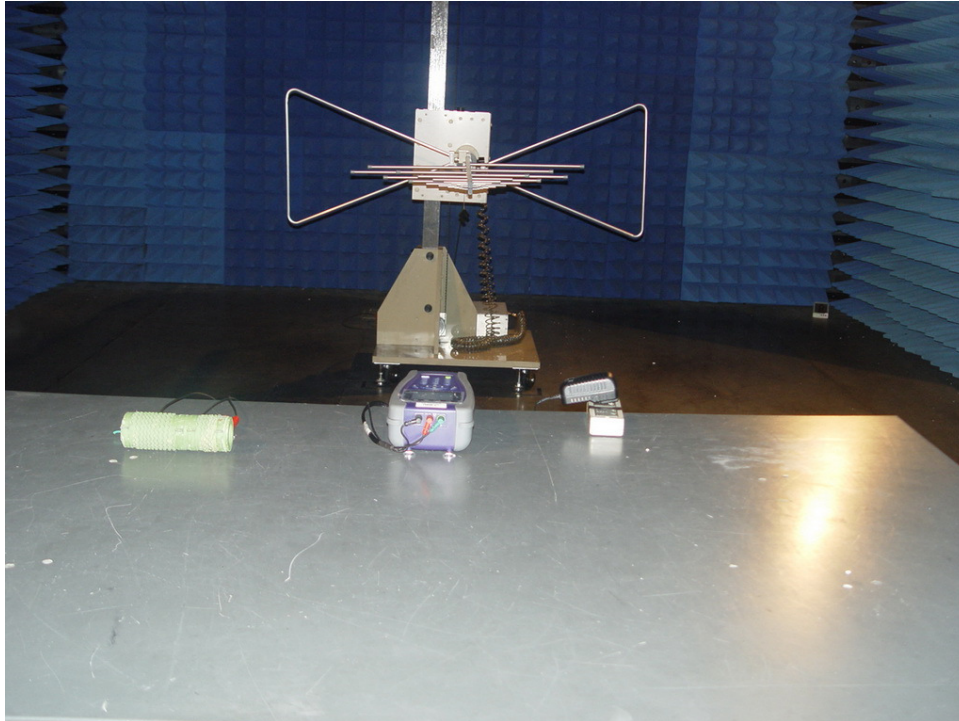
**Photograph 1: Set-up for Spurious Emissions (1GHz-18GHz)**



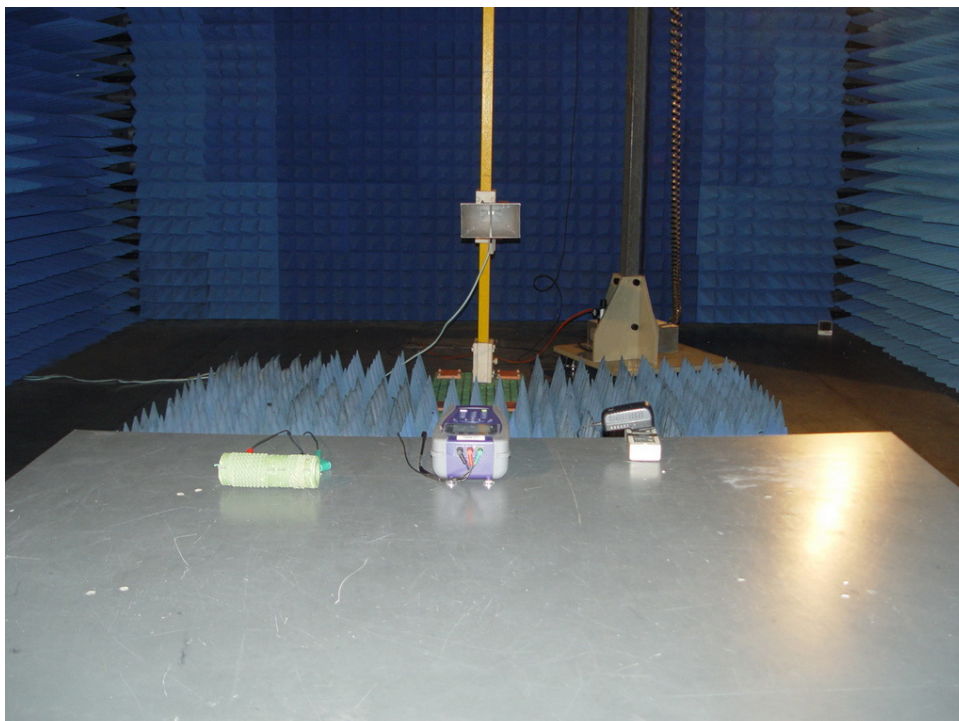
**Photograph 2: Set-up for Spurious Emissions (18GHz-26GHz)**



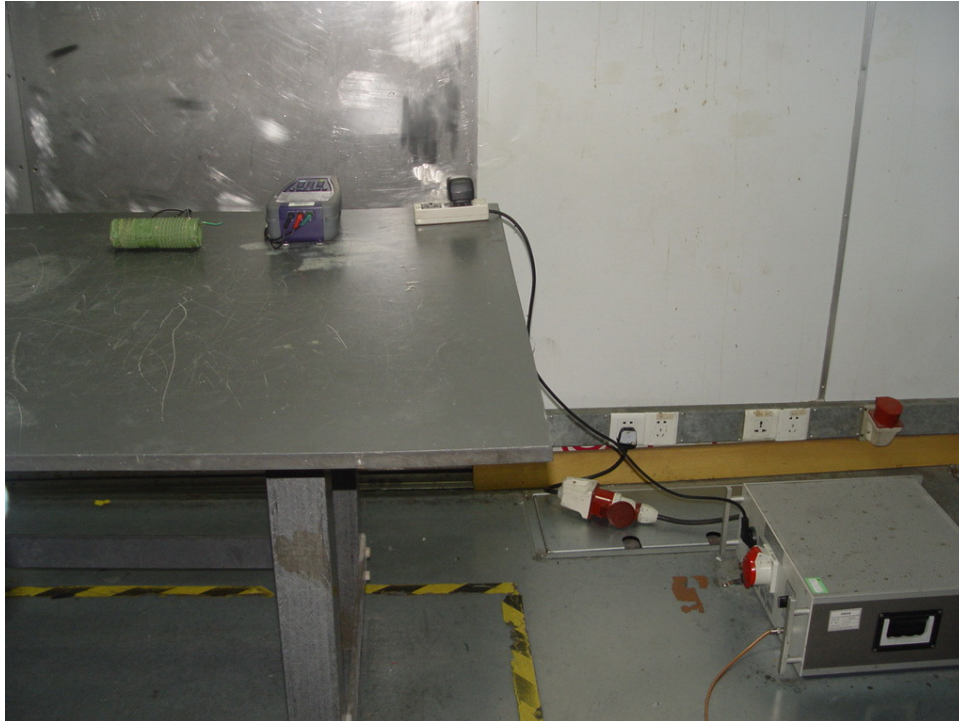
**Photograph 3: Set-up for Radiated emissions, below 1GHz**



**Photograph 4: Set-up for Radiated emissions, above 1GHz**



**Photograph 5: Set-up for Conducted emissions**



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**Test Results of Spurious Emissions; model SCTPS-AB-CU, Bluetooth operation**



**ACCURATE TECHNOLOGY CO., LTD.**

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

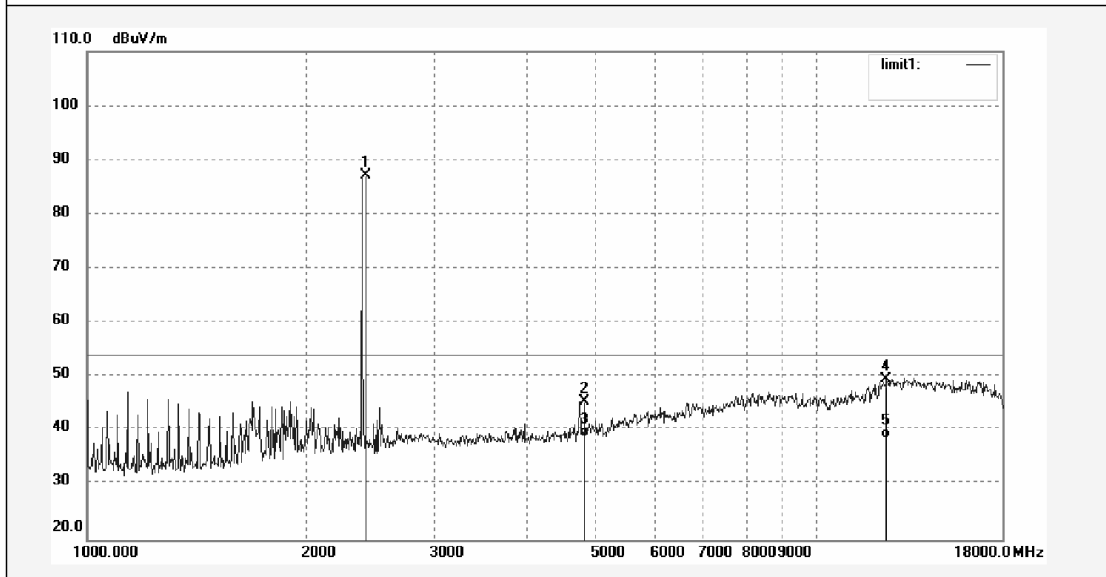
Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: PHY #881	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/03/30
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2402MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.000	94.51	-7.45	87.06	/	/	peak			
2	4804.016	45.57	-0.30	45.27	74.00	-28.73	peak			
3	4804.016	39.20	-0.30	38.90	54.00	-15.10	AVG			
4	12473.640	11.25	38.37	49.62	74.00	-24.38	peak			
5	12473.640	0.25	38.37	38.62	54.00	-15.38	AVG			

**Produkte**  
 Products



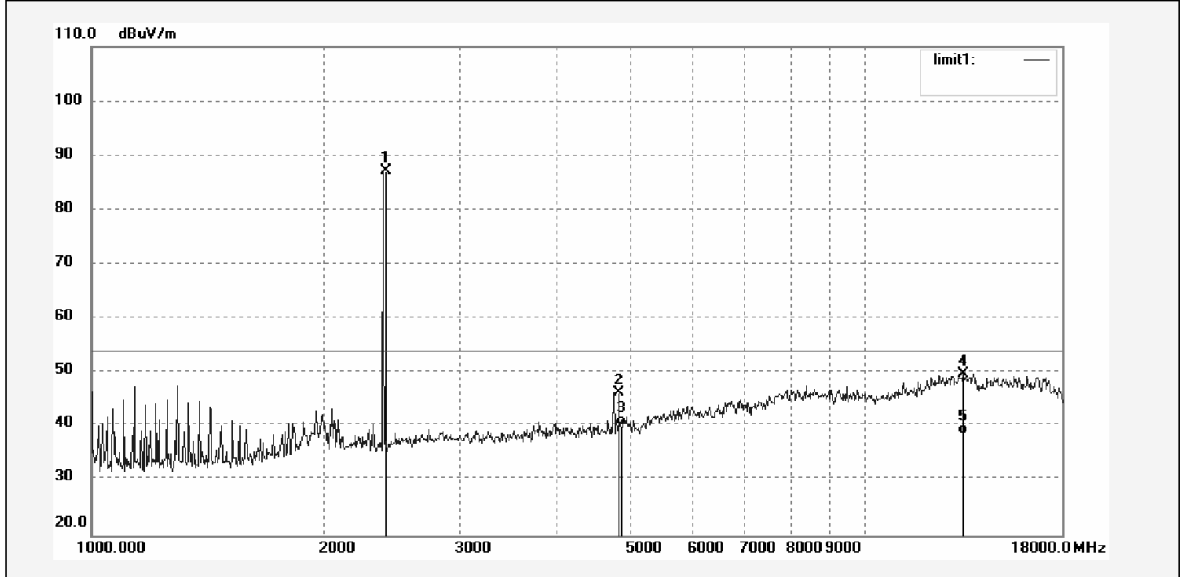
**ACCURATE TECHNOLOGY CO., LTD.**

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #882	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/03/30
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2402MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.000	94.62	-7.45	87.17	/	/	peak			
2	4804.020	46.53	-0.30	46.23	74.00	-27.77	peak			
3	4804.020	40.47	-0.30	40.17	54.00	-13.83	AVG			
4	13415.172	10.25	39.50	49.75	74.00	-24.25	peak			
5	13415.172	-1.04	39.50	38.46	54.00	-15.54	AVG			

**Produkte**  
 Products



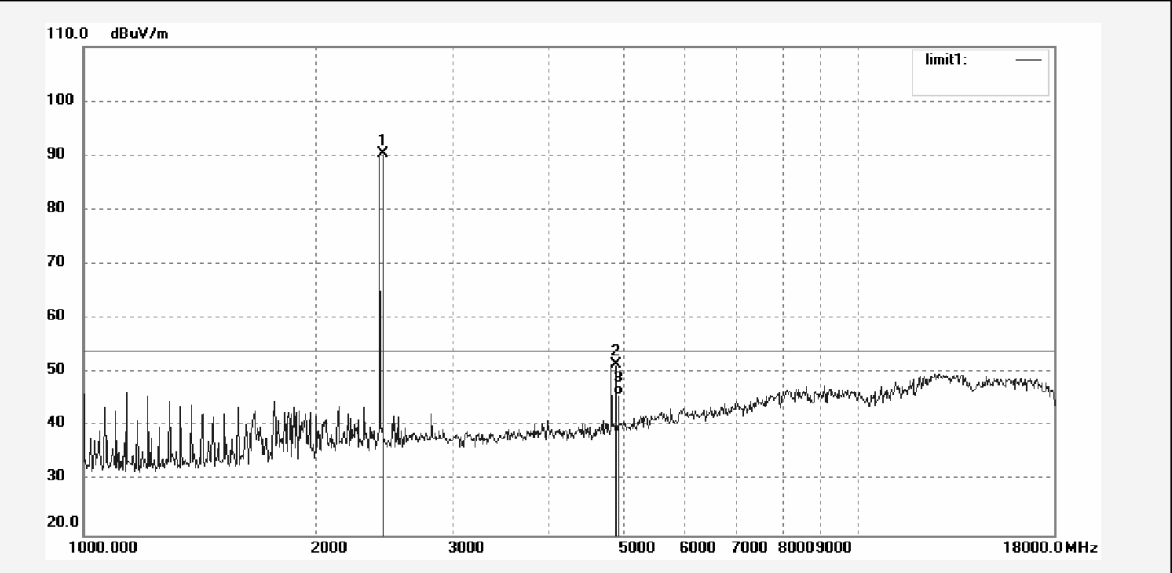
**ACCURATE TECHNOLOGY CO., LTD.**

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #885	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/03/30
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2441MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.000	97.75	-7.35	90.40	/	/	peak			
2	4882.020	51.43	0.14	51.57	74.00	-22.43	peak			
3	4882.020	45.55	0.14	45.69	54.00	-8.31	AVG			

**Produkte**  
 Products



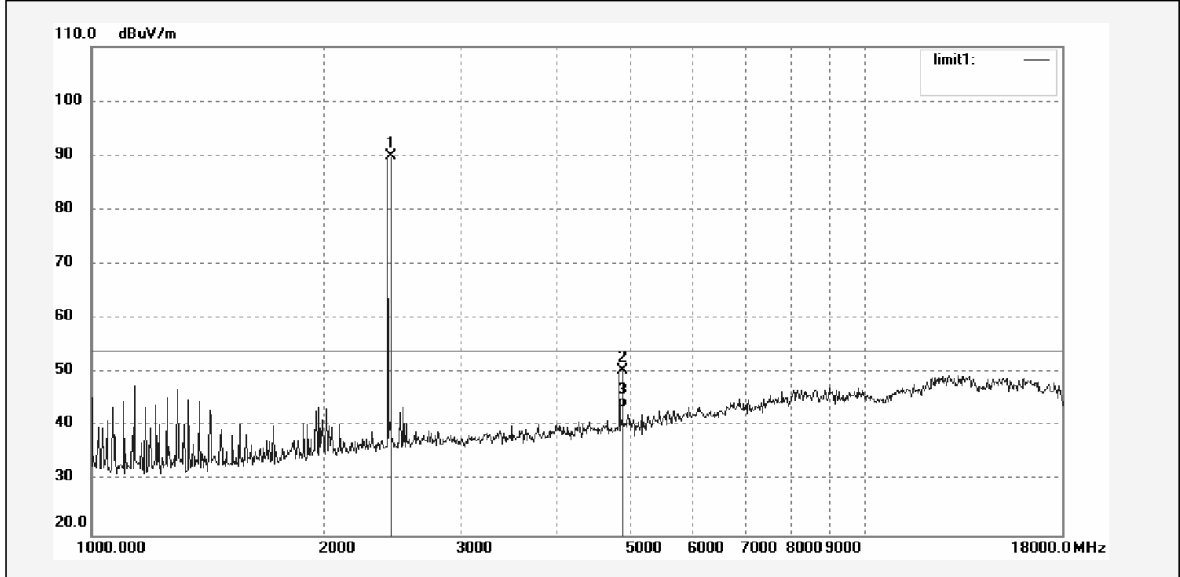
**ACCURATE TECHNOLOGY CO., LTD.**

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #886	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/03/30
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2441MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.000	97.20	-7.35	89.85	/	/	peak			
2	4882.024	50.44	0.14	50.58	74.00	-23.42	peak			
3	4882.024	43.36	0.14	43.50	54.00	-10.50	AVG			



**Produkte**  
 Products



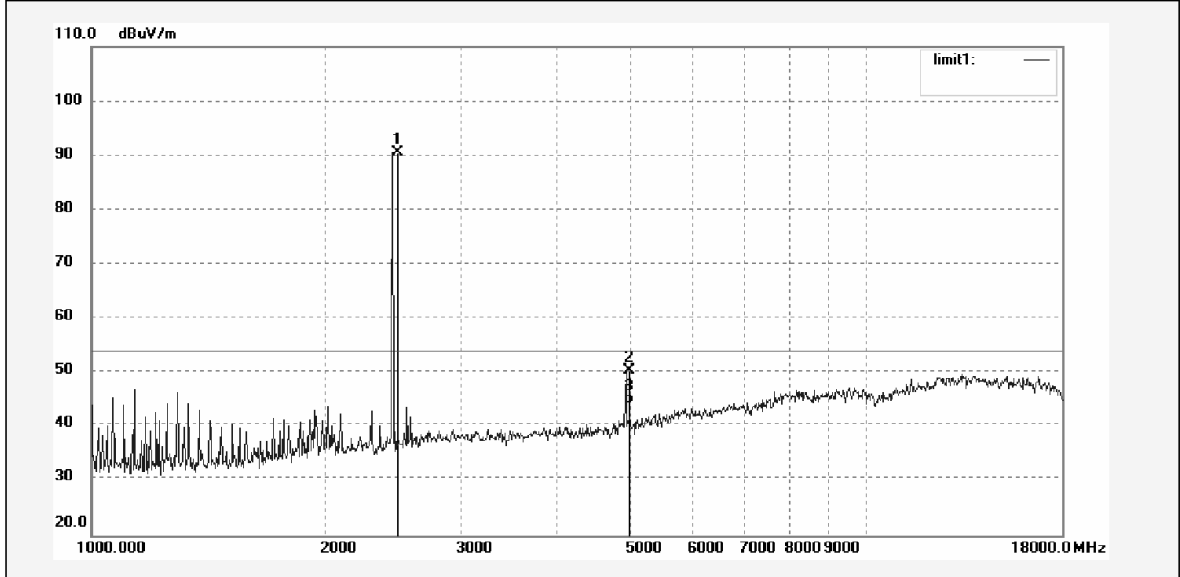
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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #887	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/03/30
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2480MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.000	97.91	-7.37	90.54	/	/	peak			
2	4960.018	50.07	0.52	50.59	74.00	-23.41	peak			
3	4960.018	43.78	0.52	44.30	54.00	-9.70	AVG			

**Produkte**  
 Products



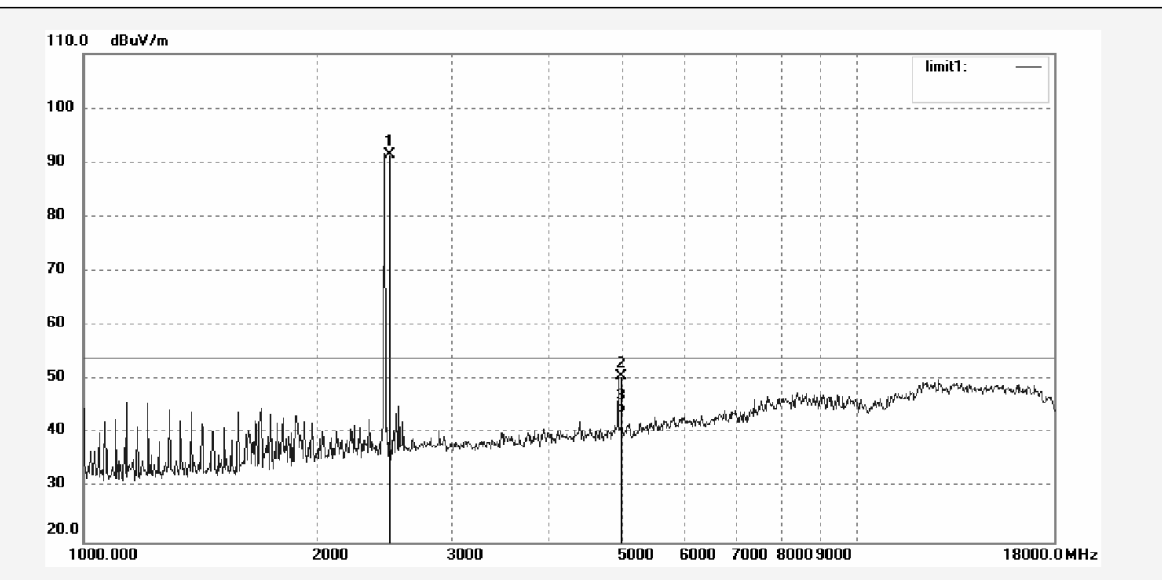
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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #888	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/03/30
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2480MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.000	98.92	-7.37	91.55	/	/	peak			
2	4960.031	50.19	0.52	50.71	74.00	-23.29	peak			
3	4960.031	43.27	0.52	43.79	54.00	-10.21	AVG			

**Produkte**  
 Products



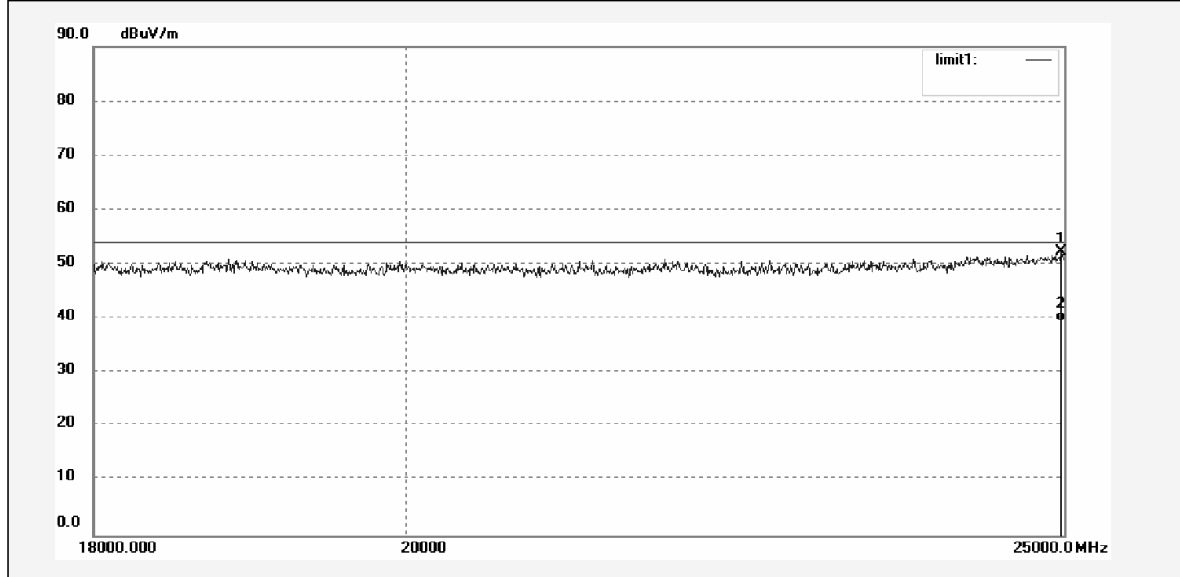
**ACCURATE TECHNOLOGY CO., LTD.**

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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #1083	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/04/09
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2402MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24975.325	33.34	18.87	52.21	74.00	-21.79	peak			
2	24975.325	20.68	18.87	39.55	54.00	-14.45	AVG			

**Produkte**  
 Products



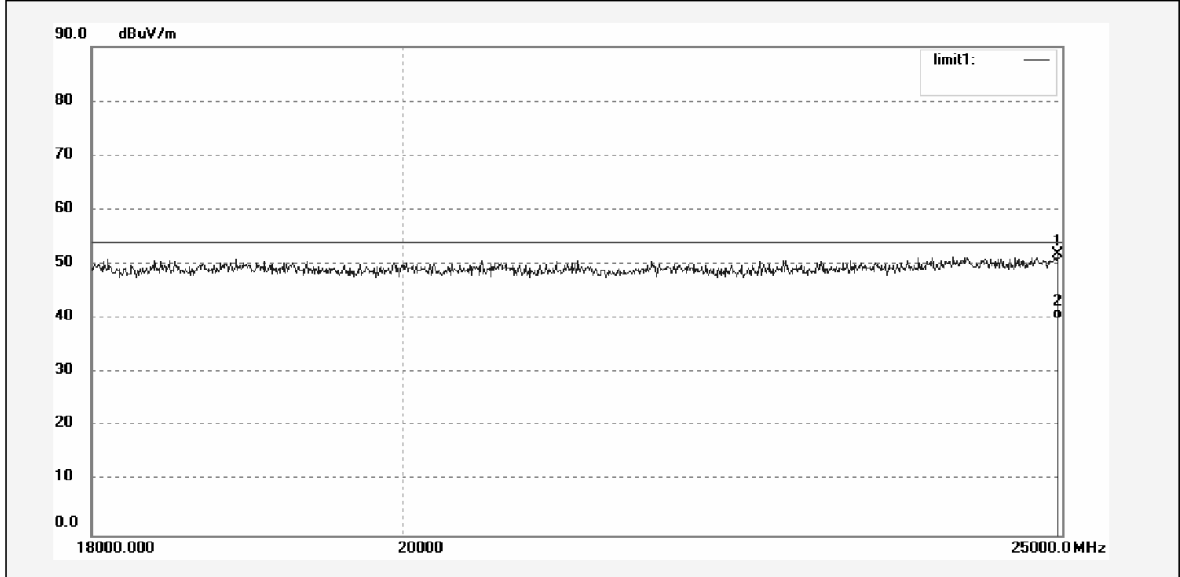
**ACCURATE TECHNOLOGY CO., LTD.**

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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #1084	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/04/09
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2402MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24958.889	33.02	18.84	51.86	74.00	-22.14	peak			
2	24958.889	21.19	18.84	40.03	54.00	-13.97	AVG			

**Produkte**  
 Products



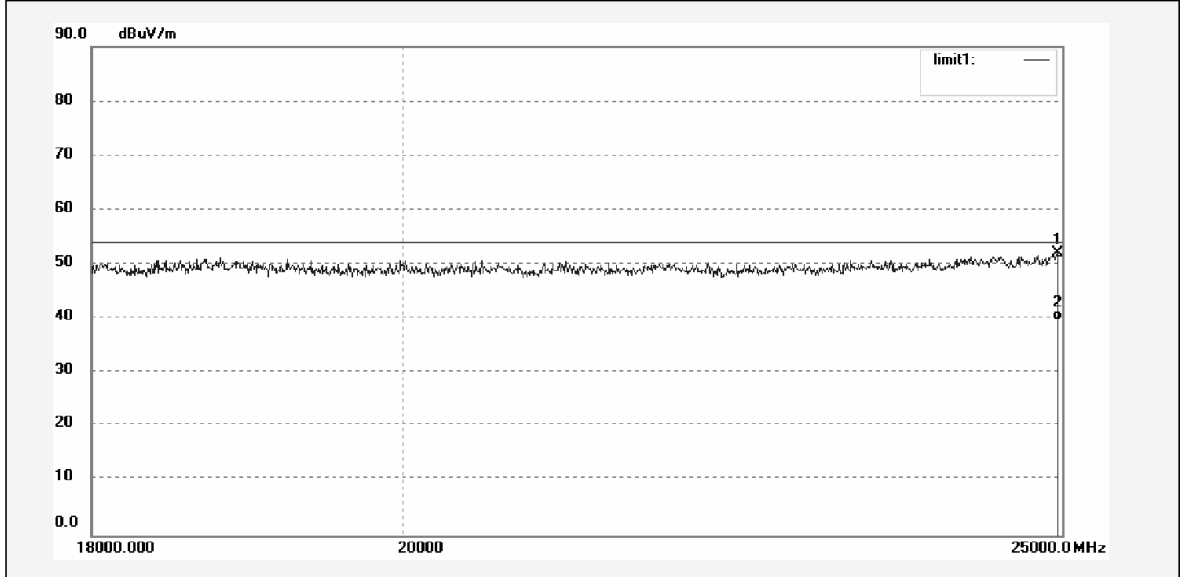
**ACCURATE TECHNOLOGY CO., LTD.**

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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #1085	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/04/09
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2441MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24967.105	33.13	18.85	51.98	74.00	-22.02	peak			
2	24967.105	20.88	18.85	39.73	54.00	-14.27	AVG			

**Produkte**  
 Products



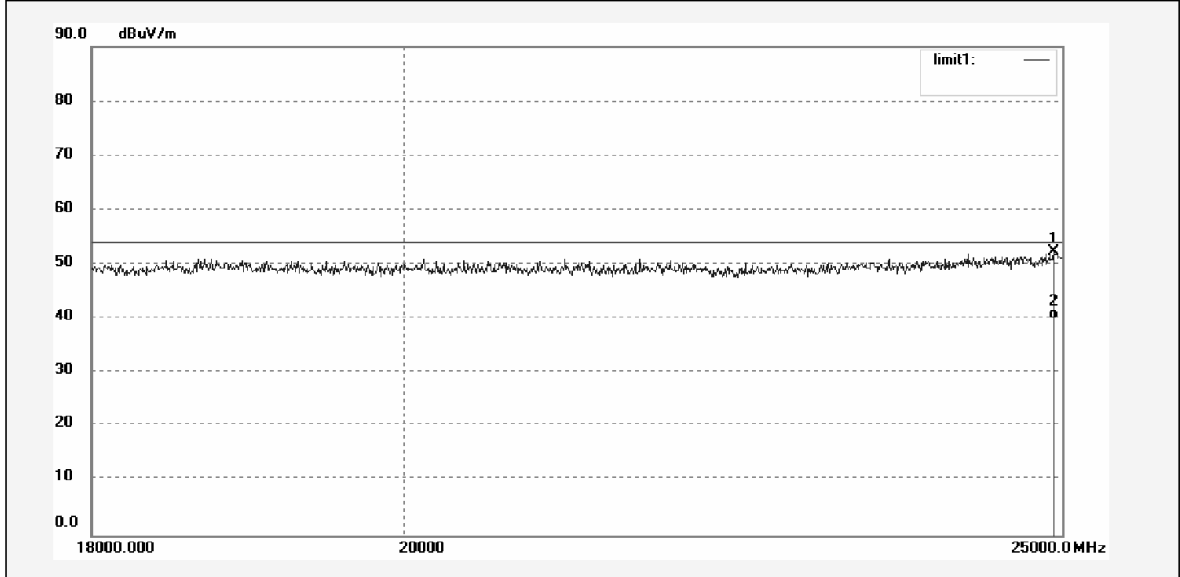
**ACCURATE TECHNOLOGY CO., LTD.**

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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #1086	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/04/09
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2441MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24926.048	33.44	18.80	52.24	74.00	-21.76	peak			
2	24926.048	21.25	18.80	40.05	54.00	-13.95	AVG			

**Produkte**  
 Products



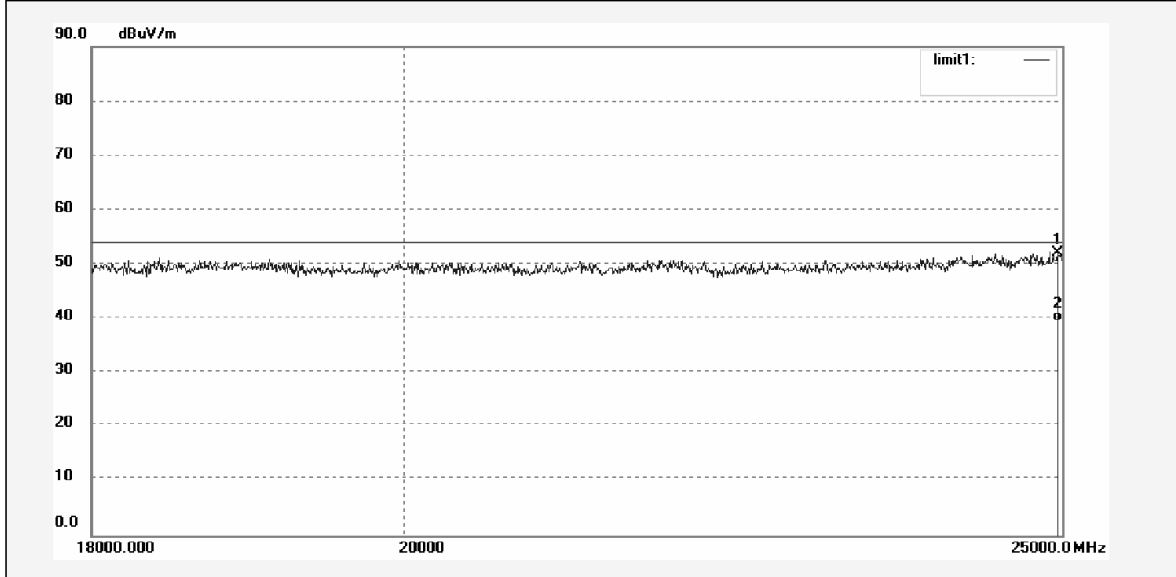
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Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #1087	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/04/09
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2480MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24958.889	33.33	18.84	52.17	74.00	-21.83	peak			
2	24958.889	20.72	18.84	39.56	54.00	-14.44	AVG			

**Produkte**  
 Products



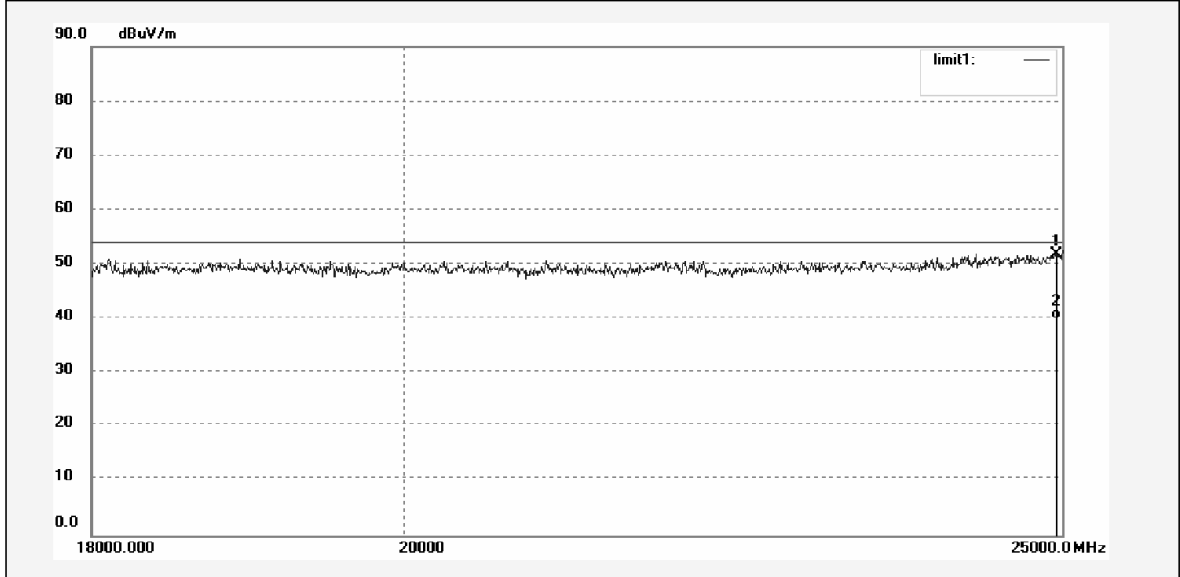
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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #1088	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/04/09
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2480MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24950.674	33.07	18.83	51.90	74.00	-22.10	peak			
2	24950.674	21.20	18.83	40.03	54.00	-13.97	AVG			



**Produkte**  
 Products



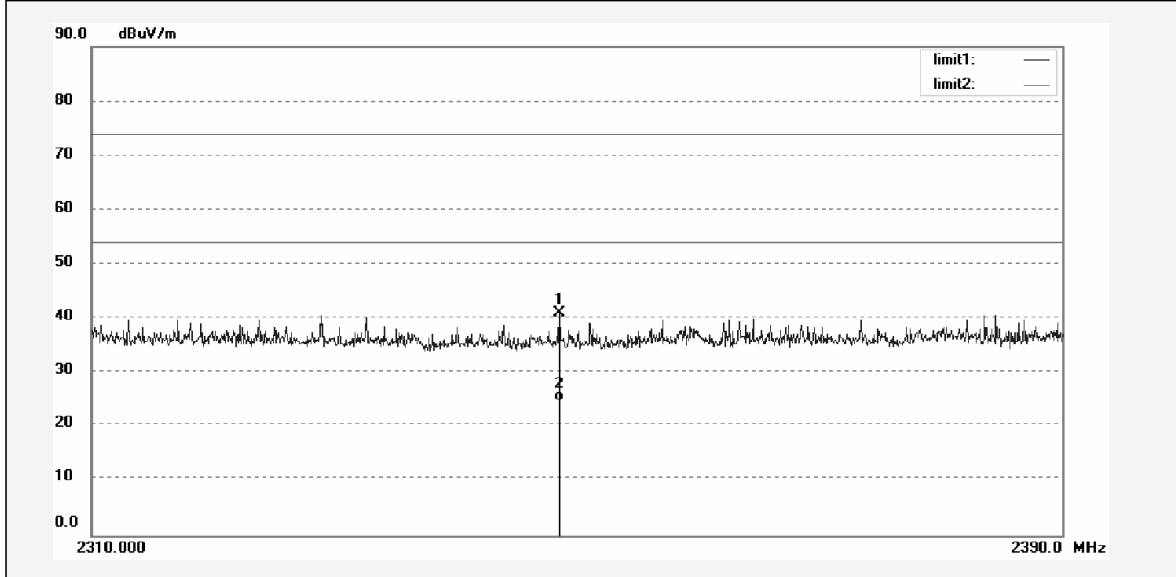
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Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #883	Polarization: Horizontal
Standard: FCC (BAND EDGE)	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/03/30
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2402MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2348.217	48.86	-7.78	41.08	74.00	-32.92	peak			
2	2348.217	32.38	-7.78	24.60	54.00	-29.40	AVG			

**Produkte**  
 Products



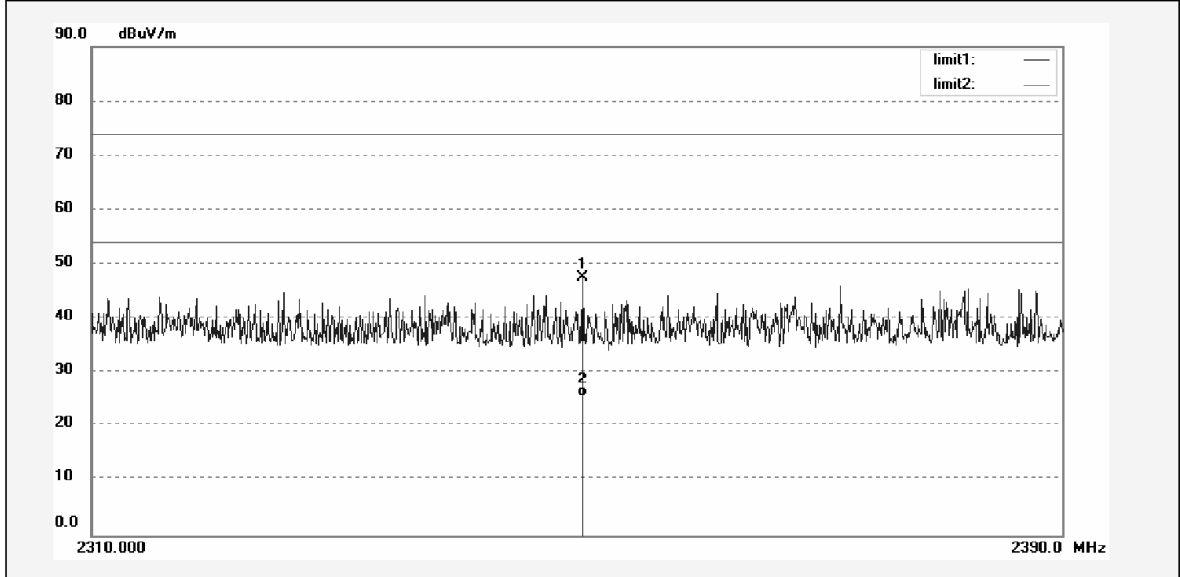
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Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #884	Polarization: Vertical
Standard: FCC (BAND EDGE)	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/03/30
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2402MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2350.140	55.27	-7.79	47.48	74.00	-26.52	peak			
2	2350.140	33.29	-7.79	25.50	54.00	-28.50	AVG			

**Produkte**  
 Products



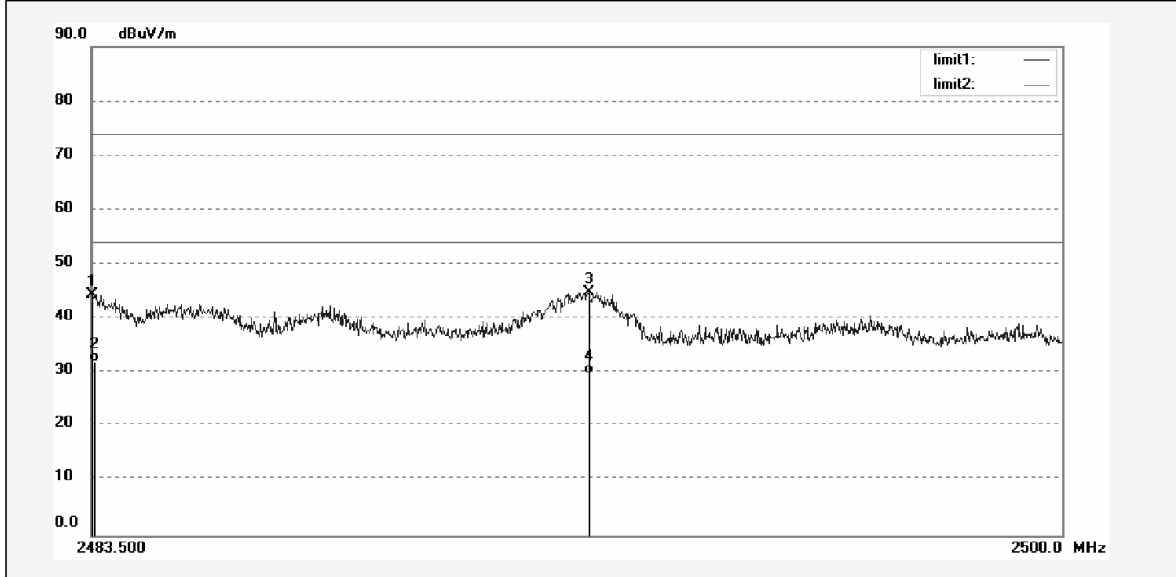
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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #889	Polarization: Vertical
Standard: FCC (BAND EDGE)	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/03/30
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2480MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	51.71	-7.37	44.34	74.00	-29.66	peak			
2	2483.500	39.37	-7.37	32.00	54.00	-22.00	AVG			
3	2491.935	52.21	-7.39	44.82	74.00	-29.18	peak			
4	2491.935	37.29	-7.39	29.90	54.00	-24.10	AVG			

**Produkte**  
 Products



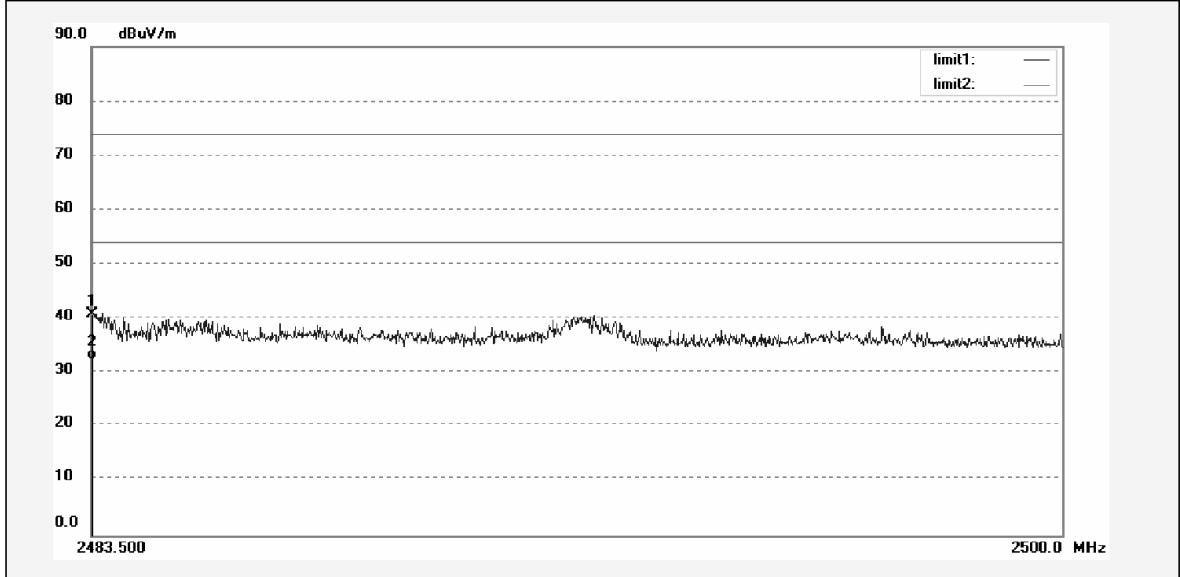
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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PHY #890	Polarization: Horizontal
Standard: FCC (BAND EDGE)	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2014/03/30
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2480MHz	Distance: 3m
Model: SCTPS-AB-CU	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	48.28	-7.37	40.91	74.00	-33.09	peak			
2	2483.500	39.87	-7.37	32.50	54.00	-21.50	AVG			

**Test Results of Spurious Emissions; model CSC-TPSVW, Bluetooth operation**



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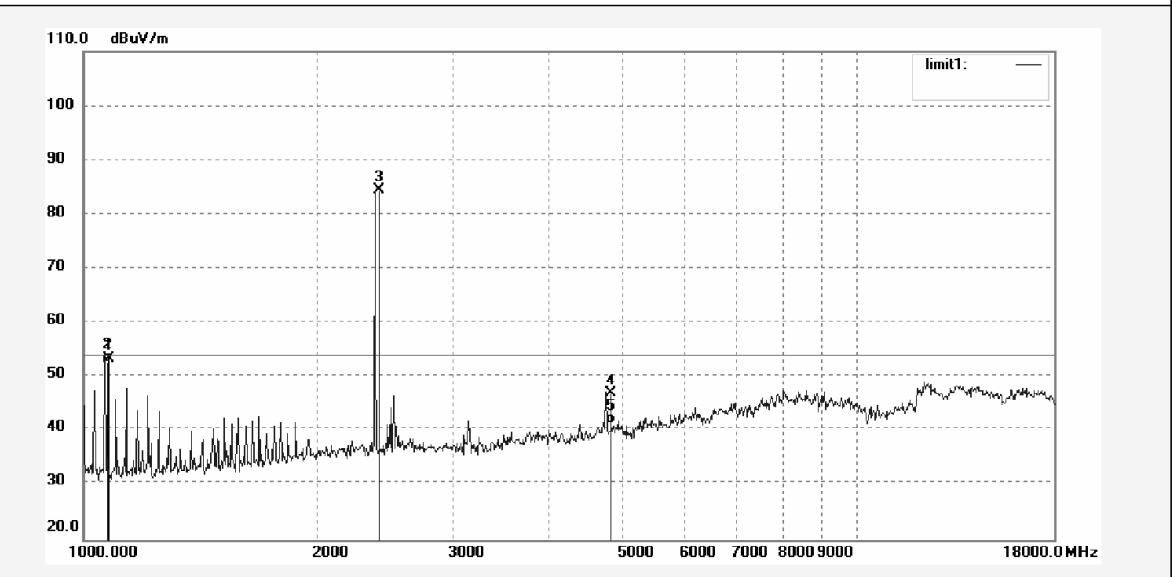
Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: PZ #3	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/05/21/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature:
Mode: TX 2402MHz	Distance:
Model: CSC-TPSVW	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1080.000	65.95	-12.64	53.31	74.00	-20.69	peak			
2	1080.000	65.35	-12.64	52.71	54.00	-1.29	AVG			
3	2402.000	91.99	-7.45	84.54	/	/	peak			
4	4804.018	47.30	-0.30	47.00	74.00	-27.00	peak			
5	4804.018	41.53	-0.30	41.23	54.00	-12.77	AVG			

**Produkte**  
 Products



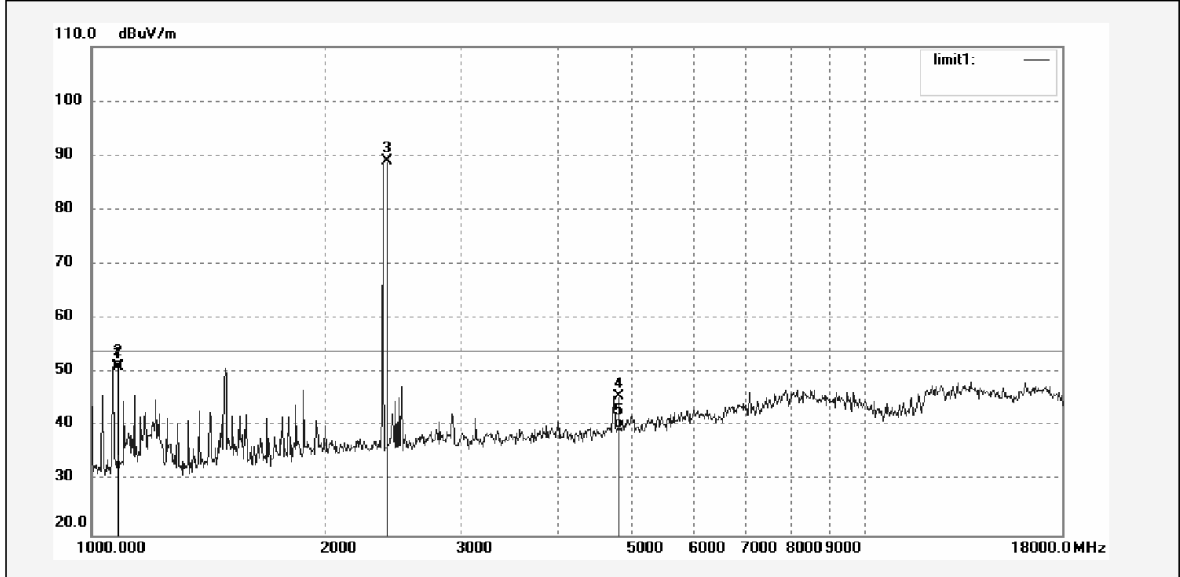
**ACCURATE TECHNOLOGY CO., LTD.**

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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PZ #4	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/05/21/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature:
Mode: TX 2402MHz	Distance:
Model: CSC-TPSVW	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1080.025	63.71	-12.64	51.07	74.00	-22.93	peak			
2	1080.025	63.32	-12.64	50.68	54.00	-3.32	AVG			
3	2402.000	96.32	-7.45	88.87	/	/	peak			
4	4804.020	45.74	-0.30	45.44	74.00	-28.56	peak			
5	4804.020	39.98	-0.30	39.68	54.00	-14.32	AVG			

**Produkte**  
 Products



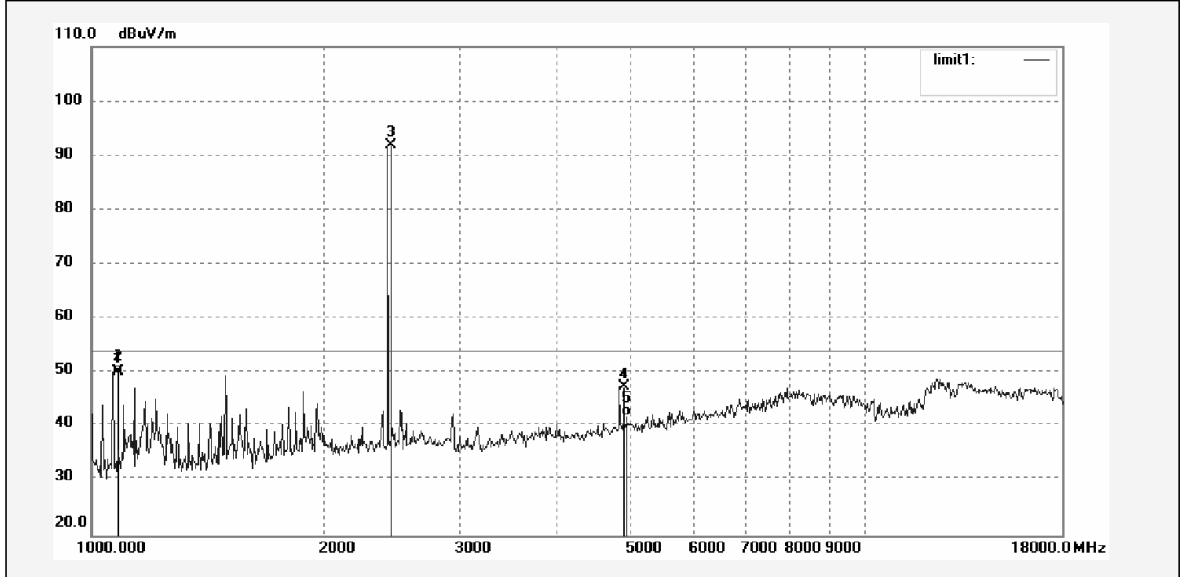
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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PZ #5	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/05/21/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature:
Mode: TX 2441MHz	Distance:
Model: CSC-TPSVW	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1080.075	62.97	-12.64	50.33	74.00	-23.67	peak			
2	1080.075	62.48	-12.64	49.84	54.00	-4.16	AVG			
3	2441.000	99.30	-7.35	91.95	/	/	peak			
4	4882.030	47.20	0.14	47.34	74.00	-26.66	peak			
5	4882.030	41.82	0.14	41.96	54.00	-12.04	AVG			



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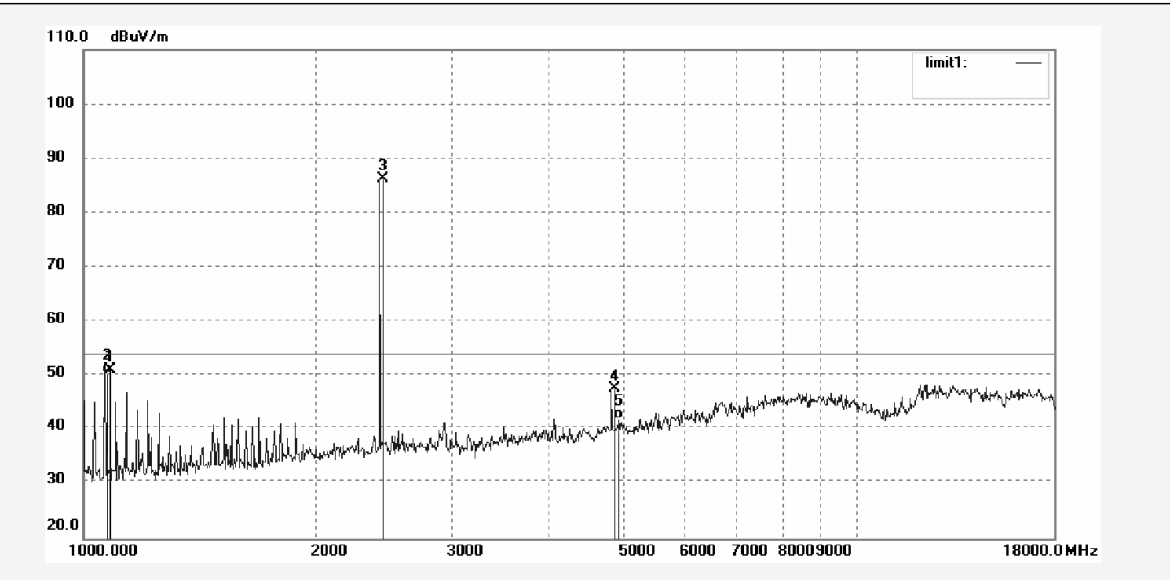
Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: PZ #6	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/05/21/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature:
Mode: TX 2441MHz	Distance:
Model: CSC-TPSVW	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1080.053	63.80	-12.64	51.16	74.00	-22.84	peak			
2	1080.053	63.18	-12.64	50.54	54.00	-3.46	AVG			
3	2441.000	93.66	-7.35	86.31	/	/	peak			
4	4880.024	47.37	0.13	47.50	74.00	-26.50	peak			
5	4880.024	41.78	0.13	41.91	54.00	-12.09	AVG			





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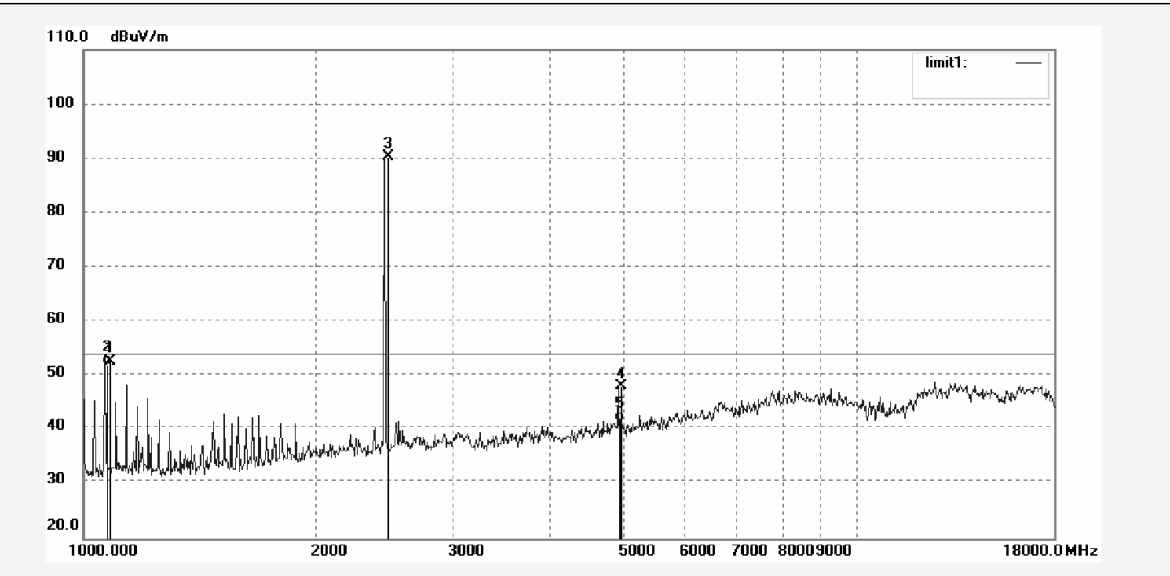
Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: PZ #7	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/05/21/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature:
Mode: TX 2480MHz	Distance:
Model: CSC-TPSVW	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1080.031	65.31	-12.64	52.67	74.00	-21.33	peak			
2	1080.031	64.70	-12.64	52.06	54.00	-1.94	AVG			
3	2480.000	97.71	-7.37	90.34	/	/	peak			
4	4960.044	47.55	0.52	48.07	74.00	-25.93	peak			
5	4960.044	41.05	0.52	41.57	54.00	-12.43	AVG			



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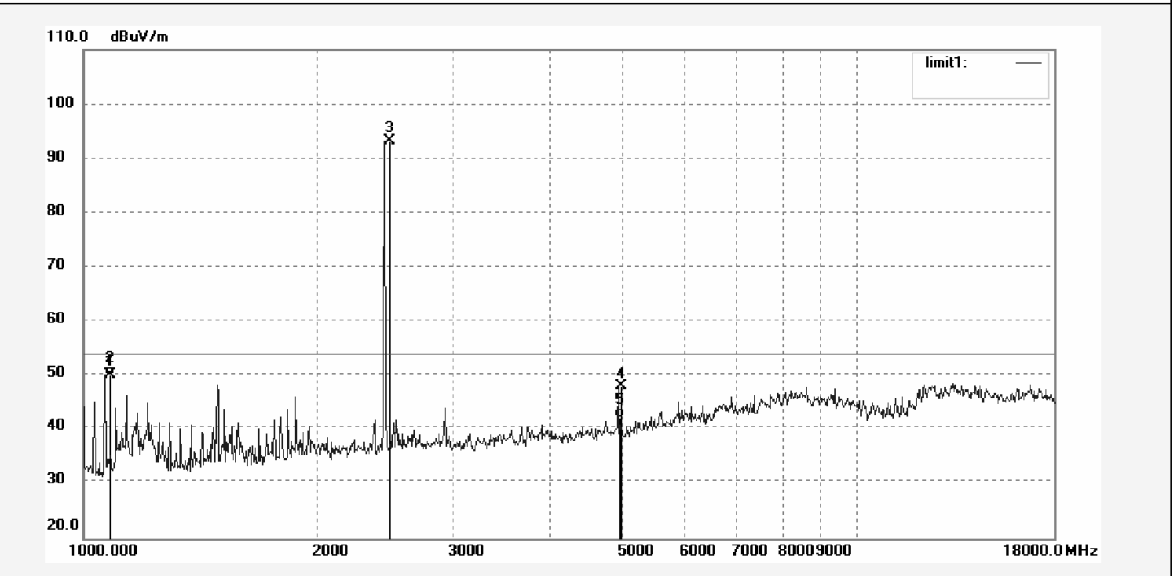
Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: PZ #8	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/05/21/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature:
Mode: TX 2480MHz	Distance:
Model: CSC-TPSVW	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1080.068	62.96	-12.64	50.32	74.00	-23.68	peak			
2	1080.068	62.59	-12.64	49.95	54.00	-4.05	AVG			
3	2480.000	100.57	-7.37	93.20	/	/	peak			
4	4960.036	47.42	0.52	47.94	74.00	-26.06	peak			
5	4960.036	41.68	0.52	42.20	54.00	-11.80	AVG			

**Produkte**  
 Products



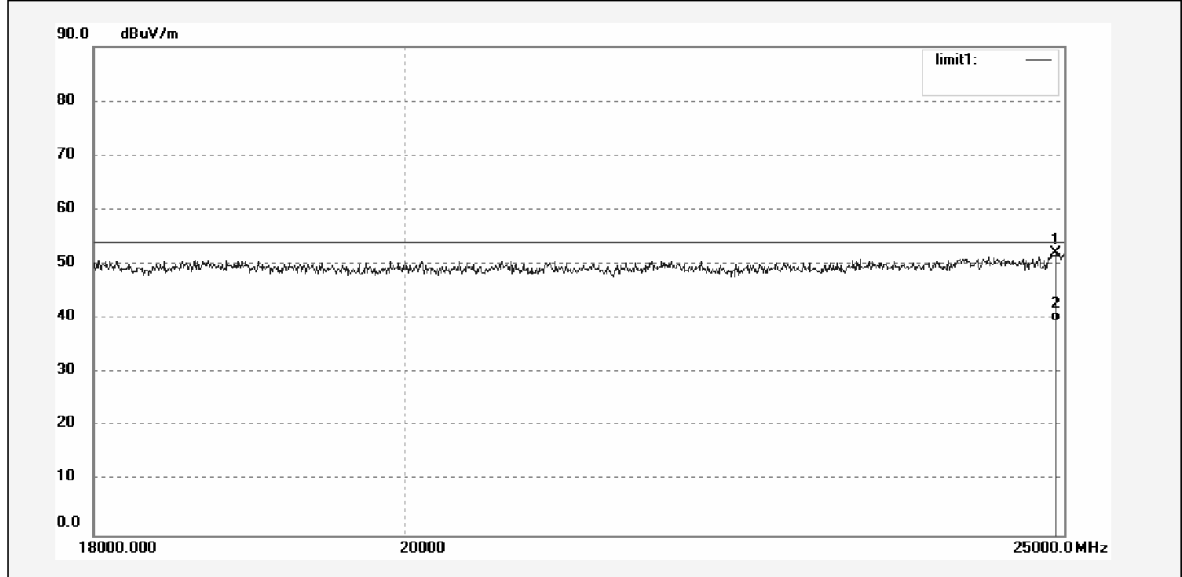
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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PZ #103	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/05/22/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2402MHz	Distance:
Model: CSC-TPSVW	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24934.254	33.27	18.81	52.08	74.00	-21.92	peak			
2	24934.254	20.63	18.81	39.44	54.00	-14.56	AVG			

**Produkte**  
 Products



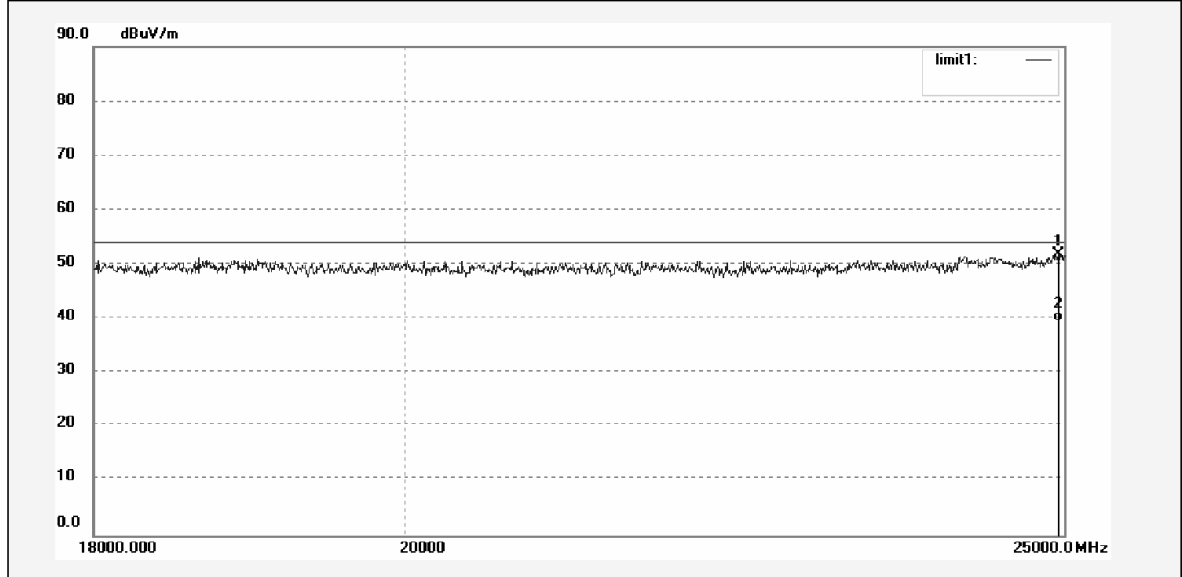
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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PZ #104	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/05/22/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2402MHz	Distance:
Model: CSC-TPSVW	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24950.674	33.10	18.83	51.93	74.00	-22.07	peak			
2	24950.674	20.59	18.83	39.42	54.00	-14.58	AVG			

**Produkte**  
 Products



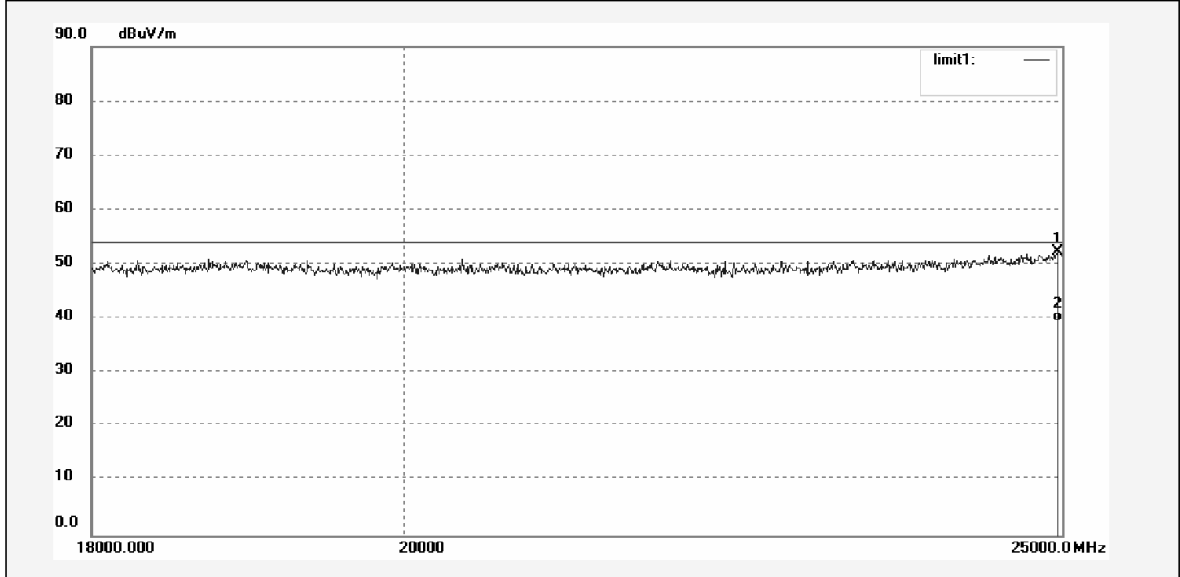
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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PZ #105	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/05/22/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2441MHz	Distance:
Model: CSC-TPSVW	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24958.889	33.58	18.84	52.42	74.00	-21.58	peak			
2	24958.889	20.76	18.84	39.60	54.00	-14.40	AVG			

**Produkte**  
 Products



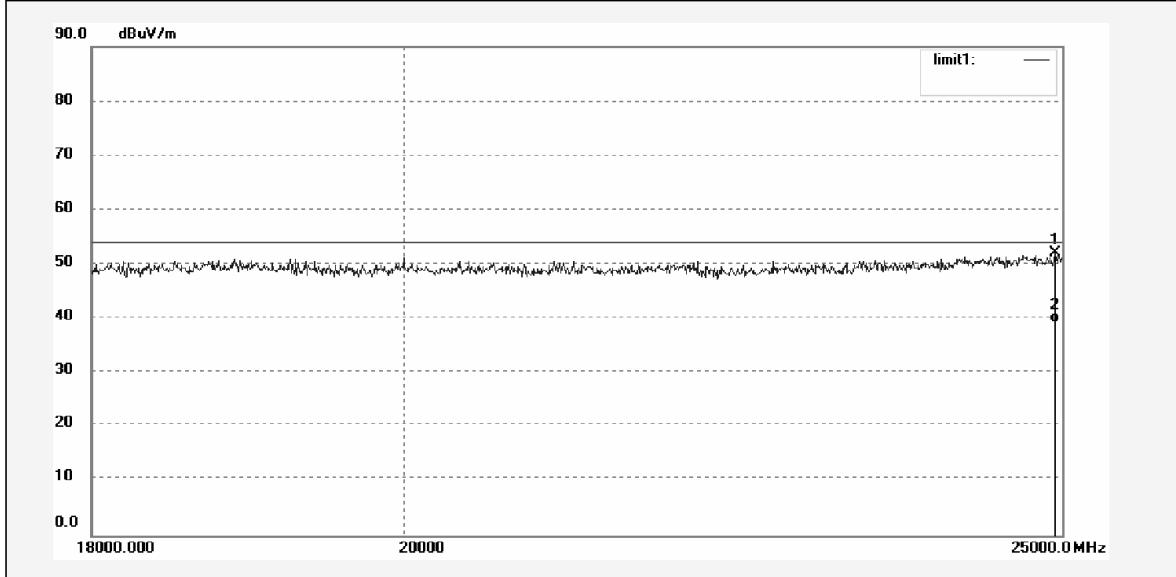
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Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PZ #106	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/05/22/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2441MHz	Distance:
Model: CSC-TPSVW	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24942.463	33.19	18.82	52.01	74.00	-21.99	peak			
2	24942.463	20.42	18.82	39.24	54.00	-14.76	AVG			

**Produkte**  
 Products



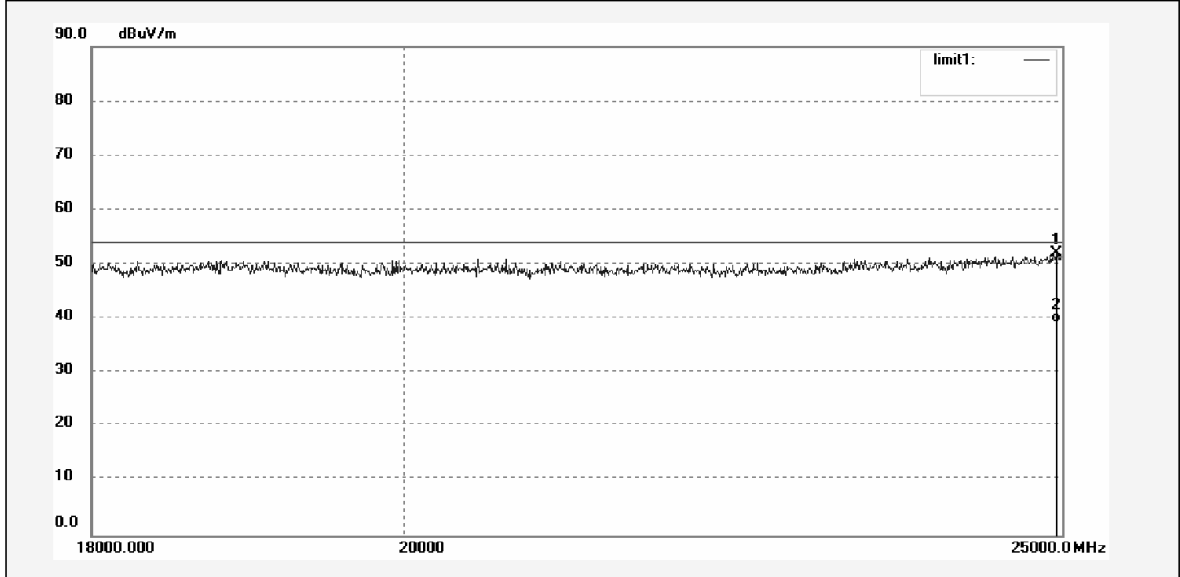
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Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: PZ #107	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/05/22/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2480MHz	Distance:
Model: CSC-TPSVW	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24950.674	33.17	18.83	52.00	74.00	-22.00	peak			
2	24950.674	20.47	18.83	39.30	54.00	-14.70	AVG			

**Produkte**  
 Products



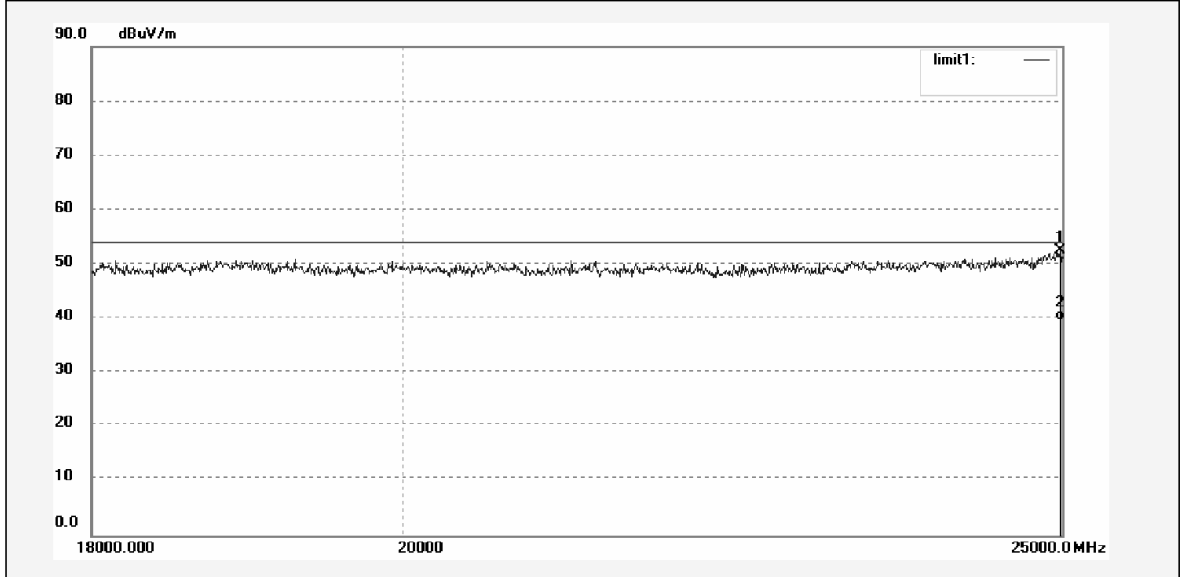
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Site: 2# Chamber  
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Job No.: PZ #108	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 14/05/22/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: SmartClass TPS	Engineer Signature: PEI
Mode: TX 2480MHz	Distance:
Model: CSC-TPSVW	
Manufacturer: JDSU	

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24983.547	33.56	18.88	52.44	74.00	-21.56	peak			
2	24983.547	20.79	18.88	39.67	54.00	-14.33	AVG			