Prüfbericht-Nr.: *Test Report No.*:	**17042940 002**	**Auftrags-Nr.:** *Order No.*:	164010483	Seite 1 von 24 *Page 1 of 24*
Kunden-Referenz-Nr.: *Client Reference No.*:	N/A	**Auftragsdatum:** *Order date*:	14.01.2014	

Auftraggeber: *Client*:	Accent Advanced Systems SLU Bergueda 43 Local 18, Castellar del Valles 08211, Spain
Prüfgegenstand: *Test item*:	Bluetooth Low Energy Advertising Device
Bezeichnung / Typ-Nr.: *Identification / Type No.*:	IBKS10
Auftrags-Inhalt: *Order content*:	FCC Certification and Verification
Prüfgrundlage: *Test specification*:	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209
Wareneingangsdatum: *Date of receipt*:	14.01.2014
Prüfmuster-Nr.: *Test sample No.*:	A000039552-001
Prüfzeitraum: *Testing period*:	15.03.2014 - 29.04.2014
Ort der Prüfung: *Place of testing*:	Shenzhen Accurate Technology Co., Ltd.
Prüflaboratorium: *Testing laboratory*:	TÜV Rheinland (Shenzhen) Co., Ltd.
Prüfergebnis*: *Test result**:	Pass

geprüft von / *tested by*:

Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*
28.09.2014	Owen Tian / Senior Project Manager	

kontrolliert von / *reviewed by*:

Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*
30.09.2014	Winnie Hou / Technical Certifier	

Sonstiges / *Other*:

Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery*:	Prüfmuster vollständig und unbeschädigt *Test item complete and undamaged*

* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut	3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	4 = ausreichend N/A = nicht anwendbar	5 = mangelhaft N/T = nicht getestet
Legend:	*1 = very good* *P(ass) = passed a.m. test specification(s)*	*2 = good*	*3 = satisfactory* *F(ail) = failed a.m. test specification(s)*	*4 = sufficient* *N/A = not applicable*	*5 = poor* *N/T = not tested*

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT
RESULT: Passed

5.1.2 PEAK OUTPUT POWER
RESULT: Passed

5.1.3 CONDUCTED POWER SPECTRAL DENSITY
RESULT: Passed

5.1.4 -6DB BANDWIDTH
RESULT: Passed

5.1.5 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100KHZ BANDWIDTH
RESULT: Passed

5.1.6 SPURIOUS EMISSION
RESULT: Passed

Contents

1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:
Appendix 1: Test Result

2. Test Sites

2.1 Test Facilities

Shenzhen Accurate Technology Co., Ltd.

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

FCC Registration No.: 752051

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
Spurious emission and Radiated emission				
Signal Generator	Rohde&Schwarz	SMT03	100059	2015-01-11
Voltage Probe	Rohde&Schwarz	URV5-Z2	100012	2015-01-11
Voltage Probe	Rohde&Schwarz	URV5-Z2	100013	2015-01-11
Field Probe	ETS	HI-6005	121578	2015-01-11
Power Amplifier	AR	250W1000A	335304	2015-01-11
Power Amplifier	MILMEGA	AS0860-75/45	1040084	2015-01-11
Power Meter	Rohde & Schwarz	NRVD	100041	2015-01-11
Broadband antenna	CHASE	CBL6111C	2576	N/A
Horn Antenna	AR	AT4002A	305754	N/A
Radio Test Suite				
Receiver	Rohde & Schwarz	ESCS30	100307	2015-01-11
Conducted Emission				
Test Receiver	Rohde & Schwarz	ESCS30	100307	2015-01-11
L.I.S.N.	Schwarzbeck	NLSK8126	8126431	2015-01-11
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	2015-01-11
50Ω Coaxial Switch	Anritsu Corp	MP59B	6200283933	2015-01-11

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, 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 basics using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements are ±3dB.

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix1 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 Shenzhen Accurate Technology Co., Ltd. test facility located at F1, Bldg. A, Changyuan New Meterial 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 EUT is a Bluetooth Low Energy advertising device with Bluetooth Core Specification Version 4.0, a Low Energy Core Configuration. The EUT is embedded with approved Bluetooth module USMART10.
For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Rating of EUT

Kind of Equipment:	Bluetooth Low Energy Advertising Device
Type Designation:	IBKS10
FCC ID	2ABTTIBK10

Table 3: Technical Specification of EUT

Technical Specification	**Value**
Operating Frequency band	2402 – 2480 MHz
Bluetooth Core Version	4.0 Single mode
Channel separation	2MHz
Extreme Temperature Range	-20ºC to +55ºC
Operation Voltage	DC 3V via CR2032 coin cell
Modulation	GFSK
Antenna Type	Internal Antenna, Non-User Replaceable
Antenna Gain	5.3dBi
RF Output Power	0.00384W (5.84dBm)

3.3 Independent Operation Modes

The basic operation modes are:

A. On, Bluetooth Transmitting
    1. Low channel
    2. Middle channel
    3. High channel
B. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

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

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power 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. All testing were performed according to the procedures in ANSI C63.4: 2003.

Below test data is copy from test report 17042940 001 of approved Bluetooth module USMART10.

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested with following accessories

Description	Manufacturer	Type	S/N
iPad	Apple	MD513CH/A	DMTK58A5F185

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

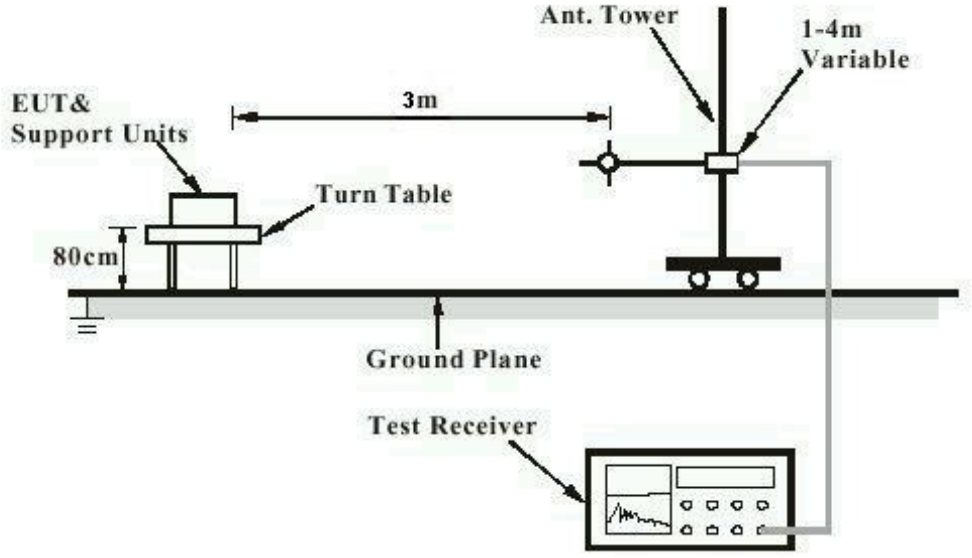


Diagram of Measurement Equipment Configuration for Mains Conduction Measurement

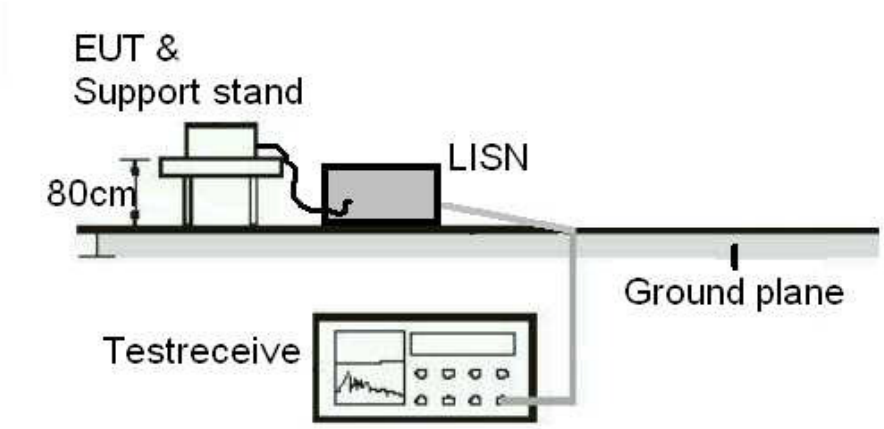
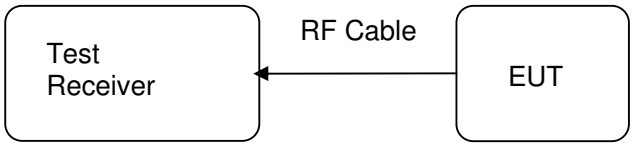


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Passed**

Test date	:	2014-03-15
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 5.3dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT photo for details.

5.1.2 Peak Output Power

RESULT: **Passed**

Test date	:	2014-03-15
Test standard	:	FCC Part 15.247(b)(3)
Basic standard	:	ANSI C63.4: 2003
Limit	:	1 Watt
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	25℃
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

Table 4: Test result of Peak Output Power

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2402	5.84	0.00384	1
Middle Channel	2440	5.30	0.00339	1
High Channel	2480	4.54	0.00284	1

5.1.3 Conducted Power Spectral Density

RESULT: **Passed**

Test date	:	2014-03-15
Test standard	:	FCC Part 15.247(e)
Basic standard	:	ANSI C63.4: 2003
Limit	:	8dBm/3kHz
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	25℃
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

Table 5: Test result of Peak Output Power

Channel	Channel Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)
Low Channel	2402	-6.10	8
Middle Channel	2440	-6.23	8
High Channel	2480	-7.75	8

5.1.4 -6dB Bandwidth

RESULT: **Passed**

Date of testing	:	2014-03-15
Test standard	:	FCC Part 15.247(a)(2)
Basic standard	:	ANSI C63.4: 2003
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	25℃
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

Table 6: Test result of -6dB Bandwidth

Channel	Channel Frequency (MHz)	-6dB Bandwidth (kHz)	Limit (kHz)	Result
Low Channel	2402	732	500	Pass
Mid Channel	2440	640	500	Pass
High Channel	2480	702	500	Pass

5.1.5 Conducted spurious emissions measured in 100kHz Bandwidth

RESULT: **Passed**

Date of testing	:	2014-03-15
Test standard	:	FCC part 15.247(d)
Basic standard	:	ANSI C63.4: 2003
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

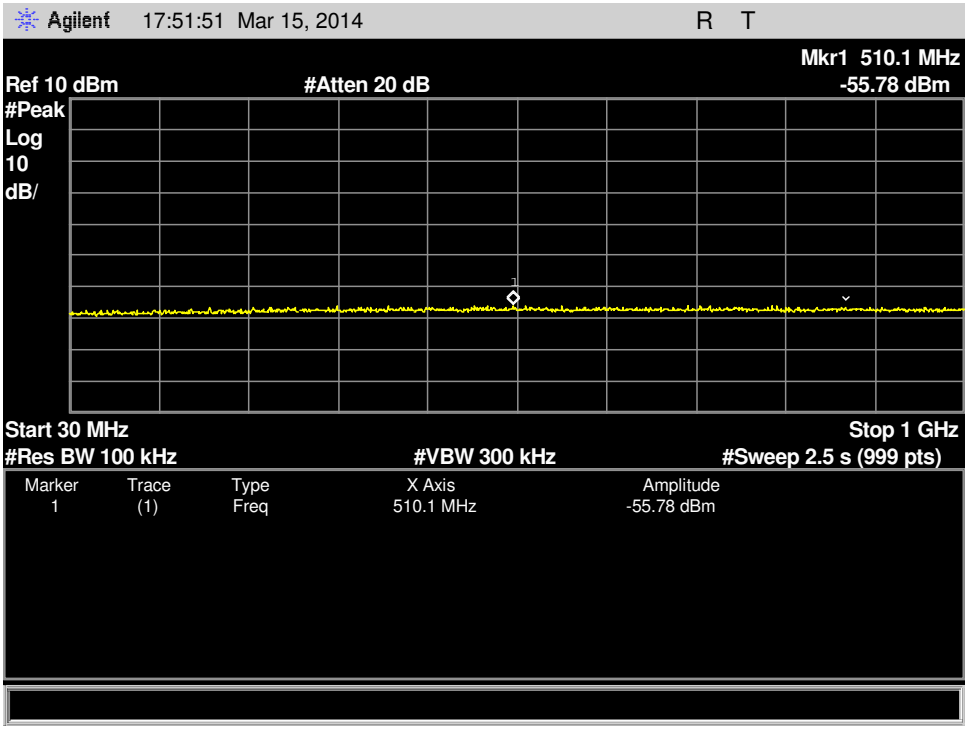
Test setup

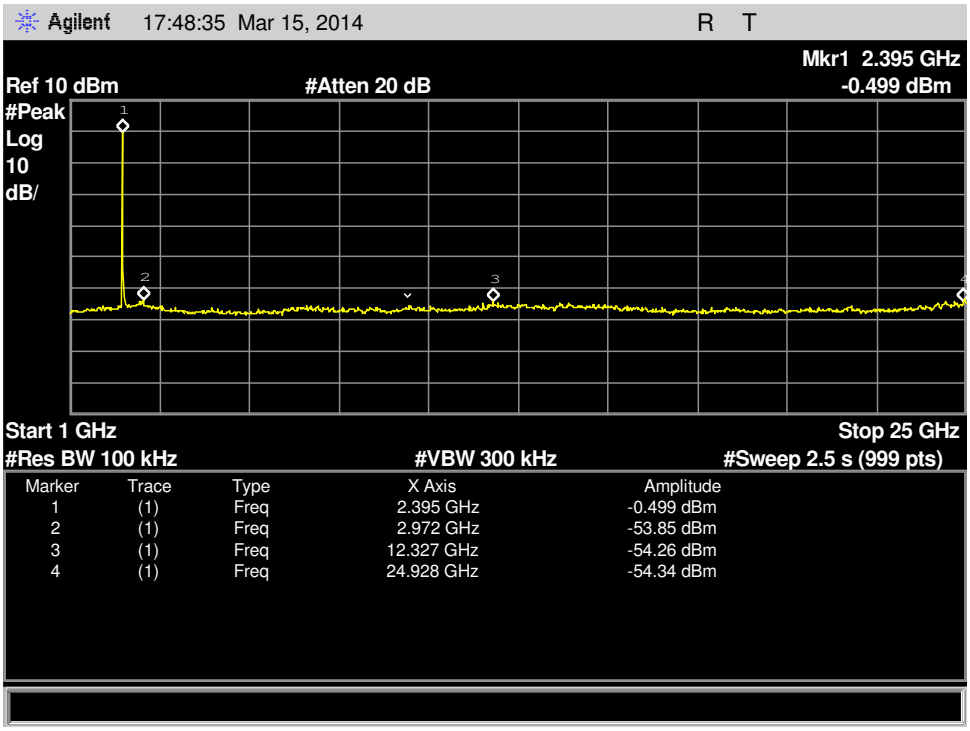
Test Channel	:	Low/ High
Operation mode	:	A
Ambient temperature	:	25℃
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

All emissions are more than 20dB below fundamental, details refer to following test plot, and compliance is achived as well.

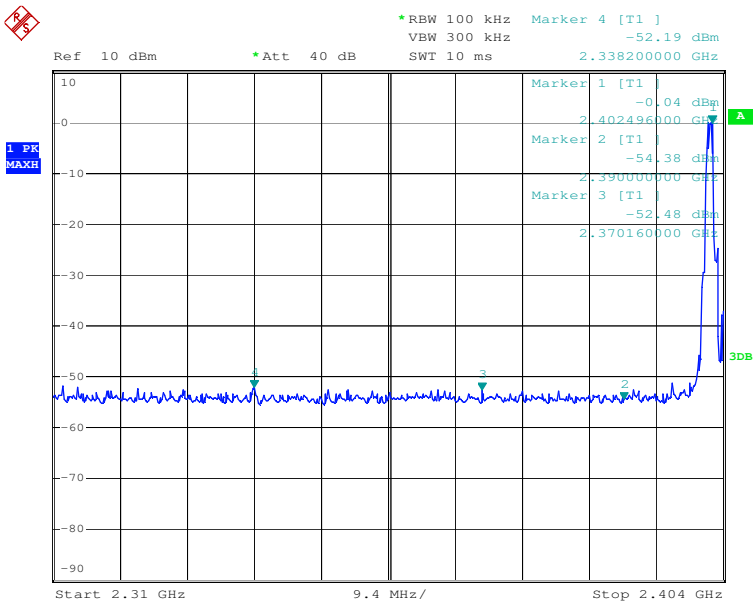
Test Plot of 100kHz Bandwidth of Frequency Band Edge

Low Channel



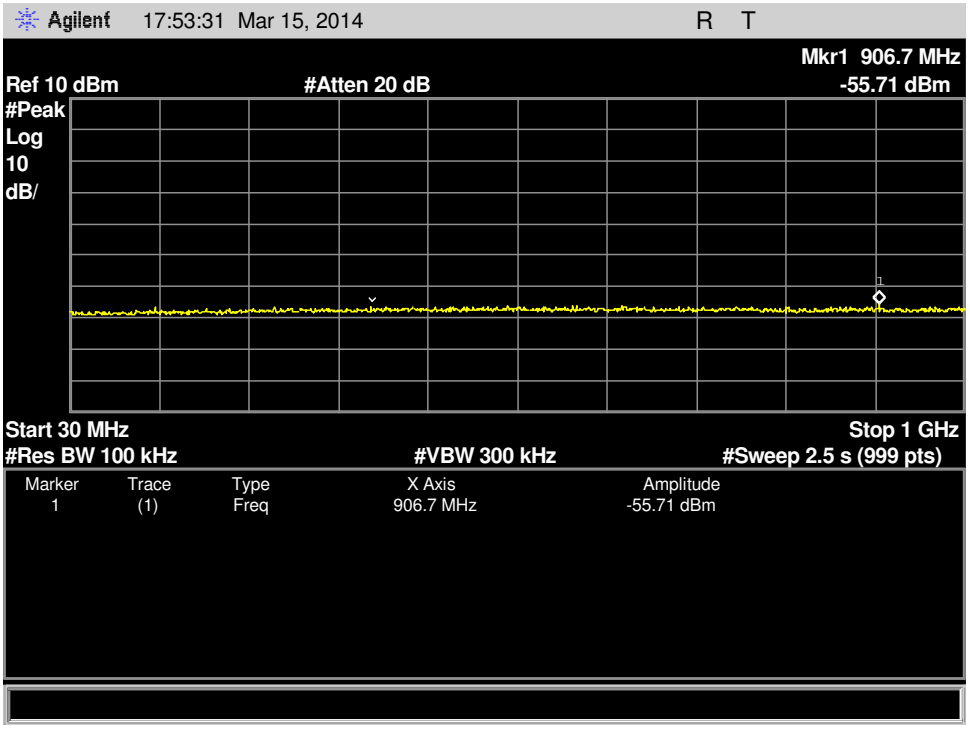


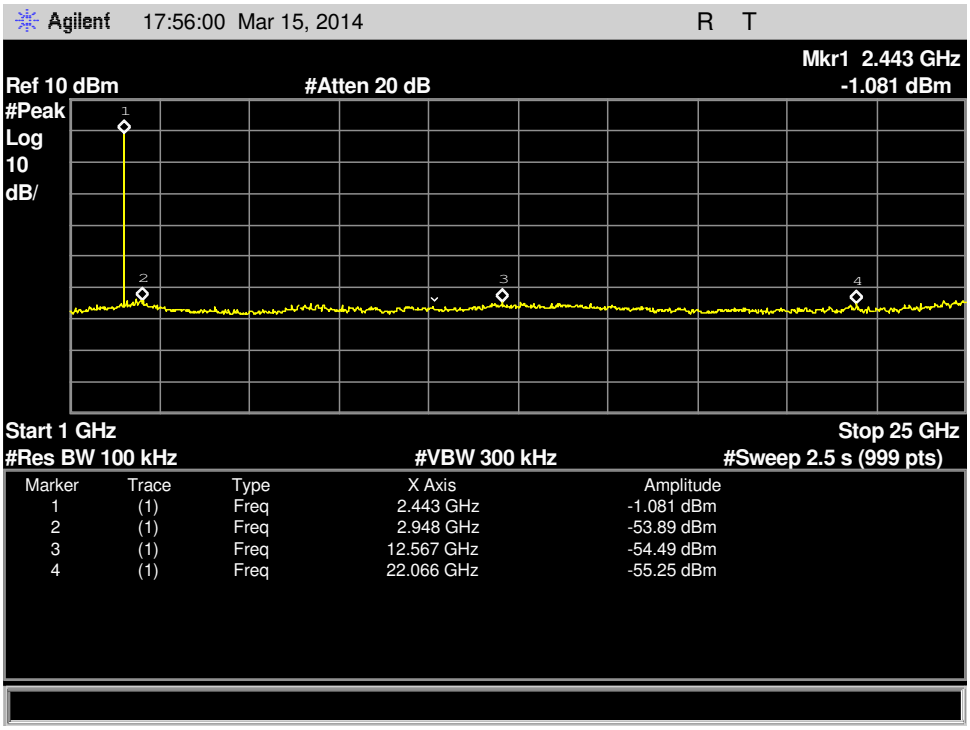
Low Channel, Band Edge



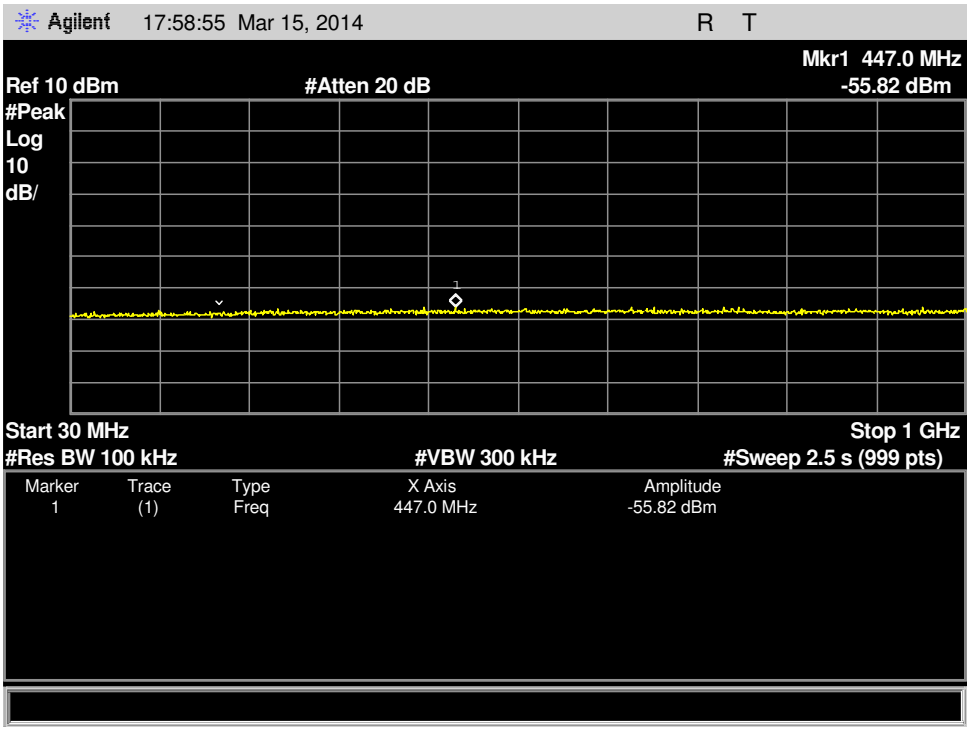
Date: 15.MAR.2014 17:07:55

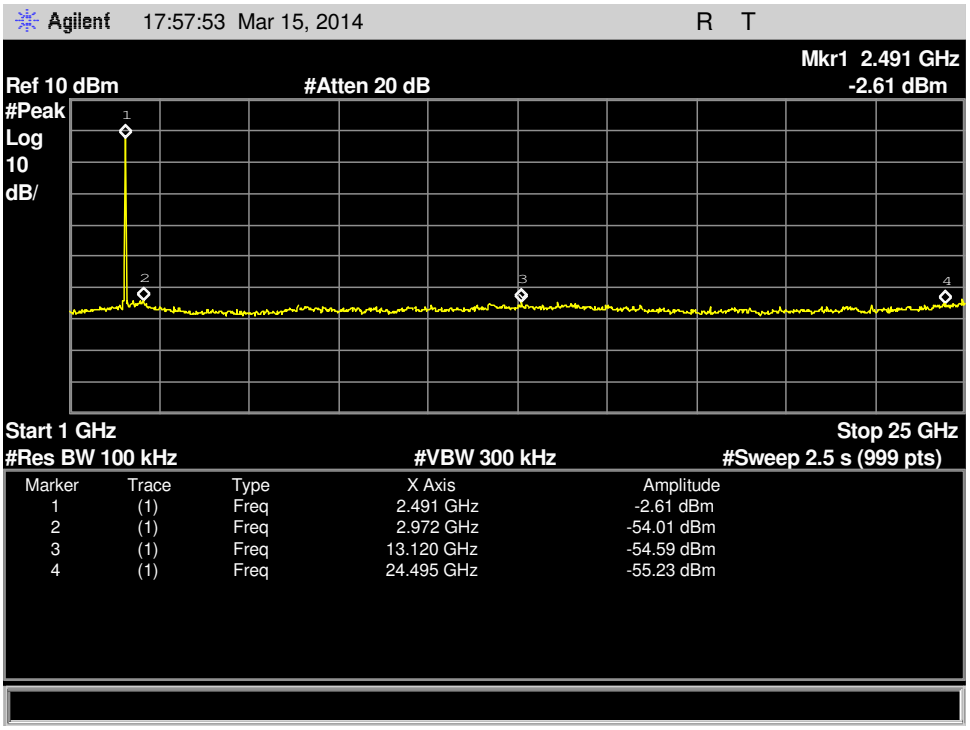
Middle Channel



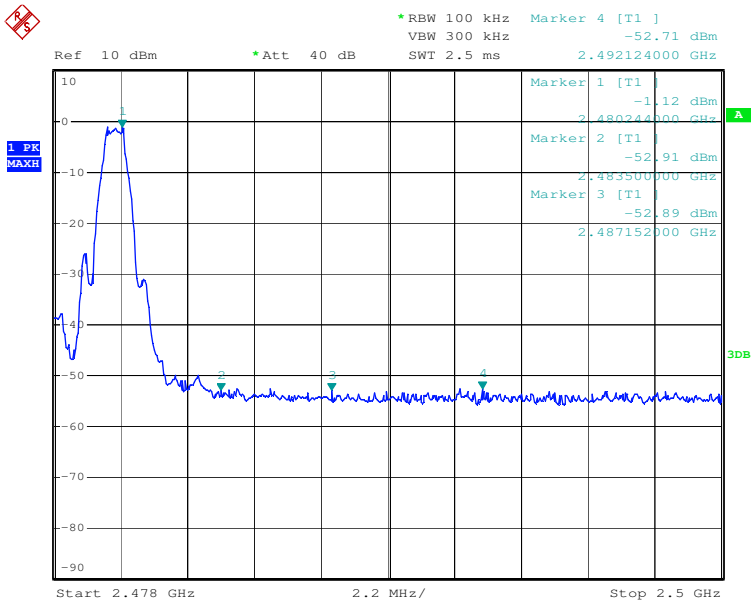


High Channel





High Channel, Band Edge



Date: 15.MAR.2014 17:05:51

5.1.6 Spurious Emission

RESULT: **Passed**

Date of testing	:	2014-03-15 to 2014-03-16
Test standard	:	FCC part 15.247(d) FCC Part 15.205
Basic standard	:	ANSI C63.4: 2003
Limits	:	Refer to 15.209(a) of FCC part 15.247(d)
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

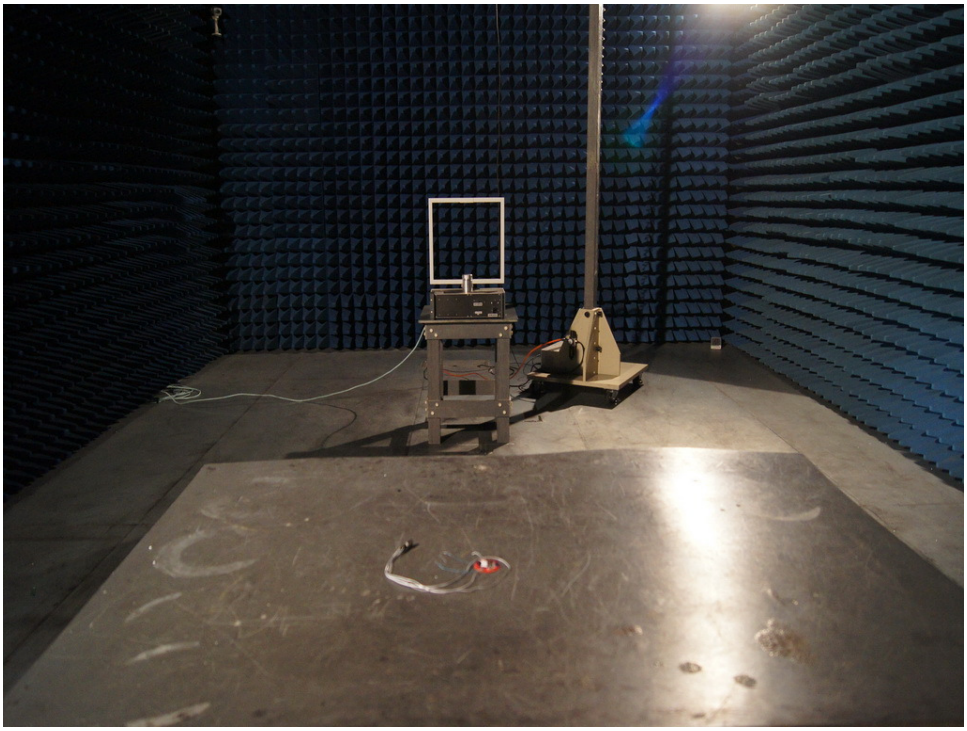
Test Channel	:	Low/ Middle/ High
Operation mode	:	A
Ambient temperature	:	25℃
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

Remark:
During the pretest the EUT was rotated through three orthogonal axes to determine the attitude that maximizes the emissions. After that the EUT was manually handled to find the orientation that has the maximum emission, which is the orientation shown in the test setup photos.
Testing was carried out within frequency range 9kHz to the tenth harmonics.

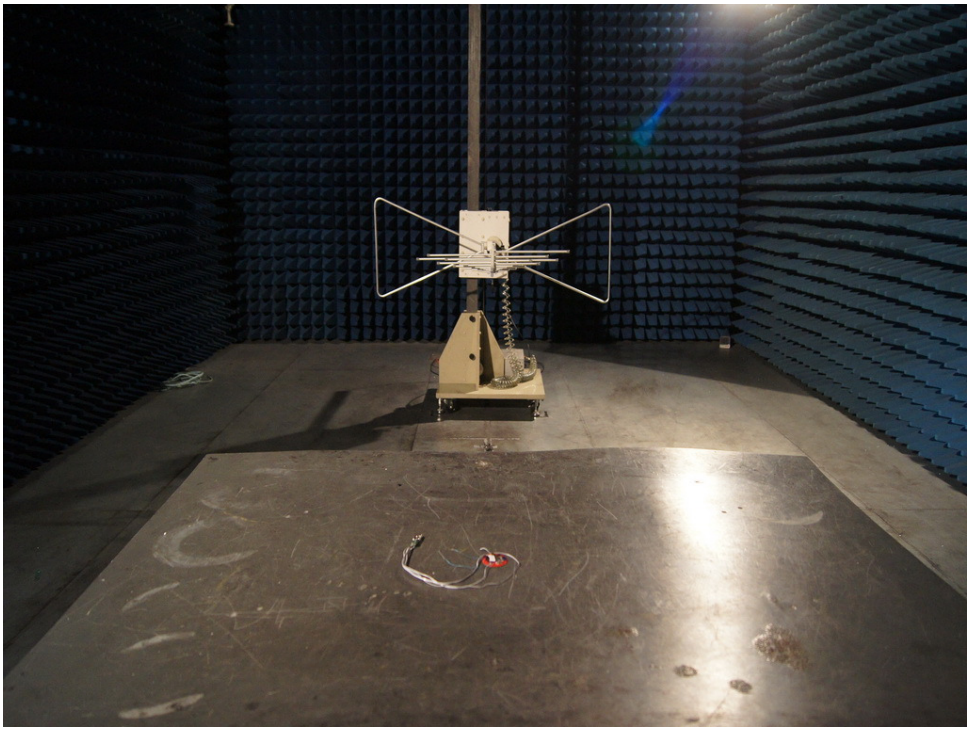
For details refer to Appendix 1.

6. Photographs of the Test Set-Up

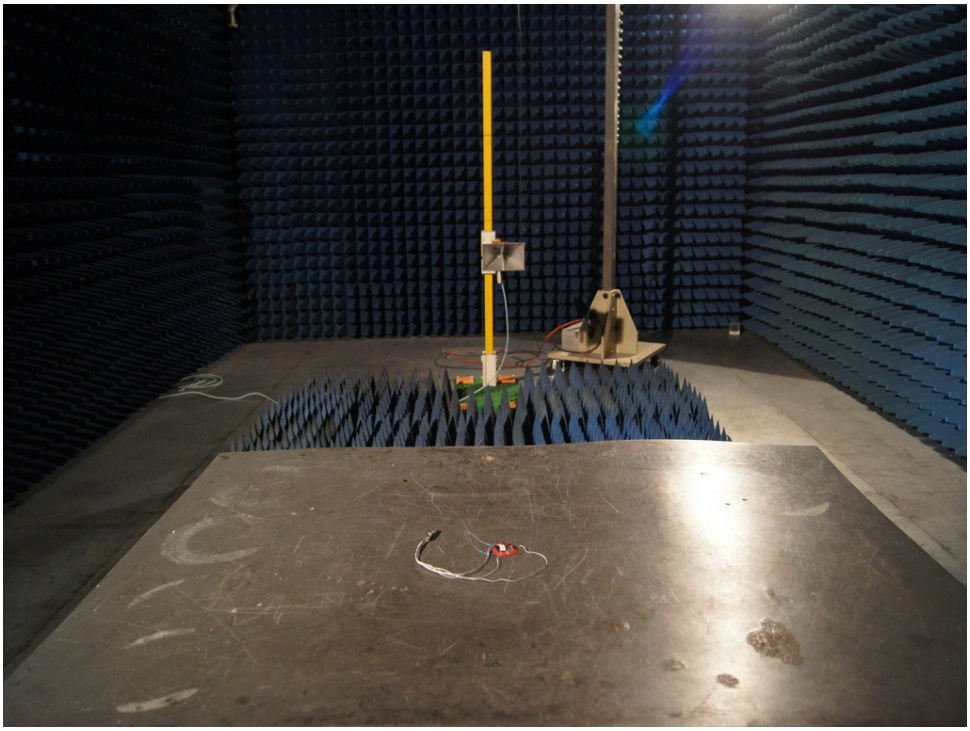
Photograph 1: Set-up for Spurious Emissions (9kHz-30MHz)



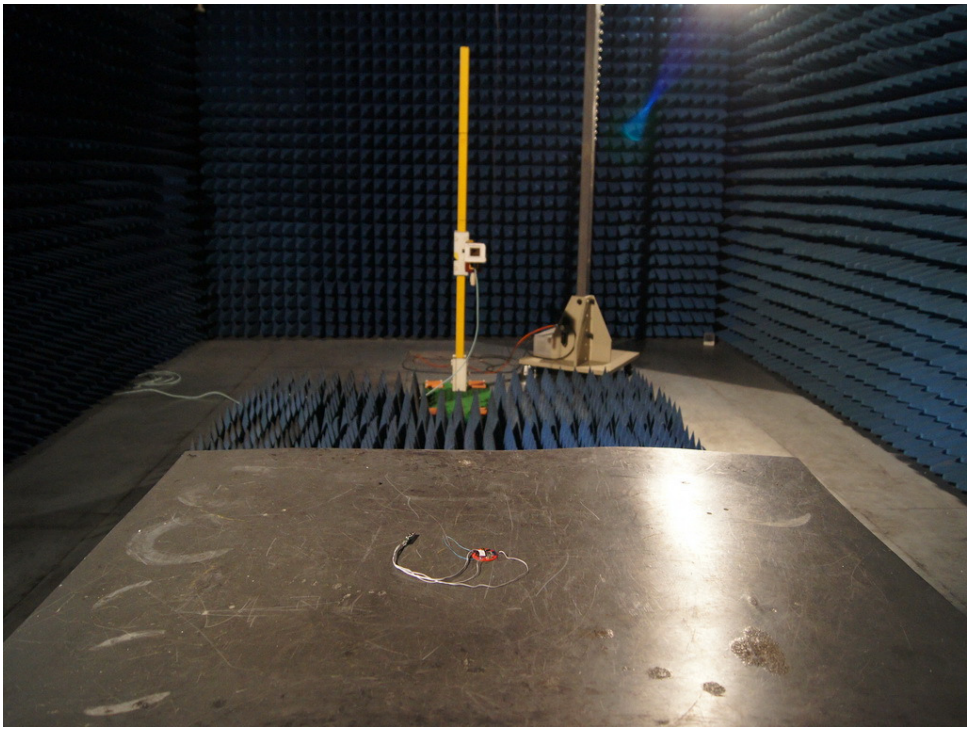
Photograph 2: Set-up for Spurious Emissions (30MHz-1GHz)



Photograph 3: Set-up for Spurious Emissions (1GHz-18GHz)



Photograph 4: Set-up for Spurious Emissions (18GHz-26GHz)

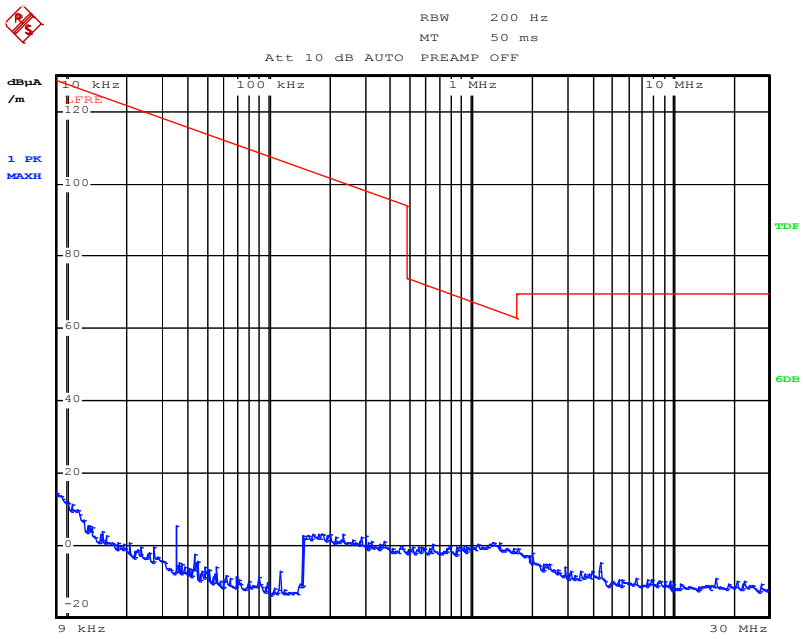


7. List of Tables

8. List of Photographs

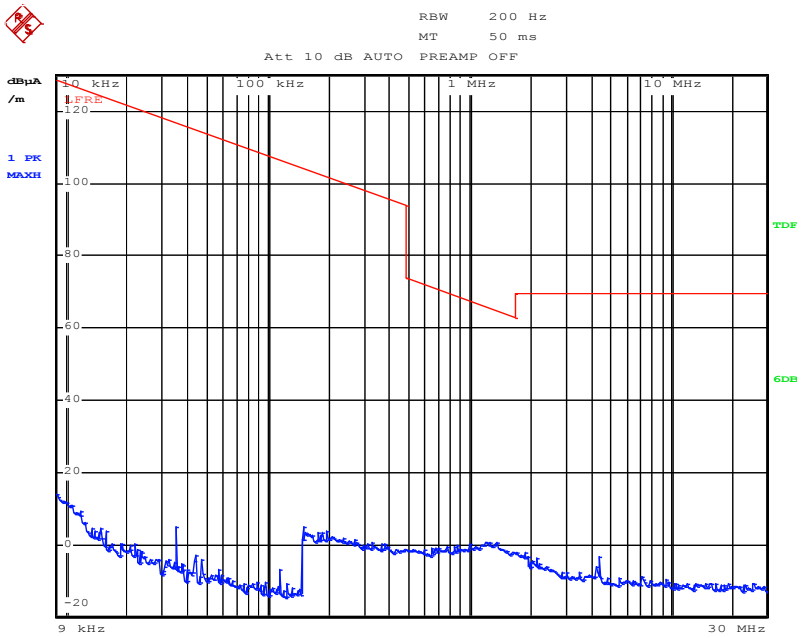
List of Figures

Figure 1: Test figure of spurious emissions, mode A.1, Horizontal polarity (9kHz – 30MHz)



Date: 16.MAR.2014 11:31:42

Figure 2: Test figure of spurious emissions, mode A.1, Vertical polarity (9kHz – 30MHz)



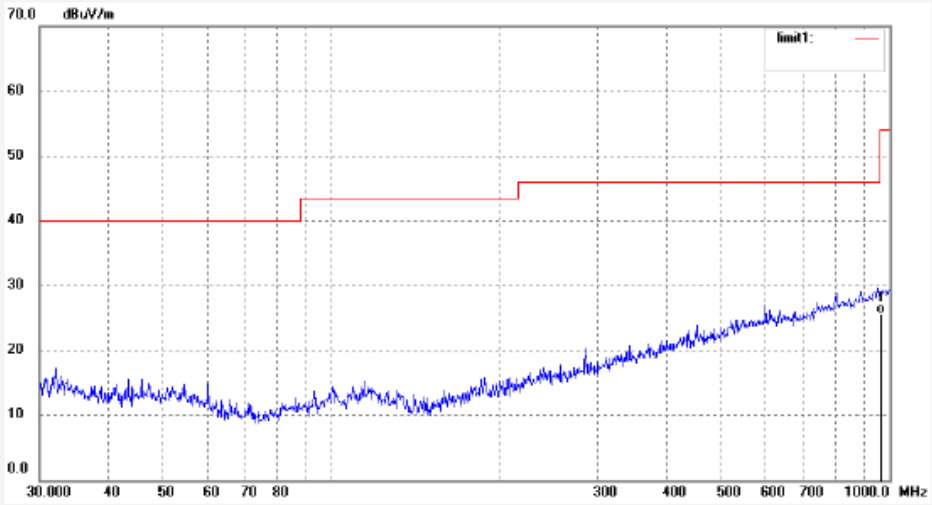
Date: 16.MAR.2014 11:33:54

Figure 3: Test figure of spurious emissions, mode A.1, Horizontal polarity (30MHz – 1GHz)

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 #694	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 14/03/16/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 10/58/42
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2402MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	960.0000	23.20	2.37	25.57	46.00	-20.43	QP			

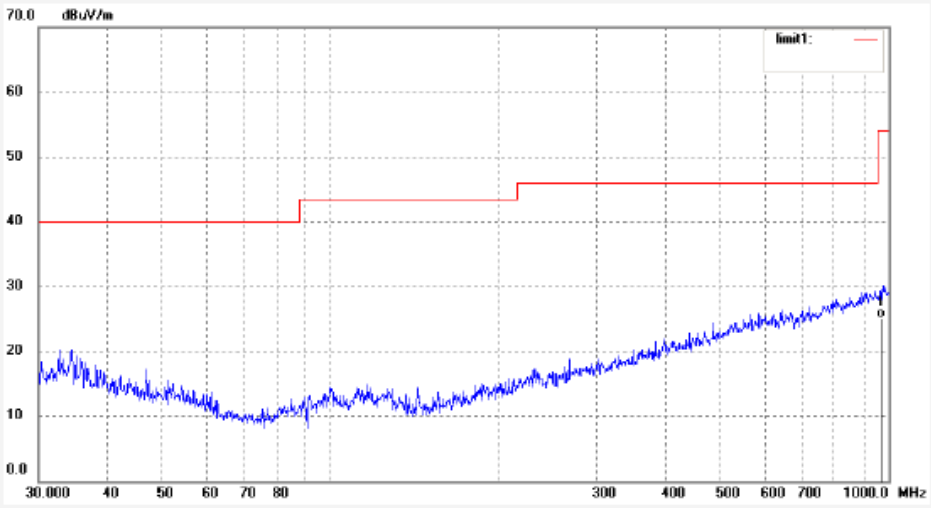
Figure 4: Test figure of spurious emissions, mode A.1, Vertical polarity (30MHz – 1GHz)

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 #695	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 14/03/16/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 11/07/18
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2402MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



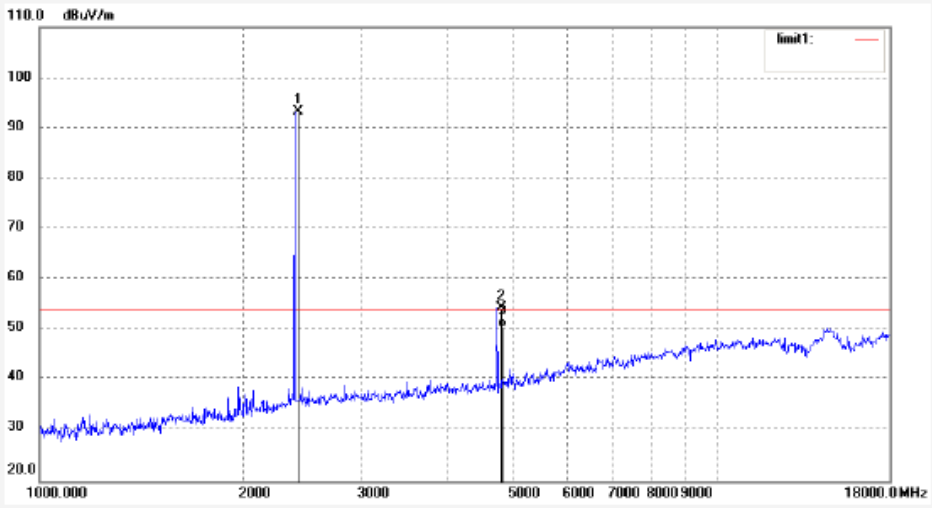
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	960.0000	22.81	2.37	25.18	46.00	-20.82	QP			

Figure 5: Test figure of spurious emissions, mode A.1, Horizontal polarity (1GHz –18GHz)

ATC®
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 #667	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2014/03/15
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 19:05:54
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2402MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



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	100.75	-7.45	93.30	/	/	peak			
2	4803.575	54.61	-0.30	54.31	74.00	-19.69	peak			
3	4803.575	50.90	-0.30	50.60	54.00	-3.40	AVG			

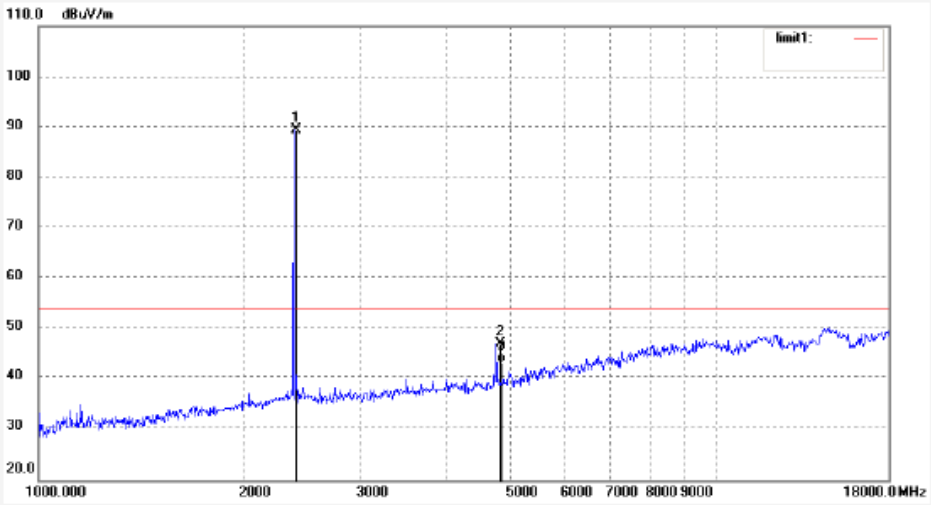
Figure 6: Test figure of spurious emissions, mode A.1, Vertical polarity (1GHz – 18GHz)

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 #666	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2014/03/15
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 18:53:03
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2402MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



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	96.94	-7.45	89.49	/	/	peak			
2	4803.663	47.52	-0.30	47.22	74.00	-26.78	peak			
3	4803.663	43.60	-0.30	43.30	54.00	-10.70	AVG			

Figure 7: Test figure of spurious emissions, mode A.1, Horizontal polarity (18GHz –25GHz)

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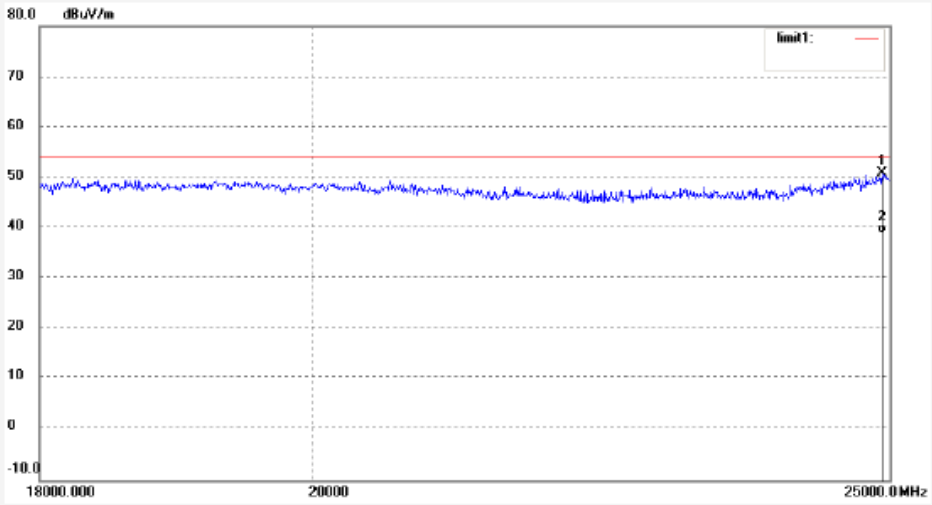
Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: PHY #683	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2014/03/15
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 21:57:16
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2402MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



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	32.00	18.80	50.80	74.00	-23.20	peak			
2	24926.048	20.24	18.80	39.04	54.00	-14.96	AVG			

Figure 8: Test figure of spurious emissions, mode A.1, Vertical polarity (18GHz – 25GHz)

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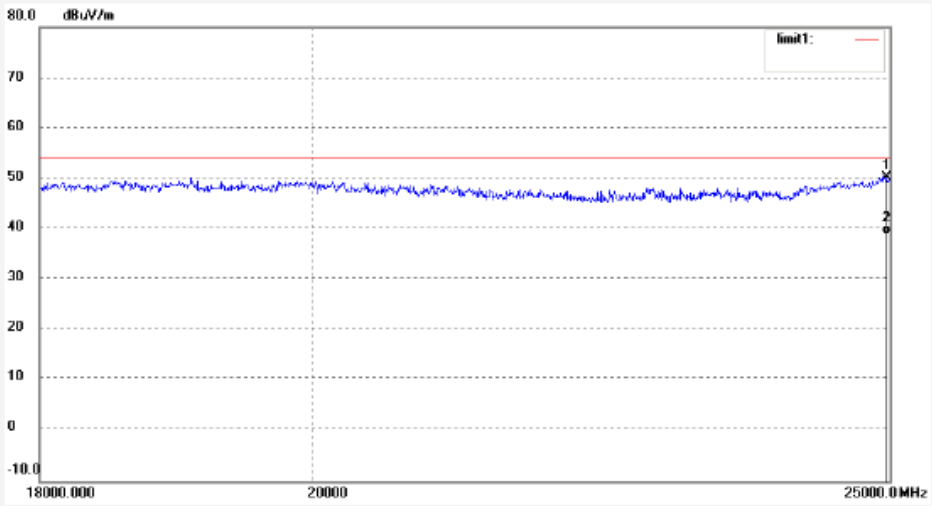
Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

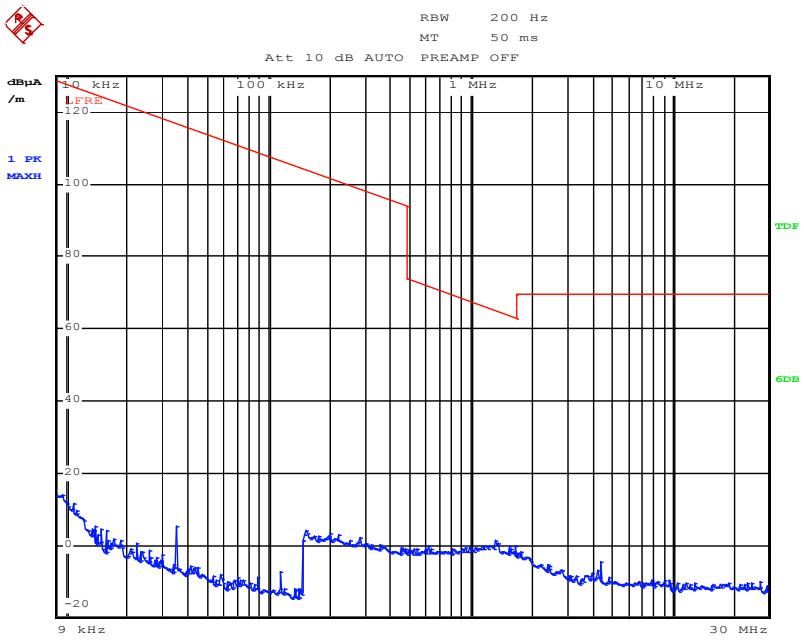
Job No.: PHY #682	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2014/03/15
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 21:49:29
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2402MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



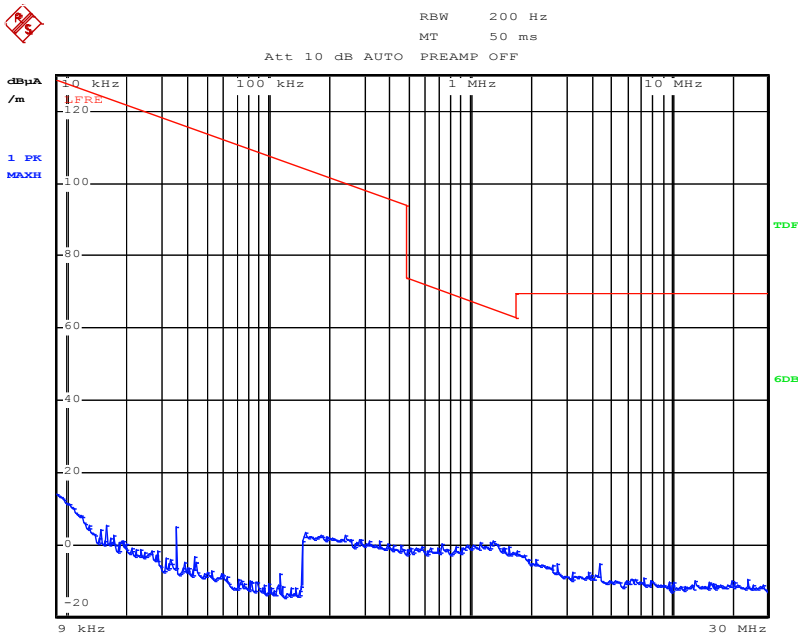
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24971.757	31.30	18.86	50.16	74.00	-23.84	peak			
2	24971.757	20.04	18.86	38.90	54.00	-15.10	AVG			

Figure 9: Test figure of spurious emissions, mode A.2, Horizontal polarity (9kHz – 30MHz)



Date: 16.MAR.2014 11:38:29

Figure 10: Test figure of spurious emissions, mode A.2, Vertical polarity (9kHz – 30MHz)



Date: 16.MAR.2014 11:40:52

Figure 11: Test figure of spurious emissions, mode A.2, Horizontal polarity (30MHz – 1GHz)

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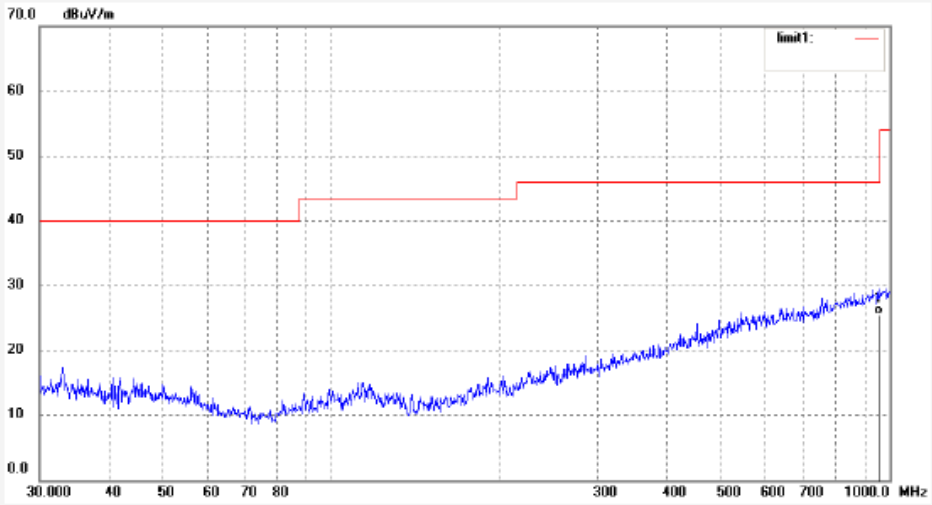
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: PHY #697	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 14/03/16/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 11/25/47
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2440MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	960.0000	23.13	2.37	25.50	46.00	-20.50	QP			

Figure 12: Test figure of spurious emissions, mode A.2, Vertical polarity (30MHz – 1GHz)

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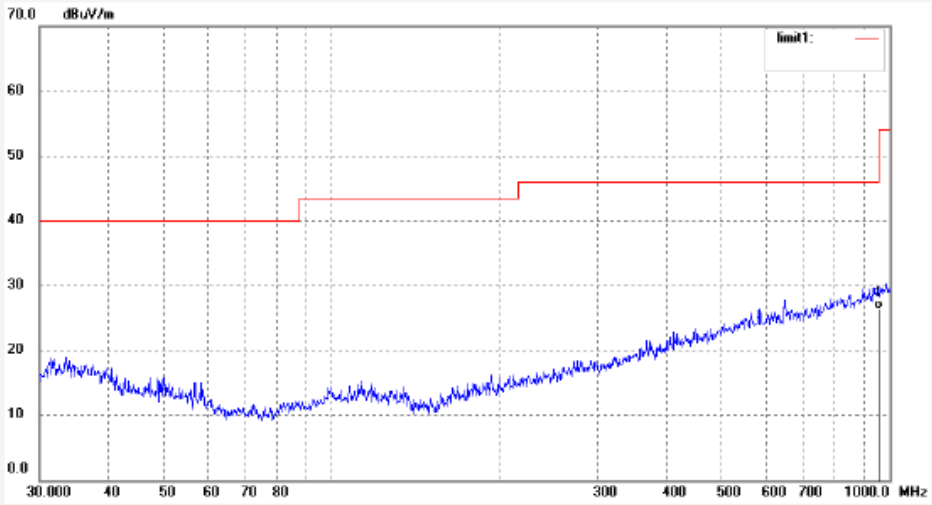
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: PHY #696	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 14/03/16/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 11/16/36
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2440MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	962.0878	23.95	2.37	26.32	54.00	-27.68	QP			

Figure 13: Test figure of spurious emissions, mode A.2, Horizontal polarity (1GHz – 18GHz)

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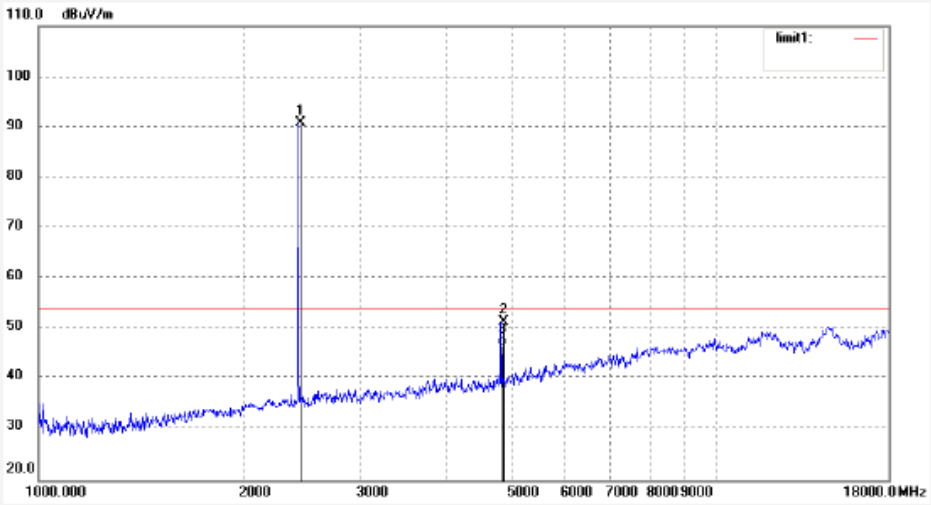
Fax:+86-0755-26503396

Job No.: PHY #668	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2014/03/15
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 19:16:23
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2440MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.000	98.09	-7.36	90.73	/	/	peak			
2	4879.589	51.17	0.13	51.30	74.00	-22.70	peak			
3	4879.589	46.47	0.13	46.60	54.00	-7.40	AVG			

Figure 14: Test figure of spurious emissions, mode A.2, Vertical polarity (1GHz – 18GHz)

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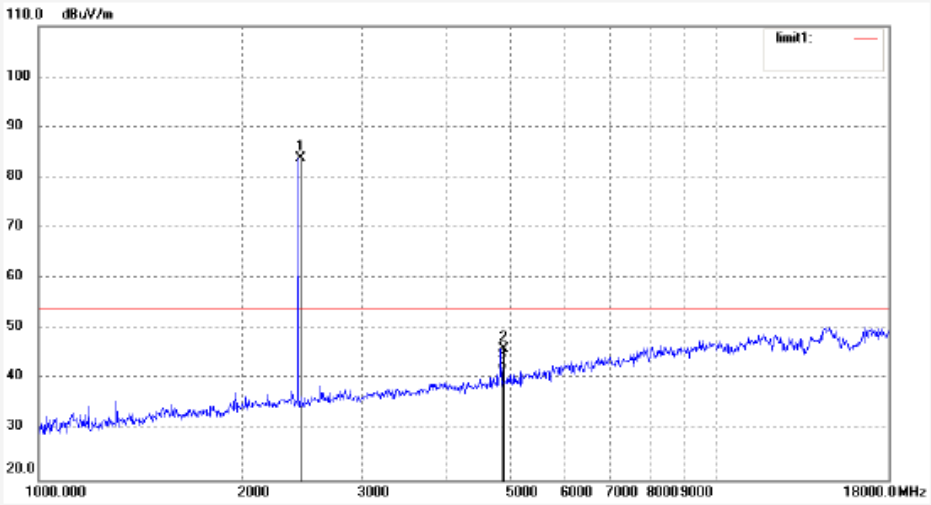
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: PHY #669	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2014/03/15
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 19:28:58
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2440MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.000	91.14	-7.36	83.78	/	/	peak			
2	4879.624	45.93	0.13	46.06	74.00	-27.94	peak			
3	4879.624	41.57	0.13	41.70	54.00	-12.30	AVG			

Figure 15: Test figure of spurious emissions, mode A.2, Horizontal polarity (18GHz – 25GHz)

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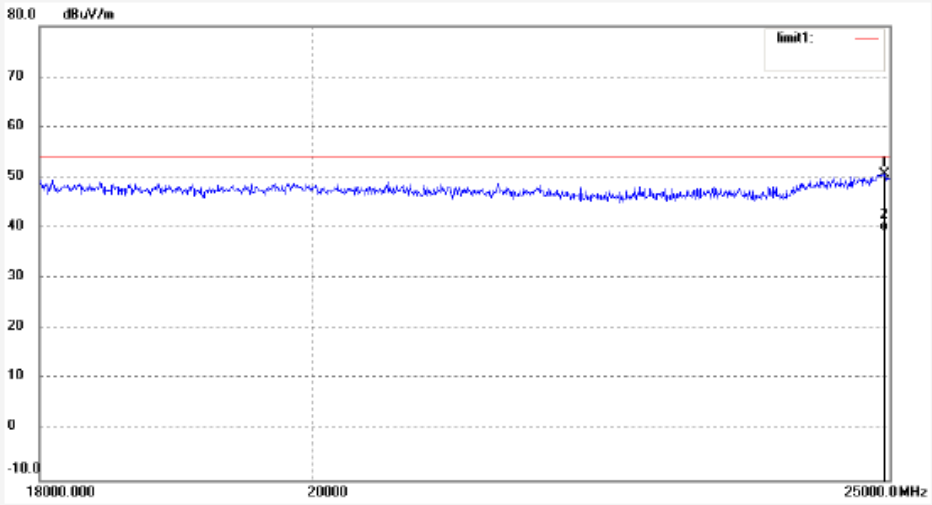
Fax:+86-0755-26503396

Job No.: PHY #684	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2014/03/15
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 22:08:43
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2440MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



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	31.92	18.83	50.75	74.00	-23.25	peak			
2	24950.674	20.53	18.83	39.36	54.00	-14.64	AVG			

Figure 16: Test figure of spurious emissions, mode A.2, Vertical polarity (18GHz – 25GHz)

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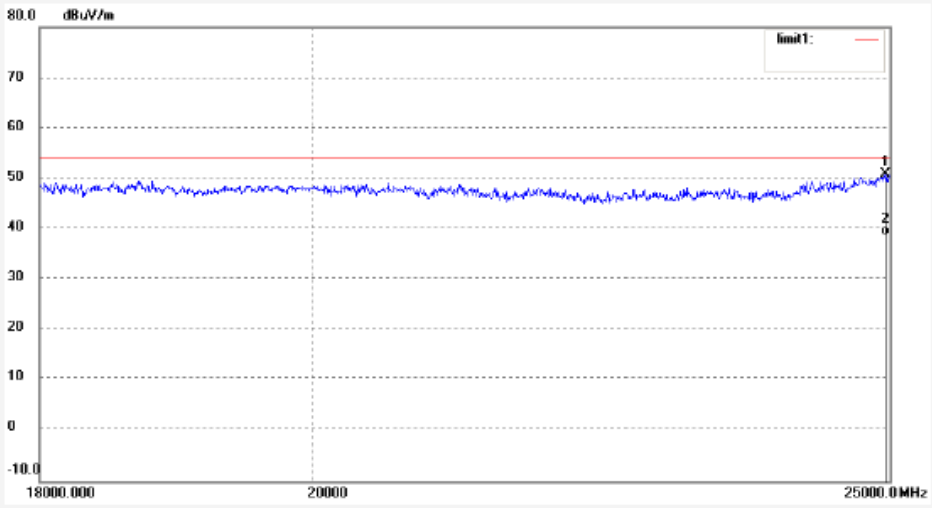
Fax:+86-0755-26503396

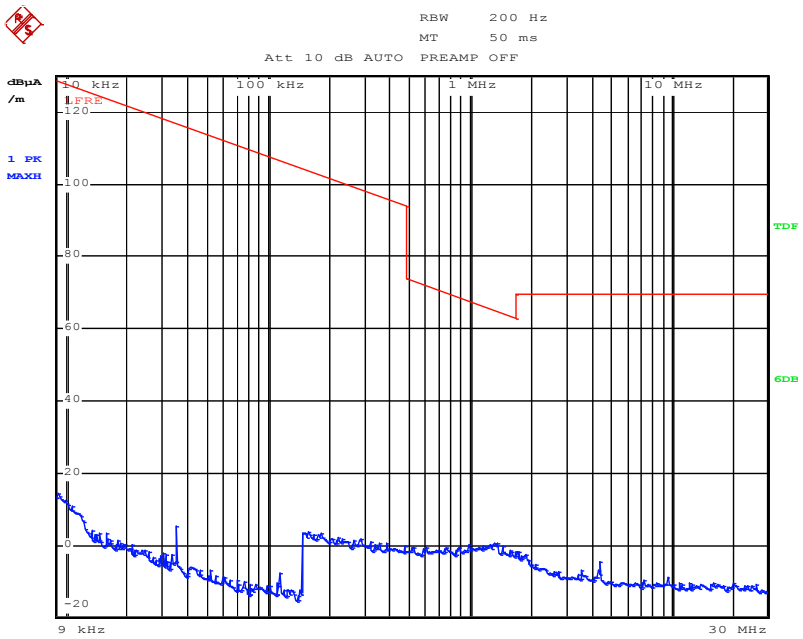
Job No.: PHY #685	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2014/03/15
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 22:21:01
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2440MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



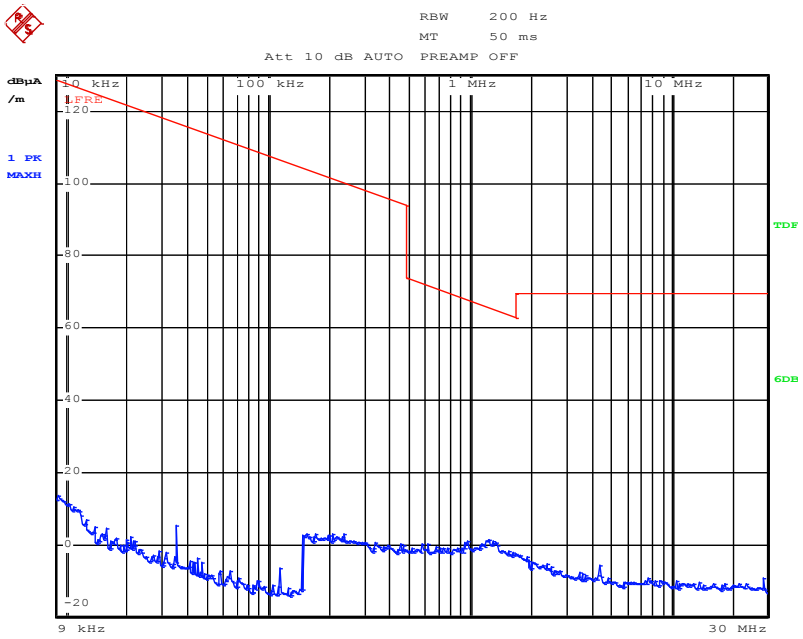
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24967.105	31.97	18.85	50.82	74.00	-23.18	peak			
2	24967.105	19.89	18.85	38.74	54.00	-15.26	AVG			

Figure 17: Test figure of spurious emissions, mode A.3, Horizontal polarity (9kHz – 30MHz)



Date: 16.MAR.2014 11:50:21

Figure 18: Test figure of spurious emissions, mode A.3, Vertical polarity (9kHz – 30MHz)



Date: 16.MAR.2014 11:48:03

Figure 19: Test figure of spurious emissions, mode A.3, Horizontal polarity (30MHz – 1GHz)

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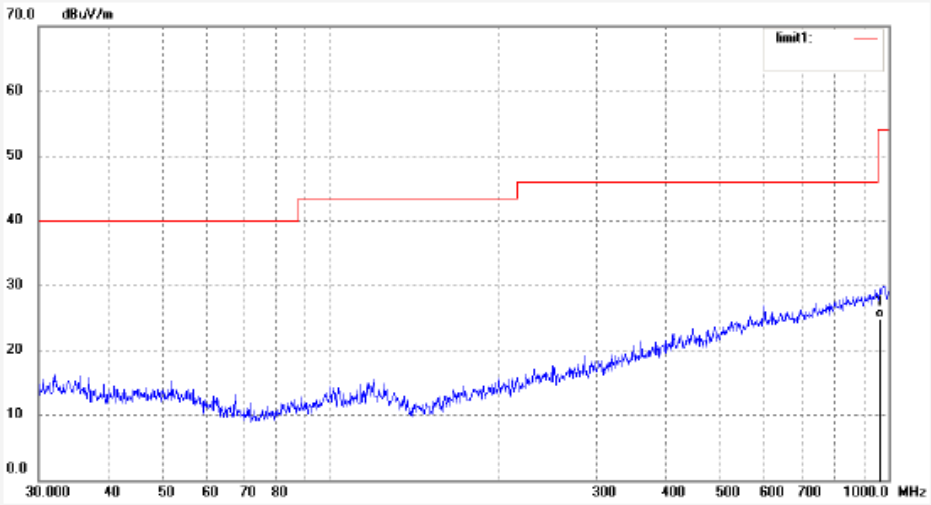
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: PHY #698	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 14/03/16/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 11/37/29
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2480MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	960.0000	22.60	2.37	24.97	46.00	-21.03	QP			

Figure 20: Test figure of spurious emissions, mode A.3, Vertical polarity (30MHz – 1GHz)

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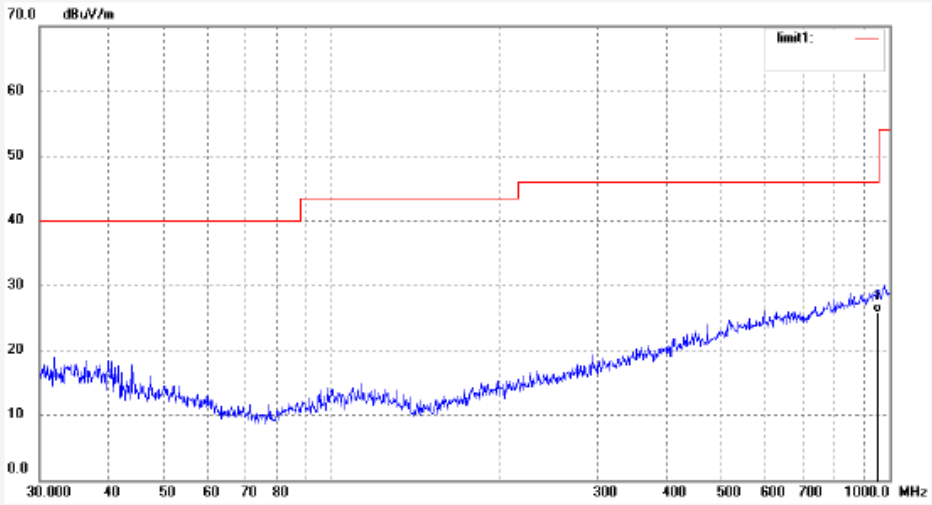
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: PHY #699	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 14/03/16/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 11/46/19
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2480MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	960.0000	23.40	2.37	25.77	46.00	-20.23	QP			

Figure 21: Test figure of spurious emissions, mode A.3, Horizontal polarity (1GHz –18GHz)

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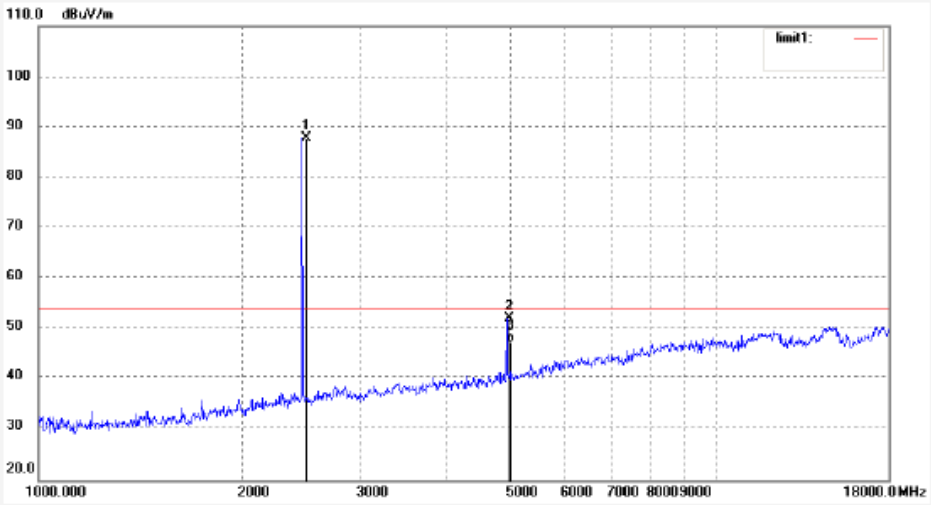
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: PHY #671
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: Buletooth Module
Mode: TX 2480MHz
Model: uSmart 10
Manufacturer: Accent Advanced Systems SLU

Polarization: Horizontal
Power Source: DC 3V
Date: 2014/03/15
Time: 19:50:49
Engineer Signature: PEI
Distance: 3m

Note:



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	95.24	-7.37	87.87	/	/	peak			
2	4959.613	51.58	0.51	52.09	74.00	-21.91	peak			
3	4959.613	46.79	0.51	47.30	54.00	-6.70	AVG			

Figure 22: Test figure of spurious emissions, mode A.3, Vertical polarity (1GHz – 18GHz)

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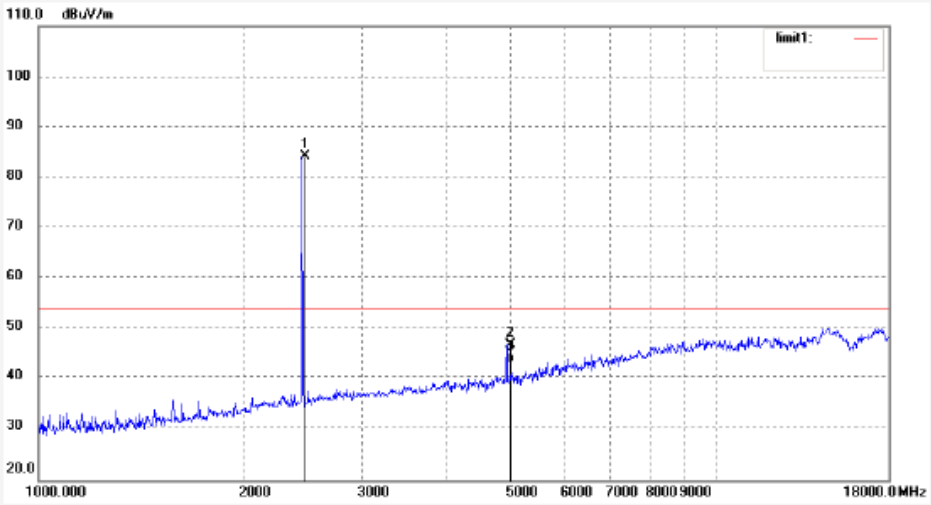
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: PHY #670	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2014/03/15
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 19:39:57
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2480MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



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	91.63	-7.37	84.26	/	/	peak			
2	4959.693	46.28	0.52	46.80	74.00	-27.20	peak			
3	4959.693	42.78	0.52	43.30	54.00	-10.70	AVG			

Figure 23: Test figure of spurious emissions, mode A.3, Horizontal polarity (18GHz –25GHz)

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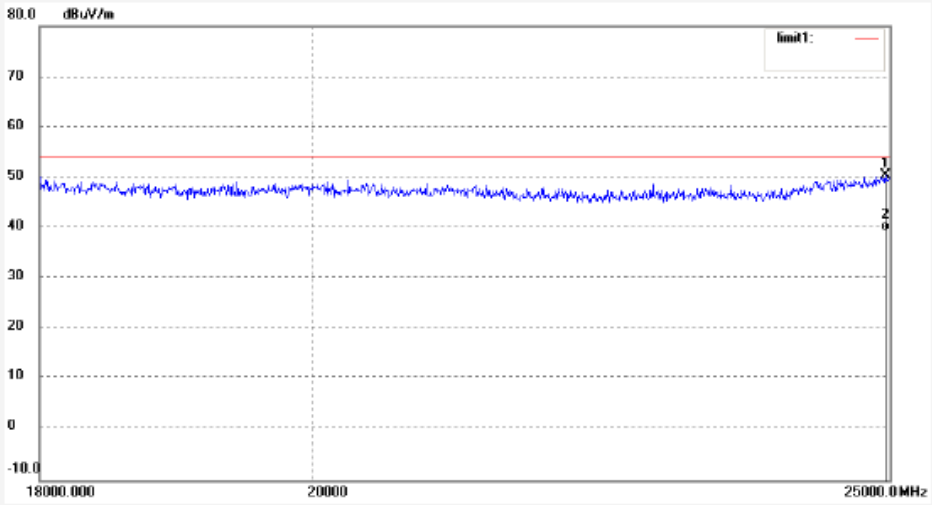
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: PHY #687	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2014/03/15
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 22:39:08
EUT: Buletooth Module	Engineer Signature: PEI
Mode: TX 2480MHz	Distance: 3m
Model: uSmart 10	
Manufacturer: Accent Advanced Systems SLU	

Note:



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	31.68	18.84	50.52	74.00	-23.48	peak			
2	24958.889	20.52	18.84	39.36	54.00	-14.64	AVG			

Figure 24: Test figure of spurious emissions, mode A.3, Vertical polarity (18GHz – 25GHz)

ACCURATE TECHNOLOGY CO., LTD.
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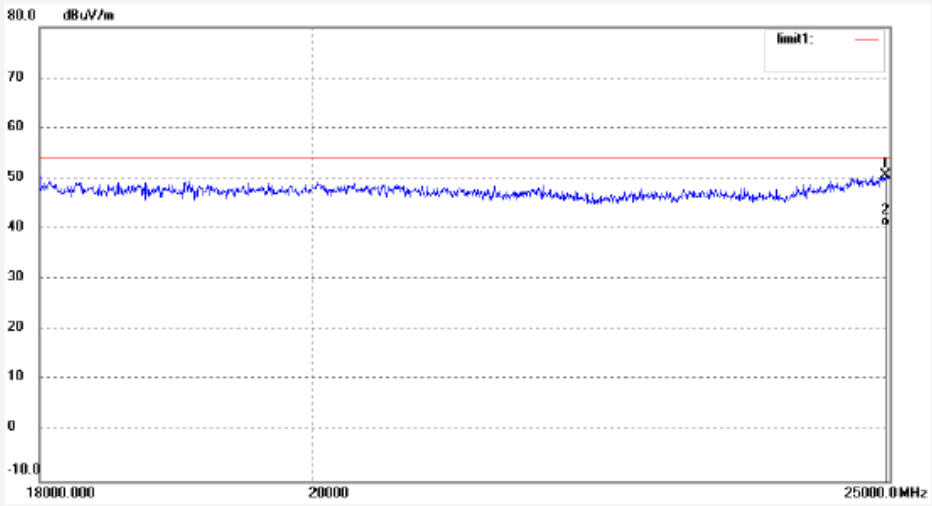
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: PHY #686
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: Buletooth Module
Mode: TX 2480MHz
Model: uSmart 10
Manufacturer: Accent Advanced Systems SLU

Polarization: Vertical
Power Source: DC 3V
Date: 2014/03/15
Time: 22:30:33
Engineer Signature: PEI
Distance: 3m

Note:



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	31.84	18.84	50.68	74.00	-23.32	peak			
2	24958.889	21.72	18.84	40.56	54.00	-13.44	AVG			

Figure 25: Test figure of Radiated emissions in restricted bands, Mode A.1, Horizontal

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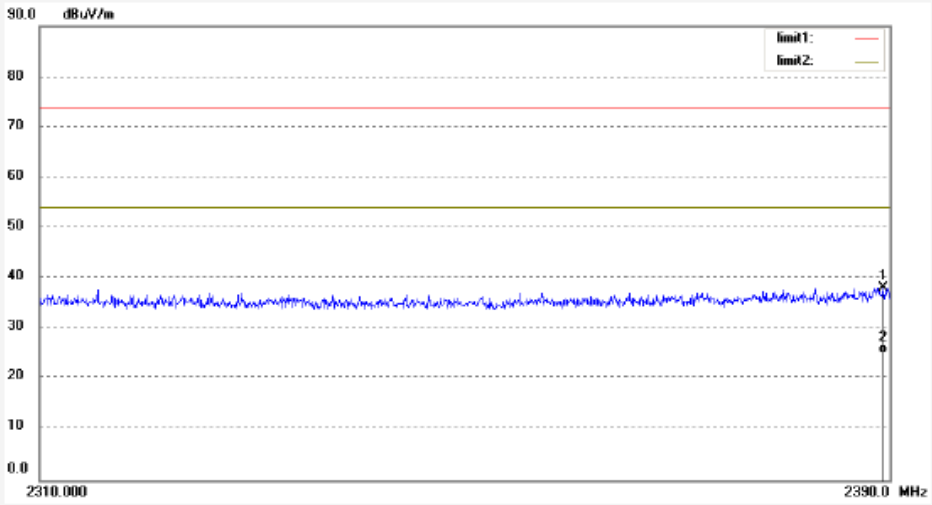
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: PHY #1390	Polarization: Horizontal
Standard: FCC Part 15 Band Edge (2.4G)	Power Source: DC 3.7V
Test item: Radiation Test	Date: 14/04/29/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 10/16/48
EUT: Bluetooth Speaker	Engineer Signature: PEI
Mode: TX 2402MHz	Distance: 3m
Model: MD-SPBT01	
Manufacturer: Compupal (Group) Corporation	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2389.429	45.67	-7.53	38.14	74.00	-35.86	peak			
2	2389.429	32.52	-7.53	24.99	54.00	-29.01	AVG			

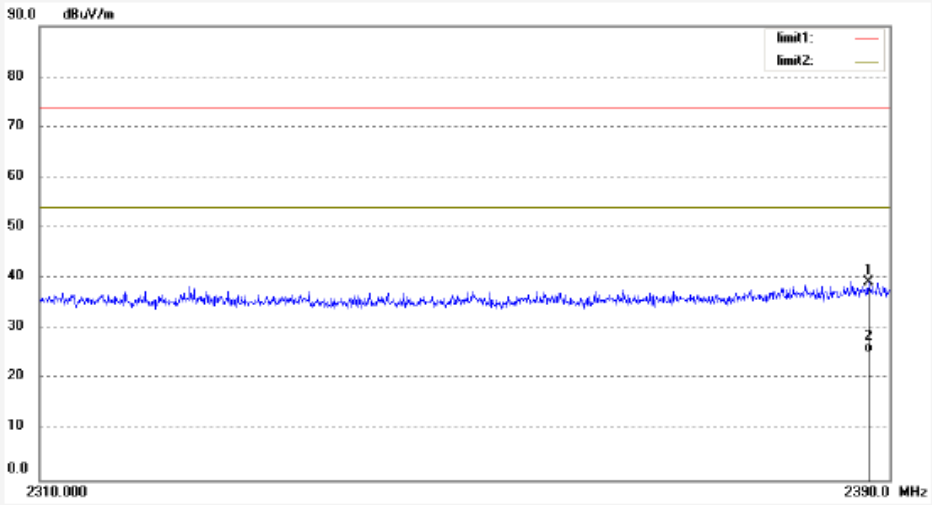
Figure 26: Test figure of Radiated emissions in restricted bands, Mode A.1, Vertical

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 #1389	Polarization: Vertical
Standard: FCC Part 15 Band Edge (2.4G)	Power Source: DC 3.7V
Test item: Radiation Test	Date: 14/04/29/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 10/05/44
EUT: Bluetooth Speaker	Engineer Signature: PEI
Mode: TX 2402MHz	Distance: 3m
Model: MD-SPBT01	
Manufacturer: Compupal (Group) Corporation	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2387.963	46.88	-7.54	39.34	74.00	-34.66	peak			
2	2387.963	32.96	-7.54	25.42	54.00	-28.58	AVG			

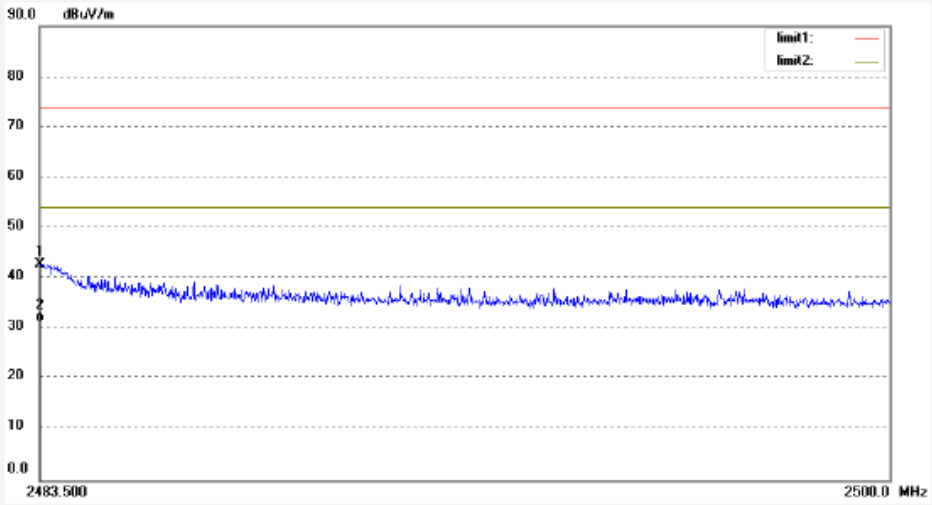
Figure 27: Test figure of Radiated emissions in restricted bands, Mode A.3, Horizontal

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 #1392	Polarization: Horizontal
Standard: FCC Part 15 Band Edge (2.4G)	Power Source: DC 3.7V
Test item: Radiation Test	Date: 14/04/29/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 10/36/57
EUT: Bluetooth Speaker	Engineer Signature: PEI
Mode: TX 2480MHz	Distance: 3m
Model: MD-SPBT01	
Manufacturer: Compupal (Group) Corporation	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.517	50.27	-7.37	42.90	74.00	-31.10	peak			
2	2483.517	38.65	-7.37	31.28	54.00	-22.72	AVG			

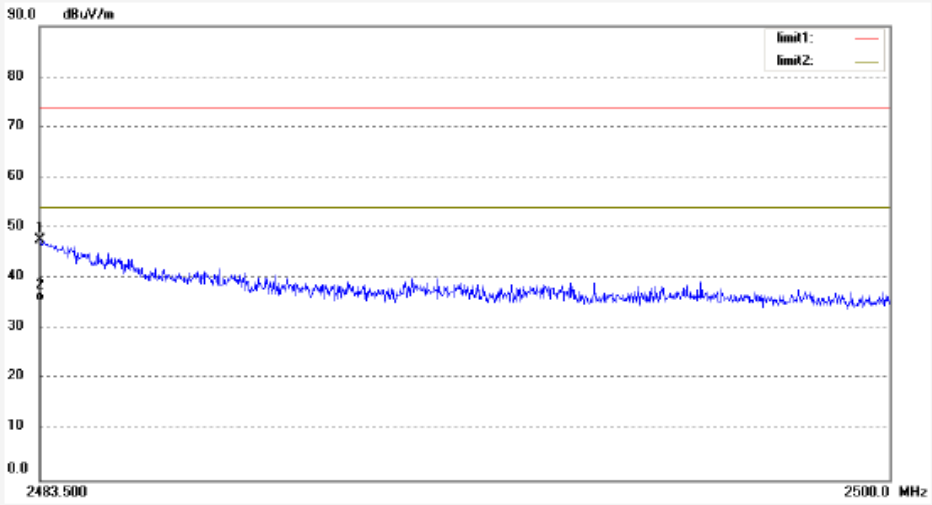
Figure 28: Test figure of Radiated emissions in restricted bands, Mode A.3, Vertical

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 #1391	Polarization: Vertical
Standard: FCC Part 15 Band Edge (2.4G)	Power Source: DC 3.7V
Test item: Radiation Test	Date: 14/04/29/
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 10/27/04
EUT: Bluetooth Speaker	Engineer Signature: PEI
Mode: TX 2480MHz	Distance: 3m
Model: MD-SPBT01	
Manufacturer: Compupal (Group) Corporation	

Note:



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	54.88	-7.37	47.51	74.00	-26.49	peak			
2	2483.500	42.75	-7.37	35.38	54.00	-18.62	AVG			