APPLICATION CERTIFICATION
On Behalf of
Smart Technologies & Investment Ltd.

SMART PANEL
Model No.: WS201

FCC ID: N9KSMARTWS201

Prepared for	:	Smart Technologies & Investment Ltd.
Address	:	Units C & D, 18/F Spectrum Tower, No.53 Hung To Road, Kwun Tong, Kowloon, Hong Kong
Prepared by	:	ACCURATE TECHNOLOGY CO., LTD
Address	:	F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science & Industry Park, Nanshan, Shenzhen, Guangdong P.R. China
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Report Number	:	ATE20120733
Date of Test	:	April 15-23, 2012
Date of Report	:	April 23, 2012

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Description Page

Test Report Certification

Applicant	:	Smart Technologies & Investment Ltd.
Manufacturer	:	Smart Electronic Industrial (Dong Guan) Co., Ltd.
EUT Description	:	SMART PANEL
		(A) MODEL NO.: WS201
		(B) SERIAL NO.: N/A
		(C) POWER SUPPLY: DC 9V

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.231
ANSI 63.4: 2003

The device described above is tested by ACCURATE TECHNOLOGY CO., LTD to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.231. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO., LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO., LTD.

Date of Test : April 15-23, 2012

Prepared by : Apple

(Engineer)

Approved & Authorized Signer :

(Manager)

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT	:	SMART PANEL
Model Number	:	WS201
Power Supply	:	DC 9V
Operation Frequency	:	433.92MHz
Applicant	:	Smart Technologies & Investment Ltd.
Address	:	Units C & D, 18/F Spectrum Tower, No.53 Hung To Road, Kwun Tong, Kowloon, Hong Kong
Manufacturer	:	Smart Electronic Industrial (Dong Guan) Co., Ltd.
Address	:	Qing Long Road, Long Jian Tian-Cun, Huang Jiang-zhen, Dongguan, Guangdong, China
Date of sample received	:	April 15, 2012
Date of Test	:	April 15-23, 2012

1.2.Description of Test Facility

EMC Lab	:	Accredited by TUV Rheinland Shenzhen Listed by FCC The Registration Number is 752051 Listed by Industry Canada The Registration Number is 5077A-2 Accredited by China National Accreditation Committee for Laboratories The Certificate Registration Number is L3193
Name of Firm	:	ACCURATE TECHNOLOGY CO., LTD
Site Location	:	F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science & Industry Park, Nanshan, Shenzhen, Guangdong P.R. China

1.3.Measurement Uncertainty

Conducted Emission Expanded Uncertainty	=	2.23dB, k=2
Radiated emission expanded uncertainty (9kHz-30MHz)	=	3.08dB, k=2
Radiated emission expanded uncertainty (30MHz-1000MHz)	=	4.42dB, k=2
Radiated emission expanded uncertainty (Above 1GHz)	=	4.06dB, k=2

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated date	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 8, 2012	Jan. 7, 2013
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 8, 2012	Jan. 7, 2013
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 8, 2012	Jan. 7, 2013
Pre-Amplifier	Rohde&Schwarz	CBLU1183540-01	3791	Jan. 8, 2012	Jan. 7, 2013
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 8, 2012	Jan. 7, 2013
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 8, 2012	Jan. 7, 2013
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 8, 2012	Jan. 7, 2013
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 8, 2012	Jan. 7, 2013
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 8, 2012	Jan. 7, 2013
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 8, 2012	Jan. 7, 2013

3. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
Section 15.207	Conducted Emission	Compliant
Section 15.231(b)	Radiated Emission	Compliant
Section 15.231(c)	20dB Bandwidth	Compliant
Section 15.231(a)(1)	Release Time Measurement	Compliant
Section 15.203	Antenna Requirement	Compliant

The product is a manually operated Remote Control transmitter.
Section 15.231 (a) (2), (3), (4) and (5) are not applicable.

4. THE FIELD STRENGTH OF RADIATION EMISSION

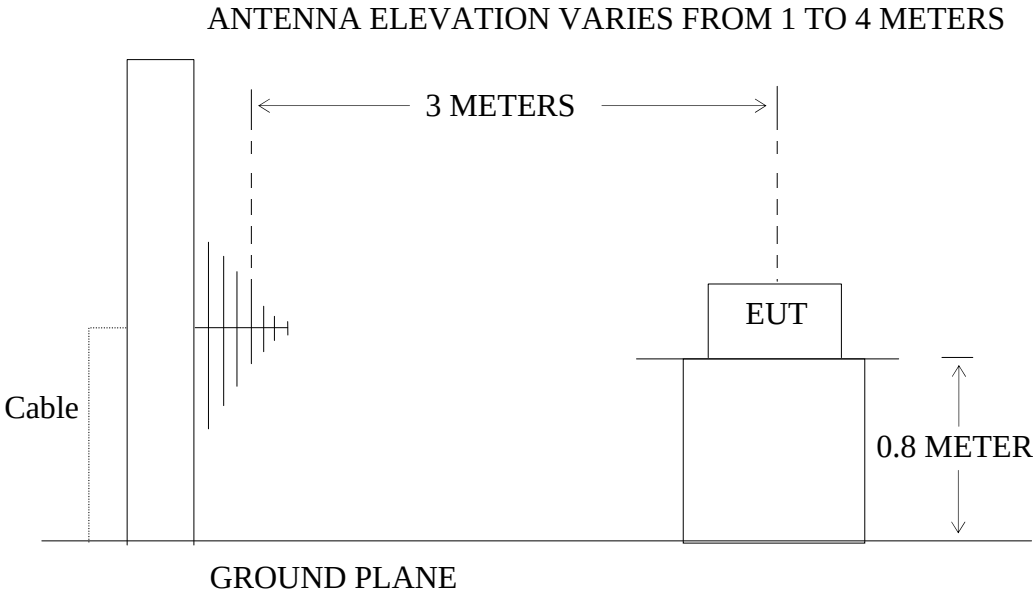
4.1.Block Diagram of Test Setup

4.1.1.Block diagram of connection between the EUT and simulators

EUT

(EUT: SMART PANEL)

4.1.2.Semi-Anechoic Chamber Test Setup Diagram



(EUT: SMART PANEL)

4.2. The Field Strength of Radiation Emission Measurement Limits

4.2.1. Radiation Emission Measurement Limits According to FCC Part 15 Section 15.231(b)

Frequency Range of Fundamental [MHz]	Field Strength of Fundamental Emission [Average] [μV/m]	Field Strength of Spurious Emission [Average] [μV/m]
40.66-40.70	2250	225
70-130	1250	125
130-174	1250-3750	125-375
174-260	3750	375
260-470	3750-12500	375-1250
Above 470	12500	1250

Where F is the frequency in MHz, the formulas for calculating the maximum permitted fundamental field strengths are as follows: for the band 130-174 MHz, uV/m at 3 meters = 56.81818(F) - 6136.3636; for the band 260-470 MHz, uV/m at 3 meters = 41.6667(F) - 7083.3333. The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level.

4.2.2. Restricted Band Radiation Emission Measurement Limits According to FCC part 15 Section 15.205 and Section15.209.

4.3. Configuration of EUT on Measurement

The following equipment is installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.3.1. SMART PANEL (EUT)

Model Number : WS201
Serial Number : N/A
Manufacturer : Smart Electronic Industrial (Dong Guan) Co., Ltd.

4.4. Operating Condition of EUT

4.4.1. Setup the EUT and simulator as shown as Section 4.1.

4.4.2. Turn on the power of all equipment.

4.4.3. Let the EUT work in TX mode measure it.

4.5. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI 63.4 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The bandwidth of test receiver is set at 120 kHz in 30-1000 MHz, and 1 MHz in 1000-5000 MHz.

The frequency range from 30 MHz to 5000 MHz is checked.

4.6. The Field Strength of Radiation Emission Measurement Results

PASS.

The frequency range 30MHz to 5000MHz is investigated.

Date of Test:	April 20, 2012	Temperature:	25°C
EUT:	SMART PANEL	Humidity:	50%
Model No.:	WS201	Power Supply:	DC 9V
Test Mode:	TX	Test Engineer:	Pei

Frequency (MHz)	Reading (dBμV/m)	Factor Corr.	Average Factor	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	PEAK	(dB)	(dB)	AV	PEAK	AV	PEAK	AV	PEAK	
433.9200	**56.12**	**22.95**	**-9.00**	**79.07**	**88.07**	**80.8**	**100.8**	**-1.63**	**-12.73**	Horizontal
867.6676	29.53	28.64	-9.00	49.17	58.17	60.8	80.8	-11.63	-22.63	
*1301.501	67.88	-12.20	-9.00	46.68	55.68	54.0	74.0	-7.32	-18.32	
1735.335	60.81	-10.39	-9.00	41.42	50.42	60.8	80.8	-19.38	-30.38	
2169.169	60.51	-8.38	-9.00	43.13	52.13	60.8	80.8	-17.67	-28.67	
2603.003	59.15	-6.72	-9.00	43.43	52.43	60.8	80.8	-17.37	-28.37	
3036.837	54.46	-4.91	-9.00	40.55	49.55	60.8	80.8	-20.25	-31.25	
3470.670	45.52	-3.31	-9.00	33.21	42.21	60.8	80.8	-27.59	-38.59	
433.9200	**52.97**	**22.95**	-9.00	**75.92**	**84.92**	**80.8**	**100.8**	**-4.88**	**-15.88**	Vertical
867.6680	25.46	28.64	-9.00	45.1	54.10	60.8	80.8	-15.7	-26.7	
*1301.502	67.56	-12.20	-9.00	46.36	55.36	54.0	74.0	-7.64	-18.64	
1735.336	59.35	-10.39	-9.00	39.96	48.96	60.8	80.8	-20.84	-31.84	
2169.170	59.59	-8.38	-9.00	42.21	51.21	60.8	80.8	-18.59	-25.95	
2603.004	58.06	-6.72	-9.00	42.34	51.34	60.8	80.8	-18.46	-29.46	
3036.838	53.24	-4.91	-9.00	39.33	48.33	60.8	80.8	-21.47	-32.47	
3470.672	50.03	-3.31	-9.00	37.72	46.72	60.8	80.8	-23.08	-34.08	

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. *: Denotes restricted band of operation.

   Measurements were made using a peak detector and average detector. Any emission falling within the restricted bands of FCC Part 15 Section 15.205 were compliance with the emission limit of FCC Part 15 Section 15.209.
3. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

4. FCC Limit for Average Measurement = 41.6667(433.92)-7083.3333 = 10996.68116 μV/m =80.8 dBμV/m
5. Pulse Desensitization Correction Factor

   Pulse Width (PW) = 19.94ms

   1/PW = 1/19.94ms = 0.05015 kHz

   RBW (100 kHz) > 1/PW (0.05015 kHz)

   Therefore PDCF is not needed
6. The spectral diagrams in appendix I display the measurement of peak values.

5. 20DB OCCUPIED BANDWIDTH

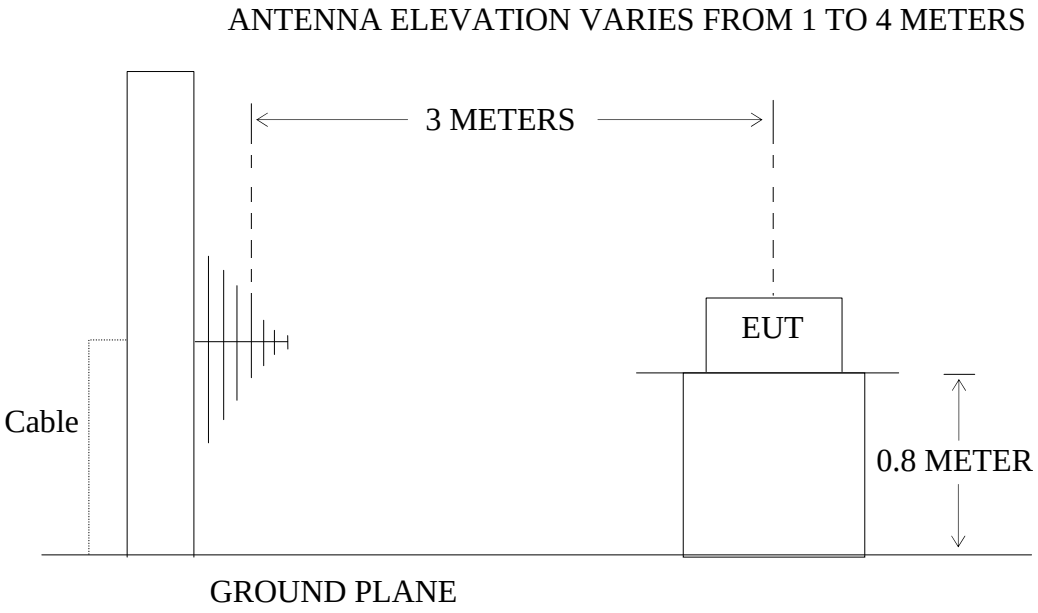
5.1.Block Diagram of Test Setup

5.1.1.Block diagram of connection between the EUT and simulators

EUT

(EUT: SMART PANEL)

5.1.2.Semi-Anechoic Chamber Test Setup Diagram



(EUT: SMART PANEL)

5.2.The Bandwidth of Emission Limit According To FCC Part 15 Section

15.231(c)

The bandwidth of emission shall be no wider than 0.25% of the center frequency. Therefore, the bandwidth of the emission limit is 433.92 MHz×0.25% = 1084.80 kHz. Bandwidth is determined at the two points 20 dB down from the top of modulated carrier.

5.3.EUT Configuration on Measurement

The following equipment are installed on the bandwidth of emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

5.3.1.SMART PANEL (EUT)

Model Number	**:**	WS201
Serial Number	**:**	N/A
Manufacturer	**:**	Smart Electronic Industrial (Dong Guan) Co., Ltd.

5.4.Operating Condition of EUT

5.4.1.Setup the EUT and simulator as shown as Section 5.1.

5.4.2.Turn on the power of all equipment.

5.4.3.Let the EUT work in TX mode measure it.

5.5.Test Procedure

5.5.1. Set SPA Center Frequency = Fundamental frequency, RBW = 10 kHz, VBW = 30 kHz, Span = 500 kHz.

5.5.2.Set SPA Max hold, Mark peak, -20 dB.

5.6.Measurement Result

The EUT does meet the FCC requirement.

-20 dB bandwidth = 28.0 kHz <1084.80 kHz.

The spectral diagrams in appendix I.

6. RELEASE TIME MEASUREMENT

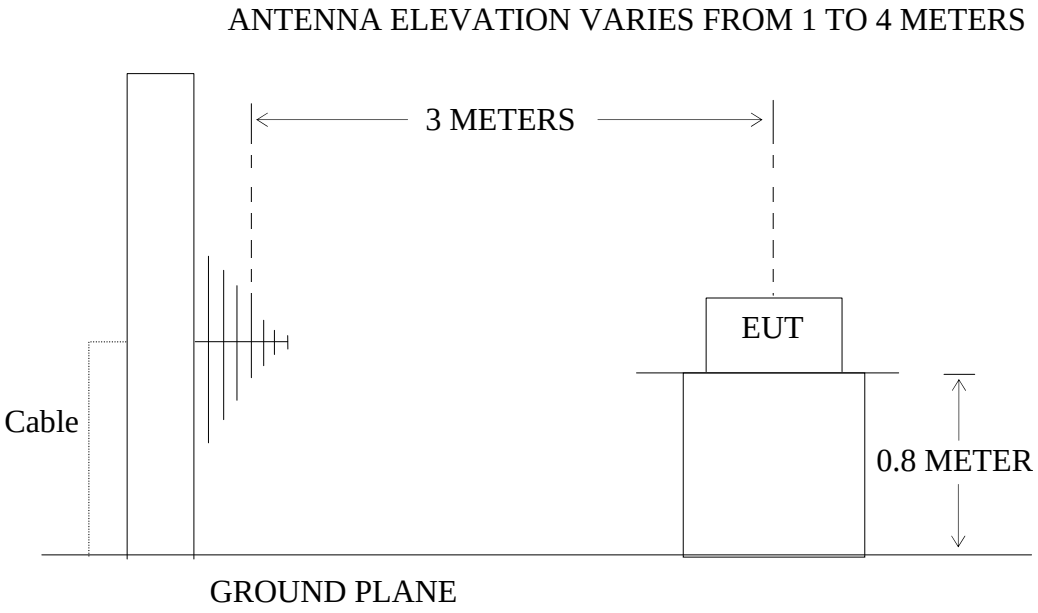
6.1.Block Diagram of Test Setup

6.1.1.Block diagram of connection between the EUT and simulators

EUT

(EUT: SMART PANEL)

6.1.2.Semi-Anechoic Chamber Test Setup Diagram



(EUT: SMART PANEL)

6.2.Release Time Measurement According To FCC Part 15 Section 15.231(a)

Section 15.231(a) (1) A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

6.3.EUT Configuration on Measurement

The following equipment are installed on Release Time Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

6.3.1. SMART PANEL (EUT)

Model Number	**:**	WS201
Serial Number	**:**	N/A
Manufacturer	**:**	Smart Electronic Industrial (Dong Guan) Co., Ltd.

6.4.Operating Condition of EUT

6.4.1.Setup the EUT and simulator as shown as Section 6.1.

6.4.2.Turn on the power of all equipment.

6.4.3.Let the EUT work in TX mode measure it.

6.5.Test Procedure

6.5.1. Set SPA Center Frequency = Fundamental frequency, RBW = 100 kHz, VBW = 300 kHz, Span = 0 Hz. Sweep time = 5 s.

6.5.2.Set EUT as normal operation and press Transmitter button.

6.5.3.Set SPA View. Delta Mark time.

6.6. Measurement Result

The release time less than 5 seconds.

Release Time= 1.24s

The spectral diagrams in appendix I.

7. AVERAGE FACTOR MEASUREMENT

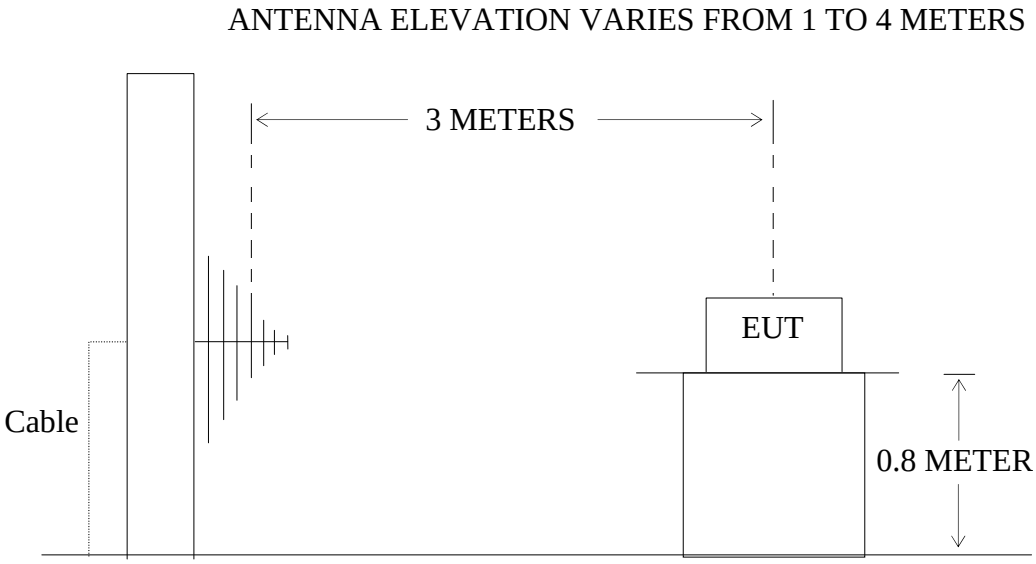
7.1.Block Diagram of Test Setup

7.1.1.Block diagram of connection between the EUT and simulators

EUT

(EUT: SMART PANEL)

7.1.2.Semi-Anechoic Chamber Test Setup Diagram



(EUT: SMART PANEL)

7.2.Average factor Measurement according to ANSI 63.4: 2003

ANSI 63.4: 2003 Section 13.1.4.2 Devices transmitting pulsed emissions and subject to a limit requiring an average detector function for radiated emissions shall initially be measured with an instrument that uses a peak detector. A radiated emission measured with a peak detector may then be corrected to a true average using the appropriate factor for emission duty cycle. This correction factor relates the measured peak level to the average limit and is derived by averaging absolute field strength over one complete pulse train that is 0.1 s, or less, in length. If the pulse train is longer than 0.1 s, the average shall be determined from the average absolute field strength during the 0.1 s interval in which the field strength is at a maximum. Instructions on calculating the duty cycle of a transmitter with pulsed emissions are provided in ANSI 63.4 H.4, step j.

Average factor in dB = 20 log (duty cycle)

7.3.EUT Configuration on Measurement

The following equipment are installed on average factor Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

7.3.1. SMART PANEL (EUT)

Model Number	**:**	WS201
Serial Number	**:**	N/A
Manufacturer	**:**	Smart Electronic Industrial (Dong Guan) Co., Ltd.

7.4.Operating Condition of EUT

7.4.1.Setup the EUT and simulator as shown as Section 7.1.

7.4.2.Turn on the power of all equipment.

7.4.3.Let the EUT work in TX mode measure it.

7.5.Test Procedure

7.5.1.The time period over which the duty cycle is measured is 100 milliseconds, or the repetition cycle, whichever is a shorter time frame. The worst case (highest percentage on) duty cycle is used for the calculation.

7.5.2.Set SPA Center Frequency = Fundamental frequency, RBW = 100 kHz, VBW = 300 kHz, Span = 0 Hz.

7.5.3.Set EUT as normal operation.

7.5.4.Set SPA View. Delta Mark time.

7.6. Measurement Result

The duty cycle is simply the on time divided by the period:

The duration of one cycle = 56.2 ms
Effective period of the cycle = (0.47×16) + (1.38×9)ms= 19.94 ms

DC = 19.94 ms/56.2 ms = 0.355

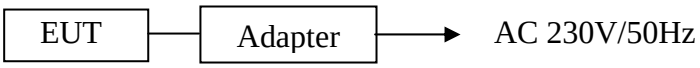
Therefore, the average factor is found by 20log0.355 = -9.00dB

The spectral diagrams in appendix I.

8. AC POWER LINE CONDUCTED EMISSION FOR FCC PART 15 SECTION 15.207(A)

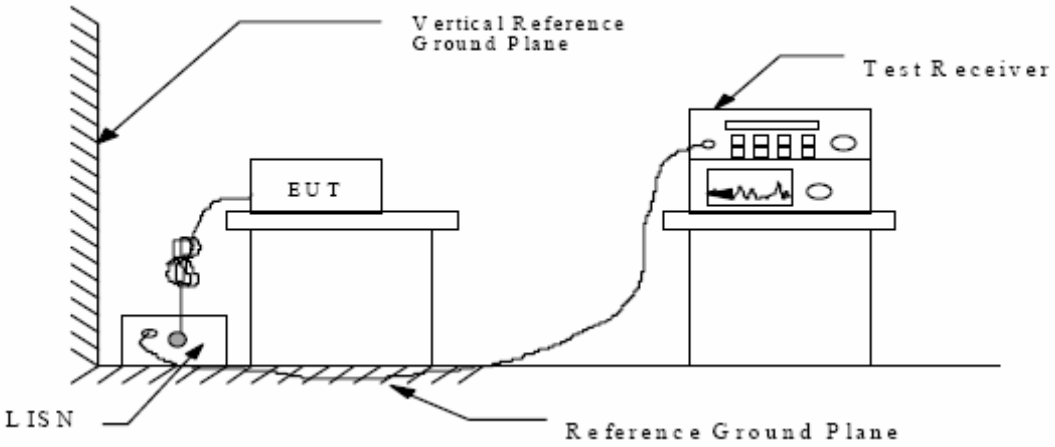
8.1.Block Diagram of Test Setup

8.1.1.Block diagram of connection between the EUT and simulators



(EUT: SMART PANEL)

8.1.2.Shielding Room Test Setup Diagram



(EUT: SMART PANEL)

8.2.The Emission Limit

8.2.1.Conducted Emission Measurement Limits According to Section 15.207(a)

Frequency (MHz)	Limit dB(μV)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

* Decreases with the logarithm of the frequency.

8.3. Configuration of EUT on Measurement

The following equipment are installed on the Conducted Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

8.3.1. SMART PANEL (EUT)

Model Number	:	WS201
Serial Number	:	N/A
Manufacturer	:	Smart Electronic Industrial (Dong Guan) Co., Ltd.

8.4. Operating Condition of EUT

8.4.1. Setup the EUT and simulator as shown as Section 8.1.

8.4.2. Turn on the power of all equipment.

8.4.3. Let the EUT work in Tx mode measure it.

8.5. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2003 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

8.6. Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

Date of Test:	April 21, 2012	Temperature:	25°C
EUT:	SMART PANEL	Humidity:	50%
Model No.:	WS201	Power Supply:	AC 120V/ 60Hz
Test Mode:	Tx	Test Engineer:	Kai

Frequency (MHz)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector	Line
0.169084	57.10	65	-7.9	QP	Neutral
0.337314	46.70	59	-12.3	QP	
2.798355	35.60	56	-20.4	QP	
0.310189	41.30	50	-8.7	AV	
0.340018	40.00	49	-9.0	AV	
2.900722	34.00	46	-12.0	AV	
0.169084	56.20	65	-8.8	QP	Live
0.335971	45.90	59	-13.1	QP	
2.832069	45.20	56	-10.8	QP	
0.310189	40.90	50	-9.1	AV	
0.338664	39.90	49	-9.1	AV	
3.116829	33.60	46	-12.4	AV	

Emissions attenuated more than 20 dB below the permissible value are not reported.
The spectral diagrams are attached as below.

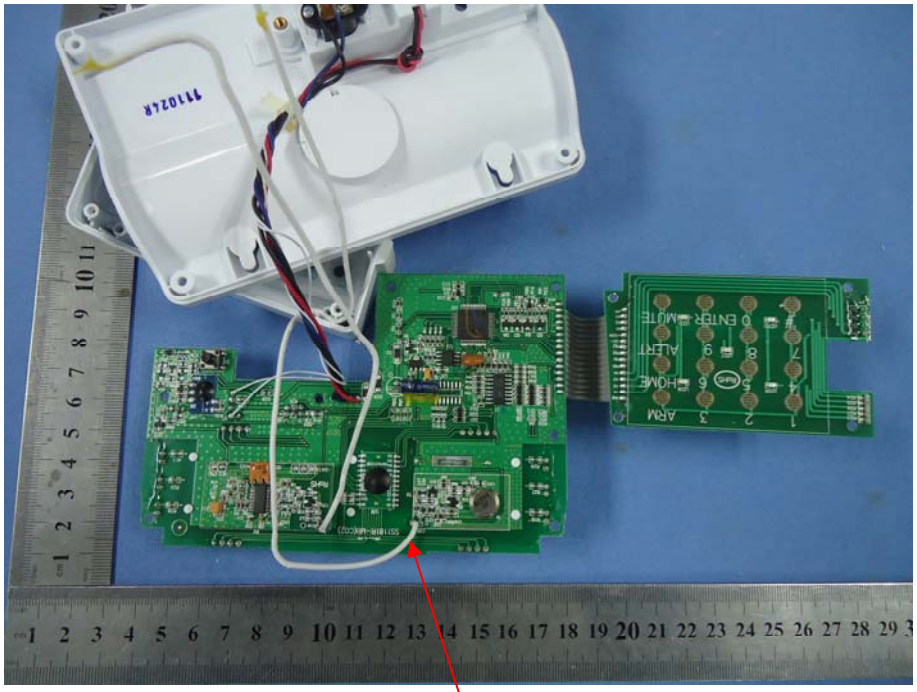
9. ANTENNA REQUIREMENT

9.1. The Requirement

According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

9.2. Antenna Construction

Device is equipped with unique antenna, which isn't displaced by other antenna. Therefore, the equipment complies with the antenna requirement of Section 15.203.

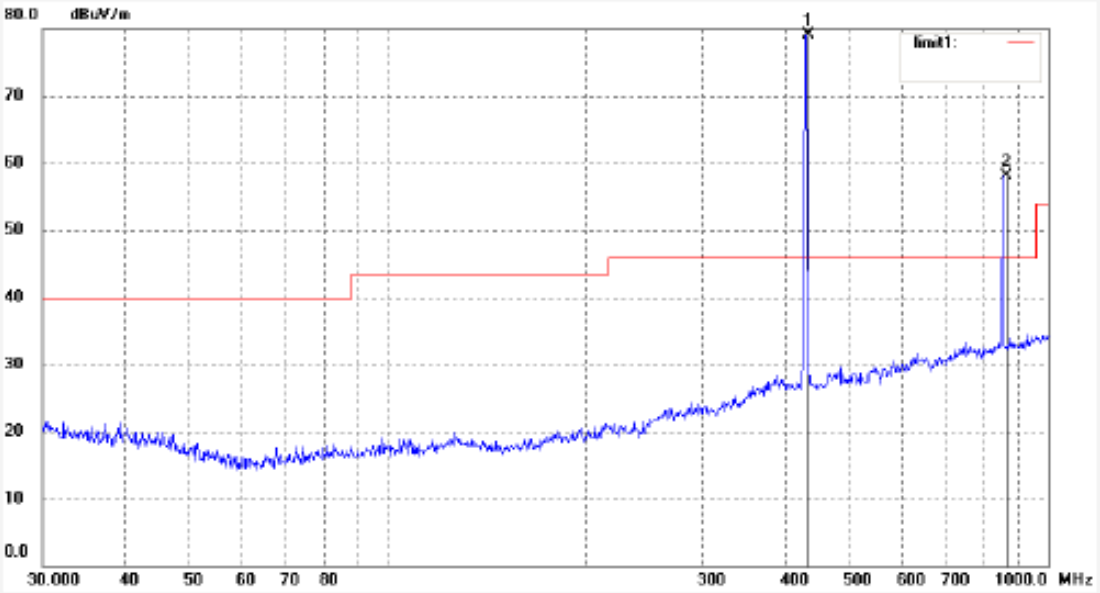


APPENDIX I
(Test Curves)

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg.A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: RTTE #6529	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 9V
Test item: Radiation Test	Date: 12/04/20/
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 8/41/21
EUT: SMART PANEL	Engineer Signature: PEI
Mode: TX	Distance: 3m
Model: WS201	
Manufacturer: Smart Technologies & Investment Ltd.	

Note: Report No.:ATE20120733



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	433.9200	56.12	22.95	88.07	100.80	-12.73	peak			
2	867.6676	29.53	28.64	58.17	80.80	-22.63	peak			

ACCURATE TECHNOLOGY CO., LTD.
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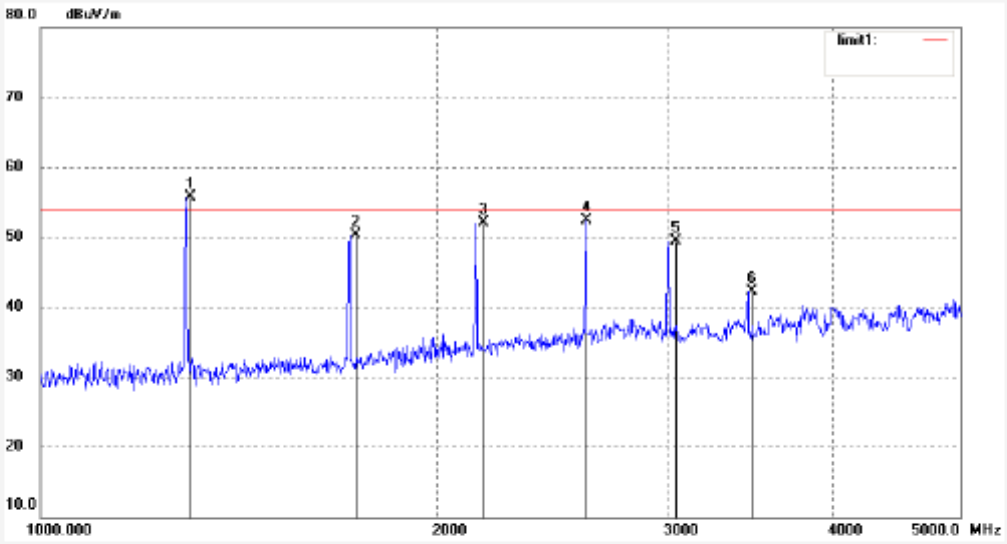
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: RTTE #6531
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 51 %
EUT: SMART PANEL
Mode: TX
Model: WS201
Manufacturer: Smart Technologies & Investment Ltd.

Polarization: Horizontal
Power Source: DC 9V
Date: 12/04/20/
Time: 9/06/01
Engineer Signature: PEI
Distance: 3m

Note: Report No.:ATE20120733

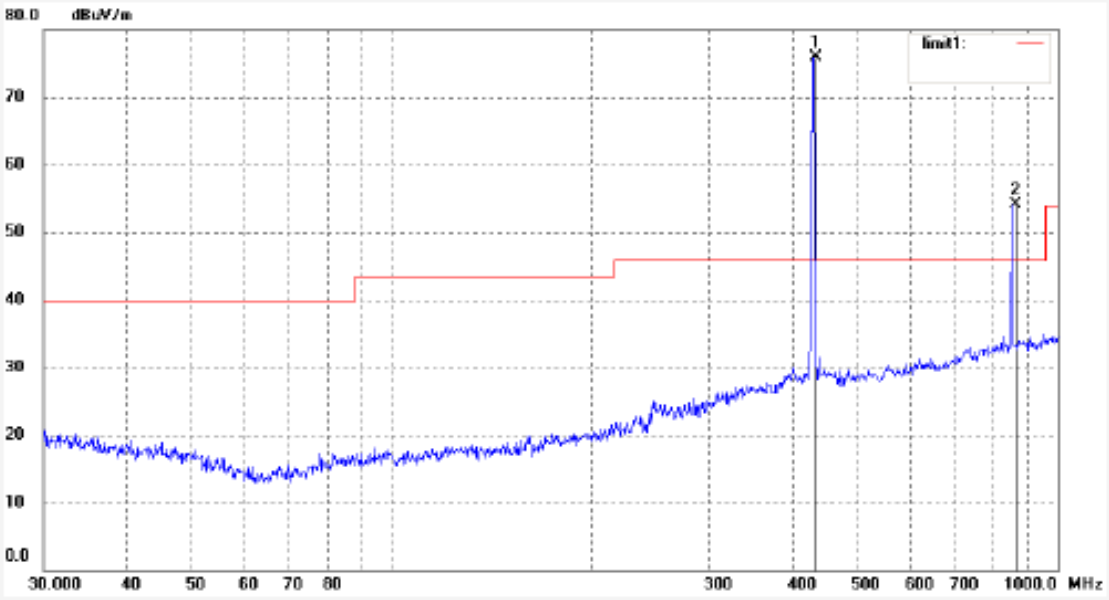


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1301.501	67.88	-12.20	55.68	74.00	-18.32	peak			
2	1735.335	60.81	-10.39	50.42	80.80	-30.38	peak			
3	2169.169	60.51	-8.38	52.13	80.80	-28.67	peak			
4	2603.003	59.15	-6.72	52.43	80.80	-28.37	peak			
5	3036.837	54.46	-4.91	49.55	80.80	-31.25	peak			
6	3470.670	45.52	-3.31	42.21	80.80	-38.59	peak			

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: RTTE #6528	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 9V
Test item: Radiation Test	Date: 12/04/20/
Temp.(C)/Hum.(%) 25 C / 51 %	Time: 8/30/26
EUT: SMART PANEL	Engineer Signature: PEI
Mode: TX	Distance: 3m
Model: WS201	
Manufacturer: Smart Technologies & Investment Ltd.	

Note: Report No.:ATE20120733



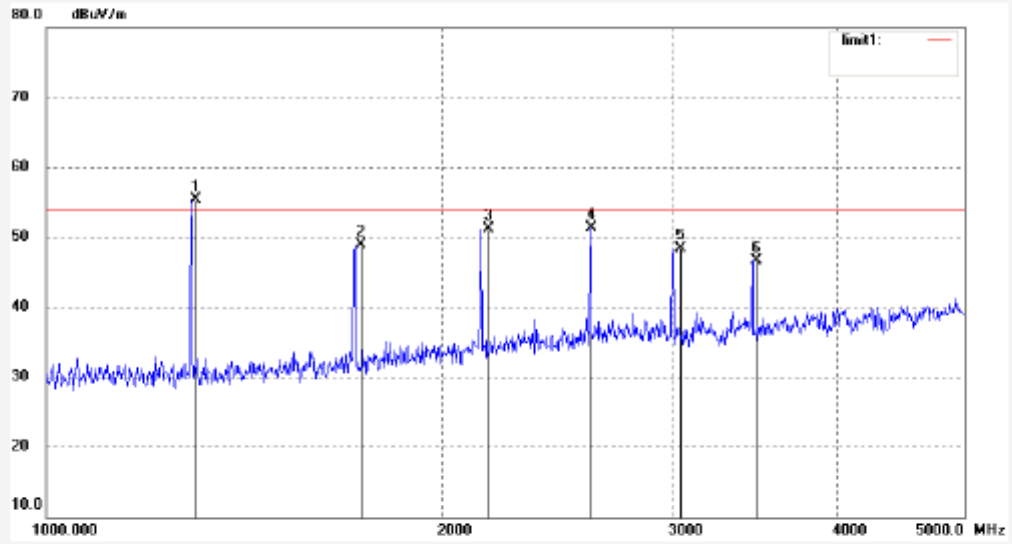
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	433.9200	52.97	22.95	84.92	100.8	-15.88	peak			
2	867.6680	25.46	28.64	54.10	80.8	-26.70	peak			

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg.A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

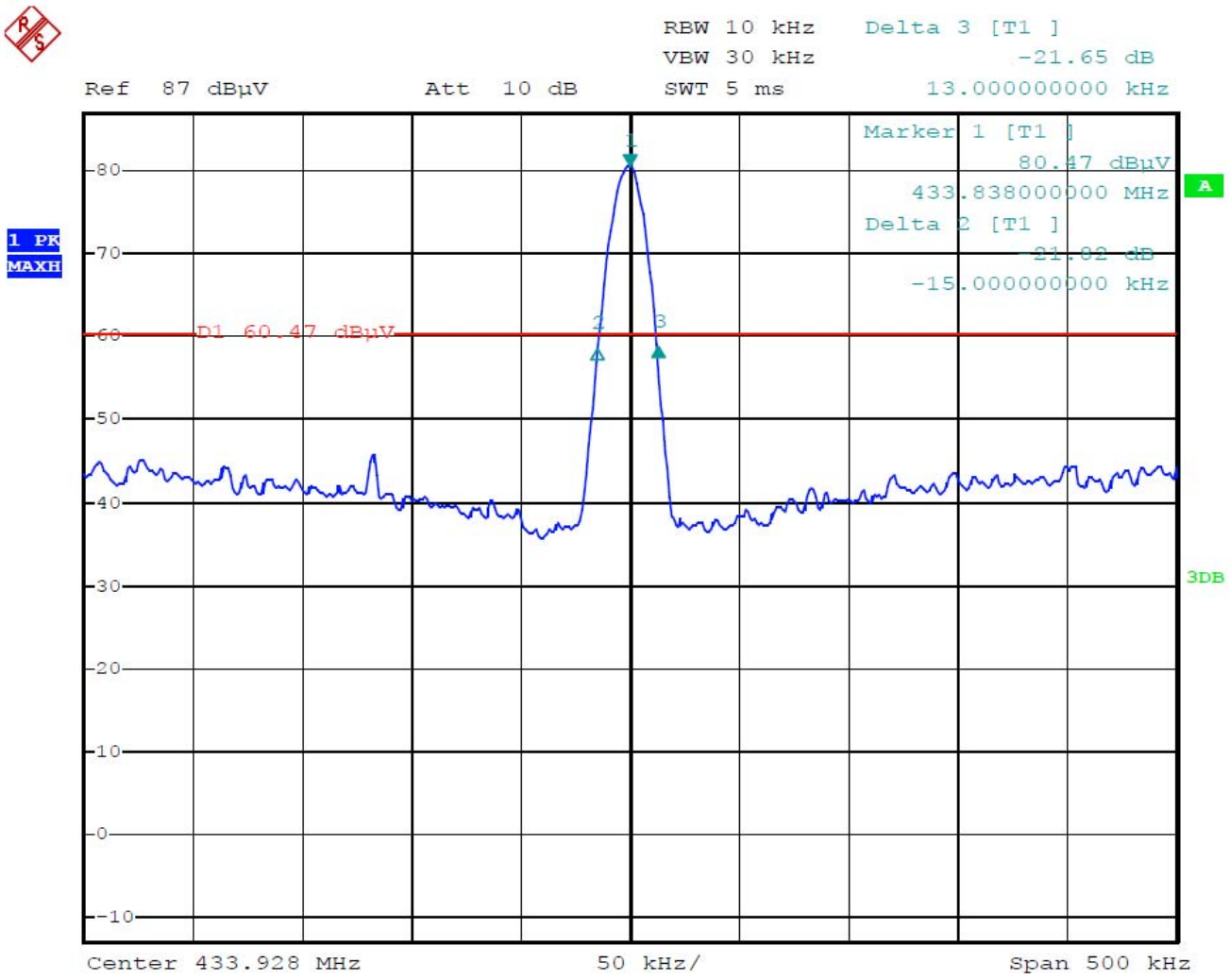
Job No.: RTTE #6530
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 51 %
EUT: SMART PANEL
Mode: TX
Model: WS201
Manufacturer: Smart Technologies & Investment Ltd.

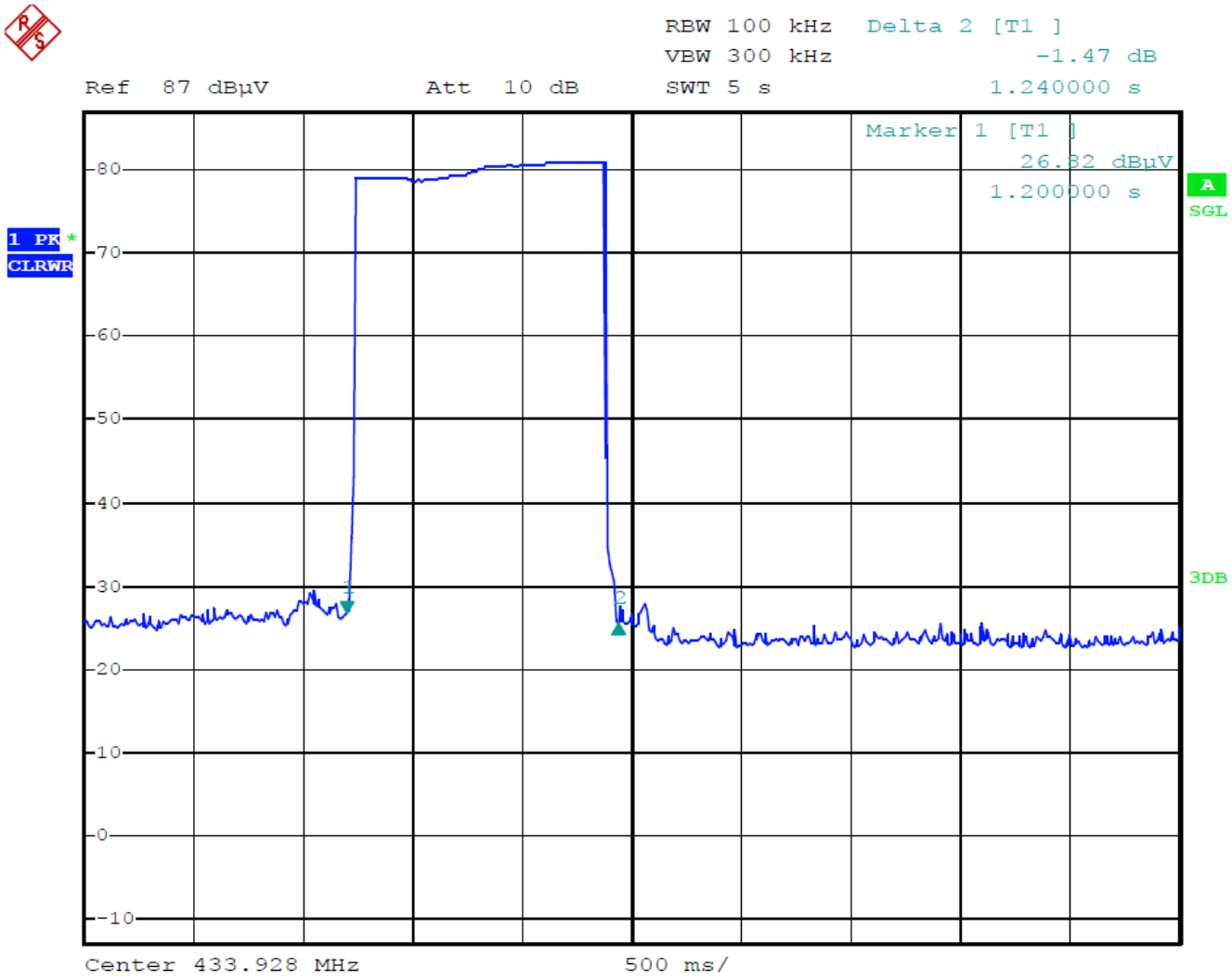
Polarization: Vertical
Power Source: DC 9V
Date: 12/04/20/
Time: 8/54/15
Engineer Signature: PEI
Distance: 3m

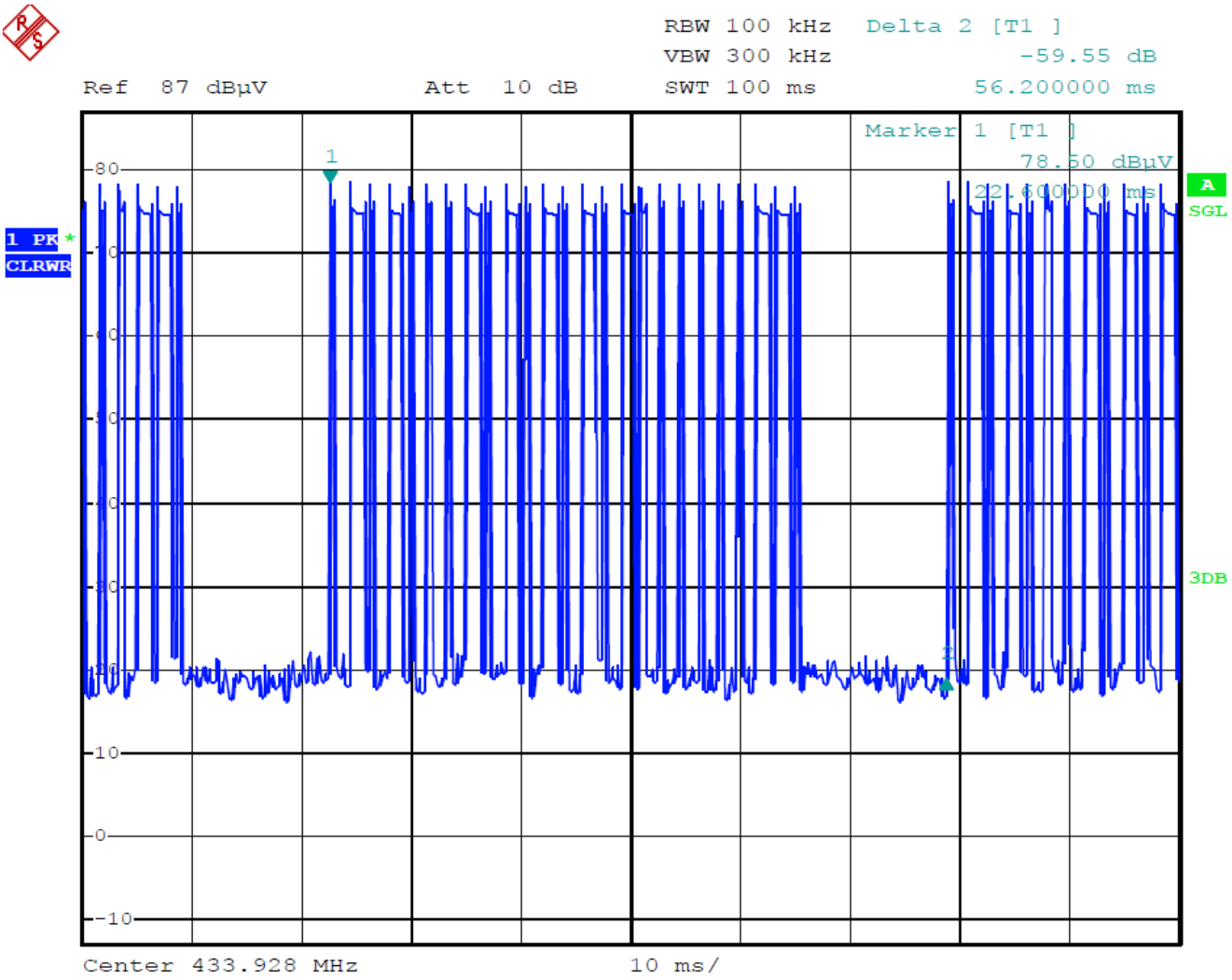
Note: Report No.:ATE20120733



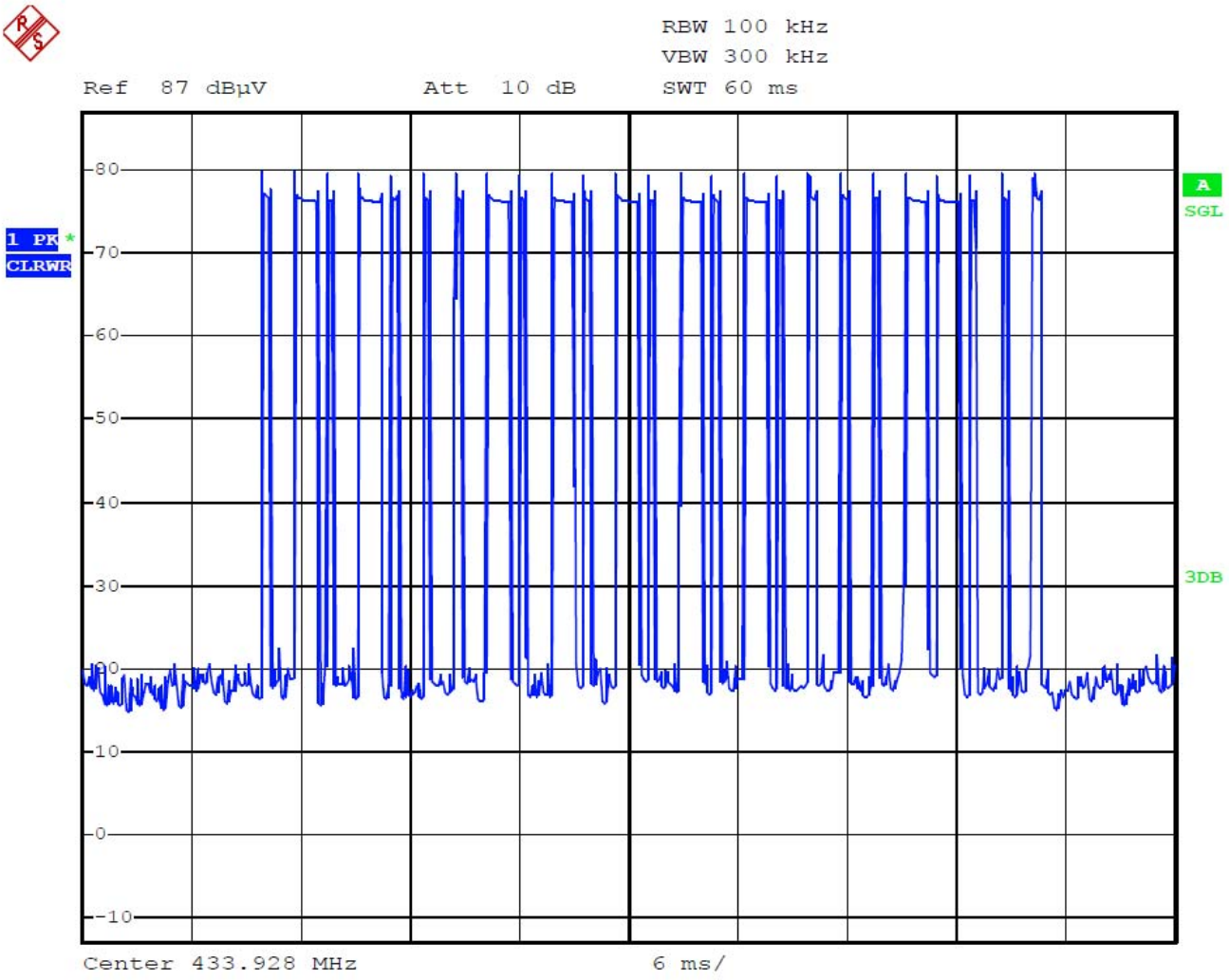
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1301.502	67.56	-12.20	55.36	74.00	-18.64	peak			
2	1735.336	59.35	-10.39	48.96	80.80	-31.84	peak			
3	2169.170	59.59	-8.38	51.21	80.80	-25.95	peak			
4	2603.004	58.06	-6.72	51.34	80.80	-29.46	peak			
5	3036.838	53.24	-4.91	48.33	80.80	-32.47	peak			
6	3470.672	50.03	-3.31	46.72	80.80	-34.08	peak			


RBW 10 kHz
VBW 30 kHz
SWT 5 ms
Delta 3 [T1]
-21.65 dB
13.000000000 kHz
Ref 87 dBµV
Att 10 dB
Marker 1 [T1]
80.47 dBµV
433.838000000 MHz
Delta 2 [T1]
-21.02 dB
-15.000000000 kHz
1 PK
MAXH
A
3DB
D1 60.47 dBµV
80
70
60
50
40
30
20
10
0
-10
Center 433.928 MHz
50 kHz/
Span 500 kHz

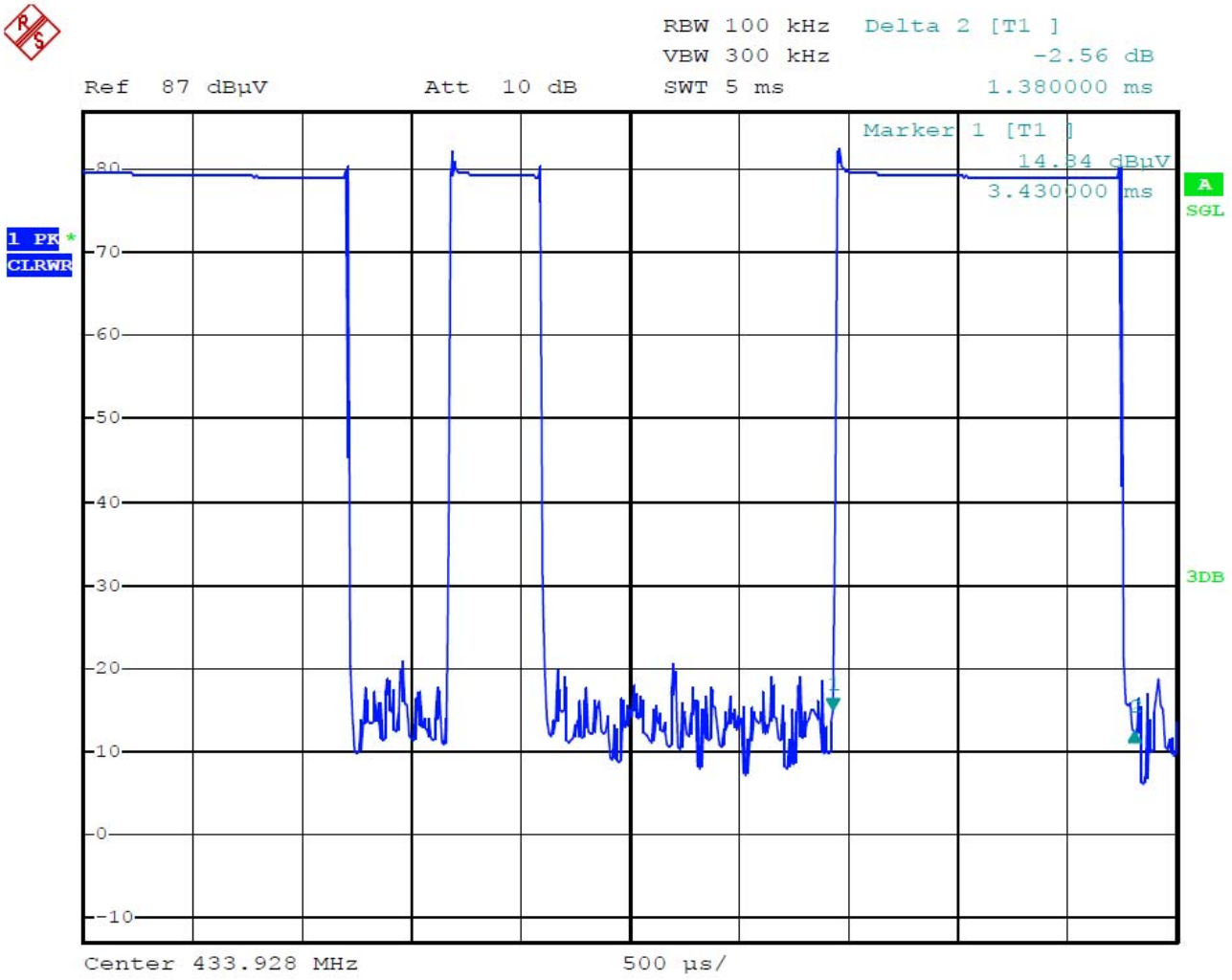

RBW 100 kHz
VBW 300 kHz
SWT 5 s
Delta 2 [T1]
-1.47 dB
1.240000 s
Ref 87 dBµV
Att 10 dB
Marker 1 [T1]
26.32 dBµV
1.200000 s
1 PK
CLRWR
A
SGL
3DB
80
70
60
50
40
30
20
10
0
-10
Center 433.928 MHz
500 ms/



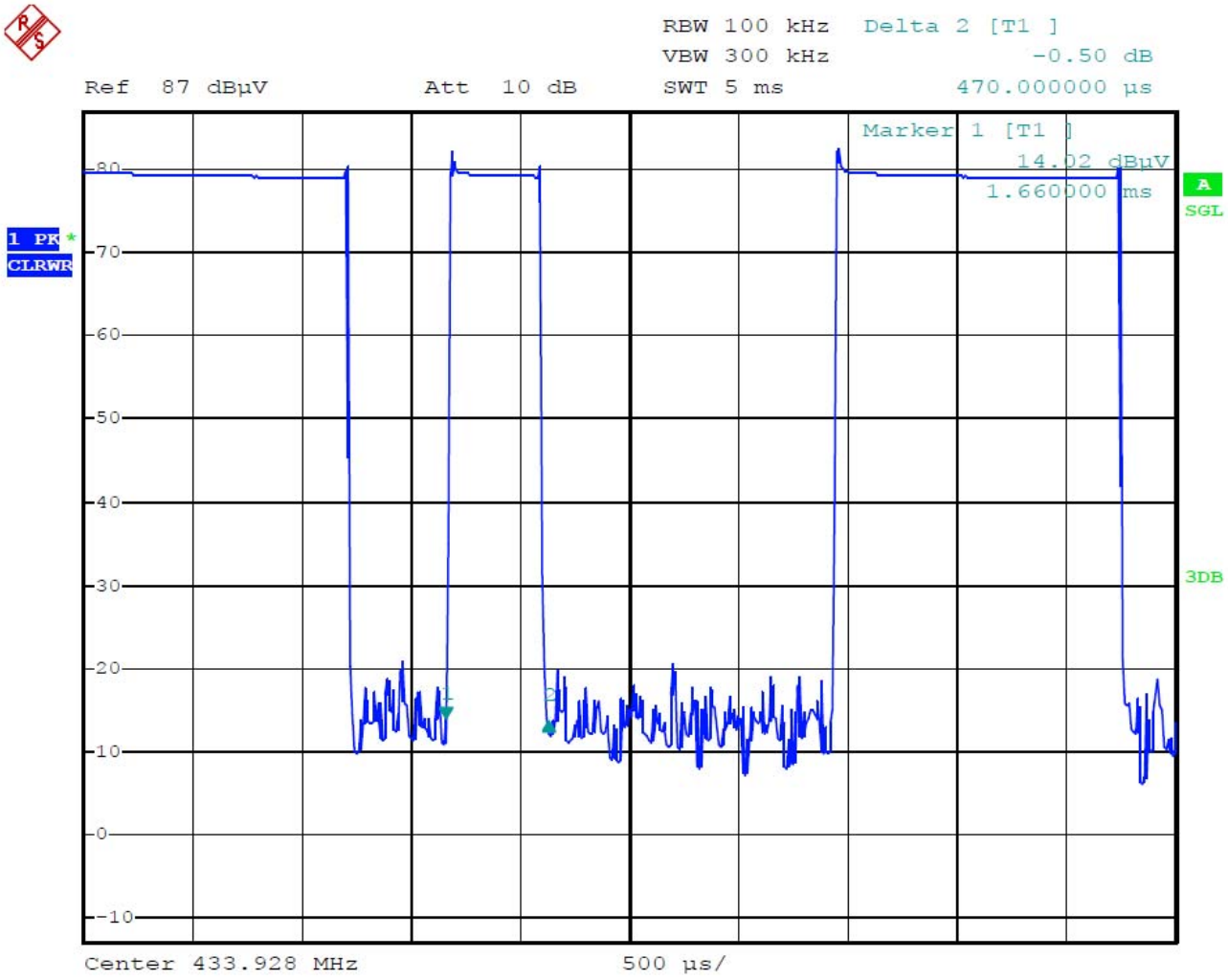
The graph shows the pattern of coding during the signal transmission.
The duration of one cycle = 56.2 ms.



The graph shows the pattern of coding during the signal transmission.



The graph shows the duration of ‘on’ signal. From marker 1 to marker 2, duration is 1.38 ms.



The graph shows the duration of ‘on’ signal. From marker 1 to marker 2, duration is 0.47 ms.

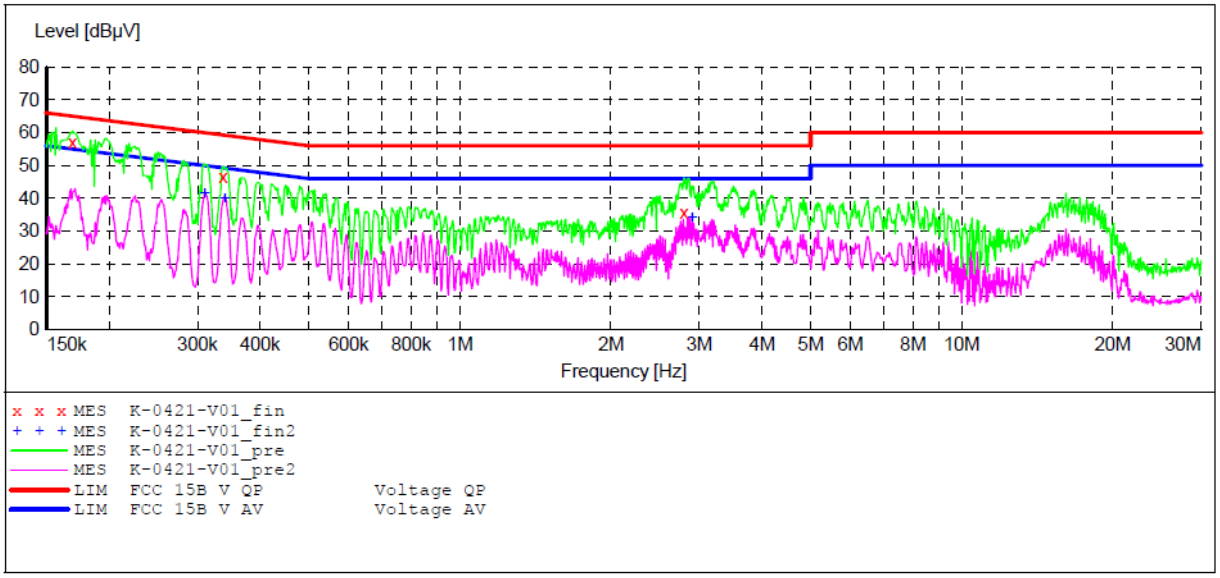
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

```
EUT:                  SMART PANEL    M/N:WS201
Manufacturer:         Smart Technologies & Investment Ltd.
Operating Condition:  Tx
Test Site:            1#Shielding Room
Operator:             Kevin
Test Specification:   L  120V/60Hz
Comment:              Report No.:ATE20120733
Start of Test:         4/21/2012 / 11:15:22AM
```

SCAN TABLE: "V 150K-30MHz fin"

```
  Short Description:              _SUB_STD_VTERM2 1.70
  Start      Stop       Step      Detector  Meas.     IF      Transducer
  Frequency  Frequency  Width               Time      Bandw.
  150.0 kHz  30.0 MHz   0.8 %     QuasiPeak 1.0 s     9 kHz   NSLK8126 2008
                                  Average
```



MEASUREMENT RESULT: "K-0421-V01_fin"

4/21/2012 11:17AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.169084	57.10	11.1	65	7.9	QP	L1	GND
0.337314	46.70	11.7	59	12.3	QP	L1	GND
2.798355	35.60	11.6	56	20.4	QP	L1	GND

MEASUREMENT RESULT: "K-0218-V01_fin2"

4/21/2012 11:17AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.310189	41.30	11.6	50	8.7	AV	L1	GND
0.340018	40.00	11.7	49	9.0	AV	L1	GND
2.900722	34.00	11.6	46	12.0	AV	L1	GND

ACCURATE TECHNOLOGY CO.,LTD

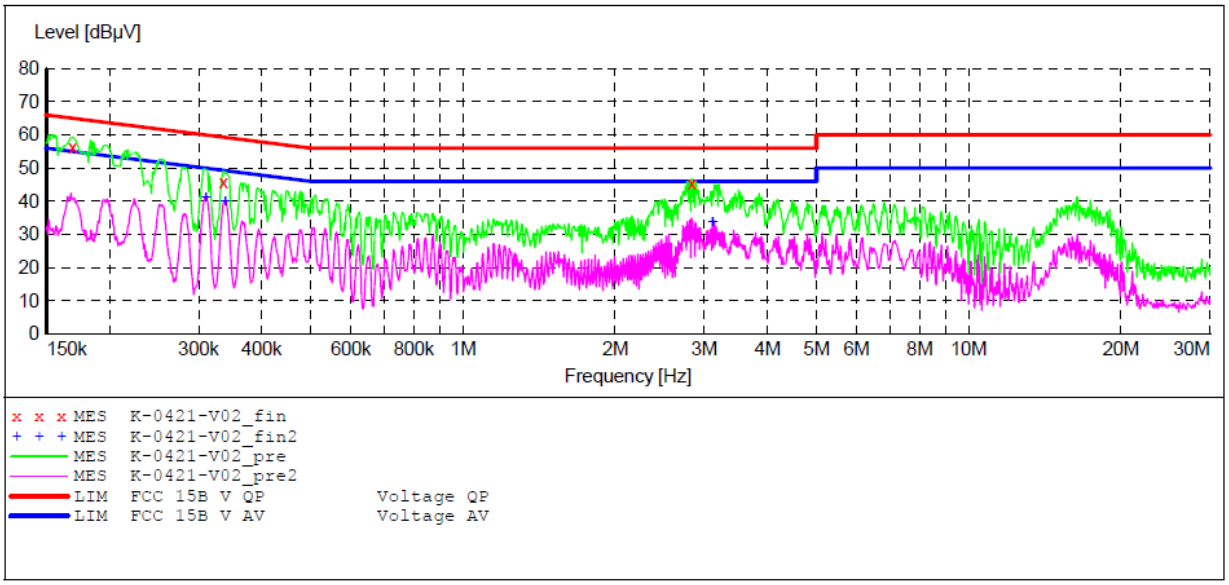
CONDUCTED EMISSION STANDARD FCC PART 15B

```
EUT:                  SMART PANEL    M/N:WS201
Manufacturer:         Smart Technologies & Investment Ltd.
Operating Condition:  Tx
Test Site:            1#Shielding Room
Operator:             Kevin
Test Specification:   N  120V/60Hz
Comment:              Report No.:ATE20120733
Start of Test:         4/21/2012 / 11:18:23AM
```

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	30.0 MHz	0.8 %	QuasiPeak Average	1.0 s	9 kHz	NSLK8126 2008



MEASUREMENT RESULT: "K-0218-V02_fin"

4/21/2012 11:21AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.169084	56.20	11.1	65	8.8	QP	L1	GND
0.335971	45.90	11.7	59	13.1	QP	L1	GND
2.832069	45.20	11.6	56	10.8	QP	L1	GND

MEASUREMENT RESULT: "K-0218-V02_fin2"

4/21/2012 11:21AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.310189	40.90	11.6	50	9.1	AV	L1	GND
0.338664	39.90	11.7	49	9.1	AV	L1	GND
3.116829	33.60	11.6	46	12.4	AV	L1	GND