

APPLICATION FOR VERIFICATION
On Behalf of
Superior Electronics Corporation

Outdoor Access Control Keypad with Proximity Card Reader
Model No.: SK-1123-SPQ

FCC ID: K4E1123SPQ

Prepared for : Superior Electronics Corporation
Address : No. 10 Lane 31, Chongde St., Sinyi District, Taipei City
110, Taiwan

Prepared by : Accurate Technology Co., Ltd.
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Report No. : ATE20151933
Date of Test : September 1-8, 2015
Date of Report : September 10, 2015

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Test Report Declaration

Applicant& address : Superior Electronics Corporation
No. 10 Lane 31, Chongde St., Sinyi District, Taipei City 110,
Taiwan

Manufacturer& address : Superior Electronics Corporation
No. 10 Lane 31, Chongde St., Sinyi District, Taipei City 110,
Taiwan

Product : Outdoor Access Control Keypad with Proximity Card Reader

Model No. : SK-1123-SPQ

Trade name : N/A

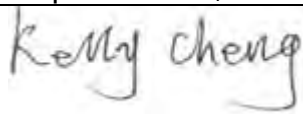
Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C 15.207&15.209 FCC/ANSI C63.4-2014

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 limits both radiated and conducted emissions. 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 : September 1-8, 2015
Date of Report : September 10, 2015

Prepared by : 
(Kelly Cheng, Engineer)

Approved & Authorized Signer : 
(Sean Liu, Manager)

1. TEST RESULTS SUMMARY

Test Items	Test Standard	Test Results
Power Line Conducted Emission	FCC Part 15.207	Pass
Radiated Emission	FCC Part 15.209	Pass

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

The submitted sample is a Outdoor Access Control Keypad with Proximity Card Reader.

The sample is powered by 12-24V DC/AC..

Outdoor Access Control Keypad with Proximity Card Reader		
Frequency	:	125KHz
Number of Channels	:	1
Modulation Type	:	GFSK
Type of Antenna	:	Internal Antenna
Max antenna gain	:	0dBi
Power Supply	:	12-24V DC/AC

2.2. Special Accessory and Auxiliary Equipment

N/A

2.3. Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen, May 10, 2004

Listed by FCC
The Registration Number is 253065
Listed by FCC
The Registration Number is 752051

Listed by Industry Canada
The Registration Number is 5077A-1
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&D, Changyuan New Material Port, Keyuan Rd., Science & Industry Park, Nanshan District, Shenzhen 518057, P.R. China

2.4. Measurement Uncertainty

Conducted emission expanded uncertainty : U=2.23dB, k=2
Power disturbance expanded uncertainty : U=2.92dB, k=2
Radiated emission expanded uncertainty : U=3.08dB, k=2
(9kHz-30MHz)
Radiated emission expanded uncertainty : U=4.42dB, k=2
(30MHz-1000MHz)
Radiated emission expanded uncertainty : U=4.06dB, k=2
(Above 1GHz)

3. POWER LINE CONDUCTED MEASUREMENT

3.1. For Power Line Conducted Emission

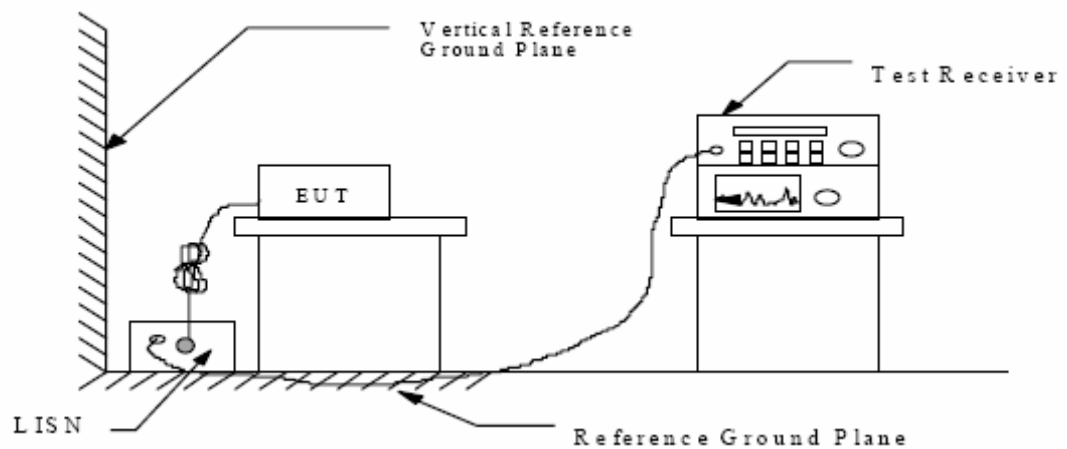
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCS30	100307	Jan. 11, 2015	1 Year
2.	L.I.S.N.	Schwarzbeck	NLSK8126	8126431	Jan. 11, 2015	1 Year
3.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	Jan. 11, 2015	1 Year
4.	50Ω Coaxial Switch	Anritsu Corp	MP59B	6200283933	Jan. 11, 2015	1 Year
Expanded Uncertainty: U= 2.23dB, k=2						

3.2. Block Diagram of Test Setup

3.2.1. Block diagram of connection between the EUT and simulators



3.2.2. Shielding Room Test Setup Diagram



(EUT:Outdoor Access Control Keypad with Proximity Card Reader)

3.3.The Emission Limit

3.3.1.Conducted Emission Measurement Limits According to Section 15.107(a)

Frequency (MHz)	Limit dB(μ V)	
	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.

3.4.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.

3.4.1.Outdoor Access Control Keypad with Proximity Card Reader (EUT)

Model Number : SK-1123-SPQ
Manufacturer : Superior Electronics Corporation

3.5.Operating Condition of EUT

3.5.1.Setup the EUT and simulator as shown as Section 3.1.

3.5.2.Turn on the power of all equipment.

3.5.3.Let the EUT work in modes (TX) and measure it.

3.6.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: 2009 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.

3.7.Power Line Conducted Emission Measurement Results

PASS.

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

Test mode : TX (AC 12V)								
MEASUREMENT RESULT: "TT02_fin"								
9/5/2015 3:32AM								
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE	
0.151202	42.50	11.0	66	23.4	QP	L1	GND	
0.306497	36.10	11.6	60	24.0	QP	L1	GND	
0.613892	33.80	11.9	56	22.2	QP	L1	GND	
MEASUREMENT RESULT: "TT02_fin2"								
9/5/2015 3:32AM								
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE	
0.553370	34.70	12.0	46	11.3	AV	L1	GND	
0.798945	34.50	11.9	46	11.5	AV	L1	GND	
1.043940	33.50	11.8	46	12.5	AV	L1	GND	
MEASUREMENT RESULT: "TT01_fin"								
9/5/2015 3:28AM								
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE	
0.150000	40.20	11.0	66	25.8	QP	N	GND	
2.274000	30.10	11.6	56	25.9	QP	N	GND	
3.502500	29.10	11.5	56	26.9	QP	N	GND	
MEASUREMENT RESULT: "TT01_fin2"								
9/5/2015 3:28AM								
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE	
0.186000	39.30	11.2	54	14.9	AV	N	GND	
2.769000	29.60	11.6	46	16.4	AV	N	GND	
3.259500	29.90	11.5	46	16.1	AV	N	GND	

Test mode : TX (AC 24V)

MEASUREMENT RESULT: "W-0912-W03_fin"

9/5/2015 15:44

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.178000	56.00	10.5	65	8.6	QP	L1	GND
3.422000	41.10	11.7	56	14.9	QP	L1	GND
18.983000	34.90	11.9	60	25.1	QP	L1	GND

MEASUREMENT RESULT: "W-0912-W03_fin2"

9/5/2015 15:44

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.182000	38.60	10.5	54	15.8	AV	L1	GND
3.345500	31.90	11.7	46	14.1	AV	L1	GND
18.848000	28.00	11.9	50	22.0	AV	L1	GND

MEASUREMENT RESULT: "W-0912-W04_fin"

9/5/2015 15:47

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.174000	51.00	10.5	65	13.8	QP	N	GND
2.823500	39.40	11.7	56	16.6	QP	N	GND
18.879500	34.00	11.9	60	26.0	QP	N	GND

MEASUREMENT RESULT: "W-0912-W04_fin2"

9/5/2015 15:47

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.188000	37.10	10.6	54	17.0	AV	N	GND
3.219500	31.80	11.7	46	14.2	AV	N	GND
18.713000	27.30	11.9	50	22.7	AV	N	GND

Emissions attenuated more than 20 dB below the permissible value are not reported.

The spectral diagrams are attached as below.

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CONDUCTED EMISSION STANDARD FCC PART 15 B

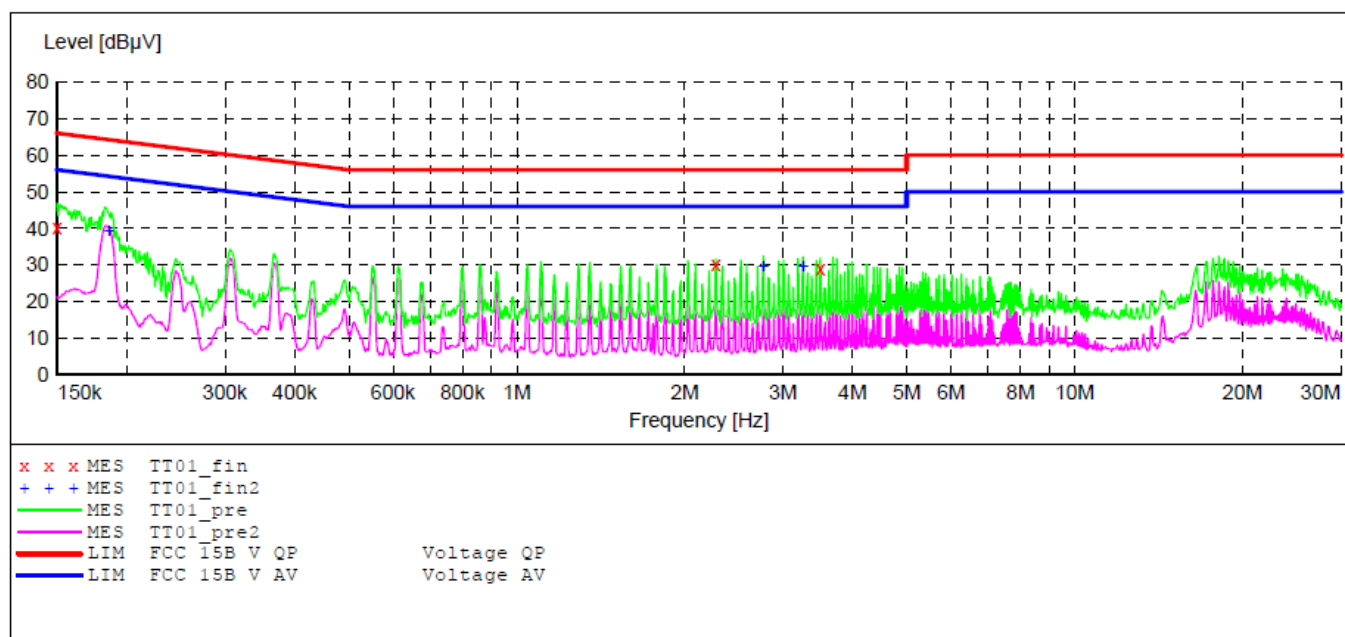
EUT: Outdoor Access Control Keypad with Proximity Card Reader
 Manufacturer: Superior M/N:SK-1123-SPQ
 Operating Condition: TX
 Test Site: 1#Shielding Room
 Operator: TOM
 Test Specification: N AC 12V
 Comment: Report No.:ATE20151933
 Start of Test: 9/5/2015 / 3:24:22AM

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

Short Description: SUB STD VTERM2 1.70

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

 Average



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CONDUCTED EMISSION STANDARD FCC PART 15 B

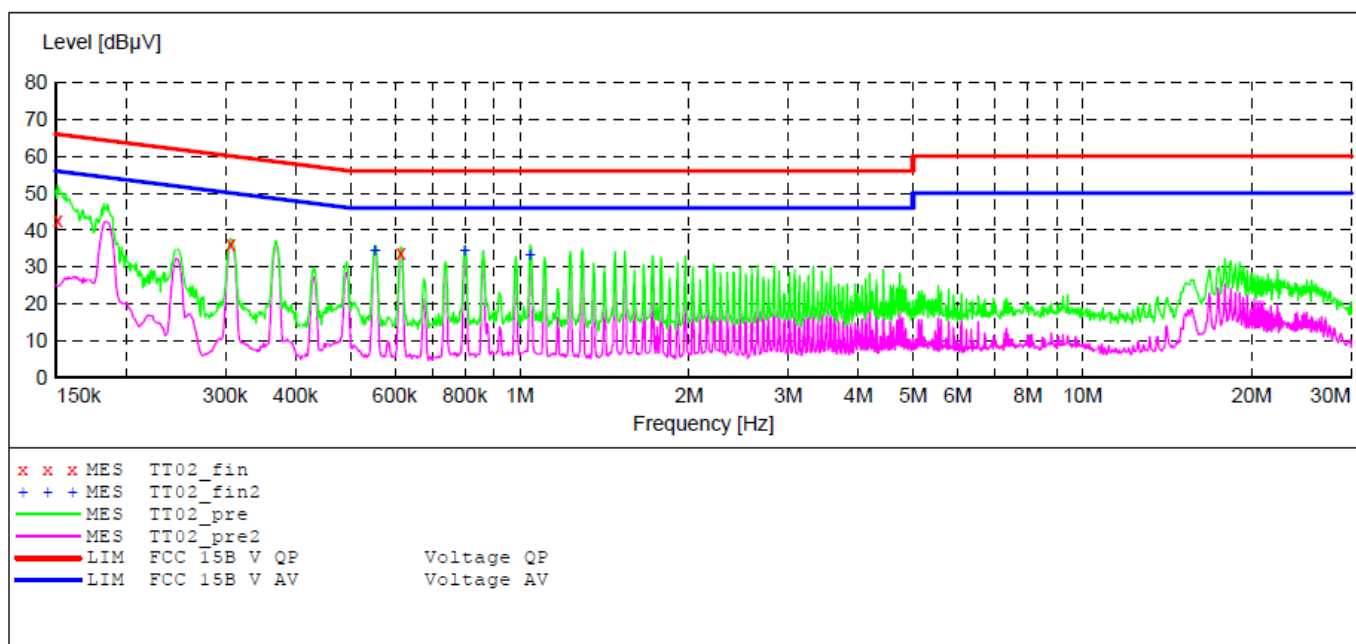
EUT: Outdoor Access Control Keypad with Proximity Card Reader
 Manufacturer: Superior M/N:SK-1123-SPQ
 Operating Condition: TX
 Test Site: 1#Shielding Room
 Operator: TOM
 Test Specification: L AC 12V
 Comment: Report No.:ATE20151933
 Start of Test: 9/5/2015 / 3:29:45AM

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

Short Description: SUB STD VTERM2 1.70

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

 Average



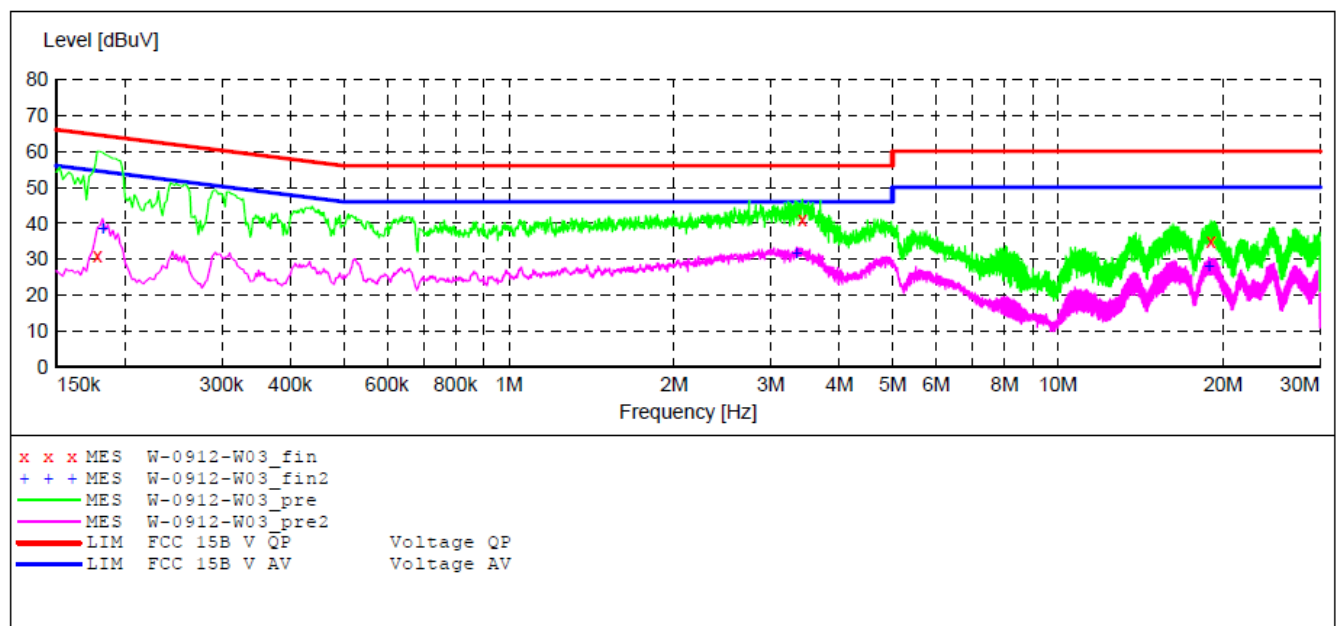
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Outdoor Access Control Keypad with Proximity Card Reader
 Manufacturer: Superior M/N:SK-1123-SPQ
 Operating Condition: TX
 Test Site: 2#Shielding Room
 Operator: TOM
 Test Specification: L AC 24V
 Comment: Report No.:ATE20151933
 Start of Test: 9/5/2015 / 15:41:03

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

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	1.0 s	9 kHz	LISN (ESH3-Z5)
Average						



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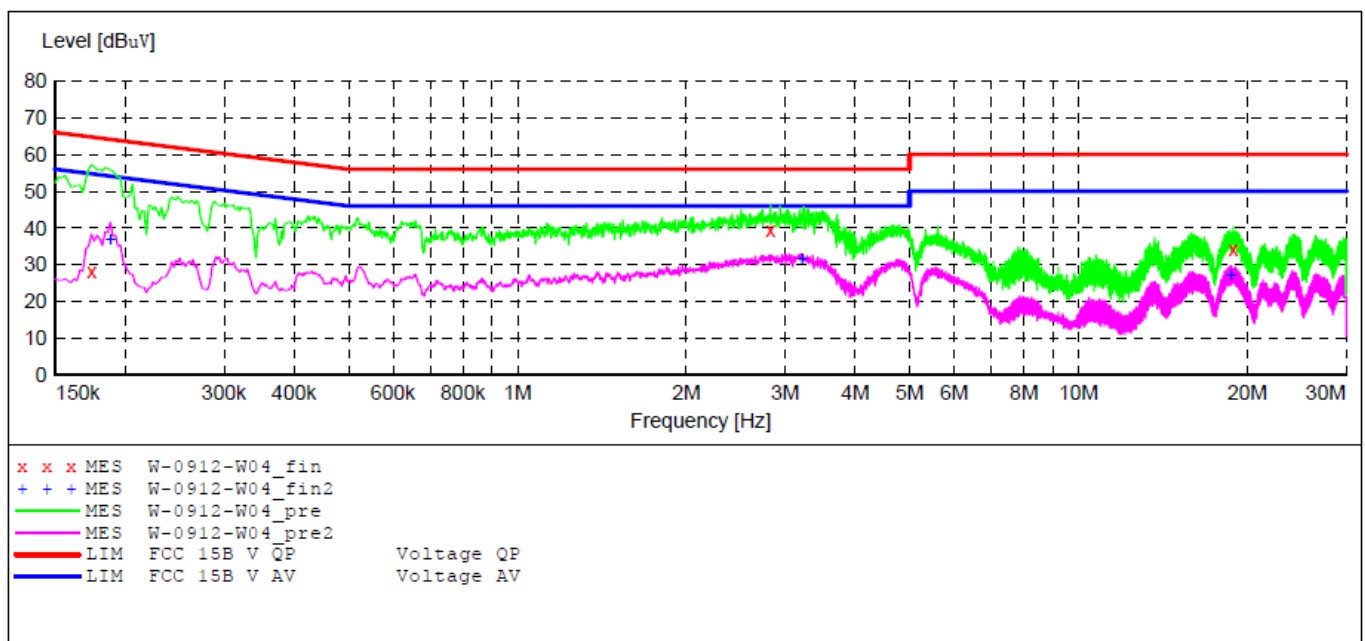
CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Outdoor Access Control Keypad with Proximity Card Reader
 Manufacturer: Superior M/N:SK-1123-SPQ
 Operating Condition: ON
 Test Site: 2#Shielding Room
 Operator: TOM
 Test Specification: N AC 24V
 Comment: Report No.:ATE20151933
 Start of Test: 9/5/2015 / 15:45:31

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

Short Description: SUB STD VTERM2 1.70

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	1.0 s	9 kHz	LISN (ESH3-Z5)
			Average			



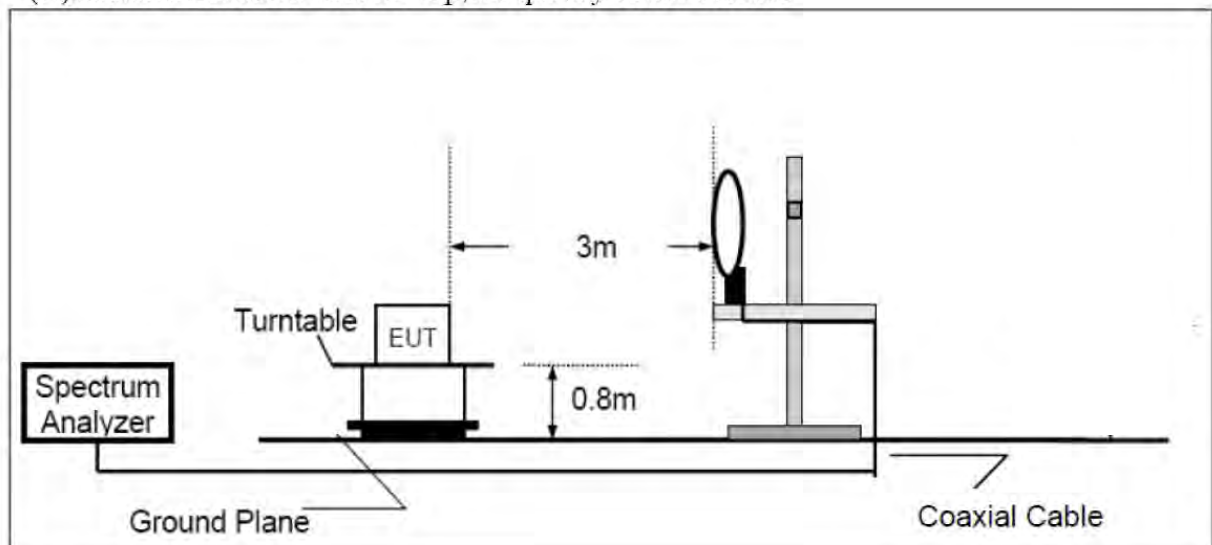
4. RADIATED EMISSION MEASUREMENT

4.1. For Radiated Emission Measurement

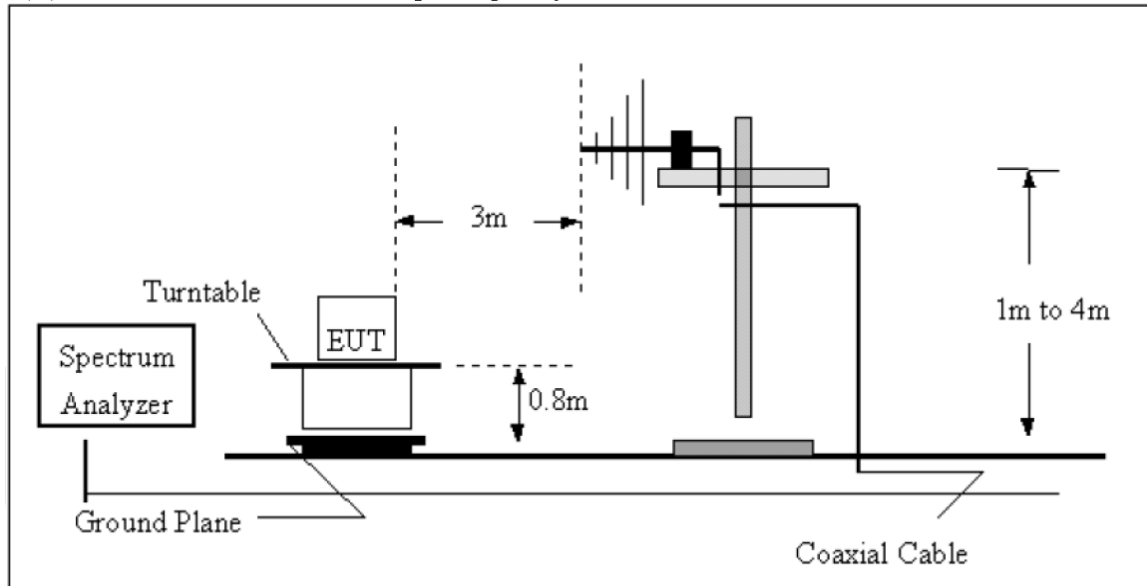
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 11, 2015	1 Year
2.	Test Receiver	Rohde & Schwarz	ESCS30	100307	Jan. 11, 2015	1 Year
3.	Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 15, 2015	1 Year
4.	Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 15, 2015	1 Year
5.	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 15, 2015	1 Year
6.	50 Coaxial Switch	Anritsu Corp	MP59B	6200506474	Jan. 11, 2015	1 Year
12.	Pre-Amplifier	Rohde & Schwarz	CBLU11835 40-01	3791	Jan. 11, 2015	1 Year
Expanded Uncertainty (9kHz-30MHz): U=3.08dB, k=2 Expanded Uncertainty (30MHz-1000MHz): U=4.42dB, k=2 Expanded Uncertainty (Above 1GHz): U=4.06dB, k=2						

4.2. TEST CONFIGURATION

(A) Radiated Emission Test Set-Up, Frequency below 30MHz

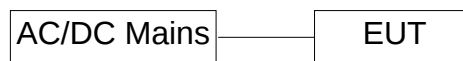


(B) Radiated Emission Test Set-Up, Frequency 30-1000MHz



4.3. Block Diagram of Test Setup

4.3.1. Block diagram of connection between the EUT and simulators



4.4. Radiated Emission Limit

Frequency (MHz)	Field Strength Limitation		Field Strength Limitation at 3m Measurement Dist	
	(uV/m)	Dist	(uV/m)	(dBuV/m)
0.009 – 0.490	2400 / F(KHz)	300m	$10000 * 2400/F(KHz)$	$20\log 2400/F(KHz) + 80$
0.490 – 1.705	24000 / F(KHz)	30m	$100 * 24000/F(KHz)$	$20\log 24000/F(KHz) + 40$
1.705 – 30.00	30	30m	$100 * 30$	$20\log 30 + 40$
30.0 – 88.0	100	3m	100	$20\log 100$
88.0 – 216.0	150	3m	150	$20\log 150$
216.0 – 960.0	200	3m	200	$20\log 200$
Above 960.0	500	3m	500	$20\log 500$

Limit: $2400/125=19.2\mu V/m@300m$

Distance Correction Factor= $40\log(\text{test distance}/\text{specific distance})$

4.5. EUT Configuration on Measurement

The 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.

4.5.1. Outdoor Access Control Keypad with Proximity Card Reader (EUT)

Model Number : SK-1123-SPQ
Manufacturer : Superior Electronics Corporation

4.6. Operating Condition of EUT

4.6.1. Setup the EUT and simulator as shown as Section 4.2.

4.6.2. Turn on the power of all equipment.

4.6.3. Let the EUT work in test mode and measure it.

4.7. 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 bilog 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 interface cables must be manipulated according to ANSI C63.10:2014 on radiated emission measurement.

From 9kHz to 30MHz at distance 3m The EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.

From 30MHz to 1000MHz at distance 3m The measuring antenna height varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity. The measurements were performed for both vertical and horizontal antenna polarization.

The final measurement will be performed with an EMI Receiver set to Quasi Peak detector for the frequency bands 9kHz to 90kHz and 110 to 490 kHz where an average detector will be used according to Section 15.209(d)(2).

The final level, expressed in dBuV/m, is arrived at by taking the reading from the EMI receiver (Level dBuV) and adding the antenna correction factor and cable loss factor (Factor dB) to it. This result then has to be compared with the relevant FCC limit. The resolution bandwidth during the measurement is as follows:

9kHz – 150kHz: ResBW:200Hz

150kHz – 30MHz: ResBW:9kHz

The bandwidth of the EMI test receiver (R&S ESCS30) is set at 120kHz from 30MHz to 1000MHz.

4.8.Radiated Emission Noise Measurement Result

PASS.

From 9 kHz to 30MHz (DC 24V (Worse))

Frequency (MHz)	Quasi Peak (dB μ V/m)	Azimuth	Polarity (H/V)	Factors (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
0.125	72.17	148	H	-55.33	105.7	-33.53
2.03	40.56	38	H	-52.18	69.5	-28.94
15.26	37.28	201	H	-52.04	69.5	-32.22
0.125	72.16	176	V	-56.30	105.7	-33.54
3.79	42.39	351	V	-53.24	69.5	-27.11
17.54	30.28	18	V	-52.26	69.5	-39.22

From 9 kHz to 30MHz (AC 24V (Worse))

Frequency (MHz)	Quasi Peak (dB μ V/m)	Azimuth	Polarity (H/V)	Factors (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
0.125	69.16	151	H	-56.27	105.7	-36.54
2.02	39.55	49	H	-54.12	69.5	-29.95
14.25	32.29	203	H	-52.16	69.5	-37.21
0.125	70.34	189	V	-56.01	105.7	-35.36
3.68	46.75	278	V	-55.15	69.5	-22.75
17.35	33.38	159	V	-50.31	69.5	-36.12

Part 15 Section 15.31(f)(2) (9kHz-30MHz)

Limit at 3m=Limit at 300m-40*log(300(m)/3(m))

Limit at 3m=Limit at 30m-40*log(30(m)/3(m))



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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Ricky2015 #742

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Outdoor Access Control Keypad with Proximity Card Reader Engineer Signature: Frank

Mode: TX

Distance: 3m

Model: SK-1123-SPQ

Manufacturer: Superior

Polarization: Horizontal

Power Source: AC 12V

Date: 15/09/04/

Time: 12/51/06

Note: Report NO.:ATE20151933



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.2625	46.15	-17.58	28.57	40.00	-11.43	QP			
2	160.3208	53.91	-21.31	32.60	43.50	-10.90	QP			
3	242.6888	49.53	-18.23	31.30	46.00	-14.70	QP			



ACCURATE TECHNOLOGY CO., LTD.

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Fax:+86-0755-26503396

Job No.: Ricky2015 #743

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Outdoor Access Control Keypad with Proximity Card Reader Engineer Signature: Frank

Mode: TX

Distance: 3m

Model: SK-1123-SPQ

Manufacturer: Superior

Polarization: Vertical

Power Source: AC 12V

Date: 15/09/04/

Time: 12/52/30

Note: Report NO.:ATE20151933



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	59.1052	59.26	-22.57	36.69	40.00	-3.31	QP			
2	130.3048	61.58	-21.74	39.84	43.50	-3.66	QP			
3	160.3209	60.55	-21.31	39.24	43.50	-4.26	QP			



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Site: 1# Chamber
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Fax:+86-0755-26503396

Job No.: Ricky 2015 #817

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Outdoor Access Control Keypad with Proximity Card Reader

Mode: TX

Model: SK-1123-SPQ

Manufacturer: Superior

Polarization: Horizontal

Power Source: DC 12V

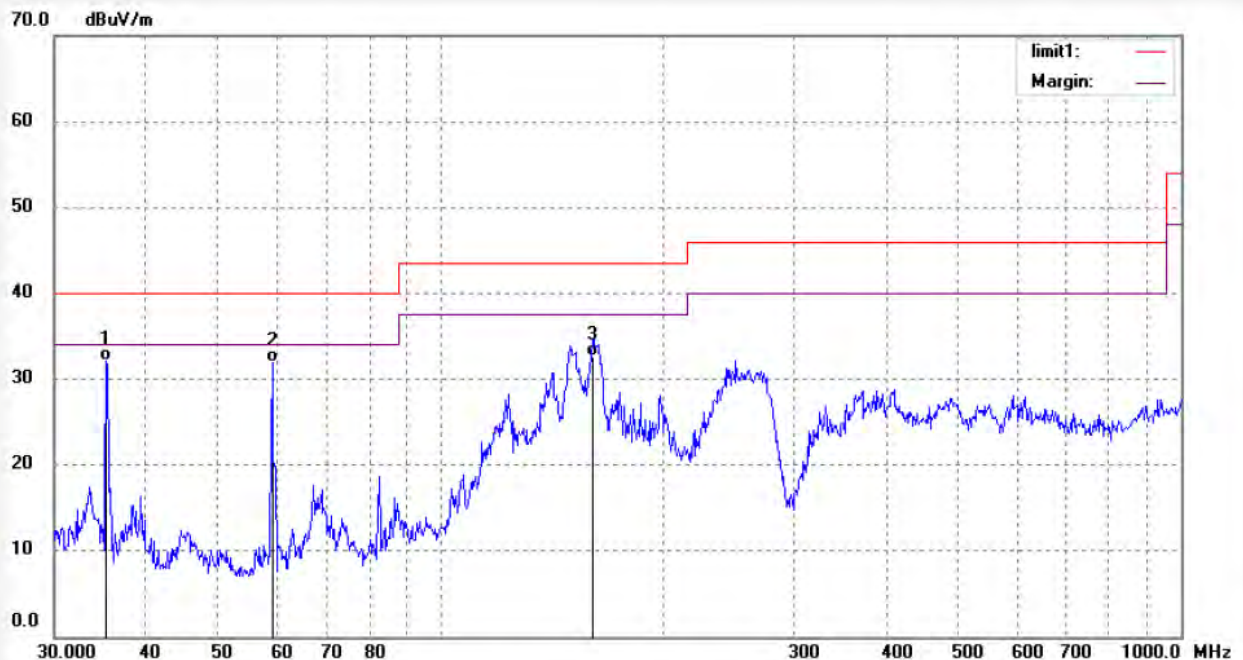
Date: 15/09/19/

Time: 10/24/11

Engineer Signature: Frank

Distance: 3m

Note: Report NO.:ATE20151933



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.2625	49.65	-17.58	32.07	40.00	-7.93	QP			
2	59.1052	53.01	-21.07	31.94	40.00	-8.06	QP			
3	160.3206	55.42	-22.82	32.60	43.50	-10.90	QP			



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

Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Ricky 2015 #818

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Outdoor Access Control Keypad with Proximity Card Reader

Mode: TX

Model: SK-1123-SPQ

Manufacturer: Superior

Polarization: Vertical

Power Source: DC 12V

Date: 15/09/19/

Time: 10/26/27

Engineer Signature: Frank

Distance: 3m

Note: Report NO.:ATE20151933



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.2625	53.00	-17.58	35.42	40.00	-4.58	QP			
2	59.1052	55.76	-21.07	34.69	40.00	-5.31	QP			
3	130.7632	61.08	-23.06	38.02	43.50	-5.48	QP			



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Site: 1# Chamber

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Job No.: Ricky 2015 #816

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Outdoor Access Control Keypad with Proximity Card Reader

Mode: TX

Model: SK-1123-SPQ

Manufacturer: Superior

Polarization: Vertical

Power Source: DC 24V

Date: 15/09/19/

Time: 10/20/33

Engineer Signature: Frank

Distance: 3m

Note: Report NO.:ATE20151933



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.2625	53.00	-17.58	35.42	40.00	-4.58	QP			
2	59.1052	55.76	-21.07	34.69	40.00	-5.31	QP			
3	160.3206	61.56	-22.82	38.74	43.50	-4.76	QP			



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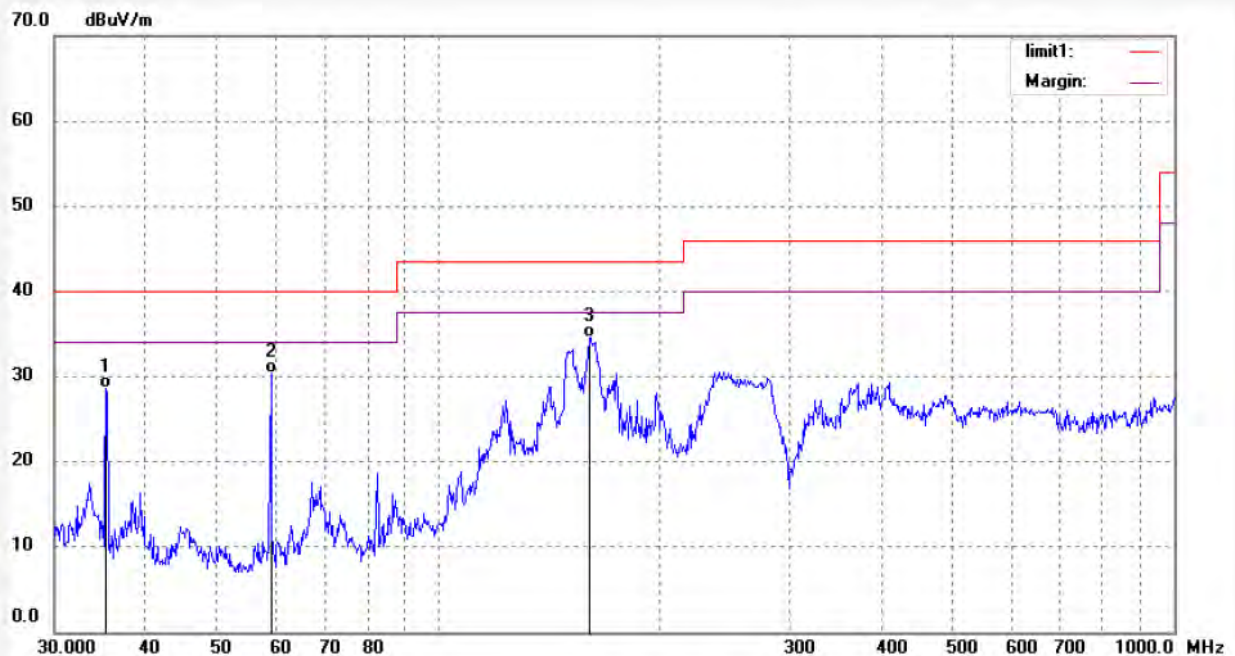
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: Ricky 2015 #815
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Outdoor Access Control Keypad with Proximity Card Reader
Mode: TX
Model: SK-1123-SPQ
Manufacturer: Superior

Polarization: Horizontal
Power Source: DC 24V
Date: 15/09/19/
Time: 10/18/25
Engineer Signature: Frank
Distance: 3m

Note: Report NO.:ATE20151933



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.2625	46.15	-17.58	28.57	40.00	-11.43	QP			
2	59.1052	51.51	-21.07	30.44	40.00	-9.56	QP			
3	160.3206	57.42	-22.82	34.60	43.50	-8.90	QP			



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Report No.: ATE20151933

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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Ricky 2015 #814

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Outdoor Access Control Keypad with Proximity Card Reader

Mode: TX

Model: SK-1123-SPQ

Manufacturer: Superior

Polarization: Vertical

Power Source: AC 24V

Date: 15/09/19/

Time: 10/16/55

Engineer Signature: Frank

Distance: 3m

Note: Report NO.:ATE20151933



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	59.1052	57.76	-21.07	36.69	40.00	-3.31	QP			
2	130.7632	61.08	-23.06	38.02	43.50	-5.48	QP			
3	161.4515	61.81	-22.69	39.12	43.50	-4.38	QP			



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Report No.: ATE20151933

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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Ricky 2015 #813

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Outdoor Access Control Keypad with Proximity Card Reader

Mode: TX

Model: SK-1123-SPQ

Manufacturer: Superior

Polarization: Horizontal

Power Source: AC 24V

Date: 15/09/19/

Time: 10/13/46

Engineer Signature: Frank

Distance: 3m

Note: Report NO.:ATE20151933



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.2625	48.65	-17.58	31.07	40.00	-8.93	QP			
2	162.5900	52.88	-22.58	30.30	43.50	-13.20	QP			
3	250.4858	48.90	-19.71	29.19	46.00	-16.81	QP			

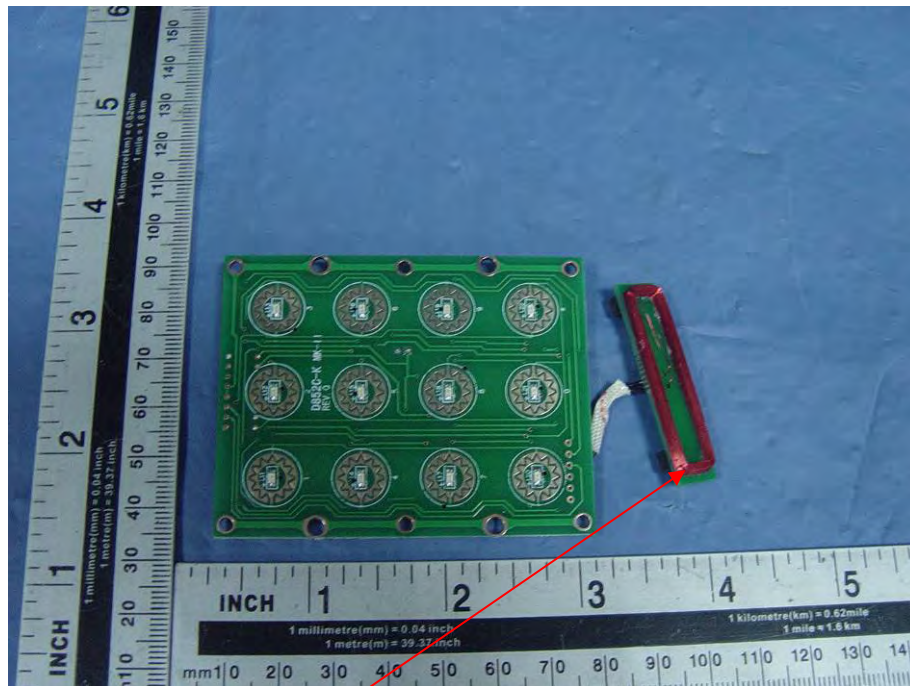
5. ANTENNA REQUIREMENT

5.1.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.

5.2.Antenna Construction

Device is equipped with permanent attached antenna, which isn't displaced by other antenna. The Antenna gain of EUT is 0dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna