

APPLICATION FOR VERIFICATION
On Behalf of
REALTRACE

Pet Scan RT250 Electronic RFID Reader
Model No.:ZR004

FCC ID: BSO-ZR004

Prepared for : REALTRACE
Address : 2, rue Georges Pompidou, 91140 VILLEBON SUR
YVETTE, France

Prepared by : Accurate Technology Co., Ltd.
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Report No. : ATE20161945
Date of Test : September 18, 2016
Date of Report : September 20, 2016

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Test Report Declaration

Applicant& address : REALTRACE
2, rue Georges Pompidou, 91140 VILLEBON SUR YVETTE,
France

Manufacturer& address : SHENZHEN MARKTRACE CO., LTD
F5, Blog, 7, Changyuan New Material Port, Keyuan Rd,
Science & Industry Park, Nanshan District, Shenzhen,
518057, P.R.C

Product : Pet Scan RT250 Electronic RFID Reader

Model No. : ZR004

Trade name : N/A

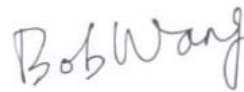
Measurement Procedure Used:


FCC Rules and Regulations Part 15 Subpart C 15.207&15.209 ANSI C63.10: 2013

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 18, 2016
Date of Report : September 20, 2016

Prepared by : 
(Bob Wang, 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 Pet Scan RT250 Electronic RFID Reader. The sample is powered by DC 3.7V & DC 5V(Power by USB port).

		Pet Scan RT250 Electronic RFID Reader
Frequency	:	134.2KHz
Number of Channels	:	1
Modulation Type	:	GFSK
Type of Antenna	:	Internal Antenna
Max antenna gain	:	1dBi
Power Supply	:	DC 3.7V & DC 5V(Power by USB port)

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. 9, 2016	1 Year
2.	L.I.S.N.	Schwarzbeck	NLSK8126	8126431	Jan. 9, 2016	1 Year
3.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	Jan. 9, 2016	1 Year
4.	50Ω Coaxial Switch	Anritsu Corp	MP59B	620028393 3	Jan. 9, 2016	1 Year
Expanded Uncertainty: U= 2.23dB, k=2						

3.2. Power Line Conducted Emission Measurement Limits (Class B)

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15—0.50	66—56*	56—46*
0.50—5.00	56	46
5.00—30.0	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

3.3.Manufacturer

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

3.3.1.Power bank (EUT)

Model Number: ZR004

Manufacturer: REALTRACE

3.4.Operating Condition of EUT

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

3.4.2.Turn on the power of all equipment.

3.4.3.Let the EUT work in test mode (Charging) and measure it.

3.5. 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: 2014 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.

3.6. Power Line Conducted Emission Measurement Results

PASS.

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

Test mode : Charging (AC 120V/60Hz)								
EUT mode : ZR004								
MEASUREMENT RESULT: "FS-0918-01_fin"								
2016-9-18 9:27								
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE	
0.176000	54.50	10.5	65	10.2	QP	L1	GND	
0.406000	39.00	11.3	58	18.7	QP	L1	GND	
1.866000	35.80	11.7	56	20.2	QP	L1	GND	
3.417500	37.70	11.7	56	18.3	QP	L1	GND	
5.465000	32.10	11.8	60	27.9	QP	L1	GND	
28.545500	32.20	12.0	60	27.8	QP	L1	GND	
MEASUREMENT RESULT: "FS-0918-01_fin2"								
2016-9-18 9:27								
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE	
0.198000	34.60	10.6	54	19.1	AV	L1	GND	
0.526000	27.40	11.5	46	18.6	AV	L1	GND	
2.058500	27.00	11.7	46	19.0	AV	L1	GND	
3.147500	29.50	11.7	46	16.5	AV	L1	GND	
5.465000	25.20	11.8	50	24.8	AV	L1	GND	
18.672500	28.70	11.9	50	21.3	AV	L1	GND	
MEASUREMENT RESULT: "FS-0918-02_fin"								
2016-9-18 9:20								
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE	
0.172000	52.40	10.5	65	12.5	QP	N	GND	
0.418000	38.60	11.3	58	18.9	QP	N	GND	
2.000000	36.00	11.7	56	20.0	QP	N	GND	
2.873000	39.40	11.7	56	16.6	QP	N	GND	
5.442500	34.90	11.8	60	25.1	QP	N	GND	
28.518500	30.90	12.0	60	29.1	QP	N	GND	
MEASUREMENT RESULT: "FS-0918-02_fin2"								
2016-9-18 9:20								
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE	
0.178000	38.50	10.5	55	16.1	AV	N	GND	
0.532000	26.30	11.5	46	19.7	AV	N	GND	
2.103500	27.30	11.7	46	18.7	AV	N	GND	
3.215000	29.80	11.7	46	16.2	AV	N	GND	
5.442500	27.50	11.8	50	22.5	AV	N	GND	
18.677000	29.10	11.9	50	20.9	AV	N	GND	

Test mode : Charging (AC 240V/60Hz)								
EUT mode : ZR004								
MEASUREMENT RESULT: "FS-0918-03_fin"								
2016-9-18 9:22								
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE	
0.174000	53.20	10.5	65	11.6	QP	N	GND	
0.408000	38.20	11.3	58	19.5	QP	N	GND	
2.067500	36.80	11.7	56	19.2	QP	N	GND	
3.039500	38.60	11.7	56	17.4	QP	N	GND	
5.348000	34.50	11.8	60	25.5	QP	N	GND	
18.524000	35.80	11.9	60	24.2	QP	N	GND	
MEASUREMENT RESULT: "FS-0918-03_fin2"								
2016-9-18 9:22								
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE	
0.188000	38.50	10.6	54	15.6	AV	N	GND	
0.526000	26.50	11.5	46	19.5	AV	N	GND	
2.099000	27.60	11.7	46	18.4	AV	N	GND	
3.084500	29.80	11.7	46	16.2	AV	N	GND	
5.312000	27.70	11.8	50	22.3	AV	N	GND	
18.731000	29.70	11.9	50	20.3	AV	N	GND	
MEASUREMENT RESULT: "FS-0918-04_fin"								
2016-9-18 9:30								
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE	
0.176000	55.50	10.5	65	9.2	QP	L1	GND	
0.428000	40.20	11.3	57	17.1	QP	L1	GND	
2.040500	35.90	11.7	56	20.1	QP	L1	GND	
3.291500	38.10	11.7	56	17.9	QP	L1	GND	
5.402000	32.30	11.8	60	27.7	QP	L1	GND	
18.425000	34.80	11.9	60	25.2	QP	L1	GND	
MEASUREMENT RESULT: "FS-0918-04_fin2"								
2016-9-18 9:30								
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE	
0.184000	38.60	10.5	54	15.7	AV	L1	GND	
0.522000	29.20	11.5	46	16.8	AV	L1	GND	
2.085500	27.00	11.7	46	19.0	AV	L1	GND	
3.395000	27.80	11.7	46	18.2	AV	L1	GND	
5.271500	26.10	11.8	50	23.9	AV	L1	GND	
18.276500	28.40	11.9	50	21.6	AV	L1	GND	

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

The spectral diagrams are attached as below.

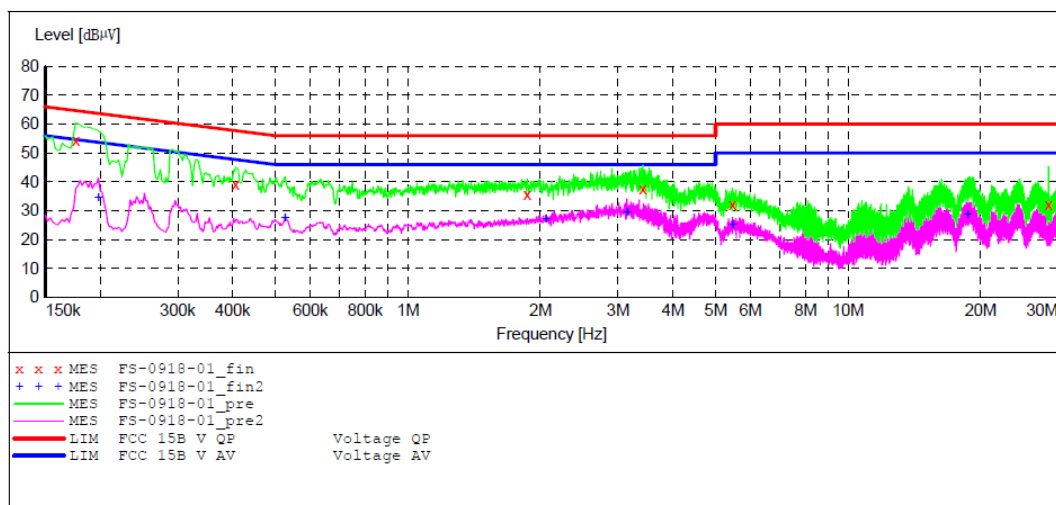
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Pet Scan RT250 Electronic RFID Reader M/N:ZR004
 Manufacturer: MARKTRACE
 Operating Condition: Charging
 Test Site: 2#Shielding Room
 Operator: DING
 Test Specification: L 120V/60Hz
 Comment: Report NO.:ATE20161945
 Start of Test: 2016-9-18 / 9:25:30

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 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "FS-0918-01_fin"

2016-9-18 9:27

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.176000	54.50	10.5	65	10.2	QP	L1	GND
0.406000	39.00	11.3	58	18.7	QP	L1	GND
1.866000	35.80	11.7	56	20.2	QP	L1	GND
3.417500	37.70	11.7	56	18.3	QP	L1	GND
5.465000	32.10	11.8	60	27.9	QP	L1	GND
28.545500	32.20	12.0	60	27.8	QP	L1	GND

MEASUREMENT RESULT: "FS-0918-01_fin2"

2016-9-18 9:27

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.198000	34.60	10.6	54	19.1	AV	L1	GND
0.526000	27.40	11.5	46	18.6	AV	L1	GND
2.058500	27.00	11.7	46	19.0	AV	L1	GND
3.147500	29.50	11.7	46	16.5	AV	L1	GND
5.465000	25.20	11.8	50	24.8	AV	L1	GND
18.672500	28.70	11.9	50	21.3	AV	L1	GND

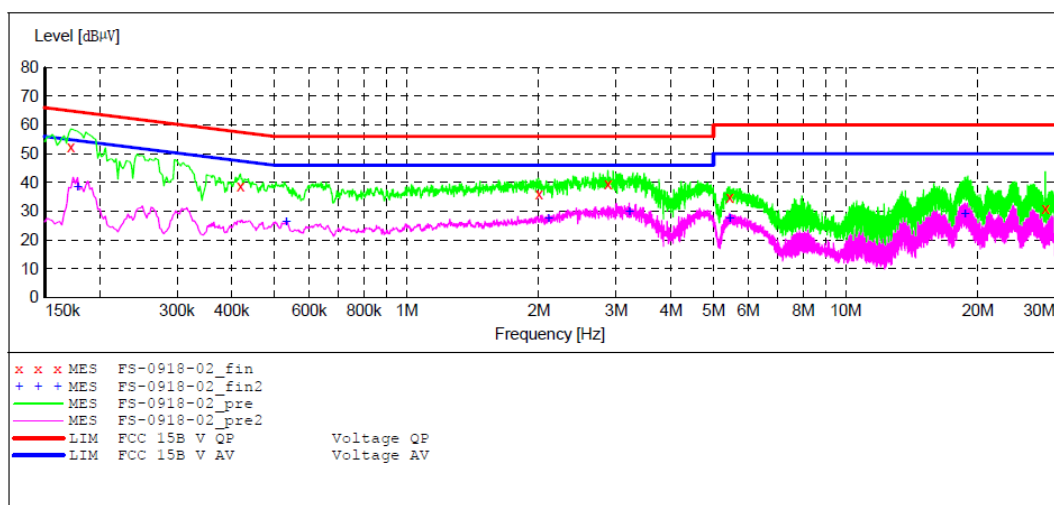
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Pet Scan RT250 Electronic RFID Reader M/N:ZR004
 Manufacturer: MARKTRACE
 Operating Condition: Charging
 Test Site: 2#Shielding Room
 Operator: DING
 Test Specification: N 120V/60Hz
 Comment: Report NO.:ATE20161945
 Start of Test: 2016-9-18 / 9:19:08

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 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "FS-0918-02_fin"

2016-9-18 9:20

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.172000	52.40	10.5	65	12.5	QP	N	GND
0.418000	38.60	11.3	58	18.9	QP	N	GND
2.000000	36.00	11.7	56	20.0	QP	N	GND
2.873000	39.40	11.7	56	16.6	QP	N	GND
5.442500	34.90	11.8	60	25.1	QP	N	GND
28.518500	30.90	12.0	60	29.1	QP	N	GND

MEASUREMENT RESULT: "FS-0918-02_fin2"

2016-9-18 9:20

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.178000	38.50	10.5	55	16.1	AV	N	GND
0.532000	26.30	11.5	46	19.7	AV	N	GND
2.103500	27.30	11.7	46	18.7	AV	N	GND
3.215000	29.80	11.7	46	16.2	AV	N	GND
5.442500	27.50	11.8	50	22.5	AV	N	GND
18.677000	29.10	11.9	50	20.9	AV	N	GND

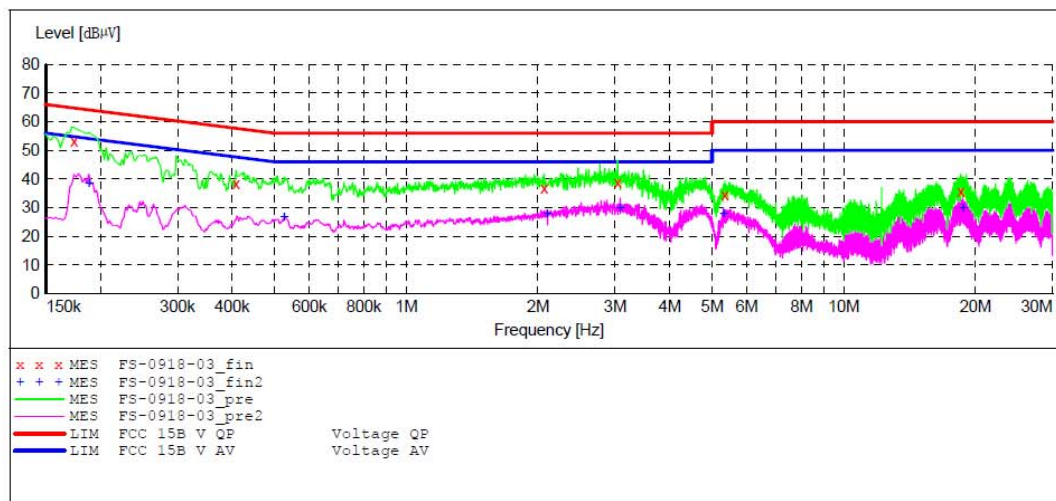
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Pet Scan RT250 Electronic RFID Reader M/N:ZR004
 Manufacturer: MARKTRACE
 Operating Condition: Charging
 Test Site: 2#Shielding Room
 Operator: DING
 Test Specification: N 240V/60Hz
 Comment: Report NO.:ATE20161945
 Start of Test: 2016-9-18 / 9:21:01

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 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "FS-0918-03_fin"

2016-9-18 9:22

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.174000	53.20	10.5	65	11.6	QP	N	GND
0.408000	38.20	11.3	58	19.5	QP	N	GND
2.067500	36.80	11.7	56	19.2	QP	N	GND
3.039500	38.60	11.7	56	17.4	QP	N	GND
5.348000	34.50	11.8	60	25.5	QP	N	GND
18.524000	35.80	11.9	60	24.2	QP	N	GND

MEASUREMENT RESULT: "FS-0918-03_fin2"

2016-9-18 9:22

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.188000	38.50	10.6	54	15.6	AV	N	GND
0.526000	26.50	11.5	46	19.5	AV	N	GND
2.099000	27.60	11.7	46	18.4	AV	N	GND
3.084500	29.80	11.7	46	16.2	AV	N	GND
5.312000	27.70	11.8	50	22.3	AV	N	GND
18.731000	29.70	11.9	50	20.3	AV	N	GND

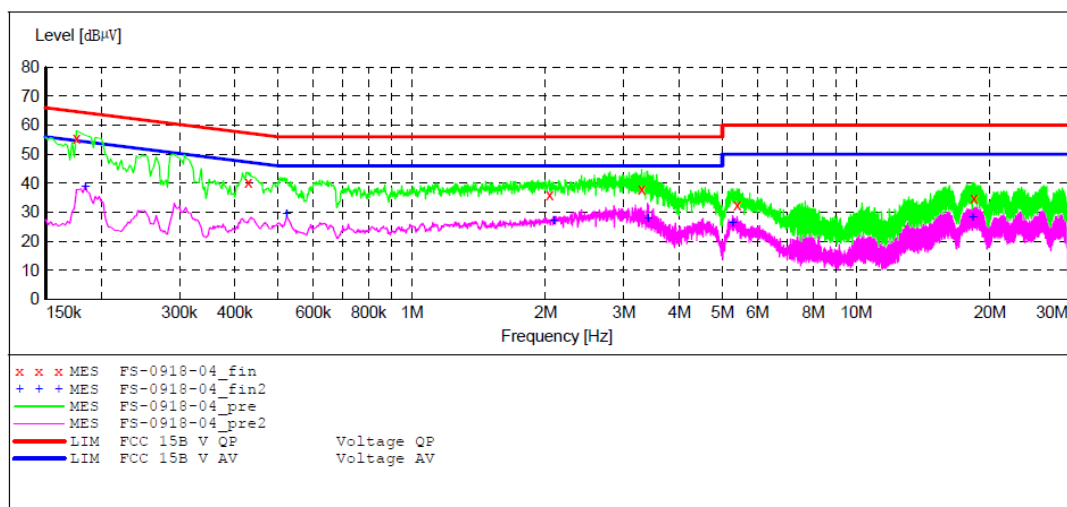
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Pet Scan RT250 Electronic RFID Reader M/N:ZR004
 Manufacturer: MARKTRACE
 Operating Condition: Charging
 Test Site: 2#Shielding Room
 Operator: DING
 Test Specification: L 240V/60Hz
 Comment: Report NO.:ATE20161945
 Start of Test: 2016-9-18 / 9:28:19

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 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "FS-0918-04_fin"

2016-9-18 9:30

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.176000	55.50	10.5	65	9.2	QP	L1	GND
0.428000	40.20	11.3	57	17.1	QP	L1	GND
2.040500	35.90	11.7	56	20.1	QP	L1	GND
3.291500	38.10	11.7	56	17.9	QP	L1	GND
5.402000	32.30	11.8	60	27.7	QP	L1	GND
18.425000	34.80	11.9	60	25.2	QP	L1	GND

MEASUREMENT RESULT: "FS-0918-04_fin2"

2016-9-18 9:30

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.184000	38.60	10.5	54	15.7	AV	L1	GND
0.522000	29.20	11.5	46	16.8	AV	L1	GND
2.085500	27.00	11.7	46	19.0	AV	L1	GND
3.395000	27.80	11.7	46	18.2	AV	L1	GND
5.271500	26.10	11.8	50	23.9	AV	L1	GND
18.276500	28.40	11.9	50	21.6	AV	L1	GND

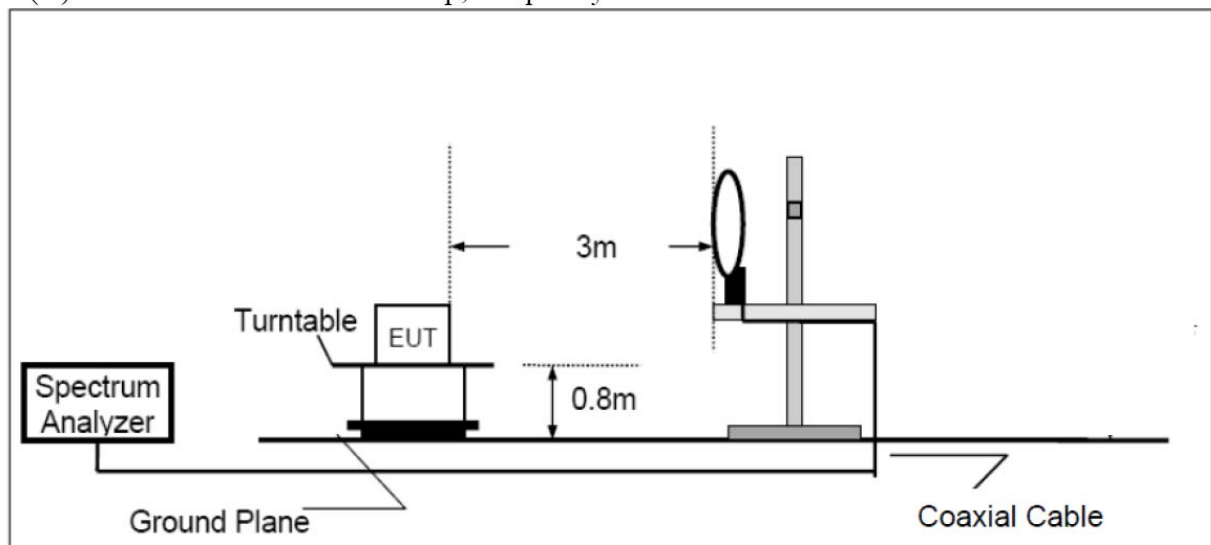
4. RADIATED EMISSION MEASUREMENT

4.1. For Radiated Emission Measurement

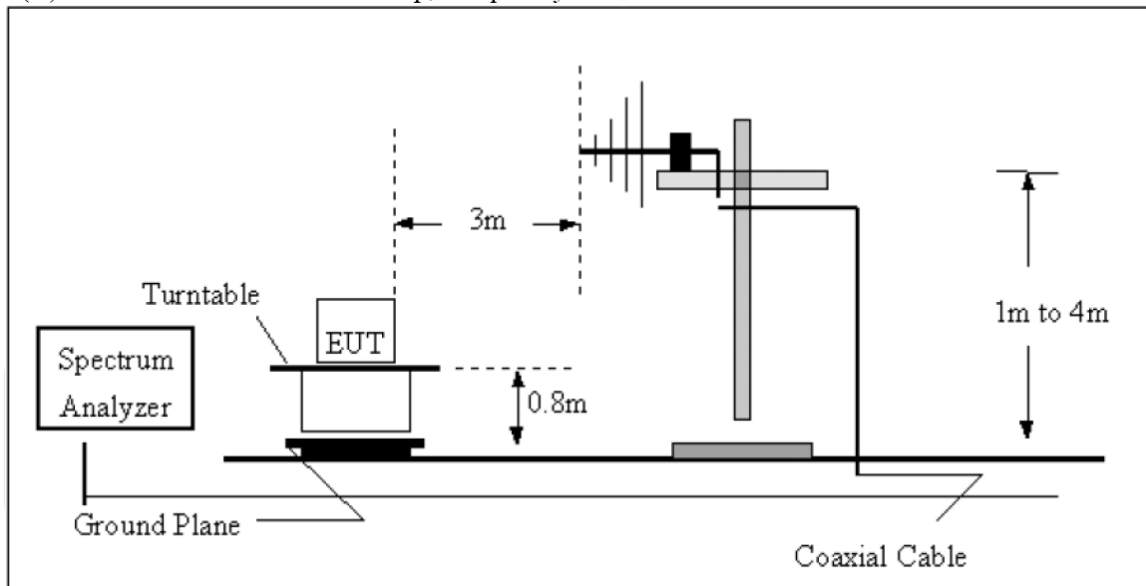
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 9, 2016	1 Year
2.	Test Receiver	Rohde & Schwarz	ESCS30	100307	Jan. 9, 2016	1 Year
3.	Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 14, 2016	1 Year
4.	Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 14, 2016	1 Year
5.	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 14, 2016	1 Year
6.	50 Coaxial Switch	Anritsu Corp	MP59B	6200506474	Jan. 9, 2016	1 Year
12.	Pre-Amplifier	Rohde & Schwarz	CBLU11835 40-01	3791	Jan. 9, 2016	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)	20log 2400/F(KHz) + 80
0.490 – 1.705	24000 / F(KHz)	30m	100 * 24000/F(KHz)	20log 24000/F(KHz) + 40
1.705 – 30.00	30	30m	100* 30	20log 30 + 40
30.0 – 88.0	100	3m	100	20log 100
88.0 – 216.0	150	3m	150	20log 150
216.0 – 960.0	200	3m	200	20log 200
Above 960.0	500	3m	500	20log 500

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

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.

4.6. 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 C63.4: 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

Frequency (MHz)	Quasi Peak (dB μ V/m)	Azimuth	Polarity (H/V)	Factors (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
0.1342	72.58	147	H	-56.36	105.7	-33.12
2.0211	38.74	34	H	-54.15	69.5	-30.76
14.2520	39.25	210	H	-53.01	69.5	-30.25
0.1342	74.44	220	V	-56.36	105.7	-31.26
3.6851	43.51	320	V	-51.27	69.5	-25.99
17.3531	34.77	54	V	-51.25	69.5	-34.73

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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Job No.: DING #2349

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Pet Scan RT250 Electronic RFID Reader

Mode: TX

Model: ZR004

Manufacturer: MARKTRACE

Polarization: Horizontal

Power Source: DC 5V

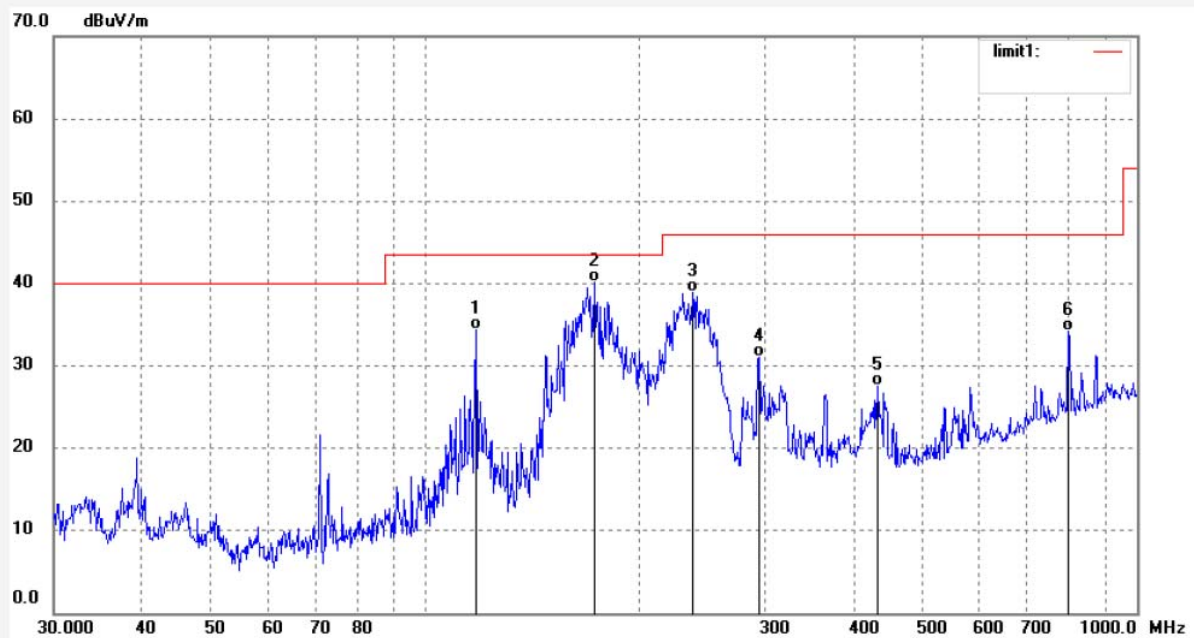
Date: 2016/09/18

Time: 12:35:58

Engineer Signature: DING

Distance: 3m

Note: Report NO.:ATE20161945



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	117.6815	55.65	-21.27	34.38	43.50	-9.12	QP			
2	172.5976	60.73	-20.56	40.17	43.50	-3.33	QP			
3	237.6262	57.29	-18.27	39.02	46.00	-6.98	QP			
4	294.4260	47.42	-16.38	31.04	46.00	-14.96	QP			
5	431.8198	41.03	-13.45	27.58	46.00	-18.42	QP			
6	801.4314	40.14	-5.89	34.25	46.00	-11.75	QP			



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Job No.: DING #2350

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: Pet Scan RT250 Electronic RFID Reader

Mode: TX

Model: ZR004

Manufacturer: MARKTRACE

Polarization: Vertical

Power Source: DC 5V

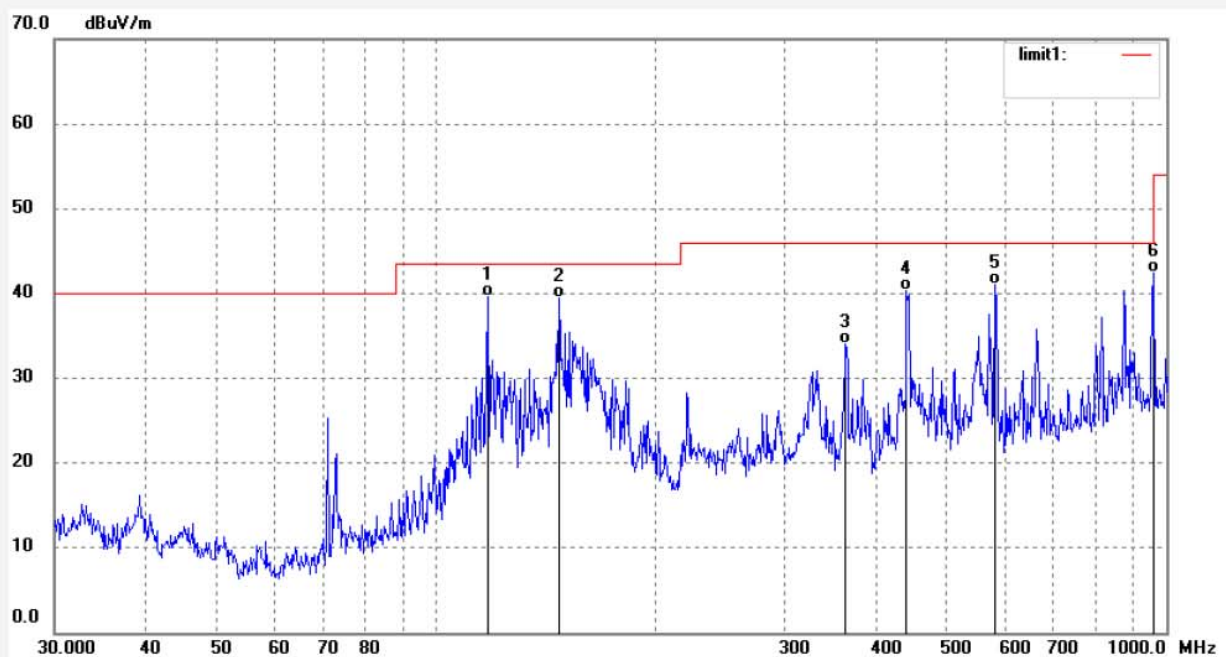
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Engineer Signature: DING

Distance: 3m

Note: Report NO.:ATE20161945



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	117.6815	60.93	-21.27	39.66	43.50	-3.84	QP			
2	147.3560	61.70	-22.27	39.43	43.50	-4.07	QP			
3	363.5231	48.22	-14.25	33.97	46.00	-12.03	QP			
4	441.0199	53.63	-13.24	40.39	46.00	-5.61	QP			
5	582.1122	51.31	-10.33	40.98	46.00	-5.02	QP			
6	962.0879	45.77	-3.25	42.52	54.00	-11.48	QP			

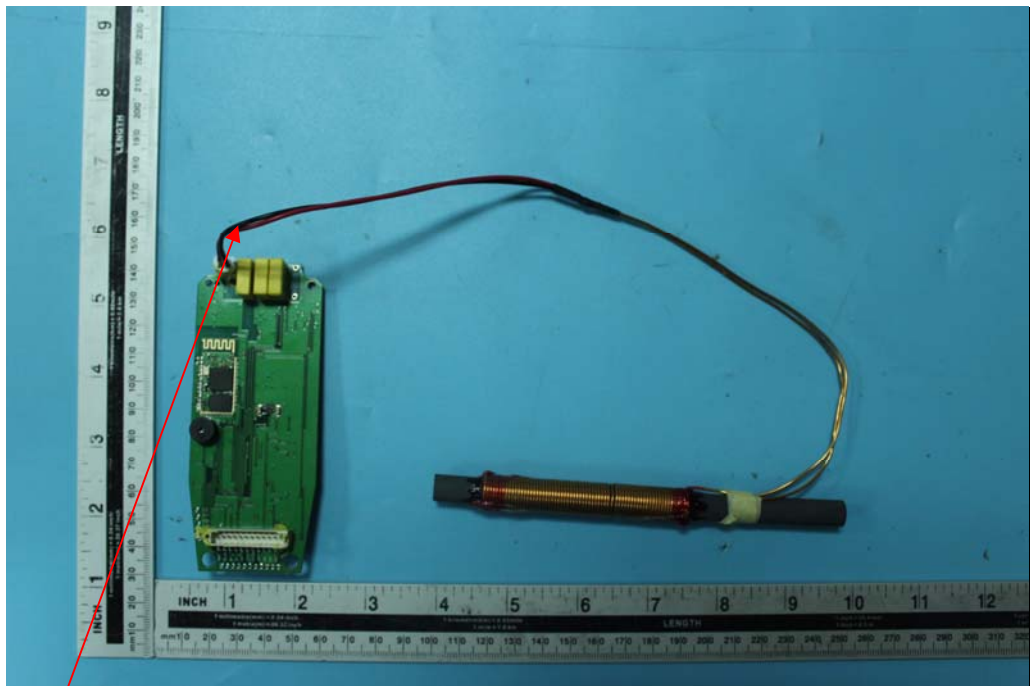
5. ANTENNA REQUIREMENT

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 1dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna