

FCC TEST REPORT

On Behalf of

Dalian Everspry Science & Technology Co., LTD.

Everspry Outsole Scanner(EverOS)

Model No.: HR-YQ-III

Additional Model No.: HR-YQ-III-A

Prepared for : Dalian Everspry Science & Technology Co., LTD.
Address : Xixian SDickt NO.31, High-tech Zone, Dalian, Liaoning,
P.R.China

Prepared by : Shenzhen LCS Compliance Testing Laboratory Ltd.
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Date of receipt of test sample : May 06, 2015
Number of tested samples : 1
Serial number : Prototype
Date of Test : May 06, 2015 - August 20, 2015
Date of Report : August 20, 2015

FCC TEST REPORT
FCC CFR 47 PART 15 Subpart B: 2014

Report Reference No. : LCS1505060249E

Date Of Issue : August 20, 2015

Testing Laboratory Name..... : Shenzhen LCS Compliance Testing Laboratory Ltd.

Address..... : 1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China

Testing Location/ Procedure..... : Full application of Harmonised standards [checked]
Partial application of Harmonised standards [unchecked]
Other standard testing method [unchecked]

Applicant's Name : Dalian Everspry Science & Technology Co., LTD.

Address..... : Xixian SDickt NO.31, High-tech Zone, Dalian, Liaoning, P.R.China

Test Specification

Standard..... : FCC CFR 47 PART 15 Subpart B: 2014, ANSI C63.4-2014

Test Report Form No..... : LCSEMC-1.0

TRF Originator : Shenzhen LCS Compliance Testing Laboratory Ltd.

Master TRF..... : Dated 2011-03

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Test Item Description..... : Everspry Outsole Scanner(EverOS)

Trade Mark..... : EVERSPRY

Model/Type Reference : HR-YQ-III

Ratings..... : INPUT: 100-240V~50/60Hz
OUTPUT: 12V/1A

Result : Positive

Compiled by:

Dick Su

Dick Su/ File administrators

Supervised by:

Glin Lu

Glin Lu/ Technique principal

Approved by:

Gavin Liang

Gavin Liang/ Manager

FCC -- TEST REPORT

Test Report No. : LCS1505060249E	<u>August 20, 2015</u> Date of issue
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Type / Model.....	: HR-YQ-III
EUT.....	: Everspry Outsole Scanner(EverOS)
Applicant.....	: Dalian Everspry Science & Technology Co., LTD.
Address.....	: Xixian SDickt NO.31, High-tech Zone, Dalian, Liaoning, P.R.China
Telephone.....	:
Fax.....	:
Manufacturer.....	: Dalian Everspry Science & Technology Co., LTD.
Address.....	: Xixian SDickt NO.31, High-tech Zone, Dalian, Liaoning, P.R.China
Telephone.....	:
Fax.....	:
Factory.....	: Dalian Everspry Science & Technology Co., LTD.
Address.....	: Xixian SDickt NO.31, High-tech Zone, Dalian, Liaoning, P.R.China
Telephone.....	:
Fax.....	:

Test Result according to the standards on page 5: Positive
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The test report merely corresponds to the test sample.
 It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	Standard	Limits	Results
Conducted disturbance at mains terminals	FCC CFR 47 PART 15 Subpart B: 2014	Class B	PASS
Radiated disturbance	FCC CFR 47 PART 15 Subpart B: 2014	Class B	PASS
N/A is an abbreviation for Not Applicable.			

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT : Everspry Outsole Scanner(EverOS)
 Model Number : HR-YQ-III
 Power Supply : Input:100-240V, 50/60Hz,Output: 12V/1A
 EUT Clock Frequency : $\leq 108\text{MHz}$

2.2. Host System Configuration List and Details

Manufacturer	Description	Model	Serial Number	Certificate
--	Adapter	--	--	VOC
Lenovo	Note Book	B470	--	DOC

2.3. External I/O Cable

I/O Port Description	Quantity	Cable
USB Port	1	1.0m
DC IN	1	N/A

2.4. Description of Test Facility

EMC Lab. : CNAS Registration Number. is L4595.
 FCC Registration Number. is 899208.
 Industry Canada Registration Number. is 9642A-1.
 VCCI Registration Number. is C-4260 and R-3804.
 ESMD Registration Number. is ARCB0108.
 UL Registration Number. is 100571-492.
 TUV SUD Registration Number. is SCN1081.
 TUV RH Registration Number. is UA 50296516-001

2.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. To DIN EN ISO/IEC 17025. Furthermore,

component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

2.6.Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Radiation Uncertainty	30MHz~200MHz	±2.96dB	(1)
	200MHz~1000MHz	±3.10dB	(1)
	1000MHz~6000MHz	±4.10dB	(1)
Conduction Uncertainty	150kHz~30MHz	±1.63dB	(1)
Power disturbance	30MHz~300MHz	±1.60dB	(1)

1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

2.7.Description Of Test Modes

There was 2 test Modes. TM1 to TM2 were shown below:

TM1: Normal Operating;

TM2: Idle;

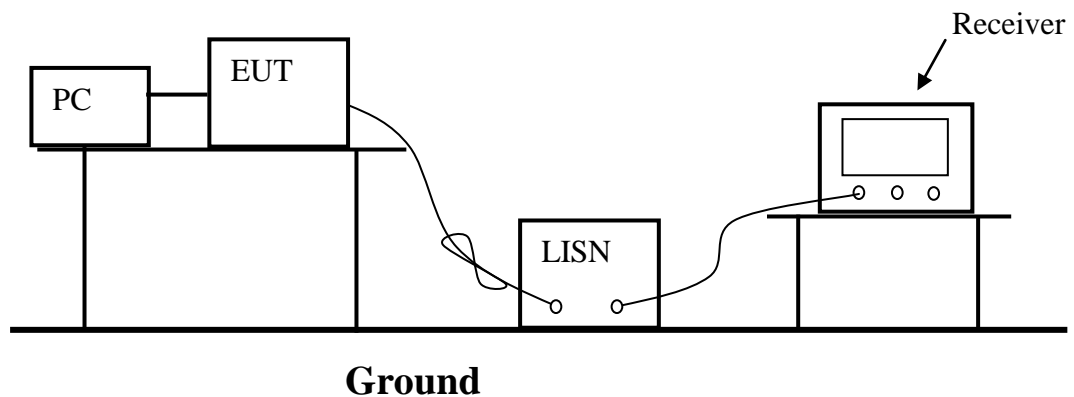
3. POWER LINE CONDUCTED MEASUREMENT

3.1. Test Equipment

The following test equipments are used during the power line conducted measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	101142	2015/06/18
2	EMI Test Receiver	ROHDE & SCHWARZ	ESPI	101840	2015/06/18
3	Artificial Mains	ROHDE & SCHWARZ	ENV216	101288	2015/06/18
4	EMI Test Software	AUDIX	E3	N/A	2015/06/18
5	Coaxial Cable	ACE	S112	N/A	2015/06/18

3.2. Block Diagram of Test Setup



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

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 ~ 0.50	66-56	56-46
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

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

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

3.4. Configuration of EUT on Measurement

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.

3.5. Operating Condition of EUT

3.5.1. Setup the EUT and simulator as shown as Section 3.2.

3.5.2. Turn on the power of all equipment.

3.5.3. Let the EUT work in test mode (ON) and measure it.

3.6. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line 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 FCC/ANSI C63.4-2014 on Conducted Emission Measurement.

The bandwidth of test receiver is set at 9kHz.

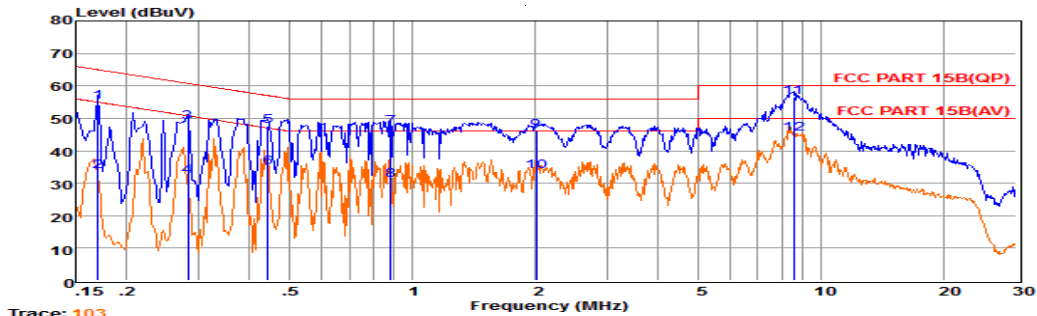
The frequency range from 150kHz to 30MHz is checked.

3.7. Power Line Conducted Emission Measurement Results

PASS.

All the scanning waveforms for Conducted Emission Measurement are refer to the next page.

Model No.	Everspry Outsole Scanner(EverOS)	Test Mode	Data transmitting
Environmental Conditions	24°C, 56% RH	Test Engineer	Dick
Pol	Line		

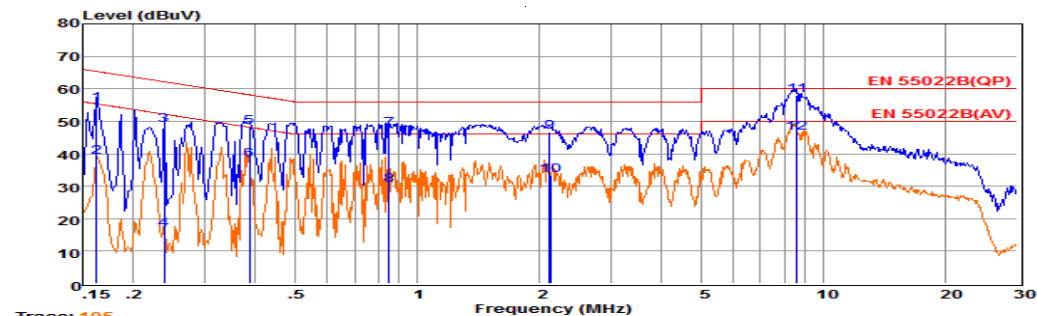


Trace: 103
 Env. Ins: 24*/56%
 EUT: Everspry Outsole Scanner(EverOS)
 M/N: HR-YQ-III
 Power Rating: AC 120V/60Hz
 Test Mode: Data transmitting
 Operator: Dick
 Memo:
 Pol: LINE

	Freq	Reading	LisnFac	CabLos	Atten_Fac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.17034	35.52	9.60	0.02	10.00	55.14	64.94	-9.80	QP
2	0.17044	14.13	9.60	0.02	10.00	33.75	54.94	-21.19	Average
3	0.28179	29.12	9.63	0.03	10.00	48.78	60.76	-11.98	QP
4	0.28188	12.49	9.63	0.03	10.00	32.15	50.76	-18.61	Average
5	0.44208	27.90	9.62	0.04	10.00	47.56	57.02	-9.46	QP
6	0.44218	15.15	9.62	0.04	10.00	34.81	47.02	-12.21	Average
7	0.88499	27.62	9.63	0.04	10.00	47.29	56.00	-8.71	QP
8	0.88509	11.22	9.63	0.04	10.00	30.89	46.00	-15.11	Average
9	2.01185	26.51	9.64	0.05	10.00	46.20	56.00	-9.80	QP
10	2.01285	13.83	9.64	0.05	10.00	33.52	46.00	-12.48	Average
11	8.54628	36.67	9.69	0.08	10.00	56.44	60.00	-3.56	QP
12	8.54728	25.58	9.69	0.08	10.00	45.35	50.00	-4.65	Average

Remarks: 1. Measured = Reading + Lisn Factor +Cable Loss+Atten_Fac.
 2. The emission levels that are 20dB below the official limit are not reported.

Model No.	Everspry Outsole Scanner(EverOS)	Test Mode	Data transmitting
Environmental Conditions	24°C, 56% RH	Test Engineer	Dick
Pol	Neutral		



Trace: 105
 Env. Ins: 24*/56%
 EUT: Everspry Outsole Scanner(EverOS)
 M/N: HR-YQ-III
 Power Rating: AC 120V/60Hz
 Test Mode: Data transmitting
 Operator: Dick
 Memo:
 Pol: NEUTRAL

	Freq	Reading	LisnFac	CabLos	Atten_Fac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.16241	35.71	9.67	0.02	10.00	55.40	65.34	-9.94	QP
2	0.16251	19.15	9.67	0.02	10.00	38.84	55.33	-16.49	Average
3	0.23784	29.25	9.60	0.03	10.00	48.88	62.17	-13.29	QP
4	0.23794	-3.04	9.60	0.03	10.00	16.59	52.17	-35.58	Average
5	0.38519	28.39	9.61	0.04	10.00	48.04	58.17	-10.13	QP
6	0.38529	18.53	9.61	0.04	10.00	38.18	48.16	-9.98	Average
7	0.85276	27.80	9.63	0.04	10.00	47.47	56.00	-8.53	QP
8	0.85286	10.80	9.63	0.04	10.00	30.47	46.00	-15.53	Average
9	2.12132	27.12	9.63	0.05	10.00	46.80	56.00	-9.20	QP
10	2.12232	13.61	9.63	0.05	10.00	33.29	46.00	-12.71	Average
11	8.59168	38.08	9.71	0.08	10.00	57.87	60.00	-2.13	QP
12	8.59268	26.60	9.71	0.08	10.00	46.39	50.00	-3.61	Average

Remarks: 1. Measured = Reading + Lisn Factor +Cable Loss+Atten_Fac.
 2. The emission levels that are 20dB below the official limit are not reported.

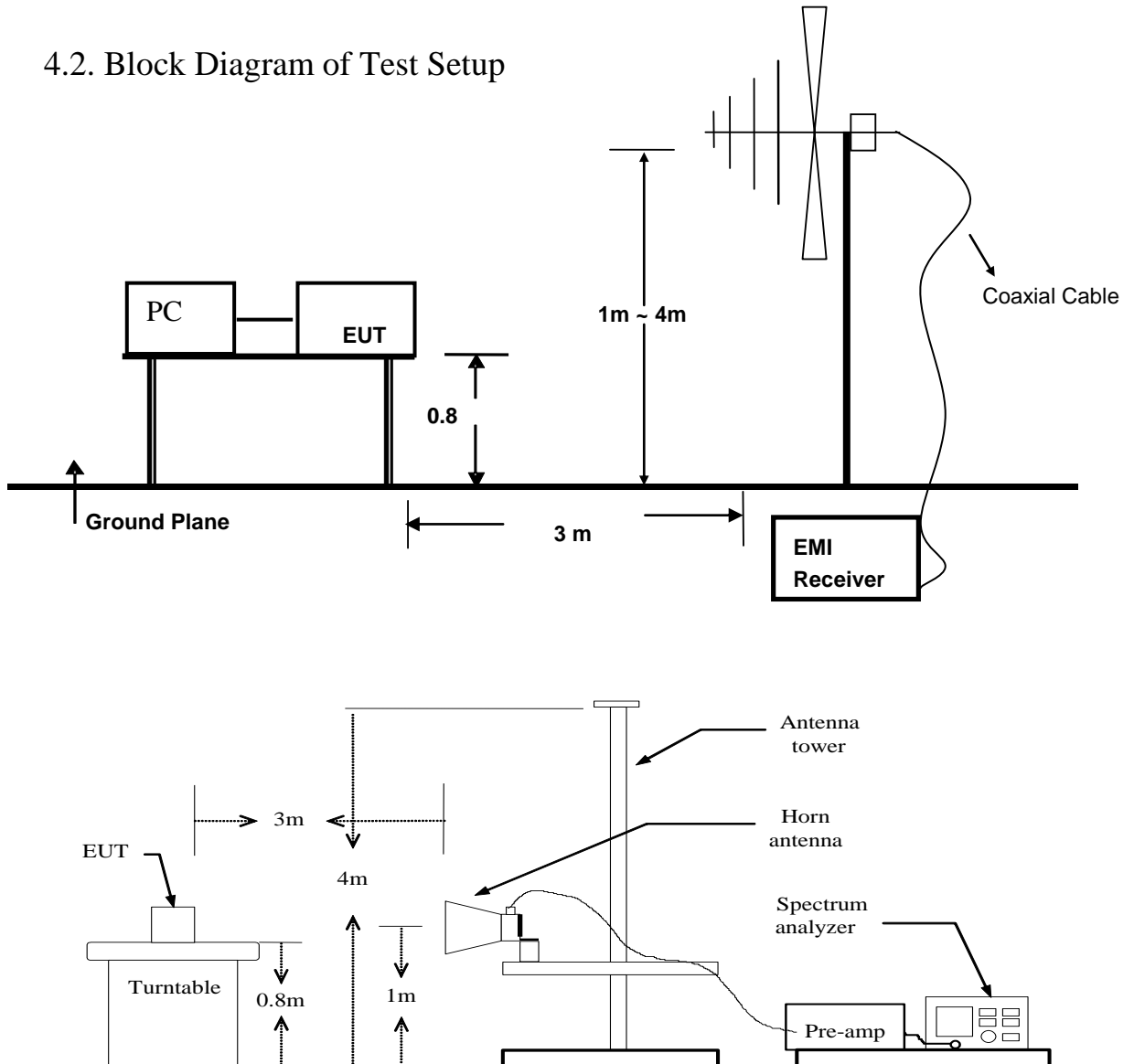
4. RADIATED EMISSION MEASUREMENT

4.1. Test Equipment

The following test equipments are used during the radiated emission measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2015/02/04
2	EMI Test Receiver	ROHDE & SCHWARZ	ESPI	101840	2015/06/18
3	Log per Antenna	SCHWARZBECK	VULB9163	9163-470	2015/06/18
4	EMI Test Software	AUDIX	E3	N/A	2015/06/18
5	Positioning Controller	MF	MF-7082	/	2015/06/18
6	Coaxial Cable	ACE	S112	N/A	2015/06/18
7	RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	2015/06/18

4.2. Block Diagram of Test Setup



4.3. Radiated Emission Limit (Class B)

Limits for radiated disturbance Blow 1GHz

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46
960 ~ 1000	3	500	54
1000 ~ 6000	3	12500	74

Remark : (1) Emission level $(\text{dB})\mu\text{V} = 20 \log$ Emission level $\mu\text{V}/\text{m}$

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.4. EUT Configuration on Measurement

The following equipment are 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. Operating Condition of EUT

4.5.1. Setup the EUT as shown in Section 4.2.

4.5.2. Let the EUT work in test mode (on) and measure it.

4.6. Test Procedure

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 a 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 by-log antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is 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.

The bandwidth of the EMI test receiver is set at 120kHz, 1000kHz.

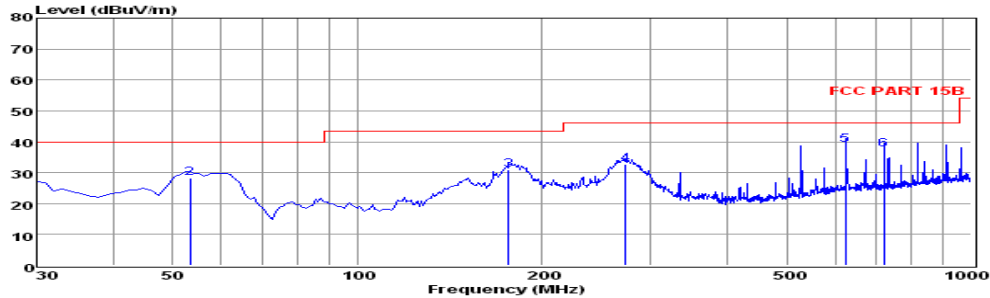
The frequency range from 30MHz to 1000MHz is checked.

4.7. Radiated Emission Noise Measurement Result

PASS.

The scanning waveforms please refer to the next page. Only record the worst results.

Model No.	Everspry Outsole Scanner(EverOS)	Test Mode	Data transmitting
Environmental Conditions	24°C, 56% RH	Detector Function	Quasi-peak
Pol	Vertical	Distance	3m
Test Engineer	Dick		

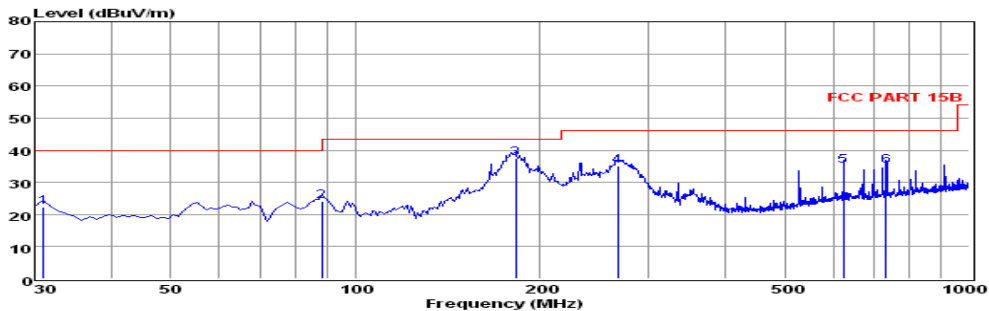


Env./Ins: 24°C/56%
 EUT: Everspry Outsole Scanner(EverOS)
 M/N: HR-YQ-III
 Power Rating: AC 120V/60HZ
 Test Mode: Data transmitting
 Operator: Dick
 Memo:
 pol: VERTICAL

	Freq MHz	Reading dBuV	CabLos dB	Antfac dB/m	Measured dBuV/m	Limit dBuV/m	Over dB	Remark
1	30.00	13.20	0.39	12.33	25.92	40.00	-14.08	QP
2	53.28	14.81	0.46	13.10	28.37	40.00	-11.63	QP
3	176.47	20.83	0.73	9.43	30.99	43.50	-12.51	QP
4	273.47	19.12	1.04	12.47	32.63	46.00	-13.37	QP
5	624.61	19.08	1.49	18.54	39.11	46.00	-6.89	QP
6	720.64	16.91	1.63	19.07	37.61	46.00	-8.39	QP

Note: 1. All readings are Quasi-peak values.
 2. Measured= Reading + Antenna Factor + Cable Loss
 3. The emission that are 20db below the official limit are not reported

Model No.	Everspry Outsole Scanner(EverOS)	Test Mode	Data transmitting
Environmental Conditions	24°C, 56% RH	Detector Function	Quasi-peak
Pol	Horizontal	Distance	3m
Test Engineer	Dick		



Env./Ins: 24°C/56%
 EUT: Everspry Outsole Scanner(EverOS)
 M/N: HR-YQ-III
 Power Rating: AC 120V/60HZ
 Test Mode: Data transmitting
 Operator: Dick
 Memo:
 pol: HORIZONTAL

	Freq MHz	Reading dBuV	CabLos dB	Antfac dB/m	Measured dBuV/m	Limit dBuV/m	Over dB	Remark
1	30.97	9.54	0.39	12.32	22.25	40.00	-17.75	QP
2	88.20	12.22	0.68	11.33	24.23	43.50	-19.27	QP
3	182.29	26.75	0.89	9.88	37.52	43.50	-5.98	QP
4	267.65	21.83	1.00	12.29	35.12	46.00	-10.88	QP
5	624.61	14.92	1.49	18.54	34.95	46.00	-11.05	QP
6	732.28	14.12	1.62	19.21	34.95	46.00	-11.05	QP

Note: 1. All readings are Quasi-peak values.
 2. Measured= Reading + Antenna Factor + Cable Loss
 3. The emission that are 20db below the official limit are not reported

-----THE END OF REPORT-----