

APPLICATION FOR VERIFICATION
On Behalf of
MATRIX COMSEC PVT. LTD.

SPARSH VP510
Model No.: SPARSH VP

FCC ID: 2ADHNVP510

Prepared for : MATRIX COMSEC PVT. LTD.
Address : 394 - GIDC, Makarpura, Vadodara, Gujarat 390 010, India
Prepared by : Accurate Technology Co., Ltd.
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Report No. : ATE20152691
Date of Test : Dec 21, 2015-Jan 10, 2016
Date of Report : Jan 10, 2016

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Test Report Declaration

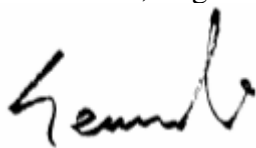
Applicant : MATRIX COMSEC PVT. LTD.
Manufacturer : MATRIX COMSEC PVT. LTD.
EUT Description : SPARSH VP510
Model No. : SPARSH VP
Trade Mark : 

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart B 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 B Class B 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 :	Dec 21, 2015-Jan 10, 2016
Date of Report :	Jan 10, 2016
Prepared by :	 (Mark Chen, Engineer)
Approved & Authorized Signer :	 (Sean Liu, Manager)

1. TEST RESULTS SUMMARY

Test Items	Test Standard	Test Results
Power Line Conducted Emission	FCC Part 15.107	Pass
Radiated Emission	FCC Part 15.109	Pass

2. GENERAL INFORMATION

2.1.Product of Device (EUT)

EUT	: SPARSH VP510
Model Number	: SPARSH VP
Power Supply	: DC 5V (Power by Adapter) POE (Power Over Internet)
Adapter	: Model: FRA024-S05-I Input: 100-240v~,0.7A,50/60Hz Output: 5V/2A
Remark(s)	: The EUT highest operating frequency provided by Manufacturer is 110MHz, the radiated emission measurement shall be made up to 2GHz
Applicant	: MATRIX COMSEC PVT. LTD.
Address	: 394 - GIDC, Makarpura, Vadodara, Gujarat 390 010, India
Manufacturer	: MATRIX COMSEC PVT. LTD.
Address	: 15 & 19-GDIC, WAGHODIA VADODARA-391 760
Date of sample received	: Dec 21, 2015
Date of Test	: Dec 21, 2015-Jan 10, 2016

2.2.Accessory and Auxiliary Equipment

ETERNITY : NTERNITY PE
Router: TL-SF1008+
Interchanger: MAT-IT/02121
Telephone set: Link 721

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. MEASURING DEVICE AND TEST EQUIPMENT

3.1. The Equipments Used to Measure Conducted Disturbance

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCS30	100307	Jan.10, 2015	1 Year
2.	Test Receiver	Rohde & Schwarz	ESPI	100396/003	Jan.10, 2015	1 Year
3.	Test Receiver	Rohde & Schwarz	ESPI	101526/003	Jan.10, 2015	1 Year
4.	Test Receiver	Rohde & Schwarz	ESR	101817	Jan.10, 2015	1 Year
5.	L.I.S.N.	Schwarzbeck	NLSK8126	8126431	Jan.10, 2015	1 Year
6.	L.I.S.N.	Rohde & Schwarz	ESH3-Z5	100305	Jan.10, 2015	1 Year
7.	L.I.S.N.	Rohde & Schwarz	ESH3-Z5	100310	Jan.10, 2015	1 Year
8.	L.I.S.N.	Rohde & Schwarz	ESH3-Z6	100132	Jan.10, 2015	1 Year
9.	L.I.S.N.	Rohde & Schwarz	ESH3-Z6	100979	Jan.10, 2015	1 Year
10.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100305	Jan.10, 2015	1 Year
11.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100312	Jan.10, 2015	1 Year
12.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	Jan.10, 2015	1 Year
13.	50Ω Coaxial Switch	Anritsu Corp	MP59B	6200283936	Jan.10, 2015	1 Year
14.	50Ω Coaxial Switch	Anritsu Corp	MP59B	6200283933	Jan.10, 2015	1 Year
15.	50Ω Coaxial Switch	Anritsu Corp	MP59B	6200506474	Jan.10, 2015	1 Year
16.	VOLTAGE PROBE	Schwarzbeck	TK9416	N/A	Jan.10, 2015	1 Year
17.	RF CURRENT PROBE	Rohde & Schwarz	EZ-17	100048	Jan.10, 2015	1 Year
18.	8-Wire Impedance Stabilisation Network	Schwarzbeck	CAT5 8158	8158-0035	Jan.10, 2015	1 Year
19.	RF Coaxial Cable	SUHNER	N-2m	No.2	Jan.10, 2015	1 Year
20.	RF Coaxial Cable	SUHNER	N-2m	No.3	Jan.10, 2015	1 Year
21.	RF Coaxial Cable	SUHNER	N-2m	No.14	Jan.10, 2015	1 Year

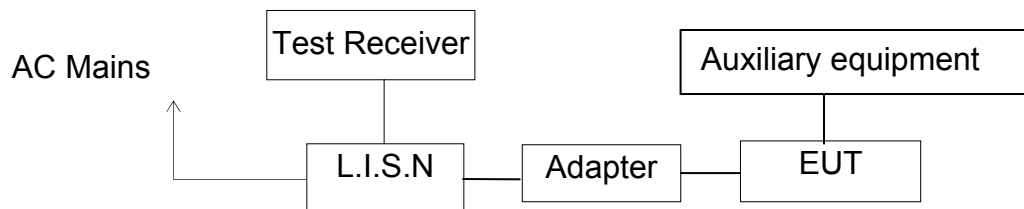
3.2. The Equipments Used to Measure Radiated Disturbance

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan.10, 2015	1 Year
2.	Spectrum Analyzer	Rohde&Schwarz	FSV40	101495	Jan.10, 2015	1 Year
3.	Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan.10, 2015	1 Year
4.	Test Receiver	Rohde& Schwarz	ESPI	100396/003	Jan.10, 2015	1 Year
5.	Test Receiver	Rohde& Schwarz	ESPI	101526/003	Jan.10, 2015	1 Year
6.	Test Receiver	Rohde& Schwarz	ESR	101817	Jan.10, 2015	1 Year
7.	Bilog Antenna	Schwarzbeck	VULB9163	9163-194	Jan.15, 2015	1 Year
8.	Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan.15, 2015	1 Year
9.	Log.-Per.Antenna	Schwarzbeck	VUSLP 9111B	9111B-074	Jan.15, 2015	1 Year
10.	Biconical Broad Band Antenna	Schwarzbeck	VHBB 9124+BBA 9106	9124-617	Jan.15, 2015	1 Year
11.	Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan.15, 2015	1 Year
12.	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan.15, 2015	1 Year
13.	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1067	Jan.15, 2015	1 Year
14.	Vertical Active Monopole Antenna	Schwarzbeck	VAMP 9243	9243-370	Jan.15, 2015	1 Year
15.	RF Switching Unit+PreAMP	Compliance Direction	RSU-M2	38322	Jan.10, 2015	1 Year
16.	Pre-Amplifier	Agilent	8447D	294A10619	Jan.10, 2015	1 Year
17.	Pre-Amplifier	Rohde&Schwarz	CBLU11835 40-01	3791	Jan.10, 2015	1 Year
18.	50 Coaxial Switch	Anritsu Corp	MP59B	6200237248	Jan.10, 2015	1 Year
19.	50 Coaxial Switch	Anritsu Corp	MP59B	6200506474	Jan.10, 2015	1 Year
20.	RF Coaxial Cable	Schwarzbeck	N-5m	No.1	Jan.10, 2015	1 Year
21.	RF Coaxial Cable	Schwarzbeck	N-1m	No.6	Jan.10, 2015	1 Year
22.	RF Coaxial Cable	Schwarzbeck	N-1m	No.7	Jan.10, 2015	1 Year
23.	RF Coaxial Cable	SUHNER	N-3m	No.8	Jan.10, 2015	1 Year
24.	RF Coaxial Cable	RESENBERGER	N-3.5m	No.9	Jan.10, 2015	1 Year
25.	RF Coaxial Cable	SUHNER	N-6m	No.10	Jan.10, 2015	1 Year
26.	RF Coaxial Cable	RESENBERGER	N-12m	No.11	Jan.10, 2015	1 Year
27.	RF Coaxial Cable	RESENBERGER	N-0.5m	No.12	Jan.10, 2015	1 Year
28.	RF Coaxial Cable	SUHNER	N-2m	No.13	Jan.10, 2015	1 Year
29.	RF Coaxial Cable	SUHNER	N-0.5m	No.15	Jan.10, 2015	1 Year
30.	RF Coaxial Cable	SUHNER	N-2m	No.16	Jan.10, 2015	1 Year
31.	RF Coaxial Cable	RESENBERGER	N-6m	No.17	Jan.10, 2015	1 Year

4. POWER LINE CONDUCTED MEASUREMENT

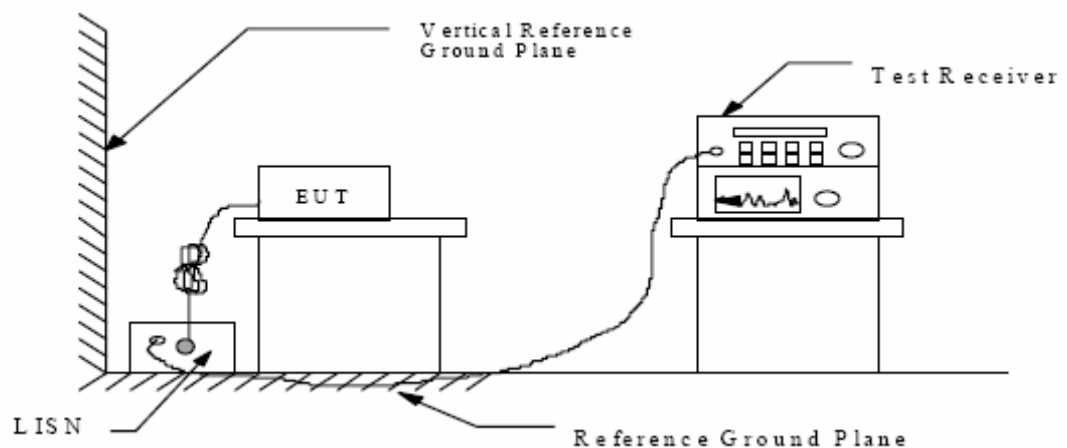
4.1. Block Diagram of Test Setup

4.1.1. Block diagram of connection between the EUT and simulators



(EUT: SPARSH VP510)

4.1.2. Shielding Room Test Setup Diagram



(EUT: SPARSH VP510)

4.2. The Emission Limit

4.2.1. Conducted Emission Measurement Limits According to Section 15.107(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.

4.3. 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.

4.3.1.SPARSH VP510 (EUT)

Model Number: SPARSH VP

Serial Number: N/A

Manufacturer: MATRIX COMSEC PVT. LTD.

4.4. Operating Condition of EUT

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

4.4.2.Turn on the power of all equipment.

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

4.5. 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.

4.6. Power Line Conducted Emission Measurement Results

PASS.

Test Mode: ON(120V/60Hz)

MEASUREMENT RESULT: "MC-1228-005_fin"

2015-12-28 12:52

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.510000	41.50	11.5	56	14.5	QP	L1	GND
1.492000	33.90	11.6	56	22.1	QP	L1	GND
20.382500	32.40	12.0	60	27.6	QP	L1	GND

MEASUREMENT RESULT: "MC-1228-005_fin2"

2015-12-28 12:52

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.518000	29.00	11.5	46	17.0	AV	L1	GND
1.062000	26.10	11.6	46	19.9	AV	L1	GND
19.707500	30.00	11.9	50	20.0	AV	L1	GND

MEASUREMENT RESULT: "MC-1228-006_fin"

2015-12-28 12:55

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.512000	41.00	11.5	56	15.0	QP	N	GND
1.512000	34.40	11.6	56	21.6	QP	N	GND
16.229000	34.60	11.9	60	25.4	QP	N	GND

MEASUREMENT RESULT: "MC-1228-006_fin2"

2015-12-28 12:55

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.516000	27.10	11.5	46	18.9	AV	N	GND
4.682000	25.30	11.8	46	20.7	AV	N	GND
19.707500	30.10	11.9	50	19.9	AV	N	GND

Test Mode: ON(240V/60HZ)

MEASUREMENT RESULT: "MC-1228-001_fin"

2015-12-28 12:41

Frequency MHz	Level dBuv	Transd dB	Limit dBuv	Margin dB	Detector	Line	PE
0.550000	42.30	11.5	56	13.7	QP	L1	GND
1.112000	37.20	11.6	56	18.8	QP	L1	GND
18.303500	33.70	11.9	60	26.3	QP	L1	GND

MEASUREMENT RESULT: "MC-1228-001_fin2"

2015-12-28 12:41

Frequency MHz	Level dBuv	Transd dB	Limit dBuv	Margin dB	Detector	Line	PE
0.554000	33.50	11.5	46	12.5	AV	L1	GND
2.661500	27.60	11.7	46	18.4	AV	L1	GND
23.127500	29.40	12.0	50	20.6	AV	L1	GND

MEASUREMENT RESULT: "MC-1228-002_fin"

2015-12-28 12:45

Frequency MHz	Level dBuv	Transd dB	Limit dBuv	Margin dB	Detector	Line	PE
0.550000	42.10	11.5	56	13.9	QP	N	GND
1.116000	37.20	11.6	56	18.8	QP	N	GND
6.275000	32.90	11.8	60	27.1	QP	N	GND

MEASUREMENT RESULT: "MC-1228-002_fin2"

2015-12-28 12:45

Frequency MHz	Level dBuv	Transd dB	Limit dBuv	Margin dB	Detector	Line	PE
0.554000	31.50	11.5	46	14.5	AV	N	GND
2.724500	27.60	11.7	46	18.4	AV	N	GND
19.707500	28.20	11.9	50	21.8	AV	N	GND

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

The spectral diagrams are shown in the following pages.

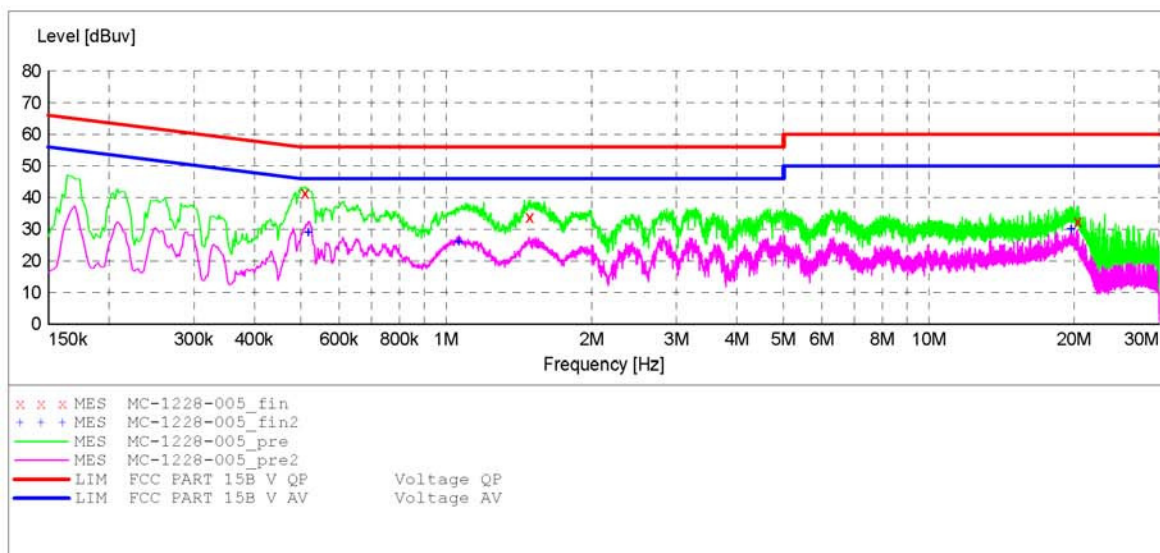
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPARSH VP510 M/N:SPARSH VP
 Manufacturer: MATRIX COMSEC PVT LTD
 Operating Condition: ON
 Test Site: 2#Shielding Room
 Operator: DING
 Test Specification: L 120V/60Hz
 Comment: Report NO.:ATE20152691
 Start of Test: 2015-12-28 / 12:51:12

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: "MC-1228-005_fin"

2015-12-28 12:52

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.510000	41.50	11.5	56	14.5	QP	L1	GND
1.492000	33.90	11.6	56	22.1	QP	L1	GND
20.382500	32.40	12.0	60	27.6	QP	L1	GND

MEASUREMENT RESULT: "MC-1228-005_fin2"

2015-12-28 12:52

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.518000	29.00	11.5	46	17.0	AV	L1	GND
1.062000	26.10	11.6	46	19.9	AV	L1	GND
19.707500	30.00	11.9	50	20.0	AV	L1	GND

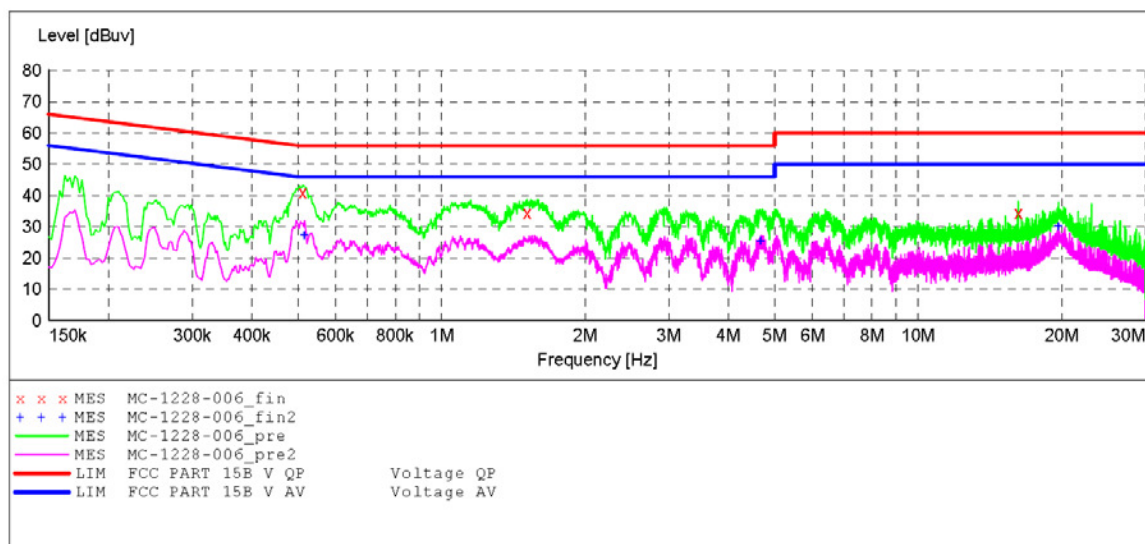
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPARSH VP510 M/N:SPARSH VP
 Manufacturer: MATRIX COMSEC PVT LTD
 Operating Condition: ON
 Test Site: 2#Shielding Room
 Operator: DING
 Test Specification: N 120V/60Hz
 Comment: Report NO.:ATE20152691
 Start of Test: 2015-12-28 / 12:53:50

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: "MC-1228-006_fin"

2015-12-28 12:55

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.512000	41.00	11.5	56	15.0	QP	N	GND
1.512000	34.40	11.6	56	21.6	QP	N	GND
16.229000	34.60	11.9	60	25.4	QP	N	GND

MEASUREMENT RESULT: "MC-1228-006_fin2"

2015-12-28 12:55

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.516000	27.10	11.5	46	18.9	AV	N	GND
4.682000	25.30	11.8	46	20.7	AV	N	GND
19.707500	30.10	11.9	50	19.9	AV	N	GND

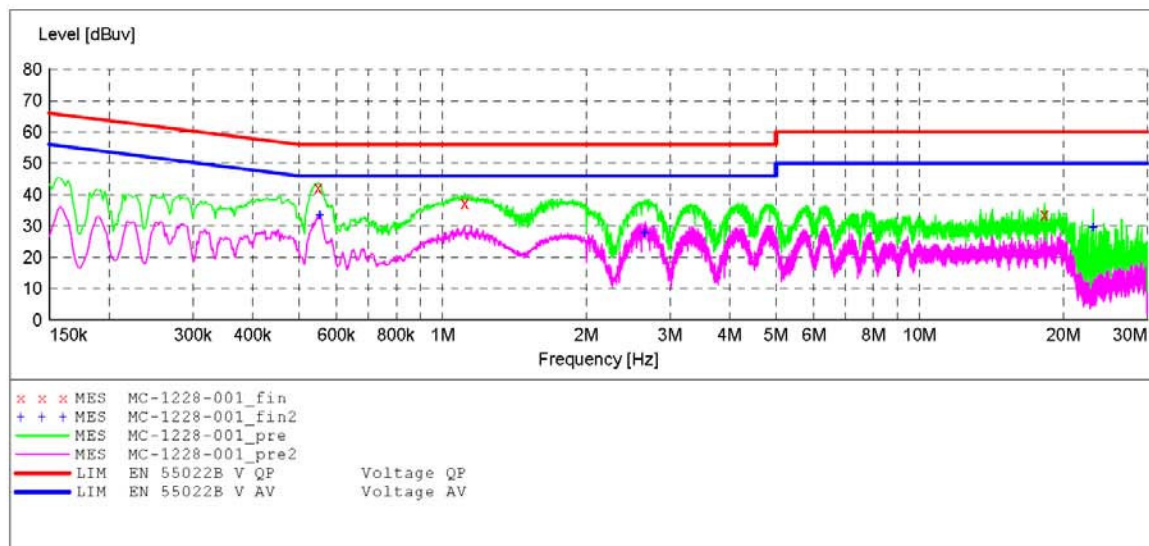
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPARSH VP510 M/N:SPARSH VP
 Manufacturer: MATRIX COMSEC PVT LTD
 Operating Condition: ON
 Test Site: 2#Shielding Room
 Operator: DING
 Test Specification: L 240V/60Hz
 Comment: Report NO.:ATE20152691
 Start of Test: 2015-12-28 / 12:39:16

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: "MC-1228-001_fin"

2015-12-28 12:41

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.550000	42.30	11.5	56	13.7	QP	L1	GND
1.112000	37.20	11.6	56	18.8	QP	L1	GND
18.303500	33.70	11.9	60	26.3	QP	L1	GND

MEASUREMENT RESULT: "MC-1228-001_fin2"

2015-12-28 12:41

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.554000	33.50	11.5	46	12.5	AV	L1	GND
2.661500	27.60	11.7	46	18.4	AV	L1	GND
23.127500	29.40	12.0	50	20.6	AV	L1	GND

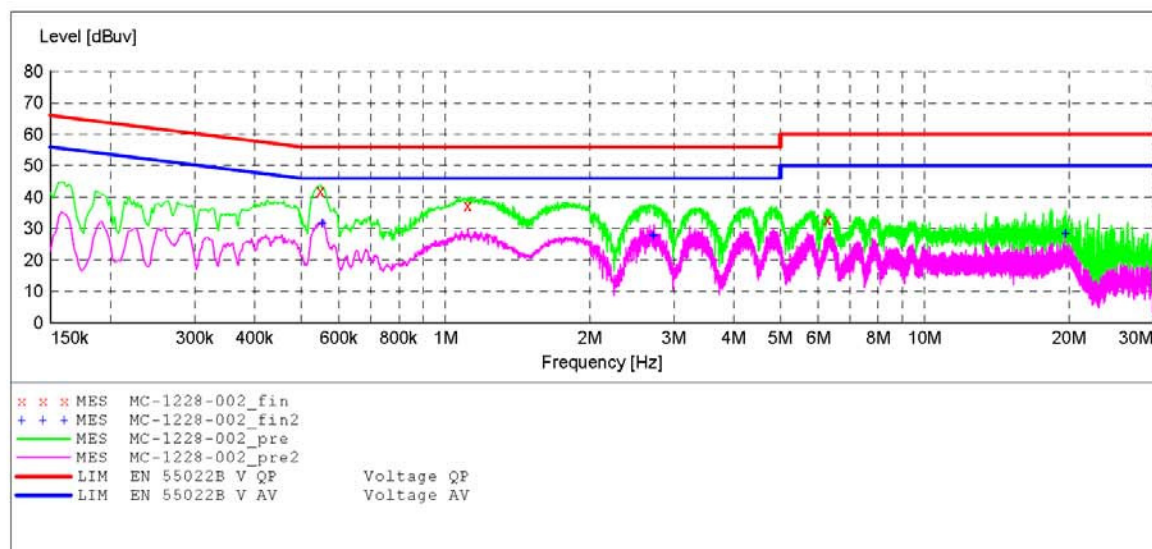
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPARSH VP510 M/N:SPARSH VP
 Manufacturer: MATRIX COMSEC PVT LTD
 Operating Condition: ON
 Test Site: 2#Shielding Room
 Operator: DING
 Test Specification: N 240V/60Hz
 Comment: Report NO.:ATE20152691
 Start of Test: 2015-12-28 / 12:43:09

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: "MC-1228-002_fin"

2015-12-28 12:45

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.550000	42.10	11.5	56	13.9	QP	N	GND
1.116000	37.20	11.6	56	18.8	QP	N	GND
6.275000	32.90	11.8	60	27.1	QP	N	GND

MEASUREMENT RESULT: "MC-1228-002_fin2"

2015-12-28 12:45

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.554000	31.50	11.5	46	14.5	AV	N	GND
2.724500	27.60	11.7	46	18.4	AV	N	GND
19.707500	28.20	11.9	50	21.8	AV	N	GND

5. RADIATED EMISSION MEASUREMENT

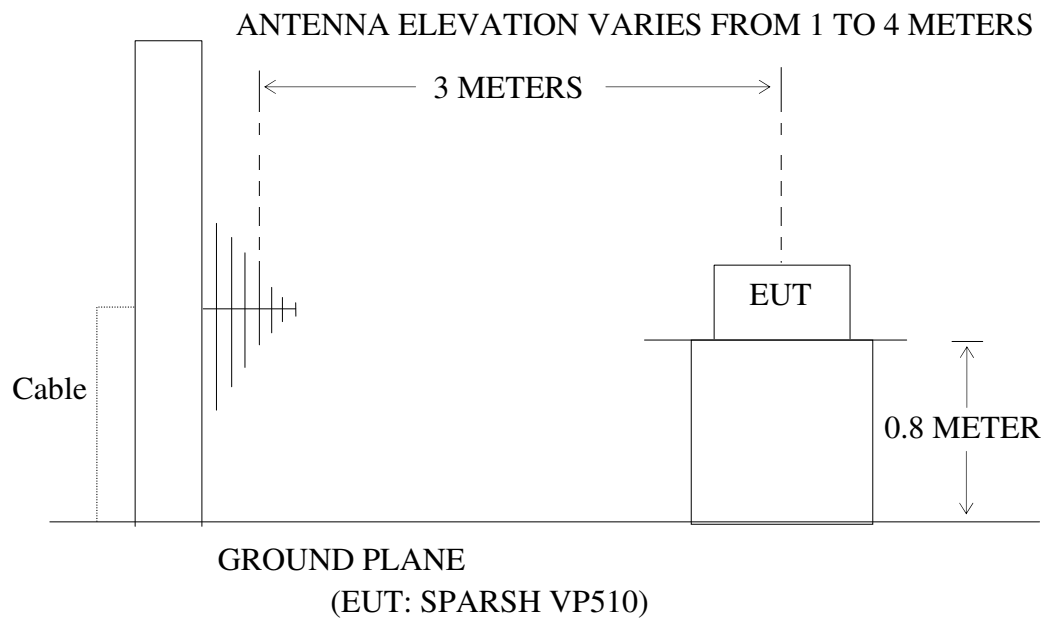
5.1. Block Diagram of Test Setup

5.1.1. Block diagram of connection between the EUT and simulators



(EUT: SPARSH VP510)

5.1.2. Semi-Anechoic Chamber Test Setup Diagram



5.2.The Emission Limit For Section 15.109 (a)

5.2.1.Radiation Emission Measurement Limits According to Section 15.109 (a).

Frequency MHz	Distance Meters	Field Strengths Limit	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V/m})$
30-88	3	100	40.0
88-216	3	150	43.5
216-960	3	200	46.0
960-1000	3	500	54.0
Remark: (1) Emission level $\text{dB}(\mu\text{V}) = 20 \log$ Emission level $\mu\text{V/m}$. (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.			

5.3.EUT Configuration 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.

5.3.1.SPARSH VP510 (EUT)

Model Number: SPARSH VP

Serial Number: N/A

Manufacturer: MATRIX COMSEC PVT. LTD.

5.4.Operating Condition of EUT

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

5.4.2.Turn on the power of all equipment.

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

5.5.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 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.

The bandwidth of the EMI test receiver (R&S ESCS30) is set at 120kHz from 30MHz to 2000MHz.

The frequency range from 30MHz to 2000MHz is checked.

5.6.Radiated Emission Noise Measurement Result

PASS.



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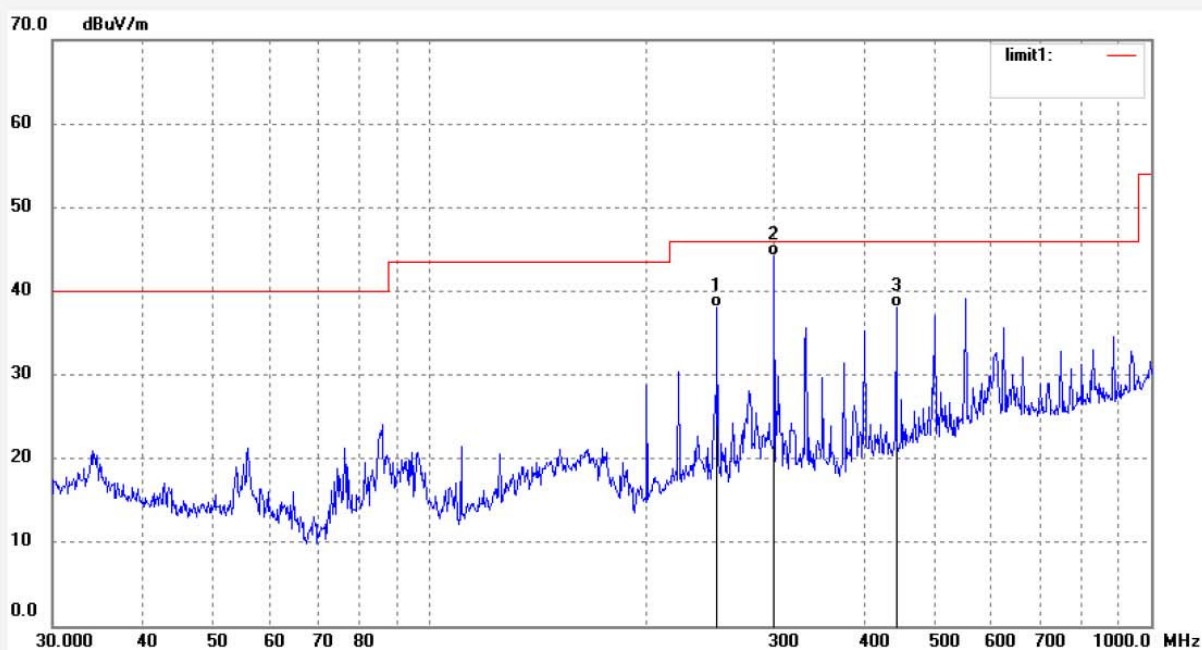
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: ding #153
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: SPARSH VP510
Mode: ON
Model: SPARSH VP
Manufacturer: MATRIX COMSEC PTV LTD

Polarization: Horizontal
Power Source: DC 5V
Date: 15/12/25/
Time: 18/25/50
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20152691



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	250.3012	48.77	-10.67	38.10	46.00	-7.90	QP			
2	300.3672	53.52	-9.29	44.23	46.00	-1.77	QP			
3	443.2943	43.87	-5.87	38.00	46.00	-8.00	QP			



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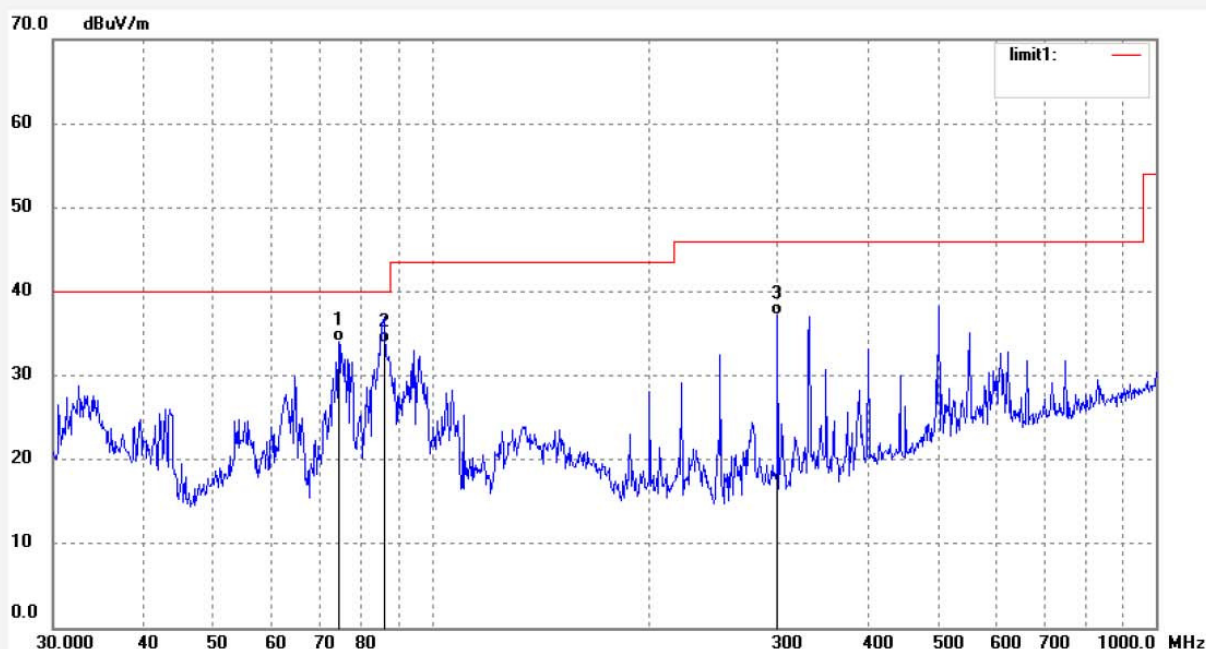
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: ding #154
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: SPARSH VP510
Mode: ON
Model: SPARSH VP
Manufacturer: MATRIX COMSEC PTV LTD

Polarization: Vertical
Power Source: DC 5V
Date: 15/12/25/
Time: 18/27/07
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20152691



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	74.3955	50.21	-16.11	34.10	40.00	-5.90	QP			
2	85.8984	48.65	-14.84	33.81	40.00	-6.19	QP			
3	300.3672	46.56	-9.29	37.27	46.00	-8.73	QP			



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Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: ding #164

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: SPARSH VP510

Mode: ON

Model: SPARSH VP

Manufacturer: MATRIX COMSEC PTV LTD

Polarization: Horizontal

Power Source: POE(Power source)

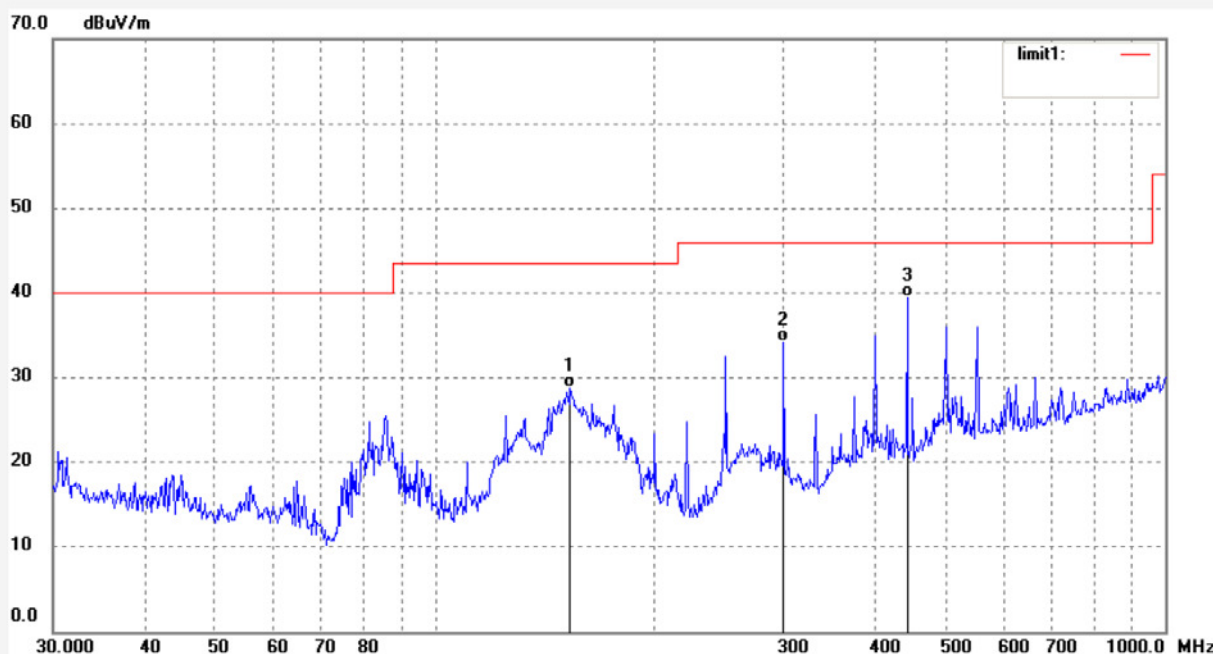
Date: 15/12/26/

Time: 8/29/54

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20152691



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	153.2004	43.60	-14.83	28.77	43.50	-14.73	QP			
2	300.3672	43.52	-9.29	34.23	46.00	-11.77	QP			
3	443.2943	45.25	-5.87	39.38	46.00	-6.62	QP			



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Job No.: ding #163

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: SPARSH VP510

Mode: ON

Model: SPARSH VP

Manufacturer: MATRIX COMSEC PTV LTD

Polarization: Vertical

Power Source: POE(Power source)

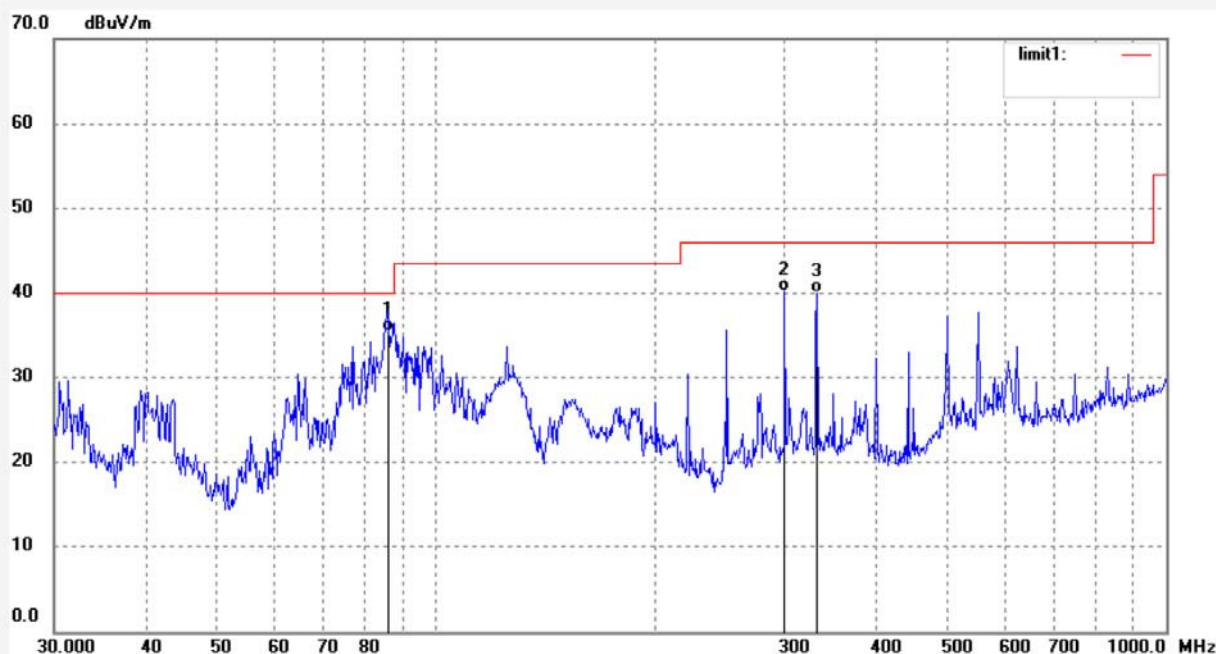
Date: 15/12/26/

Time: 8/28/25

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20152691



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	85.8984	50.24	-14.84	35.40	40.00	-4.60	QP			
2	300.3672	49.43	-9.29	40.14	46.00	-5.86	QP			
3	332.5187	48.31	-8.30	40.01	46.00	-5.99	QP			



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Job No.: ding #159

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: SPARSH VP510

Mode: ON

Model: SPARSH VP

Manufacturer: MATRIX COMSEC PTV LTD

Polarization: Horizontal

Power Source: DC 5V

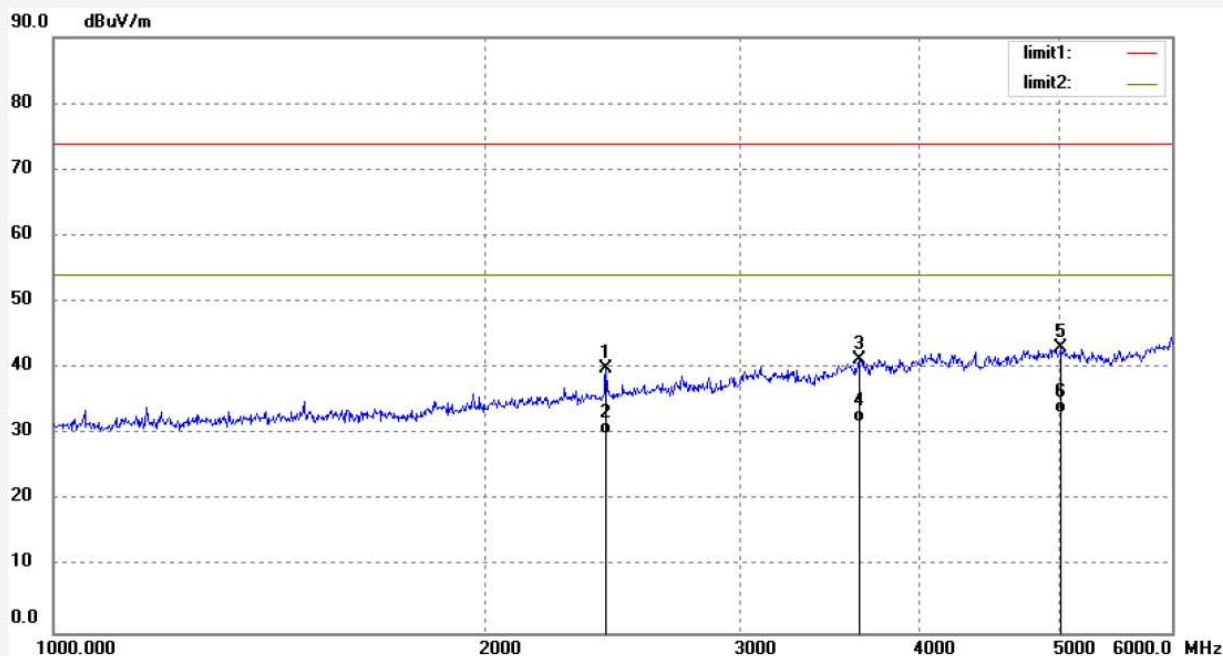
Date: 15/12/25/

Time: 18/48/29

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20152691



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2423.297	47.42	-7.40	40.02	74.00	-33.98	peak			
2	2423.297	37.54	-7.40	30.14	54.00	-23.86	AVG			
3	3633.029	43.90	-2.67	41.23	74.00	-32.77	peak			
4	3633.029	34.58	-2.67	31.91	54.00	-22.09	AVG			
5	5024.748	42.44	0.61	43.05	74.00	-30.95	peak			
6	5024.748	32.59	0.61	33.20	54.00	-20.80	AVG			



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Job No.: ding #160

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: SPARSH VP510

Mode: ON

Model: SPARSH VP

Manufacturer: MATRIX COMSEC PTV LTD

Polarization: Vertical

Power Source: DC 5V

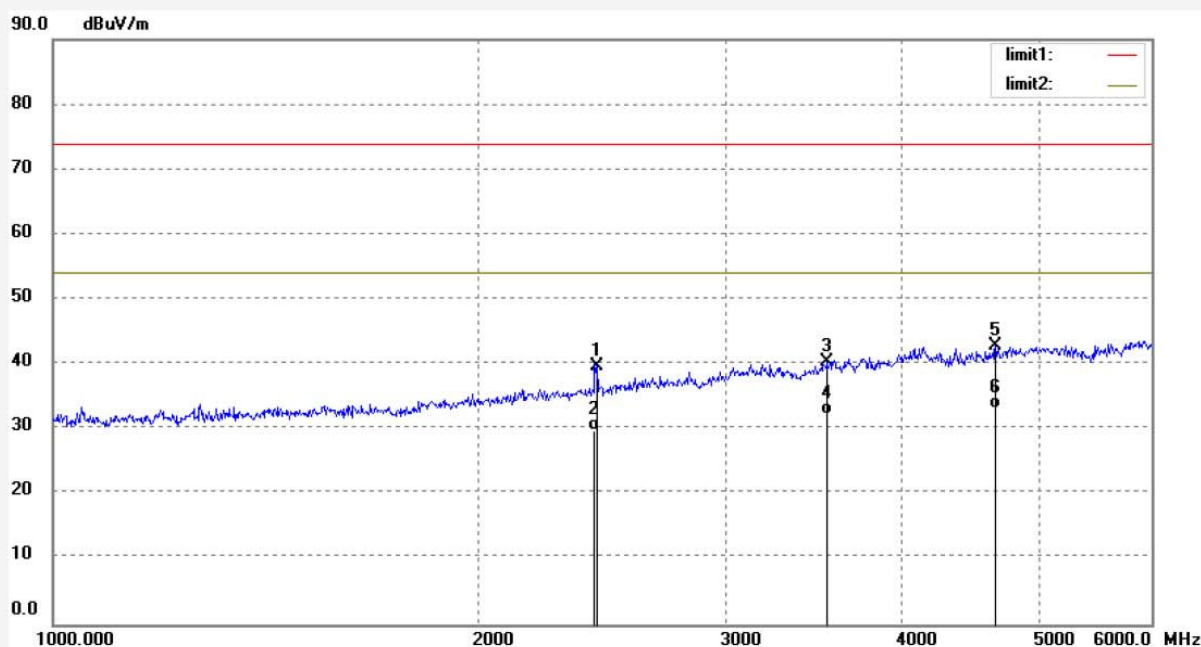
Date: 15/12/25/

Time: 18/49/38

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20152691



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2427.643	47.13	-7.39	39.74	74.00	-34.26	peak			
2	2427.643	37.25	-7.39	29.86	54.00	-24.14	AVG			
3	3536.687	43.34	-2.99	40.35	74.00	-33.65	peak			
4	3536.687	35.21	-2.99	32.22	54.00	-21.78	AVG			
5	4652.151	43.80	-1.00	42.80	74.00	-31.20	peak			
6	4652.151	34.29	-1.00	33.29	54.00	-20.71	AVG			



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Job No.: ding #165

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: SPARSH VP510

Mode: ON

Model: SPARSH VP

Manufacturer: MATRIX COMSEC PTV LTD

Polarization: Horizontal

Power Source: POE(Power source)

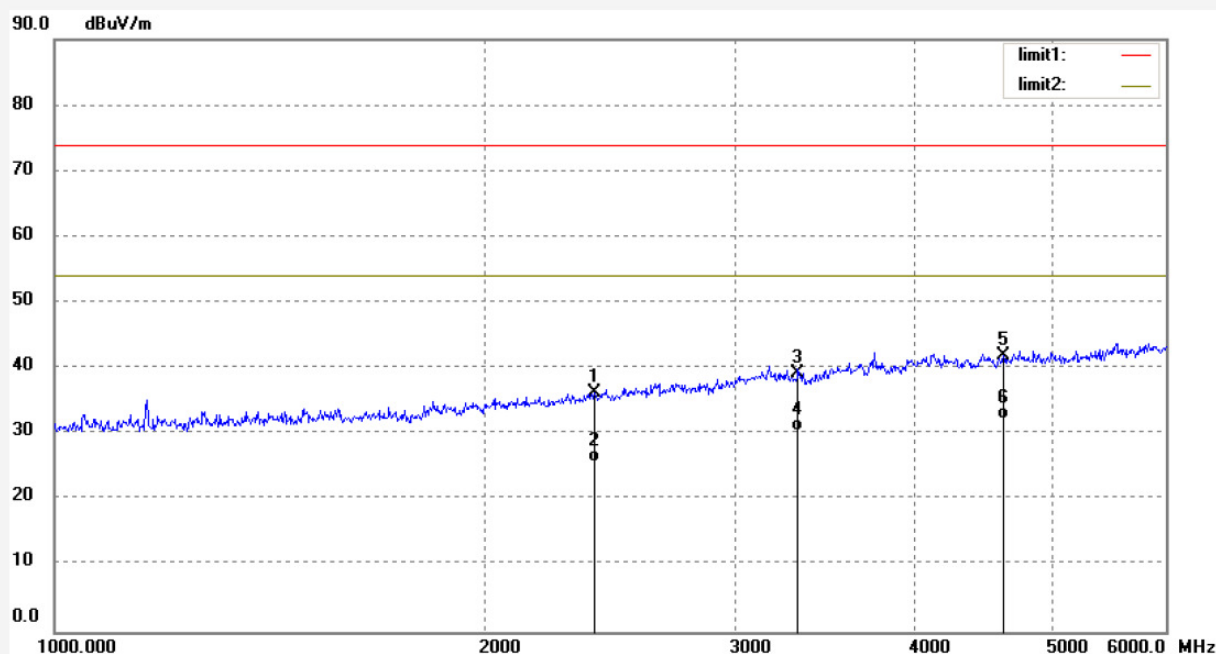
Date: 15/12/26/

Time: 8/37/20

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20152691



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2388.809	43.84	-7.53	36.31	74.00	-37.69	peak			
2	2388.809	33.24	-7.53	25.71	54.00	-28.29	AVG			
3	3321.707	43.52	-4.20	39.32	74.00	-34.68	peak			
4	3321.707	34.59	-4.20	30.39	54.00	-23.61	AVG			
5	4618.928	42.98	-1.09	41.89	74.00	-32.11	peak			
6	4618.928	33.48	-1.09	32.39	54.00	-21.61	AVG			



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Site: 2# Chamber

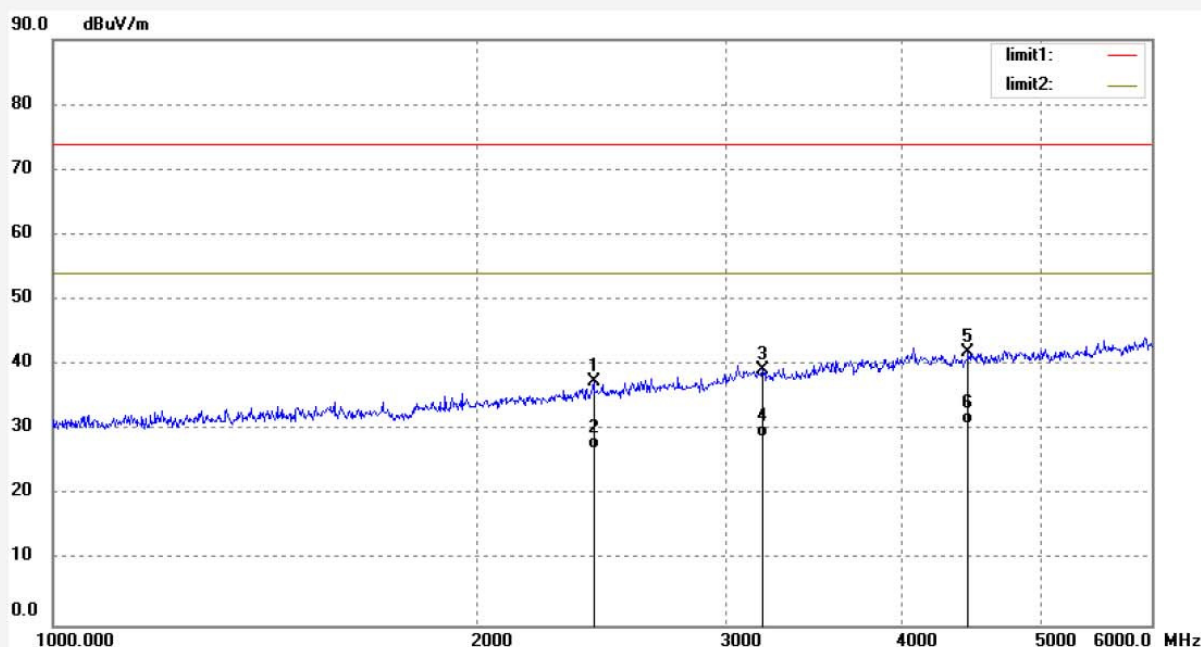
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: ding #166
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: SPARSH VP510
Mode: ON
Model: SPARSH VP
Manufacturer: MATRIX COMSEC PTV LTD

Polarization: Vertical
Power Source: POE (Power Source)
Date: 15/12/26/
Time: 8/38/17
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20152691



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2414.629	44.80	-7.42	37.38	74.00	-36.62	peak			
2	2414.629	34.58	-7.42	27.16	54.00	-26.84	AVG			
3	3181.894	43.47	-4.31	39.16	74.00	-34.84	peak			
4	3181.894	33.14	-4.31	28.83	54.00	-25.17	AVG			
5	4448.361	43.44	-1.52	41.92	74.00	-32.08	peak			
6	4448.361	32.51	-1.52	30.99	54.00	-23.01	AVG			