

Produkte
Products

Prüfbericht - Nr.:		19660387 001		Seite 1 von 23 <i>Page 1 of 23</i>	
<i>Test Report No.:</i>					
Auftraggeber: <i>Client:</i>		Honeywell Technology Solution Lab, Devarabisanahalli Village, KR Puram Hobli, Bangalore, Karnataka – 560103, India			
Gegenstand der Prüfung: <i>Test item:</i>		SmartLine Wireless Pressure Transmitter			
Bezeichnung: <i>Identification:</i>	STXW800	Serien-Nr.: <i>Serial No.</i>	Engineering Sample		
Wareneingangs-Nr.: <i>Receipt No.:</i>	1803306376	Eingangsdatum: <i>Date of receipt:</i>	23-03-2018		
Prüfort: <i>Testing location:</i>	Refer Page 5 of 23 for Test site details				
Prüfgrundlage: <i>Test specification:</i>	FCC Part 15 Subpart C 15.247, RSS 247 Issue 2 ANSI C63.10- 2013				
Prüfergebnis: <i>Test Result:</i>	Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>The test items passed the test specification(s).</i>				
Prüflaboratorium: <i>Testing Laboratory:</i>	TÜV Rheinland (India) Pvt. Ltd. 27 / B, 2nd Cross, Electronic city Phase I, Bengaluru - 560100, India FCC Test Site Registration no.: 496599 ; IC Test Site Registration no.: 3466E-1				
geprüft / tested by:		kontrolliert / reviewed by:			
10-04-2018	Santhosh S K Engineer		31-07-2018	Saibaba Siddapur Assistant Manager	
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>
Sonstiges / Other Aspects:		Contains FCC ID: S5751454941 & IC:573W-51454941 On receipt, the equipment was in good condition.			
Abkürzungen:	P(ass) = entspricht Prüfgrundlage F(ail) = entspricht nicht Prüfgrundlage N/A = nicht anwendbar N/T = nicht getestet		Abbreviations:	P(ass) = passed F(ail) = failed N/A = not applicable N/T = not tested	
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i>					

TÜV Rheinland India Pvt. Ltd. 27 / B, 2nd Cross Road, Electronics City Phase I, Bengaluru – 560100, India.
 Tel: +91 80 4649 8000 Fax: +91 80 4649 8042 · Web: <https://www.tuv.com>

Test Summary

FCC Section	IC Section	Test item	Result	Remarks
15.247(a)(2)	RSS 247 5.2 (a)	6dB Bandwidth	N/T*	RF Module Related test cases are covered in test report "19660369 001" tested by TÜV Rheinland India private limited
-	RSS Gen 6.7	99% Bandwidth	N/T*	
15.247(b)	RSS 247 5.4 (d)	Power output measurement	N/T*	
15.247(e)	RSS 247 5.2 (b)	Power spectral density	N/T*	
15.247(d)	RSS 247 5.5	Emission in non Restricted frequency bands	PASS	
15.247 (d) / 15.209 & 15.205	RSS Gen 8.9 & 8.10	Radiated spurious emission & restricted bands of operation	PASS	
15.207	RSS Gen 8.8	Conducted Emission on A.C mains lines	N/A*	Host is exclusively battery operated device

N/A*- Not applicable

N/T* - Not tested

Table of Contents

1 GENERAL REMARKS	4
1.1 Complimentary Materials	4
2 TEST SITES	5
2.1 Testing Facilities	5
2.2 List of Test and Measurement Instruments	5
3 GENERAL PRODUCT INFORMATION	6
3.1 Product Function and Intended Use	6
3.2 Ratings and System Details	6
3.3 Antenna Details and Power level settings used	7
3.4 Measurement Uncertainty	7
4 OPERATIONAL DESCRIPTIONS	7
5 TEST SET-UP AND OPERATION MODE	8
5.1 Principle of Configuration Selection	8
5.2 Test Operation and Test Software	8
5.3 Special Accessories and Auxiliary Equipment	8
5.4 Countermeasures to achieve EMC Compliance	8
6 RADIATED TEST METHODOLOGY	9
6.1 Radiated Emission Test	9
6.1.1 Test Setup Configuration	9
7 TEST RESULTS	12
7.1 Restricted bands of Emissions & Restricted Bands of Operation	12
7.1.1 Radiated Spurious Emission test results for Host Device STXW800	13
8 LIST OF TABLES	23
9 LIST OF FIGURES	23

1 GENERAL REMARKS

1.1 Complimentary Materials

All attachments are integral part of this test report with the following appendixes:

Appendix 1: Test setup photos

Appendix 2: EUT external photos

Appendix 3: EUT internal photos

Appendix 4: FCC label and location details

Appendix 5: Block diagram

Appendix 6: Specification of EUT

Appendix 7: Schematics

Appendix 8: Bill of Materials

Appendix 9: User Manual

Appendix 10: Maximum permissible exposure calculation

2 TEST SITES

2.1 Testing Facilities

TUV Rheinland (India) Private Limited
 108 , Beside ISBR Business School,
 Electronic city Phase I
 Bangalore - 560 100.

2.2 List of Test and Measurement Instruments

Table 1: Test and measurement instrument used

Equipment	Manufacturer	Model Name	Serial Number	Calibration Due Date	Periodicity	Used for Test Items
EMI Test Receiver	Rohde & Schwarz	ESU 40	100288	24-10-2018	Yearly	Radiated Spurious measurement
Active loop antenna	Frankonia	LAX-10	LAX-10-800	15-01-2019	Yearly	
Baloon and Biconical Antenna	Schwarzbeck mess-elektronik	VHBB-9124 / BBA-9106	9124-656	09-01-2019	Yearly	
Log-Periodic Antenna	Schwarzbeck mess-elektronik	VUSLP-9111B	9111B-111	16-01-2019	Yearly	
Broadband Horn Antenna	Frankonia	HAX-18	HAX18-802	16-09-2018	Yearly	
Semi Anechoic Chamber	Frankonia	-	-	-	-	

3 GENERAL PRODUCT INFORMATION

3.1 Product Function and Intended Use

The Smart Line Wireless Pressure transmitter enables customers to obtain data and create information from remote and hazardous measurement locations without the need to run wires, where running wire is cost prohibitive and/or the measurement is in a hazardous location.

3.2 Ratings and System Details

Table 2: Ratings and System Details

Operating Frequency Band	2400 MHz – 2483.5 MHz;
Radio Protocol	ZigBee
Data rate	250 kbps
Channel Spacing	5 MHz
Modulation	DSSS (O-QPSK)
Number of antennas supports	Refer Table 3 : Antenna Details
Antenna Gain & Type	Refer Table 3 : Antenna Details
Supply Voltage to Product	7.2 VDC
Environmental conditions	Operating: -40 °C to +85 °C; 5 % to 95 % RH non-condensing

3.3 Antenna Details and Power level settings used

Table 3 : Antenna Details and power level settings used

Antenna Type: External				
Sl.No	Antenna	Antenna gain	Power level settings	Host Device(STXW800) Supported antenna
1	Centurion MAF94152 Omni Antenna	-2	16	Yes
2	L-COM HG2402RDR-RSP "Rubber-Duck" Omni Antenna	+2	14	Yes
3	EM-B14503-MMP-Z6	+4	14	Yes
4	L-COM HGV-2404U Omni Antenna	+4	14	Yes
5	L-COM HGV-2409U Omni Antenna	+8	10	Yes
6	L-COM HG-2414D remote Dish Antenna	+14	6	Yes

3.4 Measurement Uncertainty

Table 4: Measurement Uncertainty

Parameter	Uncertainty
Unwanted Emissions, conducted	±3 dB
All emissions, radiated	±6 dB

4 OPERATIONAL DESCRIPTIONS

The transmitter measures the process pressure and transmits the measured value as a digital output signal in user-configured engineering units.

5 TEST SET-UP AND OPERATION MODE

5.1 Principle of Configuration Selection

Transmission was enabled with continuous transmission on low, mid and high channel with 100ms and 100% duty cycle to obtain maximum worst-case emissions

The product was tested with TUV Label **1803306376-1**

5.2 Test Operation and Test Software

Testing software was used to enable the continuous transmission on low/mid/high channels on the EUT for the tests in this report.

Software Simulator used : Putty and Tera term
Firmware Version : OW310.1 24.1.1
Hardware Version : 51454941-001
Part Number : 51454941

5.3 Special Accessories and Auxiliary Equipment

- PDA controller, Co-axial cable were used during testing.

5.4 Countermeasures to achieve EMC Compliance

- None

Table 5: List of Center Frequencies

Frequency Band (MHz)	Channel Number	Channel Frequency (MHz)
2400 – 2483.5	01	2405
	02	2410
	03	2415
	04	2420
	05	2425
	06	2430
	07	2435
	08	2440
	09	2445
	10	2450
	11	2455
	12	2460
	13	2465
	14	2470
	15	2475

Note: Host device uses 10 m and 3m co-axial cables at the end application (approximately 2 dB as specified by manufacturer)

6 RADIATED TEST METHODOLOGY

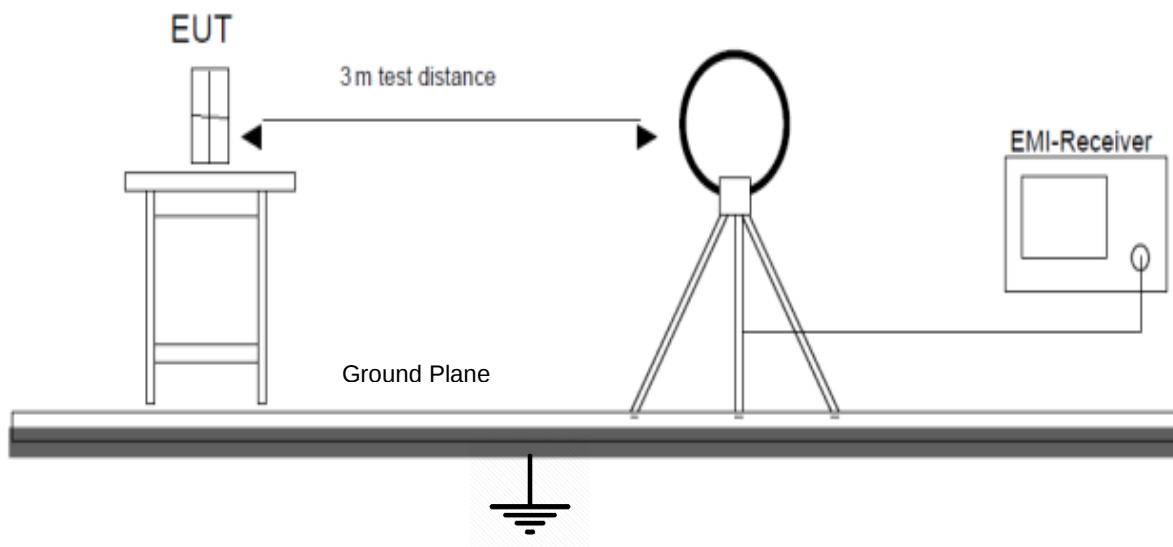
6.1 Radiated Emission Test

The radiated emission measurement was performed according to the procedures in ANSI C63.10-2013. The equipment under test (EUT) was placed at the middle of the 80 cm high turntable for below 1 GHz & 1.5 m height for above 1 GHz measurement, and the EUT is 3 meters far from the measuring antenna. The turntable was rotated 360° for obtaining the maximum emission. The height of the measuring antennas was scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations. Repeat the measurement steps until the maximum emissions were obtained. The measurement above 1000 MHz was performed by horn antenna, the measurement below 30 MHz was performed by loop antenna, Measurement from 30 MHz to 200 MHz was performed by Baloon and Biconical Antenna, and measurement from 200 MHz to 1000 MHz was performed by Log-Periodic Antenna

The EUT was rotated around the X-, Y-, and Z-Axis and the results from worst case axis are recorded.

6.1.1 Test Setup Configuration

Figure 1: Frequency Range 9 kHz- 30 MHz



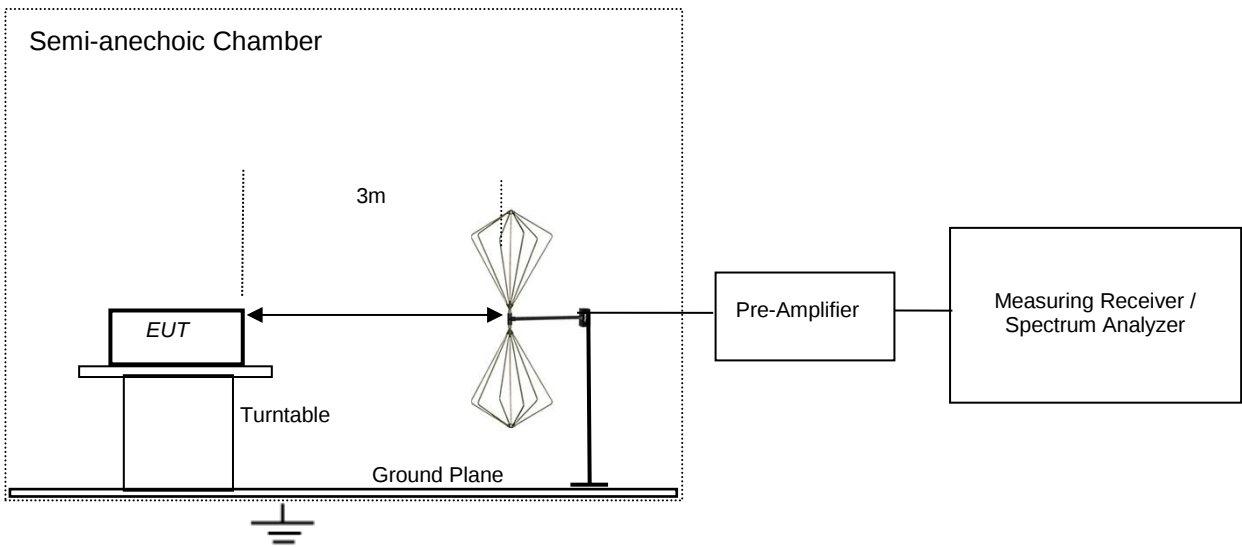


Figure 2: Frequency Range 30 MHz – 200 MHz

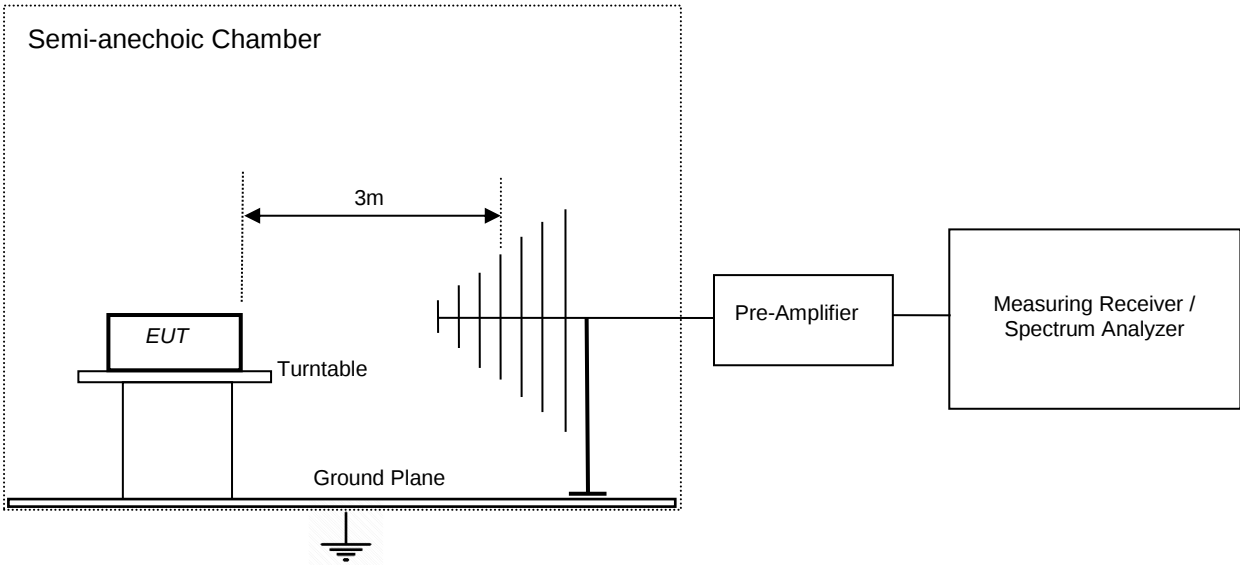


Figure 3: Frequency Range above 200 MHz – 1000 MHz

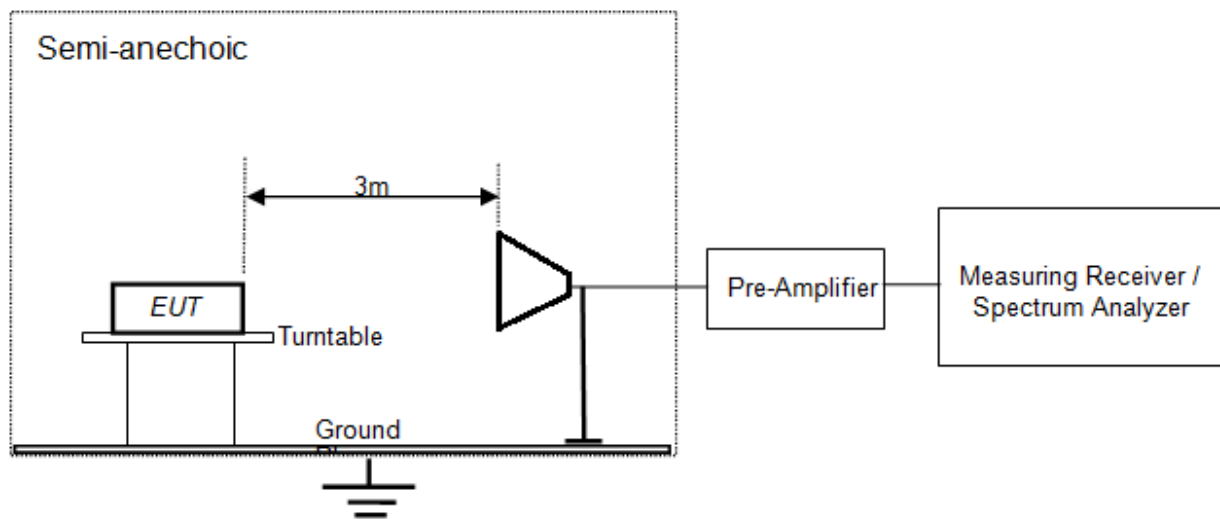


Figure 4: Frequency range above 1000 MHz

7 TEST RESULTS

7.1 Restricted bands of Emissions & Restricted Bands of Operation

Result
Pass

Test Specification	FCC part 15 Subpart C Section 15.247 (d) / (15.209 & 15.205) / RSS Gen 8.9 and 8.10
Test Method	ANSI C 63.10 - 2013
Measurement Location	Semi Anechoic Chamber
Measuring Distance	3 m
Detector	QP for frequency below 1 GHz, average for frequency above 1 GHz
Requirement	As per the limits mentioned in the below table

Table 6: Transmitter limits for Radiated emission of Section 15.209, RSS Gen 8.9 and 8.10.

Frequency (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Distance of Measurement (m)
0.009 – 0.490	2400/F(kHz)	48.50 – 13.80	300*
0.490 – 1.705	24000/F(kHz)	33.80 – 23.00	30*
1.705 -30	30	29.54	30*
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Remark: * The limit shows in the table above of frequency range 0.009 – 0.490, 0.490 – 1.705 MHz and 1.705-30MHz is at 300 meter, 30 meter and 30 meter range respectively, which corresponds to 128.51 – 93.80, 73.80 – 62.96 and 69.54dBμV/m at 3m range by extrapolation calculation and the measurement of loop antenna.

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz Radiated emission limits in these three bands are based on measurements employing an average detector.

Test Conditions:

Supply Voltage: 7.2 V DC

Environmental conditions:

Temperature: +25.9 °C RH: 62.46 %

7.1.1 Radiated Spurious Emission test results for Host Device STXW800

No emissions found in frequency 9 kHz to 30 MHz

Frequency Range 30 MHz – 200 MHz

Table 7 : Test results for 30 MHz – 200 MHz Host Device STXW800

Polarization	Measured Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Vertical	39.84 MHz	5.27	40	-34.73
	41.61 MHz	6.1	40	-33.9
	196.12 MHz	8.15	43.5	-35.35
Horizontal	145.13	4.77	43.5	-38.73
	198.16	7.92	43.5	-35.58

Frequency Range 200 MHz – 1000 MHz

Table 8 : Test results for 200 MHz – 1000 MHz Host Device STXW800

Polarization	Measured Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Vertical	208.88	13.98	43.5	-29.52
	912.8	24.18	46	-21.82
Horizontal	299.6	27.44	46	-18.56
	837.92	28.11	46	-17.89
	898.32	30.11	46	-15.89

Frequency range above 1 GHz to 26.5 GHz

Table 9: Test results for antenna -2 dBi and 16 dBm power level settings Host Device STXW800

Polarization	Operating Frequency (MHz)	Measured Frequency (MHz)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)	
Vertical	2405.00	2390 (Pk)	48.78	74.00	-25.22	
		2390 (Av)	39.90	54.00	-14.10	
		2405 (Pk)	117.62	-	*	
		2405 (Av)	113.96	-	*	
		4810 (Pk)	54.65	74.00	-19.35	
		4810 (Av)	45.29	54.00	-8.71	
		7215 (Pk)	58.71	74.00	-20.56	
		7215 (Av)	48.49	54.00	-10.33	
Horizontal		2390 (Pk)	46.47	74.00	-26.55	
		2390 (Av)	37.19	54.00	-16.81	
		2405 (Pk)	109.78	-	*	
		2405 (Av)	106.22	-	*	
		4810 (Pk)	53.44	74.00	-20.56	
		4810 (Av)	43.67	54.00	-10.33	
		7215 (Pk)	58.82	74.00	-15.18	
		7215 (Av)	47.45	54.00	-6.55	
Vertical	2440.00	2440 (Pk)	114.83	-	*	
		2440 (Av)	111.22	-	*	
		4880 (Pk)	54.35	74.00	-19.65	
		4880 (Av)	44.54	54.00	-9.46	
		7320 (Pk)	61.05	74.00	-12.95	
		7320 (Av)	51.43	54.00	-2.57	
		Horizontal	2440 (Pk)	110.48	-	*
			2440 (Av)	106.94	-	*
4880 (Pk)			54.65	74.00	-19.35	
4880 (Av)			44.81	54.00	-9.19	
7320 (Pk)			59.95	74.00	-14.05	
7320 (Av)			49.34	54.00	-4.66	

Vertical	2475.00	2483.5 (Pk)	61.44	74.00	-12.56
		2483.5 (Av)	51.32	54.00	-2.68
		2475 (Pk)	115.16	-	*
		2475 (Av)	111.69	-	*
		4950 (Pk)	53.70	74.00	-20.30
		4950 (Av)	44.03	54.00	-9.97
		7425 (Pk)	61.44	74.00	-12.56
		7425 (Av)	51.51	54.00	-2.49
Horizontal		2483.5 (Pk)	56.71	74.00	-17.29
		2483.5 (Av)	46.45	54.00	-7.55
		2475 (Pk)	114.79	-	*
		2475 (Av)	111.18	-	*
		4950 (Pk)	52.30	74.00	-21.70
		4950 (Av)	42.13	54.00	-11.87
		7425 (Pk)	60.64	74.00	-13.36
		7425 (Av)	49.31	54.00	-4.69

* - Fundamental frequency

Table 10: Test results for antenna 2 dBi and 16 dBm power level settings Host Device STXW800

Polarization	Operating Frequency (MHz)	Measured Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Vertical	2405.00	2390 (Pk)	48.40	74.00	-25.60
		2390 (Av)	37.68	54.00	-16.32
		2405 (Pk)	111.28	-	*
		2405 (Av)	111.01	-	*
		4810 (Pk)	54.47	74.00	-19.53
		4810 (Av)	42.56	54.00	-11.44
		7215 (Pk)	62.29	74.00	-11.71
		7215 (Av)	48.47	54.00	-5.53
Horizontal		2390 (Pk)	43.66	74.00	-30.34
		2390 (Av)	33.49	54.00	-20.51
		2405 (Pk)	104.60	-	*
		2405 (Av)	104.21	-	*
		4810 (Pk)	54.95	74.00	-19.05
		4810 (Av)	43.96	54.00	-10.04
		7215 (Pk)	62.15	74.00	-11.85
		7215 (Av)	48.49	54.00	-5.51

* - Fundamental frequency

Prüfbericht - Nr.:
Test Report No.:
19660387 001
Seite 16 von 23
Page 16 of 23

Vertical	2440.00	2440 (Pk)	112.18	-	*
		2440 (Av)	112.07	-	*
		4880 (Pk)	55.58	74.00	-18.42
		4880 (Av)	44.57	54.00	-9.43
		7320 (Pk)	62.96	74.00	-11.04
		7320 (Av)	48.94	54.00	-5.06
Horizontal		2440 (Pk)	105.49	-	*
		2440 (Av)	105.15	-	*
		4880 (Pk)	55.64	74.00	-18.36
		4880 (Av)	45.32	54.00	-8.68
		7320 (Pk)	63.52	74.00	-10.48
		7320 (Av)	48.96	54.00	-5.04
Vertical	2475.00	2483.5 (Pk)	60.67	74.00	-13.33
		2483.5 (Av)	51.15	54.00	-2.85
		2475 (Pk)	113.66	-	*
		2475 (Av)	113.21	-	*
		4950 (Pk)	55.94	74.00	-18.06
		4950 (Av)	44.93	54.00	-9.07
		7425 (Pk)	63.48	74.00	-10.52
		7425 (Av)	50.25	54.00	-3.75
Horizontal	2475.00	2483.5 (Pk)	55.42	74.00	-18.58
		2483.5 (Av)	45.27	54.00	-8.73
		2475 (Pk)	107.96	-	*
		2475 (Av)	107.16	-	*
		4950 (Pk)	56.60	74.00	-17.40
		4950 (Av)	45.41	54.00	-8.59
		7425 (Pk)	63.65	74.00	-10.35
		7425 (Av)	49.67	54.00	-4.33

* - Fundamental frequency

Table 11: Test results for antenna 4 dBi (EM-B14503-MMP-Z6) and 14 dBm power level settings Host Device STXW800

Polarization	Operating Frequency (MHz)	Measured Frequency (MHz)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Vertical	2405.00	2390 (Pk)	47.63	74.00	-26.37
		2390 (Av)	36.50	54.00	-17.50
		2405 (Pk)	110.51	-	*
		2405 (Av)	110.32	-	*
		4810 (Pk)	53.70	74.00	-20.30
		4810 (Av)	41.38	54.00	-12.62
		7215 (Pk)	61.52	74.00	-12.48
		7215 (Av)	47.29	54.00	-6.71

Prüfbericht - Nr.:
Test Report No.:
19660387 001
Seite 17 von 23
Page 17 of 23

Horizontal	2405.00	2390 (Pk)	42.89	74.00	-31.11	
		2390 (Av)	32.31	54.00	-21.69	
		2405 (Pk)	103.83	-	*	
		2405 (Av)	103.41	-	*	
		4810 (Pk)	54.18	74.00	-19.82	
		4810 (Av)	42.78	54.00	-11.22	
		7215 (Pk)	61.38	74.00	-12.62	
		7215 (Av)	47.31	54.00	-6.69	
Vertical	2440.00	2440 (Pk)	111.41	-	*	
		2440 (Av)	111.35	-	*	
		4880 (Pk)	54.81	74.00	-19.19	
		4880 (Av)	43.39	54.00	-10.61	
		7320 (Pk)	62.19	74.00	-11.81	
		7320 (Av)	47.76	54.00	-6.24	
Horizontal		2440 (Pk)	104.72	-	*	
		2440 (Av)	104.22	-	*	
		4880 (Pk)	54.87	74.00	-19.13	
		4880 (Av)	44.14	54.00	-9.86	
		7320 (Pk)	62.75	74.00	-11.25	
		7320 (Av)	47.78	54.00	-6.22	
Vertical		2475.00	2483.5 (Pk)	59.90	74.00	-14.10
			2483.5 (Av)	49.97	54.00	-4.03
	2475 (Pk)		112.89	-	*	
	2475 (Av)		112.32	-	*	
	4950 (Pk)		55.17	74.00	-18.83	
	4950 (Av)		43.75	54.00	-10.25	
	7425 (Pk)		62.71	74.00	-11.29	
	7425 (Av)		49.07	54.00	-4.93	
Horizontal	2483.5 (Pk)		54.65	74.00	-19.35	
	2483.5 (Av)		44.09	54.00	-9.91	
	2475 (Pk)		107.19	-	*	
	2475 (Av)		107.01	-	*	
	4950 (Pk)		55.83	74.00	-18.17	
	4950 (Av)		44.23	54.00	-9.77	
	7425 (Pk)		62.88	74.00	-11.12	
	7425 (Av)		48.49	54.00	-5.51	

* - Fundamental frequency

Table 12: Test results for antenna 4 dBi (HGV- 2404U) and 14 dBm power level settings Host Device STXW800

Polarization	Operating Frequency (MHz)	Measured Frequency (MHz)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Vertical	2405.00	2390 (Pk)	45.45	74.00	-28.55
		2390 (Av)	37.09	54.00	-16.91
		2405 (Pk)	107.99	-	*
		2405 (Av)	106.74	-	*
		4810 (Pk)	51.60	74.00	-22.40
		4810 (Av)	41.83	54.00	-12.17
		7215 (Pk)	59.34	74.00	-14.66
		7215 (Av)	47.88	54.00	-6.12
Horizontal		2390 (Pk)	40.37	74.00	-33.63
		2390 (Av)	32.60	54.00	-21.40
		2405 (Pk)	101.73	-	*
		2405 (Av)	100.36	-	*
		4810 (Pk)	52.00	74.00	-22.00
		4810 (Av)	43.37	54.00	-10.63
		7215 (Pk)	58.86	74.00	-15.14
		7215 (Av)	47.60	54.00	-6.40
Vertical	2440.00	2440 (Pk)	109.31	-	*
		2440 (Av)	107.80	-	*
		4880 (Pk)	52.63	74.00	-21.37
		4880 (Av)	43.98	54.00	-10.02
		7320 (Pk)	59.67	74.00	-14.33
		7320 (Av)	48.05	54.00	-5.95
Horizontal		2440 (Pk)	102.62	-	*
		2440 (Av)	101.07	-	*
		4880 (Pk)	52.69	74.00	-21.31
		4880 (Av)	44.73	54.00	-9.27
		7320 (Pk)	60.23	74.00	-13.77
		7320 (Av)	48.07	54.00	-5.93

* - Fundamental frequency

Prüfbericht - Nr.:
Test Report No.:
19660387 001
Seite 19 von 23
Page 19 of 23

Vertical	2475.00	2483.5 (Pk)	57.80	74.00	-16.20
		2483.5 (Av)	50.42	54.00	-3.58
		2475 (Pk)	110.71	-	*
		2475 (Av)	109.40	-	*
		4950 (Pk)	52.65	74.00	-21.35
		4950 (Av)	44.04	54.00	-9.96
Horizontal		7425 (Pk)	60.61	74.00	-13.39
		7425 (Av)	49.52	54.00	-4.48
		2483.5 (Pk)	52.47	74.00	-21.53
		2483.5 (Av)	44.68	54.00	-9.32
		2475 (Pk)	104.67	-	*
		2475 (Av)	103.45	-	*
		4950 (Pk)	53.73	74.00	-20.27
		4950 (Av)	44.68	54.00	-9.32
		7425 (Pk)	60.70	74.00	-13.30
		7425 (Av)	49.08	54.00	-4.92

* - Fundamental frequency

Table 13: Test Results for Antenna 8 dBi and 10 dBm power level level settings Host Device STXW800

Polarization	Operating Frequency (MHz)	Measured Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Vertical	2405.00	2390 (Pk)	45.35	74.00	-28.65
		2390 (Av)	35.37	54.00	-18.63
		2405 (Pk)	108.03	-	*
		2405 (Av)	104.79	-	*
		4810 (Pk)	51.35	74.00	-22.65
		4810 (Av)	41.44	54.00	-12.56
		7215 (Pk)	56.69	74.00	-24.41
		7215 (Av)		43.07	54.00
Horizontal		2390 (Pk)	38.70	74.00	-35.30
		2390 (Av)	26.87	54.00	-27.13
		2405 (Pk)	93.53	-	*
		2405 (Av)	90.28	-	*
		4810 (Pk)	49.59	74.00	-24.41
		4810 (Av)	38.21	54.00	-15.79
		7215 (Av)	43.07	54.00	-10.93

* - Fundamental frequency

Prüfbericht - Nr.:
Test Report No.:
19660387 001
Seite 20 von 23
Page 20 of 23

Vertical	2440.00	2440 (Pk)	109.20	-	*
		2440 (Av)	105.42	-	*
		4880 (Pk)	51.99	74.00	-22.01
		4880 (Av)	41.56	54.00	-12.44
		7320 (Pk)	57.53	74.00	-16.47
		7320 (Av)	43.55	54.00	-10.45
Horizontal		2440 (Pk)	94.74	-	*
		2440 (Av)	94.15	-	*
		4880 (Pk)	49.72	74.00	-24.28
		4880 (Av)	35.96	54.00	-18.04
		7320 (Pk)	57.53	74.00	-16.47
		7320 (Av)	43.65	54.00	-10.35
Vertical	2475.00	2483.5 (Pk)	59.97	74.00	-14.03
		2483.5 (Av)	50.63	54.00	-3.37
		2475 (Pk)	113.03	-	*
		2475 (Av)	109.32	-	*
		4950 (Pk)	50.21	74.00	-23.79
		4950 (Av)	38.86	54.00	-15.14
		7425 (Pk)	57.91	74.00	-16.09
		7425 (Av)	43.73	54.00	-10.27
Horizontal		2483.5 (Pk)	45.77	74.00	-28.23
		2483.5 (Av)	35.95	54.00	-18.05
		2475 (Pk)	96.88	-	*
		2475 (Av)	93.57	-	*
		4950 (Pk)	49.58	74.00	-24.42
		4950 (Av)	36.78	54.00	-17.22
		7425 (Pk)	57.84	74.00	-16.16
		7425 (Av)	44.16	54.00	-9.84

* - Fundamental frequency

Table 14: Test Results for Antenna 14 dBi and 6 dBm power level level settings Host Device STXW800

Polarization	Operating Frequency (MHz)	Measured Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Vertical	2405.00	2390 (Pk)	44.53	74.00	-29.47
		2390 (Av)	34.55	54.00	-19.45
		2405 (Pk)	109.35	-	*
		2405 (Av)	106.17	-	*
		4810 (Pk)	50.65	74.00	-23.35
		4810 (Av)	40.67	54.00	-13.33
		7215 (Pk)	55.85	74.00	-24.99
		7215 (Av)	41.92	54.00	-18.09
Horizontal		2390 (Pk)	58.50	74.00	-31.37
		2390 (Av)	40.63	54.00	-13.37
		2405 (Pk)	95.46	-	*
		2405 (Av)	91.79	-	*
		4810 (Pk)	49.01	74.00	-24.99
		4810 (Av)	35.91	54.00	-18.09
		7215 (Pk)	56.61	74.00	-17.39
		7215 (Av)	42.63	54.00	-11.37
Vertical	2440.00	2440 (Pk)	110.39	-	*
		2440 (Av)	107.21	-	*
		4880 (Pk)	54.09	74.00	-19.91
		4880 (Av)	41.22	54.00	-12.78
		7320 (Pk)	59.47	74.00	-14.53
		7320 (Av)	46.96	54.00	-7.04
Horizontal		2440 (Pk)	98.36	-	*
		2440 (Av)	94.99	-	*
		4880 (Pk)	54.81	74.00	-19.19
		4880 (Av)	42.34	54.00	-11.66
		7320 (Pk)	59.91	74.00	-14.09
		7320 (Av)	47.20	54.00	-6.80

* - Fundamental frequency

Vertical	2475.00	2483.5 (Pk)	57.52	74.00	-16.48
		2483.5 (Av)	48.21	54.00	-5.79
		2475 (Pk)	111.11	-	*
		2475 (Av)	107.53	-	*
		4950 (Pk)	54.19	74.00	-19.81
		4950 (Av)	43.41	54.00	-10.59
		7425 (Pk)	61.48	74.00	-12.52
		7425 (Av)	47.47	54.00	-6.53
Horizontal		2483.5 (Pk)	48.83	74.00	-25.17
		2483.5 (Av)	38.25	54.00	-15.75
		2475 (Pk)	99.22	-	*
		2475 (Av)	95.75	-	*
		4950 (Pk)	54.82	74.00	-19.18
		4950 (Av)	43.03	54.00	-10.97
		7425 (Pk)	60.40	74.00	-13.60
		7425 (Av)	47.76	54.00	-6.24

* - Fundamental frequency

Note: Field Strength = Measured Field Strength + Antenna Factor + Cable loss – Preamp Gain

8 LIST OF TABLES

Table 1: Test and measurement instrument used	5
Table 2: Ratings and System Details	6
Table 3 : Antenna Details and power level settings used.....	7
Table 4: Measurement Uncertainty.....	7
Table 5: List of Center Frequencies.....	8
Table 6: Transmitter limits for Radiated emission of Section 15.209, RSS Gen 8.9 and 8.10.....	12
Table 7 : Test results for 30 MHz – 200 MHz Host Device STXW800	13
Table 8 : Test results for 200 MHz – 1000 MHz Host Device STXW800	13
Table 9: Test results for antenna -2 dBi and 16 dBm power level settings Host Device STXW800	14
Table 10: Test results for antenna 2 dBi and 16 dBm power level settings Host Device STXW800	15
Table 11: Test results for antenna 4 dBi (EM-B14503-MMP-Z6) and 14 dBm power level settings Host Device STXW800.....	16
Table 12: Test results for antenna 4 dBi (HGV- 2404U) and 14 dBm power level settings Host Device STXW800.....	18
Table 13: Test Results for Antenna 8 dBi and 10 dBm power level level settings Host Device STXW800	19
Table 14: Test Results for Antenna 14 dBi and 6 dBm power level level settings Host Device STXW800	21

9 LIST OF FIGURES

Figure 1: Frequency Range 9 kHz- 30 MHz	9
Figure 2: Frequency Range 30 MHz – 200 MHz	10
Figure 3: Frequency Range above 200 MHz – 1000 MHz	10
Figure 4: Frequency range above 1000 MHz	11

*****END OF TEST REPORT*****