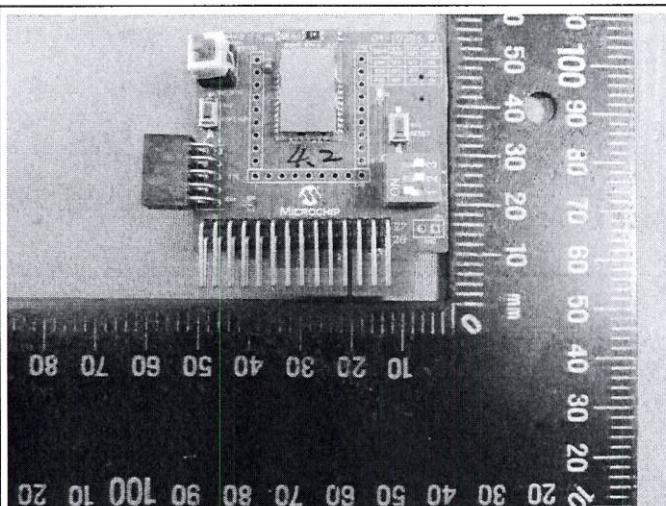


Prüfbericht-Nr.: Test Report No.:	10052437 001	Auftrags-Nr.: Order No.:	114039665	Seite 1 von 26 Page 1 of 26			
Kunden-Referenz-Nr.: Client Reference No.:	349733	Auftragsdatum: Order date.:	14 Aug. 2015				
Auftraggeber: Client:	Microchip Technology Inc. 5F, No. 5, Industry East Rd. VII, Hsinchu Science Park, TW-30077 Hsinchu City, Taiwan, R.O.C.						
Prüfgegenstand: Test item:	Bluetooth Module						
Bezeichnung / Typ-Nr.: Identification / Type No.:	BM78abcdefg, RN4678						
Auftrags-Inhalt: Order content:	TUV Rheinland - EMC service						
Prüfgrundlage: Test specification:	ETSI EN 301 489-1 V1.9.2 ETSI EN 301 489-17 V2.2.1						
Wareneingangsdatum: Date of receipt:	25 Aug. 2015						
Prüfmuster-Nr.: Test sample No.:	A000244783-004						
Prüfzeitraum: Testing period:	Refer to test report						
Ort der Prüfung: Place of testing:	TÜV Rheinland Taiwan Ltd.						
Prüflaboratorium: Testing laboratory:	TÜV Rheinland Taiwan Ltd. Taichung Branch Office						
Prüfergebnis*: Test result*:	Pass						

geprüft von / tested by:

14 Sep. 2015 Neil J. N. Tsai/ Project Manager

Datum Name/Stellung Unterschrift

Date Name/Position Signature

kontrolliert von / reviewed by:

14 Sep. 2015 Max Y. C. Yao/ Department Manager

Datum Name/Stellung Unterschrift

Date Name/Position Signature

Sonstiges / Other:

Zustand des Prüfgegenstandes bei Anlieferung:
Condition of the test item at delivery:

Prüfmuster vollständig und unbeschädigt
Test item complete and undamaged

* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft
P(pass) = entspricht o.g. Prüfgrundlage(n) F(fail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet
Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor
P(pass) = passed a.m. test specifications(s) F(fail) = failed a.m. test specifications(s) 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.

This test report only 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 test mark.

Content

1 TEST SITE	4
1.1 MEASUREMENT UNCERTAINTY	4
2 DESCRIPTION OF THE TEST SAMPLE	5
2.1 GENERAL DESCRIPTION OF EQUIPMENT.....	5
2.2 RATING AND PHYSICAL CHARACTERISTICS.....	5
2.3 SOURCES OF INTERFERENCE.....	5
2.4 NOISE SUPPRESSION PARTS	5
2.5 SUBMITTED DOCUMENTS	5
3 MEASUREMENT CONDITIONS.....	6
3.1 MODES OF OPERATION	6
3.2 ADDITIONAL EQUIPMENT	6
3.3 TEST SETUP	7
3.4 LIST OF TEST AND MEASUREMENT INSTRUMENTS	7
3.5 ABBREVIATIONS	8
4 TEST RESULTS EMISSION.....	9
4.1 CONTINUOUS INTERFERENCE	9
4.1.1 Conducted Emission (AC Mains)	9
4.1.2 Radiated Emission, 30 - 1000 MHz.....	10
4.1.3 Radiated Emission, Above 1 GHz.....	13
4.2 DISTURBANCES IN SUPPLY SYSTEMS	16
4.2.1 Harmonics	16
4.2.2 Voltage Fluctuations	16
5 TEST RESULTS IMMUNITY.....	17
5.1 ENCLOSURE PORT	17
5.1.1 Radiated Susceptibility.....	17
5.1.2 Electrostatic Discharge	18
5.2 INPUT AND OUTPUT AC POWER PORTS	19
5.2.1 Conducted Disturbances	19
5.2.2 Fast Transients Common Mode.....	19
5.2.3 Surges.....	20
5.2.4 Voltage Dips and Interruptions.....	20
5.3 SIGNAL AND TELECOMMUNICATION PORTS	21
5.3.1 Fast Transients Common Mode.....	21
5.3.2 Conducted Disturbances	21
5.3.3 Surges.....	22
6 PHOTOGRAPHS OF THE TEST SET-UP.....	23

Prüfbericht - Nr.: 10052437 001
Test Report No.

Seite 3 von 26
Page 3 of 26

7 LIST OF TABLES.....	26
8 LIST OF FIGURES	26
9 LIST OF PICTURES	26

Prüfbericht - Nr.: 10052437 001
Test Report No.

Seite 4 von 26
Page 4 of 26

1 Test Site

Laboratory:

TUV Rheinland Taiwan Ltd. Taichung Branch Office
No.9, Lane 36, Minsheng Rd., Sec. 3, Daya District, Taichung City 428, Taiwan, R.O.C.

Test Facility:

TÜV Rheinland Taiwan Ltd.
11F., No.758, Sec. 4, Bade Rd., Songshan Dist., Taipei City 105, Taiwan, R.O.C.

1.1 Measurement Uncertainty

Testing Item	Frequency Range	Uncertainty
Radiated Emission (966 Chamber: 3m)	30MHz - 1000MHz	2.80 dB
Radiated Emission (966 Chamber: 3m)	Above 1GHz	3.04 dB

Note:

The uncertainty represents an expended uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

2 Description of the Test Sample

2.1 General Description of Equipment

The tested samples are "Bluetooth Module" with model numbers "BM78abcdefg" and "RN4678" for new approval, which are intended to enable wireless connected with other Bluetooth LE devices. The tested samples are module where built in control host panel. Due to all electrical constructions are identical except for model name and firmware, one representative model with number "BM78abcdefg" was tested.

2.2 Rating and Physical Characteristics

Type Designation:	BM78abcdefg, RN4678
Rated Voltage:	Control host panel: DC 5V (via USB port)
Protection Class:	Control host panel: III

For details, refer to rating labels and user manual.

2.3 Sources of Interference

- 1) IC circuits
- 2) 16MHz Crystal

2.4 Noise Suppression Parts

Please refer to Attachment Photo Documentation for details.

2.5 Submitted Documents

- 1) Product Specification

Prüfbericht - Nr.: 10052437 001
Test Report No.

Seite 6 von 26
Page 6 of 26

3 Measurement Conditions

3.1 Modes of Operation

The EUT was enabled the wireless function to link with Remote equipment (R&S CBT).

The basic operation mode:

- A. Normal link

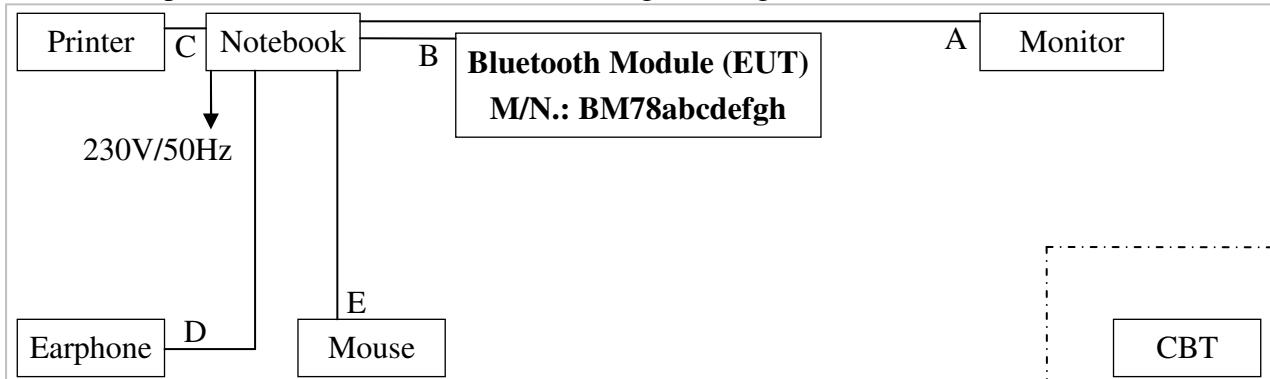
3.2 Additional Equipment

The subject sample was tested as an independent unit with the following equipment:

Description	Manufacturer	Model No.	Serial No.
Notebook	Lenovo	TP00018B	PK-2A3N7
Monitor	CHIMEI	22VD	22VDAGIW50440109
Bluetooth tester	R&S	CBT	100866
Printer	HP	VCVRA-1004	CN0C711HY9
Mouse	Lenovo	MO28UOL	44E6889
Ear/Microphone	i-Acon	CW-010MV	N/A

3.3 Test Setup

The test setup was realized on a table of 80cm height during all tests as described herein.



Signal Cable Type		Signal Cable Description
A	D-Sub cable	Shielded, 1.8m, 2 cores
B	USB cable	Shielded, 1.8m
C	USB cable	Shielded, 1.7m
D	Audio cable	Non shielded, 2m
E	USB cable	Shielded, 1.8m

3.4 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

For EMI/Radiation Measurement (Taipei: Semi-Anechoic Chamber)

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due Date
1	Test Receiver	Rohde & Schwarz	ESR7	101062	2014/08/30	2015/09/30
2	Spectrum Analyzer	Rohde & Schwarz	FSV-40	100921	2014/12/16	2015/12/16
3	Pre-Amplifier	HP	8447F	2805A03335	2014/08/22	2015/09/22
4	Pre-Amplifier	Com-Power	PAM-840	461257	2014/08/25	2015/09/25
5	Pre-Amplifier	EM Electronics	EM01G18G	060558	2014/11/03	2015/11/03
6	Bilog Antenna	TESEQ	CBL6111D	29802	2014/07/04	2016/07/04
7	Horn Antenna	ETS-Lindgren	3117	00138160	2015/01/12	2017/01/12
8	Horn Antenna	Com-Power	AH-840	101029	2014/09/26	2016/09/26
9	Loop Antenna	Schwarzbeck	FMZB 1513	1513-076	2014/10/21	2016/10/21

For EMS/ESD Test (Taipei: Shield Room)

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due Date
1	ESD Generator	TESEQ	NSG437	372	2015/08/15	2016/08/15

Prüfbericht - Nr.: 10052437 001
Test Report No.

 Seite 8 von 26
 Page 8 of 26

For EMS/RF Field Strength Susceptibility Test (Taipei: Fully-Anechoic Chamber)

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due Date
1	Signal Generator	Rohde & Schwarz	SMB-100A	104167	2015/08/15	2016/08/15
2	Amplifier (20-1GHz)	FRANKONIA	FLH-200B	1088	N.C.R.	N.C.R.
3	Amplifier (1-6GHz)	Bonn	BLMA1060-50D	108052	N.C.R.	N.C.R.
4	Broadband Antenna (30M-3GHz)	FRANKONIA	BTA-M	08009	N.C.R.	N.C.R.
5	Horn Antenna (0.7-10.5GHz)	FRANKONIA	MAX-9	MAX-9-801	N.C.R.	N.C.R.
6	Power Meter	FRANKONIA	PMS_1084	108B1251	2014/08/15	2015/09/15
7	2 Directional Coupler	AR	DC6180A	334572	N.C.R.	N.C.R.
8	Relay Switching Unit	FRANKONIA	RSU1203	113B1224	N.C.R.	N.C.R.

3.5 Abbreviations

PASS	means 'complied with requirement'	N/A	means 'not applicable'
FAIL	means 'not complied'	N.C.R.	means 'no calibration required'

Prüfbericht - Nr.: 10052437 001
Test Report No.

Seite 9 von 26
Page 9 of 26

4 Test Results EMISSION

Result:	PASS
----------------	------

4.1 Continuous Interference

4.1.1 Conducted Emission (AC Mains)

Port: AC Mains
Product Standard: EN 301 489-17, clause 7.1
Basic Standard: EN 301 489-1, clause 8.4
EN 55022, clause 5.1
Frequency Range: 0.15 – 30 MHz
Limits: EN 55022, Table 2, Class B

Result:	N/A
----------------	-----

The subject sample is not intended to be connected to AC mains supply. Therefore, this test is not applicable.

Prüfbericht - Nr.: 10052437 001
Test Report No.

Seite 10 von 26
Page 10 of 26

4.1.2 Radiated Emission, 30 - 1000 MHz

Port: Enclosure
Product Standard: EN 301 489-17, clause 7.1
Basic Standard: EN 301 489-1, clause 8.2
EN 55022, clause 6
Frequency Range: 30 - 1000 MHz
Limits: Table 6, Class B (at 3m distance)

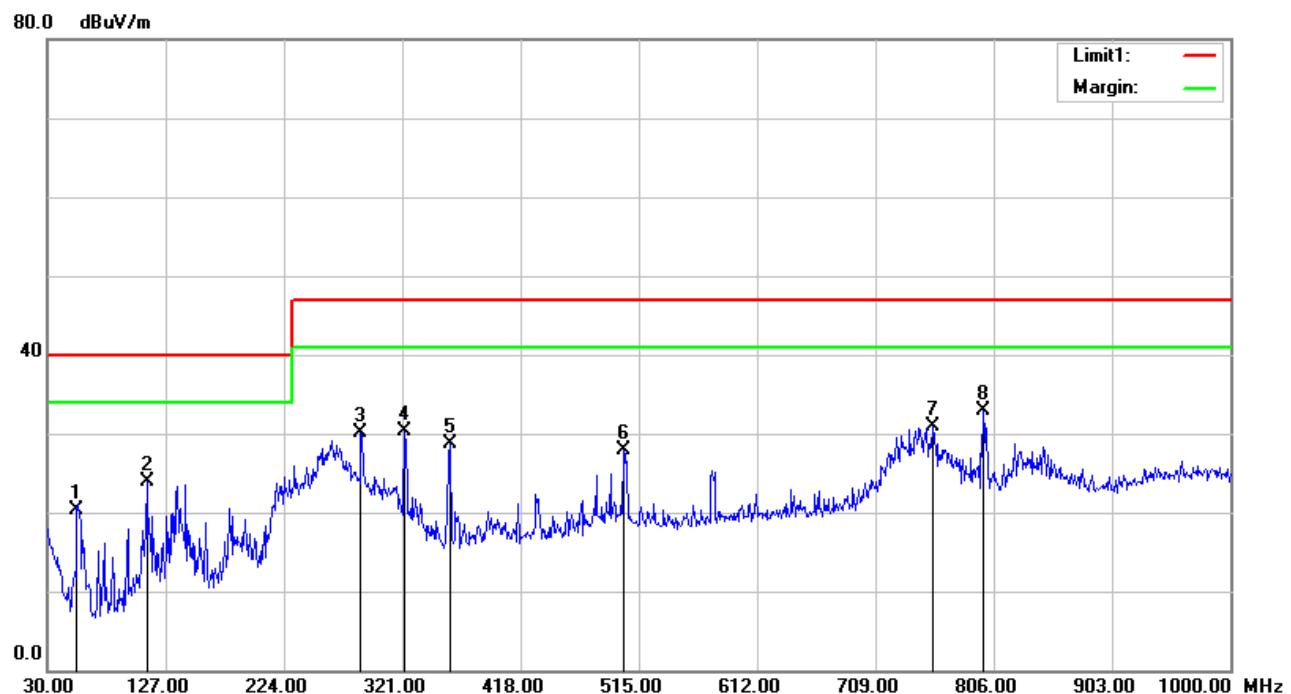
Result:	PASS
----------------	-------------

Test Setup

Date of Test: 03 Sep. 2015
Input Voltage: DC 5V (via USB port)
Operational Mode: See 3.1
Earthing: See 2.2
Temperature 23.1 °C
Relative Humidity 52 %

Table 2: Radiated Emission, 30 - 1000 MHz
Setting:

Frequency		Settings	
Start	Stop	IF Bandwidth	Detector
30 MHz	1000 MHz	120 kHz	QP

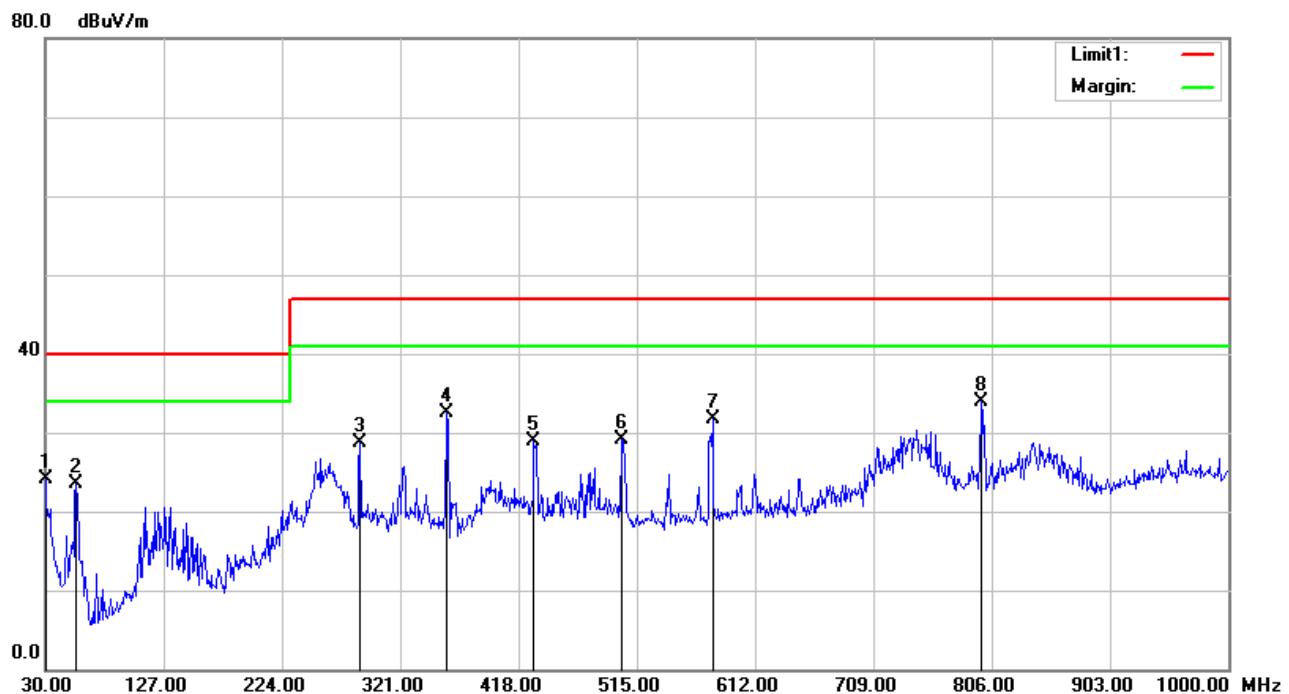
Figure 1: Radiated Emission, 30 - 1000 MHz
Horizontal


No.	Frequency (MHz)	Factor (dB/m)	Reading (dB μ V)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F	Remark
1	54.2500	-19.70	40.06	20.36	40.00	-19.64	QP	300	81	P	
2	111.4800	-15.30	39.26	23.96	40.00	-16.04	QP	200	258	P	
3	287.0500	-12.38	42.43	30.05	47.00	-16.95	QP	122	360	P	
4	322.9399	-11.49	41.77	30.28	47.00	-16.72	QP	100	153	P	
5	360.7699	-10.67	39.41	28.74	47.00	-18.26	QP	100	30	P	
6	502.3899	-8.59	36.45	27.86	47.00	-19.14	QP	300	344	P	
7	755.5599	-4.68	35.53	30.85	47.00	-16.15	QP	139	360	P	
8	797.2698	-4.31	37.12	32.81	47.00	-14.19	QP	100	161	P	

Prüfbericht - Nr.: 10052437 001
Test Report No.

Seite 12 von 26
Page 12 of 26

Vertical



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F	Remark
1	30.0000	-7.63	31.81	24.18	40.00	-15.82	QP	137	360	P	
2	55.2200	-19.93	43.52	23.59	40.00	-16.41	QP	100	184	P	
3	288.0200	-12.35	41.07	28.72	47.00	-18.28	QP	200	48	P	
4	358.8299	-10.71	43.28	32.57	47.00	-14.43	QP	200	359	P	
5	430.6100	-9.62	38.56	28.94	47.00	-18.06	QP	200	19	P	
6	502.3900	-8.59	37.79	29.20	47.00	-17.80	QP	100	43	P	
7	577.0800	-7.55	39.25	31.70	47.00	-15.30	QP	100	38	P	
8	797.2700	-4.31	38.29	33.98	47.00	-13.02	QP	200	67	P	

Prüfbericht - Nr.: 10052437 001
Test Report No.

Seite 13 von 26
Page 13 of 26

4.1.3 Radiated Emission, Above 1 GHz

Port: Enclosure
Product Standard: EN 301 489-17, clause 7.1
Basic Standard: EN 301 489-1, clause 8.2
EN 55022, clause 6.2
Frequency Range: 1 - 6 GHz
Limits: EN 301 489-1, Table 4, Class B

Result:	PASS
----------------	------

Test Setup

Date of Test: 03 Sep. 2015
Input Voltage: DC 5V (via USB port)
Operational Mode: See 3.1
Earthing: See 2.2
Temperature 23.1 °C
Relative Humidity 52 %

Table 3: Radiated Emission, Above 1 GHz

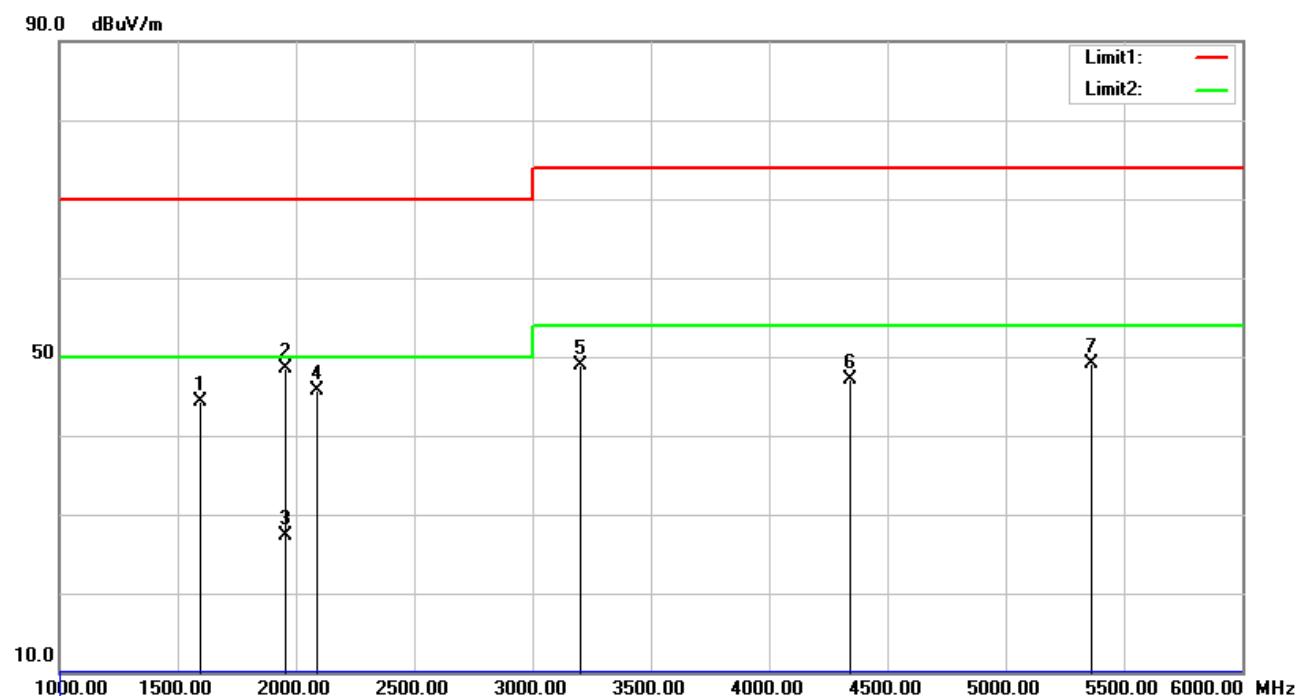
Setting:

Frequency		Settings	
Start	Stop	IF Bandwidth	Detector
1000 MHz	6000 MHz	1 MHz	Peak / Avg

Note: The highest frequency is 2480MHz for BT function, measuring up to 6GHz.

Figure 2: Radiated Emission, Above 1 GHz

Horizontal

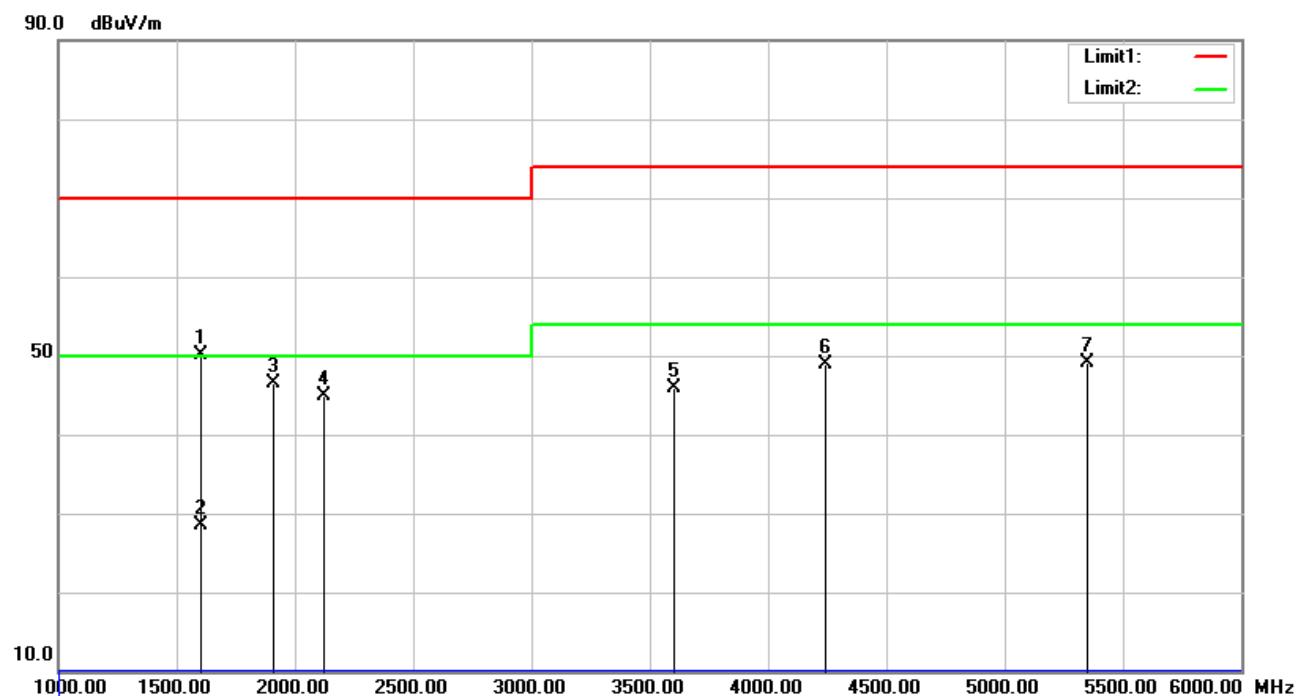


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F	Remark
1	1595.000	-10.59	54.99	44.40	70.00	-25.60	peak	100	51	P	
2	1955.000	-8.40	56.90	48.50	70.00	-21.50	peak	100	1	P	
3	1955.000	-8.40	35.70	27.30	50.00	-22.70	AVG	100	1	P	
4	2090.000	-8.01	53.64	45.63	70.00	-24.37	peak	100	360	P	
5	3200.000	-6.42	55.31	48.89	74.00	-25.11	peak	100	43	P	
6	4340.000	-4.14	51.19	47.05	74.00	-26.95	peak	100	176	P	
7	5365.000	-0.94	50.01	49.07	74.00	-24.93	peak	100	102	P	

Prüfbericht - Nr.: 10052437 001
Test Report No.

Seite 15 von 26
Page 15 of 26

Vertical



No.	Frequency (MHz)	Factor (dB/m)	Reading (dB _B V)	Level (dB _B V/m)	Limit (dB _B V/m)	Margin (dB)	Detector	Height (cm)	Azimuth (°)	P/F	Remark
1	1600.000	-10.56	60.64	50.08	70.00	-19.92	peak	100	40	P	
2	1600.000	-10.56	39.06	28.50	50.00	-21.50	AVG	100	40	P	
3	1910.000	-8.67	55.27	46.60	70.00	-23.40	peak	100	288	P	
4	2120.000	-7.98	52.89	44.91	70.00	-25.09	peak	100	288	P	
5	3600.000	-6.05	51.91	45.86	74.00	-28.14	peak	100	171	P	
6	4245.000	-4.48	53.32	48.84	74.00	-25.16	peak	100	360	P	
7	5350.000	-1.02	50.18	49.16	74.00	-24.84	peak	100	213	P	

Prüfbericht - Nr.: 10052437 001
Test Report No.

Seite 16 von 26
Page 16 of 26

4.2 Disturbances in Supply Systems

4.2.1 Harmonics

Port: AC Mains
Product Standard: EN 301 489-17
EN 61000-3-2
Basic Standard: EN 301 489-1, clause 8.5
IEC 61000-3-2
Limits: EN 61000-3-2, clause 7

Result:	N/A
----------------	-----

The subject sample is not intended to be connected to AC mains supply. Therefore, this test is not applicable.

4.2.2 Voltage Fluctuations

Port: AC Mains
Product Standard: EN 301 489-17
EN 61000-3-3
Basic Standard: EN 301 489-1, clause 8.6
IEC 61000-3-3
Limits: EN 61000-3-3, clause 5

Result:	N/A
----------------	-----

The subject sample is not intended to be connected to AC mains supply. Therefore, this test is not applicable.

5 Test Results IMMUNITY

Result:	PASS
---------	------

5.1 Enclosure Port

5.1.1 Radiated Susceptibility

Port: Enclosure
 Product Standard: EN 301 489-17
 Basic Standard: IEC/EN 61000-4-3
 Performance Criteria: Transmitters: CT
 Receivers: CT
 A
 Test Specification: EN 301 489-1
 Frequency Range: 80 - 1000 MHz; 1400-2700 MHz
 Field Strength: 3 V/m (unmodulated)
 Modulation: 1 kHz AM 80%

Result:	PASS
---------	------

Test Setup

Date of Test: 02 Sep. 2015
 Input Voltage: DC 5V (via USB port)
 Operational Mode: See 3.1
 Earthing: See 2.2
 Temperature: 23 °C
 Relative Humidity: 51 %

Table 4: Radiated Susceptibility Settings

Freq. Start	Freq. Stop	Freq. Step	Field Strength	Sweep mode	Meas. Time	Modulation	Observation	Result
80 MHz	1000 MHz	1% of the Preceding frequency	3 V/m	auto	3000 ms	1 kHz, AM 80%	Normal function	PASS
1400 MHz	2700 MHz	1% of the preceding frequency	3 V/m	auto	3000 ms	1 kHz, AM 80%	Normal function	PASS

No abnormalities were observed during and after the tests.

Prüfbericht - Nr.: 10052437 001
*Test Report No.*Seite 18 von 26
Page 18 of 26

5.1.2 Electrostatic Discharge

Port:	Enclosure
Product Standard:	EN 301 489-17
Basic Standard:	IEC/EN 61000-4-2
Performance Criteria:	Transmitters: TT Receivers: TT B
Test Specification:	EN 301 489-1 Voltage: 8 kV (Air Discharge) 4 kV (Contact Discharge) H.C.P. and V.C.P.

Result:**PASS**

Test Setup

Date of Test:	02 Sep. 2015
Input Voltage:	DC 5V (via USB port)
Operational Mode:	See 3.1
Earthing:	See 2.2
Temperature	23 °C
Relative Humidity	50 %

Table 5: Electrostatic Discharge**Setting:**

Test point	Polarity	Number of Discharges	Observation	Result
H.C.P.	+/- 4 kV	20	@	PASS
V.C.P.	+/- 4 kV	20	normal function	PASS

Note1: There is no enclosure case on the subject sample, per client request, only H.C.P. and V.C.P. discharge method was performed during this test.

Note2: "@": During testing, the BT link was disconnecting, but it can self-recover after test, without manual operation.

Prüfbericht - Nr.: 10052437 001
*Test Report No.*Seite 19 von 26
Page 19 of 26

5.2 Input and Output AC Power Ports

5.2.1 Conducted Disturbances

Port:	AC Mains
Product Standard:	EN 301 489-17
Basic Standard:	IEC/EN 61000-4-6
Performance Criteria:	Transmitters: CT Receivers: CT A
Test Specification:	EN 301 489-1 Frequency Range: 0.15 - 80 MHz Voltage Level: 3 Vrms (unmodulated) Modulation: AM 80%, 1kHz sine wave

Result:

N/A

The subject sample is not intended to be connected to AC mains supply. Therefore, this test is not applicable.

5.2.2 Fast Transients Common Mode

Port:	AC Mains
Product Standard:	EN 301 489-17
Basic Standard:	IEC/EN 61000-4-4
Performance Criteria:	Transmitters: TT Receivers: TT B
Test Specification:	EN 301 489-1 Peak Voltage: 1.0 kV T _r /T _n 5/50 ns Rep. Frequency 5 kHz

Result:

N/A

The subject sample is not intended to be connected to AC mains supply. Therefore, this test is not applicable.

Prüfbericht - Nr.: 10052437 001
*Test Report No.*Seite 20 von 26
Page 20 of 26

5.2.3 Surges

Port:	AC Mains
Product Standard:	EN 301 489-17
Basic Standard:	IEC/EN 61000-4-5
Performance Criteria:	Transmitters: TT Receivers: TT B
Test Specification:	EN 301 489-1 Peak Voltage: Tr/Th
	1.0 kV (line to line) 2.0 kV (line to ground) 1,2/50 µs

Result:**N/A**

The subject sample is not intended to be connected to AC mains supply. Therefore, this test is not applicable.

5.2.4 Voltage Dips and Interruptions

Port:	AC Mains
Product Standard:	EN 301 489-17
Basic Standard:	IEC/EN 61000-4-11
Performance Criteria:	Transmitters: TT & Receivers: TT (for >95%, 0.5 period) B (for >95%, 0.5 period) Transmitters: TT & Receivers: TT C (for 30 %, 25 periods) C (for 30 %, 25 periods) Transmitters: TT & Receivers: TT (for >95%, 250 periods) C (for >95%, 250 periods)
Test Specification:	EN 301 489-1 Test Level: 100% UT for Voltage Reductions, no. of 250 periods 100% UT for Voltage Reductions, no. of 0.5 period 100% UT for Voltage Reductions, no. of 1 period 30% UT for Voltage Reductions, no. of 25 period

Result:**N/A**

The subject sample is not intended to be connected to AC mains supply. Therefore, this test is not applicable.

Prüfbericht - Nr.: 10052437 001
Test Report No.

Seite 21 von 26
Page 21 of 26

5.3 Signal and Telecommunication Ports

5.3.1 Fast Transients Common Mode

Port: Signal / Telecommunication Ports
Product Standard: EN 301 489-17
Basic Standard: IEC/EN 61000-4-4
Performance Criteria: Transmitters: TT
Receivers: TT
B
Test Specification: EN 301 489-1
Peak Voltage: 0.5 kV
 T_r/T_n 5/50 ns
Rep. Frequency 5 kHz

Result:	N/A
----------------	-----

There are no signal lines and control lines on subject sample. Therefore, this test is not applicable.

5.3.2 Conducted Disturbances

Port: Signal / Telecommunication Ports
Product Standard: EN 301 489-17
Basic Standard: IEC/EN 61000-4-6
Performance Criteria: Transmitters: CT
Receivers: CT
A
Test Specification: EN 301 489-1
Frequency Range: 0.15 - 80 MHz
Voltage Level 3 Vrms (unmodulated)
Modulation: AM 80%, 1kHz sine wave

Result:	N/A
----------------	-----

There are no signal lines and control lines on subject sample. Therefore, this test is not applicable.

Prüfbericht - Nr.: 10052437 001
Test Report No.

Seite 22 von 26
Page 22 of 26

5.3.3 Surges

Port: Signal / Telecommunication ports
Product Standard: EN 301 489-17
Basic Standard: IEC/EN 61000-4-5
Performance Criteria: Transmitters: TT
Receivers: TT
B
Test Specification: EN 301 489-1
Peak Voltage: 1.0 kV
 T_r/T_h 1,2/50 µs

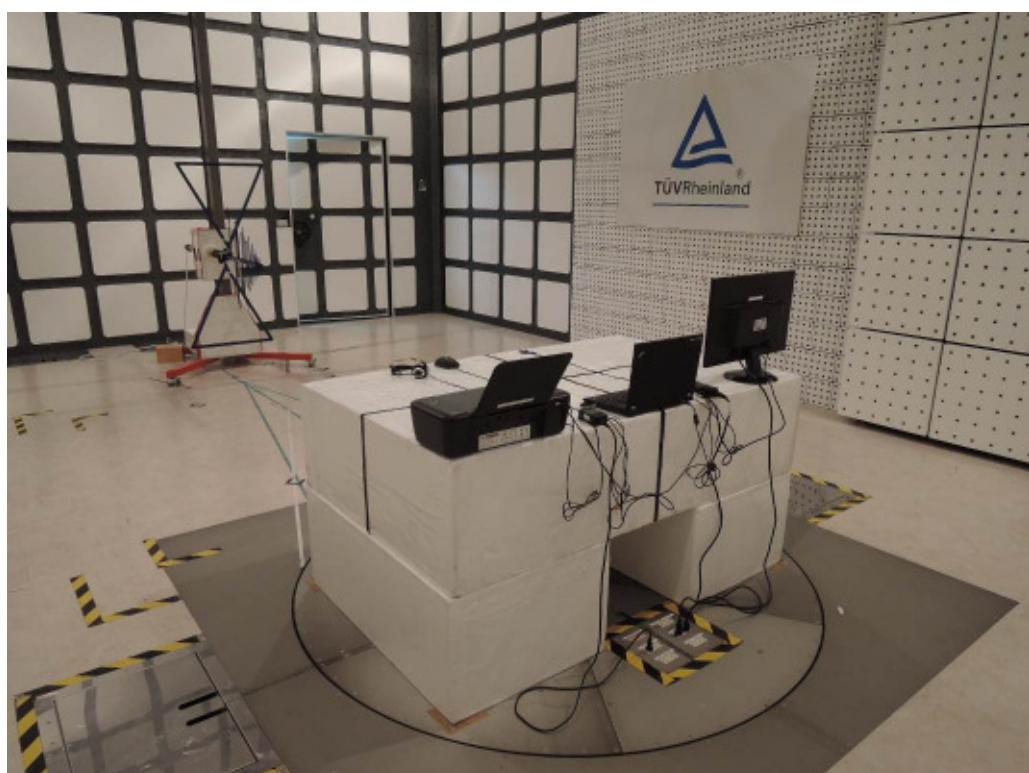
Result:

N/A

The subject sample is not connected directly to outdoor cable. Therefore, this test is not applicable.

6 Photographs of the Test Set-up

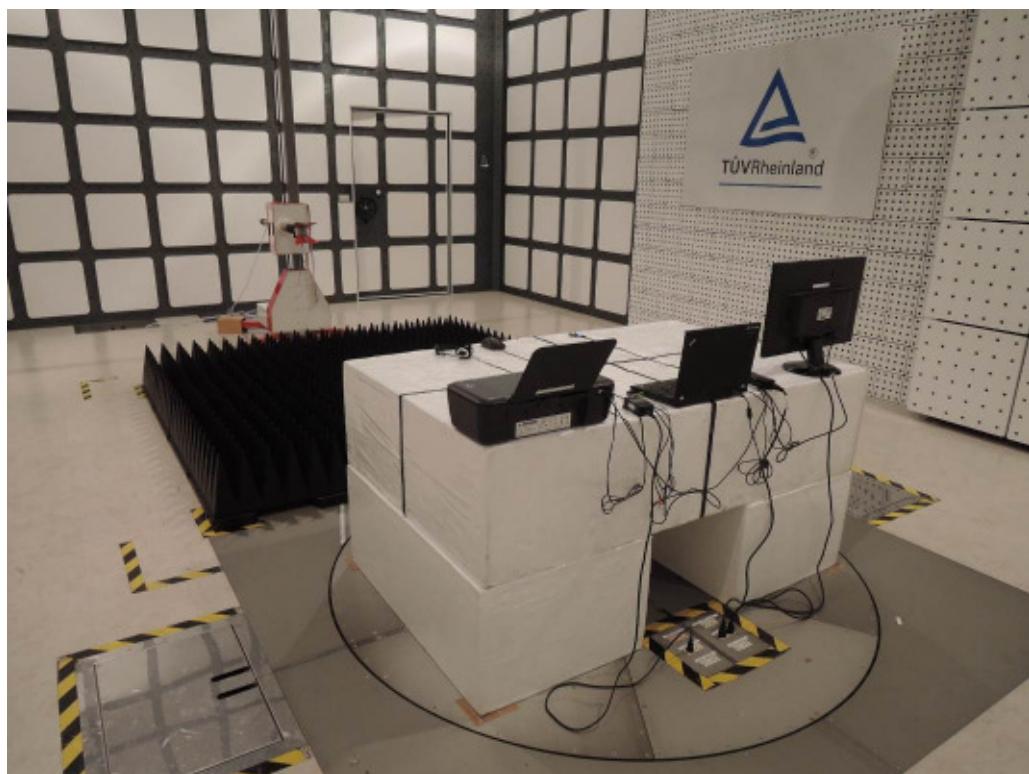
Picture 1: Radiated Emission, 30 - 1000 MHz



Prüfbericht - Nr.: 10052437 001
Test Report No.

Seite 24 von 26
Page 24 of 26

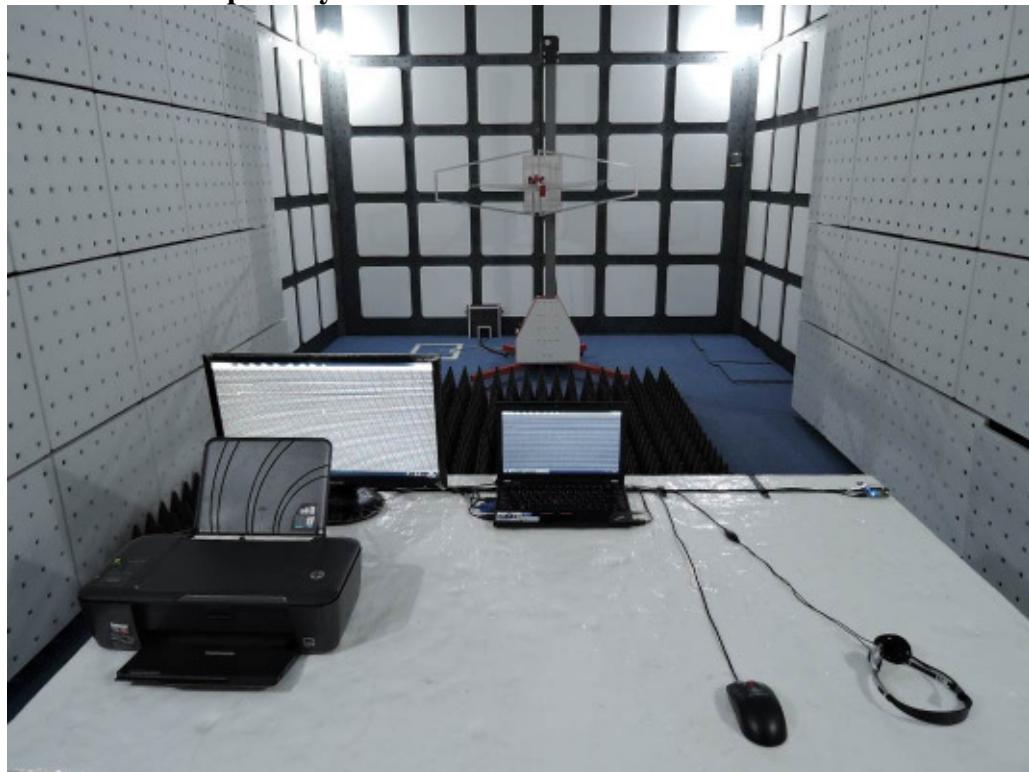
Picture 2: Radiated Emission, Above 1 GHz



Prüfbericht - Nr.: 10052437 001
Test Report No.

Seite 25 von 26
Page 25 of 26

Picture 3: Radiated Susceptibility



Picture 4: Electrostatic Discharge



7 List of Tables

TABLE 1: LIST OF TEST AND MEASUREMENT EQUIPMENT	7
TABLE 2: RADIATED EMISSION, 30 - 1000 MHz.....	10
TABLE 3: RADIATED EMISSION, ABOVE 1 GHz.....	13
TABLE 4: RADIATED SUSCEPTIBILITY	17
TABLE 5: ELECTROSTATIC DISCHARGE	18

8 List of Figures

FIGURE 1: RADIATED EMISSION, 30 - 1000 MHz	11
FIGURE 2: RADIATED EMISSION, ABOVE 1 GHz.....	14

9 List of Pictures

PICTURE 1: RADIATED EMISSION, 30 - 1000 MHz	23
PICTURE 2: RADIATED EMISSION, ABOVE 1 GHz	24
PICTURE 3: RADIATED SUSCEPTIBILITY	25
PICTURE 4: ELECTROSTATIC DISCHARGE	25

ATTACHMENT**Photo Documentation**

Page 1 of 1

Report No.: 10052437 001

Product: Bluetooth ModuleType Designation: BM78abcdefg