

Prüfbericht-Nr.: Test Report No.:	50080310 001	Auftrags-Nr.: Order No.:	154243386	Seite 1 von 36 Page 1 of 36
Kunden-Referenz-Nr.: Client Reference No.:	52195766	Auftragsdatum: Order date:	04.25.2017	
Auftraggeber: Client:	Lightcomm Technology Co. RM 1808 18/F, FO TAN INDU FO TAN SHATIN NEW TERR	ISTRIAL CENTRE, I		PUI WAN STREET,
Prüfgegenstand: Test item:	MID			
Bezeichnung / Typ-Nr.: Identification / Type No.:	MID8006-L, DL8006, DL80XX (x=0-9, A-Z, a-z, - or blank, for except the model number, b FCC ID: XMF-MID8006L	or market purpose	only, all mode	ls are identical
Auftrags-Inhalt: Order content:	Complete test			
Prüfgrundlage: Test specification:	FCC CFR47 Part 15, Subpart ANSI C63.4: 2014	В		
Wareneingangsdatum: Date of receipt:	04.01.2017		/	
Prüfmuster-Nr.: Test sample No.:	A000567056-003			
Prüfzeitraum: Testing period:	04.01.2017 to 06.21.2017	- Wat 45 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		
Ort der Prüfung: Place of testing:	MRT Technology(Suzhou) Co., Ltd.	a City		
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shanghai) Co., Ltd.	8 09	oo ot os oe or or or oc strocorium OOF	200 = 200
Prüfergebnis*:	Pass			

geprüft von / tested by:

Name / Stellung

Name / Position

Test result\*:

Datum

Date

07.06.2017Elliot Zhang / Assistant Project Manager

Unterschrift

Signature

07.06.2017Shi Li / Department Manager

Datum Name / Stellung
Date Name / Position

kontrolliert von / reviewed by:

Unterschrift
Signature

Sonstiges / Other

Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:				ständig und unbesc lete and undamage		
* Legende:	1 = sehr gut	2 = gut	3 = befriedigend		4 = ausreichend	5 = mangelhaft
Legend:	P(ass) = entspricht o.g 1 = very good	. Prüfgrundlage(n) 2 = good	F(ail) = entspricht nich 3 = satisfactory	t o.g. Prüfgrundlage(n)	N/A = nicht anwendbar 4 = sufficient	N/T = nicht getestet 5 = poor
	P(ass) = passed a.m.	test specification(s)	F(ail) = failed a.m. test	t specification(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.



**Products** 

 Prüfbericht - Nr.:
 50080310 001
 Seite 2 von 36

 Test Report No.
 Page 2 of 36

## **TEST SUMMARY**

5.1.1 CONDUCTED EMISSIONS

RESULT: Pass

5.1.2 RADIATED EMISSION

RESULT: Pass



Products

# Prüfbericht - Nr.: 50080310 001 Seite 3 von 36 Test Report No. Page 3 of 36

# Contents

•••		
1.	GENERAL REMARKS	4
1.1	COMPLEMENTARY MATERIALS	4
2.	TEST SITES	5
2.1	TEST FACILITIES	5
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS	6
2.3	TRACEABILITY	6
2.4	CALIBRATION	6
2.5	MEASUREMENT UNCERTAINTY	7
3.	GENERAL PRODUCT INFORMATION	8
3.1	PRODUCT FUNCTION AND INTENDED USE	8
3.2	RATINGS AND SYSTEM DETAILS	8
3.3	INDEPENDENT OPERATION MODES	9
3.4	NOISE GENERATING AND NOISE SUPPRESSING PARTS	_
3.5	SUBMITTED DOCUMENTS	9
4.	TEST SET-UP AND OPERATION MODES	. 10
4.1	PRINCIPLE OF CONNECTION DIAGRAM	
4.2	TEST OPERATION AND TEST SOFTWARE	
4.3	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	
4.4	COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE	
5.	TEST RESULTS	. 12
<b>5.1</b> <i>5.1.</i>	EMISSION IN THE FREQUENCY RANGE UP TO 18GHz	
5. 1. 5. 1.		
6.	LIST OF TABLES	. 36



50080310 001	<b>Seite 4 von 36</b> <i>Page 4 of 36</i>
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 Prüfbericht - Nr.:
 50080310 001
 Seite 5 von 36

 Test Report No.
 Page 5 of 36

### 2. Test Sites

#### 2.1 Test Facilities

MRT Technology (Suzhou) Co., Ltd.

D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China

The used test equipment is in accordance with CISPR 16 for measurement of radio interference.

The Federal Communications Commission has reviewed the technical characteristics of the radiated and conducted emission facility, and has found these test facilities to be in compliance with the requirements of section 2.948 of the FCC rules. The description of the test facility is listed under FCC registration number 809388.

The Industry Canada has reviewed the technical characteristics of the radiated and conducted emission facility, and has found these test facilities to be in compliance. The description of the test facility is listed under chambers filing number 11384A.

 Prüfbericht - Nr.:
 50080310 001
 Seite 6 von 36

 Test Report No.
 Page 6 of 36

#### 2.2 List of Test and Measurement Instruments

#### **Table 1: List of Test and Measurement Equipment**

#### **Conducted Emissions**

Instrument	Manufacturer	Type No.	Serial No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2018/06/20
Two-Line V-Network	R&S	ENV216	MRTSUE06002	1 year	2018/06/20
Two-Line V-Network	R&S	ENV216	MRTSUE06003	1 year	2018/06/20
Temperature/ Meter Humidity	Ouleinuo	N/A	MRTSUE06114	1 year	2017/12/20

#### Radiated Emission

Instrument	Manufacturer	Type No.	Serial No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	E4447A	MRTSUE06028	1 year	2017/12/08
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2017/11/03
Preamplifier	Agilent	83017A	MRTSUE06020	1 year	2018/03/29
Preamplifier	Schwarzbeck	BBV9721	MRTSUE06121	1 year	2018/04/16
Loop Antenna	Schwarzbeck	FMZB1519	MRTSUE06025	1 year	2017/11/07
TRILOG Antenna	Schwarzbeck	VULB9162	MRTSUE06022	1 year	2017/11/07
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06023	1 year	2017/11/07
Broadband Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06024	1 year	2018/01/05
Temperature/Humidity Meter	Ouleinuo	N/A	MRTSUE06115	1 year	2017/11/20

## 2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

#### 2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.



**Products** 

 Prüfbericht - Nr.:
 50080310 001
 Seite 7 von 36

 Test Report No.
 Page 7 of 36

## 2.5 Measurement Uncertainty

#### **Table 2: Measurement Uncertainty**

Measurement Type	Frequency	Uncertainty
Antenna Port Conducted Emission	< 1GHz	±0.39dB
	> 1GHz	±0.68dB
Radiated Emission	30MHz - 1GHz	±4.18dB
	> 1GHz	±4.76dB

 Prüfbericht - Nr.:
 50080310 001
 Seite 8 von 36

 Test Report No.
 Page 8 of 36

### 3. General Product Information

### 3.1 Product Function and Intended Use

The EUT (Equipment Under Test) is a 'Tablet PC' device. It supports Bluetooth 4.0 (Dual mode) & 2.4 GHz Wi-Fi 802.11 b/g/n(HT20)/n(HT40) & 5 GHz Wi-Fi 802.11 a wireless technology.

The 2.4GHz WIFI, 5GHz WIFI and Bluetooth can TX simultaneously

For details refer to the User Manual and Circuit Diagram.

### 3.2 Ratings and System Details

**Table 3: Technical Specification of EUT** 

General Description of	General Description of EUT	
Product Name:	Tablet PC	
Model No.:	MID8006-L, DL8006, DL80XXXXXXX(x=0-9, A-Z, a-z, - or blank, for market purpose only, all models are identical except the model number, brand or color)	
Rated Voltage:	DC 3.7V 6000mAh via internal rechargeable Li-Poly battery DC 5.0V 2.0A via AC/DC adapter for charging	
RF Function:	2.4GHz Wi-Fi: 802.11b/g/n 5GHz Wi-Fi: 802.11a Bluetooth v3.0 + HS & v4.0	



 Prüfbericht - Nr.:
 50080310 001
 Seite 9 von 36

 Test Report No.
 Page 9 of 36

### 3.3 Independent Operation Modes

#### **Table 4: Independent Operation Modes**

Test Mode	Description
TM1	Charging by Adapter and Play Video with Adapter # 1
TM2	Charging by Adapter and Play Video with Adapter # 2
TM3	USB Copy with Notebook
TM4	Charging by Adapter and Play Video with Adapter # 3

### 3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

### 3.5 Submitted Documents

- Application Form
- Circuit Diagram
- ID Label and Location Info
- Photo Document
- Operation Description

- Block Diagram
- PCB Layout
- Model Difference Letter
- Schematics
- User Manual



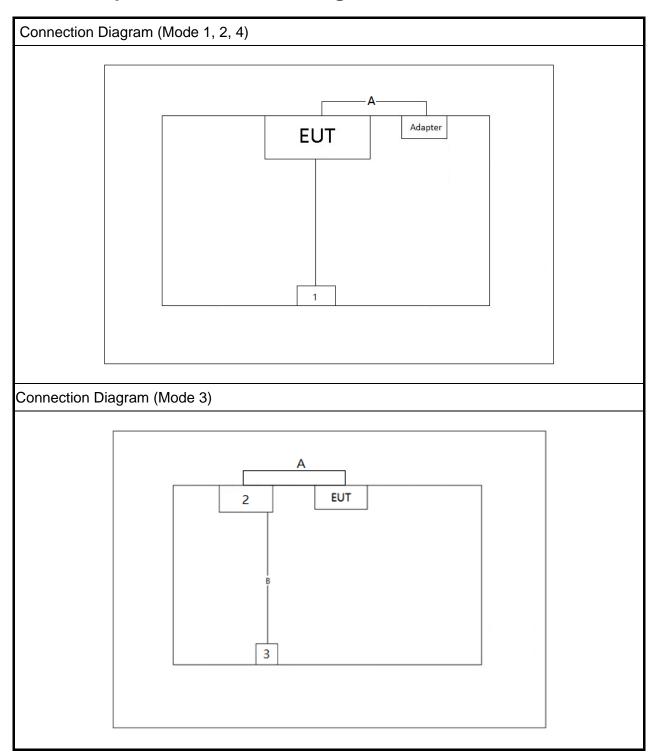
 Prüfbericht - Nr.:
 50080310 001

 Test Report No.
 Seite 10 von 36

 Page 10 of 36

# 4. Test Set-up and Operation Modes

## 4.1 Principle of Connection Diagram



 Prüfbericht - Nr.:
 50080310 001

 Test Report No.
 Seite 11 von 36

 Page 11 of 36

### 4.2 Test Operation and Test Software

All testing were performed according to the procedures in ANSI C63.4: 2014.

### 4.3 Special Accessories and Auxiliary Equipment

Signal Cab	le Туре	Signal cable Description
Α	USB Cable	Shielded, 0.5m

Pro	duct	Manufacturer	Model No.	Power Cord
1	Earphone	Logitech	H110	N/A
2	Notebook	Lenovo	E430C	Non-Shielded, 1.8m
3	USB Mouse	DELL	MS111-T	N/A

### 4.4 Countermeasures to achieve EMC Compliance

Null.



**Products** 

 Prüfbericht - Nr.:
 50080310 001

 Test Report No.
 Seite 12 von 36

 Page 12 of 36

### 5. Test Results

### 5.1 Emission in the Frequency Range up to 18GHz

#### 5.1.1 Conducted Emission

RESULT: PASS

Date of testing : 2017/04/01

Test standard : FCC Part 15.207 (a)
Test procedure : ANSI C63.10: 2013
Limit : FCC Part 15.207(a)
Kind of test site : Shielded room

Site: SR2	Time: 2017/04/01 - 14:02
Limit: FCC_Part15.107_CE_Class B	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: MID	Power: AC 120V/60Hz

TM1

80

70

60

10

10

10

10

10

10

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Frequency(MHz)

N.L.		NAI	I =	NA	l D l'		11.2.29	I =	T
No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV)	(dB)	
			,	(dBuV)	(dBuV)	(dB)	, ,	, ,	
1		*	0.166	53.487	43.400	-11.671	65.158	10.087	QP
2			0.166	29.587	19.500	-25.571	55.158	10.087	AV
3			0.270	39.016	29.036	-22.102	61.118	9.980	QP
4			0.270	17.160	7.180	-33.958	51.118	9.980	AV
5			0.562	39.823	29.688	-16.177	56.000	10.135	QP
6			0.562	32.420	22.286	-13.580	46.000	10.135	AV
7			1.618	29.091	19.206	-26.909	56.000	9.885	QP
8			1.618	19.296	9.411	-26.704	46.000	9.885	AV
9			12.346	39.477	29.400	-20.523	60.000	10.077	QP
10			12.346	27.677	17.600	-22.323	50.000	10.077	AV
11			20.050	24.394	14.255	-35.606	60.000	10.139	QP
12			20.050	17.826	7.687	-32.174	50.000	10.139	AV

Note: Measure Level (dB $\mu$ V) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).



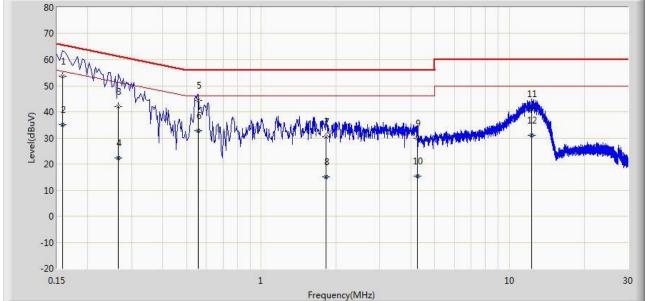
Prüfbericht - Nr.: 50080310 001

**Seite 13 von 36** *Page 13 of 36* 

Test Report No.

Site: SR2	Time: 2017/04/01 - 14:11
Limit: FCC_Part15.107_CE_Class B	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: MID	Power: AC 120V/60Hz

TM1



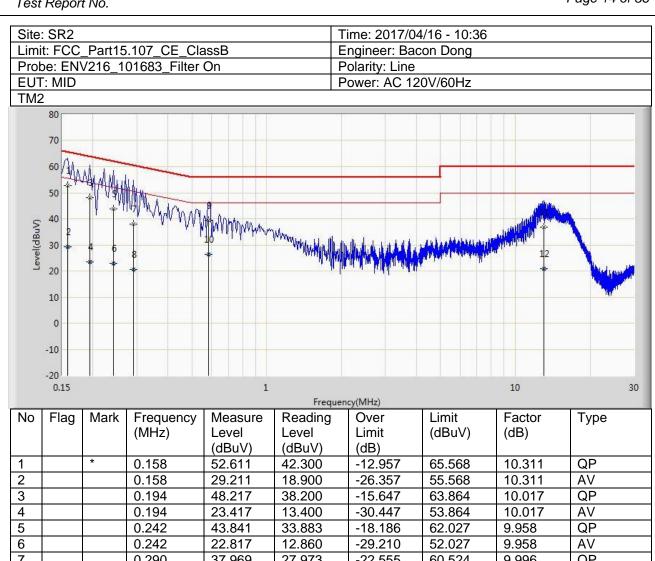
No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Type
			(MHz)	Level	Level	Limit	(dBuV)	(dB)	
			, ,	(dBuV)	(dBuV)	(dB)			
1			0.158	53.590	43.300	-11.979	65.568	10.290	QP
2			0.158	35.190	24.900	-20.379	55.568	10.290	AV
3			0.266	41.926	31.914	-19.316	61.242	10.013	QP
4			0.266	22.256	12.243	-28.986	51.242	10.013	AV
5		*	0.558	44.444	34.290	-11.556	56.000	10.154	QP
6			0.558	32.891	22.737	-13.109	46.000	10.154	AV
7			1.826	30.547	20.668	-25.453	56.000	9.879	QP
8			1.826	15.007	5.128	-30.993	46.000	9.879	AV
9			4.254	29.871	19.885	-26.129	56.000	9.985	QP
10			4.254	15.218	5.233	-30.782	46.000	9.985	AV
11			12.242	41.230	31.110	-18.770	60.000	10.120	QP
12			12.242	31.075	20.955	-18.925	50.000	10.120	AV

Note: Measure Level (dB $\mu$ V) = Reading Level (dB $\mu$ V) + Factor (dB) Factor (dB) = Cable Loss (dB) + LISN Factor (dB).



**Products** 

Seite 14 von 36 Prüfbericht - Nr.: 50080310 001 Page 14 of 36 Test Report No.



5			0.242	43.841	33.883	-18.186	62.027	9.958	QP
6			0.242	22.817	12.860	-29.210	52.027	9.958	AV
7			0.290	37.969	27.973	-22.555	60.524	9.996	QP
8			0.290	20.444	10.447	-30.081	50.524	9.996	AV
9			0.582	39.450	29.326	-16.550	56.000	10.124	QP
10			0.582	26.390	16.266	-19.610	46.000	10.124	AV
11			13.058	36.692	26.614	-23.308	60.000	10.078	QP
12			13.058	20.783	10.705	-29.217	50.000	10.078	AV
Note	e: Meas	sure Le	vel (dBµV) =	Reading Lev	/el (dBμV) +	Factor (dB)			
_					/ ID)				

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).



Products

Prüfbericht - Nr.: 50080310 001

**Seite 15 von 36** *Page 15 of 36* 

Test Report No.

Site: SR2	Time: 2017/04/16 - 10:48
Limit: FCC_Part15.107_CE_ClassB	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: MID	Power: AC 120V/60Hz

TM2

80

70

60

40

20

10

0

-10

-20

0.15

1

10

30

is.	Frequency(MHz)											
No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре			
			(MHz)	Level	Level	Limit	(dBuV)	(dB)				
				(dBuV)	(dBuV)	(dB)						
1		*	0.150	52.742	41.600	-13.258	66.000	11.142	QP			
2			0.150	28.842	17.700	-27.158	56.000	11.142	AV			
3			0.186	48.135	38.100	-16.078	64.213	10.035	QP			
4			0.186	23.035	13.000	-31.178	54.213	10.035	AV			
5			0.210	44.640	34.645	-18.566	63.205	9.995	QP			
6			0.210	19.469	9.474	-33.736	53.205	9.995	AV			
7			0.262	40.269	30.259	-21.098	61.368	10.010	QP			
8			0.262	22.488	12.478	-28.880	51.368	10.010	AV			
9			0.562	36.465	26.313	-19.535	56.000	10.152	QP			
10			0.562	30.738	20.586	-15.262	46.000	10.152	AV			
11			12.618	32.887	22.787	-27.113	60.000	10.101	QP			
12			12.618	19.782	9.681	-30.218	50.000	10.101	AV			

Note: Measure Level (dB $\mu$ V) = Reading Level (dB $\mu$ V) + Factor (dB) Factor (dB) = Cable Loss (dB) + LISN Factor (dB).



Test Report No.

Prüfbericht - Nr.: 50080310 001

**Seite 16 von 36** *Page 16 of 36* 

 Site: SR2
 Time: 2017/04/01 - 14:47

 Limit: FCC\_Part15.107\_CE\_Class B
 Engineer: Bacon Dong

Probe: ENV216\_101683\_Filter On Polarity: Line

EUT: MID Power: AC 120V/60Hz

TM3

80

70

60

50

40

10

0

-10

-20

0.15

1

10

30

No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV)	(dB)	
				(dBuV)	(dBuV)	(dB)			
1			0.282	49.883	39.894	-10.873	60.757	9.990	QP
2		*	0.282	43.819	33.830	-6.937	50.757	9.990	AV
3			0.466	44.328	34.189	-12.257	56.585	10.139	QP
4			0.466	38.496	28.357	-8.089	46.585	10.139	AV
5			1.030	38.536	28.628	-17.464	56.000	9.908	QP
6			1.030	28.212	18.304	-17.788	46.000	9.908	AV
7			1.770	34.208	24.329	-21.792	56.000	9.879	QP
8			1.770	21.257	11.378	-24.743	46.000	9.879	AV
9			8.226	31.962	21.798	-28.038	60.000	10.164	QP
10			8.226	23.106	12.942	-26.894	50.000	10.164	AV
11			10.374	30.878	20.743	-29.122	60.000	10.135	QP
12			10.374	20.318	10.183	-29.682	50.000	10.135	AV

Frequency(MHz)

Note: Measure Level ( $dB\mu V$ ) = Reading Level ( $dB\mu V$ ) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

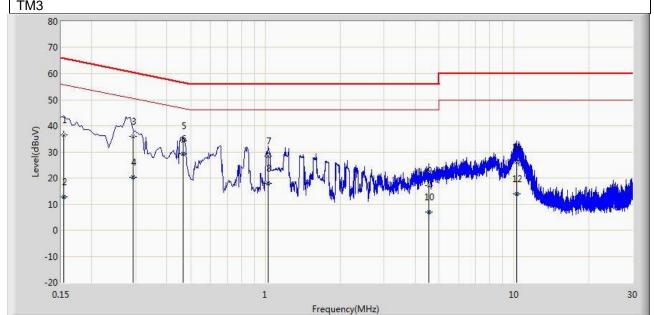


Prüfbericht - Nr.: 50080310 001

**Seite 17 von 36** *Page 17 of 36* 

Test Report No.

Site: SR2	Time: 2017/04/01 - 15:14
Limit: FCC_Part15.107_CE_Class B	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: MID	Power: AC 120V/60Hz
TMO	



No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV)	(dB)	
				(dBuV)	(dBuV)	(dB)			
1			0.154	46.496	36.506	-19.285	65.781	9.990	QP
2			0.154	22.836	12.846	-32.945	55.781	9.990	AV
3			0.292	46.091	35.952	-14.383	60.474	10.139	QP
4			0.292	30.457	20.318	-20.017	50.474	10.139	AV
5			0.466	44.038	34.130	-12.547	56.585	9.908	QP
6		*	0.466	39.302	29.394	-7.283	46.585	9.908	AV
7			1.026	38.291	28.412	-17.709	56.000	9.879	QP
8			1.026	27.894	18.015	-18.106	46.000	9.879	AV
9			4.534	27.130	16.966	-28.87	56.000	10.164	QP
10			4.534	16.864	6.700	-29.136	46.000	10.164	AV
11			10.270	35.923	25.788	-24.077	60.000	10.135	QP
12			10.270	23.793	13.658	-26.207	50.000	10.135	AV

Note: Measure Level (dB $\mu$ V) = Reading Level (dB $\mu$ V) + Factor (dB) Factor (dB) = Cable Loss (dB) + LISN Factor (dB).



**Products** 

 Prüfbericht - Nr.:
 50080310 001

 Test Report No.
 Seite 18 von 36

 Page 18 of 36

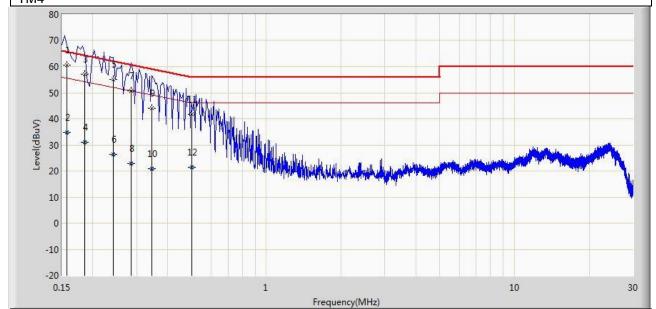
 Site: SR2
 Time: 2017/06/19 - 11:28

 Limit: FCC\_Part15.107\_CE\_Class B
 Engineer: Bacon Dong

 Probe: ENV216\_101683\_Filter On
 Polarity: Line

 EUT: MID
 Power: AC 120V/60Hz

 TM4



No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV)	(dB)	
				(dBuV)	(dBuV)	(dB)			
1		*	0.157	60.518	50.100	-5.103	65.621	10.418	QP
2			0.157	34.718	24.300	-20.903	55.621	10.418	AV
3			0.185	57.041	47.000	-7.217	64.258	10.041	QP
4			0.185	31.141	21.100	-23.117	54.258	10.041	AV
5			0.242	54.957	45.000	-7.070	62.027	9.958	QP
6			0.242	26.257	16.300	-25.770	52.027	9.958	AV
7			0.286	50.605	40.612	-10.035	60.640	9.993	QP
8			0.286	22.983	12.990	-27.656	50.640	9.993	AV
9			0.346	44.079	34.038	-14.979	59.058	10.041	QP
10			0.346	20.758	10.717	-28.300	49.058	10.041	AV
11			0.500	41.857	31.700	-14.143	56.000	10.157	QP
12			0.500	21.457	11.300	-24.543	46.000	10.157	AV

Note: Measure Level ( $dB\mu V$ ) = Reading Level ( $dB\mu V$ ) + Factor (dB) Factor (dB) = Cable Loss (dB) + LISN Factor (dB)



**Products** 

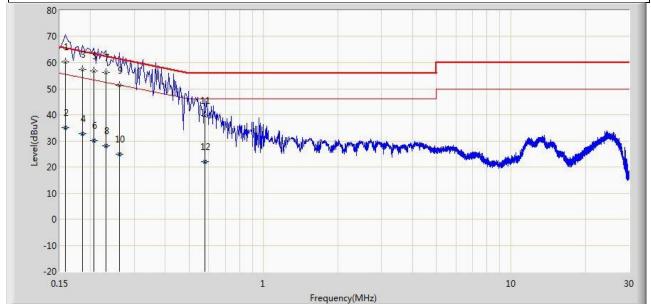
Prüfbericht - Nr.: 50080310 001

**Seite 19 von 36** *Page 19 of 36* 

Test Report No.

Site: SR2	Time: 2017/06/19 - 11:43
Limit: FCC_Part15.107_CE_Class B	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: MID	Power: AC 120V/60Hz

TM4



No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV)	(dB)	
			, ,	(dBuV)	(dBuV)	(dB)	,	, ,	
1		*	0.158	60.213	49.923	-5.356	65.568	10.290	QP
2			0.158	35.074	24.785	-20.494	55.568	10.290	AV
3			0.186	57.305	47.270	-6.908	64.213	10.035	QP
4			0.186	32.834	22.799	-21.379	54.213	10.035	AV
5			0.206	56.775	46.774	-6.590	63.365	10.001	QP
6			0.206	30.204	20.203	-23.161	53.365	10.001	AV
7			0.230	56.231	46.246	-6.218	62.450	9.985	QP
8			0.230	28.188	18.202	-24.262	52.450	9.985	AV
9			0.262	51.342	41.332	-10.026	61.368	10.010	QP
10			0.262	24.876	14.866	-26.492	51.368	10.010	AV
11			0.578	39.715	29.572	-16.285	56.000	10.143	QP
12			0.578	21.984	11.841	-24.016	46.000	10.143	AV

Note: Measure Level (dB $\mu$ V) = Reading Level (dB $\mu$ V) + Factor (dB) Factor (dB) = Cable Loss (dB) + LISN Factor (dB)



**Products** 

Kind of test site

 Prüfbericht - Nr.:
 50080310 001
 Seite 20 von 36

 Test Report No.
 Page 20 of 36

# 5.1.2 Radiated Spurious Emission

RESULT: Pass

Date of testing : 04.07.2017

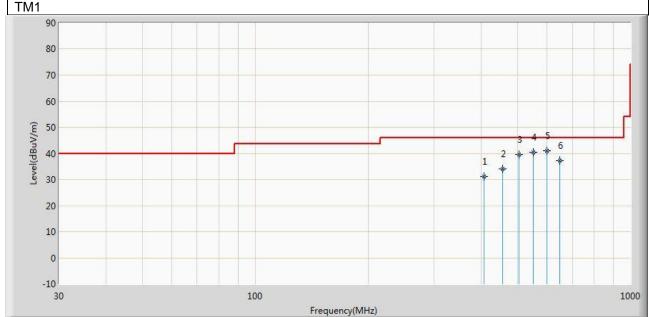
Test standard : FCC Part 15.247(d)
Test procedure : ANSI C63.10: 2013

Clause 11&12 of KDB 558074 D01 v03r05

Limit : FCC Part 15.247(d) FCC Part 15.209(a)

: 3m Semi-Anechoic Chamber

Time: 2017/04/07 - 15:24
Margin: 0
Polarity: Horizontal
Power: AC 120V/60Hz



No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV/m)		
				(dBuV/m)	(dBuV)	(dB)			
1			407.815	31.149	14.290	-14.851	46.000	16.859	QP
2			455.830	34.014	16.470	-11.986	46.000	17.544	QP
3			503.845	39.494	21.110	-6.506	46.000	18.384	QP
4			551.980	40.296	21.100	-5.704	46.000	19.196	QP
5		*	599.875	40.984	20.890	-5.016	46.000	20.094	QP
6			647.890	37.128	16.430	-8.872	46.000	20.697	QP

Note: Measure Level  $(dB\mu V/m)$  = Reading Level  $(dB\mu V)$  + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



 Prüfbericht - Nr.:
 50080310 001
 Seite 21 von 36

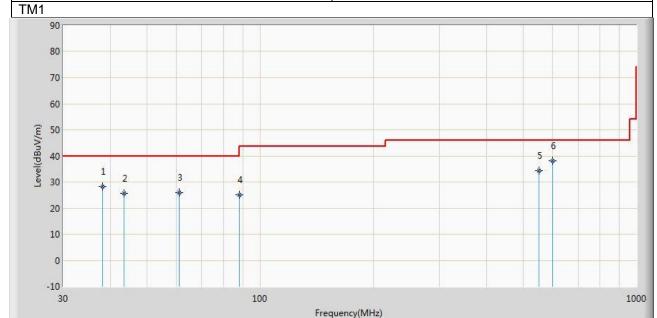
 Test Report No.
 Page 21 of 36

 Site: AC2
 Time: 2017/04/07 - 15:26

 Limit: FCC\_Part15.109\_RE(3m)\_ClassB
 Margin: 0

 Probe: VULB9162\_0.03-8GHz
 Polarity: Vertical

 EUT: MID
 Power: AC 120V/60Hz



No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV/m)		
				(dBuV/m)	(dBuV)	(dB)			
1			38.245	28.357	14.850	-11.643	40.000	13.506	QP
2			43.580	25.675	11.120	-14.325	40.000	14.555	QP
3			61.040	26.050	12.340	-13.950	40.000	13.710	QP
4			88.200	25.087	14.290	-18.413	43.500	10.797	QP
5			551.860	34.463	15.270	-11.537	46.000	19.193	QP
6		*	599.875	38.214	18.120	-7.786	46.000	20.094	QP

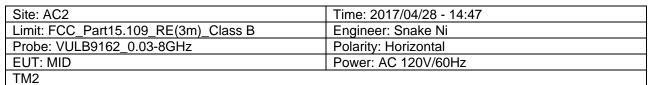
Note: Measure Level  $(dB\mu V/m)$  = Reading Level  $(dB\mu V)$  + Factor (dB)

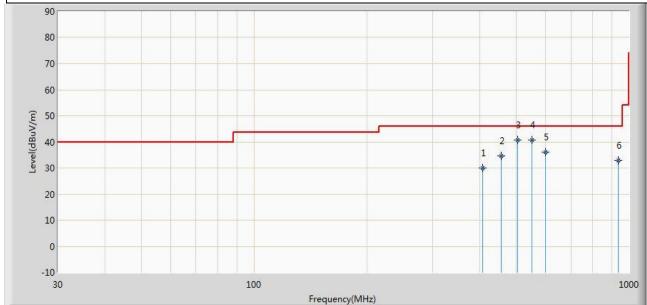
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



**Products** 

50080310 001 Seite 22 von 36 Prüfbericht - Nr.: Page 22 of 36 Test Report No.





No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)	(dB)			
1			407.815	29.869	13.010	-16.131	46.000	16.859	QP
2			455.830	34.574	17.030	-11.426	46.000	17.544	QP
3			503.845	40.684	22.300	-5.316	46.000	18.384	QP
4		*	551.860	40.713	21.520	-5.287	46.000	19.193	QP
5			599.875	36.054	15.960	-9.946	46.000	20.094	QP
6			935.980	33.033	8.640	-12.967	46.000	24.394	QP

Note: Measure Level  $(dB\mu V/m)$  = Reading Level  $(dB\mu V)$  + Factor (dB)Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



1000

**Produkte Products** 

30

20 10

0 -10 30

Prüfbericht - Nr.: 50080310 001 Seite 23 von 36 Page 23 of 36 Test Report No.

Site: AC2 Time: 2017/04/28 - 14:48 Limit: FCC Part15.109 RE(3m) Class B Engineer: Snake Ni Probe: VULB9162 0.03-8GHz Polarity: Vertical EUT: MID Power: AC 120V/60Hz TM2 90 80 70 60 Level(dBuV/m) 50 40 6

Frequency(MHz) No Flag Mark Frequency Measure Reading Over Limit Factor Type (MHz) Level Level Limit (dBuV/m) (dB) (dBuV/m) (dBuV) (dB) 38.730 21.288 7.680 -18.712 40.000 13.607 QP 2 QP 63.950 19.593 6.690 -20.407 40.000 12.903 3 9.671 136.215 24.031 14.360 -19.469 43.500 QP 4 154.645 27.299 17.650 -16.201 43.500 9.649 QP 5 503.845 28.414 10.030 -17.586 46.000 18.384 QP 6 551.860 30.443 11.250 -15.557 46.000 19.193 QP

Note: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB) Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

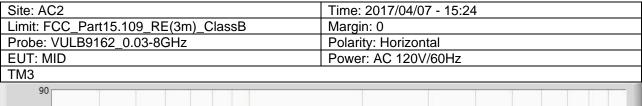
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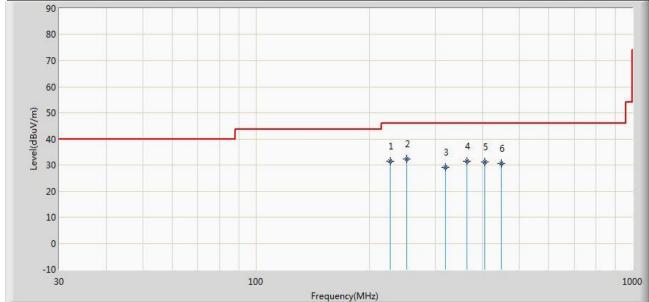
2



**Products** 

50080310 001 Seite 24 von 36 Prüfbericht - Nr.: Page 24 of 36 Test Report No.





No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV/m)		
				(dBuV/m)	(dBuV)	(dB)			
1			227.395	31.444	18.470	-14.556	46.000	12.973	QP
2		*	251.160	32.288	18.570	-13.712	46.000	13.719	QP
3			318.575	29.002	13.950	-16.998	46.000	15.051	QP
4			362.710	31.448	15.390	-14.552	46.000	16.058	QP
5			405.875	31.215	14.390	-14.785	46.000	16.825	QP
6			448.555	30.696	13.290	-15.304	46.000	17.406	QP

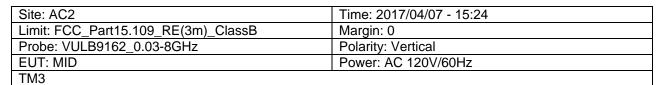
Note: Measure Level  $(dB\mu V/m)$  = Reading Level  $(dB\mu V)$  + Factor (dB)

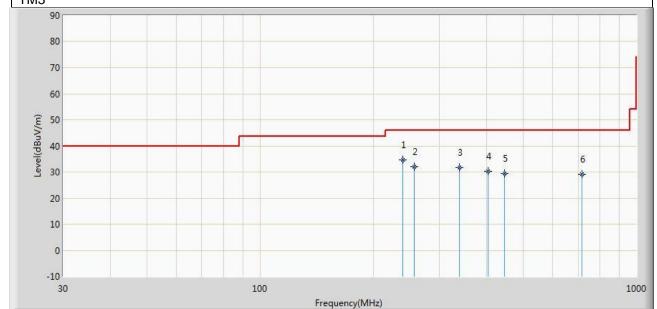
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



**Products** 

50080310 001 Seite 25 von 36 Prüfbericht - Nr.: Page 25 of 36 Test Report No.





No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV/m)		
				(dBuV/m)	(dBuV)	(dB)			
1		*	240.005	34.680	21.260	-11.320	46.000	13.420	QP
2			256.495	32.039	18.210	-13.961	46.000	13.828	QP
3			339.430	31.768	16.100	-14.232	46.000	15.668	QP
4			403.935	30.289	13.470	-15.711	46.000	16.819	QP
5			445.645	29.456	12.100	-16.544	46.000	17.356	QP
6			716.275	29.207	7.380	-16.793	46.000	21.827	QP

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

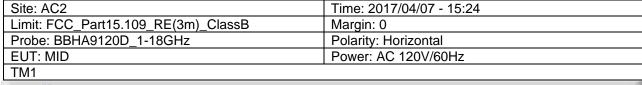
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

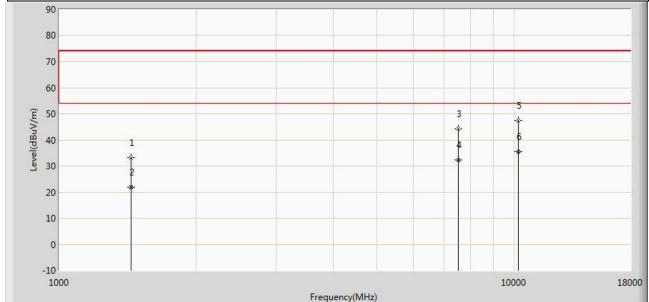


Products

 Prüfbericht - Nr.:
 50080310 001
 Seite 26 von 36

 Test Report No.
 Page 26 of 36





No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV/m)		
				(dBuV/m)	(dBuV)	(dB)			
1			1442.000	33.149	38.716	-40.851	74.000	-5.567	PK
2			1442.000	21.773	27.340	-32.227	54.000	-5.567	AV
3			7536.500	44.320	33.343	-29.680	74.000	10.977	PK
4			7536.500	32.227	21.250	-21.773	54.000	10.977	AV
5			10222.500	47.334	33.064	-26.666	74.000	14.270	PK
6		*	10222.500	35.460	21.190	-18.540	54.000	14.270	AV

Note: Measure Level  $(dB\mu V/m)$  = Reading Level  $(dB\mu V)$  + Factor (dB) Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier (dB)



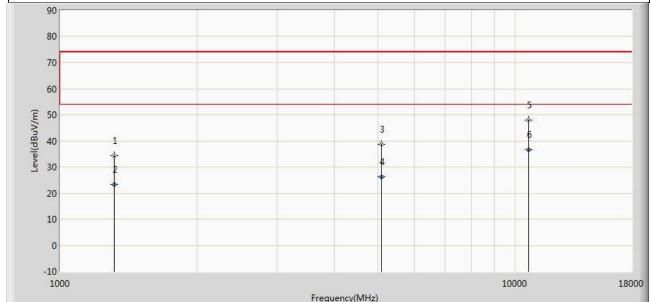
Prüfbericht - Nr.: 50080310 001

**Seite 27 von 36** *Page 27 of 36* 

Test Report No.

Site: AC2	Time: 2017/04/07 - 15:24
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: MID	Power: AC 120V/60Hz

TM1



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No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV/m)		
				(dBuV/m)	(dBuV)	(dB)			
1			1314.500	34.324	39.584	-39.676	74.000	-5.259	PK
2			1314.500	23.190	28.450	-30.810	54.000	-5.259	AV
3			5080.000	38.670	35.597	-35.330	74.000	3.073	PK
4			5080.000	26.253	23.180	-27.747	54.000	3.073	AV
5			10690.000	48.078	32.444	-25.922	74.000	15.634	PK
6		*	10690.000	36.744	21.110	-17.256	54.000	15.634	AV

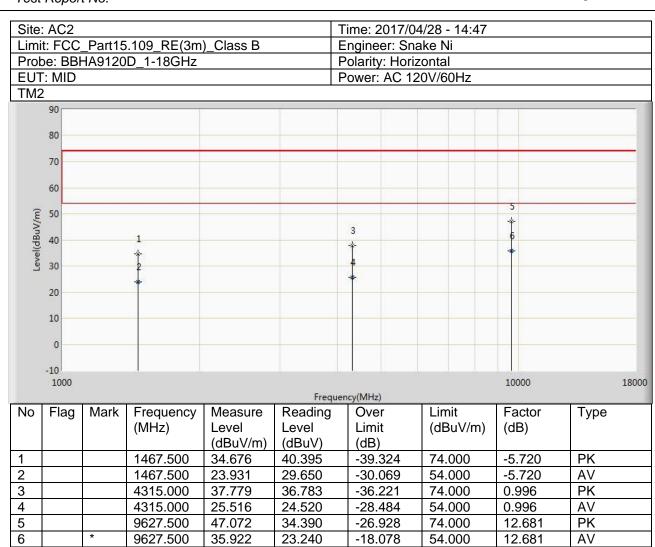
Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB) Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier (dB)



**Products** 

 Prüfbericht - Nr.:
 50080310 001
 Seite 28 von 36

 Test Report No.
 Page 28 of 36



Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB) Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier (dB)



Test Report No.

Prüfbericht - Nr.: 50080310 001

**Seite 29 von 36** *Page 29 of 36* 

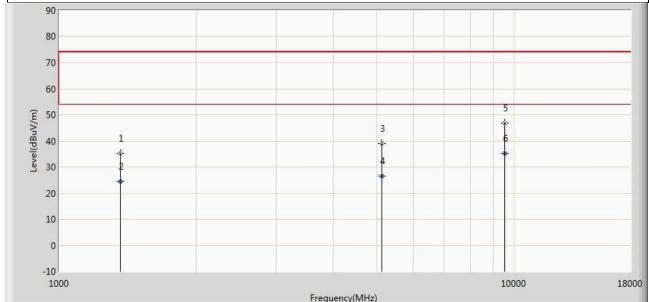
 Site: AC2
 Time: 2017/04/28 - 14:47

 Limit: FCC\_Part15.109\_RE(3m)\_Class B
 Engineer: Snake Ni

 Probe: BBHA9120D\_1-18GHz
 Polarity: Vertical

EUT: MID Power: AC 120V/60Hz

TM2



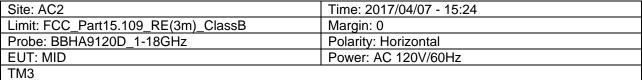
No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)	(dB)			
1			1365.500	35.126	40.443	-38.874	74.000	-5.317	PK
2			1365.500	24.363	29.680	-29.637	54.000	-5.317	AV
3			5122.500	39.102	35.928	-34.898	74.000	3.174	PK
4			5122.500	26.424	23.250	-27.576	54.000	3.174	AV
5			9542.500	46.890	34.147	-27.110	74.000	12.742	PK
6		*	9542.500	35.163	22.420	-18.837	54.000	12.742	AV

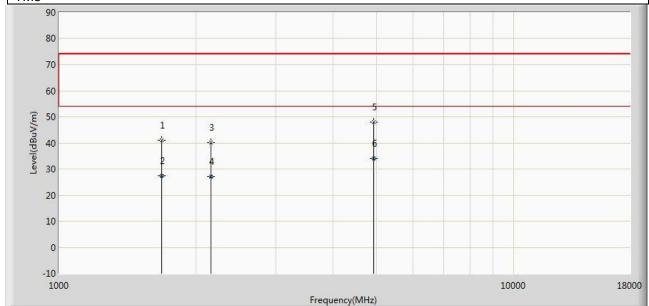
Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB) Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier (dB)



**Products** 

50080310 001 Seite 30 von 36 Prüfbericht - Nr.: Page 30 of 36 Test Report No.





No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
	_		(MHz)	Level	Level	Limit	(dBuV/m)		
				(dBuV/m)	(dBuV)	(dB)			
1			1680.000	40.892	47.074	-33.108	74.000	-6.183	PK
2			1680.000	27.358	33.540	-26.642	54.000	-6.183	AV
3			2156.000	40.080	43.003	-33.920	74.000	-2.923	PK
4			2156.000	27.187	30.110	-26.813	54.000	-2.923	AV
5			4927.000	48.029	45.397	-25.971	74.000	2.632	PK
6		*	4927.000	33.922	31.290	-20.078	54.000	2.632	AV

Note: Measure Level  $(dB\mu V/m)$  = Reading Level  $(dB\mu V)$  + Factor (dB)Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier (dB)

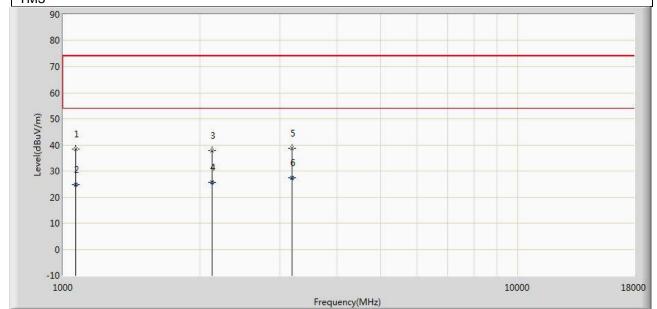


Prüfbericht - Nr.: 50080310 001

**Seite 31 von 36** *Page 31 of 36* 

Test Report No.

Site: AC2	Time: 2017/04/07 - 15:24
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: MID	Power: AC 120V/60Hz
TM3	



No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
	_		(MHz)	Level	Level	Limit	(dBuV/m)		
			, ,	(dBuV/m)	(dBuV)	(dB)	,		
1			1068.000	38.442	45.969	-35.558	74.000	-7.528	PK
2			1068.000	24.913	32.440	-29.087	54.000	-7.528	AV
3			2130.500	37.794	41.034	-36.206	74.000	-3.240	PK
4			2130.500	25.640	28.880	-28.360	54.000	-3.240	AV
5			3193.000	38.820	41.378	-35.180	74.000	-2.558	PK
6		*	3193.000	27.332	29.890	-26.668	54.000	-2.558	AV

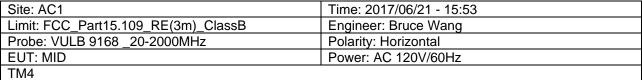
Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB) Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier (dB)

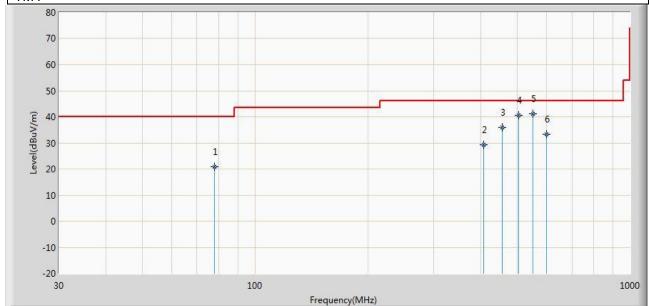


Products

 Prüfbericht - Nr.:
 50080310 001
 Seite 32 von 36

 Test Report No.
 Page 32 of 36





No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)	(dB)			
1			78.015	20.958	10.659	-19.042	40.000	10.299	QP
2			407.815	29.337	12.635	-16.663	46.000	16.702	QP
3			455.830	35.852	17.970	-10.148	46.000	17.882	QP
4			503.860	40.501	21.940	-5.499	46.000	18.560	QP
5		*	551.860	41.140	21.642	-4.860	46.000	19.498	QP
6			599.875	33.438	12.950	-12.562	46.000	20.488	QP

Note: Measure Level  $(dB\mu V/m)$  = Reading Level  $(dB\mu V)$  + Factor (dB) Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

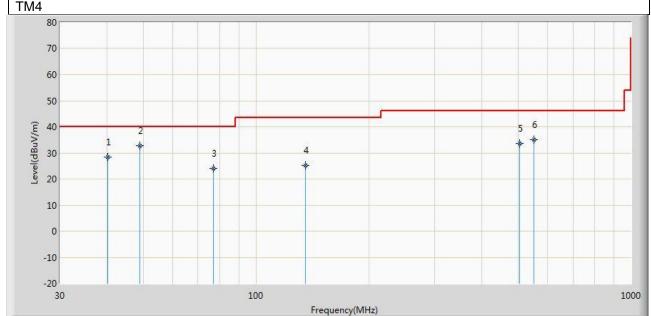


50080310 001 Prüfbericht - Nr.:

Seite 33 von 36 Page 33 of 36

Test Report No.

Site: AC1	Time: 2017/06/21 - 15:53
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Bruce Wang
Probe: VULB 9168 _20-2000MHz	Polarity: Vertical
EUT: MID	Power: AC 120V/60Hz
TNAA	



No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)	(dB)			
1			40.185	28.343	13.840	-11.657	40.000	14.503	QP
2		*	48.915	32.697	18.600	-7.303	40.000	14.097	QP
3			77.045	24.058	13.609	-15.942	40.000	10.448	QP
4			135.245	25.140	11.015	-18.360	43.500	14.124	QP
5			503.845	33.536	14.975	-12.464	46.000	18.561	QP
6			551.860	35.147	15.649	-10.853	46.000	19.498	QP

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB) Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

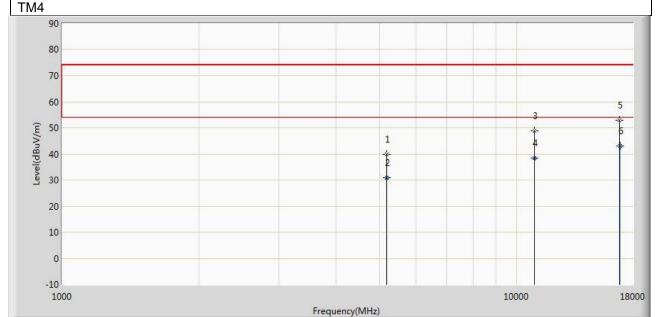


Prüfbericht - Nr.: 50080310 001

**Seite 34 von 36** *Page 34 of 36* 

Test Report No.

Site: AC1	Time: 2017/06/21 - 15:53
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: MID	Power: AC 120V/60Hz



No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Туре
			(MHz)	Level	Level	Limit	(dBuV/m)		
				(dBuV/m)	(dBuV)	(dB)			
1			5173.500	39.715	36.437	-34.285	74.000	3.278	PK
2			5173.500	30.918	27.640	-23.082	54.000	3.278	AV
3			10945.000	48.979	35.926	-25.021	74.000	13.053	PK
4			10945.000	38.403	25.350	-15.597	54.000	13.053	AV
5			16818.500	52.880	37.939	-21.120	74.000	14.941	PK
6		*	16848.500	42.995	27.940	-11.005	54.000	15.055	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB) Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier (dB)

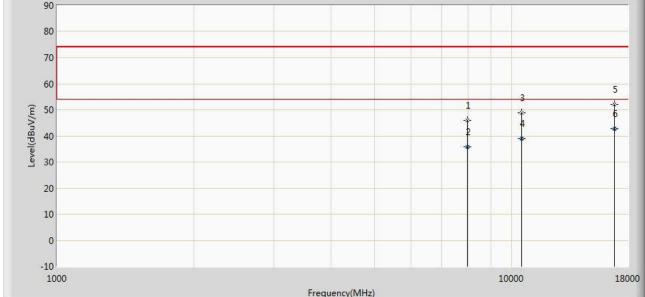


Prüfbericht - Nr.: 50080310 001

**Seite 35 von 36** *Page 35 of 36* 

Test Report No.

Site: AC1	Time: 2017/06/21 - 15:53					
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Bruce Wang					
Probe: BBHA9120D_1-18GHz	Polarity: Vertical					
EUT: MID	Power: AC 120V/60Hz					
TM4						
90						
20						



					2,252,250		ı		
No	Flag	Mark	Frequency	Measure	Reading	Over	Limit	Factor	Type
			(MHz)	Level	Level	Limit	(dBuV/m)	(dB)	
			,	(dBuV/m)	(dBuV)	(dB)	,	` ,	
1			7978.500	45.802	37.114	-28.198	74.000	8.688	PK
2			7978.500	35.738	27.050	-18.262	54.000	8.688	AV
3			10511.500	48.837	36.399	-25.163	74.000	12.439	PK
4			10511.500	38.888	26.450	-15.112	54.000	12.439	AV
5			16835.500	52.162	37.152	-21.838	74.000	15.010	PK
6		*	16835.500	42.660	27.650	-11.340	54.000	15.010	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB) Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier (dB)



**Products** 

 Prüfbericht - Nr.:
 50080310 001
 Seite 36 von 36

 Test Report No.
 Page 36 of 36

### 6. List of Tables

Table 1: List of Test and Measurement Equipment	6
Table 2: Measurement Uncertainty	
Table 3: Technical Specification of EUT	
Table 4: Independent Operation Modes	