



Prüfbericht - Nr.:		19660368 001		Seite 1 von 39
Test Report No.				Page 1 of 3
Auftraggeber: Client:		American Megatrends l Kumaran Nagar, Semn Off. Old Mahabalipuran Chennai-600119, India	nanchery,	
Gegenstand de	er Prüfung:	B.O.L.T Chest ECG		
Bezeichnung: Identification:		VA07	<b>Serien-Nr.:</b> Serial No.	Engineering Sample
Wareneingang Receipt No.:	ıs-Nr.:	1803293443	Eingangsdatum: Date of receipt:	01.02.2018
Prüfort: Testing location	n:	Refer Page 5 of 39 for	Test site details	
Prüfgrundlage Test specification	on:	FCC Part 15 Subpart C ANSI C63.10-2013	2 15.247	
Prüfergebnis: Test Result:		Der Prüfgegenstand et The test items passed t	ntspricht oben genanr the test specification(s).	nter Prüfgrundlage (n).
Prüflaboratori	um:	TÜV Rheinland (India)		
Testing Laboratory:		27/B, 2nd cross, Electronic City Phase 1 Bangalore – 560 100. India		
Testing Labora		Bangalore – 300 100. II	lula	
Testing Labora		FCC Test Site Registrat		
geprüft / tested	d by:			d by:
	Girish Kumar G		kontrolliert / reviewed  23.05.2018 Saibaba S	Siddapur Fairbaka Manager
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 Prüfbericht - Nr.:
 19660368 001
 Seite 2 von 39

 Test Report No.:
 Page 2 of 39

# **TEST SUMMARY**

Section	Test item	Result	Remarks
15.247 (b) (3)	Maximum Peak Conducted Output Power	Pass	
15.247 (a) (2)	6 dB / DTS Bandwidth	Pass	
15.247 (e)	Maximum Power Spectral  Density	Pass	
15.247 (d)	Emissions in non – restricted band	Pass	-
15.247 (a)(1)	Conducted Spurious Emissions	Pass	
15.247 (d) / (15.209 & 15.205)	Restricted bands of Emissions and Restricted Bands of Operation.	Pass	
15.207	Conducted emission on A.C power lines	Pass	





Prüfbericht - Nr.:	40000000 004	Seite 3 von 39
Test Report No.:	19660368 001	Page 3 of 39

# **Table of Contents**

•	Table of Contents	
1	. GENERAL REMARKS	4
	Complimentary Materials	4
2	. TEST SITES	5
	Testing Facilities	5
	List of Test and Measurement Instruments	5
3	. GENERAL PRODUCT INFORMATION	6
	Product Function and Intended Use	6
	Ratings and System Details	6
	Measurement Uncertainty:	7
4	. TEST SET-UP AND OPERATION MODE	7
	Principle of Configuration Selection	7
	Test Operation and Test Software	7
	Special Accessories and Auxiliary Equipment	7
	Countermeasures to achieve EMC Compliance	7
	Test modes – data rates and modulations	7
	List of frequencies	8
5	. TEST METHODOLOGY	9
	Radiated Emission Test	9
	1.1.1 Test Setup Configuration	9
6	. TEST RESULTS	12
	Maximum Peak Conducted Output Power	12
	Maximum Power Spectral Density	15
	DTS Bandwidth	18
	Emissions in non-restricted frequency bands	21
	Conducted Spurious Emission	24
	Restricted bands of Emissions & Restricted Bands of Operation	26
	Conducted Emission Test on A.C. Power Line	30
7	. LIST OF TABLES	39
8	. LIST OF FIGURES	39





Prüfbericht - Nr.:	4000000	Seite 4 von 39
Test Report No.:	19660368 001	Page 4 of 39

# 1. GENERAL REMARKS

## **Complimentary Materials**

All attachments are integral part of this test report. This applies especially to the following appendix:

**APPENDIX 1:** TEST SETUP PHOTOS

**APPENDIX 2: EUT EXTERNAL PHOTOS** 

**APPENDIX 3: EUT INTERNAL PHOTOS** 

**APPENDIX 4: FCC LABEL AND LABEL LOCATION** 

**APPENDIX 5: BLOCK DIAGRAM** 

**APPENDIX 6: SPECIFICATION OF EUT** 

**APPENDIX 7: SCHEMATIC DIAGRAM** 

**APPENDIX 8: BILL OF MATERIAL** 

**APPENDIX 9: USER MANUAL** 

**APPENDIX 10: SAR EXCLUSION CALCULATION** 





 Prüfbericht - Nr.:
 19660368 001
 Seite 5 von 39

 Test Report No.:
 Page 5 of 39

# 2. TEST SITES

# **Testing Facilities**

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

### **List of Test and Measurement Instruments**

Table 1: List of test and measurement instruments

Equipment	Manufacturer	Model Name	Serial Number	Calibration Due Date	Periodicity	Used for Test Items
Spectrum Analyser	Agilent Technologies	E4407B	US41192772	13.02.2019	Yearly	Antenna - Port Measurements
EMI Test Receiver	Rohde & Schwarz	ESU 40	100288	24-10-2018	Yearly	
Active loop antenna	Frankonia	LAX-10	LAX-10-800	13-04-2018	Yearly	
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	Radiated Spurious Emission
Broadband Horn Antenna	Frankonia	HAX-18	HAX18-802	16-09-2018	Yearly	
Emission Horn Antenna	ETS Lindgren	116706	00107323	22-06-2018	Yearly	
Semi Anechoic Chamber	Frankonia	-	-	-	-	
EMI Test Receiver	Rohde & Schwarz	ESR7	101133	13.02.2019	Yearly	Conducted Emission on
Two Line V- Network (LISN)	Rohde & Schwarz	ENV216	100022	05.09.2018	Yearly	AC Power Lines





Prüfbericht - Nr.:	10000000	Seite 6 von 39
Test Report No.:	19660368 001	Page 6 of 39

# 3. GENERAL PRODUCT INFORMATION

#### **Product Function and Intended Use**

B.O.L.T Chest ECG device is a portable diagnostic system which can measure/monitor the electrical activity of the heart over a period of time using the ECG electrodes placed on the user's body. The device monitors the ECG waveform from the chest Left, Right alone with a reference Electrode. The acquired and processed ECG data obtained from the device is transmitted to a mobile device wirelessly for further processing and analysis. The ECG data acquired by the device can be used to obtain clinical consultation from cardiologists or healthcare practitioners.

### **Ratings and System Details**

**Table 2: Ratings and System Details** 

Operating Frequency Range	2400 MHz – 2483.5 MHz
Radio Protocol	Bluetooth Low Energy
Verified RF Power	-5.468 dBm
Channel Spacing	2 MHz
Modulation	GFSK
Number of antennas	1
Antenna type and gain	Chip antenna & 0.5 dBi
Supply Voltage to Product	5 VDC from Power adapter
Environmental conditions	Storage Condition: 10°C to 55°C Operational conditions: 16°C to 35°C

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Prüfbericht - Nr.:	4000000	Seite 7 von 39
Test Report No.:	19660368 001	Page 7 of 39

### **Measurement Uncertainty:**

**Table 3: Measurement Uncertainty** 

Parameter	Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±1.5 dB
Power Spectral Density, conducted	±3 dB
Unwanted Emissions, conducted	±3 dB
All emissions, radiated	±6 dB
Temperature	±3 °C
Supply Voltages	±3 %
Time	±5 %

# 4. TEST SET-UP AND OPERATION MODE

## **Principle of Configuration Selection**

Transmission was enabled with highest possible duty cycle transmission on low, mid and high channel.

### **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.

• Test software used: CSR Bluetest3

Software Version: BlueSuite 2.6.0

Hardware Version: ECG\_2V2

### **Special Accessories and Auxiliary Equipment**

- None

### Countermeasures to achieve EMC Compliance

- None

#### Test modes – data rates and modulations

For Radiated spurious emissions, the tests were performed for all data rates and only worst case results are reported in this report.

Note: The testing was performed with the power settings of -4 dBm in the Bluetest software.





 Prüfbericht - Nr.:
 19660368 001
 Seite 8 von 39

 Test Report No.:
 Page 8 of 39

# List of frequencies

**Table 4: List of Center Frequiences** 

Frequency Band (MHz)	Channel No.	Channel Frequency (MHz)
	0	2402
	1	2404
	2	2406
	3	2408
	:	:
	:	:
2400 – 2483.5	18	2438
(2MHz Bandwidth)	19	2440
BT LE	20	2437
	:	:
	÷	:
	36	2474
	37	2476
	38	2478
	39	2480



Prüfbericht - Nr.:	4000000000	Seite 9 von 39
Test Report No.:	19660368 001	Page 9 of 39

# **5. TEST METHODOLOGY**

#### **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 mesurement from 200 MHz to 1 GHz 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.

#### 1.1.1 Test Setup Configuration

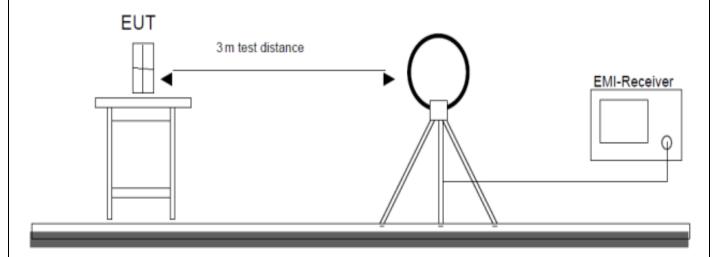


Figure 1: Frequency Range 9 kHz- 30 MHz

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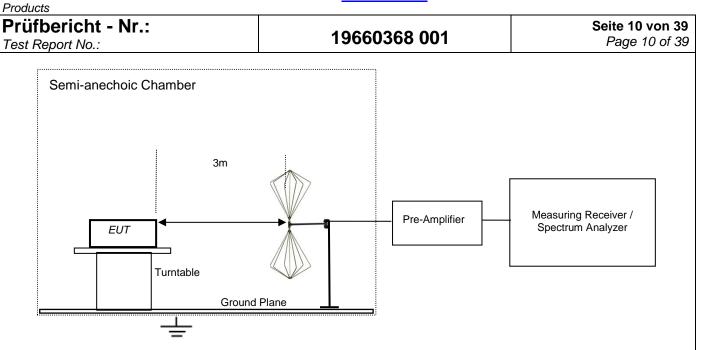


Figure 2: Frequency Range 30 MHz - 200 MHz

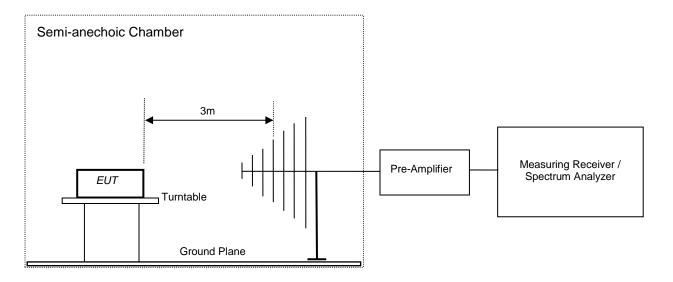


Figure 3: Frequency Range 200 MHz - 1GHz



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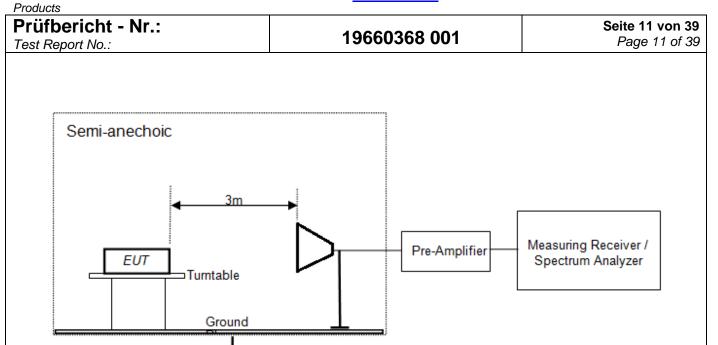


Figure 4: Frequency Range above 1 GHz





Prüfbericht - Nr.: Seite 12 von 39 19660368 001 Page 12 of 39 Test Report No.:

# 6. TEST RESULTS

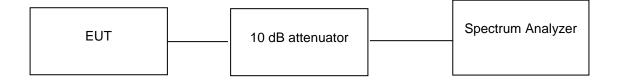
## **Maximum Peak Conducted Output Power**

Result **Pass** 

**Test Specification** FCC part 15 Subpart C 15.247 (b)(3)

Measurement Bandwidth 1 MHz Detector Peak

≤ 1 W (30 dBm) Requirement



#### Test results:

Note: Measurements were made as per section 9.1.1 in KDB 558074 D01 DTS Meas Guidance v04.

10 dB attenuator + 0.7 Cable loss = 10.7 dB offset is considered in below result

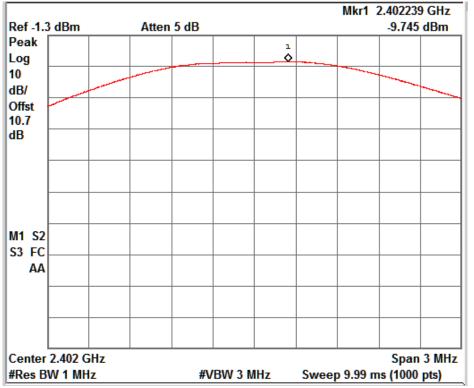
Table 5: Maximum peak conducted output power verified Test Results

Channel Frequency (MHz)	Output power (dBm)	Limit (dBm)
2402	-9.745	30
2440	-5.468	30
2480	-5.578	30

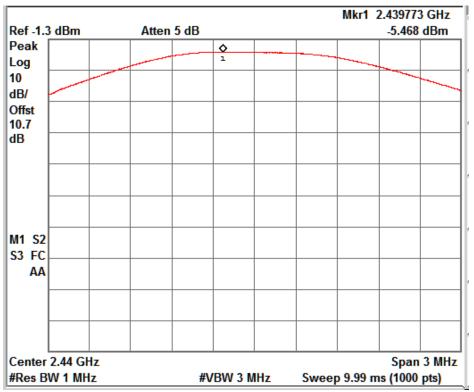


 Prüfbericht - Nr.:
 19660368 001
 Seite 13 von 39

 Page 13 of 39



Channel low - 2402 MHz



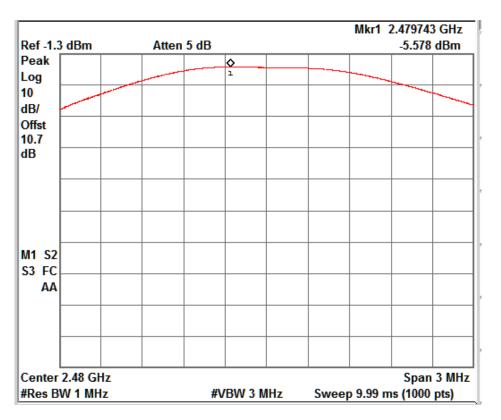
Channel mid - 2440 MHz





 Prüfbericht - Nr.:
 19660368 001
 Seite 14 von 39

 Test Report No.:
 Page 14 of 39



Channel high - 2480 MHz





Prüfbericht - Nr.: Seite 15 von 39 19660368 001 Page 15 of 39 Test Report No.:

## **Maximum Power Spectral Density**

Result **Pass** 

FCC Part 15 Subpart C Section 15.247 (e) **Test Specification** 

**Detector Function** Peak

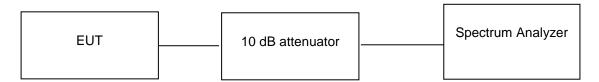
Port of testing Antenna port

Requirement For digitally modulated systems, the power spectral density

conducted from the intentional radiator to the antenna shall not be

greater than 8 dBm.

#### Test Method:



#### Test results:

Note: Measurements were made as per section 10.2 in KDB 558074 D01 DTS Meas Guidance v04.

10 dB attenuator + 0.7 Cable loss = 10.7 dB offset is considered in below result

Table 6: Maximum power spectral density verified Test Results

Channel Frequency (MHz)	Total PSD @100kHz BW (dBm)	Total PSD @3kHz BW (dBm)	Limit @3kHz BW (dBm)	Margin (dB)
2402.00	-10.42	-25.64	8.00	-18.42
2440.00	-5.934	-21.15	8.00	-13.934
2480.00	-6.097	-21.31	8.00	-14.097

#### Calculations for PSD at 3kHz bandwidth:

For 2402 MHz:

Total PSD (@ 100kHz Bandwidth) = -10.42 = -10.42 + 10 log(3 kHz/100 kHz) = -25.64 (@ 3kHz Bandwidth)

For 2440 MHz:

Total PSD (@ 100kHz Bandwidth) = -5.93 = -5.93 + 10 log(3 kHz/100 kHz) = -21.15 (@ 3kHz Bandwidth)

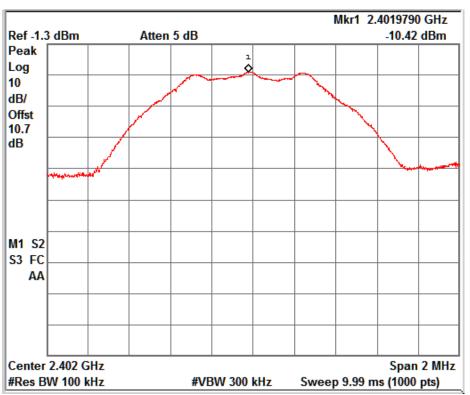
For 2480 MHz:

Total PSD (@ 100kHz Bandwidth) = -6.09 = -6.09 + 10 log(3 kHz/100 kHz) = -21.31 (@ 3kHz Bandwidth)

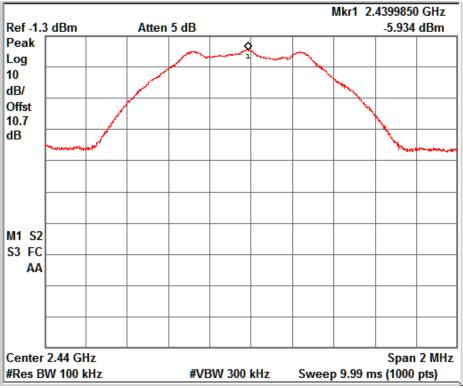


 Prüfbericht - Nr.:
 19660368 001
 Seite 16 von 39

 Page 16 of 39



Channel low - 2402 MHz



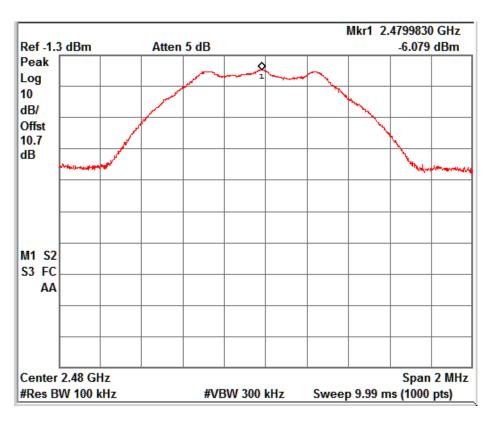
Channel mid - 2440 MHz



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Prüfbericht - Nr.: Seite 17 von 39 19660368 001 Test Report No.: Page 17 of 39



Channel high - 2480 MHz





Prüfbericht - Nr.:	4000000	Seite 18 von 39
Test Report No.:	19660368 001	Page 18 of 39

#### **DTS Bandwidth**

Result **Pass** 

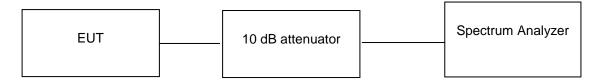
**Test Specification** FCC part 15 Subpart C Section 15.247 (a)(2)

Detector Peak

Port of testing Antenna Port

Requirement The minimum 6 dB bandwidth shall be at least 500 kHz.

#### **Test Method:**



#### Test results:

Note: Measurements were made as per section 8.1, 8.2 in KDB 558074 D01 DTS Meas Guidance v04.

10 dB attenuator + 0.7 Cable loss = 10.7 dB offset is considered in below result

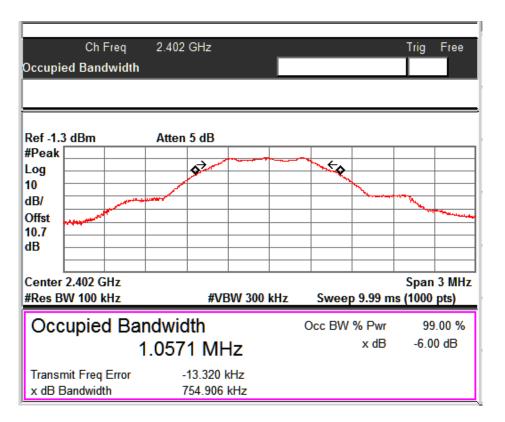
Table 7: DTS Bandwidth verified Test Results

Channel Frequency (MHz)	6 dB Bandwidth (kHz)	99% OBW (MHz)
2402.00	754.90	1.057
2440.00	744.16	1.052
2480.00	750.78	1.055

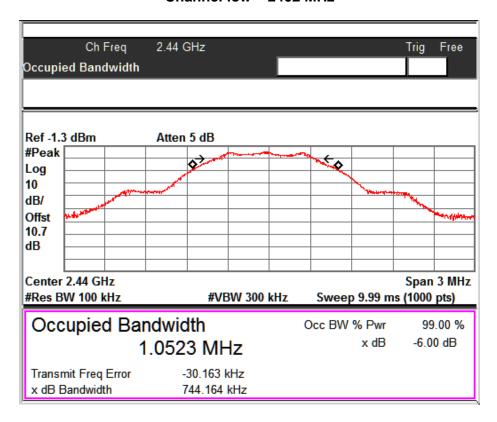


 Prüfbericht - Nr.:
 19660368 001
 Seite 19 von 39

 Page 19 of 39



### Channel low - 2402 MHz



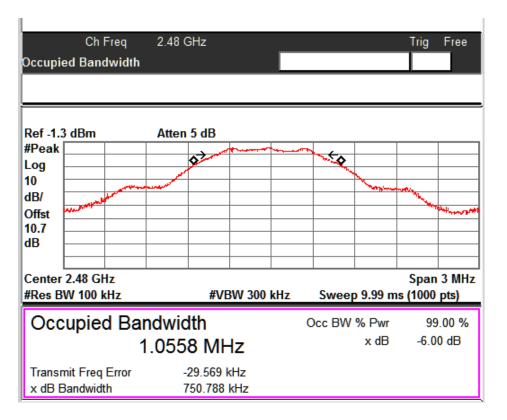
Channel mid - 2440 MHz





 Prüfbericht - Nr.:
 19660368 001
 Seite 20 von 39

 Test Report No.:
 Page 20 of 39



Channel high - 2480 MHz





Prüfbericht - Nr.: Seite 21 von 39 19660368 001 Page 21 of 39 Test Report No.:

## **Emissions in non-restricted frequency bands**

Result **Pass** 

**Test Specification** FCC Part 15 Subpart C Section 15.247 (d)

**Detector Function** Peak

Antenna port Port of testing

Requirement In any 100kHz bandwidth outside the frequency band in which the

spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance

with the peak conducted power limits.

#### **Test Method:**



#### Test results:

Note: Measurements were made as per section 11.2, 11.3 in KDB 558074 D01 DTS Meas Guidance v04.

10 dB attenuator + 0.7 Cable loss = 10.7 dB offset is considered in below result

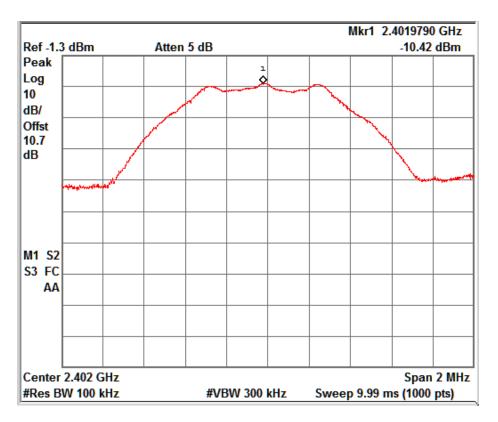
Table 8: Verified Test Results of Emissions in non-restricted frequency bands

_Channel	Value at Ba	and Edge	Reference	Band Edge	Limit
Frequency (MHz)	Frequency (MHz)	Value A (dBm)	PSD Value B (dBm)	Value A∼B (dB)	(dBc)
2402	2400	-60.58	-10.42	-50.16	20.00
2480	2483.50	-65.47	-6.07	-59.4	20.00

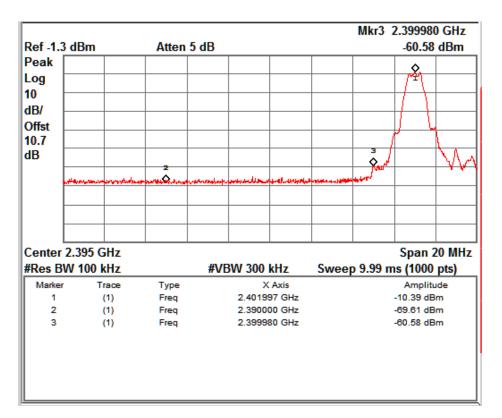


 Prüfbericht - Nr.:
 19660368 001
 Seite 22 von 39

 Page 22 of 39



#### Reference Level Plot - Channel low 2402 MHz

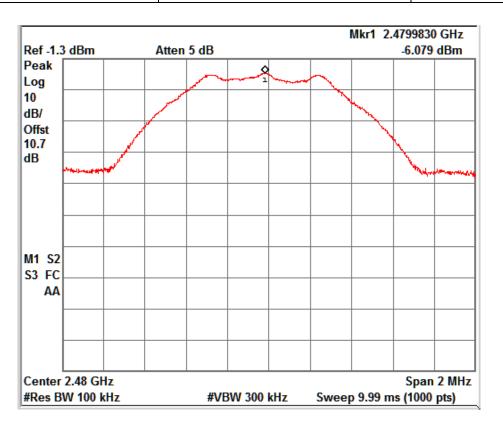


Channel low - 2402 MHz

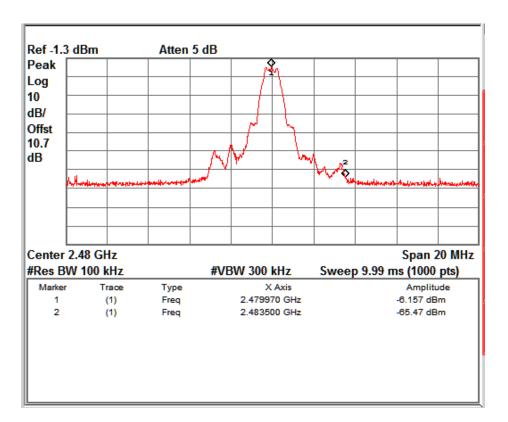


 Prüfbericht - Nr.:
 19660368 001
 Seite 23 von 39

 Page 23 of 39



### Reference Level Plot - Channel high - 2480 MHz



Channel high - 2480 MHz





Prüfbericht - Nr.: Seite 24 von 39 19660368 001 Page 24 of 39 Test Report No.:

# **Conducted Spurious Emission**

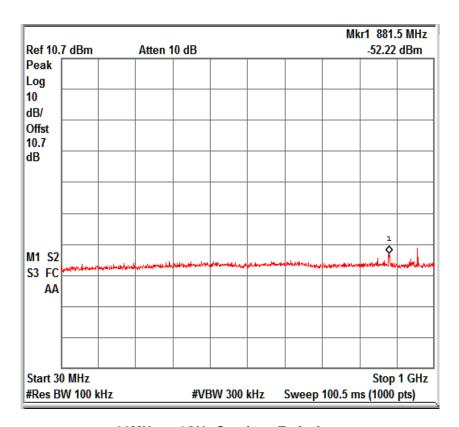
Result **Pass** 

**Test Method:** 



10 dB attenuator + 0.7 Cable loss = 10.7 dB offset is considered in below result

#### Test results:

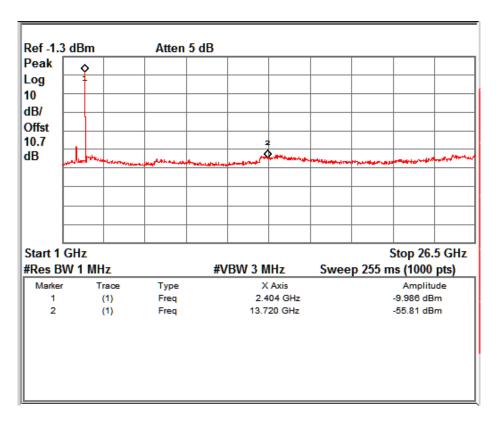


30MHz to 1GHz Spurious Emissions

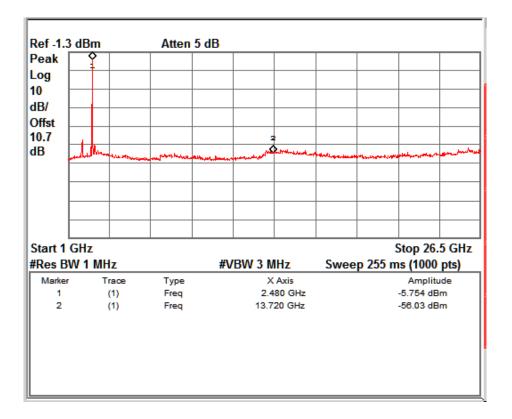


 Prüfbericht - Nr.:
 19660368 001
 Seite 25 von 39

 Page 25 of 39



### **Channel Frequency 2402 MHz**



**Channel Frequency 2480 MHz** 





Prüfbericht - Nr.: Seite 26 von 39 19660368 001 Page 26 of 39 Test Report No.:

## **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)

Test Method ANSI C 63.10 - 2013 Measurement Location Semi Anechoic Chamber

Measuring Distance 3 m

QP for frequency below 1 GHz, average for frequency above 1 GHz Detector

Requirement As per the limits mentioned in the below table

Table 9: Transmitter limits for Radiated emission of Section 15,209

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 69.54 dB $\mu$ V/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:**

5 VDC from Power adaptor

#### **Environmental conditions:**

Temperature: +23.5 °C RH: 61.7 %





Prüfbericht - Nr.:	4000000000	Seite 27 von 39
Test Report No.:	19660368 001	Page 27 of 39

### Test results:

No emissions found in frequency 9 kHz to 30 MHz

# Test results for frequencies in the range 30 MHz - 200 MHz

## Adapter 1 with Battery 1 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vartical	46.97	27.03	40	-12.97
Vertical	148.04	26.43	43.5	-17.07
Harizantal	87.23	18.03	40	-21.97
Horizontal	180.73	21.25	43.5	-22.25

### Adapter 1 with Battery 2 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vertical	45.61	21.52	40	-18.48
vertical	149.31	23.65	43.5	-19.85
Horizontal	87.52	18.11	40	-21.89
Honzontai	149.11	18.12	43.5	-25.38

## Adapter 2 with Battery 1 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vertical	47.16	29.61	40	-10.39
Vertical	148.14	28.30	43.5	-15.20
Harizantal	94.89	20.92	40	-19.08
Horizontal	175.59	29.37	43.5	-14.13

## Adapter 2 with Battery 2 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vertical	46.74	26.00	40	-14.00
vertical	174.22	21.59	43.5	-21.91
Harizantal	92.25	20.45	40	-19.55
Horizontal	199.04	23.62	43.5	-19.88





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Prüfbericht - Nr.:	4000000000	Seite 28 von 39
Test Report No.:	19660368 001	Page 28 of 39

# Test results for frequencies in the range 200 MHz to 1 GHz

## Adapter 1 with Battery 1 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vertical	479.98	24.41	46	-21.59
vertical	591.24	27.85	46	-18.15
Horizontal	480.08	24.72	46	-21.28
Horizontal	590.46	27.31	46	-18.69

# Adapter 1 with Battery 2 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vertical	379.58	23.23	46	-22.77
vertical	536.92	27.70	46	-18.30
Harizantal	590.85	26.57	46	-19.43
Horizontal	898.63	31.34	46	-14.66

## Adapter 2 with Battery 1 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vertical	232.34	23.34	46	-22.66
vertical	590.95	26.47	46	-19.53
Harizantal	236.22	25.94	46	-20.06
Horizontal	591.33	26.95	46	-19.05

### Adapter 2 with Battery 2 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vartical	480.00	23.71	46	-22.29
Vertical	948.88	24.04	46	-21.96
Horizontal	479.92	24.52	46	-21.48
Honzoniai	898.00	26.10	46	-19.90



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 Prüfbericht - Nr.:
 19660368 001
 Seite 29 von 39

 Test Report No.:
 Page 29 of 39

Test results for frequencies in the range 1 GHz - 26.5 GHz

## Table 10: Restricted bands of emission verified Test Results

Channel	Polarization	Frequency (MHz)	Measure Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
		2390(Pk)	39.25	74	-34.75
		2390(Av)	27.10	54	-26.90
	\/a#iaal	2402(Pk)	73.10	-	*
	Vertical	2402(Av)	69.08	-	*
		4804(Pk)	53.18	74	-20.82
Law		4804(Av)	43.48	54	-10.52
Low		2390(Pk)	38.64	74	-35.36
		2390(Av)	27.10	54	-26.9
	11.2	2402(Pk)	81.30	-	*
	Horizontal	2402(Av)	76.98	-	*
		4804(Pk)	53.36	74	-20.64
		4804(Av)	42.64	54	-11.36
	\/o#tiool	4880(Pk)	54.21	74	-19.79
N 4: -I	Vertical	4880(Av)	44.15	54	-9.85
Mid	l lovi-outol	4880(Pk)	54.11	74	-19.89
	Horizontal	4880(Av)	43.51	54	-10.49
		2480(Pk)	80.26	-	*
		2480(Av)	76.15	-	*
	\/a#iaal	2483.5(Pk)	38.12	74	-35.88
	Vertical	2483.5(Av)	26.93	54	-27.07
		4960(Pk)	54.06	74	-19.94
LEada		4960(Av)	43.53	54	-10.47
High		2480(Pk)	86.01	-	*
		2480(Av)	82.21	-	*
	Hori-outol	2483.5(Pk)	39.61	74	-34.39
	Horizontal	2483.5(Av)	27.82	54	-26.18
		4960(Pk)	54.08	74	-19.92
		4960(Av)	43.27	54	-10.73



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 Prüfbericht - Nr.:
 19660368 001
 Seite 30 von 39

 Test Report No.:
 Page 30 of 39

# **Conducted Emission Test on A.C. Power Line**

Result Pass

Test Specification : FCC Part 15 Section 15.207

Test Method : ANSI C63.10-2013 Testing Location : Screened room

Measurement Bandwidth: 9kHz

Frequency Range : 150kHz – 30MHz Supply Voltage : 120VAC,60Hz

#### Limit of section 15.207

Frequency of emission	QP Limit	AV Limit
(MHz)	(dBµV)	(dBµV/m)
0.15 - 0.5	66 – 56*	56 – 46*
0.5 - 5	56	46
5 – 30	60	50

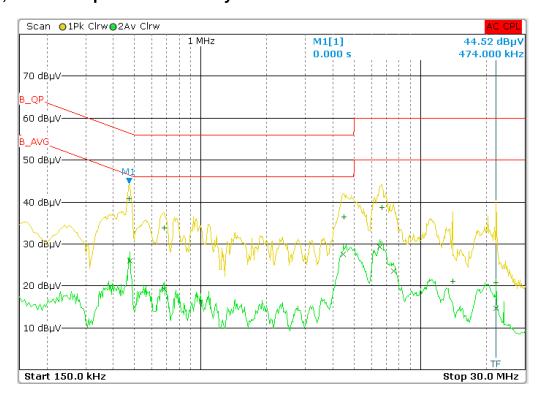
<sup>\*</sup> Decreases with the logarithm of the frequency



Prüfbericht - Nr.: Seite 31 von 39 19660368 001 Page 31 of 39 Test Report No.:

**Test Result: LINE Graphs and Tables** 

# 110v AC, 60Hz - Adapter 1 with Battery 1 combination



Line Graph

Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	474.00 kHz	40.82	56.20	-15.38
Quasi Peak	682.00 kHz	33.75	56	-22.25
Quasi Peak	4.49 MHz	36.45	56	-19.55
Quasi Peak	6.67 MHz	38.69	60	-21.31
Quasi Peak	14.07 MHz	21.03	60	-38.97
Quasi Peak	22.16 MHz	20.74	60	-39.26
Average	478.00 kHz	25.89	46.13	-20.24
Average	682 kHz	33.75	46	-12.25
Average	4.46 MHz	27.61	46	-18.39
Average	6.55 MHz	29.35	50	-20.65
Average	7.57 MHz	23.45	50	-26.55
Average	22.16 MHz	14.63	50	-35.37

Line Table

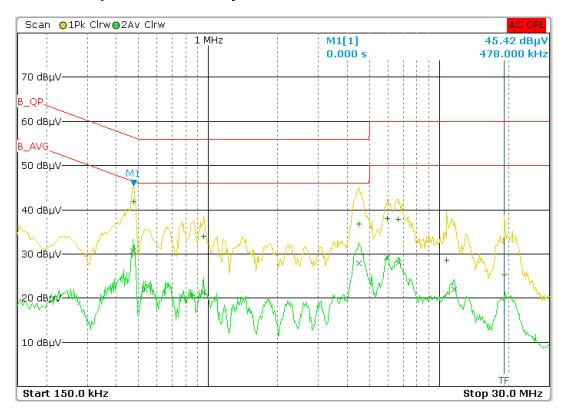




 Prüfbericht - Nr.:
 19660368 001
 Seite 32 von 39

 Test Report No.:
 Page 32 of 39

# 110v AC, 60Hz - Adapter 1 with Battery 2 combination



### Line Graph

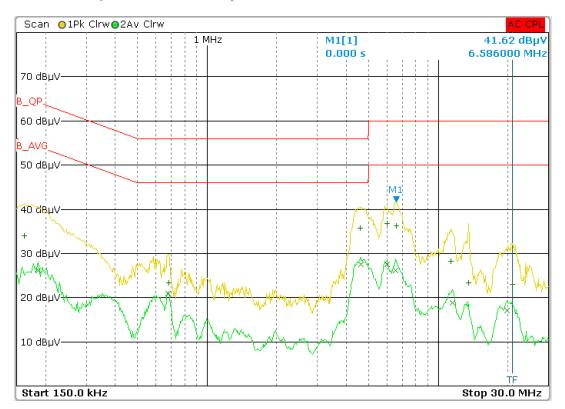
Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	478.00 kHz	41.82	56.13	-14.31
Quasi Peak	958.00 kHz	33.96	56	-22.04
Quasi Peak	4.50 MHz	36.76	56	-19.24
Quasi Peak	5.97 MHZ	38.08	60	-21.92
Quasi Peak	6.61 MHz	37.8	60	-22.20
Quasi Peak	10.77 MHz	28.57	60	-31.43
Quasi Peak	19.14 MHz	25.26	60	-34.74
Average	474.00 kHz	30.75	46.20	-15.45
Average	534.00 kHz	22.01	46	-23.99
Average	958.00 kHz	21.26	46	-24.74
Average	4.48 MHz	27.97	46	-18.03
Average	5.94 MHz	29.12	50	-20.88
Average	6.67 MHz	27.98	50	-22.02
Average	11.64 MHz	21.99	50	-28.01

**Line Table** 





# 110v AC , 60Hz - Adapter 2 with Battery 1 combination



Line Graph

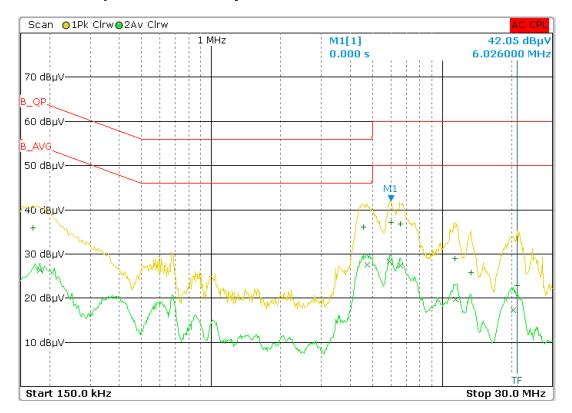
Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	162.00 kHz	33.99	65.34	-31.35
Quasi Peak	682.00 kHz	23.43	56	-32.57
Quasi Peak	4.58 MHz	35.8	56	-20.20
Quasi Peak	6.00 MHz	36.7	60	-23.30
Quasi Peak	6.58 MHz	36.17	60	-23.83
Quasi Peak	11.30 MHz	28.16	60	-31.84
Quasi Peak	13.55 MHz	23.4	60	-36.6
Quasi Peak	20.90 MHz	22.94	60	-37.06
Average	186.00 kHz	26.22	54.16	-27.94
Average	678.00 kHz	20.83	46	-25.17
Average	4.61 MHz	27.55	46	-18.45
Average	5.99 MHz	27.53	50	-22.47
Average	6.54 MHz	26.22	50	-23.78
Average	11.53 MHz	18.83	50	-31.17
Average	19.87 MHz	17.13	50	-32.87

Line Table



Prüfbericht - Nr.: Seite 34 von 39 19660368 001 Page 34 of 39 Test Report No.:

# 110v AC, 60Hz - Adapter 2 with Battery 2 combination



### Line Graph

Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	170.00 kHz	35.85	64.93	-29.08
Quasi Peak	4.55 MHz	36.08	56	-19.92
Quasi Peak	6.02 MHz	37.18	60	-22.82
Quasi Peak	6.61 MHz	36.86	60	-23.14
Quasi Peak	11.31 MHz	28.88	60	-31.12
Quasi Peak	13.34 MHz	25.88	60	-34.12
Quasi Peak	21.12 MHz	22.79	60	-37.21
Average	182.00 kHz	26.38	54.35	-27.97
Average	4.73 MHz	27.49	46	-18.51
Average	5.93 MHz	28.32	50	-21.68
Average	6.58 MHz	27.39	50	-22.61
Average	11.47 MHz	19.77	50	-30.23
Average	20.25 MHz	17.17	50	-32.83

Line Table





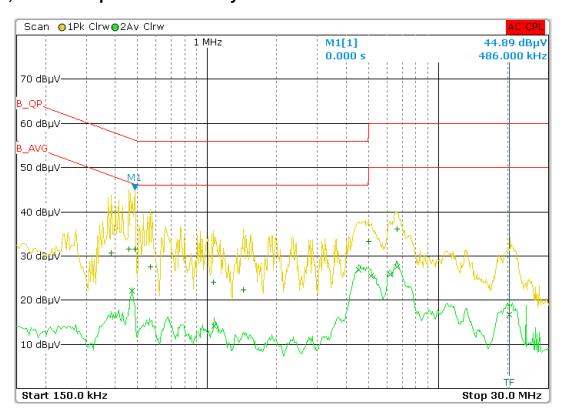


 Prüfbericht - Nr.:
 19660368 001
 Seite 35 von 39

 Test Report No.:
 Page 35 of 39

### **NEUTRAL Graphs and Tables**

# 110v AC, 60Hz - Adapter 1 with Battery 1 combination



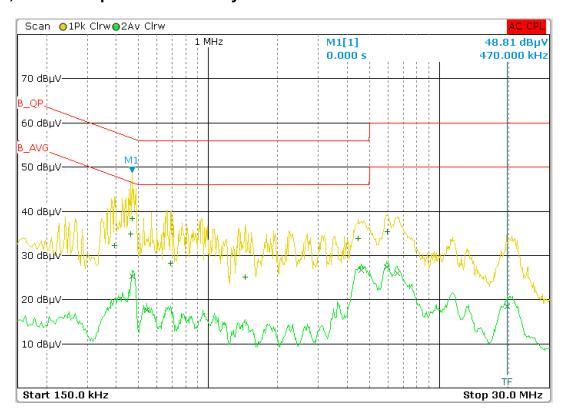
### **Neutral Graph**

Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	386.00 kHz	30.63	57.95	-27.32
Quasi Peak	458.00 kHz	31.55	56.49	-24.94
Quasi Peak	486.00 kHz	31.53	55.99	-24.46
Quasi Peak	570.00 kHz	27.6	56	-28.40
Quasi Peak	1.06 MHz	24.04	56	-31.96
Quasi Peak	1.43 MHz	22.28	56	-33.72
Quasi Peak	4.98 MHz	33.21	56	-22.79
Quasi Peak	6.63 MHz	27.59	60	-32.41
Average	474.00 kHz	22.12	46.20	-24.08
Average	1.07 MHz	14.04	46	-31.96
Average	4.52 MHz	26.85	46	-19.15
Average	5.12 MHz	25.4	50	-24.60
Average	6.18 MHz	25.87	50	-24.13
Average	6.63 MHz	36.11	50	-13.89
Average	20.24 MHz	16.7	50	-33.30





# 110v AC, 60Hz - Adapter 1 with Battery 2 combination



### **Neutral Graph**

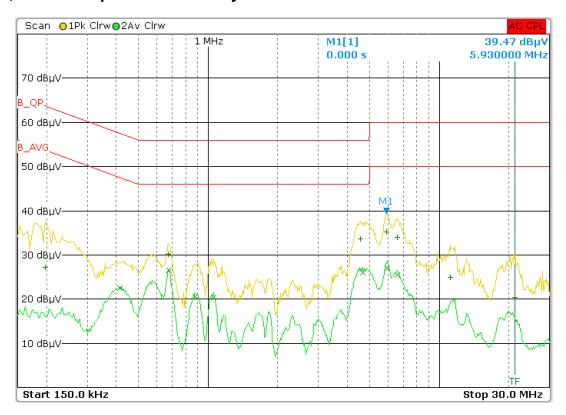
Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	394.00 kHz	32.19	57.77	-25.58
Quasi Peak	462.00 kHz	34.93	56.42	-21.49
Quasi Peak	470.00 kHz	38.27	56.27	-18.00
Quasi Peak	686.00 kHz	28.31	56	-27.69
Quasi Peak	1.44 MHz	25.16	56	-30.84
Quasi Peak	4.45 MHz	33.81	56	-22.19
Quasi Peak	5.94 MHz	35.31	60	-24.69
Average	470.00 kHz	25.32	46.27	-20.95
Average	542.00 kHz	17.55	46	-28.45
Average	4.60 MHz	26.75	46	-19.25
Average	5.92 MHz	27.44	50	-22.56
Average	6.56 MHz	25.96	50	-24.04
Average	19.74 MHz	18.52	50	-31.48



 Prüfbericht - Nr.:
 19660368 001
 Seite 37 von 39

 Test Report No.:
 Page 37 of 39

# 110v AC, 60Hz - Adapter 2 with Battery 1 combination



# **Neutral Graph**

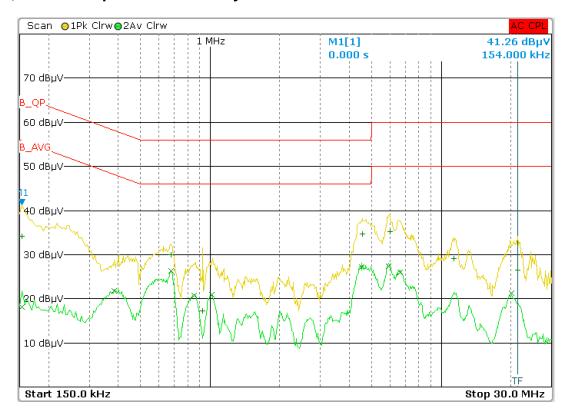
Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	198.00 kHz	27.13	63.63	-36.5
Quasi Peak	674.00 kHz	30.16	56	-25.84
Quasi Peak	4.55 MHz	33.61	56	-22.39
Quasi Peak	5.93 MHz	35.15	60	-24.85
Quasi Peak	6.59 MHz	34.01	60	-25.99
Quasi Peak	11.14 MHz	24.89	60	-35.11
Quasi Peak	21.32 MHz	20.43	60	-39.57
Average	414.00 kHz	22.52	47.35	-24.83
Average	678.00 kHz	26.53	46	-19.47
Average	882.00 kHz	20.55	46	-25.45
Average	1.05 MHz	20.42	46	-25.58
Average	4.65 MHz	25.95	46	-20.05
Average	5.94 MHz	26.95	50	-23.05
Average	6.57 MHz	25.48	50	-24.52

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# 110v AC, 60Hz - Adapter 2 with Battery 2 combination



### **Neutral Graph**

Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	154.00 kHz	34.11	65.77	-31.66
Quasi Peak	678.00 kHz	29.99	56	-26.01
Quasi Peak	930.00 kHz	17.2	56	-38.80
Quasi Peak	4.55 MHz	34.73	56	-21.27
Quasi Peak	6.00 MHz	35.27	60	-24.73
Quasi Peak	11.35 MHz	29.08	60	-30.92
Quasi Peak	21.45 MHz	26.5	60	-33.50
Average	154.00 kHz	18.2	55.77	-37.57
Average	386.00 kHz	21.77	47.95	-26.18
Average	678.00 kHz	26.38	46	-19.62
Average	850.00 kHz	20.79	46	-25.21
Average	1.01 MHz	20.94	46	-25.06
Average	4.53 MHz	27.25	46	-18.75
Average	5.89 MHz	27.45	50	-22.55
Average	6.63 MHz	26.05	50	-23.95
Average	20.17 MHz	21.28	50	-28.72





 Prüfbericht - Nr.:
 19660368 001
 Seite 39 von 39

 Test Report No.:
 Page 39 of 39

# 7. LIST OF TABLES

Table 1: List of test and measurement instruments	5
Table 2: Ratings and System Details	6
Table 3: Measurement Uncertainty	7
Table 4: List of Center Frequiences	
Table 5: Maximum peak conducted output power verified Test Results	12
Table 6: Maximum power spectral density verified Test Results	15
Table 7: DTS Bandwidth verified Test Results	18
Table 8: Verified Test Results of Emissions in non-restricted frequency bands	21
Table 9: Transmitter limits for Radiated emission of Section 15.209	26
Table 10 : Restricted bands of emission verified Test Results	29

# 8. LIST OF FIGURES

Figure 1: Frequency Range 9 kHz- 30 MHz	9
Figure 2: Frequency Range 30 MHz – 200 MHz	
Figure 3: Frequency Range 200 MHz - 1GHz	
Figure 4: Frequency Range above 1 GHz	

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