

Prüfbericht-Nr.: <i>Test report no.:</i>	CN23JHXL 001	Auftrags-Nr.: <i>Order no.:</i>	168450593	Seite 1 von 16 Page 1 of 16
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2023-11-02	
Auftraggeber: <i>Client:</i>	SRP Companies 85 Rio Grande Drive, Second Floor, Castle Rock, CO 80104, USA			
Prüfgegenstand: <i>Test item:</i>	24/7 LIFE MGNTC WRLS CHRGR			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	EWL-23160-A, 052548506360, 608707678630			
Auftrags-Inhalt: <i>Order content:</i>	Test Report			
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 CFR47 FCC Part 15: Subpart C Section 15.215			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2023-11-07	Please refer to Photo Document		
Prüfmuster-Nr.: <i>Test sample no.:</i>	A003596938-002			
Prüfzeitraum: <i>Testing period:</i>	2023-11-15 - 2023-11-17			
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: tested by:	<u>X</u>	genehmigt von: authorized by:	<u>X</u>	
Datum: Date: 2023-11-30		Ausstellungsdatum: Issue date: 2023-11-30		
Stellung / Position:	Sachverständige(r)/Expert	Stellung / Position:	Sachverständige(r)/Expert	
Sonstiges / <i>Other:</i>	FCC ID: 2ATF5-E50636			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet * Legend: P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test 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. <i>This test report only relates to the above mentioned 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.</i>				

V05

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Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. <i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i>
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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. <i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i>
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. <i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i>

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Test Summary

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 99% BANDWIDTH

RESULT: Pass

5.1.3 20dB BANDWIDTH

RESULT: Pass

5.1.4 RADIATED SPURIOUS EMISSION

RESULT: Pass

5.1.5 CONDUCTED EMISSION

RESULT: Pass

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1 General Remarks

1.1 Complementary Materials

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

Appendix A: Test Results of FCC Part 15C.

Appendix B: Photographs of the Test Set-up.

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

No. 362 Huanguan Road Middle, Longhua District, 518110, Shenzhen, P. R. China.

FCC Accreditation Designation No.: CN1260

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing (TS8997)				
Equipment	Manufacturer	Model	Serial No.	Cal. until
Signal Analyzer	R&S	FSV 40	101441	2024-07-25
OSP	R&S	OSP 150	101017	2023-11-21
Control PC	DELL	OptiPlex 7050	FTJZ9P2	N/A
Test Software	R&S	WMS32 (V11.00.00)	N/A	N/A
Power Meter	R&S	NRP2	107105	2023-11-21
Wideband Power Sensor	R&S	NRP-Z81	105677	2024-07-25
Shielding Room 8#	Albatross	SR8	APC17151-SR8	2024-06-22
Unwanted Emission Testing (TS9975)				
Equipment	Manufacturer	Model	Serial No.	Cal. until
EMI Test Receiver	R&S	ESR 7	102021	2024-07-25
Signal Analyzer	R&S	FSV 40	101439	2024-07-25
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	2024-07-25
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2024-07-25
Amplifier	R&S	SCU-18F	180070	2024-07-25
Amplifier	R&S	SCU40A	100475	2024-07-25
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	2024-08-06
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	2024-08-06
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2024-08-27
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2024-08-06
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	2024-06-22

Conducted Emission				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
EMI Test Receiver	R&S	ESR3	102428	2024-07-30
Artificial Mains Network	R&S	ENV216	102333	2024-07-31
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, 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 basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table

Table 2: Measurement Uncertainty

Parameter	Uncertainty (k=2)
Occupied Channel Bandwidth	± 2.08 %
All emissions, radiated	± 4.17 dB
Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz)	± 3.70 dB / ± 3.30 dB

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) Co., Ltd. file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at No. 362 Huanguan Road Middle, Longhua District, 518110, Shenzhen, P. R. China. is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The EUT is a Wireless Charging intended to use with a minimum distance 20cm between the radiator and user body.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	24/7 LIFE MGNTC WRLS CHRGR
Type Designation:	EWL-23160-A, 052548506360, 608707678630 All models above are same in electronic aspect, the difference is only model number for market strategy.
FCC ID:	2ATF5-E50636
Operating Voltage:	DC 5V@2A / 9V@2A
Technical Specification of WPT	
Frequency Range:	110.5~205KHz
Type of Modulation:	FSK
Antenna Type:	Coil antenna
Wireless output power:	15W/10W/7.5W/5W

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Wireless charging

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- ID Label and Location Info
- Schematics
- Operation Description
- Block Diagram
- PCB Layout

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5 & 6. All testing were performed according to the procedures in ANSI C63.10: 2013.

According to clause 3.1, all tests were performed on model EWL-23160-A in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 4: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Adapter	Mi	MDY-11-EX	HA62105M403553G	5V/3A,9V/3A
Electric Load	YBZ	N/A	N/A	MAX 15W

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 30MHz)

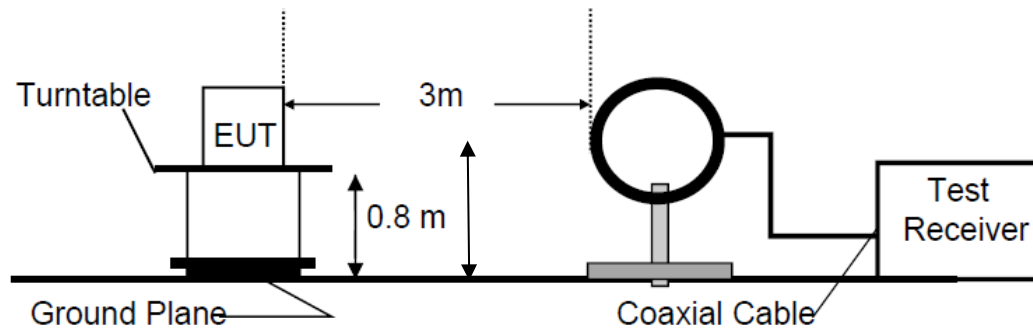


Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

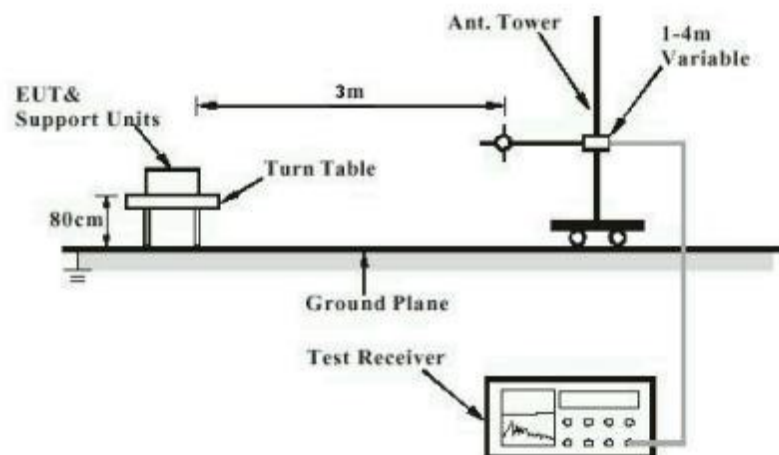
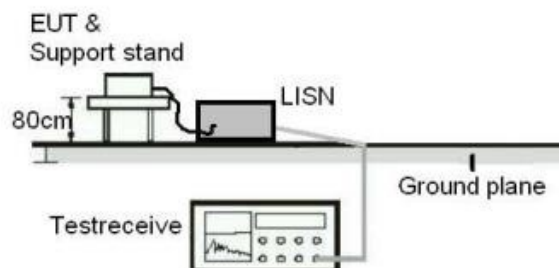


Diagram of Measurement Configuration for Mains Conduction Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:

Pass

Test Specification

Test standard : Part 15.203
the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has one internal antenna, and the antenna is permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

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5.1.2 99% Bandwidth

RESULT:

Pass

Test Specification

Basic standard : ANSI C63.10: 2013
Kind of test site : Shielded Room

Test Setup

Date of testing : 2023-11-15
Input voltage : AC 120V, 60Hz
Operation mode : A
Ambient temperature : 23 °C
Relative humidity : 56 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

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5.1.3 20dB Bandwidth

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.215(c)
Basic standard	: ANSI C63.10: 2013
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2023-11-15
Input voltage	: AC 120V, 60Hz
Operation mode	: A
Ambient temperature	: 23 °C
Relative humidity	: 56 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

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5.1.4 Radiated Spurious Emission

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.209 & 15.205
Basic standard	: ANSI C63.10: 2013
Limits	: Refer to 15.209(a)
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 2023-11-15
Input voltage	: AC 120V, 60Hz
Operation mode	: A
Ambient temperature	: 23 °C
Relative humidity	: 56 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

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5.1.5 Conducted Emission

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.207(a)
Basic standard	: ANSI C63.10: 2013
Frequency range	: 0.15 – 30MHz
Limits	: FCC Part 15.207(a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2023-11-17
Input voltage	: AC 120V, 60Hz
Operation mode	: A
Earthing	: Not connected
Ambient temperature	: 23 °C
Relative humidity	: 56 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

6 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix B.

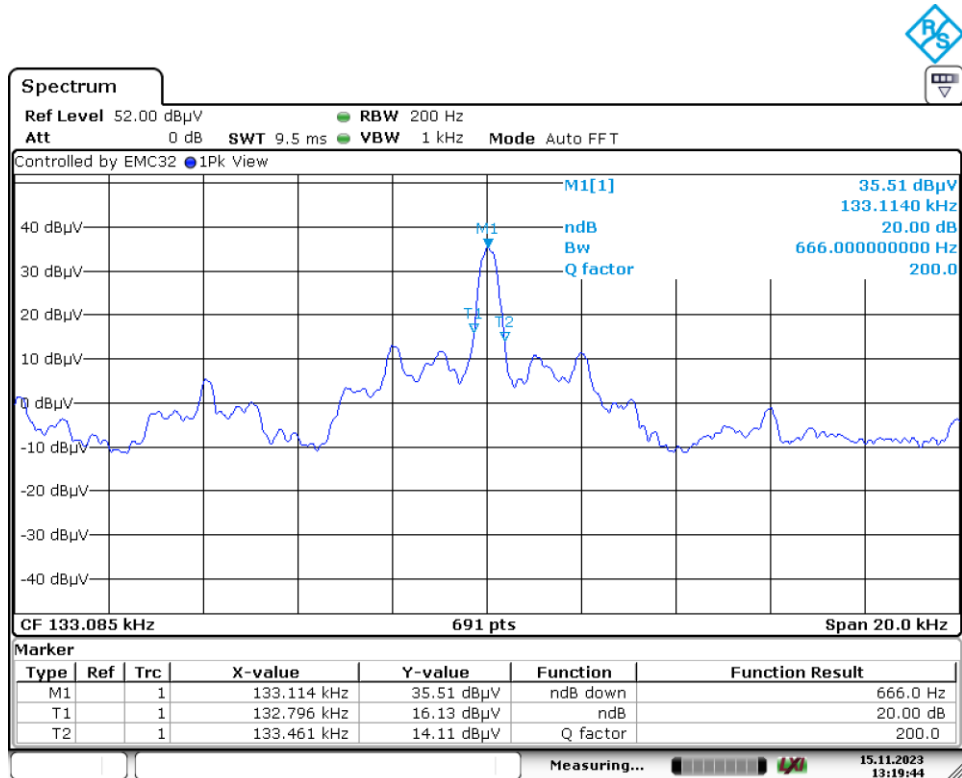
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Appendix A: Test Results of FCC Part 15C

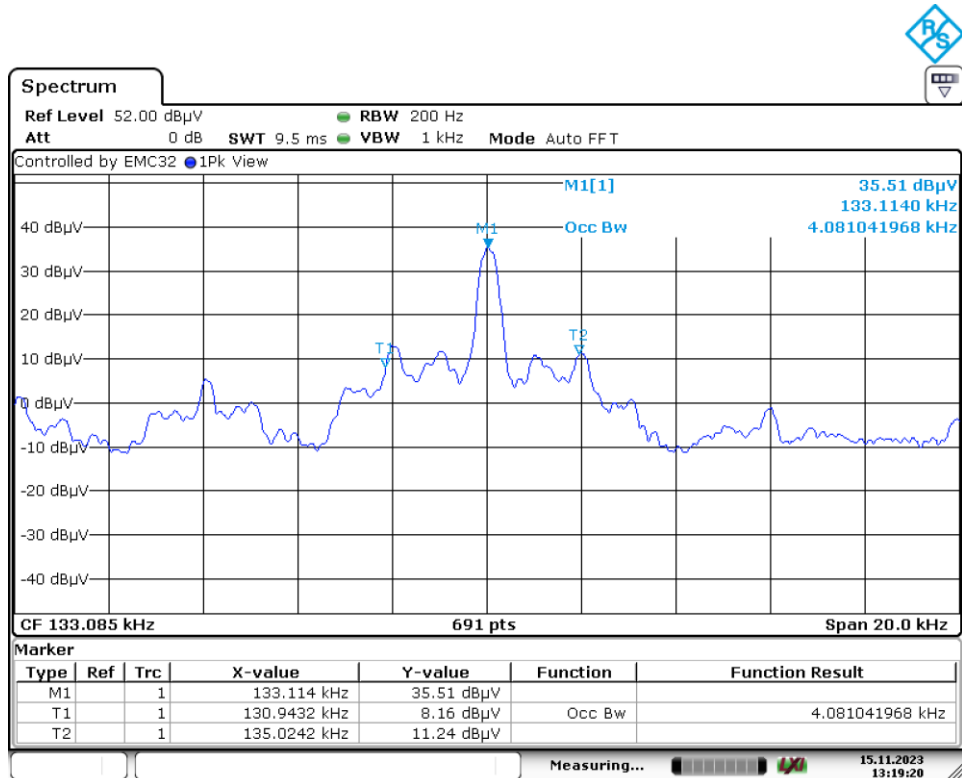
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Appendix A.1: Test Results of 20dB Bandwidth



Date: 15.NOV.2023 13:19:44

Appendix A.2: Test Results of 99% Bandwidth



Date: 15.NOV.2023 13:19:21

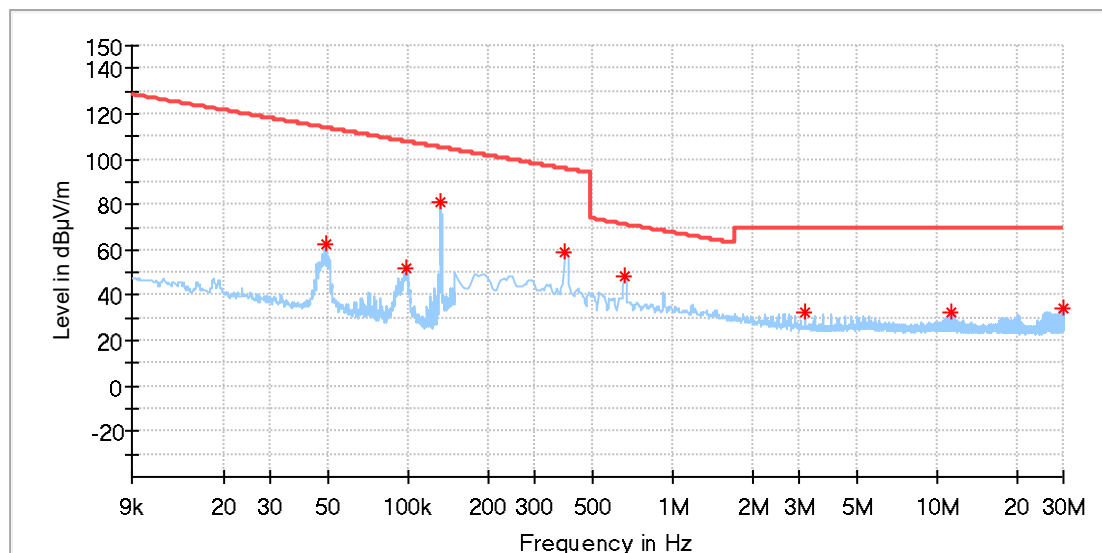
Appendix A.3: Test Results of Radiated Spurious Emission

Note: The highest waveform in the figure is Fundamental.

9KHz – 30MHz

EUT Information

EUT Name:	MGNTC WRLSCHRGR
Model:	EWL-23160-A
Test Mode:	Charging
Order No/Sample No:	168450593/A003596938-002
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

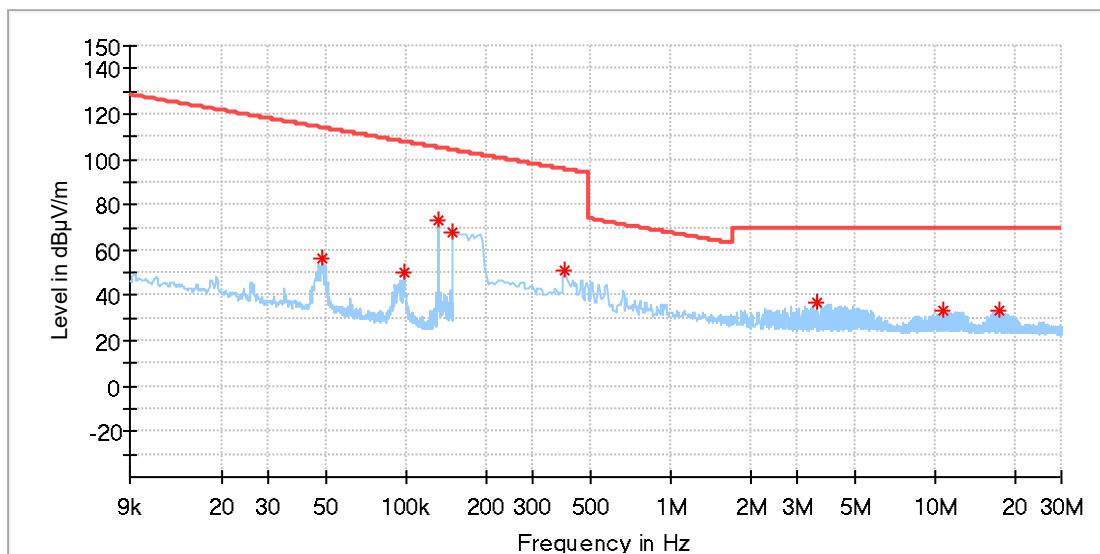
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.048480	62.18	113.88	51.70	100.0	X	32.0	20.1
0.098233	51.80	107.75	55.95	100.0	X	36.0	20.1
0.132375	81.06	105.16	24.10	100.0	X	97.0	20.1
0.391434	59.25	95.75	36.50	100.0	X	99.0	20.1
0.659206	48.49	71.23	22.74	100.0	X	74.0	20.1
3.178897	32.14	69.50	37.36	100.0	X	120.0	20.2
11.326191	32.83	69.50	36.67	100.0	X	109.0	20.4
29.784904	34.52	69.50	34.98	100.0	X	275.0	20.7

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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EUT Information

EUT Name: MGNTC WRLSCHRGR
Model: EWL-23160-A
Test Mode: Charging
Order No/Sample No: 168450593/A003596938-002
Test Voltage: 120V/60Hz
Remark: Temp 23 Humi:56%
Test Standard: FCC Part 15C
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

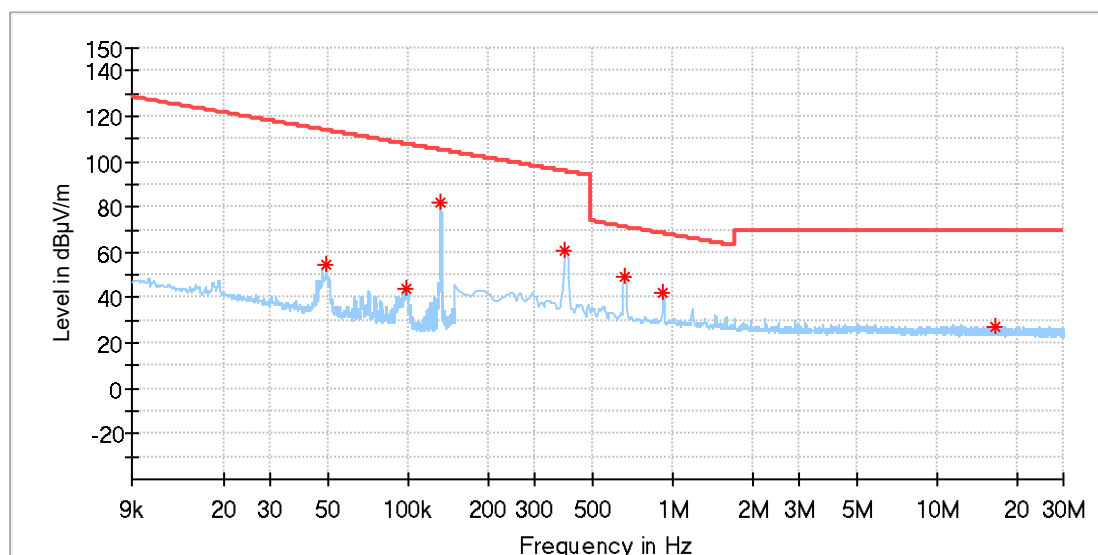
Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.048178	56.56	113.94	57.37	100.0	Y	76.0	20.1
0.097629	49.72	107.81	58.09	100.0	Y	57.0	20.1
0.132476	72.87	105.16	32.29	100.0	Y	180.0	20.1
0.150000	67.89	104.08	36.18	100.0	Y	50.0	20.1
0.395824	51.18	95.65	44.47	100.0	Y	182.0	20.1
3.573971	36.60	69.50	32.90	100.0	Y	31.0	20.2
10.795037	33.02	69.50	36.48	100.0	Y	36.0	20.4
17.397155	33.28	69.50	36.22	100.0	Y	16.0	20.5

Final Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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EUT Information

EUT Name:	MGNTC WRLSCHRGR
Model:	EWL-23160-A
Test Mode:	Charging
Order No/Sample No:	168450593/A003596938-002
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.048782	54.25	113.83	59.58	100.0	Z	40.0	20.1
0.098636	43.91	107.72	63.80	100.0	Z	33.0	20.1
0.131670	82.28	105.21	22.93	100.0	Z	130.0	20.1
0.391434	60.31	95.75	35.44	100.0	Z	120.0	20.1
0.659206	49.58	71.23	21.65	100.0	Z	76.0	20.1
0.922588	42.09	68.32	26.23	100.0	Z	82.0	20.1
16.650905	27.21	69.50	42.29	100.0	Z	45.0	20.5

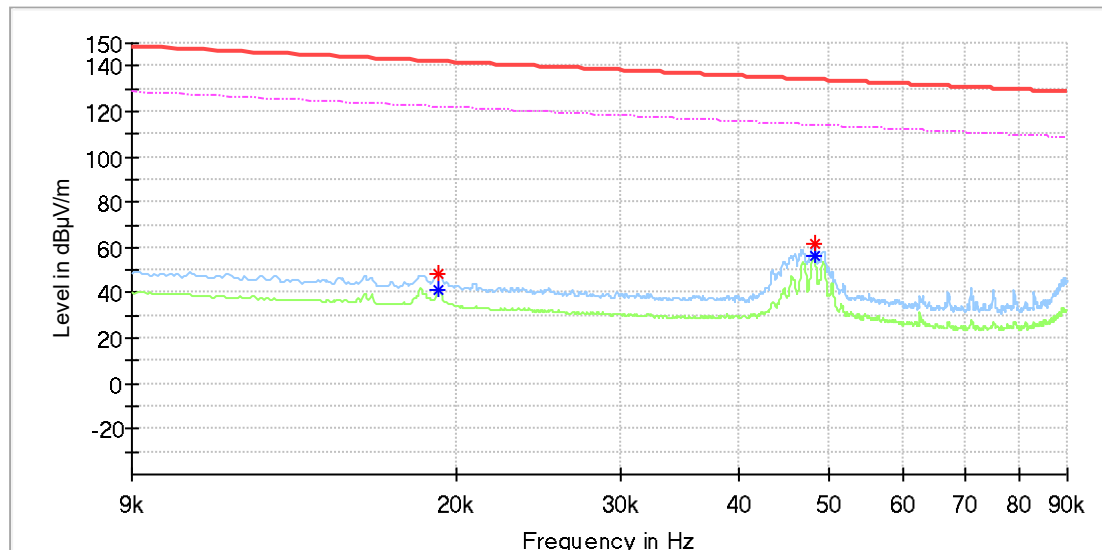
Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

9kHz - 90KHz

EUT Information

EUT Name:	MGNTC WRLSCHRGR
Model:	EWL-23160-A
Test Mode:	Charging
Order No/Sample No:	168450593/A003596938-002
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

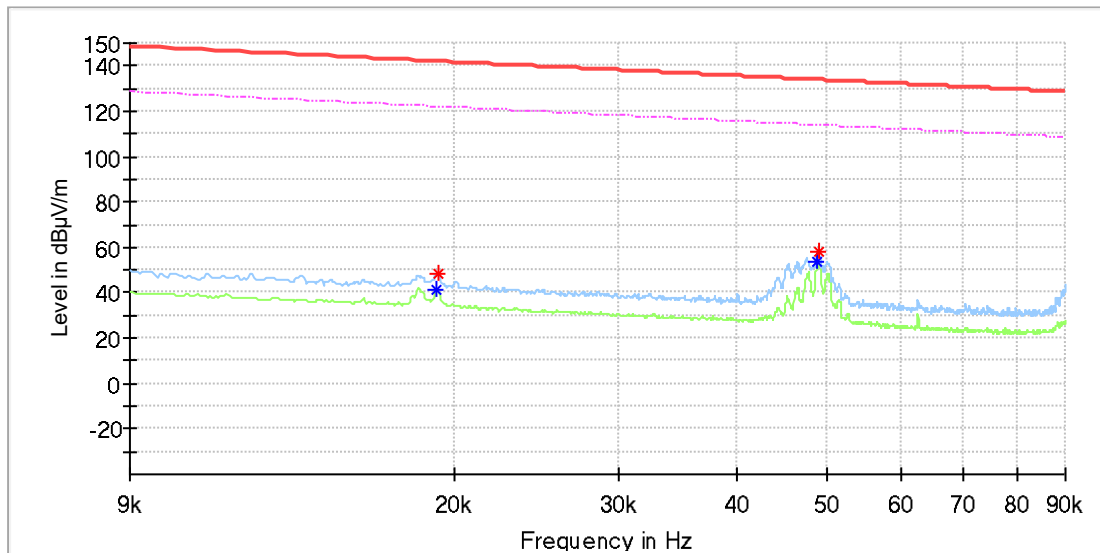


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.019183	48.30	---	141.93	93.63	100.0	X	44.0	20.0
0.019183	---	41.42	121.93	80.51	100.0	X	44.0	20.0
0.048285	61.57	---	133.92	72.35	100.0	X	36.0	20.0
0.048285	---	56.64	113.92	57.27	100.0	X	36.0	20.0

EUT Information

EUT Name:	MGNTC WRLSCHRGR
Model:	EWL-23160-A
Test Mode:	Charging
Order No/Sample No:	168450593/A003596938-002
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

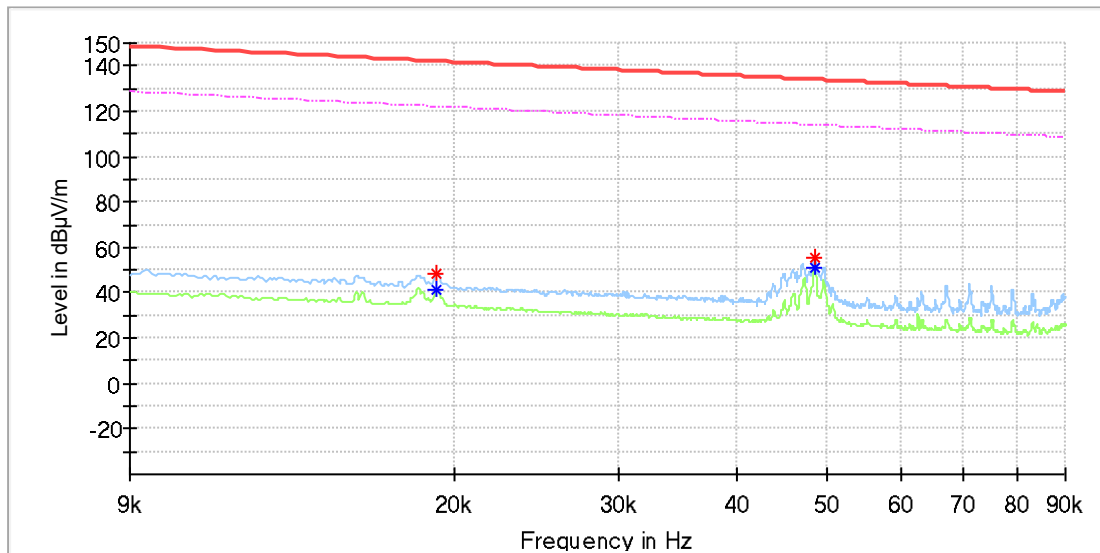


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.019183	---	41.52	121.93	80.41	100.0	Y	72.0	20.0
0.019241	48.11	---	141.90	93.79	100.0	Y	103.0	20.0
0.048921	---	53.51	113.80	60.30	100.0	Y	80.0	20.0
0.048979	58.52	---	133.79	75.27	100.0	Y	80.0	20.0

EUT Information

EUT Name:	MGNTC WRLSCHRGR
Model:	EWL-23160-A
Test Mode:	Charging
Order No/Sample No:	168450593/A003596938-002
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



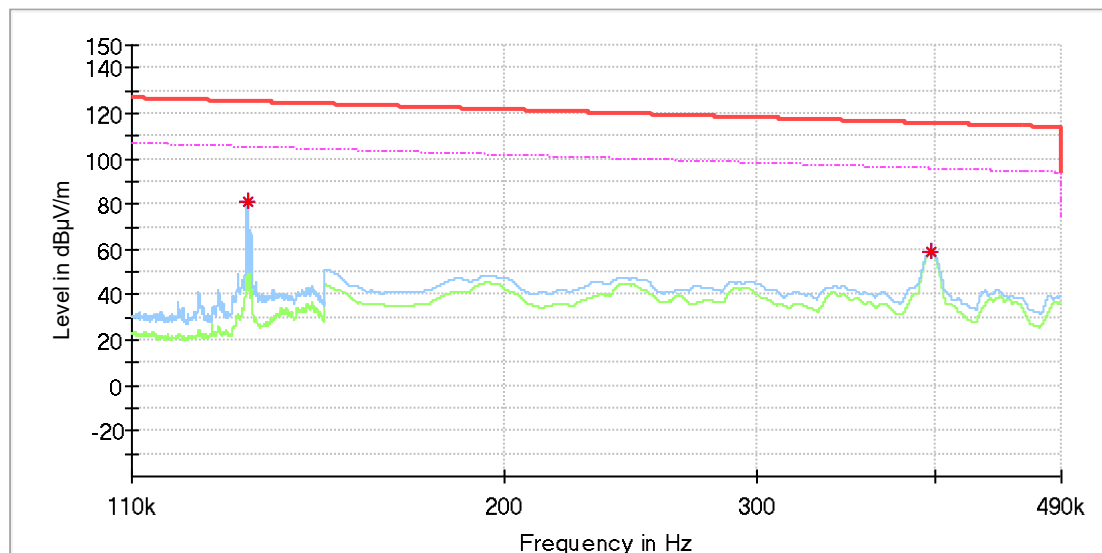
Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.019125	48.31	---	141.96	93.65	100.0	Z	81.0	20.0
0.019183	---	41.53	121.93	80.40	100.0	Z	237.0	20.0
0.048516	---	50.63	113.88	63.24	100.0	Z	38.0	20.0
0.048632	55.23	---	133.85	78.63	100.0	Z	38.0	20.0

110KHz - 490KHz

EUT Information

EUT Name:	MGNTC WRLSCHRGR
Model:	EWL-23160-A
Test Mode:	Charging
Order No/Sample No:	168450593/A003596938-002
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

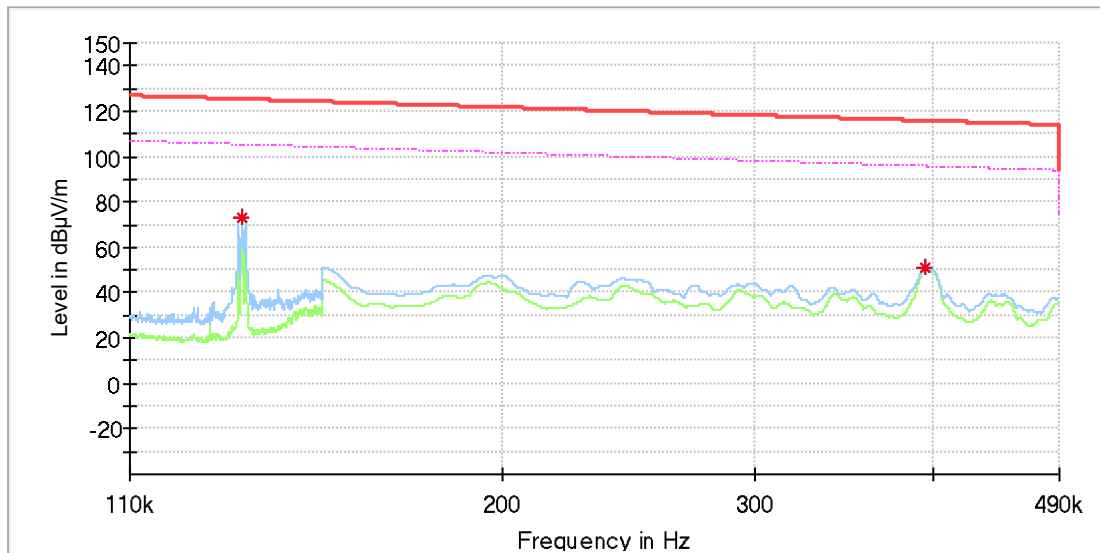


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.132400	81.11	---	125.16	44.05	100.0	X	94.0	20.0
0.132429	---	80.81	105.16	24.35	100.0	X	102.0	20.0
0.397050	59.15	---	115.63	56.48	100.0	X	83.0	20.0
0.397300	---	58.62	95.62	37.00	100.0	X	83.0	20.0

EUT Information

EUT Name:	MGNTC WRLSCHRGR
Model:	EWL-23160-A
Test Mode:	Charging
Order No/Sample No:	168450593/A003596938-002
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

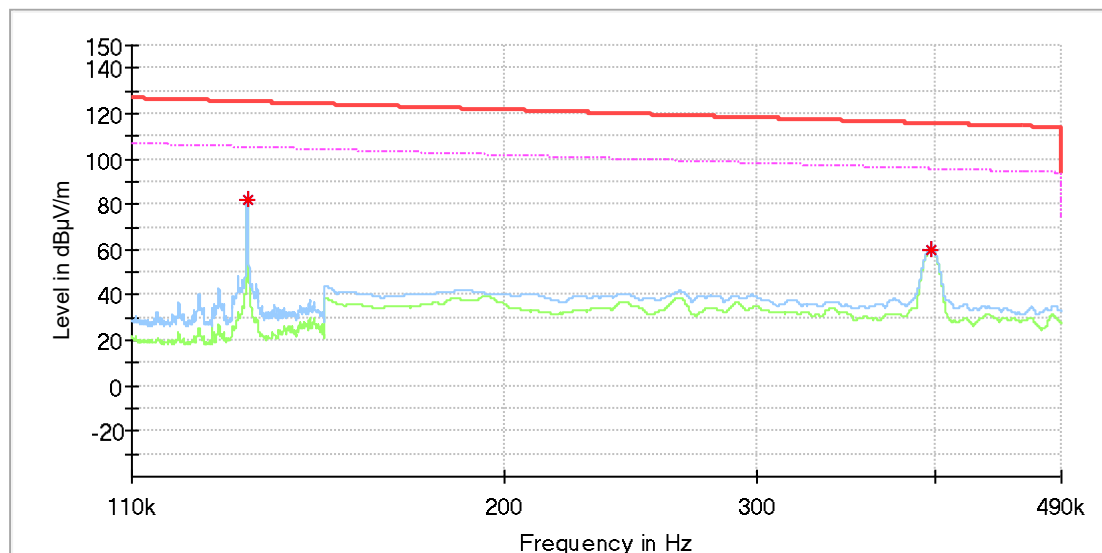


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.131743	---	73.05	105.20	32.15	100.0	Y	205.0	20.0
0.131772	73.24	---	125.20	51.96	100.0	Y	205.0	20.0
0.395250	51.05	---	115.67	64.62	100.0	Y	192.0	20.0
0.395250	---	50.63	95.67	45.04	100.0	Y	192.0	20.0

EUT Information

EUT Name:	MGNTC WRLSCHRGR
Model:	EWL-23160-A
Test Mode:	Charging
Order No/Sample No:	168450593/A003596938-002
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



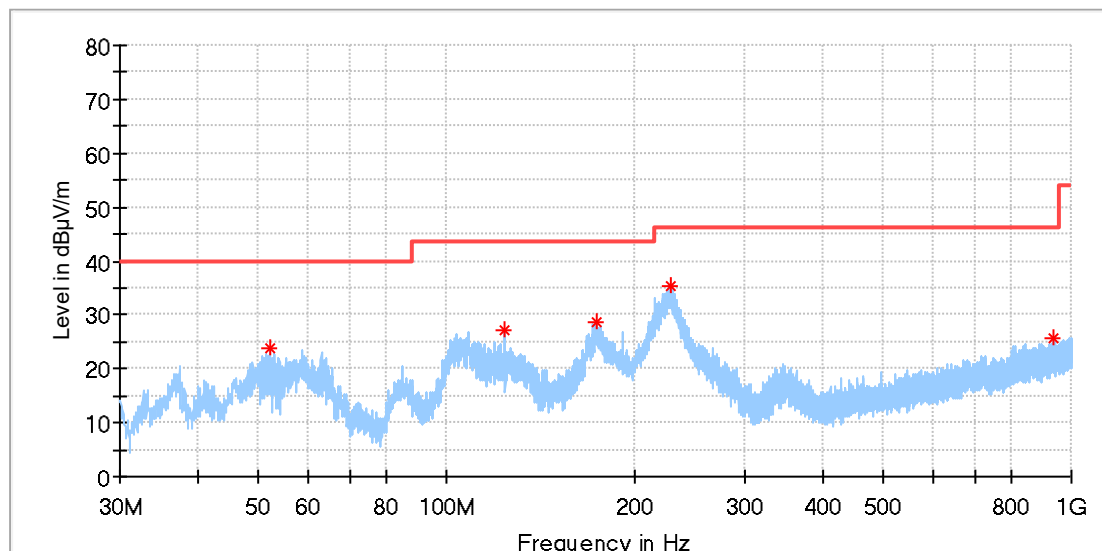
Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.132429	82.38	---	125.16	42.78	100.0	Z	125.0	20.0
0.132429	---	82.17	105.16	22.99	100.0	Z	125.0	20.0
0.397450	60.24	---	115.62	55.38	100.0	Z	113.0	20.0
0.397500	---	60.07	95.62	35.55	100.0	Z	113.0	20.0

30MHz - 1GHz

EUT Information

EUT Name:	MGNTC WRLSCHRGR
Model:	EWL-23160-A
Test Mode:	Charging
Order No/Sample No:	168450593/A003596938-002
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

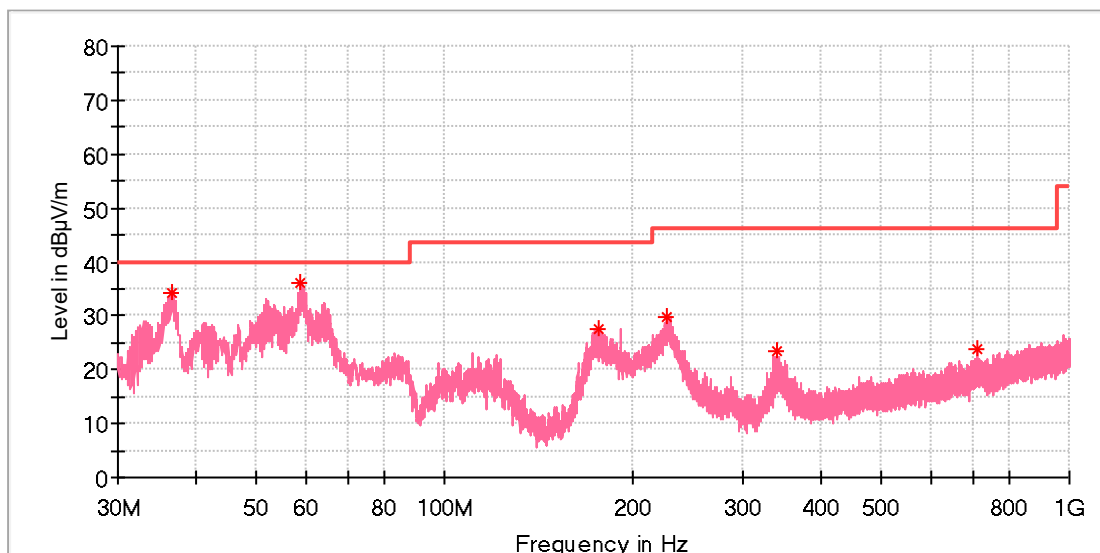
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
52.048846	23.72	40.00	16.28	100.0	H	354.0	-18.6
123.567692	27.15	43.50	16.35	100.0	H	354.0	-21.5
173.821154	28.68	43.50	14.82	100.0	H	98.0	-21.3
228.551539	35.36	46.00	10.64	100.0	H	5.0	-18.5
933.890769	25.66	46.00	20.34	100.0	H	325.0	-5.1

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	MGNTC WRLSCHRGR
Model:	EWL-23160-A
Test Mode:	Charging
Order No/Sample No:	168450593/A003596938-002
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
36.603462	34.31	40.00	5.69	100.0	V	240.0	-21.6
58.838846	36.20	40.00	3.80	100.0	V	256.0	-19.2
176.843077	27.36	43.50	16.14	100.0	V	56.0	-21.1
226.835385	29.81	46.00	16.19	100.0	V	48.0	-18.6
339.579231	23.50	46.00	22.50	100.0	V	313.0	-15.4
712.618846	23.98	46.00	22.02	100.0	V	240.0	-8.2

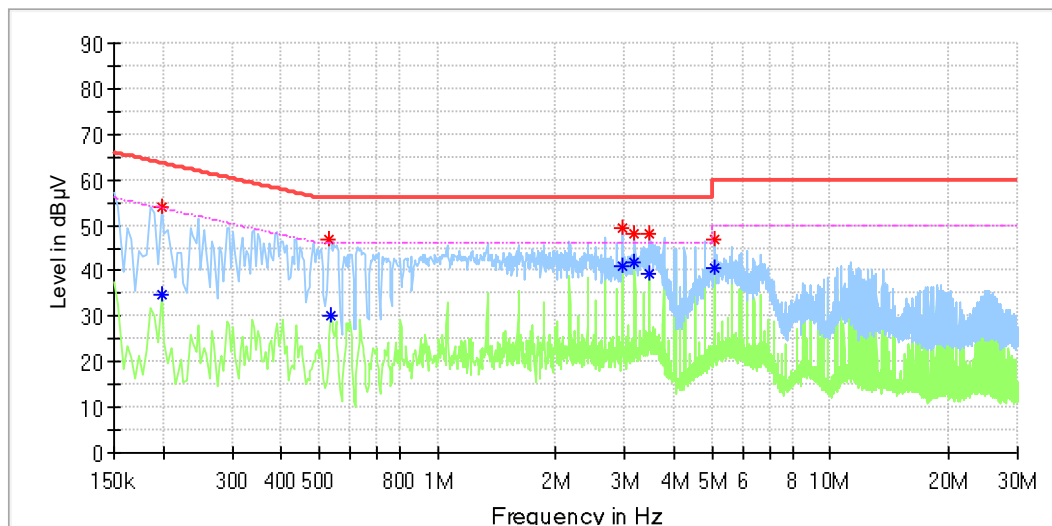
Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Appendix A.4: Test Results of Conducted Emission on AC Mains

EUT Information

EUT Name:	MGNTC WRLSCHRRGR
Model:	EWL-23160-A
Test Mode:	Charging
Order No/Sample No:	168450593/A003596938-002
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

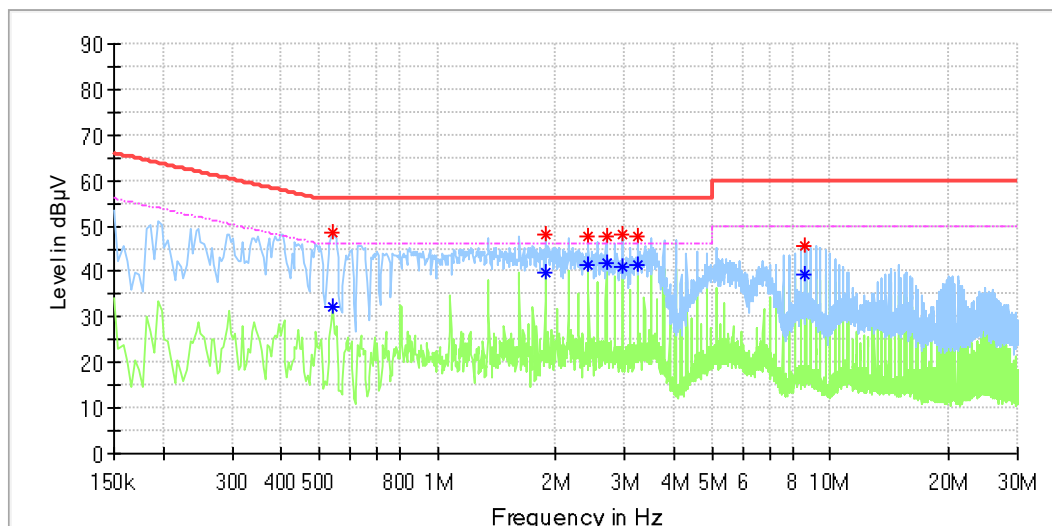
Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.198000	---	34.72	53.69	18.98	L1	9.9
0.198000	54.09	---	63.69	9.60	L1	9.9
0.530000	46.85	---	56.00	9.15	L1	10.0
0.534000	---	30.03	46.00	15.97	L1	10.0
2.962000	---	41.18	46.00	4.82	L1	10.2
2.962000	49.39	---	56.00	6.61	L1	10.2
3.178000	47.96	---	56.00	8.04	L1	10.2
3.178000	---	41.92	46.00	4.08	L1	10.2
3.462000	---	39.18	46.00	6.82	L1	10.2
3.462000	48.31	---	56.00	7.69	L1	10.2
5.058000	---	40.65	50.00	9.35	L1	10.3
5.058000	46.90	---	60.00	13.10	L1	10.3

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
93.5	118.0	116.0	118.0	0.0	1000	9	1	0.0

EUT Information

EUT Name:	MGNTC WRLSCHRR
Model:	EWL-23160-A
Test Mode:	Charging
Order No/Sample No:	168450593/A003596938-002
Test Voltage:	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.538000	48.52	---	56.00	7.48	N	9.8
0.542000	---	32.12	46.00	13.88	N	9.8
1.882000	48.06	---	56.00	7.94	N	9.8
1.886000	---	39.91	46.00	6.09	N	9.8
2.422000	---	41.59	46.00	4.41	N	9.9
2.422000	47.54	---	56.00	8.46	N	9.9
2.690000	47.52	---	56.00	8.48	N	9.9
2.690000	---	41.92	46.00	4.08	N	9.9
2.958000	48.04	---	56.00	7.96	N	9.9
2.958000	---	41.19	46.00	4.81	N	9.9
3.230000	---	41.44	46.00	4.56	N	9.9
3.230000	47.77	---	56.00	8.23	N	9.9
8.650000	---	39.39	50.00	10.61	N	10.0
8.650000	45.82	---	60.00	14.18	N	10.0

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
90.000	100.00	95.00	100.00	0.00	100.00	100.00	1	0.00

Appendix B: Photographs of the Test Set-Up

APPENDIX B: PHOTOGRAPHS OF THE TEST SET-UP	1
PHOTOGRAPH 1: SET-UP PHOTO FOR RADIATED SPURIOUS EMISSION, BELOW 30MHz	2
PHOTOGRAPH 2: SET-UP PHOTO FOR RADIATED SPURIOUS EMISSION, 30MHz - 1GHz.....	2
PHOTOGRAPH 3: SET-UP PHOTO FOR CONDUCTED EMISSION ON AC MAINS.....	3

Photograph 1: Set-up photo for Radiated Spurious Emission, Below 30MHz



Photograph 2: Set-up photo for Radiated Spurious Emission, 30MHz - 1GHz



Photograph 3: Set-up photo for Conducted Emission on AC Mains

