

Prüfbericht-Nr.: Test report no.:	NN21PWAL 002	Auftrags-Nr.: Order no.:	168320590	Seite 1 von 21 Page 1 of 21
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2021-05-28	
Auftraggeber: Client:	Sungrow Power Supply Co., Ltd. No.1699 Xiyou Rd., New & High Technology Industrial Development Zone, 230088, Hefei, P. R. China			
Prüfgegenstand: Test item:	11 kW EV Charger			
Bezeichnung / Typ-Nr.: Identification / Type no.:	AC011E-01 (Trademark: SUNGROW)			
Auftrags-Inhalt: Order content:	RED approval			
Prüfgrundlage: Test specification:	EN 300 330 V2.1.1			
Wareneingangsdatum: Date of sample receipt:	2021-05-18			
Prüfmuster-Nr.: Test sample no.:	210625010-1			
Prüfzeitraum: Testing period:	2021-05-18 - 2021-06-29			
Ort der Prüfung: Place of testing:	Shenzhen STS Test Services Co., Ltd.			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:	 Ryan Yang	genehmigt von: authorized by:		
Datum: Date:	2021-08-02	Ausstellungsdatum: Issue date:	2021-08-02	
Stellung / Position	Assistant Project Manager	Stellung / Position	Technical Certifier	
Sonstiges / Other: This report is for Article 3.2 Radio Spectrum requirements only.				
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:		Prüfmuster vollständig und unbeschädigt Test item complete and undamaged:		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specifications(s) F(ail) = failed a.m. test specifications(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.				

Test Summary

5.1.1 PERMITTED RANGE OF OPERATING FREQUENCIES

RESULT: Pass

5.1.2 OPERATING FREQUENCY RANGES

RESULT: Pass

5.1.3 MODULATION BANDWIDTH

RESULT: Pass

5.1.4 TRANSMITTER H-FIELD REQUIREMENTS

RESULT: Pass

5.1.5 TRANSMITTER RF CARRIER CURRENT

RESULT: Not applicable

5.1.6 TRANSMITTER RADIATED E-FIELD

RESULT: Not applicable

5.1.7 TRANSMITTER CONDUCTED SPURIOUS EMISSIONS

RESULT: Not applicable

5.1.8 TRANSMITTER SPURIOUS EMISSIONS < 30MHZ

RESULT: Pass

5.1.9 TRANSMITTER SPURIOUS EMISSIONS > 30MHZ

RESULT: Pass

5.1.10 TRANSMITTER FREQUENCY STABILITY

RESULT: Not applicable

5.2.1 RECEIVER SPURIOUS EMISSIONS

RESULT: Not applicable

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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 Test Results of RFID of Article 3.2 Radio Spectrum.

2 Test Sites

2.1 Test Facilities

Shenzhen STS Test Services Co., Ltd.

1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road, Fuyong Street, Bao'an District, Shenzhen, Guangdong, China

CNAS Registration No.: L7649

The tests at the test sites have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Shenzhen STS Test Services Co., Ltd.

Radio Spectrum Testing (TS8997)				
Equipment	Manufacturer	Model	Serial No.	Cal. until
Bilog Antenna	TESEQ	CBL6111D	34678	2022-10-10
Loop Antenna	ZHINAN	ZN30900C	16035	2022-04-09
Pre-Amplifier (0.1M-3GHz)	EM	EM330	060665	2021-10-10
Signal Analyzer	R&S	FSV 40-N	101823	2021-10-08
Temperature & Humidity	SW-108	SuWei	N/A	2022-03-02
Turn table	EM	SC100_1	60531	N/A
Antenna mast	EM	SC100	N/A	N/A
AC Power Source	APC	KDF-11010G	F214050035	N.C.R

2.3 Uncertainty of Measurement

According to the requirement of EN 300 330, the value of the measurement uncertainty of each parameter is listed as below:

Table 2: Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	±0.5 ppm
All Emissions, Radiated (Below 1GHz)	±2.25 dB
All Emissions, Radiated (1GHz-18GHz)	±2.21 dB
All Emissions, Radiated (18GHz-25GHz)	±3.46 dB
Occupied BandWidth	±3.6 %
Temperature	±0.5 °C
Humidity	±2.0 %

3 General Product Information

3.1 Product Function and Intended Use

The product is a three-phase AC charger is used for electric vehicle's AC charging, which supports Wi-Fi 802.11 b/g/n and RFID (13.56MHz) function.

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		Description
Kind of Equipment		11 kW EV Charger
Type Designation		AC011E-01
Trademark		SUNGROW
Operating Voltage		AC 400V $\pm$ 10%, 50/60Hz (three-phase)
Testing Voltage		AC 230V@50Hz (one phase)
Operating Temperature Range		-30 °C ~ +50 °C
Technical Specification of RFID		
Characteristic		Description
Operating Frequency		13.56 MHz
Type of Modulation		ASK
Channel Number		1 channel
Antenna Type		loop antenna
Antenna Gain		0. dBi

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, RFID wireless mode
 - 1 Transmitting
 - 2 Receiving
- B. Normal operation mode
- C. Standby mode
- D. Off

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3.4 Noise Generating and Noise Suppressing Parts

For details refer to the Circuit Diagram.

3.5 Submitted Documents

- User Manual

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.

According to clause 3.1, all tests were performed on model AC011E-01 in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 4: Auxiliary Equipment used during test

Description	Manufacturer	Model	S/N	Rating
--	--	--	---	--

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.

5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Permitted Range of Operating Frequencies

RESULT:

Pass

Test Specification

Test standard	: EN 300 330 V2.1.1
Test requirement	: EN 300 330 V2.1.1, Clause 4.3.1
Limit	: EN 300 330 V2.1.1, Clause 4.3.1.3
Test suites	: EN 300 330 V2.1.1, Clause 6.2.2

Test Setup

Date of testing	: 2021-06-29
Test voltage	: AC 230V@50Hz (one phase)
Operation mode	: A.1
Ambient temperature	: 21 °C
Relative humidity	: 60 %
Atmospheric pressure	: 101 kPa

Note: the test data refer to clause 5.1.2.

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5.1.2 Operating Frequency Ranges

RESULT:**Pass****Test Specification**

Test standard	: EN 300 330 V2.1.1
Test requirement	: EN 300 330 V2.1.1, Clause 4.3.2
Limit	: EN 300 330 V2.1.1, Clause 4.3.2.3
Test suites	: EN 300 330 V2.1.1, Clause 6.2.2

Test Setup

Date of testing	: 2021-06-29
Test voltage	: AC 230V@50Hz (one phase)
Operation mode	: A.1
Ambient temperature	: 21 °C
Relative humidity	: 60 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

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5.1.3 Modulation Bandwidth

RESULT:**Pass****Test Specification**

Test standard	: EN 300 330 V2.1.1
Test requirement	: EN 300 330 V2.1.1, Clause 4.3.3
Limit	: EN 300 330 V2.1.1, Clause 4.3.3.3
Test suites	: EN 300 330 V2.1.1, Clause 6.2.3

Test Setup

Date of testing	: 2021-06-29
Test voltage	: AC 230V@50Hz (one phase)
Operation mode	: A.1
Ambient temperature	: 21 °C
Relative humidity	: 60 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

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5.1.4 Transmitter H-field Requirements

RESULT:**Pass****Test Specification**

Test standard	: EN 300 330 V2.1.1
Test requirement	: EN 300 330 V2.1.1, Clause 4.3.4
Limit	: EN 300 330 V2.1.1, Clause 4.3.4.3
Test suites	: EN 300 330 V2.1.1, Clause 6.2.4

Test Setup

Date of testing	: 2021-06-29
Test voltage	: AC 230V@50Hz (one phase)
Operation mode	: A.1
Ambient temperature	: 21 °C
Relative humidity	: 60 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

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5.1.5 Transmitter RF Carrier Current

RESULT:

Not applicable

Test Specification

Test standard	: EN 300 330 V2.1.1
Test requirement	: EN 300 330 V2.1.1, Clause 4.3.5
Limit	: EN 300 330 V2.1.1, Clause 4.3.5.3
Test suites	: EN 300 330 V2.1.1, Clause 6.2.5

Exemption Condition(s):

The product is Class 1 Product, according to clause 4.3.5.1 of EN 300 330 V2.1.1, this requirement is applied to Product Class 3 only, hence this requirement is not applicable.

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5.1.6 Transmitter Radiated E-field

RESULT:

Not applicable

Test Specification

Test standard	: EN 300 330 V2.1.1
Test requirement	: EN 300 330 V2.1.1, Clause 4.3.6
Limit	: EN 300 330 V2.1.1, Clause 4.3.6.3
Test suites	: EN 300 330 V2.1.1, Clause 6.2.6

Exemption Condition(s):

The product is Class 1 Product, according to clause 4.3.6.1 of EN 300 330 V2.1.1, this requirement is applied to Product Class 4 only, hence this requirement is not applicable.

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5.1.7 Transmitter Conducted Spurious Emissions

RESULT:**Not applicable****Test Specification**

Test standard	: EN 300 330 V2.1.1
Test requirement	: EN 300 330 V2.1.1, Clause 4.3.7
Limit	: EN 300 330 V2.1.1, Clause 4.3.7.3
Test suites	: EN 300 330 V2.1.1, Clause 6.2.7

Exemption Condition(s):

The product is Class 1 Product, according to clause 4.3.7.1 of EN 300 330 V2.1.1, this requirement is applied to Product Class 3 only, hence this requirement is not applicable.

Prüfbericht - Nr.: **NN21PWAL 002**
Test Report No.Seite 16 von 21
Page 16 of 21**5.1.8 Transmitter Spurious Emissions < 30MHz****RESULT:****Pass****Test Specification**

Test standard	: EN 300 330 V2.1.1
Test requirement	: EN 300 330 V2.1.1, Clause 4.3.8
Limit	: EN 300 330 V2.1.1, Clause 4.3.8.3
Test suites	: EN 300 330 V2.1.1, Clause 6.2.8

Test Setup

Date of testing	: 2021-06-29
Test voltage	: AC 230V@50Hz (one phase)
Operation mode	: B, C
Ambient temperature	: 21 °C
Relative humidity	: 60 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

Prüfbericht - Nr.: **NN21PWAL 002**
Test Report No.Seite 17 von 21
Page 17 of 21**5.1.9 Transmitter Spurious Emissions > 30MHz****RESULT:****Pass****Test Specification**

Test standard	: EN 300 330 V2.1.1
Test requirement	: EN 300 330 V2.1.1, Clause 4.3.9
Limit	: EN 300 330 V2.1.1, Clause 4.3.9.3
Test suites	: EN 300 330 V2.1.1, Clause 6.2.9

Test Setup

Date of testing	: 2021-06-29
Test voltage	: AC 230V@50Hz (one phase)
Operation mode	: B, C
Ambient temperature	: 21 °C
Relative humidity	: 60 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

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Test Report No.Seite 18 von 21
Page 18 of 21**5.1.10 Transmitter Frequency Stability****RESULT:****Not applicable****Test Specification**

Test standard	: EN 300 330 V2.1.1
Test requirement	: EN 300 330 V2.1.1, Clause 4.3.10
Limit	: EN 300 330 V2.1.1, Clause 4.3.10.3
Test suites	: EN 300 330 V2.1.1, Clause 6.2.10

Exemption Condition(s):

Only for channelized systems. The EUT is not channelized device, hence this requirement is not applicable.

5.2 Receiver Requirement & Test Suites

5.2.1 Receiver Spurious Emissions

RESULT:

Not applicable

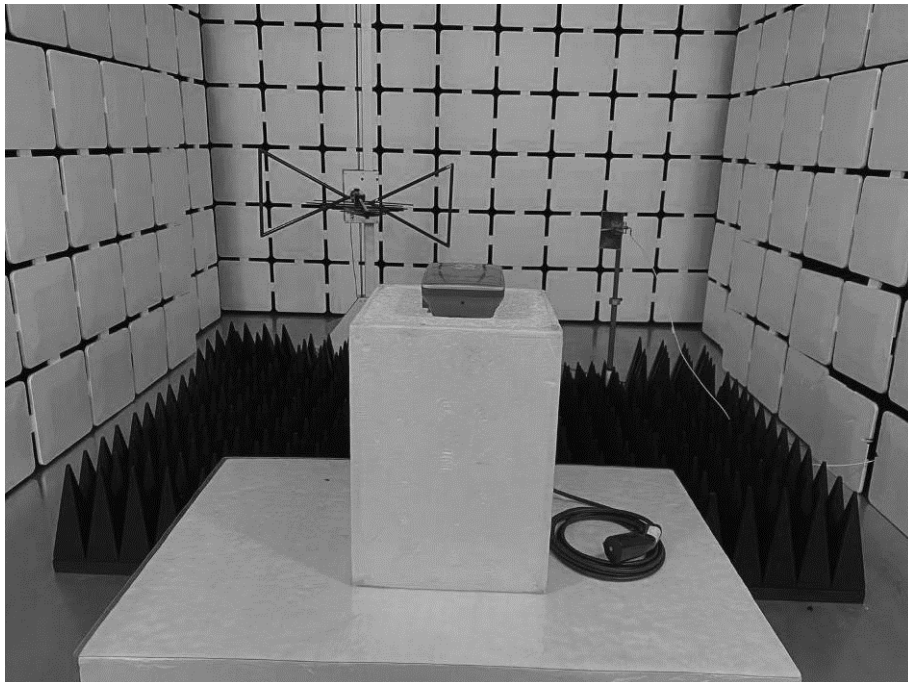
According to table 7 of clause 4.4.1 of EN 300 330 V2.1.1, only receiver spurious emission is required for EUT, and the receiving mode of EUT is used in combination with permanently co-located transmitter continuously transmitting, according to clause 4.4.2.1 of EN 300 330 V2.1.1, the test 'receiver spurious emissions' is not applicable.

6 Photographs of the Test Set-Up

Photograph 1: Set-up for Transmitter Spurious Emissions, Below 30 MHz



Photograph 2: Set-up for Transmitter Spurious Emissions, Above 30 MHz



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Appendix A: Test Results of RFID of of Article 3.2 Radio Spectrum

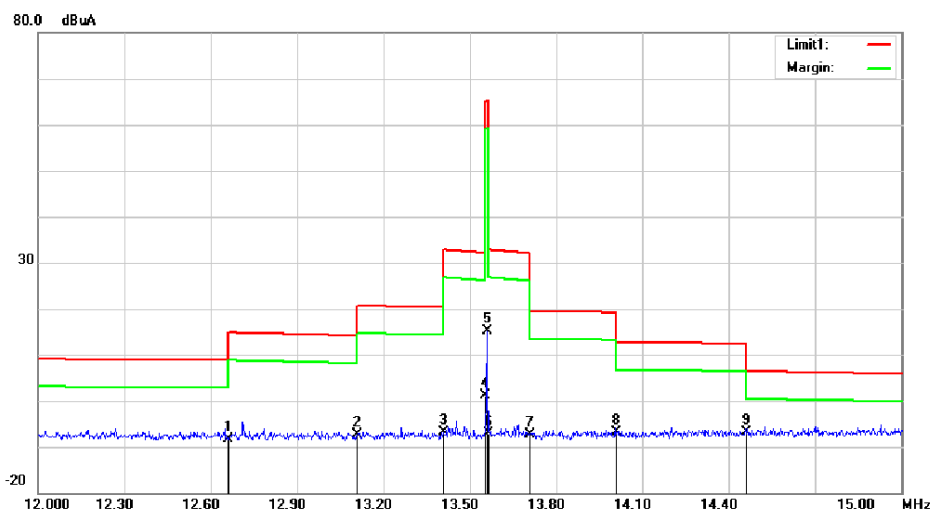
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Appendix A.1: Test Results of Operating Frequency Ranges

Test Conditions	Frequency Range				Verdict
	f _L Channel (MHz)	f _H Channel (MHz)	f _L Limit (MHz)	f _H Limit (MHz)	
Normal	13.556	13.565	13.553	13.567	Pass

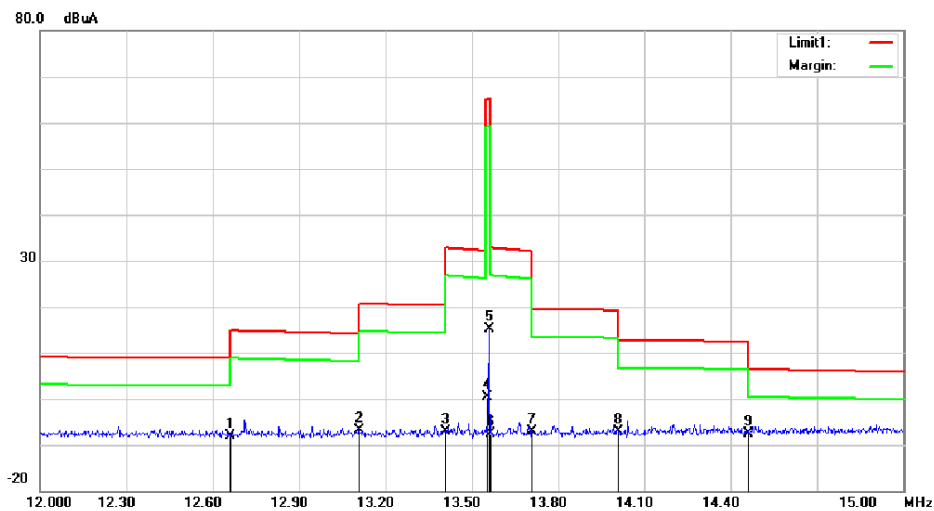
Appendix A2: Test Results of Modulation Bandwidth

Job No.:	STS2106192	Ant.Polar.:	X
Standard:	EN 300330_NFC_MASK_QP	Date:2021/6/29	Time:16:42:42
Testitem:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Sungrow	Hum.(% RH):	60% RH
Model:	AC011E-01	Power:	AC 220V/50Hz
Mode:	RFID	Test By:	Chris
Description:			



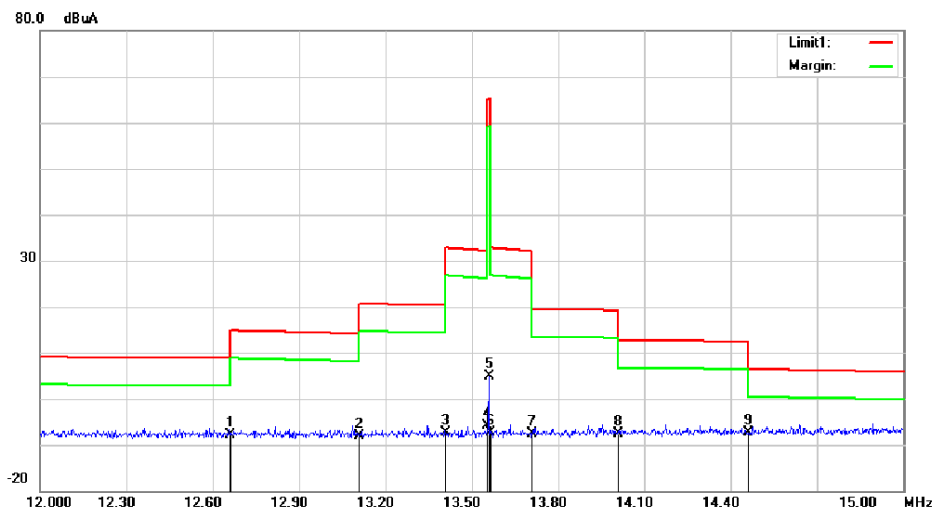
No.	Frequency (MHz)	Reading (dBuA)	Correct Factor(dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	12.6600	-29.06	20.79	-8.27	8.80	-17.07	QP
2	13.1100	-28.35	20.88	-7.47	14.10	-21.57	QP
3	13.4100	-27.73	20.95	-6.78	20.30	-27.08	QP
4	13.5560	-19.95	20.98	1.03	65.10	-64.07	QP
5	13.5600	-5.94	20.98	15.04	65.10	-50.06	peak
6	13.5670	-28.16	20.98	-7.18	32.80	-39.98	QP
7	13.7100	-28.48	21.02	-7.46	19.50	-26.96	QP
8	14.0100	-28.01	21.08	-6.93	12.70	-19.63	QP
9	14.4600	-28.17	21.18	-6.99	6.40	-13.39	QP

Job No.:	STS2106192	Ant.Polar.:	Y
Standard:	EN 300330_NFC_MASK_QP	Date:2021/6/29	Time:16:46:15
Test item:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Sungrow	Hum.(% RH):	60% RH
Model:	AC011E-01	Power:	AC 220V/50Hz
Mode:	RFID	Test By:	Chris
Description:			



No.	Frequency (MHz)	Reading (dBuA)	Correct Factor(dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	12.6600	-28.90	20.79	-8.11	8.80	-16.91	QP
2	13.1100	-27.81	20.88	-6.93	14.10	-21.03	QP
3	13.4100	-28.04	20.95	-7.09	20.30	-27.39	QP
4	13.5560	-20.66	20.98	0.32	65.10	-64.78	QP
5	13.5600	-5.88	20.98	15.10	65.10	-50.00	peak
6	13.5670	-28.69	20.98	-7.71	32.80	-40.51	QP
7	13.7100	-28.24	21.02	-7.22	19.50	-26.72	QP
8	14.0100	-28.25	21.08	-7.17	12.70	-19.87	QP
9	14.4600	-28.71	21.18	-7.53	6.40	-13.93	QP

Job No.:	STS2106192	Ant.Polar.:	Z
Standard:	EN 300330_NFC_MASK_QP	Date:2021/6/29	Time:16:39:19
Test item:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Sungrow	Hum.(% RH):	60% RH
Model:	AC011E-01	Power:	AC 220V/50Hz
Mode:	RFID	Test By:	Chris
Description:			



No.	Frequency (MHz)	Reading (dBuA)	Correct Factor(dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	12.6600	-28.63	20.79	-7.84	8.80	-16.64	QP
2	13.1100	-28.98	20.88	-8.10	14.10	-22.20	QP
3	13.4100	-28.40	20.95	-7.45	20.30	-27.75	QP
4	13.5560	-26.94	20.98	-5.96	65.10	-71.06	QP
5	13.5600	-16.09	20.98	4.89	65.10	-60.21	peak
6	13.5670	-28.43	20.98	-7.45	32.80	-40.25	QP
7	13.7100	-28.62	21.02	-7.60	19.50	-27.10	QP
8	14.0100	-28.58	21.08	-7.50	12.70	-20.20	QP
9	14.4600	-28.64	21.18	-7.46	6.40	-13.86	QP

Appendix A3: Test Results of Transmitter H-field Requirements

Frequency (MHz)	Reading Level (dBμA@3m)	Corrected Factor to 10m (dB)	Result (dBμA@10m)	Limit (dBμA@10m)	Verdict
13.56	15.10	23.10	-8.00	42.00	Pass

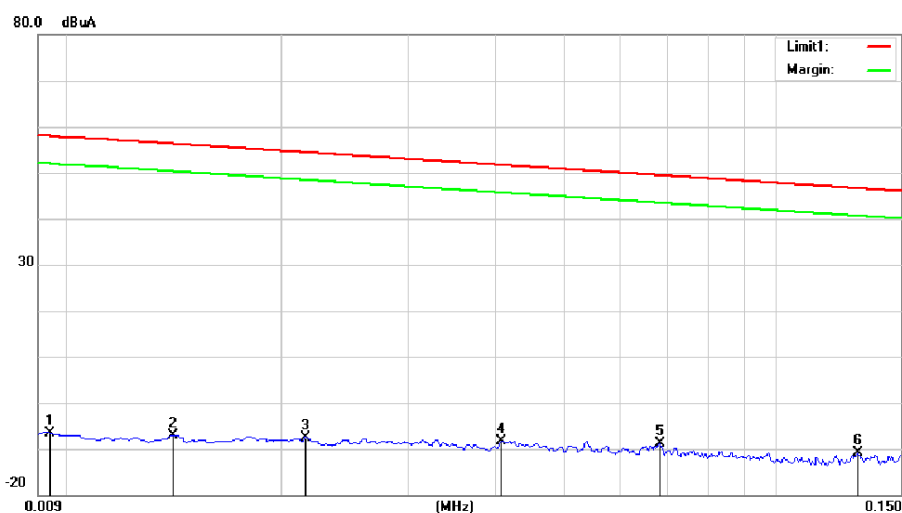
Note:

Annex F.2, $H_{3m} = H_{10m} + C3(\sim 23.1\text{dB})$
Annex F.2, $H_{10m} = H_{3m} - C3(\sim 23.1\text{dB})$

Appendix A4: Test Results of Transmitter Spurious Emissions < 30MHz

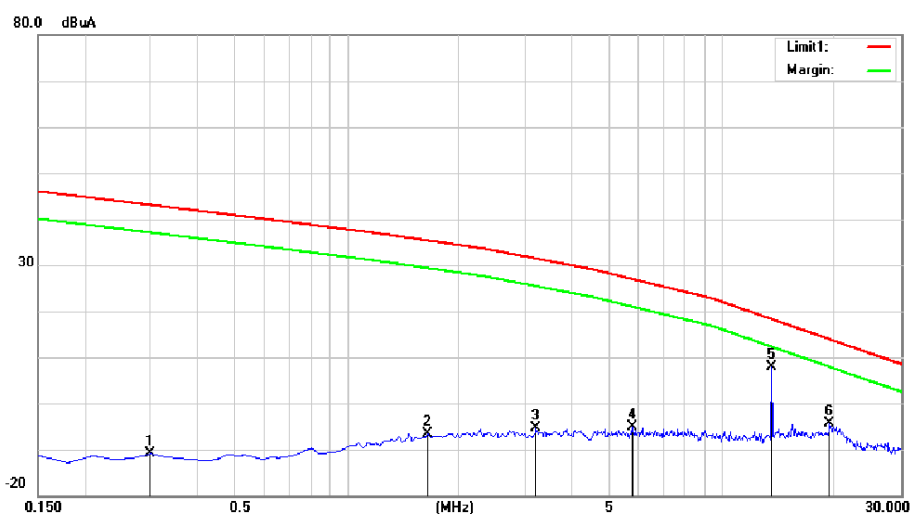
Operating mode

Job No.:	STS2106192	Ant.Polar.:	X
Standard:	EN 300330_TX_Below30M	Date:2021/6/29	Time:14:57:15
Test item:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Sungrow	Hum.(% RH):	60% RH
Model:	AC011E-01	Power:	AC 220V/50Hz
Mode:	RFID	Test By:	Chris
Description:			



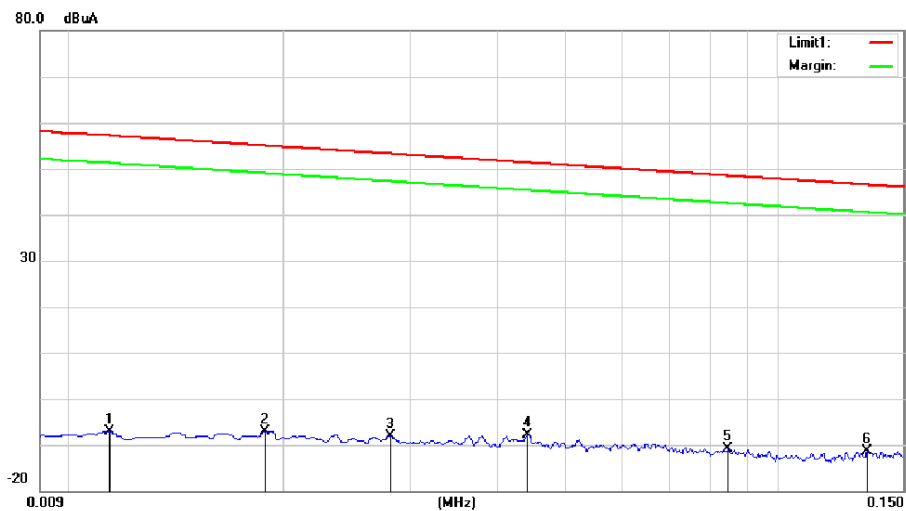
No.	Frequency (MHz)	Reading (dBuA)	Correct Factor(dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.0094	-25.86	19.33	-6.53	58.01	-64.54	QP
2	0.0140	-26.72	19.66	-7.06	56.29	-63.35	QP
3	0.0215	-27.57	20.07	-7.50	54.43	-61.93	QP
4	0.0408	-27.99	19.68	-8.31	51.66	-59.97	QP
5	0.0682	-27.85	18.99	-8.86	49.43	-58.29	QP
6	0.1303	-28.47	17.54	-10.93	46.63	-57.56	QP

Job No.:	STS2106192	Ant.Polar.:	X
Standard:	EN 300330_TX_Below30M	Date:2021/6/29	Time:14:47:37
Testitem:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Sungrow	Hum.(% RH):	60% RH
Model:	AC011E-01	Power:	AC 220V/50Hz
Mode:	RFID	Test By:	Chris
Description:			



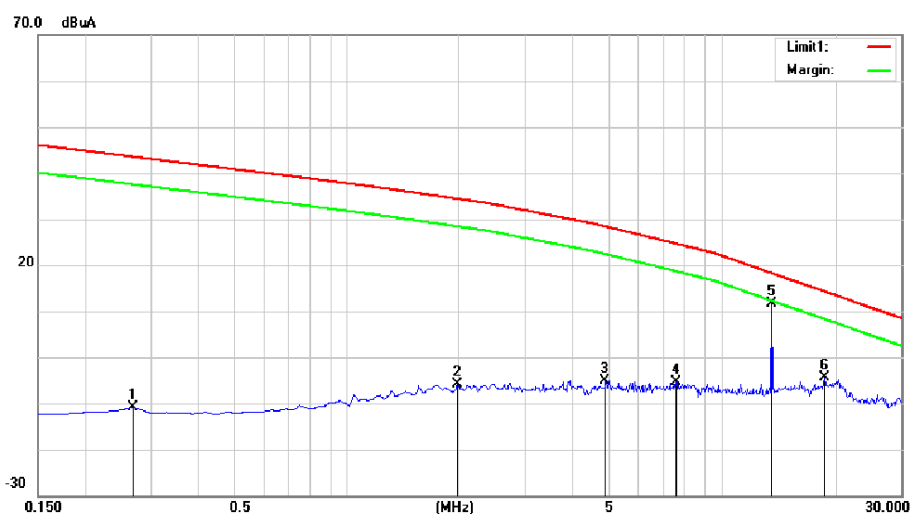
No.	Frequency (MHz)	Reading (dBuA)	Correct Factor(dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2993	-31.06	20.12	-10.94	43.03	-53.97	QP
2	1.6425	-26.93	20.33	-6.60	35.31	-41.91	QP
3	3.1947	-25.61	20.16	-5.45	31.38	-36.83	QP
4	5.7618	-25.52	20.45	-5.07	26.97	-32.04	QP
5	13.5600	-13.20	20.98	7.78	18.26	-10.48	peak
6	19.3435	-26.81	22.34	-4.47	13.89	-18.36	QP

Job No.:	STS2106192	Ant.Polar.:	Y
Standard:	EN 300330_TX_Below30M	Date:2021/6/29	Time:14:59:40
Testitem:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Sungrow	Hum.(% RH):	60% RH
Model:	AC011E-01	Power:	AC 220V/50Hz
Mode:	RFID	Test By:	Chris
Description:			



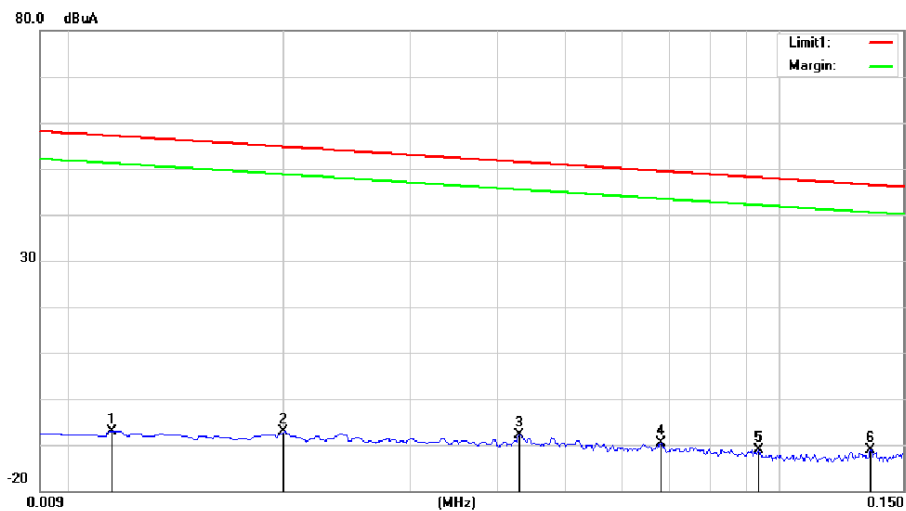
No.	Frequency (MHz)	Reading (dBuA)	Correct Factor(dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.0112	-26.57	19.46	-7.11	57.25	-64.36	QP
2	0.0188	-27.03	20.01	-7.02	55.01	-62.03	QP
3	0.0281	-27.99	19.94	-8.05	53.27	-61.32	QP
4	0.0441	-27.61	19.62	-7.99	51.32	-59.31	QP
5	0.0850	-29.18	18.32	-10.86	48.48	-59.34	QP
6	0.1335	-28.90	17.53	-11.37	46.53	-57.90	QP

Job No.:	STS2106192	Ant.Polar.:	Y
Standard:	EN 300330_TX_Below30M	Date:2021/6/29	Time:15:06:46
Testitem:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Sungrow	Hum.(% RH):	60% RH
Model:	AC011E-01	Power:	AC 220V/50Hz
Mode:	RFID	Test By:	Chris
Description:			



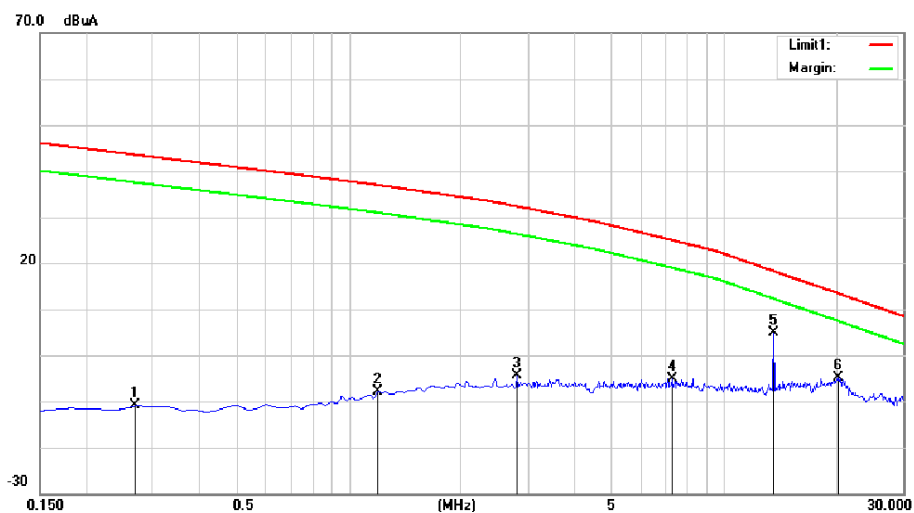
No.	Frequency (MHz)	Reading (dBuA)	Correct Factor(dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2694	-30.92	20.11	-10.81	43.49	-54.30	QP
2	1.9708	-26.27	20.39	-5.88	34.39	-40.27	QP
3	4.8961	-25.57	20.49	-5.08	28.38	-33.46	QP
4	7.5528	-25.67	20.35	-5.32	24.62	-29.94	QP
5	13.5600	-9.23	20.98	11.75	18.26	-6.51	peak
6	18.7764	-26.66	22.21	-4.45	14.26	-18.71	QP

Job No.:	STS2106192	Ant.Polar.:	Z
Standard:	EN 300330_TX_Below30M	Date:2021/6/29	Time:14:17:55
Testitem:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Sungrow	Hum.(% RH):	60% RH
Model:	AC011E-01	Power:	AC 220V/50Hz
Mode:	RFID	Test By:	Chris
Description:			



No.	Frequency (MHz)	Reading (dBuA)	Correct Factor(dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.0114	-26.48	19.47	-7.01	57.18	-64.19	QP
2	0.0200	-27.34	20.10	-7.24	54.74	-61.98	QP
3	0.0430	-27.51	19.64	-7.87	51.43	-59.30	QP
4	0.0680	-28.68	19.00	-9.68	49.45	-59.13	QP
5	0.0937	-28.96	17.90	-11.06	48.06	-59.12	QP
6	0.1350	-28.54	17.53	-11.01	46.48	-57.49	QP

Job No.:	STS2106192	Ant.Polar.:	Z
Standard:	EN 300330_TX_Below30M	Date:2021/6/29	Time:14:38:32
Testitem:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Sungrow	Hum.(% RH):	60% RH
Model:	AC011E-01	Power:	AC 220V/50Hz
Mode:	RFID	Test By:	Chris
Description:			

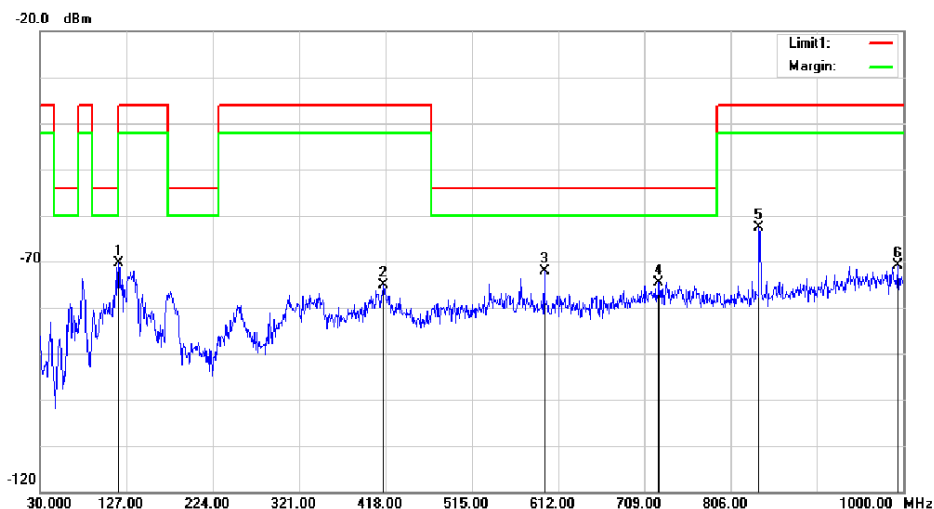


No.	Frequency (MHz)	Reading (dBuA)	Correct Factor(dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2694	-31.06	20.11	-10.95	43.49	-54.44	QP
2	1.1947	-28.07	20.24	-7.83	36.92	-44.75	QP
3	2.8066	-24.63	20.16	-4.47	32.26	-36.73	QP
4	7.2543	-25.37	20.36	-5.01	24.97	-29.98	QP
5	13.5600	-16.11	20.98	4.87	18.26	-13.39	peak
6	20.2092	-27.33	22.42	-4.91	13.35	-18.26	QP

Appendix A5: Test Results of Transmitter Spurious Emissions > 30MHz

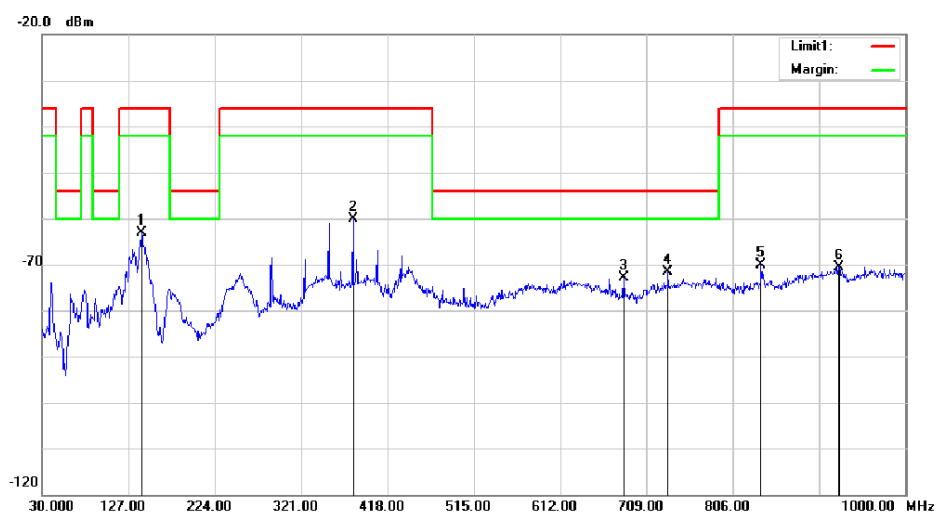
Operating mode

Job No.:	STS2106192	Ant.Polar.:	Vertical
Standard:	EN 300330_TX_30M-1G	Date:2021/6/29	Time:15:42:18
Testitem:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Sungrow	Hum.(% RH):	60% RH
Model:	AC011E-01	Power:	AC 220V/50Hz
Mode:	RFID	Test By:	Chris
Description:			



No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	118.2700	-65.77	-4.52	-70.29	-36.00	-34.29	peak
2	416.0600	-74.73	-0.41	-75.14	-36.00	-39.14	peak
3	596.4800	-75.73	3.49	-72.24	-54.00	-18.24	peak
4	725.4900	-81.53	6.95	-74.58	-54.00	-20.58	peak
5	838.0100	-69.20	6.64	-62.56	-36.00	-26.56	peak
6	994.1800	-80.82	10.01	-70.81	-36.00	-34.81	peak

Job No.:	STS2106192	Ant.Polar.:	Horizontal
Standard:	EN 300330_TX_30M-1G	Date:2021/6/29	Time:15:36:33
Test item:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Sungrow	Hum.(% RH):	60% RH
Model:	AC011E-01	Power:	AC 220V/50Hz
Mode:	RFID	Test By:	Chris
Description:			



No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	141.5500	-55.90	-7.14	-63.04	-36.00	-27.04	peak
2	379.2000	-57.98	-2.03	-60.01	-36.00	-24.01	peak
3	683.7800	-76.36	3.52	-72.84	-54.00	-18.84	peak
4	733.2500	-77.39	5.72	-71.67	-54.00	-17.67	peak
5	838.0100	-76.32	6.31	-70.01	-36.00	-34.01	peak
6	925.3100	-79.33	8.60	-70.73	-36.00	-34.73	peak