

RED-Radio Test Report

Client Name : Acrel Co., Ltd.
Address : No.253, Yulv Road, Jiading District, Shanghai, China
Product Name : Energy Meter
Date : Apr. 19, 2022

Shenzhen Anbotek Compliance Laboratory Limited



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TEST REPORT

Applicant : Acrel Co., Ltd.
Manufacturer : Jiangsu Acrel Electrical Manufacturing. Co., Ltd.
Product Name : Energy Meter
Model No. : ADW300, ADW300-WF, ADW300-WIFI, ADW300-4GHW, ADW300-FGHW,
ADW300-Lora, ADW350, ADW400, ADW200, ADW210, ADW220, ADW500
Trade Mark : Acrel
Rating(s) : Input: AC 3x57.7/100V, 3x230/400V, AC 3x1(6)A
Test Standard(s) : **ETSI EN 300 220-1 V3.1.1 (2017-02)**
ETSI EN 300 220-2 V3.2.1 (2018-06)

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the EN 300 220-1 & EN 300 220-2 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt

Mar. 22, 2022

Date of Test

Mar. 22~Apr. 12, 2022

Prepared By



(TuTu Hong)

Approved & Authorized Signer



(Kingkong Jin)

Shenzhen Anbotek Compliance Laboratory Limited

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1. General Information

1.1. Client Information

Applicant	:	Acrel Co., Ltd.
Address	:	No.253, Yulv Road, Jiading District, Shanghai, China
Manufacturer	:	Jiangsu Acrel Electrical Manufacturing. Co., Ltd.
Address	:	No.5, Dongmeng Road, Nanzha Street, Jiangyin City, Jiangsu Province, China
Factory	:	Jiangsu Acrel Electrical Manufacturing. Co., Ltd.
Address	:	No.5, Dongmeng Road, Nanzha Street, Jiangyin City, Jiangsu Province, China

1.2. Description of Device (EUT)

Product Name	:	Energy Meter
Model No.	:	ADW300, ADW300-WF, ADW300-WIFI, ADW300-4GHW, ADW300-FGHW, ADW300-Lora, ADW350, ADW400, ADW200, ADW210, ADW220, ADW500 (Note: All samples are the same except the model number, so we prepare "ADW300" for test only.)
Trade Mark	:	Acrel
Test Power Supply	:	AC 230V, 50Hz
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(Engineering Sample)
Product Description	:	Operation Frequency: SRD: 868.5MHz WiFi 2.4G 802.11b/g/n(HT20): 2412~2472MHz LTE-FDD: Band3: 1710-1785 MHz (TX); 1805-1880 MHz (RX) Band8: 880-915 MHz (TX); 925-960 MHz (RX) LTE-TDD: Band38: 2570-2620 MHz (TX & RX) Band40: 2300-2400 MHz (TX & RX)
		Modulation Type: SRD: GFSK WiFi 2.4G: CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM LTE: QPSK, 16QAM
		Number of Channel: SRD: 1 Channels WiFi 2.4G 802.11b/g/n(HT20): 13 Channels
		Antenna Type: External Antenna
		Antenna Gain(Peak): SRD: 2dBi (Provided by customer) WiFi 2.4G: 2dBi (Provided by customer) LTE Band 3/8/38/40: 2dBi (Provided by customer)

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	Hardware version :	V1.04
	Software version :	V1.10
	Adapter:	N/A

Remark: 1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual. 2) This report is for SRD module.

1.3. Auxiliary Equipment Used During Test

N/A	
-----	--

1.4. Description of Test Modes

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Test mode	Freq.(MHz)
CH01	868.5

1.5. Test Conditions

	Normal Test Conditions	Extreme Test Conditions
Temperature	15°C ~ 30°C	-10°C ~45°C Note: (1)
Relative Humidity	20% ~ 75%	N/A
Supply Voltage	AC 230V, 50Hz	AC 253V~ AC 207V

Note: (1) The HT 45°C and LT -10°C was declared by manufacturer.

1.6. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Three Phase V-type Artificial Power Network	CYBERTEK	EM5040DT	E215040DT001	Jul 05, 2021	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Oct. 22, 2021	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	Oct. 22, 2021	1 Year
4.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Oct. 22, 2021	1 Year
5.	MAX Spectrum Analysis	Agilent	N9020A	MY51170037	Oct. 22, 2021	1 Year
6.	Preamplifier	SKET Electronic	BK1G18G30D	KD17503	Oct. 22, 2021	1 Year
7.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Oct. 22, 2021	2 Year
8.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Oct. 22, 2021	2 Year
9.	Loop Antenna	Schwarzbeck	FMZB1519B	00053	Oct. 22, 2021	2 Year
10.	Horn Antenna	A-INFO	LB-180400-KF	J211060628	Oct. 22, 2021	2 Year
11.	Pre-amplifier	SONOMA	310N	186860	Oct. 22, 2021	1 Year
12.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A
13.	RF Test Control System	YIHENG	YH3000	2017430	Oct. 22, 2021	1 Year
14.	Power Sensor	DAER	RPR3006W	15I00041SN045	Oct. 22, 2021	1 Year
15.	Power Sensor	DAER	RPR3006W	15I00041SN046	Oct. 22, 2021	1 Year
16.	MXA Spectrum Analysis	KEYSIGHT	N9020A	MY53280032	Oct. 22, 2021	1 Year
17.	MXG RF Vector Signal Generator	Agilent	N5182A	MY48180656	Oct. 22, 2021	1 Year
18.	Signal Generator	Agilent	E4421B	MY41000743	Oct. 22, 2021	1 Year
19.	DC Power Supply	IVYTECH	IV3605	1804D360510	Oct. 22, 2021	1 Year
20.	Constant Temperature Humidity Chamber	ZHONGJIAN	ZJ-KHWS80B	N/A	Oct. 22, 2021	1 Year

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1.7. Measurement Uncertainty

For the test methods, according to ETSI EN 300 220-1&-2 standard, the measurement uncertainty figures shall be calculated in accordance with ETR 100 028-1 [4] and shall correspond to an expansion factor (coverage factor) $k = 1,96$ or $k = 2$ (which provide confidence levels of respectively 95 % and 95,45 % in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)).

Maximum measurement uncertainty

Parameter	Uncertainty
Occupied Channel Bandwidth	$\pm 5 \%$
RF output power, conducted	$\pm 1,5 \text{ dB}$
All emissions, conducted	$\pm 6 \text{ dB}$
All emissions, radiated	$\pm 6 \text{ dB}$
Temperature	$\pm 1 \text{ }^\circ\text{C}$
Humidity	$\pm 5 \%$
DC and low frequency voltages	$\pm 3 \%$
Time	$\pm 5 \%$
Duty Cycle	$\pm 5 \%$

1.8. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 184111

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 184111.

ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.


Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

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2. Summary of Test Results

Harmonised Standard ETSI EN 300 220-2			
No.	Test Items	Clause No.	Results
1	Operating frequency	4.2.1	PASS
2	Unwanted emissions in the spurious domain	4.2.2	PASS
3	Effective radiated power	4.3.1	PASS
4	Maximum e.r.p. spectral density	4.3.2	N/A
5	Duty cycle	4.3.3	N/A
6	Occupied bandwidth	4.3.4	PASS
7	TX out of band emissions	4.3.5	PASS
8	Transient Power	4.3.6	PASS
9	Adjacent channel power	4.3.7	N/A
10	TX behaviour under low voltage conditions	4.3.8	N/A
11	Adaptive power control	4.3.9	N/A
12	FHSS	4.3.10	N/A
13	Short term behaviour	4.3.11	N/A
14	RX sensitivity	4.4.1	N/A
15	Receiver Blocking	4.4.2	PASS
16	Clear channel assessment threshold	4.5.2	N/A
17	Polite spectrum access timing parameters	4.5.3	N/A
18	Adaptive Frequency Agility	4.5.4	N/A

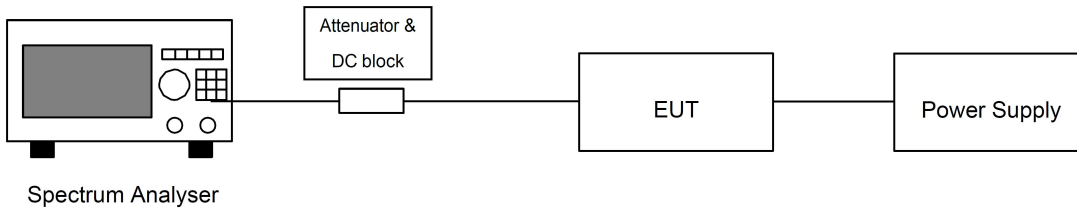
Note: "N/A" is an abbreviation for Not Applicable and means this test item is not applicable for this device according to the technology characteristic of device.

3. Operating Frequency

3.1. Test Standard and Limit

Test Standard	ETSI EN 300 220-2 V3.1.1 Clause 4.2.1
Test Limit	The manufacturer may declare either one or more operating frequencies and operating channels. Operating channel(s) shall be entirely within operational frequency bands allowed by annexes
	863MHz to 870MHz

3.2. Test Setup



3.3. Test Procedure

The conducted measurement procedure in clause 5.1.2. of ETSI EN 300 220-1 V3.1.1. The measurements shall be performed during continuously transmitting.

3.4. Test Data

Pass

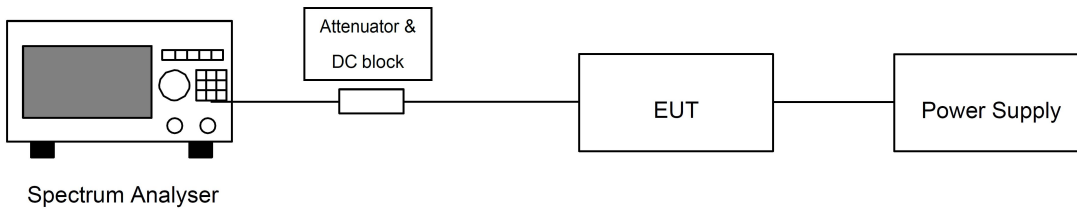
Temperature:	25°C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage:	AC 230V, 50Hz

4. Duty Cycle

4.1. Test Standard and Limit

Test Standard	ETSI EN 300 220-2 V3.2.1 Clause 4.3.3	
Test Limit	The Duty Cycle shall not exceed the following values allowed in annexes C (EN 300 220-2) for the chosen operational frequency band(s).	
	Frequency Band	Channel access and occupation rules
	863MHz to 870MHz	≤ 0,1 % duty cycle or polite spectrum access

4.2. Test Setup



4.3. Test Procedure

The conducted measurement procedure in clause 5.4.2 of ETSI EN 300 220-1 V3.1.1. The measurements shall be performed during uncontinuously transmitting.

4.4. Test Data

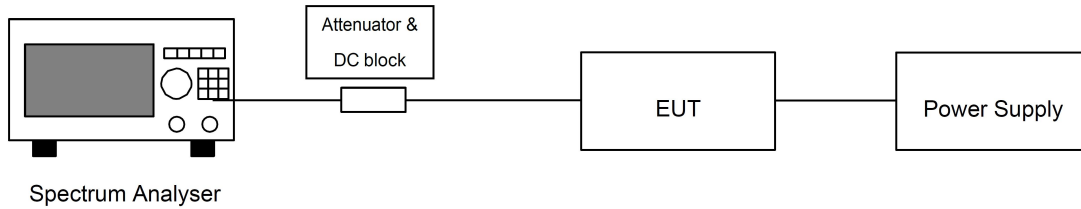
The duty cycle is ≤ 0,1 %

5. Effective Radiated Power

5.1. Test Standard and Limit

Test Standard	ETSI EN300 220-2 V3.2.1 Clause 4.3.1	
Test Limit	The effective radiated power shall not be greater than the value allowed in annexes C (EN 300 220-2) for the chosen operational frequency band(s).	
	Frequency Band	Maximum effective radiated power
	863MHz to 870MHz	25mW (14dBm)

5.2. Test Setup



5.3. Test Procedure

The conducted measurement procedure in clause 5.2.2.1 of ETSI EN 300 220-1 V3.1.1. The measurements shall be performed during continuously transmitting.

5.4. Test Data

Temperature:	See below	Relative Humidity:	52 %
Pressure:	1012 hPa	Test Voltage:	See below

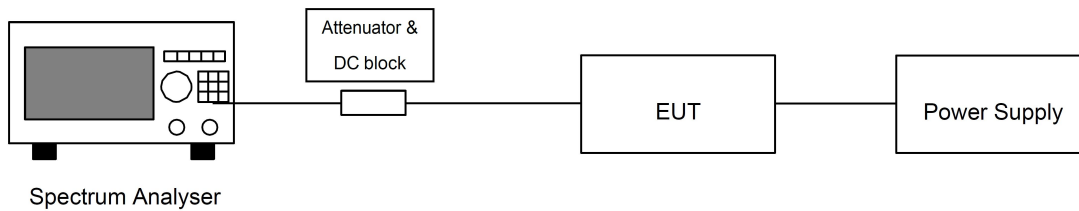
Test Mode:	TX			
Test Conditions				Total e.r.p (dBm)
T nom (°C)	NT	V nom (V)	NV	13.850
T min (°C)	LT	V nom (V)	NV	13.845
T max (°C)	HT	V nom (V)	NV	13.849
Max RF Power				13.850
Limits				14
Result				PASS

6. Occupied Bandwidth

6.1. Test Standard and Limit

Test Standard	ETSI EN300 220-2 V3.2.1 Clause 4.3.4
Test Limit	300 kHz

6.2. Test Setup



6.3. Test Procedure

The conducted measurement procedure in clause 5.6.3.4 of ETSI EN 300 220-1 V3.1.1.

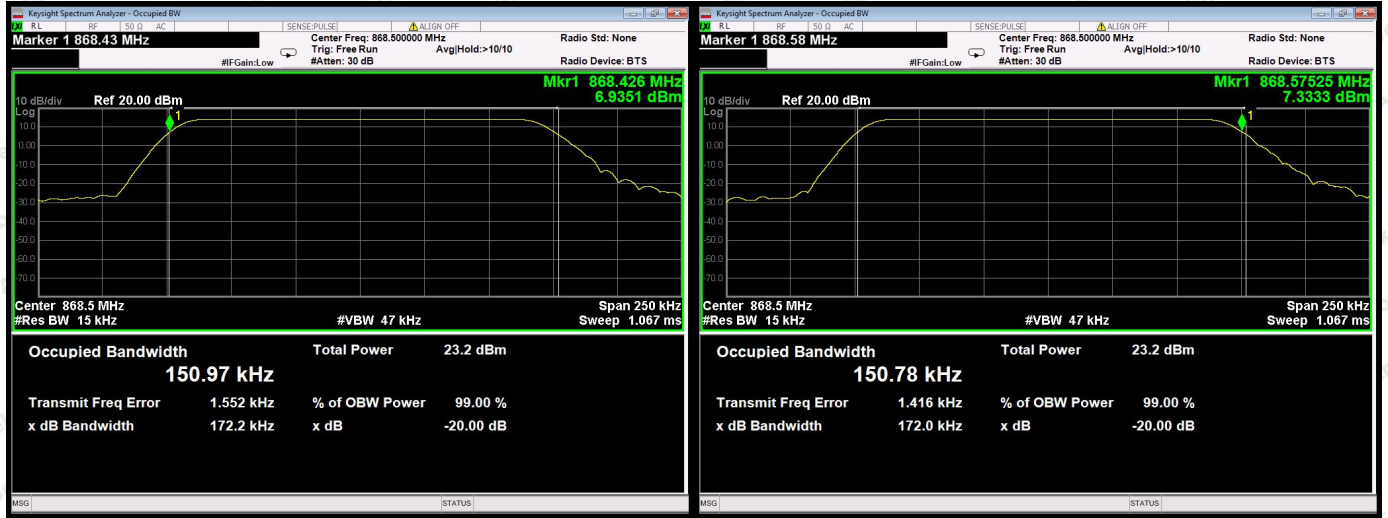
The measurements shall be performed during continuously transmitting.

6.4. Test Data

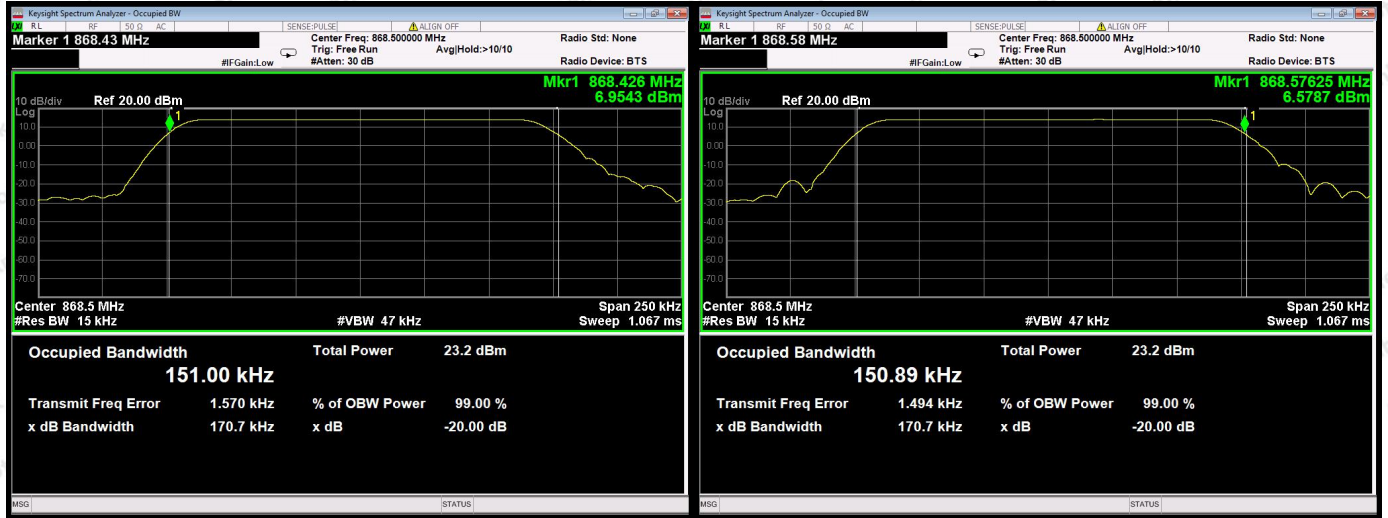
Temperature:	See below	Relative Humidity:	52 %
Pressure:	1012 hPa	Test Voltage:	AC 230V, 50Hz

Temp./Vol.	99% Bandwidth (KHz)	Limit	Results
NTNV	150.97	300 kHz	PASS
LTLV	151.00		
LTHV	150.80		
HTLV	151.37		
HTHV	151.00		

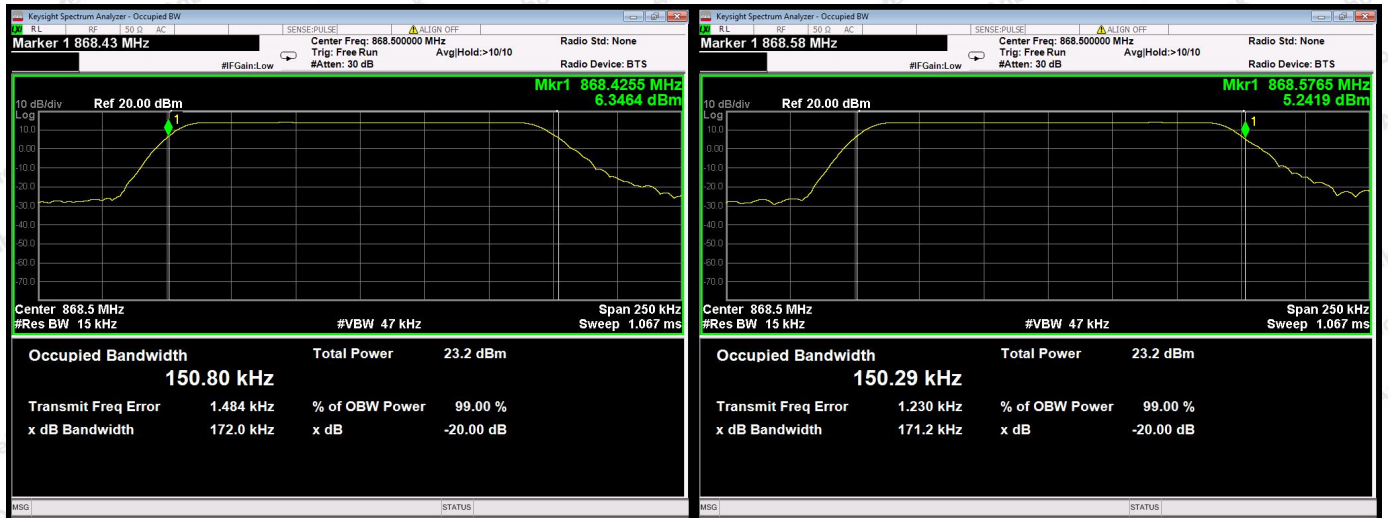
NTNV



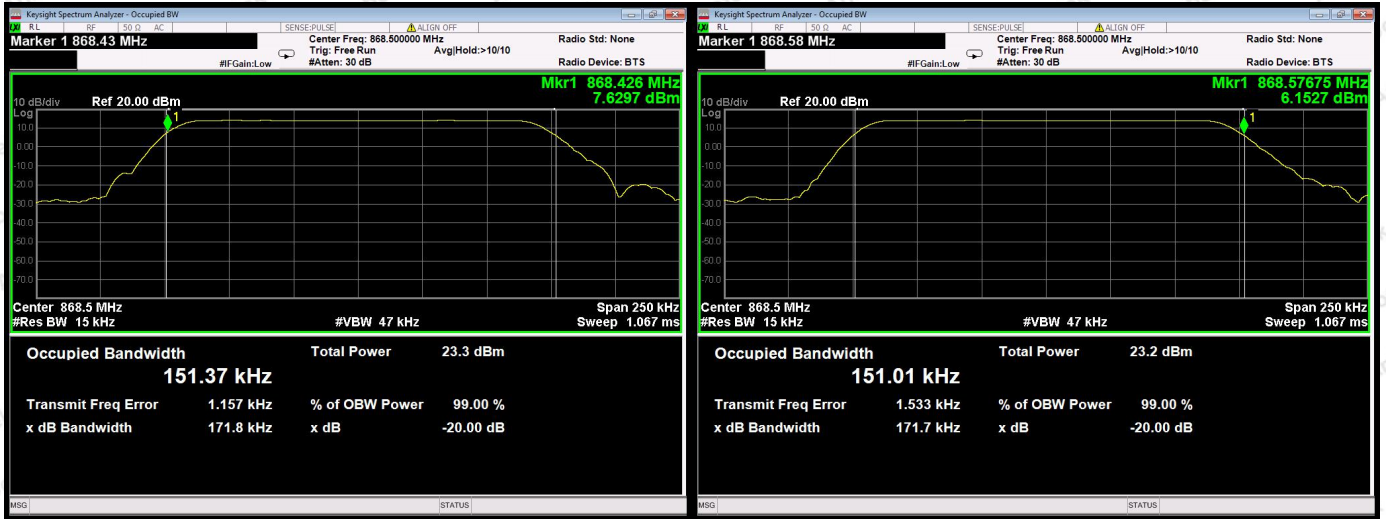
LTLV



LTHV



HTLV



HTHV



7. Out Of Band Emissions

7.1. Test Standard and Limit

Test Standard	ETSI EN300 220-2 V3.2.1 Clause 4.3.5				
Test Limit	Domain	Frequency Range	RBW _{REF}	Max power limit	
	OOB limits applicable to Operational Frequency Band (See Figure 6)	$f \leq f_{\text{low_OFB}} - 400 \text{ kHz}$		10 kHz	-36 dBm
		$F_{\text{low_OFB}} - 400 \text{ kHz} \leq f \leq f_{\text{low_OFB}} - 200 \text{ kHz}$		1 kHz	-36 dBm
		$f_{\text{low}} - 200 \text{ kHz} \leq f < f_{\text{low_OFB}}$		1 kHz	See Figure 6
		$f = f_{\text{low_OFB}}$		1 kHz	-36 dBm
		$f = f_{\text{high_OFB}}$		1 kHz	-36 dBm
		$F_{\text{high_OFB}} < f \leq f_{\text{high_OFB}} + 200 \text{ kHz}$		1 kHz	0 dBm
		$F_{\text{high_OFB}} + 200 \text{ kHz} \leq f \leq f_{\text{high_OFB}} + 400 \text{ kHz}$		1 kHz	-36 dBm
		$F_{\text{high_OFB}} + 400 \text{ kHz} \leq f$		10 kHz	-36 dBm
	OOB limits applicable to Operating Channel (See Figure 5)	$f = f_c - 2.5 \times \text{OCW}$		1 kHz	-36 dBm
		$f_c - 2.5 \times \text{OCW} \leq f \leq f_c - 0.5 \times \text{OCW}$		1 kHz	See Figure 5
		$f = f_c - 0.5 \times \text{OCW}$		1 kHz	0 dBm
		$f = f_c + 0.5 \times \text{OCW}$		1 kHz	0 dBm
		$f_c + 0.5 \times \text{OCW} \leq f \leq f_c + 2.5 \times \text{OCW}$		1 kHz	See Figure 5
		$f = f_c + 2.5 \times \text{OCW}$		1 kHz	-36 dBm
<p>NOTE: f is the measurement frequency. f_c is the Operating Frequency. $F_{\text{low_OFB}}$ is the lower edge of the Operational Frequency Band. $F_{\text{high_OFB}}$ is the upper edge of the Operational Frequency Band. OCW is the operating channel bandwidth.</p>					

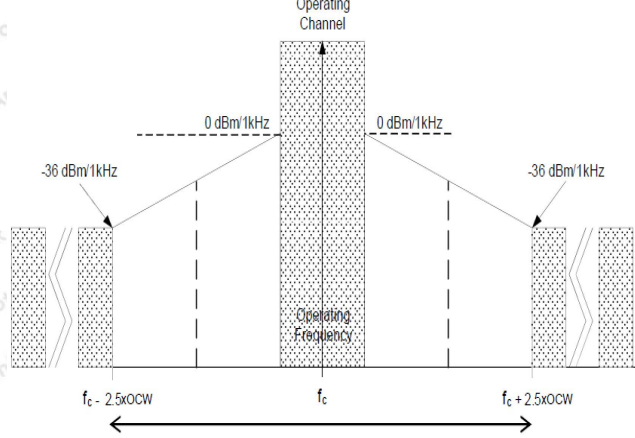


Figure 5: Out Of Band Domain for Operating Channel with reference BW

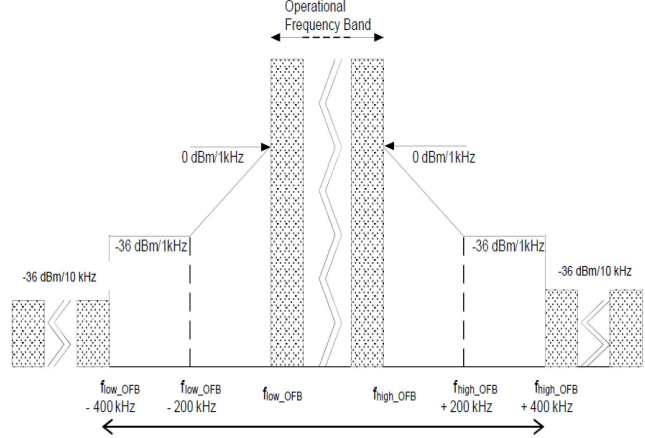
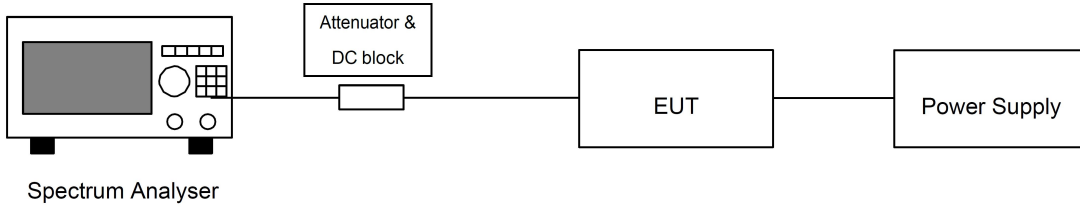


Figure 6: Out Of Band Domain for Operational Frequency Band with reference BW

7.2. Test Setup



7.3. Test Procedure

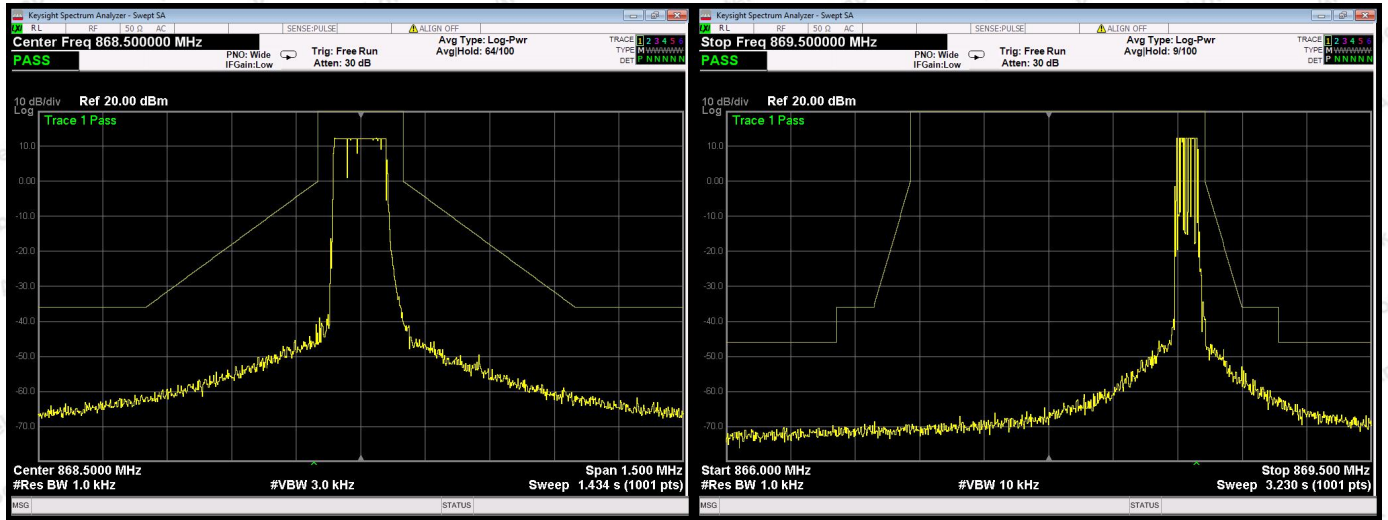
The conducted measurement procedure in clause 5.8.3.3 of ETSI EN 300 220-1 V3.1.1. The measurements shall be performed during continuously transmitting.

7.4. Test Data

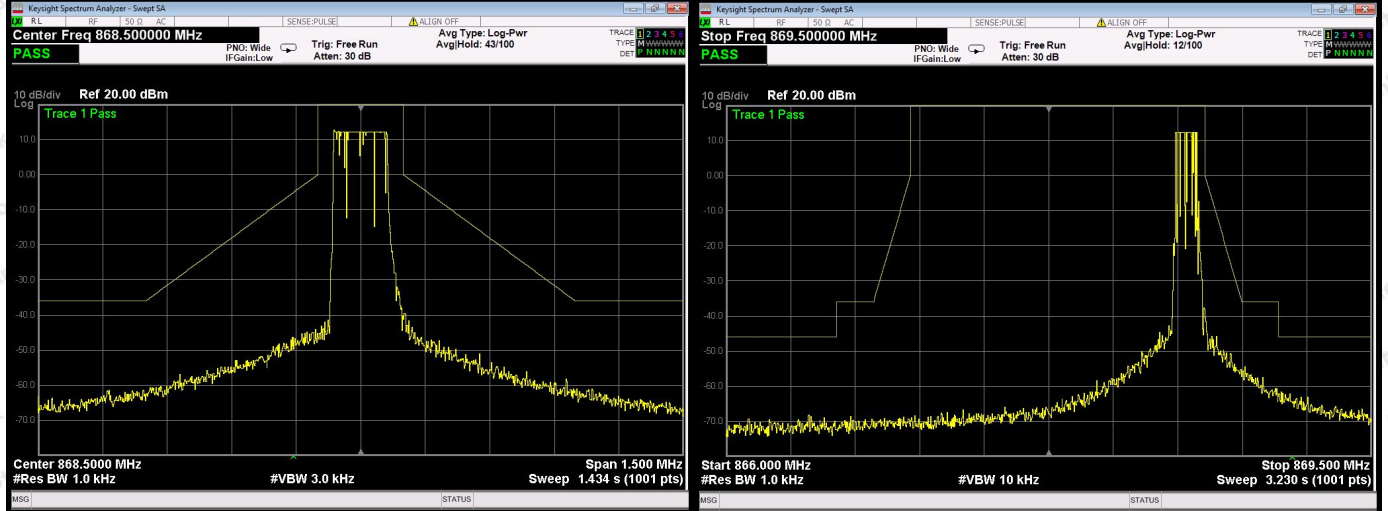
Temperature:	See below	Relative Humidity:	52 %
Pressure:	1012 hPa	Test Voltage:	AC 230V, 50Hz

PASS.

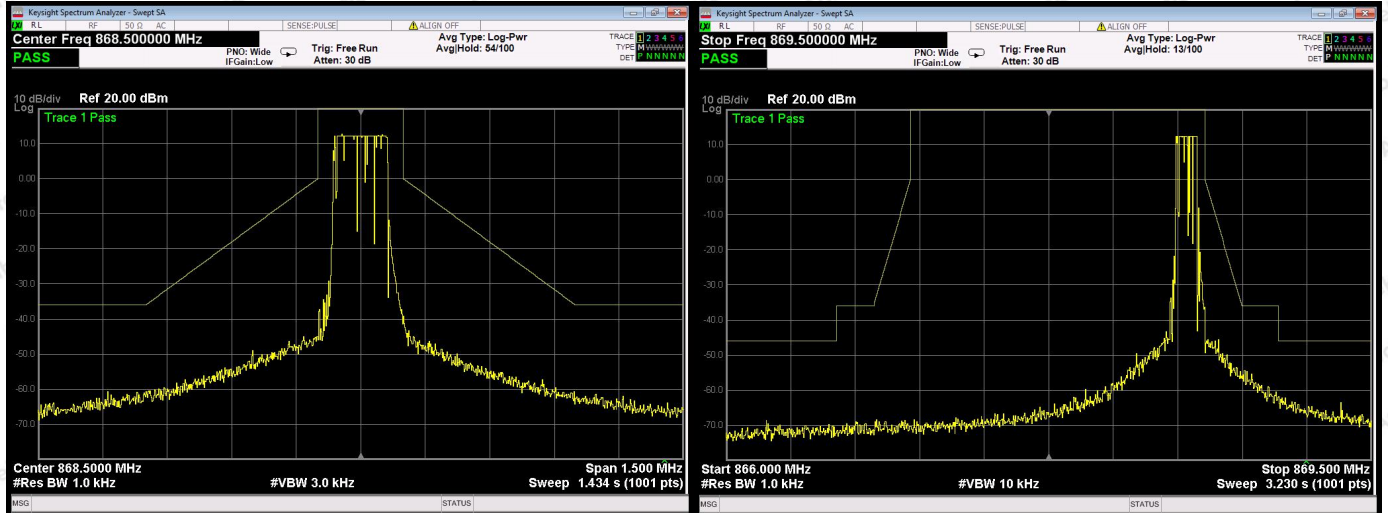
NTNV



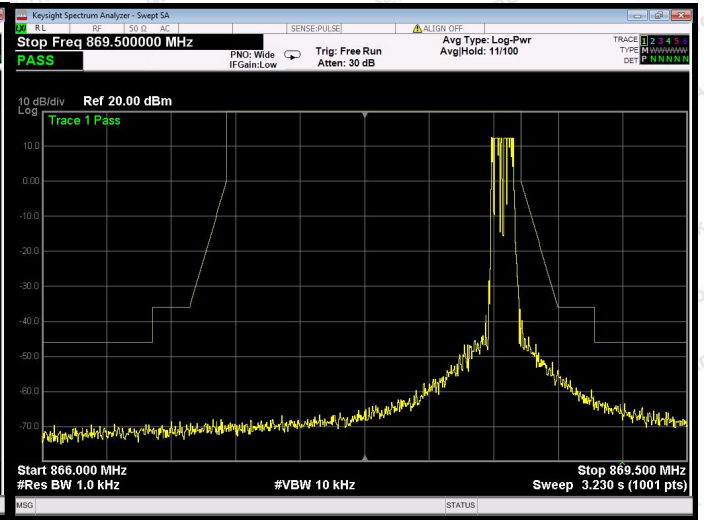
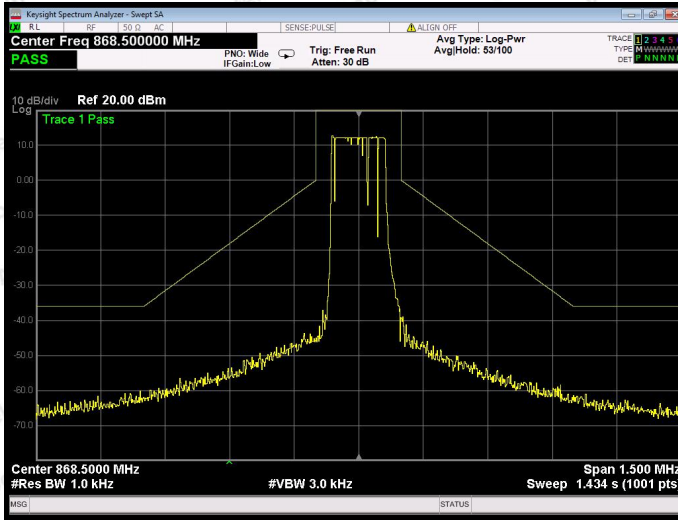
LTLV



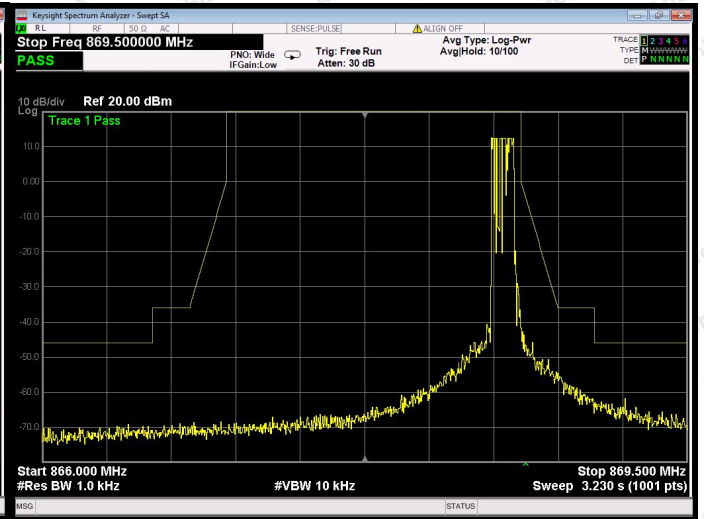
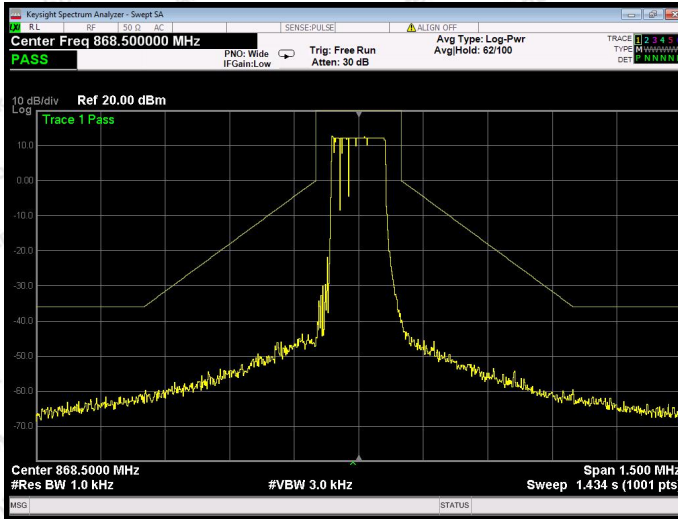
LTHV



HTLV



HTHV

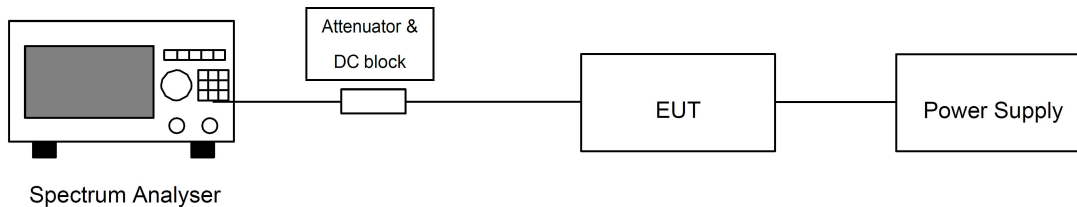


8. Transient Power

8.1. Test Standard and Limit

Test Standard	ETSI EN300 220-2 V3.2.1 Clause 4.3.6		
Test Limit	Absolute offset from centre frequency	RBW _{REF}	Peak power limit applicable at measurement points
	≤ 400 kHz	1 kHz	0 dBm
	> 400 kHz	1 kHz	-27 dBm

8.2. Test Setup



8.3. Test Procedure

The conducted measurement procedure in clause 5.10.3.2 of ETSI EN 300 220-1 V3.1.1. The measurements shall be performed during continuously transmitting.

8.4. Test Data

Temperature:	See below	Relative Humidity:	52 %
Pressure:	1012 hPa	Test Voltage:	AC 230V, 50Hz
Test Channel	CH01		

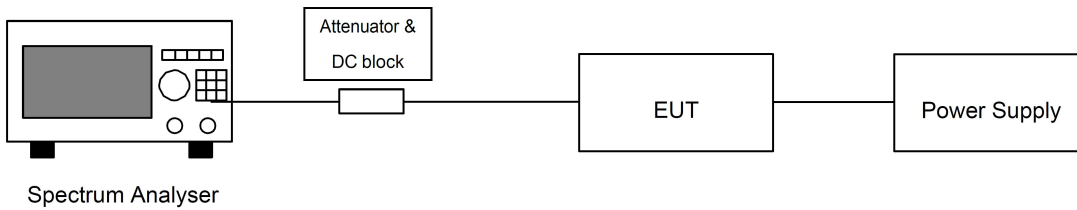
Measurement points: offset from centre frequency	Peak power limit applicable at measurement points (dBm)	Test Result (dBm)
-OCW	0	-11.67
+OCW	0	-9.95
-0,5 x OCW - 400 kHz	-27	-37.29
0,5 x OCW + 400 kHz	-27	-34.76
-0,5 x OCW -1 200 kHz	-27	-35.97
0,5 x OCW + 1 200 kHz	-27	-37.56

9. TX Behaviour Under Low Voltage Conditions

9.1. Test Standard and Limit

Test Standard	ETSI EN300 220-2 V3.2.1 Clause 4.3.8
Test Limit	<p>The equipment shall either:</p> <ul style="list-style-type: none"> a) remain in the Operating Channel OC without exceeding any applicable limits (e.g. Duty Cycle); or b) reduce its effective radiated power below the Spurious Emission limits without exceeding any applicable limits (e.g. Duty Cycle); or c) shut down, (ceasing function); <p>as the voltage falls below the manufacturers declared operating voltage.</p>

9.2. Test Setup



9.3. Test Procedure

The conducted measurement procedure in clause 5.12.3.2 of ETSI EN 300 220-1 V3.1.1. The measurements shall be performed during continuously transmitting.

9.4. Test Data

Not Applicable. TX behaviour under low voltage condition applies to battery powered EUT.

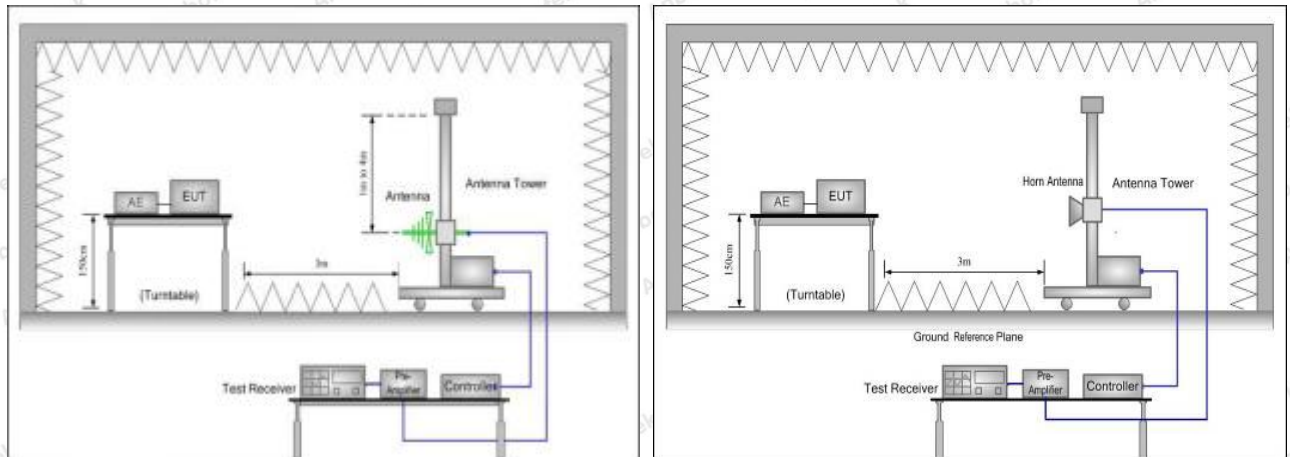
10. Unwanted Emissions In The Spurious Domain

10.1. Test Standard and Limit

Test Standard	ETSI EN 300 220-2 V3.2.1 Clause 4.2.2				
Test Limit	State	Frequency	47 MHz to 74 MHz	Other frequencies below 1 000 MHz	Frequencies above 1 000 MHz
		State	87,5 MHz to 118 MHz 174 MHz to 230 MHz 470 MHz to 790 MHz		
	TX mode	-54 dBm	-36 dBm	-30 dBm	
	RX and all other modes	-57 dBm	-57 dBm	-47 dBm	

10.2. Test Setup

(A) Radiated Emission Test Set-Up Frequency Bellow 1 GHz. (B) Radiated Emission Test Set-Up Frequency Above 1 GHz



10.3. Test Procedure

The conducted measurement procedure in clause 5.9.3.3.1 of ETSI EN 300 220-1 V3.1.1.

The radiated measurement procedure in clause 5.9.3.3.2 of ETSI EN 300 220-1 V3.1.1, with the antenna port terminated in a dummy load.

The measurements shall be performed during continuously transmitting.

10.4. Test Data

PASS

Test Results (25~1000MHz)

Temperature:	25°C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage:	AC 230V, 50Hz

Test Mode: TX Mode					
Frequency (MHz)	Level(dBm)	Limit (dBm)	Margin(dB)	Polarization	Test Result
57.12	-66.09	-54.00	-12.09	H	PASS
123.77	-52.93	-36.00	-16.93	H	
211.53	-73.45	-54.00	-19.45	H	
487.22	-60.81	-54.00	-6.81	H	
762.58	-67.31	-54.00	-13.31	H	
542.19	-60.70	-36.00	-24.70	H	
67.69	-68.28	-54.00	-14.28	V	
118.42	-59.19	-36.00	-23.19	V	
206.68	-74.12	-54.00	-20.12	V	
511.83	-57.67	-54.00	-3.67	V	
848.83	-58.78	-54.00	-4.78	V	
693.26	-58.27	-36.00	-22.27	V	

Test Result: above 1000MHz

Test Mode: TX Mode					
Frequency (MHz)	Level(dBm)	Limit (dBm)	Margin(dB)	Polarization	Test Result
2605.50	-46.26	-30.00	-16.26	H	PASS
2787.89	-45.66	-30.00	-15.66	H	
3474.00	-44.14	-30.00	-14.14	H	
2787.89	-46.57	-30.00	-16.57	V	
2605.50	-52.32	-30.00	-22.32	V	
3474.00	-44.36	-30.00	-14.36	V	

Test Results (25~1000MHz)

Temperature:	25°C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage:	AC 230V, 50Hz

Test Mode: RX Mode					
Frequency (MHz)	Level(dBm)	Limit (dBm)	Margin(dB)	Polarization	Test Result
51.34	-74.46	-57.00	-17.46	H	PASS
91.15	-68.50	-57.00	-11.50	H	
159.86	-68.49	-57.00	-11.49	H	
195.87	-74.52	-57.00	-17.52	H	
321.38	-61.81	-57.00	-4.81	H	
698.07	-68.74	-57.00	-11.74	H	
53.50	-68.02	-57.00	-11.02	V	
99.61	-65.22	-57.00	-8.22	V	
153.07	-61.80	-57.00	-4.80	V	
179.33	-69.74	-57.00	-12.74	V	
359.58	-69.32	-57.00	-12.32	V	
812.64	-65.99	-57.00	-8.99	V	

Test Result: above 1000MHz

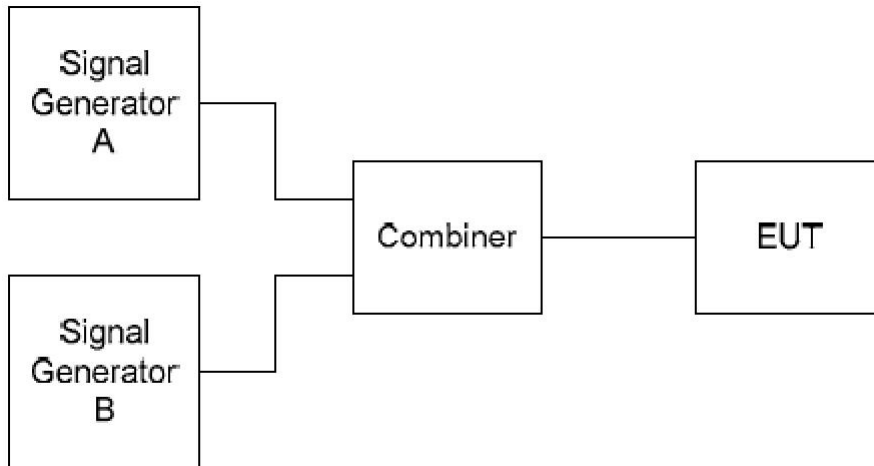
Test Mode: RX Mode					
Frequency (MHz)	Level(dBm)	Limit (dBm)	Margin(dB)	Polarization	Test Result
2588.13	-55.23	-47.00	-8.23	H	PASS
2622.87	-56.57	-47.00	-9.57	H	
3491.37	-53.01	-47.00	-6.01	H	
2787.89	-56.79	-47.00	-9.79	V	
2614.19	-55.24	-47.00	-8.24	V	
3482.69	-55.30	-47.00	-8.30	V	

11. Receiver Blocking

11.1. Test Standard and Limit

Test Standard	ETSI EN300 220-2 V3.2.1 Clause 4.4.2			
Test Limit	Requirement	Limits		
		Receiver category 2	Receiver category 1.5	Receiver category 1
	Blocking at ± 2 MHz from OC edge f_{high} and f_{low}	≥ -69 dBm	≥ -43 dBm	≥ -20 dBm
	Blocking at ± 10 MHz from OC edge f_{high} and f_{low}	≥ -44 dBm	≥ -33 dBm	≥ -20 dBm
	Blocking at ± 5 % of Centre Frequency or 15 MHz, whichever is the greater	≥ -44 dBm	≥ -33 dBm	≥ -20 dBm

11.2. Test Setup



11.3. Test Procedure

The conducted measurement procedure in clause 5.18.6.3 of ETSI EN 300 220-1 V3.1.1.

The measurements shall be performed during continuously receiving.

11.4. Test Data

Temperature:	25°C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage:	AC 230V, 50Hz

EUT category: category 2	Operating Channel: 868.5 MHz	
Requirement	Limit	Results
Blocking at -2 MHz from Operating Channel	≥ -69 dBm	PASS
Blocking at +2 MHz from Centre Frequency	≥ -69 dBm	PASS
Blocking at -10 MHz from Centre Frequency	≥ -44 dBm	PASS
Blocking at +10 MHz from Centre Frequency	≥ -44 dBm	PASS
Blocking at -5 % of Centre Frequency or 15 MHz, whichever is the greater	≥ -44 dBm	PASS
Blocking at +5 % of Centre Frequency or 15 MHz, whichever is the greater	≥ -44 dBm	PASS

APPENDIX I -- TEST SETUP PHOTOGRAPH

Photo of Radiation Emission Test



----- End of Report -----

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