

# SPECTRUM REPORT

**Applicant:** Nebra LTD.  
**Address of Applicant:** Unit 4 Bells Yew Green Business Court, Bells Yew Green,  
Tunbridge Wells TN3 9BJ United Kingdom  
**Equipment Under Test (EUT)**  
**Product Name:** Nebra Smart Outdoor LoRa Gateway / Nebra HNT Outdoor  
Hotspot Miner  
**Model No.:** HNTOUT-868-G-LT+, HNTOUT-868-G-LT, HNTOUT-868-LT+,  
HNTOUT-868-G, HNTOUT-868-LT, HNTOUT-868  
**Trade Mark:** Nebra  
**Applicable standards:** ETSI EN 300 220-1 V3.1.1 (2017-02)  
ETSI EN 300 220-2 V3.2.1 (2018-06)  
**Date of sample receipt:** 31 May, 2021  
**Date of Test:** 31 May, to 08 Jul., 2021  
**Date of report issue:** 09 Jul., 2021  
**Test Result:** PASS\*

\*In the configuration tested, the EUT complied with the standards specified above.

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives. The protection requirements with respect to electromagnetic compatibility contained in Directive 2014/53/EU are considered.



Bruce Zhang  
Laboratory Manager



This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the JYT product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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## 2 Version

Version No.	Date	Description
00	09 Jul., 2021	Original

**Remark:**  
The Shenzhen Anbotek Compliance Laboratory Limited of the BLE module quoted in this report is: SZAWW180830005-04W. The difference between the two is as follows: It is now used inside the whole machine. Therefore, the AC Power Line Conducted Emission and the Radiated Spurious Emission are retested.

Tested by: Carey Chen  
Test Engineer

Date: 09 Jul., 2021

Reviewed by: Winner Zhang  
Project Engineer

Date: 09 Jul., 2021

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## 4 Test Summary

Test Items	Test Requirement	Test method	Result
<b>Transmitter Part</b>			
Operating frequency	EN 300 220-2 Clause 4.2.1	EN 300 220-1 Clause 5.1.2	PASS*
Effective Radiated Power	EN 300 220-2 Clause 4.3.1	EN 300 220-1 Clause 5.2.2	PASS*
Maximum e.r.p. spectral density	EN 300 220-2 Clause 4.3.2	EN 300 220-1 Clause 5.3.2	PASS*
Duty Cycle	EN 300 220-2 Clause 4.3.3	EN 300 220-1 Clause 5.4.2	PASS*
Occupied Bandwidth	EN 300 220-2 Clause 4.3.4	EN 300 220-1 Clause 5.6.3	PASS*
Tx Out of Band Emissions	EN 300 220-2 Clause 4.3.5	EN 300 220-1 Clause 5.8.3	PASS*
Transient power	EN 300 220-2 Clause 4.3.6	EN 300 220-1 Clause 5.10.3	PASS*
Adjacent Channel Power	EN 300 220-2 Clause 4.3.7	EN 300 220-1 Clause 5.11.3	N/A
TX behaviour under Low Voltage Conditions	EN 300 220-2 Clause 4.3.8	EN 300 220-1 Clause 5.12.3	PASS*
Adaptive Power Control	EN 300 220-2 Clause 4.3.9	EN 300 220-1 Clause 5.13.3	N/A
FHSS equipment	EN 300 220-2 Clause 4.3.10	EN 300 220-2 Clause 4.3.10.3	N/A
Short term behaviour	EN 300 220-2 Clause 4.3.11	EN 300 220-1 Clause 5.5.2	N/A
Unwanted emissions in the spurious domain	EN 300 220-2 Clause 4.2.2	EN 300 220-1 Clause 5.9.3	PASS
<b>Receiver Part</b>			
RX sensitivity	EN 300 220-2 Clause 4.4.1	EN 300 220-1 Clause 5.14.3	N/A
Blocking	EN 300 220-2 Clause 4.4.2	EN 300 220-1 Clause 5.18.6	PASS*
<b>Polite spectrum access conformance requirement</b>			
Clear Channel Assessment threshold	EN 300 220-2 Clause 4.5.2	EN 300 220-1 Clause 5.21.2.3	N/A
Polite spectrum access timing parameters	EN 300 220-2 Clause 4.5.3	EN 300 220-1 Clause 5.21.2.3	N/A
Adaptive Frequency Agility	EN 300 220-2 Clause 4.5.4	EN 300 220-1 Clause 5.21.4.2	N/A
<b>Remark:</b> <ol style="list-style-type: none"> <li>1. Pass: Meet the requirement.</li> <li>2. PASS*: Refer to the Report No.: SZAWW180830005-04W</li> <li>3. N/A: Not Applicable for Non-adaptive equipment.</li> <li>4. The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer).</li> </ol>			

## 5 General Information

### 5.1 Client Information

Applicant:	Nebra LTD.
Address:	Unit 4 Bells Yew Green Business Court, Bells Yew Green, Tunbridge Wells TN3 9BJ United Kingdom
Manufacturer:	Nebra LTD.
Address:	Unit 4 Bells Yew Green Business Court, Bells Yew Green, Tunbridge Wells TN3 9BJ United Kingdom
Factory:	SUNSOAR TECH CO., LIMITED
Address:	4/F, Block E, Fengze Building, Huafeng No.2 Industrial Park, Hangkong Road, XiXiang Town, BaoAn District, Shenzhen, China

### 5.2 General Description of E.U.T.

Product Name:	Nebra Smart Outdoor LoRa Gateway / Nebra HNT Outdoor Hotspot Miner
Model No.:	HNTOUT-868-G-LT+, HNTOUT-868-G-LT, HNTOUT-868-LT+, HNTOUT-868-G, HNTOUT-868-LT, HNTOUT-868
Operation Frequency:	868.1MHz-868.5 MHz
Hardware version:	V01-16-2021-1820
Software version:	4dc8745
Modulation:	OOK
Antenna type:	External antenna
Antenna Gain:	3.0dBi
Power supply:	AC: AC 230V / 50Hz POE: DC48V
	Model No.: HNTOUT-868-G-LT+, HNTOUT-868-G-LT, HNTOUT-868-LT+, HNTOUT-868-G, HNTOUT-868-LT, HNTOUT-868 The difference: we will offer the unit with or without a GPS module included. Models with the GPS Included are indicated with a -G on the end of the model number. For example a unit with model no HNTOUT-868 is 868 Mhz, no GPS. A unit with Model No HNTOUT-868-G, is 915Mhz with GPS. We offer the unit using the Raspberry Pi Compute Module 3+ 32GB by standard (no suffix) but have an -LT variant which uses the Raspberry Pi Compute Module 3 Lite with a 32 GB eMMC to SD adapter card and a -LT+ variant which uses the Raspberry Pi Compute Module 3+ Lite with a 32 GB eMMC to SD adapter card. These suffixes can be applied to the models both with and without GPS as described above. We also provide customers the ability to, optionally, add both cellular connectivity and an additional 8 channel LoRa gateway to any of these models by using an mPCIe module however these come as optional extras.

### 5.3 Test environment and mode, and test samples plans

Transmitting mode:	Keep the TX unit in transmitting mode with modulation.
Receiving mode:	Keep the RX unit in receiving mode.
<b>Operating Environment:</b>	
Temperature:	Normal: 15°C ~ 35°C, Extreme: -20°C ~ +55°C
Humidity:	20 % ~ 75 % RH
Atmospheric Pressure:	1008 mbar
Voltage:	POE: Nominal: 48Vdc, Extreme: Low 44Vdc, High 53Vdc

### 5.4 Description of Support Units

The EUT has been tested as an independent unit.

### 5.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%)
Radio frequency	±0.5 ppm
RF output power, conducted	±1.5 dB
Conducted spurious emission of transmitter, valid up to 6 GHz	±3.0 dB
Conducted emission of receivers	±3.0 dB
RF level uncertainty for a given BER	±1.5 dB
Occupied BandWidth	±5 %
Temperature	±3 °C
Humidity	±10 %
Radiated Emission (30MHz ~ 1000MHz)	±4.32 dB
Radiated Emission (1GHz ~ 18GHz)	±5.16 dB

### 5.6 Laboratory Facility

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

● **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

### 5.7 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax:+86-755-23116366

Email: info-JYTee@lets.com, Website: <http://www.ccis-cb.com>

## 5.8 Test Instruments list

Radiated Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	SAEMC	9m*6m*6m	966	01-19-2021	01-18-2024
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-03-2021	03-02-2022
Biconical Antenna	SCHWARZBECK	VUBA9117	359	06-18-2020	06-17-2021
				06-17-2021	06-16-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-03-2021	03-02-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-18-2020	06-17-2021
				06-17-2021	06-16-2022
EMI Test Software	AUDIX	E3	Version: 6.110919b		
Pre-amplifier	HP	8447D	2944A09358	03-03-2021	03-02-2022
Pre-amplifier	CD	PAP-1G18	11804	03-03-2021	03-02-2022
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-03-2021	03-02-2022
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-03-2021	03-02-2022
Signal Generator	Rohde & Schwarz	SMX	835454/016	03-03-2021	03-02-2022
Signal Generator	R&S	SMR20	1008100050	03-03-2021	03-02-2022
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-03-2021	03-02-2022
Cable	MICRO-COAX	MFR64639	K10742-5	03-03-2021	03-02-2022
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-03-2021	03-02-2022
RF Switch Unit	MWRFTTEST	MW200	N/A	N/A	N/A
Test Software	MWRFTTEST	MTS8200	Version: 2.0.0.0		

## 6 Radio Technical Requirements Specification in EN 300 220-2

### 6.1 Operating Frequency

Declared by the manufacturer operating frequency for 433.92MHz and OCW for 100kHz.

### 6.2 Duty Cycle

The manufacturer has declared that due to the time between transmissions by the devices, the duty cycle is less than 10%.

### 6.3 Adjacent Channel Power

Not applicable, only applies to transmitters with OCW  $\leq$  25 kHz.

### 6.4 Adaptive Power Control

Not applicable, only applies to EUT with adaptive power control using annex C band AF.

### 6.5 FHSS equipment

Not applicable, since the test applies to FHSS equipment.

### 6.6 Short term behaviour

Not applicable, only applies to EUT using annex C bands AD, AE, AF, AG, AH, or AI.



**6.7 Effective Radiated Power**

Test Requirement:	ETSI EN300 220-2 clause 4.3.1
Test Method:	ETSI EN300 220-1 clause 5.2.2.2
Receiver Setup:	RBW=100 kHz, VBW=300 kHz, Detector= peak
Limit:	10dBm (Refer to ETSI EN300 220-2 Annex B)
Test Procedure:	Refer to the Report No.: SZAWW180830005-04W
Test Instruments:	
Test Mode:	
Test Results:	

## 6.8 Occupied Bandwidth

Test Requirement:	EN300 220-2 Clause 4.3.4
Test Method:	EN 300 220-1 Clause 5.6.3
Limit:	Within of 433.05MHz to 434.79MHz
Test Procedure:	Refer to the Report No.: SZAWW180830005-04W
Test Instruments:	
Test Mode:	
Test Results:	

**6.9 Tx Out of Band Emissions**

Test Requirement:	EN300 220-2 Clause 4.3.5
Test Method:	EN 300 220-1 Clause 5.8.3
Limit:	Refer to ETSI EN300 220-1 Clause 5.8.2
Test Procedure:	Refer to the Report No.: SZAWW180830005-04W
Test Instruments:	
Test Mode:	
Test Results:	

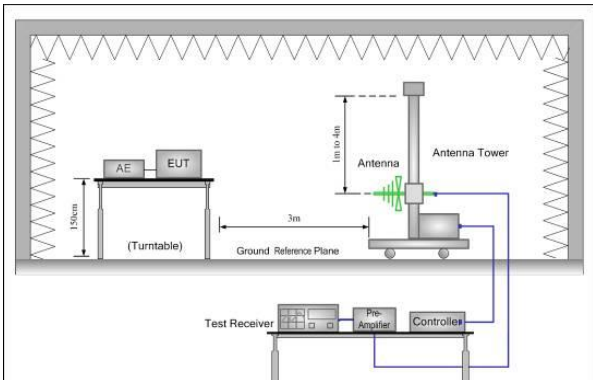
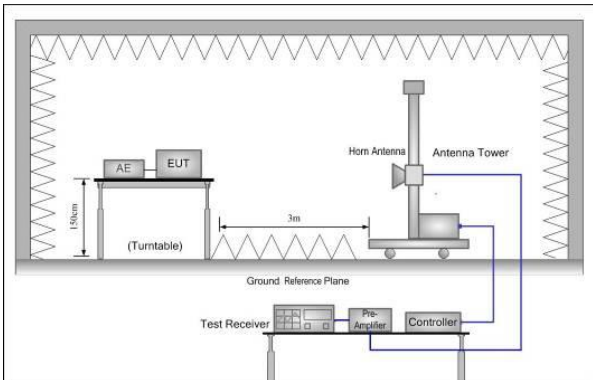
## 6.10 Transient power

Test Requirement:	EN300 220-2 Clause 4.3.6											
Test Method:	EN 300 220-1 Clause 5.10.3											
Limit:	<div>Table 23: Transmitter Transient Power limits</div> <table><tr><th>Absolute offset from centre frequency</th><th>RBW<sub>REF</sub></th><th>Peak power limit applicable at measurement points</th></tr><tr><td>≤ 400 kHz</td><td>1 kHz</td><td>0 dBm</td></tr><tr><td>&gt; 400 kHz</td><td>1 kHz</td><td>-27 dBm</td></tr></table>			Absolute offset from centre frequency	RBW <sub>REF</sub>	Peak power limit applicable at measurement points	≤ 400 kHz	1 kHz	0 dBm	> 400 kHz	1 kHz	-27 dBm
Absolute offset from centre frequency	RBW <sub>REF</sub>	Peak power limit applicable at measurement points										
≤ 400 kHz	1 kHz	0 dBm										
> 400 kHz	1 kHz	-27 dBm										
Test Procedure:	Refer to the Report No.: SZAWW180830005-04W											
Test Instruments:												
Test Mode:												
Test Results:												

## 6.11 TX behaviour under Low-voltage Conditions

Test Requirement:	EN 300 220-2 Clause 4.3.8
Test Method:	EN 300 220-1 Clause 5.12.3
Limit:	The equipment shall either: 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); as the voltage falls below the manufacturers declared operating voltage.
Test Procedure:	Refer to the Report No.: SZAWW180830005-04W
Test Instruments:	
Test Mode:	
Test Results:	

## 6.12 Unwanted emissions in the spurious domain

Test Requirement:	EN 300 220-2 Clause 4.2.2																						
Test Method:	EN 300 220-1 Clause 5.9.3																						
Receiver Setup:	<div>Table 20: Parameters for TX Spurious Radiations Measurement</div> <table><tr><th>Operating Mode</th><th>Frequency Range</th><th>RBW<sub>REF</sub> (see note 2)</th></tr><tr><td rowspan="9">Transmit mode</td><td>9 kHz ≤ f &lt; 150 kHz</td><td>1 kHz</td></tr><tr><td>150 kHz ≤ f &lt; 30 MHz</td><td>10 kHz</td></tr><tr><td>30 MHz ≤ f &lt; f<sub>c</sub> - m</td><td>100 kHz</td></tr><tr><td>f<sub>c</sub> - m ≤ f &lt; f<sub>c</sub> - n</td><td>10 kHz</td></tr><tr><td>f<sub>c</sub> - n ≤ f &lt; f<sub>c</sub> - p</td><td>1 kHz</td></tr><tr><td>f<sub>c</sub> + p &lt; f ≤ f<sub>c</sub> + n</td><td>1 kHz</td></tr><tr><td>f<sub>c</sub> + n &lt; f ≤ f<sub>c</sub> + m</td><td>10 kHz</td></tr><tr><td>f<sub>c</sub> + m &lt; f ≤ 1 GHz</td><td>100 kHz</td></tr><tr><td>1 GHz &lt; f ≤ 6 GHz</td><td>1 MHz</td></tr></table> <div><div>NOTE 1: f is the measurement frequency. f<sub>c</sub> is the Operating Frequency. m is 10 x OCW or 500 kHz, whichever is the greater. n is 4 x OCW or 100 kHz, whichever is the greater. p is 2,5 x OCW.</div><div>NOTE 2: If the value of RBW used for measurement is different from RBW<sub>REF</sub>, use bandwidth correction from clause 4.3.10.1.</div></div>	Operating Mode	Frequency Range	RBW <sub>REF</sub> (see note 2)	Transmit mode	9 kHz ≤ f < 150 kHz	1 kHz	150 kHz ≤ f < 30 MHz	10 kHz	30 MHz ≤ f < f <sub>c</sub> - m	100 kHz	f <sub>c</sub> - m ≤ f < f <sub>c</sub> - n	10 kHz	f <sub>c</sub> - n ≤ f < f <sub>c</sub> - p	1 kHz	f <sub>c</sub> + p < f ≤ f <sub>c</sub> + n	1 kHz	f <sub>c</sub> + n < f ≤ f <sub>c</sub> + m	10 kHz	f <sub>c</sub> + m < f ≤ 1 GHz	100 kHz	1 GHz < f ≤ 6 GHz	1 MHz
Operating Mode	Frequency Range	RBW <sub>REF</sub> (see note 2)																					
Transmit mode	9 kHz ≤ f < 150 kHz	1 kHz																					
	150 kHz ≤ f < 30 MHz	10 kHz																					
	30 MHz ≤ f < f <sub>c</sub> - m	100 kHz																					
	f <sub>c</sub> - m ≤ f < f <sub>c</sub> - n	10 kHz																					
	f <sub>c</sub> - n ≤ f < f <sub>c</sub> - p	1 kHz																					
	f <sub>c</sub> + p < f ≤ f <sub>c</sub> + n	1 kHz																					
	f <sub>c</sub> + n < f ≤ f <sub>c</sub> + m	10 kHz																					
	f <sub>c</sub> + m < f ≤ 1 GHz	100 kHz																					
	1 GHz < f ≤ 6 GHz	1 MHz																					
Limit:	<div>Table 19: Spurious domain emission limits</div> <table><tr><th>Frequency</th><th>47 MHz to 74 MHz 87,5 MHz to 118 MHz 174 MHz to 230 MHz 470 MHz to 790 MHz</th><th>Other frequencies below 1 000 MHz</th><th>Frequencies above 1 000 MHz</th></tr><tr><th>State</th><td></td><td></td><td></td></tr><tr><td>TX mode</td><td>-54 dBm</td><td>-36 dBm</td><td>-30 dBm</td></tr><tr><td>RX and all other modes</td><td>-57 dBm</td><td>-57 dBm</td><td>-47 dBm</td></tr></table>	Frequency	47 MHz to 74 MHz 87,5 MHz to 118 MHz 174 MHz to 230 MHz 470 MHz to 790 MHz	Other frequencies below 1 000 MHz	Frequencies above 1 000 MHz	State				TX mode	-54 dBm	-36 dBm	-30 dBm	RX and all other modes	-57 dBm	-57 dBm	-47 dBm						
Frequency	47 MHz to 74 MHz 87,5 MHz to 118 MHz 174 MHz to 230 MHz 470 MHz to 790 MHz	Other frequencies below 1 000 MHz	Frequencies above 1 000 MHz																				
State																							
TX mode	-54 dBm	-36 dBm	-30 dBm																				
RX and all other modes	-57 dBm	-57 dBm	-47 dBm																				
Test Frequency Range:	25MHz to 4GHz																						
Test Setup:	<div>Below 1GHz</div> <div></div> <div>Above 1GHz</div> <div></div>																						
Test Procedure:	<p>Substitution method was performed to determine the actual ERP emission levels of the EUT.</p> <p>The following test procedure as below:</p> <p><b>Below 1GHz test procedure:</b></p> <ol style="list-style-type: none"><li>On the test site as test setup graph above,the EUT shall be placed at the 1.5m support on the turntable and in the position closest to normal use as declared by the provider.</li></ol>																						

	<ol style="list-style-type: none"> <li>2. The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter. The output of the test antenna shall be connected to the measuring receiver.</li> <li>3. The transmitter shall be switched on, if possible, without modulation and the measuring receiver shall be tuned to the frequency of the transmitter under test.</li> <li>4. The test antenna shall be raised and lowered from 1m to 4m until a maximum signal level is detected by the measuring receiver. Then the turntable should be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.</li> <li>5. Repeat step 4 for test frequency with the test antenna polarized horizontally.</li> <li>6. Remove the transmitter and replace it with a substitution antenna (the antenna should be half-wavelength for each frequency involved). The center of the substitution antenna should be approximately at the same location as the center of the transmitter. At the lower frequencies, where the substitution antenna is very long, this will be impossible to achieve when the antenna is polarized vertically. In such case the lower end of the antenna should be 0.3 m above the ground.</li> <li>7. Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a nonradiating cable. With the antennas at both ends vertically polarized, and with the signal generator tuned to a particular test frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output.</li> <li>8. Repeat step 7 with both antennas horizontally polarized for each test frequency.</li> <li>9. Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps 7 and 8 by the power loss in the cable between the generator and the antenna, and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna by the following formula:  <math display="block">ERP(dBm) = Pg(dBm) - \text{cable loss (dB)} + \text{antenna gain (dBd)}</math>           where: Pg is the generator output power into the substitution antenna.         </li> </ol> <p><b>Above 1GHz test procedure:</b></p> <p>Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber, and the test antenna do not need to raise from 1 to 4m, just test in 1.5m height.</p>
Test Instruments:	Refer to section 5.8 for details
Test Mode:	Refer to section 5.3 for details
Test Results:	Pass

**Measurement Data:**

TX mode				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	polarization	Level(dBm)		
123.97	Vertical	-67.39	-54.00	Pass
327.79	V	-55.92		
59.99	V	-52.61	-36.00	
721.85	V	-64.61		
1736.60	V	-57.48	-30.00	
2604.90	V	-51.33		
3473.20	V	-48.36	-54.00	
144.22	Horizontal	-70.46		
328.68	H	-59.91	-36.00	
59.99	H	-58.60		
720.07	H	-55.31	-30.00	
1736.60	H	-50.75		

RX mode				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	polarization	Level(dBm)		
623.93	Vertical	-59.00	-57.00	Pass
720.16	V	-58.47		
1736.60	V	-61.98	-47.00	
320.03	Horizontal	-58.47	-57.00	
660.99	H	-58.49		
1736.60	H	-63.14	-47.00	



## 6.13 Receiver Requirements

Receiver Classification, Table 1 of EN 300 220-1.

**Table 1: Receiver categories**

Receiver category	Description
1	Category 1 is a high performance level of receiver. In particular to be used where the operation of a SRD may have inherent safety of human life implications.
1.5	Category 1.5 is an improved performance level of receiver category 2.
2	Category 2 is standard performance level of receiver.
3	Category 3 is a low performance level of receiver. Manufacturers have to be aware that category 3 receivers are not able to work properly in case of coexistence with some services such as a mobile radio service in adjacent bands. The manufacturer shall provide another mean to overcome the weakness of the radio link or accept the failure.

Remark: The EUT (Rx part) belong to Class 3 with no polite spectrum access.

### 6.13.1 RX sensitivity

Not applicable, since the test applied to with polite spectrum access facility only.

### 6.13.2 Blocking

Test Requirement:	EN 300 220-2 Clause 4.4.2										
Test Method:	EN 300 220-1 Clause 5.18.6										
Limit:	<p><b>Table 40: Blocking level parameters for RX category 3</b></p> <table> <tr> <th>Requirement</th><th>Limits</th></tr> <tr> <td></td><td><b>Receiver category 3</b></td></tr> <tr> <td>Blocking at <math>\pm 2</math> MHz from OC edge <math>f_{\text{high}}</math> and <math>f_{\text{low}}</math></td><td><math>\geq -80</math> dBm</td></tr> <tr> <td>Blocking at <math>\pm 10</math> MHz from OC edge <math>f_{\text{high}}</math> and <math>f_{\text{low}}</math></td><td><math>\geq -60</math> dBm</td></tr> <tr> <td>Blocking at <math>\pm 5\%</math> of Centre Frequency or 15 MHz, whichever is the greater</td><td><math>\geq -60</math> dBm</td></tr> </table>	Requirement	Limits		<b>Receiver category 3</b>	Blocking at $\pm 2$ MHz from OC edge $f_{\text{high}}$ and $f_{\text{low}}$	$\geq -80$ dBm	Blocking at $\pm 10$ MHz from OC edge $f_{\text{high}}$ and $f_{\text{low}}$	$\geq -60$ dBm	Blocking at $\pm 5\%$ of Centre Frequency or 15 MHz, whichever is the greater	$\geq -60$ dBm
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Blocking at $\pm 5\%$ of Centre Frequency or 15 MHz, whichever is the greater	$\geq -60$ dBm										
Test Setup:	Refer to the Report No.: SZAWW180830005-04W										
Test Procedure:											
Test Instruments:											
Test Mode:											
Test Results:											

## 6.14 Polite spectrum access requirements

### 6.14.1 Clear Channel Assessment threshold

Not applicable, since the test applied to with polite spectrum access facility only.

### 6.14.2 Polite spectrum access timing parameters

Not applicable, since the test applied to with polite spectrum access facility only.

### 6.14.3 Adaptive Frequency Agility

Not applicable, since the test applied to with polite spectrum access facility only.

## 7 Test Setup Photo

Radiated Spurious Emission  
Below 1GHz



Above 1GHz



## 8 EUT Constructional Details

Reference to the test report No. JYTSZB-R01-2100336.

-----End of report-----