

## ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT



**EUT Description** Bridge  
**Applicant:** Ring LLC  
12515 Cerise Ave, Hawthorne, CA90250 United States  
**Manufacturer:** Ring LLC  
12515 Cerise Ave, Hawthorne, CA90250 United States  
**Brand Name:** ring  
**Model No./ISED HVIN:** 7RCEAB  
**ISED PMN:** 7RCEAB  
**Report Number:** TERF2508002547E2  
**FCC ID** 2AEUP-7RCEAB  
**IC:** 20271-7RCEAB  
**Date of EUT Received:** August 8, 2025  
**Date of Test:** August 8, 2025~August 13, 2025  
**Issue Date:** August 15, 2025

*Aken Huang*  
**Approved By** Aken Huang

**We hereby certify that:**

The above equipment was tested by SGS Taiwan Ltd. Central RF Lab. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10:2020 and the energy emitted by the sample EUT comply with FCC rule part §15.247, ISED RSS-Gen and RSS-247.

The results of this report relate only to the sample identified in this report.

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## Revision History

Report Number	Revision	Description	Issue Date	Revised By	Remark
TERF2508002547E2	00	FCC / ISED C2PC for changed FEM	August 15, 2025	Yuri Tsai	

**Note:**

- 1、The remark "\*" indicates modification of the report upon requests from certification body.
- 2、This is an addendum test report reference to the test report *TERF2501000107E2*.

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## 1 GENERAL INFORMATION

### 1.1 Product Description

EUT Description	Bridge
Brand Name:	ring
Model No./ISED HVIN:	7RCEAB
Hardware Version:	N/A
Firmware Version:	N/A
EUT Series No.:	No.1
Power Supply:	100-240V AC
Test Software (Name/Version)	Tera Term V4.106

### 1.2 RF Specification

Radio Technology:	LoRa
Frequency Range:	902 – 928MHz
Channel number:	3 channels
Modulation type:	DTS
Dwell Time:	<= 0.4s
Operating Mode:	Point-to-Point
Antenna Designation:	PIFA Antenna, Peak Gain: 1dBi

**Note:** The antenna information is provided by the applicant, and the laboratory shall not be held liable for the accuracy, completeness, or reliability of any applicant-supplied data.

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### 1.3 Test Methodology of Applied Standards

FCC Part 15, Subpart C §15.247

FCC KDB 558074 D01 15.247 Meas Guidance v05r02

RSS-247 issue 4 July 2025

RSS-Gen, Issue 5 April 2018, Amendment 2 (February 2021)

ANSI C63.10:2020

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024

### 1.4 Test Facility

Laboratory	Test Site Address	Test Site Name	FCC Designation Number / Registration Number	IC CAB identifier	
SGS Taiwan Ltd. Central RF Lab. (TAF code 3702)	No.134, Wu Kung Road, New Taipei In- dustrial Park, Wuku District, New Taipei City, Taiwan.	SAC 1	TW0027 / 891563	TW3702	
		SAC 2			
		SAC 3			
		Conduction 1			
		Conducted 1			
		Conducted 2			
		Conducted 3			
		Conducted 4			
		Conducted 5			
		Conducted 6			
	No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333	Conduction C	TW0028 / 200037		
		SAC C			
		SAC D			
		SAC G			
		Conducted A			
		Conducted B			
		Conducted C			
		Conducted D			
		Conducted E			
		Conducted F			
		Conducted G			

**Note:** Test site name is remarked on the equipment list in each section of this report as an indication where measurements occurred in specific test site and address.

Temperature:	23.6	°C	Relative Humidity:	62	%
Test site	Conducted E		Test Start:	08/13/2025	
Test Engineer:	Henry Chiang		Test Done:	08/13/2025	

### 1.5 Special Accessories

There are no special accessories used while test was conducted.

### 1.6 Equipment Modifications

There was no modification incorporated into the EUT.

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## 2 SYSTEM TEST CONFIGURATION

### 2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 2.2 EUT Exercise

An engineering test mode (software/firmware) that applicant provided was utilized to manipulate the EUT into transmit, selection of the test channel, and modulation scheme.

### 2.3 Test Procedure

#### 2.3.1 Conducted Test (RF)

The active antenna port of the unlicensed wireless device is connected to the spectrum analyzer with attenuator to protect the instrumentation. If a second antenna port is available, it is tested at one operating frequency, with other port(s) appropriately terminated, to verify it has similar output characteristics as the fully tested port.

#### 2.3.2 Radiated Emissions

The EUT is placed on a turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.

### 2.4 Measurement Results Explanation Example

#### 2.4.1 Radiated Emission Test Sites For Measurements From 9 kHz To 30 MHz

Radiated emission below 30MHz is measured in a 9m\*6m\*6m semi-anechoic chamber, the

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measurements correspond to those obtained at an open-field test site.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

#### 2.4.2 For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

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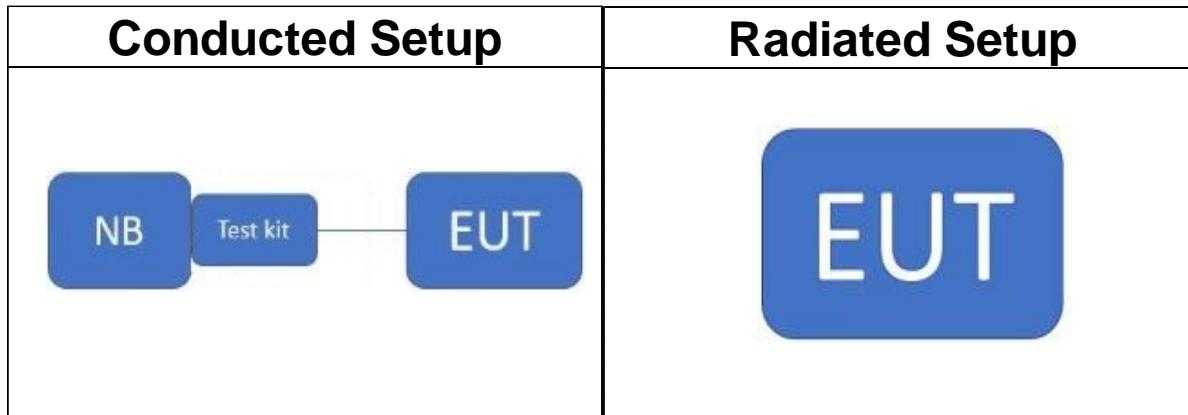
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## 2.5 Test Configuration



## 2.6 Control Unit(s)

Conducted Emission Test Site: Conducted E					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL. (mm/dd/yyyy)	CAL DUE. (mm/dd/yyyy)
Test Kit	N/A	N/A	N/A	N/A	N/A
Notebook	HP	HSN-Q35C-4	P0004691	N/A	N/A

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### 3 SUMMARY OF TEST RESULTS

FCC Rules	ISED Rules	Description Of Test	Result
§15.247(b) (3)	RSS-247 §6.3.2	Peak Output Power	Compliant
§15.205 §15.209 §15.247(d)	RSS-247 §6.6 RSS-Gen §8.9	Radiated Band Edge and Spurious Emission	Compliant

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## 4 DESCRIPTION OF TEST MODES

### 4.1 Operating Frequencies

902~928 MHz	
CH	Freq. (MHz)
Low	902.5
Mid	914.5
High	926.5

### 4.2 The Worst Test Modes and Channel Details

1. The EUT has been tested under operating condition.
2. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.
3. Investigation has been done on all the possible configurations for searching the worst case.

The given UE is pre-scanned among below modes.

CONDUCTED TEST			
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION
LoRa	902.5 to 926.5	902.5, 914.5, 926.5	DTS

TRANSMIT RADIATED EMISSION TEST			
MODE	FREQUENCY BAND (MHz)	TEST FREQUENCY (MHz)	MODULATION
LoRa SF11	902.5 to 926.5	902.5, 914.5, 926.5	DTS
LoRa SF7	902.5 to 926.5	902.5, 914.5, 926.5	DTS

#### Note:

The field strength of radiated emission was measured as the EUT positioned in different orthogonal planes (E1/E2/H) based on actual usage of the EUT to pre-scan the emissions for determining the worst case scenario.

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## 5 MEASUREMENT UNCERTAINTY

Test Items	Uncertainty		
AC Power Line Conducted Emission	+/-	1.54	dB
Output Power measurement	+/-	0.97	dB
Emission Bandwidth	+/-	1.38	Hz
Conducted emission measurement	+/-	0.77	dB
Peak Power Density	+/-	0.61	dB
Temperature	+/-	0.6	°C
Humidity	+/-	3	%
DC / AC Power Source	+/-	1	%

Radiated Spurious Emission Measurement Uncertainty			
Polarization: Vertical	+/-	1.89	dB
	+/-	4.1	dB
	+/-	3.37	dB
	+/-	3.83	dB
Polarization: Horizontal	+/-	1.89	dB
	+/-	4.1	dB
	+/-	3.37	dB
	+/-	3.83	dB
Radiated Spurious Emission	+/-	2	dB
	+/-	1.59	dB
	+/-	1.71	dB
	+/-	1.64	dB
	+/-	3.84	dB
			33GHz-50GHz
			50GHz-60GHz
			60GHz-90GHz
			90GHz-140GHz
			140GHz-220GHz

**Note:**

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
2. The conformity assessment statement in this report is based solely on the test results, measurement uncertainty is excluded.

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## 6 MEASUREMENT EQUIPMENT USED

### 6.1 Conducted Measurement

Conducted Emission Test Site: Conducted E					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL. (mm/dd/yyyy)	CAL DUE. (mm/dd/yyyy)
Attenuator	Marvelous	MVE2213-10	RF06	11/14/2024	11/13/2025
DC Block	PASTERNAK	PE8210	RF157	11/14/2024	11/13/2025
Power Meter	Anritsu	ML2496A	2138002	08/28/2024	08/27/2025
Power Sensor	Anritsu	MA2411B	1911390	08/28/2024	08/27/2025
Power Sensor	Anritsu	MA2411B	1911398	08/28/2024	08/27/2025
Spectrum Analyzer	KEYSIGHT	N9010A	MY57120200	04/02/2025	04/01/2026
Test Software	SGS Taiwan	Radio Test Software	Ver.21	N.C.R	N.C.R

### 6.2 Radiated Measurement

Radiated Emission Test Site: SAC D					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL. (mm/dd/yyyy)	CAL DUE. (mm/dd/yyyy)
Active Loop Antenna	COM-POWER	AL-130R	10160105	12/11/2024	12/10/2025
Attenuator	Woken	WATT-218FS-10	RF17	11/14/2024	11/13/2025
Broadband Antenna	SCHWARZBECK	VULB 9168	9168-617	12/17/2024	12/16/2025
Coaxial Cable	EMCI+Huber Suhner	RG 214/U+EMC104-SM-SM-500+SUCAFLEX 104+16+EMC105-SM-SM-11000+EMC106-SM-SM-2300	W22.01+W21.01+150707+MY969/4+16+190825+150702	11/14/2024	11/13/2025
High Pass Filter	Titan Microwave	T04H30001800070S01	RF188	11/14/2024	11/13/2025
Horn Antenna	Schwarzbeck	BBHA9120D	1187	02/05/2025	02/04/2026
Horn Antenna	Schwarzbeck	BBHA9120D	1341	05/29/2025	05/28/2026
Horn Antenna	Schwarzbeck	BBHA9170	184	12/20/2024	12/19/2025
Pre-Amplifier	EMC Instruments	EMC12630SE	980273	11/14/2024	11/13/2025
Pre-Amplifier	EMC Instruments	EMC184045SEE	980881	11/14/2024	11/13/2025
Pre-Amplifier	EMC Instruments	EMC9135	980234	11/14/2024	11/13/2025
Spectrum Analyzer	KEYSIGHT	N9010A	MY54510568	10/16/2024	10/15/2025
Test Software	audix	e3	E3 20923 SGS Ver.9 (C)	N.C.R	N.C.R

**NOTE: N.C.R refers to Not Calibrated Required.**

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## 7 PEAK OUTPUT POWER MEASUREMENT

### 7.1 Standard Applicable:

#### 7.1.1 FCC

For systems using digital modulation in the 902-928 MHz bands, the limit for peak output power is 1Watt.

If the transmitting antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the Antenna exceeds 6dBi.

In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of Antenna exceeds 6dBi.

#### 7.1.2 ISED

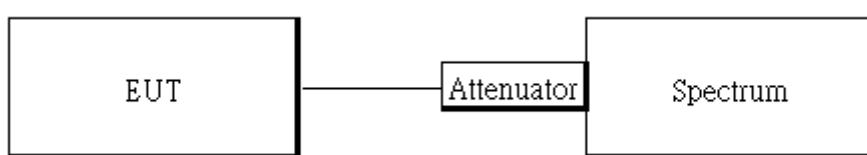
For systems using digital modulation in the 902-928 MHz bands, the limit for peak output power is 1Watt and the e.i.r.p. shall not exceed 4 W.

#### Note:

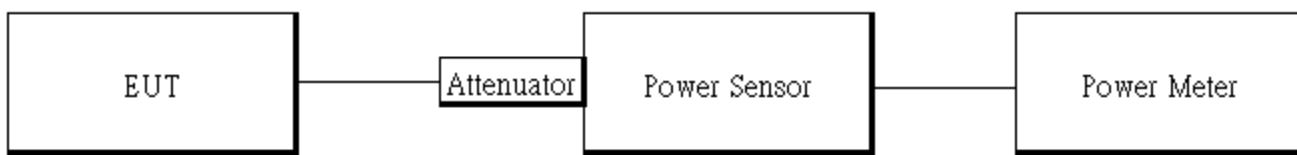
When the antenna gain is greater than 6 dBi, the power limit attenuated accordingly.

### 7.2 Test Setup

#### 7.2.1 Duty Cycle



#### 7.2.2 Output Power



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## 7.3 Measurement Procedure:

### 7.3.1 Duty Cycle

1. Place the EUT on the table and set it in transmitting mode.
2. Set span = Zero
3. RBW = 8MHz, VBW = 8MHz,
4. Detector = Peak

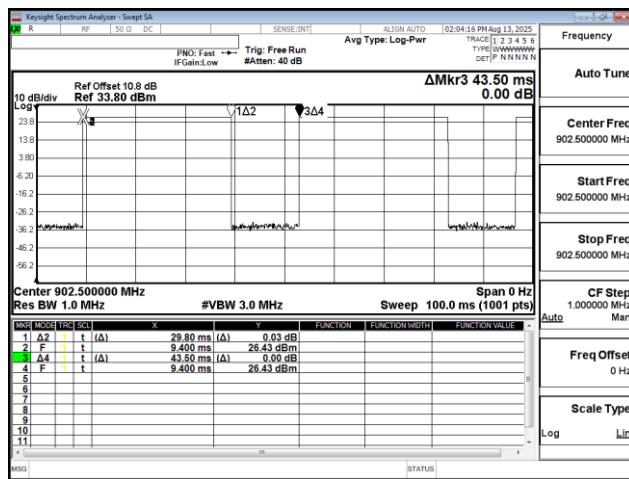
## 7.4 Output Power

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance.
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter.
4. Record the max. Reading as observed from Power Meter.
5. Repeat above procedures until all test default channel measured was complete.

## 7.5 Duty Factor:

LoRa	Duty Cycle (%) = Ton / (Ton+Toff)	Duty Factor (dB) =10*log ( 1/Duty Cycle )	1/T (kHz)	VBW setting (kHz)
SF7	68.50	1.64	0.03	1.00

LoRa\_SF7\_LowCH-902.5MHz



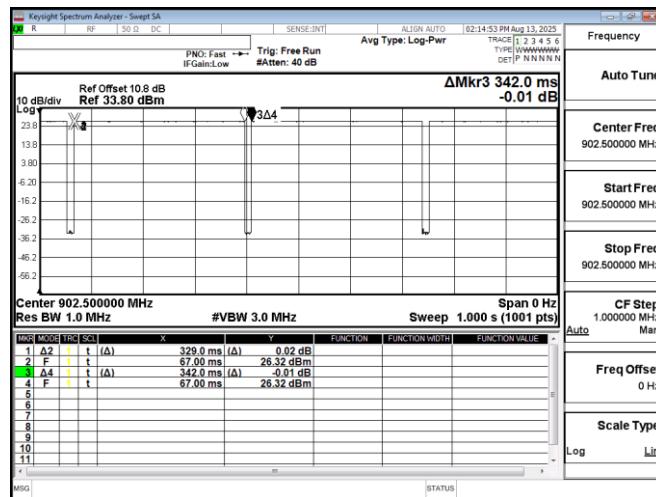
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LoRa	Duty Cycle (%) = Ton / (Ton+Toff)	Duty Factor (dB) =10*log ( 1/Duty Cycle )	1/T (kHz)	VBW setting (kHz)
SF11	96.20	0.17	0.00	1.00

LoRa\_SF11\_LowCH-902.5MHz



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## 7.6 Output Power:

### 7.6.1 Peak & Avg

LoRa SF7 mode:

CH	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	Required Limit (dBm)
Low	902.5	6	26.26	30
Mid	914.5	6	25.87	30
High	926.5	6	25.73	30
CH	Frequency (MHz)	Power Setting	Avg. Output Power (dBm)	Required Limit (dBm)
Low	902.5	6	25.66	30
Mid	914.5	6	25.63	30
High	926.5	6	25.44	30

\*Note:

1. Measured by power meter, cable loss 10.8 dB + Duty cycle factor has been offset to the power meter for Avg. power and cable loss has been offset for Peak power measurement.

LoRa SF11 mode:

CH	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	Required Limit (dBm)
Low	902.5	3	24.22	30
Mid	914.5	3	23.97	30
High	926.5	3	23.75	30
CH	Frequency (MHz)	Power Setting	Avg. Output Power (dBm)	Required Limit (dBm)
Low	902.5	3	24.09	30
Mid	914.5	3	23.83	30
High	926.5	3	23.62	30

\*Note:

1. Measured by power meter, cable loss 10.8 dB + Duty cycle factor has been offset to the power meter for Avg. power and cable loss has been offset for Peak power measurement.

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## 7.6.2 EIRP

### EIRP LoRa SF7 mode

CH	Frequency (MHz)	Power Setting	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit
Low	902.5	6	25.66	1.00	26.66	4W= 36 dBm
Mid	914.5	6	25.63	1.00	26.63	4W= 36 dBm
High	926.5	6	25.44	1.00	26.44	4W= 36 dBm

\* Note: EIRP = Average Power + Gain

### EIRP LoRa SF11 mode

CH	Frequency (MHz)	Power Setting	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit
Low	902.5	3	24.09	1.00	25.09	4W= 36 dBm
Mid	914.5	3	23.83	1.00	24.83	4W= 36 dBm
High	926.5	3	23.62	1.00	24.62	4W= 36 dBm

\* Note: EIRP = Average Power + Gain

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## 8 RADIATED BANDEDGE AND SPURIOUS EMISSION MEASUREMENT

### 8.1 Standard Applicable

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under the section 8, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the §15.209 and RSS-Gen §8.9 Table 5 and 6 limit as below.

And according to §15.33(a) (1) & RSS-Gen §6.13.2.a, for an intentional radiator operates below 10GHz, the frequency range of measurements: to the tenth harmonic of the highest fundamental frequency or to 40GHz, whichever is lower.

Frequency (MHz)	Field strength (microvolts/meter)	Distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

**Note:**

1. The lower limit shall apply at the transition frequencies.

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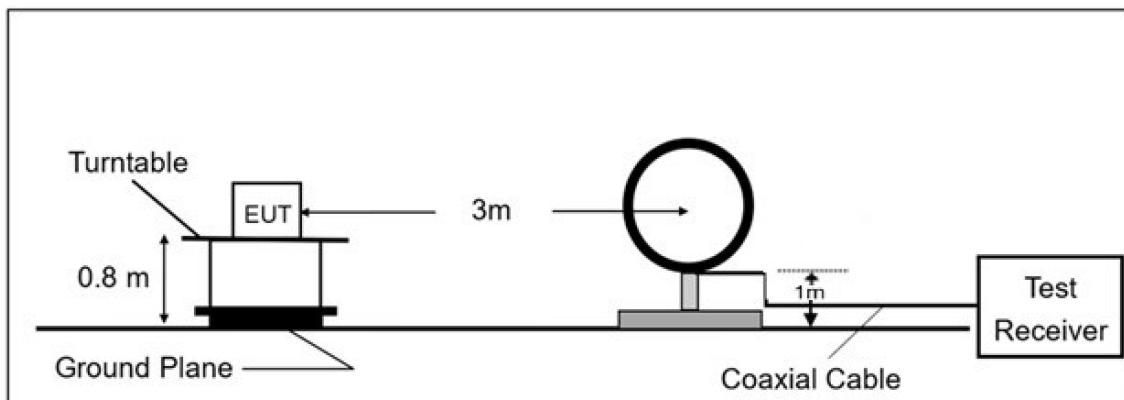
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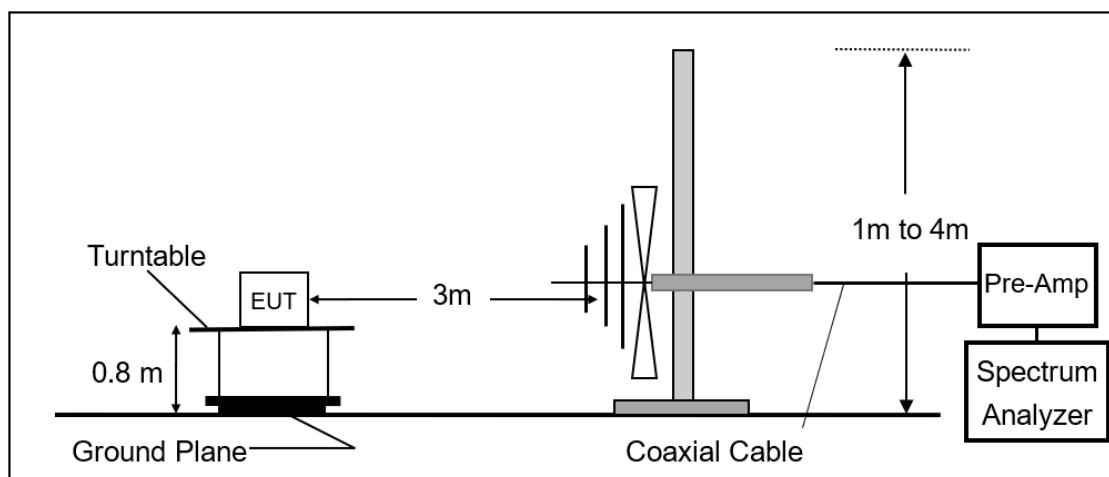
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## 8.2 Test Setup

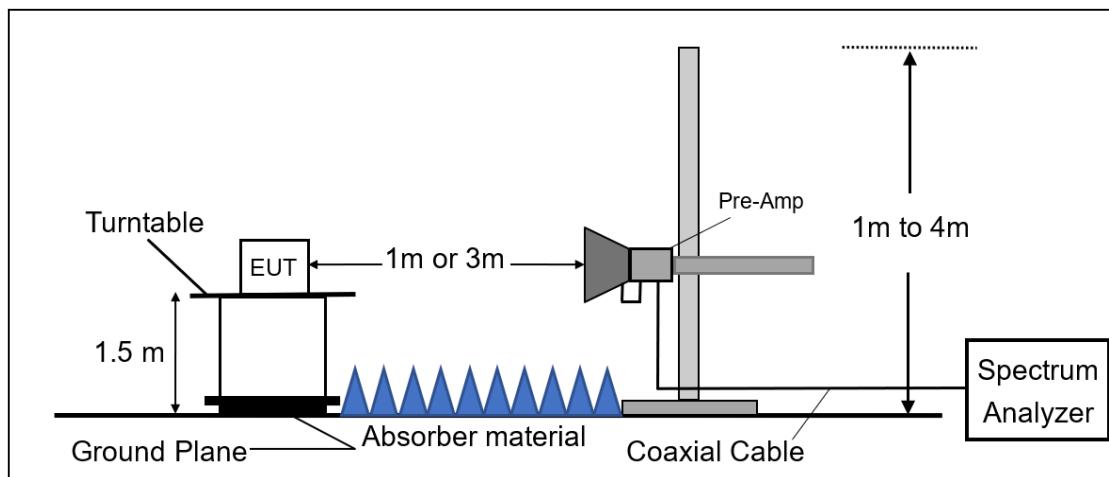
### (A) Radiated Emission Test Set-Up, Frequency Below 30MHz.



### (B) Radiated Emission Test Set-Up, Frequency From 30MHz to 1000MHz.



### (C) Radiated Emission Test Set-Up, Frequency Above 1GHz.



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### 8.3 Measurement Procedure

1. The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance.
2. The EUT was placed on a turn table with 0.8m for frequency < 1GHz and 1.5m for frequency > 1GHz above ground plane.
3. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
4. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
5. Set the spectrum analyzer as RBW=100 kHz and VBW=300 kHz for Peak Detector (PK) at frequency between 30MHz and 1 GHz.
6. Use receiver mode as RBW=120 kHz for Quasi-peak (QP) at frequency between 30MHz and 1 GHz.
7. Set the spectrum analyzer as RBW=1 MHz, VBW=3 MHz, Detector= Peak for Maximum Emission Measurements at frequency above 1 GHz.
8. Set the spectrum analyzer as RBW=1 MHz, VBW=3 MHz, Detector= RMS correction factor is  $[10 \log (1 / D)]$  for Average Emission measurements at frequency above 1 GHz **when D ≥ 98%**. If a specific emission is demonstrated to be continuous ( $D \geq 98\%$ ) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that emission, where D is the duty cycle.
9. Set the spectrum analyzer as RBW=1 MHz, VBW  $\geq 1/T$  **when D < 98%** for Average Emission Measurements at frequency above 1 GHz.
10. When measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made “while keeping the antenna in the ‘cone of radiation’ from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.” is still within the 3dB illumination BW of the measurement antenna.
11. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
12. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. On spectrum, change spectrum mode in linear display mode, and reduce VBW = 10Hz if average reading is measured.
13. Repeat above procedures until all default test channel measured were complete.

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## 8.4 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where  $FS$  = Field Strength

$CL$  = Cable Attenuation Factor (Cable Loss)

$RA$  = Reading Amplitude

$AG$  = Amplifier Gain

$AF$  = Antenna Factor

The limit of the emission level is expressed in  $dB_{\mu}V/m$ , which converts  $20 * \log(uV/m)$

Actual  $FS(dB_{\mu}V/m)$  = SPA. Reading level( $dB_{\mu}V$ ) + Factor( $dB$ )

Factor( $dB$ ) = Antenna Factor( $dB/m$ ) + Cable Loss( $dB$ ) - Pre\_Amplifier Gain( $dB$ )

## 8.5 Test Results of Radiated Spurious Emissions from 9 kHz to 30 MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit per 15.31(o) & RSS-GEN §6.13.2 was not reported.

## 8.6 Measurement Result:

Note: Refer to next page spectrum analyzer data chart and tabular data sheets.

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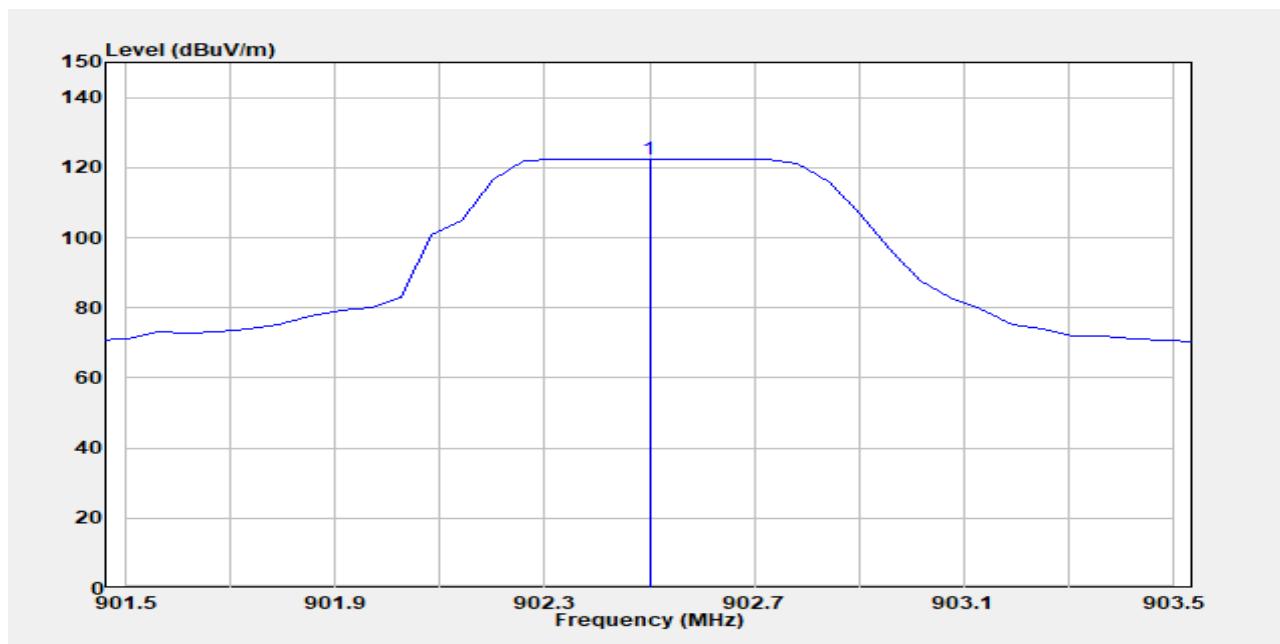
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### 8.6.1 Radiated Main and Band Edge Measurement Result

Report Number	:TERF2508002547E2	Test Site	:SAC D
Operation Mode	:LoRa SF7	Test Date	:2025-08-12
Test Frequency	:902.5 MHz	Temp./Humi.	:24.3°C/58%
Test Mode	:Main	Antenna Pol.	:Vertical
EUT Pol	:E1 Plane	Engineer	:Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
902.50	Peak	128.63	-5.30	123.33	-	-

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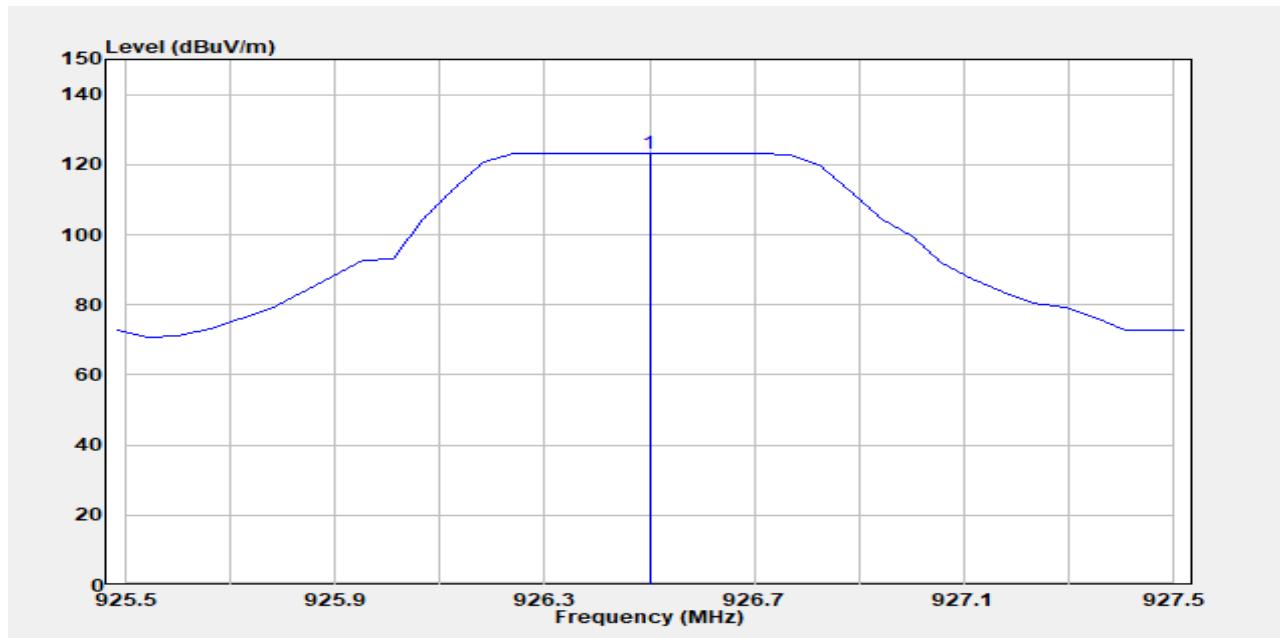
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Report Number :TERF2508002547E2  
Operation Mode :LoRa SF7  
Test Frequency :902.5 MHz  
Test Mode :Main  
EUT Pol :E1 Plane  
Test Site :SAC D  
Test Date :2025-08-11  
Temp./Humi. :24.3°C/58%  
Antenna Pol. :Horizontal  
Engineer :Temo Chen



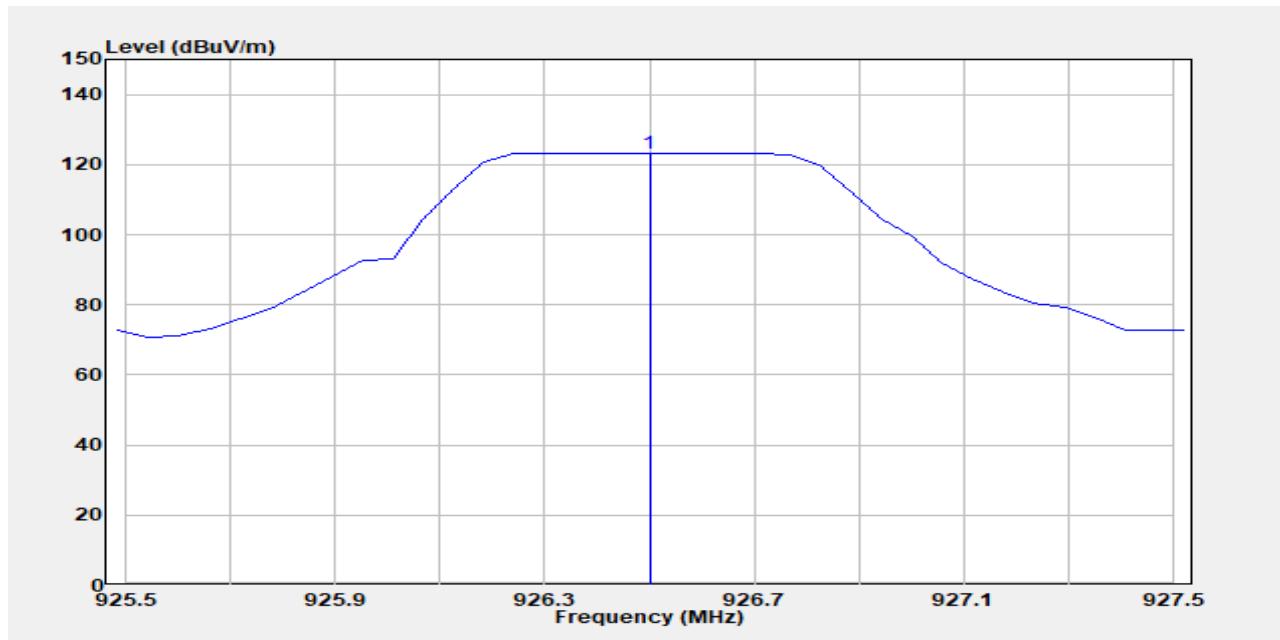
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
902.50	Peak	127.72	-5.30	122.42	-	-

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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :LoRa SF7 Test Date :2025-08-11  
Test Frequency :926.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Main Antenna Pol. :Vertical  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
926.50	Peak	127.87	-4.80	123.08	-	-

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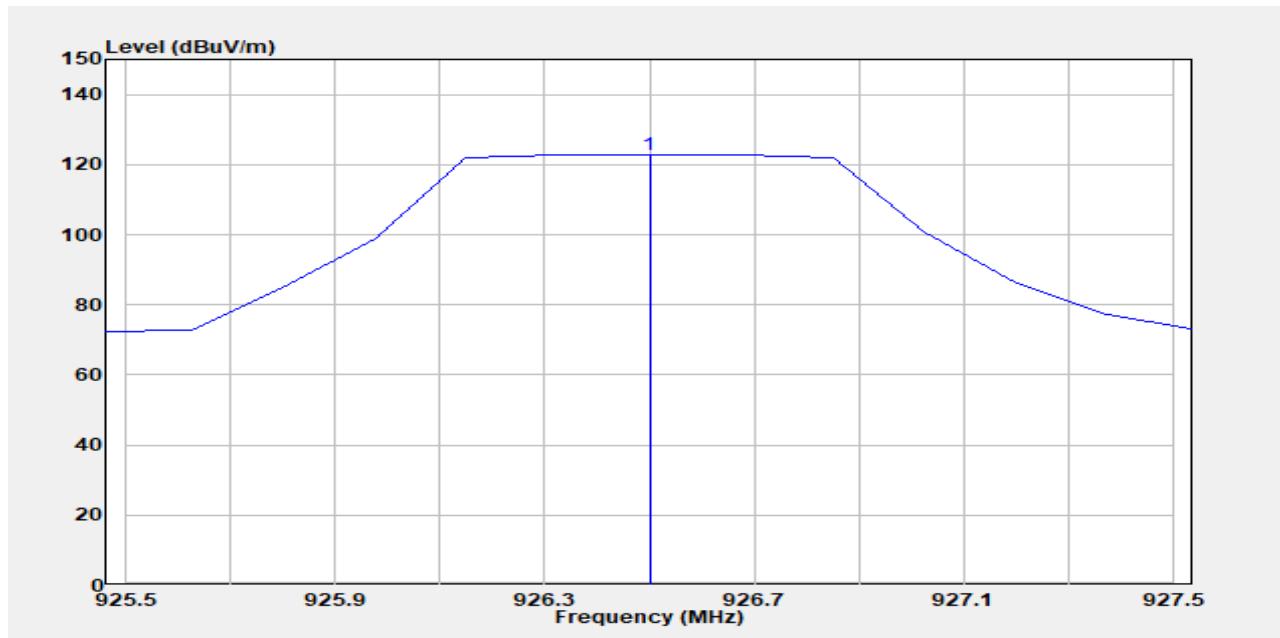
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Report Number :TERF2508002547E2  
Operation Mode :LoRa SF7  
Test Frequency :926.5 MHz  
Test Mode :Main  
EUT Pol :E1 Plane  
Test Site :SAC D  
Test Date :2025-08-11  
Temp./Humi. :24.3°C/58%  
Antenna Pol. :Horizontal  
Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
926.50	Peak	127.46	-4.80	122.66	-	-

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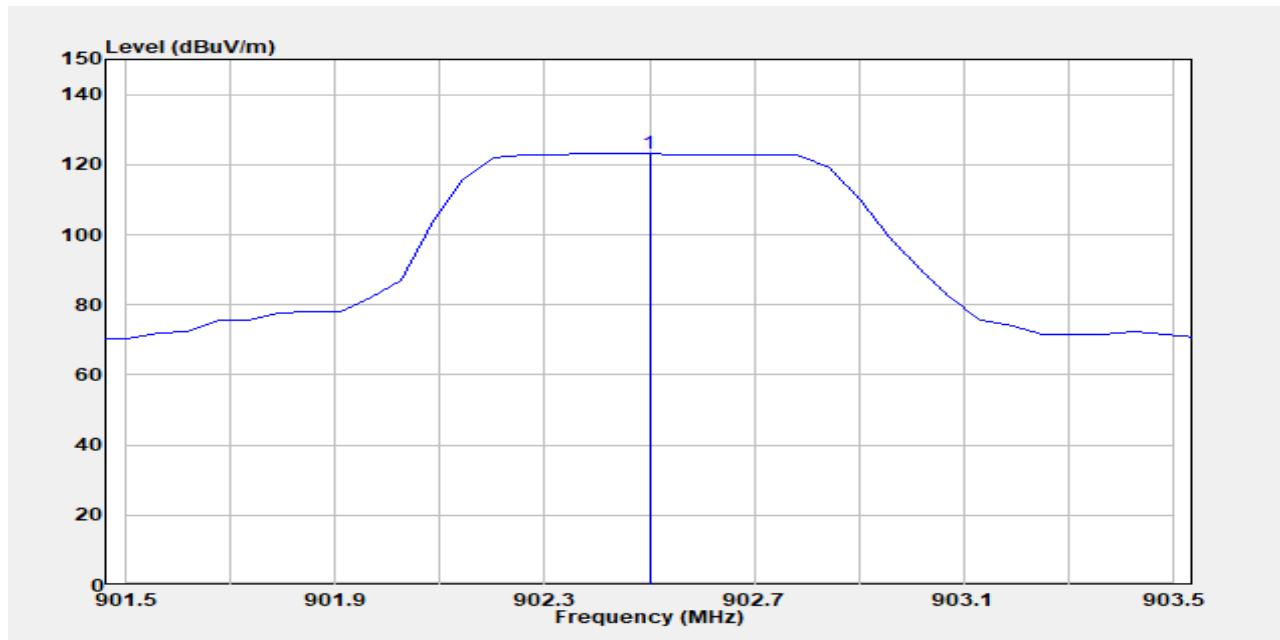
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Report Number :TERF2508002547E2  
Operation Mode :LoRa SF11  
Test Frequency :902.5 MHz  
Test Mode :Main  
EUT Pol :E1 Plane  
Test Site :SAC D  
Test Date :2025-08-11  
Temp./Humi. :24.3°C/58%  
Antenna Pol. :Vertical  
Engineer :Temo Chen



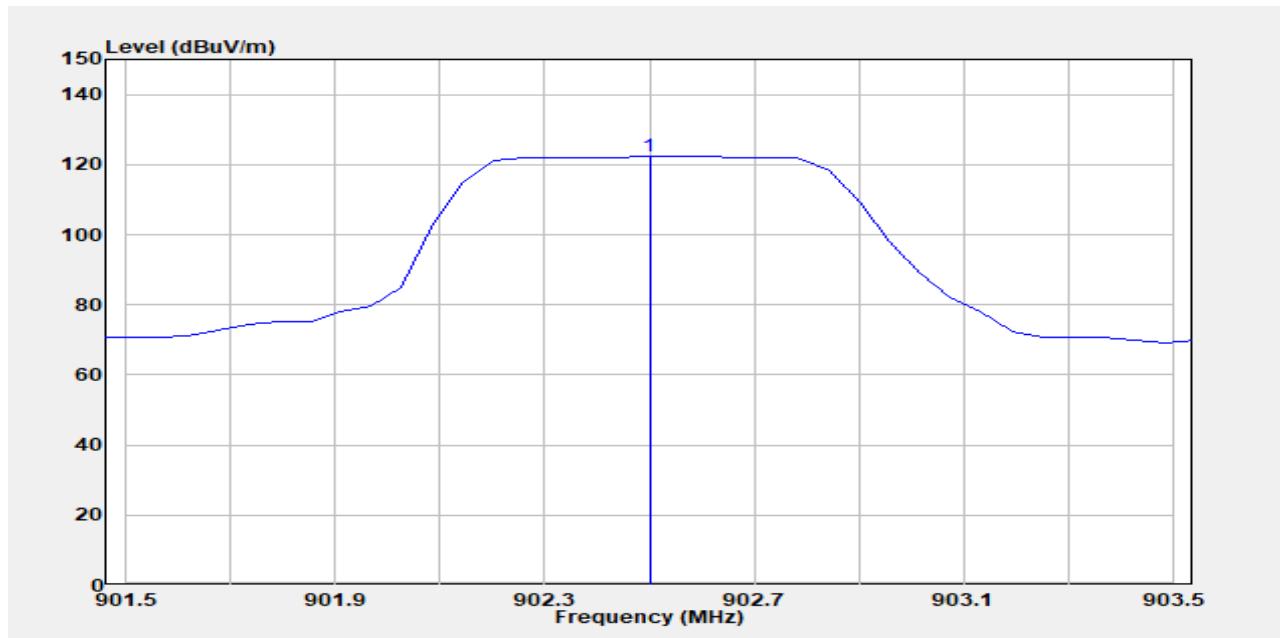
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
902.50	Peak	128.45	-5.30	123.15	-	-

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Report Number :TERF2508002547E2  
Operation Mode :LoRa SF11  
Test Frequency :902.5 MHz  
Test Mode :Main  
EUT Pol :E1 Plane  
Test Site :SAC D  
Test Date :2025-08-11  
Temp./Humi. :24.3°C/58%  
Antenna Pol. :Horizontal  
Engineer :Temo Chen



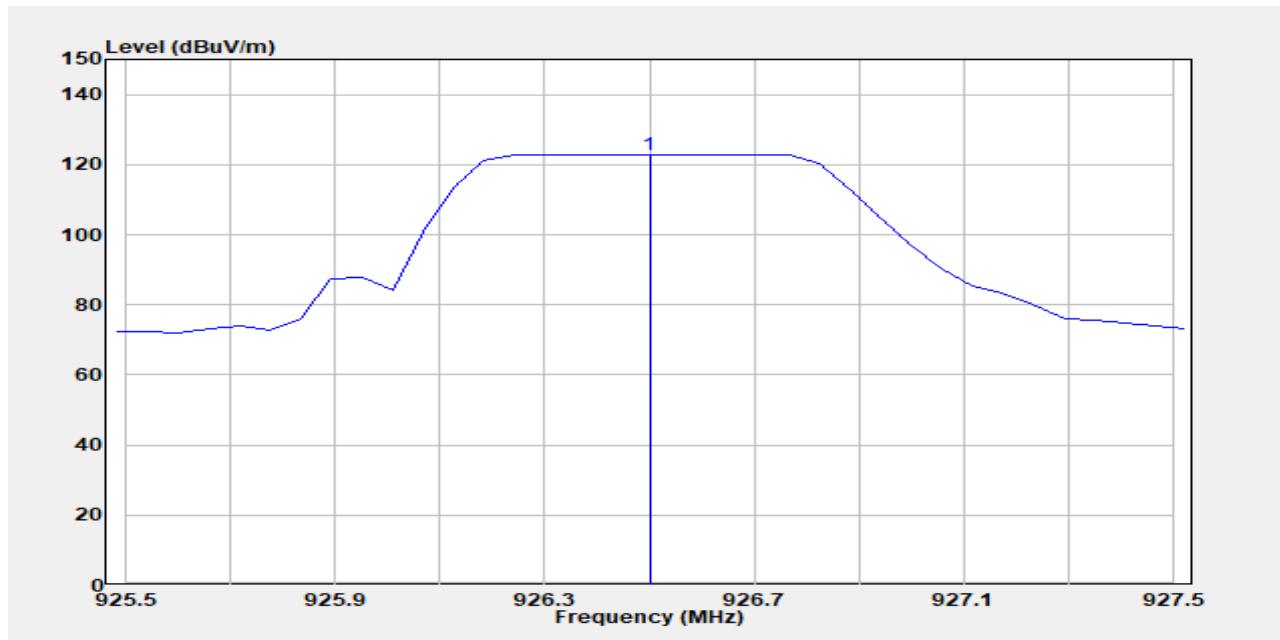
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
902.50	Peak	127.67	-5.30	122.37	-	-

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Report Number :TERF2508002547E2  
Operation Mode :LoRa SF11  
Test Frequency :926.5 MHz  
Test Mode :Main  
EUT Pol :E1 Plane  
Test Site :SAC D  
Test Date :2025-08-11  
Temp./Humi. :24.3°C/58%  
Antenna Pol. :Vertical  
Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
926.50	Peak	127.52	-4.80	122.72	-	-

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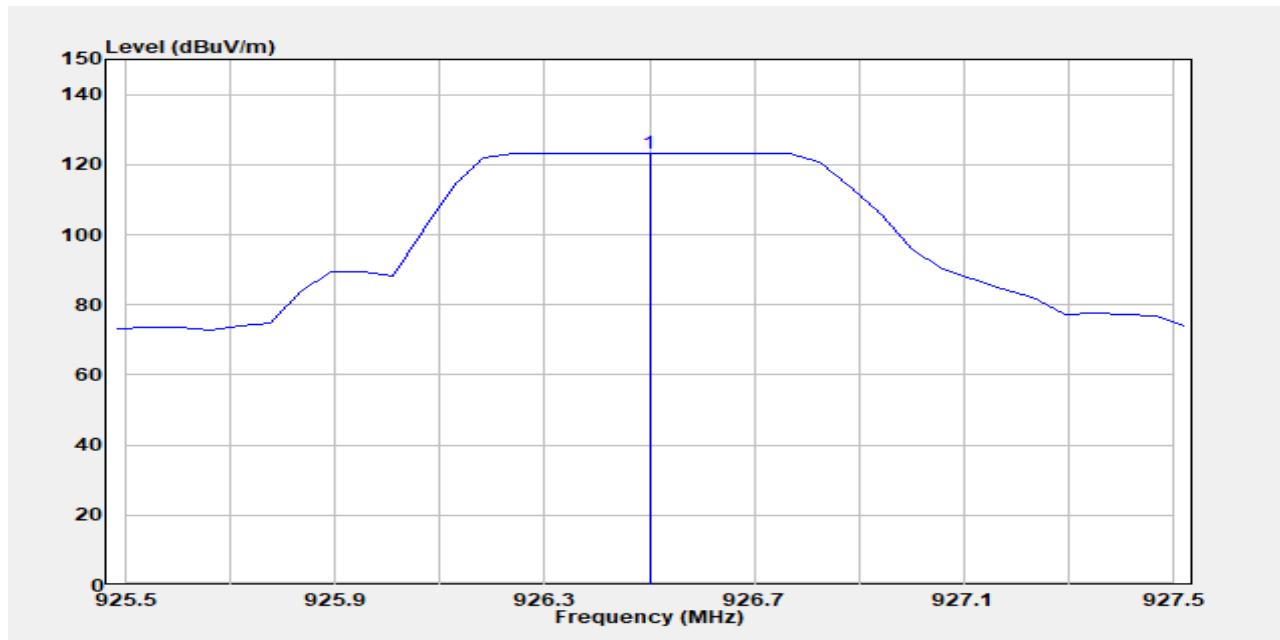
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Report Number :TERF2508002547E2  
Operation Mode :LoRa SF11  
Test Frequency :926.5 MHz  
Test Mode :Main  
EUT Pol :E1 Plane  
Test Site :SAC D  
Test Date :2025-08-11  
Temp./Humi. :24.3°C/58%  
Antenna Pol. :Horizontal  
Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
926.50	Peak	128.13	-4.80	123.33	-	-

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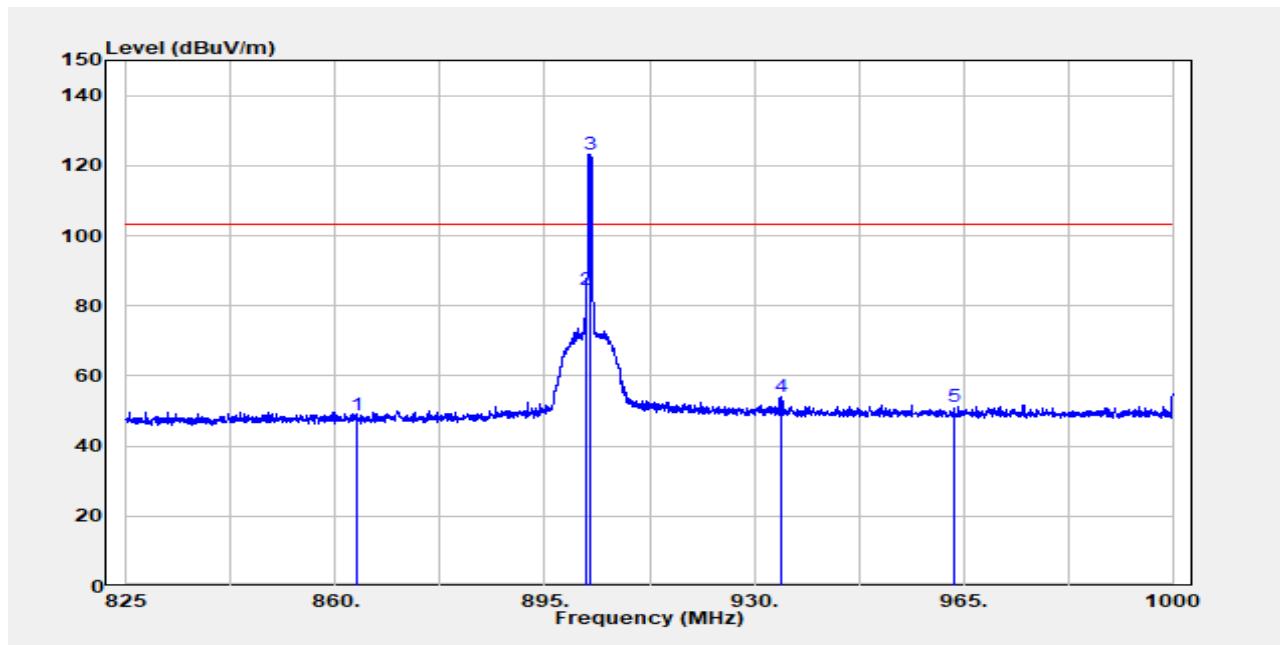
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :LoRa SF7 Test Date :2025-08-11  
Test Frequency :902.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Bandedge Antenna Pol. :Vertical  
EUT Pol :E1 Plane Engineer :Temo Chen



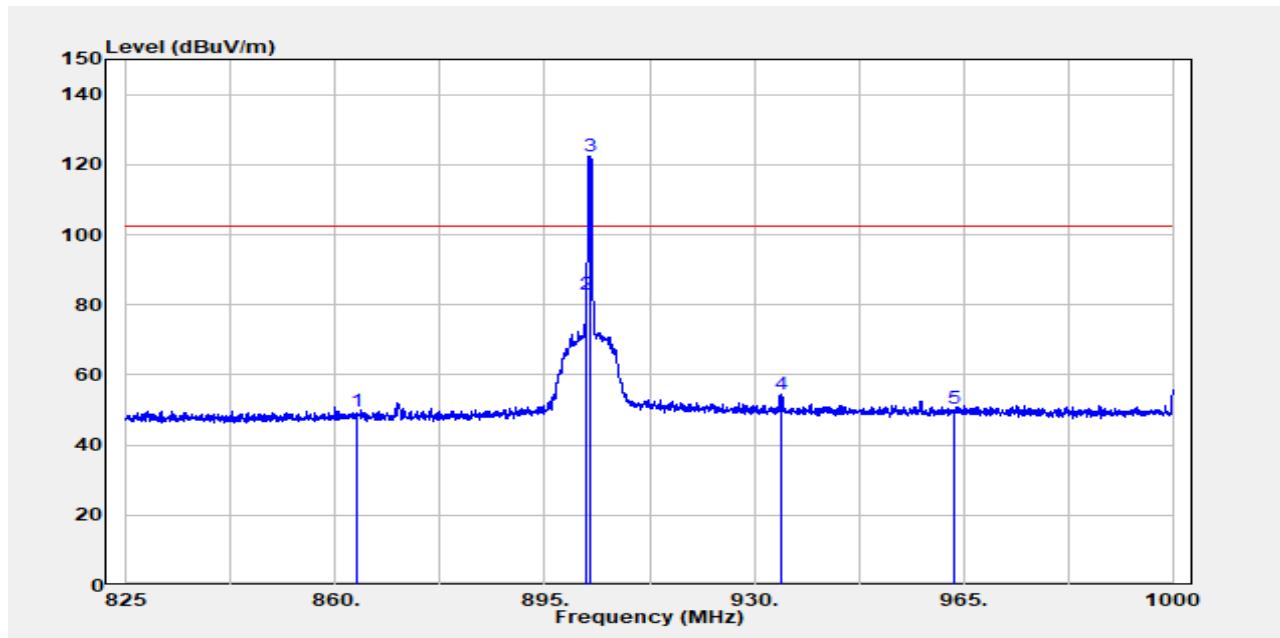
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
863.51	Peak	54.69	-5.93	48.76	103.33	-54.57
902.03	Peak	89.69	-5.31	84.38	103.33	-18.95
902.50	Peak	128.63	-5.30	123.33	-	-
934.41	Peak	58.73	-4.61	54.12	103.33	-49.21
963.47	Peak	55.34	-4.23	51.11	103.33	-52.22

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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :LoRa SF7 Test Date :2025-08-11  
Test Frequency :902.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Bandedge Antenna Pol. :Horizontal  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
863.51	Peak	55.46	-5.93	49.53	102.42	-52.89
902.03	Peak	88.27	-5.31	82.96	102.42	-19.46
902.50	Peak	127.72	-5.30	122.42	-	-
934.53	Peak	59.06	-4.61	54.45	102.42	-47.97
963.47	Peak	54.59	-4.23	50.36	102.42	-52.06

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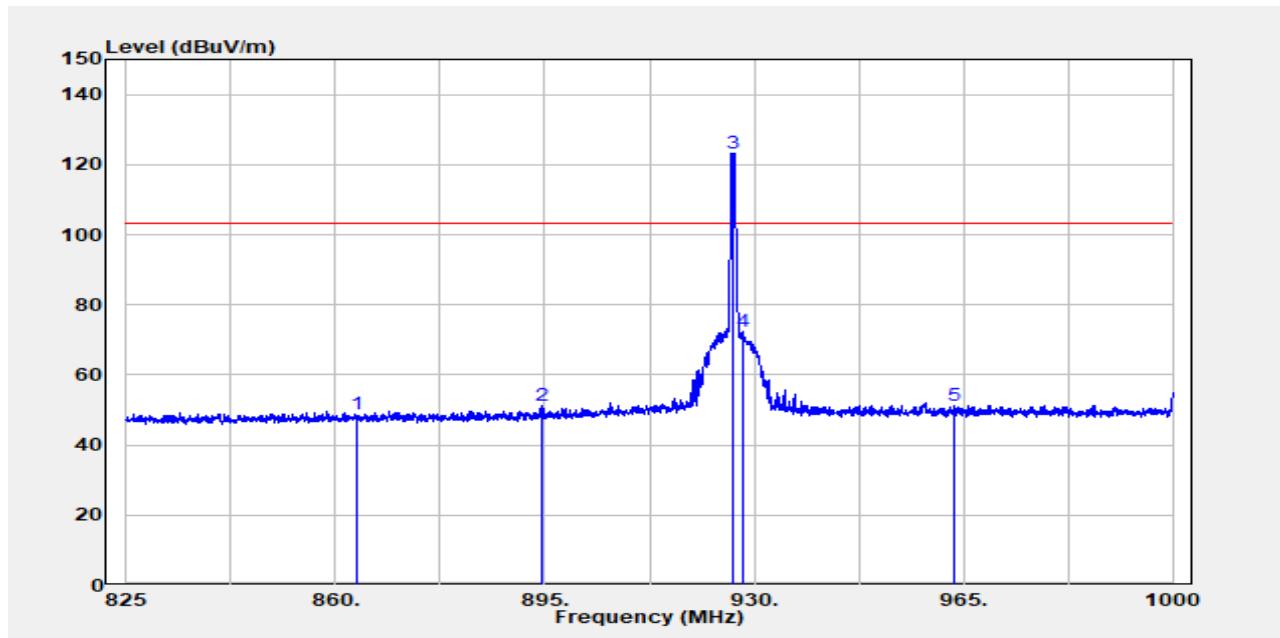
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :LoRa SF7 Test Date :2025-08-11  
Test Frequency :926.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Bandedge Antenna Pol. :Vertical  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
863.51	Peak	54.85	-5.93	48.92	103.08	-54.16
894.44	Peak	56.80	-5.50	51.30	103.08	-51.78
926.50	Peak	127.88	-4.80	123.08	-	-
927.99	Peak	77.07	-4.77	72.30	103.08	-30.78
963.47	Peak	55.37	-4.23	51.14	103.08	-51.94

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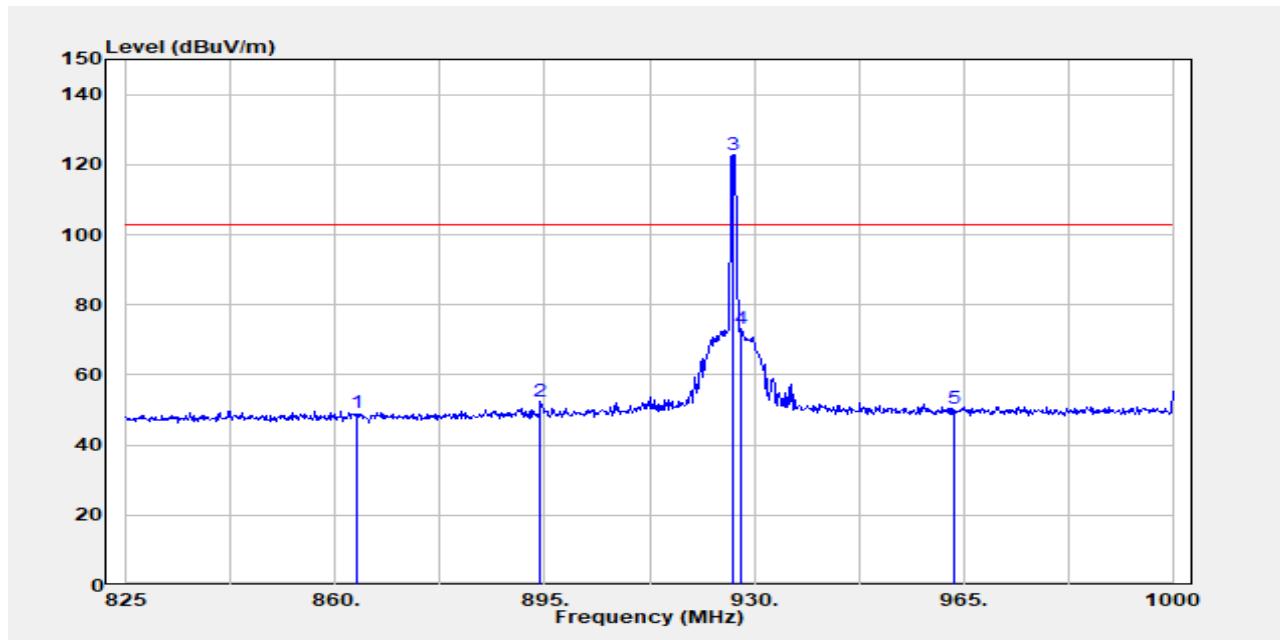
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :LoRa SF7 Test Date :2025-08-11  
Test Frequency :926.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Bandedge Antenna Pol. :Horizontal  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
863.50	Peak	54.93	-5.93	49.00	102.66	-53.66
894.30	Peak	57.92	-5.50	52.42	102.66	-50.24
926.50	Peak	127.46	-4.80	122.66	-	-
927.90	Peak	77.95	-4.77	73.18	102.66	-29.48
963.43	Peak	54.53	-4.23	50.30	102.66	-52.36

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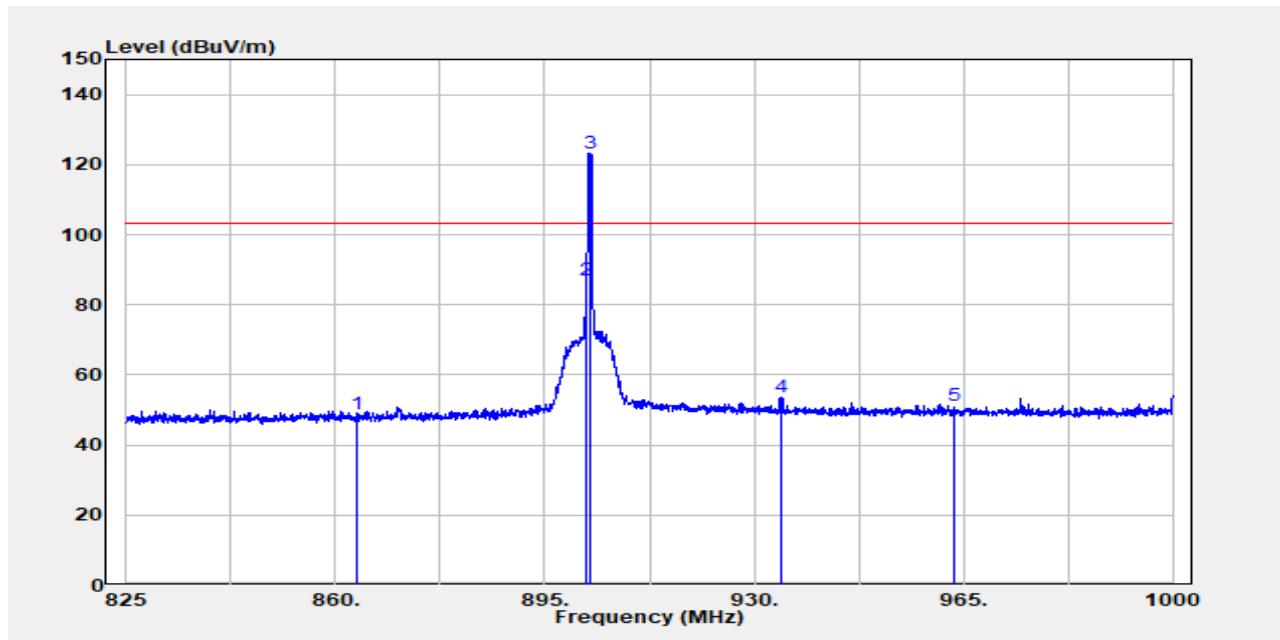
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :LoRa SF11 Test Date :2025-08-11  
Test Frequency :902.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Bandedge Antenna Pol. :Vertical  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
863.51	Peak	54.71	-5.93	48.78	103.15	-54.37
902.03	Peak	92.16	-5.31	86.85	103.15	-16.30
902.50	Peak	128.45	-5.30	123.15	-	-
934.59	Peak	58.27	-4.61	53.66	103.15	-49.49
963.47	Peak	55.47	-4.23	51.24	103.15	-51.91

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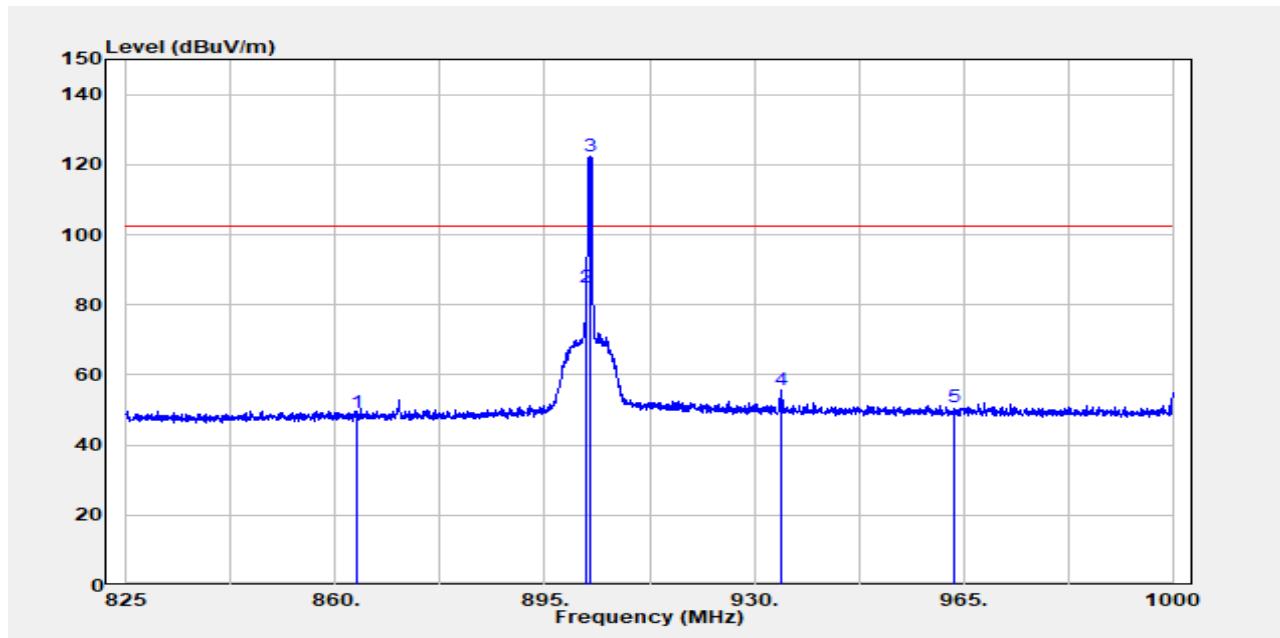
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :LoRa SF11 Test Date :2025-08-11  
Test Frequency :902.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Bandedge Antenna Pol. :Horizontal  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
863.51	Peak	55.22	-5.93	49.29	102.37	-53.08
902.03	Peak	90.35	-5.31	85.04	102.37	-17.33
902.50	Peak	127.67	-5.30	122.37	-	-
934.53	Peak	60.13	-4.61	55.52	102.37	-46.85
963.47	Peak	55.04	-4.23	50.81	102.37	-51.56

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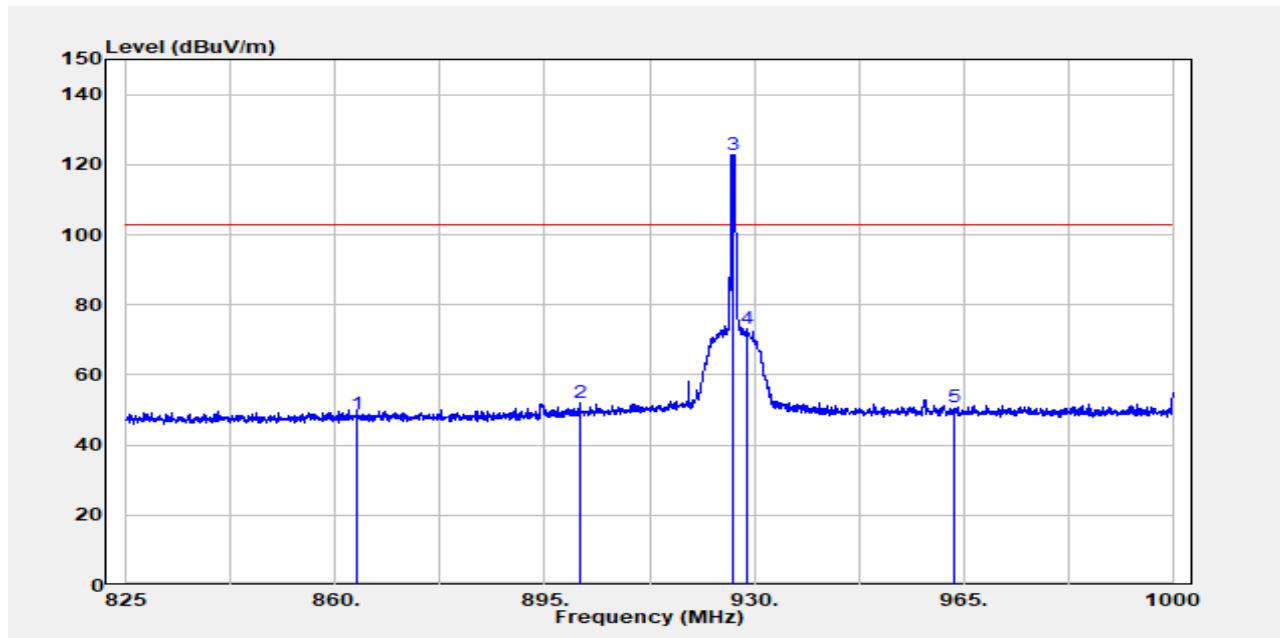
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :LoRa SF11 Test Date :2025-08-11  
Test Frequency :926.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Bandedge Antenna Pol. :Vertical  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
863.51	Peak	54.67	-5.93	48.74	102.72	-53.98
900.74	Peak	57.27	-5.35	51.92	102.72	-50.80
926.50	Peak	127.52	-4.80	122.72	-	-
928.87	Peak	77.97	-4.74	73.23	102.72	-29.49
963.47	Peak	55.22	-4.23	50.99	102.72	-51.73

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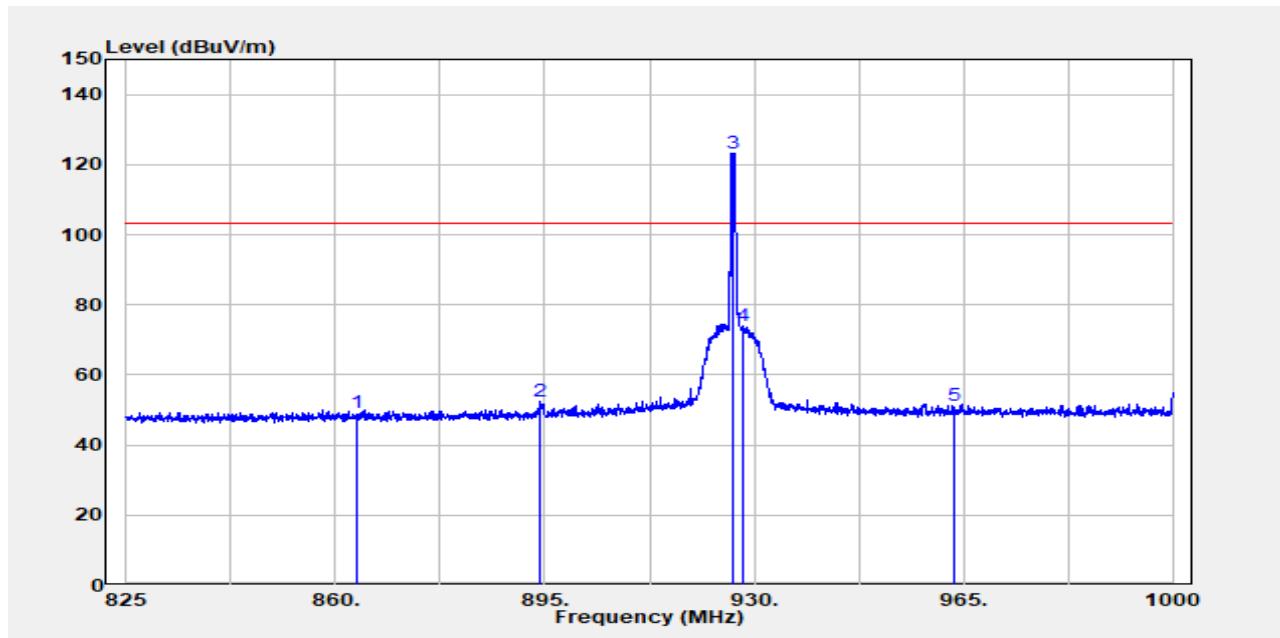
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :LoRa SF11 Test Date :2025-08-11  
Test Frequency :926.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Bandedge Antenna Pol. :Horizontal  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
863.51	Peak	55.26	-5.93	49.33	103.33	-54.00
894.27	Peak	57.85	-5.50	52.35	103.33	-50.98
926.50	Peak	128.13	-4.80	123.33	-	-
928.23	Peak	78.93	-4.77	74.16	103.33	-29.17
963.47	Peak	55.31	-4.23	51.08	103.33	-52.25

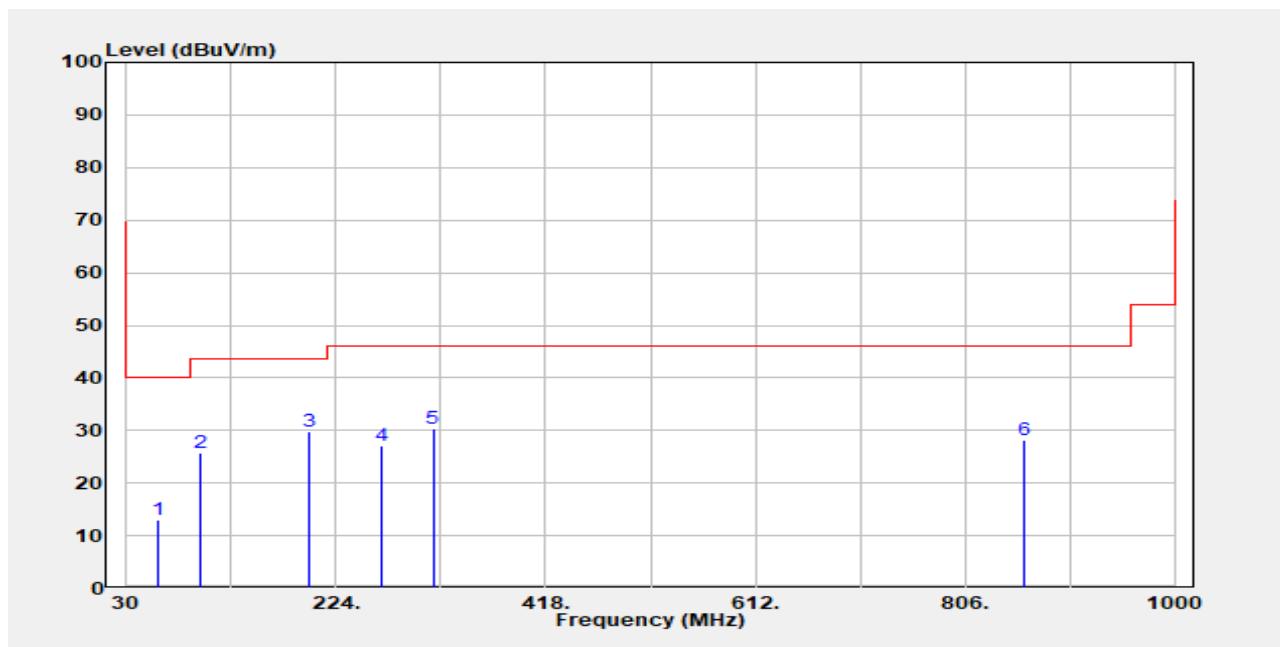
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## 8.6.2 Radiated Spurious Emission

Report Number	:TERF2508002547E2	Test Site	:SAC D
Operation Mode	:Lora SF7	Test Date	:2025-08-11
Test Frequency	:914.5 MHz	Temp./Humi.	:24.3°C/58%
Test Mode	:Tx	Antenna Pol.	:Vertical
EUT Pol	:E1 Plane	Engineer	:Temo Chen



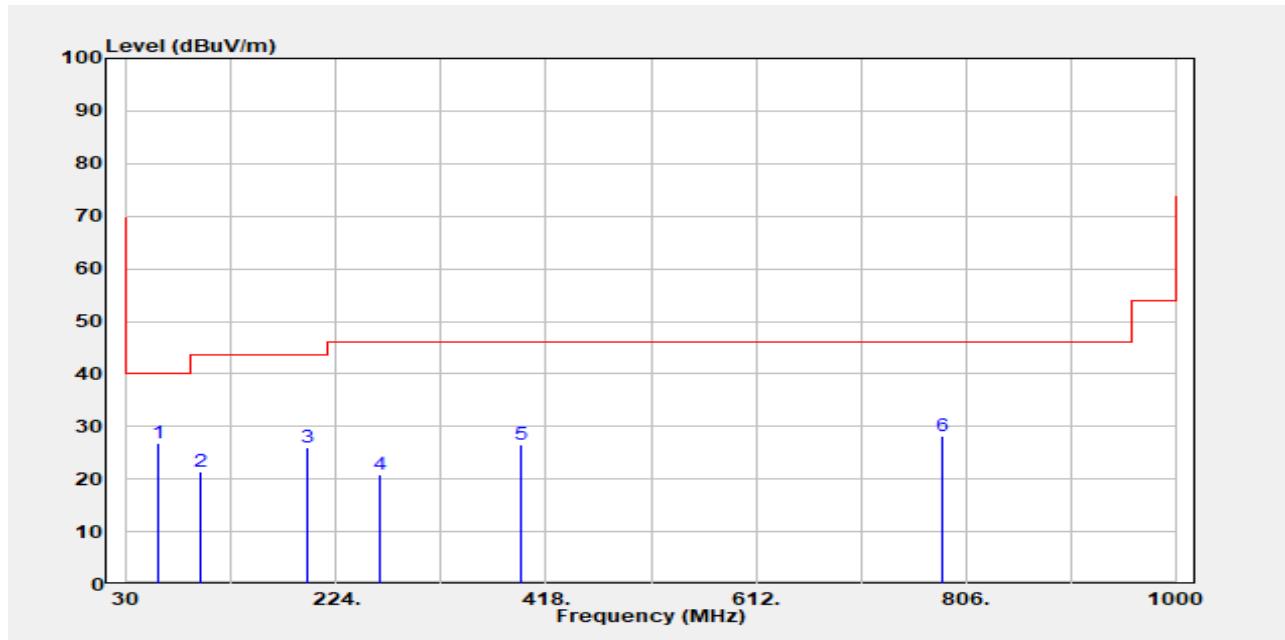
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
59.110	QP	31.00	-17.92	13.08	40.00	-26.92
98.246	Peak	48.00	-22.15	25.86	43.50	-17.64
198.189	Peak	49.38	-19.63	29.75	43.50	-13.75
266.436	Peak	44.47	-17.26	27.22	46.00	-18.78
313.658	Peak	45.91	-15.69	30.22	46.00	-15.78
861.567	Peak	34.12	-5.94	28.18	46.00	-17.82

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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :Lora SF7 Test Date :2025-08-11  
Test Frequency :914.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Tx Antenna Pol. :Horizontal  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
59.110	Peak	44.82	-17.92	26.89	40.00	-13.11
98.246	Peak	43.44	-22.15	21.29	43.50	-22.21
197.866	Peak	45.52	-19.63	25.89	43.50	-17.61
264.171	Peak	38.22	-17.39	20.84	46.00	-25.16
394.842	Peak	40.00	-13.57	26.43	46.00	-19.57
783.941	Peak	34.44	-6.24	28.20	46.00	-17.80

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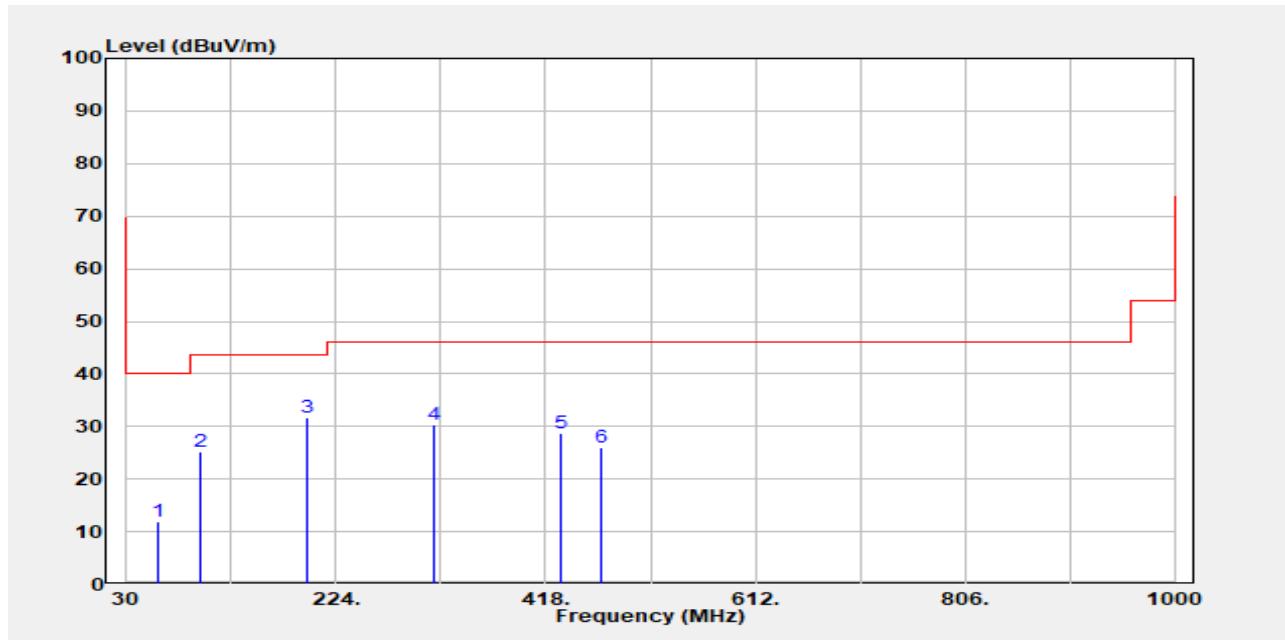
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :Lora SF11 Test Date :2025-08-11  
Test Frequency :914.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Tx Antenna Pol. :Vertical  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
58.463	QP	29.80	-17.93	11.87	40.00	-28.13
98.246	Peak	47.43	-22.15	25.28	43.50	-18.22
197.866	Peak	51.29	-19.63	31.65	43.50	-11.85
313.981	Peak	45.94	-15.67	30.27	46.00	-15.73
431.391	Peak	41.31	-12.60	28.70	46.00	-17.30
470.203	Peak	37.89	-11.78	26.11	46.00	-19.89

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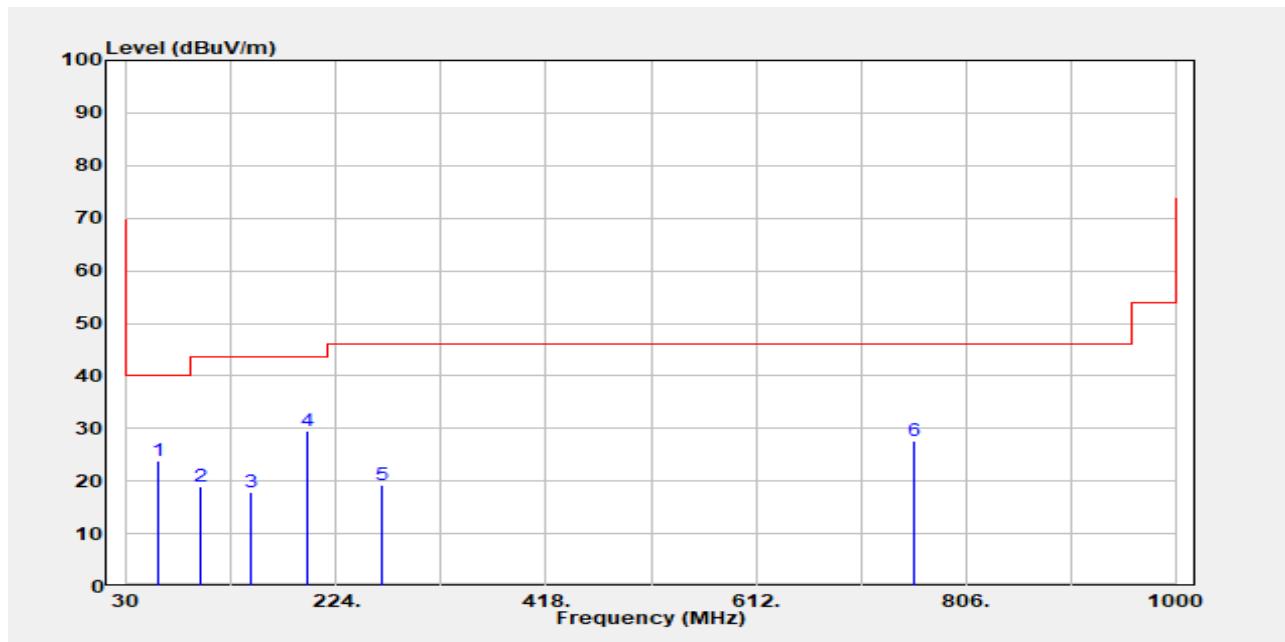
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :Lora SF11 Test Date :2025-08-11  
Test Frequency :914.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Tx Antenna Pol. :Horizontal  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
58.786	Peak	41.84	-17.93	23.91	40.00	-16.09
98.246	Peak	41.10	-22.15	18.96	43.50	-24.54
144.175	Peak	34.70	-16.91	17.79	43.50	-25.71
197.866	Peak	49.17	-19.63	29.54	43.50	-13.96
265.465	Peak	36.57	-17.32	19.25	46.00	-26.75
759.036	Peak	34.25	-6.72	27.53	46.00	-18.47

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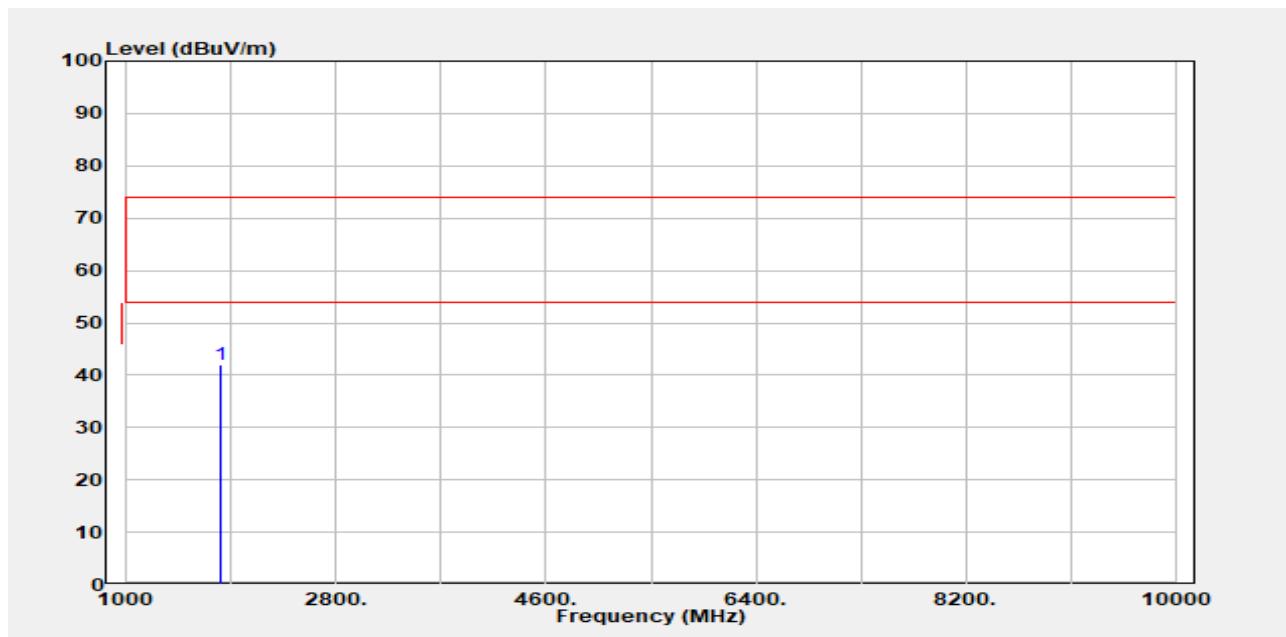
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :Lora SF7 Test Date :2025-08-08  
Test Frequency :902.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Tx Antenna Pol. :Vertical  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
1804.27	Peak	42.52	-0.39	42.13	74.00	-31.87

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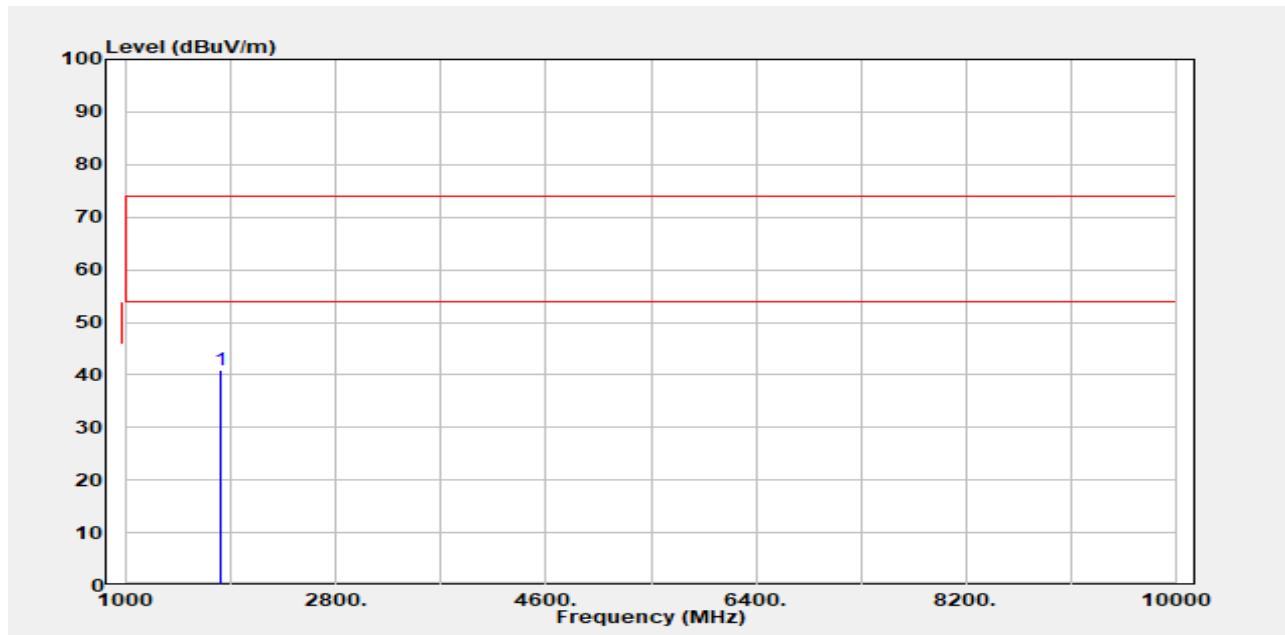
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :Lora SF7 Test Date :2025-08-08  
Test Frequency :902.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Tx Antenna Pol. :Horizontal  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB <sub>uV</sub>	Factor dB	Actual FS dB <sub>uV/m</sub>	Limit @3m dB <sub>uV/m</sub>	Margin dB
1804.27	Peak	41.44	-0.39	41.05	74.00	-32.95

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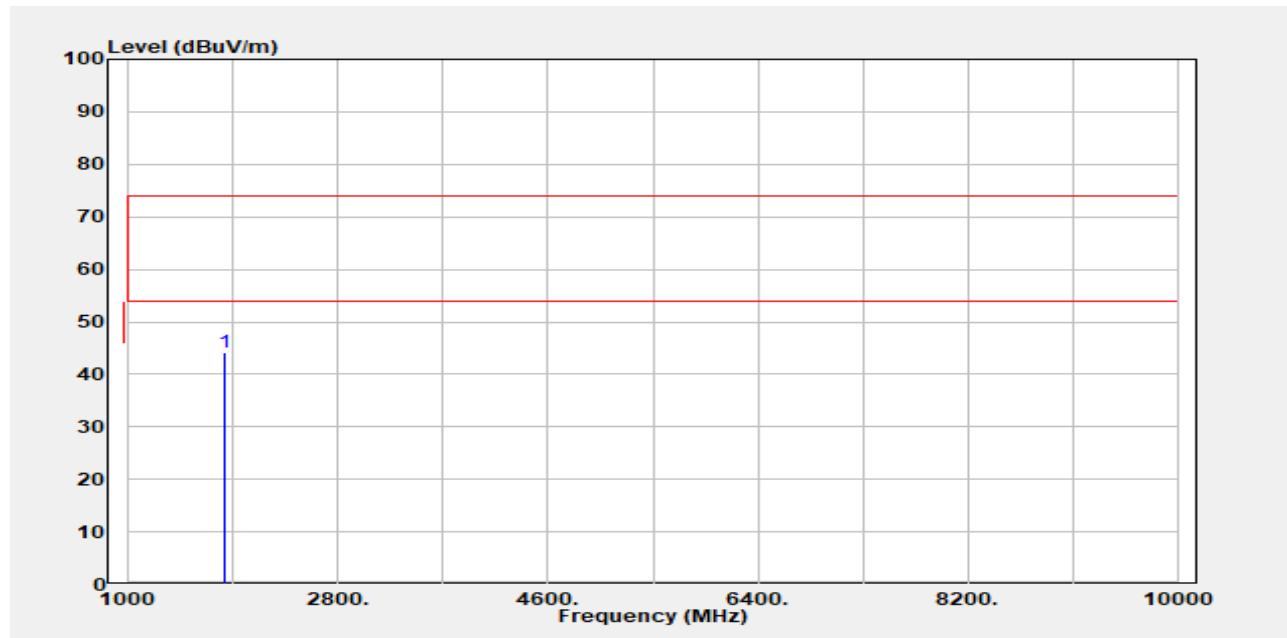
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Report Number : TERF2508002547E2  
Operation Mode : Lora SF7  
Test Frequency : 914.5 MHz  
Test Mode : Tx  
EUT Pol : E1 Plane

Test Site : SAC D  
Test Date : 2025-08-08  
Temp./Humi. : 24.3°C/58%  
Antenna Pol. : Vertical  
Engineer : Temo Chen



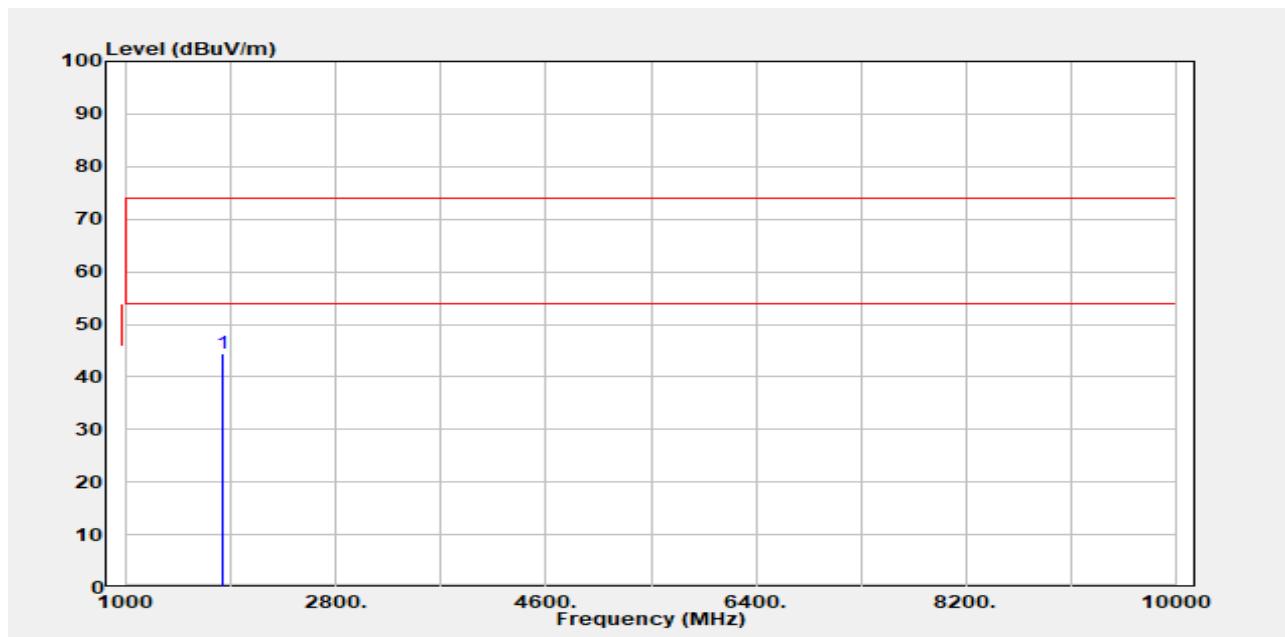
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
1828.28	Peak	44.41	-0.29	44.12	74.00	-29.88

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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :Lora SF7 Test Date :2025-08-08  
Test Frequency :914.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Tx Antenna Pol. :Horizontal  
EUT Pol :E1 Plane Engineer :Temo Chen



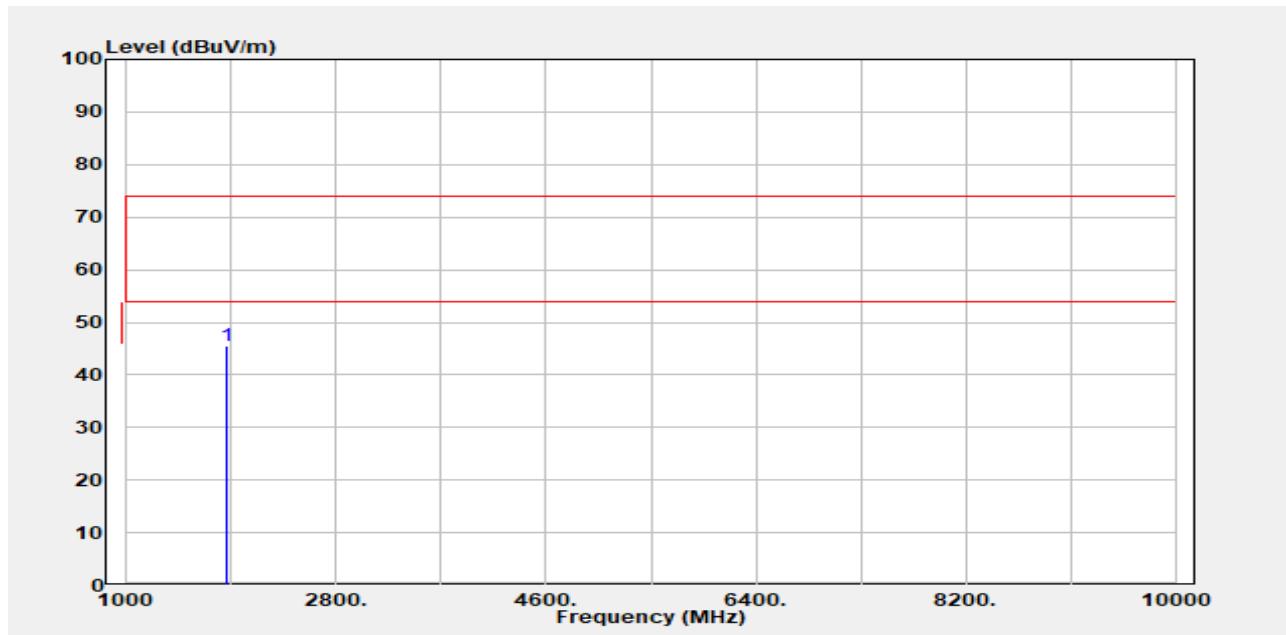
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
1828.28	Peak	44.71	-0.29	44.42	74.00	-29.58

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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :Lora SF7 Test Date :2025-08-08  
Test Frequency :926.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Tx Antenna Pol. :Vertical  
EUT Pol :E1 Plane Engineer :Temo Chen



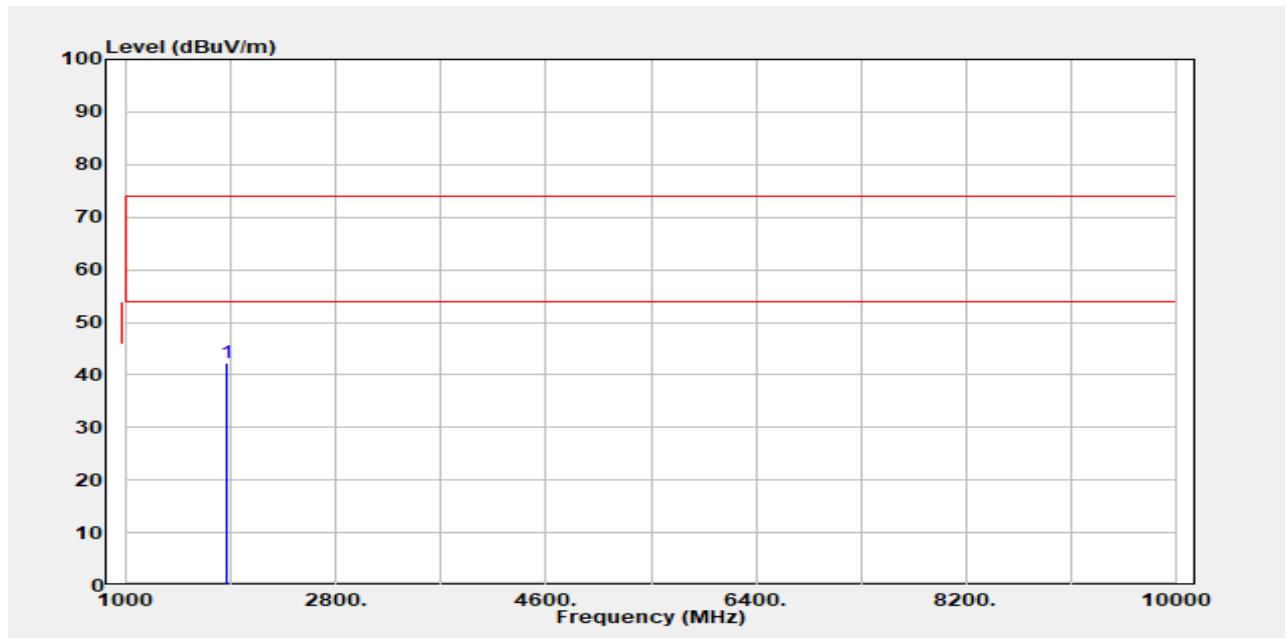
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
1852.28	Peak	45.54	0.00	45.54	74.00	-28.46

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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :Lora SF7 Test Date :2025-08-08  
Test Frequency :926.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Tx Antenna Pol. :Horizontal  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
1852.28	Peak	42.27	0.00	42.27	74.00	-31.73

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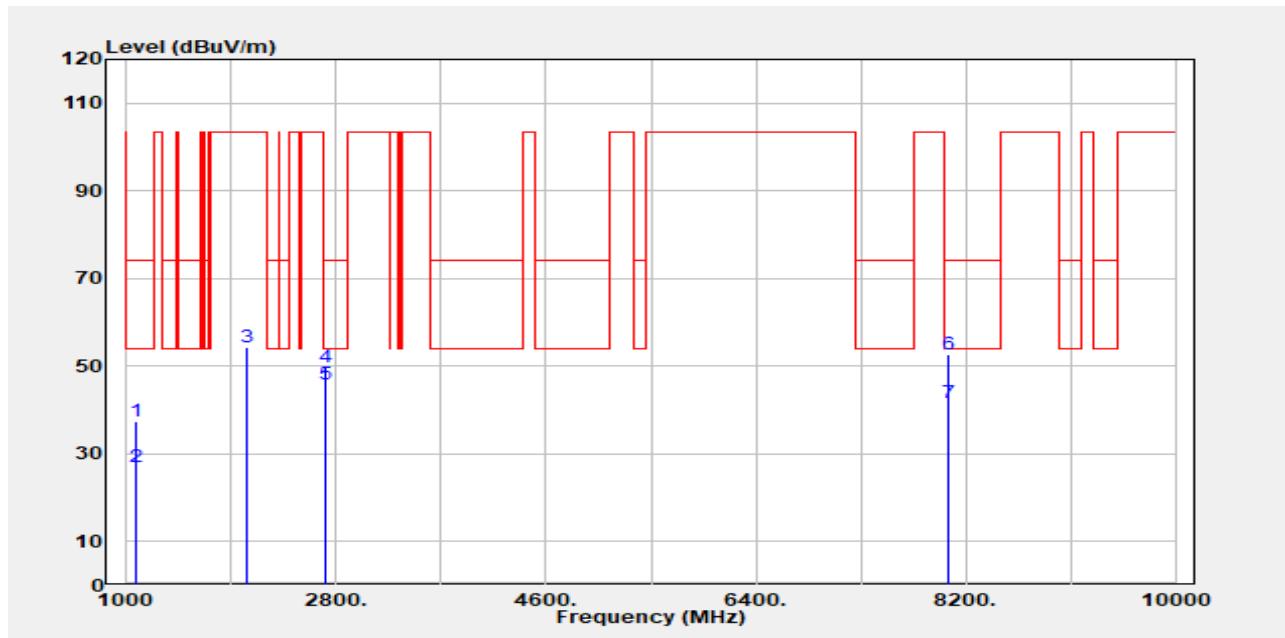
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :Lora SF11 Test Date :2025-08-08  
Test Frequency :902.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Tx Antenna Pol. :Vertical  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
1084.03	Peak	39.42	-2.14	37.28	74.00	-36.72
1084.03	Average	29.17	-2.14	27.03	54.00	-26.97
2035.35	Peak	52.83	1.34	54.17	103.33	-49.16
2707.57	Peak	46.04	3.72	49.76	74.00	-24.24
2707.57	Average	41.99	3.72	45.71	54.00	-8.29
8046.35	Peak	34.18	18.64	52.82	74.00	-21.18
8046.35	Average	23.06	18.64	41.70	54.00	-12.30

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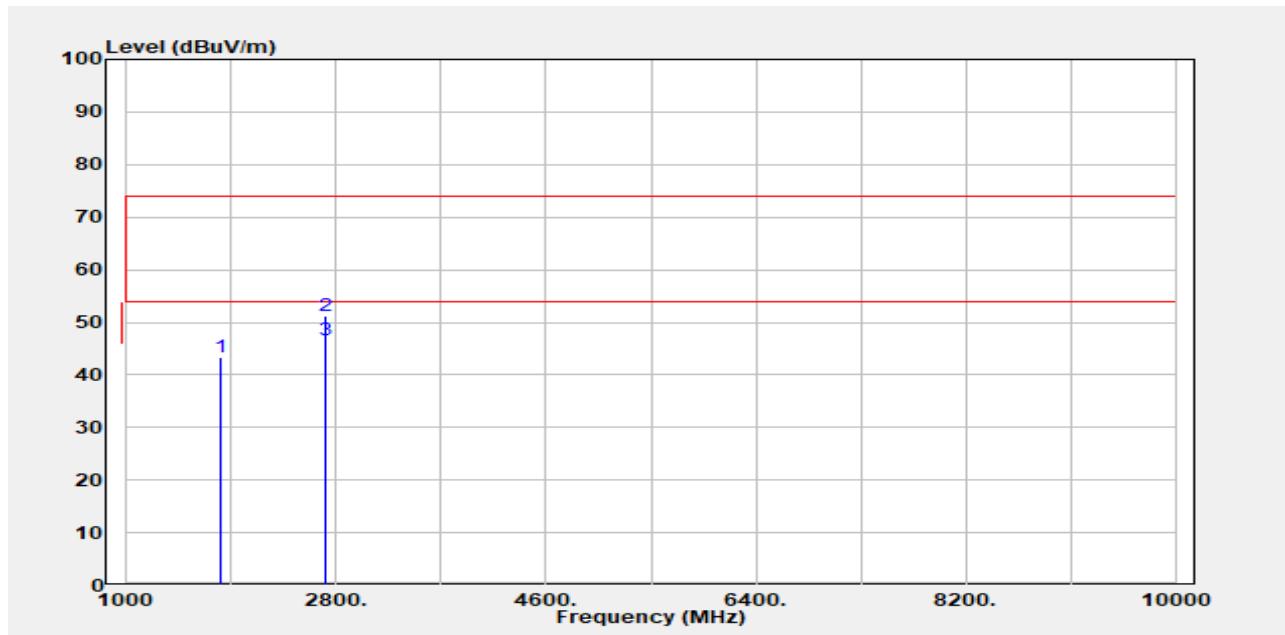
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :Lora SF11 Test Date :2025-08-08  
Test Frequency :902.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Tx Antenna Pol. :Horizontal  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
1804.27	Peak	43.69	-0.39	43.30	74.00	-30.70
2707.57	Peak	47.55	3.72	51.27	74.00	-22.73
2707.57	Average	42.80	3.72	46.52	54.00	-7.48

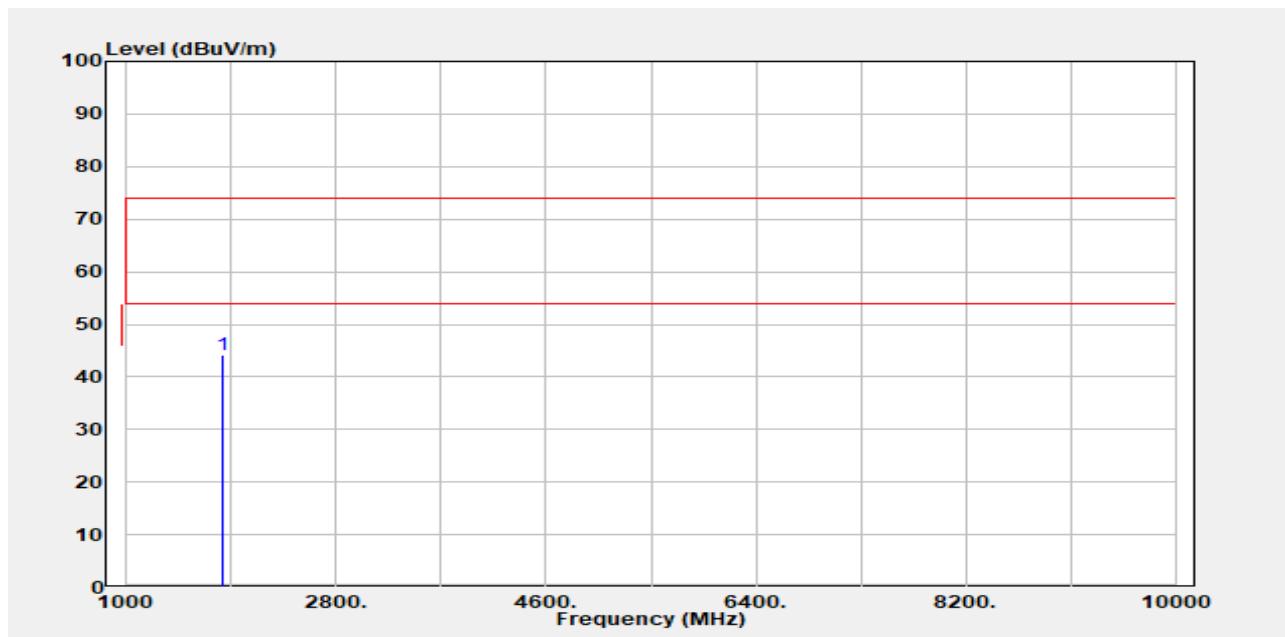
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :Lora SF11 Test Date :2025-08-08  
Test Frequency :914.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Tx Antenna Pol. :Vertical  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
1852.28	Peak	44.57	0.00	44.57	74.00	-29.43

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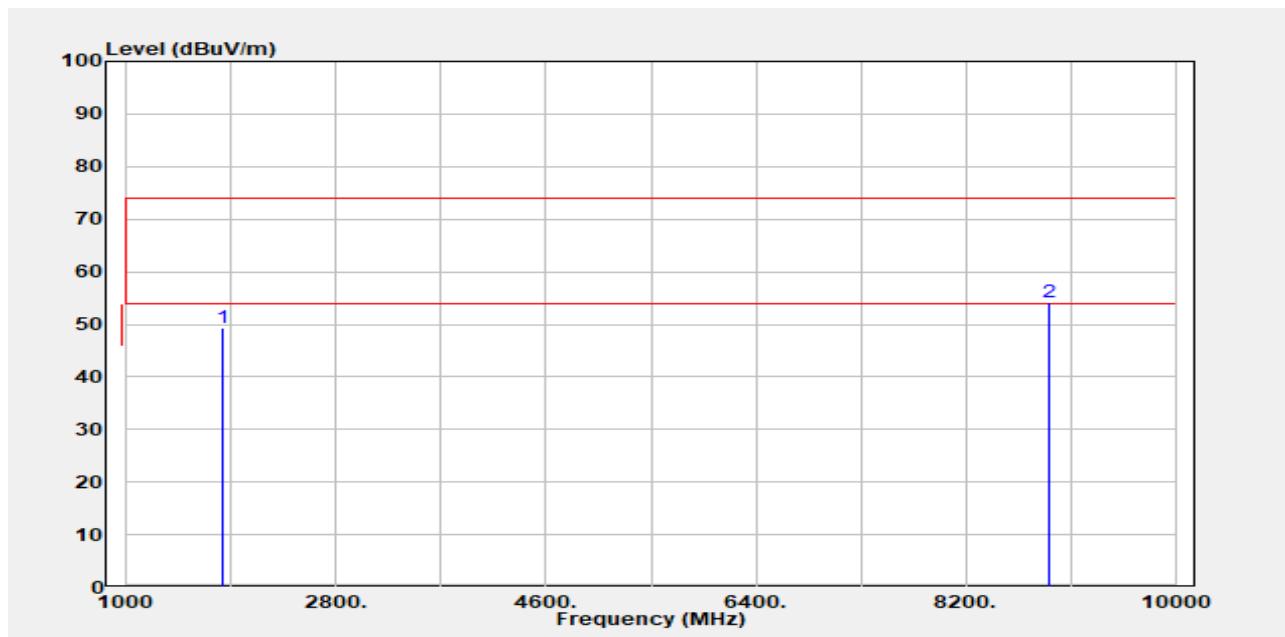
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :Lora SF11 Test Date :2025-08-08  
Test Frequency :914.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Tx Antenna Pol. :Horizontal  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
1828.28	Peak	49.54	-0.29	49.25	74.00	-24.75
8913.64	Peak	34.40	19.87	54.27	74.00	-19.73

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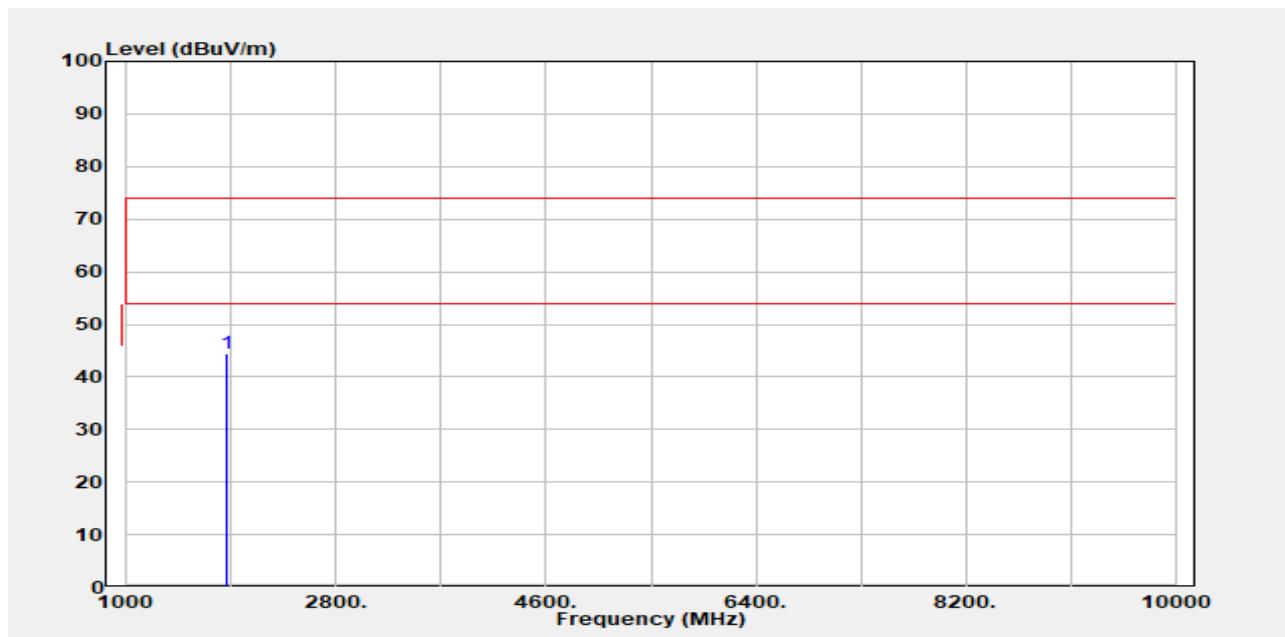
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :Lora SF11 Test Date :2025-08-08  
Test Frequency :926.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Tx Antenna Pol. :Vertical  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB <sub>uV</sub>	Factor dB	Actual FS dB <sub>uV/m</sub>	Limit @3m dB <sub>uV/m</sub>	Margin dB
1852.28	Peak	44.57	0.00	44.57	74.00	-29.43

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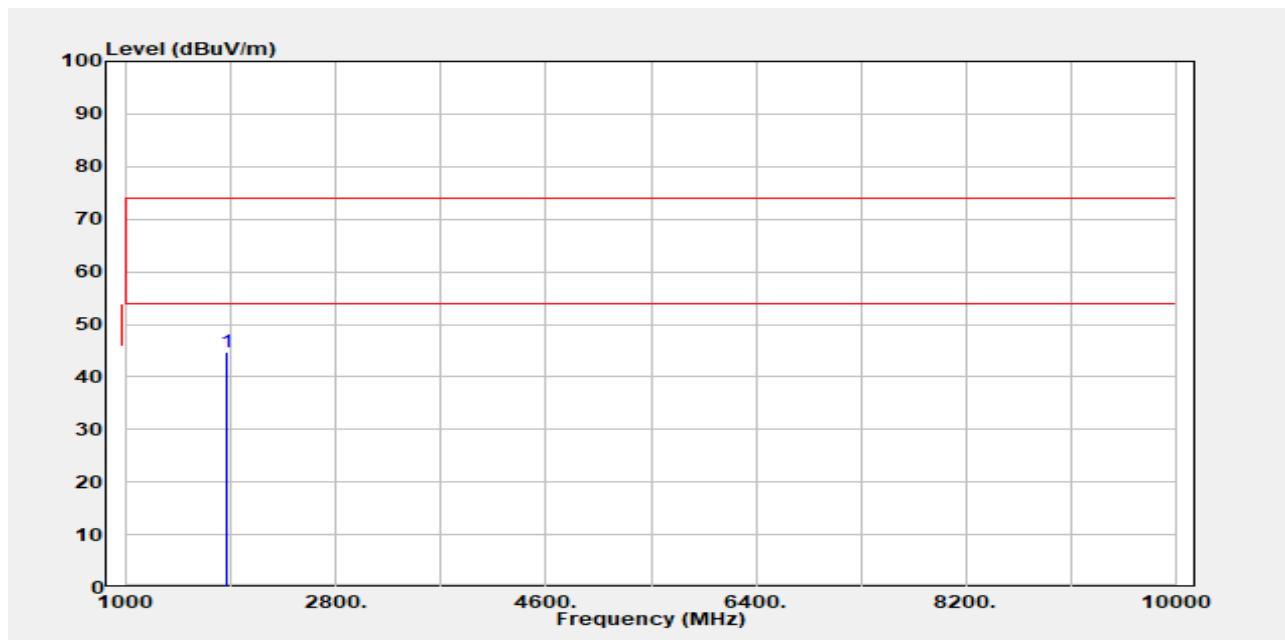
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Report Number :TERF2508002547E2 Test Site :SAC D  
Operation Mode :Lora SF11 Test Date :2025-08-08  
Test Frequency :926.5 MHz Temp./Humi. :24.3°C/58%  
Test Mode :Tx Antenna Pol. :Horizontal  
EUT Pol :E1 Plane Engineer :Temo Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
1852.28	Peak	44.62	0.00	44.62	74.00	-29.38

*~ End of Report ~*

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