

# ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT



**EUT Description** Wireless module installed in 5008X Monitor with CDX without remote control

**Applicant:** Fresenius Medical Care AG  
Hafenstr. 9, 97424 Schweinfurt, Germany

**Manufacturer:** Fresenius Medical Care Deutschland GmbH  
Hafenstr. 9, 97424 Schweinfurt, Germany

**Brand Name:** Bointec

**Model No.:** DGF109A, DGF104A

**Model Difference:** Marketing Different

**FCC Host Model:** F50015749

**Report Number:** TERF2504001299ER

**FCC ID** 2BK5J-DGF109FME

**Date of EUT Received:** April 08, 2025

**Date of Test:** April 09, 2025 ~ May 05, 2025

**Issue Date:** June 2, 2025

Approved By

Blue Yang

**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 C63.10:2013 and the energy emitted by the sample EUT comply with FCC rule part §15.247.

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
TERF2504001299ER	00	Class II permissive change	May 20, 2025	Karen Huang	
TERF2504001299ER	01	Update section 2.5, 2.6 and 8.2	June 2, 2025	Karen Huang	*

**Note:**

- 1、The remark "\*" indicates modification of the report upon requests from certification body.

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## 1 GENERAL INFORMATION

### 1.1 Product Description

EUT Description	Wireless module installed in 5008X Monitor with CDX without remote control
Brand Name:	Bointec
Model No.:	DGF109A, DGF104A
Model Difference:	Marketing Different
FCC Host Model:	F50015749
Integrated BT/WLAN Module	Brand Name: Bointec Model Name: DGF109A , DGF104A
Hardware Version:	4YEA0276 and 4YEA0277
Firmware Version:	4.80.29
EUT Series No.:	4VTQ0389
Power Supply:	120Vdc
Test Software (Name/Version)	QRCT v3.0.250.0

### 1.2 RF Specification

Radio Technology:	BLE
Frequency Range:	2402 – 2480MHz
Channel number:	40 channels
Modulation type:	GFSK

### 1.3 Antenna Designation

Antenna Type	Supplier	Antenna Part No.	Freq.	Peak Antenna Gain (dBi)
Dipole	INVAX /Cortec	NB1363-B310BX	2.4GHz	3.62

**Note:**

1. Antenna information is provided by the applicant.

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## 1.4 Test Methodology of Applied Standards

FCC Part 15, Subpart C §15.247

FCC KDB 558074 D01 15.247 Meas Guidance v05r02

ANSI C63.10:2013

## 1.5 Test Facility

Laboratory	Test Site Address	Test Site Name	FCC Designa- tion number	IC CAB identifier
SGS Taiwan Ltd. Central RF Lab. (TAF code 3702)	No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan.	SAC 1	TW0027	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	
		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.

## 1.6 Special Accessories

There are no special accessories used while test was conducted.

## 1.7 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 Emissions

The EUT is placed on a table which is 0.8 m above ground plane. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz. The CISPR Quasi-Peak and Average detector mode is employed. The two LISNs provide 50uH/50 ohm of coupling impedance for the measuring instrument. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

#### 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.

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## 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 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.

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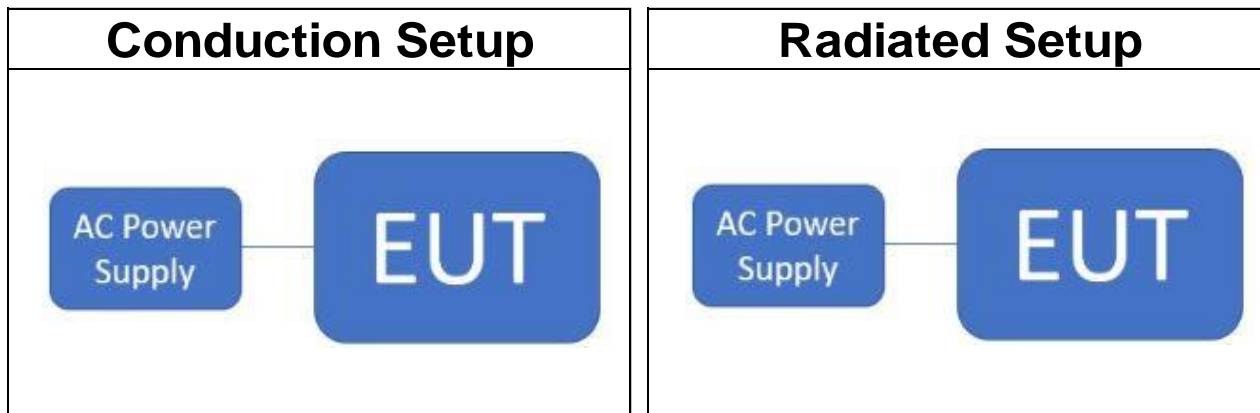
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## 2.5 Test Configuration



## 2.6 Control Unit(s)

AC Power-Line Conducted Emission Test Site: Conduction 1					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL. (mm/dd/yyyy)	CAL DUE. (mm/dd/yyyy)
AC Power Supply	TDK Corporation	F40010329	N/A	N/A	N/A

Radiated Emission Test Site: SAC 3					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL. (mm/dd/yyyy)	CAL DUE. (mm/dd/yyyy)
AC Power Supply	TDK Corporation	F40010329	N/A	N/A	N/A

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### 3 SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§15.207(a)	AC Power Line Conducted Emission	Compliant
§15.247(d) §15.209	Radiated Band Edge and Spurious Emission	Compliant

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## 4 DESCRIPTION OF TEST MODES

### 4.1 Operating Frequencies

ITEM	FREQUENCY	ITEM	FREQUENCY	ITEM	FREQUENCY
0	2402 MHz	14	2430 MHz	28	2458 MHz
1	2404 MHz	15	2432 MHz	29	2460 MHz
2	2406 MHz	16	2434 MHz	30	2462 MHz
3	2408 MHz	17	2436 MHz	31	2464 MHz
4	2410 MHz	18	2438 MHz	32	2466 MHz
5	2412 MHz	19	2440 MHz	33	2468 MHz
6	2414 MHz	20	2442 MHz	34	2470 MHz
7	2416MHz	21	2444 MHz	35	2472 MHz
8	2418 MHz	22	2446 MHz	36	2474 MHz
9	2420 MHz	23	2448 MHz	37	2476 MHz
10	2422 MHz	24	2450 MHz	38	2478 MHz
11	2424 MHz	25	2452 MHz	39	2480 MHz
12	2426 MHz	26	2454 MHz		
13	2428 MHz	27	2456 MHz		

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## 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. The field strength of radiation 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.
4. Investigation has been done on all the possible configurations for searching the worst case.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	PACKET TYPE
TRANSMIT RADIATED EMISSION TEST (BELOW 1 GHz)				
Bluetooth LE_1M	0 to 39	20	GFSK	1
TRANSMIT RADIATED EMISSION TEST (ABOVE 1 GHz)				
Bluetooth LE_1M	0 to 39	0,20,39	GFSK	1
Note: The field strength of radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for channel Low, Mid and High, the worst case position was reported.				

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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	9kHz~30MHz
	+/-	4.1	dB	30MHz - 1000MHz
	+/-	3.37	dB	1GHz - 18GHz
	+/-	3.83	dB	18GHz - 40GHz
Polarization: Horizontal	+/-	1.89	dB	9kHz~30MHz
	+/-	4.1	dB	30MHz - 1000MHz
	+/-	3.37	dB	1GHz - 18GHz
	+/-	3.83	dB	18GHz - 40GHz
Radiated Spurious Emission	+/-	2	dB	33GHz-50GHz
	+/-	1.59	dB	50GHz-60GHz
	+/-	1.71	dB	60GHz-90GHz
	+/-	1.64	dB	90GHz-140GHz
	+/-	3.84	dB	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 Emission from AC power line

AC Power-Line Conducted Emission Test Site: Conduction 1					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL. (mm/dd/yyyy)	CAL DUE. (mm/dd/yyyy)
Coaxial Cables	EMC Instruments Corp.	EMCCFD300-BM-BM-3000	161207	06/22/2024	06/21/2025
EMI Test Receiver	R&S	ESCI 7	100759	08/28/2024	08/27/2025
LISN	SCHWARZBECK	NSLK 8127	1040	09/07/2024	09/06/2025
Pulse Limiter	SCHWARZBECK	VTSD 9561F-N	793	06/22/2024	06/21/2025
Test Software	Audix	e3	Ver. 9.210616	N.C.R	N.C.R

### 6.2 Radiated Measurement

Radiated Emission Test Site: SAC 3					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL. (mm/dd/yyyy)	CAL DUE. (mm/dd/yyyy)
4G High Pass Filter	WI	WHKX4.0	22	12/11/2024	12/10/2025
Attenuator	Mini-Circuits	BW-S10W2+	16	12/11/2024	12/10/2025
Band Reject Filter 2400-2483.5	EWT	EWT-14-0166	M2	12/11/2024	12/10/2025
Bi-log Antenna	SCHWARZBECK	VULB9168	378	08/09/2024	08/08/2025
Coaxial Cables	EMCI+Huber Suhner	EMC107-SM-SM-1000 +SUCOFLEX 104PEA +EMC107-SM-SM-1500 +SUCOFLEX 106	RX Cable 9K-18G (221110+MY4251/4 PEA+221106+76096 /6)	08/30/2024	08/29/2025
Coaxial Cables	Huber Suhner	SUCOFLEX 102	RX Cable 18G-40G MY2630/2+805062/ 2	08/30/2024	08/29/2025
EMI Test Receiver	R&S	ESCI 7	100759	08/28/2024	08/27/2025
EXA Spectrum Analyzer	KEYSIGHT	N9010B	MY63440386	02/05/2025	02/04/2026
Horn Antenna	RF SPIN	DRH0844	LE2D05A0844	07/10/2024	07/09/2025
Horn Antenna	SCHWARZBECK	BBHA9120D	1441	09/23/2024	09/22/2025
Loop Antenna	COM-POWER	AL-130R	10160104	12/19/2024	12/18/2025
Pre-Amplifier	EMCI	EMC118A45SEE	980868	08/30/2024	08/29/2025
Pre-Amplifier	EMCI	EMC184045SEE	9080939	08/30/2024	08/29/2025
Pre-Amplifier	HP	8447D	2944A07676	08/30/2024	08/29/2025
Site Cal	SGS	SAC 3	N/A	08/30/2024	08/29/2025
Test Software	Audix	e3	Ver. 9.210616	N.C.R	N.C.R

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

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## 7 CONDUCTED EMISSION TEST

### 7.1 Standard Applicable:

Frequency range within 150kHz to 30MHz shall not exceed the Limit table as below.

Frequency range MHz	Limits (dB $\mu$ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

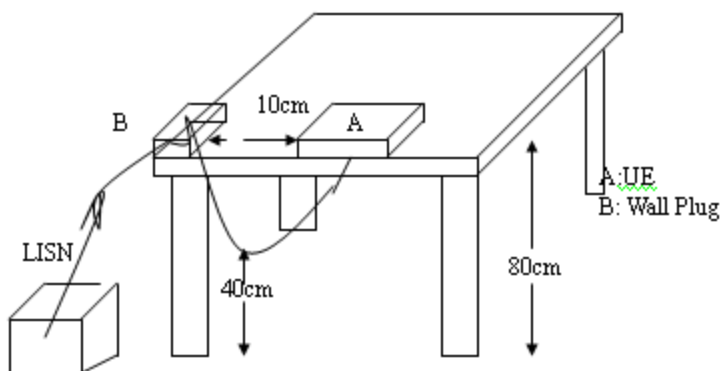
Note

- 1.The lower limit shall apply at the transition frequencies
- 2.The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

### 7.2 EUT Setup:

1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.10:2013.
2. The AC/DC Power adaptor of EUT was plug-in LISN. The EUT was placed flushed with the rear of the table.
3. The LISN was connected with 120Vac/60Hz power source.

### 7.3 Test Setup



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#### 7.4 Measurement Procedure:

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all phases of power being supplied by given UE are completed

#### 7.5 Measurement Result:

Note: Refer to next page for measurement data and plots.

Note2: The \* reveals the worst-case results that closest to the limit.

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## AC POWER LINE CONDUCTED EMISSION TEST DATA

Report Number :TERF2504001299ER

Test Site :Conduction 1

Operation Mode :BLE

Test Date :2025-04-28

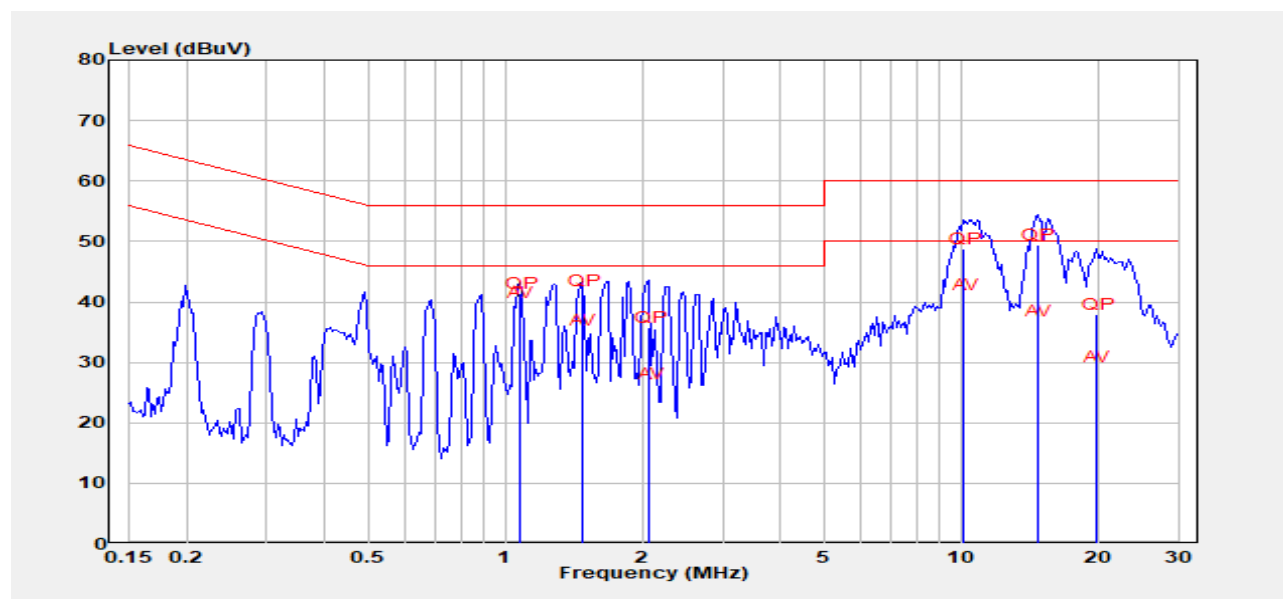
Power :120V/60Hz

Temp./Humi. :23.5°C/66%

Probe :L

Engineer :Nick Lin

Note: :



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV	Limit dBμV	Margin dB
1.077	Average	29.67	10.20	39.87	46.00	-6.13
1.077	QP	31.28	10.20	41.48	56.00	-14.52
1.480	Average	25.23	10.19	35.42	46.00	-10.58
1.480	QP	31.73	10.19	41.92	56.00	-14.08
2.077	Average	16.23	10.20	26.43	46.00	-19.57
2.077	QP	25.47	10.20	35.67	56.00	-20.33
10.179	Average	30.77	10.38	41.15	50.00	-8.85
10.179	QP	38.36	10.38	48.74	60.00	-11.26
14.750	Average	26.47	10.46	36.93	50.00	-13.07
14.750	QP	38.87	10.46	49.33	60.00	-10.67
19.845	Average	18.82	10.53	29.35	50.00	-20.65
19.845	QP	27.52	10.53	38.05	60.00	-21.95

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Report Number :TERF2504001299ER

Operation Mode :BLE

Power :120V/60Hz

Probe :N

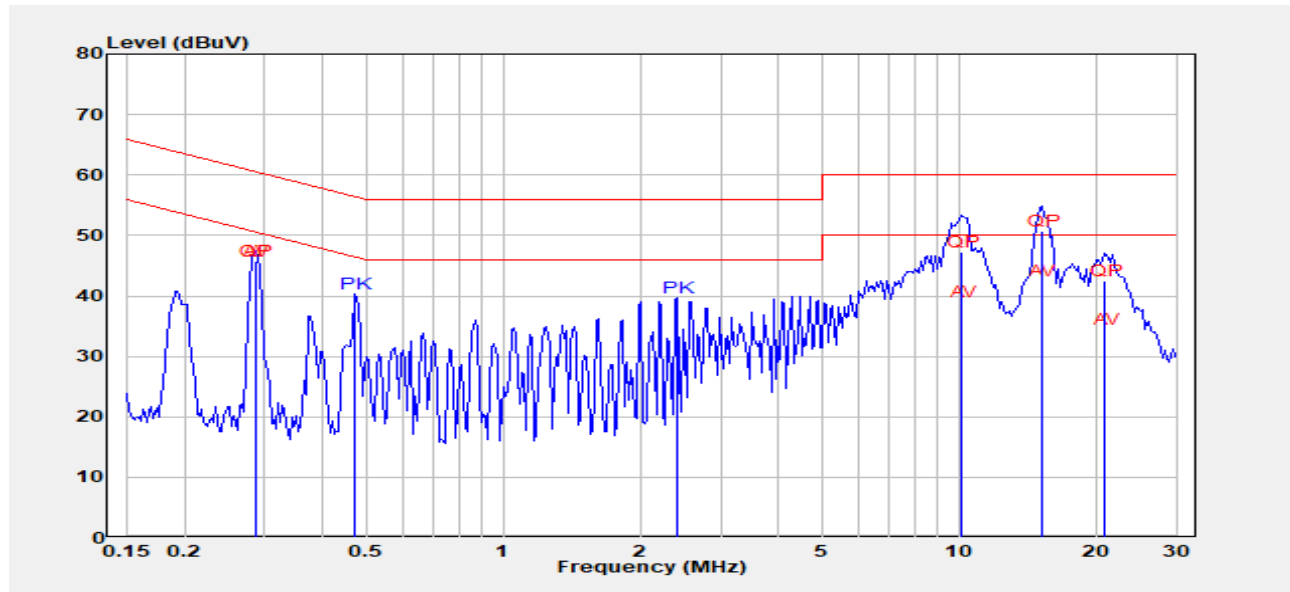
Note: :

Test Site :Conduction 1

Test Date :2025-04-28

Temp./Humi. :23.5°C/66%

Engineer :Nick Lin



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV	Limit dBμV	Margin dB
0.286	Average	35.57	10.14	45.71	50.63	-4.93
0.286	QP	35.61	10.14	45.75	60.63	-14.89
0.471	Peak	30.18	10.16	40.34	56.49	-16.15
2.409	Peak	29.44	10.22	39.66	56.00	-16.34
10.179	Average	28.57	10.40	38.97	50.00	-11.03
10.179	QP	36.77	10.40	47.17	60.00	-12.83
15.226	Average	31.88	10.52	42.40	50.00	-7.60
15.226	QP	40.27	10.52	50.79	60.00	-9.21
20.924	Average	23.92	10.60	34.52	50.00	-15.48
20.924	QP	31.89	10.60	42.49	60.00	-17.51

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## 8 RADIATED BANDEDGE AND SPURIOUS EMISSION MEASUREMENT

### Spurious Emission

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. In addition, radiated emissions which fall in the restricted bands must also comply with the §15.209 limit as below.

And according to §15.33(a) (1) 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

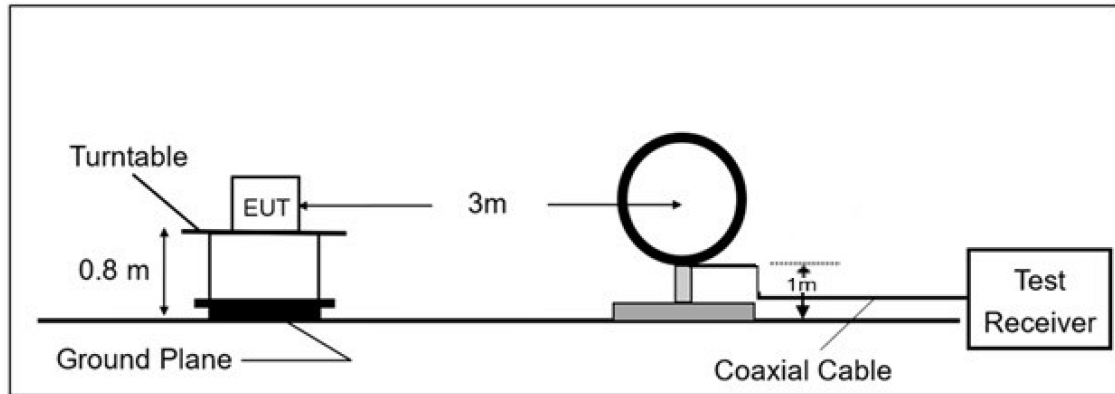
**Note:** The lower limit shall apply at the transition frequencies.

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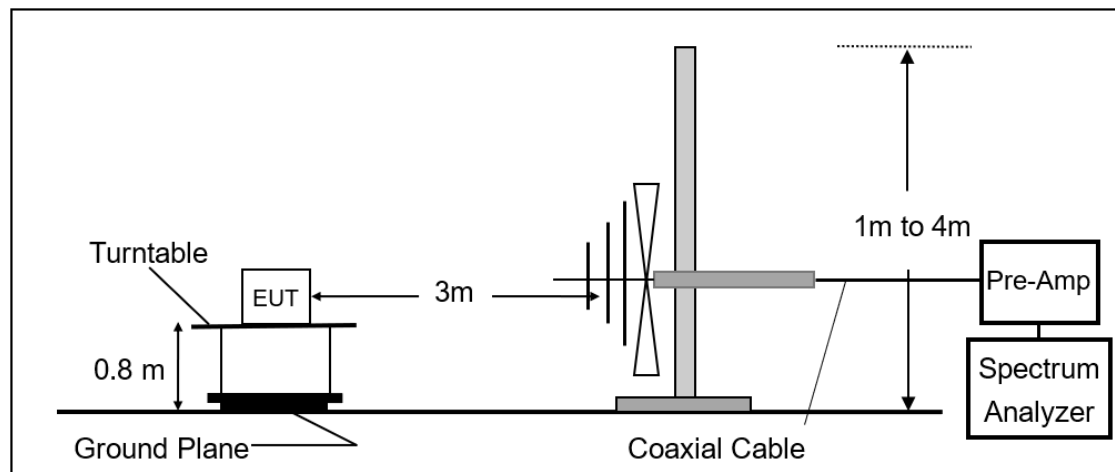
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## 8.1 Test Setup

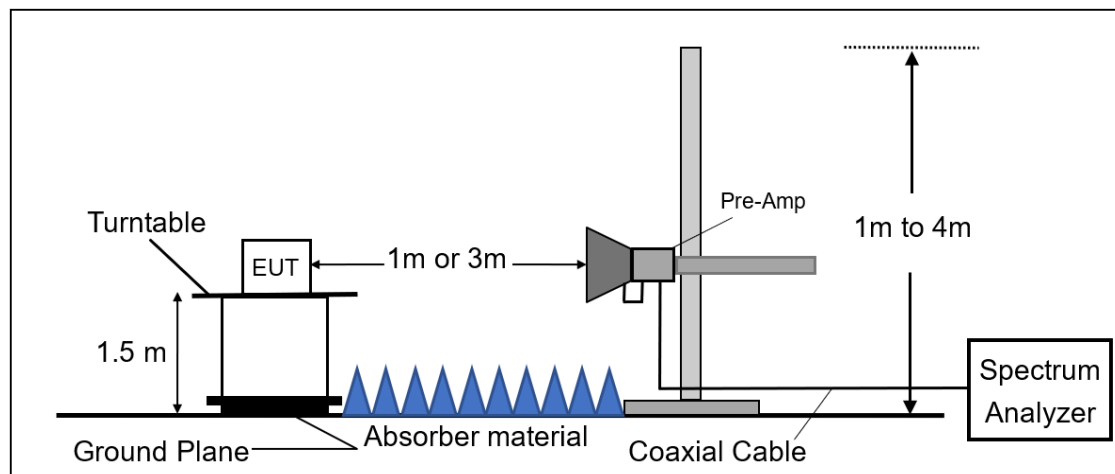
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz.



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



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



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## 8.2 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 for Maximum Emission Measurements at frequency above 1 GHz.
8. Set the spectrum analyzer as RBW=1 MHz, VBW=10 Hz (Duty cycle > 98%) for Average Emission Measurements at frequency above 1 GHz.
9. 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.
10. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
11. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
12. Repeat above procedures until all default test channel measured were complete.

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### 8.3 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*

*RA = Reading Amplitude*

*AF = Antenna Factor*

*CL = Cable Attenuation Factor (Cable Loss)*

*AG = Amplifier Gain*

*The limit of the emission level is expressed in dBuV/m, which converts  $20 \cdot \log(\mu V/m)$*

*Actual FS(dBμV/m) = SPA. Reading level(dBμV) + Factor(dB)*

*Factor(dB) = Antenna Factor(dB/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)*

### 8.4 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) was not reported.

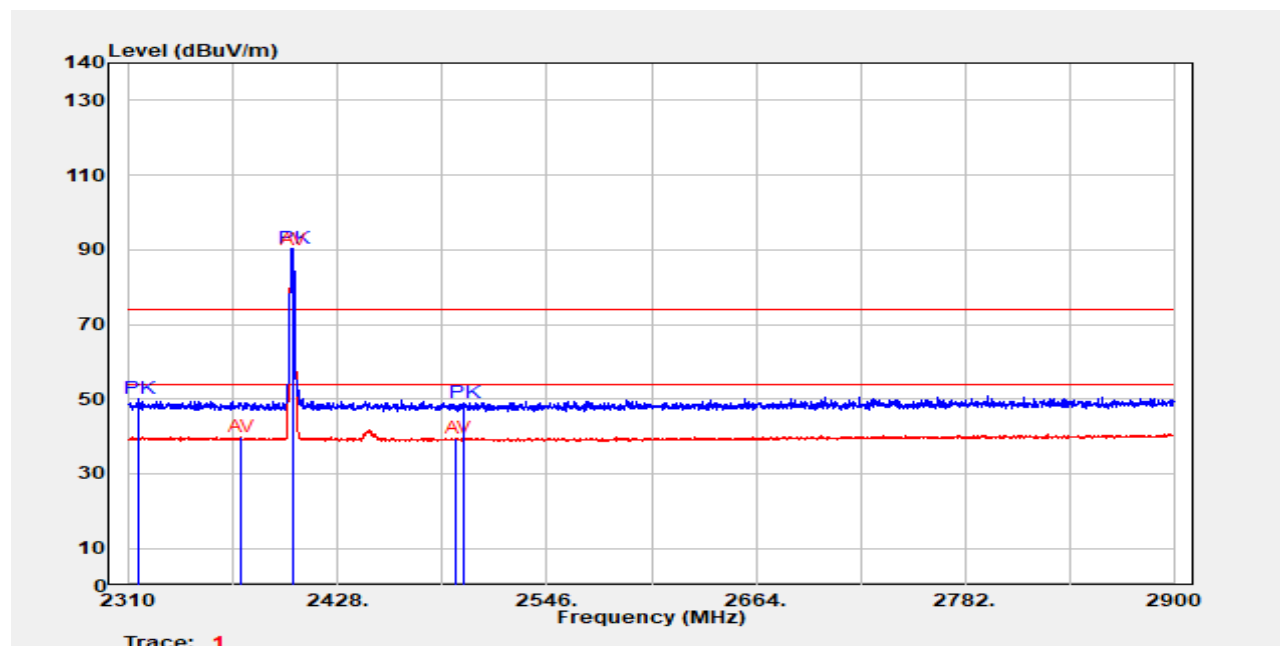
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## 8.4.1 Radiated Band Edge Measurement Result

Report Number :TERF2504001299ER  
 Operation Mode :BLE 1M  
 Test Frequency :2402 MHz  
 Test Mode :Bandedge  
 EUT Pol :H Plane

Test Site :SAC 3  
 Test Date :2025-05-05  
 Temp./Humi. :23.2°C/62%  
 Antenna Pol. :Vertical  
 Engineer :Nick Lin



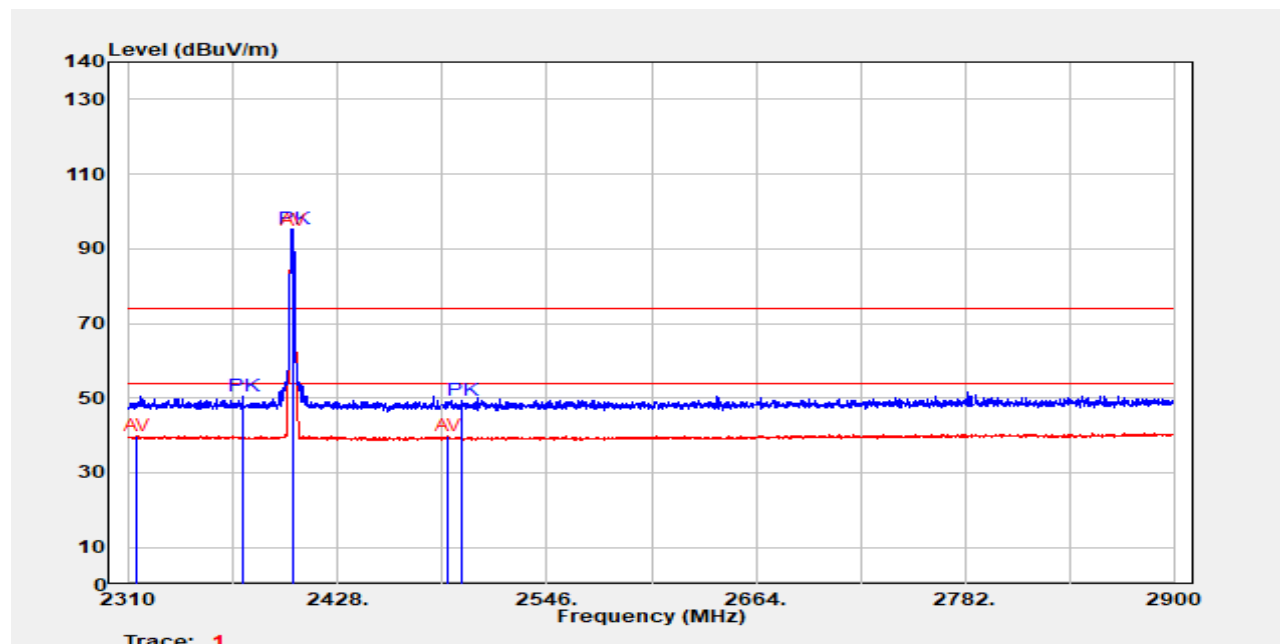
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB
2315.12	Peak	54.40	-4.34	50.06	74.00	-23.94
2372.95	Average	44.29	-4.47	39.82	54.00	-14.18
2402.00	Peak	94.77	-4.54	90.23	-	-
2402.00	Average	94.32	-4.54	89.78	-	-
2494.73	Average	44.15	-4.70	39.45	54.00	-14.55
2499.06	Peak	53.53	-4.70	48.83	74.00	-25.17

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Report Number :TERF2504001299ER  
 Operation Mode :BLE 1M  
 Test Frequency :2402 MHz  
 Test Mode :Bandedge  
 EUT Pol :H Plane

Test Site :SAC 3  
 Test Date :2025-05-05  
 Temp./Humi. :23.2°C/62%  
 Antenna Pol. :Horizontal  
 Engineer :Nick Lin



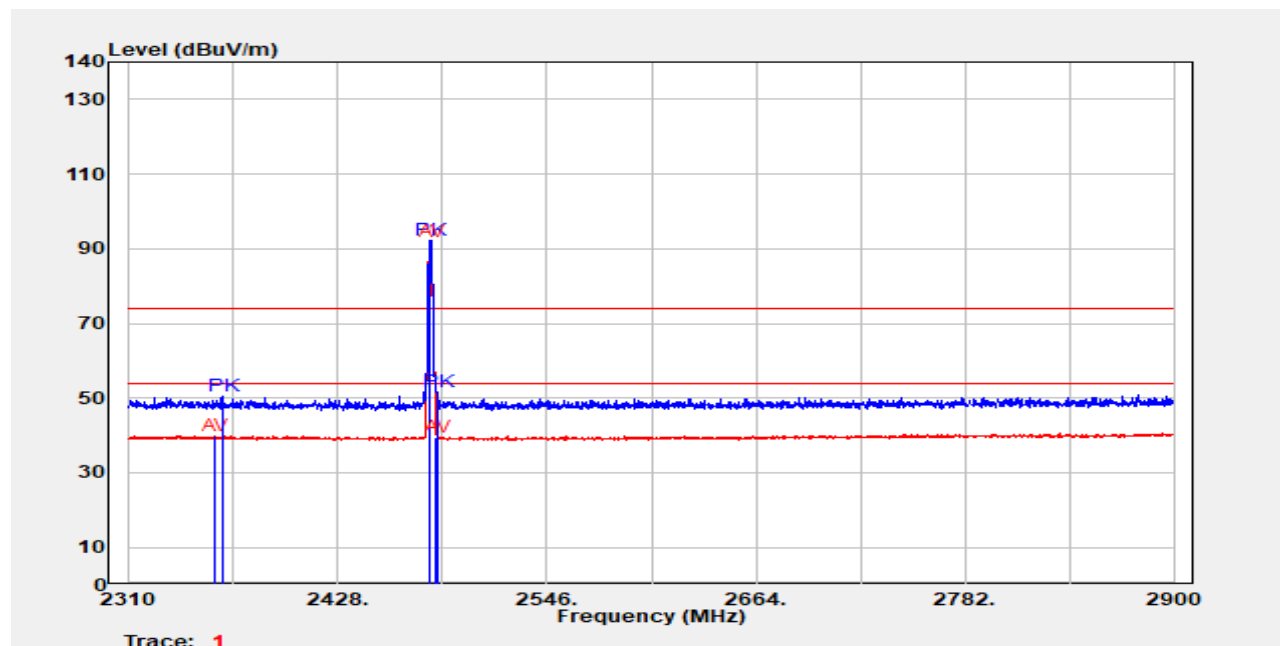
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
2313.74	Average	44.13	-4.33	39.80	54.00	-14.20
2374.33	Peak	54.96	-4.47	50.49	74.00	-23.51
2402.00	Peak	99.65	-4.54	95.11	-	-
2402.00	Average	99.29	-4.54	94.75	-	-
2489.81	Average	44.58	-4.70	39.88	54.00	-14.12
2498.27	Peak	54.16	-4.70	49.46	74.00	-24.54

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Report Number :TERF2504001299ER  
 Operation Mode :BLE 1M  
 Test Frequency :2480 MHz  
 Test Mode :Bandedge  
 EUT Pol :H Plane

Test Site :SAC 3  
 Test Date :2025-05-05  
 Temp./Humi. :23.2°C/62%  
 Antenna Pol. :Vertical  
 Engineer :Nick Lin



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
2357.81	Average	44.23	-4.44	39.79	54.00	-14.21
2362.33	Peak	54.97	-4.44	50.53	74.00	-23.47
2480.00	Peak	96.76	-4.71	92.05	-	-
2480.00	Average	96.39	-4.71	91.68	-	-
2483.50	Average	44.09	-4.70	39.39	54.00	-14.61
2483.72	Peak	56.22	-4.70	51.52	74.00	-22.48

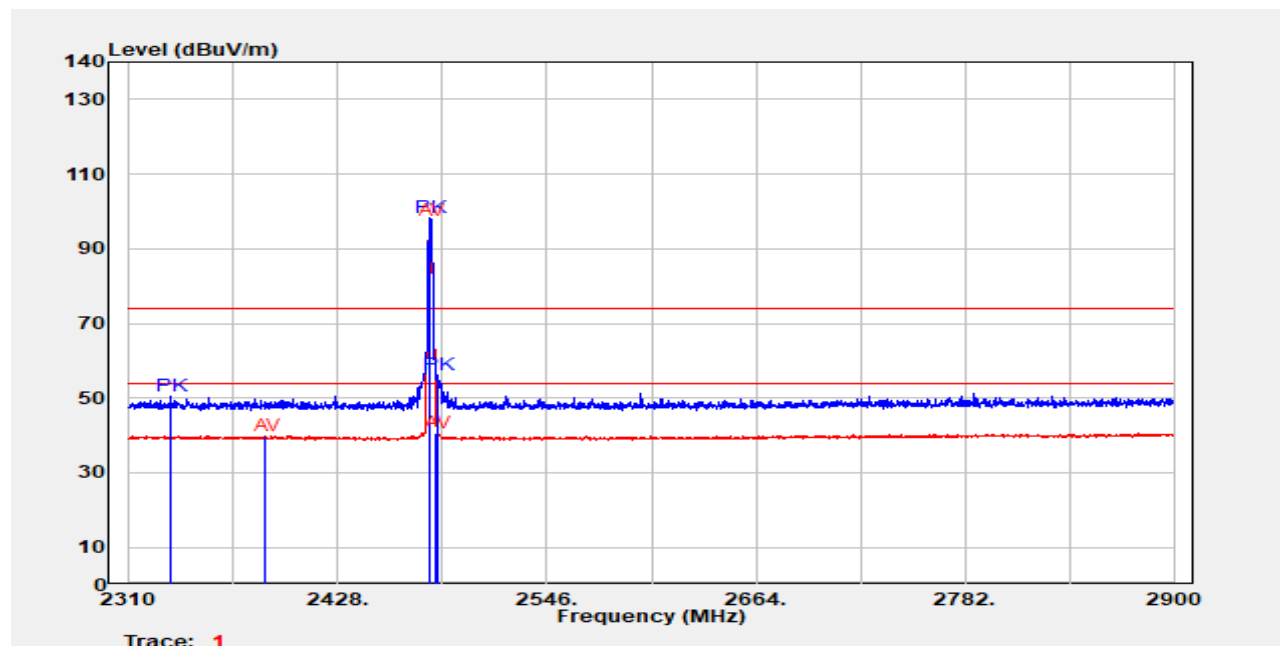
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Report Number :TERF2504001299ER  
 Operation Mode :BLE 1M  
 Test Frequency :2480 MHz  
 Test Mode :Bandedge  
 EUT Pol :H Plane

Test Site :SAC 3  
 Test Date :2025-05-05  
 Temp./Humi. :23.2°C/62%  
 Antenna Pol. :Horizontal  
 Engineer :Nick Lin



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
2333.02	Peak	54.94	-4.38	50.56	74.00	-23.44
2387.12	Average	44.40	-4.50	39.90	54.00	-14.10
2480.00	Peak	102.79	-4.71	98.08	-	-
2480.00	Average	102.40	-4.71	97.69	-	-
2483.50	Average	45.48	-4.70	40.78	54.00	-13.22
2483.72	Peak	60.90	-4.70	56.20	74.00	-17.80

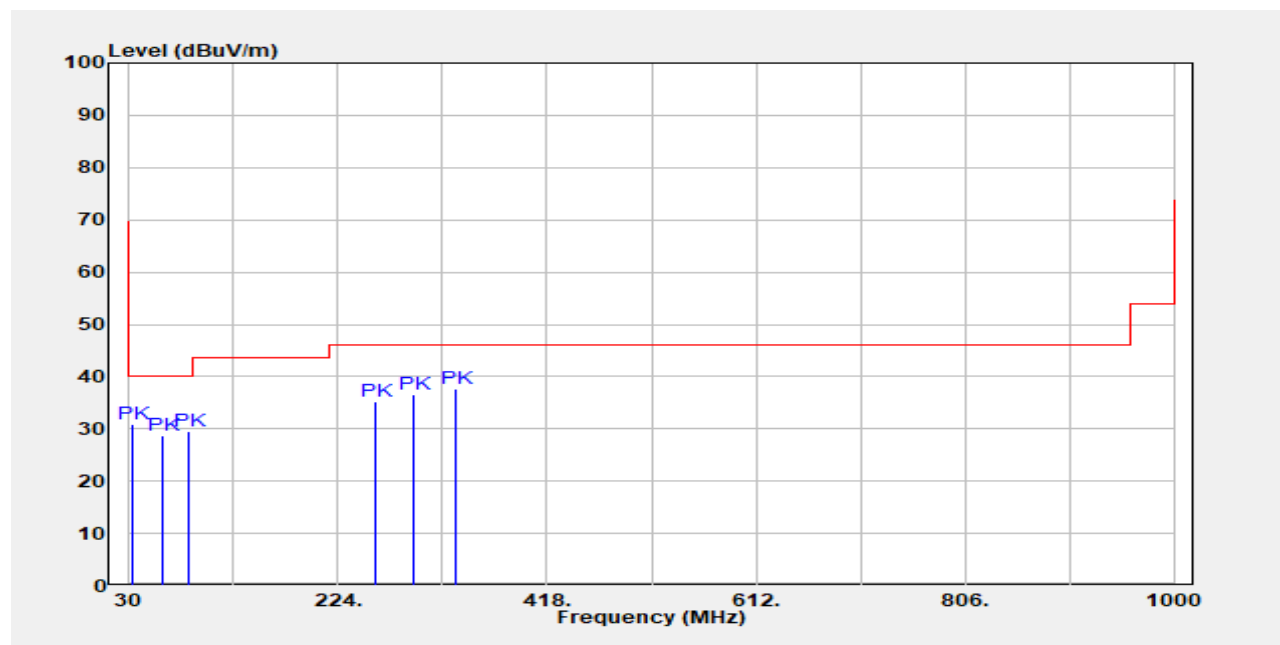
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## 8.4.2 Radiated Spurious Emission

Report Number :TERF2504001299ER  
 Operation Mode :BLE 1M  
 Test Frequency :2442 MHz  
 Test Mode :Tx  
 EUT Pol :H Plane

Test Site :SAC 3  
 Test Date :2025-05-05  
 Temp./Humi. :23.2°C/62%  
 Antenna Pol. :Vertical  
 Engineer :Nick Lin



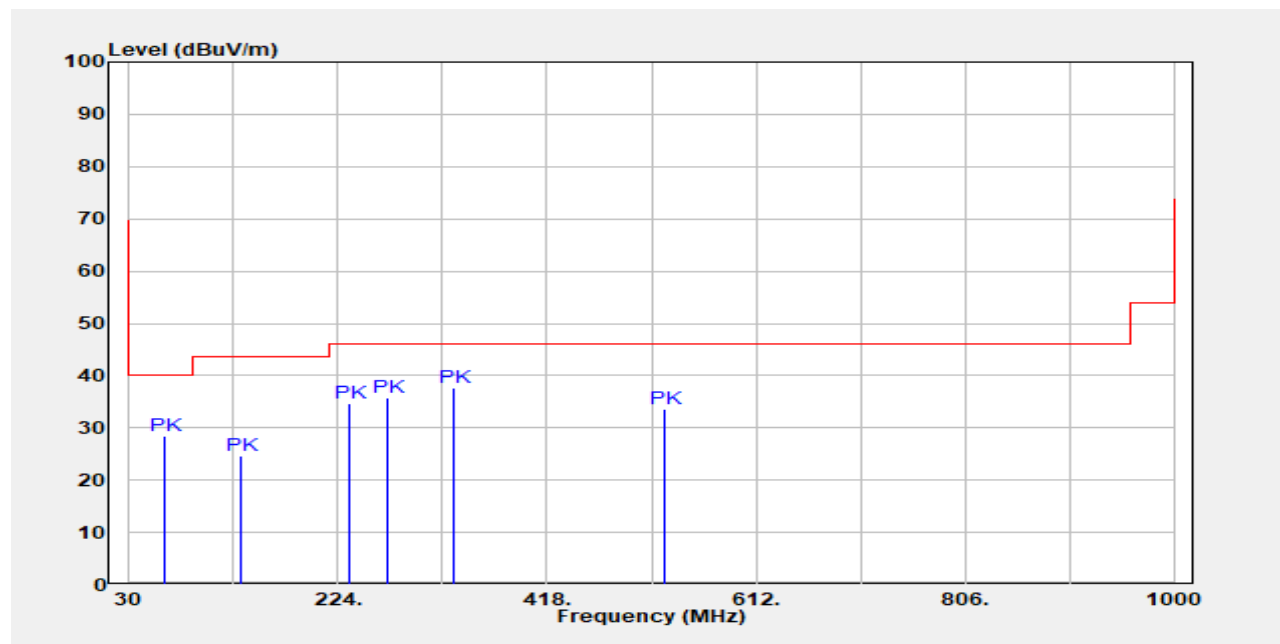
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
32.91	Peak	41.00	-10.01	30.99	40.00	-9.01
60.07	Peak	37.77	-8.99	28.78	40.00	-11.22
84.32	Peak	43.34	-13.91	29.43	40.00	-10.57
257.95	Peak	43.50	-8.37	35.13	46.00	-10.87
294.81	Peak	43.73	-7.06	36.67	46.00	-9.33
333.61	Peak	43.97	-6.36	37.61	46.00	-8.39

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Report Number :TERF2504001299ER  
 Operation Mode :BLE 1M  
 Test Frequency :2442 MHz  
 Test Mode :Tx  
 EUT Pol :H Plane

Test Site :SAC 3  
 Test Date :2025-05-05  
 Temp./Humi. :23.2°C/62%  
 Antenna Pol. :Horizontal  
 Engineer :Nick Lin



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
62.98	Peak	38.12	-9.58	28.54	40.00	-11.46
133.79	Peak	34.30	-9.52	24.78	43.50	-18.72
233.70	Peak	44.03	-9.39	34.64	46.00	-11.36
270.56	Peak	43.78	-7.89	35.89	46.00	-10.11
331.67	Peak	44.14	-6.39	37.75	46.00	-8.25
527.61	Peak	36.46	-2.93	33.53	46.00	-12.47

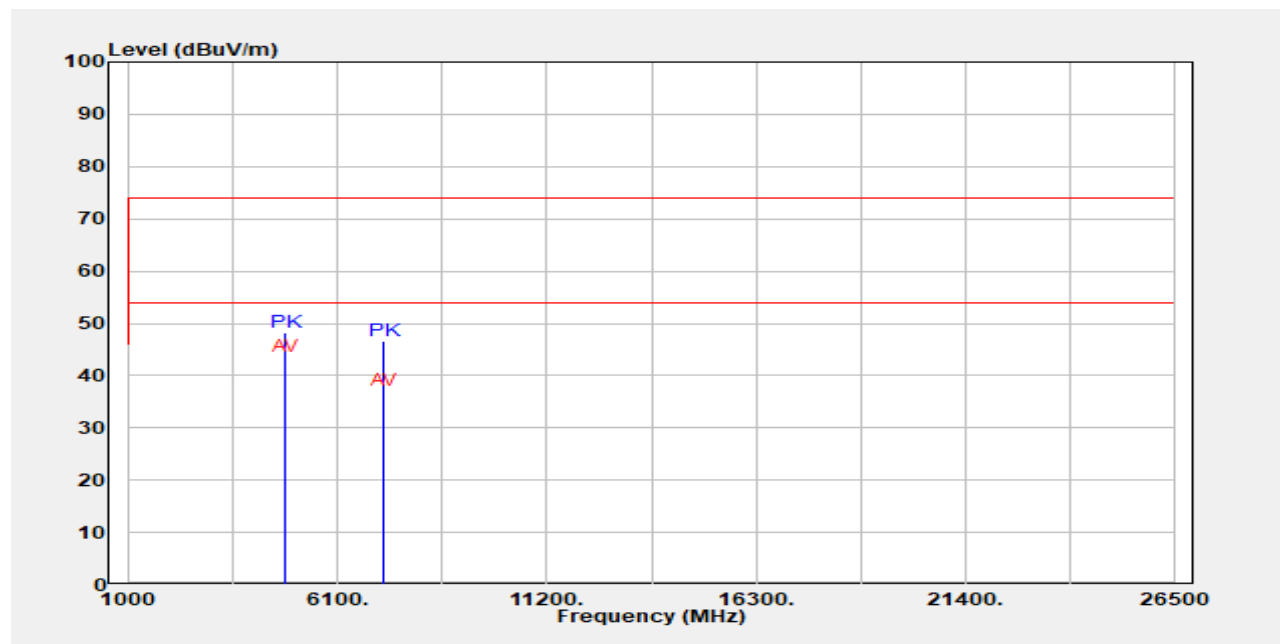
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Report Number :TERF2504001299ER  
 Operation Mode :BLE 1M  
 Test Frequency :2402 MHz  
 Test Mode :Tx  
 EUT Pol :H Plane

Test Site :SAC 3  
 Test Date :2025-05-05  
 Temp./Humi. :23.2°C/62%  
 Antenna Pol. :Vertical  
 Engineer :Nick Lin



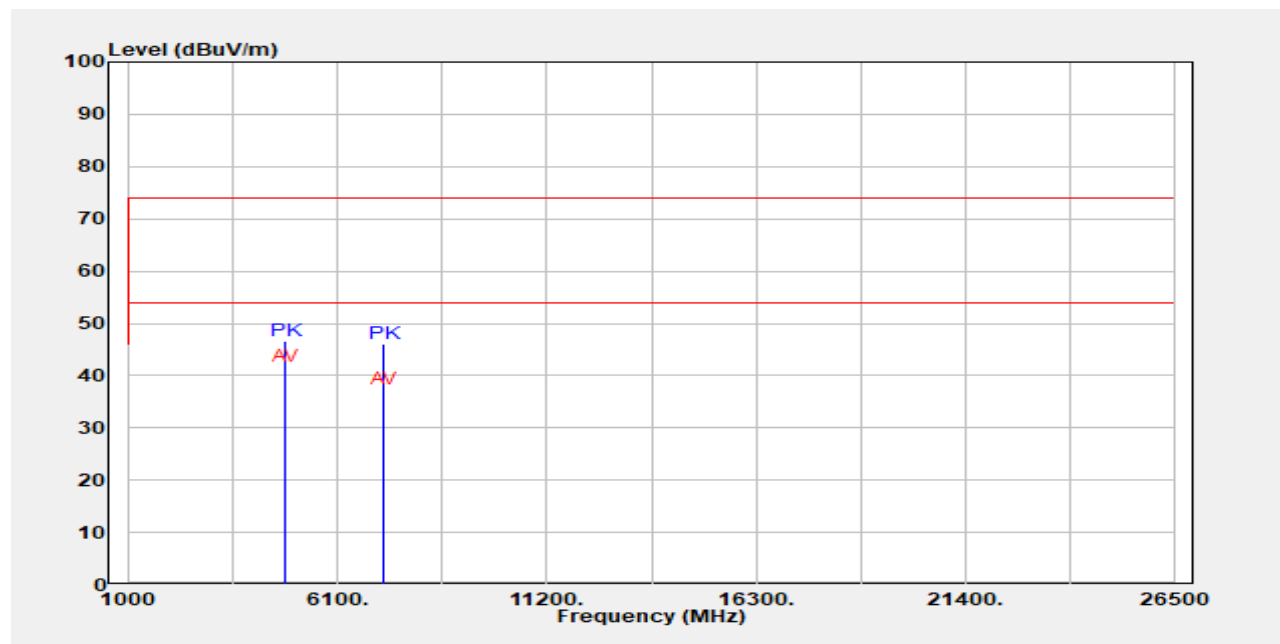
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
4804.00	Peak	48.06	0.22	48.28	74.00	-25.72
4804.00	Average	43.42	0.22	43.64	54.00	-10.36
7206.00	Peak	41.14	5.38	46.52	74.00	-27.48
7206.00	Average	31.77	5.38	37.15	54.00	-16.85

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Report Number :TERF2504001299ER  
 Operation Mode :BLE 1M  
 Test Frequency :2402 MHz  
 Test Mode :Tx  
 EUT Pol :H Plane

Test Site :SAC 3  
 Test Date :2025-05-05  
 Temp./Humi. :23.2°C/62%  
 Antenna Pol. :Horizontal  
 Engineer :Nick Lin



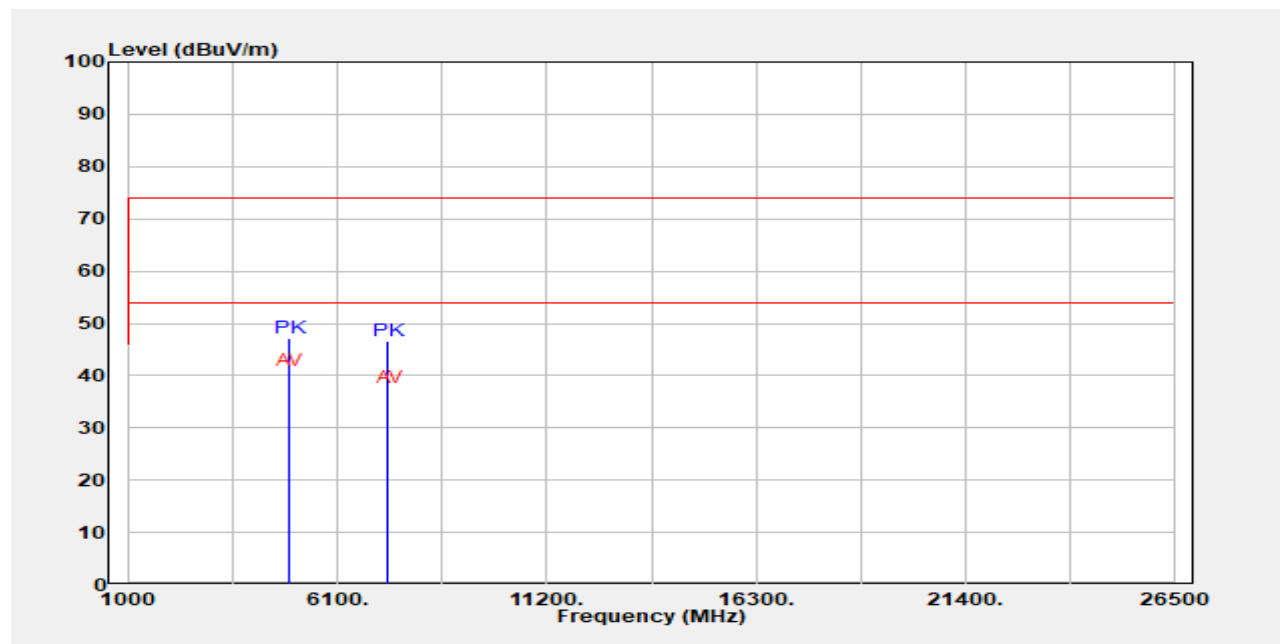
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
4804.00	Peak	46.51	0.22	46.73	74.00	-27.27
4804.00	Average	41.49	0.22	41.71	54.00	-12.29
7206.00	Peak	40.59	5.38	45.97	74.00	-28.03
7206.00	Average	31.92	5.38	37.30	54.00	-16.70

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Report Number :TERF2504001299ER  
 Operation Mode :BLE 1M  
 Test Frequency :2442 MHz  
 Test Mode :Tx  
 EUT Pol :H Plane

Test Site :SAC 3  
 Test Date :2025-05-05  
 Temp./Humi. :23.2°C/62%  
 Antenna Pol. :Vertical  
 Engineer :Nick Lin



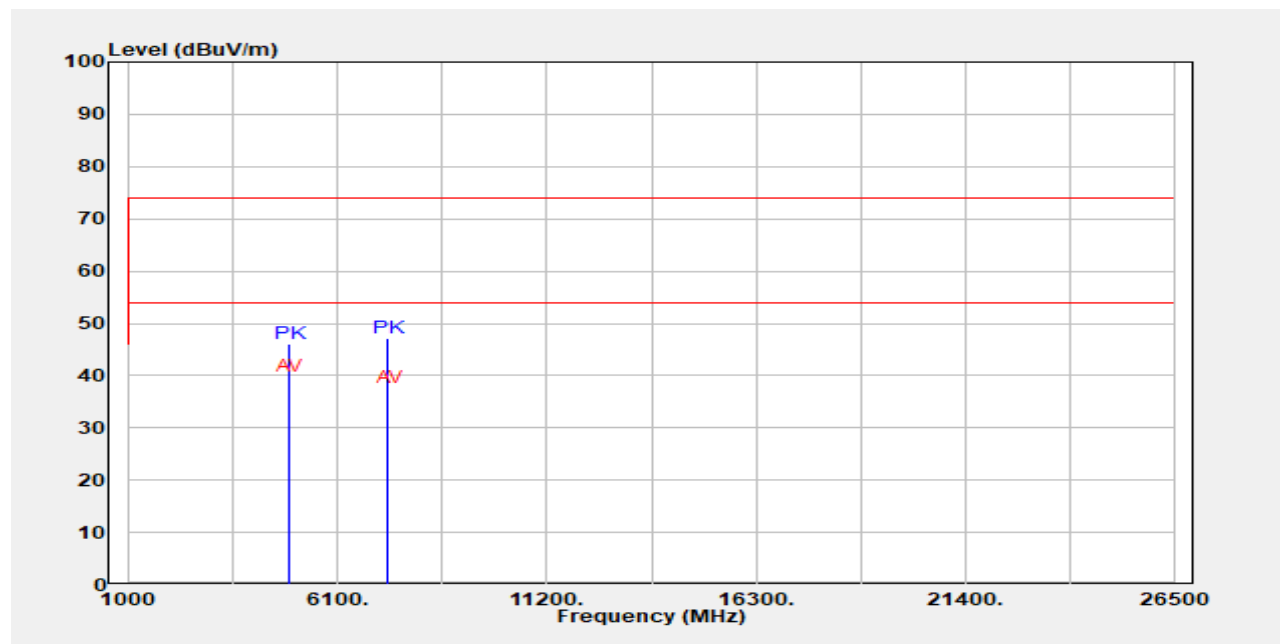
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
4884.00	Peak	47.00	0.21	47.21	74.00	-26.79
4884.00	Average	40.69	0.21	40.90	54.00	-13.10
7326.00	Peak	40.96	5.58	46.54	74.00	-27.46
7326.00	Average	32.06	5.58	37.64	54.00	-16.36

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Report Number :TERF2504001299ER  
 Operation Mode :BLE 1M  
 Test Frequency :2442 MHz  
 Test Mode :Tx  
 EUT Pol :H Plane

Test Site :SAC 3  
 Test Date :2025-05-05  
 Temp./Humi. :23.2°C/62%  
 Antenna Pol. :Horizontal  
 Engineer :Nick Lin



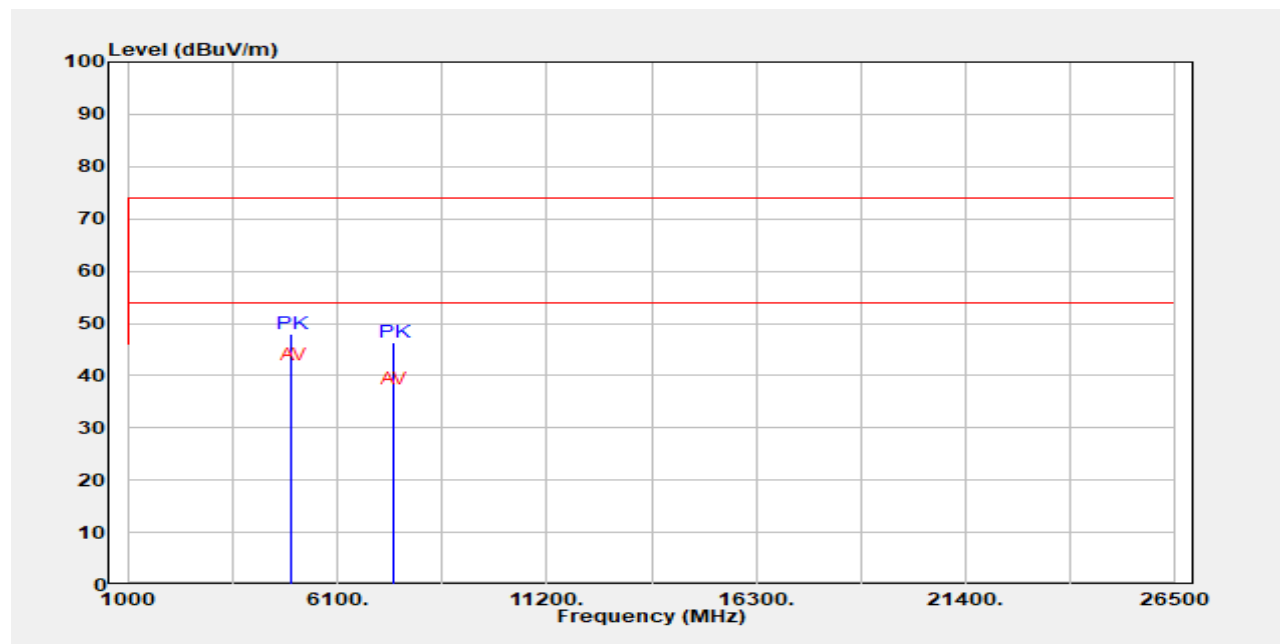
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
4884.00	Peak	45.94	0.21	46.15	74.00	-27.85
4884.00	Average	39.51	0.21	39.72	54.00	-14.28
7326.00	Peak	41.70	5.58	47.28	74.00	-26.72
7326.00	Average	32.14	5.58	37.72	54.00	-16.28

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Report Number :TERF2504001299ER  
 Operation Mode :BLE 1M  
 Test Frequency :2480 MHz  
 Test Mode :Tx  
 EUT Pol :H Plane

Test Site :SAC 3  
 Test Date :2025-05-05  
 Temp./Humi. :23.2°C/62%  
 Antenna Pol. :Vertical  
 Engineer :Nick Lin



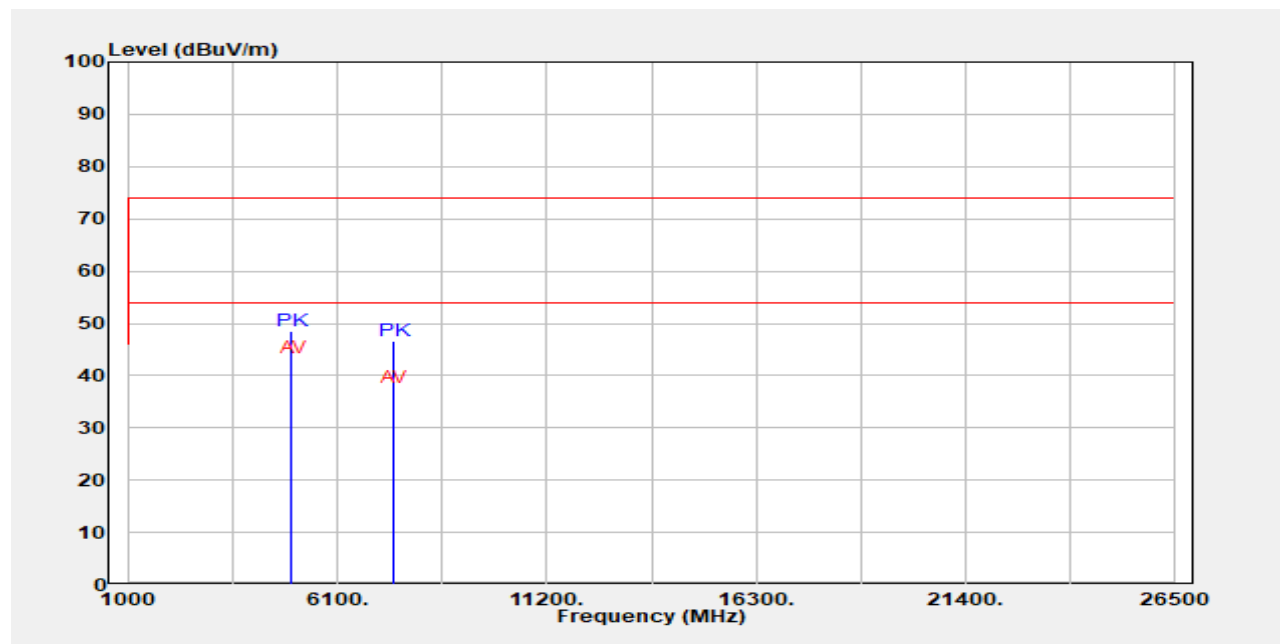
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
4960.00	Peak	47.60	0.46	48.06	74.00	-25.94
4960.00	Average	41.42	0.46	41.88	54.00	-12.12
7440.00	Peak	40.90	5.54	46.44	74.00	-27.56
7440.00	Average	31.85	5.54	37.39	54.00	-16.61

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Report Number :TERF2504001299ER  
 Operation Mode :BLE 1M  
 Test Frequency :2480 MHz  
 Test Mode :Tx  
 EUT Pol :H Plane

Test Site :SAC 3  
 Test Date :2025-05-05  
 Temp./Humi. :23.2°C/62%  
 Antenna Pol. :Horizontal  
 Engineer :Nick Lin



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
4960.00	Peak	48.13	0.46	48.59	74.00	-25.41
4960.00	Average	42.82	0.46	43.28	54.00	-10.72
7440.00	Peak	41.08	5.54	46.62	74.00	-27.38
7440.00	Average	32.22	5.54	37.76	54.00	-16.24

~ End of Report ~

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