

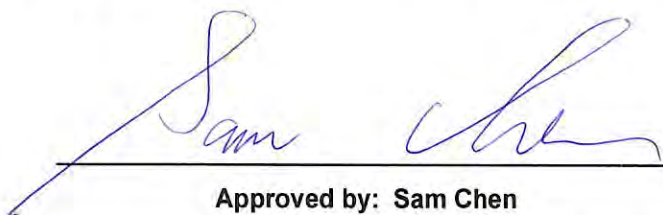


RADIO TEST REPORT

FCC ID : 2ACZP-ZED30
Equipment : Wireless Scale pad
Brand Name : ZeD
Model Name : ZeD 3.0
Applicant : Jackco Transnational Inc.
642 South Duggan Ave. Azusa CA 91702 USA
Manufacturer : J-MEX Inc.
B2, 3F, No. 1, Li-Hsin 1st Road, SBIP Hsin Chu, 300 Taiwan
Standard : 47 CFR FCC Part 15.247

The product was received on Jul. 26, 2023, and testing was started from Aug. 10, 2023 and completed on Aug. 14, 2023. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory
No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)



Table of Contents

History of this test report.....	3
Summary of Test Result.....	4
1 General Description	5
1.1 Information.....	5
1.2 Applicable Standards	7
1.3 Testing Location Information	7
1.4 Measurement Uncertainty	8
2 Test Configuration of EUT	9
2.1 Test Channel Mode	9
2.2 The Worst Case Measurement Configuration	9
2.3 EUT Operation during Test	10
2.4 Accessories	10
2.5 Support Equipment.....	10
2.6 Test Setup Diagram	11
3 Transmitter Test Result	12
3.1 DTS Bandwidth.....	12
3.2 Maximum Conducted Output Power	13
3.3 Power Spectral Density	16
3.4 Emissions in Non-restricted Frequency Bands	18
3.5 Emissions in Restricted Frequency Bands.....	19
4 Test Equipment and Calibration Data	23
Appendix A. Test Results of DTS Bandwidth	
Appendix B. Test Results of Maximum Conducted Output Power	
Appendix C. Test Results of Power Spectral Density	
Appendix D. Test Results of Emissions in Non-restricted Frequency Bands	
Appendix E. Test Results of Emissions in Restricted Frequency Bands	
Appendix F. Test Photos	
Photographs of EUT v01	



TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A10_6 Ver1.3



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
-	15.207	AC Power-line Conducted Emissions	N/A	Note
3.1	15.247(a)	DTS Bandwidth	PASS	-
3.2	15.247(b)	Maximum Conducted Output Power	PASS	-
3.3	15.247(e)	Power Spectral Density	PASS	-
3.4	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.5	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

Note: It was supplied power by Battery for EUT; it's not necessary to apply to AC Power Port Conducted Emission tests.

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sam Chen

Report Producer: Cathy Chiu



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Bluetooth Mode	Ch. Frequency (MHz)	Channel Number
2400-2483.5	LE	2402-2480	0-39 [40]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-LE(2Mbps)	2.0	1TX

Note:

- ♦ Bluetooth LE uses a GFSK modulation.
- ♦ BWch is the nominal channel bandwidth.

**1.1.2 Antenna Information**

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	J-MEX	Scalar Module	PCB Printed Antenna	N/A	2.09

Note: The above information was declared by manufacturer.

<For Bluetooth function> (1TX/1RX):

Only Port 1 can be used as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
BT-LE(2Mbps)	0.334	4.76	208.75u	10k

Note:

- ♦ DC is Duty Cycle.
- ♦ DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From Battery(DC 1.5V*4)			
Function	☐	Point-to-multipoint	☒	Point-to-point
Test Software Version	nrfconnect 4.1.2			
Support Mode	☐	LE 1M PHY: 1 Mb/s		
	☐	LE Coded PHY (S=2): 500 Kb/s		
	☐	LE Coded PHY (S=8): 125 Kb/s		
	☒	LE 2M PHY: 2 Mb/s		

Note: The above information was declared by manufacturer.



1.2 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR FCC Part 15.247
- ♦ ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of TAF.

- ♦ FCC KDB 558074 D01 v05r02
- ♦ FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu (TAF: 3787)	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.) TEL: 886-3-656-9065 FAX: 886-3-656-9085 Test site Designation No. TW3787 with FCC. Conformity Assessment Body Identifier (CABID) TW3787 with ISED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH03-CB	Kevin Huang	24.2-25.3 / 66-69	Aug. 10, 2023
Radiated	03CH04-CB	Mark Hsu	21.7~22.9 / 58~62	Aug. 10, 2023~ Aug. 14, 2023



1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Test Items	Uncertainty	Remark
Radiated Emission (9kHz ~ 30MHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.1 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.1 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%
Conducted Emission	3.1 dB	Confidence levels of 95%
Output Power Measurement	0.8 dB	Confidence levels of 95%
Power Density Measurement	3.1 dB	Confidence levels of 95%
Bandwidth Measurement	2.2%	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
BT-LE(2Mbps)	-
2402MHz	0
2440MHz	0
2480MHz	0

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
After evaluating, the worst case was found at X axis from Emissions in Restricted Frequency Bands above 1GHz. So the measurement will follow this same test configuration.	
1	EUT in X-axis+Battery
Operating Mode > 1GHz	CTX
After evaluating, the worst case was found at X axis, so it was selected to perform test and its test result was written in the report.	
1	EUT in X-axis+Battery

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	Bluetooth
Refer to Sporton Test Report No.: FA372612 for Co-location RF Exposure Evaluation.	



Note: The Battery below is for measurement only, would not be marketed.

The Battery information as below:

Support Unit	Brand Name	Model Number
Battery	Duracell	MN1500

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

Accessories		
Equipment Name	Brand Name	Model Name
M8 female circle connector*4	Kinsun	4016Z40000

2.5 Support Equipment

For Radiated:

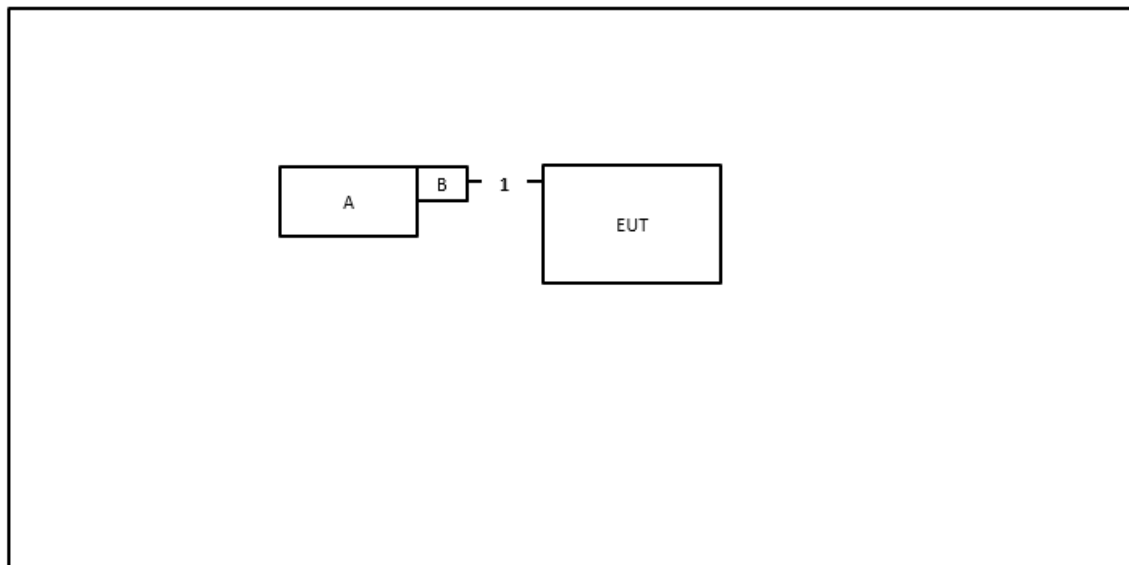
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	Lenovo	L440	N/A
B	Fixture	FTDI	MCS-73 LV	N/A
C	Battery	Duracell	MN1500	N/A

For RF Conducted:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	Lenovo	L440	N/A
B	Battery	Duracell	MN1500	N/A
C	Fixture	FTDI	MCS-73 LV	N/A

2.6 Test Setup Diagram

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	Console cable	No	0.13m

3 Transmitter Test Result

3.1 DTS Bandwidth

3.1.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
6 dB bandwidth $\geq$ 500 kHz.

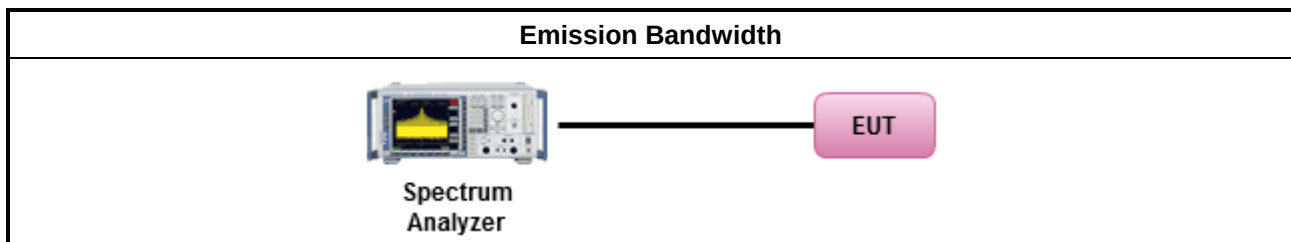
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
For the emission bandwidth shall be measured using one of the options below:
☒ Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.
☐ Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 Option 2 for 6 dB bandwidth measurement.
☐ Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.1.4 Test Setup



3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A

3.2 Maximum Conducted Output Power

3.2.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	▪ Smart antenna system (SAS):
	- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

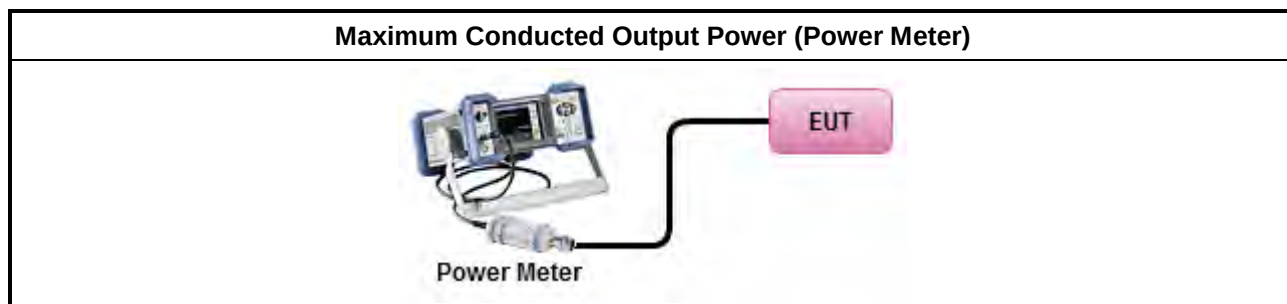
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method	
Maximum Peak Conducted Output Power	
☐	Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
☐	Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
Maximum Conducted Output Power	
[duty cycle ≥ 98% or external video / power trigger]	
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
duty cycle < 98% and average over on/off periods with duty factor	
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
Measurement using a power meter (PM)	
☐	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
☒	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average power meter).
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.	
If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$	

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B



3.3 Power Spectral Density

3.3.1 Power Spectral Density Limit

Power Spectral Density Limit
▪ Power Spectral Density (PSD) ≤ 8 dBm/3kHz

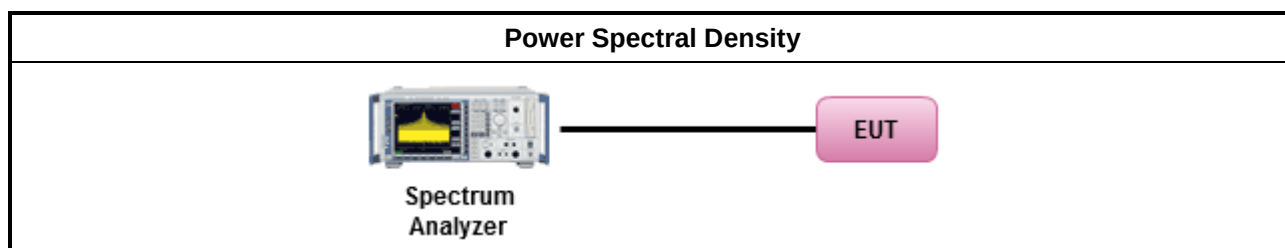
3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method	
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).	
☒	Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD. [duty cycle $\geq 98\%$ or external video / power trigger]
▪ For conducted measurement.	
▪ If The EUT supports multiple transmit chains using options given below:	
☐	Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
☐	Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
☐	Option 3: Measure and add $10 \log(N)$ dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with $10 \log(N)$. Or each transmit chains shall be add $10 \log(N)$ to compared with the limit.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Refer as Appendix C

3.4 Emissions in Non-restricted Frequency Bands

3.4.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dBc)
Peak output power procedure	20
Average output power procedure	30
Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level. Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.	

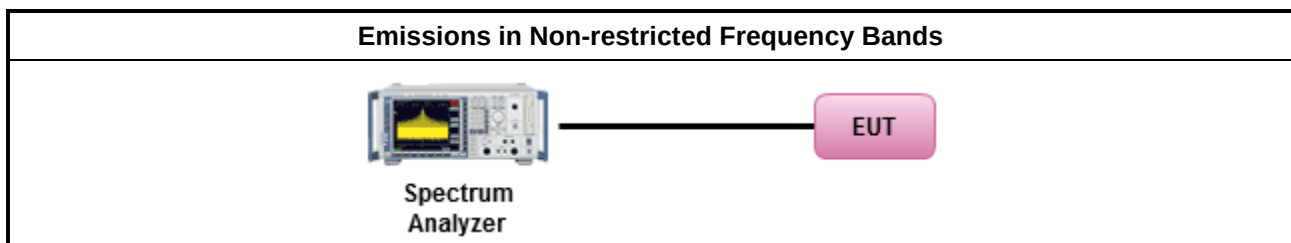
3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method
Refer as FCC KDB 558074, clause 8.5 for unwanted emissions into non-restricted bands.

3.4.4 Test Setup



3.4.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix D

3.5 Emissions in Restricted Frequency Bands

3.5.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB / decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

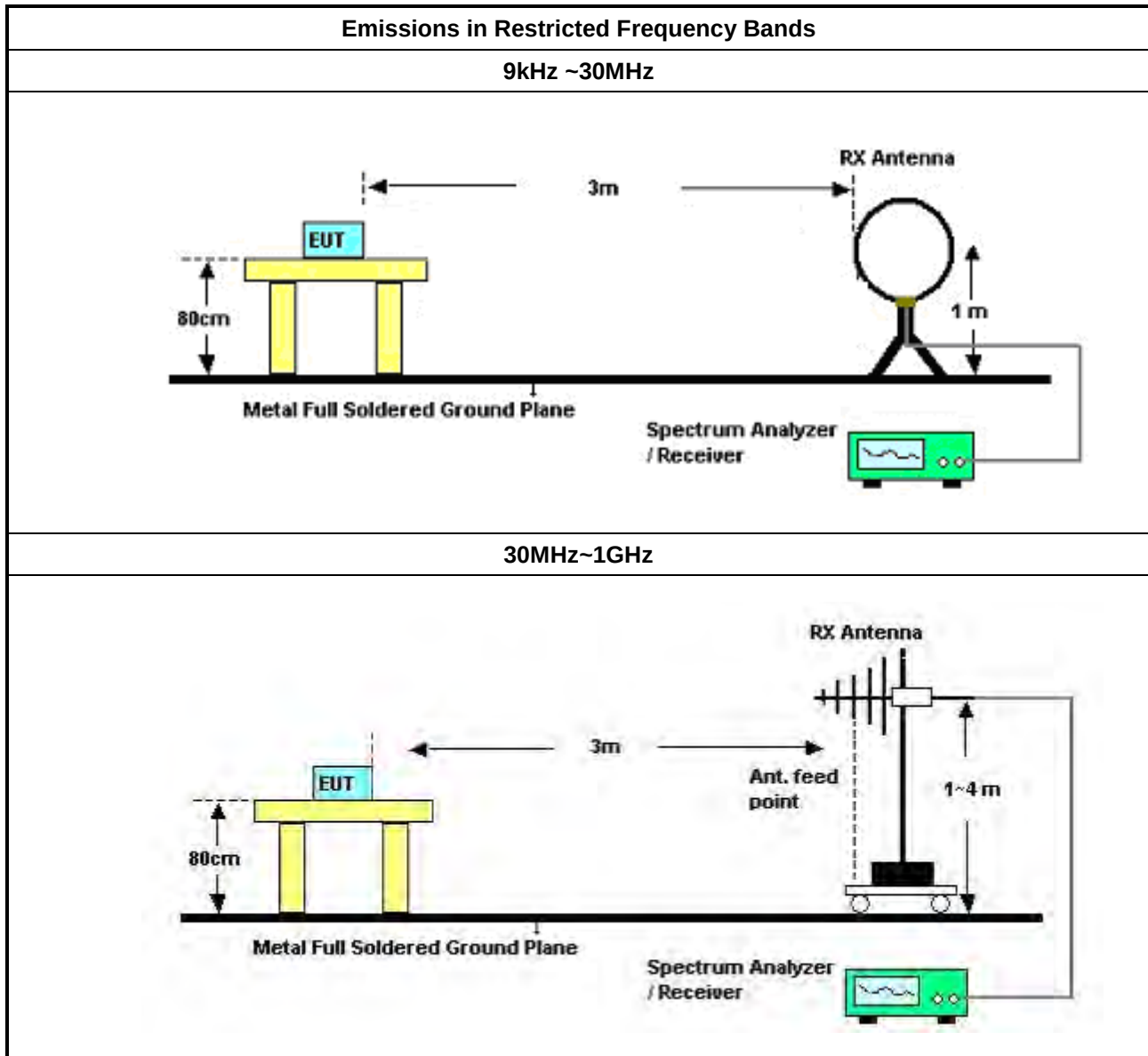
3.5.2 Measuring Instruments

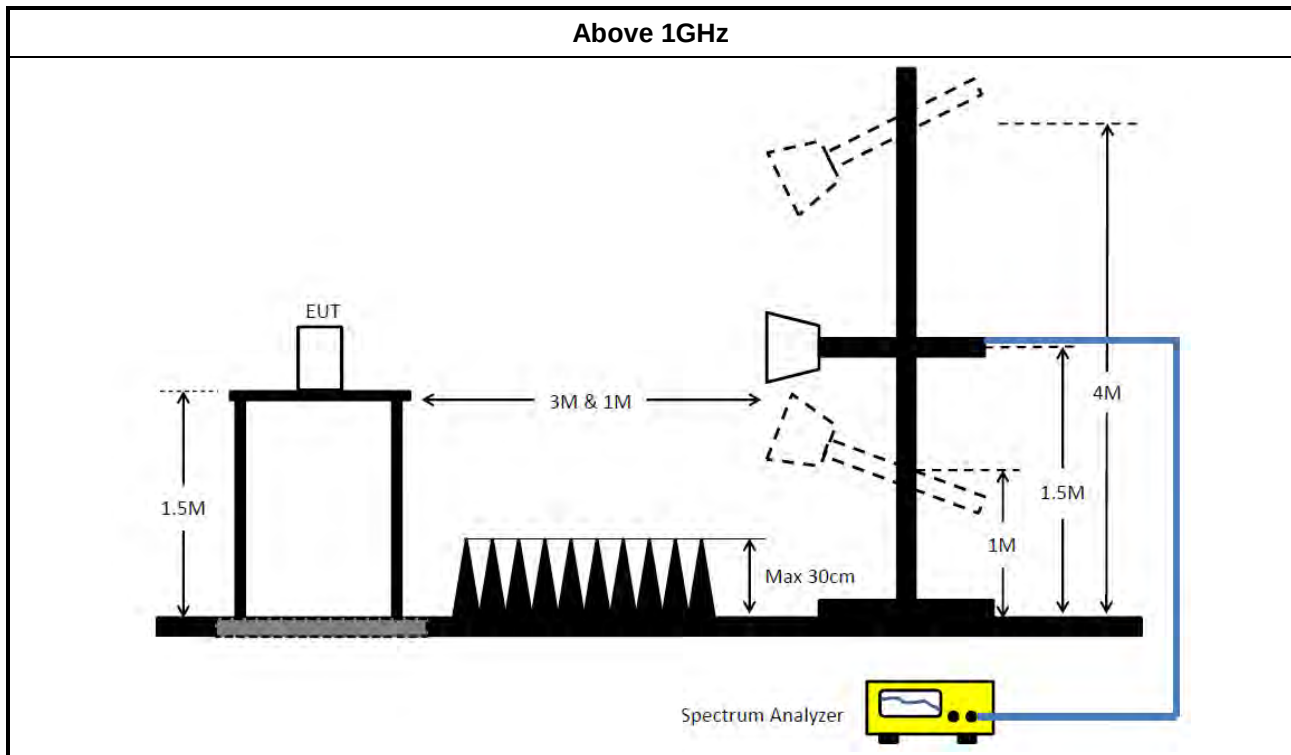
Refer a test equipment and calibration data table in this test report.

**3.5.3 Test Procedures**

Test Method	
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].	
▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
▪ For the transmitter unwanted emissions shall be measured using following options below:	
	▪ Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.
	☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle $\geq 98\%$).
	☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
	☒ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW $\geq 1/T$).
	☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq 1/T$, where T is pulse time.
	☐ Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	☒ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.
	▪ For the transmitter band-edge emissions shall be measured using following options below:
	▪ Refer as FCC KDB 558074 clause 8.7 & c63.10 clause 11.13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	▪ Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.
	▪ Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
	▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB
	▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.

3.5.4 Test Setup





3.5.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level.

3.5.6 Emissions in Restricted Frequency Bands (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10th harmonic or 40 GHz, whichever is appropriate.

3.5.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix E



4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Loop Antenna	Teseq	HLA 6120	31244	9kHz - 30 MHz	Mar. 23, 2023	Mar. 22, 2024	Radiation (03CH04-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH04-CB	30 MHz ~ 1 GHz	Aug. 01, 2023	Jul. 31, 2024	Radiation (03CH04-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH04-CB	1GHz ~18GHz 3m	Feb. 23, 2023	Feb. 22, 2024	Radiation (03CH04-CB)
BILOG ANTENNA with 6 dB attenuator	Schaffner & EMC	CBL6112B & N-6-06	22021&AT-N06 07	30MHz ~ 1GHz	Oct. 08, 2022	Oct. 07, 2023	Radiation (03CH04-CB)
Horn Antenna	ETS-Lindgren	3115	00143147	750MHz~18GHz	Oct. 12, 2022	Oct. 11, 2023	Radiation (03CH04-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2022	Aug. 21, 2023	Radiation (03CH04-CB)
Pre-Amplifier	EMCI	EMC330N	980391	20MHz ~ 3GHz	May 23, 2023	May 22, 2024	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Jun. 30, 2023	Jun. 29, 2024	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Mar. 21, 2023	Mar. 20, 2024	Radiation (03CH04-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 13, 2023	Jun. 12, 2024	Radiation (03CH04-CB)
RF Cable-low	Woken	RG402	Low Cable-03+67	30MHz ~ 1GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+67	1GHz - 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH04-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH04-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Dec. 30, 2022	Dec. 29, 2023	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Sep. 04, 2022	Sep. 03, 2023	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Sep. 04, 2022	Sep. 03, 2023	Conducted (TH03-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable	Woken	RG402	High Cable-11	30MHz –18 GHz	Feb. 14, 2023	Feb. 13, 2024	Conducted (TH03-CB)
RF Cable	Woken	RG402	High Cable-12	30MHz –18 GHz	Feb. 14, 2023	Feb. 13, 2024	Conducted (TH03-CB)
RF Cable	Woken	RG402	High Cable-13	30MHz –18 GHz	Feb. 14, 2023	Feb. 13, 2024	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
Switch	SPTCB	SP-SWI	SWI-03	1 GHz –26.5 GHz	Oct. 04, 2022	Oct. 03, 2023	Conducted (TH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH03-CB)

Note: Calibration Interval of instruments listed above is one year.
NCR means Non-Calibration required.



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(2Mbps)	1.14M	2.051M	2M05F1D	1.14M	2.045M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

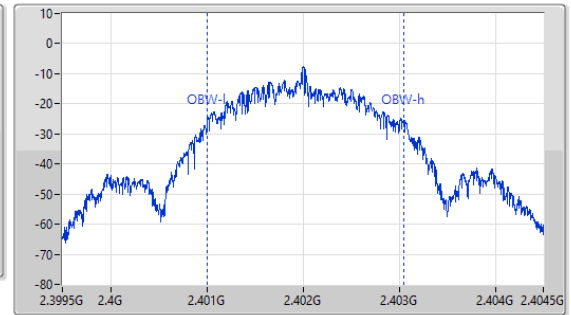
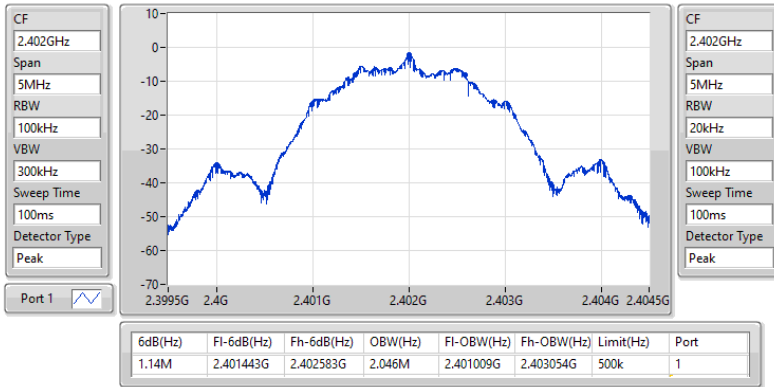
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.14M	2.046M
2440MHz	Pass	500k	1.14M	2.045M
2480MHz	Pass	500k	1.14M	2.051M

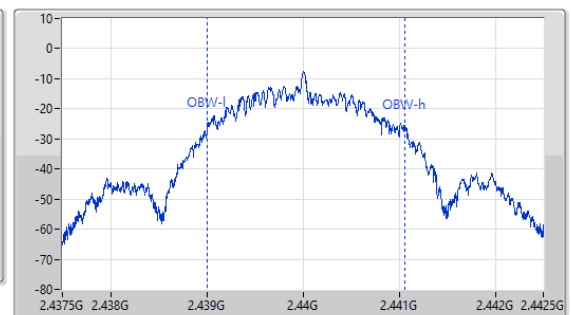
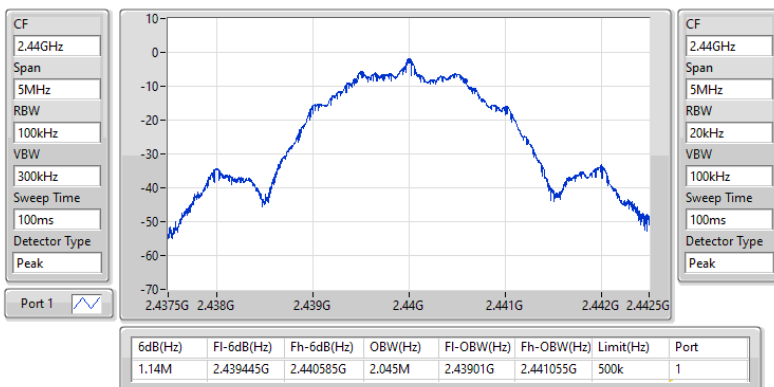
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-LE(2Mbps)
EBW-DTS
2402MHz

10/08/2023


2.4-2.4835GHz_BT-LE(2Mbps)
EBW-DTS
2440MHz

10/08/2023

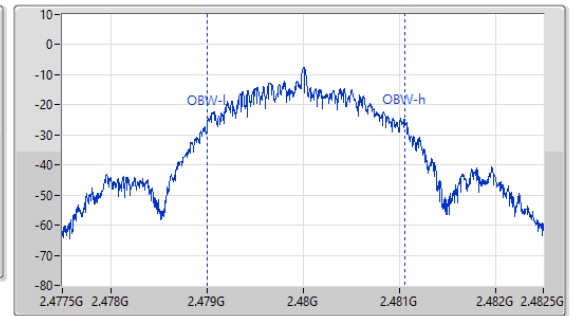
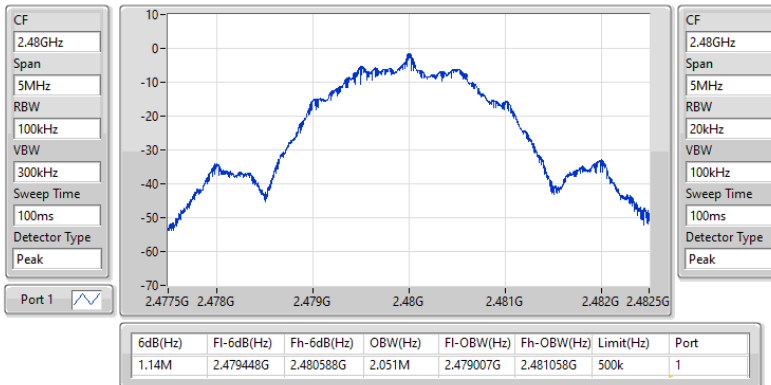


2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2480MHz

10/08/2023





Average Power-DTS

Appendix B

Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(2Mbps)	-3.58	0.00044



Average Power-DTS

Appendix B

Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.09	-3.58	30.00
2440MHz	Pass	2.09	-3.82	30.00
2480MHz	Pass	2.09	-3.84	30.00

DG = Directional Gain; Port X = Port X output power



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(2Mbps)	-20.07

RBW = 3kHz;

Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.09	-20.07	8.00
2440MHz	Pass	2.09	-20.20	8.00
2480MHz	Pass	2.09	-20.08	8.00

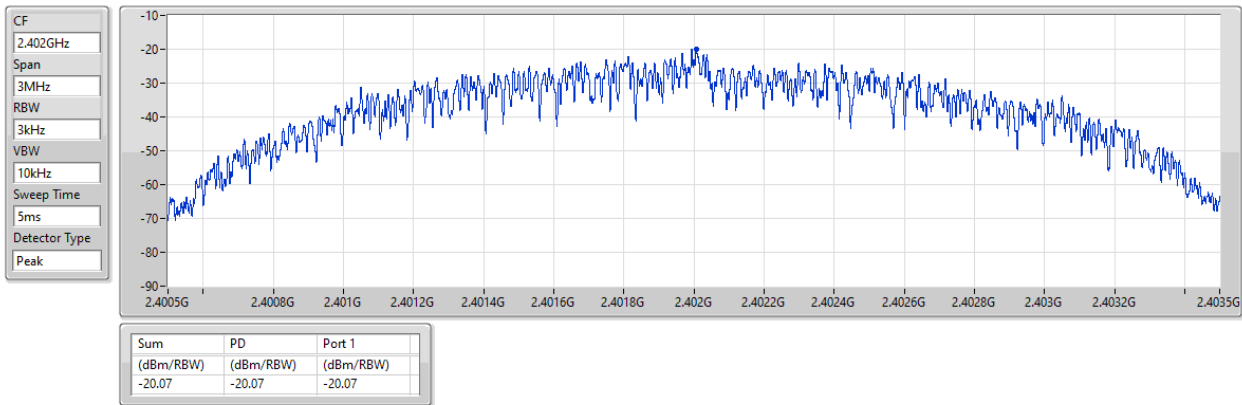
DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2402MHz

10/08/2023

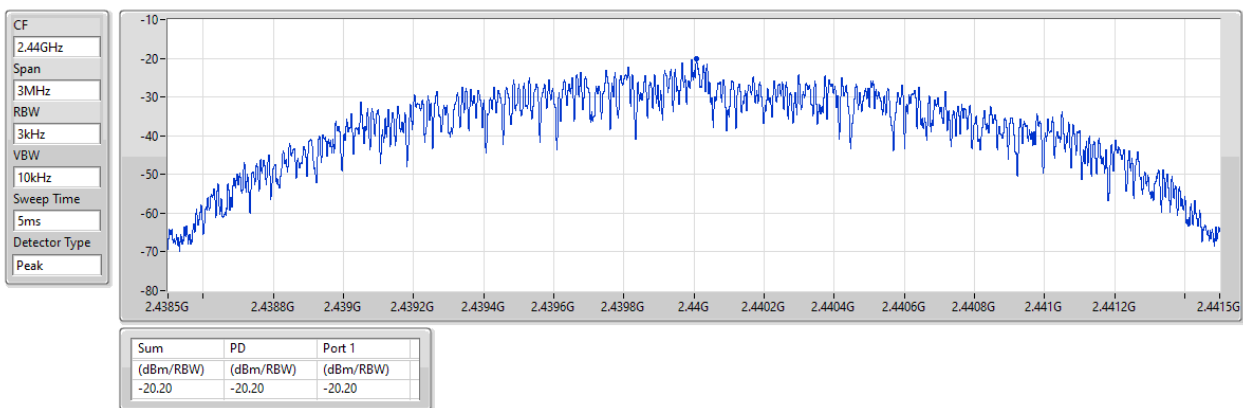


2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2440MHz

10/08/2023

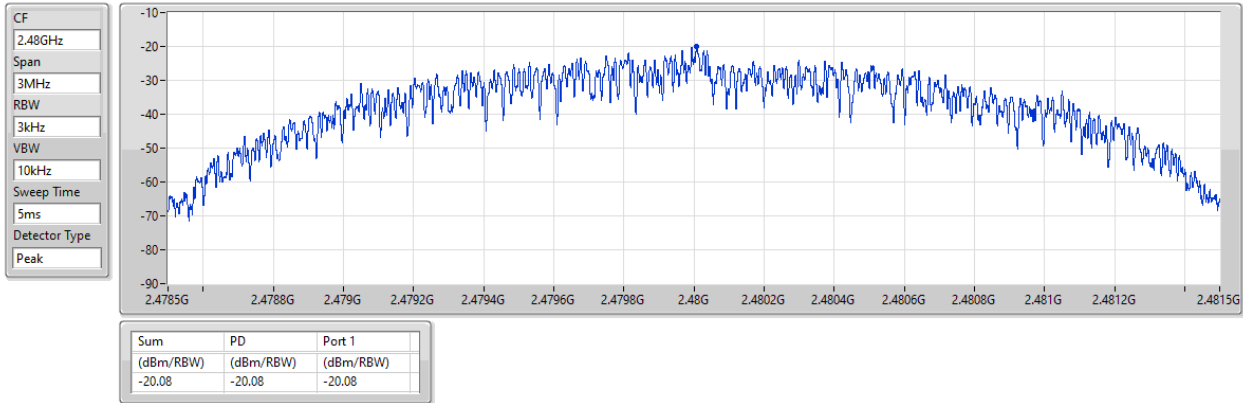


2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2480MHz

10/08/2023



Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	2.402G	-2.23	-32.23	2.09918G	-52.41	2.4G	-34.25	2.4G	-34.79	2.50318G	-50.70	7.20527G	-38.07	1

Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	-2.23	-32.23	2.09918G	-52.41	2.4G	-34.25	2.4G	-34.79	2.50318G	-50.70	7.20527G	-38.07	1
2440MHz	Pass	2.402G	-2.23	-32.23	1.9617G	-52.91	2.4G	-50.43	2.4G	-55.52	2.50338G	-50.59	21.90111G	-46.29	1
2480MHz	Pass	2.402G	-2.23	-32.23	2.13208G	-51.78	2.3934G	-50.06	2.4G	-55.38	2.50322G	-50.18	2.56537G	-45.21	1

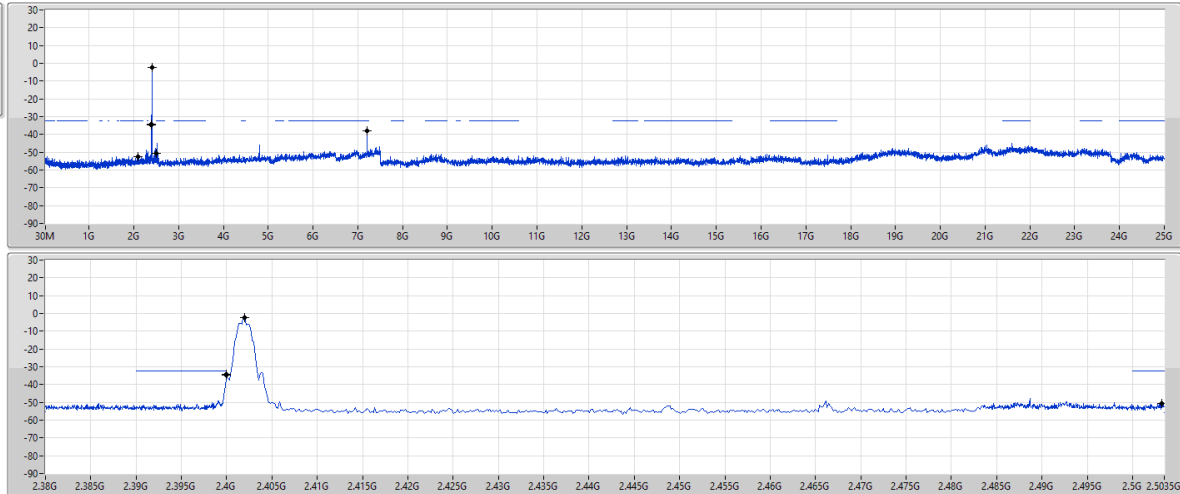
2.4-2.4835GHz_BT-LE(2Mbps)

CSEndB-DTS

2402MHz

10/08/2023

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak



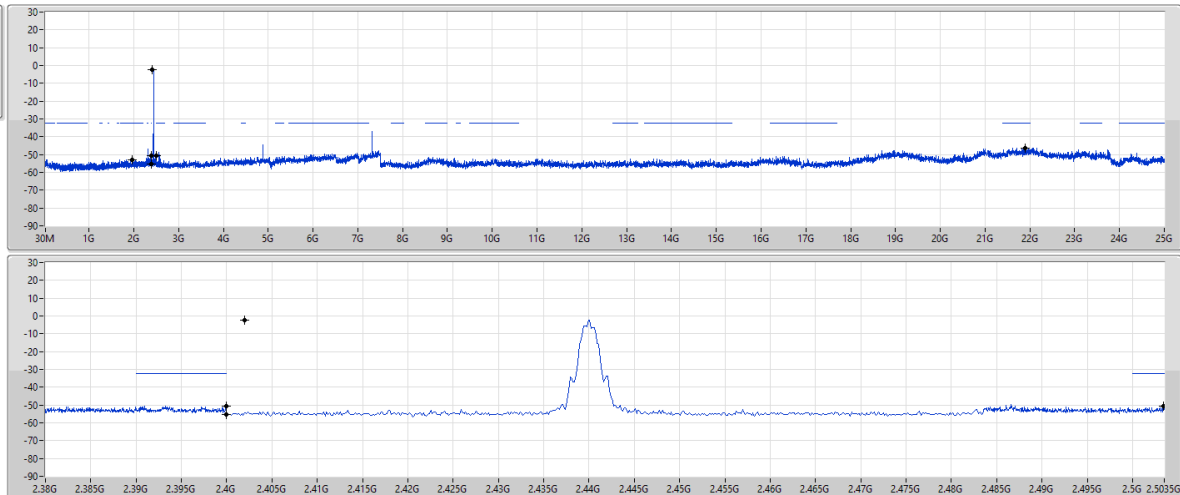
2.4-2.4835GHz_BT-LE(2Mbps)

CSEndB-DTS

2440MHz

10/08/2023

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak



2.4-2.4835GHz_BT-LE(2Mbps)

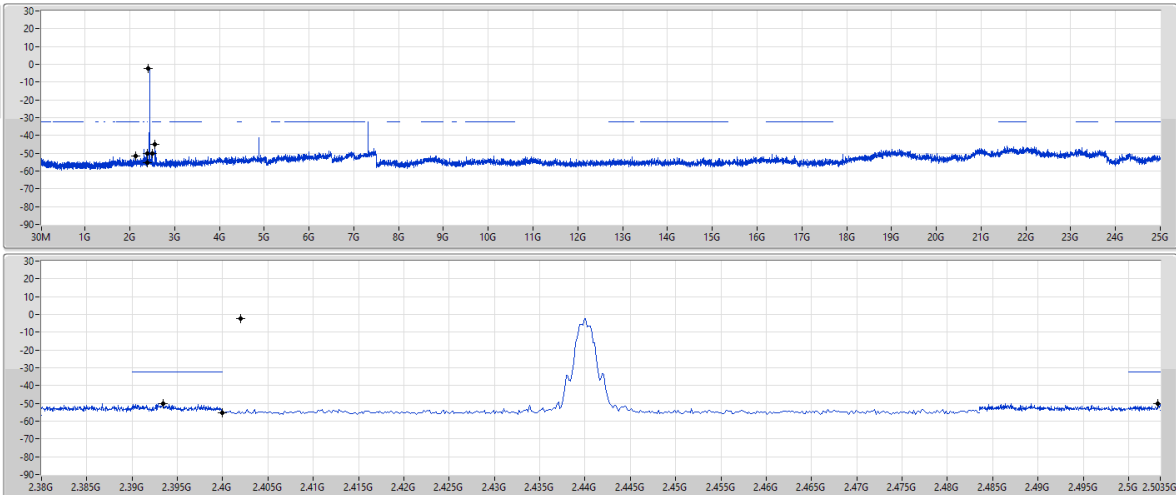
CSEndB-DTS

2480MHz

10/08/2023

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

Port 1



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402G	-2.23	-32.23	2.13208G	-51.78	2.3934G	-50.06	2.4G	-55.38	2.50322G	-50.18	2.56337G	-45.21	1



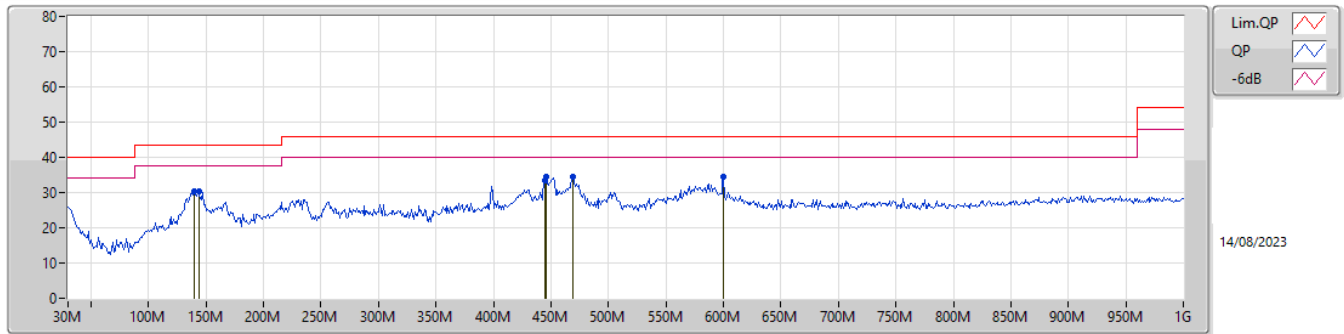
Radiated Emissions below 1GHz

Appendix E.1

Summary

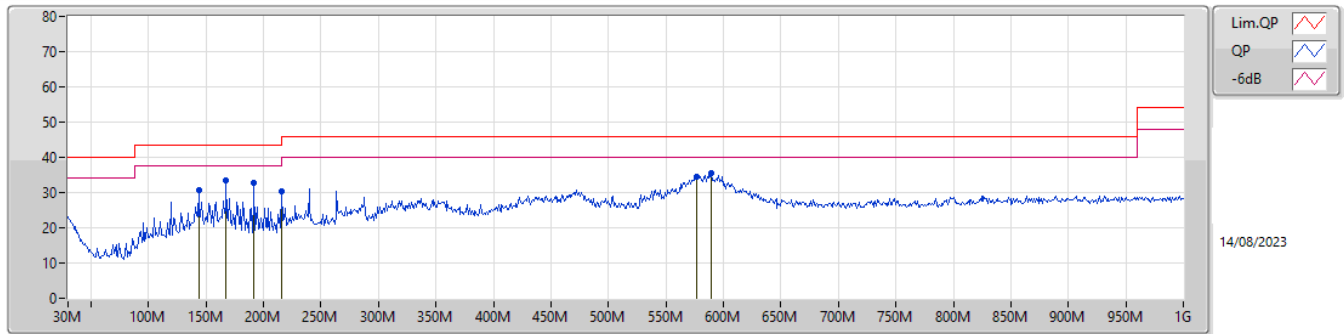
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	167.74M	33.30	43.50	-10.20	Horizontal

Mode 1



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)		
PK	139.61M	30.26	43.50	-13.24	-13.24	3	Vertical	90	1.00	-	43.50	17.30	1.29	31.83		
PK	143.49M	30.18	43.50	-13.32	-13.55	3	Vertical	38	1.00	-	43.73	16.95	1.31	31.81		
PK	445.16M	33.62	46.00	-12.38	-7.22	3	Vertical	145	1.25	-	40.84	22.59	2.27	32.08		
PK	446.13M	34.32	46.00	-11.68	-7.20	3	Vertical	162	1.00	-	41.52	22.61	2.27	32.08		
PK	469.41M	34.58	46.00	-11.42	-6.60	3	Vertical	154	1.00	"Worst"	41.18	23.15	2.32	32.07		
PK	600.36M	34.41	46.00	-11.59	-4.64	3	Vertical	138	1.00	-	39.05	24.89	2.62	32.15		

Mode 1



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)		
PK	143.49M	30.76	43.50	-12.74	-13.55	3	Horizontal	2	2.00	-	44.31	16.95	1.31	31.81		
PK	167.74M	33.30	43.50	-10.20	-14.39	3	Horizontal	360	1.50	"Worst"	47.69	15.90	1.41	31.70		
PK	191.99M	32.68	43.50	-10.82	-15.12	3	Horizontal	186	1.25	-	47.80	15.10	1.51	31.73		
PK	215.27M	30.50	43.50	-13.00	-15.20	3	Horizontal	165	1.50	-	45.70	14.99	1.60	31.79		
PK	577.08M	34.52	46.00	-11.48	-5.05	3	Horizontal	344	1.50	-	39.57	24.53	2.57	32.15		
PK	589.69M	35.48	46.00	-10.52	-4.83	3	Horizontal	327	1.50	-	40.31	24.72	2.60	32.15		

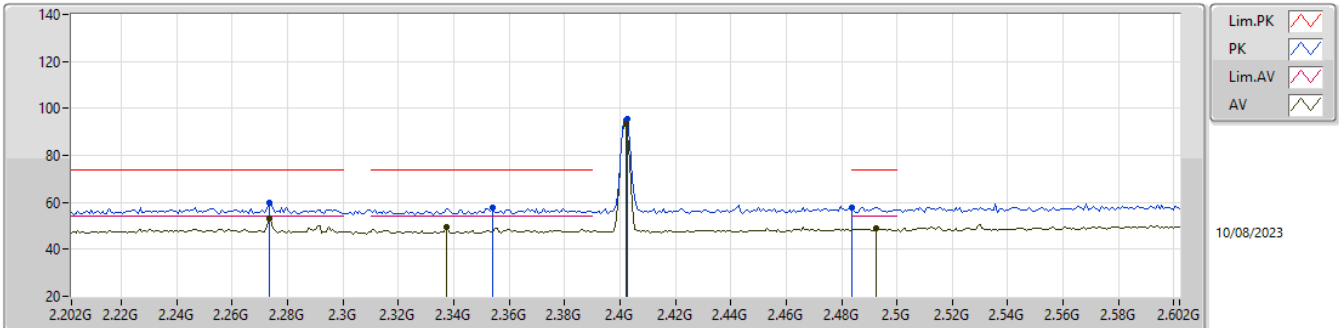


Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	AV	2.2732G	53.20	54.00	-0.80	3	Vertical	89	1.75	-

2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX

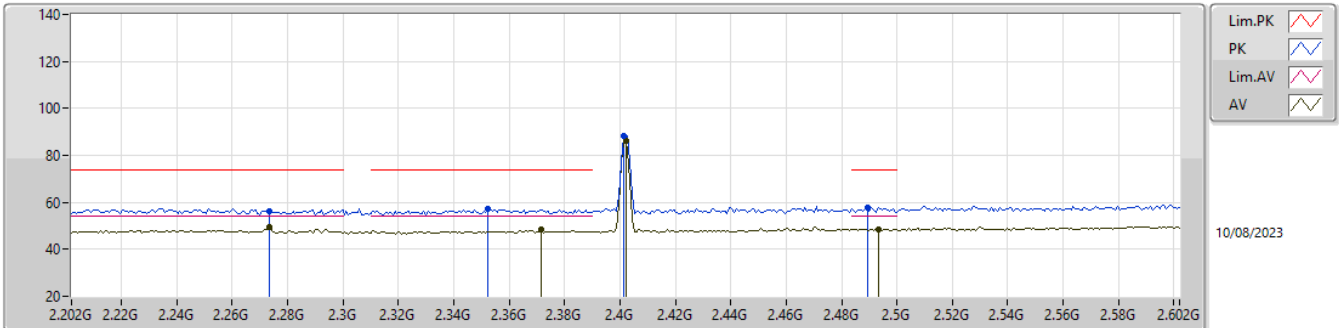


EUT_X_1TX
Setting 0
04-M-A-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.2732G	59.99	74.00	-14.01	29.29	3	Vertical	89	1.75	-	27.56	3.14	-			
AV	2.2732G	53.20	54.00	-0.80	22.50	3	Vertical	89	1.75	-	27.56	3.14	-			
PK	2.354G	57.71	74.00	-16.29	27.11	3	Vertical	89	1.75	-	27.42	3.18	-			
AV	2.3372G	49.36	54.00	-4.64	18.79	3	Vertical	89	1.75	-	27.40	3.17	-			
PK	2.4028G	95.40	Inf	-Inf	64.50	3	Vertical	89	1.75	-	27.70	3.20	-			
AV	2.402G	93.29	Inf	-Inf	62.39	3	Vertical	89	1.75	-	27.70	3.20	-			
PK	2.4835G	57.94	74.00	-16.06	26.83	3	Vertical	89	1.75	-	27.83	3.28	-			
AV	2.4924G	48.87	54.00	-5.13	17.71	3	Vertical	89	1.75	-	27.87	3.29	-			

2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX

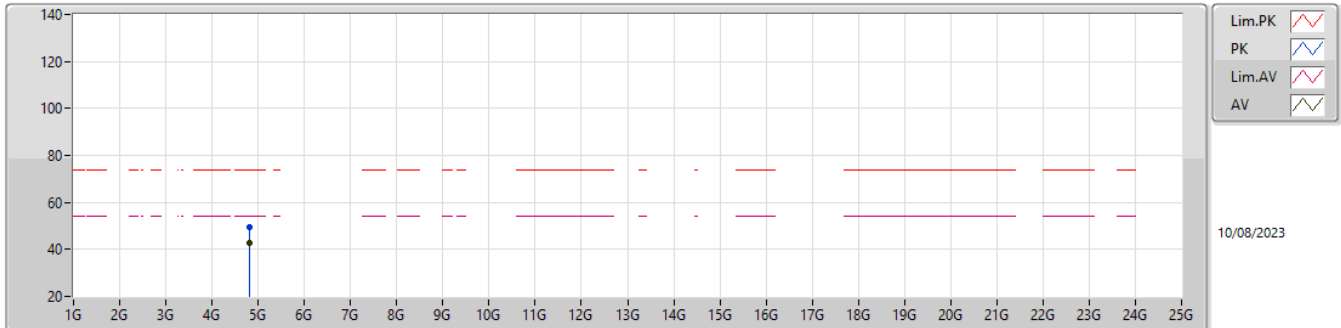


EUT_X_1TX
Setting 0
04-M-A-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.2732G	56.40	74.00	-17.60	25.70	3	Horizontal	231	1.00	-	27.56	3.14	-			
AV	2.2732G	49.41	54.00	-4.59	18.71	3	Horizontal	231	1.00	-	27.56	3.14	-			
PK	2.3524G	57.43	74.00	-16.57	26.84	3	Horizontal	231	1.00	-	27.41	3.18	-			
AV	2.3716G	48.37	54.00	-5.63	17.65	3	Horizontal	231	1.00	-	27.53	3.19	-			
PK	2.4012G	88.14	Inf	-Inf	57.24	3	Horizontal	231	1.00	-	27.70	3.20	-			
AV	2.402G	86.05	Inf	-Inf	55.15	3	Horizontal	231	1.00	-	27.70	3.20	-			
PK	2.4892G	57.78	74.00	-16.22	26.63	3	Horizontal	231	1.00	-	27.86	3.29	-			
AV	2.4932G	48.68	54.00	-5.32	17.52	3	Horizontal	231	1.00	-	27.87	3.29	-			

2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX

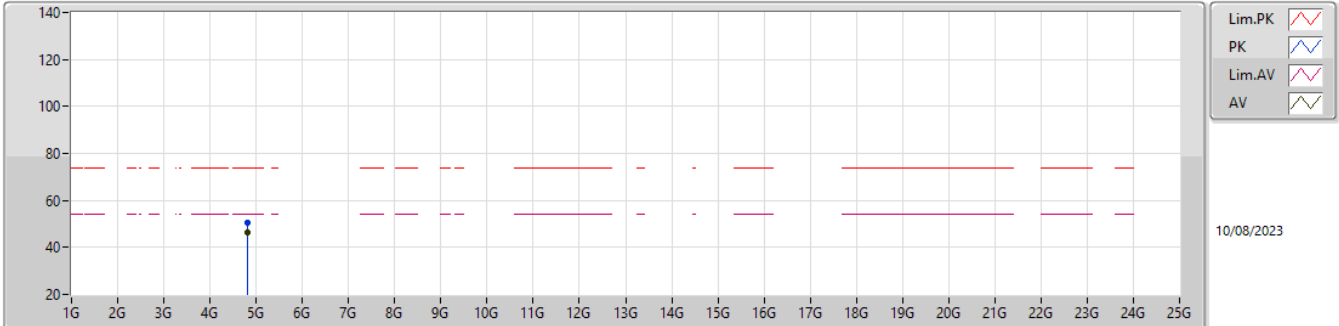


EUT_X_1TX
Setting 0
04-M-A-4

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA			
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)			
PK	4.80518G	49.39	74.00	-24.61	44.15	3	Vertical	264	2.06	-	32.61	5.30	32.67			
AV	4.80386G	42.65	54.00	-11.35	37.41	3	Vertical	264	2.06	-	32.61	5.30	32.67			

2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX

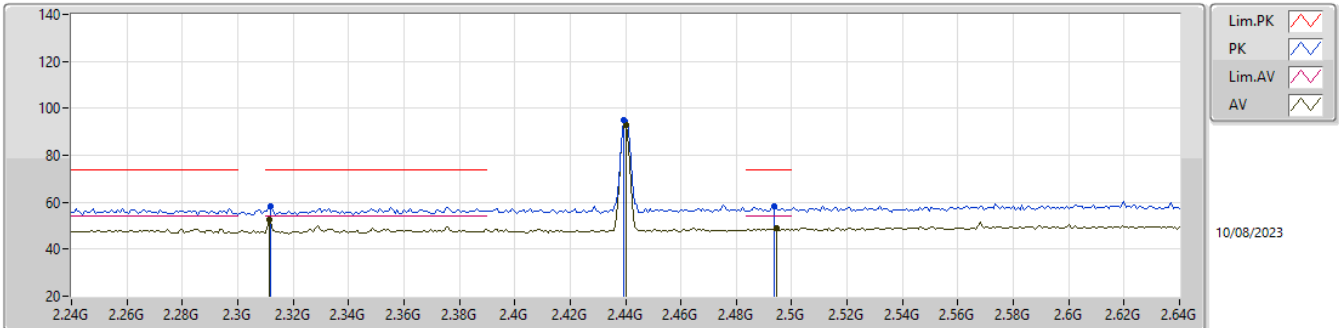


EUT_X_1TX
Setting 0
04-M-A-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.80488G	50.52	74.00	-23.48	45.28	3	Horizontal	299	2.36	-	32.61	5.30	32.67			
AV	4.80386G	46.20	54.00	-7.80	40.96	3	Horizontal	299	2.36	-	32.61	5.30	32.67			

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX

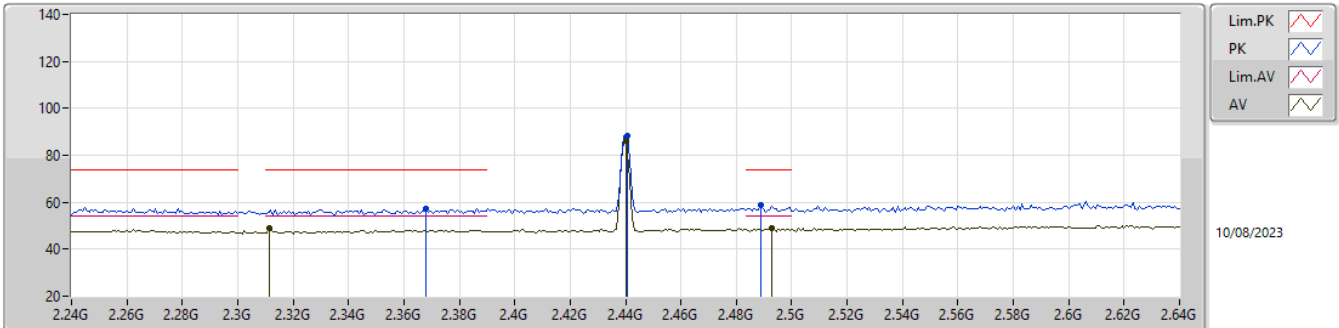


EUT_X_1TX
Setting 0
04-M-A-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.312G	58.44	74.00	-15.56	27.88	3	Vertical	88	1.42	-	27.40	3.16	-			
AV	2.3112G	52.34	54.00	-1.66	21.78	3	Vertical	88	1.42	-	27.40	3.16	-			
PK	2.4392G	95.24	Inf	-Inf	64.30	3	Vertical	88	1.42	-	27.70	3.24	-			
AV	2.44G	93.07	Inf	-Inf	62.13	3	Vertical	88	1.42	-	27.70	3.24	-			
PK	2.4936G	58.12	74.00	-15.88	26.96	3	Vertical	88	1.42	-	27.87	3.29	-			
AV	2.4944G	48.88	54.00	-5.12	17.71	3	Vertical	88	1.42	-	27.88	3.29	-			

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX

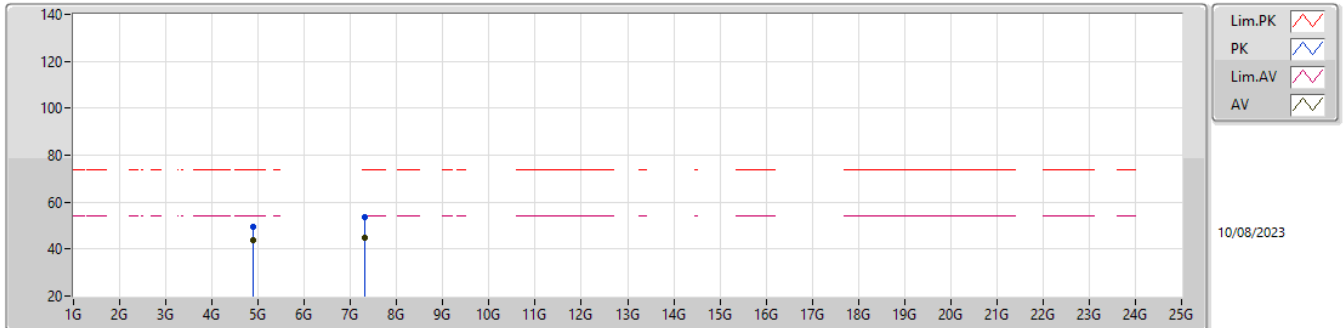


EUT_X_1TX
Setting 0
04-M-A-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.368G	57.06	74.00	-16.94	26.37	3	Horizontal	230	1.20	-	27.51	3.18	-			
AV	2.3112G	48.82	54.00	-5.18	18.26	3	Horizontal	230	1.20	-	27.40	3.16	-			
PK	2.4408G	88.30	Inf	-Inf	57.36	3	Horizontal	230	1.20	-	27.70	3.24	-			
AV	2.44G	86.15	Inf	-Inf	55.21	3	Horizontal	230	1.20	-	27.70	3.24	-			
PK	2.4888G	58.69	74.00	-15.31	27.54	3	Horizontal	230	1.20	-	27.86	3.29	-			
AV	2.4928G	49.06	54.00	-4.94	17.90	3	Horizontal	230	1.20	-	27.87	3.29	-			

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX

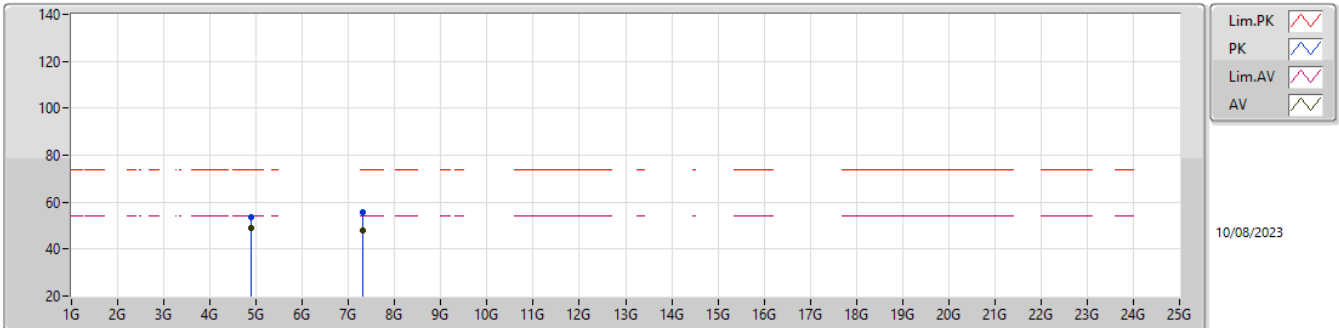


EUT_X_1TX
Setting 0
04-M-A-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.87908G	49.57	74.00	-24.43	44.01	3	Vertical	274.4	1.52	-	32.76	5.30	32.50			
AV	4.87984G	43.91	54.00	-10.09	38.34	3	Vertical	274.4	1.52	-	32.76	5.30	32.49			
PK	7.31858G	53.81	74.00	-20.19	43.29	3	Vertical	14	1.00	-	37.70	6.92	34.10			
AV	7.31834G	44.97	54.00	-9.03	34.45	3	Vertical	14	1.00	-	37.70	6.92	34.10			

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX

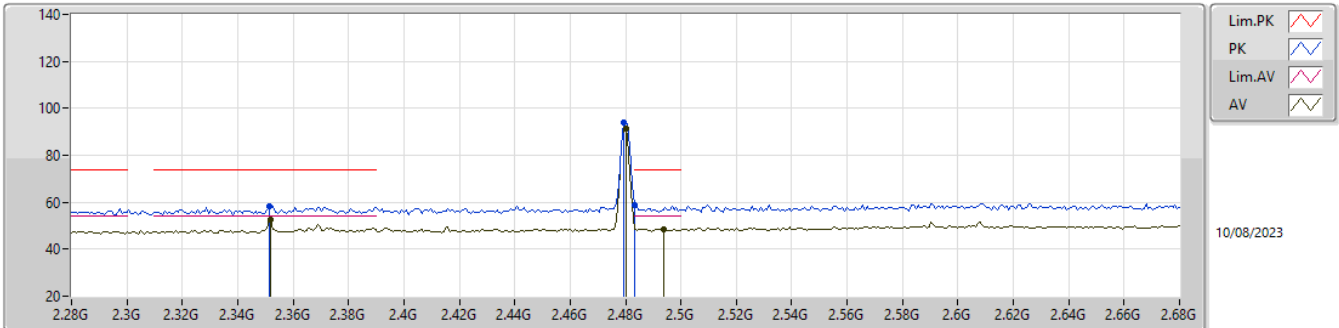


EUT_X_1TX
Setting 0
04-M-A-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.8801G	53.53	74.00	-20.47	47.96	3	Horizontal	300	2.42	-	32.76	5.30	32.49			
AV	4.87978G	48.84	54.00	-5.16	43.27	3	Horizontal	300	2.42	-	32.76	5.30	32.49			
PK	7.3218G	55.48	74.00	-18.52	44.96	3	Horizontal	34	2.39	-	37.70	6.92	34.10			
AV	7.31976G	47.68	54.00	-6.32	37.16	3	Horizontal	34	2.39	-	37.70	6.92	34.10			

2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX

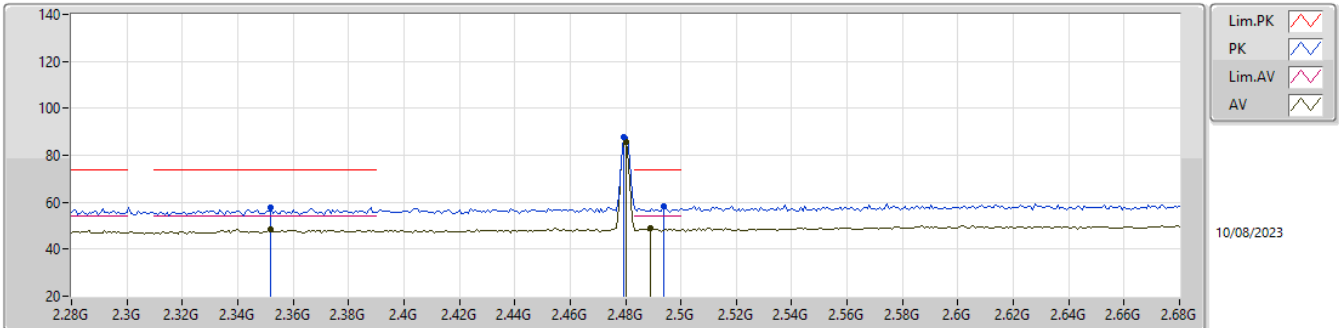


EUT_X_1TX
Setting 0
04-M-A-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.3512G	58.34	74.00	-15.66	27.75	3	Vertical	90	1.45	-	27.41	3.18	-			
AV	2.352G	52.53	54.00	-1.47	21.94	3	Vertical	90	1.45	-	27.41	3.18	-			
PK	2.4792G	93.84	Inf	-Inf	62.74	3	Vertical	90	1.45	-	27.82	3.28	-			
AV	2.48G	91.52	Inf	-Inf	60.42	3	Vertical	90	1.45	-	27.82	3.28	-			
PK	2.4835G	58.96	74.00	-15.04	27.85	3	Vertical	90	1.45	-	27.83	3.28	-			
AV	2.4936G	48.68	54.00	-5.32	17.52	3	Vertical	90	1.45	-	27.87	3.29	-			

2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX

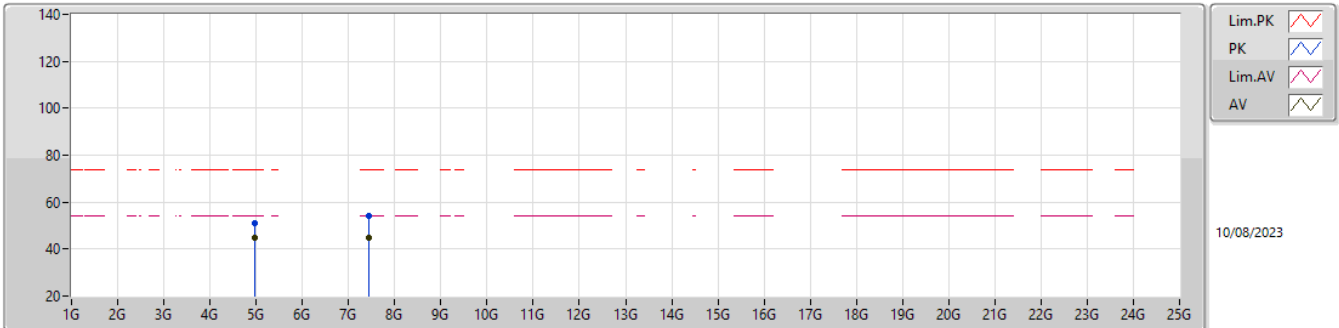


EUT_X_1TX
Setting 0
04-M-A-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.352G	57.55	74.00	-16.45	26.96	3	Horizontal	230	1.16	-	27.41	3.18	-			
AV	2.352G	48.54	54.00	-5.46	17.95	3	Horizontal	230	1.16	-	27.41	3.18	-			
PK	2.4792G	87.90	Inf	-Inf	56.80	3	Horizontal	230	1.16	-	27.82	3.28	-			
AV	2.48G	85.71	Inf	-Inf	54.61	3	Horizontal	230	1.16	-	27.82	3.28	-			
PK	2.4936G	58.51	74.00	-15.49	27.35	3	Horizontal	230	1.16	-	27.87	3.29	-			
AV	2.4888G	48.87	54.00	-5.13	17.72	3	Horizontal	230	1.16	-	27.86	3.29	-			

2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX

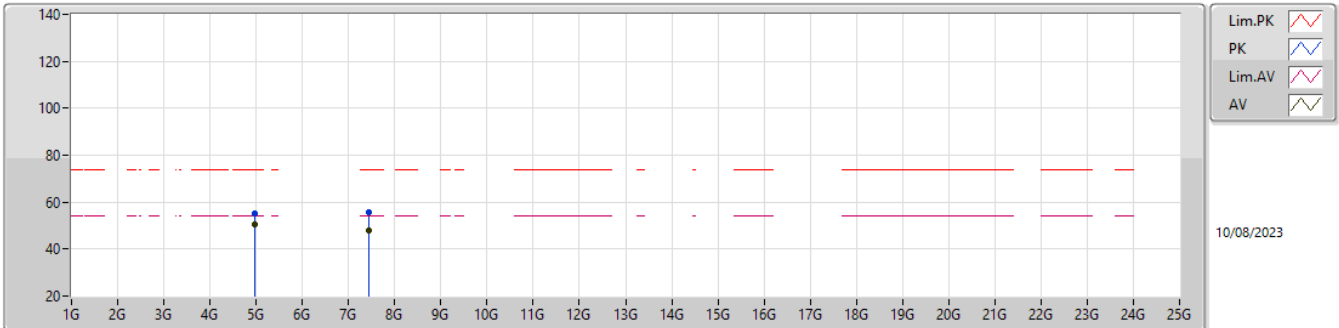


EUT_X_1TX
Setting 0
04-M-A-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.96114G	51.00	74.00	-23.00	45.08	3	Vertical	269	1.43	-	32.92	5.30	32.30			
AV	4.95984G	44.94	54.00	-9.06	39.02	3	Vertical	269	1.43	-	32.92	5.30	32.30			
PK	7.43832G	53.91	74.00	-20.09	43.62	3	Vertical	58	1.80	-	37.42	7.02	34.15			
AV	7.43836G	44.78	54.00	-9.22	34.49	3	Vertical	58	1.80	-	37.42	7.02	34.15			

2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



EUT_X_1TX
Setting 0
04-M-A-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	4.96016G	55.24	74.00	-18.76	49.32	3	Horizontal	302	2.25	-	32.92	5.30	32.30				
AV	4.95978G	50.57	54.00	-3.43	44.65	3	Horizontal	302	2.25	-	32.92	5.30	32.30				
PK	7.4412G	55.44	74.00	-18.56	45.15	3	Horizontal	42	2.34	-	37.42	7.02	34.15				
AV	7.43854G	48.18	54.00	-5.82	37.89	3	Horizontal	42	2.34	-	37.42	7.02	34.15				