

FCC Radio Test Report

FCC ID : 2BOYO-SSB-10
Equipment : Wireless Smart Button
Brand Name : SKS
Model Name : SSB-10-1
Applicant : TAIWAN SHIN KONG SECURITY CO.,LTD
No. 128, Xing'ai Rd., Neihu Dist., Taipei City 114508, Taiwan
Manufacturer : TAIWAN SHIN KONG SECURITY CO.,LTD
No. 128, Xing'ai Rd., Neihu Dist., Taipei City 114508, Taiwan
Standard : 47 CFR FCC Part 15.247

The product was received on Jul. 06, 2026, and testing was started from Jul. 16, 2026 and completed on Aug. 14, 2026. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Errata to C63.10a-2024 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. Hsinhua Laboratory, the test report shall not be reproduced except in full.


Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)



Table of Contents

HISTORY OF THIS TEST REPORT3

SUMMARY OF TEST RESULT4

1 GENERAL DESCRIPTION5

1.1 Information.....5

1.2 Testing Applied Standards7

1.3 Testing Location Information7

1.4 Measurement Uncertainty7

2 TEST CONFIGURATION OF EUT.....8

2.1 Test Channel Mode8

2.2 The Worst Case Measurement Configuration9

2.3 Support Equipment.....10

2.4 Test Setup Diagram10

3 TRANSMITTER TEST RESULT11

3.1 DTS Bandwidth.....11

3.2 Maximum Conducted Output Power12

3.3 Power Spectral Density14

3.4 Emissions in Non-restricted Frequency Bands15

3.5 Emissions in Restricted Frequency Bands.....16

4 TEST EQUIPMENT AND CALIBRATION DATA20

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 RESULTS OF RADIATED EMISSION CO-LOCATION

APPENDIX G. TEST PHOTOS

PHOTOGRAPHS OF EUT V01



History of this test report

TEL : 886-3-3273456
FAX : 886-3-3270973
Report Template No.: HE1-C10 Ver4.5
FCC ID: 2BOYO-SSB-10

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	Not Required	Only employ battery power.
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	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and explanations:

None

Reviewed by: Ryan Hsiao

Report Producer: Amber 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(125kbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(500kbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(1Mbps)	1.0	1TX

Note:

- Bluetooth LE uses a GFSK (1Mbps/125kbps/500kbps) modulation.
- BWch is the nominal channel bandwidth.
- Bluetooth LE 125k/500k/1Mbps uses the same modulation, and 1Mbps was found to be the worst case scenario which was performed full test and recorded in this test report.

1.1.2 Antenna Information

Ant.	Brand Name	Model Name	Ant. Type	Connector	RF	Radio
1	Shenzhen Feixin Wireless Communication	FX-DS-923-002	Spring	N/A	Lora	Radio 1
2	DUSUN	DSBC-570	PCB	N/A	BT	Radio 2

Ant.	Port	Gain (dBi)	
		Lora (902-928)	BT
1	1	2.5	-
2	1	-	-2.73

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

Ant. 2 (port 1) could transmit/receive.

For LoRa function:

For LoRa mode (1TX/1RX)

Ant. 1 (port 1) could transmit/receive.

1.1.3 EUT Information

Operational Condition	
EUT Power Type	From Battery
EUT Function	☐ Point-to-multipoint ☒ Point-to-point
Type of EUT	
☒	Stand-alone
☐	Combined (EUT where the radio part is fully integrated within another device)
	Combined Equipment - Brand Name / Model No.: ...
☐	Plug-in radio (EUT intended for a variety of host systems)
	Host System - Brand Name / Model No.: ...
☐	Other:

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
BT-LE(1Mbps)	1	0	20.001m	10Hz (DC>=0.98)

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

1.2 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Errata to C63.10a-2024

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

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

1.3 Testing Location Information

☒ Wenhua 3rd. (TAF: 3785)	ADD: No. 58, Aly. 75, Ln. 564, Wenhua 3rd Rd., Guishan Dist. Taoyuan City 333, Taiwan (R.O.C.)			
	TEL: 886-3-327-0868			
RF : Test site Designation No. TW0036 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH06-HY	Peng Huang	23.8~24.6°C / 53~59%	22/Jul/2026
Radiated	03CH24-HY	Jack Tang	20.3~23.1°C / 54~60%	16/Jul/2026~21/Jul/2026
Radiated (Co-location)	03CH24-HY	Jack Tang	21.7~22.4°C / 54~60%	14/Aug/2026

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
Conducted Output Power	1.12 dB	Confidence levels of 95%
Bandwidth	0.07 MHz	Confidence levels of 95%
Conducted Emission	1.12 dB	Confidence levels of 95%
Power Spectral Density	1.22 dB	Confidence levels of 95%
Radiated Emission (9 kHz ~ 30 MHz)	1.76 dB	Confidence levels of 95%
Radiated Emission (30 MHz ~ 1 GHz)	5.38 dB	Confidence levels of 95%
Radiated Emission (1 GHz ~ 18 GHz)	4.94 dB	Confidence levels of 95%
Radiated Emission (18 GHz ~ 40 GHz)	4.92 dB	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Test Software Version	Airoha_Tool_Kit(ATK)_2.2.0.1.7
-----------------------	--------------------------------

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	7/15
2440MHz	7/15
2480MHz	7/15

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		
1	Battery Mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT	V		

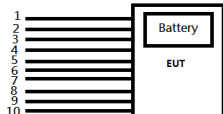
The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	CTX
1	BT+LoRa
Refer to Appendix F for Radiated Emission Co-location.	

2.3 Support Equipment

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	Fixture	Sporton	Sporton	-	-

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Fixture Cable *10	SKS	SGW-10-1	-	Provided by Customer

2.4 Test Setup Diagram

Test Setup Diagram - Radiated Test				
				
Item	Connection	Shielded	Length(m)	Remark
1	Fixture Cable	No	0.2	-
2	Fixture Cable	No	0.2	-
3	Fixture Cable	No	0.2	-
4	Fixture Cable	No	0.2	-
5	Fixture Cable	No	0.2	-
6	Fixture Cable	No	0.2	-
7	Fixture Cable	No	0.2	-
8	Fixture Cable	No	0.2	-
9	Fixture Cable	No	0.2	-
10	Fixture Cable	No	0.2	-

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.

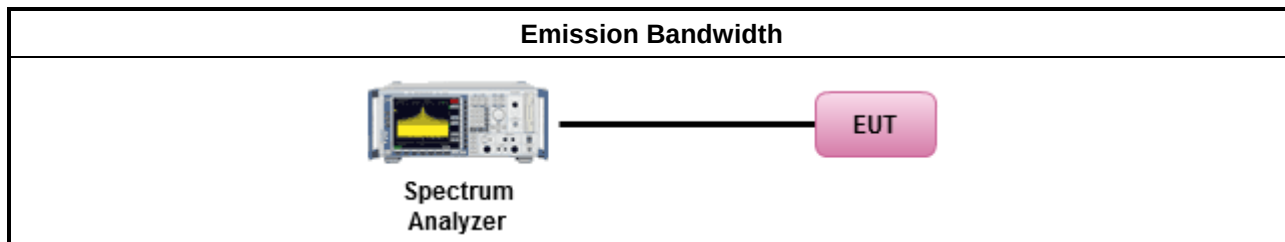
3.1.2 Measuring Instruments

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 KDB 558074, clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
☐	Refer as RSS-Gen, clause 6.7 for occupied bandwidth testing.
☐	Refer as ANSI C63.10, clause 6.9.3 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
e.i.r.p. Power Limit:	
	2400-2483.5 MHz Band
	Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)
	Point-to-point systems (P2P): $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])$ dBm
	Smart antenna system (SAS)
	- Single beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	- Overlap beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	- Aggregate power on all beams: $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX} + 8])$ 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.	

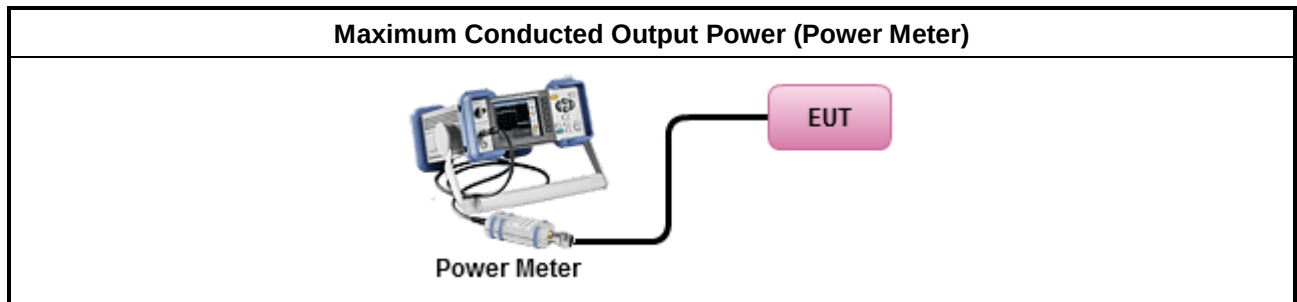
3.2.2 Measuring Instruments

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 KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
☐	Refer as KDB 558074, clause 8.3.1.2 integrated band power method.
☐	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.2 of ANSI C63.10) peak power meter.
Maximum Average Conducted Output Power	
☐	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
☒	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below: Refer as 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

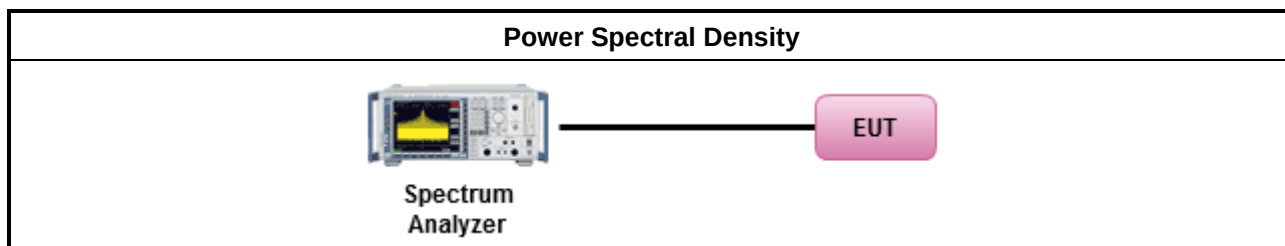
3.3.2 Measuring Instruments

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 KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Max. PSD.
- For conducted measurement. - If The EUT supports multiple transmit chains using options given below: - Measure and sum the spectra across the outputs. Refer as 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.

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 (dB)
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 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 level.	

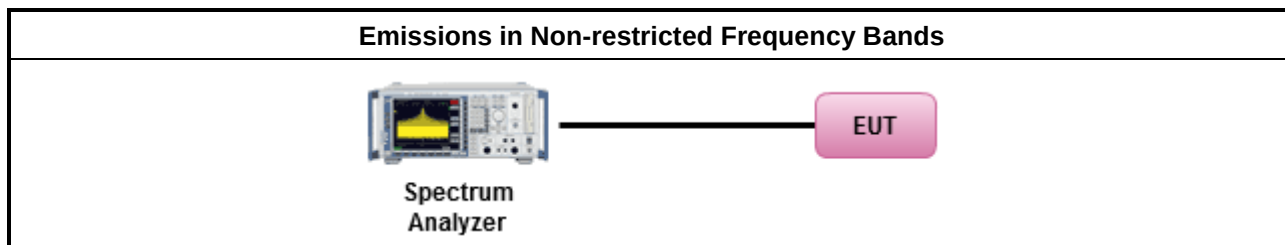
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method
Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency 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

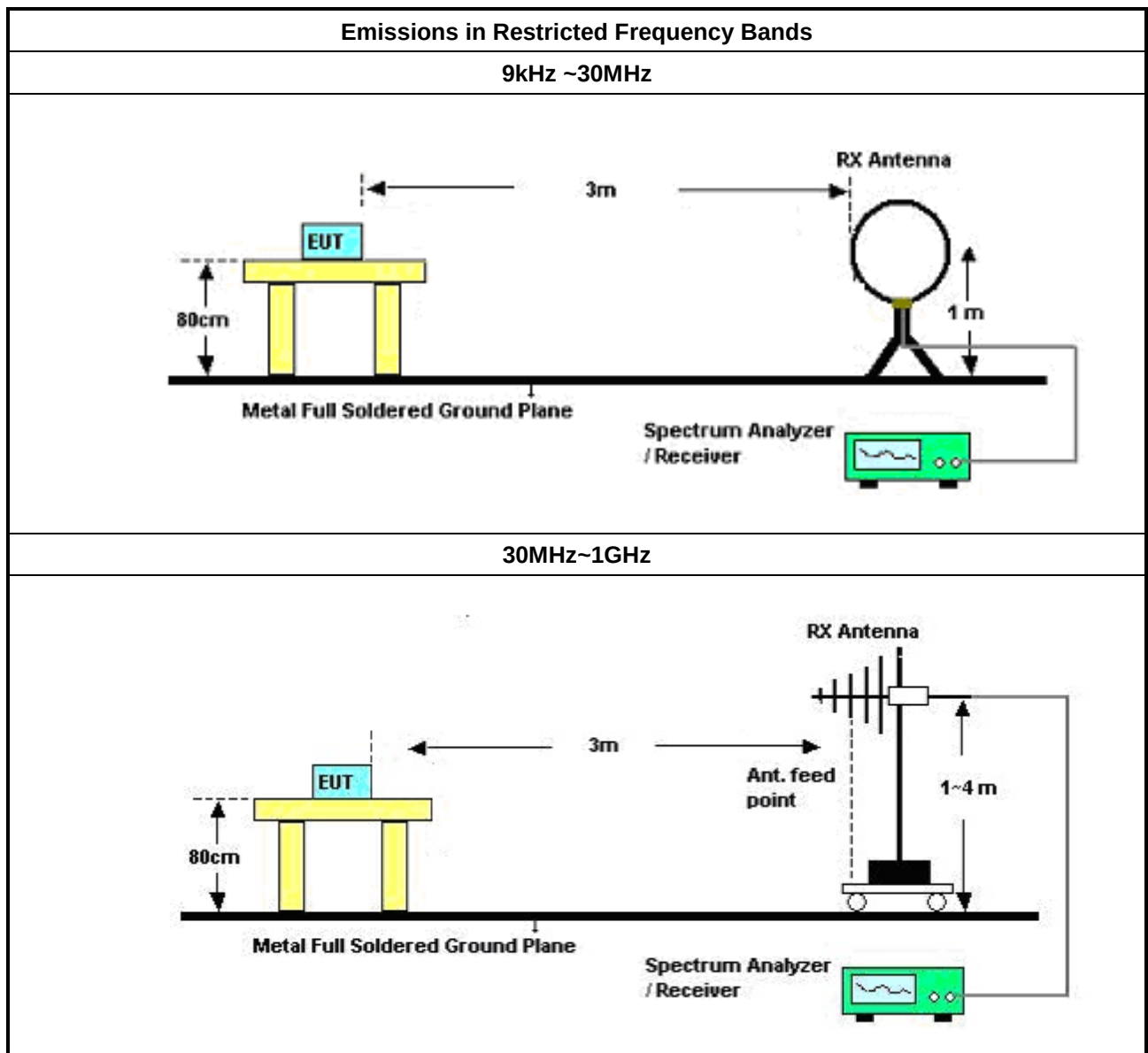
Test Method	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
For the transmitter band-edge emissions shall be measured using following options below:	
	Refer as KDB 558074 clause 8.7.1, 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 KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.
	Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels.
Use the following spectrum analyzer settings:	
	Set RBW=100 kHz for $f < 1$ GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement. For average measurement, refer as 1.1.4.
KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.	
	Based on FCC 15.31(f)(2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.
	Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

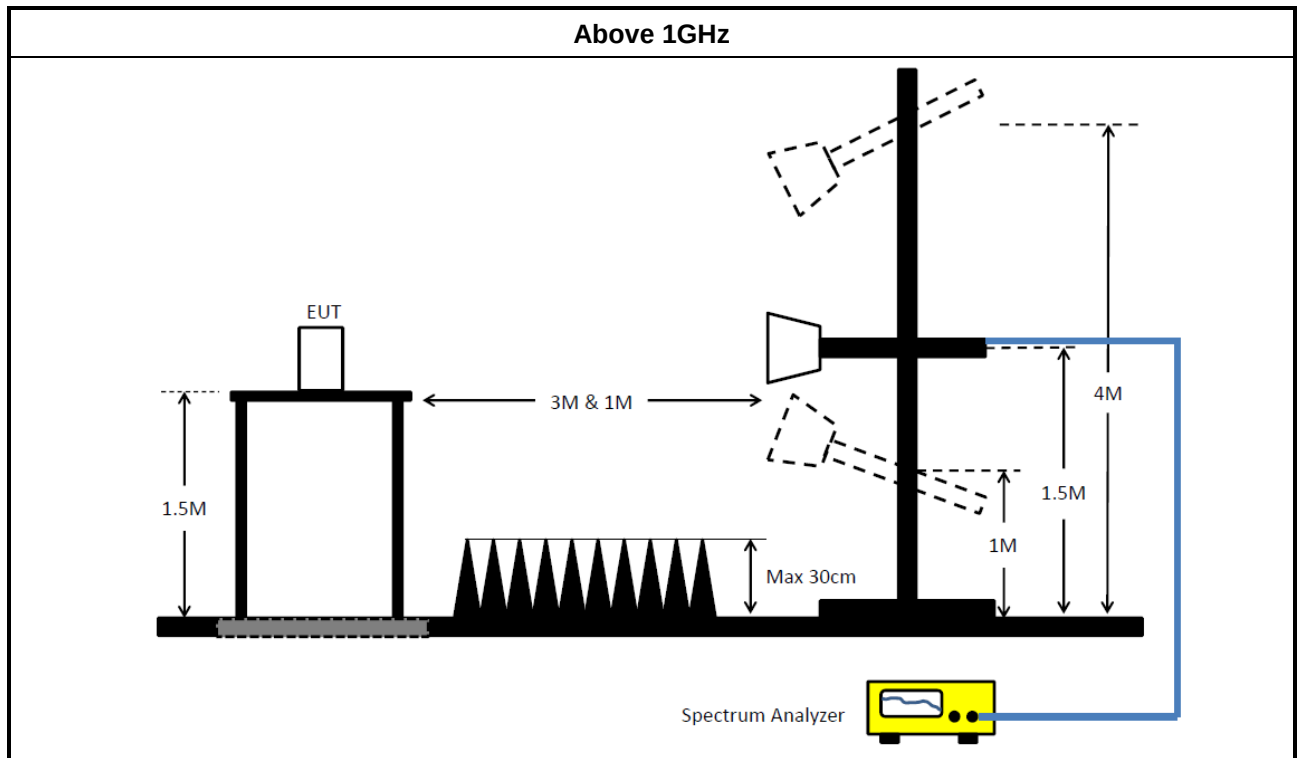
3.5.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamplifier Factor)

3.5.5 Test Setup





3.5.6 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

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

3.5.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix E

4 Test Equipment and Calibration Data

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101029	10Hz~40GHz	30/Oct/2025	29/Oct/2026
SMB100A Signal Generator	R&S	SMB100A	183621	100kHz~40GHz	30/Dec/2025	29/Dec/2026
Power Meter	Anritsu	ML2495A	1124009	300MHz~40GHz	26/Mar/2026	25/Mar/2027
Pulse Sensor	Anritsu	MA2411B	1027452	300MHz~40GHz	26/Mar/2026	25/Mar/2027
SENSE-15247_FS	Sporton	V5.11.28	N/A	N/A	N/A	N/A

Instrument for Radiated Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH24-HY	30MHz~1GHz 3m	15/Aug/2025	14/Aug/2026
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH24-HY	1GHz~18GHz 3m	29/Jul/2025	28/Jul/2026
EMI Test Receiver	ROHDE & SCHWARZ	ESR	102318	9kHz~3.6GHz	08/Dec/2025	07/Dec/2026
Signal Analyzer	ROHDE & SCHWARZ	FSV3044	101345	10Hz~44GHz	26/Aug/2025	25/Aug/2026
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	16/Mar/2026	15/Mar/2027
Bilog Antenna & 6dB Attenuator	TESEQ / Woken	CBL 6112D / 00800N1D01N-06	35376 / 02	30MHz~1GHz	12/Apr/2026	11/Apr/2027
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02744	1GHz~18GHz	07/Aug/2025	06/Aug/2026
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	01248	18GHz~40GHz	07/Oct/2025	06/Oct/2026
RF Cable	HUBER+SUHNER	SUOFLEX 104	03CH24-cable-01	9kHz~40GHz	02/Oct/2025	01/Oct/2026
Pre-Amplifier	Aglient	8447D	2944A06292	30MHz~1GHz	07/Apr/2026	06/Apr/2027
Amplifier	EM	EM01G18G	060870	1GHz ~18GHz	08/Aug/2025	07/Aug/2026
Amplifier	EM	EM18G40GA	060874	18GHz ~40GHz	27/Apr/2026	26/Apr/2027
SENSE-15247-FS	Sporton	V5.11.24	NA	NA	NA	NA

**Instrument for Radiated Test Co-location**

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH24-HY	1GHz~18GHz 3m	28/Jul/2026	27/Jul/2027
Signal Analyzer	ROHDE& SCHWARZ	FSV3044	101345	10Hz~44GHz	26/Aug/2025	25/Aug/2026
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02744	1GHz~18GHz	29/Jul/2026	28/Jul/2027
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	01248	18GHz~40GHz	07/Oct/2025	06/Oct/2026
RF Cable	HUBER+ SUHNER	SUOFLEX 104	03CH24-cable-01	9kHz~40GHz	02/Oct/2025	01/Oct/2026
Amplifier	EM	EM01G18G	060870	1GHz ~18GHz	07/Aug/2026	06/Aug/2027
Amplifier	EM	EM18G40GA	060874	18GHz ~40GHz	27/Apr/2026	26/Apr/2027
SENSE-15407-NII	Sporton	V5.11.27	NA	NA	NA	NA



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	875k	1.175M	1M18F1D	750k	1.108M

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(1Mbps)	-	-	-	-
2402MHz	Pass	500k	785k	1.108M
2440MHz	Pass	500k	750k	1.124M
2480MHz	Pass	500k	875k	1.175M

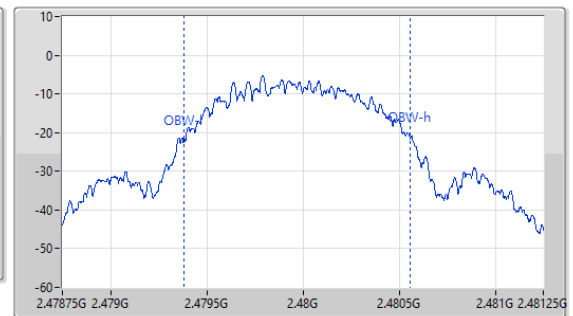
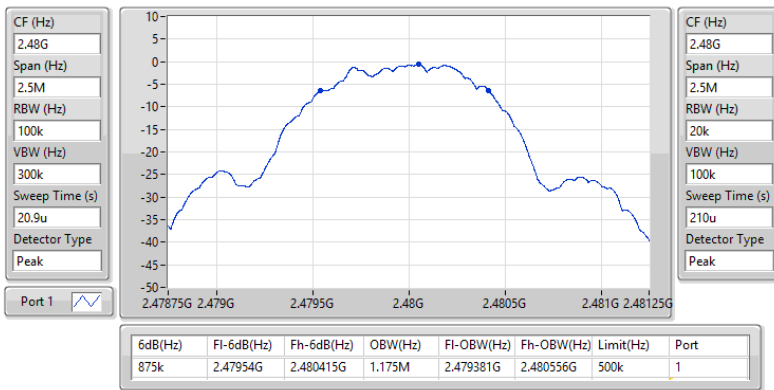
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

2480MHz

22/07/2026





Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	1.98	0.00158



Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	-2.73	1.98	30.00
2440MHz	Pass	-2.73	1.88	30.00
2480MHz	Pass	-2.73	1.74	30.00

DG = Directional Gain; Port X = Port X output power;
Inf = There's no restriction for the limit.



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-15.06

RBW = 3kHz;



Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	-2.73	-15.06	8.00
2440MHz	Pass	-2.73	-15.20	8.00
2480MHz	Pass	-2.73	-15.75	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;
Inf = There's no restriction for the limit.

2.4-2.4835GHz_BT-LE(1Mbps)

PSD

2402MHz

22/07/2026

CF (Hz)
2.402G

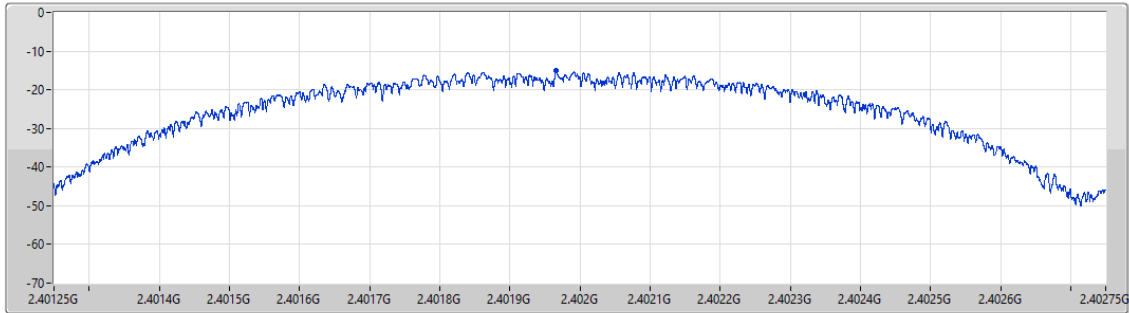
Span (Hz)
1.5M

RBW (Hz)
3k

VBW (Hz)
10k

Sweep Time (s)
4.19m

Detector Type
Peak



Port 1

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-15.06	-15.06	-15.06



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(1Mbps)	Pass	2.40217G	1.11	-28.89	1.8489G	-55.48	2.39996G	-41.62	2.4G	-44.02	2.50046G	-55.73	21.52991G	-45.63	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(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40217G	1.11	-28.89	1.8489G	-55.48	2.39996G	-41.62	2.4G	-44.02	2.50046G	-55.73	21.52991G	-45.63	1
2440MHz	Pass	2.40217G	1.11	-28.89	2.18495G	-55.27	2.39984G	-56.22	2.4G	-57.71	2.5015G	-56.18	21.76613G	-46.23	1
2480MHz	Pass	2.40217G	1.11	-28.89	2.13443G	-55.31	2.39096G	-55.93	2.4G	-57.36	2.50306G	-56.18	22.00234G	-46.55	1

2.4-2.4835GHz_BT-LE(1Mbps)

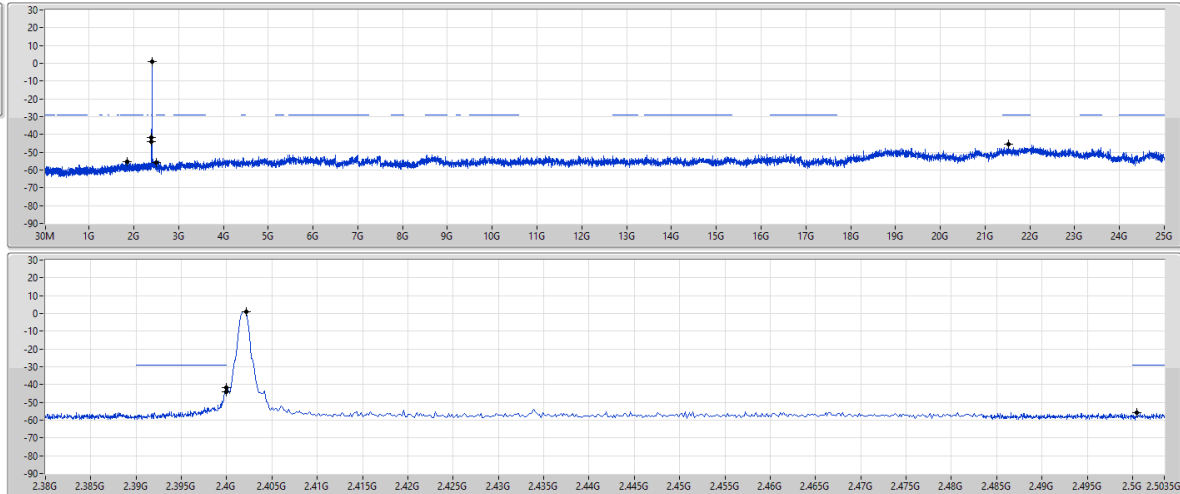
CSEndB-DTS

2402MHz

22/07/2026

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
2.40217G	1.11	-28.89	1.8489G	-55.48	2.39996G	-41.62	2.4G	-44.02	2.50046G	-55.73	21.52991G	-45.63	1



Summary

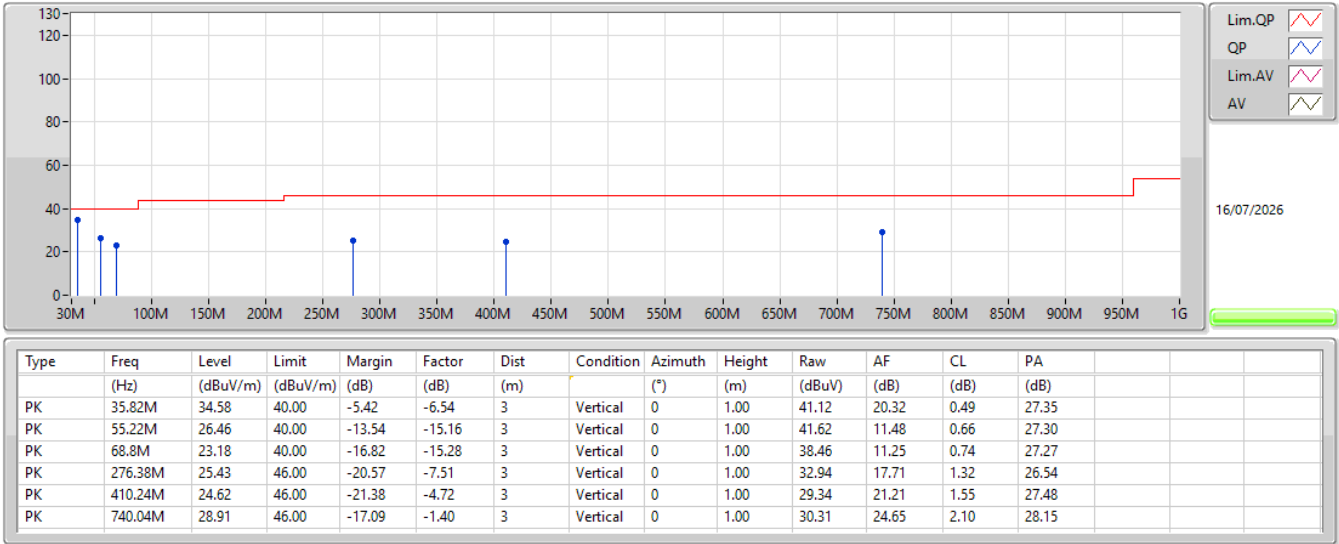
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	PK	35.82M	34.58	40.00	-5.42	3	Vertical	0	1.00

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	35.82M	34.58	40.00	-5.42	3	Vertical	0	1.00
2440MHz	Pass	PK	55.22M	26.46	40.00	-13.54	3	Vertical	0	1.00
2440MHz	Pass	PK	68.8M	23.18	40.00	-16.82	3	Vertical	0	1.00
2440MHz	Pass	PK	276.38M	25.43	46.00	-20.57	3	Vertical	0	1.00
2440MHz	Pass	PK	410.24M	24.62	46.00	-21.38	3	Vertical	0	1.00
2440MHz	Pass	PK	740.04M	28.91	46.00	-17.09	3	Vertical	0	1.00
2440MHz	Pass	PK	31.94M	25.52	40.00	-14.48	3	Horizontal	360	1.00
2440MHz	Pass	PK	117.3M	18.67	43.50	-24.83	3	Horizontal	360	1.00
2440MHz	Pass	PK	225.94M	32.36	46.00	-13.64	3	Horizontal	360	1.00
2440MHz	Pass	PK	282.2M	29.80	46.00	-16.20	3	Horizontal	360	1.00
2440MHz	Pass	PK	369.5M	32.98	46.00	-13.02	3	Horizontal	360	1.00
2440MHz	Pass	PK	419.94M	33.94	46.00	-12.06	3	Horizontal	360	1.00

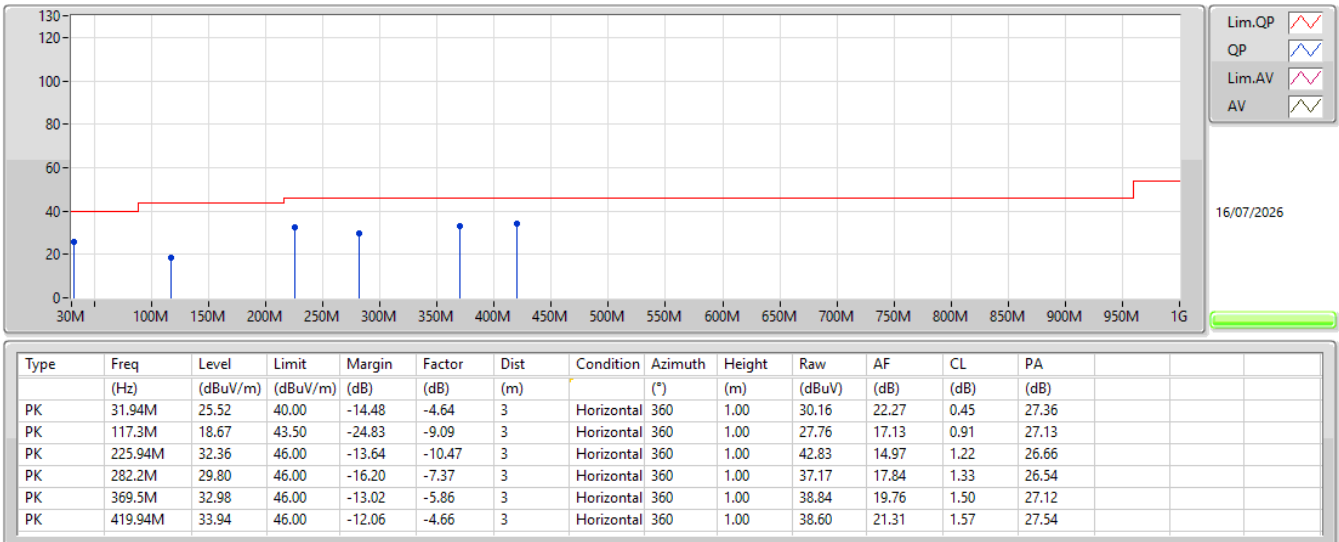
2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz_Battery



2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz_Battery





Summary

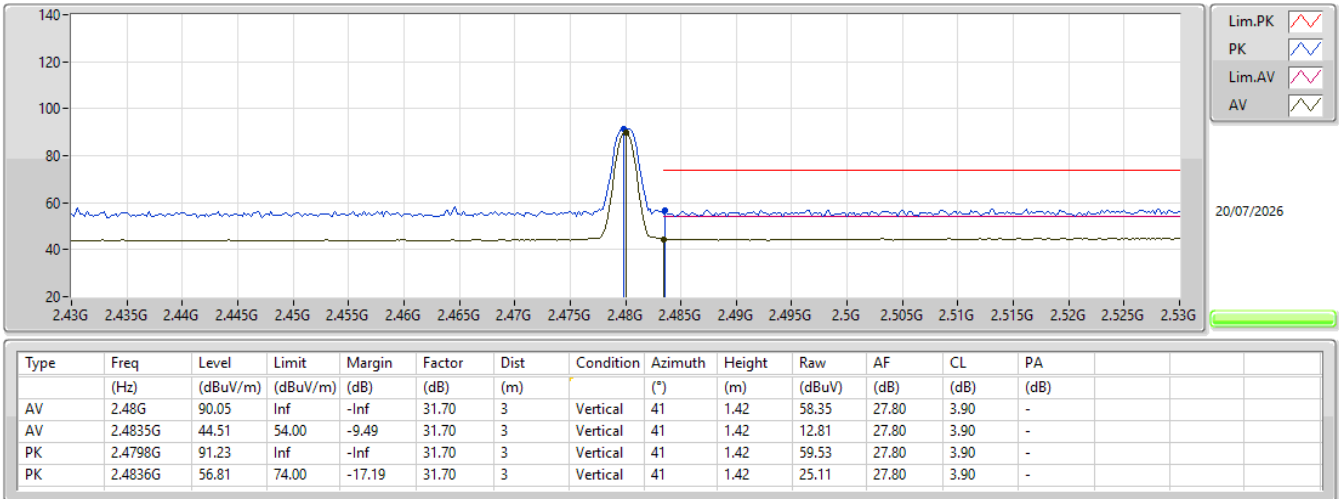
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	4.96G	53.88	54.00	-0.12	3	Vertical	191	1.36

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3694G	42.92	54.00	-11.08	3	Vertical	38	1.27
2402MHz	Pass	AV	2.402G	88.74	Inf	-Inf	3	Vertical	38	1.27
2402MHz	Pass	PK	2.3634G	56.01	74.00	-17.99	3	Vertical	38	1.27
2402MHz	Pass	PK	2.4018G	89.91	Inf	-Inf	3	Vertical	38	1.27
2402MHz	Pass	AV	2.3524G	43.88	54.00	-10.12	3	Horizontal	4	2.69
2402MHz	Pass	AV	2.402G	92.65	Inf	-Inf	3	Horizontal	4	2.69
2402MHz	Pass	PK	2.3818G	56.65	74.00	-17.35	3	Horizontal	4	2.69
2402MHz	Pass	PK	2.4022G	93.75	Inf	-Inf	3	Horizontal	4	2.69
2402MHz	Pass	AV	4.804G	52.64	54.00	-1.36	3	Vertical	197	1.07
2402MHz	Pass	PK	4.80353G	57.61	74.00	-16.39	3	Vertical	197	1.07
2402MHz	Pass	AV	4.80397G	51.67	54.00	-2.33	3	Horizontal	270	1.00
2402MHz	Pass	PK	4.80448G	56.53	74.00	-17.47	3	Horizontal	270	1.00
2440MHz	Pass	AV	2.3616G	43.80	54.00	-10.20	3	Vertical	40	1.28
2440MHz	Pass	AV	2.44G	89.07	Inf	-Inf	3	Vertical	40	1.28
2440MHz	Pass	AV	2.4856G	44.56	54.00	-9.44	3	Vertical	40	1.28
2440MHz	Pass	PK	2.3668G	56.69	74.00	-17.31	3	Vertical	40	1.28
2440MHz	Pass	PK	2.4404G	90.29	Inf	-Inf	3	Vertical	40	1.28
2440MHz	Pass	PK	2.4884G	57.32	74.00	-16.68	3	Vertical	40	1.28
2440MHz	Pass	AV	2.3716G	43.80	54.00	-10.20	3	Horizontal	174	1.92
2440MHz	Pass	AV	2.44G	91.15	Inf	-Inf	3	Horizontal	174	1.92
2440MHz	Pass	AV	2.4835G	44.55	54.00	-9.45	3	Horizontal	174	1.92
2440MHz	Pass	PK	2.3656G	56.47	74.00	-17.53	3	Horizontal	174	1.92
2440MHz	Pass	PK	2.4396G	92.28	Inf	-Inf	3	Horizontal	174	1.92
2440MHz	Pass	PK	2.4872G	56.81	74.00	-17.19	3	Horizontal	174	1.92
2440MHz	Pass	AV	4.87997G	51.42	54.00	-2.58	3	Vertical	191	1.35
2440MHz	Pass	PK	4.87951G	56.56	74.00	-17.44	3	Vertical	191	1.35
2440MHz	Pass	AV	4.87996G	51.29	54.00	-2.71	3	Horizontal	289	2.48
2440MHz	Pass	PK	4.88049G	56.52	74.00	-17.48	3	Horizontal	289	2.48
2480MHz	Pass	AV	2.48G	90.05	Inf	-Inf	3	Vertical	41	1.42
2480MHz	Pass	AV	2.4835G	44.51	54.00	-9.49	3	Vertical	41	1.42
2480MHz	Pass	PK	2.4798G	91.23	Inf	-Inf	3	Vertical	41	1.42
2480MHz	Pass	PK	2.4836G	56.81	74.00	-17.19	3	Vertical	41	1.42
2480MHz	Pass	AV	2.48G	91.34	Inf	-Inf	3	Horizontal	170	2.82
2480MHz	Pass	AV	2.4836G	44.78	54.00	-9.22	3	Horizontal	170	2.82
2480MHz	Pass	PK	2.4802G	92.53	Inf	-Inf	3	Horizontal	170	2.82
2480MHz	Pass	PK	2.496G	57.01	74.00	-16.99	3	Horizontal	170	2.82
2480MHz	Pass	AV	4.96G	53.88	54.00	-0.12	3	Vertical	191	1.36
2480MHz	Pass	PK	4.96041G	59.07	74.00	-14.93	3	Vertical	191	1.36
2480MHz	Pass	AV	4.95998G	53.49	54.00	-0.51	3	Horizontal	294	2.87
2480MHz	Pass	PK	4.96041G	58.75	74.00	-15.25	3	Horizontal	294	2.87

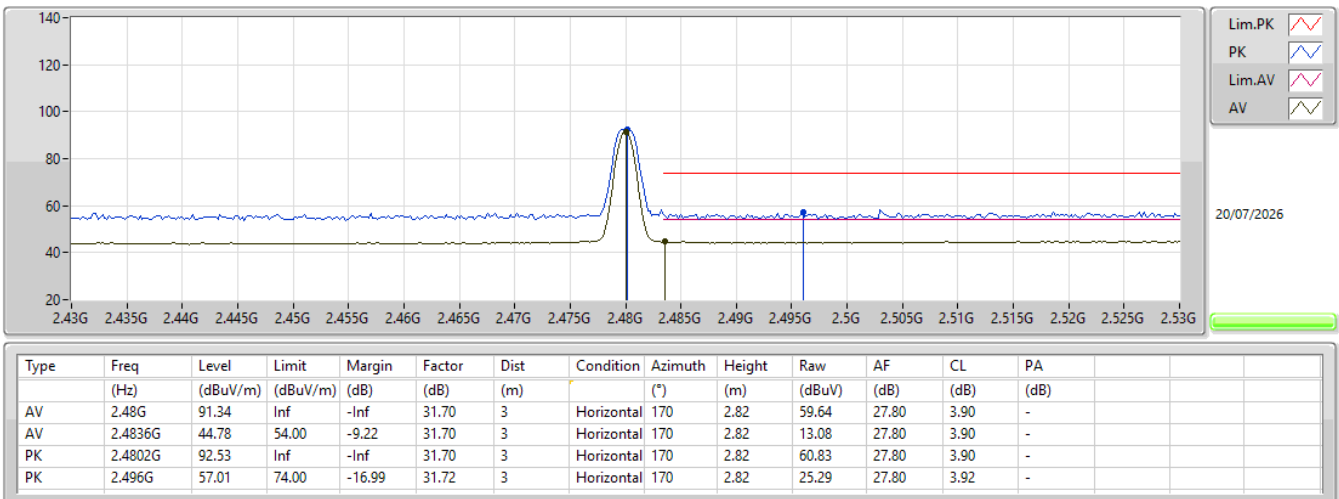
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



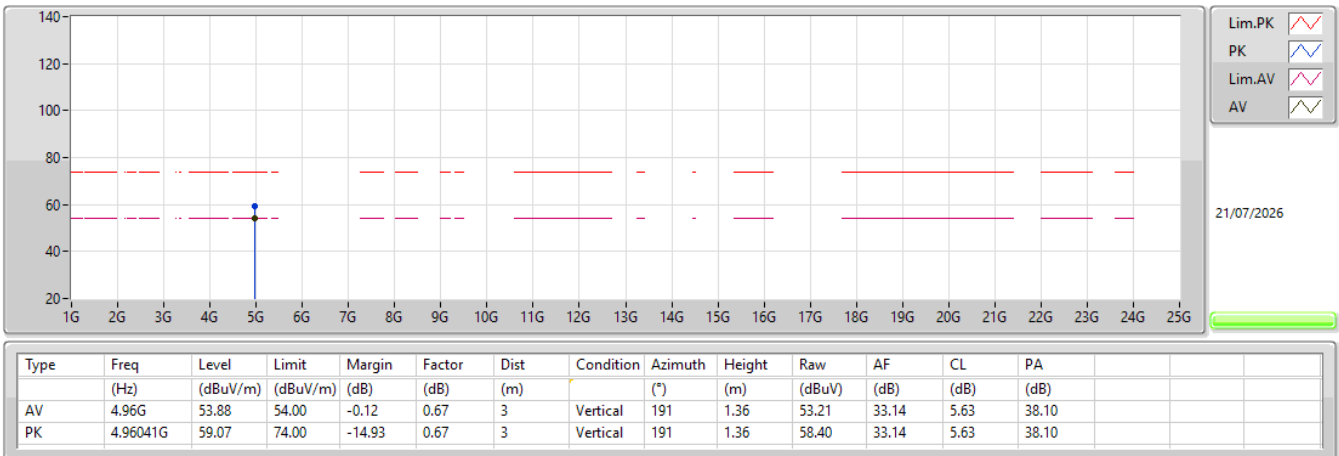
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



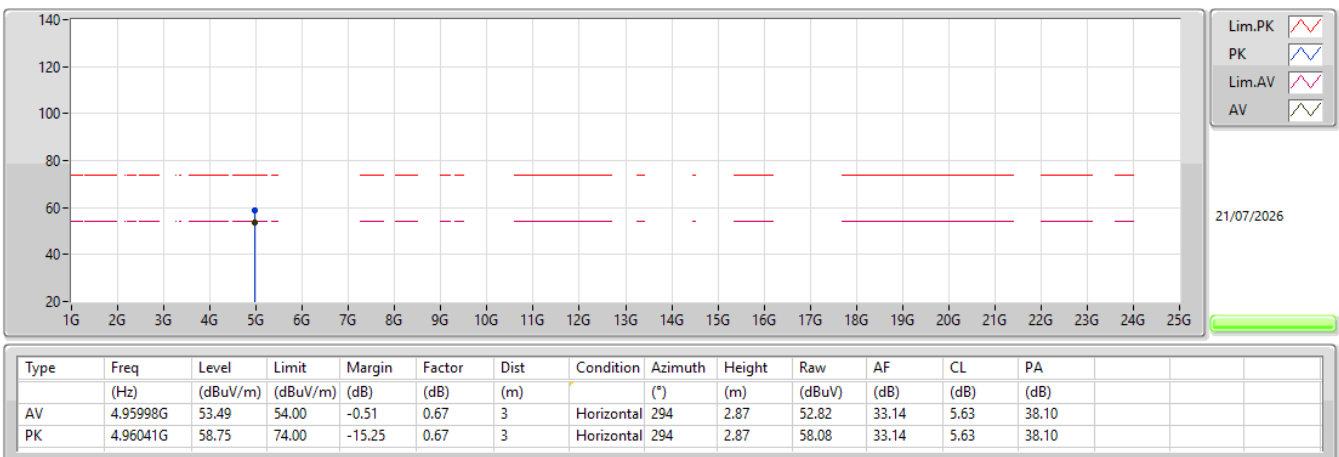
2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX





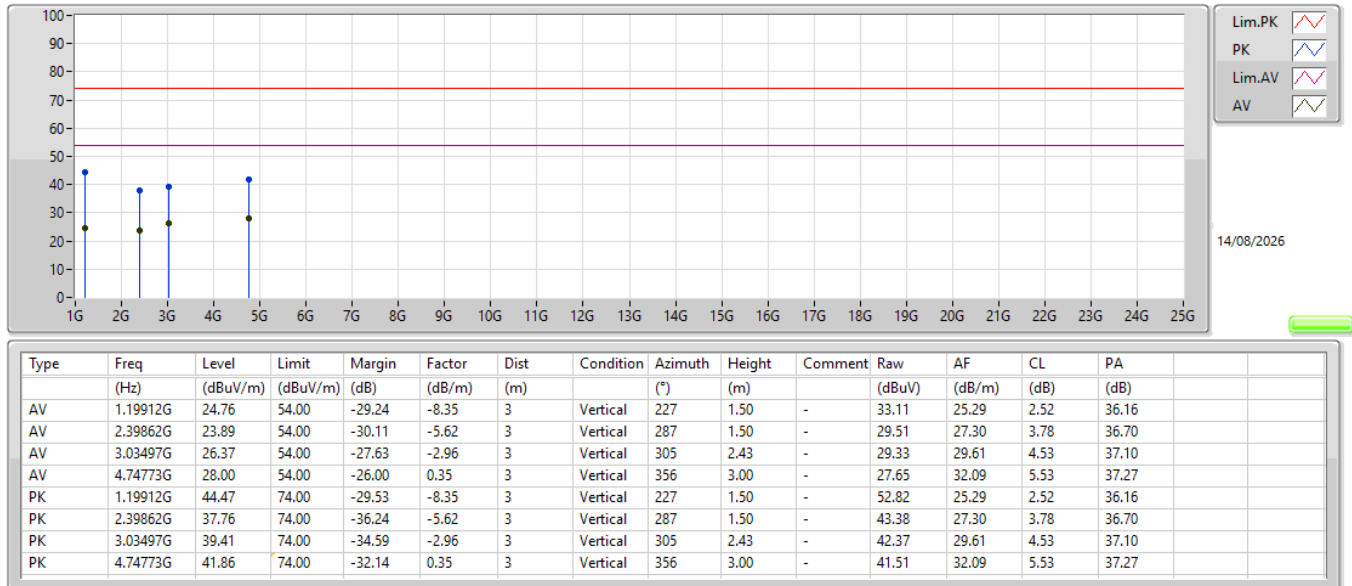
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	5.04508G	28.59	54.00	-25.41	Horizontal

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 1	Pass	AV	1.19912G	24.76	54.00	-29.24	3	Vertical	227	1.50
Mode 1	Pass	AV	2.39862G	23.89	54.00	-30.11	3	Vertical	287	1.50
Mode 1	Pass	AV	3.03497G	26.37	54.00	-27.63	3	Vertical	305	2.43
Mode 1	Pass	AV	4.74773G	28.00	54.00	-26.00	3	Vertical	356	3.00
Mode 1	Pass	PK	1.19912G	44.47	74.00	-29.53	3	Vertical	227	1.50
Mode 1	Pass	PK	2.39862G	37.76	74.00	-36.24	3	Vertical	287	1.50
Mode 1	Pass	PK	3.03497G	39.41	74.00	-34.59	3	Vertical	305	2.43
Mode 1	Pass	PK	4.74773G	41.86	74.00	-32.14	3	Vertical	356	3.00
Mode 1	Pass	AV	1.35295G	23.09	54.00	-30.91	3	Horizontal	339	2.68
Mode 1	Pass	AV	2.19868G	24.99	54.00	-29.01	3	Horizontal	68	2.44
Mode 1	Pass	AV	3.45464G	26.20	54.00	-27.80	3	Horizontal	31	2.91
Mode 1	Pass	AV	5.04508G	28.59	54.00	-25.41	3	Horizontal	146	2.51
Mode 1	Pass	PK	1.35295G	37.29	74.00	-36.71	3	Horizontal	339	2.68
Mode 1	Pass	PK	2.19868G	39.10	74.00	-34.90	3	Horizontal	68	2.44
Mode 1	Pass	PK	3.45464G	39.96	74.00	-34.04	3	Horizontal	31	2.91
Mode 1	Pass	PK	5.04508G	41.94	74.00	-32.06	3	Horizontal	146	2.51

Radiated Emissions above 1GHz_Mode 1



Radiated Emissions above 1GHz_Mode 1

