Prüfbericht-Nr.: *Test report no.:*	**CN22TG87 001**	**Auftrags-Nr.:** *Order no.*:	**244417092**	Seite 1 von 79 *Page 1 of 79*
Kunden-Referenz-Nr.: *Client reference no.:*	**P00645001**	**Auftragsdatum:** *Order date:*	**2022-11-11**	
Auftraggeber: *Client:*	FCC: Decathlon America LLC 1160 Battery Street, Suite 100, San Francisco, CA 94111, United States IC: DECATHLON SE 4 Boulevard de Mons, VILLENEUVE D'ASCQ, 59650, France			
Prüfgegenstand: *Test item:*	DOMYOS Fitness Treadmill			
Bezeichnung / Typ-Nr.: *Identification / Type no.:*	W900 110V US CA FCC ID:2A8UOW900 IC:244468-W900			
Auftrags-Inhalt: *Order content*:	Complete test			
Prüfgrundlage: *Test specification:*	FCC CFR47 Part 15, Subpart C Section 15.247 RSS-Gen Issue 5, Amendment 2, February 2021 RSS-247 Issue 2, February 2017 ANSI C63.10: 2013			
Wareneingangsdatum: *Date of sample receipt:*	2022-11-08			
Prüfmuster-Nr.: *Test sample no:*	A003368355-001			
Prüfzeitraum: *Testing period:*	Refer to test report			
Ort der Prüfung: *Place of testing:*	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüfergebnis*: *Test result*:*	Pass			

geprüft von: *tested by:*	X Yanli Fan Signed by: Yanli Fan	**genehmigt von:** *authorized by:*	X Elliot Zhang Signed by: Elliot Zhang
Datum: *Date:* 2023-05-15		**Ausstellungsdatum:** *Issue date:* 2023-05-15	
Stellung / *Position:*	PE/Yanli Fan	**Stellung** / *Position:*	Reviewer/Elliot Zhang

Sonstiges / *Other:*	HVIN: W900 110V US CA Model code: 8405295 Conception code: 300689 Supplier name: Zhejiang Arcana Power Sports Supplier code: 46559 Test request no.: L074-03-2201-0003
Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery:*	Prüfmuster vollständig und unbeschädigt *Test item complete and undamaged*

* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
** Legend:*	*P(ass) = passed a.m. test specification(s)*	*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

V05

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT
RESULT: Pass

5.1.2 20DB & 99% BANDWIDTH
RESULT: Pass

5.1.3 PEAK OUTPUT POWER
RESULT: Pass

5.1.4 FREQUENCY SEPARATION
RESULT: Pass

5.1.5 NUMBER OF HOPPING FREQUENCY
RESULT: Pass

5.1.6 TIME OF OCCUPANCY
RESULT: Pass

5.1.7 CONDUCTED BAND EDGE AND OUT-OF BAND EMISSIONS
RESULT: Pass

5.2.1 CONDUCTED EMISSION
RESULT: Pass

5.3.1 RADIATED BAND-EDGE
RESULT: Pass

5.3.2 RADIATED SPURIOUS EMISSION
RESULT: Pass

Contents

1. General Remarks

1.1 Complementary Materials

Null.

2. Test Sites

2.1 Test Facilities

TÜV Rheinland (Shanghai) Co., Ltd.

Shanghai TUV Rheinland Building No. 177, 178 Lane 777, West Guangzhong Rd, Jing'an District, Shanghai, China

The used test equipment is in accordance with CISPR 16 for measurement of radio interference.

The Federal Communications Commission has reviewed the technical characteristics of the radiated and conducted emission facility, and has found these test facilities to be in compliance with the requirements of section 2.948 of the FCC rules. The description of the test facility is listed under FCC registration number 958801.

The Innovation, Science and Economic Development Canada has reviewed the technical characteristics of the radiated and conducted emission facility, and has found these test facilities to be in compliance. The description of the test facility is listed under chambers filing number 2932F.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Equip.	Description	Model	Manufacturer	Due Date
G1811378	3m modified semi-anechoic chamber	SAC3	Frankonia	10.06.2024
9042162	EMI test receiver	ESR7	Rohde&Schwarz	02.03.2023
G1811425	Bilog antenna	CBL 6112D	Teseq	10.03.2023
G1811417	Log periodic antenna	HL050	Rohde&Schwarz	10.03.2023
G1822695	Spectrum analyser	FSP30	Rohde&Schwarz	16.08.2024
G1825371	Preamplifier	EMC051845SE	Taiwan EMCI	14.05.2023
G1825372	Preamplifier	EMC184045SE	Taiwan EMCI	14.05.2023
G1831065	Broadband horn antenna	BBHA 9170	Schwarzbeck	10.07.2023
G1822702	Spectrum analyser	FSV40	Rohde&Schwarz	04.11.2023
G1822694	Double ridged broadband horn antenna	BBHA 9120 D	Schwarzbeck	23.03.2026
EMC-C-304	OSP	OSP-B157W8	Rohde & Schwarz	14.10.2023

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

2.5 Measurement Uncertainty

Table 2: Measurement Uncertainty

Measurement Type	Frequency	Uncertainty
Antenna Port Conducted Emission	< 1GHz	±0.39dB
	> 1GHz	±0.68dB
Conducted Emission	150kHz - 30MHz	±3.39dB
Radiated Emission	9kHz – 30MHz	±2.93dB
	30MHz - 1GHz	±5.34dB
	> 1GHz	±5.40dB

3. General Product Information

3.1 Product Function and Intended Use

The EUT (Equipment Under Test) is a Treadmill which supports Bluetooth Low Energy and Bluetooth Classic.
The aim of this report is to evalute the RF characteristic of the Bluetooth Classic Part of this EUT.
For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Description of EUT	
Product Name:	DOMYOS Fitness Treadmill
Model No.:	W900 110V US CA
Test Voltage:	DC 3.3V for RF Conducted and Radiated Test AC 120V/60Hz for Conducted Emission Test
Technical Specification of Bluetooth Classic(Wireless module: EW-BLED-26)	
Frequency Range:	2402 to 2480MHz
Modulation Type:	GFSK, π/4 DQPSK
Data Rate:	1Mbps(GFSK), 2Mbps(π/4 DQPSK)
Antenna Type:	PCB Antenna
Antenna Gain:	-6.5dBi (Provided by the Client)
Technical Specification of Bluetooth Low Energy(Wireless module: EW-BLED-22)	
Frequency Range:	2402 to 2480MHz
Modulation Type:	GFSK
Data Rate:	1Mbps
Antenna Type:	PCB Antenna
Antenna Gain:	-6.5dBi (Provided by the Client)

3.3 Independent Operation Modes

Table 4: Independent Operation Modes

Test Mode	Data Rate	Channel
TM1	1-DH5	00
TM2	1-DH5	39
TM3	1-DH5	78
TM4	2-DH5	00
TM5	2-DH5	39
TM6	2-DH5	78
TM7	1-DH1	Hopping
TM8	1-DH3	Hopping
TM9	1-DH5	Hopping
TM10	2-DH1	Hopping
TM11	2-DH3	Hopping
TM12	2-DH5	Hopping
TM13	Normal Operating Mode	
TM14	Co-location Transmitting Mode	

Note: The worst configuration of this co-lacation transmitting mode is Module EW-BLED-26 operating in 2DH5 CH39 and Module EW-BLED-22 operating in BLE CH39

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Bill of Material
- Circuit Diagram
- PCB Layout
- Instruction Manual
- Photo Document
- Rating Label

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2013.
Test Software used: FCC Assist 1.0.0.2

Table 5: Power parameter value

Channel Frequency [MHz]	Power Parameter Value
2402	10
2441	10
2480	10

4.3 Special Accessories and Auxiliary Equipment

Table 6: Auxiliary Equipment

Product Name	Model Name	Manufactory
Laptop	TP00001A	Lenovo

4.4 Countermeasures to achieve EMC Compliance

Null.

5. Test Results

5.1 Conducted Testing at Antenna Port

5.1.1 Antenna Requirement

RESULT: **Pass**

According to the manufacturer declared, the EUT for Bluetooth Classic has one PCB antenna, the EUT for Bluetooth Low Energy has one PCB antenna, the directional gain of antenna is -6.5dBi and the antenna is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Table 7: Antenna Requirement

FCC 15.203 – Antenna Requirement 1		
Requirement:	No antenna other than that furnished by the responsible party shall be used with the device	
Results:	Antenna type:	PCB antenna
Verdict:	Pass	

FCC 15.204 – Antenna Requirement 2	
Requirement:	An intentional radiator may be operated only with the antenna with which it is authorized. If an antenna is marketed with the intentional radiator, it shall be of a type which is authorized with the intentional radiator.
Results:	Only one PCB antenna can be used
Verdict:	Pass

RSS-Gen 6.4 – External Control	
Requirement:	The device shall not have any external controls accessible to the user that enable it to be adjusted, selected or programmed to operate in violation of the regulatory requirements, including RSS-Gen and the applicable RSSs
Results:	The device does not have any transmitter external controls accessible to the user that can be adjusted and operated in violation of the limits of this standard.
Verdict:	PASS

RSS-Gen 6.8 – Antenna Requirement		
Requirement:	When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer.	
Results:	a) Antenna Type:	PCB Antenna
	b) Manufacture:	N/A
	c) Model No.:	N/A
	d) Gain with reference to an isotropic radiator:	-6.5dBi
Verdict:	PASS	

5.1.2 20dB & 99% Bandwidth

RESULT: **Pass**

Date of testing	:	2022-12-05
Ambient temperature	:	22.4°C
Relative humidity	:	47.9%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(a)(1) RSS-247 Issue 2, February 2017, Clause 5.1(a)
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	DC 3.3V
Test modes applied	:	TM1 to TM6

Table 8: 20dB & 99% Bandwidth, TM1 to TM6

Test Mode	Mode	CH.	Freq. [MHz]	20dB Bandwidht [MHz]	99% Bandwidth [MHz]
TM1	1-DH5	00	2402	0.885000	0.855000
TM2	1-DH5	39	2441	0.885000	0.855000
TM3	1-DH5	78	2480	0.885000	0.855000
TM4	2-DH5	00	2402	1.210000	1.175000
TM5	2-DH5	39	2441	1.210000	1.175000
TM6	2-DH5	78	2480	1.205000	1.175000

Note:
For frequency hopping systems operating in the 2400 – 2483.5MHz band, no bandwidth limit is specified. The test data is provide for reference.
And according to FCC, when the occupied bandwidth limit is not stated in the applicable FCC or reference measurement method, the transmitted signal band width shall be reported as the 99% emission bandwidth.

TM1, 2402MHz, 1-DH5

Emission Bandwidth 20 dB (2402 MHz; 10.000 dBm; 1dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.7

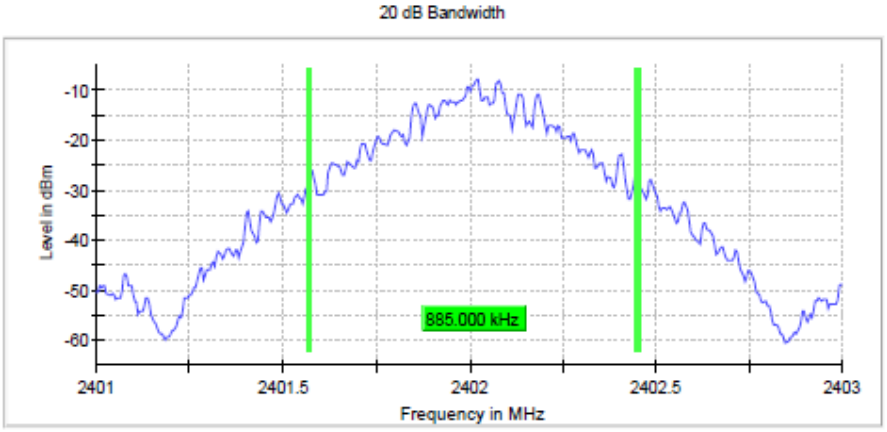
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.885000	---	---	2401.567500	2402.452500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	-7.9	PASS



Bandwidth

Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	7 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.07 dB	0.50 dB

TM2, 2441MHz, 1-DH5

Emission Bandwidth 20 dB (2441 MHz; 10.000 dBm; 1dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.7

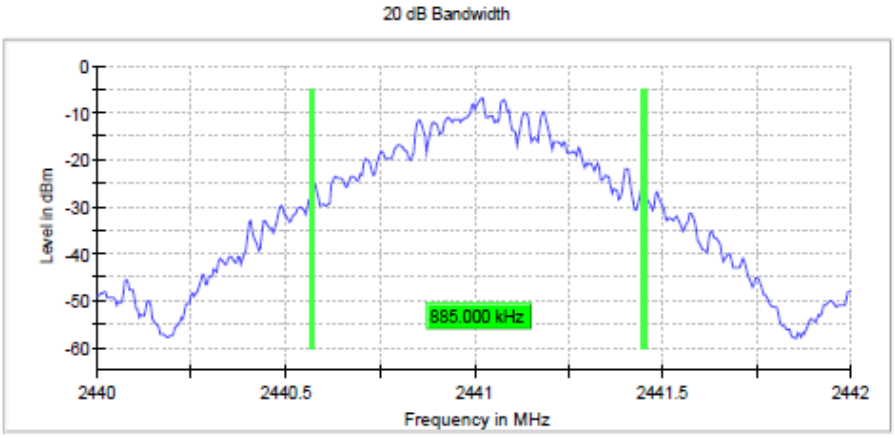
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	0.885000	---	---	2440.567500	2441.452500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2441.000000	-6.8	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	7 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.07 dB	0.50 dB

TM3, 2480MHz, 1-DH5

Emission Bandwidth 20 dB (2480 MHz; 10.000 dBm; 1dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.7

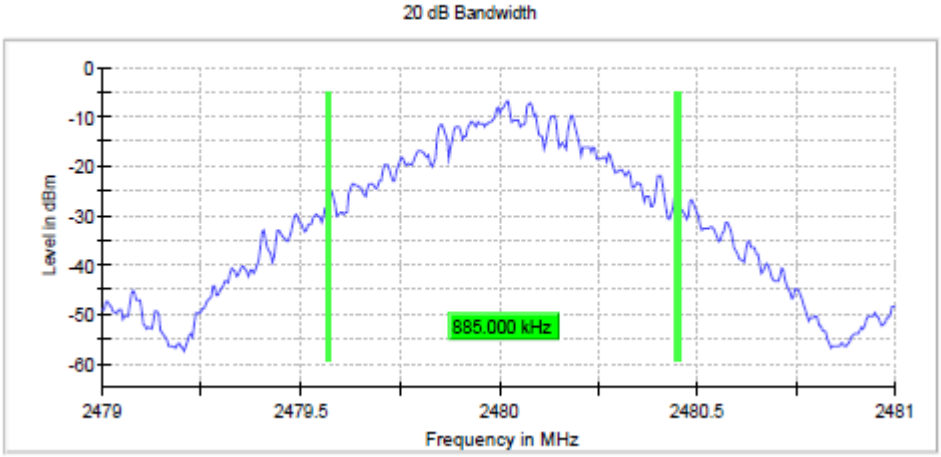
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.885000	---	---	2479.567500	2480.452500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	-6.8	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	7 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.09 dB	0.50 dB

TM4, 2402MHz, 2-DH5

Emission Bandwidth 20 dB (2402 MHz; 10.000 dBm; 2dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.7

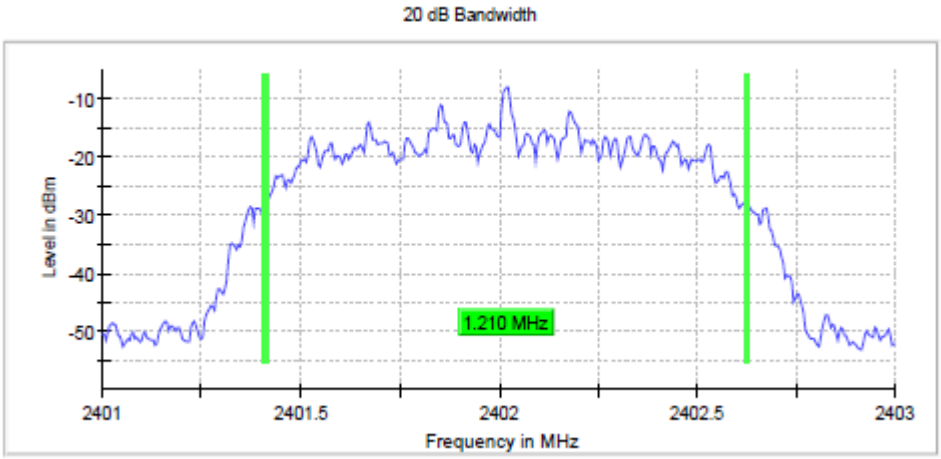
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.210000	---	---	2401.412500	2402.622500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	-7.9	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	8 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.07 dB	0.50 dB

TM5, 2441MHz, 2-DH5

Emission Bandwidth 20 dB (2441 MHz; 10.000 dBm; 2dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.7

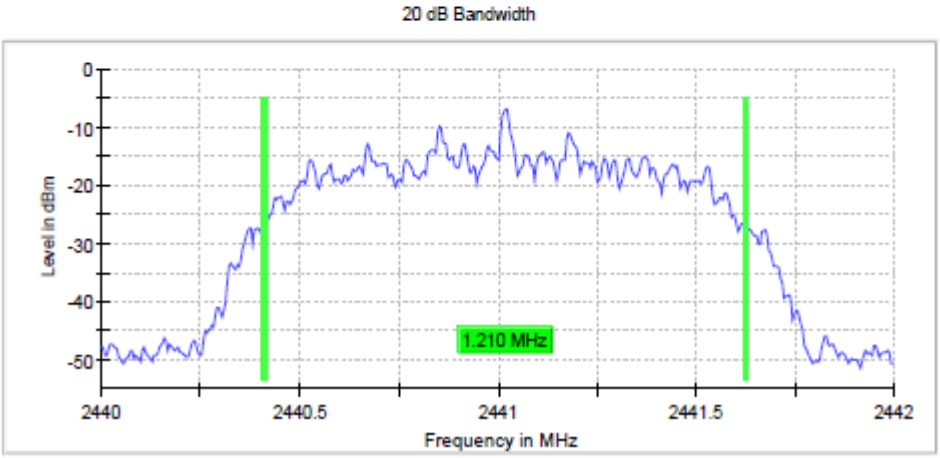
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	1.210000	---	---	2440.412500	2441.622500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2441.000000	-6.8	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	8 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.17 dB	0.50 dB

TM6, 2480MHz, 2-DH5

Emission Bandwidth 20 dB (2480 MHz; 10.000 dBm; 2dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.7

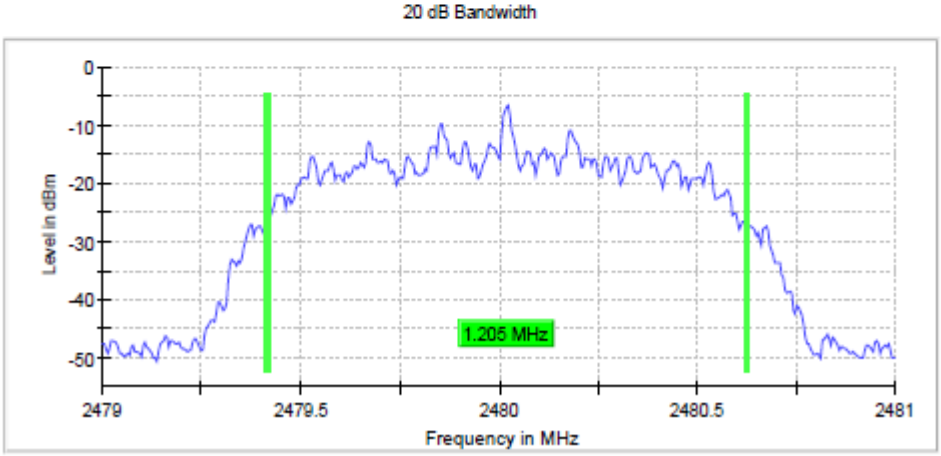
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.205000	---	---	2479.417500	2480.622500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	-6.7	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	11 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.15 dB	0.50 dB

TM1, 2402MHz, 1-DH5

Occupied Channel Bandwidth 99% (2402 MHz; 10.000 dBm; 1dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.7

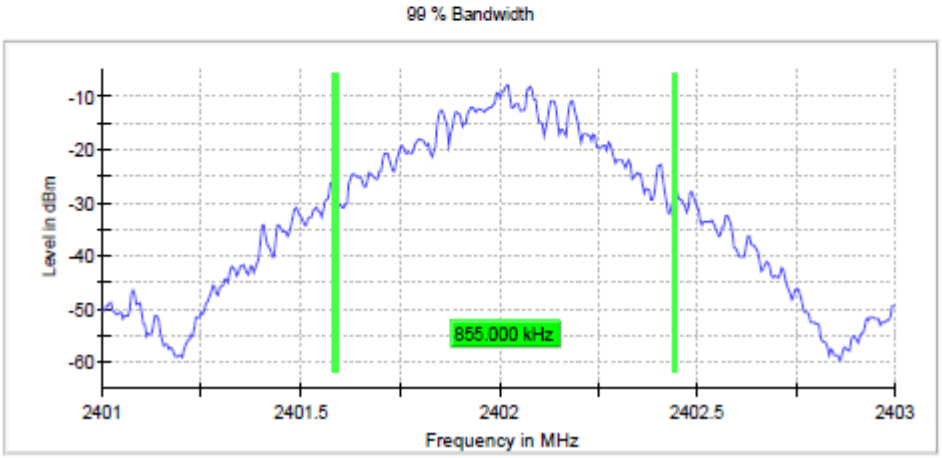
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.855000	---	---	2401.587500	2402.442500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.04 dB	0.30 dB

TM2, 2441MHz, 1-DH5

Occupied Channel Bandwidth 99% (2441 MHz; 10.000 dBm; 1dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.7

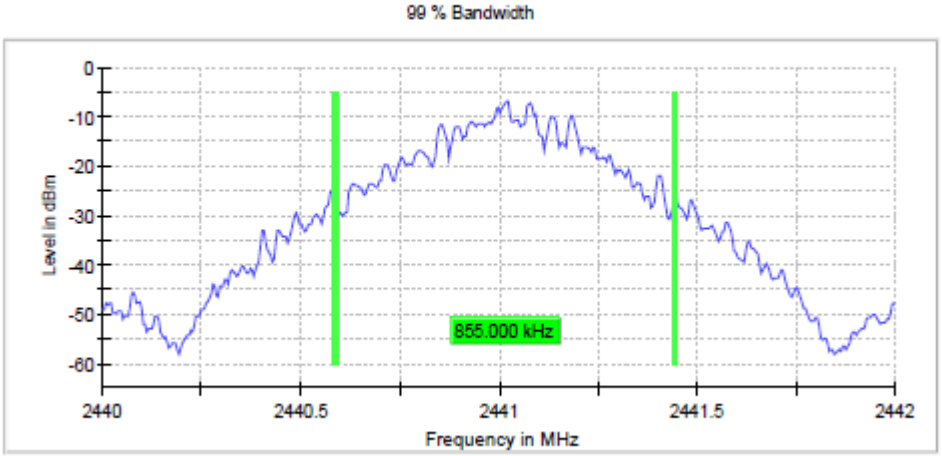
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	0.855000	---	---	2440.587500	2441.442500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2441.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.18 dB	0.30 dB

TM3, 2480MHz, 1-DH5

Occupied Channel Bandwidth 99% (2480 MHz; 10.000 dBm; 1dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.7

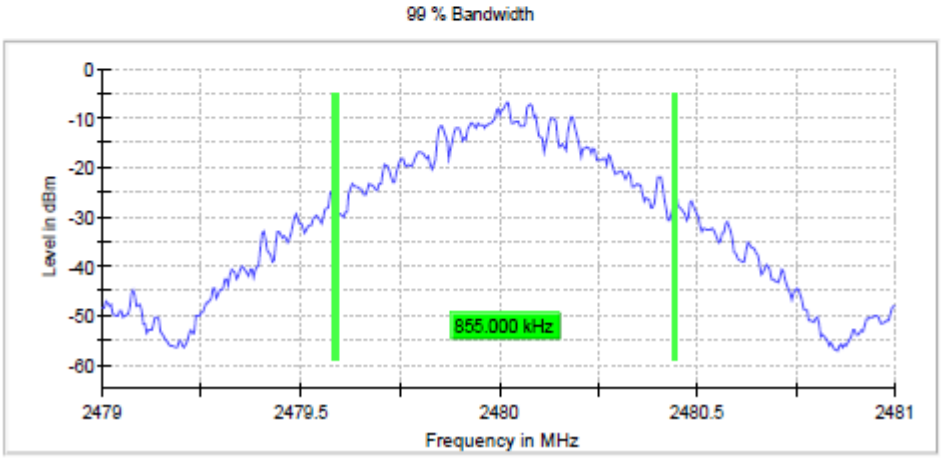
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.855000	---	---	2479.587500	2480.442500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.09 dB	0.30 dB

TM4, 2402MHz, 2-DH5

Occupied Channel Bandwidth 99% (2402 MHz; 10.000 dBm; 2dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.7

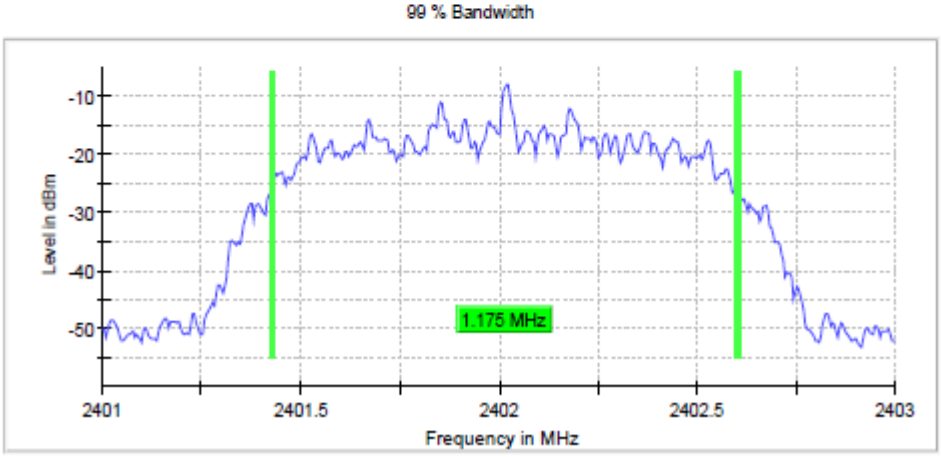
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.175000	---	---	2401.427500	2402.602500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.12 dB	0.30 dB

TM5, 2441MHz, 2-DH5

Occupied Channel Bandwidth 99% (2441 MHz; 10.000 dBm; 2dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.7

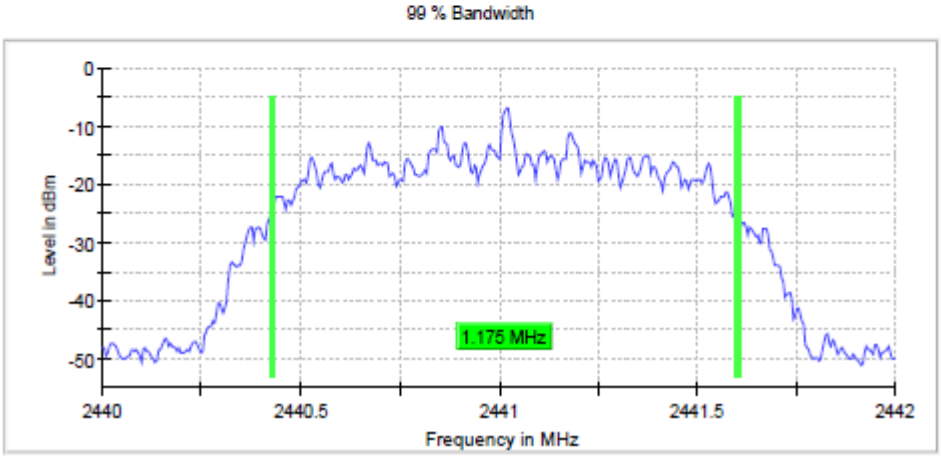
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	1.175000	---	---	2440.427500	2441.602500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2441.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.10 dB	0.30 dB

TM6, 2480MHz, 2-DH5

Occupied Channel Bandwidth 99% (2480 MHz; 10.000 dBm; 2dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.7

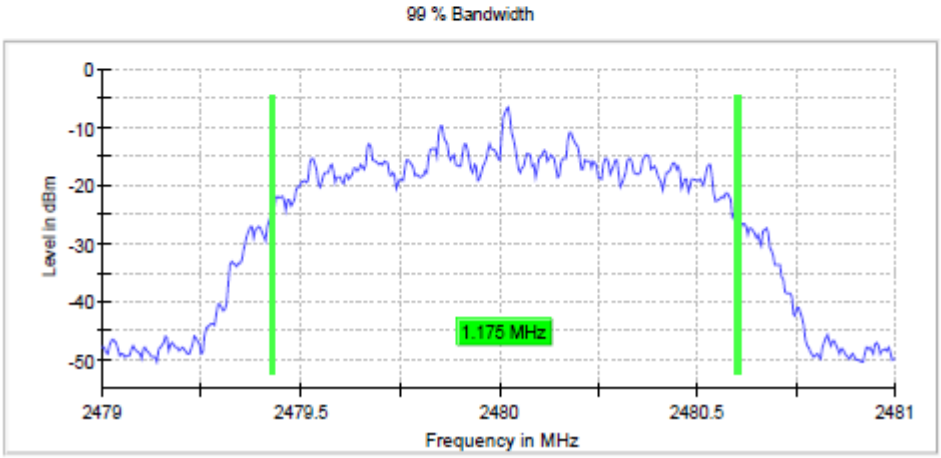
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 2%

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.175000	---	---	2479.427500	2480.602500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.12 dB	0.30 dB

5.1.3 Peak Output Power

RESULT: **Pass**

Date of testing	:	2022-12-05
Ambient temperature	:	22.4°C
Relative humidity	:	47.9%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(b)(1) RSS-247 Issue 2, February 2017, Clause 5.4(b)
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	DC 3.3V
Test modes applied	:	TM1 to TM6

Table 9: Peak Output Power

Test Mode	Antenna Gain [dBi]	CH.	Freq. [MHz]	Maximum Peak Conducted Output Power [dBm]	Peak Conducted Output Power Limit [dBm]	Maximum EIRP [dBm]	EIRP Limit [dBm]
TM1	-6.5	00	2402	-2.4	30	-8.9	36
TM2		39	2441	-1.4	30	-7.9	36
TM3		78	2480	-1.3	30	-7.8	36
TM4		00	2402	-1.6	30	-8.1	36
TM5		39	2441	-0.5	30	-7.0	36
TM6		78	2480	-0.3	30	-6.8	36

Note:
EIRP=Peak Conducted Output Power + Antenna Gain
The cable loss=1dB was provided by the client, and was factored in the result Peak Conducted Output Power

5.1.4 Frequency Separation

RESULT: **Pass**

Date of testing	:	2021-07-15
Ambient temperature	:	21.4°C
Relative humidity	:	56.1%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(a)(1) RSS-247 Issue 2, February 2017, Clause 5.1(b)
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	DC 3.3V
Test modes applied	:	TM9 , TM12

Table 10: Frequency Separation

Test Mode	CH.	Frequency [MHz]	Frequency Separation [kHz]	Limit [kHz]
TM9	00	2402	980.198	≥590.000
	39	2441	980.198	≥590.000
	78	2480	980.198	≥590.000
TM12	00	2402	1009.900	≥806.667
	39	2441	980.198	≥806.667
	78	2480	1009.900	≥806.667

Note:
Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

TM9, 2402MHz, 1-DH5

Carrier Frequency Separation (2402 MHz; 10.000 dBm; 1dh5 (1 MHz))

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 9 and ANSI C63.10-2013 7.8.2

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty(k = 2) < 1%

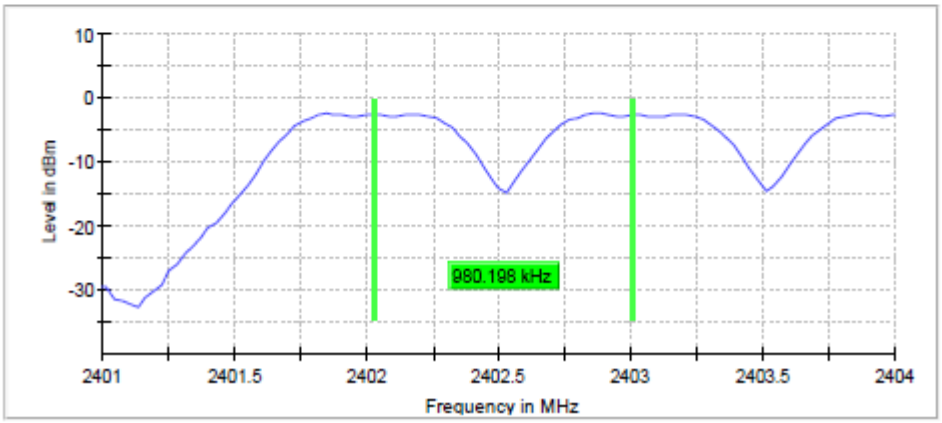
Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2402.000000	0.980198	0.590000	---	2402.024752	2403.004950

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS

CFS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40400 GHz	2.40400 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	25 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.07 dB	0.50 dB

TM9, 2441MHz, 1-DH5

Carrier Frequency Separation (2441 MHz; 10.000 dBm; 1dh5 (1 MHz))

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 9 and ANSI C63.10-2013 7.8.2

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty(k = 2) < 1%

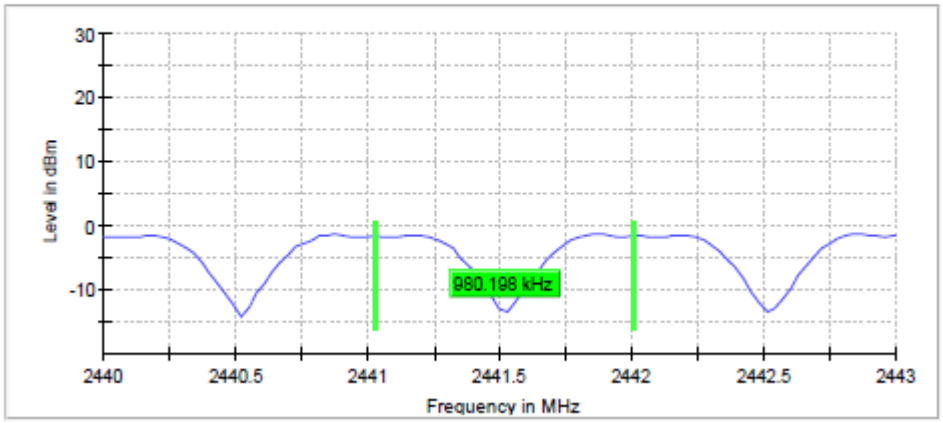
Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2441.000000	0.980198	0.590000	---	2441.024752	2442.004950

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2441.000000	PASS

CFS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44300 GHz	2.44300 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	12 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.00 dB	0.50 dB

TM9, 2480MHz, 1-DH5

Carrier Frequency Separation (2480 MHz; 10.000 dBm; 1dh5 (1 MHz))

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 9 and ANSI C63.10-2013 7.8.2

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty(k = 2) < 1%

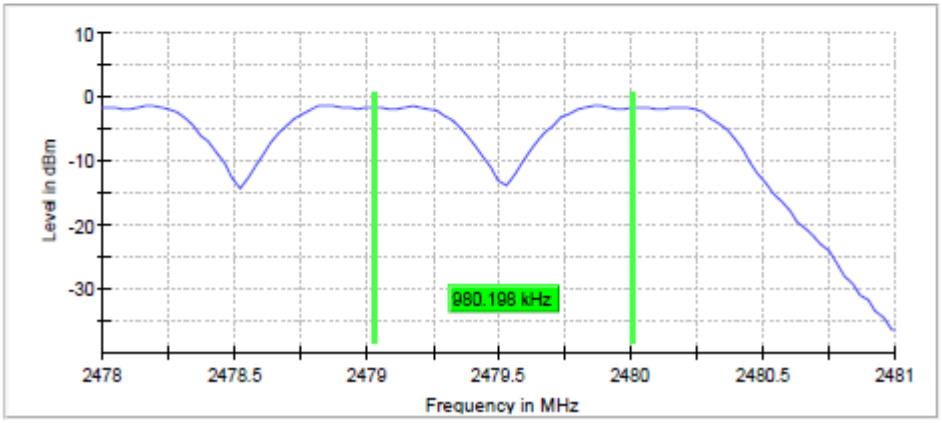
Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2480.000000	0.980198	0.590000	---	2479.024752	2480.004950

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS

CFS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47800 GHz	2.47800 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	16 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.22 dB	0.50 dB

TM12, 2402MHz, 2-DH5

Carrier Frequency Separation (2402 MHz; 10.000 dBm; 2dh5 (1 MHz))

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 9 and ANSI C63.10-2013 7.8.2

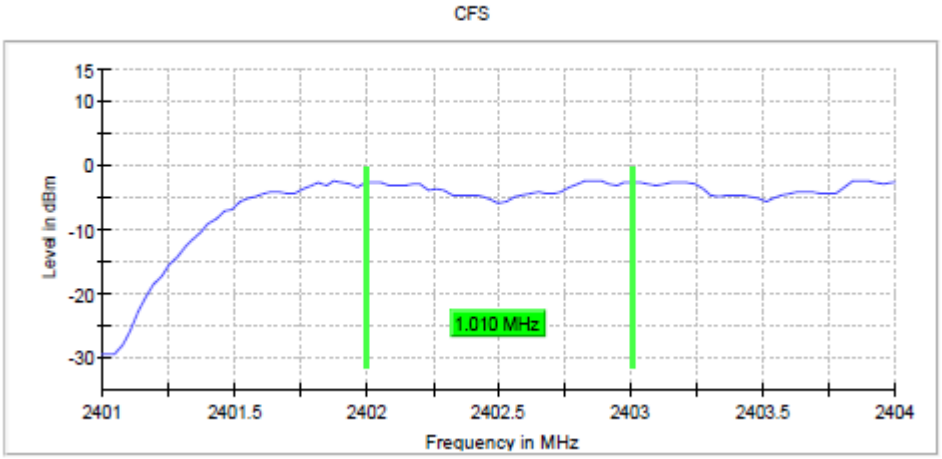
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty(k = 2) < 1%

Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2402.000000	1.009900	0.806667	---	2401.995050	2403.004950

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40400 GHz	2.40400 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	45 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.02 dB	0.50 dB

TM12, 2441MHz, 2-DH5

Carrier Frequency Separation (2441 MHz; 10.000 dBm; 2dh5 (1 MHz))

Difference betweeen maximum and minimum level below 10.0 dB. Difference: 4.0 dB Min:-5.4 dBm Max:-1.4 dBm

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 9 and ANSI C63.10-2013 7.8.2

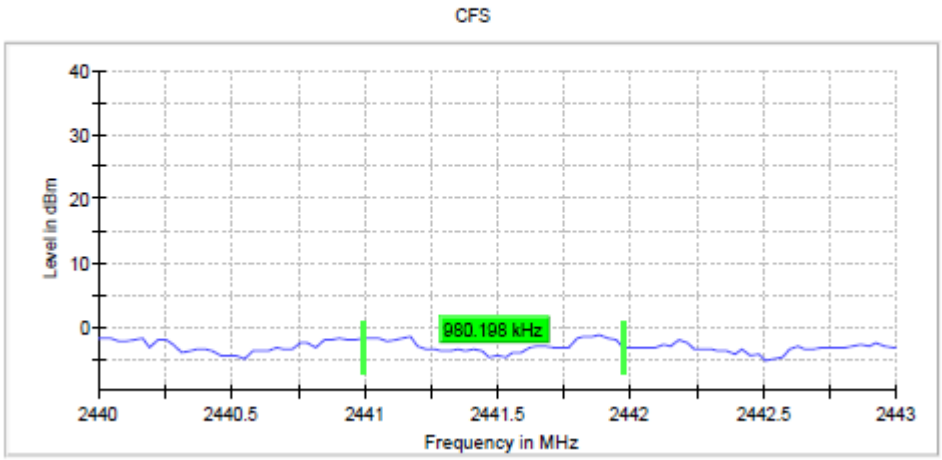
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty(k = 2) < 1%

Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2441.000000	0.980198	0.806667	---	2440.995050	2441.975248

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2441.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44300 GHz	2.44300 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	12 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.00 dB	0.50 dB

TM12, 2480MHz, 2-DH5

Carrier Frequency Separation (2480 MHz; 10.000 dBm; 2dh5 (1 MHz))

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 9 and ANSI C63.10-2013 7.8.2

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty(k = 2) < 1%

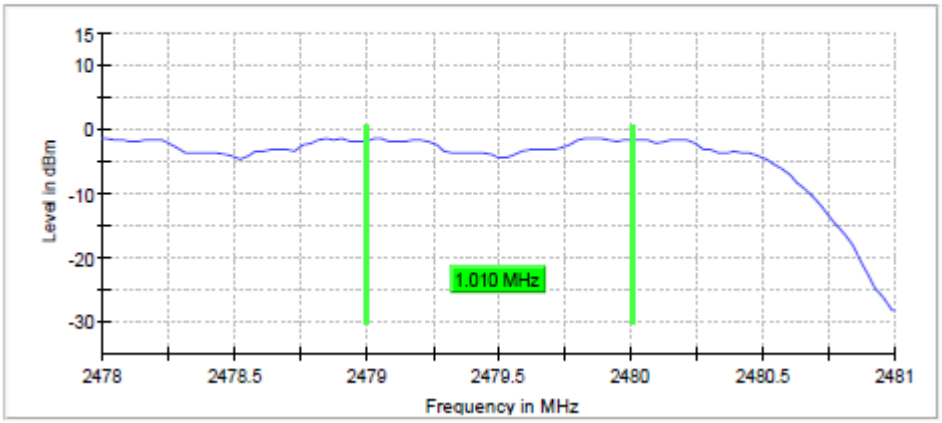
Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2480.000000	1.009900	0.803333	---	2478.995050	2480.004950

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS

CFS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47800 GHz	2.47800 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	64 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.01 dB	0.50 dB

5.1.5 Number of Hopping Frequency

RESULT: **Pass**

Date of testing	:	2022-12-05
Ambient temperature	:	22.4°C
Relative humidity	:	47.9%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC 15.247(a)(1)(iii) RSS-247 Issue 2, February 2017, Clause 5.1(d)
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	DC 3.3V
Test modes applied	:	TM9, TM12

Table 11: Number of Hopping Frequency

Frequency Range	Measured Quantity of Hopping Channel	Limit
2402 to 2480	79	≥15

TM9, 1-DH5

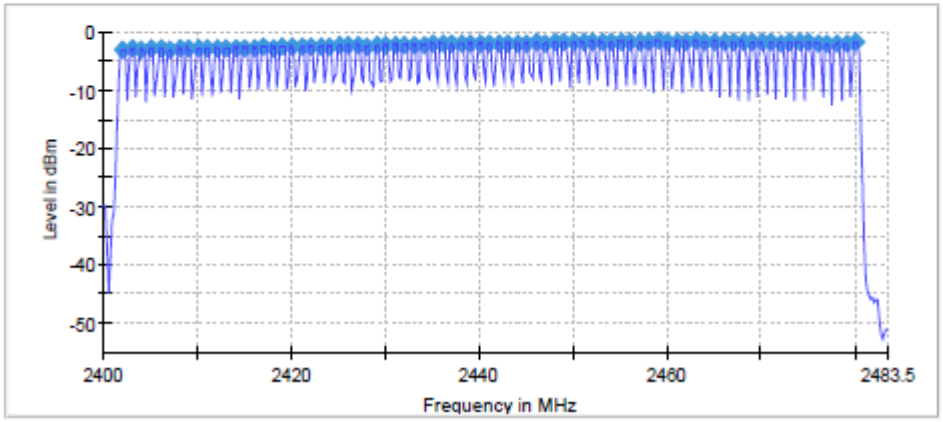
Hopping Frequencies (frequency independent; 10.000 dBm; 1dh5 (1 MHz))

Test according to FCC title 47 part 15 §15.247(a),(g), KDB 558074 D01 DTS Meas Guidance v05r02 9 and ANSI C63.10-2013 7.8.3

Channels

Channels	Limit Min	Limit Max	Result
79	15	---	PASS

Sequence



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	200.000 kHz	<= 299.000 kHz
VBW	200.000 kHz	>= 200.000 kHz
SweepPoints	418	~ 418
Sweeptime	1.060 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	55 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.32 dB	0.50 dB

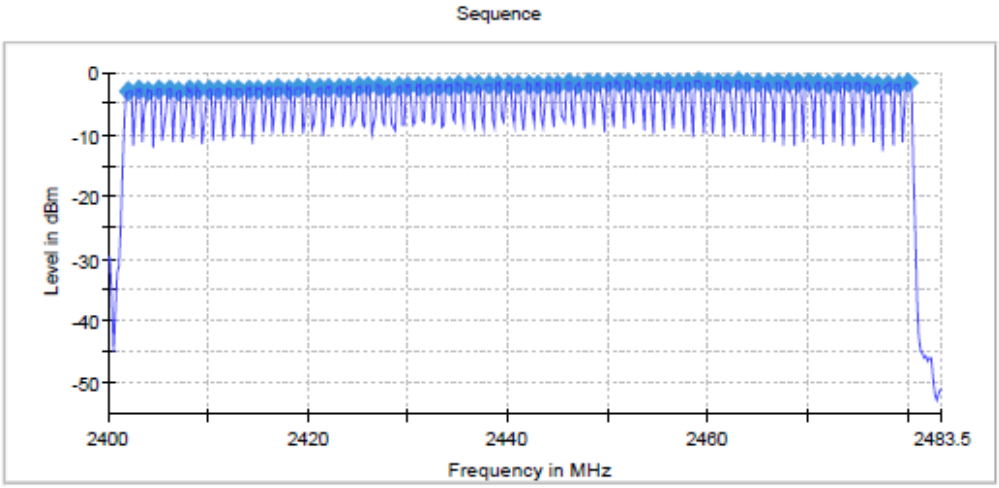
TM2, 2-DH5

Hopping Frequencies (frequency independent; 10.000 dBm; 1dh5 (1 MHz))

Test according to FCC title 47 part 15 §15.247(a),(g), KDB 558074 D01 DTS Meas Guidance v05r02 9 and ANSI C63.10-2013 7.8.3

Channels

Channels	Limit Min	Limit Max	Result
79	15	---	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	200.000 kHz	<= 299.000 kHz
VBW	200.000 kHz	>= 200.000 kHz
SweepPoints	418	~ 418
Sweeptime	1.060 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	121 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.47 dB	0.50 dB

5.1.6 Time of Occupancy

RESULT: **Pass**

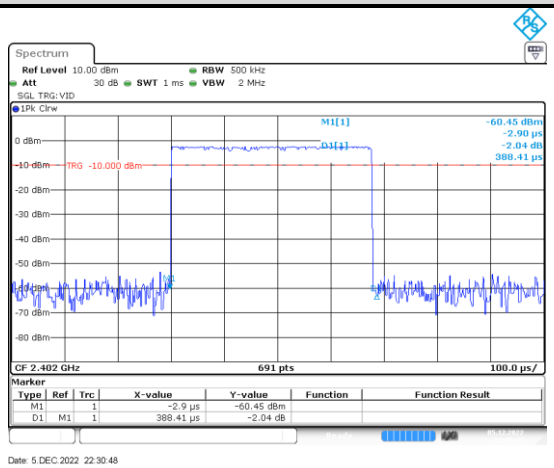
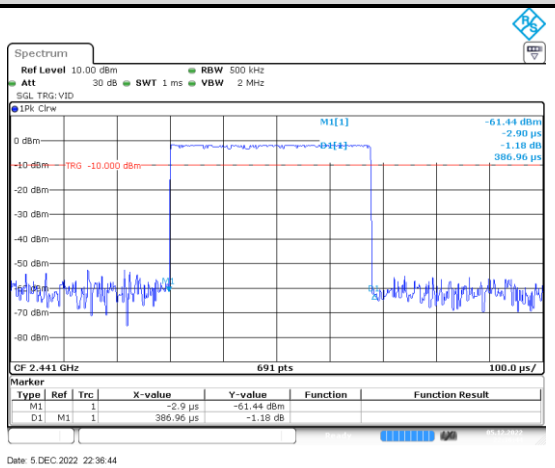
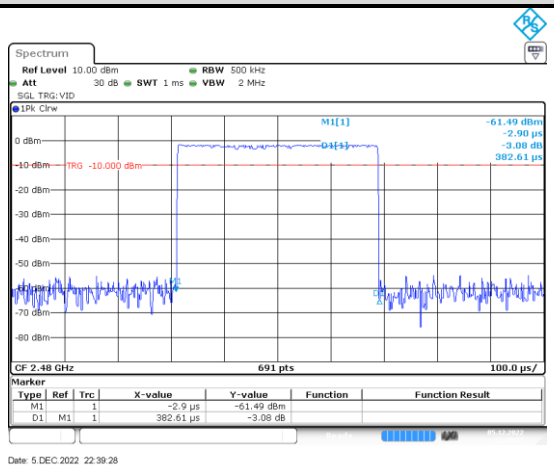
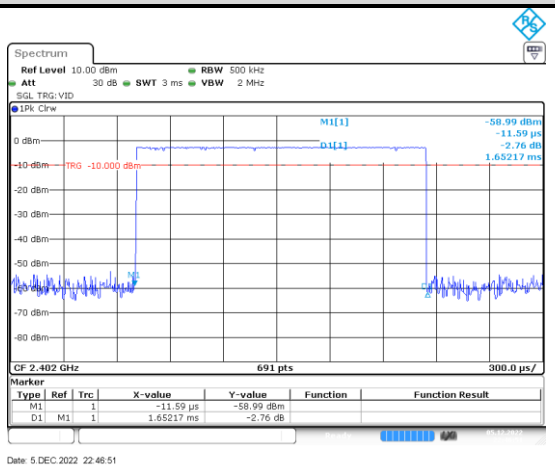
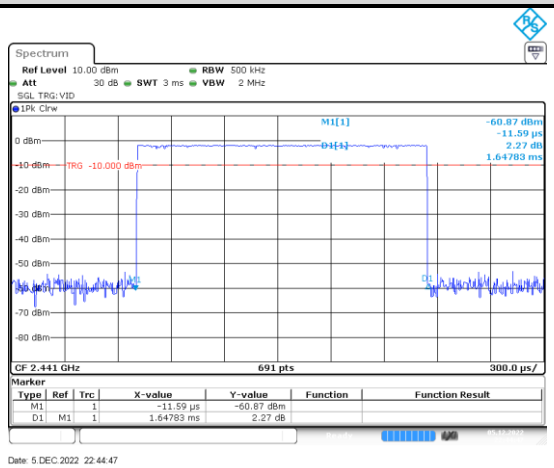
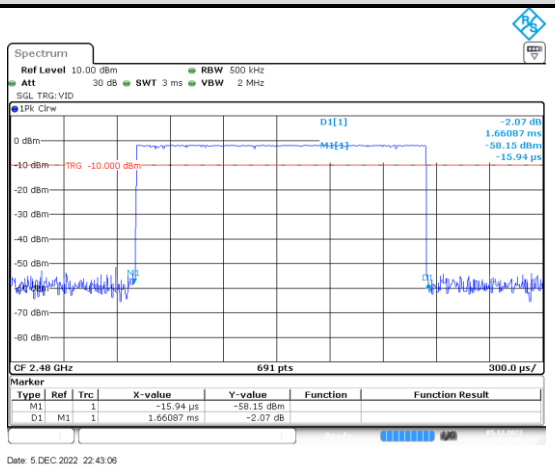
Date of testing : 2022-12-05
Ambient temperature : 22.4°C
Relative humidity : 47.9%
Atmospheric pressure : 101kPa
Test requirement : FCC 15.247(a)(1)(iii)
RSS-247 Issue 2, February 2017, Clause 5.1(d)
Test procedure : ANSI C63.10: 2013
Test voltage : DC 3.3V
Test modes applied : TM7 to TM12

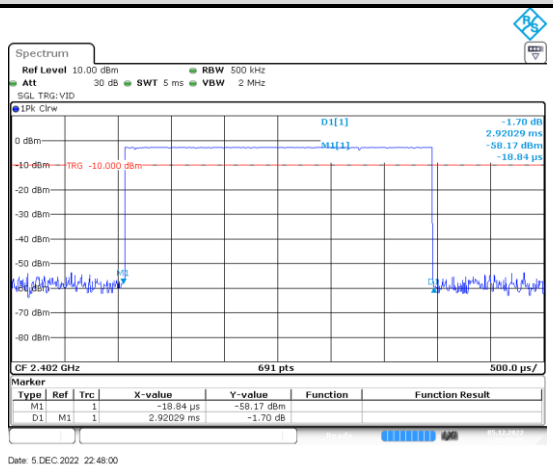
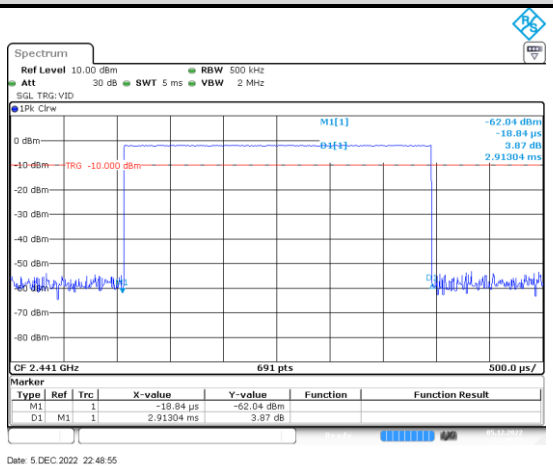
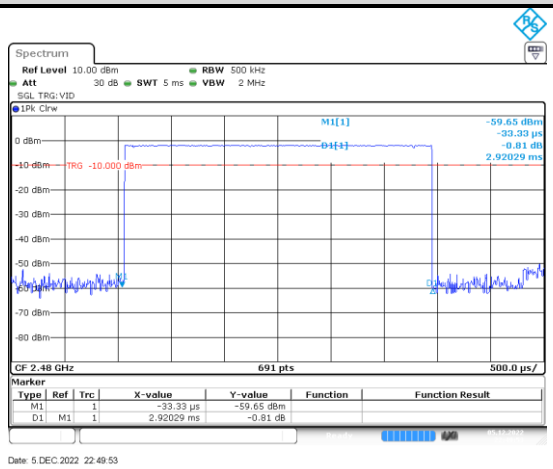
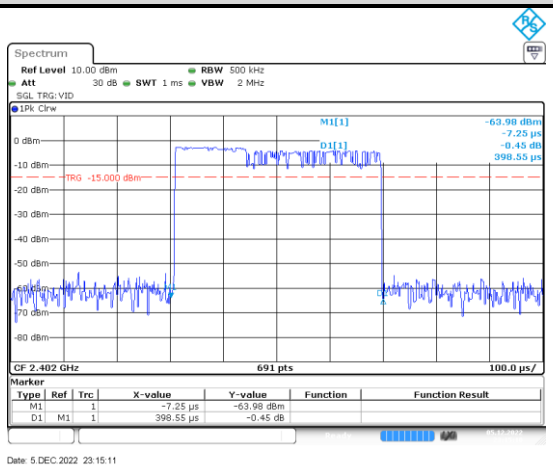
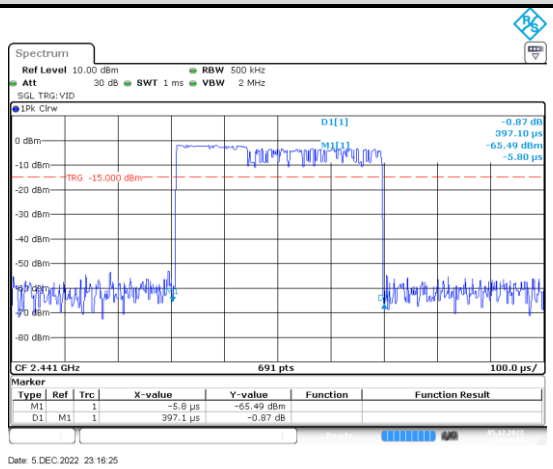
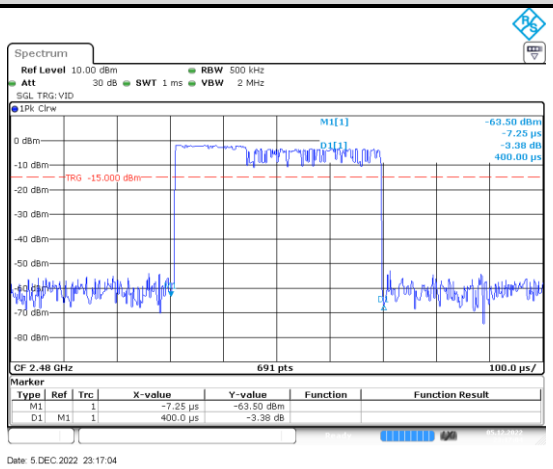
Table 12: Time of Occupancy, TM7 to TM12

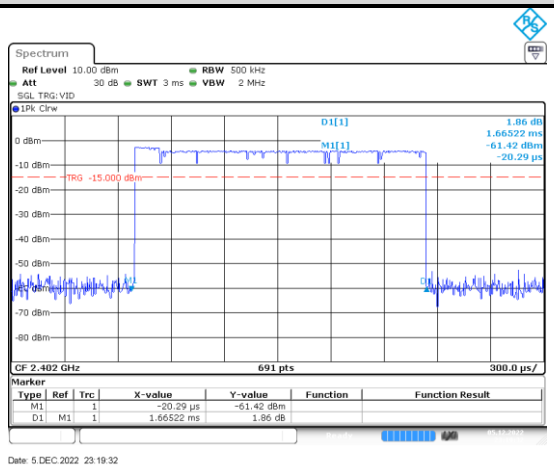
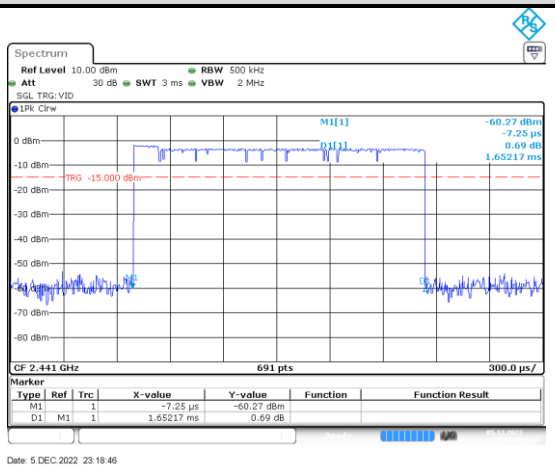
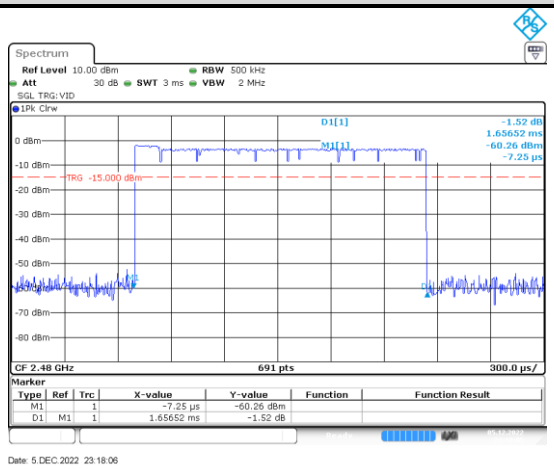
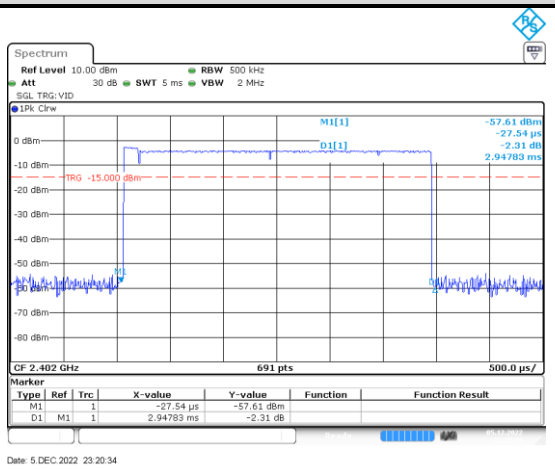
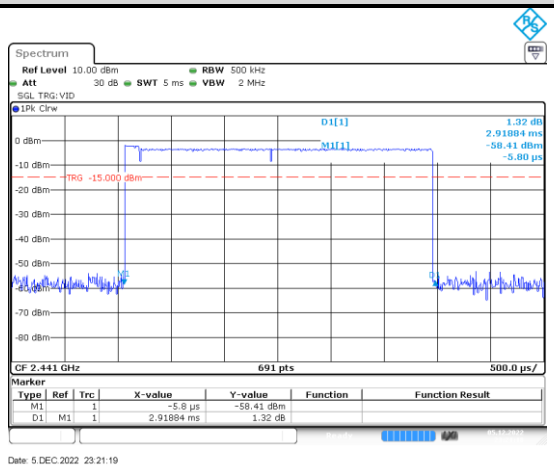
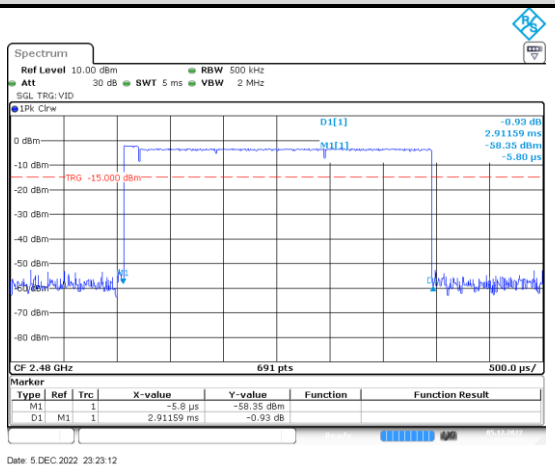
Test Mode	Mode	CH.	Frequency [MHz]	Packet Duration [ms]	Hops over Occupancy Time [Hops]	Time of Occupancy [ms]	Limit [ms]
TM7	1-DH1	00	2402	0.38841	320	124.29120	400
	1-DH1	39	2441	0.38696	320	123.82720	400
	1-DH1	78	2480	0.38261	320	122.43520	400
TM8	1-DH3	00	2402	1.65217	160	264.34720	400
	1-DH3	39	2441	1.64783	160	263.65280	400
	1-DH3	78	2480	1.66087	160	265.73920	400
TM9	1-DH5	00	2402	2.92029	107	312.47103	400
	1-DH5	39	2441	2.91304	107	311.69528	400
	1-DH5	78	2480	2.92029	107	312.47103	400
TM10	2-DH1	00	2402	0.39855	320	127.53600	400
	2-DH1	39	2441	0.39710	320	127.07200	400
	2-DH1	78	2480	0.40000	320	128.00000	400
TM11	2-DH3	00	2402	1.66522	160	266.43520	400
	2-DH3	39	2441	1.65217	160	264.34720	400
	2-DH3	78	2480	1.65652	160	265.04320	400
TM12	2-DH5	00	2402	2.94783	107	315.41781	400
	2-DH5	39	2441	2.91884	107	312.31588	400
	2-DH5	78	2480	2.91159	107	311.54013	400

Note:
Time of occupancy = Packet duration * Hops over Occupancy Time.
Hops Over Occupancy Time in 31.6s for DH1 = 1600 / 2 / 79 * 31.6 = 320.
Hops Over Occupancy Time in 31.6s for DH3 = 1600 / 4 / 79 * 31.6 = 160.
Hops Over Occupancy Time in 31.6s for DH5 = 1600 / 6 / 79 * 31.6 = 107.

Figure 1: Time of Occupancy, TM7 to TM12

TM7-00	TM7-39
	
TM7-78	**TM8-00**
	
TM8-39	**TM8-78**
	

TM9-00	TM9-39
	
TM9-78	**TM10-00**
	
TM10-39	**TM10-78**
	

TM11-00	TM11-39
	
TM11-78	**TM12-00**
	
TM12-39	**TM12-78**
	

5.1.7 Conducted Band Edge and out-of Band Emissions

RESULT: **Pass**

Date of testing	:	2022-12-05
Ambient temperature	:	22.4°C
Relative humidity	:	47.9%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(d) RSS-247 Issue 2, February 2017, Clause 5.5
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	DC 3.3V
Test modes applied	:	TM1 to TM6, TM9, TM12

TM1, 2402MHz, 1-DH5

Band Edge low (2402 MHz; 10.000 dBm; 1dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.6

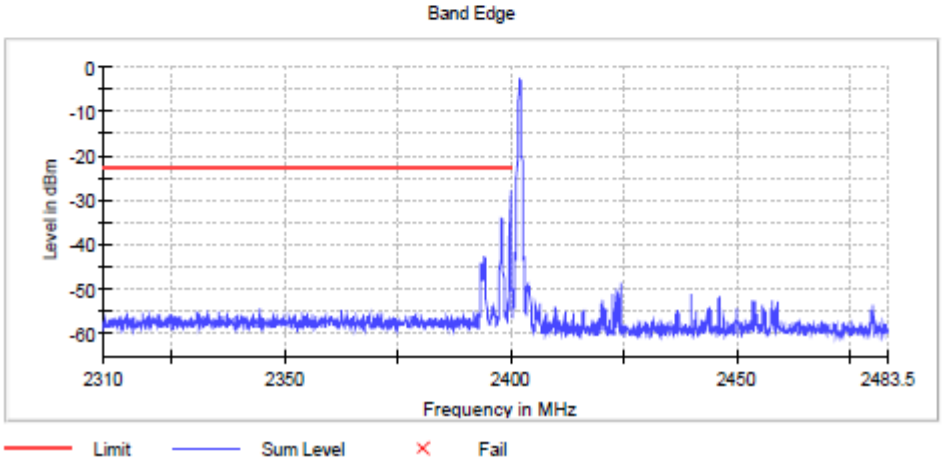
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 0.8 dB

Result

DUT Frequency (MHz)	Result
2402.000000	PASS

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.975000	-27.9	5.0	-22.9	PASS
2397.875000	-34.0	11.1	-22.9	PASS
2398.125000	-34.1	11.2	-22.9	PASS
2397.975000	-34.2	11.2	-22.9	PASS
2398.025000	-34.2	11.3	-22.9	PASS
2398.075000	-34.3	11.4	-22.9	PASS
2398.175000	-34.5	11.6	-22.9	PASS
2397.925000	-34.5	11.6	-22.9	PASS
2397.825000	-35.2	12.2	-22.9	PASS
2398.225000	-35.8	12.9	-22.9	PASS
2398.275000	-37.8	14.9	-22.9	PASS
2399.925000	-38.3	15.4	-22.9	PASS
2397.775000	-39.8	16.9	-22.9	PASS
2398.325000	-41.5	18.6	-22.9	PASS
2394.025000	-42.5	19.6	-22.9	PASS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	2.31000 GHz	2.31000 GHz
Stop Frequency	2.40000 GHz	2.40000 GHz
Span	90.000 MHz	90.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1800	~ 1800
Sweeptime	1.800 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1670	~ 1670
Sweeptime	1.670 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.02 dB	0.50 dB

TM3, 2480MHz, 1-DH5

Band Edge high (2480 MHz; 10.000 dBm; 1dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.6

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 0.8 dB

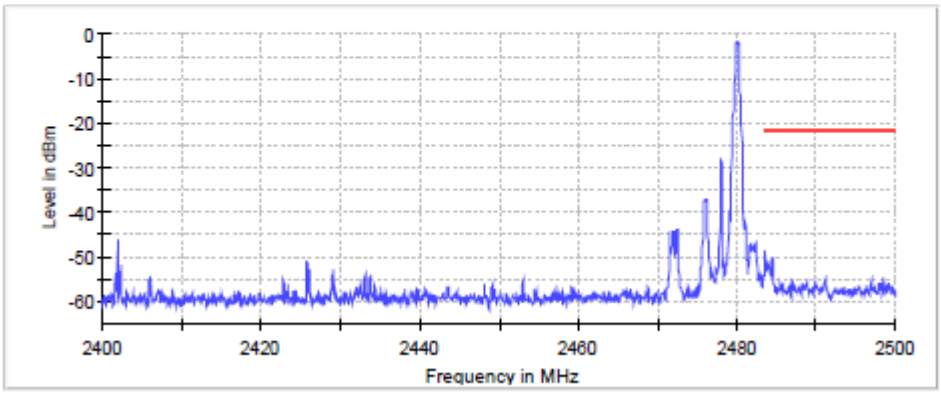
Result

DUT Frequency (MHz)	Result
2480.000000	PASS

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.525000	-48.5	26.7	-21.8	PASS
2483.575000	-48.8	27.0	-21.8	PASS
2484.525000	-50.5	28.7	-21.8	PASS
2484.475000	-50.8	29.0	-21.8	PASS
2483.875000	-51.1	29.3	-21.8	PASS
2483.925000	-51.2	29.4	-21.8	PASS
2484.025000	-51.3	29.5	-21.8	PASS
2484.575000	-51.4	29.7	-21.8	PASS
2483.975000	-51.7	29.9	-21.8	PASS
2483.625000	-51.8	30.0	-21.8	PASS
2483.725000	-52.4	30.6	-21.8	PASS
2483.675000	-52.6	30.8	-21.8	PASS
2484.425000	-52.8	31.0	-21.8	PASS
2483.775000	-53.0	31.2	-21.8	PASS
2484.075000	-53.1	31.3	-21.8	PASS

Band Edge



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1670	~ 1670
Sweeptime	1.670 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.07 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	2.48350 GHz	2.48350 GHz
Stop Frequency	2.50000 GHz	2.50000 GHz
Span	16.500 MHz	16.500 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	330	~ 330
Sweeptime	37.969 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

TM4, 2402MHz, 2-DH5

Band Edge low (2402 MHz; 10.000 dBm; 2dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.6

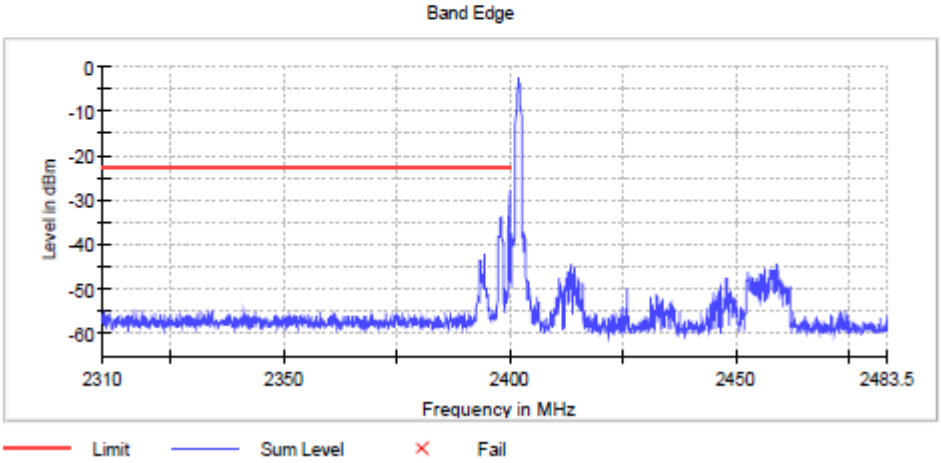
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 0.8 dB

Result

DUT Frequency (MHz)	Result
2402.000000	PASS

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.975000	-27.7	5.2	-22.6	PASS
2398.175000	-33.5	10.9	-22.6	PASS
2397.875000	-33.9	11.4	-22.6	PASS
2398.225000	-34.0	11.4	-22.6	PASS
2398.025000	-34.2	11.7	-22.6	PASS
2397.925000	-34.3	11.7	-22.6	PASS
2398.075000	-34.7	12.2	-22.6	PASS
2397.825000	-35.7	13.1	-22.6	PASS
2397.975000	-36.0	13.5	-22.6	PASS
2399.925000	-36.2	13.7	-22.6	PASS
2398.275000	-36.6	14.0	-22.6	PASS
2398.125000	-36.8	14.3	-22.6	PASS
2397.775000	-37.6	15.0	-22.6	PASS
2398.375000	-37.8	15.2	-22.6	PASS
2398.325000	-38.0	15.5	-22.6	PASS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	2.31000 GHz	2.31000 GHz
Stop Frequency	2.40000 GHz	2.40000 GHz
Span	90.000 MHz	90.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1800	~ 1800
Sweeptime	1.800 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.17 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1670	~ 1670
Sweeptime	1.670 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	10 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.30 dB	0.50 dB

TM6, 2480MHz, 2-DH5

Band Edge high (2480 MHz; 10.000 dBm; 2dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.6

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 0.8 dB

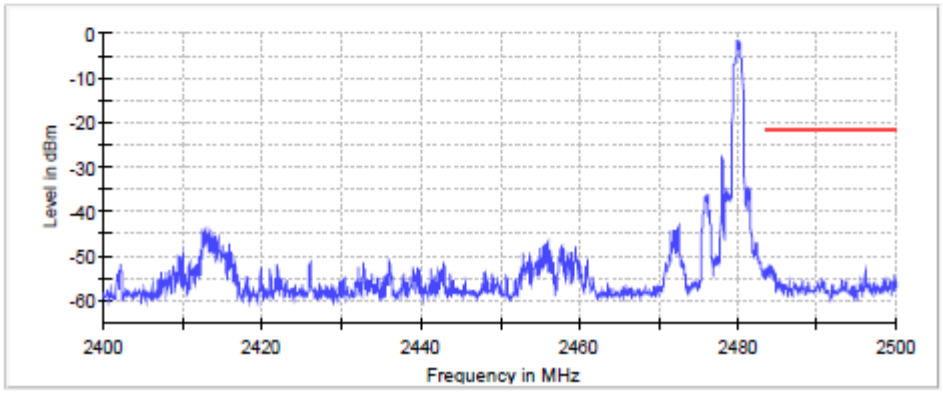
Result

DUT Frequency (MHz)	Result
2480.000000	PASS

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.125000	-52.2	30.8	-21.4	PASS
2484.025000	-52.3	30.9	-21.4	PASS
2484.175000	-52.3	30.9	-21.4	PASS
2483.775000	-52.6	31.2	-21.4	PASS
2484.075000	-52.7	31.3	-21.4	PASS
2483.825000	-52.7	31.4	-21.4	PASS
2484.475000	-52.9	31.5	-21.4	PASS
2484.425000	-53.2	31.8	-21.4	PASS
2483.975000	-53.5	32.1	-21.4	PASS
2484.525000	-53.5	32.1	-21.4	PASS
2484.225000	-53.5	32.1	-21.4	PASS
2483.725000	-53.6	32.2	-21.4	PASS
2483.525000	-53.6	32.2	-21.4	PASS
2496.125000	-53.6	32.2	-21.4	PASS
2496.075000	-53.7	32.3	-21.4	PASS

Band Edge



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1670	~ 1670
Sweeptime	1.670 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	17 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	2.48350 GHz	2.48350 GHz
Stop Frequency	2.50000 GHz	2.50000 GHz
Span	16.500 MHz	16.500 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	330	~ 330
Sweeptime	37.969 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

TM1, 2402MHz, 1-DH5

Tx Spurious Emission (2402 MHz; 10.000 dBm; 1dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05r02 7.8.8 and ANSI C63.10-2013

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1.8 dB

Result

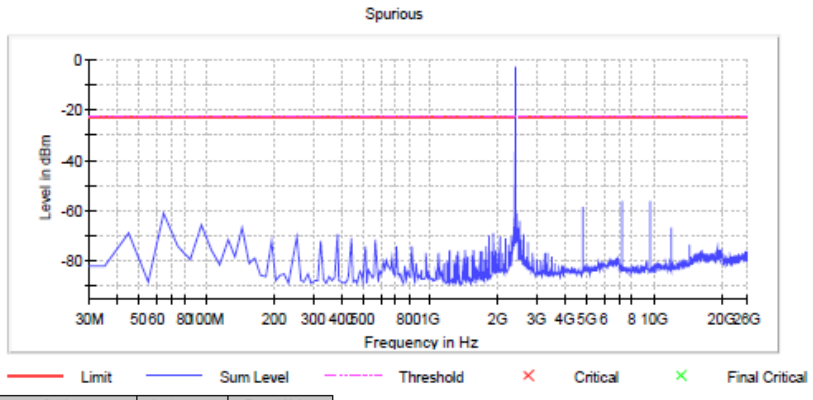
DUT Frequency (MHz)	Result
2402.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2395.021008	-28.2	5.1	-23.1
7205.789099	-56.3	33.2	-23.1
9604.412133	-56.5	33.4	-23.1
4807.166065	-58.3	35.2	-23.1
7195.794836	-60.8	37.7	-23.1
64.852941	-61.1	38.0	-23.1
2498.491394	-64.0	40.9	-23.1
2355.189076	-65.2	42.1	-23.1
94.726891	-65.7	42.6	-23.1
144.516807	-66.8	43.7	-23.1
12003.035168	-66.8	43.8	-23.1
2365.147059	-68.2	45.1	-23.1
44.936975	-68.7	45.7	-23.1
1917.037815	-69.1	46.0	-23.1
2628.416808	-69.2	46.1	-23.1



Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	238	~ 238
Sweeptime	23.700 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	3	3
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	5 / max. 40	max. 40
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

TM2, 2441MHz, 1-DH5

Tx Spurious Emission (2441 MHz; 10.000 dBm; 1dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05r02 7.8.8 and ANSI C63.10-2013

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1.8 dB

Result

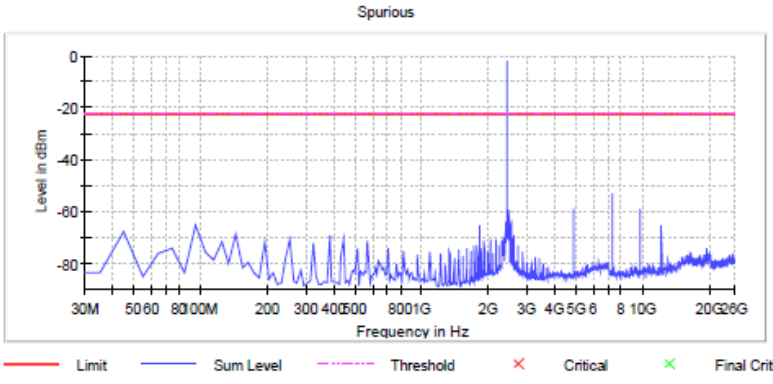
DUT Frequency (MHz)	Result
2441.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
7325.720251	-52.9	30.8	-22.2
9754.326073	-58.8	36.7	-22.2
4887.120166	-58.9	36.8	-22.2
2488.497131	-59.3	37.1	-22.2
4877.125903	-59.4	37.2	-22.2
7315.725988	-60.1	37.9	-22.2
2538.468445	-63.5	41.3	-22.2
2395.021008	-65.3	43.2	-22.2
94.726891	-65.4	43.2	-22.2
12192.926158	-65.4	43.2	-22.2
1827.415966	-65.5	43.3	-22.2
44.936975	-67.8	45.6	-22.2
2498.491394	-68.4	46.2	-22.2
2508.485657	-68.4	46.3	-22.2
144.516807	-68.9	46.7	-22.2



Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	238	~ 238
Sweeptime	23.700 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	3	3
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	9 / max. 40	max. 40
Stable	3 / 3	3
Max Stable Difference	0.12 dB	0.50 dB

TM3, 2480MHz, 1-DH5

Tx Spurious Emission (2480 MHz; 10.000 dBm; 1dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05r02 7.8.8 and ANSI C63.10-2013

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1.8 dB

Result

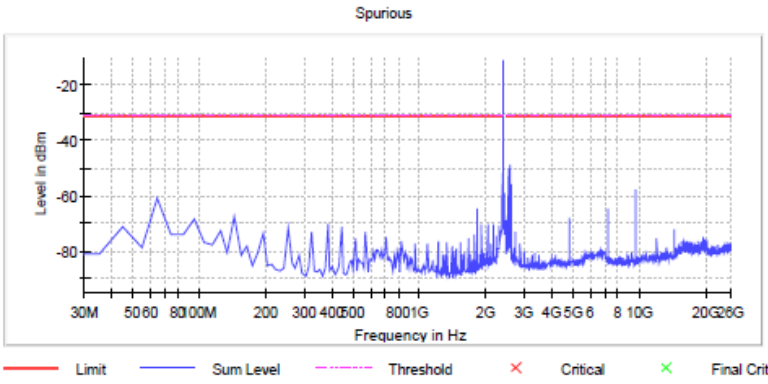
DUT Frequency (MHz)	Result
2480.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2568.451232	-48.8	17.8	-31.0
2395.021008	-49.1	18.1	-31.0
2538.468445	-50.2	19.3	-31.0
2608.428283	-55.6	24.7	-31.0
9604.412133	-57.4	26.5	-31.0
64.852941	-61.0	30.0	-31.0
2578.445495	-61.4	30.4	-31.0
2598.434020	-61.9	30.9	-31.0
2385.063025	-62.5	31.5	-31.0
2618.422546	-63.6	32.6	-31.0
1827.415966	-64.4	33.5	-31.0
7205.789099	-64.8	33.8	-31.0
144.516807	-67.4	36.4	-31.0
4807.166065	-67.8	36.8	-31.0
94.726891	-68.4	37.4	-31.0



Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	238	~ 238
Sweeptime	23.700 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	3	3
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	8 / max. 40	max. 40
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

TM4, 2402MHz, 2-DH5

Tx Spurious Emission (2402 MHz; 10.000 dBm; 2dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05r02 7.8.8 and ANSI C63.10-2013

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1.8 dB

Result

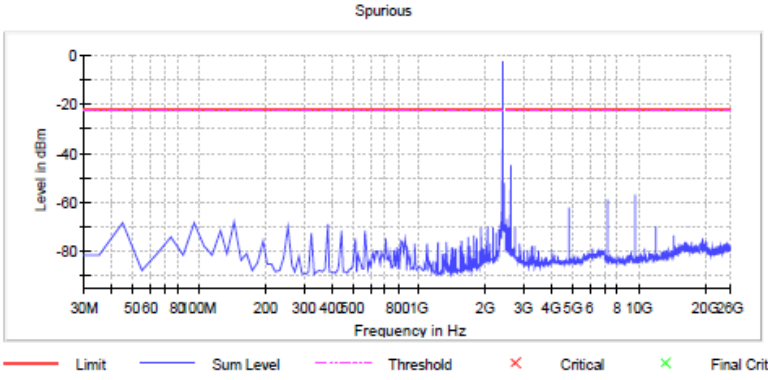
DUT Frequency (MHz)	Result
2402.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2395.021008	-30.0	7.5	-22.6
2608.428283	-44.8	22.2	-22.6
9604.412133	-57.0	34.4	-22.6
7205.789099	-58.8	36.3	-22.6
7195.794836	-60.1	37.6	-22.6
4807.166065	-62.2	39.6	-22.6
2498.491394	-67.0	44.5	-22.6
2355.189076	-67.3	44.8	-22.6
2365.147059	-67.8	45.2	-22.6
144.516807	-67.9	45.4	-22.6
94.726891	-68.3	45.8	-22.6
2628.416808	-68.6	46.0	-22.6
44.936975	-68.6	46.1	-22.6
383.508403	-69.0	46.4	-22.6
2335.273109	-69.3	46.8	-22.6



Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	238	~ 238
Sweeptime	23.700 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	3	3
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 40	max. 40
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

TM5, 2441MHz, 2-DH5

Tx Spurious Emission (2441 MHz; 10.000 dBm; 2dh5 (1 MHz); Test Mode)

Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05r02 7.8.8 and ANSI C63.10-2013

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1.8 dB

Result

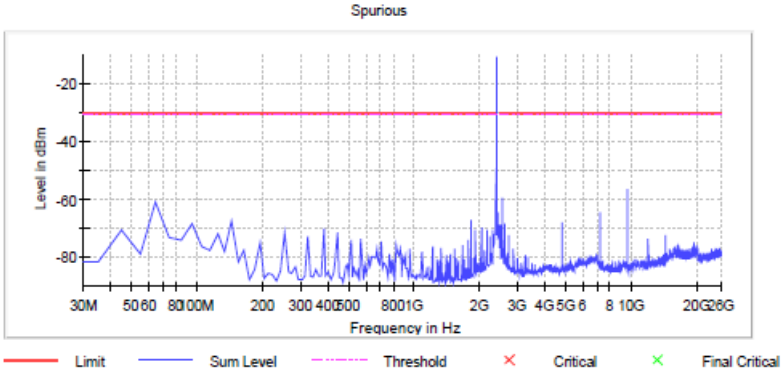
DUT Frequency (MHz)	Result
2441.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2395.021008	-45.9	15.1	-30.8
9604.412133	-56.6	25.7	-30.8
2548.462707	-59.7	28.9	-30.8
64.852941	-61.0	30.1	-30.8
2385.063025	-63.6	32.8	-30.8
7205.789099	-64.4	33.6	-30.8
2375.105042	-66.5	35.7	-30.8
1827.415966	-67.2	36.3	-30.8
144.516807	-67.7	36.9	-30.8
4807.166065	-68.1	37.3	-30.8
94.726891	-68.4	37.6	-30.8
2628.416808	-68.6	37.7	-30.8
2498.491394	-68.9	38.0	-30.8
2046.491597	-69.8	39.0	-30.8
2365.147059	-70.0	39.2	-30.8



Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	238	~ 238
Sweeptime	23.700 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	3	3
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	9 / max. 40	max. 40
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

TM6, 2480MHz, 2-DH5
Tx Spurious Emission (2480 MHz; 10.000 dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05r02 8.5 and ANSI C63.10-2013 11.11.2 & 11.11.3

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.
Expanded Uncertainty (K=2) < 1.8 dB

Result

DUT Frequency (MHz)	Result
2480.000000	PASS

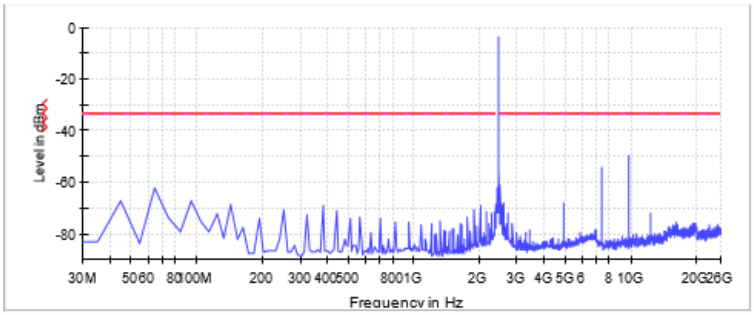
Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
9914.234275	-50.0	16.2	-33.8
7435.657140	-54.5	20.7	-33.8
2488.497131	-55.5	21.7	-33.8
7445.651402	-60.5	26.7	-33.8
2528.474182	-61.3	27.5	-33.8
64.852941	-62.3	28.5	-33.8
9924.228538	-66.6	32.8	-33.8
44.936975	-67.2	33.4	-33.8
94.726891	-67.2	33.4	-33.8
2498.491394	-67.9	34.1	-33.8
2548.462707	-68.3	34.5	-33.8
4957.080004	-68.4	34.6	-33.8
2628.416808	-68.5	34.7	-33.8
144.516807	-68.8	35.0	-33.8
2578.445495	-69.3	35.5	-33.8

Spurious



Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	238	~ 238
Sweeptime	23.700 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	3	3
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	18 / max. 40	max. 40
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

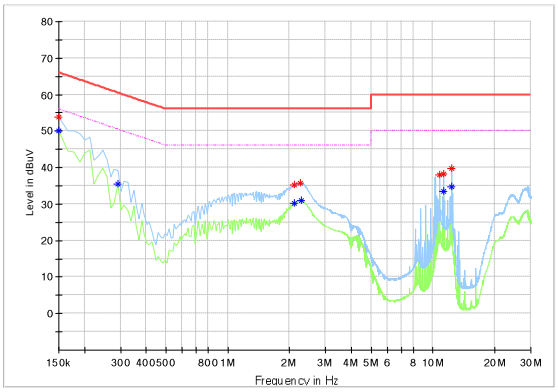
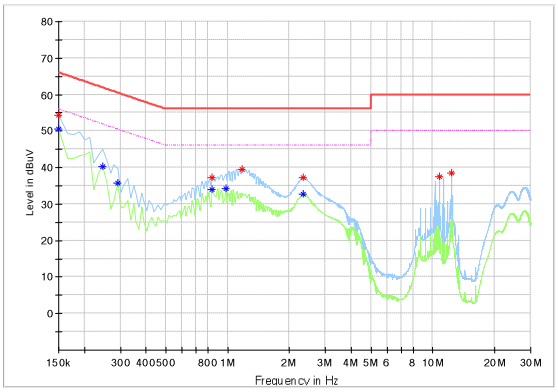
5.2 Emission in the Frequency Range up to 30MHz

5.2.1 Conducted Emission

RESULT: **Pass**

Date of testing	:	2022-12-07
Ambient temperature	:	24.5°C
Relative humidity	:	50.4%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.207 (a) RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.8
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	AC 120V/60Hz
Test modes applied	:	TM13

Figure 2: Conducted Emission

TM10-L	TM10-N
	

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Comment
2.113125	35.30	---	56.00	20.70	L1	
2.248125	35.77	---	56.00	20.23	L1	
10.753125	38.13	---	60.00	21.87	L1	
11.270625	38.36	---	60.00	21.64	L1	
12.294375	39.77	---	60.00	20.23	L1	
0.150000	53.94	---	66.00	12.06	L1	
12.294375	---	34.78	50.00	15.22	L1	
11.270625	---	33.51	50.00	16.49	L1	
0.150000	---	50.19	56.00	5.81	L1	
0.290625	---	35.47	50.51	15.03	L1	
2.270625	---	30.97	46.00	15.03	L1	
2.113125	---	30.27	46.00	15.73	L1	
0.841875	37.24	---	56.00	27.13	N	
2.338125	37.25	---	56.00	26.88	N	
10.764375	37.48	---	60.00	25.56	N	
12.305625	38.58	---	60.00	24.22	N	
1.179375	39.60	---	56.00	21.43	N	
0.150000	54.26	---	66.00	8.15	N	
2.338125	---	32.64	46.00	15.41	N	
0.245625	---	40.35	51.90	18.91	N	
0.150000	---	50.49	56.00	7.90	N	
0.290625	---	35.80	50.51	18.92	N	
0.976875	---	34.35	46.00	19.27	N	
0.841875	---	33.90	46.00	16.71	N	

5.3 Emission in the Frequency Range above 30MHz

5.3.1 Radiated Band-Edge

RESULT: **Pass**

Date of testing	:	2022-11-21 and 2023-01-11 ~ 2023-01-12
Ambient temperature	:	20.9°C
Relative humidity	:	50.2%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(d) FCC Part 15.205(a) FCC Part 15.209(a) RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.9 RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.10 RSS-247 Issue 2, February 2017, Clause 5.5
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	DC 3.3V
Test modes applied	:	TM1, TM3, TM4, TM6

Figure 3: Radiated Band-Edge, TM1

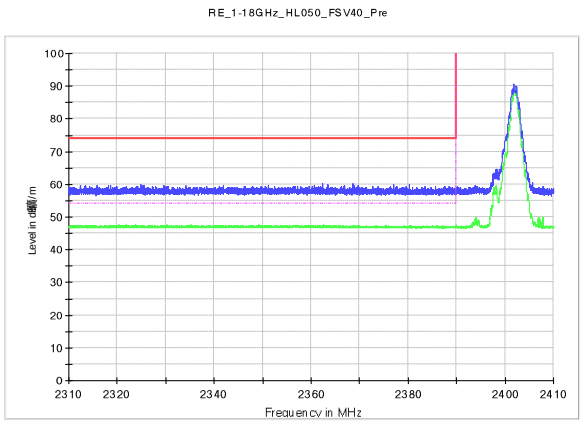
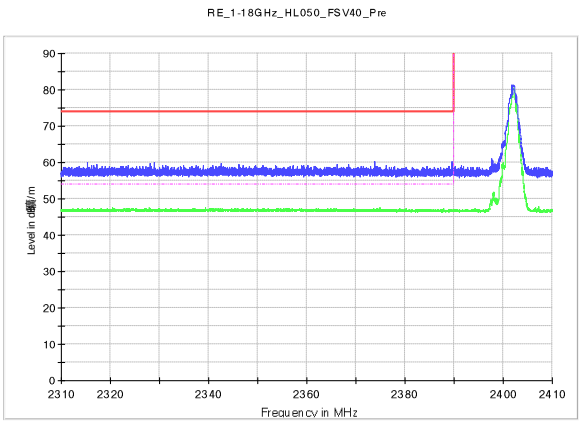
H	V
	

Figure 4: Radiated Band-Edge, TM3

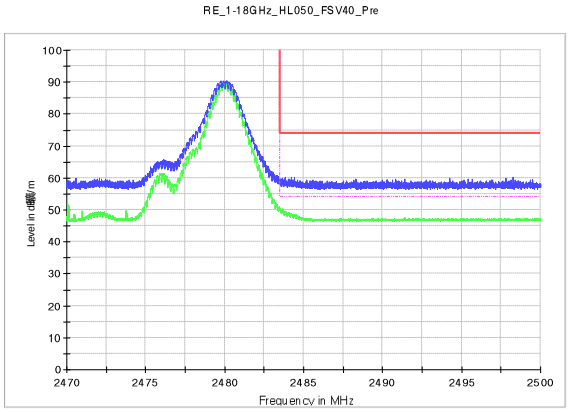
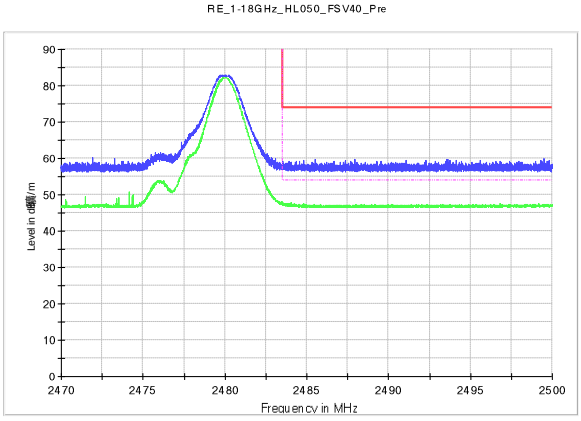
H	V
	

Figure 5: Radiated Band-Edge, TM4

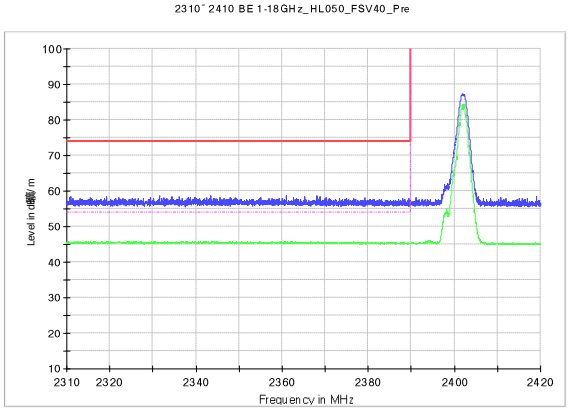
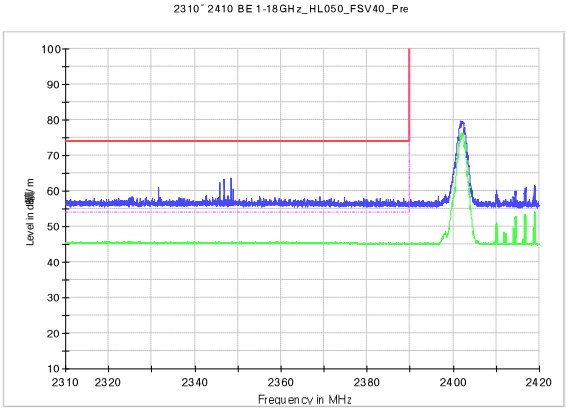
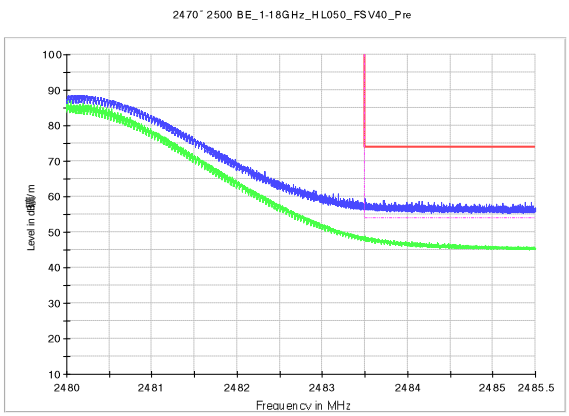
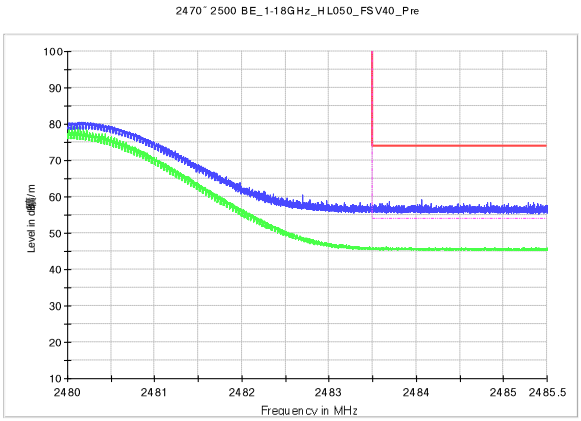
H	V
	

Figure 6: Radiated Band-Edge, TM6

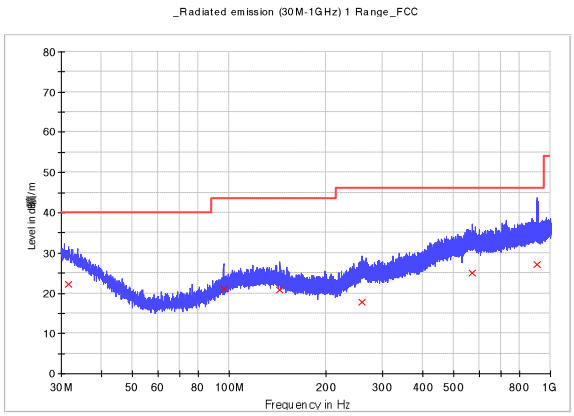
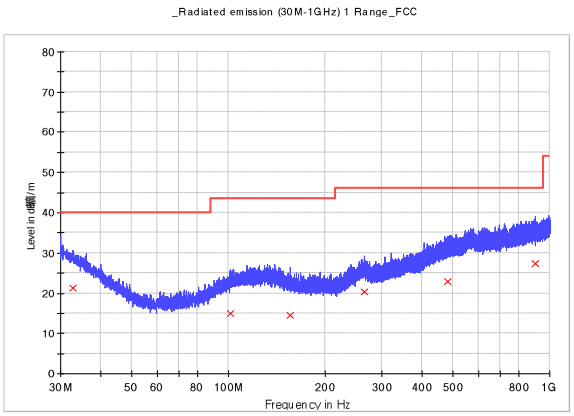
H	V
	

5.3.2 Radiated Spurious Emission

RESULT: **Pass**

Date of testing	:	2022-11-21 and 2023-01-11 ~ 2023-01-12
Ambient temperature	:	20.9°C
Relative humidity	:	50.2%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(d) FCC Part 15.209(a) RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.9 RSS-247 Issue 2, February 2017, Clause 5.5
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	DC 3.3V
Test modes applied	:	TM1 to TM6
Kind of test site		3m Anechoic Chamber

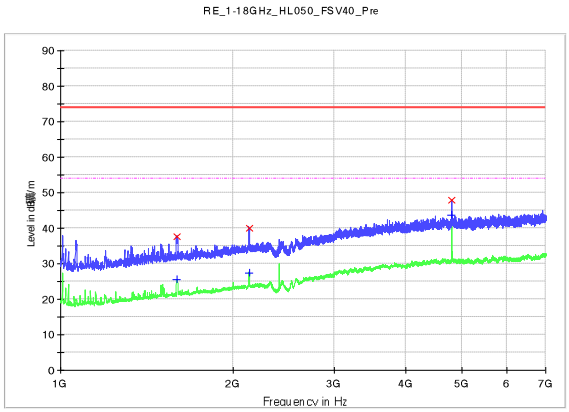
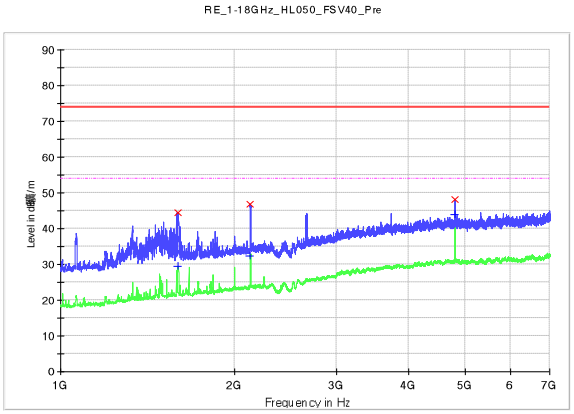
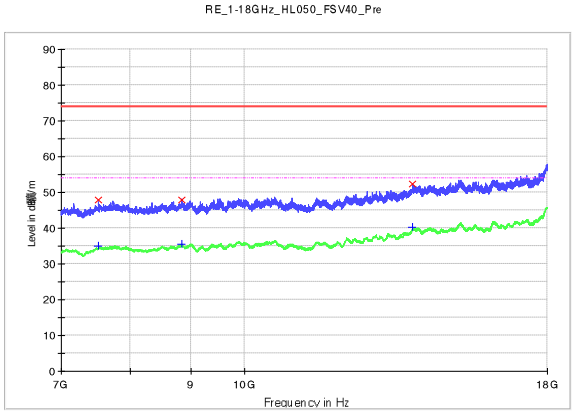
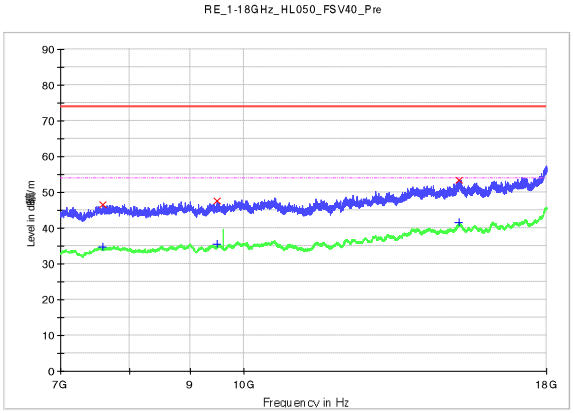
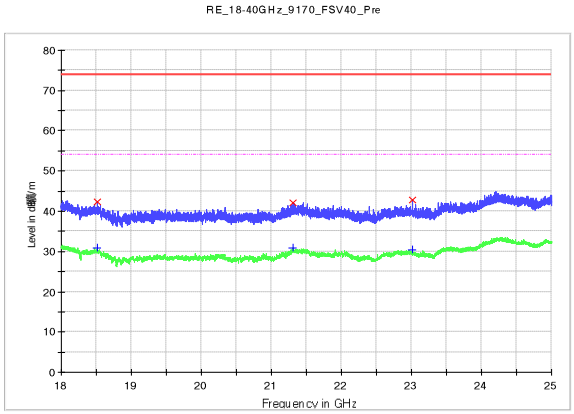
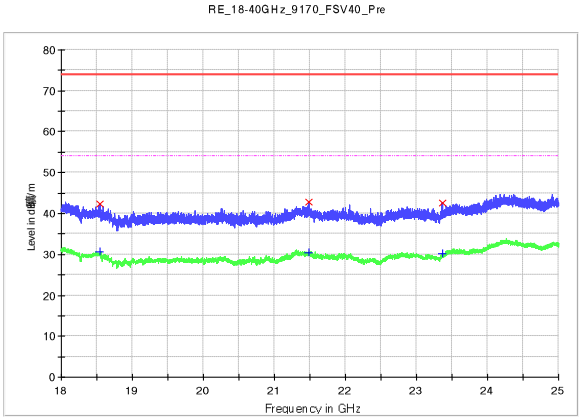
Figure 7: Radiated Spurious Emission, TM1, 30MHz to 1GHz

30MHz to 1GHz H	30MHz to 1GHz V
	

Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
31.584333	22.1	H	24.7	17.9	40.0
95.960000	21.1	H	16.8	22.4	43.5
144.007333	20.9	H	17.8	22.6	43.5
259.663667	17.7	H	20.7	28.3	46.0
570.613333	24.9	H	26.1	21.1	46.0
909.660667	27.0	H	28.0	19.0	46.0
32.813000	21.2	V	23.9	18.8	40.0
101.230333	14.9	V	17.7	28.6	43.5
155.582667	14.4	V	16.9	29.1	43.5
265.451333	20.3	V	20.6	25.7	46.0
481.373333	22.8	V	24.6	23.2	46.0
899.378667	27.4	V	28.3	18.6	46.0

Figure 8: Radiated Spurious Emission, TM1, 1GHz to 25GHz

1GHz to 7GHz H	1GHz to 7GHz V
	
7GHz to 18GHz H	**7GHz to 18GHz V**
	
18GHz to 25GHz H	**18GHz to 25GHz V**
	

Limit and Margin

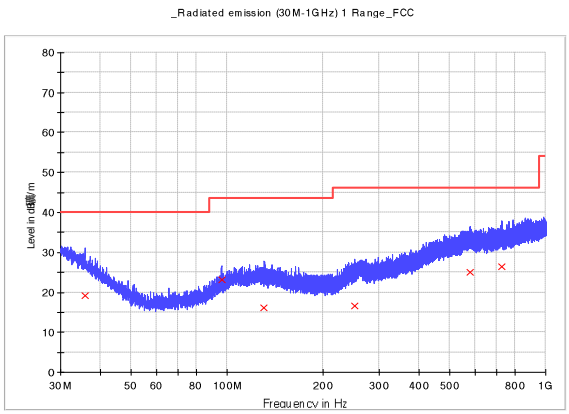
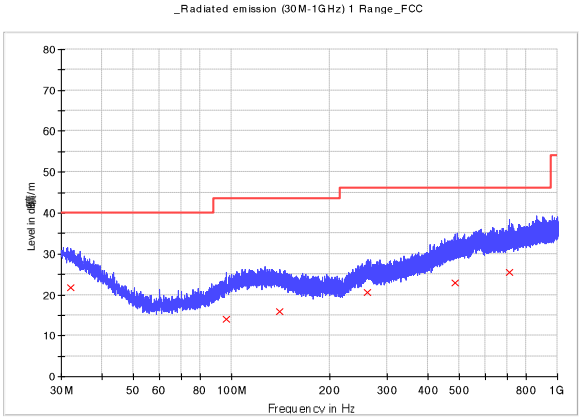
PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1594.750000	37.7	H	-18.4	36.3	74.0
2132.500000	40.0	H	-15.7	34.0	74.0
4804.750000	48.0	H	-6.5	26.0	74.0
7521.125000	47.9	H	-2.8	26.1	74.0
8850.750000	48.0	H	-1.5	26.0	74.0
13848.875000	52.3	H	4.1	21.7	74.0
18510.125000	42.3	H	-9.3	31.7	74.0
21303.125000	42.2	H	-6.3	31.8	74.0
23010.250000	42.7	H	-5.4	31.3	74.0
1593.250000	44.5	V	-18.4	29.5	74.0
2127.250000	46.8	V	-15.8	27.2	74.0
4804.000000	48.1	V	-6.5	25.9	74.0
7603.625000	46.5	V	-3.1	27.5	74.0
9488.750000	47.6	V	-0.7	26.4	74.0
15184.000000	53.4	V	6.2	20.6	74.0
18547.750000	42.4	V	-9.3	31.6	74.0
21479.875000	42.7	V	-6.0	31.3	74.0
23362.000000	42.6	V	-4.6	31.4	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1594.750000	25.4	H	-18.4	28.6	54.0
2132.500000	27.4	H	-15.7	26.6	54.0
4804.750000	43.8	H	-6.5	10.2	54.0
7521.125000	34.9	H	-2.8	19.1	54.0
8850.750000	35.6	H	-1.5	18.4	54.0
13848.875000	40.2	H	4.1	13.8	54.0
18510.125000	30.8	H	-9.3	23.2	54.0
21303.125000	30.9	H	-6.3	23.1	54.0
23010.250000	30.3	H	-5.4	23.7	54.0
1593.250000	29.6	V	-18.4	24.4	54.0
2127.250000	32.5	V	-15.8	21.5	54.0
4804.000000	44.0	V	-6.5	10.0	54.0
7603.625000	34.8	V	-3.1	19.2	54.0
9488.750000	35.4	V	-0.7	18.6	54.0
15184.000000	41.5	V	6.2	12.5	54.0
18547.750000	30.6	V	-9.3	23.4	54.0
21479.875000	30.5	V	-6.0	23.5	54.0
23362.000000	30.2	V	-4.6	23.8	54.0

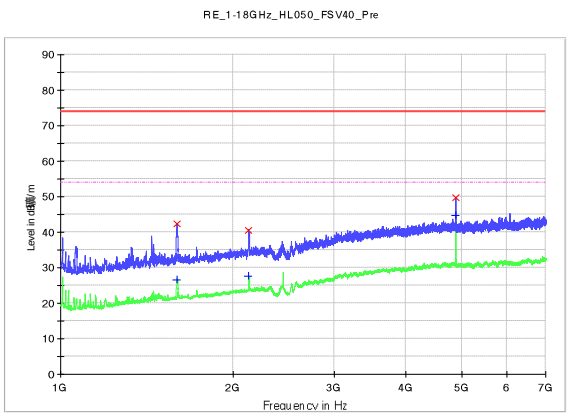
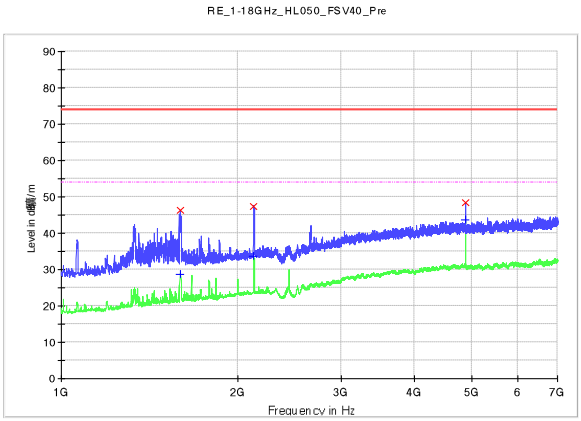
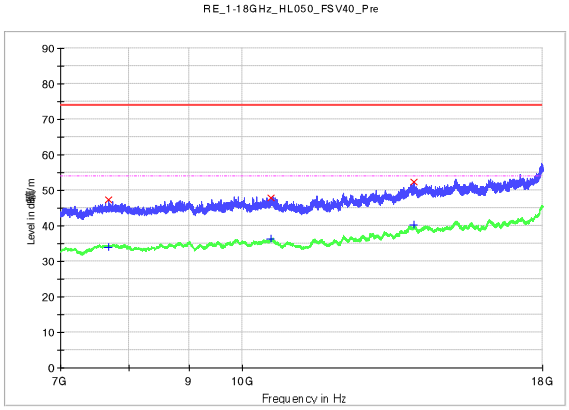
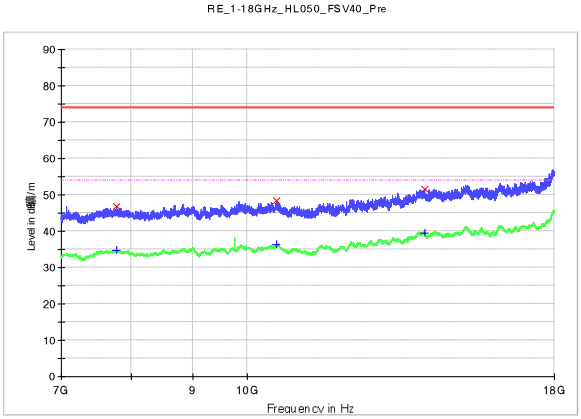
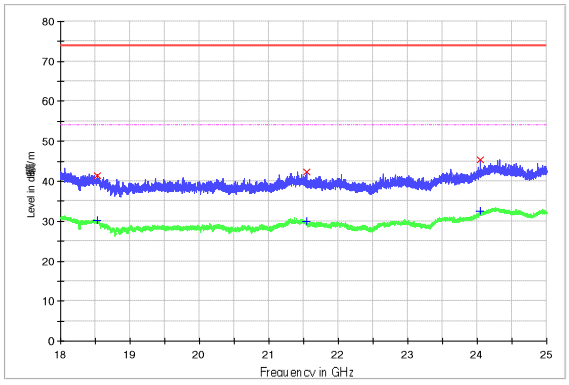
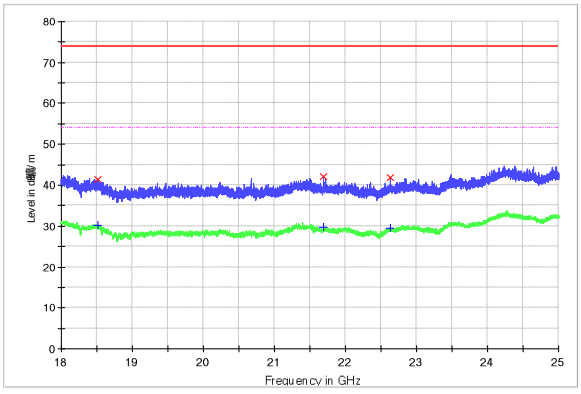
Figure 9: Radiated Spurious Emission, TM2, 30MHz to 1GHz

30MHz to 1GHz H	30MHz to 1GHz V
	

Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
35.723000	19.3	H	22.4	20.7	40.0
95.992333	23.2	H	16.8	20.3	43.5
130.815333	16.2	H	18.7	27.3	43.5
251.192333	16.5	H	19.4	29.5	46.0
578.276333	25.1	H	26.1	20.9	46.0
729.111333	26.4	H	26.7	19.7	46.0
32.166333	21.8	V	24.4	18.3	40.0
96.412667	14.0	V	16.8	29.5	43.5
140.774000	15.8	V	18.1	27.7	43.5
260.439667	20.5	V	20.7	25.5	46.0
486.385000	23.0	V	24.8	23.0	46.0
709.840667	25.4	V	26.2	20.6	46.0

Figure 10: Radiated Spurious Emission, TM2, 1GHz to 25GHz

1GHz to 7GHz H	1GHz to 7GHz V
	
7GHz to 18GHz H	**7GHz to 18GHz V**
	
18GHz to 25GHz H	**18GHz to 25GHz V**
	

Limit and Margin

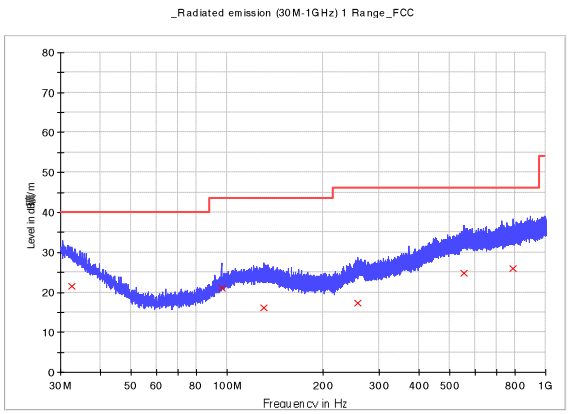
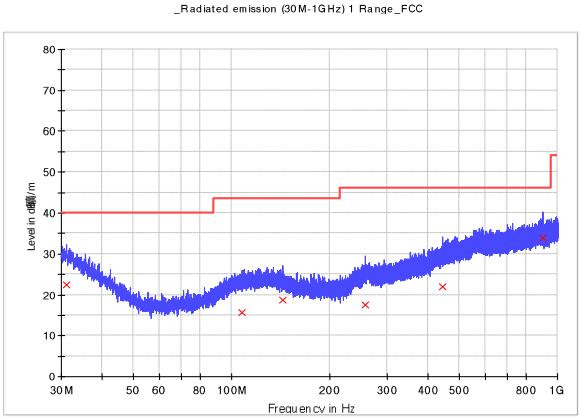
PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1594.000000	42.3	H	-18.4	31.7	74.0
2125.000000	40.5	H	-15.8	33.5	74.0
4882.000000	49.8	H	-6.5	24.2	74.0
7695.750000	47.4	H	-2.9	26.6	74.0
10570.875000	47.8	H	0.9	26.2	74.0
13996.000000	52.5	H	4.6	21.5	74.0
18532.875000	41.5	H	-9.3	32.5	74.0
21542.875000	42.3	H	-6.0	31.7	74.0
24047.125000	45.4	H	-4.2	28.6	74.0
1592.500000	46.3	V	-18.4	27.7	74.0
2123.500000	47.5	V	-15.8	26.5	74.0
4882.000000	48.4	V	-6.5	25.6	74.0
7775.500000	46.9	V	-3.1	27.1	74.0
10576.375000	48.5	V	0.9	25.5	74.0
14031.750000	51.5	V	4.5	22.5	74.0
18515.375000	41.3	V	-9.3	32.7	74.0
21696.000000	42.0	V	-5.9	32.0	74.0
22628.750000	41.8	V	-6.5	32.2	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1594.000000	26.5	H	-18.4	27.5	54.0
2125.000000	27.7	H	-15.8	26.3	54.0
4882.000000	44.7	H	-6.5	9.3	54.0
7695.750000	34.1	H	-2.9	19.9	54.0
10570.875000	36.3	H	0.9	17.7	54.0
13996.000000	40.3	H	4.6	13.7	54.0
18532.875000	30.2	H	-9.3	23.8	54.0
21542.875000	30.0	H	-6.0	24.0	54.0
24047.125000	32.6	H	-4.2	21.4	54.0
1592.500000	28.8	V	-18.4	25.2	54.0
2123.500000	33.6	V	-15.8	20.4	54.0
4882.000000	43.6	V	-6.5	10.4	54.0
7775.500000	34.8	V	*-3.1*	*19.2*	*54.0*
10576.375000	36.4	V	*0.9*	*17.6*	*54.0*
14031.750000	39.6	V	*4.5*	*14.4*	*54.0*
18515.375000	30.1	V	-9.3	23.9	54.0
21696.000000	29.6	V	-5.9	24.4	54.0
22628.750000	29.4	V	-6.5	24.6	54.0

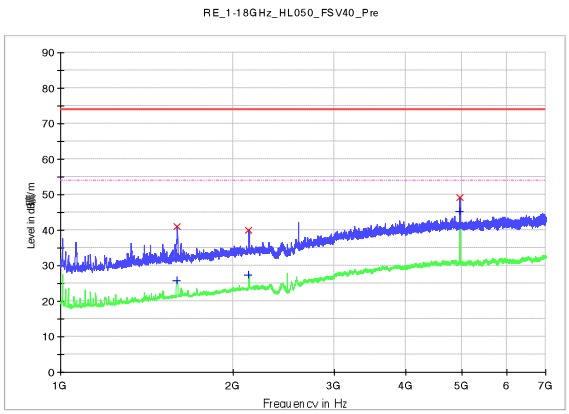
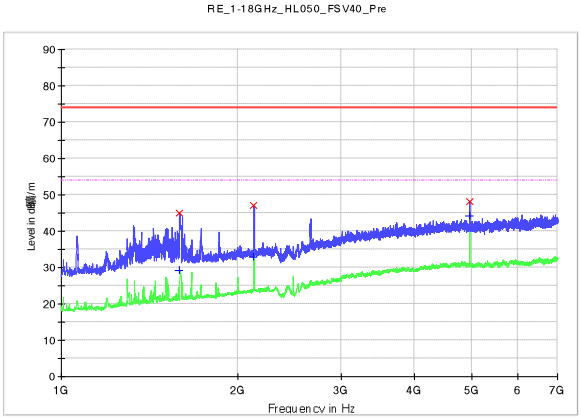
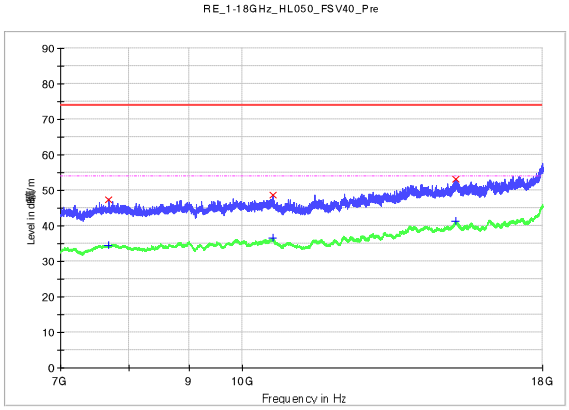
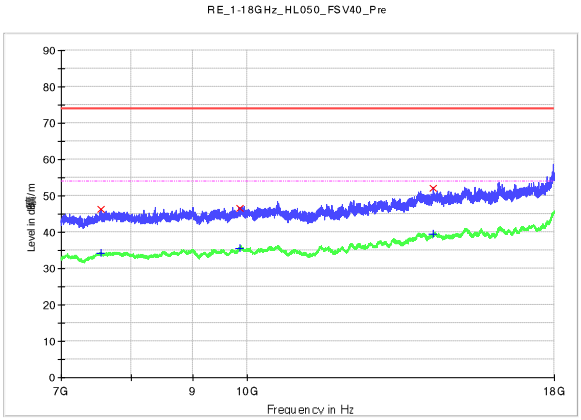
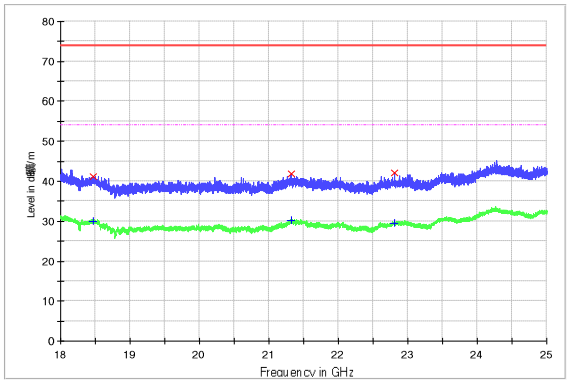
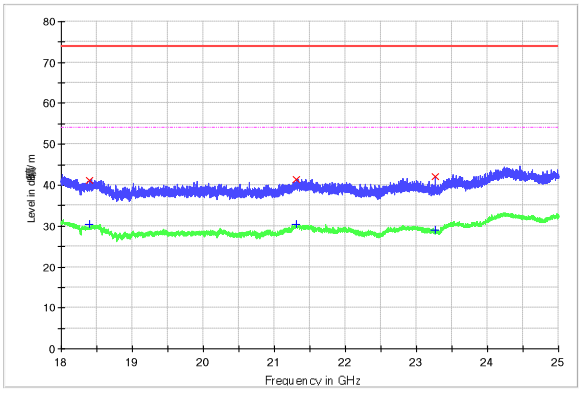
Figure 11: Radiated Spurious Emission, TM3, 30MHz to 1GHz

30MHz to 1GHz H	30MHz to 1GHz V
	

Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
32.425000	21.5	H	24.2	18.5	40.0
95.960000	21.1	H	16.8	22.4	43.5
130.395000	16.2	H	18.7	27.3	43.5
257.400333	17.4	H	20.3	28.6	46.0
552.377333	24.9	H	26.4	21.1	46.0
789.283667	26.0	H	27.6	20.0	46.0
31.067000	22.4	V	24.9	17.6	40.0
107.891000	15.6	V	18.4	27.9	43.5
143.975000	18.7	V	17.8	24.8	43.5
257.885333	17.5	V	20.4	28.5	46.0
444.222333	21.9	V	24.0	24.1	46.0
905.037000	33.9	V	28.1	12.1	46.0

Figure 12: Radiated Spurious Emission, TM3, 1GHz to 25GHz

1GHz to 7GHz H	1GHz to 7GHz V
	
7GHz to 18GHz H	**7GHz to 18GHz V**
	
18GHz to 25GHz H	**18GHz to 25GHz V**
	

Limit and Margin

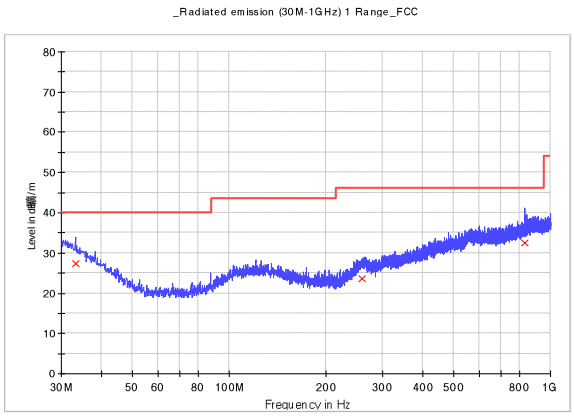
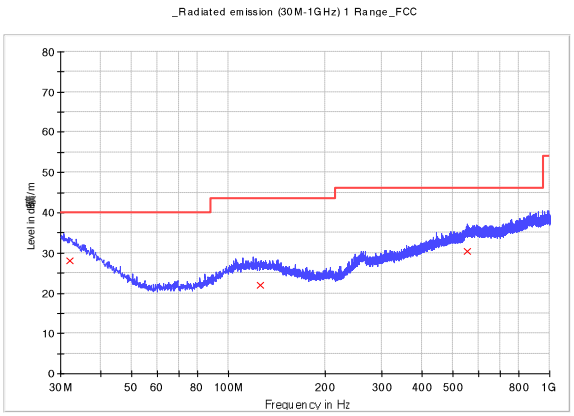
PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1598.500000	41.0	H	-18.3	33.0	74.0
2127.250000	40.1	H	-15.8	33.9	74.0
4960.000000	49.3	H	-6.6	24.7	74.0
7697.125000	47.5	H	-2.9	26.5	74.0
10608.000000	48.6	H	1.3	25.4	74.0
15193.625000	53.2	H	6.3	20.8	74.0
18469.875000	41.2	H	-9.2	32.8	74.0
21317.125000	41.8	H	-6.3	32.2	74.0
22814.250000	42.0	H	-6.0	32.0	74.0
1591.750000	45.1	V	-18.4	28.9	74.0
2128.000000	47.2	V	-15.7	26.8	74.0
4960.750000	48.1	V	-6.6	25.9	74.0
7625.625000	46.8	V	-3.1	27.2	74.0
9851.750000	48.2	V	-0.3	25.8	74.0
15245.875000	52.6	V	6.2	21.4	74.0
18399.875000	41.2	V	-9.1	32.8	74.0
21308.375000	41.5	V	-6.3	32.5	74.0
23271.000000	42.1	V	-4.8	31.9	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1598.500000	25.9	H	-18.3	28.1	54.0
2127.250000	27.3	H	-15.8	26.7	54.0
4960.000000	45.2	H	-6.6	8.8	54.0
7697.125000	34.4	H	-2.9	19.6	54.0
10608.000000	36.5	H	1.3	17.5	54.0
15193.625000	41.3	H	6.3	12.7	54.0
18469.875000	30.0	H	-9.2	24.0	54.0
21317.125000	30.2	H	-6.3	23.8	54.0
22814.250000	29.5	H	-6.0	24.5	54.0
1591.750000	29.1	V	-18.4	24.9	54.0
2128.000000	33.0	V	-15.7	21.0	54.0
4960.750000	44.1	V	-6.6	9.9	54.0
7625.625000	34.3	V	-3.1	19.7	54.0
9851.750000	36.1	V	-0.3	17.9	54.0
15245.875000	41.2	V	6.2	12.8	54.0
18399.875000	30.3	V	-9.1	23.7	54.0
21308.375000	30.3	V	-6.3	23.7	54.0
23271.000000	29.1	V	-4.8	24.9	54.0

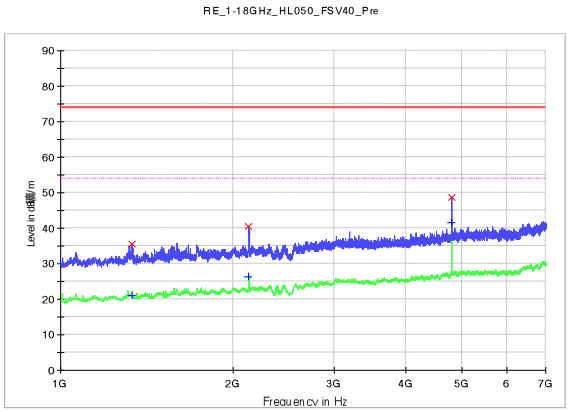
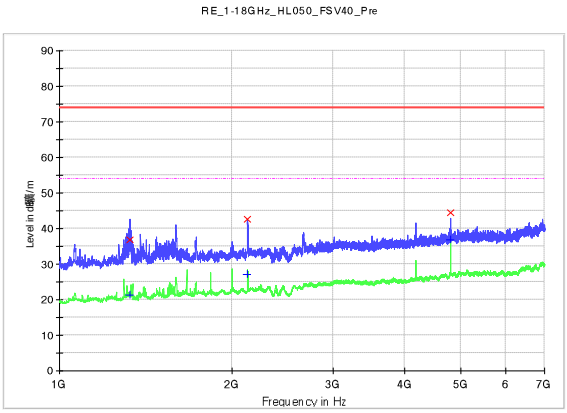
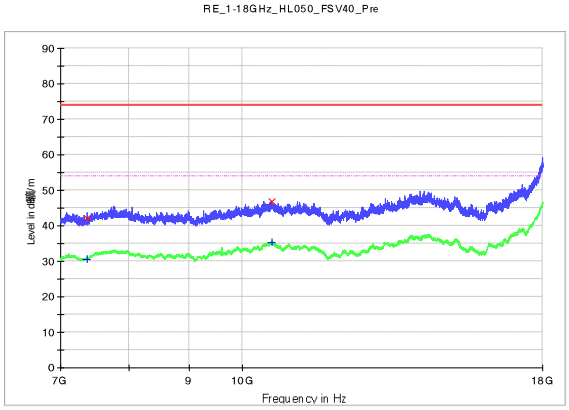
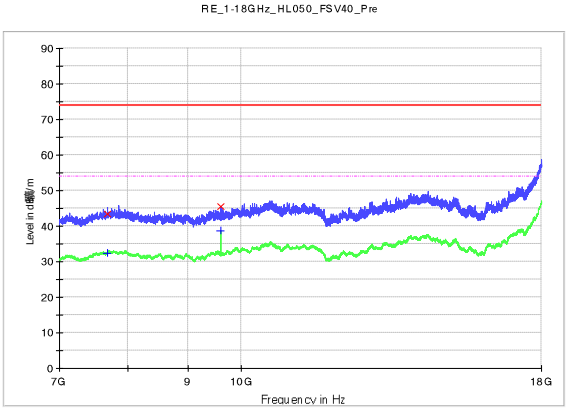
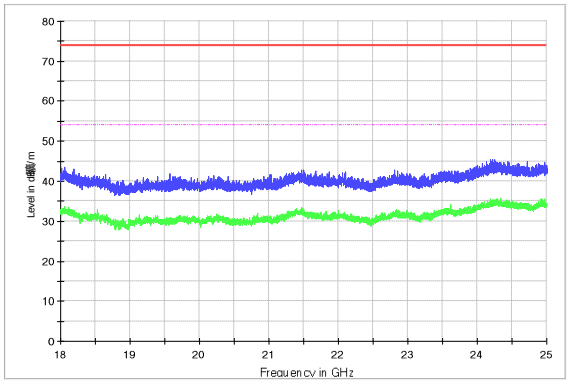
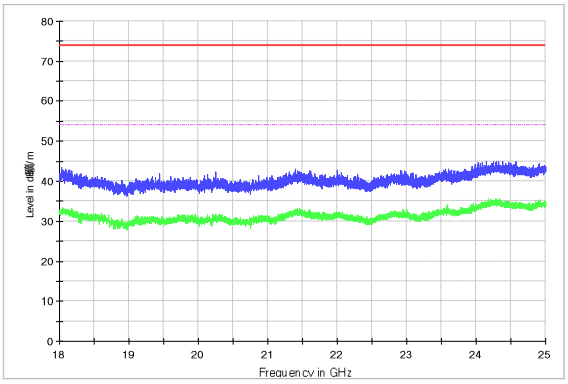
Figure 13: Radiated Spurious Emission, TM4, 30MHz to 1GHz

30MHz to 1GHz H	30MHz to 1GHz V
	

Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
32.061250	28.1	H	24.5	11.9	40.0
125.181250	22.1	H	18.8	21.4	43.5
552.466250	30.3	H	26.4	15.7	46.0
33.152500	27.3	V	23.7	12.7	40.0
258.071250	23.7	V	20.4	22.3	46.0
830.007500	32.4	V	27.5	13.6	46.0

Figure 14: Radiated Spurious Emission, TM4, 1GHz to 25GHz

1GHz to 7GHz H	1GHz to 7GHz V
	
7GHz to 18GHz H	**7GHz to 18GHz V**
	
18GHz to 25GHz H	**18GHz to 25GHz V**
	

Limit and Margin

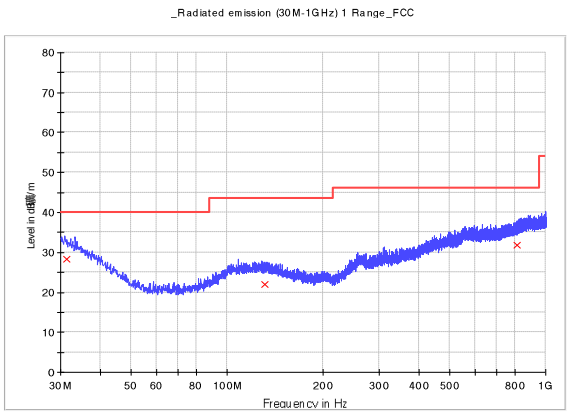
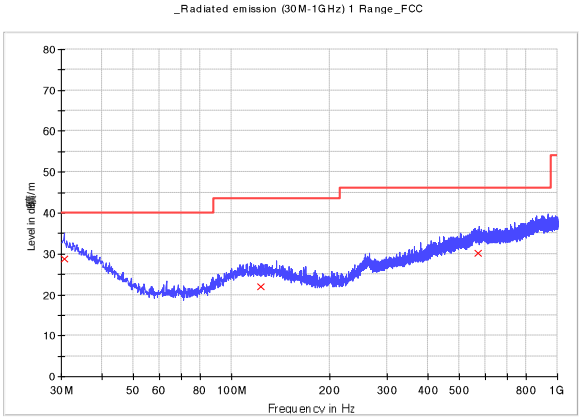
PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1330.750000	35.5	H	-20.0	38.5	74.0
2128.750000	40.5	H	-17.2	33.5	74.0
4803.250000	48.6	H	-10.6	25.4	74.0
7372.625000	42.2	H	-6.2	31.8	74.0
10587.375000	46.9	H	-0.9	27.1	74.0
1327.000000	36.8	V	-20.0	37.2	74.0
2124.250000	42.6	V	-17.2	31.4	74.0
4804.000000	44.4	V	-10.6	29.6	74.0
7688.875000	43.5	V	-5.4	30.5	74.0
9600.125000	45.5	V	-4.2	28.5	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1330.750000	21.0	H	-20.0	33.0	54.0
2128.750000	26.2	H	-17.2	27.8	54.0
4803.250000	41.7	H	-10.6	12.3	54.0
7372.625000	30.5	H	-6.2	23.5	54.0
10587.375000	35.2	H	-0.9	18.8	54.0
1327.000000	21.2	V	-20.0	32.8	54.0
2124.250000	27.0	V	-17.2	27.0	54.0
4804.000000	36.9	V	-10.6	17.1	54.0
7688.875000	32.3	V	-5.4	21.7	54.0
9600.125000	38.6	V	-4.2	15.4	54.0

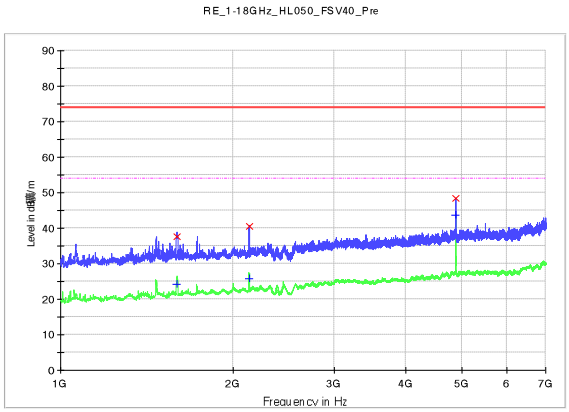
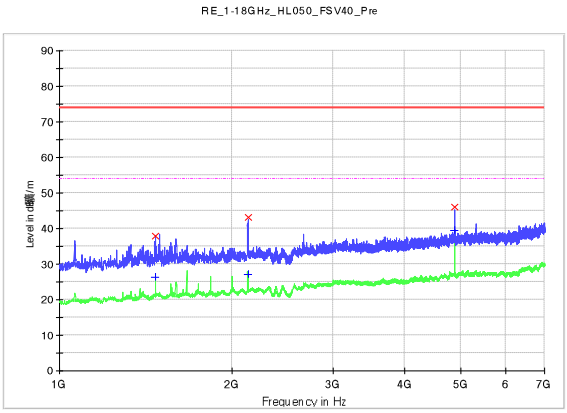
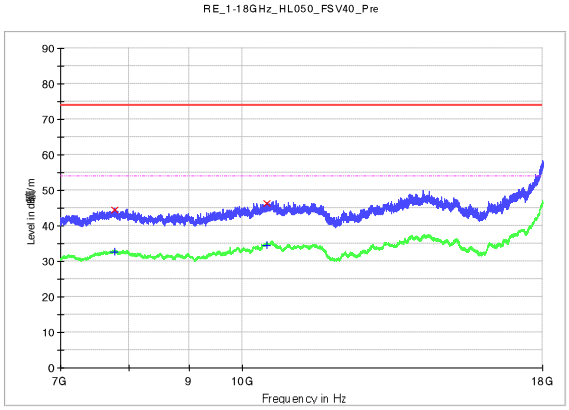
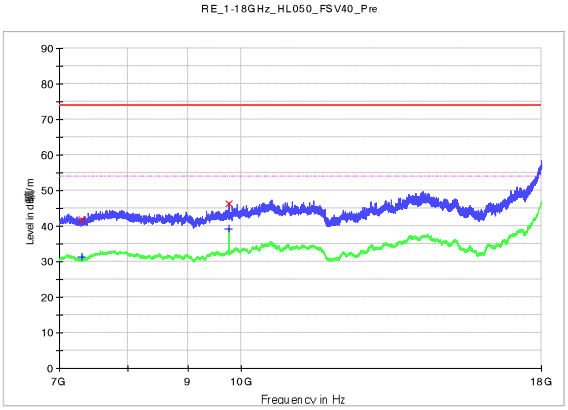
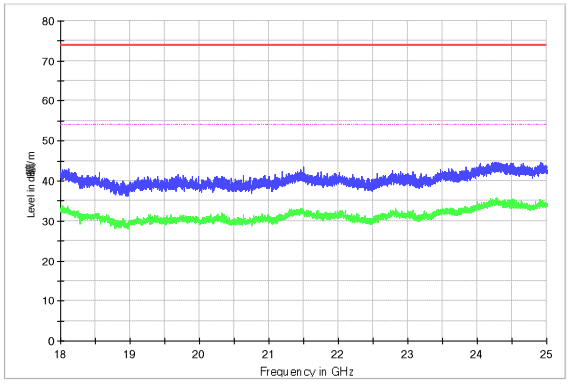
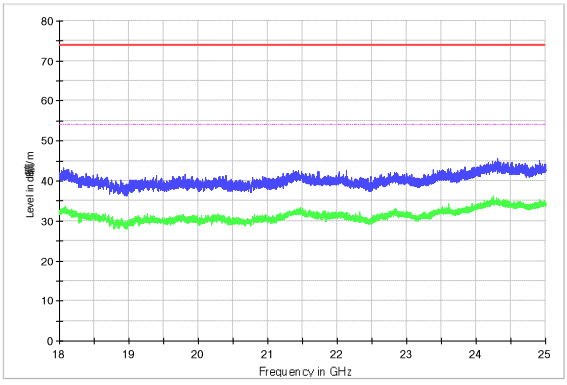
Figure 15: Radiated Spurious Emission, TM5, 30MHz to 1GHz

30MHz to 1GHz H	30MHz to 1GHz V
	

Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
31.455000	28.4	H	24.7	11.6	40.0
130.880000	22.0	H	18.7	21.5	43.5
811.213750	31.9	H	27.5	14.1	46.0
30.606250	28.8	V	25.1	11.2	40.0
123.120000	21.9	V	18.7	21.6	43.5
570.532500	30.2	V	26.1	15.8	46.0

Figure 16: Radiated Spurious Emission, TM5, 1GHz to 25GHz

1GHz to 7GHz H	1GHz to 7GHz V
	
7GHz to 18GHz H	**7GHz to 18GHz V**
	
18GHz to 25GHz H	**18GHz to 25GHz V**
	

Limit and Margin

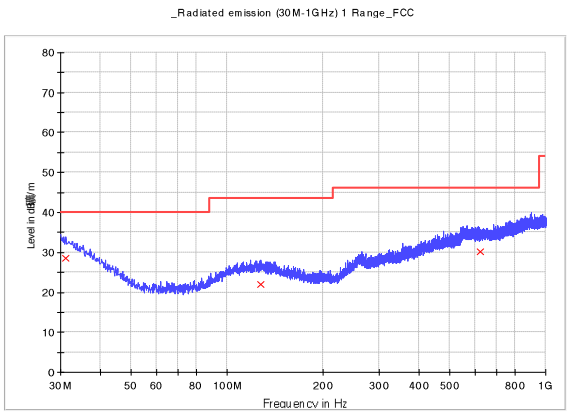
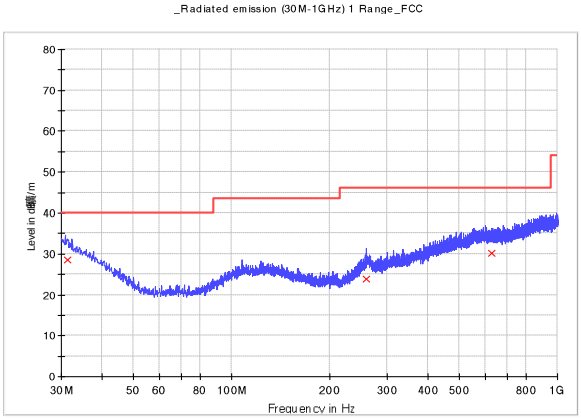
PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1592.500000	37.6	H	-18.8	36.4	74.0
2131.750000	40.4	H	-17.2	33.6	74.0
4882.000000	48.3	H	-10.5	25.7	74.0
7776.875000	44.5	H	-5.4	29.5	74.0
10492.500000	46.3	H	-1.8	27.7	74.0
1469.500000	37.9	V	-19.3	36.1	74.0
2129.500000	43.1	V	-17.2	30.9	74.0
4882.000000	46.1	V	-10.5	27.9	74.0
7321.750000	41.8	V	-6.6	32.2	74.0
9755.500000	46.4	V	-3.6	27.6	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1592.500000	24.3	H	-18.8	29.7	54.0
2131.750000	25.7	H	-17.2	28.3	54.0
4882.000000	43.8	H	-10.5	10.2	54.0
7776.875000	32.6	H	-5.4	21.4	54.0
10492.500000	34.4	H	-1.8	19.6	54.0
1469.500000	26.3	V	-19.3	27.7	54.0
2129.500000	27.1	V	-17.2	26.9	54.0
4882.000000	39.4	V	-10.5	14.6	54.0
7321.750000	31.4	V	-6.6	22.6	54.0
9755.500000	39.1	V	-3.6	14.9	54.0

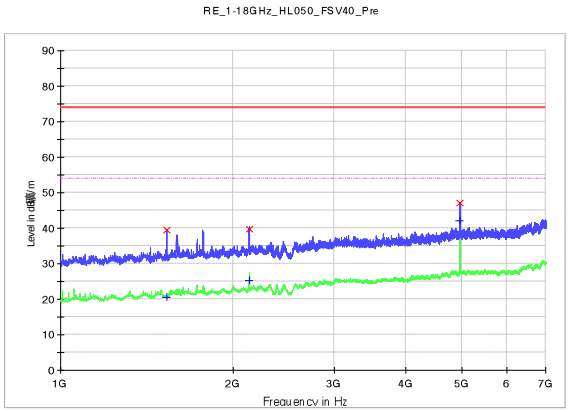
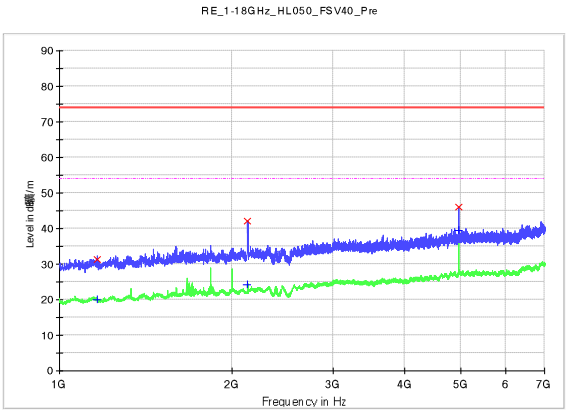
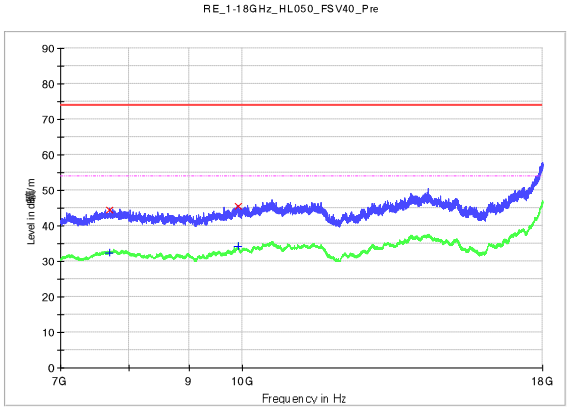
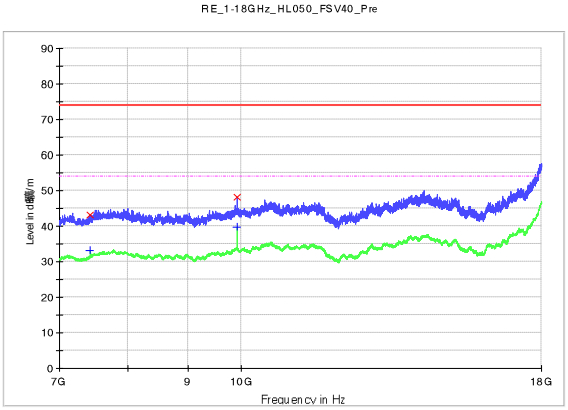
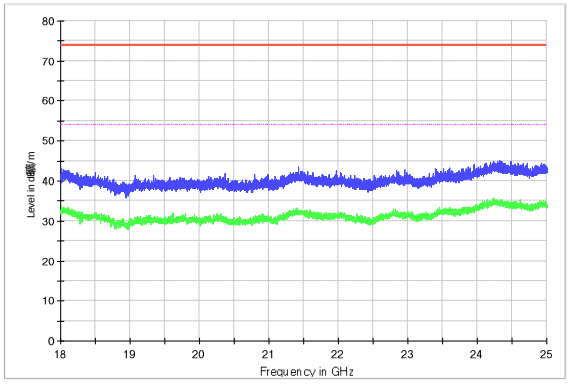
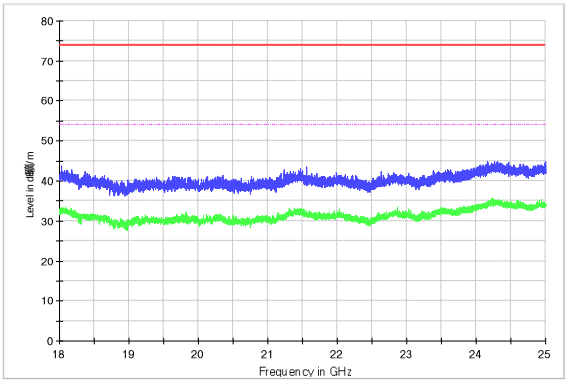
Figure 17: Radiated Spurious Emission, TM6, 30MHz to 1GHz

30MHz to 1GHz H	30MHz to 1GHz V
	

Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
31.212500	28.4	H	24.8	11.6	40.0
127.848750	22.1	H	18.7	21.4	43.5
624.367500	30.1	H	26.2	15.9	46.0
31.333750	28.4	V	24.8	11.6	40.0
259.526250	23.9	V	20.6	22.1	46.0
628.005000	30.3	V	26.4	15.7	46.0

Figure 18: Radiated Spurious Emission, TM6, 1GHz to 25GHz

1GHz to 7GHz H	1GHz to 7GHz V
	
7GHz to 18GHz H	**7GHz to 18GHz V**
	
18GHz to 25GHz H	**18GHz to 25GHz V**
	

Limit and Margin

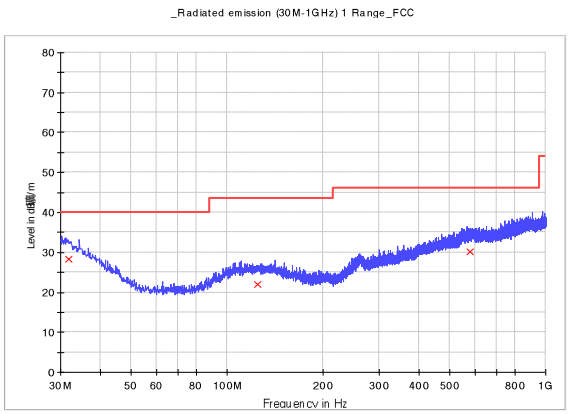
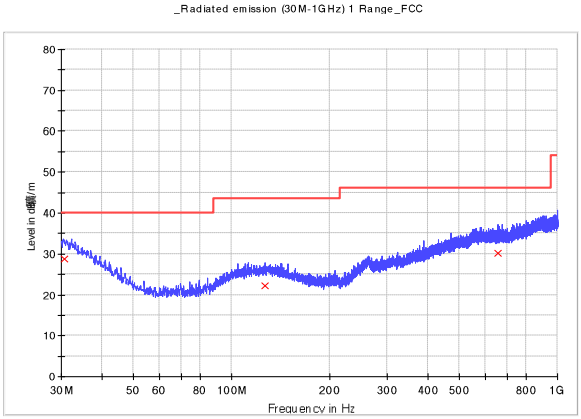
PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1530.250000	39.6	H	-19.1	34.4	74.0
2131.750000	39.7	H	-17.2	34.3	74.0
4960.750000	47.2	H	-10.4	26.8	74.0
7699.875000	44.5	H	-5.3	29.5	74.0
9912.250000	45.5	H	-3.1	28.5	74.0
1165.750000	31.3	V	-20.7	42.7	74.0
2124.250000	42.0	V	-17.2	32.0	74.0
4960.000000	46.2	V	-10.4	27.8	74.0
7440.000000	43.1	V	-5.7	30.9	74.0
9912.250000	48.1	V	-3.1	25.9	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1530.250000	20.6	H	-19.1	33.4	54.0
2131.750000	25.3	H	-17.2	28.7	54.0
4960.750000	42.1	H	-10.4	11.9	54.0
7699.875000	32.3	H	-5.3	21.7	54.0
9912.250000	34.1	H	-3.1	19.9	54.0
1165.750000	20.1	V	-20.7	33.9	54.0
2124.250000	24.3	V	-17.2	29.7	54.0
4960.000000	39.4	V	-10.4	14.6	54.0
7440.000000	33.1	V	-5.7	20.9	54.0
9912.250000	39.8	V	-3.1	14.2	54.0

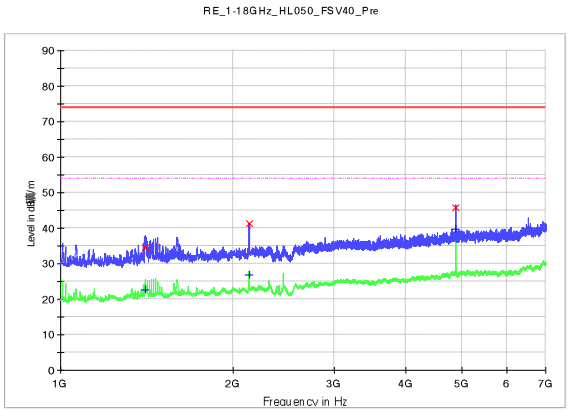
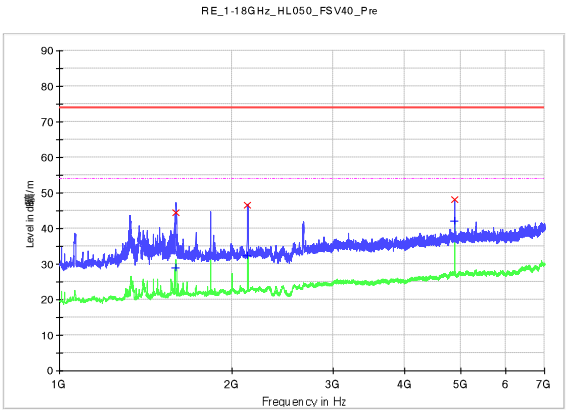
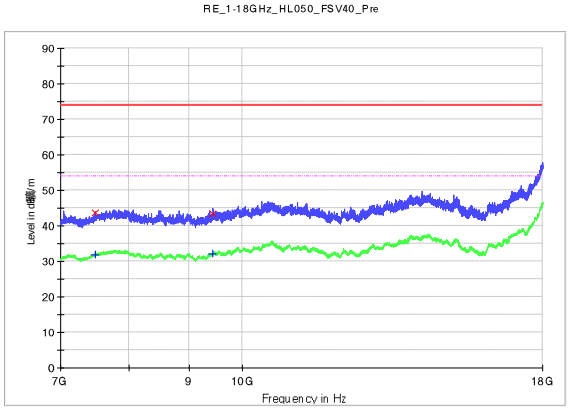
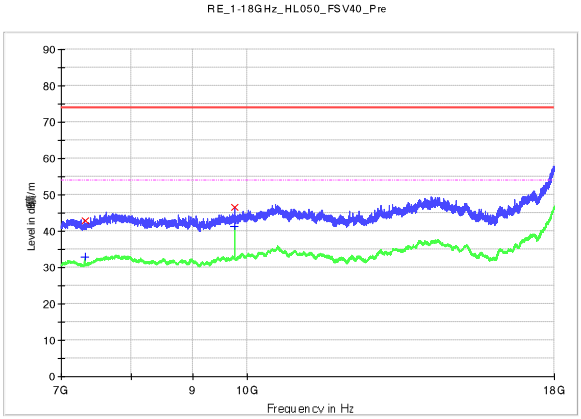
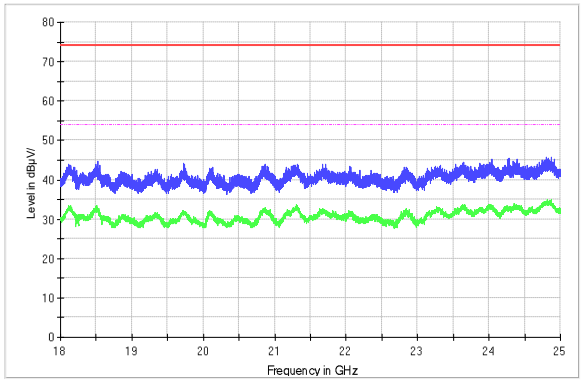
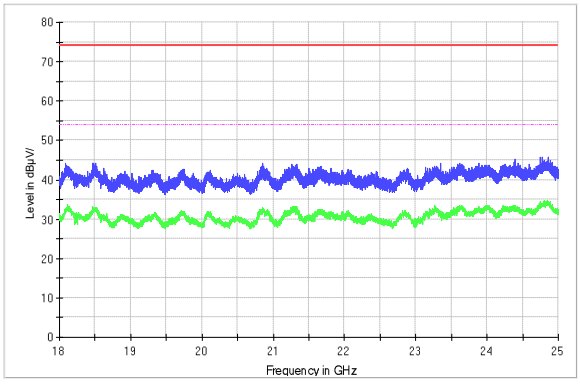
Figure 19: Radiated Spurious Emission, TM14, 30MHz to 1GHz

30MHz to 1GHz H	30MHz to 1GHz V
	

Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
31.940000	28.2	H	24.5	11.8	40.0
124.938750	22.0	H	18.7	21.5	43.5
578.777500	30.2	H	26.1	15.8	46.0
30.727500	28.7	V	25.0	11.3	40.0
126.515000	22.2	V	18.8	21.3	43.5
654.558750	30.1	V	26.2	15.9	46.0

Figure 20: Radiated Spurious Emission, TM14, 1GHz to 25GHz

1GHz to 7GHz H	1GHz to 7GHz V
	
7GHz to 18GHz H	**7GHz to 18GHz V**
	
18GHz to 25GHz H	**18GHz to 25GHz V**
	

Limit and Margin

PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1403.500000	34.5	H	-19.7	39.5	74.0
2131.000000	41.2	H	-17.2	32.8	74.0
4881.250000	45.7	H	-10.5	28.3	74.0
7486.750000	43.7	H	-5.4	30.3	74.0
9440.625000	43.4	H	-4.3	30.6	74.0
1598.500000	44.6	V	-18.8	29.4	74.0
2128.000000	46.7	V	-17.2	27.3	74.0
4882.000000	48.2	V	-10.5	25.8	74.0
7323.125000	43.0	V	-6.6	31.0	74.0
9755.500000	46.6	V	-3.6	27.4	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1403.500000	22.5	H	-19.7	31.5	54.0
2131.000000	26.9	H	-17.2	27.1	54.0
4881.250000	39.8	H	-10.5	14.2	54.0
7486.750000	31.9	H	-5.4	22.1	54.0
9440.625000	32.0	H	-4.3	22.0	54.0
1598.500000	28.9	V	-18.8	25.1	54.0
2128.000000	32.4	V	-17.2	21.6	54.0
4882.000000	42.2	V	-10.5	11.8	54.0
7323.125000	32.8	V	-6.6	21.2	54.0
9755.500000	41.3	V	-3.6	12.7	54.0

Note: The worst configuration of this co-lacation transmitting mode is Module EW-BLED-26 operating in 2DH5 CH39 and Module EW-BLED-22 operating in BLE CH39

6. List of Tables

7. List of Figures