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TEST REPORT

of

FCC Part 15 Subpart C §15.247
IC RSS-247 Issue 3 and RSS-Gen Issue 5

FCC ID: MZR-YMB624
IC Certification: 2676A-YMB624

Equipment Under Test	:	Smart Lock
Model Name	:	YMB624
Variant Model Name(s)	:	Refer to page 3
FCC Applicant	:	Master Lock Company
IC Applicant	:	Master Lock Company LLC
Manufacturer	:	AASPV
Date of Receipt	:	2025.05.12
Date of Test(s)	:	2025.05.21 ~ 2025.06.02
Date of Issue	:	2025.06.09

In the configuration tested, the EUT complied with the standards specified above.
This test report does not assure KOLAS accreditation.

1) The results of this test report are effective only to the items tested.
2) The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received.
3) This test report cannot be reproduced, except in full, without prior written permission of the Company.
4) The data marked ※ in this report was provided by the customer and may affect the validity of the test results.
We are responsible for all the information of this test report except for the data(※) provided by the customer

Tested by: Dave Kim

Technical Manager: Jinhyoung Cho

SGS Korea Co., Ltd. Gunpo Laboratory

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1. General Information

1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)
- 10-2, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- 4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- Designation number: KR0150

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1.2. Details of Applicant

FCC Applicant : Master Lock Company
FCC Address : P.O. Box 927, 6744 South Howell Avenue, Oak Creek, United States, WI 53154
IC Applicant : Master Lock Company LLC
IC Address : 6744 South Howell Avenue, Oak Creek, United States of America, WI 53154
Contact Person : Savannah, Mai
Phone No. : +8618218675875

1.3. Details of Manufacturer

Company : AASPV
Address : Lot A10 Ba Thien II Industrial Park Thien Ke Ward Vinh Phuc Province

1.4. Description of EUT

Kind of Product	Smart Lock
Model Name	YMB624
Variant Model Name(s)	YMB614, YMB634, YMB644, MCB614, MCB624, MCB634, MCB644
Serial Number	Conducted: 1Z6VP200008 Radiated: 1Z6VP200020
Power Supply	DC 9.0 V
Frequency Range	2 402 ㎒ ~ 2 480 ㎒ (Bluetooth Low Energy)
Modulation Technique	GFSK
Number of Channels	40 channels (Bluetooth Low Energy)
Antenna Type	PIFA
Antenna Gain※	5.12 ㏈i
H/W Version	PV1.0
S/W Version	V1.2.0
FVIN	N/A

1.5. Test Equipment List

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Interval	Cal. Due
Signal Generator	R&S	SMA100B	106887	Oct. 11, 2024	Annual	Oct. 11, 2025
Spectrum Analyzer	R&S	FSV30	103453	Oct. 29, 2024	Annual	Oct. 29, 2025
Spectrum Analyzer	Agilent	N9020A	MY53421758	Sep. 10, 2024	Annual	Sep. 10, 2025
Attenuator	AEROFLEX / INMET	40AH2W-6	1	Mar. 12, 2025	Annual	Mar. 12, 2026
High Pass Filter	Wainwright Instrument GmbH	WHKX3.0/18G-10SS	21	Jun. 07, 2024	Annual	Jun. 07, 2025
High Pass Filter	Wainwright Instrument GmbH	WHNX7.5/26.5G-6SS	15	Jun. 07, 2024	Annual	Jun. 07, 2025
Low Pass Filter	Mini-Circuits	NLP-1200+	V8979400903-2	Feb. 04, 2025	Annual	Feb. 04, 2026
Power Sensor	R&S	NRP-Z81	100748	Jun. 07, 2024	Annual	Jun. 07, 2025
DC Power Supply	R&S	HMP2020	120063	May 09, 2025	Annual	May 09, 2026
Preamplifier	H.P.	8447F	2944A03909	Aug. 09, 2024	Annual	Aug. 09, 2025
Preamplifier	R&S	SCU18F	101058	Feb. 27, 2025	Annual	Feb. 27, 2026
Preamplifier	MITEQ Inc.	JS44-18004000-35-8P	1546891	Oct. 14, 2024	Annual	Oct. 14, 2025
Loop Antenna	Schwarzbeck Mess-Elektronik	FMZB 1519	1519-039	Mar. 25, 2025	Biennial	Mar. 25, 2027
Bilog Antenna	Schwarzbeck Mess-Elektronik	VULB9163	01126	Mar. 05, 2025	Biennial	Mar. 05, 2027
Horn Antenna	R&S	HF906	100326	Feb. 24, 2025	Annual	Feb. 24, 2026
Horn Antenna	Schwarzbeck Mess-Elektronik	BBHA 9170	9170-540	Dec. 11, 2024	Annual	Dec. 11, 2025
EMI Test Receiver	R&S	ESU26	100109	Jan. 13, 2025	Annual	Jan. 13, 2026
Turn Table	Innco systems GmbH	DS 1200 S	N/A	N.C.R.	N/A	N.C.R.
Controller	Innco systems GmbH	CONTROLLER CO3000-4P	CO3000/963/383 30516/L	N.C.R.	N/A	N.C.R.
Antenna Mast	Innco systems GmbH	MA4640-XP-ET	MA4640/536/383 30516/L	N.C.R.	N/A	N.C.R.
Anechoic Chamber	SY Corporation	L × W × H (9.6 m × 6.4 m × 6.6 m)	N/A	N.C.R.	N/A	N.C.R.
Coaxial Cable	SENSORVIEW	NMST-13A26-NMST-5 m	TPC2402190004	Apr. 08, 2025	Semi-Annual	Oct. 08, 2025
Coaxial Cable	SENSORVIEW	NMST-13A26-NMST-10 m	TPC2402190001	Apr. 08, 2025	Semi-Annual	Oct. 08, 2025
Coaxial Cable	Radiall	TESTPRO3	18 22 88	Apr. 11, 2025	Semi-Annual	Oct. 11, 2025

1.6. Summary of Test Results

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15 Subpart C, RSS-247 Issue 3 and RSS-Gen Issue 5			
Section in FCC	**Section in IC**	**Test Item(s)**	**Result**
15.205(a) 15.209 15.247(d)	RSS-247 Issue 3 5.5 RSS-Gen Issue 5 8.9	Transmitter Radiated Spurious Emissions and Conducted Spurious Emission	Pass
15.247(a)(2)	RSS-247 Issue 3 5.2(a) RSS-Gen Issue 5 6.7	6 dB Bandwidth & 99 % Bandwidth	Pass
15.247(b)(3)	RSS-247 Issue 3 5.4(d)	Maximum Peak Conducted Output Power	Pass
15.247(e)	RSS-247 Issue 3 5.2(b)	Power Spectral Density	Pass
15.207	RSS-Gen Issue 5 8.8	AC Power Line Conducted Emission	N/A[1)]

Note;

1) The AC power line test was not performed because the EUT use battery power for operation and which do not operate from the AC power lines.

1.7. Test Procedure(s)

The measurement procedures described in the American National Standard of Procedure for Compliance Testing of unlicensed Wireless Devices (ANSI C63.10-2013) and the guidance provided in KDB 558074 D01 15.247 Meas Guidance v05r02 were used in the measurement of the DUT.

1.8. Sample Calculation

Where relevant, the following sample calculation is provided:

1.8.1. Conducted Test

Offset value (dB) = Attenuator (dB) + Cable loss (dB)

1.8.2. Radiation Test

Field strength level (dBμV/m) = Measured level (dBμV) + Antenna factor (dB/m) + Cable loss (dB) - Amplifier gain (dB) + Duty factor (dB)

1.9. Information of software for test

- Using the software of nrf Direct Test Mode v2 to test for the BLE.

1.10. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter	Uncertainty	
Maximum Peak Conducted Output Power	0.32 dB	
Power Spectral Density	0.63 dB	
99 % Bandwidth	0.04 MHz	
6 dB Bandwidth	0.05 MHz	
Conducted Spurious Emission	0.89 dB	
Radiated Emission, 9 kHz to 30 MHz	H	3.40 dB
	V	3.40 dB
Radiated Emission, below 1 GHz	H	4.60 dB
	V	5.00 dB
Radiated Emission, above 1 GHz	H	3.60 dB
	V	3.60 dB

All measurement uncertainty values are shown with a coverage factor of *k*=2 to indicate a 95 % level of confidence.

1.11. Test Report Revision

Revision	Report number	Date of Issue	Description
0	F690501-RF-RTL006103	2025.06.09	Initial

1.12. Description of Variant Model

Model name		Description
Basic model	YMB624	- Representative production model - The basic model is touch-operated and uses physical keys.
Variant models	YMB614	- Same as basic model except below - The derivative model is button-operated
	YMB634	- Same as basic model except below - The derivative model is button-operated and has no physical keys
	YMB644	- Same as basic model except below - The derivative model has no physical keys
	MCB614	- Same as basic model except below - The derivative t model is button-operated - Same to YMB614 but only difference in marketing purposes
	MCB0624	- Same to basic model but only difference in marketing purposes
	MCB634	- Same as basic model except below - The derivative model is button-operated and has no physical keys - Same to YMB634 but only difference in marketing purposes
	MCB644	- Same as basic model except below - The derivative model has no physical keys - Same to YMB644 but only difference in marketing purposes

Note;
- Radiated emission was performed with Basic model(YMB624) and variant model(YMB614).

1.13. Worst-Case Configuration and Test Mode (Bluetooth 5.1)

Modulation	Bandwidth	Mode	Frequency (㎒)	RF Output Power (dBm)
GFSK	1M	125k Coded	2 402	**-2.59**
		500k Coded	2 402	-2.69
		PHY 1M	2 402	-2.60
	2M	PHY 2M	2 402	**-1.92**

Remark;

The Bluetooth version of the EUT is 5.1.

All modes were investigated.

For 125k Coded and PHY2M, 255 bytes is tested as worst condition

Radiated emission below 1 ㎓ were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

Radiated emission above 1 ㎓ was performed with the EUT set to transmit Low/Middle/High Channels as worst-case scenario.

Conducted tests were performed with the EUT set to transmit Low/Middle/High channels with highest output power.

1.14. Duty Cycle of EUT

Regarding to KDB 558074 D01 15.247 Meas Guidance v05r02, 6, the maximum duty cycles of all modes were investigated and set the spectrum analyzer as below;
Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value. Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100.

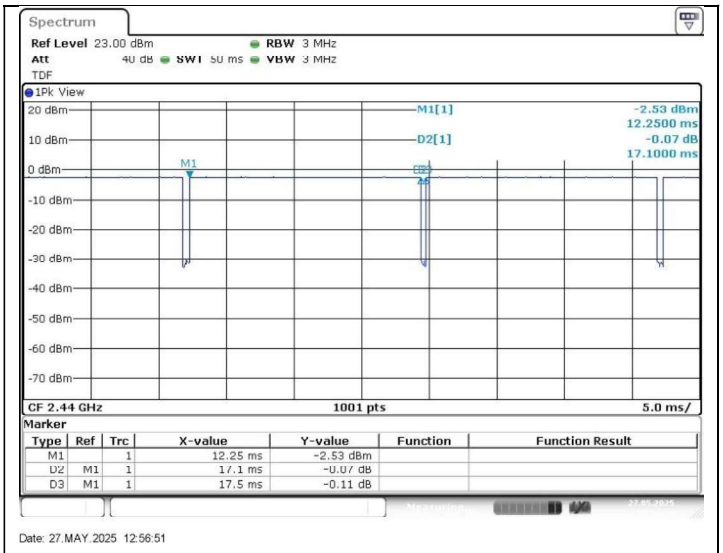
	Duty Cycle (%)	Correction factor (dB)
125k Coded	97.71	0.10
PHY 2M	57.60	2.40

Remark;

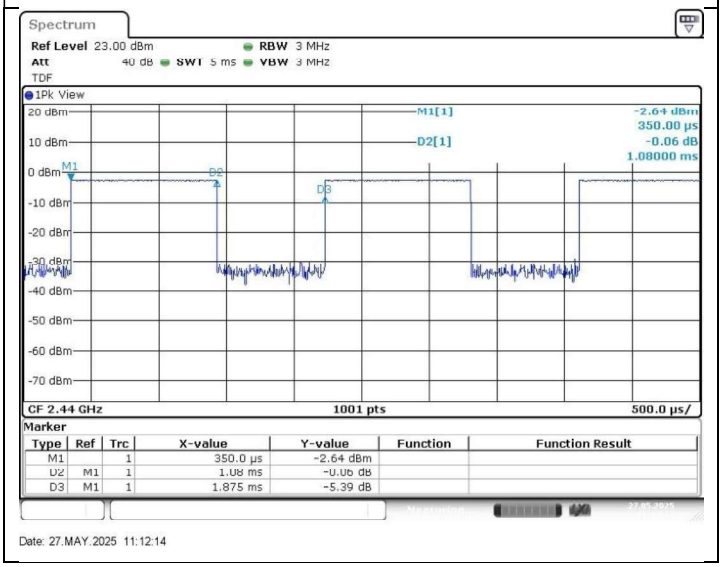
1. Duty Cycle (%) = (Tx on time / Tx on + off time) x 100
2. Correction Factor (dB) = 10 log (1 / Duty Cycle)

- Test plot

125k Coded



PHY 2M

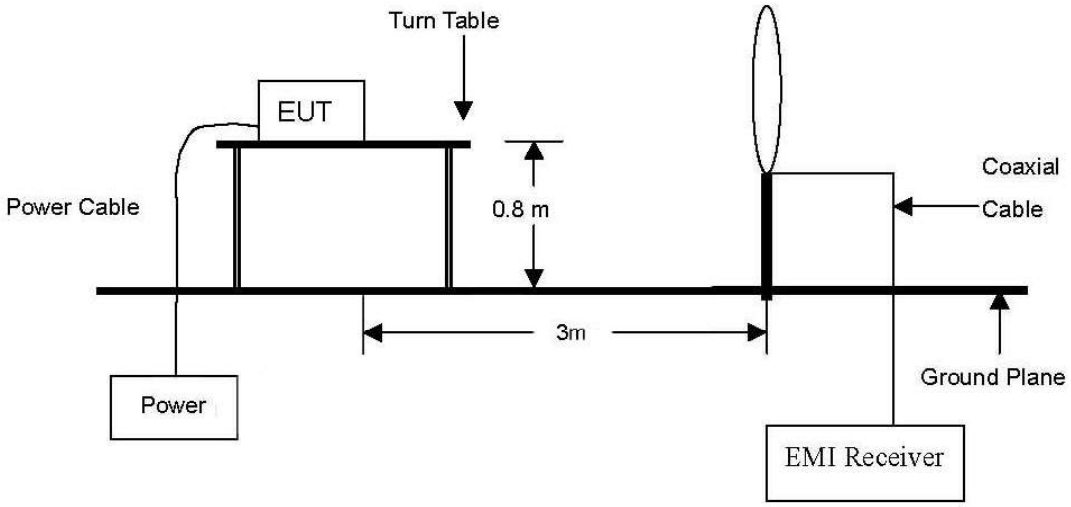


2. Transmitter Radiated Spurious Emissions and Conducted Spurious Emissions

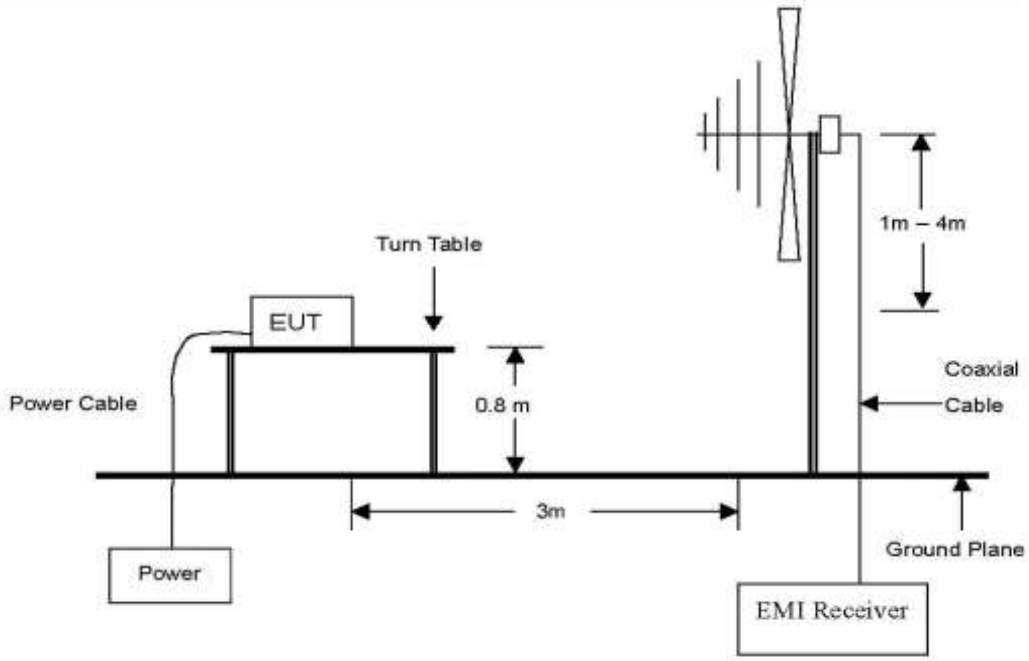
2.1. Test Setup

2.1.1. Transmitter Radiated Spurious Emissions

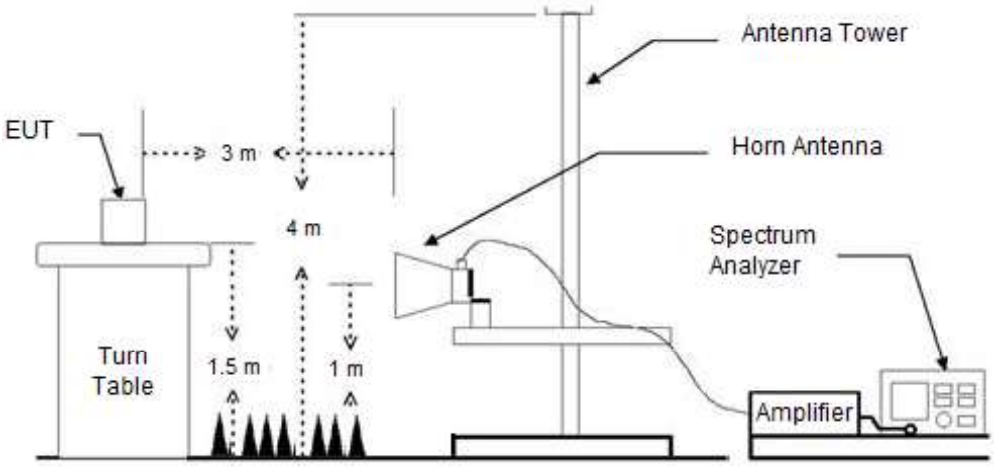
The diagram below shows the test setup that is utilized to make the measurements for emission from 9 ㎑ to 30 ㎒ emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission from 30 ㎒ to 1 ㎓ Emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission.
The spurious emissions were investigated from 1 ㎓ to the 10th harmonic of the highest fundamental frequency or 40 ㎓, whichever is lower.



2.1.2. Conducted Spurious Emissions

2.2. Limit

2.2.1. FCC

According to §15.247(d), in any 100 ㎑ bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 ㏈ below that in the 100 ㎑ bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 ㏈ instead of 20 ㏈. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emission which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

According to §15.209(a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (㎒)	Field Strength (㎶/m)	Measurement Distance (Meters)
0.009-0.490	2 400/F(㎑)	300
0.490-1.705	24 000/F(㎑)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 ㎒, 76-88 ㎒, 174-216 ㎒ or 470-806 ㎒. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241.

2.2.2. IC

According to RSS-247 Issue 3, 5.5, in any 100 ㎑ bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 ㏈ below that in the 100 ㎑ bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 ㏈ instead of 20 ㏈. Attenuation below the general field strength limits specified in RSS-Gen is not required.

According to RSS-Gen Issue 5, 8.9, except where otherwise indicated in the applicable RSS, radiated emissions shall comply with the field strength limits shown in table 5 and table 6. Additionally, the level of any transmitter unwanted emission shall not exceed the level of the transmitter's fundamental emission.

Table 5 – General Field Strength Limits at frequencies above 30 ㎒

Frequency (㎒)	Field Strength (㎶/m at 3 m)
30-88	100
88-216	150
216-960	200
Above 960	500

Table 6 – General Field Strength Limits at frequencies below 30 ㎒

Frequency	Magnetic Field Strength (H-Field) (㎂/m)	Measurement Distance (meters)
9-490 ㎑ [1]	6.37/F (F in ㎑)	300
490-1 705 ㎑	63.7/F (F in ㎑)	30
1.705-30 ㎒	0.08	30

Note[1]: The emission limits for the ranges 9-90 ㎑ and 110-490 ㎑ are based on measurements employing a linear average detector.

2.3. Test Procedures

Radiated emissions from the EUT were measured according to the dictates in section 11.11 & 11.12 of ANSI C63.10-2013.

2.3.1. Test Procedures for emission below 30 ㎒

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
2. Then antenna is a loop antenna is fixed at one meter above the ground to determine the maximum value of the field strength. Both parallel and perpendicular of the antenna are set to make the measurement.
3. For each suspected emission, the EUT was arranged to its worst case and then the table was turned from 0 degrees to 360 degrees to find the maximum reading.
4. The test-receiver system was set to average or quasi peak detect function and Specified Bandwidth with Maximum Hold Mode.

2.3.2. Test Procedures for emission from above 30 ㎒

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter anechoic chamber test site below 1 ㎓ and 1.5 meters above the ground at a 3 meter anechoic chamber test site above 1 ㎓. The table was rotated 360 degrees to determine the position of the highest radiation.
2. During performing radiated emission below 1 ㎓, the EUT was set 3 meters away from the interference receiving antenna, which was mounted on the top of a variable-height antenna tower. During performing radiated emission above 1 ㎓, the EUT was set 3 meter away from the interference-receiving antenna.
3. The antenna is a bi-log antenna, a horn antenna and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. For measurements below 1 ㎓ resolution bandwidth is set to 100 ㎑ for peak detection measurements or 120 ㎑ for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.
6. For measurements Above 1 ㎓ resolution bandwidth is set to 1 ㎒, the video bandwidth is set to 3 ㎒ for peak measurements and as applicable for average measurements.

1. Unwanted Emissions into Non-Restricted Frequency Bands

- The Reference Level Measurement refer to section 11.11.2
Set analyzer center frequency to DTS channel center frequency, SPAN ≥ 1.5 times the DTS bandwidth, the RBW = 100 ㎑ and VBW ≥ 3 x RBW, Detector = Peak, Sweep time = Auto couple, Trace = Max hold.

- Unwanted Emissions Level Measurement refer to section 11.11.3
Set the center frequency and span to encompass frequency range to be measured, the RBW = 100 ㎑ and VBW ≥ 3 x RBW, Detector = Peak, Sweep time = Auto couple, Trace = Max hold.

2. Unwanted Emissions into Restricted Frequency Bands

- Peak Power measurement procedure refer to section 11.12.2.4
Set RBW = as specified in Table 9, VBW ≥ 3 x RBW, Detector = Peak, Sweep time = auto, Trace = Max hold.

Table 9 – RBW as a function of frequency

Frequency	RBW
9 ㎑ to 150 ㎑	200 ㎐ to 300 ㎐
0.15 ㎒ to 30 ㎒	9 ㎑ to 10 ㎑
30 ㎒ to 1 000 ㎒	100 ㎑ to 120 ㎑
> 1 000 ㎒	1 ㎒

If the peak – detected amplitude can be shown to comply with the average limit, then it is not necessary to perform a separate average measurement.

- Average Power measurements procedure refer to section 11.12.2.5.2
The EUT shall be configured to operate at the maximum achievable duty cycle.
Measure the duty cycle D of the transmitter output signal as described in section 11.6.
Set RBW = 1 ㎒, VBW ≥ 3 x RBW, Detector = RMS, if span / (# of points in sweep) ≤ (RBW/2).
Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied then the detector mode shall be set to peak.

Averaging type = power (i.e., RMS).
As an alternative the detector and averaging type may be set for linear voltage averaging.
Some instruments require linear display mode in order to use linear voltage averaging. Log or ㏈ averaging shall not be used. Sweep time = auto, Perform a trace average of at least 100 traces.

A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:

1) If power averaging (rms) mode was used in step f), then the applicable correction factor is [10 log (1 / D)], where D is the duty cycle.
2) If a specific emission is demonstrated to be continuous (D ≥ 98%) rather than turning ON and OFF with the transmit cycle, then no duty cycled correction is required for that emission.

3. Definition of DUT Axis.

The radiation test of the EUT was investigated in three orthogonal orientations X, Y, and Z described in the test setup photo. All radiated testing of EUT was performed with worst case axis.

2.3.3. Test Procedures for Conducted Spurious Emissions

Per the guidance of ANSI C63.10-2013, section 11.11.1 & 11.11.2 & 11.11.3, the reference level for out of band emissions is established from the plots of this section since the band edge emissions are measured with a RBW of 100 ㎑. This reference level is then used as the limit in subsequent plots for out of band spurious emissions shown in section 2.4.3. The limit for out of band spurious emission at the band edge is 20 ㏈ below the fundamental emission level measured in a 100 ㎑ bandwidth.

1. Conducted Emissions at Band Edge
 - The Measurement refer to section 11.11.3
   Set the center frequency and span to encompass frequency range to be measured, the RBW = 100 ㎑ and VBW ≥ 3 x RBW, Detector = Peak, Sweep time = Auto couple, Trace mode = Max hold, The trace was allowed to stabilize.

2. Conducted Spurious Emissions
 - The Measurement refer to section 11.11.3
   Start frequency was set to 9 ㎑ and stop frequency was set to 25 ㎓ (separated into two plots per channel), RBW = 1 ㎒, VBW ≥ 3 x RBW, Detector = Peak, Sweep time = Auto couple, Trace = Max hold, The trace was allowed to stabilize.

3. TDF function
 - For plots showing conducted spurious emissions from 9 ㎑ to 25 ㎓, all path loss of wide frequency range was investigated and compensated to spectrum analyzer as TDF function.
   So, the reading values shown in plots were final result.

2.4. Test Results

Ambient temperature : (23 ± 1) ℃
Relative humidity : 47 % R.H.

2.4.1. Radiated Spurious Emissions below 1 000 ㎒

The frequency spectrum from 9 ㎑ to 1 000 ㎒ was investigated.

- YMB624: Basic Model

Radiated Emissions			Ant.	Correction Factors (dB/m)	Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.		Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
883.17	23.70	Quasi - Peak	H	3.75	27.45	46.00	18.55
Above 900.00	Not detected	-	-	-	-	-	-

- YMB614: Variant Model

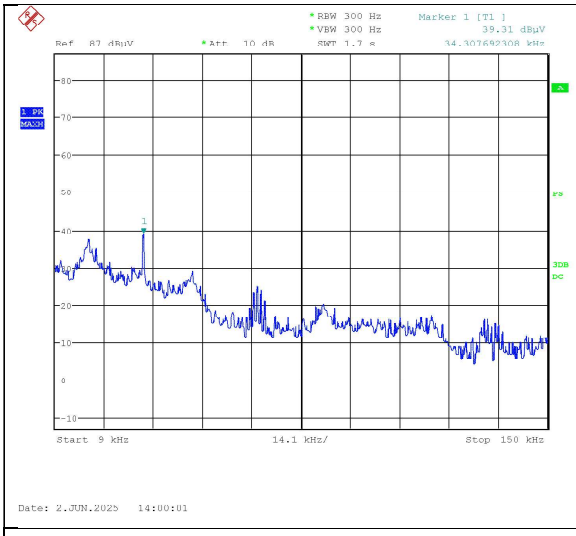
Radiated Emissions			Ant.	Correction Factors (dB/m)	Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.		Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
746.08	23.94	Quasi - Peak	H	2.14	26.08	46.00	19.92
Above 800.00	Not detected	-	-	-	-	-	-

Remark;

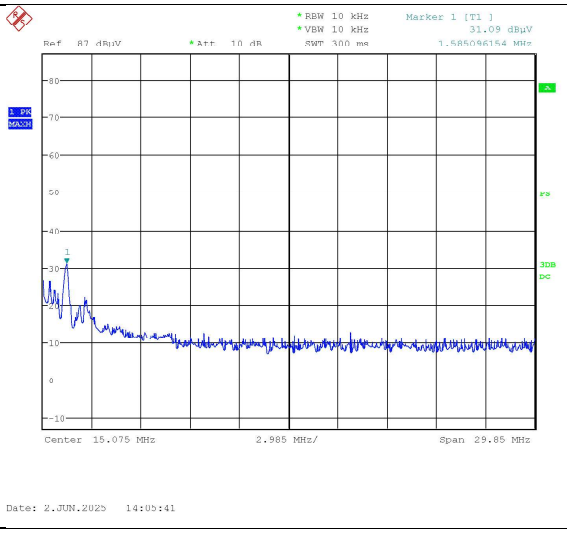
1. Spurious emissions for all channels were investigated and almost the same below 1 ㎓.
2. Test from 30 ㎒ to 1 000 ㎒ was performed using the software of ELEKTRAT(V5.02) from Rohde & Schwarz GmbH & Co. KG.
3. Reported spurious emissions are in **PHY 2M / 255 bytes / Low channel** as worst case among other mode and channels.
4. Radiated spurious emission measurement as below.
   (Actual = Reading + Correction)
   (Correction = Antenna Factor + AMP Factor + Cable Loss)
5. According to §15.31(o), emission levels are not report much lower than the limits by over 20 ㏈.

- Test plots

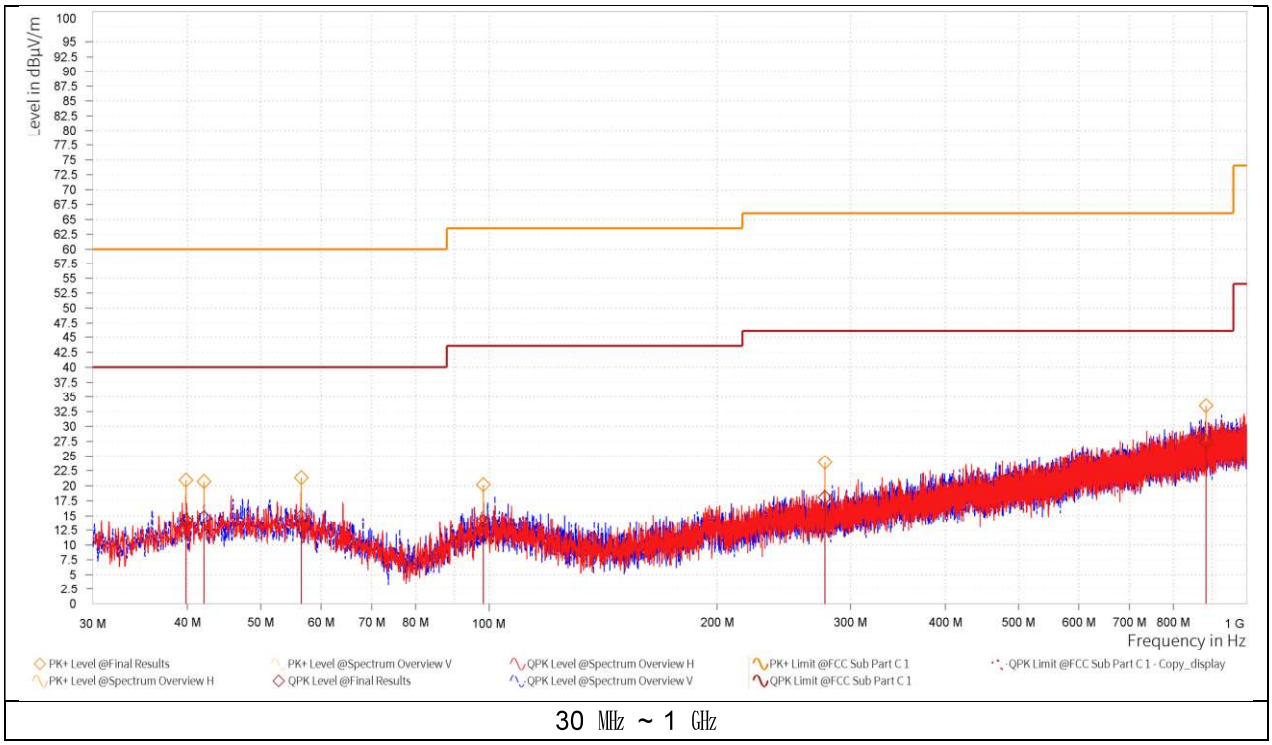
- YMB624: Basic Model



9 ㎑ ~ 150 ㎑

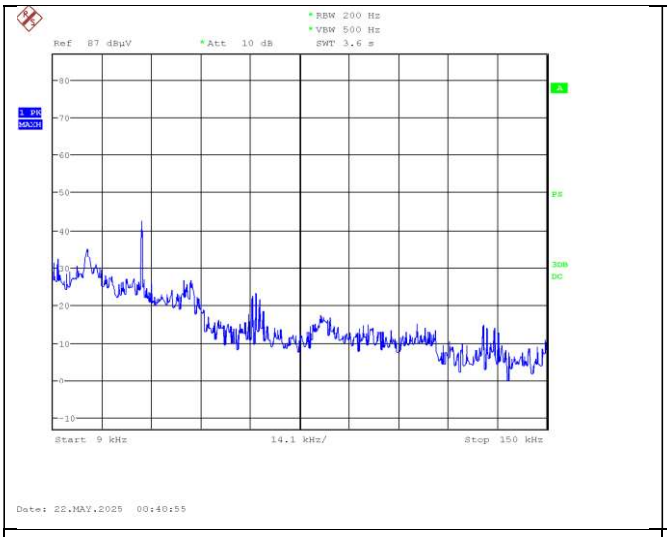


150 ㎑ ~ 30 ㎒

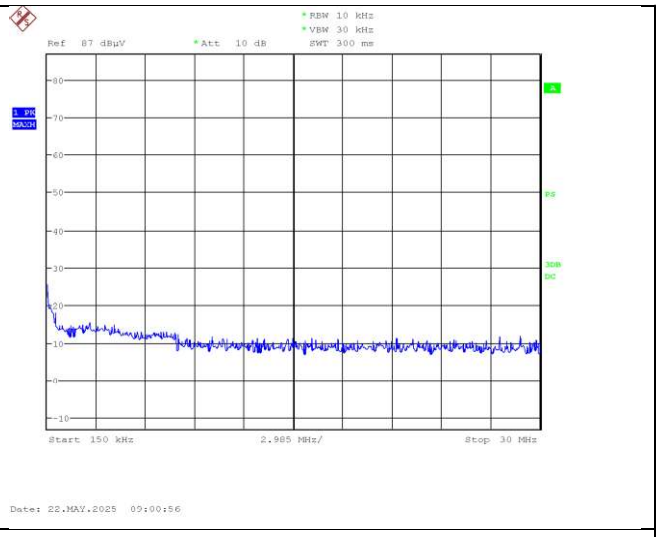


30 ㎒ ~ 1 ㎓

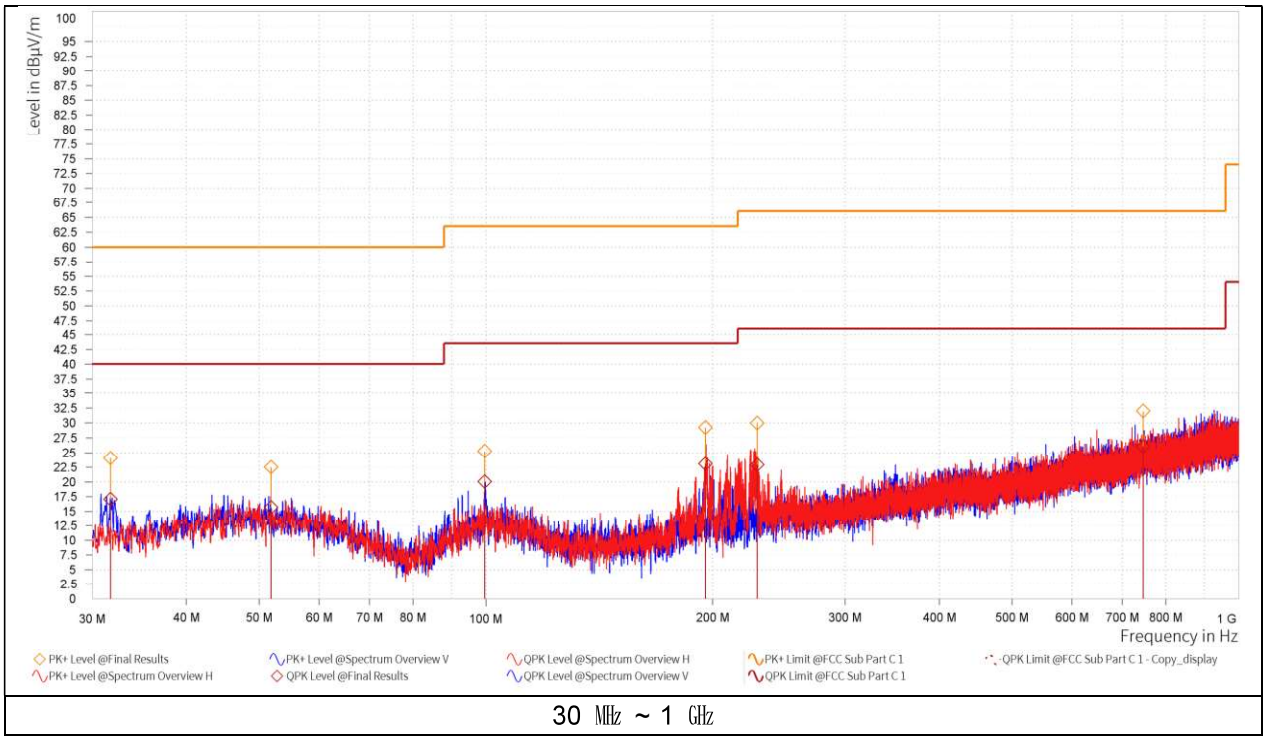
- YMB614: Variant Model



9 ㎑ ~ 150 ㎑



150 ㎑ ~ 30 ㎒



30 ㎒ ~ 1 ㎓

2.4.2. Radiated Spurious Emissions above 1 000 ㎒

The frequency spectrum above 1 000 ㎒ was investigated. All reading values are peak and average values.

- YMB624: Basic Model
125k Coded
Low Channel (2 402 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*2 310.00	15.67	Peak	V	27.94	7.27	-	50.88	74.00	23.12
*2 310.00	5.25	Average	V	27.94	7.27	0.10	40.56	54.00	13.44
*2 387.56	17.15	Peak	V	28.18	7.50	-	52.83	74.00	21.17
*2 388.11	6.20	Average	V	28.18	7.50	0.10	41.98	54.00	12.02
*2 390.00	15.85	Peak	V	28.18	7.52	-	51.55	74.00	22.45
*2 390.00	5.49	Average	V	28.18	7.52	0.10	41.29	54.00	12.71

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

Middle Channel (2 440 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

High Channel (2 480 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*2 483.50	23.38	Peak	V	28.34	7.73	-	59.45	74.00	14.55
*2 483.50	6.18	Average	V	28.34	7.73	0.10	42.35	54.00	11.65
*2 483.56	24.49	Peak	V	28.34	7.73	-	60.56	74.00	13.44
*2 484.02	6.55	Average	V	28.34	7.73	0.10	**42.72**	54.00	11.28
*2 500.00	16.21	Peak	V	28.50	7.73	-	52.44	74.00	21.56
*2 500.00	5.86	Average	V	28.50	7.73	0.10	42.19	54.00	11.81

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

- YMB624: Basic Model
PHY 2M
Low Channel (2 402 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*2 310.00	16.43	Peak	V	27.94	7.27	-	51.64	74.00	22.36
*2 310.00	5.68	Average	V	27.94	7.27	2.40	43.29	54.00	10.71
*2 379.84	17.84	Peak	V	28.16	7.41	-	53.41	74.00	20.59
*2 383.14	6.26	Average	V	28.17	7.45	2.40	44.28	54.00	9.72
*2 390.00	15.70	Peak	V	28.18	7.52	-	51.40	74.00	22.60
*2 390.00	5.96	Average	V	28.18	7.52	2.40	44.06	54.00	9.94

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

Middle Channel (2 440 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

High Channel (2 480 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*2 483.50	24.38	Peak	V	28.34	7.73	-	60.45	74.00	13.55
*2 483.50	7.05	Average	V	28.34	7.73	2.40	**45.52**	54.00	8.48
*2 483.56	24.21	Peak	V	28.34	7.73	-	60.28	74.00	13.72
*2 484.79	6.52	Average	V	28.35	7.73	2.40	45.00	54.00	9.00
*2 500.00	16.49	Peak	V	28.50	7.73	-	52.72	74.00	21.28
*2 500.00	6.14	Average	V	28.50	7.73	2.40	44.77	54.00	9.23

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

- YMB614: Variant Model
125k Coded
Low Channel (2 402 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*2 310.00	14.20	Peak	V	27.94	7.27	-	49.41	74.00	24.59
*2 310.00	3.68	Average	V	27.94	7.27	0.10	38.99	54.00	15.01
*2 340.45	16.43	Peak	V	28.06	7.28	-	51.77	74.00	22.23
*2 386.99	3.54	Average	V	28.17	7.49	0.10	39.30	54.00	14.70
*2 390.00	14.52	Peak	V	28.18	7.52	-	50.22	74.00	23.78
*2 390.00	3.78	Average	V	28.18	7.52	0.10	39.58	54.00	14.42

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

Middle Channel (2 440 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

High Channel (2 480 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*2 483.50	15.03	Peak	V	28.34	7.73	-	51.10	74.00	22.90
*2 483.50	3.84	Average	V	28.34	7.73	0.10	40.01	54.00	13.99
*2 484.00	17.05	Peak	V	28.34	7.73	-	53.12	74.00	20.88
*2 483.58	3.95	Average	V	28.34	7.73	0.10	40.12	54.00	13.88
*2 500.00	15.40	Peak	V	28.50	7.73	-	51.63	74.00	22.37
*2 500.00	3.96	Average	V	28.50	7.73	0.10	40.29	54.00	13.71

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

- YMB614: Variant Model
PHY 2M
Low Channel (2 402 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*2 310.00	13.15	Peak	V	27.94	7.27	-	48.36	74.00	25.64
*2 310.00	3.70	Average	V	27.94	7.27	2.40	41.31	54.00	12.69
*2 367.73	15.12	Peak	V	28.14	7.33	-	50.59	74.00	23.41
*2 383.78	3.84	Average	V	28.17	7.45	2.40	41.86	54.00	12.14
*2 390.00	13.21	Peak	V	28.18	7.52	-	48.91	74.00	25.09
*2 390.00	3.80	Average	V	28.18	7.52	2.40	41.90	54.00	12.10

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

Middle Channel (2 440 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

High Channel (2 480 ㎒)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
*2 483.50	20.67	Peak	V	28.34	7.73	-	56.74	74.00	17.26
*2 483.50	4.68	Average	V	28.34	7.73	2.40	43.15	54.00	10.85
*2 483.54	20.94	Peak	V	28.34	7.73	-	57.01	74.00	16.99
*2 483.54	4.48	Average	V	28.34	7.73	2.40	42.95	54.00	11.05
*2 500.00	13.57	Peak	V	28.50	7.73	-	49.80	74.00	24.20
*2 500.00	4.12	Average	V	28.50	7.73	2.40	42.75	54.00	11.25

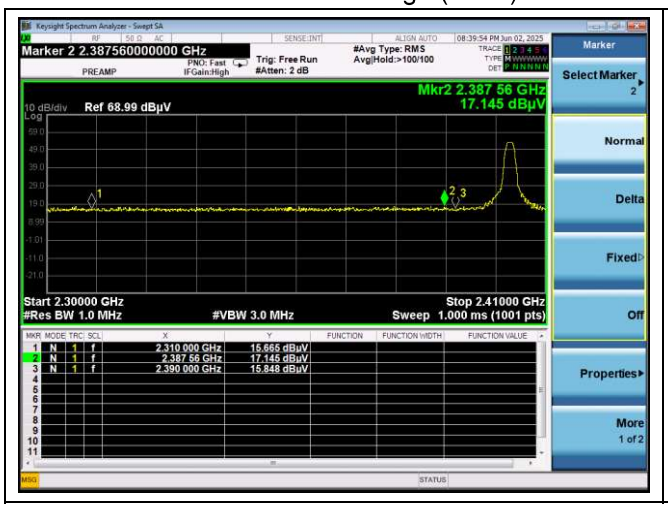
Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (㎒)	Reading (dB㎶)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

Remarks;

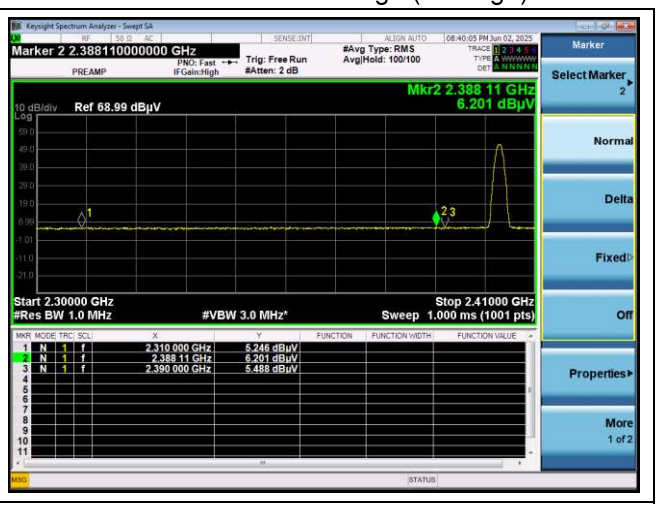
1. "*" means the restricted band.
2. Measuring frequencies from 1 ㎓ to the 10th harmonic of highest fundamental frequency.
3. Radiated emissions measured in frequency above 1 000 ㎒ were made with an instrument using peak/average detector mode.
4. Actual = Reading + AF + CL + (DF) or Reading + AF + AMP + CL + (DF).
5. According to § 15.31(o), emission levels are not reported much lower than the limits by over 20 ㏈.
6. The maximized peak measured value complies with the average limit, to perform an average measurement is unnecessary.
7. AF = Antenna Factor, CL = Cable Loss, DF = Duty Correction Factor.

- Test plots
- YMB624: Basic Model
125k Coded

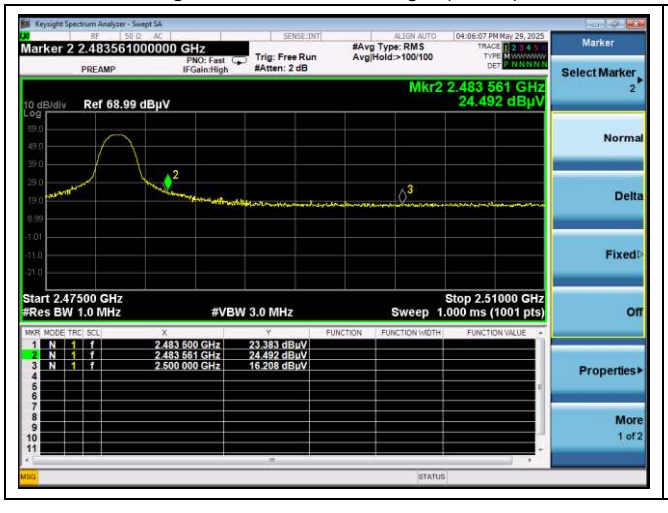
Low channel band edge (Peak)



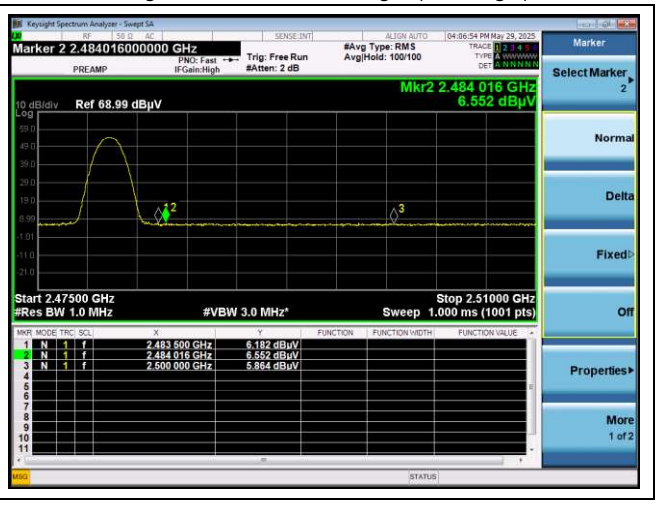
Low channel band edge (Average)



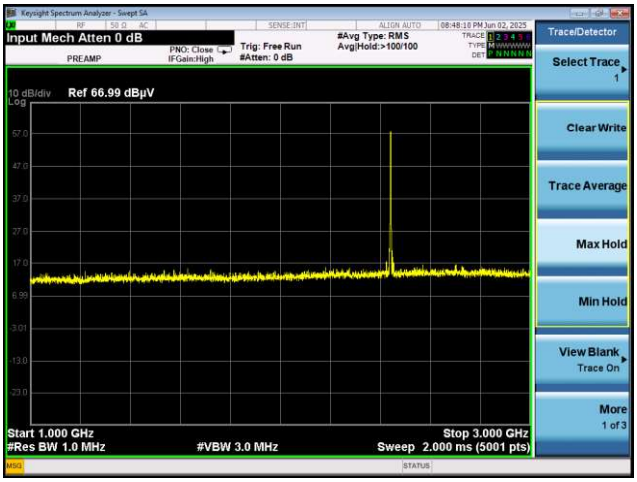
High channel band edge (Peak)



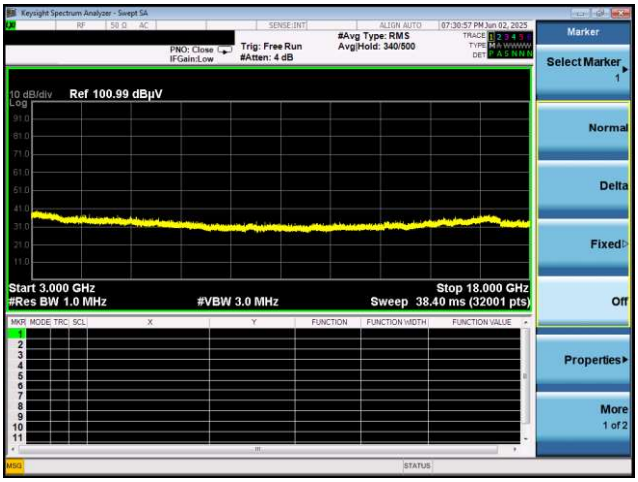
High channel band edge (Average)



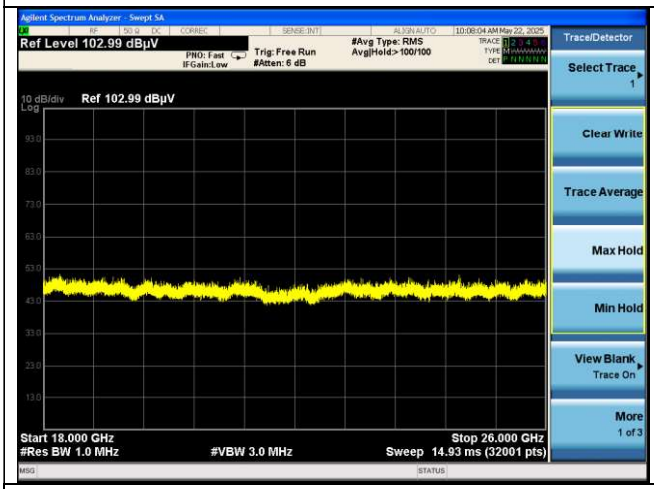
Radiated Spurious Emissions



1 ㎓ ~ 3 ㎓



3 ㎓ ~ 18 ㎓

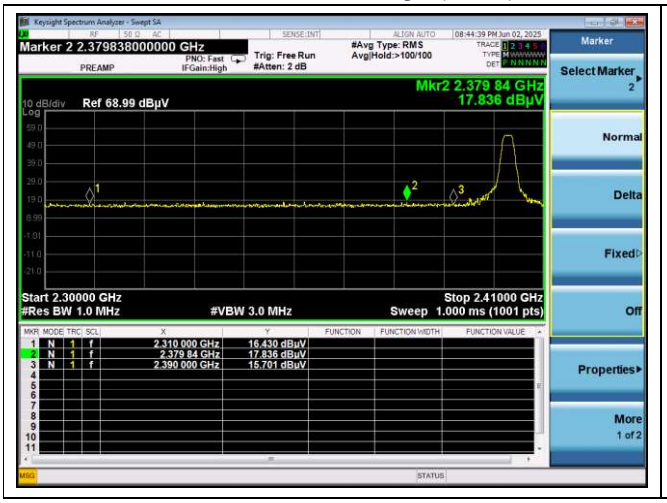


18 ㎓ ~ 26 ㎓

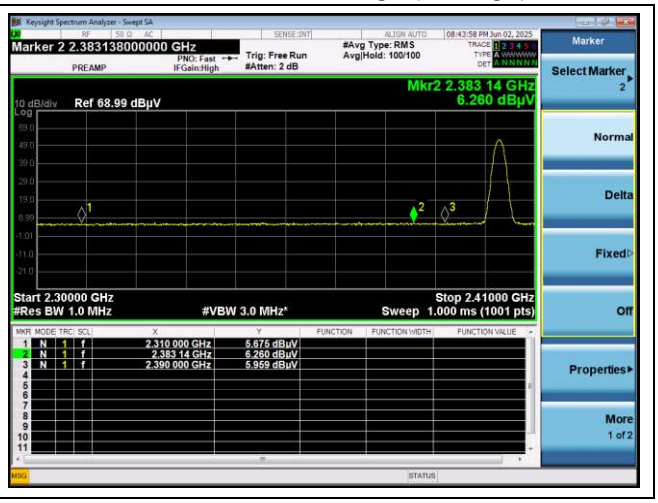
- **YMB624: Basic Model**

PHY 2M

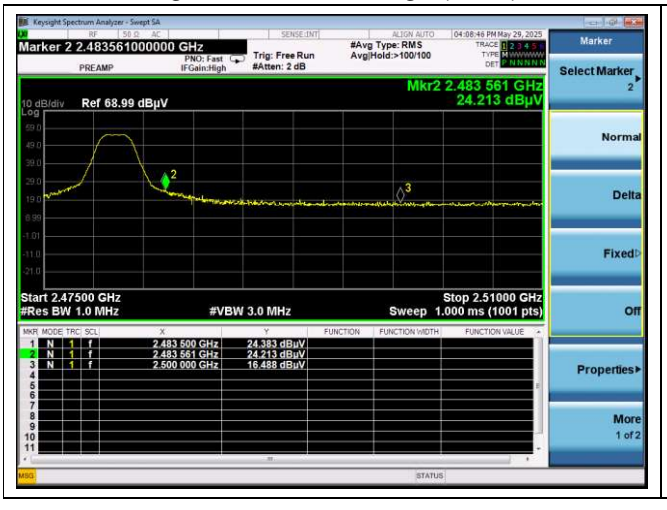
Low channel band edge (Peak)



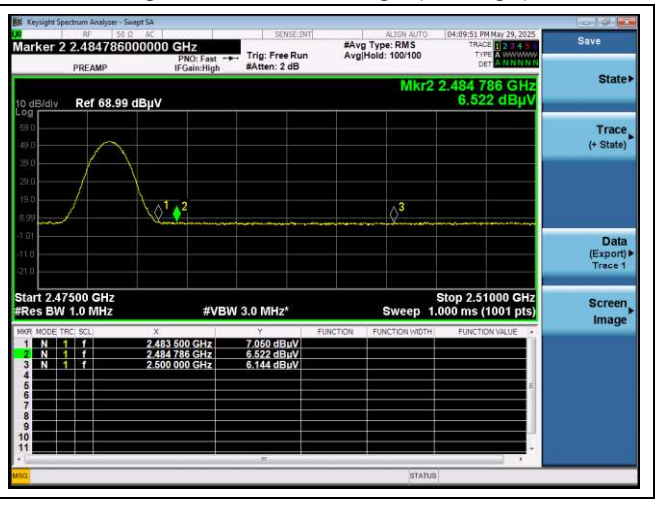
Low channel band edge (Average)



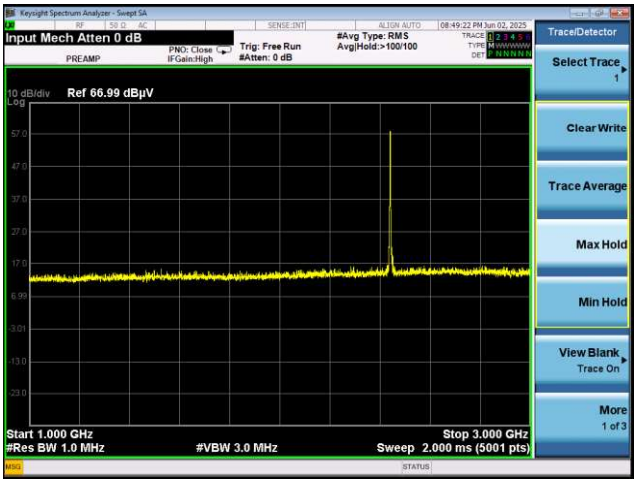
High channel band edge (Peak)



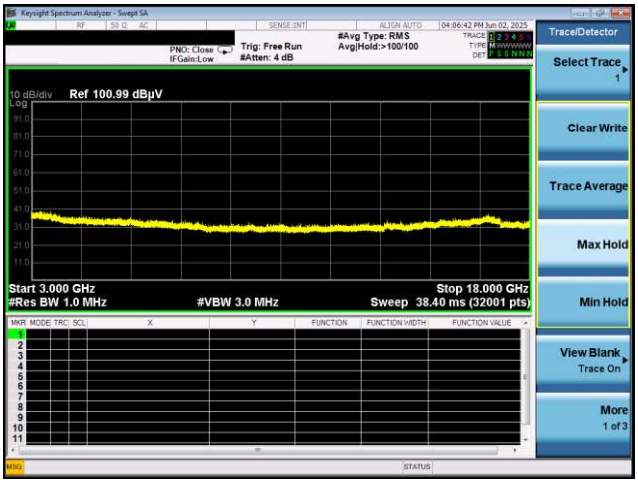
High channel band edge (Average)



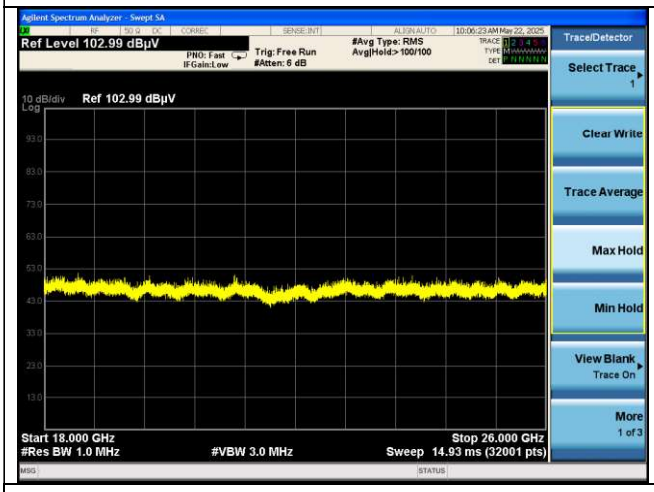
Radiated Spurious Emissions



1 ㎓ ~ 3 ㎓



3 ㎓ ~ 18 ㎓



18 ㎓ ~ 26 ㎓