

3701, 40, Simin-daero 365beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea Tel: +82-31-425-6200 / Fax: +82-31-424-0450 www.kes.co.kr Report No.: KES-RF-23T0085 Page (42) of (53)

Mode:	802.11b(Worst Case)
Channel	11

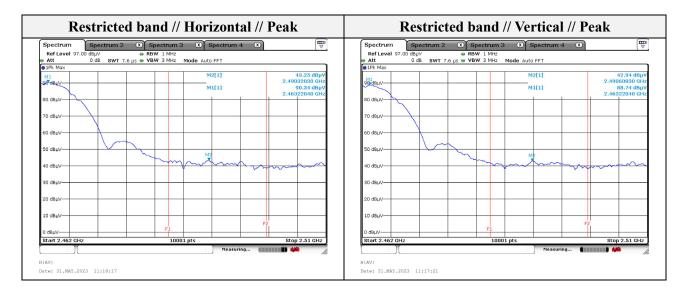
Distance of measurement: 3 meter

-	Spurious

Frequency (Mbz)	Level (dBµN)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBµV/m)	Limit (dBµN/m)	Margin (dB)
1 214.08	45.01	Peak	Н	-7.66	-	37.35	74.00	36.65
1 329.47	46.29	Peak	V	-6.71	-	39.58	74.00	34.42

- Band edge

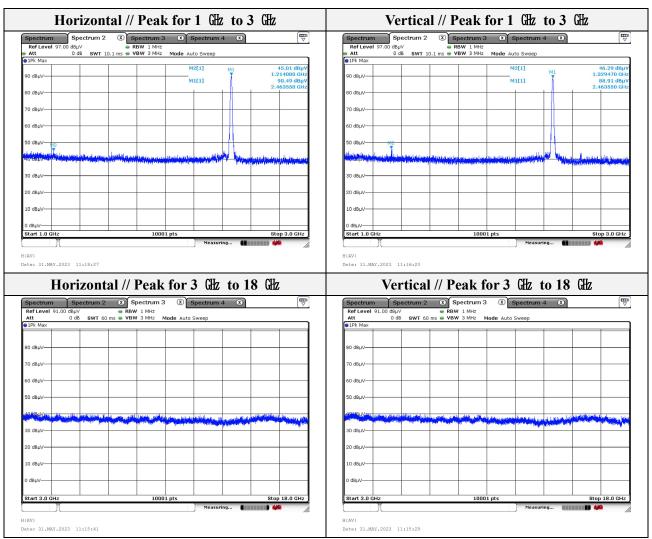
Danu C	uge							
Frequency (畑z)	Level (dBµV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBµV/m)	Limit (dBµN/m)	Margin (dB)
2 490.32	43.25	Peak	Н	-0.85	-	42.40	74.00	31.60
2 490.61	42.94	Peak	V	-0.85	-	42.09	74.00	31.91





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Note.

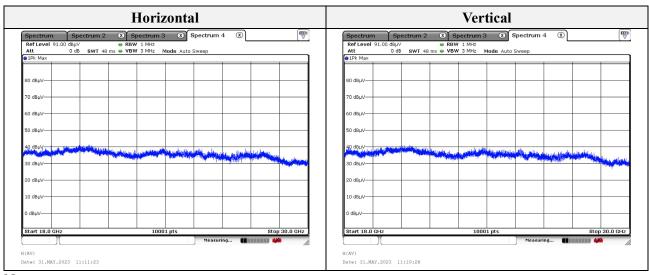
1. No spurious emission were detected above 3 GHz.

2. Average test would be performed if the peak result were greater than the average limit.



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Test results (18 GHz to 30	GHz)
Mode:	802.11b(Worst Case)
Channel	01 (Worst case)
Distance of measurement:	3 meter



Note.

1. No spurious emission were detected above 18 GHz.



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<u>DC 24V</u>

Mode:	802.11b(Worst Case)
Channel	01
Distance of measurement:	3 meter

- Spurious

Frequency (Mbz)	Level (dBµN)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBµV/m)	Limit (dBµN/m)	Margin (dB)
1 004.90	47.31	Peak	Н	-9.05	-	38.26	74.00	35.74
1 327.87	47.53	Peak	V	-6.72	-	40.81	74.00	33.19

Band edge

Frequency (Mbz)	Level (dBµV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBµV/m)	Limit (dBµN/m)	Margin (dB)
2 382.33	47.48	Peak	V	-1.22	-	46.26	74.00	27.74
2 385.29	48.93	Peak	Н	-1.22	-	47.71	74.00	26.29

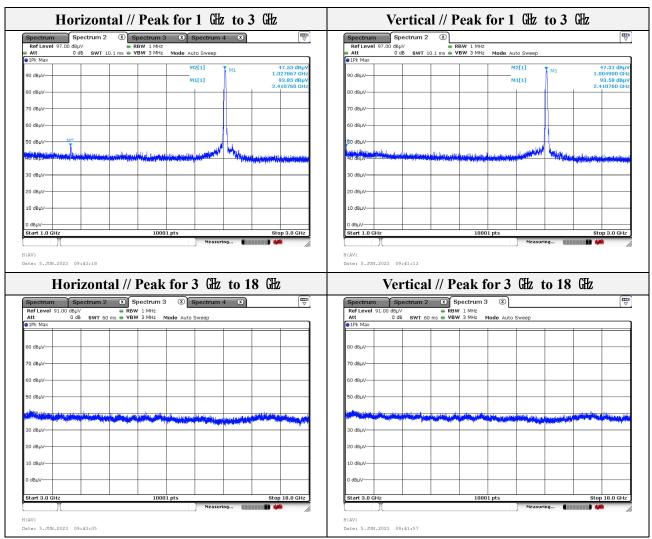
Spectrum Spectrur	n 2 🛛 🗶 Spectrum	3 🛞 Spectrum 4 🗶		Spectrum Spectrum 2	· · · · · · · · · · · · · · · · · · ·	
Ref Level 97.00 dBµV	RBW 1 MH			Ref Level 97.00 dBµV	RBW 1 MHz	•
Att OdB SV	/T 15.2 µs 👄 VBW 3 MH	z Mode Auto FFT		Att 0 dB SWT	15.2 µs 🖷 VBW 3 MHz Mode Auto FFT	
90 dBµV-		M2[1]	48.93 dBuy 2.3852851 8Hz 93.76 dBuy	90 dBµV	M2[1]	47.48 dBµ 2.3823286 84 93.48 øBµ
80 dBuV			2.4107070 GHz	80 dBuV		2.4107510 GHz
70 dBµV				70 dBµV-		
60 dBµV				60 dBµV		
50 dBuV		M2		50 dBµV-	,	M2
2038 Jon	mont	munum	~~	40 dBhr	1 million manufactures and the second se	Amer
30 dBµV				30 dBµV		
20 dBµV				20 dBµV		
10 dBµV				10 dBµV		
0 dBµV-F1			F2	0 dBµV-F1		F2
Start 2.3 GHz	10	001 pts	Stop 2.412 GHz	Start 2.3 GHz	10001 pts	Stop 2.412 GHz
T		Measuring 📲			Measuring.	

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Note.

1. No spurious emission were detected above 3 GHz.

2. Average test would be performed if the peak result were greater than the average limit.



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Mode:	802.11b(Worst Case)	

Channel

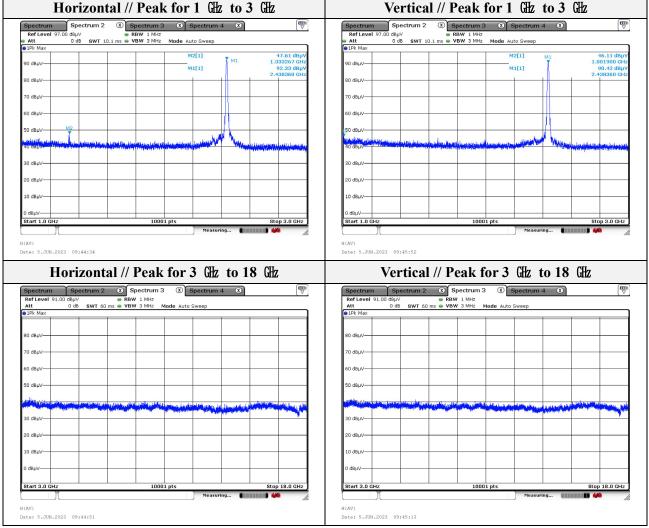
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Distance of measurement: 3 meter

-	Spur	rious

Frequency (Mb)	Level (dBµN)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBµV/m)	Limit (dBµN/m)	Margin (dB)
1 001.90	46.11	Peak	Н	-9.07	-	37.04	74.00	36.96
1 333.27	47.61	Peak	V	-6.68	-	40.93	74.00	33.07



Note.

1. No spurious emission were detected above 3 GHz.

2. Average test would be performed if the peak result were greater than the average limit.

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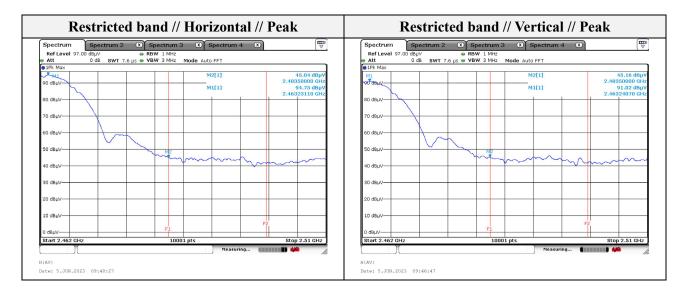
Mode:	802.11b(Worst Case)
Channel	11

Distance of measurement: 3 meter

- Spurious								
Frequency (Mbz)	Level (dBµN)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBµV/m)	Limit (dBµN/m)	Margin (dB)
1 001.70	49.33	Peak	Н	-9.07	-	40.26	74.00	33.74
1 327.47	47.51	Peak	V	-6.72	-	40.79	74.00	33.21

Band edge

- Dallu C	uge							
Frequency (畑z)	Level (dBµV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2 483.50	45.04	Peak	Н	-0.88	-	44.16	74.00	29.84
2 483.50	45.16	Peak	V	-0.88	-	44.28	74.00	29.72

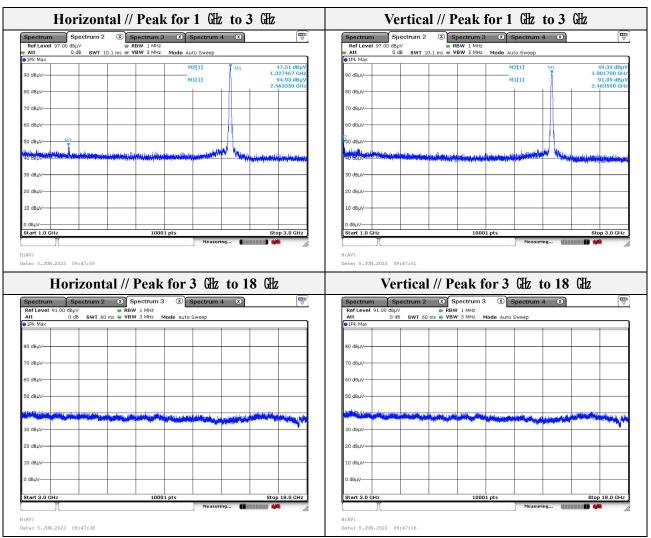


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Note.

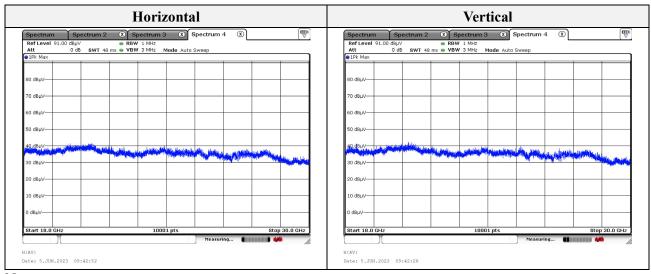
1. No spurious emission were detected above 3 GHz.

2. Average test would be performed if the peak result were greater than the average limit.



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Test results (18 GHz to 30	GHz)
Mode:	802.11b(Worst Case)
Channel	01 (Worst case)
Distance of measurement:	3 meter



Note.

1. No spurious emission were detected above 18 GHz



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3.3. Antenna Requirement

According to 15.207(a), An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.



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Appendix A. Measurement equipment

Equipment	Manufacturer	Model	Serial No.	Calibration interval	Calibration due.
Spectrum analyzer	R&S	FSV3044	101272	1 year	2024.03.16
Spectrum analyzer	R&S	FSV40	101725	1 year	2023.06.16
MXG Vector SIGNAL GENERATOR	Agilent	N5182A	MY50143829	1 year	2024.01.12
SIGNAL GENERATOR	Anritsu	68369B	002118	1 year	2024.05.12
Attenuator	Mini-Circuits	BW-S10-2W263+	2	1 year	2024.01.13
Power Meter	Anritsu	ML2495A	2010001	1 year	2024.04.19
Pulse Power Sensor	Anritsu	MA2411B	1911111	1 year	2024.04.18
Loop Antenna	Schwarzbeck	FMZB1513	1513-257	2 years	2025.01.16
TRILOG-BROADBAND ANTENNA	Schwarzbeck	VULB 9163	714	2 years	2024.03.21
Attenuator	HUBER+SUHNER	6806.17.A	-	1 year	2024.03.21
Horn Antenna	A.H	SAS-571	414	1 year	2024.01.16
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA 9170550	1 year	2024.01.16
Amplifier	SONOMA INSTRUMENT	310N	186549	1 year	2024.03.21
PREAMPLIFIER	HP	8449B	3008A00899	1 year	2024.03.23
BROADBAND AMPLIFIER	SCHWARZBECK	BBV9721	PS9721-003	1 year	2024.01.16
DC POWER SUPPLY	SORENSEN	DCS40-75E	1408A02745	1 year	2024.01.12
EMI Test Receiver	R&S	ESU26	100517	1 year	2023.08.01

Peripheral devices

Device Manufacturer		Model No.	Serial No.
Notebook computer	LG Electronics Inc.,	LGS53	306QCZP560949