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Report No.:  
KES-RF-23T0119  
Page ( 31 ) of ( 45 )

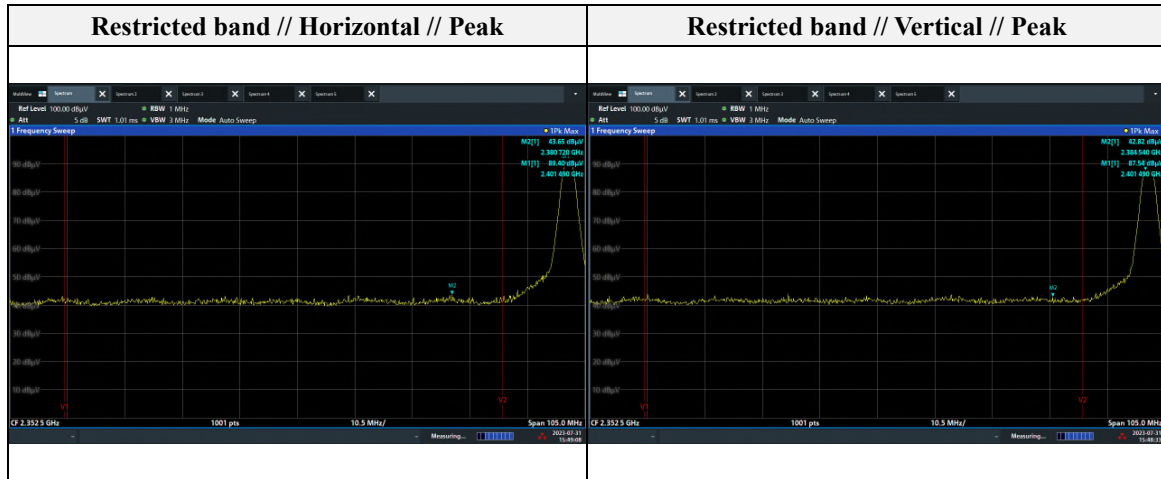
Mode: LE 2 Mbps  
Distance of measurement: 3 meter  
Channel: 00

**- Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1 198.80	49.71	Peak	H	-8.22	-	41.49	74.00	32.51
2 157.80	46.41	Peak	V	-1.19	-	45.22	74.00	28.78
4 806.00	55.14	Peak	H	6.55	-	61.69	74.00	12.31
4 806.00	40.71	Average	H	6.55	2.29	47.26	54.00	4.45
4 806.00	57.07	Peak	V	6.55	-	63.62	74.00	10.38
4 806.00	42.58	Average	V	6.55	2.29	49.13	54.00	2.58

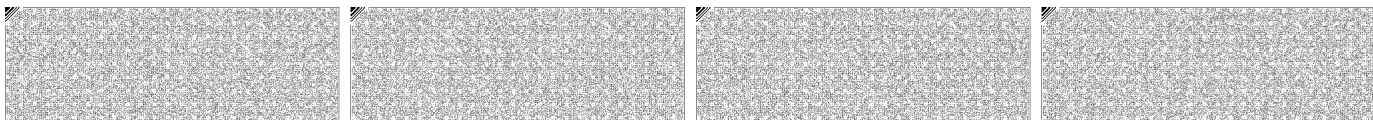
**- Band edge**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2 380.72	43.65	Peak	H	-0.74	-	42.91	74.00	31.09
2 384.54	42.82	Peak	V	-0.74	-	42.08	74.00	31.92



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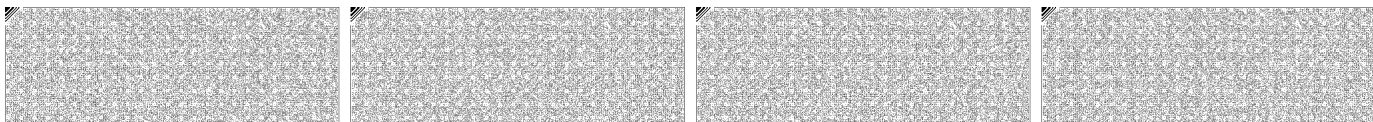
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Report No.:  
 KES-RF-23T0119  
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Report No.:  
KES-RF-23T0119  
Page ( 33 ) of ( 45 )

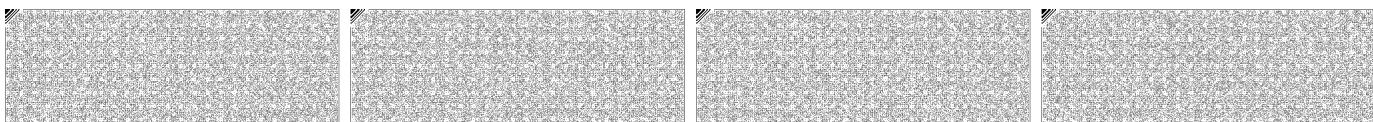
Mode: LE 2 Mbps  
Distance of measurement: 3 meter  
Channel: 20

**- Spurious**

Frequency (MHz)	Level (dB $\mu$ V)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
1 031.00	45.90	Peak	V	-9.39	-	36.51	74.00	37.49
1 232.80	47.08	Peak	H	-7.99	-	39.09	74.00	34.91
4 881.00	52.31	Peak	H	7.08	-	59.39	74.00	14.61
4 881.00	38.32	Average	H	7.08	2.29	45.40	54.00	6.31
4 881.00	56.95	Peak	V	7.08	-	64.03	74.00	9.97
4 881.00	43.49	Average	V	7.08	2.29	50.57	54.00	1.14

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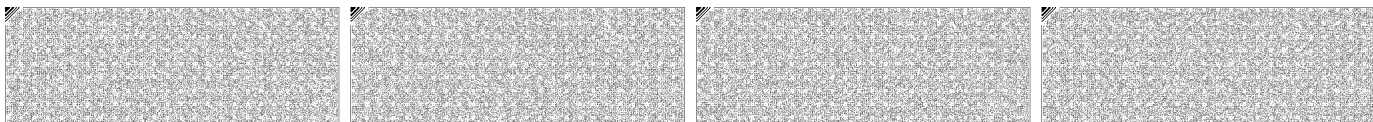
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Report No.:  
 KES-RF-23T0119  
 Page ( 34 ) of ( 45 )



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Report No.:  
KES-RF-23T0119  
Page ( 35 ) of ( 45 )

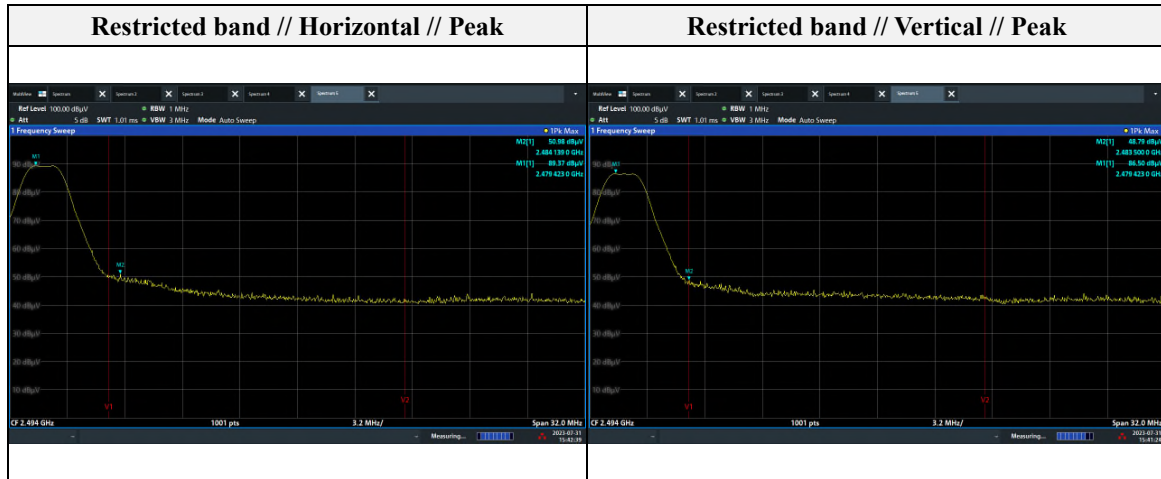
Mode: LE 2 Mbps  
Distance of measurement: 3 meter  
Channel: 39

**- Spurious**

Frequency (MHz)	Level (dB $\mu$ V)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
1 182.80	46.21	Peak	H	-8.33	-	37.88	74.00	36.12
1 466.50	46.01	Peak	V	-6.42	-	39.59	74.00	34.41
4 956.00	53.89	Peak	H	7.61	-	61.50	74.00	12.50
4 956.00	40.08	Average	H	7.61	2.29	47.69	54.00	4.02
4 956.00	55.41	Peak	V	7.61	-	63.02	74.00	10.98
4 956.00	41.52	Average	V	7.61	2.29	49.13	54.00	2.58

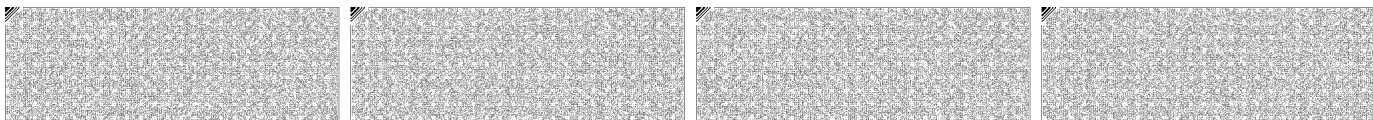
**- Band edge**

Frequency (MHz)	Level (dB $\mu$ V)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
2 483.50	48.79	Peak	V	-0.57	-	48.22	74.00	25.78
2 484.14	50.98	Peak	H	-0.57	-	50.41	74.00	23.59



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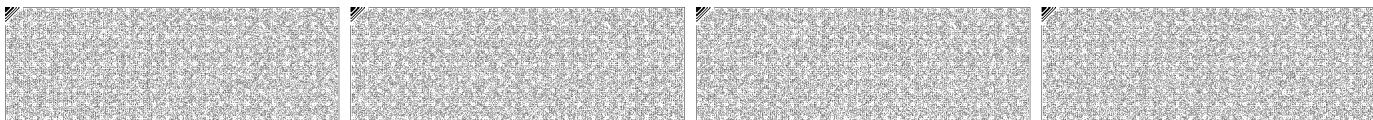
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Report No.:  
 KES-RF-23T0119  
 Page ( 36 ) of ( 45 )



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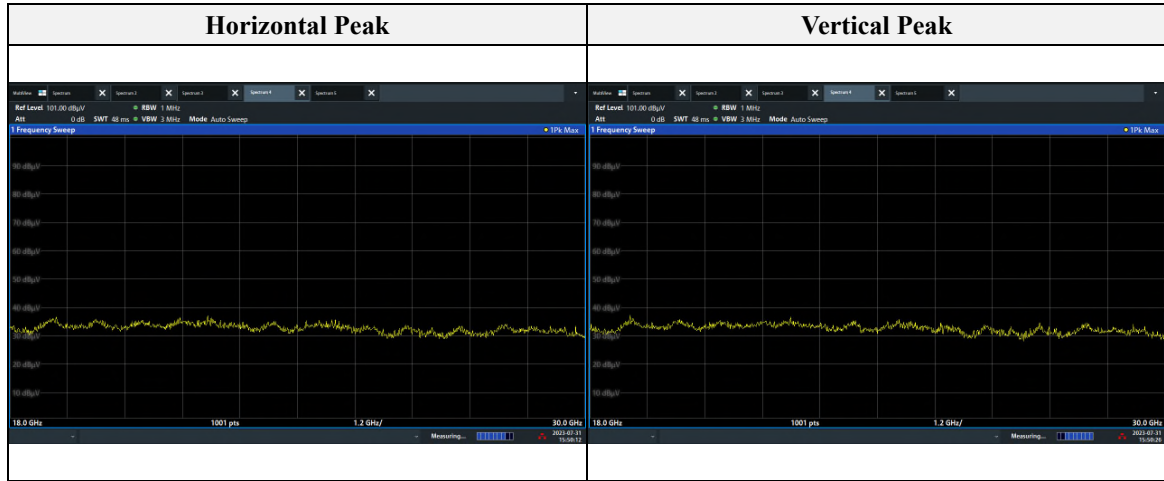
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Report No.:  
 KES-RF-23T0119  
 Page ( 37 ) of ( 45 )

**Test results (18 GHz to 30 GHz)**

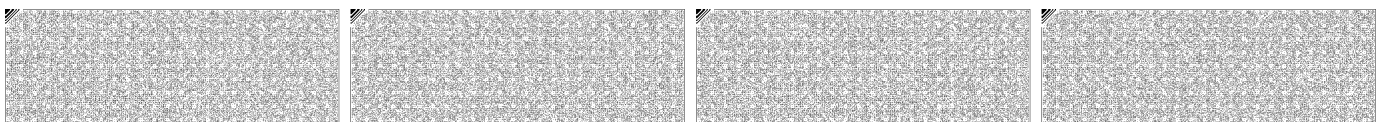
Mode: LE 2 Mbps  
 Distance of measurement: 3 meter  
 Channel: 00 (Worst case)



Note.  
 No spurious emission were detected above 18 GHz.

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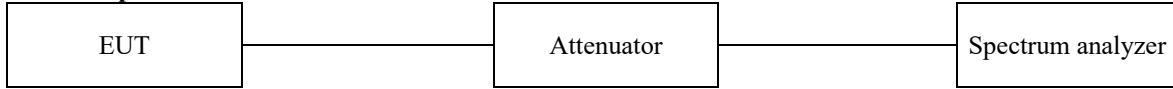
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Report No.:  
KES-RF-23T0119  
Page ( 38 ) of ( 45 )

### 3.5. Conducted spurious emissions & band edge

#### Test setup



#### Test procedure

##### Band edge

ANSI C63.10-2013 - Section 11.11

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. Set the RBW = 100 kHz
4. Set the VBW = [3 × RBW].
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow trace to fully stabilize.

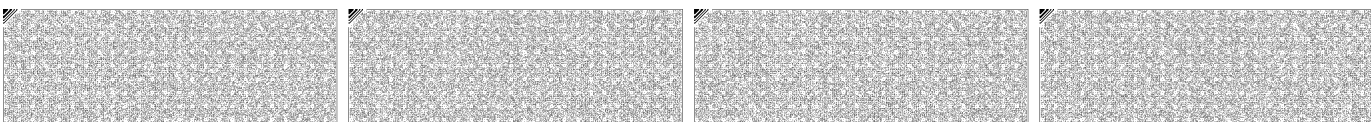
##### Out of band emissions

ANSI C63.10-2013 - Section 11.11

1. Start frequency was set to 30 MHz and stop frequency was set to 25 GHz for 2.4 GHz frequencies and 40 GHz for 5 GHz frequencies
2. Set the RBW = 100 kHz
3. Set the VBW = [3 × RBW].
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Allow trace to fully stabilize.

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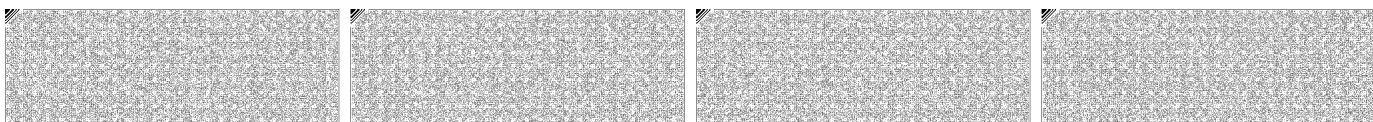
Report No.:  
KES-RF-23T0119  
Page ( 39 ) of ( 45 )

**Limit**

According to 15.247(d), in any 100 kHz 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 dB below that in the 100 kHz 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 dB instead of 20 dB. Attenuation below the general limits specified in section 15.209(a) is not required. In addition, radiated emission which in the restricted band, as define in section 15.205(a), must also comply the radiated emission limits specified in section 15.209(a) (see section 15.205(c))

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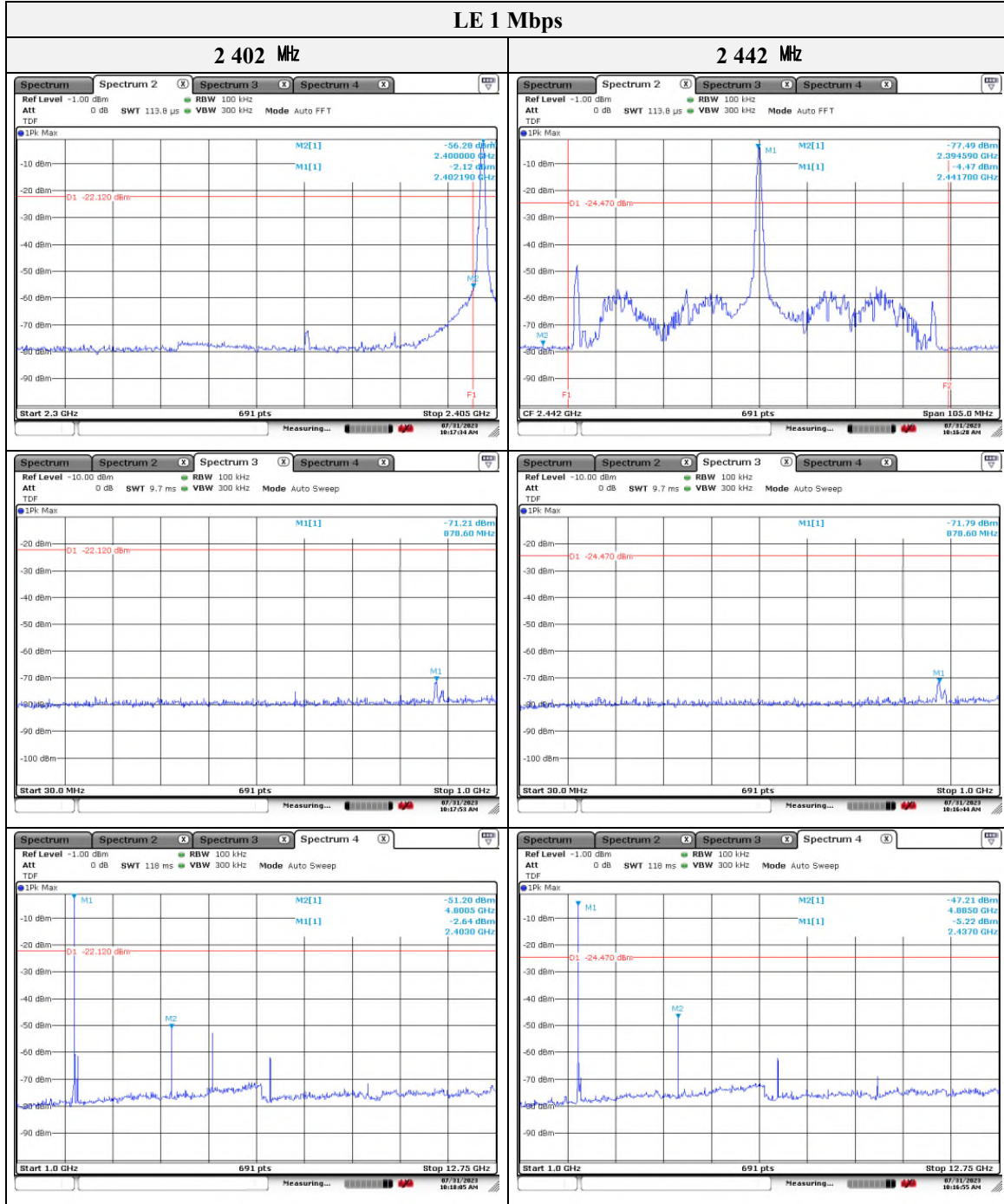




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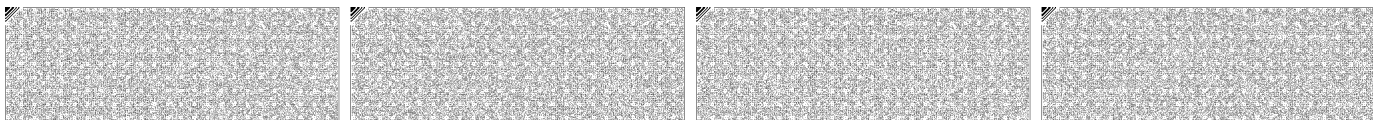
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 Page ( 40 ) of ( 45 )

**Test results**



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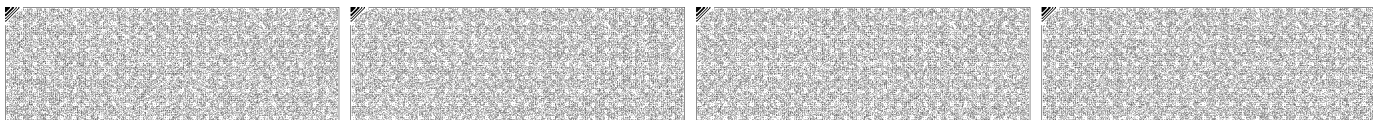
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 Page ( 41 ) of ( 45 )

LE 1 Mbps	
2 480 MHz	-
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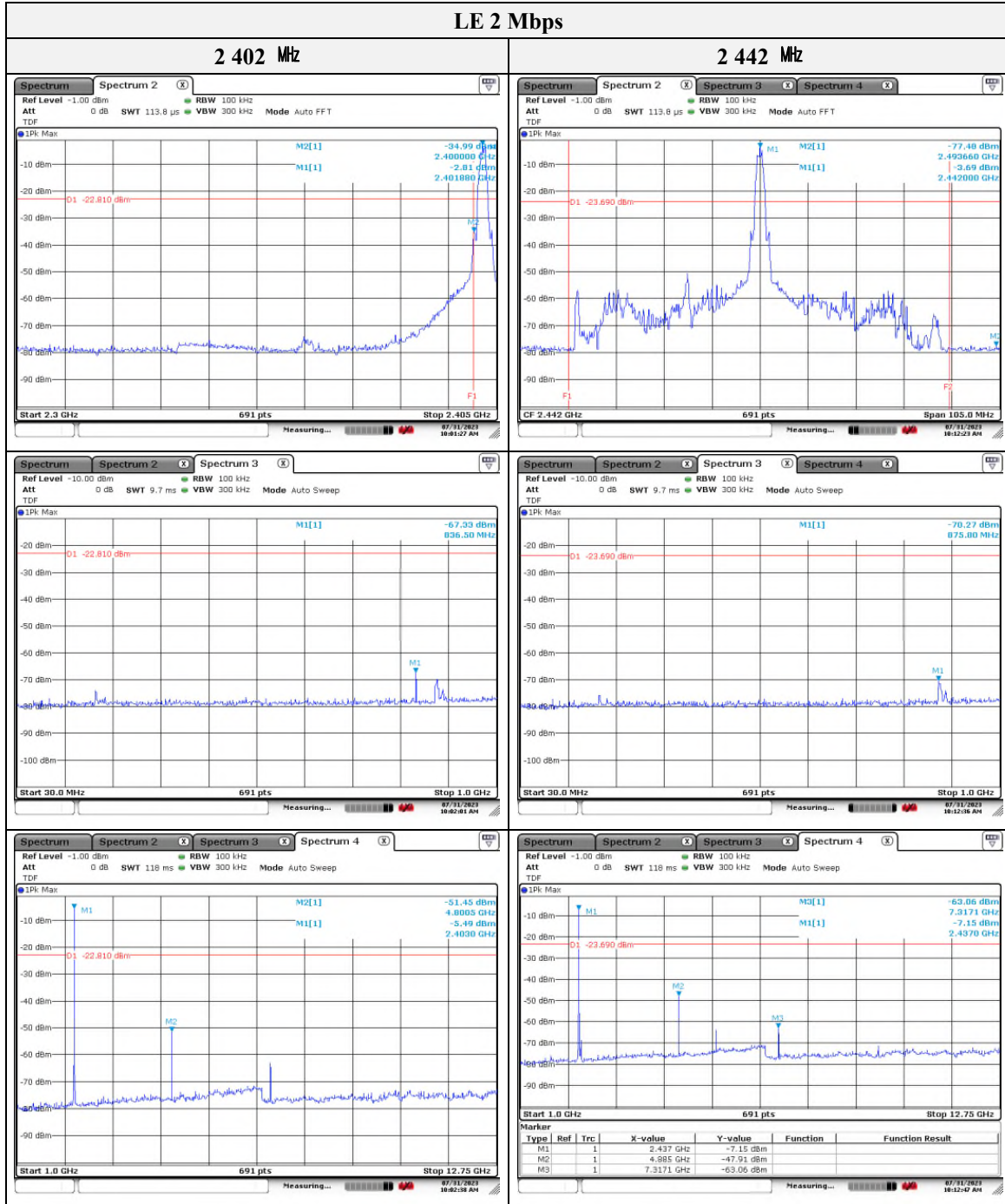
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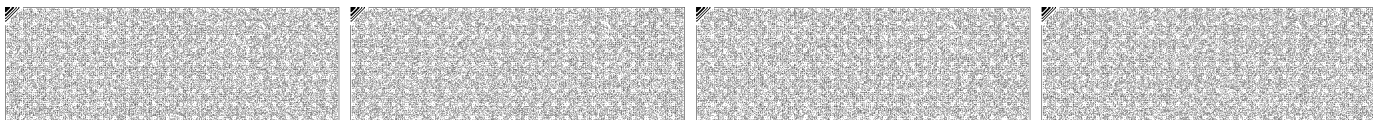
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 Page ( 42 ) of ( 45 )



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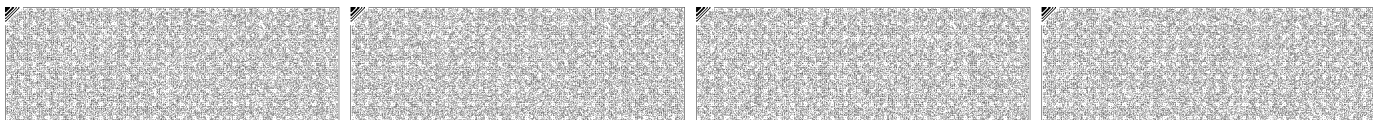
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Report No.:  
 KES-RF-23T0119  
 Page ( 43 ) of ( 45 )

LE 2 Mbps	
2 480 MHz	-
<p>Ref Level -1.00 dBm              Att 0 dB SWT 37.9 μs VBW 300 kHz Mode Auto FFT              TDF              IPK Max              M2[1] -55.23 dBm 2.4825960 GHz              M1[1] -4.54 dBm 2.4799260 GHz              D1 -24.540 dBm              Start 2.478 GHz 691 pts Stop 2.5 GHz              Measuring... 07/11/2023 10:14:15 AM</p>	BLANK
<p>Ref Level -10.00 dBm              Att 0 dB SWT 9.7 ms VBW 300 kHz Mode Auto Sweep              TDF              IPK Max              M1[1] -69.08 dBm 880.00 MHz              D1 -24.540 dBm              Start 30.0 MHz 691 pts Stop 1.0 GHz              Measuring... 07/11/2023 10:14:15 AM</p>	BLANK
<p>Ref Level -1.00 dBm              Att 0 dB SWT 118 ms VBW 300 kHz Mode Auto Sweep              TDF              IPK Max              M2[1] -16.98 dBm 4.9540 GHz              M1[1] -7.55 dBm 2.4880 GHz              D1 -24.540 dBm              Start 1.0 GHz 691 pts Stop 12.75 GHz              Measuring... 07/11/2023 10:14:15 AM</p>	BLANK

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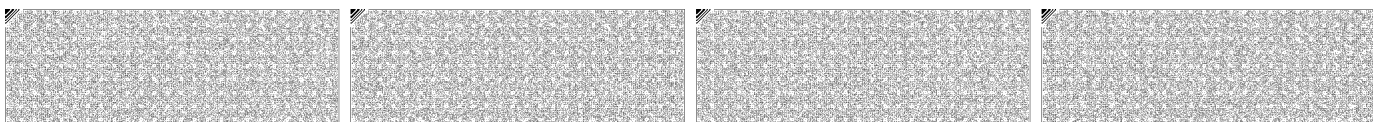
Report No.:  
KES-RF-23T0119  
Page ( 44 ) of ( 45 )

### 3.6. 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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Report No.:  
KES-RF-23T0119  
Page ( 45 ) of ( 45 )

**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	2024.06.15
SIGNAL GENERATOR	KEYSIGHT	N5182B	MY59100115	1 year	2024.04.19
SIGNAL GENERATOR	Anritsu	68369B	002118	1 year	2024.05.12
Power Meter	Anritsu	ML2495A	2010001	1 year	2024.04.19
Pulse Power Sensor	Anritsu	MA2411B	1911111	1 year	2024.04.18
ATTENUATOR	Mini-Circuits	BW-S10-2W263+	1	1 year	2024.01.13
Loop Antenna	Schwarzbeck	FMZB1513	1513-257	2 years	2025.03.22
BILOG ANTENNA	Schwarzbeck	VULB 9163	714	2 years	2024.04.19
Attenuator	HUBER+SHHNER	6806.17.A	NONE	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	3008A00538	1 year	2024.05.31
BROADBAND AMPLIFIER	SCHWARZBECK	BBV9721	PS9721-003	1 year	2024.01.16
EMI Test Receiver	R&S	ESU26	100517	1 year	2024.07.31

**Peripheral devices**

Device	Manufacturer	Model No.	Serial No.
Notebook Computer	LG Electronics.	15UD50N	005QCXM563234

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