

Duty cycle

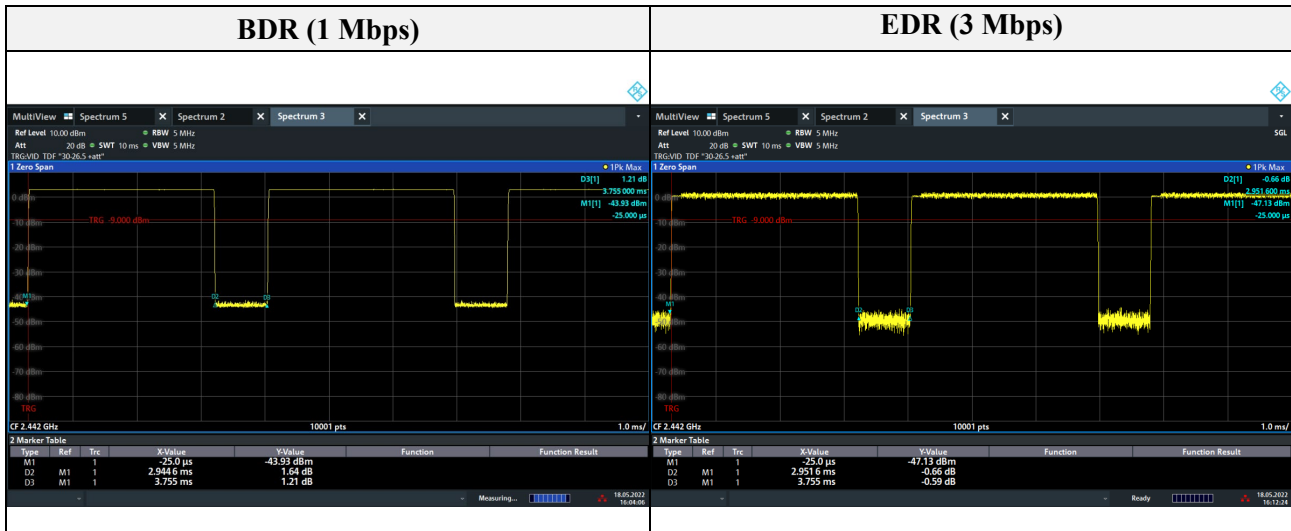
Regarding to KDB 558074 D01_v05 r02, 6. Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:

- A diode detector and an oscilloscope that together have sufficiently short response time to permit accurate measurements of the on- and off-times of the transmitted signal.
- The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on- and off-times of the transmitted signal.

Mode	T _{on} time (ms)	Period (ms)	Duty cycle (Linear)	Duty cycle (%)	Duty cycle correction factor (dB)
BDR(1 Mbps)	2.945	3.755	0.784	78.418	1.06
EDR(3 Mbps)	2.952	3.755	0.786	78.605	1.05

Duty cycle (Linear) = T_{on} time/Period

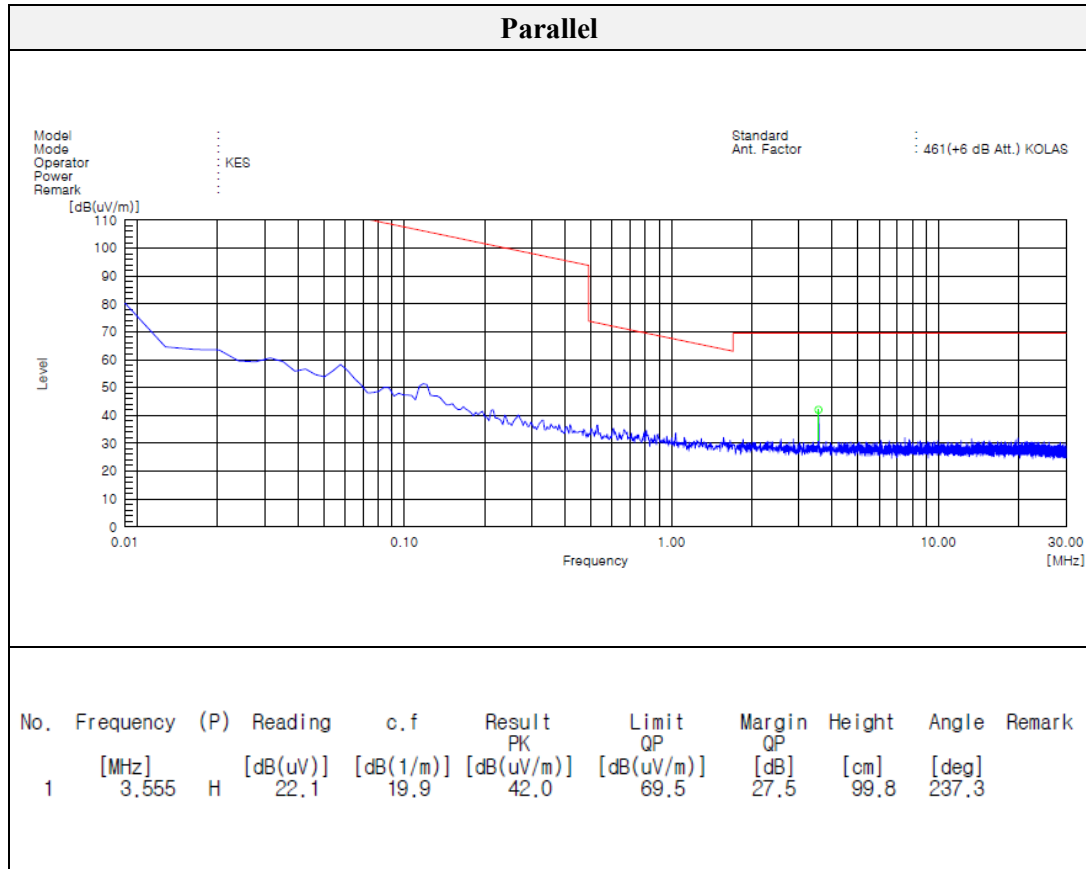
DCF(Duty cycle correction factor (dB)) = 10log(1/duty cycle)



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Test results (Below 30 MHz)

Mode: BDR
Distance of measurement: 3 meter
Channel: 78(Worst case)



Note.

1. No spurious emission were detected under 30 MHz, the above test result is the peak result.



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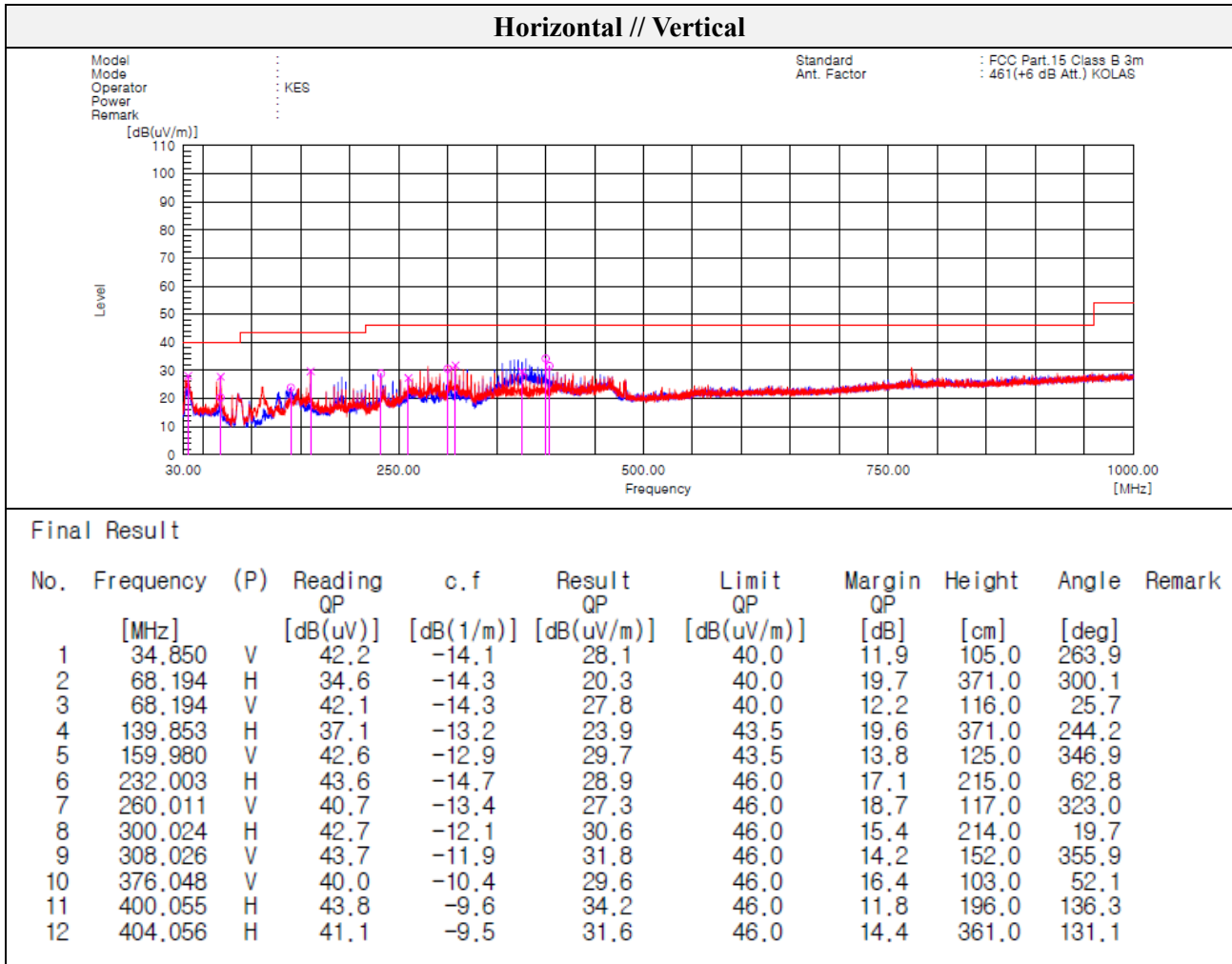
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Test results (Below 1 000 MHz) – Worst case

Mode: BDR
Distance of measurement: 3 meter
Channel: 78 (Worst case)



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Test results (Above 1 000 MHz)

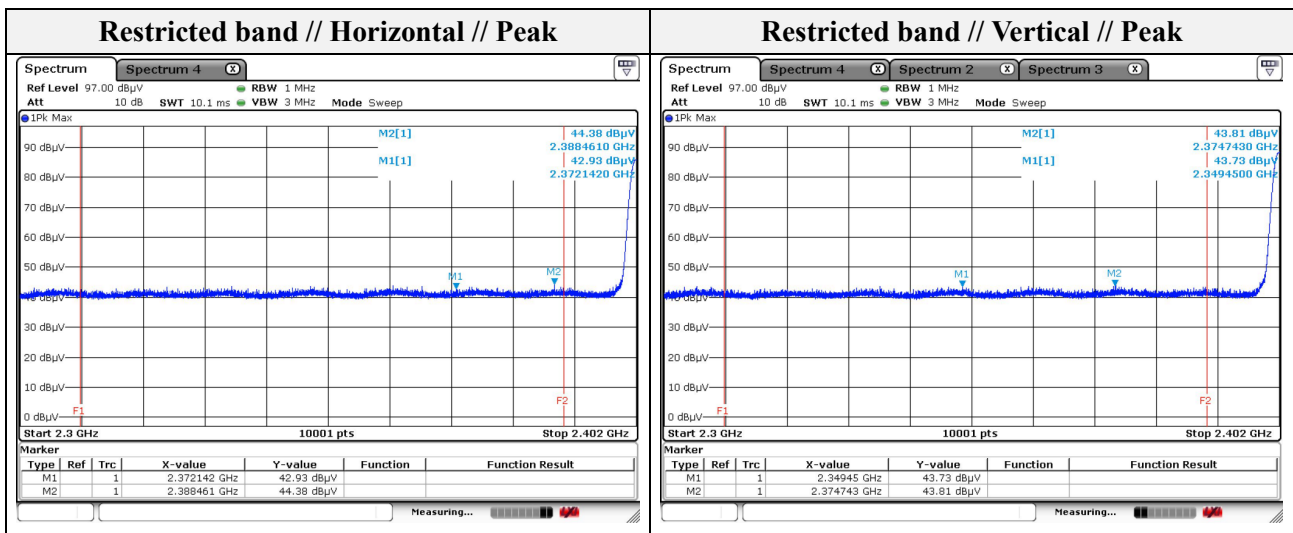
Mode: BDR
Distance of measurement: 3 meter
Channel: 00

- Spurious

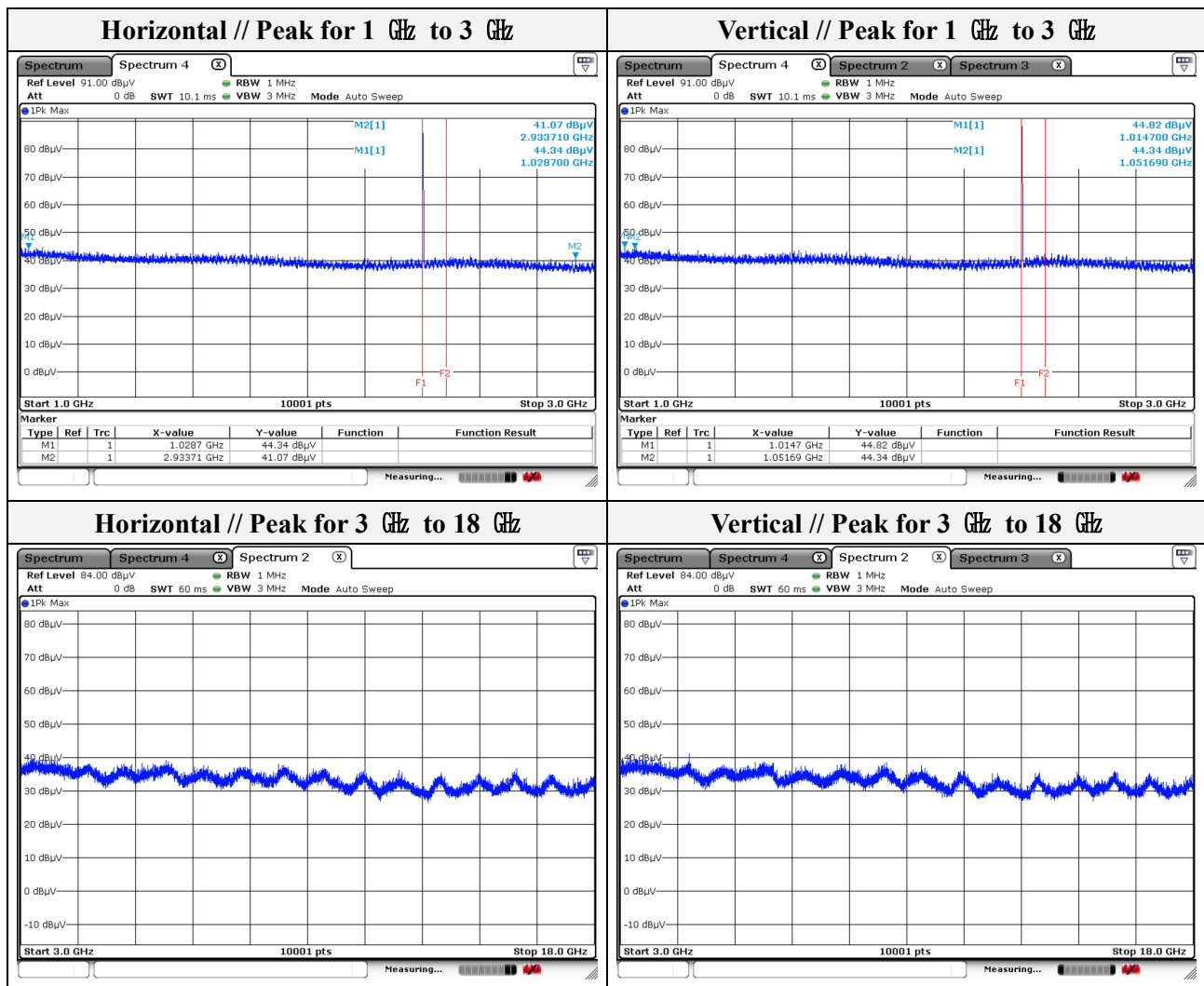
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1 014.70	44.82	Peak	V	-11.08	-	33.74	74.00	40.26
1 028.70	44.34	Peak	H	-11.01	-	33.33	74.00	40.67
1 051.69	44.34	Peak	V	-10.89	-	33.45	74.00	40.55
2 933.71	41.07	Peak	H	-1.04	-	40.03	74.00	33.97

- 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)
2 349.45	43.73	Peak	V	-2.94	-	40.79	74.00	33.21
2 372.14	42.93	Peak	H	-2.84	-	40.09	74.00	33.91
2 374.74	43.81	Peak	V	-2.83	-	40.98	74.00	33.02
2 388.46	44.38	Peak	H	-2.77	-	41.61	74.00	32.39



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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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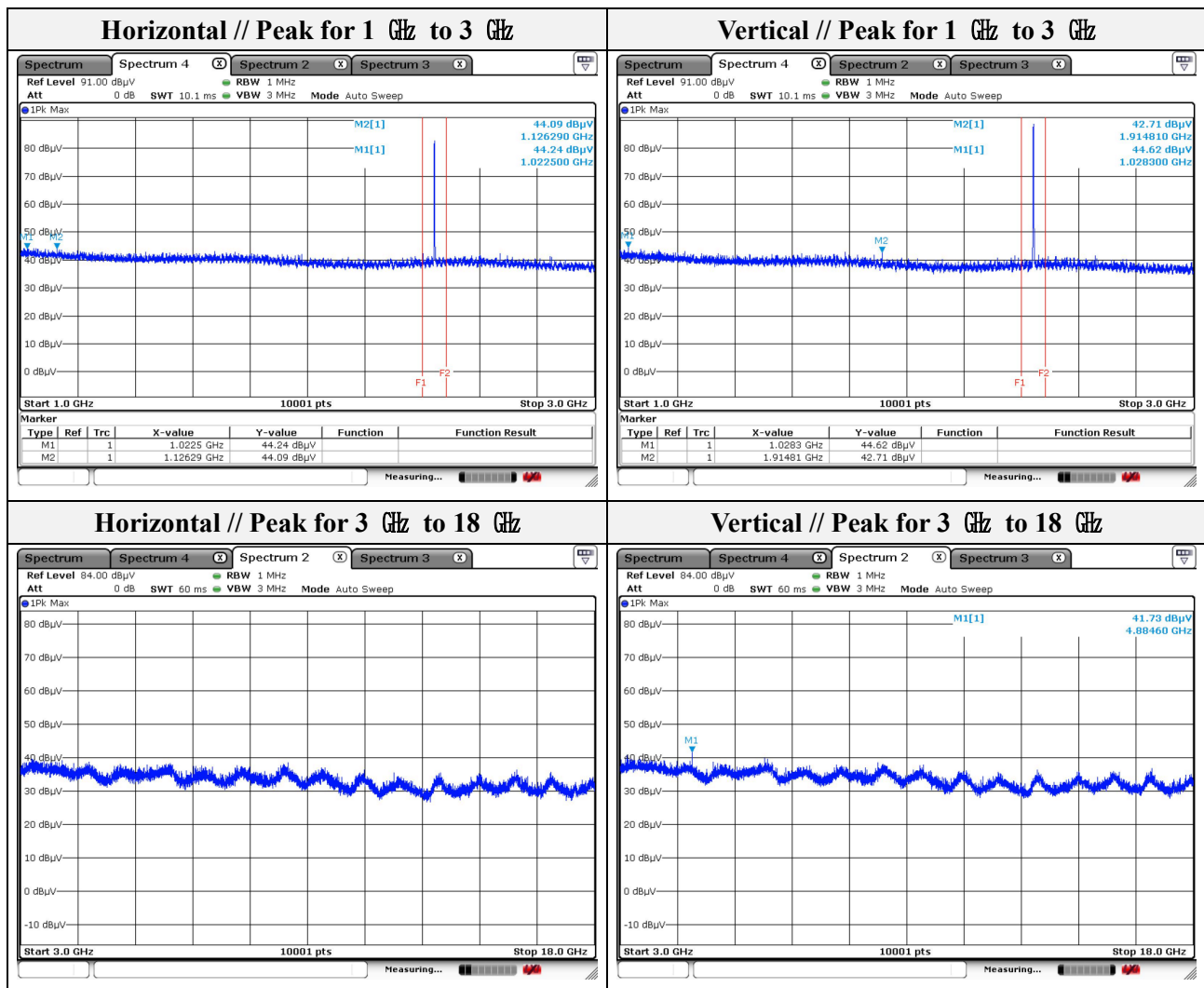
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Mode: BDR
Distance of measurement: 3 meter
Channel: 40

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1 022.50	44.24	Peak	H	-11.04	-	33.20	74.00	40.80
1 028.30	44.62	Peak	V	-11.01	-	33.61	74.00	40.39
1 126.29	44.09	Peak	H	-10.49	-	33.60	74.00	40.40
1 914.81	42.71	Peak	V	-5.14	-	37.57	74.00	36.43
4 884.60	41.73	Peak	V	5.44	-	47.17	74.00	26.83



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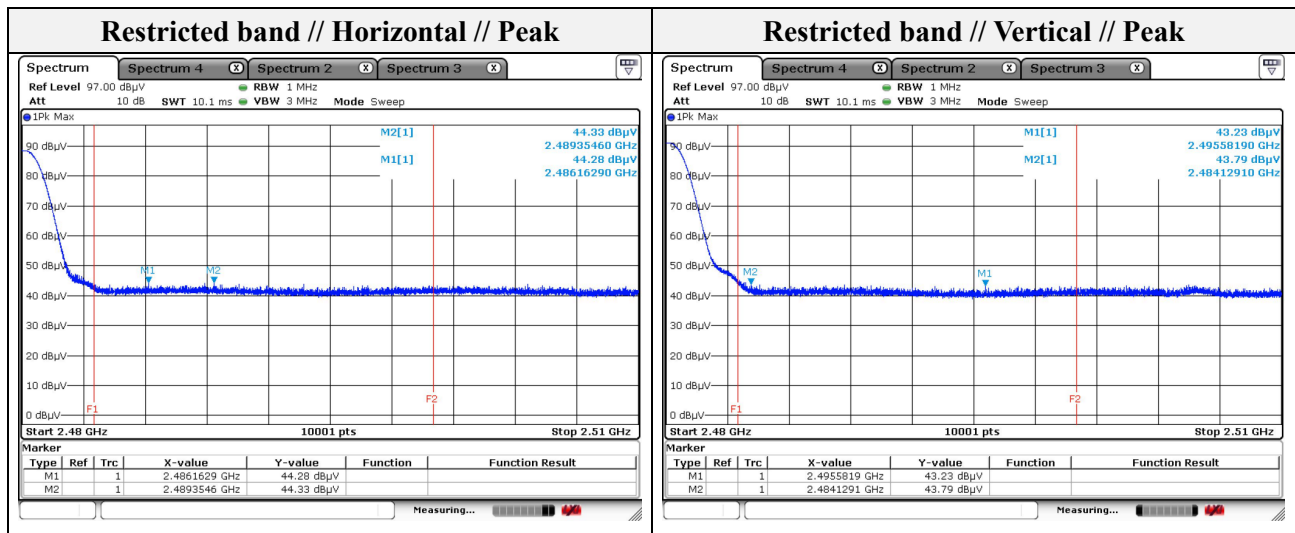
Mode: BDR
Transfer rate: 1 Mbps
Distance of measurement: 3 meter
Channel: 78

- Spurious

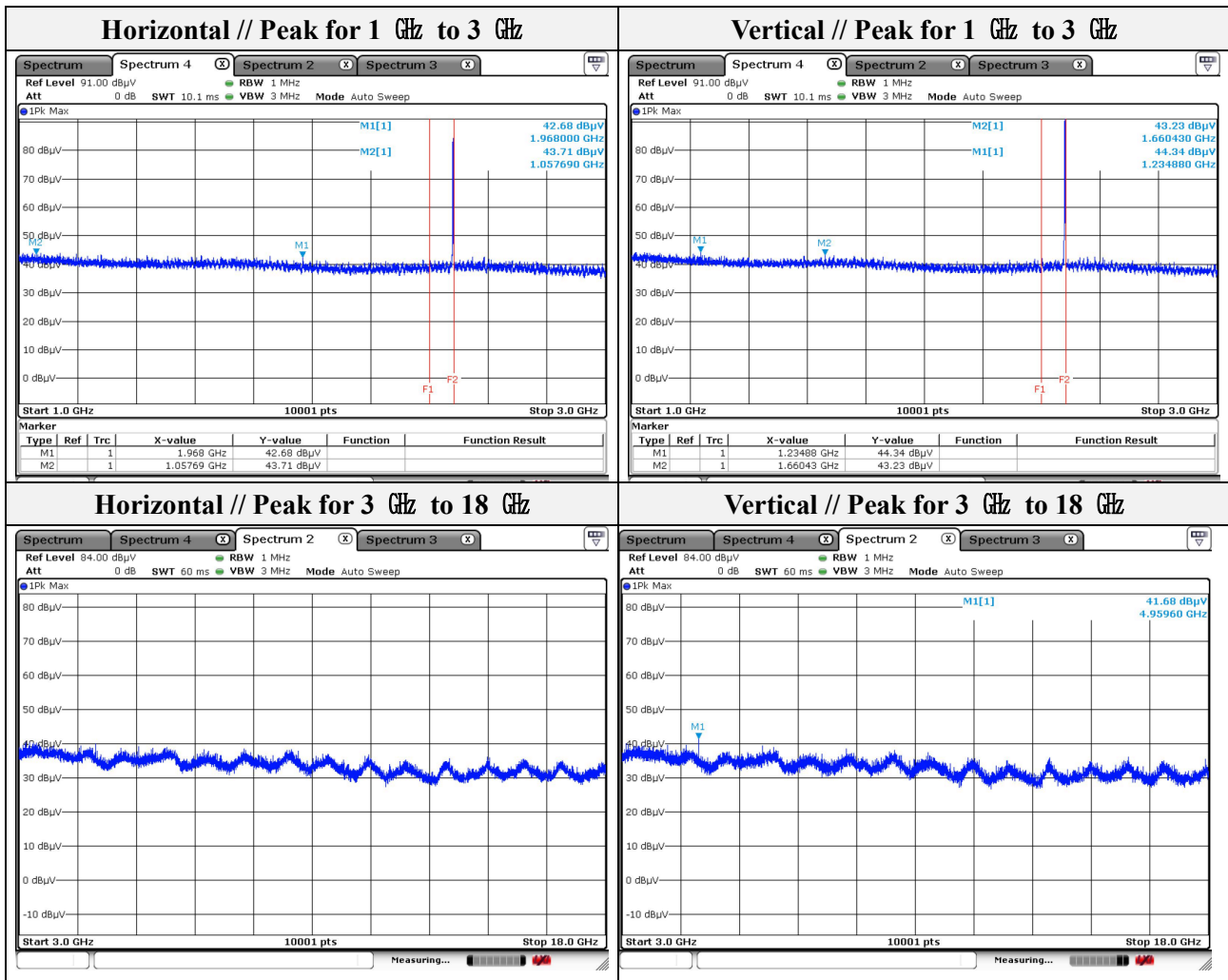
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1 057.69	43.71	Peak	H	-10.85	-	32.86	74.00	41.14
1 234.88	44.34	Peak	V	-9.91	-	34.43	74.00	39.57
1 660.43	43.23	Peak	V	-7.18	-	36.05	74.00	37.95
1 968.00	42.68	Peak	H	-4.69	-	37.99	74.00	36.01
4 959.60	41.68	Peak	V	5.99	-	47.67	74.00	26.33

- 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)
2 484.13	43.79	Peak	V	-2.40	-	41.39	74.00	32.61
2 486.16	44.28	Peak	H	-2.39	-	41.89	74.00	32.11
2 489.35	44.33	Peak	H	-2.38	-	41.95	74.00	32.05
2 495.58	43.23	Peak	V	-2.35	-	40.88	74.00	33.12



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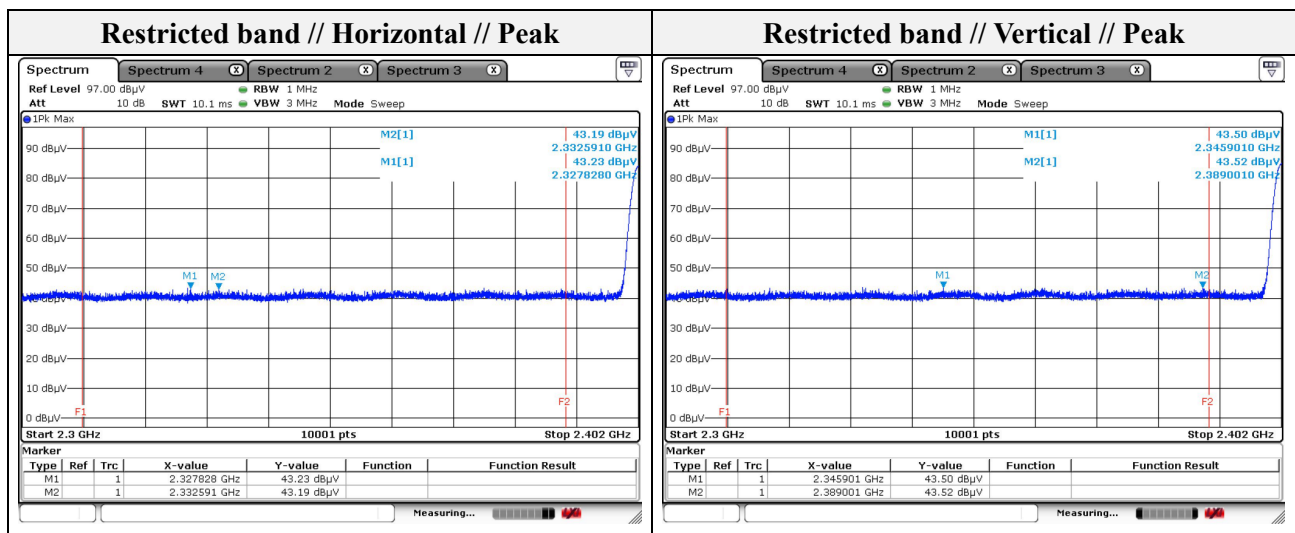
Mode: EDR
Transfer rate: 3 Mbps(Worst case)
Distance of measurement: 3 meter
Channel: 00

- Spurious

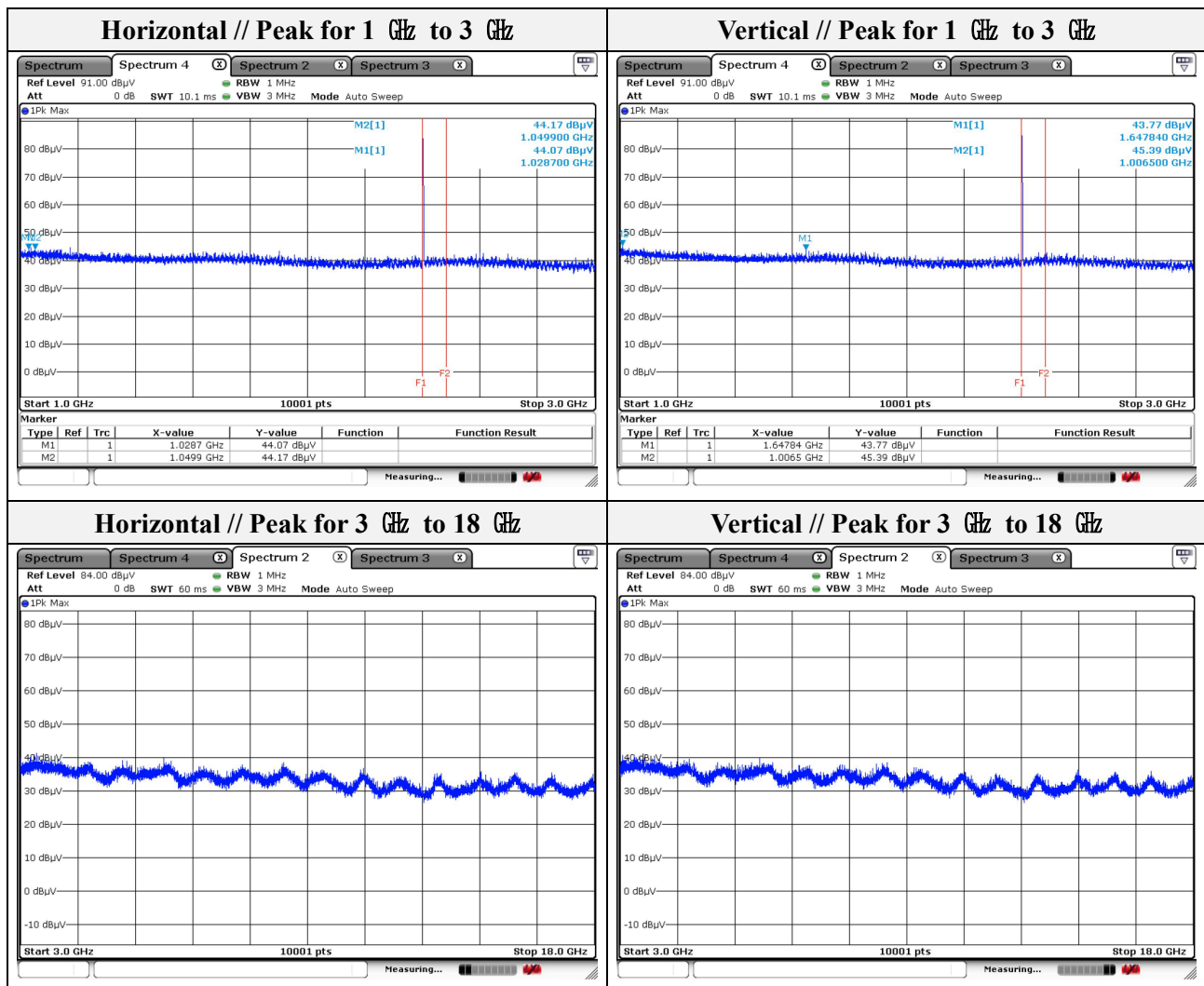
Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1 006.50	45.39	Peak	V	-11.13	-	34.26	74.00	39.74
1 028.70	44.07	Peak	H	-11.01	-	33.06	74.00	40.94
1 049.90	44.17	Peak	H	-10.90	-	33.27	74.00	40.73
1 647.84	43.77	Peak	V	-7.28	-	36.49	74.00	37.51

- 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)
2 327.83	43.23	Peak	H	-3.03	-	40.20	74.00	33.80
2 332.59	43.19	Peak	H	-3.01	-	40.18	74.00	33.82
2 345.90	43.50	Peak	V	-2.96	-	40.54	74.00	33.46
2 389.00	43.52	Peak	V	-2.77	-	40.75	74.00	33.25



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