

Annex 1: Measurement diagrams to Test Report 19-1-0069003T32a-C1-A1

Number of pages:	7	Date of Report:	2020-Nov-19
Testing company:	CETECOM GmbH Im Teelbruch 116 45219 Essen Germany Tel. + 49 (0) 20 54 / 95 19-0 Fax: + 49 (0) 20 54 / 95 19-150	Applicant:	WAGO KONTAKTTECHNIK GMBH & CO. KG
Test Object / Tested Device(s):	8DIO FLD PN DC 24V 2.0A SlimLine 765-1104/0100-0000 WAGO I/O System Field		
FCC ID:	2AKUE-SLIMLINE	IC:	22322-SLIMLINE
Testing has been carried out in accordance with:	FCC Regulations PART 15—RADIO FREQUENCY DEVICES Subpart B Radiated emissions in the frequency range 30 to 1000 MHz Radiated emissions in the frequency range 1 to 6 GHz Radiated emissions in the frequency range 1 to 12.75 GHz		

1 Measurement diagrams

Diagram No. 3.01 FCC

1.1 Radiated emissions in the frequency range 30 to 1000 MHz

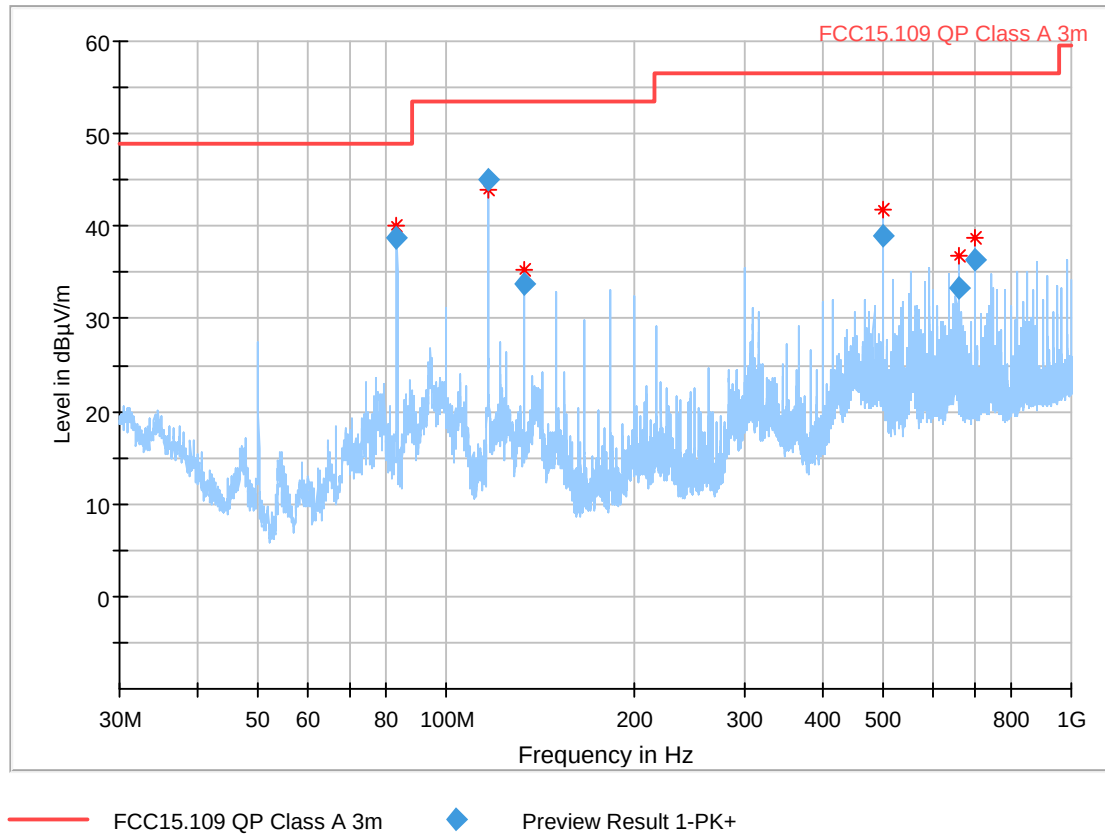
Test Description:	Electric Field Strength Measurement
Test Site & Location:	Semi Anechoic Chamber 2 (SAC5) with 3m measurement distance
Version of Testsoftware:	EMC32 V10.0.0
Test Specification:	FCC15.109, class A; RSS-Gen.: Issue 4
Operating Mode:	Continuous Data transmission between the Test plate and EUT. Permanent Bluetooth connection (Mobile Phone + EUT).
Environmental conditions:	Humidity: 49 %; Temperature: 21.6 °C; Air pressure: 996 hPa
Operator:	AUe
Comments:	-

EUT Information

Manufacturer:	WAGO Kontakttechnik GmbH & Co. KG
EuT:	8DIO FLD PN DC 24V 2.0A – SlimLine 765-1104/0100-0000
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HW Version:	Rev. 4
SW Version:	V1.0.2.0
Firmware:	BT-FW: V1.2.0.0

Full Spectrum

Full Spectrum



Preliminary Result (SAC 3m distance)

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
83.332000	38.75	49.00	10.25	120.000	119.0	V	-18.0	11.2
116.664000	45.12	53.50	8.38	120.000	104.0	V	311.0	12.5
133.332000	33.75	53.50	19.75	120.000	100.0	V	197.0	11.2
499.996000	39.07	56.50	17.43	120.000	127.0	V	185.0	17.5
662.500000	33.34	56.50	23.16	120.000	121.0	H	317.0	19.9
699.996000	36.47	56.50	20.03	120.000	104.0	V	60.0	20.5

Final Result (OATS – 10 m distance)

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
83.332000	32.52	39.00	6.48	120.000	206.0	V	24.0	11.5
116.664000	39.70	43.50	3.80	120.000	172.0	V	-144.0	16.8
133.332000	24.05	43.50	19.45	120.000	105.0	V	-174.0	18.6
499.990000	19.36	46.40	27.04	120.000	227.0	V	127.0	25.3
662.500000	22.31	46.40	24.09	120.000	175.0	H	-145.0	27.9
699.996000	23.76	46.40	22.64	120.000	165.0	V	53.0	29.0

Diagram No. 4.01 FCC

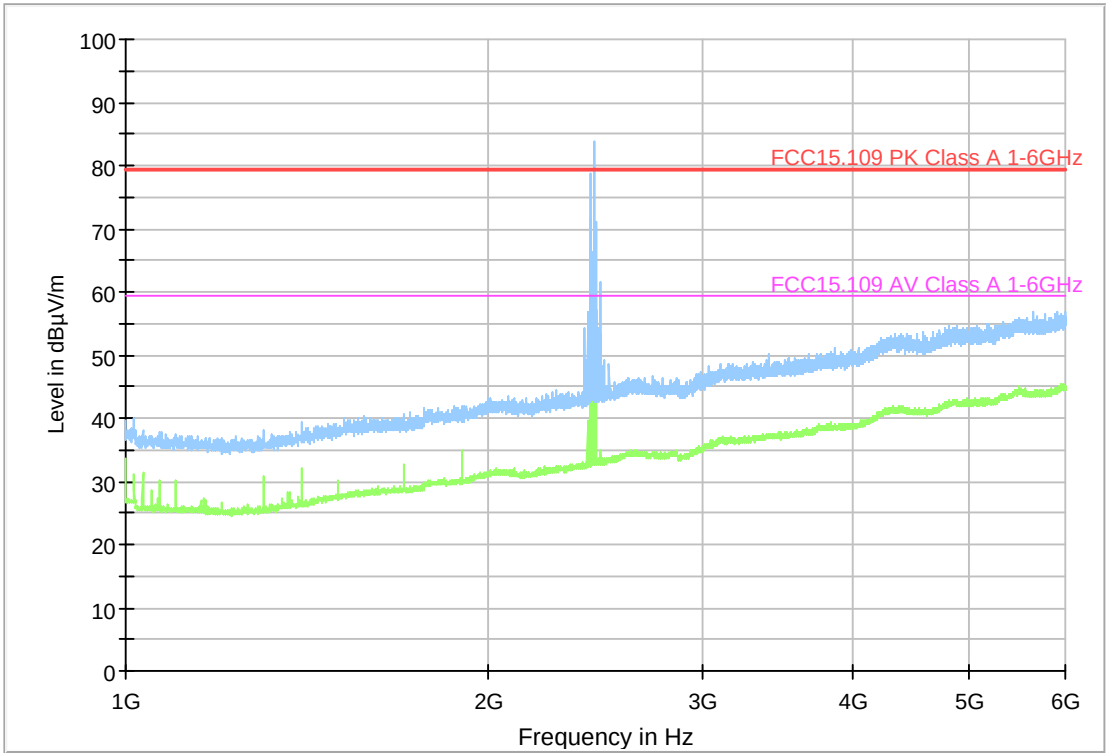
1.2 Radiated emissions in the frequency range 1 to 6 GHz

Test Description:	Electric Field Strength Measurement
Test Site & Location:	Semi Anechoic Chamber 2 (SAC5) with 3m measurement distance
Version of Testsoftware:	EMC32 V10.0.0
Test Specification:	FCC15.109, class A; RSS-Gen.: Issue 4
Operating Mode:	Continuous Data transmission between the Test plate and EUT. Permanent Bluetooth connection (Mobile Phone + EUT).
Environmental conditions:	Humidity: 49 %; Temperature: 21.6 °C; Air pressure: 996 hPa
Operator:	AUe
Comments:	-

EUT Information

Manufacturer:	WAGO Kontakttechnik GmbH & Co. KG
EuT:	8DIO FLD PN DC 24V 2.0A – SlimLine 765-1104/0100-0000
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HW Version:	Rev. 4
SW Version:	V1.0.2.0
Firmware:	BT-FW: V1.2.0.0

Full Spectrum



- * Preview Result 2-AVG
- FCC15.109 AV Class A 1-6GHz
- FCC15B_RSS_Gen_PK
- FCC15.109 PK Class A 1-6GHz
- Critical_Freqs PK+

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/)
No conspicuous frequencies detected – Margin to limit > 10 dB (Peak/Average)										

- The Peak at 2.4 GHz is a wanted frequency for Bluetooth signalling.

Diagram No. 4.02 FCC

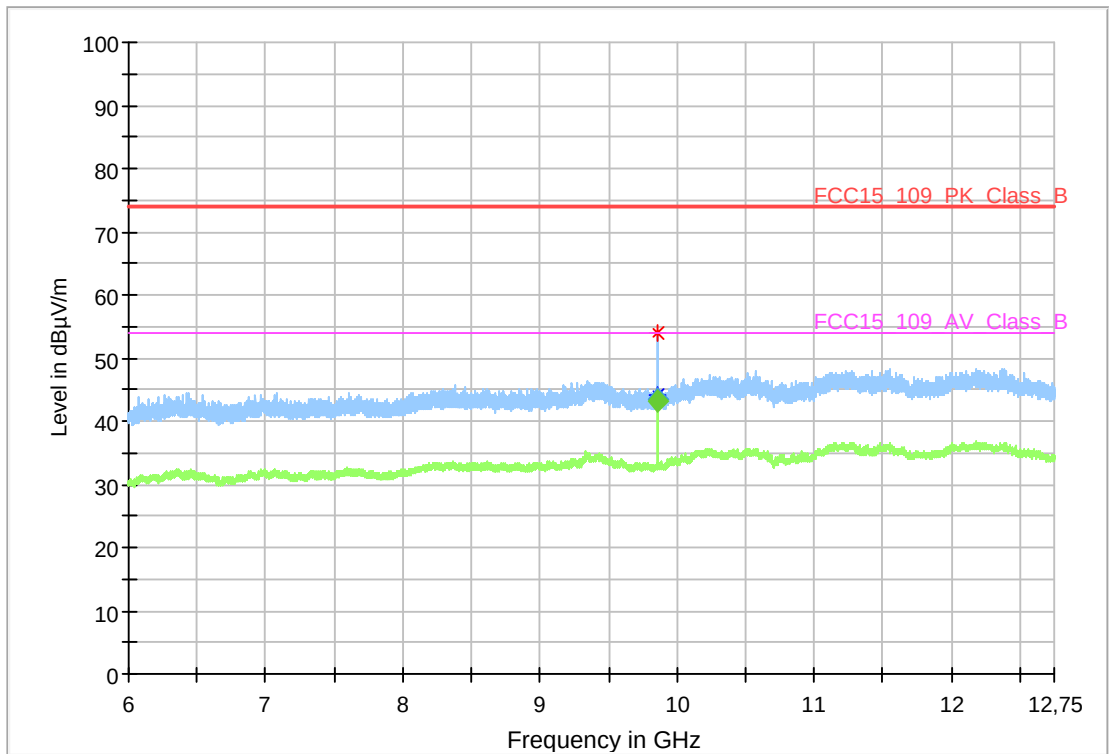
1.3 Radiated emissions in the frequency range 6 to 12.75 GHz

Test Description:	Electric Field Strength Measurement
Test Site & Location:	Semi Anechoic Chamber 2 (SAC5) with 3m measurement distance
Version of Testsoftware:	EMC32 V10.0.0
Test Specification:	FCC15.109, class A; RSS-Gen.: Issue 4
Operating Mode:	Continuous Data transmission between the Test plate and EUT. Permanent Bluetooth connection (Mobile Phone + EUT).
Environmental conditions:	Humidity: 49 %; Temperature: 21.6 °C; Air pressure: 996 hPa
Operator:	AUe
Comments:	-

EUT Information

Manufacturer:	WAGO Kontakttechnik GmbH & Co. KG
EuT:	8DIO FLD PN DC 24V 2.0A – SlimLine 765-1104/0100-0000
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HW Version:	Rev. 4
SW Version:	V1.0.2.0
Firmware:	BT-FW: V1.2.0.0

Full Spectrum



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Preview Result 2-AVG
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Preview Result 1-PK+
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Critical_Freqs AVG
- 

Critical_Freqs PK+
- 

FCC15_109_PK_Class_B
- 

FCC15_109_AV_Class_B
- 

Final_Result PK+
- 

Final_Result AVG

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/
No conspicuous frequencies detected – Margin to limit > 10 dB (Peak/Average)										

End Of Annex 1