

Annex 1-C1: Measurement diagrams to
TEST REPORT
No.: 18-1-0029001T02a-C1

According to:

Title 47 - FCC Regulations
Part 15, Subpart B
§15.107, §15.109

for

ELOKON GmbH
ELOshield Warning System

Pedestrian Module

FCC-ID: 2ASP7-PEDM-V01

Laboratory Accreditation
 Deutsche Akkreditierungsstelle D-PL-12047-01-01 D-PL-12047-01-03 D-PL-12047-01-04
accredited according to DIN EN ISO/IEC 17025
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1. Measurement diagrams

1.1. Conducted emissions on AC Power lines

Diagram 1.01

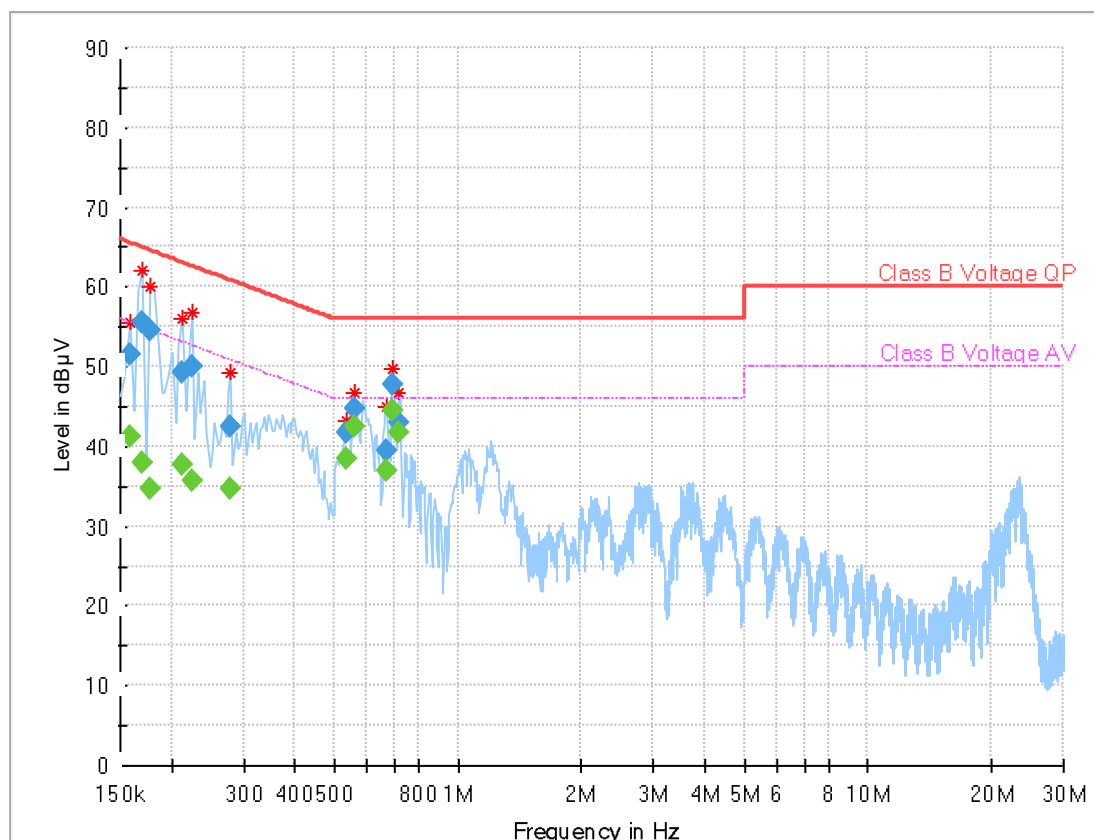
Common Information

Test Description:	Conducted Voltage Measurement Class B
Test Site & Location:	Conducted Emission, CETECOM GmbH Essen
Test Software:	R&S EMC32 v9.15
Test Specification:	FCC 15.107
Operating Mode:	Verification Module - Relay On/Off - UWB Off
Measured on line:	N/L1
Diagram details:	Shows the peak values as a sum of measured ports in maxhold mode
Environmental Conditions:	Humidity: 45% rH; Temperature: 20° C
Operator:	JVo
Comments:	120 V AC

EUT Information

Manufacturer:	ELOKON GmbH
Model:	Verification Module
Type:	ELOshield system, badge verification
EUT:	100874
HW version:	1.1
SW version:	1.1.0.1
Config:	Elo Shield Manager 1.1.9.8
Serial number:	17080002
Connected Interfaces:	120 V AC, USB cable
Power Supply:	120 V AC
Comments:	Relay On/Off, UWB Off

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)
0.157813	---	41.13	55.58
0.157813	51.44	---	65.58
0.169531	---	38.05	54.98
0.169531	55.61	---	64.98
0.177344	54.48	---	64.61
0.177344	---	34.64	54.61
0.212500	49.23	---	63.11
0.212500	---	37.66	53.11
0.224219	49.91	---	62.66
0.224219	---	35.74	52.66
0.278906	42.47	---	60.85
0.278906	---	34.66	50.85
0.532813	---	38.41	46.00
0.532813	41.70	---	56.00
0.556250	---	42.39	46.00
0.556250	44.81	---	56.00
0.669531	---	36.97	46.00
0.669531	39.45	---	56.00
0.692969	---	44.51	46.00
0.692969	47.73	---	56.00
0.720313	---	41.66	46.00
0.720313	42.92	---	56.00

1.2. Radiated emissions in the frequency range 30 to 1000MHz

Diagram 3.01

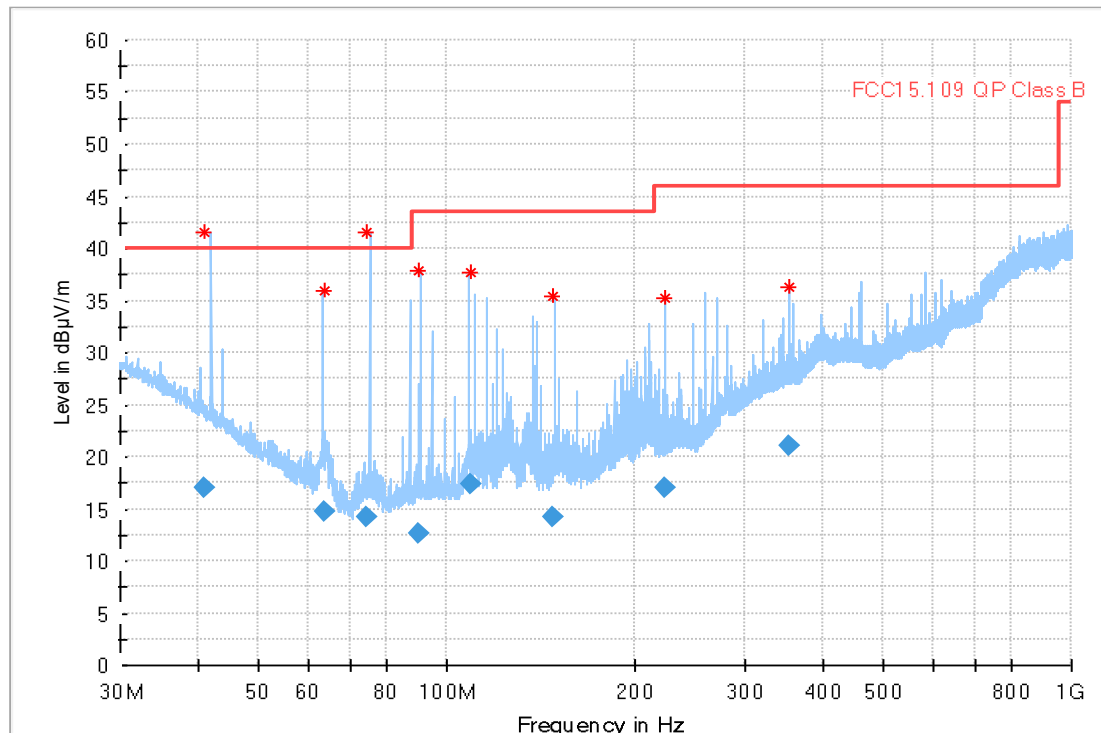
Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-No. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Test software:	EMC32 V9.25.0
Distance correction:	not used
Used filter:	not used
Technical Data:	please see page 2 for detailed data of measurement setup
Test specification.:	FCC 15.109 Class B
Operator:	MKh
Operating Mode:	Proximity Sensor
Power during tests:	120V AC, 60 Hz
Environmental Conditions.:	Humidity : 53.5% rH; Temperature: 24.3° C
EUT Setup:	Laying
Verdict:	Passed

EUT Information

Manufacturer:	ELOKON GmbH
Model:	Pedestrian Module
Type:	ELOshield Personal Warning System
EUT:	100587
HW version:	1.1
SW version:	1.1.0.5
SVN:	-
Config:	EloShield Manager 1.1.9.8
Serial number:	18070560
Connected Interfaces:	USB Charger, USB Cable
Power Supply:	3.7 V Li-ion Battery
Comments:	Spectrum Test, mod 3, UWB ON

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dB μ V /m)	Limit (dB μ V /m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
40.980000	17.03	40.00	22.97	120.000	237.0	V	337.0	16.7
63.840000	14.70	40.00	25.30	120.000	137.0	V	174.0	7.6
74.250000	14.27	40.00	25.73	120.000	173.0	V	146.0	6.7
90.130000	12.65	43.50	30.85	120.000	336.0	V	149.0	8.2
109.230000	17.31	43.50	26.19	120.000	139.0	V	197.0	8.2
148.110000	14.16	43.50	29.34	120.000	194.0	V	353.0	8.6
223.320000	17.07	46.00	28.93	120.000	162.0	H	134.0	12.5
353.720000	21.07	46.00	24.93	120.000	114.0	H	297.0	16.7

1.3. Radiated emissions in the frequency range above 1000MHz

Diagram 4.01

Common Information

Test Description:	Radiated Filed Strength Emission
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 15.109, class B
Operating Mode:	--
Equipment Class:	Class B
Environmental Conditions:	Humidity: 40% rH; Temperature: 20° C
Operator:	MKh

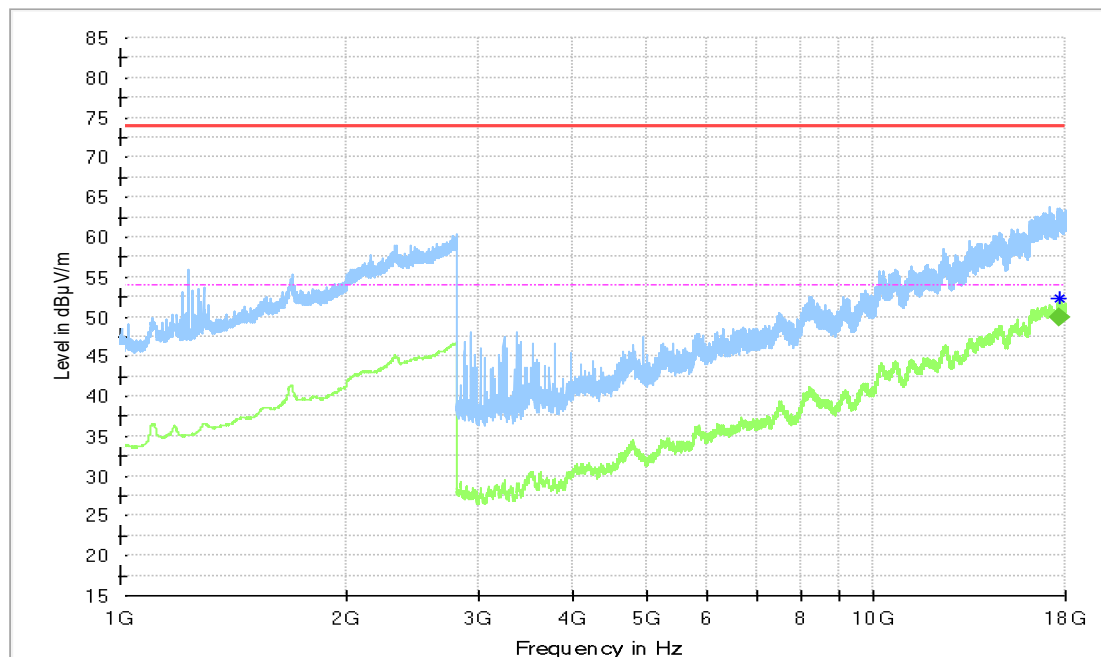
EUT Information

Manufacturer:	ELOKON GmbH
Model:	Pedestrian Module
Type:	ELOshield Personal Warning System

EUT:	100587
HW version:	1.1
SW version:	1.1.0.5
SVN:	-
Config:	Elo Shield Manager 1.1.9.8
Serial number:	18070560
Connected Interfaces:	USB Charger, USB Cable
Power Supply:	3.7 V Li-ion Battery

Full Spectrum

Full Spectrum



Final Result

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Pol	Azimuth (deg)	Elevation (deg)	Correction (dB)
17655.460000	49.85	54.00	4.15	100.0	V	358.0	90.0	26.0