

Annex 1: Measurement diagrams to
TEST REPORT
No.: 2-20773496c/09

According to:
FCC/IC Regulations

Part 15.107 Un-Intentional radiators
Part 15.109 Un-Intentional radiators
Part 15.207 Intentional radiators
RSS-Gen., Issue 2
RSS-132/RSS-133

for

IREX Technologies

E-Reader with integrated Option PCI Express Mini Card DR800SG
contains FCC ID: NCMOMO0491-I
contains IC ID: 2734A-MO0491

Laboratory Accreditation and Listings			
 Deutscher Akkreditierungs Rat DAT-P176/94-02	 Reg. No.: 99538 MRA US-EU 0003	 Industry Canada Reg. No.: 3462D-1 3462D-2	 Reg. No.: R-2665, R-2666 C-2914, T-339
accredited according to DIN EN ISO/IEC 17025			
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Table of contents

1. CONDUCTED EMISSIONS ON AC-MAINS.....	3
2. RADIATED EMISSIONS, 30MHZ – 1GHZ	19
3. RADIATED EMISSIONS ABOVE 1GHZ	27

1. Conducted emissions on AC-mains

Diagram No. 01.10

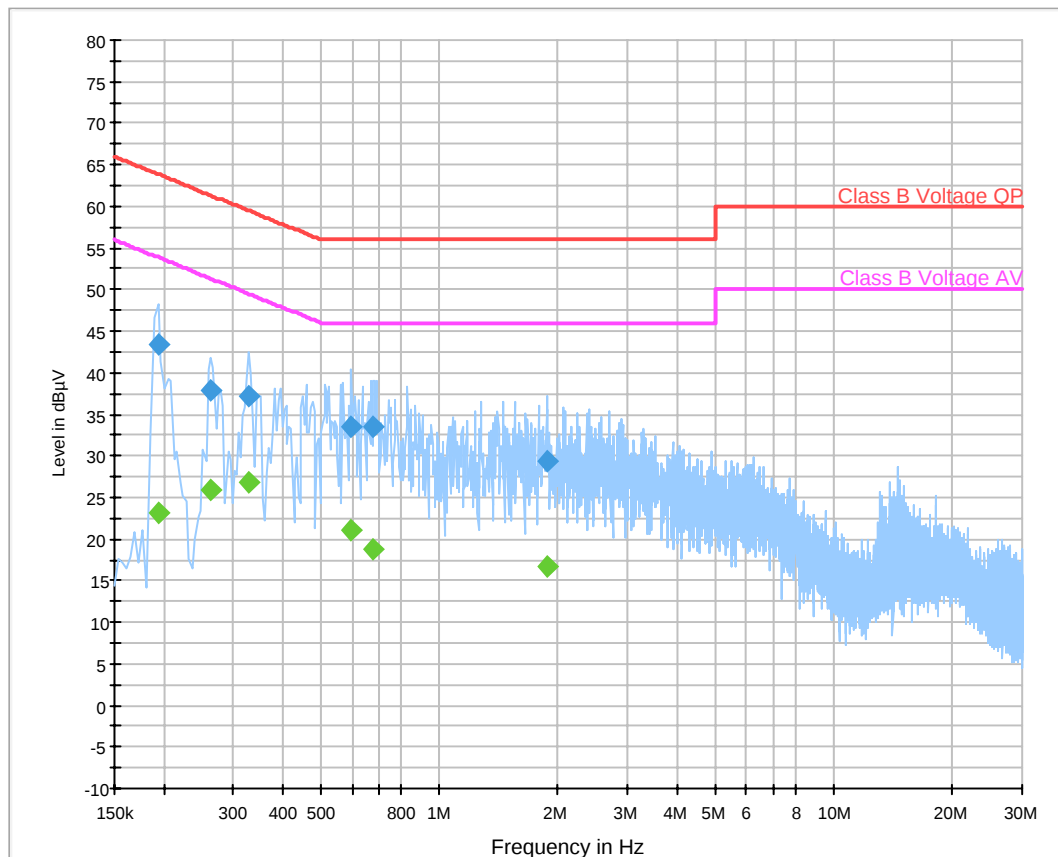
Common Information

Test Description:	Conducted Voltage Measurement Class B
Test specification:	FCC 15.207,
Measurement Receiver:	R&S ESCS 30, Ser.-Nr. 100160, Ref.-Nr. 377
Scan Mode:	EMC 32, automatic scan mode, repetitive scan, maxhold mode
Diagram:	Shows the peak values as a sum of measured ports (N+L1) in maxhold mode
Operators name:	Lor
Operating Conditions:	GPRS 1900 GSMK
Measurement on line:	Mains AC L1 and N
Power during the test :	110 V AC 60 Hz

EUT Information

Description:	
EUT Name:	DR800SG + USB Charger AC/DC
Manufacturer:	IREX
Serial Number:	#15901

01_Class B_Voltage_PK_QPAV_N_L1



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.192969	43.3	1000.0	9.000	GN	N	0.0	20.6	63.9
0.263281	37.8	1000.0	9.000	GN	L1	0.0	23.5	61.3
0.329688	37.3	1000.0	9.000	GN	L1	0.0	22.2	59.5
0.599219	33.5	1000.0	9.000	GN	L1	0.0	22.5	56.0
0.681250	33.4	1000.0	9.000	GN	L1	0.0	22.6	56.0
1.880469	29.5	1000.0	9.000	GN	L1	0.0	26.5	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.192969	23.2	1000.0	9.000	GN	N	0.0	30.7	53.9
0.263281	25.9	1000.0	9.000	GN	L1	0.0	25.4	51.3
0.329688	26.7	1000.0	9.000	GN	L1	0.0	22.8	49.5
0.599219	21.0	1000.0	9.000	GN	L1	0.0	25.0	46.0
0.681250	18.7	1000.0	9.000	GN	L1	0.0	27.3	46.0
1.880469	16.7	1000.0	9.000	GN	L1	0.0	29.3	46.0

Templates and settings

EMI Auto Test Template: 01_Class B_Voltage_PK_QPAV_N_L1

Hardware Setup: ESH2-Z5
 Measurement Type: 4 Line LISN
 Frequency Range: 150 kHz - 30 MHz
 Graphics Level Range: -10 dBμV - 80 dBμV

Preview Measurements:
 Scan Test Template: 02_Class B pre_PK_fast

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	MaxPeak	9 kHz	0,00005 s	Receiver

Data Reduction:
 Limit Line #1: Class B Voltage QP
 Limit Line #2: Class B Voltage AV
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 50 Subranges , Maxima per Subrange: 2
 Acceptance Offset: -13 dB
 Maximum Number of Results: 30
 After Data Reduction: Interactive data reduction

Final Measurements:
 Template for Single Meas.: 07_Class B fin AV QP

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	QuasiPeak; Average	9 kHz	1 s	Receiver

Report Settings:
 Report Template: Ctc_Standard_class_B
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Diagram No. 01.11

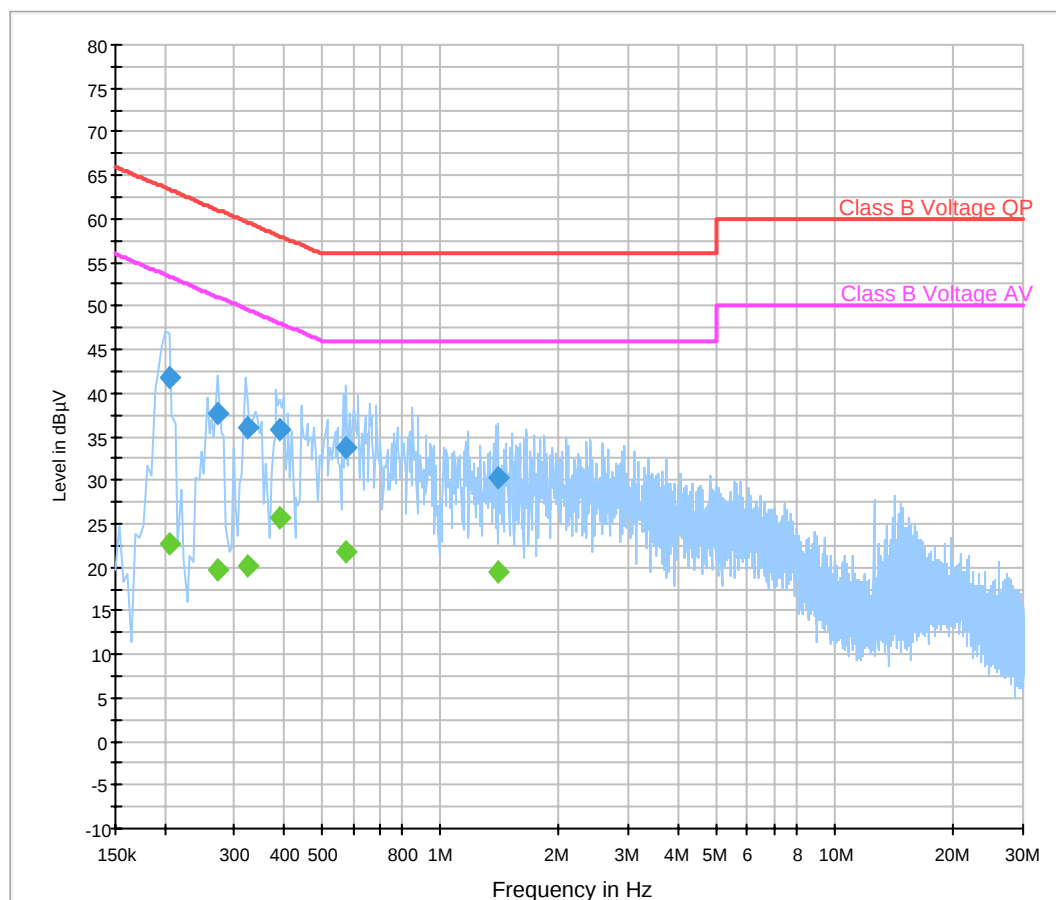
Common Information

Test Description:	Conducted Voltage Measurement Class B
Test specification:	FCC 15.207,
Measurement Receiver:	R&S ESCS 30, Ser.-Nr. 100160, Ref.-Nr. 377
Scan Mode:	EMC 32, automatic scan mode, repetitive scan, maxhold mode
Diagram:	Shows the peak values as a sum of measured ports (N+L1) in maxhold mode
Operators name:	Lor
Operating Conditions:	GPRS 1900 IDLE Mode
Measurement on line:	Mains AC L1 and N
Power during the test :	110 V AC 60 Hz

EUT Information

Description:	
EUT Name:	DR800SG + USB Charger AC/DC
Manufacturer:	IREX
Serial Number:	#15901

01_Class B_Voltage_PK_QPAV_N_L1



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.204688	41.8	1000.0	9.000	GN	N	0.0	21.6	63.4
0.271094	37.7	1000.0	9.000	GN	N	0.0	23.4	61.1
0.325781	36.0	1000.0	9.000	GN	N	0.0	23.6	59.6
0.392188	35.9	1000.0	9.000	GN	L1	0.0	22.2	58.0
0.575781	33.8	1000.0	9.000	GN	L1	0.0	22.2	56.0
1.400000	30.2	1000.0	9.000	GN	L1	0.0	25.8	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.204688	22.6	1000.0	9.000	GN	N	0.0	30.8	53.4
0.271094	19.7	1000.0	9.000	GN	N	0.0	31.4	51.1
0.325781	20.0	1000.0	9.000	GN	N	0.0	29.6	49.6
0.392188	25.7	1000.0	9.000	GN	L1	0.0	22.3	48.0
0.575781	21.8	1000.0	9.000	GN	L1	0.0	24.2	46.0
1.400000	19.5	1000.0	9.000	GN	L1	0.0	26.5	46.0

Templates and settings

EMI Auto Test Template: 01_Class B_Voltage_PK_QPAV_N_L1

Hardware Setup: ESH2-Z5
 Measurement Type: 4 Line LISN
 Frequency Range: 150 kHz - 30 MHz
 Graphics Level Range: -10 dBμV - 80 dBμV

Preview Measurements:
 Scan Test Template: 02_Class B pre_PK_fast

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	MaxPeak	9 kHz	0,00005 s	Receiver

Data Reduction:
 Limit Line #1: Class B Voltage QP
 Limit Line #2: Class B Voltage AV
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 50 Subranges , Maxima per Subrange: 2
 Acceptance Offset: -13 dB
 Maximum Number of Results: 30
 After Data Reduction: Interactive data reduction

Final Measurements:
 Template for Single Meas.: 07_Class B fin AV QP

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	QuasiPeak; Average	9 kHz	1 s	Receiver

Report Settings:
 Report Template: Ctc_Standard_class_B
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Diagram No. 1.14 Test

Common Information

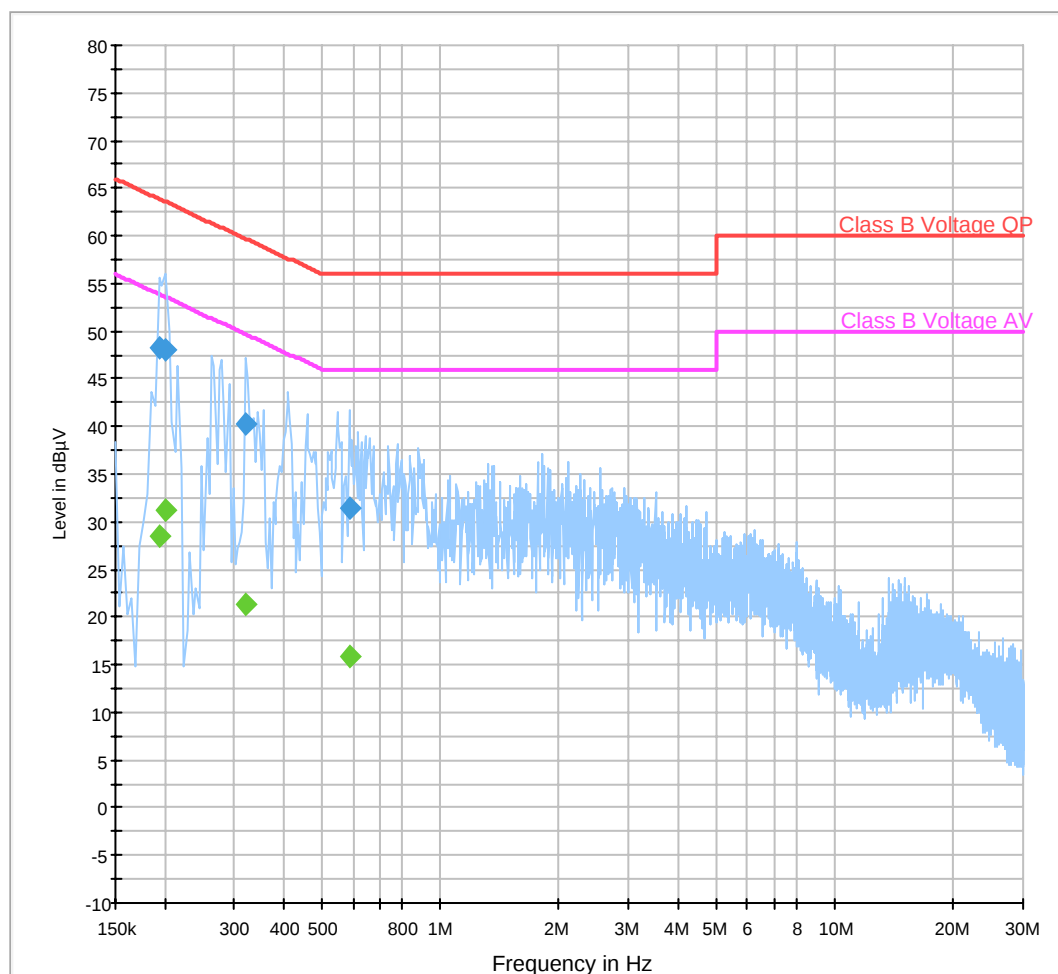
Test Description:	Conducted Voltage Measurement Class B
Test specification:	FCC 15.107
Measurement Receiver:	R&S ESCS 30, Ser.-Nr. 100160, Ref.-Nr. 377
Scan Mode:	EMC 32, automatic scan mode, repetitive scan, maxhold mode
Diagram:	Shows the peak values as a sum of measured ports (N+L1) in maxhold mode
Operator's name:	TAS

Operating Conditions:	FDD 2 RX
Measurement on line:	Mains AC L1 and N
Power during the test :	110 V AC 60 Hz
Comment 1:	

EUT Information

Description:	
EUT Name:	DR800SG + USB Charger AC/DC
Manufacturer:	IREX
Serial Number:	IMEI 3527

01_Class B_Voltage_PK_QPAV_N_L1



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Correction (dB)	Margin (dB)	Limit (dBμV)
0.192969	48.2	1000.0	9.000	GN	L1	0.0	15.7	63.9
0.200781	48.0	1000.0	9.000	GN	L1	0.0	15.6	63.6
0.321875	40.2	1000.0	9.000	GN	L1	0.0	19.5	59.7
0.587500	31.5	1000.0	9.000	GN	L1	0.0	24.5	56.0

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Correction (dB)	Margin (dB)	Limit (dBμV)
0.192969	28.5	1000.0	9.000	GN	L1	0.0	25.4	53.9
0.200781	31.3	1000.0	9.000	GN	L1	0.0	22.3	53.6
0.321875	21.3	1000.0	9.000	GN	L1	0.0	28.4	49.7
0.587500	15.9	1000.0	9.000	GN	L1	0.0	30.1	46.0

Templates and settings of EMC32 V8.30.0**EMI Auto Test Template: 01_Class B_Voltage_PK_QPAV_N_L1**

Hardware Setup: ESH2-Z5
 Measurement Type: 4 Line LISN
 Frequency Range: 150 kHz - 30 MHz
 Graphics Level Range: -10 dBμV - 80 dBμV

Preview Measurements:
 Scan Test Template: 02_Class B pre_PK_fast

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	MaxPeak	9 kHz	0,00005 s	Receiver

Data Reduction:
 Limit Line #1: Class B Voltage QP
 Limit Line #2: Class B Voltage AV
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 50 Subranges , Maxima per Subrange: 2
 Acceptance Offset: -13 dB
 Maximum Number of Results: 30
 After Data Reduction: Interactive data reduction

Final Measurements:
 Template for Single Meas.: 07_Class B fin AV QP

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	QuasiPeak; CAverage	9 kHz	1 s	Receiver

Report Settings:
 Report Template: Ctc_Standard_class_B
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Actions:
 Test stop
 Notify: "End of Test"

Diagram No. 1.15 Test

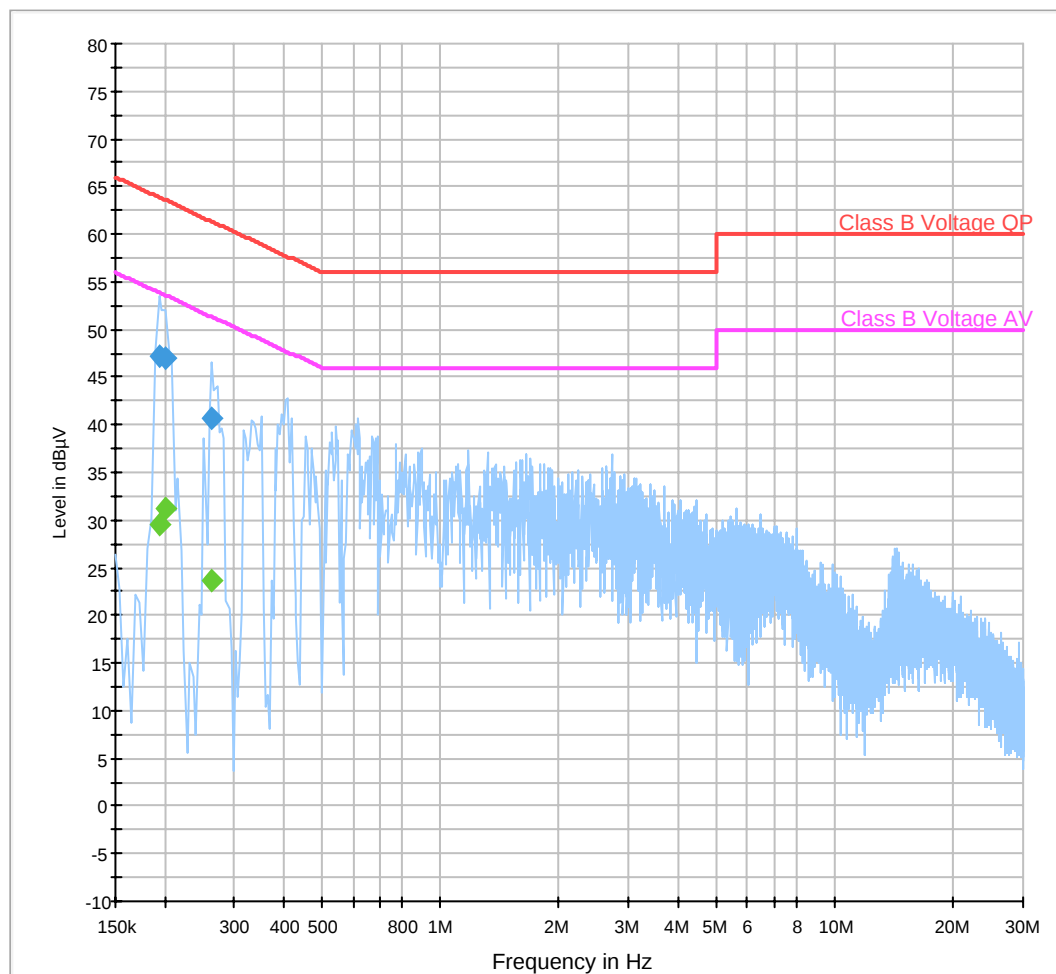
Common Information

Test Description:	Conducted Voltage Measurement Class B
Test specification:	FCC 15.107
Measurement Receiver:	R&S ESCS 30, Ser.-Nr. 100160, Ref.-Nr. 377
Scan Mode:	EMC 32, automatic scan mode, repetitive scan, maxhold mode
Diagram:	Shows the peak values as a sum of measured ports (N+L1) in maxhold mode
Operator's name:	TAS
Operating Conditions:	FDD 2 TX
Measurement on line:	Mains AC L1 and N
Power during the test :	110 V AC 60 Hz
Comment 1:	

EUT Information

Description:	
EUT Name:	DR800SG + USB Charger AC/DC
Manufacturer:	IREX
Serial Number:	IMEI 3527

01_Class B_Voltage_PK_QPAV_N_L1



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Correction (dB)	Margin (dB)	Limit (dBμV)
0.192969	47.2	1000.0	9.000	GN	L1	0.0	16.7	63.9
0.200781	47.0	1000.0	9.000	GN	L1	0.0	16.6	63.6
0.263281	40.7	1000.0	9.000	GN	L1	0.0	20.6	61.3

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Correction (dB)	Margin (dB)	Limit (dBμV)
0.192969	29.6	1000.0	9.000	GN	L1	0.0	24.3	53.9
0.200781	31.1	1000.0	9.000	GN	L1	0.0	22.5	53.6
0.263281	23.6	1000.0	9.000	GN	L1	0.0	27.7	51.3

Templates and settings of EMC32 V8.30.0**EMI Auto Test Template: 01_Class B_Voltage_PK_QPAV_N_L1**

Hardware Setup: ESH2-Z5
 Measurement Type: 4 Line LISN
 Frequency Range: 150 kHz - 30 MHz
 Graphics Level Range: -10 dBμV - 80 dBμV

Preview Measurements:
 Scan Test Template: 02_Class B pre_PK_fast

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	MaxPeak	9 kHz	0,00005 s	Receiver

Data Reduction:
 Limit Line #1: Class B Voltage QP
 Limit Line #2: Class B Voltage AV
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 50 Subranges , Maxima per Subrange: 2
 Acceptance Offset: -13 dB
 Maximum Number of Results: 30
 After Data Reduction: Interactive data reduction

Final Measurements:
 Template for Single Meas.: 07_Class B fin AV QP

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	QuasiPeak; CAverage	9 kHz	1 s	Receiver

Report Settings:
 Report Template: Ctc_Standard_class_B
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Actions:
 Test stop
 Notify: "End of Test"

Diagram No. 1.16 Test

Common Information

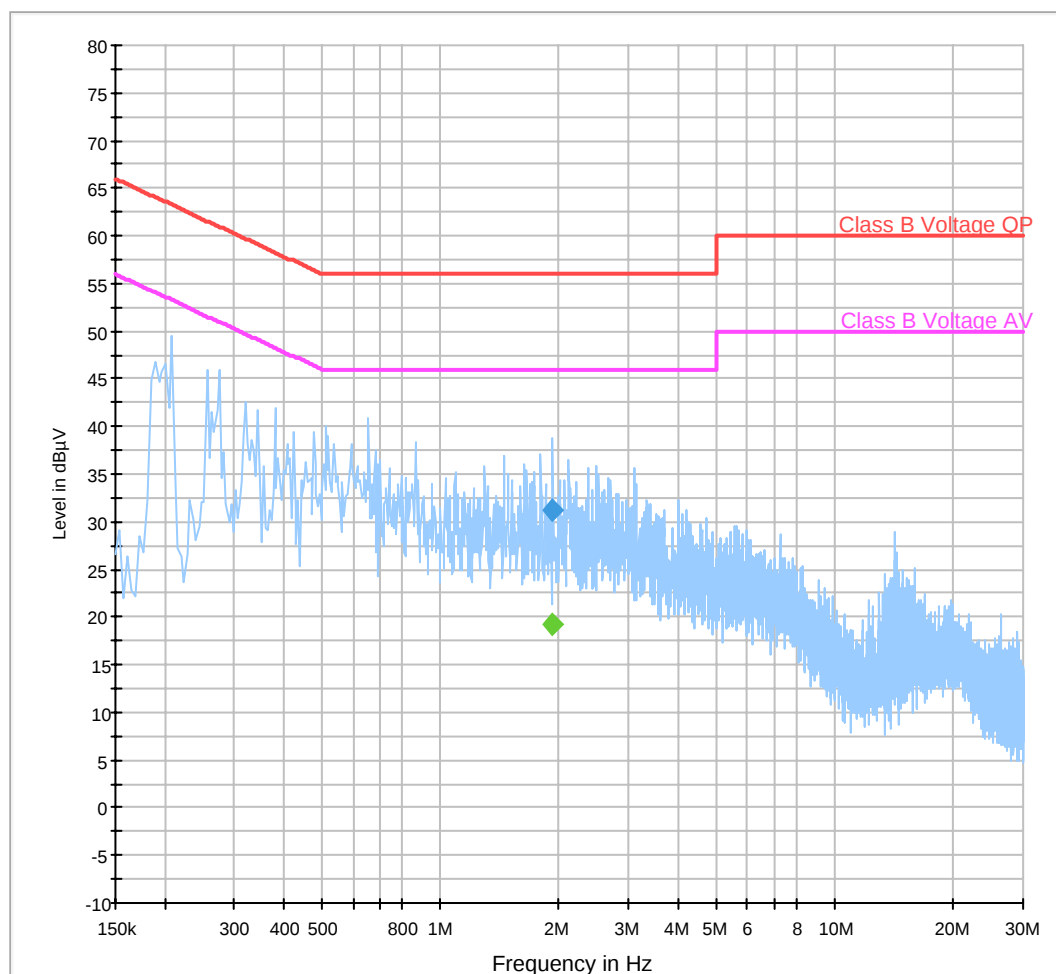
Test Description:	Conducted Voltage Measurement Class B
Test specification:	FCC 15.107
Measurement Receiver:	R&S ESCS 30, Ser.-Nr. 100160, Ref.-Nr. 377
Scan Mode:	EMC 32, automatic scan mode, repetitive scan, maxhold mode
Diagram:	Shows the peak values as a sum of measured ports (N+L1) in maxhold mode
Operators name:	TAS

Operating Conditions:	FDD 5 RX
Measurement on line:	Mains AC L1 and N
Power during the test :	110 V AC 60 Hz
Comment 1:	

EUT Information

Description:	
EUT Name:	DR800SG + USB Charger AC/DC
Manufacturer:	IREX
Serial Number:	IMEI 3527

01_Class B_Voltage_PK_QPAV_N_L1



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Correction (dB)	Margin (dB)	Limit (dBμV)
1.931250	31.1	1000.0	9.000	GN	N	0.0	24.9	56.0

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Correction (dB)	Margin (dB)	Limit (dBμV)
1.931250	19.2	1000.0	9.000	GN	N	0.0	26.8	46.0

Templates and settings of EMC32 V8.30.0**EMI Auto Test Template: 01_Class B_Voltage_PK_QPAV_N_L1**

Hardware Setup: ESH2-Z5
 Measurement Type: 4 Line LISN
 Frequency Range: 150 kHz - 30 MHz
 Graphics Level Range: -10 dBμV - 80 dBμV

Preview Measurements:
 Scan Test Template: 02_Class B_pre_PK_fast

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	MaxPeak	9 kHz	0,00005 s	Receiver

Data Reduction:
 Limit Line #1: Class B Voltage QP
 Limit Line #2: Class B Voltage AV
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 50 Subranges , Maxima per Subrange: 2
 Acceptance Offset: -13 dB
 Maximum Number of Results: 30
 After Data Reduction: Interactive data reduction

Final Measurements:
 Template for Single Meas.: 07_Class B fin AV QP

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	QuasiPeak; CAverage	9 kHz	1 s	Receiver

Report Settings:
 Report Template: Ctc_Standard_class_B
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Actions:
 Test stop
 Notify: "End of Test"

Diagram No. 1.17

Common Information

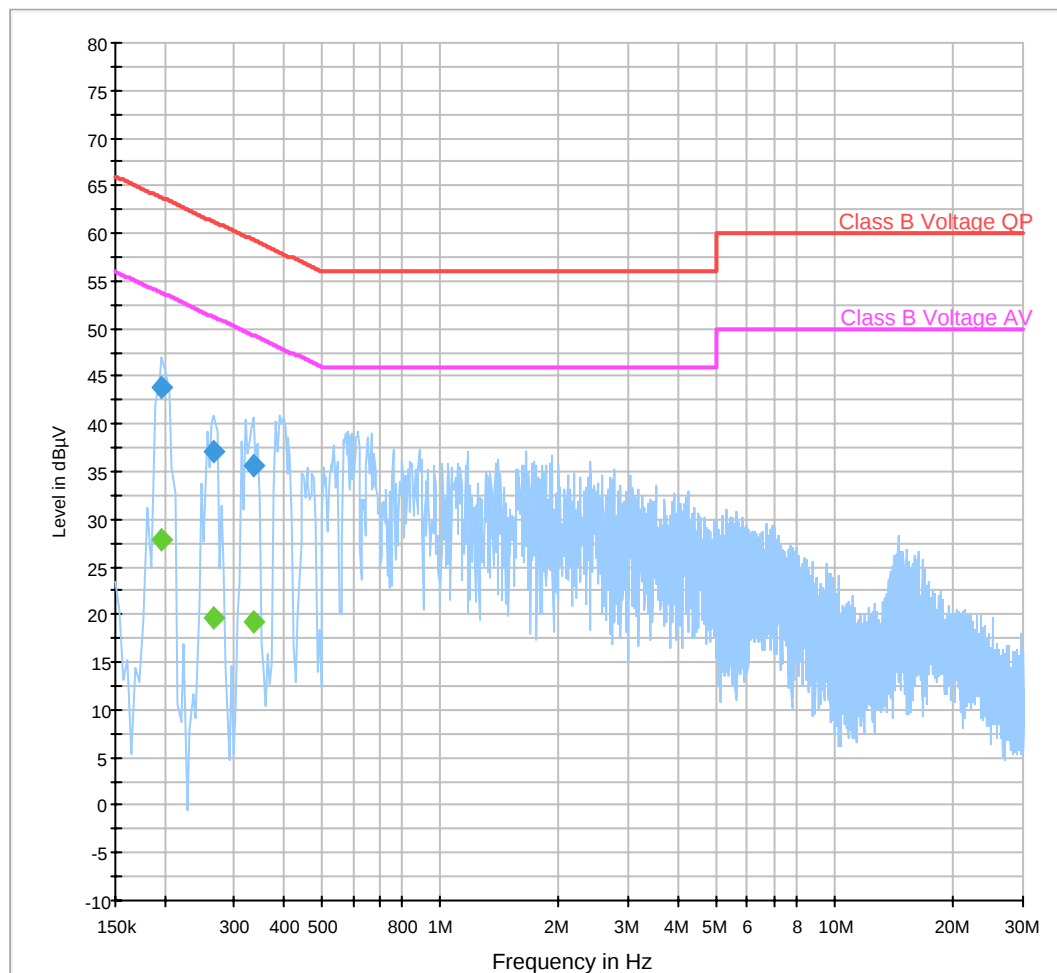
Test Description:	Conducted Voltage Measurement Class B
Test specification:	FCC 15.107
Measurement Receiver:	R&S ESCS 30, Ser.-Nr. 100160, Ref.-Nr. 377
Scan Mode:	EMC 32, automatic scan mode, repetitive scan, maxhold mode
Diagram:	Shows the peak values as a sum of measured ports (N+L1) in maxhold mode
Operator's name:	

Operating Conditions:	FDD 5 TX
Measurement on line:	Mains AC L1 and N
Power during the test :	110 V AC 60 Hz
Comment 1:	

EUT Information

Description:	
EUT Name:	DR800SG + USB Charger AC/DC
Manufacturer:	IREX
Serial Number:	IMEI 3527

01_Class B_Voltage_PK_QPAV_N_L1



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Correction (dB)	Margin (dB)	Limit (dBμV)
0.196875	43.9	1000.0	9.000	GN	L1	0.0	19.8	63.7
0.267188	37.1	1000.0	9.000	GN	L1	0.0	24.2	61.2
0.337500	35.7	1000.0	9.000	GN	L1	0.0	23.6	59.3

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Correction (dB)	Margin (dB)	Limit (dBμV)
0.196875	28.0	1000.0	9.000	GN	L1	0.0	25.7	53.7
0.267188	19.6	1000.0	9.000	GN	L1	0.0	31.6	51.2
0.337500	19.3	1000.0	9.000	GN	L1	0.0	30.0	49.3

Templates and settings of EMC32 V8.30.0**EMI Auto Test Template: 01_Class B_Voltage_PK_QPAV_N_L1**

Hardware Setup: ESH2-Z5
 Measurement Type: 4 Line LISN
 Frequency Range: 150 kHz - 30 MHz
 Graphics Level Range: -10 dBμV - 80 dBμV

Preview Measurements:
 Scan Test Template: 02_Class B pre_PK_fast

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	MaxPeak	9 kHz	0,00005 s	Receiver

Data Reduction:
 Limit Line #1: Class B Voltage QP
 Limit Line #2: Class B Voltage AV
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 50 Subranges , Maxima per Subrange: 2
 Acceptance Offset: -13 dB
 Maximum Number of Results: 30
 After Data Reduction: Interactive data reduction

Final Measurements:
 Template for Single Meas.: 07_Class B fin AV QP

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	QuasiPeak; CAverage	9 kHz	1 s	Receiver

Report Settings:
 Report Template: Ctc_Standard_class_B
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Actions:
 Test stop
 Notify: "End of Test"

Diagram No. 1.18

Common Information

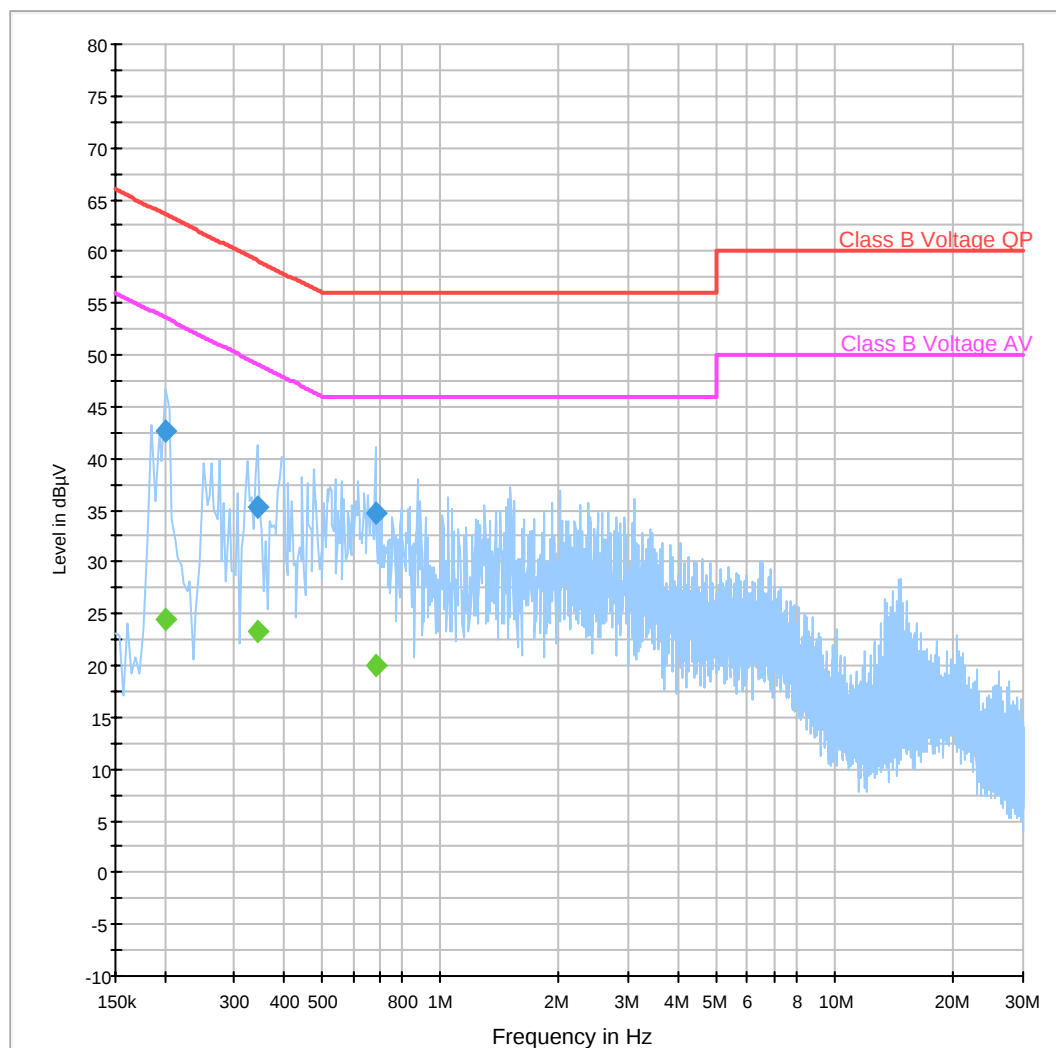
Test Description:	Conducted Voltage Measurement Class B
Test specification:	FCC 15.107
Measurement Receiver:	R&S ESCS 30, Ser.-Nr. 100160, Ref.-Nr. 377
Scan Mode:	EMC 32, automatic scan mode, repetitive scan, maxhold mode
Diagram:	Shows the peak values as a sum of measured ports (N+L1) in maxhold mode
Operator's name:	

Operating Conditions:	G850 RX
Measurement on line:	Mains AC L1 and N
Power during the test :	110 V AC 60 Hz
Comment 1:	

EUT Information

Description:	
EUT Name:	DR800SG + USB Charger AC/DC
Manufacturer:	IREX
Serial Number:	IMEI 3527

01_Class B_Voltage_PK_QPAV_N_L1



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Correction (dB)	Margin (dB)	Limit (dBμV)
0.200781	42.7	1000.0	9.000	GN	L1	0.0	20.9	63.6
0.345312	35.4	1000.0	9.000	GN	N	0.0	23.7	59.1
0.685156	34.7	1000.0	9.000	GN	N	0.0	21.3	56.0

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Correction (dB)	Margin (dB)	Limit (dBμV)
0.200781	24.4	1000.0	9.000	GN	L1	0.0	29.2	53.6
0.345312	23.2	1000.0	9.000	GN	N	0.0	25.9	49.1
0.685156	20.1	1000.0	9.000	GN	N	0.0	25.9	46.0

Templates and settings of EMC32 V8.30.0**EMI Auto Test Template: 01_Class B_Voltage_PK_QPAV_N_L1**

Hardware Setup: ESH2-Z5
 Measurement Type: 4 Line LISN
 Frequency Range: 150 kHz - 30 MHz
 Graphics Level Range: -10 dBμV - 80 dBμV

Preview Measurements:
 Scan Test Template: 02_Class B pre_PK_fast

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	MaxPeak	9 kHz	0,00005 s	Receiver

Data Reduction:
 Limit Line #1: Class B Voltage QP
 Limit Line #2: Class B Voltage AV
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 50 Subranges , Maxima per Subrange: 2
 Acceptance Offset: -13 dB
 Maximum Number of Results: 30
 After Data Reduction: Interactive data reduction

Final Measurements:
 Template for Single Meas.: 07_Class B fin AV QP

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	QuasiPeak; CAverage	9 kHz	1 s	Receiver

Report Settings:
 Report Template: Ctc_Standard_class_B
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Actions:
 Test stop
 Notify: "End of Test"

Diagram No. 1.19

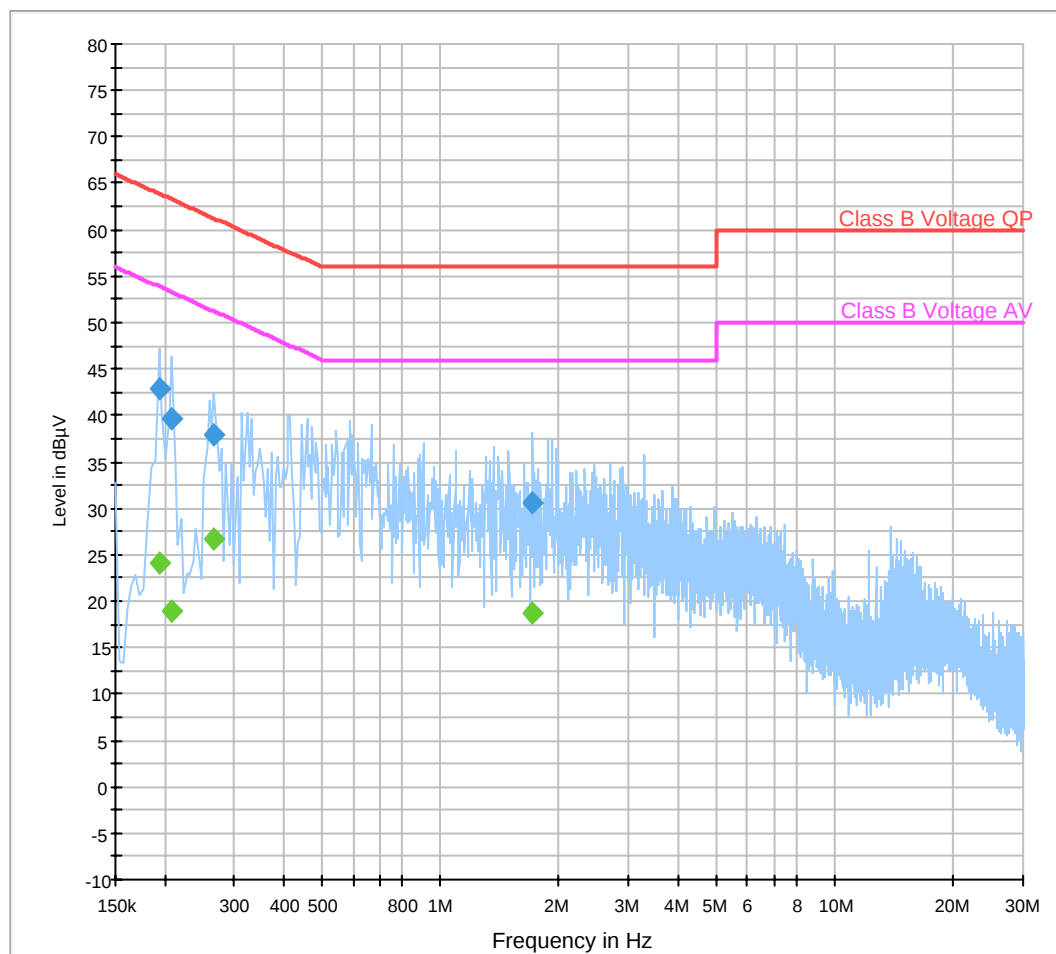
Common Information

Test Description:	Conducted Voltage Measurement Class B
Testspezifikation:	FCC 15.207
Measurement Receiver:	R&S ESCS 30, Ser.-Nr. 100160, Ref.-Nr. 377
Scan Mode:	EMC 32, automatic scan mode, repetitive scan, maxhold mode
Diagram:	Shows the peak values as a sum of measured ports (N+L1) in maxhold mode
Operators name:	
Operating Conditions:	G850 TX
Measurement on line:	Mains AC L1 and N
Power during the test :	110 V AC 60 Hz
Comment 1:	three parts of ferrit core used (Type: 2x 742 711 4, 1x 742 716 12 from WÜRTH)

EUT Information

Description:	
EUT Name:	DR800SG + USB Charger AC/DC
Manufacturer:	IREX
Serial Number:	IMEI 3527

01_Class B_Voltage_PK_QPAV_N_L1



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Correction (dB)	Margin (dB)	Limit (dBμV)
0.192969	42.9	1000.0	9.000	GN	L1	0.0	21.0	63.9
0.208594	39.7	1000.0	9.000	GN	L1	0.0	23.6	63.3
0.267188	37.9	1000.0	9.000	GN	N	0.0	23.3	61.2
1.716406	30.5	1000.0	9.000	GN	N	0.0	25.5	56.0

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Correction (dB)	Margin (dB)	Limit (dBμV)
0.192969	24.1	1000.0	9.000	GN	L1	0.0	29.8	53.9
0.208594	19.0	1000.0	9.000	GN	L1	0.0	34.3	53.3
0.267188	26.7	1000.0	9.000	GN	N	0.0	24.5	51.2
1.716406	18.8	1000.0	9.000	GN	N	0.0	27.2	46.0

Templates and settings of EMC32 V8.30.0**EMI Auto Test Template: 01_Class B_Voltage_PK_QPAV_N_L1**

Hardware Setup: ESH2-Z5
 Measurement Type: 4 Line LISN
 Frequency Range: 150 kHz - 30 MHz
 Graphics Level Range: -10 dBμV - 80 dBμV

Preview Measurements:
 Scan Test Template: 02_Class B pre_PK_fast

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	MaxPeak	9 kHz	0,00005 s	Receiver

Data Reduction:
 Limit Line #1: Class B Voltage QP
 Limit Line #2: Class B Voltage AV
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 50 Subranges , Maxima per Subrange: 2
 Acceptance Offset: -13 dB
 Maximum Number of Results: 30
 After Data Reduction: Interactive data reduction

Final Measurements:
 Template for Single Meas.: 07_Class B fin AV QP

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
150 kHz - 30 MHz	QuasiPeak; CAverage	9 kHz	1 s	Receiver

Report Settings:
 Report Template: Ctc_Standard_class_B
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Actions:
 Test stop
 Notify: "End of Test"

2. Radiated emissions, 30MHz – 1GHz

Diagram No. 02.03

Common Information

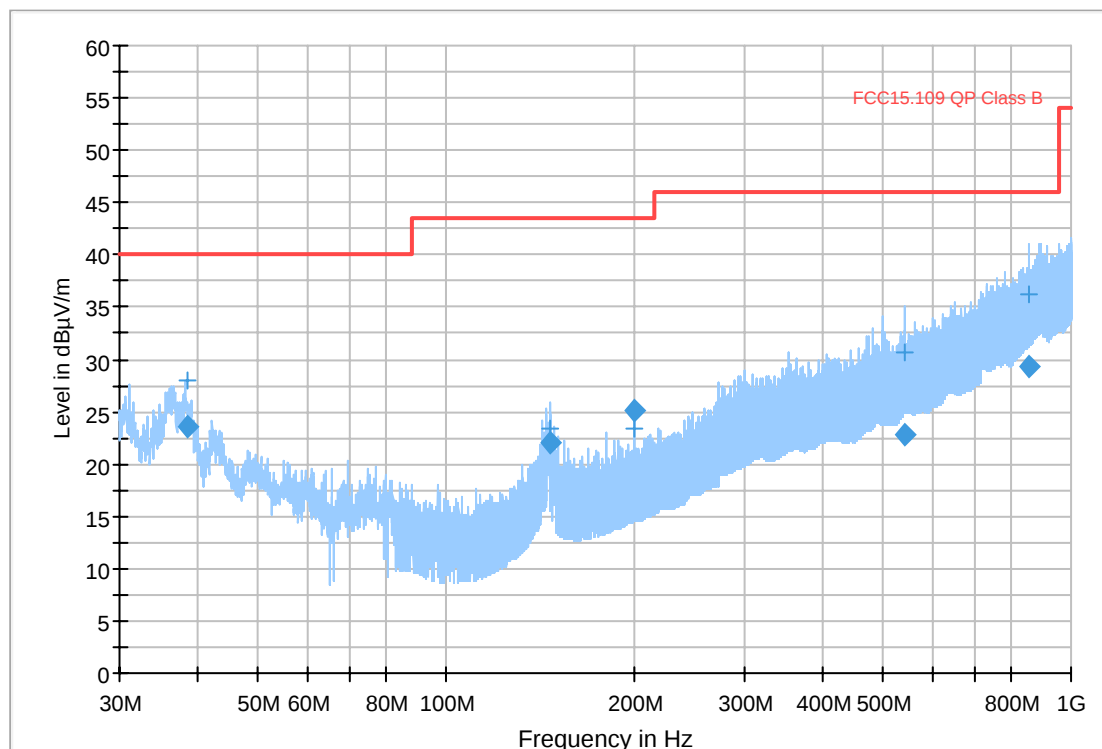
Test description:	Electric Fieldstrength Measurement related to 3 m distance
Test site and distance:	Semi Anechoic Room (SAR) with 3 m measurement distance
Measured sides of EUT:	front, right, rear, left
Rec. antenna (pre-scan):	height 1.00 m and 1.82 m, horizontal and vertical polarisation
Rec. antenna (final):	height between 1 m to 4 m, polarisation according to pre-scan results
Turntable step:	90° during pre-scan, continuously turning during final measurement
Used filter:	lowpass 1200 MHz
Test specification.:	FCC 15.109

Operator:	X_Mtn
Operating conditions:	Attach 1900 (RX-Mode)
Comment 1:	Channel middle

EUT Information

Description:	
EUT Name:	DR800SG + USB Cable + AC/DC Adapter
Manufacturer:	
HW	
SW	--
S/N	#13527

05_FCC15.109_hor+vert_kipp



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Elevation (deg)	Corr. (dB)	Margin (dB)
38.450000	23.6	1000.000	120.000	100.0	V	304.0	90.0	11.1	16.4
146.760000	22.1	1000.000	120.000	179.0	H	72.0	90.0	13.0	21.4
199.500000	25.1	1000.000	120.000	137.0	H	134.0	0.0	11.5	18.4
540.690000	22.9	1000.000	120.000	100.0	H	201.0	90.0	21.4	23.1
854.560000	29.4	1000.000	120.000	287.0	H	234.0	90.0	25.9	16.6

Frequency (MHz)	Limit (dBμV/m)	Comment
38.450000	40.0	
146.760000	43.5	
199.500000	43.5	
540.690000	46.0	
854.560000	46.0	

EMI Auto Test Template: 05_FCC15.109_hor+vert_kipp

Hardware Setup: HW11_FCC_ESCS30_TP1200_EUTkipp
 Measurement Type: E(I)RP
 Frequency Range: 30 MHz - 1 GHz
 Graphics Level Range: 0 dBμV/m - 60 dBμV/m

Preview Measurements:
 Turntable position: 0 - 270 deg , Step Size = 90 deg , Speed = 8
 Elevation: 0 - 90 deg , Step Size = 90 deg , Speed = 4
 Polarity: H + V
 Scan Test Template: EMI Scan 01_fast_FCC_15_209 B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	MaxPeak	120 kHz	0,00005 s	ESCS 30

Data Reduction:
 Limit Line #1: FCC15.109 QP Class B
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 25 Subranges , Maxima per Subrange: 1
 Acceptance Offset: -6 dB
 Maximum Number of Results: 20
 After Data Reduction: Interactive data reduction

Frequency Zoom:
 Zoom Scan Template: EMI Scan 02_20ms_zoom_15_209 B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	MaxPeak	120 kHz	0,02 s	ESCS 30

Adjustment:
 Turntable position: Adjustment with full Range , Speed = 3
 Elevation: Adjustment with full Range , Speed = 5
 Template for Single Meas.: EMI Scan 02_20ms_FCC_15_209B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	MaxPeak	120 kHz	0,02 s	ESCS 30

Final Measurements:
 Template for Single Meas.: EMI Scan 03_1s_FCC_15_209 B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	QuasiPeak	120 kHz	1 s	ESCS 30

Report Settings:
 Report Template: FCC15_209_vert_hor
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

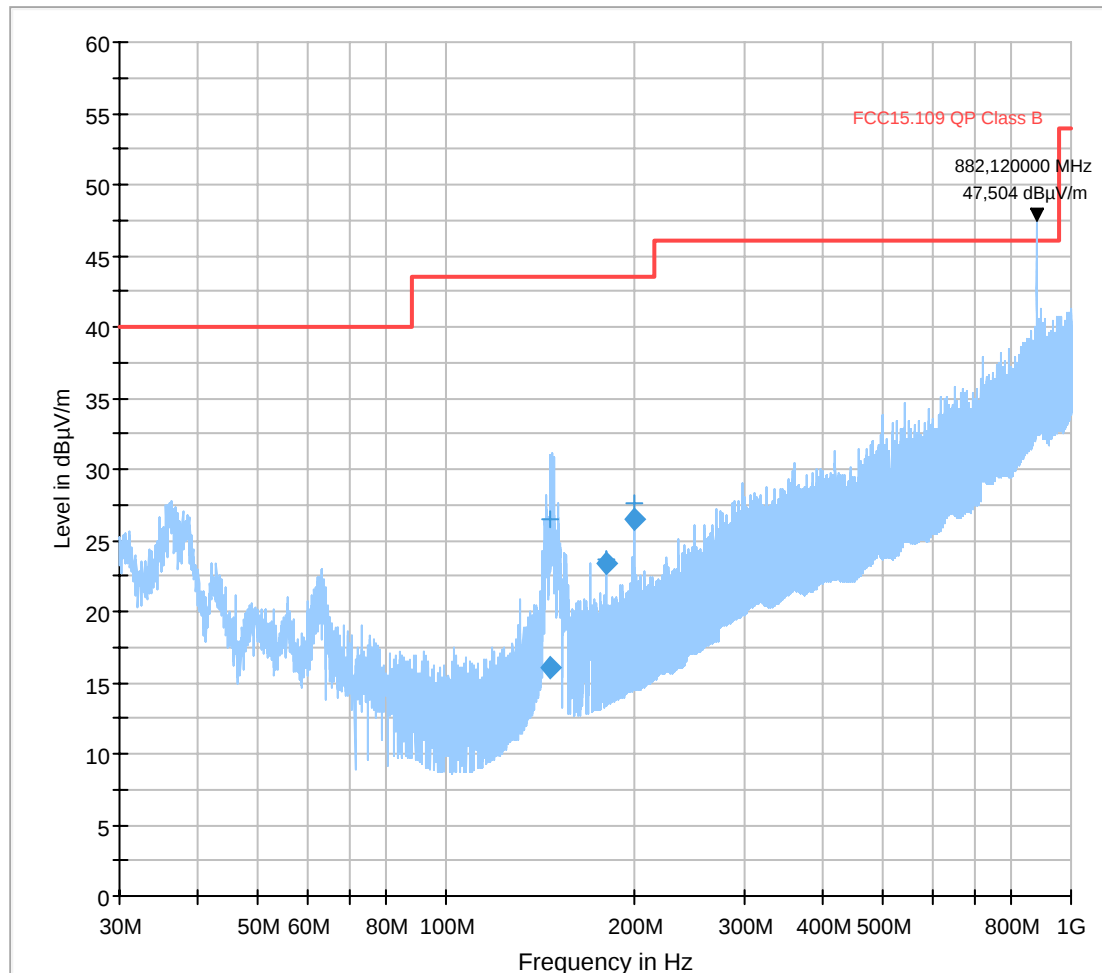
Diagram No. 02.04

Common Information

Test description:	Electric Fieldstrength Measurement related to 3 m distance
Test site and distance:	Semi Anechoic Room (SAR) with 3 m measurement distance
Measured sides of EUT:	front, right, rear, left, top, under
Rec. antenna (pre-scan):	height 1.00 m and 1.82 m, horizontal and vertical polarisation
Rec. antenna (final):	height between 1 m to 4 m, polarisation according to pre-scan results
Turntable step:	90° during pre-scan, continuously turning during final measurement
Used filter:	lowpass 1200 MHz
Test specification.:	FCC 15.109

Operator:	X_Mtn
Operating conditions:	FDD5 RX-Mode
Comment 1:	Channel middle=4185
Comment 2:	Downlink channel 4410: 822MHz

05_FCC15.109_hor+vert_kipp



Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Elevation (deg)	Corr. (dB)	Margin (dB)
146.950000	16.1	1000.000	120.000	100.0	H	289.0	0.0	12.9	27.4
180.000000	23.4	1000.000	120.000	172.0	H	284.0	90.0	10.5	20.1
199.500000	26.5	1000.000	120.000	130.0	H	123.0	90.0	11.5	17.0

(continuation of the "Final Result 1" table from column 10 ...)

Frequency (MHz)	Limit (dB μ V/m)	Comment
146.950000	43.5	
180.000000	43.5	
199.500000	43.5	

EMI Auto Test Template: 05_FCC15.109_hor+vert_kipp

Hardware Setup: HW11_FCC_ESCS30_TP1200_EUTkipp
 Measurement Type: E(I)RP
 Frequency Range: 30 MHz - 1 GHz
 Graphics Level Range: 0 dB μ V/m - 60 dB μ V/m

Preview Measurements:
 Turntable position: 0 - 270 deg , Step Size = 90 deg , Speed = 8
 Elevation: 0 - 90 deg , Step Size = 90 deg , Speed = 4
 Polarity: H + V
 Scan Test Template: EMI Scan 01_fast_FCC_15_209 B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	MaxPeak	120 kHz	0,00005 s	ESCS 30

Data Reduction:
 Limit Line #1: FCC15.109 QP Class B
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 25 Subranges , Maxima per Subrange: 1
 Acceptance Offset: -6 dB
 Maximum Number of Results: 20
 After Data Reduction: Interactive data reduction

Frequency Zoom:
 Zoom Scan Template: EMI Scan 02_20ms_zoom_15_209 B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	MaxPeak	120 kHz	0,02 s	ESCS 30

Adjustment:
 Turntable position: Adjustment with full Range , Speed = 3
 Elevation: Adjustment with full Range , Speed = 5
 Template for Single Meas.: EMI Scan 02_20ms_FCC_15_209B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	MaxPeak	120 kHz	0,02 s	ESCS 30

Final Measurements:
 Template for Single Meas.: EMI Scan 03_1s_FCC_15_209 B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	QuasiPeak	120 kHz	1 s	ESCS 30

Report Settings:
 Report Template: FCC15_209_vert_hor
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

Diagram No. 2.21

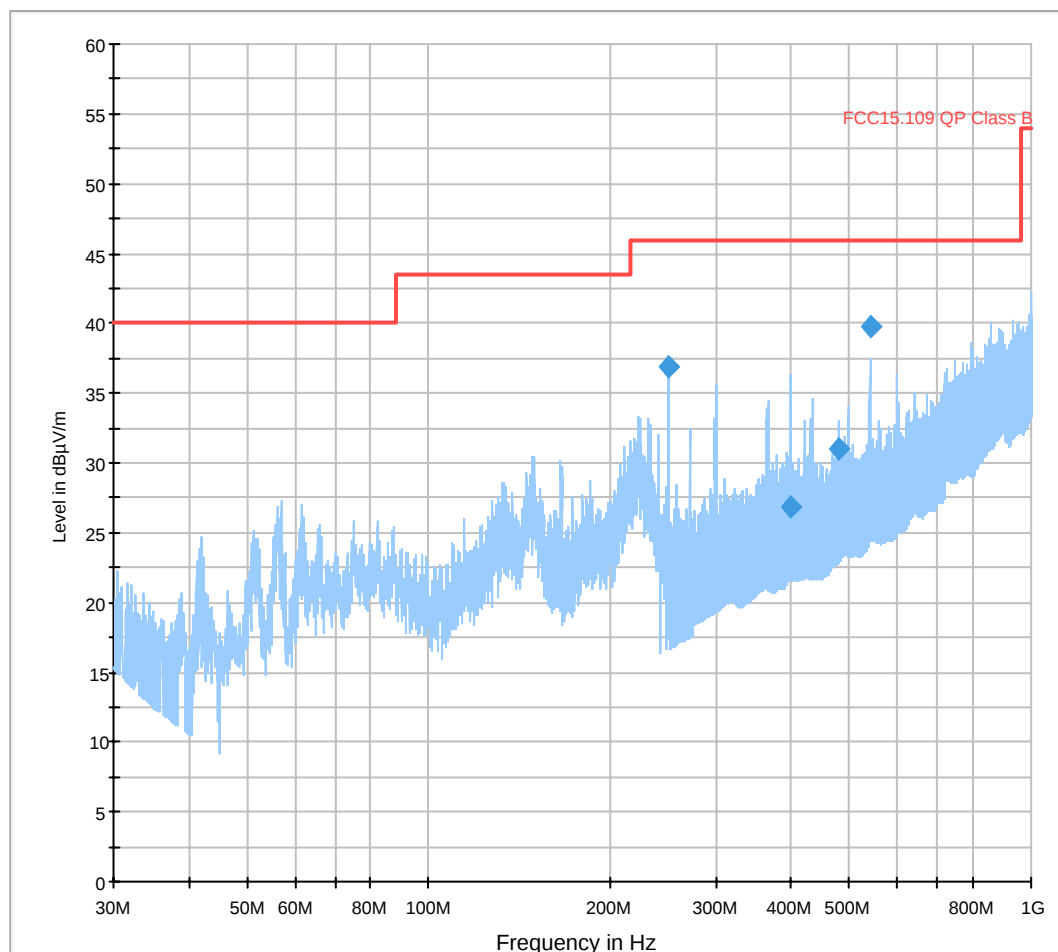
Common Information

Test description:	Electric Fieldstrength Measurement related to 3 m distance
Test site and distance:	Semi Anechoic Room (SAR) with 3 m measurement distance
Measured sides of EUT:	front, right, rear, left
Rec. antenna (pre-scan):	height 1.00 m and 1.82 m, horizontal and vertical polarisation
Rec. antenna (final):	height between 1 m to 4 m, polarisation according to pre-scan results
Turntable step:	90° during pre-scan, continuously turning during final measurement
Used filter:	lowpass 1200 MHz
Test specification.:	FCC 15.109
Operator:	TAS
Operating conditions:	FDD II idle data transfer RX-on
Comment 1:	EUT + usb cable (ferrit core used: Type: 742 711 4 from WÜRTH)

EUT Information

Description:	
EUT Name:	E-Reader, IMEI ...13527
Manufacturer:	IREX
Equipment	Battery (approx 4,0 V DC), SD card, Laptop 04 (CTC)

FCC15.109_hor+vert



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)
249.980000	36.9	1000.000	120.000	100.0	H	100.0	13.9	9.1
398.800000	26.9	1000.000	120.000	121.0	H	257.0	18.3	19.2
480.680000	31.0	1000.000	120.000	180.0	H	69.0	20.0	15.0
539.990000	39.7	1000.000	120.000	121.0	V	62.0	21.4	6.3

(continuation of the "Final Result 1" table from column 9 ...)

Frequency (MHz)	Limit (dBμV/m)	Comment
249.980000	46.0	
398.800000	46.0	
480.680000	46.0	
539.990000	46.0	

EMI Auto Test Template: FCC15.109_hor+vert

Hardware Setup: HW11_FCC_ESCS30_TP1200

Measurement Type: Open-Area-Test-Site

Frequency Range: 30 MHz - 1 GHz

Graphics Level Range: 0 dBμV/m - 60 dBμV/m

Preview Measurements:

Antenna height: 100 - 182 cm , Step Size = 82 cm , Speed = 8

Polarity: H + V

Turntable position: 0 - 270 deg , Step Size = 90 deg , Speed = 8

Scan Test Template: EMI Scan 01_fast_FCC 15_209 B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	MaxPeak	120 kHz	0,00005 s	ESCS 30

Data Reduction:

Limit Line #1: FCC15.109 QP Class B

Peak Search: 6 dB , Maximum Results: 10

Subrange Maxima: 25 Subranges , Maxima per Subrange: 1

Acceptance Offset: -6 dB

Maximum Number of Results: 20

After Data Reduction: Interactive data reduction

Frequency Zoom:

Zoom Scan Template: EMI Scan 02_20ms_zoom_FCC 15_209 B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	MaxPeak	120 kHz	0,02 s	ESCS 30

Adjustment:

Antenna height: Adjustment with full Range , Speed = 3

Turntable position: Adjustment with full Range , Speed = 3

Template for Single Meas.: EMI Scan 02_20ms_FCC 15_209 B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	MaxPeak	120 kHz	0,02 s	ESCS 30

Final Measurements:

Template for Single Meas.: EMI Scan 03_1s_FCC 15_209 B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	QuasiPeak	120 kHz	1 s	ESCS 30

Report Settings:

Report Template: FCC15_209_vert_hor

Create Electronic Report: RTF PDF

Document Name: EMI Report

Diagram No. 2.23

Common Information

Test description:	Electric Fieldstrength Measurement related to 3 m distance
Test site and distance:	Semi Anechoic Room (SAR) with 3 m measurement distance
Measured sides of EUT:	front, right, rear, left
Rec. antenna (pre-scan):	height 1.00 m and 1.82 m, horizontal and vertical polarisation
Rec. antenna (final):	height between 1 m to 4 m, polarisation according to pre-scan results
Turntable step:	90° during pre-scan, continuously turning during final measurement
Used filter:	lowpass 1200 MHz
Test specification.:	FCC 15.109

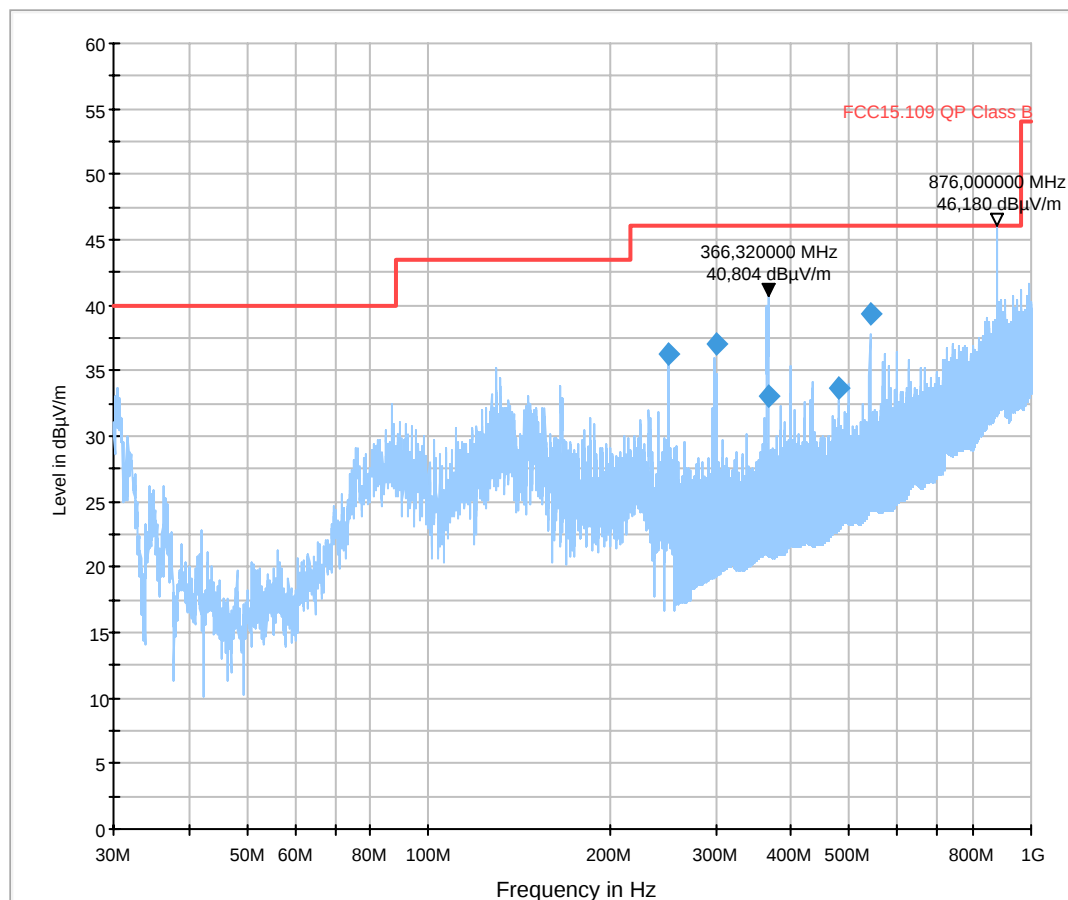
Operator:	TAS
Operating conditions:	G850 idle data transfer RX-on
Comment 1:	EUT + usb cable (ferrit core used: Type: 742 711 4 from WÜRTH)

Comment 2:	DL carrier of G850 (876 MHz), 366 MHz Laptop(CTC 04) Interference
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EUT Information

Description:	
EUT Name:	E-Reader, IMEI ...13527
Manufacturer:	IREX
Equipment	Battery (approx 4,0 VDC, S/N 0..047), SD card, Laptop 04 (CTC) plug-in to AC

FCC15.109_hor+vert



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)
250.010000	36.3	1000.000	120.000	100.0	H	95.0	13.9	9.7
299.990000	37.0	1000.000	120.000	100.0	H	0.0	15.6	9.0
365.440000	33.0	1000.000	120.000	100.0	H	254.0	17.6	13.0
480.010000	33.7	1000.000	120.000	179.0	H	64.0	19.9	12.3
539.990000	39.3	1000.000	120.000	116.0	V	150.0	21.4	6.7

(continuation of the "Final Result 1" table from column 9 ...)

Frequency (MHz)	Limit (dBμV/m)	Comment
250.010000	46.0	
299.990000	46.0	
365.440000	46.0	
480.010000	46.0	
539.990000	46.0	

EMI Auto Test Template: FCC15.109_hor+vert

Hardware Setup: HW11_FCC_ESCS30_TP1200
 Measurement Type: Open-Area-Test-Site
 Frequency Range: 30 MHz - 1 GHz
 Graphics Level Range: 0 dBμV/m - 60 dBμV/m

Preview Measurements:
 Antenna height: 100 - 182 cm , Step Size = 82 cm , Speed = 8
 Polarity: H + V
 Turntable position: 0 - 270 deg , Step Size = 90 deg , Speed = 8
 Scan Test Template: EMI Scan 01_fast_FCC 15_209 B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	MaxPeak	120 kHz	0,00005 s	ESCS 30

Data Reduction:
 Limit Line #1: FCC15.109 QP Class B
 Peak Search: 6 dB , Maximum Results: 10
 Subrange Maxima: 25 Subranges , Maxima per Subrange: 1
 Acceptance Offset: -6 dB
 Maximum Number of Results: 20
 After Data Reduction: Interactive data reduction

Frequency Zoom:
 Zoom Scan Template: EMI Scan 02_20ms_zoom_FCC 15_209 B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	MaxPeak	120 kHz	0,02 s	ESCS 30

Adjustment:
 Antenna height: Adjustment with full Range , Speed = 3
 Turntable position: Adjustment with full Range , Speed = 3
 Template for Single Meas.: EMI Scan 02_20ms_FCC 15_209 B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	MaxPeak	120 kHz	0,02 s	ESCS 30

Final Measurements:
 Template for Single Meas.: EMI Scan 03_1s_FCC 15_209 B

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	QuasiPeak	120 kHz	1 s	ESCS 30

Report Settings:
 Report Template: FCC15_209_vert_hor
 Create Electronic Report: RTF PDF
 Document Name: EMI Report

3. Radiated emissions above 1GHz

Diagram No.: 2.01

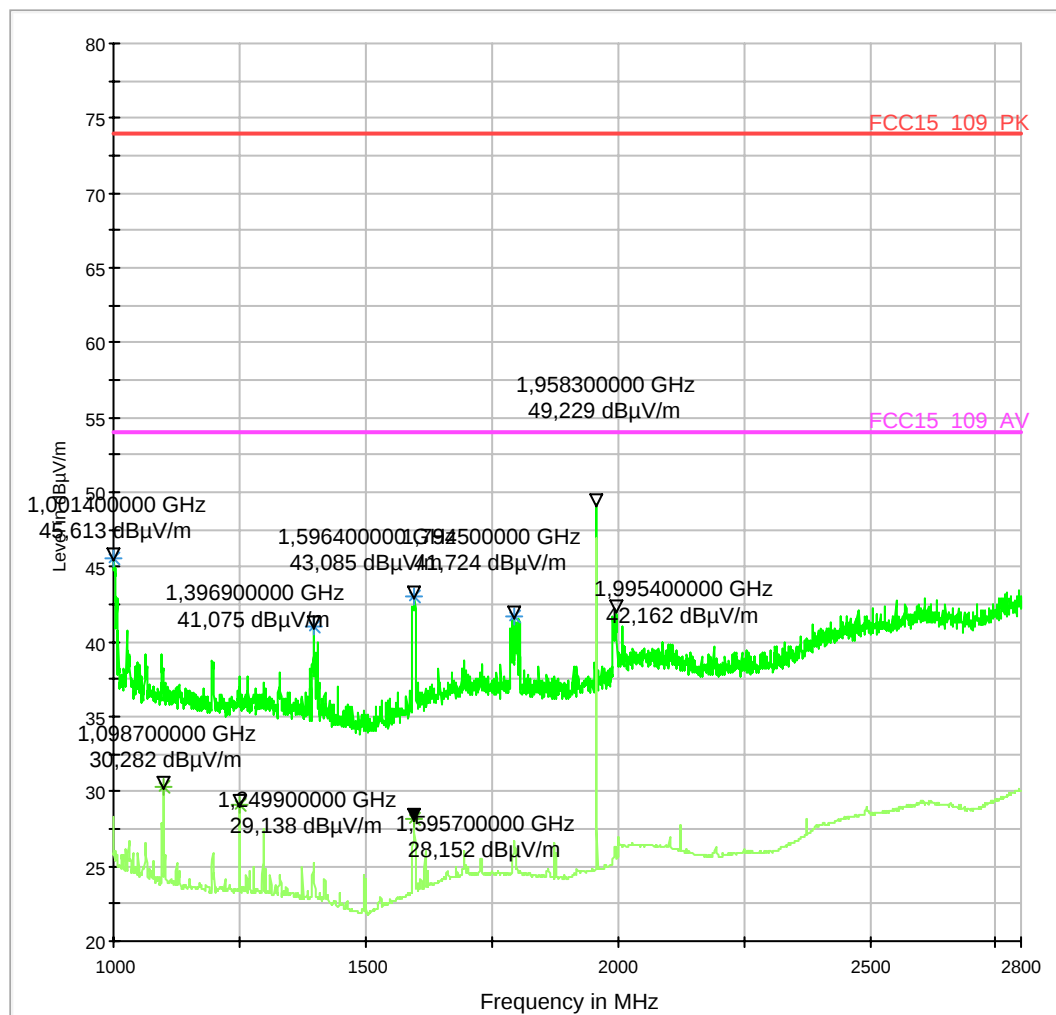
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.109 Unintentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	IDLE Mode 1900 (RX)
Operator Name:	Lor
Remark:	Downlink channel middle: 651

EUT Information

Description:	
EUT Name:	E-Reader DR800SG
Test Setup equipment:	+ Notebook + USB cable
S/N	IMEI #13501

01_1_2.8G_SM_H&V



EMI Auto Test Template: 01_1_2.8G_SM_H&V

Hardware Setup: 28_ESU_Horn_18G_Preamplifier_mit_SM
Measurement Type: E(I)RP
Frequency Range: 1 GHz - 2,8 GHz
Graphics Level Range: 20 dBµV/m - 80 dBµV/m

Preview Measurements:
Scan Test Template: 01_ESU_1_2.8G_SM_pre

Data Reduction:
Limit Line #1: FCC15_109_PK
Limit Line #2: FCC15_109_AV
Peak Search: 6 dB , Maximum Results: 10
Subrange Maxima: 50 Subranges , Maxima per Subrange: 1
Acceptance Offset: -20 dB
Maximum Number of Results: 30
After Data Reduction: Interactive data reduction

Frequency Zoom:
Zoom Scan Template: 02_ESU_1_2.8G_SM_zoom

Adjustment:
Template for Single Meas.: 01_ESU_1_2.8G_SM_pre

Final Measurements:
Template for Single Meas.: 03_ESU_1_2.8G_SM_fin

Template for Single
Meas.:(>1GHz) 03_ESU_1_2.8G_SM_fin

Report Settings:
Report Template: Report Setup FCC 15_109
Create Electronic Report: RTF PDF
Document Name: dummy FCC Report

Actions:
Test start
Notify: "Matrix richtig geschaltet ?!? Spektrum (ESU) angeschlossen ?"

Diagram No.: 2.02

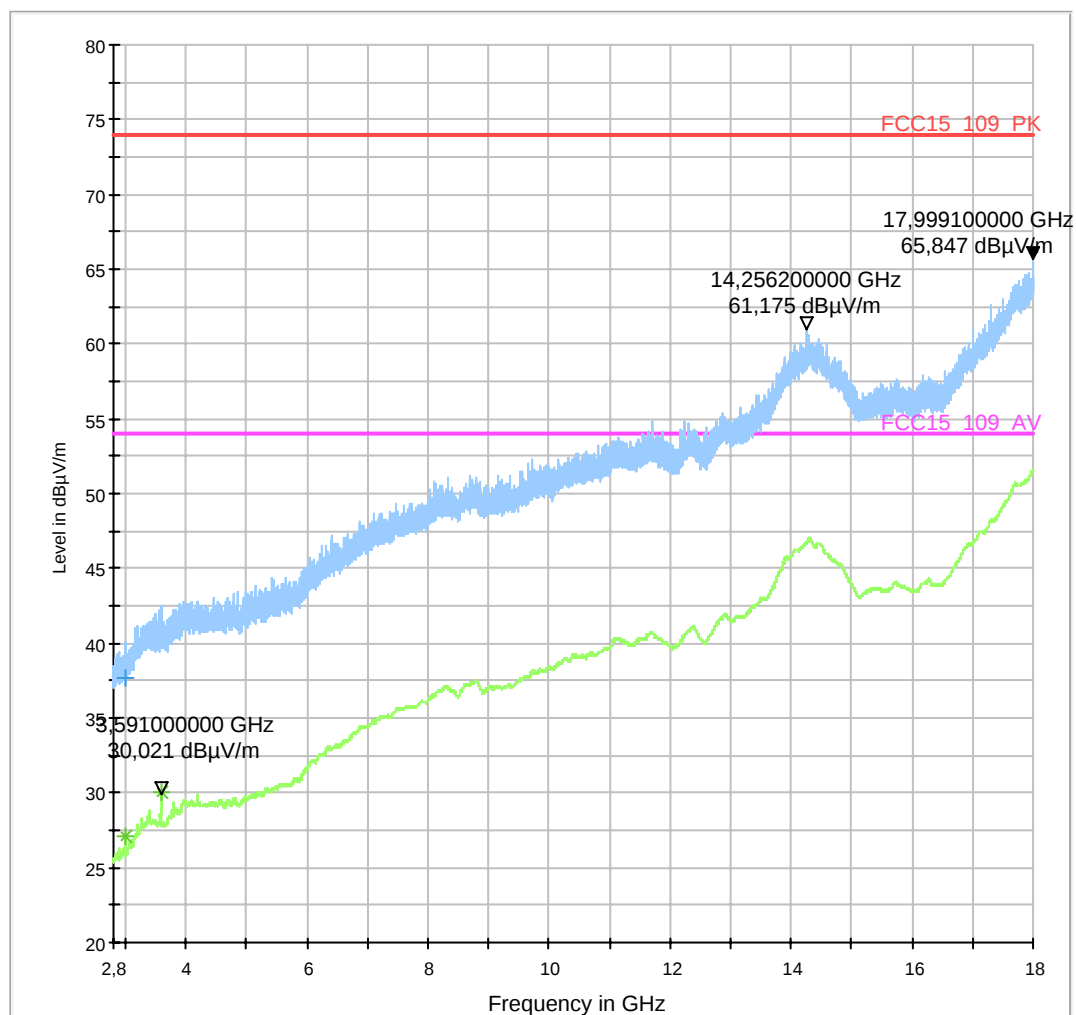
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.109 Unintentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	IDLE Mode 1900
Operator Name:	Lor
Remark:	Downlink channel middle: 651

EUT Information

Description:	
EUT:	DR800SG+USB cable + Notebook
Manufacturer:	IREX
S/N	IMEI #13501

04_2.8_18G_SM



EMI Auto Test Template: 04_2.8_18G_SM

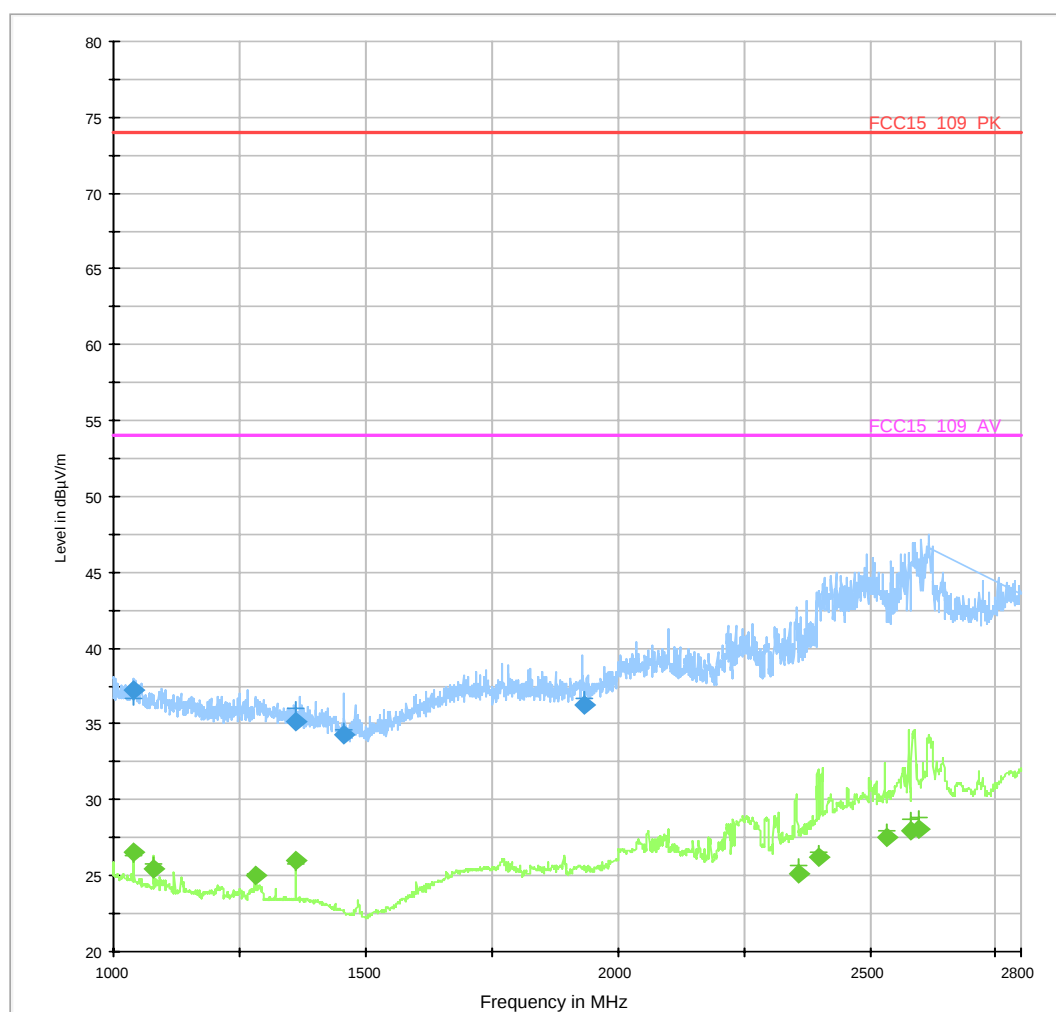
Hardware Setup:	28_ESU_Horn_18G_Preamp_mit_SM
Measurement Type:	Open-Area-Test-Site
Frequency Range:	2,8 GHz - 18 GHz
Graphics Level Range:	20 dBµV/m - 80 dBµV/m
Preview Measurements:	
Scan Test Template:	04_ESU_2.8_18G_SM_ExtPreamp_pre
Data Reduction:	
Limit Line #1:	FCC15_109_PK
Limit Line #2:	FCC15_109_AV
Peak Search:	6 dB , Maximum Results: 10
Subrange Maxima:	50 Subranges , Maxima per Subrange: 1
Acceptance Offset:	-20 dB
Maximum Number of Results:	30
After Data Reduction:	Interactive data reduction
Frequency Zoom:	
Zoom Scan Template:	05_ESU_2.8_18G_SM_ExtPreamp_zoom
Adjustment:	
Template for Single Meas.:	04_ESU_2.8_18G_SM_ExtPreamp_pre
Final Measurements:	
Template for Single Meas.:	06_ESU_2.8_18G_SM_ExtPreamp_fin
Template for Single Meas.:(>1GHz)	06_ESU_2.8_18G_SM_ExtPreamp_fin
Report Settings:	
Report Template:	Report Setup FCC 15_109
Create Electronic Report:	RTF PDF
Document Name:	dummy EMI Report
Actions:	
Test start	
Notify:	"Switch-Matrix richtig geschaltet ? Spekki (ESU) angeschlossen ?"

Diagram No.: 2.07

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.109 Unintentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	IDLE Mode FDD Band 5 + charging battery
Operator Name:	Lor
Comment:	Uplink channel middle: 4185

01_1_2.8G_SM_H&V



Final Result 1

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Corr. (dB)	Margin (dB)
1040.500000	37.2	100.0	1000.000	155.0	V	40.0	90.0	0.0	36.8
1361.100000	35.1	100.0	1000.000	155.0	V	222.0	90.0	-1.4	38.9
1457.000000	34.3	100.0	1000.000	155.0	V	58.0	90.0	-2.2	39.7
1933.000000	36.3	100.0	1000.000	155.0	H	268.0	90.0	0.2	37.7

Frequency (MHz)	Limit (dBμV/m)	Comment
1040.500000	74.0	
1361.100000	74.0	
1457.000000	74.0	
1933.000000	74.0	

Final Result 2

Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Elevation (deg)	Corr. (dB)	Margin (dB)
1040.500000	26.6	100.0	1000.000	155.0	V	31.0	90.0	0.0	27.4
1079.700000	25.5	100.0	1000.000	155.0	H	177.0	90.0	-0.4	28.5
1281.300000	25.0	100.0	1000.000	155.0	V	158.0	90.0	-1.0	29.0
1361.100000	26.0	100.0	1000.000	155.0	V	154.0	90.0	-1.4	28.0
2358.600000	25.1	100.0	1000.000	155.0	V	258.0	90.0	0.9	28.9
2399.900000	26.2	100.0	1000.000	155.0	V	303.0	90.0	1.3	27.8
2533.600000	27.5	100.0	1000.000	155.0	V	287.0	90.0	1.9	26.5
2582.600000	28.0	100.0	1000.000	155.0	V	248.0	90.0	1.8	26.0
2595.400000	28.0	100.0	1000.000	155.0	V	272.0	90.0	1.7	26.0

Frequency (MHz)	Limit (dBμV/m)	Comment
1040.500000	54.0	
1079.700000	54.0	
1281.300000	54.0	
1361.100000	54.0	
2358.600000	54.0	
2399.900000	54.0	
2533.600000	54.0	
2582.600000	54.0	
2595.400000	54.0	

EMI Auto Test Template: 01_1_2.8G_SM_H&V

Hardware Setup:	28_ESU_Horn_18G_Preamplifier_Smith
Measurement Type:	E(I)RP
Frequency Range:	1 GHz - 2.8 GHz
Graphics Level Range:	20 dBμV/m - 80 dBμV/m
Preview Measurements:	
Scan Test Template:	01_ESU_1_2.8G_SM_pre
Data Reduction:	
Limit Line #1:	FCC15_109_PK
Limit Line #2:	FCC15_109_AV
Peak Search:	20 dB , Maximum Results: 10
Subrange Maxima:	50 Subranges , Maxima per Subrange: 1
Acceptance Offset:	-20 dB
Maximum Number of Results:	30
After Data Reduction:	Interactive data reduction
Frequency Zoom:	
Zoom Scan Template:	02_ESU_1_2.8G_SM_zoom
Adjustment:	
Template for Single Meas.:	01_ESU_1_2.8G_SM_pre

Final Measurements:

Template for Single Meas.:	03_ESU_1_2.8G_SM_fin
Template for Single Meas.:(>1GHz)	03_ESU_1_2.8G_SM_fin

Report Settings:

Report Template:	Report Setup FCC 15_109
Create Electronic Report:	RTF PDF
Document Name:	dummy FCC Report

Actions:

Test start	
Notify:	"Matrix richtig geschaltet ?!? Spekki (ESU) angeschlossen ?"

Diagram No.: 2.08

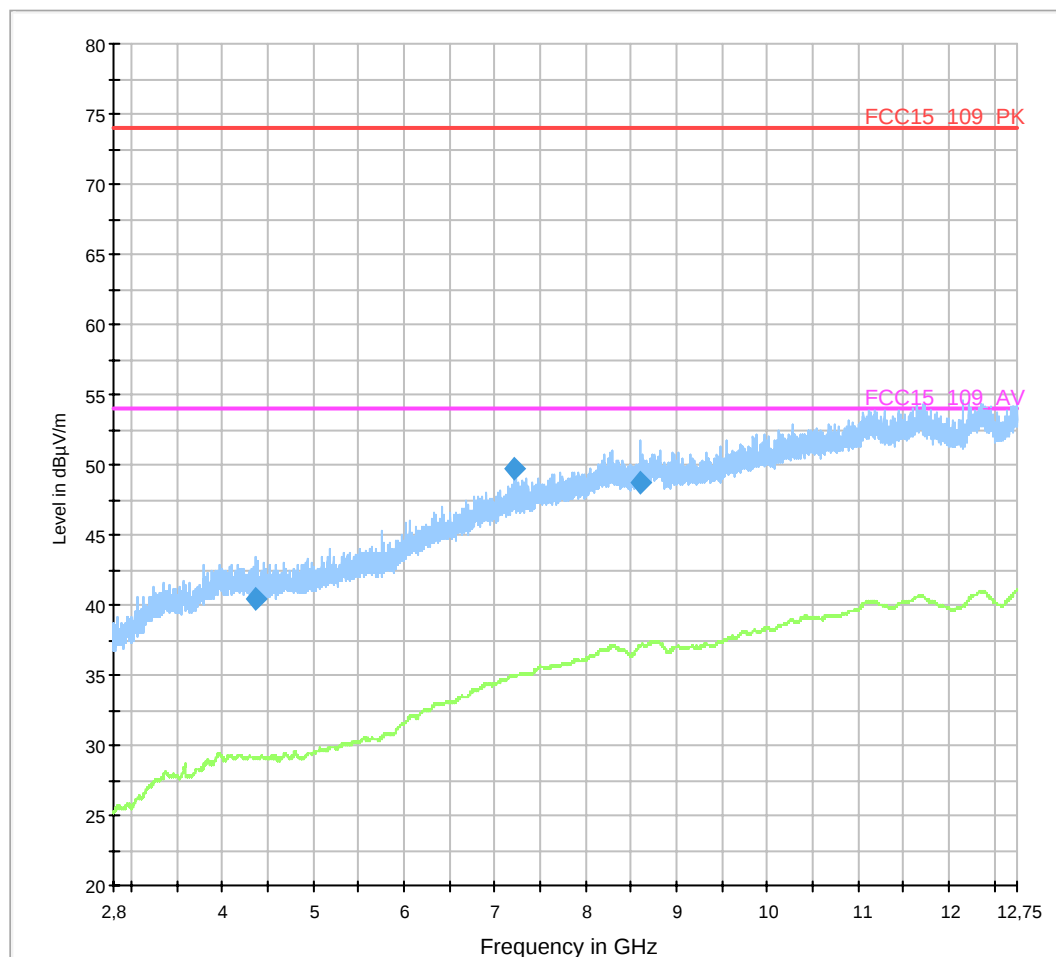
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.109 Unintentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	IDLE Mode FDD Band 5 + charging battery
Operator Name:	Lor
Comment:	Uplink channel middle: 4185

EUT Information

Description:	
EUT Name:	DR800SG+USB cable + AC/DC Adapter
Manufacturer:	IREX
Serial Number:	IMEI #14210
Hardware Rev:	--
Software Rev:	--

04_2.8_18G_SM



Final Result 1

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
4375.000000	40.5	100.0	1000.000	155.0	H	44.0	-0.6	33.5	74.0
7221.200000	49.8	100.0	1000.000	155.0	V	230.0	6.6	24.2	74.0
8606.900000	48.7	100.0	1000.000	155.0	V	324.0	8.9	25.3	74.0

Frequency (MHz)	Comment
4375.000000	
7221.200000	
8606.900000	

EMI Auto Test Template: 04_2.8_18G_SM

Hardware Setup:	28_ESU_Horn_18G_Preamplifier_mit_SM
Measurement Type:	Open-Area-Test-Site
Frequency Range:	2,8 GHz - 12,75 GHz
Graphics Level Range:	20 dBμV/m - 80 dBμV/m
Preview Measurements:	
Scan Test Template:	04_ESU_2.8_18G_SM_ExtPreamplifier_pre
Data Reduction:	
Limit Line #1:	FCC15_109_PK
Limit Line #2:	FCC15_109_AV
Peak Search:	6 dB , Maximum Results: 10
Subrange Maxima:	50 Subranges , Maxima per Subrange: 1
Acceptance Offset:	-20 dB
Maximum Number of Results:	30
After Data Reduction:	Interactive data reduction
Frequency Zoom:	
Zoom Scan Template:	05_ESU_2.8_18G_SM_ExtPreamplifier_zoom
Frequency Zoom:	
Zoom Scan Template:	05_ESU_2.8_18G_SM_ExtPreamplifier_zoom
Adjustment:	
Template for Single Meas.:	04_ESU_2.8_18G_SM_ExtPreamplifier_pre
Final Measurements:	
Template for Single Meas.:	06_ESU_2.8_18G_SM_ExtPreamplifier_fin
Template for Single Meas.:(>1GHz)	06_ESU_2.8_18G_SM_ExtPreamplifier_fin
Report Settings:	
Report Template:	Report Setup FCC 15_109
Create Electronic Report:	RTF PDF
Document Name:	dummy EMI Report
Actions:	
Test start	
Notify:	"Switch-Matrix richtig geschaltet ? Spekki (ESU) angeschlossen ?"

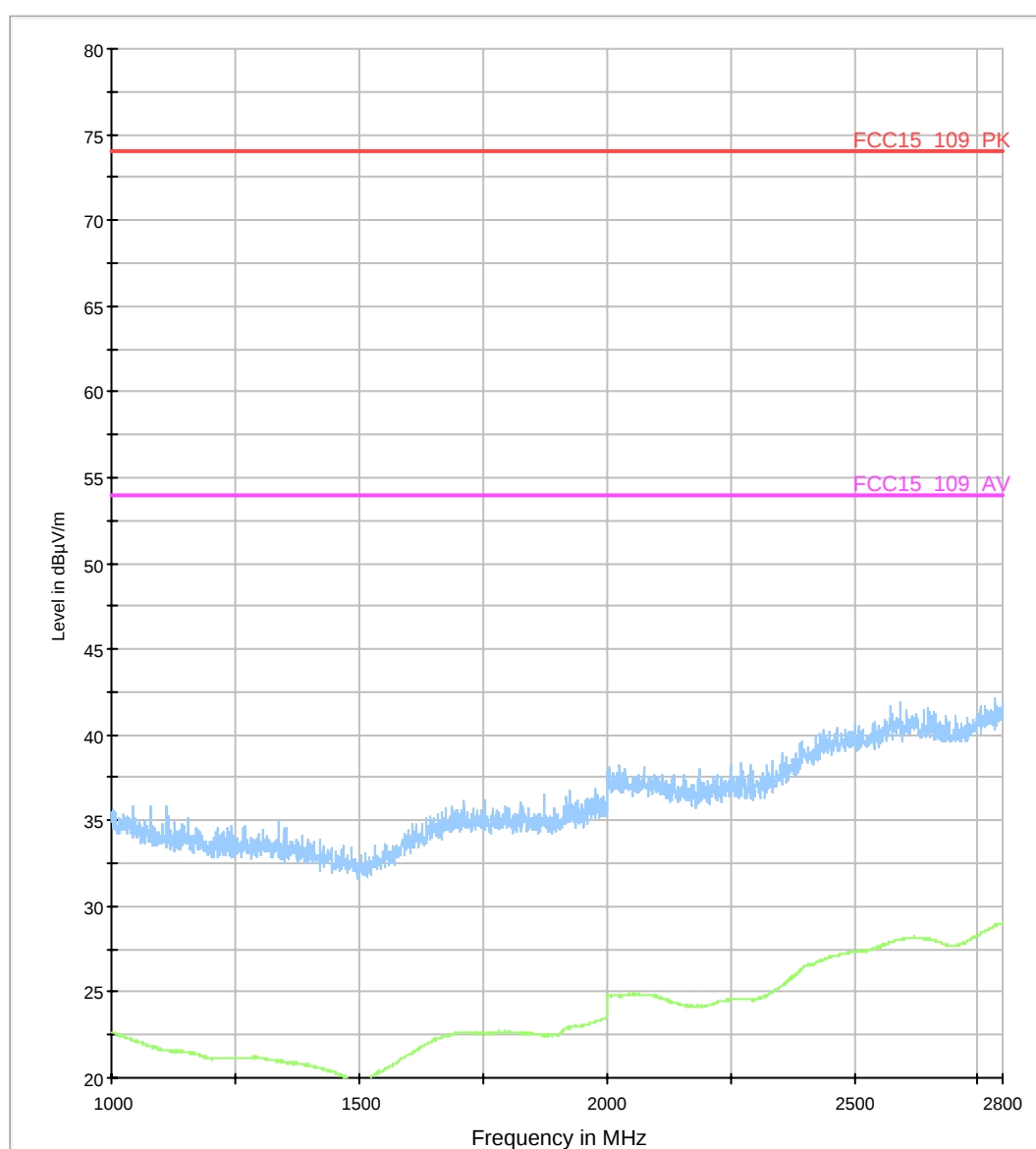
Diagram No.: 2.17

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.109 Unintentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	GSM 850 IDLE DATA TRANSFER
Operator Name:	DPa/TAS
Comment:	EUT + USB Cable + PC + Ferrit 74271142

EUT position horizontal

02_1_2.8G_SM



EMI Auto Test Template: 02_1_2.8G_SM

Hardware Setup:	28_ESU_Horn_18G_Preamplifier_mit_SM
Measurement Type:	Open-Area-Test-Site
Frequency Range:	1 GHz - 2,8 GHz
Graphics Level Range:	20 dBµV/m - 80 dBµV/m
Preview Measurements:	
Scan Test Template:	01_ESU_1_2.8G_SM_pre
Data Reduction:	
Limit Line #1:	FCC15_109_PK
Limit Line #2:	FCC15_109_AV
Peak Search:	6 dB , Maximum Results: 10
Subrange Maxima:	50 Subranges , Maxima per Subrange: 1
Acceptance Offset:	-20 dB
Maximum Number of Results:	30
After Data Reduction:	Interactive data reduction
Frequency Zoom:	
Zoom Scan Template:	02_ESU_1_2.8G_SM_zoom
Adjustment:	
Template for Single Meas.:	01_ESU_1_2.8G_SM_pre
Final Measurements:	
Template for Single Meas.:	03_ESU_1_2.8G_SM_fin
Template for Single Meas.:(>1GHz)	03_ESU_1_2.8G_SM_fin
Report Settings:	
Report Template:	Report Setup FCC 15_109
Create Electronic Report:	RTF PDF
Document Name:	dummy FCC Report
Actions:	
Test start	
Notify:	"Matrix richtig geschaltet !? Spektrum (ESU) angeschlossen ?"

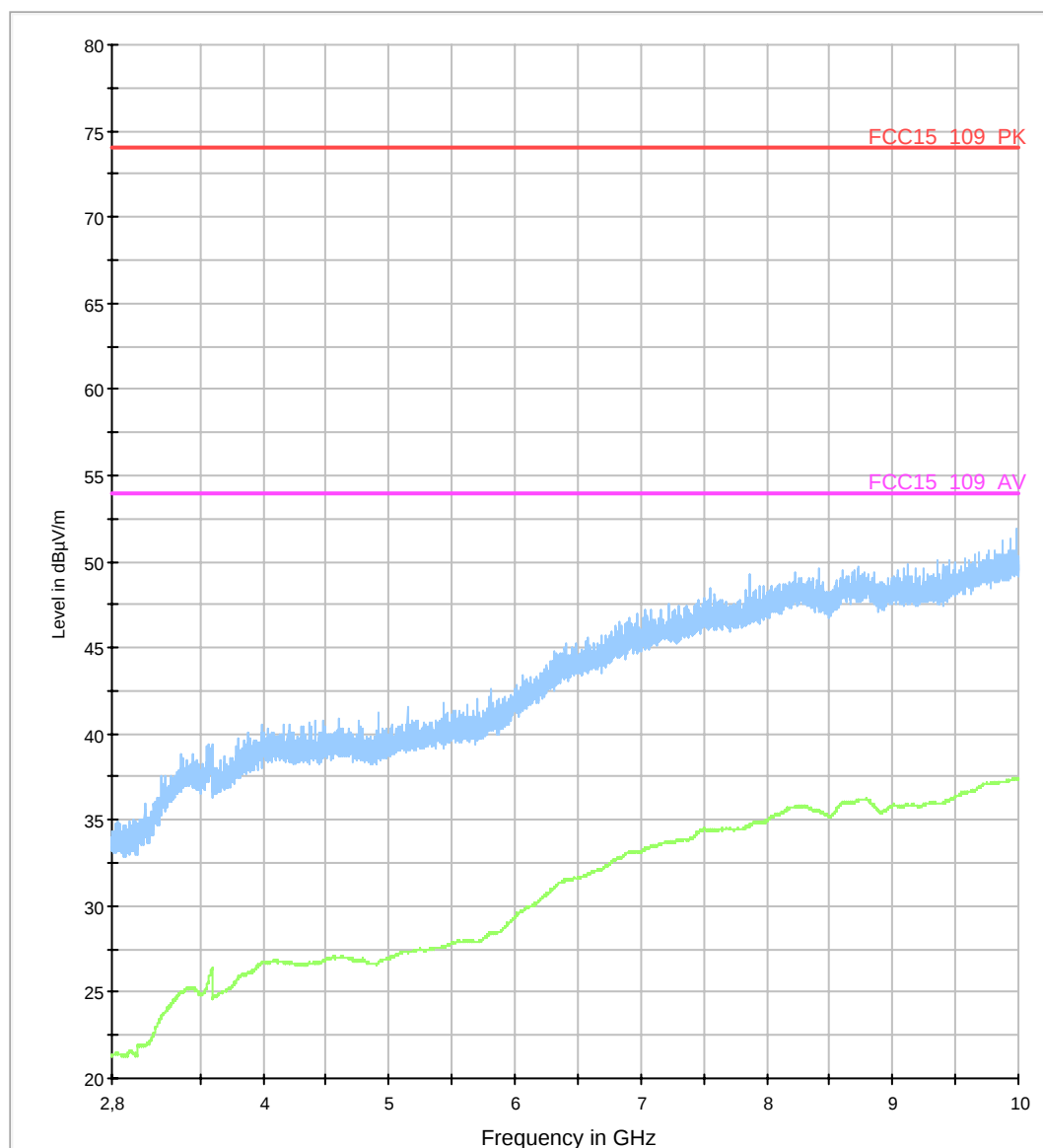
Diagram No.: 2.18

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.109 Unintentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	GSM 850 IDLE DATA TRANSFER
Operator Name:	DPa/TAS
Comment:	EUT + USB Cable + PC + Ferrit 74271142

EUT position horizontal

04_2.8_18G_SM



EMI Auto Test Template: 04_2.8_18G_SM

Hardware Setup:	28_ESU_Horn_18G_Preamp_mit_SM
Measurement Type:	Open-Area-Test-Site
Frequency Range:	2,8 GHz - 10 GHz
Graphics Level Range:	20 dBµV/m - 80 dBµV/m
Preview Measurements:	
Scan Test Template:	04_ESU_2.8_18G_SM_ExtPreamp_pre
Data Reduction:	
Limit Line #1:	FCC15_109_PK
Limit Line #2:	FCC15_109_AV
Peak Search:	6 dB , Maximum Results: 10
Subrange Maxima:	50 Subranges , Maxima per Subrange: 1
Acceptance Offset:	-20 dB
Maximum Number of Results:	30
After Data Reduction:	Interactive data reduction
Frequency Zoom:	
Zoom Scan Template:	05_ESU_2.8_18G_SM_ExtPreamp_zoom
Frequency Zoom:	
Zoom Scan Template:	05_ESU_2.8_18G_SM_ExtPreamp_zoom
Adjustment:	
Template for Single Meas.:	04_ESU_2.8_18G_SM_ExtPreamp_pre
Final Measurements:	
Template for Single Meas.:	06_ESU_2.8_18G_SM_ExtPreamp_fin
Template for Single Meas.:(>1GHz)	06_ESU_2.8_18G_SM_ExtPreamp_fin
Report Settings:	
Report Template:	Report Setup FCC 15_109
Create Electronic Report:	RTF PDF
Document Name:	dummy EMI Report
Actions:	
Test start	
Notify:	"Switch-Matrix richtig geschaltet ? Spekki (ESU) angeschlossen ?"

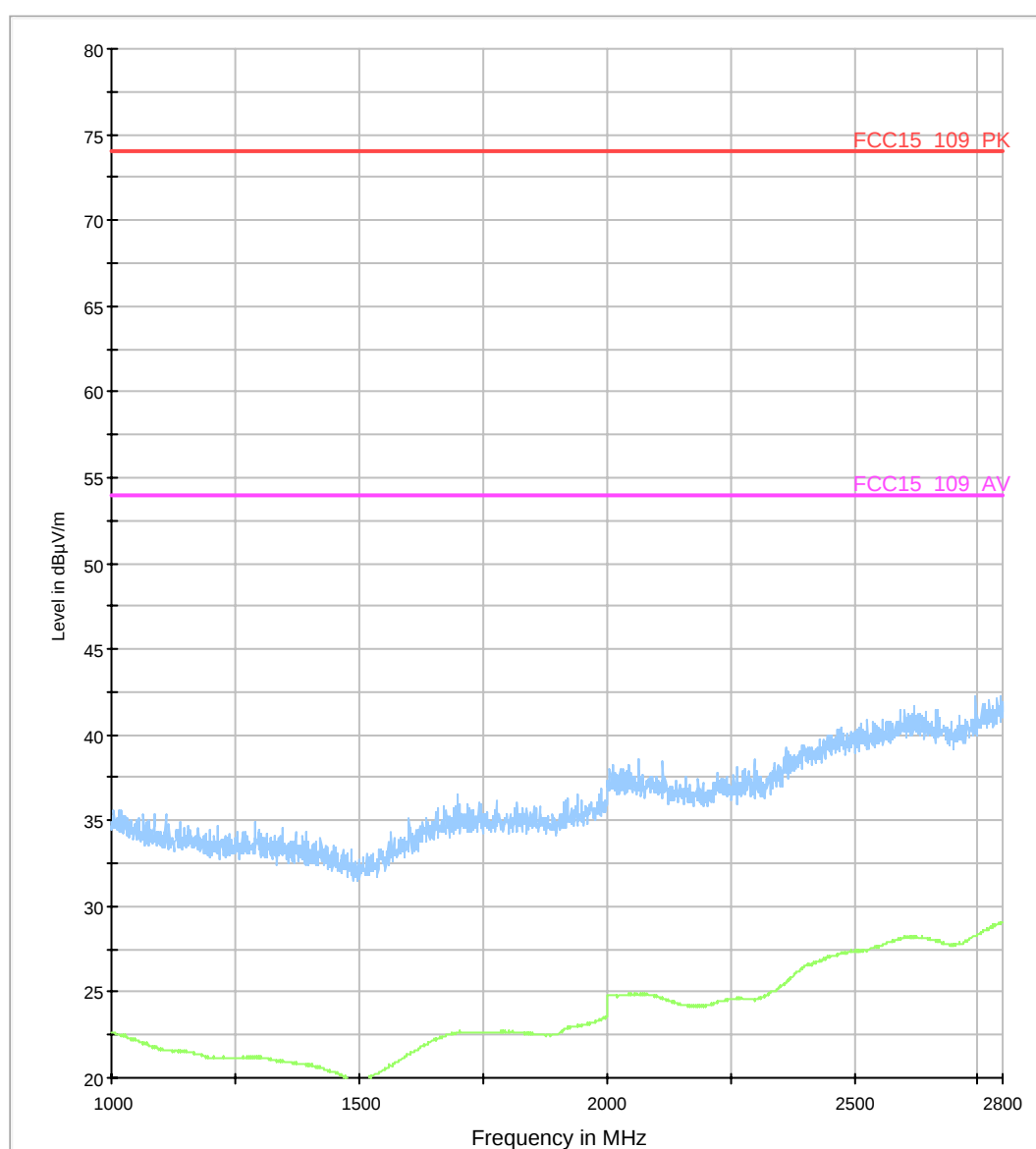
Diagram No.: 2.19

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.109 Unintentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	FDD Band 2 IDLE DATA TRANSFER
Operator Name:	DPa/TAS
Comment:	EUT + USB Cable + PC + Ferrit 74271142

EUT position horizontal

02_1_2.8G_SM



EMI Auto Test Template: 02_1_2.8G_SM

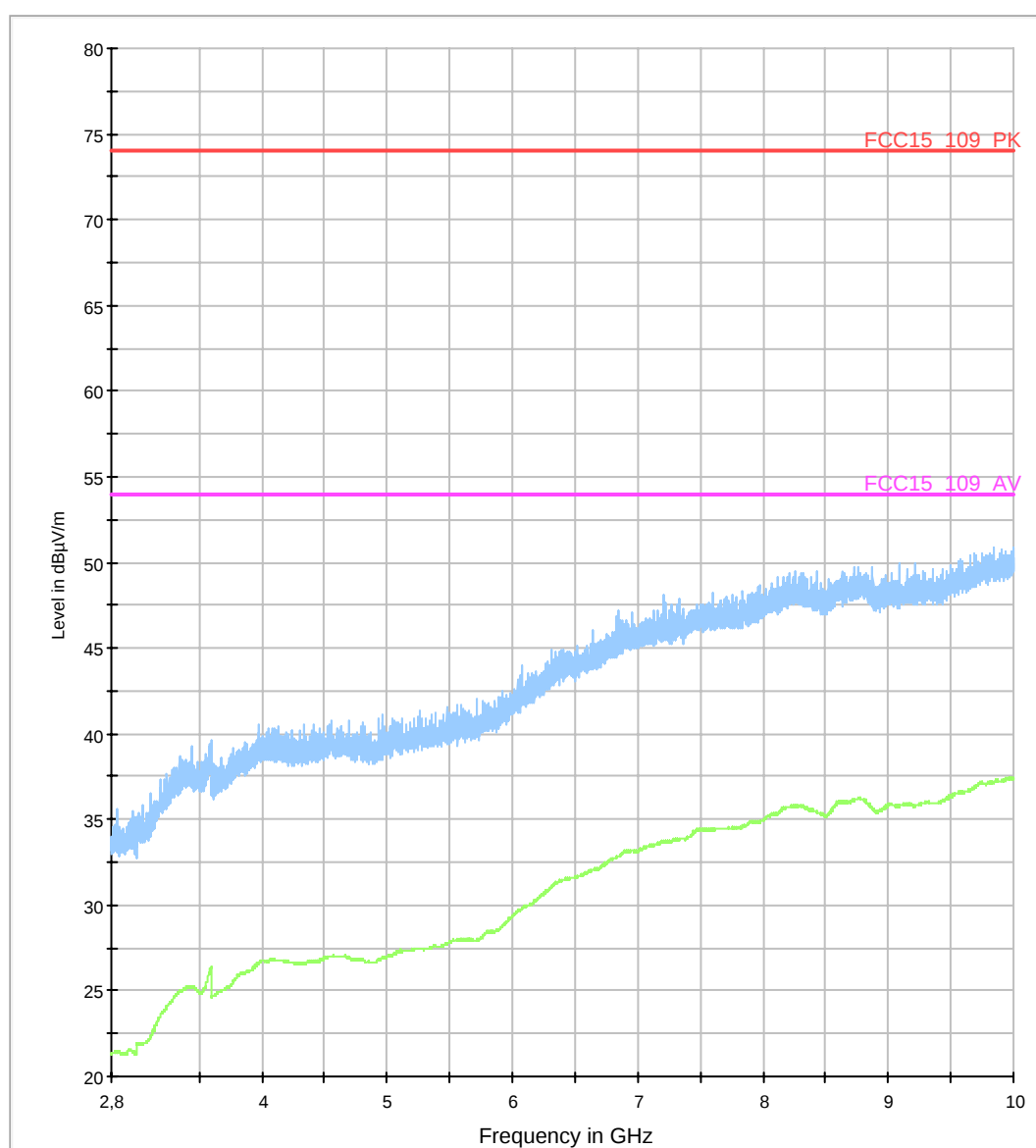
Hardware Setup:	28_ESU_Horn_18G_Preamplifier_mit_SM
Measurement Type:	Open-Area-Test-Site
Frequency Range:	1 GHz - 2,8 GHz
Graphics Level Range:	20 dBµV/m - 80 dBµV/m
Preview Measurements:	
Scan Test Template:	01_ESU_1_2.8G_SM_pre
Data Reduction:	
Limit Line #1:	FCC15_109_PK
Limit Line #2:	FCC15_109_AV
Peak Search:	6 dB , Maximum Results: 10
Subrange Maxima:	50 Subranges , Maxima per Subrange: 1
Acceptance Offset:	-20 dB
Maximum Number of Results:	30
After Data Reduction:	Interactive data reduction
Frequency Zoom:	
Zoom Scan Template:	02_ESU_1_2.8G_SM_zoom
Adjustment:	
Template for Single Meas.:	01_ESU_1_2.8G_SM_pre
Final Measurements:	
Template for Single Meas.:	03_ESU_1_2.8G_SM_fin
Template for Single Meas.:(>1GHz)	03_ESU_1_2.8G_SM_fin
Report Settings:	
Report Template:	Report Setup FCC 15_109
Create Electronic Report:	RTF PDF
Document Name:	dummy FCC Report
Actions:	
Test start	
Notify:	"Matrix richtig geschaltet !? Spektrum (ESU) angeschlossen ?"

Diagram No.: 2.20**Common Information**

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.109 Unintentional Radiator
Antenna polarisation:	horizontal/vertical
Operation mode:	FDD Band 2 IDLE DATA TRANSFER
Operator Name:	DPa/TAS
Comment:	EUT + USB Cable + PC + Ferrit 74271142

EUT position horizontal

04_2.8_18G_SM



EMI Auto Test Template: 04_2.8_18G_SM

Hardware Setup:	28_ESU_Horn_18G_Preamp_mit_SM
Measurement Type:	Open-Area-Test-Site
Frequency Range:	2,8 GHz - 10 GHz
Graphics Level Range:	20 dBµV/m - 80 dBµV/m
Preview Measurements:	
Scan Test Template:	04_ESU_2.8_18G_SM_ExtPreamp_pre
Data Reduction:	
Limit Line #1:	FCC15_109_PK
Limit Line #2:	FCC15_109_AV
Peak Search:	6 dB , Maximum Results: 10
Subrange Maxima:	50 Subranges , Maxima per Subrange: 1
Acceptance Offset:	-20 dB
Maximum Number of Results:	30
After Data Reduction:	Interactive data reduction
Frequency Zoom:	
Zoom Scan Template:	05_ESU_2.8_18G_SM_ExtPreamp_zoom
Frequency Zoom:	
Zoom Scan Template:	05_ESU_2.8_18G_SM_ExtPreamp_zoom
Adjustment:	
Template for Single Meas.:	04_ESU_2.8_18G_SM_ExtPreamp_pre
Final Measurements:	
Template for Single Meas.:	06_ESU_2.8_18G_SM_ExtPreamp_fin
Template for Single Meas.:(>1GHz)	06_ESU_2.8_18G_SM_ExtPreamp_fin
Report Settings:	
Report Template:	Report Setup FCC 15_109
Create Electronic Report:	RTF PDF
Document Name:	dummy EMI Report
Actions:	
Test start	
Notify:	"Switch-Matrix richtig geschaltet ? Spekki (ESU) angeschlossen ?"