

Annex 1: Measurement diagrams 20-1-0094901T09a-A1

Number of pages:	13	Date of Report:	2021-Sep-06
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:	Prodrive Technologies B.V.
Product: Model:	RFID Reader RFID Reader		
FCC ID:	Y2IRFIDR	IC:	9389A-RFIDR
Testing has been carried out in accordance with:	Title 47 CFR, Chapter I FCC Regulations, Subchapter A Part 15, Subpart C: §15.209 RSS-Gen, Issue 5 + Amendment 1 General Requirements for Compliance of Radio Apparatus FCC 15.209 Deviations, modifications or clarifications (if any) to above mentioned documents are written in each section under "Test method and limit".		



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1 Measurement diagrams

2.01_H_Field_TX_standing

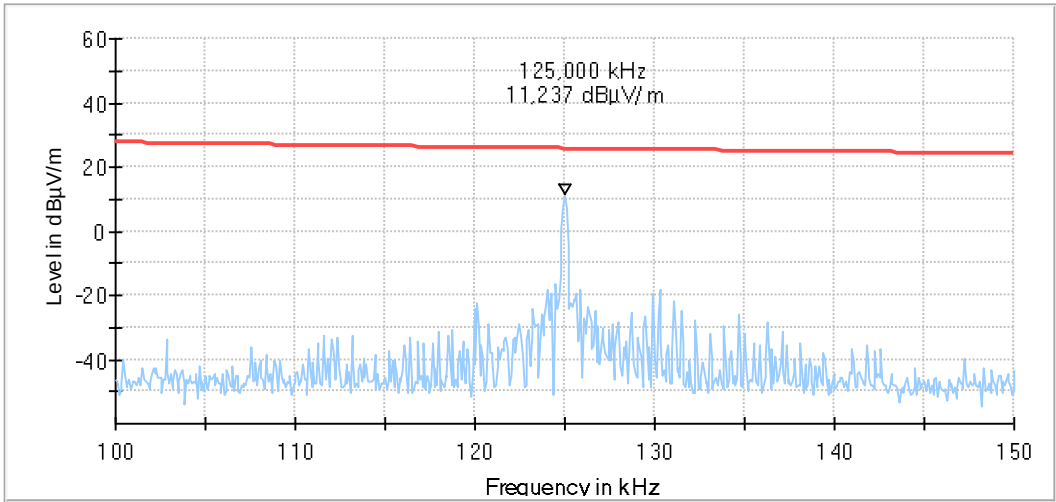
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used Filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	SSanthakum
Operating Mode:	TX 125 kHz
Power during tests:	12 V DC 110 V/60 Hz, full loaded batteries
Comment 1:	Channel low/middle/high
Environmental Conditions::	Humidity : 50% rH; Temperature: 20 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	20-1-00949S04_C02
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Full Spectrum



2.02_H_Field_TX_lying

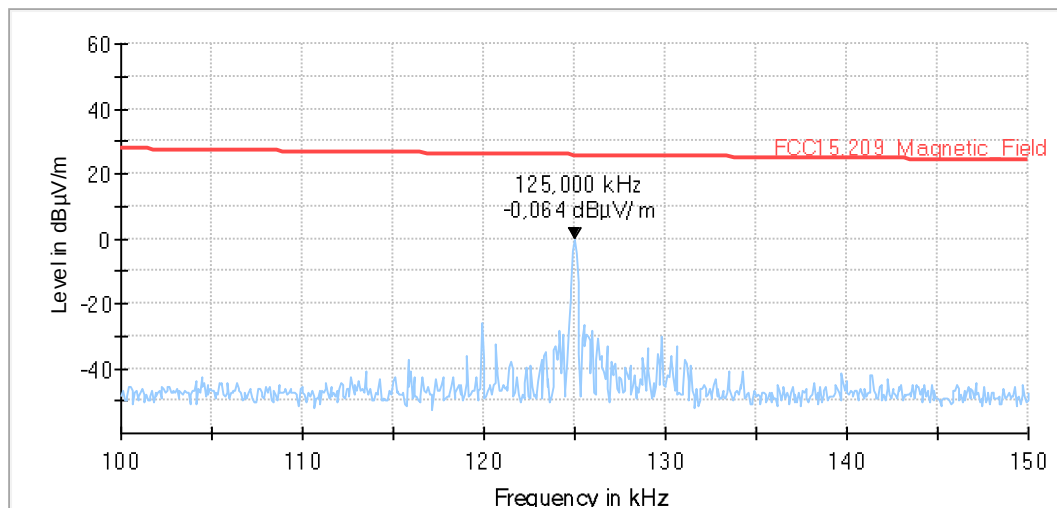
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used Filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	SSanthakum
Operating Mode:	TX 125 kHz
Power during tests:	12 V DC 110 V/60 Hz, full loaded batteries
Comment 1:	Channel low/middle/high
Environmental Conditions::	Humidity : 50% rH; Temperature: 20 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	20-1-00949S04_C02
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Full Spectrum



2.03_H_Field_TXRX_lying

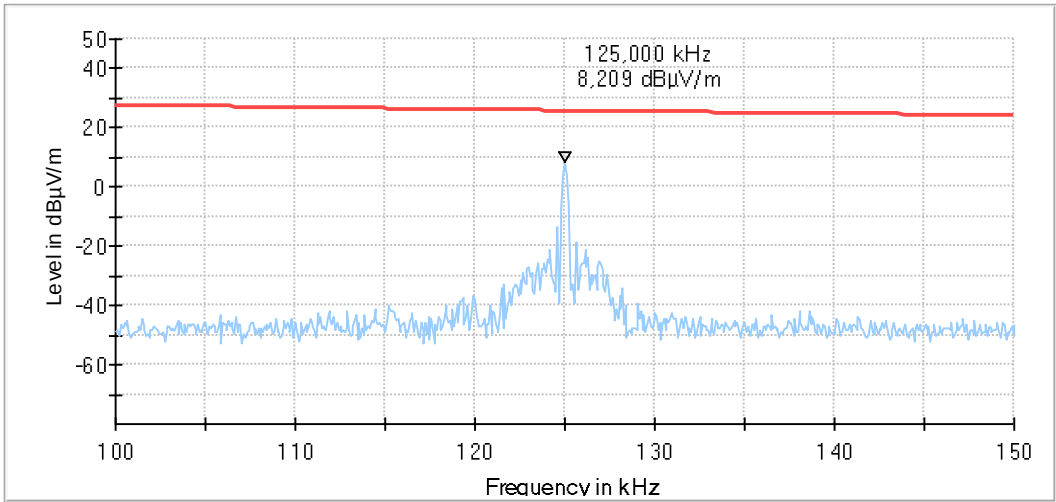
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used Filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	SSanthakum
Operating Mode:	TXRX 125 kHz
Power during tests:	12 V DC 110 V/60 Hz, full loaded batteries
Comment 1:	Channel low/middle/high
Environmental Conditions::	Humidity : 50% rH; Temperature: 20 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	20-1-00949S04_C02
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Full Spectrum



2.04_H_Field_TXRX_lying

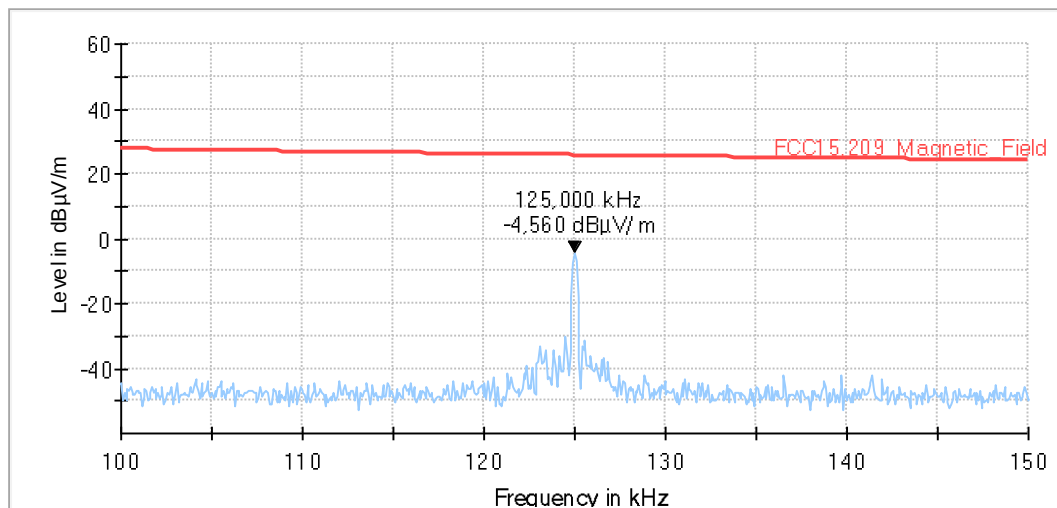
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used Filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	SSanthakum
Operating Mode:	TXRX 125 kHz
Power during tests:	12 V DC 110 V/60 Hz, full loaded batteries
Comment 1:	Channel low/middle/high
Environmental Conditions::	Humidity : 50% rH; Temperature: 20 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	20-1-00949S04_C02
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Full Spectrum



2.05_RSE_TX_standing

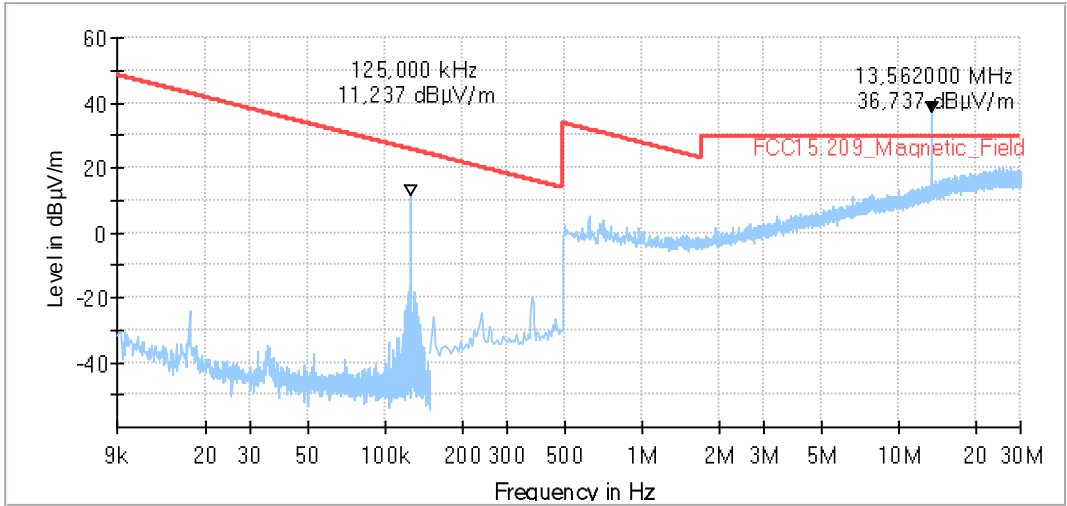
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used Filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	SSanthakum
Operating Mode:	TX 13,56 MHz
Power during tests:	12 V DC 110 V/60 Hz, full loaded batteries
Comment 1:	Channel low/middle/high
Environmental Conditions::	Humidity : 50% rH; Temperature: 20 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	20-1-00949S04_C02
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Full Spectrum



2.06_RSE_TXRX_standing

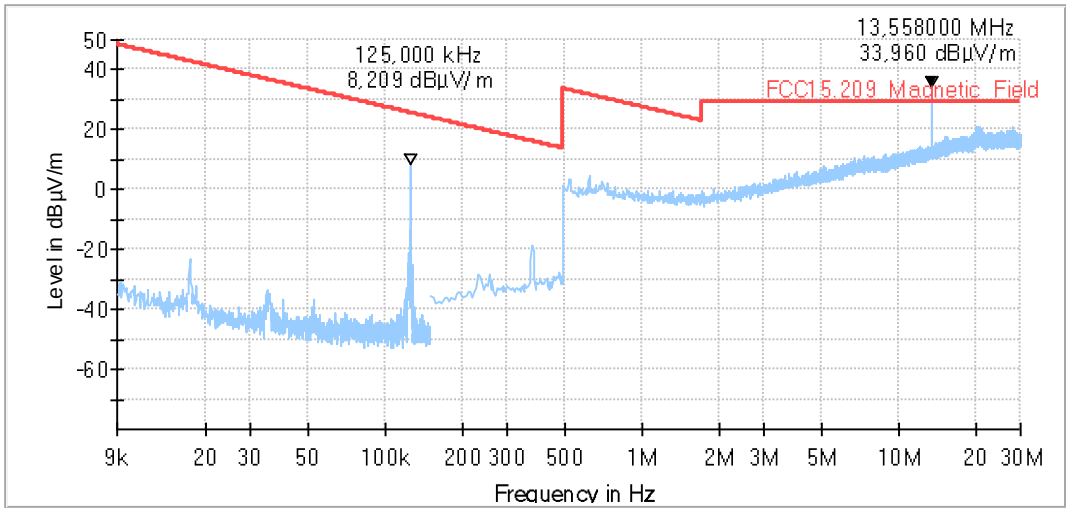
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used Filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	SSanthakum
Operating Mode:	TXRX 125 kHz
Power during tests:	12 V DC 110 V/60 Hz, full loaded batteries
Comment 1:	Channel low/middle/high
Environmental Conditions::	Humidity : 50% rH; Temperature: 20 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	20-1-00949S04_C02
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Full Spectrum



3.01_RSE_TX_standing

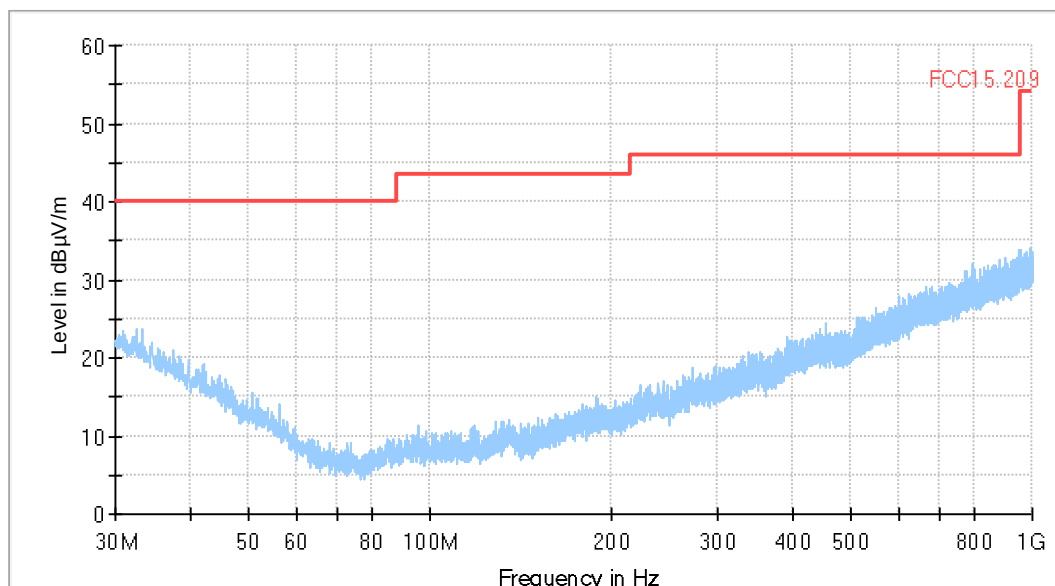
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.205&15.209 & RSS Gen. Issue 5
Antenna polarisation:	horizontal/vertical
Environmental Conditions::	Humidity : 50% rH; Temperature: 20 °C
Operating Mode:	TX
Comment:	Channel no. low/middle/high
Verdict:	Passed

EUT Information

PMT number:	20-1-00949S04_C02
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Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
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(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBµV)	Comment
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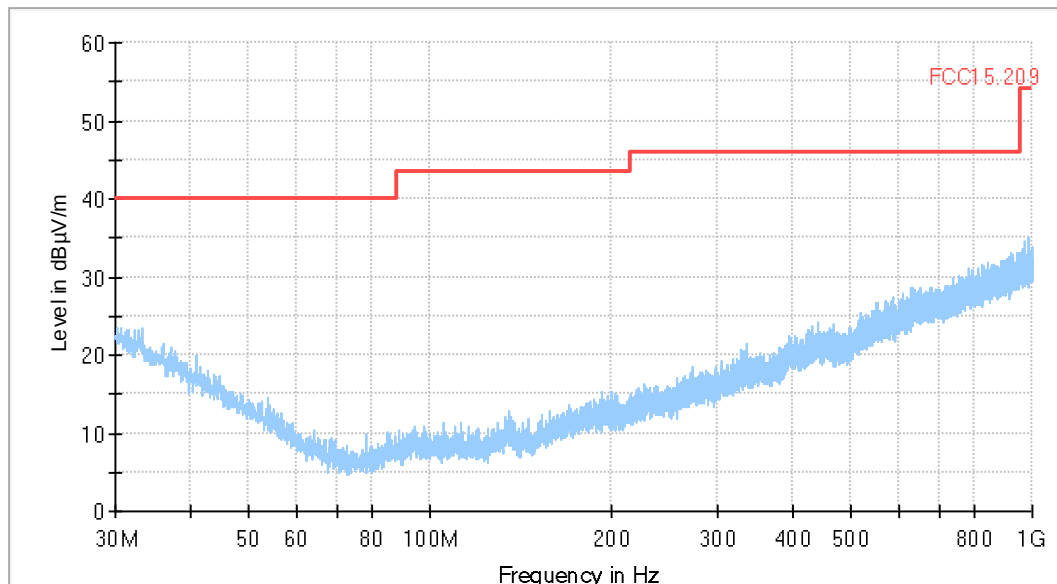
3.02_RSE_TX_lying

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.205&15.209 & RSS Gen. Issue 5
Antenna polarisation:	horizontal/vertical
Environmental Conditions::	Humidity : 50% rH; Temperature: 20 °C
Operating Mode:	TX
Comment:	Channel no. low/middle/high
Verdict:	Passed

EUT Information

PMT number:	20-1-00949S04_C02
	Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
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(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBµV)	Comment
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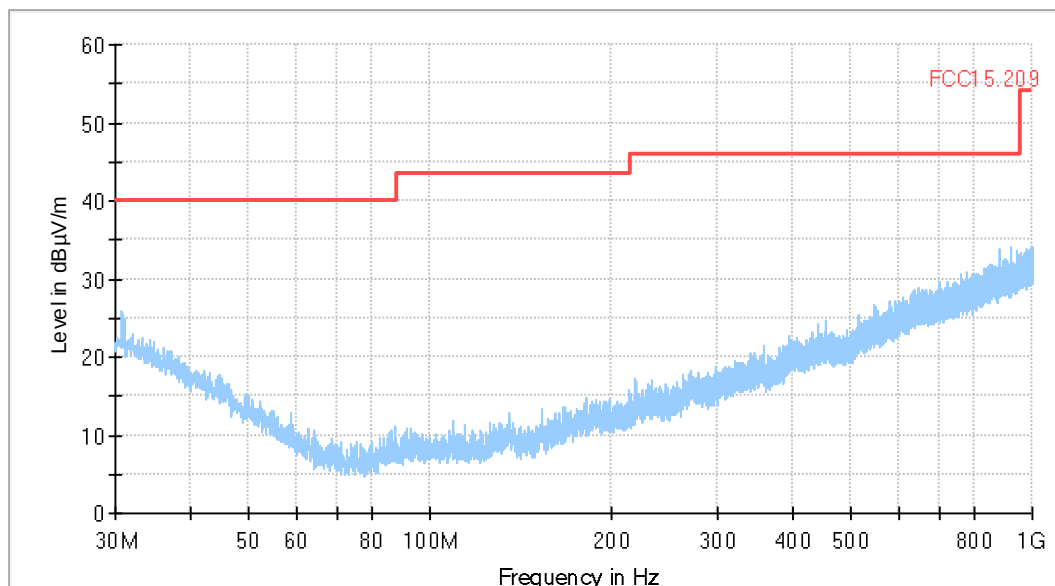
3.03_RSE_TXRX_standing

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.205&15.209 & RSS Gen. Issue 5
Antenna polarisation:	horizontal/vertical
Environmental Conditions::	Humidity : 50% rH; Temperature: 20 °C
Operating Mode:	TXRX 125 kHz
Comment:	Channel no. low/middle/high
Verdict:	Passed

EUT Information

PMT number: 20-1-00949S04_C02
Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
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(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBµV)	Comment
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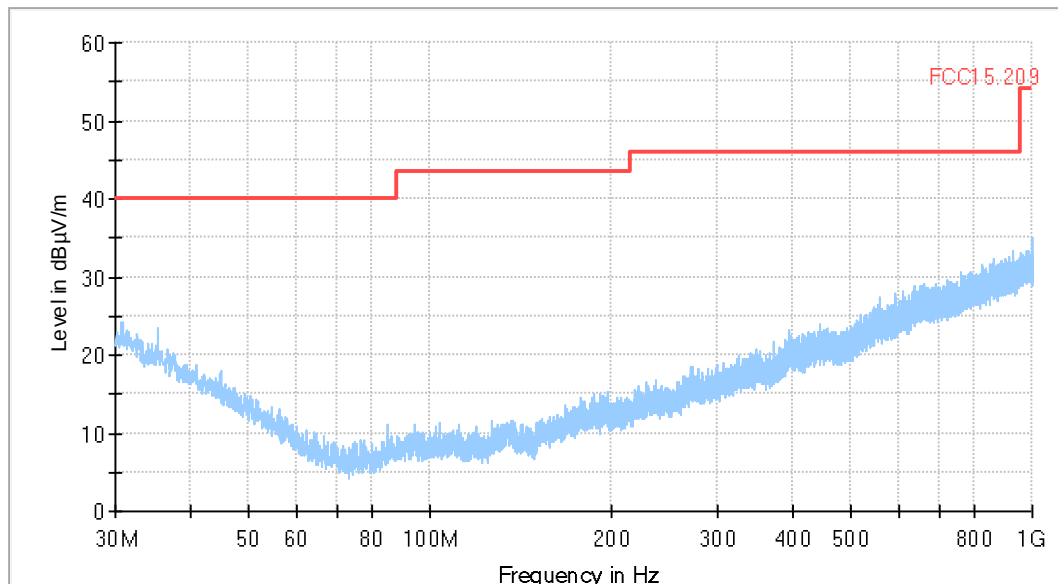
3.04_RSE_TXRX_lying

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.205&15.209 & RSS Gen. Issue 5
Antenna polarisation:	horizontal/vertical
Environmental Conditions::	Humidity : 50% rH; Temperature: 20 °C
Operating Mode:	TXRX 125 kHz
Comment:	Channel no. low/middle/high
Verdict:	Passed

EUT Information

PMT number:	20-1-00949S04_C02
	Full Spectrum



Final_Result

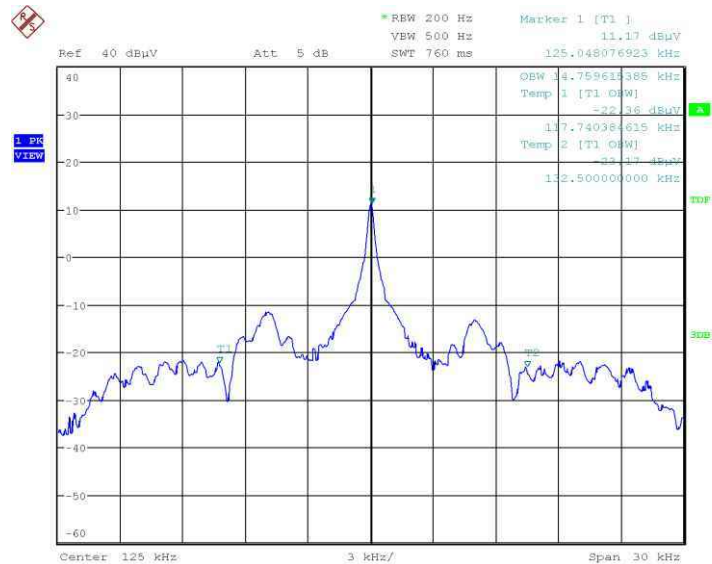
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
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(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBµV)	Comment
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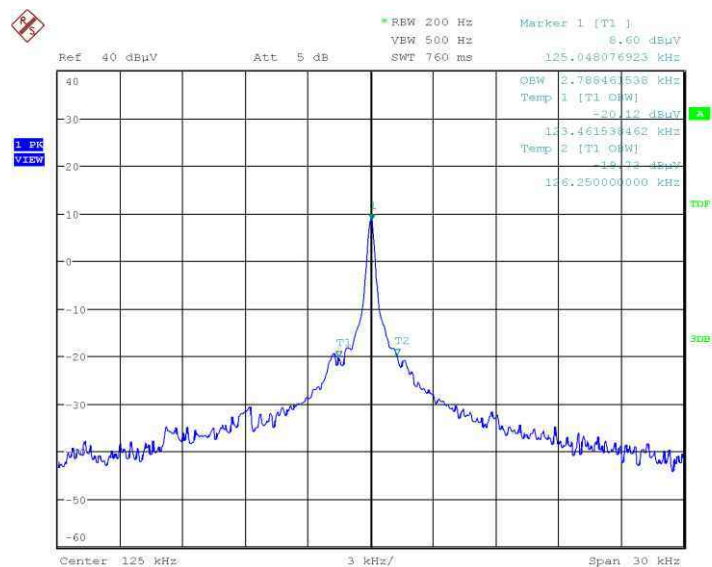
Occupied bandwidth tests

EUT TX mode (without RFID tag)



Date: 6.SEP.2021 08:23:52

EUT TXRX mode (with RFID tag)



Date: 6.SEP.2021 08:28:13

End Of Annex 1