TEST REPORT
FROM
RADIO FREQUENCY
INVESTIGATION LTD.

Test Of: Valeo Electronique
315 MHz Transmitter

To: F.C.C. Part 15
Subpart C. Section 15.231
(Intentional Radiators)

Test Report Serial No:
RFI/EMCB2/RP36922A
Supersedes Test Report Serial No:
RFI/EMCB1/RP36922A

This Test Report Is Issued Under The Authority Of Brian Watson Technical Director: **PP**	**Checked By:** **Pp**
Tested By: **Pp**	**Release Version No:** **PDF01**
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Radio Frequency Investigation Ltd, Ewhurst Park, Ramsdell, Basingstoke, Hampshire, RG26 5RQ, ENGLAND. Tel: +44 (0) 1256 851193 Fax: +44 (0) 1256 851192	Registered in England, No. 211 7901. Registered Office: Ewhurst Park, Ramsdell, Basingstoke, Hampshire RG26 5RQ	NAMAS TESTING 0644

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Test Report Serial No: RFI/EMCB2/RP36922A supersedes Test report Serial No: RFI/EMCB1/RP36922A

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1. Client Information

Company Name:	Valeo Electronique
Address:	02 Rue Fernand Pouillond 94042 Creteil France
Contact Name:	Mr A N'Deumo

2. Equipment Under Test (EUT)

The client has supplied the following information (with the exception of the Date of Receipt):

2.1. Identification Of Equipment Under Test (EUT)

Brand Name:	Valeo Electronique
Model Name or Number:	315 MHz
Unique Type Identification:	VALTX3
Serial Number:	Not stated by client
Country of Manufacture:	France
FCC ID Number:	Not stated by client
Date of Receipt:	7 May 1998

2.2. Description Of EUT

The EUT is a handheld, Low power, Key fob transmitter that is used for the remote locking / unlocking of vehicle doors.

2.3. Modifications Incorporated In EUT

The EUT has been modified to enable constant transmissions for test purpose.

2.4. Additional Information Related To Testing

Power Supply Requirement:	3 Volts DC (internal battery)
Intended Operating Environment:	Vehicle
Weight:	0.05kg
Dimensions:	7 x 3 x 4 cm
Interface Ports:	None

2.5. Support Equipment

No support equipment was used.

3. Test Specification, Methods And Procedures

3.1. Test Specification

Reference:	F.C.C. Part 15 Subpart C. Section 15.231 - Intentional Radiators*
Title:	Code of Federal Regulations, Part 15 (47CFR15), 1995 Radio Frequency Devices: Intentional Radiators.
Comments:	A description of the test facility used for this test is on file with, and has been accepted by, the Federal Communications Commission as required by Section 2.948 of Federal Rules.
Purpose of Test:	To determine whether the equipment complied with the requirements of the specification for the purposes of certification.

*Sections 15.209 (Radiated Emissions; general requirements) and 15.231 (Periodic operation in the band 40.66 to 40.70 MHz and above 70 MHz)

3.2. Methods And Procedures

The methods and procedures used were as detailed in:

ANSI C63.2 (1987)
Title: American National Standard for Instrumentation - Electromagnetic noise and field strength.

ANSI C63.4 (1992)
Title: American National Standard Methods of Measurement of Electromagnetic Emissions from Low Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

ANSI C63.5 (1988)
Title: American National Standard for the Calibration of antennas used for Radiated Emission measurements in Electromagnetic Interference (EMI) control.

ANSI C63.7 (1988)
Title: American National Standard Guide for Construction of Open Area Test Sites for performing Radiated Emission Measurements.

CISPR 16 (1987)
Title: Specification for Radio Interference measuring apparatus and measurement methods.

3.3. Definition Of Measurement Equipment

The measurement equipment used complied with the requirements of the standards referenced in the Methods & Procedures section above. Appendix 1 contains a list of the test equipment used.

4. Deviations From The Test Specification

None.

5. Operation Of The EUT During Testing

5.1. Operating Conditions

The EUT was tested in a normal laboratory environment. During testing, the EUT was powered by an internal battery.

5.2. Operating Modes

The EUT was tested in the following operating mode: Transmit: The EUT was operated by activating the front switch (to enable locking of the vehicle) followed by the rear switch (to enable unlocking of the vehicle). To enable radiated emissions testing to be carried out, the EUT was modified to allow continuous transmission (locking mode).

5.3. Configuration And Peripherals

The EUT was tested in the following configuration: Stand Alone. The reason for choosing this configuration was that it was defined by the client as being likely to be the worst case typical mode. NB Section 2 of this report contains a full list of support equipment used and Appendix 3 contains a schematic diagram of the test configuration.

6. Summary Of Test Results

6.1. Radiated Emissions

Range Of Measurements	Specification Reference	Compliancy Status
Electric Field Strength, 30 MHz to 5.0 GHz	Section 15 of C.F.R. 47: 1997	Complied

6.2. Location Of Tests

All the measurements described in this report were performed at the premises of Radio Frequency Investigation Ltd, Dunlop House, Dunlop, Ayrshire, KA3 4BD, Scotland.

7. Measurements, Examinations And Derived Results

7.1. General Comments

7.1.1. This section contains test results only. Details of the test methods and procedures can be found in Appendix 2 of this report.

7.1.2. The measurement uncertainties stated were calculated in accordance with the requirements of NAMAS Document NIS 81 with a confidence level of 95%. Please refer to Section 8 for details of measurement uncertainties.

7.2. Test Results For Radiated Emissions (Section 15.231)

7.2.1. General Comments

7.2.1.1. Radiated emissions pre-scans were performed with the EUT operated by in 2 different modes. The first mode was with the 'front switch' (locking mode) operational and the second mode was with the 'back switch' (unlock mode) operational. The scans were performed to determine a worse case mode of operation. However, as the emissions present were of a similar level for both modes, final radiated emissions were performed with the EUT operated with the 'front switch' (locked mode) operational.

7.2.1.2. Plots of the initial scans can be found in Appendix 4 of this test report.

7.2.2. Electric Field Strength Measurement of Fundermental Frequency

7.2.2.1. The client has stated that the EUT has a fundamental frequency of 315MHz.

7.2.2.2. As stated in section 15.231 (b) of CFR 47 Part 15, the field strength of the fundamental frequency between 260 MHz and 470 MHz shall not exceed 3750µV/m to 12500µV/m. The calculated field strength level at 315MHz must not exceed 6025.6µV/m (75.6dBµV/m). The limit stated is specified at a test distance of 3m using an Average detector (however a Quasi-Peak detector may be employed).

7.2.2.3. The following table lists frequencies at which emissions were measured using a Quasi-Peak detector (results incorporate antenna factors and cable losses):

Frequency (MHz)	Ant. Pol.	Q-P Level (dBmV/m)	Q-P Limit (dBmV/m)	Margin (dB)	Result
315.014	Horz	68.8	75.6	6.8	Complied

7.2.2.4. The following table lists frequencies at which emissions were measured using an Average detector (results incorporate antenna factors and cable losses):

Frequency (MHz)	Ant. Pol.	Av. Level (dBmV/m)	Av. Limit (dBmV/m)	Margin (dB)	Result
315.014	Horz	21.6	75.6	54.0	Complied

The following table lists frequencies at which emissions were measured using a Peak detector (results incorporate antenna factors and cable losses):

Frequency (MHz)	Ant. Pol.	Peak Level (dBmV/m)	Peak Limit (dBmV/m)	Margin (dB)	Result
315.014	Horz	70.9	75.6	4.7	Complied

7.3. Test Results For Radiated Emissions (Section 15.231)

7.3.1. Electric Field Strength Measurements of Spurious Emissions: Below 1000MHz

7.3.1.1. The client has stated that the highest frequency generated or used in the EUT was 315 MHz. Therefore tests were performed up to 5.0 GHz.

7.3.1.2. Plots of the initial scans can be found in Appendix 4 of this test report.

7.3.1.3. As stated in section 15.231 (b) of CFR 47 Part 15, the field strength of the of spurious emissions between 260 MHz and 470 MHz shall not exceed 375µV/m to 1250µV/m. The calculated field strength level for a device operating at 315MHz must not exceed 602.5V/m (55.6dBµV/m). The limit stated is specified at a test distance of 3m using an Average detector (however a Quasi-Peak detector may be employed).

7.3.1.4. The following table lists frequencies at which emissions were measured using an Average detector (results incorporate antenna factors and cable losses):

Frequency (MHz)	Ant. Pol.	Av. Level (dBmV/m)	Av. Limit (dBmV/m)	Margin (dB)	Result
630.034	Horz	23.1	55.6	32.5	Complied
945.042	Horz	28.0	55.6	27.6	Complied

7.3.1.5. The following table lists frequencies at which emissions were measured using a Peak detector (results incorporate antenna factors and cable losses):

Frequency (MHz)	Ant. Pol.	Peak Level (dBmV/m)	Peak Limit (dBmV/m)	Margin (dB)	Result
630.034	Horz	44.4	75.6	31.2	Complied
945.042	Horz	65.8	75.6	9.8	Complied

7.3.2. Electric Field Strength Measurements of Spurious Emissions: Above 1000MHz

7.3.2.1. The client has stated that the highest clock frequency for the EUT was 315 MHz. Therefore tests were performed up to 5.0 GHz.

7.3.2.2. Plots of the initial scans can be found in Appendix 4 of this test report.

7.3.2.3. As stated in section 15.231 (b) of CFR 47 Part 15, the field strength of the of spurious emissions between 260 MHz and 470 MHz shall not exceed 375µV/m to 1250µV/m. The calculated field strength level for a device operating at 315MHz must not exceed 602.5V/m (55.6dBµV/m). The limit stated is specified at a test distance of 3m using an Average and Peak detector.

7.3.2.4. The following tables list frequencies at which emissions were measured using Peak and Average detector functions:

Highest Average Level:

Frequency (GHz)	Antenna Polarity (H/V)	Average Detector level (dBmV)	Antenna factor (dB)	Cable loss (dB)	Actual Average Level (dBmV/m)	Average Limit (dBmV/m)	Average Margin (dB)	Result
1260.065	Horiz	22.4	24.7	0.8	47.9	55.6	7.7	Complied
1575.000	Vert	12.5	25.8	1.0	39.3	53.9	4.6	Complied

Highest Peak Level:

Frequency (GHz)	Antenna Polarity (H/V)	Peak Detector level (dBmV)	Antenna factor (dB)	Cable loss (dB)	Actual Peak Level (dBmV/m)	Peak Limit (dBmV/m)	Peak Margin (dB)	Result
1260.065	Horiz	29.1	24.7	0.8	54.6	75.6	21.0	Complied
1575.000	Vert	22.0	25.8	1.0	48.8	73.9	25.1	Complied

Note: The emission of 1575.000 MHz falls within a restricted band specified in section 15.205 of C.F.R. 47. Therefore the limit stated in section 15.209 was applied.

7.4. Test Results for Radiated Emissions: Fundamental Frequency Bandwidth Measurement

7.4.1. As stated in C.F.R. 47 Part 15.231 (c) the bandwidth of the emission must not exceed 0.25% of the centre frequency.

7.4.2. For a centre frequency of 315 MHz, 0.25% allows a bandwidth of 787.5 kHz.

7.4.3. Scans showing the bandwidth measurement of the centre frequency can be seen in Appendix 4 of this test report.

Results

Frequency (MHz)	Scan No.	Resolution Bandwidth (kHz)	Measured Bandwidth (kHz)	Margin (kHz)	Result
315.014	GPH/36922E01/09	120	366.6	420.9	Complied
315.014	GPH/36922E01/10	10	66.6	720.9	Complied

7.5. Periodic Operation: Transmitter Time Allocation

7.5.1. The EUT tested is a manually operated device and therefore is required to meet the requirements of 15.231 (a(1)).

7.5.2. As stated in C.F.R. 47 Part 15.231 (a), a transmitter, which is operated manually, must employ a switch that automatically deactivates the transmitter within not more than 5 seconds of being released.

7.5.3. Scans showing the timing characteristics of the transmitter can be found in Appendix 4 of this test report.

Results

Mode of Operation	Scan No.	Duration of Transmission (ms)	Result
Front Switch Activated (Vehicle Locked)	GPH/36922E01/01	91.111	Complied
Rear Switch Activated (Vehicle Unlocked)	GPH/36922E01/02	91.111	Complied

8. Measurement Uncertainty

8.1. Company Policy, as based on the NAMAS Accreditation Standard, M10, paragraph 12.11 (o), states that Test Reports shall include estimated uncertainty of the calibration or test result (this information need only appear in test reports and test certificates where it is relevant to the validity or application of the test result, where a client's instructions so require or where uncertainty affects compliance to a specification or limit).

8.2. The global uncertainties have been calculated in accordance with NAMAS NIS 81 (Edition 1, May 1994) as follows:

Measurement Type	Range	Confidence Level	Calculated Uncertainty
Radiated Emissions	30 MHz to 1000 MHz	95%	+/- 3.9 dB
Radiated Emissions	1 GHz to 5.0 GHz	95%	+/- 4.2 dB

8.3. Measurement uncertainties have been applied in accordance with NAMAS document NIS 81 (edition 1, May 1994), and in the absence of any specification criteria, guidance, or code of practice, compliance has been judged on the basis of shared risk.

8.4. In the case of emissions tests, the measured value of the disturbance from the product sample shall be compared directly with the limits. If the measured value is equal to or less than the limit the product is deemed to pass the test.

8.5. In the case of immunity tests, the equipment is deemed to pass the test if it fulfils the stated performance criteria at the required or a higher severity level. The measurement uncertainty has been taken into account in the calibration procedures stated in the relevant basic standard.

8.6. The methods used to calculate the above uncertainties are in line with those used for calibration laboratories contained in NAMAS document NIS 3003 Edition 8 “The Expression of Uncertainty and Confidence in Measurement” May 1995, which align with international recommendations “Guide to the Expression of Uncertainty in Measurement” ISO/IEC/OIML/BIPM (Prepared by ISO/TAG 4: January 1993).

Appendix 1. Test Equipment Used

Instrument	Manufacturer	Model	RFI No.
Screened Enclosure: Emissions			
Biconical Antenna	R & S	HK116	A507
Biconical Antenna	R & S	HK116	A513
Log periodic	R & S	HL223	A506
Log Spiral	EMCO	3101	A514
Display Unit	R & S	ESAI-D	M505
RF Unit	R & S	ESBI	M506
Double Ridge Guide Antenna	EMCO	3115	A605
Open Area Test Site			
Biconical Antenna	R & S	HK116	A513
Log periodic	R & S	HL223	A506
Cable	Rosenberger	UFA210A-1-1181-70x70	C345
Double Ridge Guide Antenna	EMCO	3115	A605
Spectrum Monitor	R & S	EZM	M024
Receiver	R & S	ESVP	M044

NB In accordance with NAMAS requirements, all the measurement equipment is on a calibration schedule.

Appendix 2. Measurement Methods

A2.1. Radiated Emissions: FCC Part 15

A2.1.1. Radiated emissions measurements were performed in accordance with the standard, against appropriate limits for each detector function.

A2.1.2. Initial measurements covering the entire measurement band in the form of swept scans in a shielded enclosure were performed in order to identify frequencies on which the EUT was generating interference. This determined the frequencies on which the EUT should be re-measured in full on the open area test site. In order to minimise the time taken for the swept measurements, a Peak detector was used in conjunction with the appropriate detector IF measuring bandwidth (see table below). Repetitive scans were performed to allow for emissions with low repetition rates, and for the duty cycle of the EUT. The test configuration was the same for the initial scans as for the final measurements.

A2.1.3. The initial scans were performed using an antenna height of 1.5 m and a measurement distance of 3 m. Following the initial scans, graphs were produced giving an overview of the emissions from the EUT plotted against the appropriate specification limit. A tolerance line was set 6 dB below the specification limit and levels above the tolerance line were re-tested on the open area test site, at the appropriate distance, using a measuring receivers with a Quasi-Peak detector (below 1000 MHz), where applicable, for measurements above 1000 MHz average and peak detectors were used.

A2.1.4. For the main (final) measurements the EUT was arranged on a non-conducting table on an open area test site, as detailed in the specification.

A2.1.5. All measurements on the open area test site were performed using broadband antennas.

A2.1.6. On the open area test site, at each frequency where a signal was found, the levels were maximised by initially rotating the turntable through 360°. For measurements below 1000 MHz the antenna height was varied between 1 m and 4 m. For frequencies above 1000 MHz the antenna was fixed at a height of 1.5m. At this point, any signals found to be between the limit and a level 6 dB below it were further maximised by changing the configuration of the EUT, e.g. re-routing cables to peripherals and moving peripherals with respect to the EUT.

A2.1.7. The test equipment settings for radiated emissions measurements were as follows:

Receiver Function	**Initial Scan**	**Final Measurements Below 1GHz**	**Final Measurements Above 1 GHz**
Detector Type:	Peak	Quasi-Peak (CISPR)	Peak/Average
Mode:	Max Hold	Not applicable	Not applicable
Bandwidth:	100 kHz	120 kHz	1 MHz
Amplitude Range:	60 dB	20 dB	20 dB (typical)
Measurement Time:	Not applicable	> 1 s	> 1 s
Observation Time:	Not applicable	> 15 s	> 15 s
Step Size:	Continuous sweep	Not applicable	Not applicable
Sweep Time:	Coupled	Not applicable	Not applicable

Spurious radiated emissions were measured against the limits specified in Section 15.209 of C.F.R. 47 Part 15 Subpart C - Intentional Radiators OR those of Section 15.231 depending upon whichever permitted a higher field strength. Unless otherwise stated, the limits given in this report correspond to those specified in Section 15.209, as these are the most stringent.

Appendix 3. Test Configuration Drawings

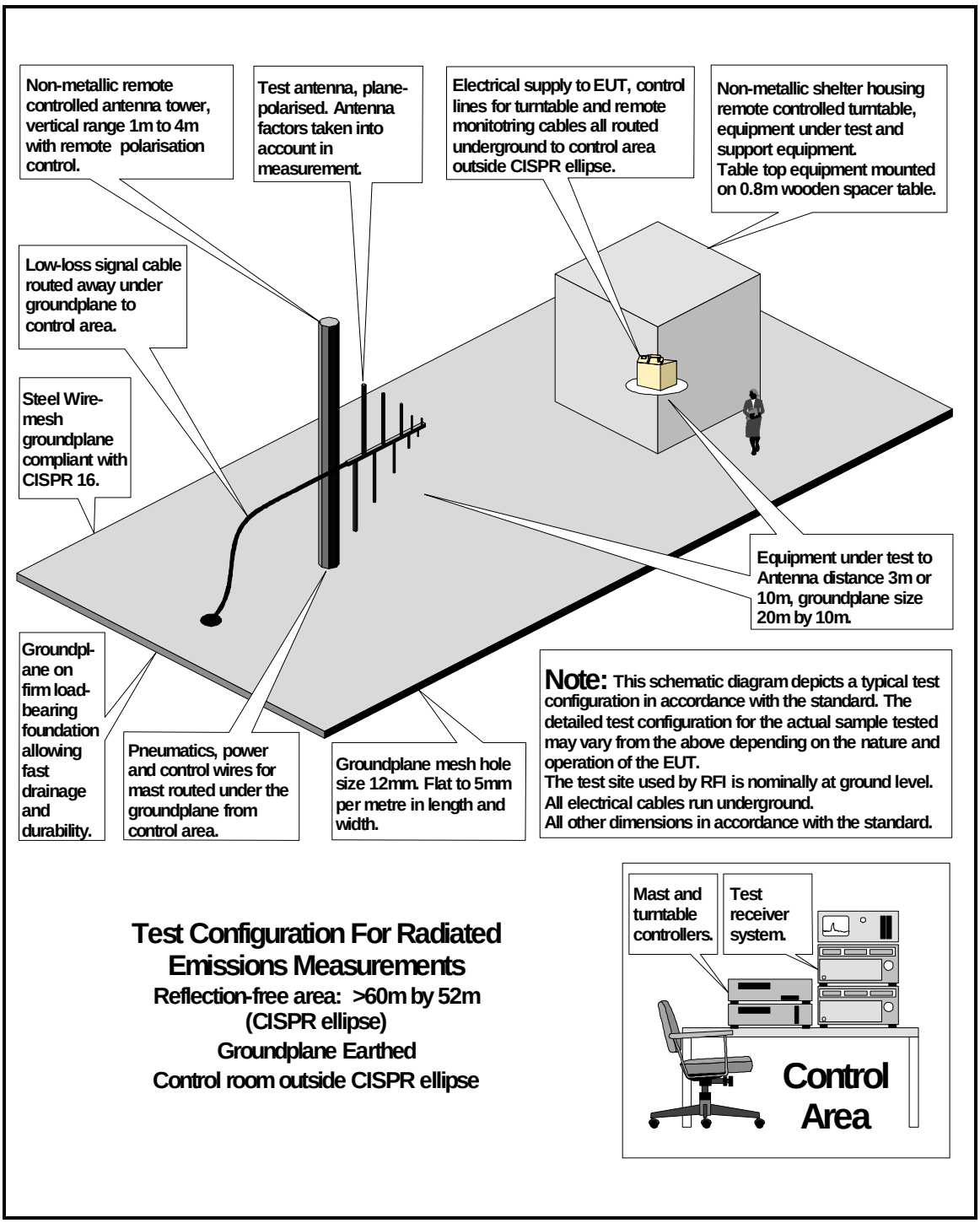
This appendix contains the following drawings:

Drawing Reference Number	Title
DRG\36922E01\EMIRAD	Test configuration for measurement of radiated emissions
DRG\36922E01\001	Schematic diagram of the EUT, support equipment and interconnecting cables used for the test

Test Of: Valeo Electronique
315 MHz Transmitter

To: F.C.C. Part 15 Subpart C Section 15.231 (Intentional Radiators)

DRG\36922E01\EMIRAD



Test Configuration For Radiated Emissions Measurements

Reflection-free area: >60m by 52m (CISPR ellipse)

Groundplane Earthed

Control room outside CISPR ellipse

DRG\36922E01\001

Configuration of EUT and Local Support Equipment

Configuration of Remote Support Equipment

Appendix 4. Graphical Test Results

This appendix contains the following graphs:

Graph Reference Number	Title
GPH\36922\E\01\001	Time domain plot – Front switch operated
GPH\36922\E\01\002	Time domain plot – Rear switch operated
GPH\36922\E\01\003	Scan of radiated electric field: (200 to 1000 MHz). Front switch operated
GPH\36922\E\01\004	Scan of radiated electric field: (200 to 1000 MHz). Rear switch operated
GPH\36922\E\01\005	Scan of radiated electric field: (30 to 200 MHz). Front switch operated
GPH\36922\E\01\006	Scan of radiated electric field: (30 to 200 MHz). Rear switch operated
GPH\36922\E\01\007	Scan of radiated electric field (1 to 5 GHz). Front switch operated
GPH\36922\E\01\008	Scan of radiated electric field (1 to 5 GHz). Rear switch operated
GPH\36922\E\01\009	Bandwidth Measurement (120kHz Resolution Bandwidth) (312.532128 to 317.532128 MHz).
GPH\36922\E\01\010	Bandwidth Measurement (10kHz Resolution Bandwidth) (312.532128 to 317.532128 MHz)

These pages are not included in the total number of pages for this report.

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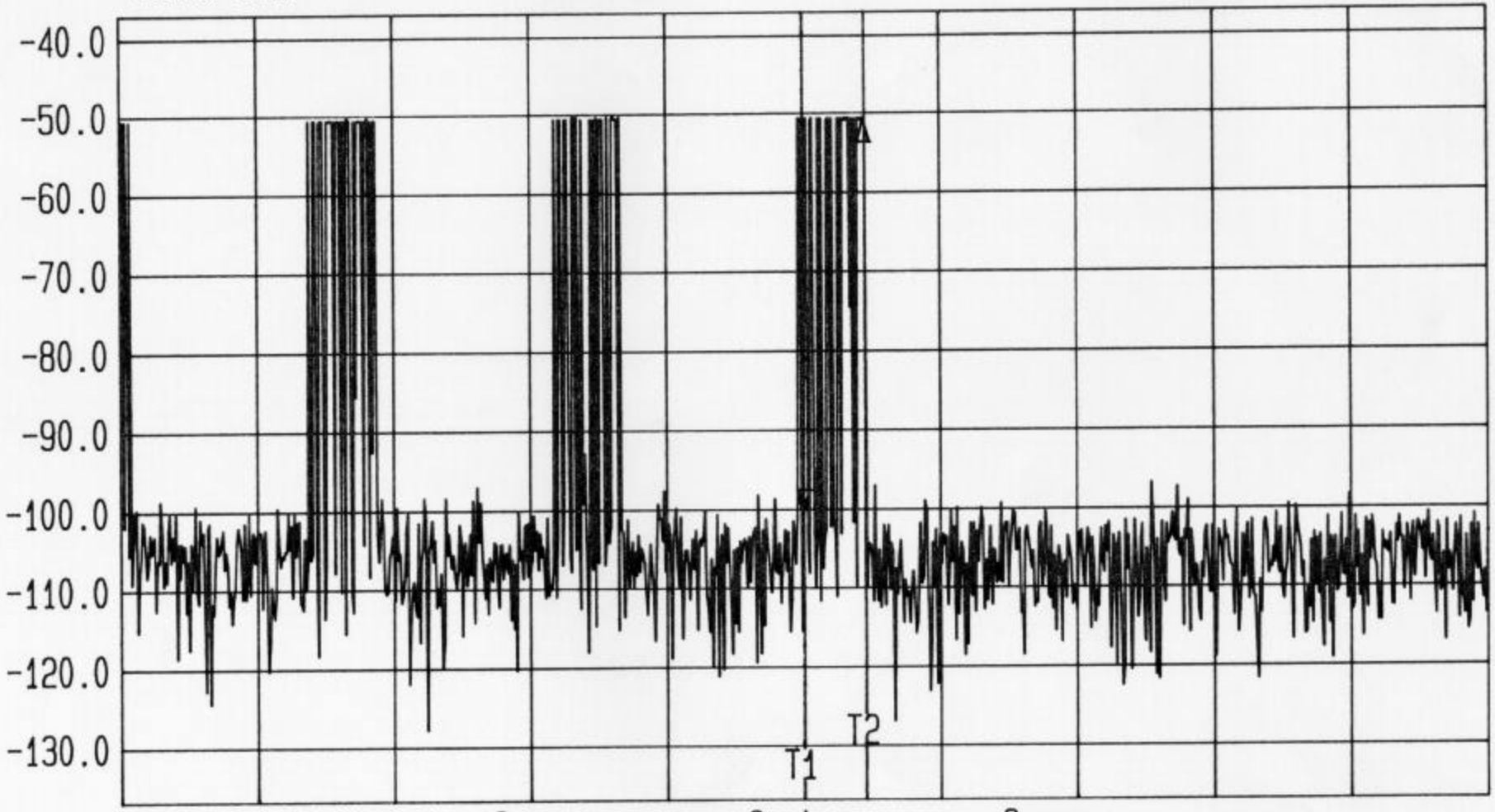
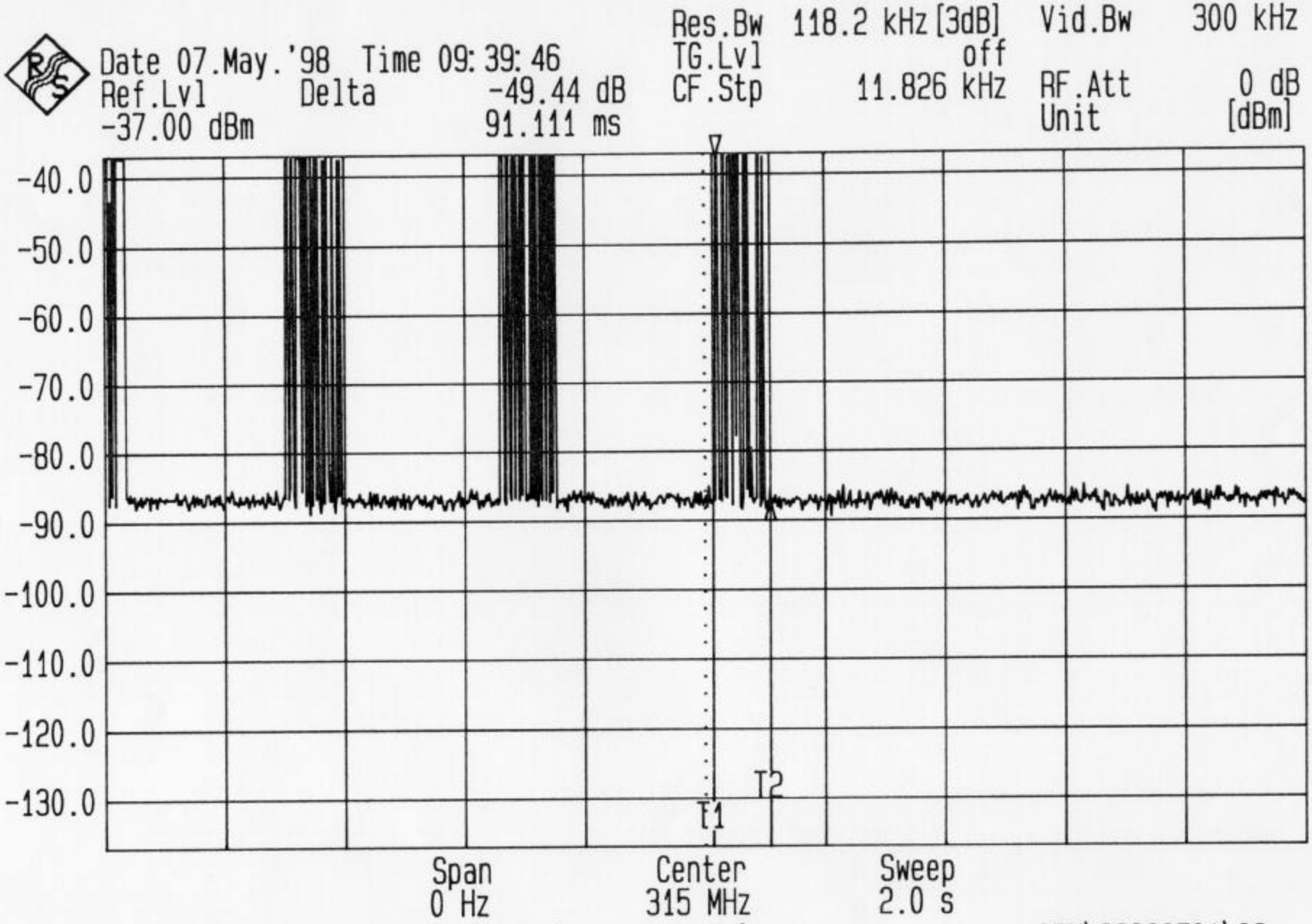
Date 07.May.'98 Time 09:20:47
Ref.Lvl -37.00 dBm
Delta 49.85 dB 91.111 ms
Res.Bw 118.2 kHz [3dB]
TG.Lvl off
CF.Stp 11.826 kHz
Vid.Bw 300 kHz
RF.Att 0 dB
Unit [dBm]



Span 0 Hz
Center 315 MHz
Sweep 2.0 s

Radio Frequency Investigation Ltd. T1= Tx switch off T2= noTx GPH\36922E01\01
EUT: 315 MHz Tx /Cust: Valeo Electronique /Op.Cond: Tx/Eng: AB /Spec: FCC 15 C 1997

FRONT SWITCH

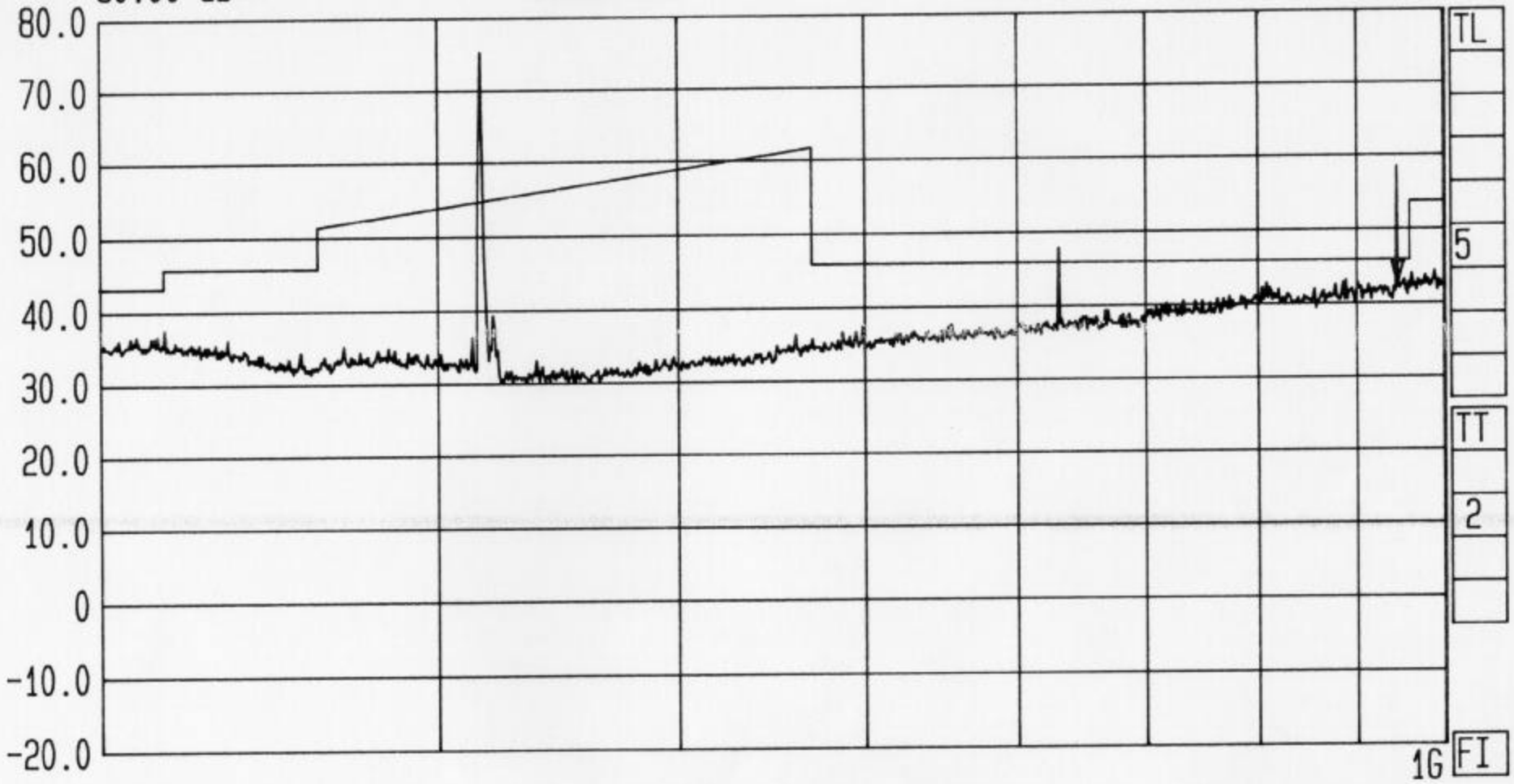


RFI Ltd. T1= Tx switch off T2= noTx/rear switch/ GPH\36922E01\02
EUT: 315 MHz Tx /Cust: Valeo Electronique /Op.Cond: Tx/Eng: AB /Spec: FCC 15 C 1997

Date 07.May.'98 Time 10:27:12
Ref.Lvl 80.00 dB*
Marker 42.55 dB* 946.0 MHz

Res.Bw 120 kHz [imp]
TG.Lvl off
CF.Stp 80.000 MHz

Vid.Bw 3 MHz
RF.Att 0 dB
Unit [dBµV/m]



Start 200 MHz
Span 800 MHz
Center 447.2 MHz
Sweep 360 ms
Stop 1 GHz

Radio Frequency Investigation Ltd/Screened Room E-field prescans GPH\36922E01\03
EUT: 315 MHz Tx /Cust: Valeo Electronique /Op.Cond: Tx/Eng: AB /Spec: FCC 15 C 1997

Date 07.May.'98 Time 10:42:56
Ref.Lvl 80.00 dB*
Marker 40.87 dB* 925.9 MHz
Res.Bw 120 kHz [imp]
TG.Lvl off
CF.Stp 80.000 MHz
Vid.Bw 3 MHz
RF.Att 0 dB
Unit [dBµV/m]

Start 200 MHz
Span 800 MHz
Center 447.2 MHz
Sweep 360 ms
Stop 1 GHz

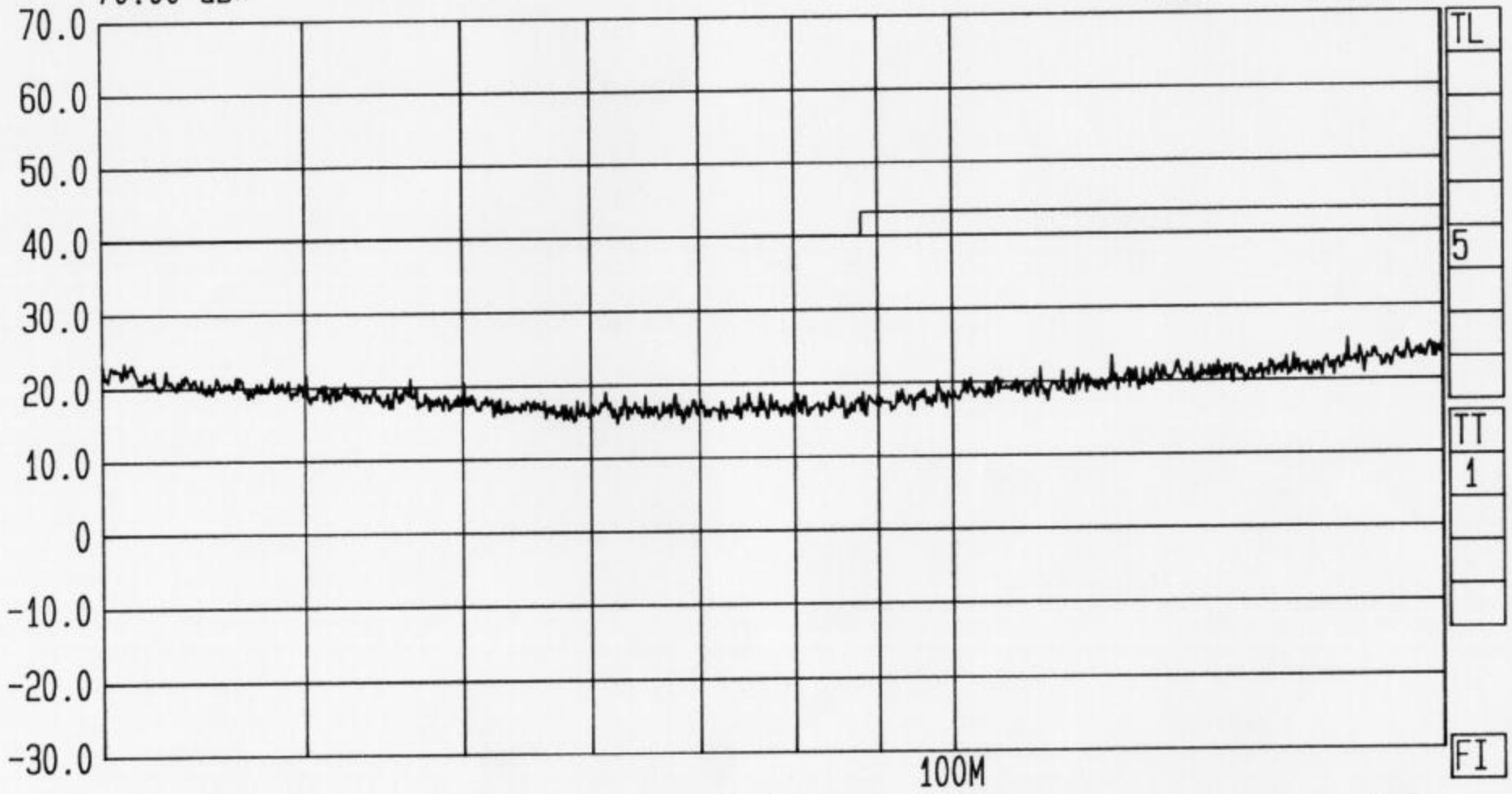
RFI Ltd/Screened Room E-field prescans /rear switch/ GPH\36922E01\04
EUT: 315 MHz Tx /Cust: Valeo Electronique /Op.Cond: Tx/Eng: AB /Spec: FCC 15 C 1997

Date 07.May.'98 Time 11:51:21

Ref.Lvl
70.00 dB*

Res.Bw 120 kHz [imp]
TG.Lvl off
CF.Stp 17.000 MHz

Vid.Bw 3 MHz
RF.Att 0 dB
Unit [dBµV/m]



Start	Span	Center	Sweep	Stop
30 MHz	170 MHz	77.45 MHz	80 ms	200 MHz

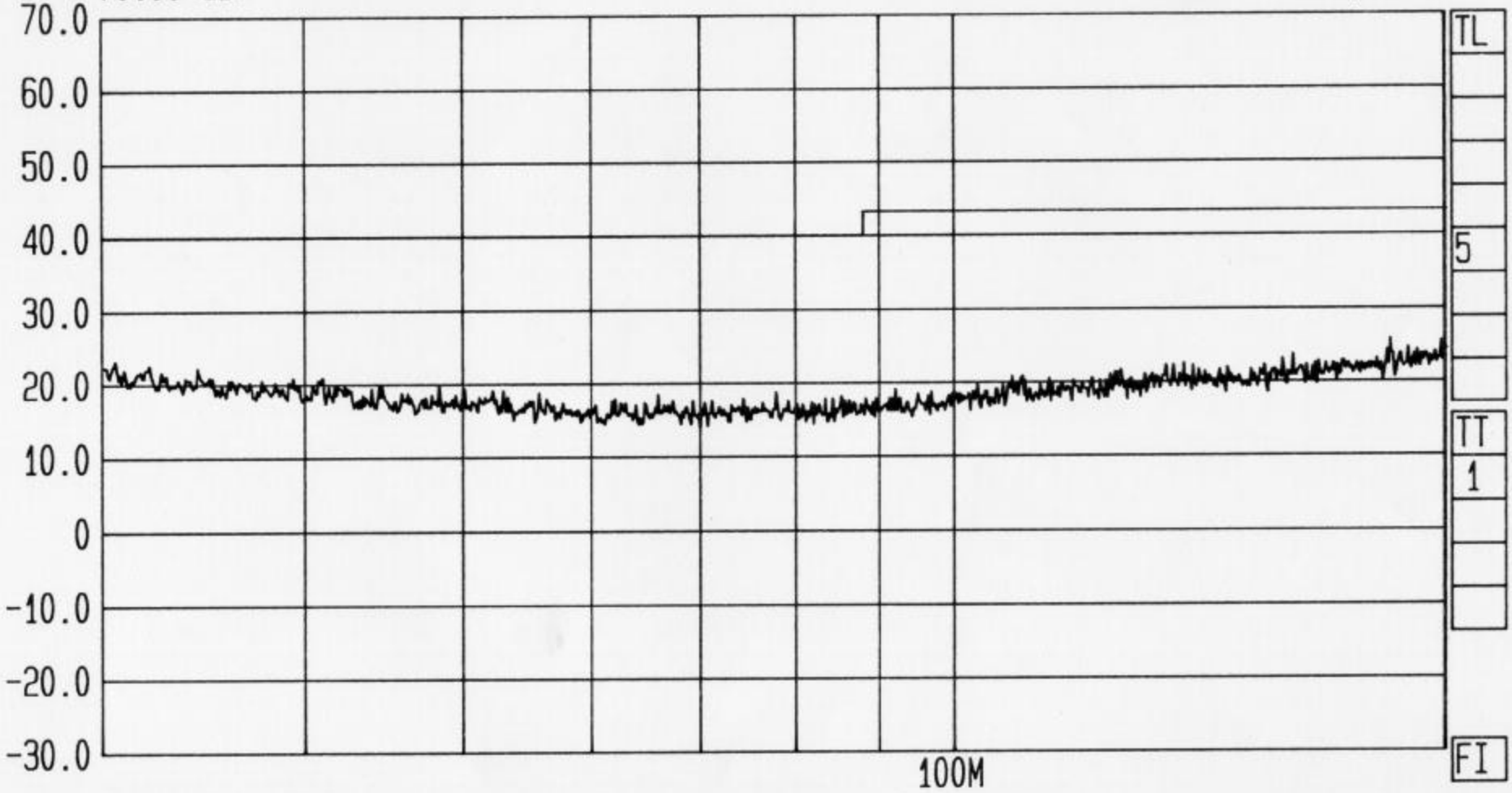
RFI Ltd/Screened Room E-field prescans /front switch/ GPH\36922E01\05
EUT: 315 MHz Tx /Cust: Valeo Electronique /Op.Cond: Tx/Eng: AB /Spec: FCC 15 C 1997

Date 07.May.'98 Time 11:58:52

Ref.Lvl
70.00 dB*

Res.Bw 120 kHz [imp]
TG.Lvl off
CF.Stp 17.000 MHz

Vid.Bw 3 MHz
RF.Att 0 dB
Unit [dBµV/m]



Start	Span	Center	Sweep	Stop
30 MHz	170 MHz	77.45 MHz	80 ms	200 MHz

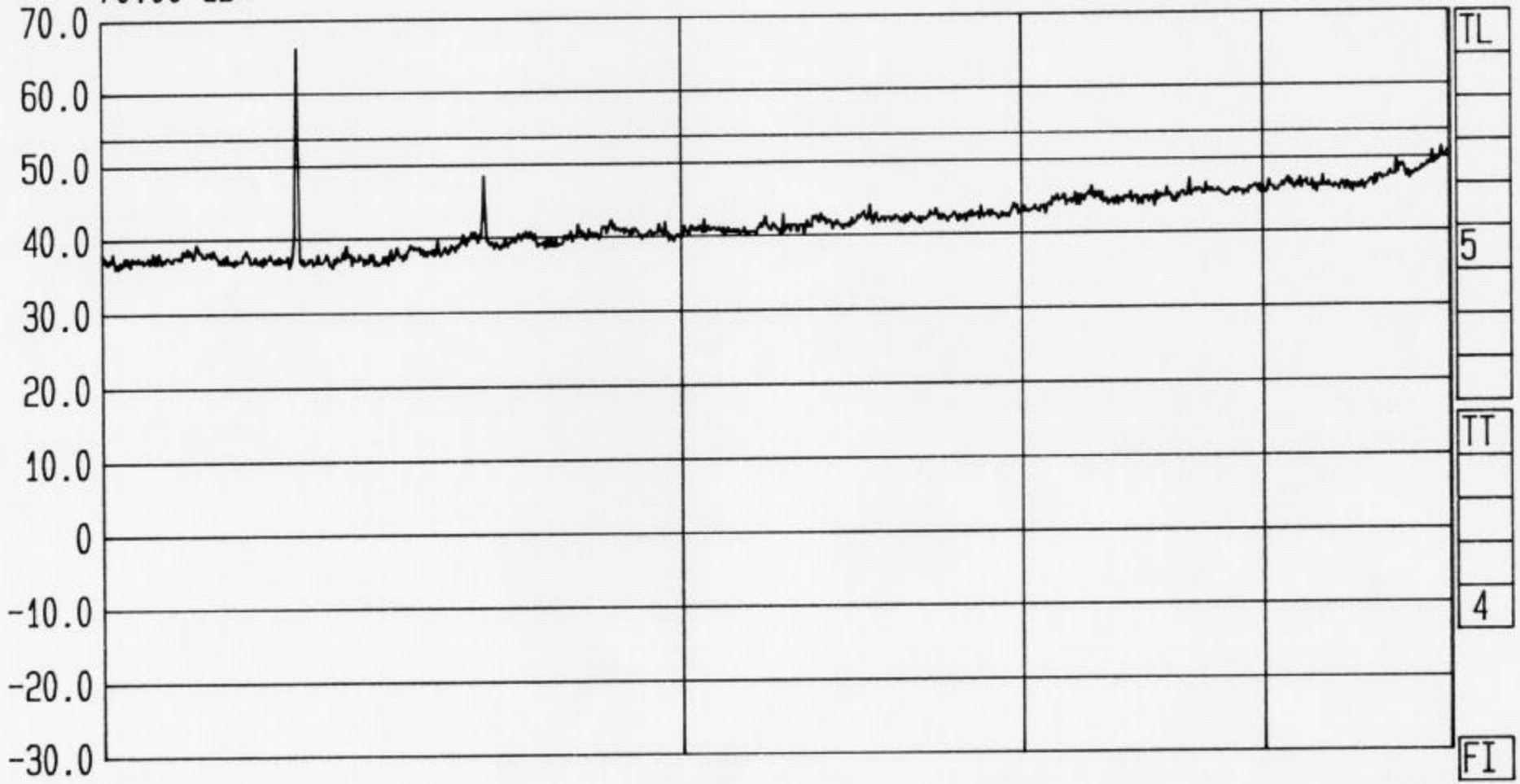
RFI Ltd/Screened Room E-field prescans /rear switch/ GPH\36922E01\06
EUT: 315 MHz Tx /Cust: Valeo Electronique /Op.Cond: Tx/Eng: AB /Spec: FCC 15 C 1997

Date 07.May.'98 Time 14:18:28

Ref.Lvl
70.00 dB*

Res.Bw 100 kHz [imp]
TG.Lvl off
CF.Stp 400.000 MHz

Vid.Bw 1 MHz
RF.Att 0 dB
Unit [dBµV/m]



Start 1 GHz | Span 4 GHz | Center 2.236 GHz | Sweep 2.6 s | Stop 5 GHz

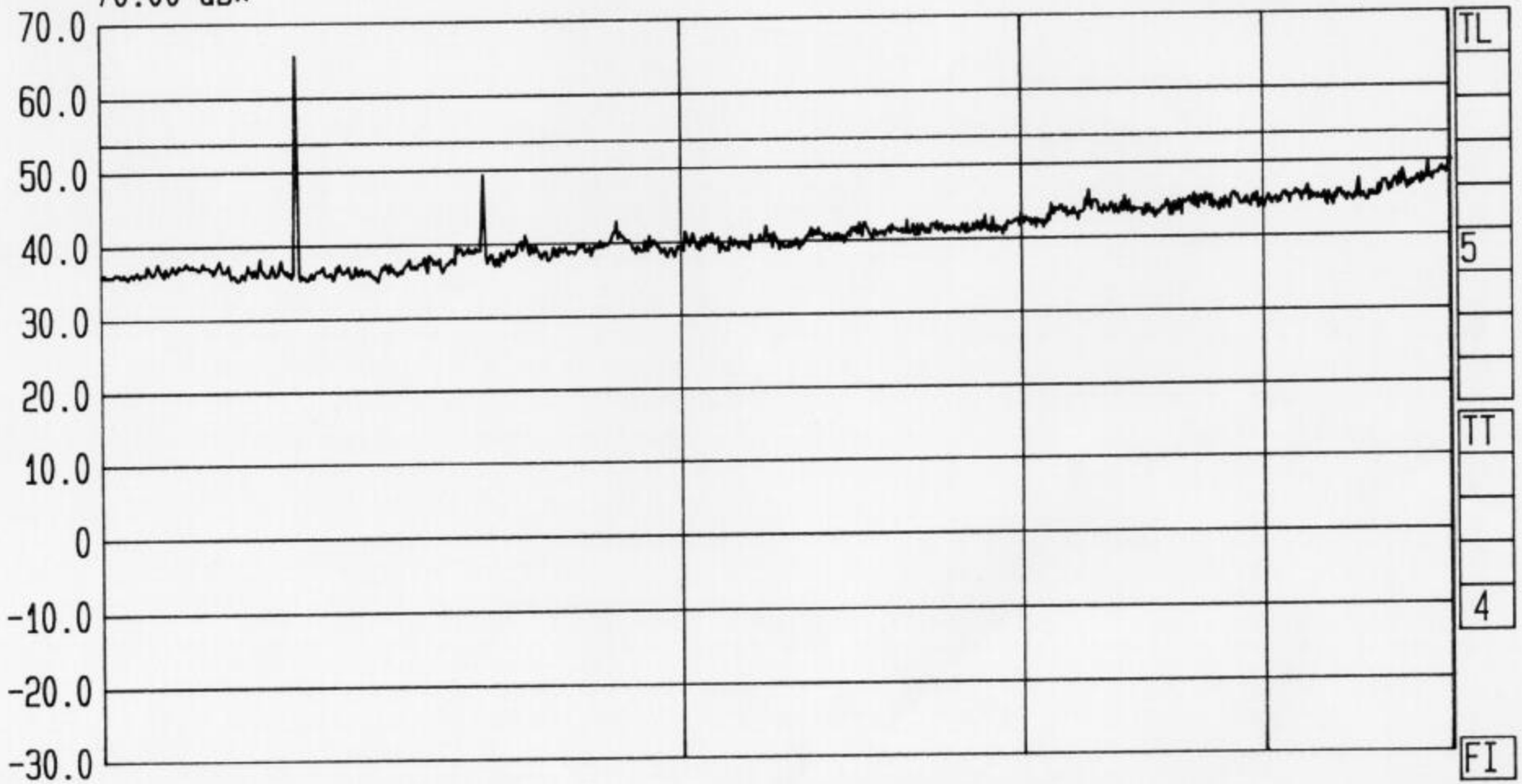
RFI Ltd/Screened Room E-field Prescans/Front switch on/ GPH\36922E01\07
8EUT: 315 MHz Tx /Cust: Valeo Electronique /Op.Cond: Tx/Eng: AB /Spec: FCC 15 C 1997

ab

Date 07.May.'98 Time 14:26:59
Ref.Lvl
70.00 dB*

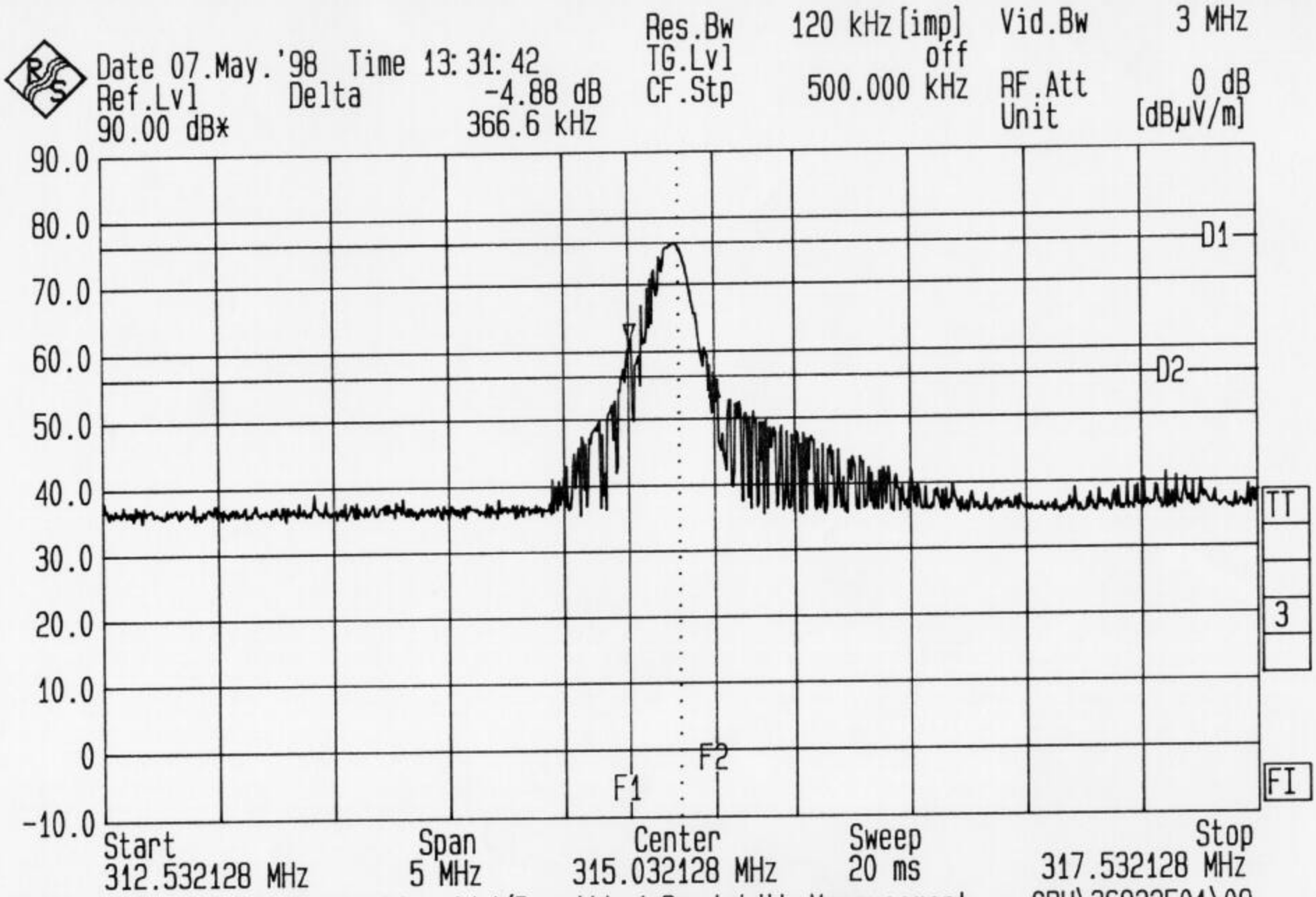
Res.Bw 100 kHz [imp]
TG.Lvl off
CF.Stp 400.000 MHz

Vid.Bw 1 MHz
RF.Att 0 dB
Unit [dBµV/m]

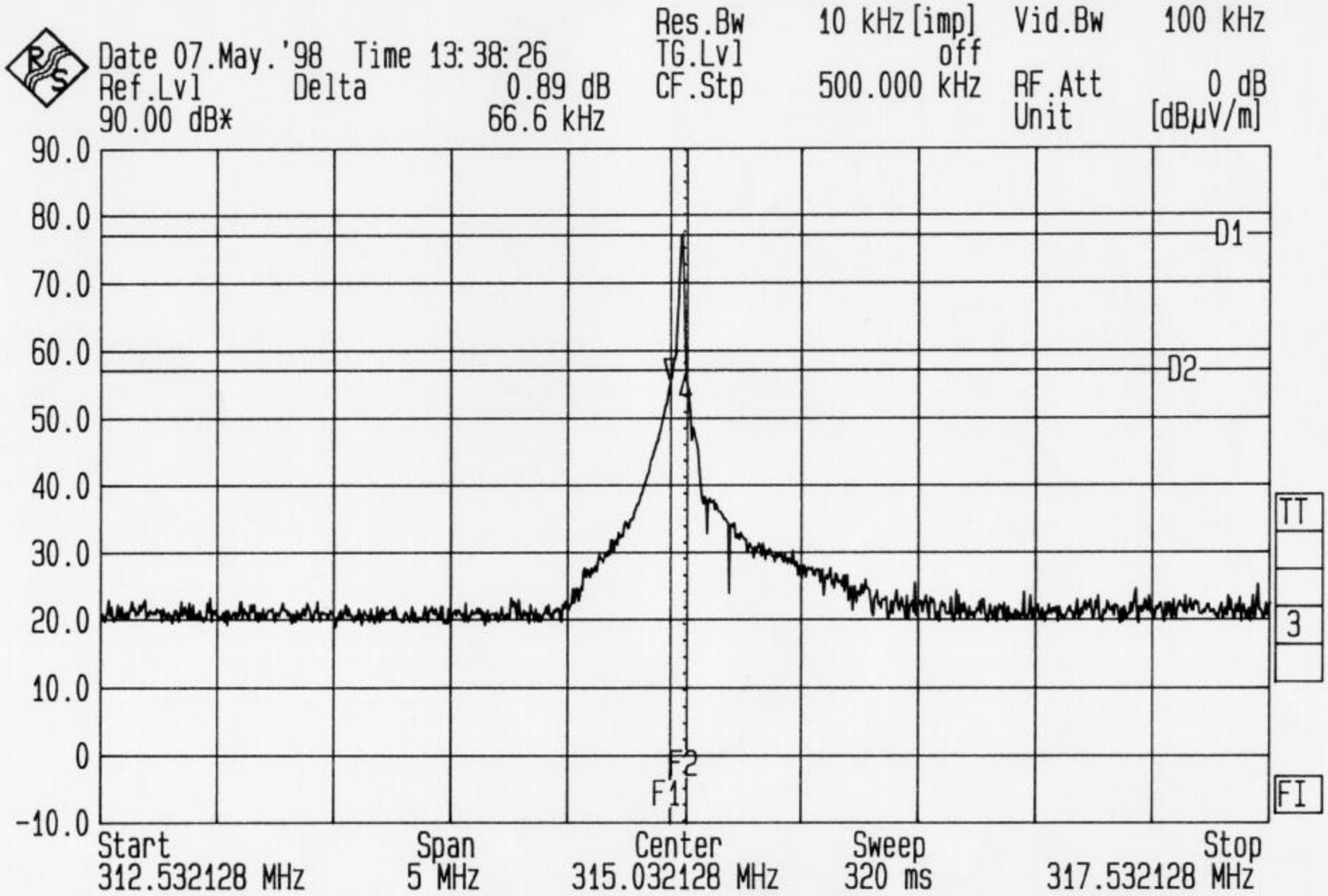


Start	Span	Center	Sweep	Stop
1 GHz	4 GHz	2.236 GHz	2.6 s	5 GHz

RFI Ltd/Screened Room E-field Prescans/Reart switch on/ GPH\36922E01\08
8EUT: 315 MHz Tx /Cust: Valeo Electronique /Op.Cond: Tx/Eng: AB /Spec: FCC 15 C 1997



Radio Frequency Investigation Ltd/Permitted Bandwidth Measurement GPH\36922E01\09
8EUT: 315 MHz Tx /Cust: Valeo Electronique /Op.Cond: Tx/Eng: AB /Spec: FCC 15 C 199



Radio Frequency Investigation Ltd/Permitted Bandwidth Measurement GPH\36922E01\10
8EUT: 315 MHz Tx /Cust: Valeo Electronique /Op.Cond: Tx/Eng: AB /Spec: FCC 15 C 199

Appendix 5. Photographs of EUT

This appendix contains the following photographs:

Photograph Reference Number	Title
PHT\36922E01\001	Front view of radiated emissions test configuration
PHT\36922E01\002	Front view of radiated emissions test configuration

Test Of: **Valeo Electronique**
315 MHz Transmitter
To: **F.C.C. Part 15 Subpart C Section 15.231 (Intentional Radiators)**

PHT\36922E01\001
Front view of radiated emissions test configuration.

PHT\36922E01\002
Rear view of radiated emissions test configuration.