

**TEST REPORT
FROM
RFI GLOBAL SERVICES LTD**

Test of: Datalogic Mobile S.r.l.
DI-Kyman With R3 module

To: FCC Part 15: 2006 Class B Subpart B
Clause 15.107 Conducted Emissions and Clause
15.109 Radiated Emissions

Test Report Serial No:
RFI/RPTE1/RP49797JD01A

**This Test Report Is Issued Under The Authority
Of Steve Flocks, Radio Performance Group Service Leader:**



Checked By: Steve Flocks



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Issue Date: 28 May 2008

Test Dates: 29 April 2008 to 30 April 2008

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1. Client Information

Company Name:	Datalogic Mobile S.r.l.
Address:	Via San Vitalino 13 Lippo di Calderara di Reno Bologna 40012
Contact Name:	Mr M DeGirolami

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2. Equipment Under Test (EUT)

The following information (with the exception of the date of receipt) has been supplied by the client:

2.1. Identification of Equipment Under Test (EUT)

Description:	Mobile Computer
Brand Name:	DI-Kyman With R3 module
Model Name or Number:	DI-Kyman 701-032
Serial Number:	D08P00011
Hardware Version Number:	1.0
Software Version Number:	1.65
FCC ID Number:	U4G0016
Country of Manufacture:	Italy
Date of Receipt:	29 April 2008

2.2. Description of EUT

The equipment under test is a Mobile Computer.

2.3. Modifications Incorporated in the EUT

During the course of testing the EUT was not modified.

2.4. Additional Information Related to Testing

Intended Operating Environment:	Residential, Commercial, Light industry and Heavy industry
Equipment Category:	Computer
Highest internally generated clock or oscillator frequency:	2485 MHz
Type of Unit:	Mobile Computer
Power Supply Requirement:	External DC Supply of 12 to 14 V Internal battery supply of 7.4 V
Frequency Range:	13.553 MHz to 13.567 MHz

2.5. Port Identification

Port	Description	Type/Length
1	USB	Dedicated, 2m
2	RS232	Dedicated, 2m

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3. Test Specification, Methods and Procedures

3.1. Test Specification

Reference:	FCC Part 15: 2006 Class B Subpart B Clause 15.107 Conducted Emissions and Clause 15.109 Radiated Emissions
Title:	Code of Federal Regulations, Part 15 (47CFR15) Radio Frequency Devices: Digital Devices.
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.

3.2. Methods and Procedures

The methods and procedures used were as detailed in:

ANSI C63.2 (1996)

Title: American National Standard for Instrumentation - Electromagnetic noise and field strength.

ANSI C63.4 (2003)

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 (2004)

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 16-1-1 (2004)

Title: Specification for radio disturbance and immunity measuring apparatus and methods. Part 1. Radio disturbance and immunity measuring apparatus – Measuring Apparatus.

CISPR 16-1-4 (2005)

Title: Specification for radio disturbance and immunity measuring apparatus and methods. Part 1. Radio disturbance and immunity measuring apparatus – Radiated Disturbances

4. Deviations from the Test Specification

There were no deviations from the test specification.

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5. Operation of the EUT during Testing

5.1. Operating Modes

The EUT was tested in the following operating mode(s):

- In standby mode.

5.2. Configuration and Peripherals

The EUT was tested in the following configuration(s):

- Connected to a power supply which was connected to a 110V AC supply.

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6. Summary of Test Results

Environmental Phenomena	Specification Reference	Port Type	Compliance Status
AC Conducted Emissions	Clause 15.107 of CFR 47	AC Mains	Complied
Radiated Emissions	Clause 15.109 of CFR 47	Enclosure	Complied

6.1. Location of Tests

All the measurements described in this report were performed at the premises of RFI Global Services Ltd, Ewhurst Park, Ramsdell, Basingstoke, Hampshire, RG26 5RQ.

6.2. Site Registration Numbers

FCC: 90895

IC: 3485

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7. Measurements, Examinations and Derived Results

7.1. General Comments

This section contains test results only.

Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%. Please refer to section 8 for details of measurement uncertainties.

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7.2. Test Results

7.2.1. AC Conducted Emissions - Quasi Peak Detector Measurements

7.2.1.1. Plots of the initial scans can be found in Appendix 3.

7.2.1.2. Tests were performed using the test methods detailed in ANSI C63.4 Section 7.

Frequency (MHz)	Line	Quasi Peak Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Note(s)	Result
0.354000	Live	35.7	58.9	23.2	-	Complied
0.394000	Live	37.7	58.0	20.3	-	Complied
0.458000	Live	27.9	56.7	28.8	-	Complied
0.502000	Live	34.1	56.0	21.9	-	Complied
0.562000	Live	19.1	56.0	36.9	-	Complied
0.566000	Live	19.7	56.0	36.3	-	Complied
0.726000	Neutral	28.4	56.0	27.6	-	Complied
0.946000	Neutral	24.1	56.0	31.9	-	Complied
1.170000	Live	25.4	56.0	30.6	-	Complied
1.286000	Live	27.7	56.0	28.3	-	Complied

7.2.2. AC Conducted Emissions - Average Detector Measurements

7.2.2.1. Following the initial scans and quasi peak measurements, further measurements were made at the relevant frequencies using an average detector. The measured levels were as follows:

Frequency (MHz)	Line	Average Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Note(s)	Result
0.350000	Neutral	24.5	49.0	24.5	-	Complied
0.394000	Neutral	26.8	48.0	21.2	-	Complied
0.454000	Live	22.7	46.8	24.1	-	Complied
0.506000	Live	38.2	46.0	7.8	-	Complied
0.558000	Live	14.5	46.0	31.5	-	Complied
0.566000	Live	8.0	46.0	38.0	-	Complied
0.662000	Neutral	21.3	46.0	24.7	-	Complied
0.726000	Live	29.2	46.0	16.8	-	Complied
1.174000	Live	16.7	46.0	29.3	-	Complied
1.286000	Neutral	26.3	46.0	19.7	-	Complied

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7.2.3. Radiated Emissions - Electric Field Strength Measurements (Frequency Range: 30 to 1000 MHz)

7.2.3.1. Plots of the initial scans can be found in Appendix 3.

7.2.3.2. Tests were performed using the test methods detailed in ANSI C63.4 Section 8.

Frequency (MHz)	Antenna Polarity	Quasi Peak Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Note(s)	Result
172.033	Vertical	35.1	43.5	8.4	-	Complied

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8. Measurement Uncertainty

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently, the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor, such that a confidence level of approximately 95% is maintained. For the purposes of this document "approximately" is interpreted as meaning "effectively" or "for most practical purposes".

Measurement Type	Range	Confidence Level (%)	Calculated Uncertainty
AC Conducted Spurious Emissions	0.15 MHz to 30 MHz	95%	+/- 3.25 dB
Radiated Emissions	9 kHz to 30 MHz	95%	+/- 3.53 dB
Radiated Emissions	30 MHz to 1000 MHz	95%	+/- 5.26 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty, the published guidance of the appropriate accreditation body is followed. Where it has been necessary to perform measurements using the substitution method, it has not been possible to calculate an uncertainty for this measurement. Due to the complex effects on the emissions levels measured within a screened room with either a signal source or the equipment under test, the calculation of a general measurement uncertainty for this process would be unrepresentative for all possible measured results.

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Appendix 1. Test Equipment Used

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A004	Line Impedance Stabilization Network	Rohde & Schwarz	ESH3-Z5	890 604/027	23 Apr 2007	13
A1037	Antenna	Chase EMC Ltd	CBL6112B	2413	13 Feb 2008	12
A1330	Attenuator	Midwest Microwave	ATT-0216-03-NNN-02	N/A	Calibrated before use	-
C1268	Cable	Rosenberger	FA210A007500 8080	49356-1	Calibrated before use	-
C151	Cable	Rosenberger	UFA210A-1-1181-70x70	None	Calibrated before use	-
C160	Cable	Rosenberger	UFA210A-1-1181-70x70	None	Calibrated before use	-
C340	Cable	Andrews	None	None	Calibrated before use	-
C348	Cable	Rosenberger	UFA210A-1-1181-70x70	2993	Calibrated before use	-
C363	Cable	Rosenberger	RG142	None	Calibrated before use	-
C461	Cable	Rosenberger	UFA210A-1-1182-704704	98H0305	Calibrated before use	-
M1263	Test Receiver	Rohde & Schwarz	ESIB7	100265	06 Feb 2008	12
M1379	Test Receiver	Rohde and Schwarz	ESIB7	100330	02 Aug 2007	12
S201	Open Area Test Site	RFI	1	None	25 May 2007	12
S212	Emissions Screened Room	RFI	12	None	Verified before use	-

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

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Appendix 2. Graphical Test Results

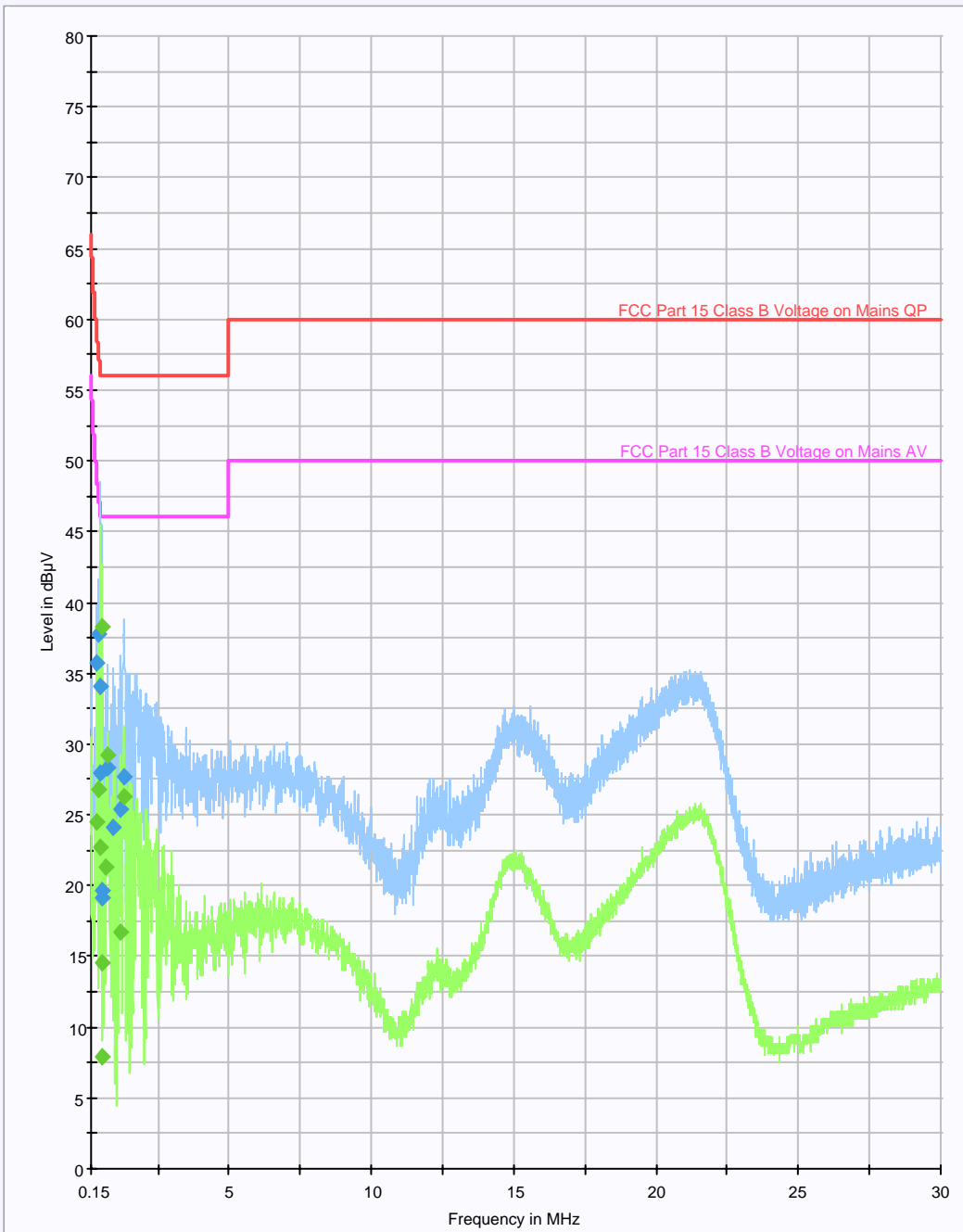
This Appendix contains the following graphs:

Graph Reference Number	Title
GPH\49797JD01\001	Conducted Emissions Pre-Scan (0.15 MHz to 30.0 MHz)
GPH\49797JD01\002	Radiated Emissions Pre-Scan (9 kHz to 150 kHz)
GPH\49797JD01\003	Radiated Emissions Pre-Scan (150 kHz to 25.0 MHz)
GPH\49797JD01\004	Radiated Emissions Pre-Scan (25.0 MHz to 30.0 MHz)
GPH\49797JD01\005	Radiated Emissions Pre-Scan (30.0 MHz to 1000.0 MHz)

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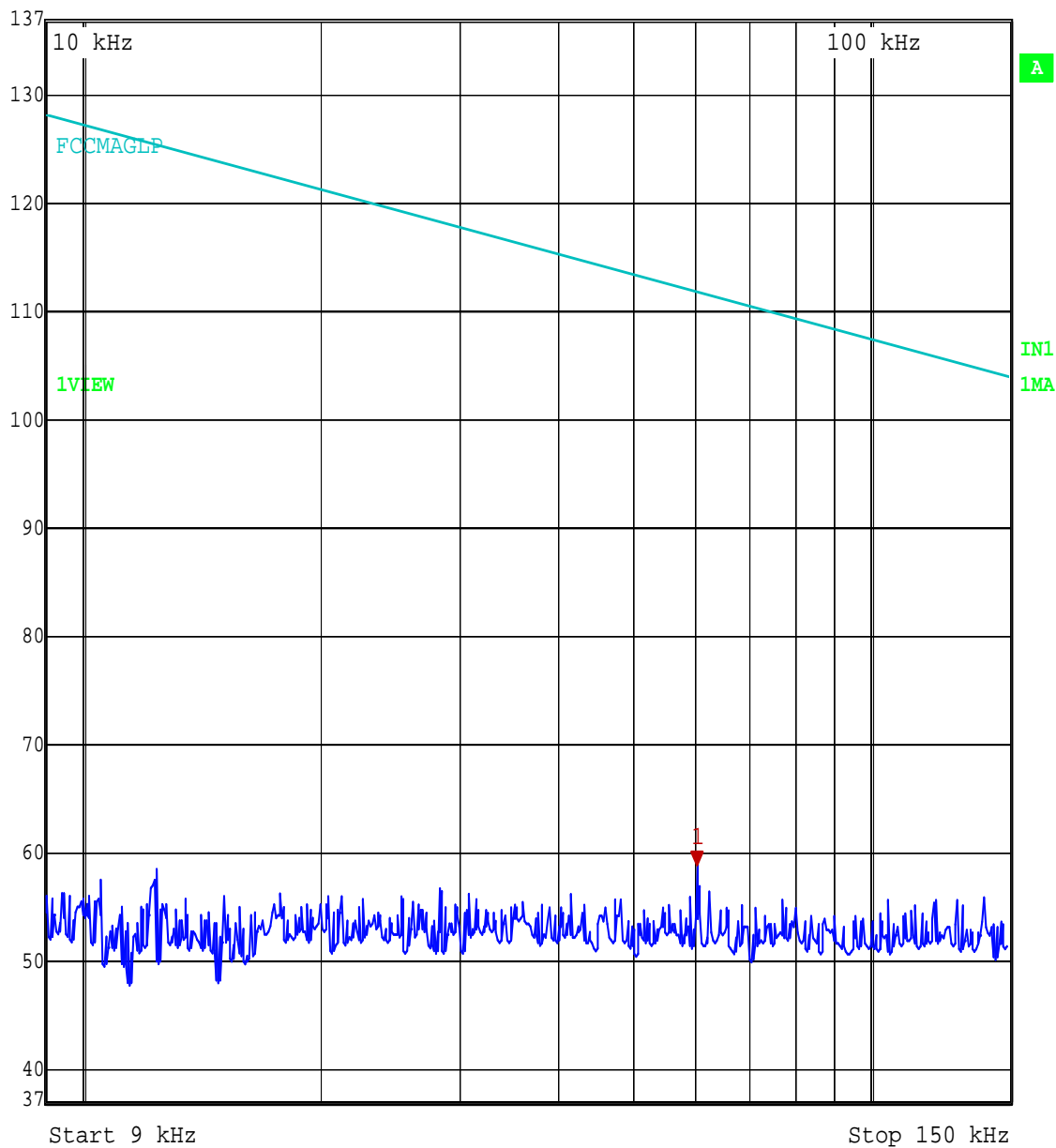
GPH\49797JD01\001
Conducted Emissions Pre-Scan
(0.15 MHz to 30 MHz)



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GPH\49797JD01\002
Radiated Emissions Pre-Scan
(9 kHz to 150 kHz)


 Marker 1 [T1] RBW 300 Hz RF Att 40 dB
Ref Lvl 58.92 dBV VBW 300 Hz
137 dBV 60.51562377 kHz SWT 8 s Unit dBV

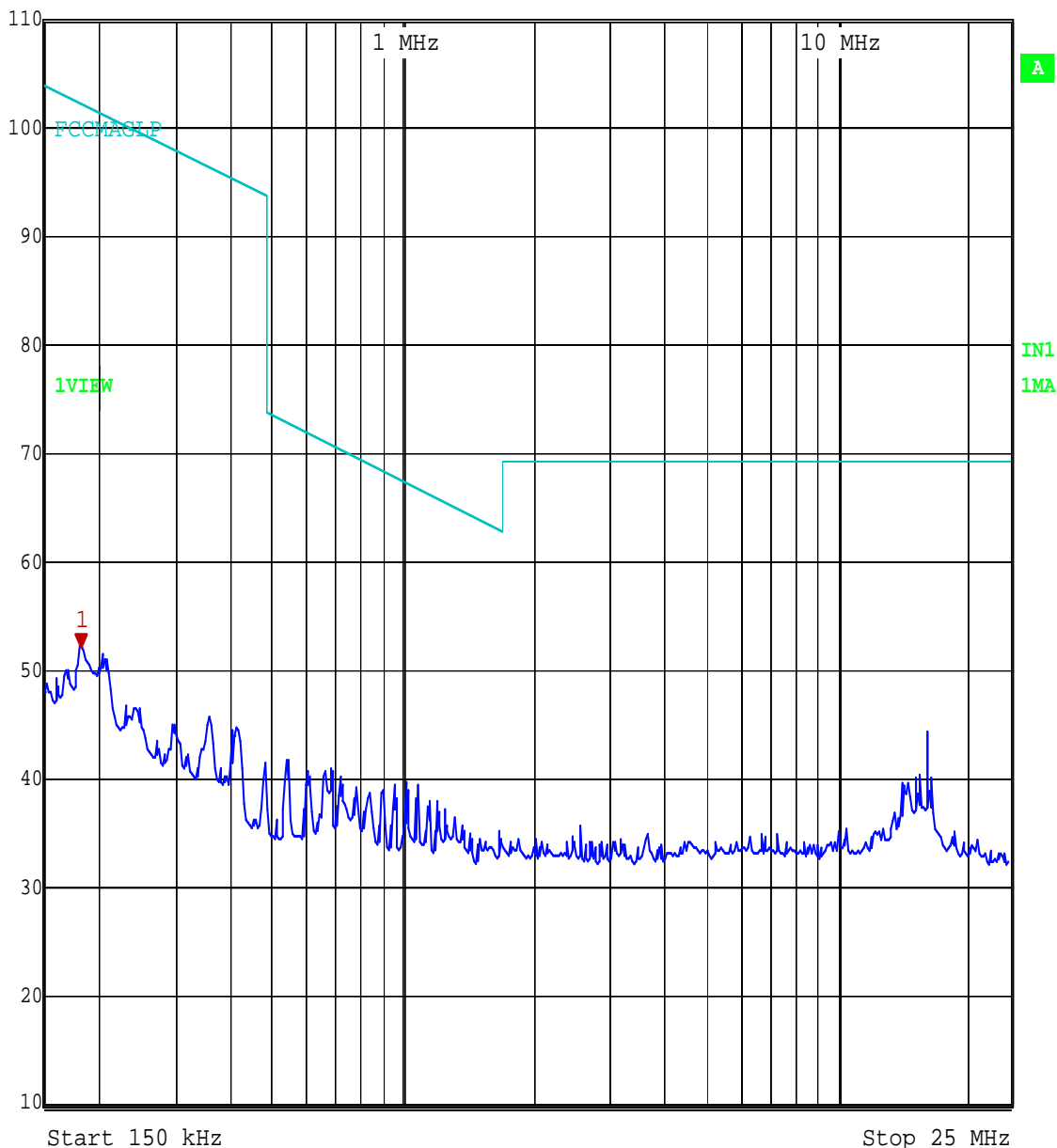


Title: 49797JD01
Date: 29.APR.2008 10:31:08

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GPH\49797JD01\003
Radiated Emissions Pre-Scan
(150 kHz to 25.0 MHz)


 Marker 1 [T1] RBW 10 kHz RF Att 10 dB
Ref Lvl 52.25 dBV VBW 10 kHz
110 dBV 182.25972491 kHz SWT 640 ms Unit dBV

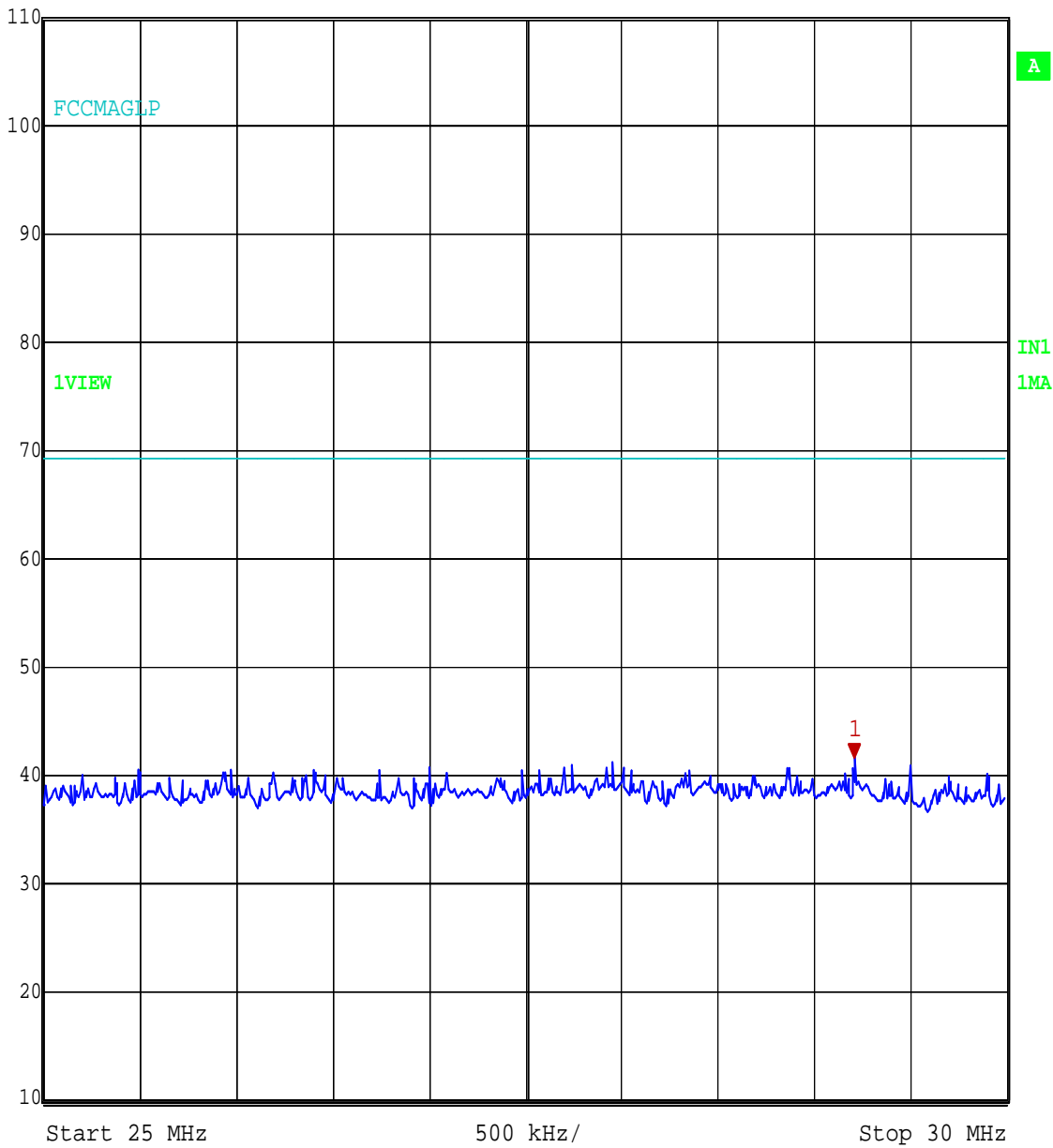


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Date: 29.APR.2008 10:29:22

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GPH\49797JD01\004
Radiated Emissions Pre-Scan
(25.0 MHz to 30.0 MHz)

 Marker 1 [T1] RBW 100 kHz RF Att 0 dB
Ref Lvl 41.58 dBV VBW 100 kHz
110 dBV 29.21843687 MHz SWT 5 ms Unit dBV



Title: 49797JD01
Date: 29.APR.2008 10:34:11

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GPH\49797JD01\005
Radiated Emissions Pre-Scan
(30.0 MHz to 1000.0 MHz)

