



LCIE

Rapport d'essai / Test report

JDE : 60052792 N° 200611-3414C-R1-E

DELIVRE A / ISSUED TO : SAGEM MONETEL
Rue Claude CHAPPE – BP344
07503 GUILHERAND GRANGES
FRANCE

Objet / Subject : Essais de compatibilité électromagnétique conformément aux normes :
Electromagnetic compatibility tests according to the standards:
FCC CFR 47 Part 15, Subpart B.
ANSI C63.4 (2003)

Matériel testé / Apparatus under test :

- Produit / Product : Terminal de paiement bancaire / Bank payment terminal
(Communication Ethernet / Ethernet communication)
- Marque / Trade mark : SAGEM MONETEL
- Constructeur / Manufacturer : SAGEM MONETEL
- Type / Model : EFT930-SE
- N° de série / serial number : N°10167063

Date des essais / Test date : 13 décembre 2006 / December 13th, 2006

Lieu d'essai / Test location : LCIE
ZI des Blanchisseries
38500 VOIRON - France

Test réalisé par / Test performed by : Laurent CHAPUS

Ce document comporte / Composition of document: 19 pages.

VOIRON, LE 23 JANVIER 2007 / JANUARY 23RD, 2007

Ecrit par / Written by
Laurent CHAPUS

Approuvé par / Approved by,
Yannick SAVOIE

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**1. TEST PROGRAM****1.1. REQUIREMENTS FOR DISTURBANCE EMISSIONS**

Standard:

- FCC Part 15, Subpart B (Digital Devices)
- ANSI C63.4 (2003)

EMISSION TEST	LIMITS			RESULTS (Comments)
Limits for conducted disturbance at mains ports 150kHz-30MHz	Frequency	Quasi-peak value (dBµV)	Average value (dBµV)	COMPLY
	150-500kHz	66 to 56	56 to 46	
	0.5-5MHz	56	46	
	5-30MHz	60	50	
Radiated emissions 30MHz-2Ghz	Measure at 3m 30MHz-88MHz : 40 dBµV/m 88MHz-216MHz : 43.5 dBµV/m 216MHz-960MHz : 46.0 dBµV/m Above 960MHz : 54.0 dBµV/m			COMPLY

NA: Not Applicable

NP: Not Performed



2. APPARATUS UNDER TEST: CONFIGURATION

2.1. JUSTIFICATION

The system was configured for testing in a typical fashion (as a customer would normally use it). All functions available on the EFT930-SE are activated during the measurement test.

2.2. HARDWARE IDENTIFICATION (EUT AND AUXILIARIES)

- **Equipment under test (EUT):**

EFT930-SE (Ethernet interface)

Serial Number: N°10167063

FCC ID: TTSEFT930SE

P/N: EFT930S-3EEH1101

I/O connection cable 252000196

→ With mains power adapter **SAGEM MONETEL**

EPA-301DAN-08

(0612S)

P/N: EPA-301DAN-08-NV

Input: 100-240Vac 50-60Hz

Output: 8Vdc/3.6A

→ With mains power adapter **SAGEM MONETEL**

P/N: AD5632LF

(D4A61902550)

Input: 100-240Vac 50-60Hz

Output: 8Vdc/3.6A

- Internal frequencies: 32 kHz, 20 MHz, 57 MHz, 171 MHz

- Dimensions: 174 x 77 x 66 mm

- Soft: Test EMC

- **Inputs/outputs:**

- DC power input (8Vdc)

- 2 x USB ports

- 1 x Serial link (RS232C)

- 1 x Ethernet line

- **Cables:**

- 1x EFT930S extension cord with I/O connectors (DC power, Ethernet and Serial link), spiraled, unshielded: 1m

- 1x DC power supply cable (fixed on mains power unit), unshielded: 1.75m

- 2x Ethernet cables, Cat 5e, unshielded: 3m

- 1x RS232 Com cable, RJ11, unshielded, 1.5m

- 1x USB cable, Mini A&B connectors, shielded: 1m

- **Auxiliaries equipment used during test:**

- 1x Smartcard (Bank card)

sn: none

- 3x SAM/SIM cards

sn: none

- 1x Laptop PC TOSHIBA SATELITE S1410-704 (PS141E-04YCM-3V)

sn: 13594938G

with its power supply unit (PA3201U-1ACA SEB100P2-15.0)

- 1x Ethernet HUB 3COM (Hub TP4)

sn: 7XSV07D8E2

With its power adapter (SLD81408-3)

2.3. RUNNING MODE

The EUT is connected to a laptop PC with its Ethernet link through a hub.

The inboard software (EMC TEST) performed the followings tests and activates the followings functions:

- Ethernet ON (Ping function with a PC),

- Printer ON,

- Smartcards reading: CAM0, SAM1,2 & 3 (power ON and reading)



- USB ON (host looped back on slave port)
- Serial link (Rx data looped back on Tx)
- Backlight and display are ON.

2.4. EQUIPMENT MODIFICATIONS

None

2.5. SPECIAL ACCESSORIES

Special accessories used during testing are supplied with the equipment under test:

- Connection cable (spiraled, attached to EUT)
- Power supply adapter

Ethernet cables use during testing are unshielded.



3. MEASUREMENT OF RADIATED EMISSION (30MHz TO 2GHz)

3.1. TEST CONDITIONS

Date of test : December 13th, 2006
Test performed by : L. Chapus

3.2. SETUP FOR RADIATED EMISSIONS MEASUREMENT

The installation of EUT is identical for pre-characterization measures in a 3 meters full anechoic chamber and for measures on the 10 meters Open site.

The EUT is set on the non-conducting table of 80 cm height.

The EUT is powered by 230Vac/50Hz.

The Ethernet port of the EUT is connected to a PC through an Ethernet hub.

Pre-characterisation measurement:

A pre-scan of all the setup has been performed in a 3 meters full anechoic chamber. The distance between EUT and antenna is 3 meters. Test is performed in horizontal (H) and vertical (V) polarization.

The pre-characterization graphs are obtained in PEAK detection. During the max-hold measurement, the EUT is rotated on 360 degree range.

For frequency band 1GHz to 2GHz, a manual search is performed in the anechoic chamber in order to determine frequencies radiated by the EUT.

Characterization on 3 meters open site from 30MHz to 2GHz:

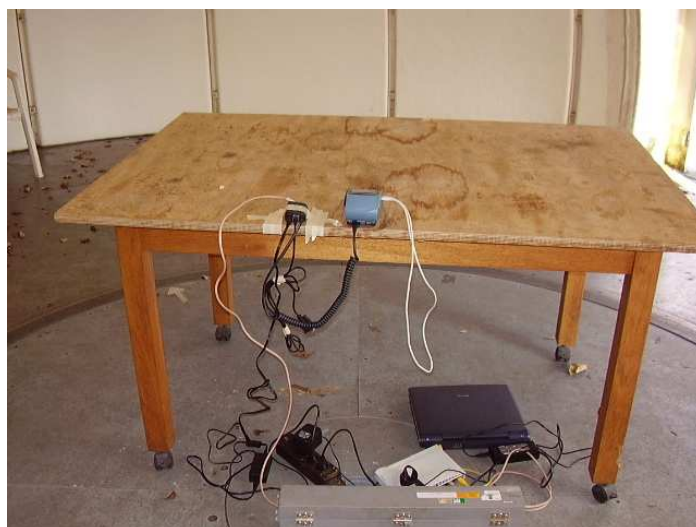
The product has been tested according to ANSI C63.4 (2003), FCC part 15 subpart C. Radiated Emissions were measured on an open area test site. A description of the facility is on file with the FCC.

The product has been tested at a distance of **3 meters** from the antenna and compared to the FCC part 15 subpart B §15.209 limits.

Measurement bandwidth was 120kHz from 30 MHz to 1GHz and 1MHz from 1GHz to 2GHz.

Antenna height search was performed from 1m to 4m for both horizontal and vertical polarization. Continuous linear turntable azimuth search was performed with 360 degrees range.

A summary of the worst case emissions found in all test configurations and modes is shown on clause 3.4 (Pre-characterization results).



**3.3. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION**

None

3.4. MEASUREMENTS RESULTSPre-characterisation measurement: pre-scan measurement at 3m (PEAK detection, graph examples)**Power adapter EPA-301DAN-08**

30MHz-1GHz Polarisation H: graph **Emr#H** (see annex 1)
Polarisation V: graph **Emr#V** (see annex 1)
1GHz-2GHz No frequency observed

Power adapter AD5632LF

30MHz-1GHz Polarisation H: graph **Emr1#H** (see annex 1)
Polarisation V: graph **Emr1#V** (see annex 1)
1GHz-2GHz No frequency observed

QUALIFICATION: 3 meters measurement on the Open Area Test Site.

Frequency list has been created with anechoic chamber pre-scan results. Measurements are performed with the EPA-301DAN-08 power adapter.

Measurements are performed using a QUASI-PEAK detection.

No	Frequency (MHz)	Limit Quasi-Peak (dBµV/m)	Measure Quasi-Peak (dBµV/m)	Margin (Mes-Lim) (dB)	Angle Table (deg)	Pol Ant.	Ht Ant. (cm)	Correc. factor (dB)	Comments
1	31.588	40.0	32.1	-7.9	320	V	100	12.4	
2	171.417	43.5	33.3	-10.2	80	V	100	17.7	
3	200.004	43.5	36.5	-7.0	90	V	120	17.1	
4	214.280	43.5	28.2	-15.3	145	V	100	17.0	
5	228.565	46.0	28.2	-17.8	145	H	150	16.9	
6	250.000	46.0	34.2	-11.8	170	V	100	16.8	
7	350.013	46.0	42.7	-3.3	215	H	100	20.2	
8	399.995	46.0	43.4	-2.6	110	V	150	20.9	
9	571.400	46.0	39.5	-6.5	185	V	100	24.9	
10	628.537	46.0	37.9	-8.1	110	H	140	26.0	
11	685.665	46.0	43.9	-2.1	265	H	100	25.9	
12	700.023	46.0	39.5	-6.5	285	H	100	27.9	

RESULT: PASS



3.5. Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follow:

$$FS = RA + AF + CF - AG$$

Where FS = Field Strength
 RA = Receiver Amplitude
 AF = Antenna Factor
 CF = Cable Factor
 AG = Amplifier Gain

Assume a receiver reading of 52.5dB μ V is obtained. The antenna factor of 7.4 and a cable factor of 1.1 is added. The amplifier gain of 29dB is subtracted, giving a field strength of 32 dB μ V/m.

$$FS = 52.5 + 7.4 + 1.1 - 29 = 32 \text{ dB}\mu\text{V/m}$$

The 32 dB μ V/m value can be mathematically converted to its corresponding level in μ V/m.

$$\text{Level in } \mu\text{V/m} = \text{Common Antilogarithm } [(32\text{dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}.$$

**4. MEASUREMENT OF CONDUCTED EMISSION (150kHz-30MHz)****4.1. TEST CONDITIONS**

Date of test : December 13th, 2006
Test performed by : L. Chapus

4.2. SETUP FOR CONDUCTED EMISSIONS MEASUREMENTMains terminals:

The EUT with its auxiliaries are set on a non-conducting 80cm above the ground reference plane.
The distance between the EUT and the LISN is 80cm. The EUT is 40cm away for the vertical ground plane.
The EUT is powered through a LISN 50Ω / 50μH (measure). Auxiliaries are powered by another LISN.
Mains: 110V/60Hz.

**4.3. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION**

None

4.4. MEASUREMENTS RESULTS

Measurements are performed on the phase (L1) and neutral (N) of the power line.

Power adapter EPA-301DAN-08**Results: (PEAK detection)**

Measure on L1: graph **Emc#L1**

(see annex 1)

Measure on N : graph **Emc#N**

(see annex 1)

Power adapter AD5632LF**Results: (PEAK detection)**

Measure on L1: graph **Emc1#L1**

(see annex 1)

Measure on N : graph **Emc1#N**

(see annex 1)

RESULT: PASS



5. TEST EQUIPMENT LIST

	N° LCIE	TYPE	COMPANY	REF	SN
RADIATED EMISSION MEASUREMENT					
	C2040057VO	Antenna monopole	AH SYSTEM	SAS-551	181
	A7102026VO	Amplifier 8-26GHz	ALDETEC	ALS01452	1
X	C4040009VO	Air Compressor	ATLAS COPCO	LX111	0615-038
X	A3169050VO	Radiated emission comb generator	BARDET		PR17B
X	C2040051VO	Antenna Bi-log	CHASE	CBL6111A	1628
	C2040052VO	Antenna Loop	ELECTRO-METRICS	EM-6879	690234
X	C2042027VO	Antenna horn	EMCO	3115	6382
X	C2040050VO	Antenna biconic	EMCO	3104C	9401-4636
X	C2040056VO	Antenna log-periodic	EMCO	3146	2178
X	F2000286VO	Turntable controller	EMCO	1060-10	1217
X	F2000287VO	Antenna mast controller	EMCO	1050	8811-1295
X	F2000288VO	Antenna mast	EMCO	1050	
X	F2000289VO	Turntable	EMCO	1060	
X	F2000371VO	Turntable (Anechoic chamber)	ETS LINGREN	Model 2065	
X	F2000372VO	Turntable controller (Anechoic chb)	ETS LINGREN	Model 2090	
X	D3044009VO	Anechoic chamber	EUROSHIELD	RDF-F-60-060	1213
X	A7102024VO	Amplifier 8 GHz	HEROTEK	A1080304A	222033
X	A4060016VO	Spectrum analyzer 9kHz –1.8GHz	HEWLETT PACKARD	8591E	3536A00384
X	A7102019VO	Amplifier 9 KHz – 1300 MHz	HEWLETT PACKARD	8447F Opt 64	3113A06394
X	A4060018VO	Spectrum Analyzer 9KHz – 26.5GHz	HEWLETT PACKARD	8593E	3409u00537
X	A4049060VO	Adapter quasi-peak	HEWLETT PACKARD	HP85650A	2811A01134
X	A4060028VO	Spectrum analyzer display	HEWLETT PACKARD	HP85662A	2816A16603
X	A4060029VO	Spectrum analyzer	HEWLETT PACKARD	HP8568B	2732A04155
X	A4060030VO	Pre-selector RF	HEWLETT PACKARD	HP85685A	2837A00784
X	A5329032VO	Absorption clamp	LUTHI	MDS21	2826
	A5329044VO	Absorption clamp	RHODE ET SCHWARZ	85024A	194.0100.50
	A2640011VO	Measurement receiver 9kHz–30MHz	ROHDE ET SCHWARZ	ESH3	972079/117
	C2042028VO	Antenna horn 26GHz	SCHWARZBECK	BBHA 9170	BBHA9170232
X	A5329045VO	Cable IMR&EMR (Anechoic chamber)	SMEE	KX13	
X	A5329048VO	Cable EMR OATS	SUCOFLEX	106G	553
X	A5329038VO	Cable coaxial 3.5 m (Blue)	SUHNER	SUCOFLEX 106	26732/6
X	A5329056VO	Cable Radiat EMI (Pre-amp/Analyzer)			
X	A5329057VO	Cable Radiat. EMI (Pre-amp/cage)			
	A5329059VO	Cable OATS (Mast at 10m)			
X	A5329058VO	Cable OATS (Mast at 3m)			
CONDUCTED MEASUREMENT EMISSION					
X	A3169049VO	Conducted emission comb generator	BARDET		CGPR12
X	A2320059VO	LISN 50Ω / 50μH (Measure)	EMCO	3810/2SH	9511/1182
X	C2320068VO	LISN 50Ω / 50μH	EMCO	3825/2	9309/2122
X	A4049061VO	Transient limiter	HEWLETT PACKARD	11947A	3107A01596
X	A2120003VO	Programable PSU, HAR/FLK	HEWLETT PACKARD	6842A	3531A00109
	A4060016VO	Spectrum analyzer 9kHz –1.8GHz	HEWLETT PACKARD	8591E	3536A00384
	A5329036VO	Direct Injection Module 100 Ohms	LCIE	MID01-100 ohms	
	A5329042VO	Ferrite Tube	LUTHI	FTC 101	4485
	A1092042VO	Ferrite Tube	LUTHI	FTC101	4763
X	D3044010VO	Faraday Cage	RAY PROOF		4854
	C2320062VO	LISN tri-phase ESH2-Z5	RHODE ET SCHWARZ	33852.19.53	841223/008
	C2320063VO	LISN tri-phase ESH2-Z5	RHODE ET SCHWARZ	33852.19.53	841223/007
	C2320066VO	RSI 4 wires	RHODE ET SCHWARZ	ENY41	838119/023
	C2320067VO	RSI 2 x 2 wires	RHODE ET SCHWARZ	ENY22	836727/015
X	A2640011VO	Measurement receiver 9kHz–30MHz	ROHDE ET SCHWARZ	ESH3	972079/117
	A1290017VO	Current probe	SCHAFFNER	CSP9160	1097
	A5329034VO	Current injection probe	SCHAFFNER	CIP8213	52
	A4089117VO	Voltage probe	SMEE		
	C2320061VO	LISN 50Ω / 50μH	TELEMETER ELECTRONIC	NNB-2/16Z	98010
X	A5329061VO	Cable Conduct. EMI (Analyzer/cage)			
X	A5329060VO	Cable Conduct. EMI (LISN/cage)			

**6. UNCERTAINTIES CHART**

Type de mesure / Kind of measurement	Incertitude élargie laboratoire / Wide uncertainty laboratory (k=2) ± x	Incertitude limite du CISPR / CISPR uncertainty limit ± y
Mesure des perturbations conduites en tension sur le réseau d'énergie <i>Measurement of conducted disturbances in voltage on the power port</i>	3.57 dB	3.6 dB
Mesure des perturbations conduites en tension sur le réseau de télécommunication <i>Measurement of conducted disturbances in voltage on the telecommunication port.</i>	3.28 dB	A l'étude / Under consid.
Mesure des perturbations discontinues conduites en tension <i>Measurement of discontinuous conducted disturbances in voltage</i>	3.47 dB	3.6 dB
Mesure des perturbations conduites en courant <i>Measurement of conducted disturbances in current</i>	2.90 dB	A l'étude / Under consid.
Mesure du champ électrique rayonné sur le site en espace libre de Voiron <i>Measurement of radiated electric field on the Voiron open area test site</i>	5.07 dB	5.2 dB
Mesure du champ électrique rayonné IN SITU de 30 à 1000 MHz <i>IN SITU measurement of radiated electric field from 30 to 1000MHz</i>	A l'étude / Under consideration	5.2 dB
Mesure de la puissance perturbatrice / <i>Measurement of disturbance power</i>	3.37 dB	4.5 dB

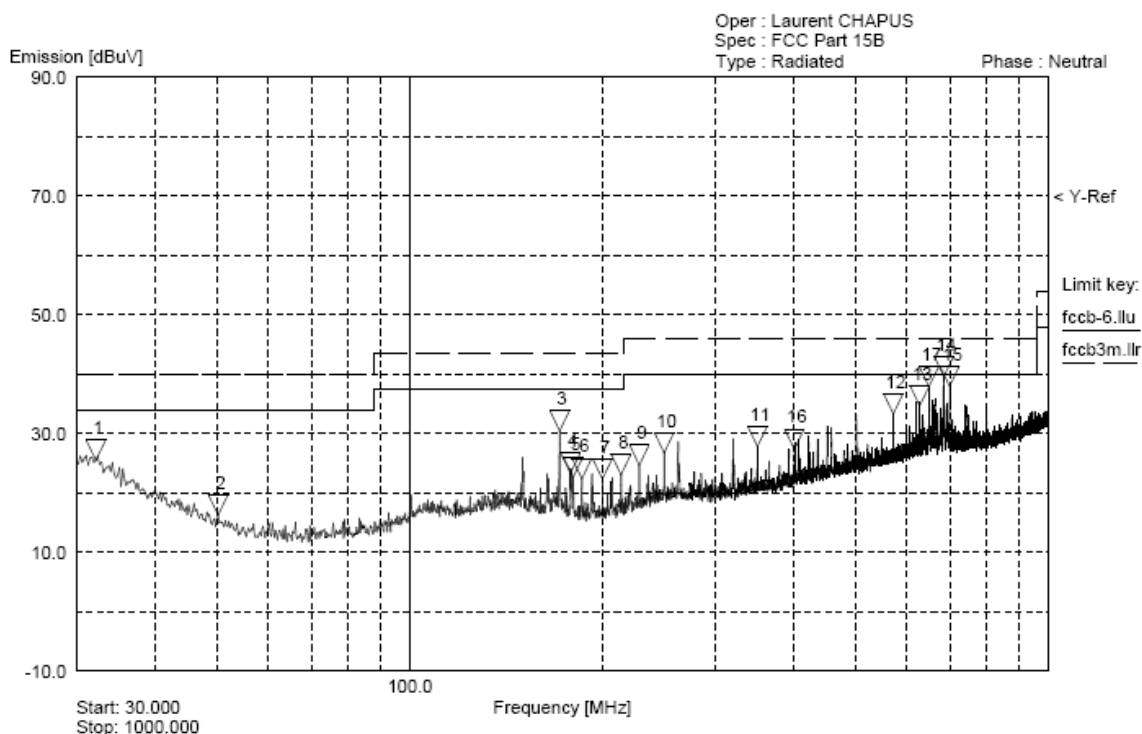
Les valeurs d'incertitudes calculées du laboratoire étant inférieures aux valeurs d'incertitudes limites établies par le CISPR, la conformité de l'échantillon est établie directement par les niveaux limites applicables. / The uncertainty values calculated by the laboratory are lower than limit uncertainty values defined by the CISPR. The conformity of the sample is directly established by the applicable limits values.



7. ANNEX 1 (GRAPHS)

RADIATED EMISSIONS		Test configuration:
Graph name:	Emr#H	Power adapter EPA-301DAN-08
Antenna polarisation	Horizontal	
Azimuth:	Max-hold measurement 0° to 360°	
RBW / VBW :	120kHz / 300kHz	

EMISSIONS RAYONNEES - SAGEM Monetel



10:21:43 13 Dec 2006

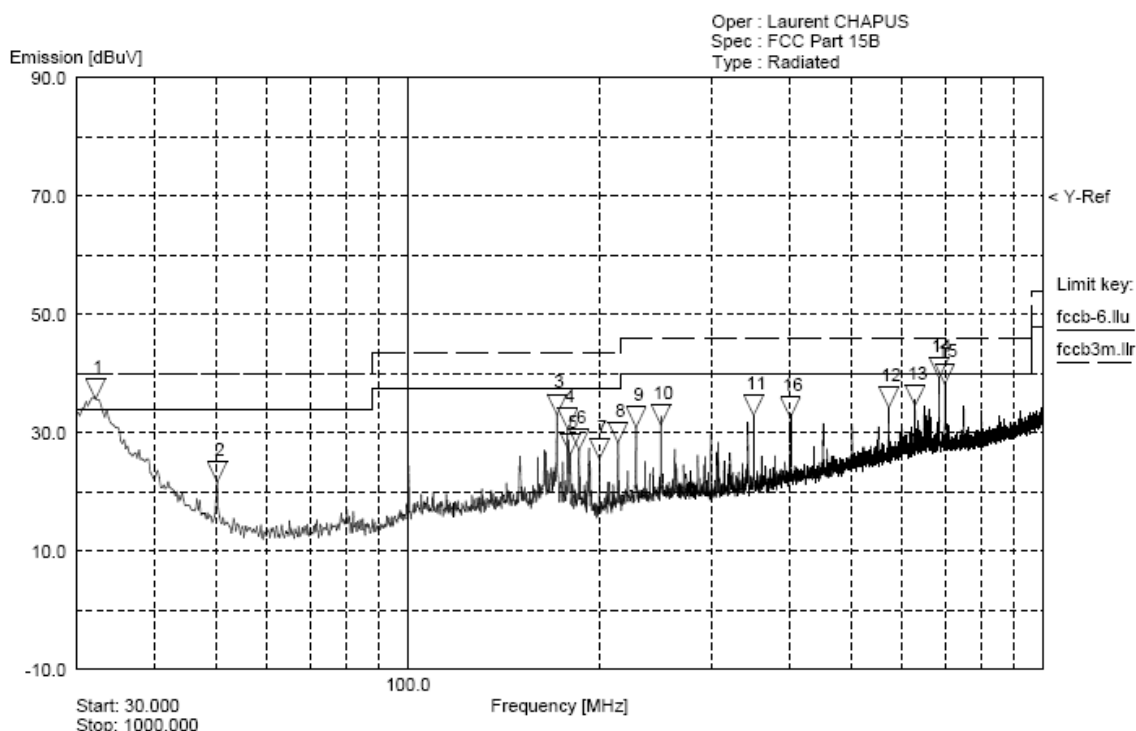
Device : EFT 930 SE
Serial #: Pol H (Sn: 10167063)

Marker ▽	Frequency [MHz]	Peak [dBuV]	Q-Peak [dBuV]	Average [dBuV]	Limit [dBuV]
1	32.20	25.51	-	-	34.00
2	50.06	16.25	-	-	34.00
3	171.5	30.43	-	-	34.00
4	178.4	23.26	-	-	34.00
5	180.1	22.68	-	-	34.00
6	185.9	22.40	-	-	34.00
7	200.2	22.37	-	-	34.00
8	214.1	23.07	-	-	34.00
9	228.6	24.70	-	-	34.00
10	250.0	26.75	-	-	41.00
11	350.1	27.82	-	-	41.00
12	571.4	33.30	-	-	41.00
13	628.8	34.69	-	-	41.00
14	685.9	39.61	-	-	41.00
15	700.2	37.97	-	-	41.00
16	399.9	27.35	-	-	41.00
17	649.9	37.89	-	-	41.00



RADIATED EMISSIONS		Test configuration:
Graph name:	Emr#V	Power adapter EPA-301DAN-08
Antenna polarisation	Vertical	
Azimuth:	Max-hold measurement 0° to 360°	
RBW / VBW :	120kHz / 300kHz	

EMISSIONS RAYONNEES - SAGEM Monotel



10:10:41 13 Dec 2006

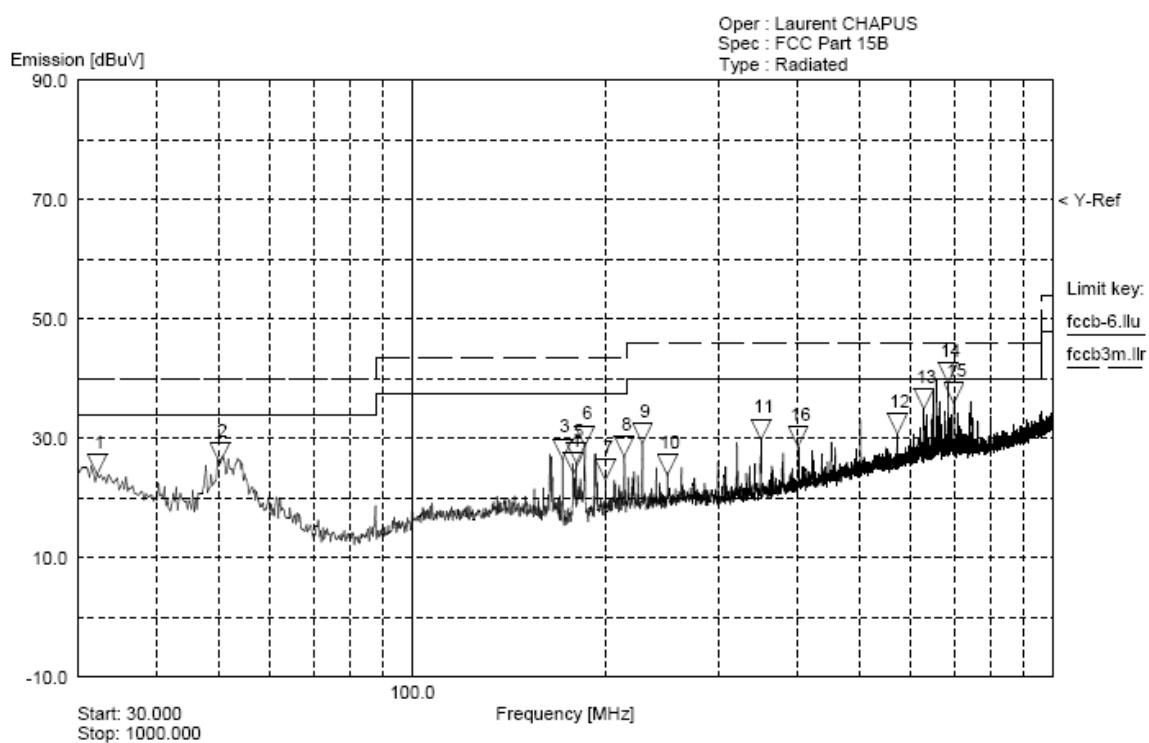
Device : EFT 930 SE
Serial #: Pol V (Sn: 10167063)

Marker ▽	Frequency [MHz]	Peak [dBuV]	Q-Peak [dBuV]	Average [dBuV]	Limit [dBuV]
1	32.20	35.70	-	-	34.00
2	50.06	21.69	-	-	34.00
3	171.5	33.10	-	-	34.00
4	178.4	30.66	-	-	34.00
5	180.1	26.42	-	-	34.00
6	185.9	27.11	-	-	34.00
7	200.2	25.59	-	-	34.00
8	214.1	28.38	-	-	34.00
9	228.6	30.94	-	-	34.00
10	250.0	31.37	-	-	41.00
11	350.1	32.93	-	-	41.00
12	571.4	34.27	-	-	41.00
13	628.8	34.60	-	-	41.00
14	685.9	39.26	-	-	41.00
15	700.2	38.27	-	-	41.00
16	399.9	32.57	-	-	41.00



RADIATED EMISSIONS		Test configuration:
Graph name:	Emr1#H	Power adapter AD5632LF
Antenna polarisation	Horizontal	
Azimuth:	Max-hold measurement 0° to 360°	
RBW / VBW :	120kHz / 300kHz	

EMISSIONS RAYONNEES - SAGEM Monotel



18:22:27 13 Dec 2006

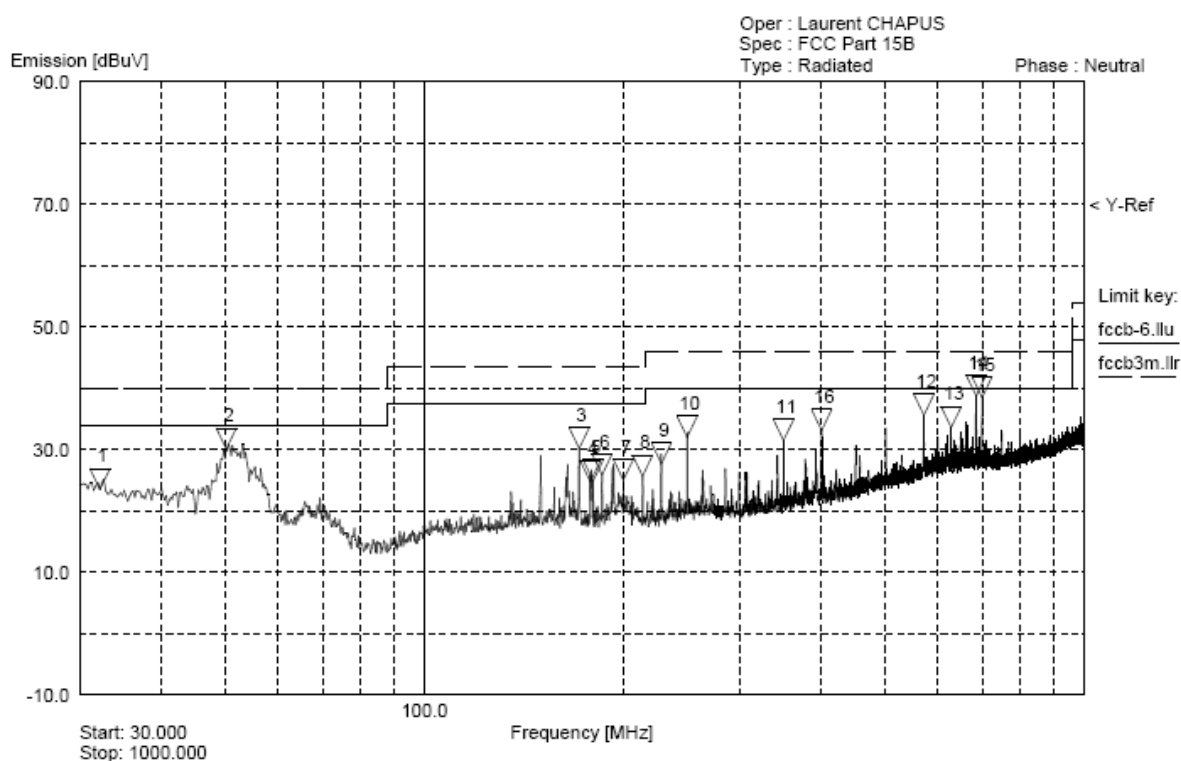
Device : EFT 930 SE
Serial #: Pol H (Sn: 10167063) Alin MARTEK

Marker ▽	Frequency [MHz]	Peak [dBuV]	Q-Peak [dBuV]	Average [dBuV]	Limit [dBuV]
1	32.20	23.97	-	-	34.00
2	50.06	25.82	-	-	34.00
3	171.5	26.54	-	-	34.00
4	178.4	24.14	-	-	34.00
5	180.1	25.87	-	-	34.00
6	185.9	28.69	-	-	34.00
7	200.2	23.00	-	-	34.00
8	214.1	26.99	-	-	34.00
9	228.6	29.15	-	-	34.00
10	250.0	23.83	-	-	41.00
11	350.1	29.78	-	-	41.00
12	571.4	30.74	-	-	41.00
13	628.8	34.93	-	-	41.00
14	685.9	39.30	-	-	41.00
15	700.2	35.88	-	-	41.00
16	399.9	28.65	-	-	41.00



RADIATED EMISSIONS		Test configuration:
Graph name:	Emr1#V	Power adapter AD5632LF
Antenna polarisation	Vertical	
Azimuth:	Max-hold measurement 0° to 360°	
RBW / VBW :	120kHz / 300kHz	

EMISSIONS RAYONNEES - SAGEM Monetel



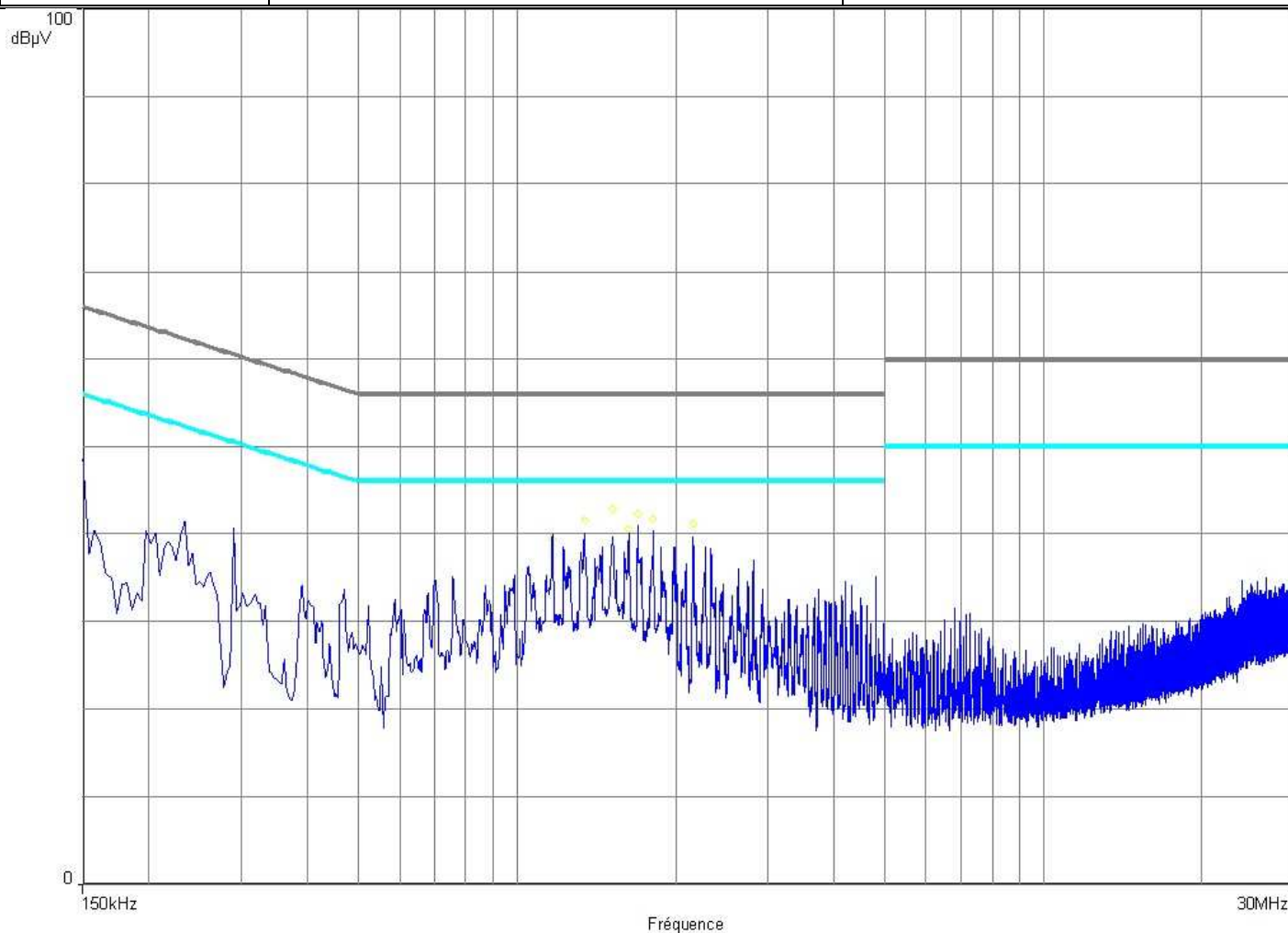
18:11:26 13 dec 2006

Device : EFT 930 SE
Serial #: Pol V (Sn: 10167063) Alin MARTEK

Marker ▽	Frequency [MHz]	Peak [dBuV]	Q-Peak [dBuV]	Average [dBuV]	Limit [dBuV]
1	32.20	23.50	-	-	34.00
2	50.06	30.11	-	-	34.00
3	171.5	30.17	-	-	34.00
4	178.4	24.76	-	-	34.00
5	180.1	24.92	-	-	34.00
6	185.9	25.90	-	-	34.00
7	200.2	25.05	-	-	34.00
8	214.1	25.70	-	-	34.00
9	228.6	27.71	-	-	34.00
10	250.0	32.02	-	-	41.00
11	350.1	31.50	-	-	41.00
12	571.4	35.61	-	-	41.00
13	628.8	33.63	-	-	41.00
14	685.9	38.76	-	-	41.00
15	700.2	38.47	-	-	41.00
16	399.9	33.14	-	-	41.00



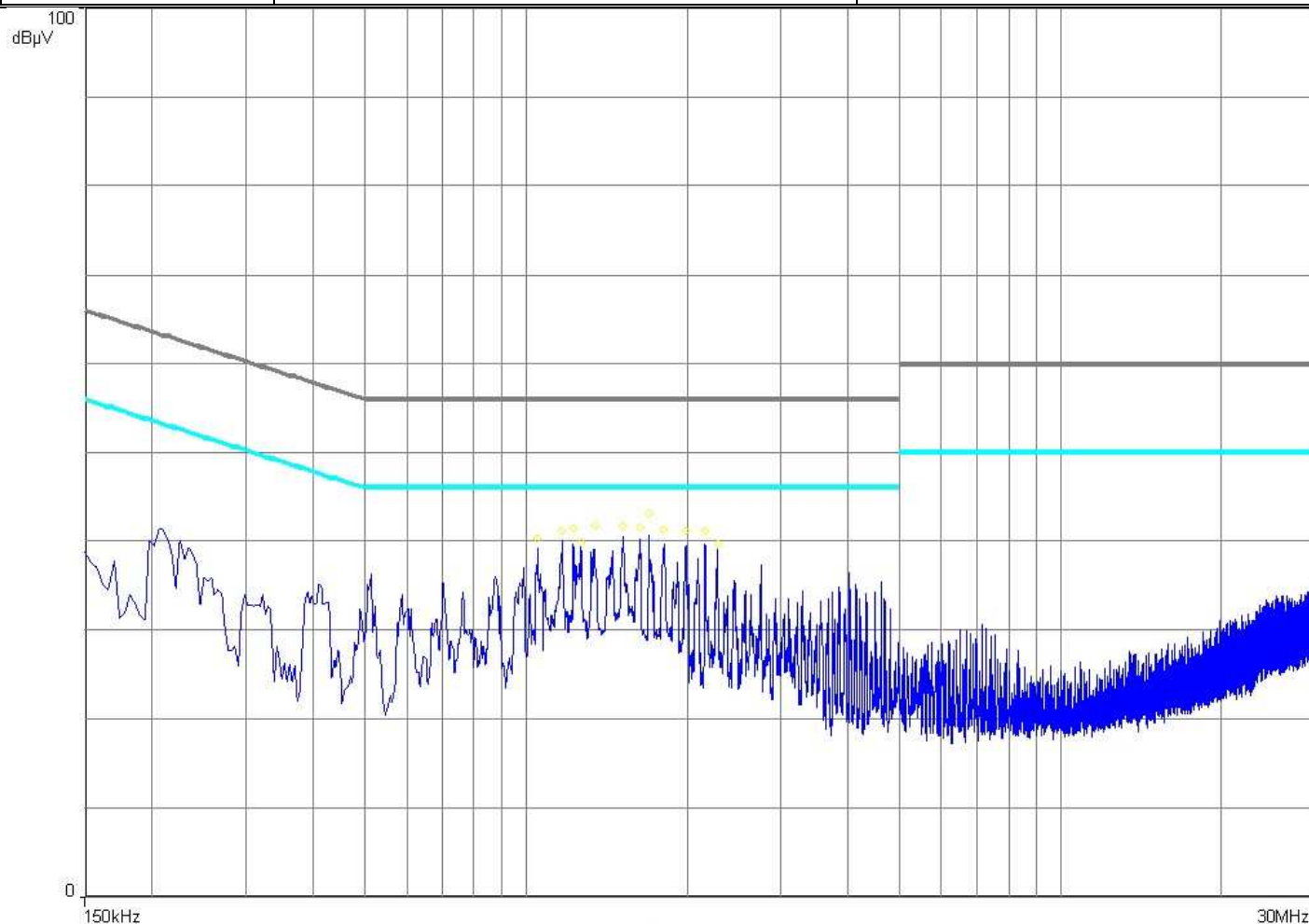
CONDUCTED EMISSIONS		Test configuration:
Graph name:	Emc#L1	Power adapter EPA-301DAN-08
Voltage / Frequency	110Vac/60Hz	
Line/Port	Phase L1	
RBW / VBW :	9kHz / 30kHz	



Frequency (MHz)	Measure Peak dBμV	Measure Average dBμV	Limit Average dBμV	Avg-Lim (Margin) dB	Measure Quasi-Peak dBμV	Limit QPeak dBμV	QPeak-Lim (Margin) dB
1.166	39.4	26.1	46	-19.9	34.3	56	-21.7
1.346	41.5	27	46	-19	36.2	56	-19.8
1.522	42.9	27.6	46	-18.4	36.4	56	-19.6
1.63	40.6	25.8	46	-20.2	34.7	56	-21.3
1.698	42.3	27.2	46	-18.8	36.3	56	-19.7
1.814	41.8	26.3	46	-19.7	35.9	56	-20.1
2.166	41.1	24.3	46	-21.7	34	56	-22



CONDUCTED EMISSIONS		Test configuration: Power adapter EPA-301DAN-08
Graph name:	Emc#N	
Voltage / Frequency	110Vac/60Hz	
Line/Port	Neutral (N)	
RBW / VBW :	9kHz / 30kHz	

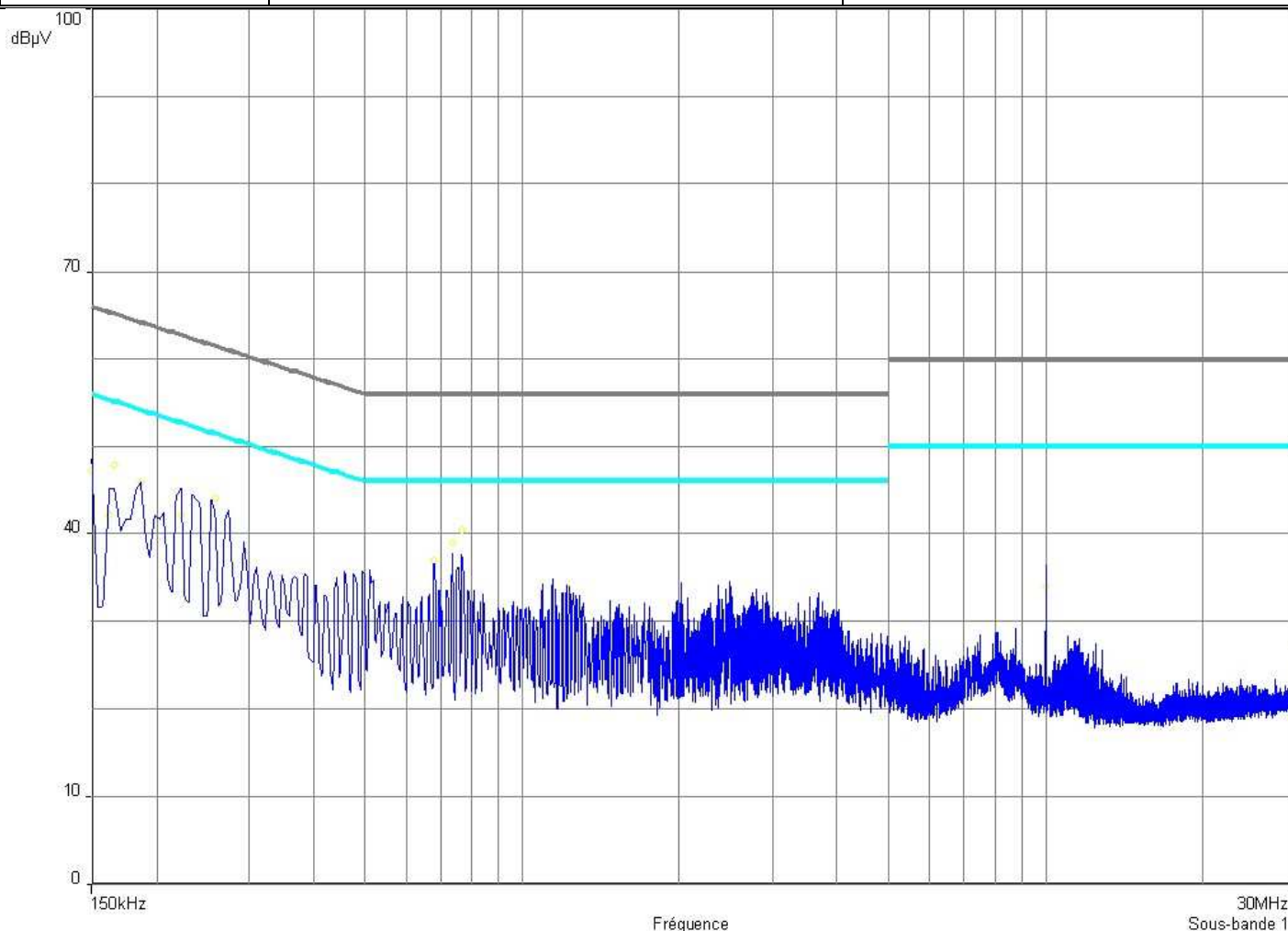


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Frequency (MHz)	Measure Peak dBμV	Measure Average dBμV	Limit Average dBμV	Avg-Lim (Margin) dB	Measure Quasi-Peak dBμV	Limit QPeak dBμV	QPeak-Lim (Margin) dB
1.054	40.3	24.0	46.0	-22.0	34.6	56.0	-21.4
1.17	41.1	25.7	46.0	-20.3	35.9	56.0	-20.1
1.23	41.4	25.3	46.0	-20.7	35.6	56.0	-20.4
1.27	39.8	23.6	46.0	-22.4	32.9	56.0	-23.1
1.346	41.6	26.5	46.0	-19.5	36.4	56.0	-19.6
1.518	41.7	27.3	46.0	-18.7	36.3	56.0	-19.7
1.634	41.6	26.7	46.0	-19.3	36.2	56.0	-19.8
1.698	43.1	26.4	46.0	-19.6	36.7	56.0	-19.3
1.818	41.3	24.2	46.0	-21.8	34.6	56.0	-21.4
1.99	41.1	24.6	46.0	-21.4	35.3	56.0	-20.7
2.166	41.2	22.9	46.0	-23.1	34.5	56.0	-21.5
2.286	39.8	21.6	46.0	-24.4	31.9	56.0	-24.1



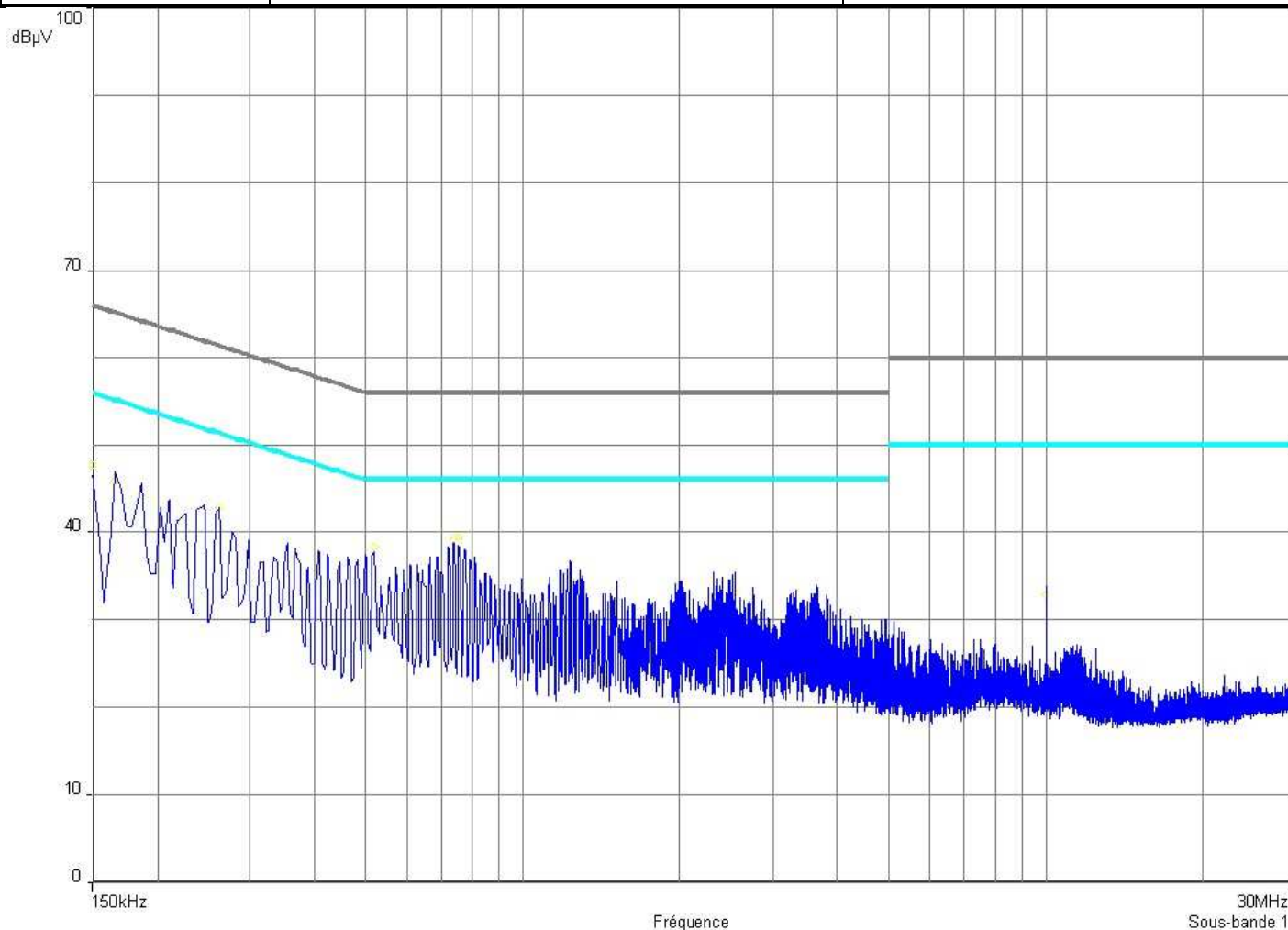
CONDUCTED EMISSIONS		Test configuration: Power adapter AD5632LF
Graph name:	Emc1#L1	
Voltage / Frequency	110Vac/60Hz	
Line/Port	Phase L1	
RBW / VBW :	9kHz / 30kHz	



Frequency (MHz)	Measure Peak dBμV	Measure Average dBμV	Limit Average dBμV	Avg-Lim (Margin) dB	Measure Quasi-Peak dBμV	Limit QPeak dBμV	QPeak-Lim (Margin) dB
0.150	47.3	13.9	56.0	-42.1	34.6	66.0	-31.4
0.162	42.1	14.9	55.4	-40.5	32.7	65.4	-32.7
0.166	47.9	16.7	55.2	-38.5	33.8	65.2	-31.4
0.186	46.0	18.5	54.2	-35.7	31.7	64.2	-32.5
0.222	42.1	15.6	52.7	-37.2	31.6	62.7	-31.2
0.258	44.1	18.0	51.5	-33.5	35.9	61.5	-25.6
0.678	37.0	10.3	46.0	-35.7	23.0	56.0	-33.0
0.734	39.0	11.7	46.0	-34.3	27.5	56.0	-28.5
0.766	40.5	12.7	46.0	-33.3	28.7	56.0	-27.3
9.998	34.0	9.3	50.0	-40.7	14.8	60.0	-45.2



CONDUCTED EMISSIONS		Test configuration: Power adapter AD5632LF
Graph name:	Emc1#N	
Voltage / Frequency	110Vac/60Hz	
Line/Port	Neutral (N)	
RBW / VBW :	9kHz / 30kHz	



Frequency (MHz)	Measure Peak dBμV	Measure Average dBμV	Limit Average dBμV	Avg-Lim (Margin) dB	Measure Quasi-Peak dBμV	Limit QPeak dBμV	QPeak-Lim (Margin) dB
0.150	47.8	10.6	56.0	-45.4	32.7	66.0	-33.3
0.166	46.0	16.0	55.2	-39.2	32.0	65.2	-33.2
0.186	44.3	21.2	54.2	-33.0	31.2	64.2	-33.0
0.262	42.9	15.8	51.4	-35.6	33.6	61.4	-27.8
0.518	38.4	12.7	46.0	-33.3	26.9	56.0	-29.1
0.738	39.3	12.5	46.0	-33.5	30.0	56.0	-26.0
0.754	39.5	13.6	46.0	-32.4	30.1	56.0	-25.9
1.234	34.8	11.0	46.0	-35.0	25.8	56.0	-30.2
2.542	33.1	10.0	46.0	-36.0	21.3	56.0	-34.7
10.002	32.9	8.8	50.0	-41.2	14.4	60.0	-45.6