



Accredited testing-laboratory

DAR registration number: DAT-P-176/94-D1

**Federal Motor Transport Authority (KBA)
DAR registration number: KBA-P 00070-97**

Recognized by the Federal Communications Commission

Anechoic chamber registration no.: 90462 (FCC)

Anechoic chamber registration no.: 3463A-1 (IC)

Certification ID: DE 0001

Accreditation ID: DE 0002

Accredited Bluetooth® Test Facility (BQTF)

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Annex to Test report no. : 4-2380-24-09/07
Type identification : EC2007P
Applicant : SAGEM Communication
Test standards : 47 CFR Part 15

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1 General information

1.1 Notes

The test results of this test report relate exclusively to the test item specified in 1.5. The CETECOM ICT Services GmbH does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the CETECOM ICT Services GmbH.

Test laboratory manager:

2007-07-30

Detlev Gillmann



Date

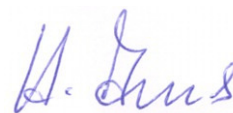
Name

Signature

Technical responsibility for area of testing:

2007-07-30

Harro Ames



Date

Name

Signature

1.2 Testing laboratory

CETECOM ICT Services GmbH

Untertürkheimer Straße 6 - 10

66117 Saarbrücken

Germany

Phone: + 49 681 5 98 - 0

Fax: + 49 681 5 98 - 9075

e-mail: info@ICT.cetecom.de

Internet: <http://www.cetecom-ict.de>

State of accreditation: The test laboratory (area of testing) is accredited according to
DIN EN ISO/IEC 17025
DAR registration number: DAT-P-176/94-D1

Accredited by: Federal Motor Transport Authority (KBA)
DAR registration number: KBA-P 00070-97

Testing location, if different from CETECOM ICT Services GmbH:

Name :
Street :
Town :
Country :
Phone :
Fax :

1.3 Details of applicant

Name:	SAGEM Communication FR 0448018158
Street:	2 rue du Petit Albi
Town:	95801 Cergy Pontoise Cedex
Country:	France
Telephone:	+33-1-40 70 63 63
Fax:	+33-1-5811 14 11
Contact:	Jean Marquet
E-mail:	jean.marquet@sagem.com
Telephone:	+33-1-5811 91 72

1.4 Application details

Date of receipt of order:	2007-07-07
Date of receipt of test item:	2007-07-26
Date of start test:	2007-07-30
Date of end test	2007-07-31
Persons(s) who have been present during the test:	

No.:2 AC/DC Adaptor myG 5 V 500mA US with mobile EC2007P **EC2007P**
S/N: 189 665 411



No.:3 AC/DC Adaptor myG 5 V 500mA UK
S/N: 189 665 403

with mobile EC2007P **EC2007P**



No.: 4 Remote control + jack headset with mobile :EC2007P
S/N: 189 706361 + S/N:189 679197



No.: 5 USB data cable with mobile **EC2007P**
S/N: 189 688063



2.3 Summary of Measurement Results and list of all performed test cases

- ☒ No deviations from the technical specifications were ascertained
- ☐ There were deviations from the technical specifications ascertained

Section in this Report	Test Name	Verdict
4.1	Conducted limits CFR Part 15.207, 15.107 RSS 210, Issue 7, Section 6.6 , 7.4	Pass
4.2	Receiver spurious emission radiated (Idle mode) CFR Part SUBCLAUSE § 15.109 RSS 210, Issue 7, Section 7.3 Receiver Spurious Emissions (Radiated)	Pass

3 Measurements and results

The radiated measurements are performed in vertical and horizontal plane in the frequency range from 9 kHz to 20 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber.

The receiving antennas are conforming to specifications ANSI C63.2-1996 clause 15 and ANSI C63.4-2003 clause 4.1.5. These antennas can be moved over the height range between 1.0 m and 4.0 m in order to search for maximum field strength emitted from EUT. The measurement distances between EUT and receiving antennas are indicated in the test set-ups for the various frequency ranges. For each measurement, the EUT is rotated in all three axes until the maximum field strength is received.

The wanted and unwanted emissions are received by spectrum analysers where the detector modes and resolution bandwidths over various frequency ranges are set according to requirement ANSI C63.4-2003 clause 4.2.

Antennas are conforming to ANSI C63.2-1996 item 15.

9 kHz – 150 kHz ,Quasi Peak measurement, 200 Hz Bandwidth, passive loop antenna.

150 kHz - 30 MHz: Quasi Peak measurement, 9 kHz Bandwidth, passive loop antenna.

30 MHz - 200 MHz: Quasi Peak measurement, 120 KHz Bandwidth, biconical antenna

200MHz - 1GHz: Quasi Peak measurement, 120 KHz Bandwidth, log periodic antenna

>1GHz: Average, RBW 1MHz, VBW 10 Hz, wave guide horn

All measurement settings are according to FCC 15.109 and 15.107

4 Annex A: FCC Part 15 Subpart B

4.1 Conducted Limits

Reference

FCC:	CFR Part 15.207, 15.107
IC:	RSS 210, Issue 7, Section 6.6 , 7.4

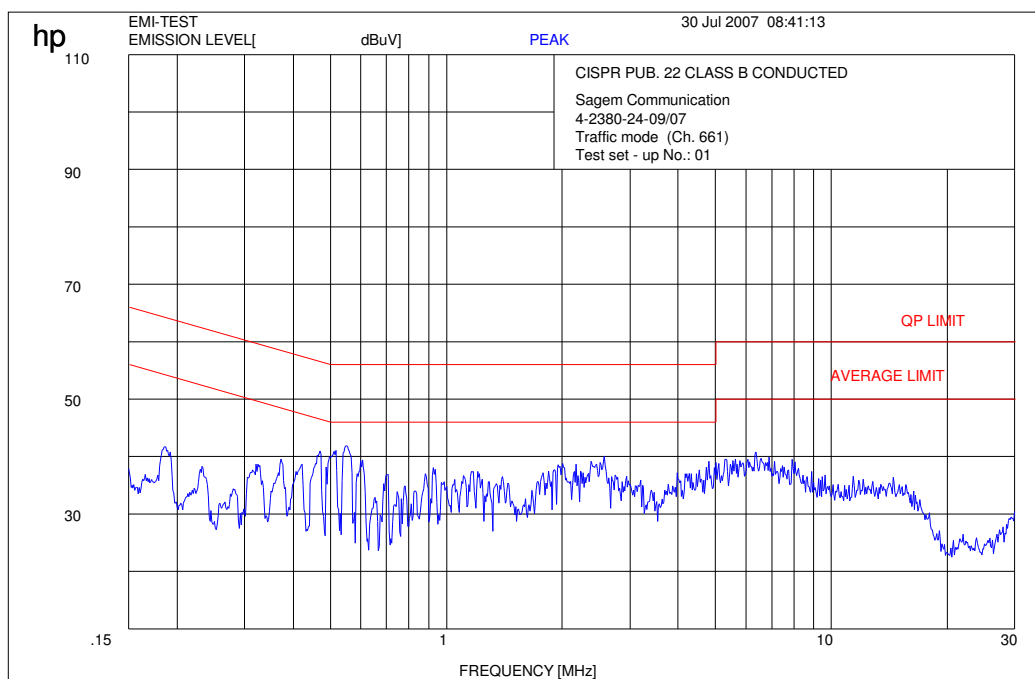
Limits: § 15.107 / 15.207

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 - 30	60	50

* Decreases with the logarithm of the frequency

EUT: : AC/DC Adaptor myG 5V 500mA CE
 (with mobile EC2007P)
 Power AC (measured) : 115 V / 60 Hz
 Manufacturer: : Sagem
 Operating Condition : Traffic mode
 Test Site: : Room 006 (Shielded chamber)
 Operator: : Gillmann

Test set – up No.: 01

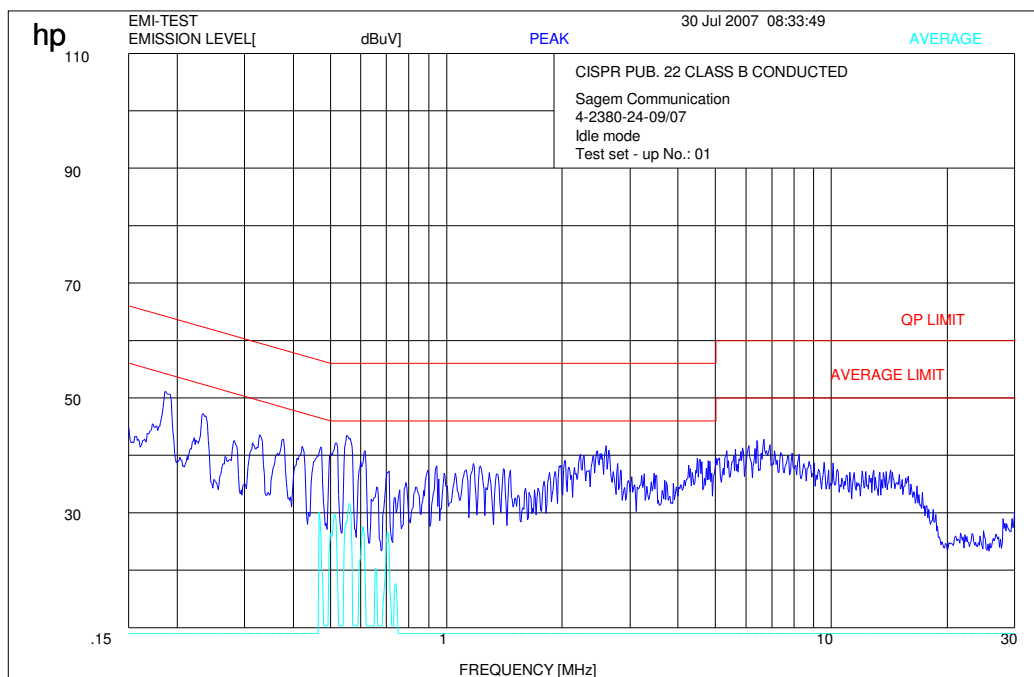


Upper Limit LINE CISPPR 22 QP
 Lower Limit LINE CISPPR 22 AV

Setting : 150 kHz - 30 MHz: Quasi Peak measurement, 9kHz Bandwidth,
 L1 and N – system (max. Hold)

EUT: : AC/DC Adaptor myG 5V 500mA CE
 (with mobile EC2007P)
 Power AC (measured) : 115 V / 60 Hz
 Manufacturer: : Sagem
 Operating Condition : Idle mode
 Test Site: : Room 006 (Shielded chamber)
 Operator: : Gillmann

Test set – up No.: 01

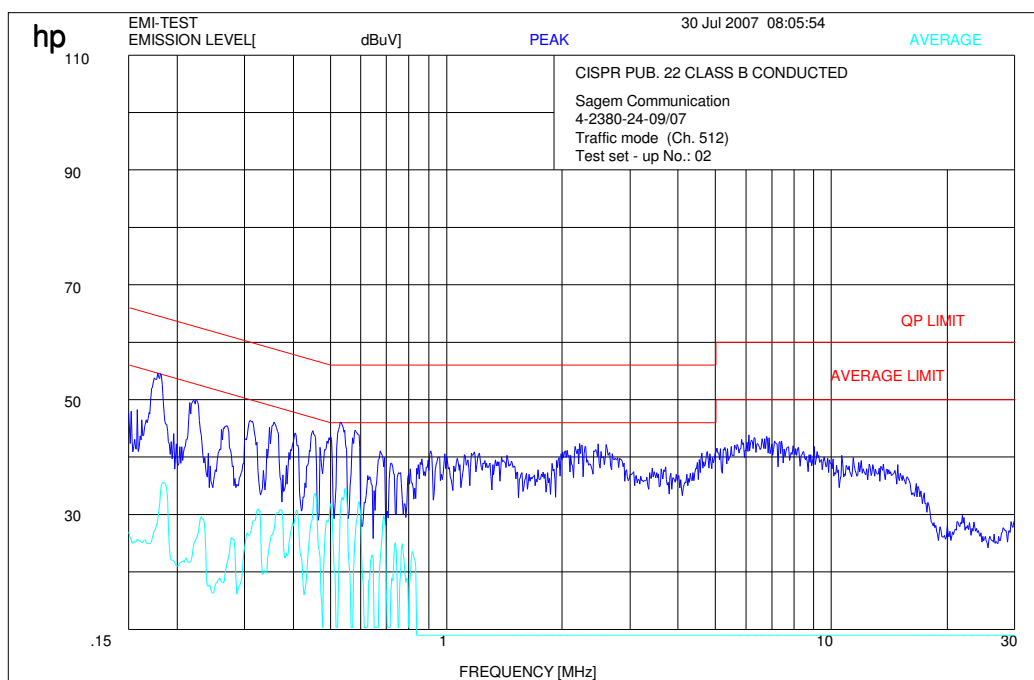


Upper Limit LINE CISPPR 22 QP
 Lower Limit LINE CISPPR 22 AV

Setting : 150 kHz - 30 MHz: Quasi Peak measurement, 9kHz Bandwidth,
 L1 and N – system (max. Hold)

EUT: : AC/DC Adaptor myG 5V 500mA US
 (with mobile EC2007P)
 Power AC (measured) : 115 V / 60 Hz
 Manufacturer: : Sagem
 Operating Condition : Traffic mode
 Test Site: : Room 006 (Shielded chamber)
 Operator: : Gillmann

Test set – up No.: 02

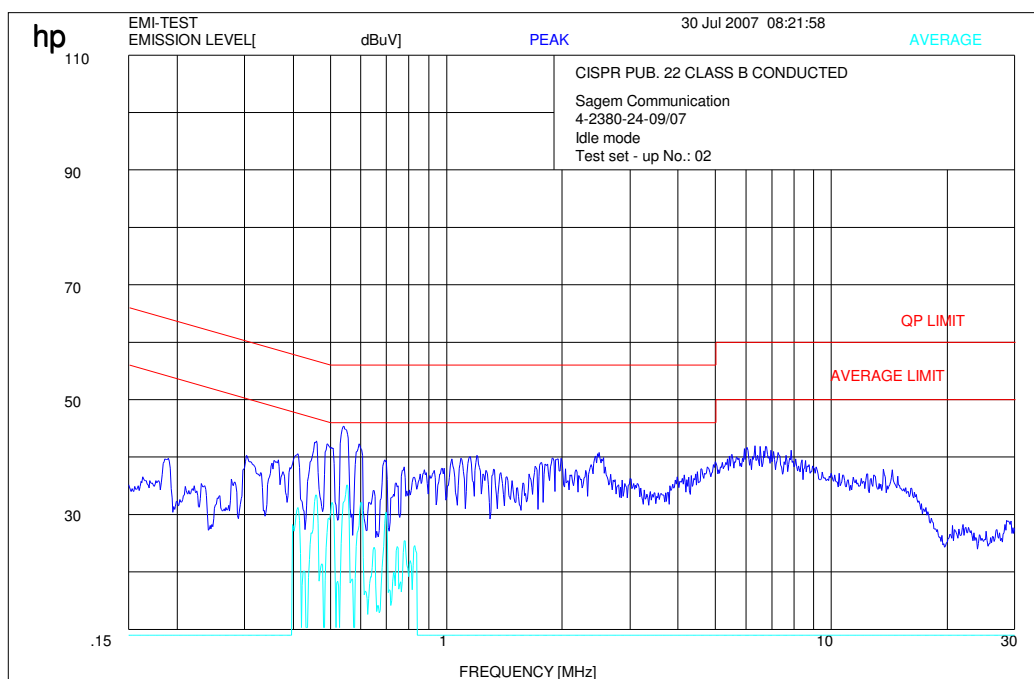


Upper Limit LINE CISPPR 22 QP
 Lower Limit LINE CISPPR 22 AV

Setting : 150 kHz - 30 MHz: Quasi Peak measurement, 9kHz Bandwidth,
 L1 and N – system (max. Hold)

EUT: : AC/DC Adaptor myG 5V 500mA US
 (with mobile EC2007P)
 Power AC (measured) : 115 V / 60 Hz
 Manufacturer: : Sagem
 Operating Condition : Idle mode
 Test Site: : Room 006 (Shielded chamber)
 Operator: : Gillmann

Test set – up No.: 02

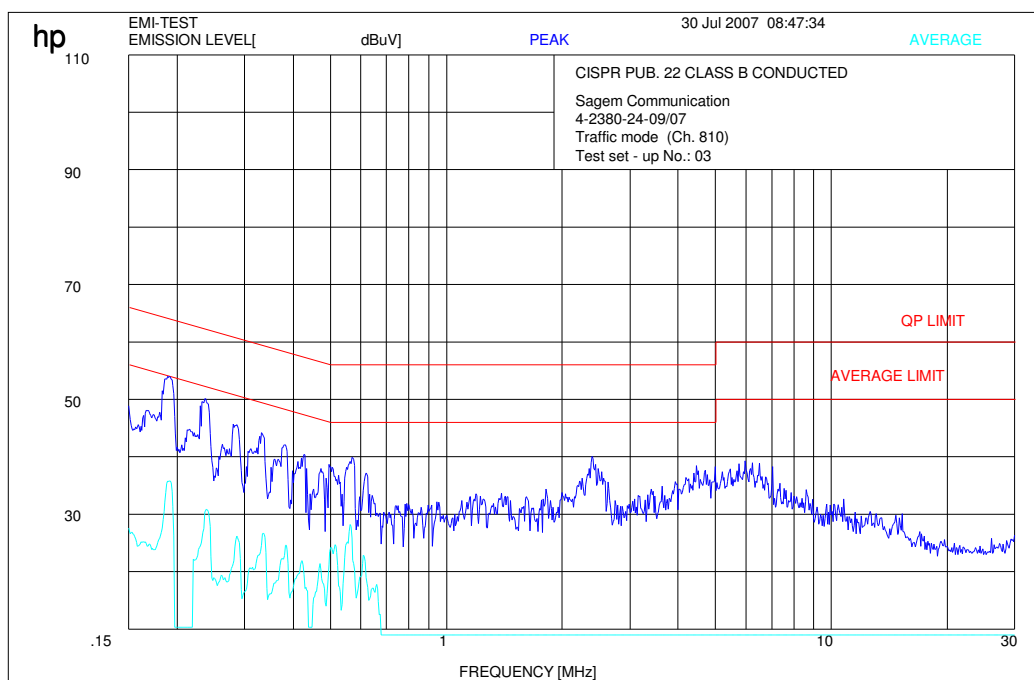


Upper Limit LINE CISPPR 22 QP
 Lower Limit LINE CISPPR 22 AV

Setting : 150 kHz - 30 MHz: Quasi Peak measurement, 9kHz Bandwidth,
 L1 and N – system (max. Hold)

EUT: : AC/DC Adaptor myG 5 V 500mA UK
(with mobile EC2007P)
Power AC (measured) : 115 V / 60 Hz
Manufacturer: : Sagem
Operating Condition : Traffic mode
Test Site: : Room 006 (Shielded chamber)
Operator: : Gillmann

Test set – up No.: 03

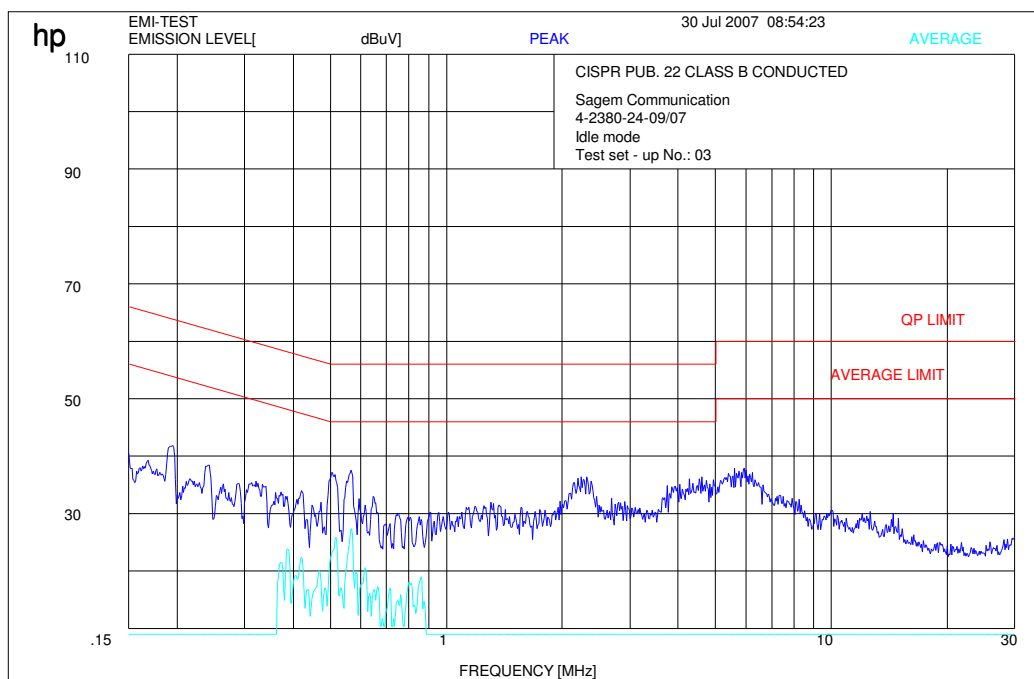


Upper Limit LINE CISPPR 22 QP
Lower Limit LINE CISPPR 22 AV

Setting : 150 kHz - 30 MHz: Quasi Peak measurement, 9kHz Bandwidth,
L1 and N – system (max. Hold)

EUT: : AC/DC Adaptor myG 5 V 500mA UK
(with mobile EC2007P)
Power AC (measured) : 115 V / 60 Hz
Manufacturer: : Sagem
Operating Condition : Idle mode
Test Site: : Room 006 (Shielded chamber)
Operator: : Gillmann

Test set – up No.: 03



Upper Limit LINE CISPPR 22 QP
Lower Limit LINE CISPPR 22 AV

Setting : 150 kHz - 30 MHz: Quasi Peak measurement, 9kHz Bandwidth,
L1 and N – system (max. Hold)

4.2 Receiver spurious emission radiated (Idle mode)

Reference

FCC:	CFR Part SUBCLAUSE § 15.109
IC:	RSS 210, Issue 7, Section 7.3 Receiver Spurious Emissions (Radiated)

SPURIOUS EMISSIONS LEVEL ($\mu\text{V/m}$)								
Idle Mode								
1900 MHz			MHz			MHz		
F [MHz]	Detector	Level [$\mu\text{V/m}$]	F [MHz]	Detector	Level [$\mu\text{V/m}$]	F [MHz]	Detector	Level [$\mu\text{V/m}$]
No peaks found								
Measurement uncertainty			$\pm 3\text{ dB}$					

$f < 1\text{ GHz}$: RBW/VBW: 100 kHz

$f \geq 1\text{ GHz}$: RBW/VBW: 1 MHz

Limits

SUBCLAUSE § 15.109

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Measurement distance (m)
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
above 960	500	3

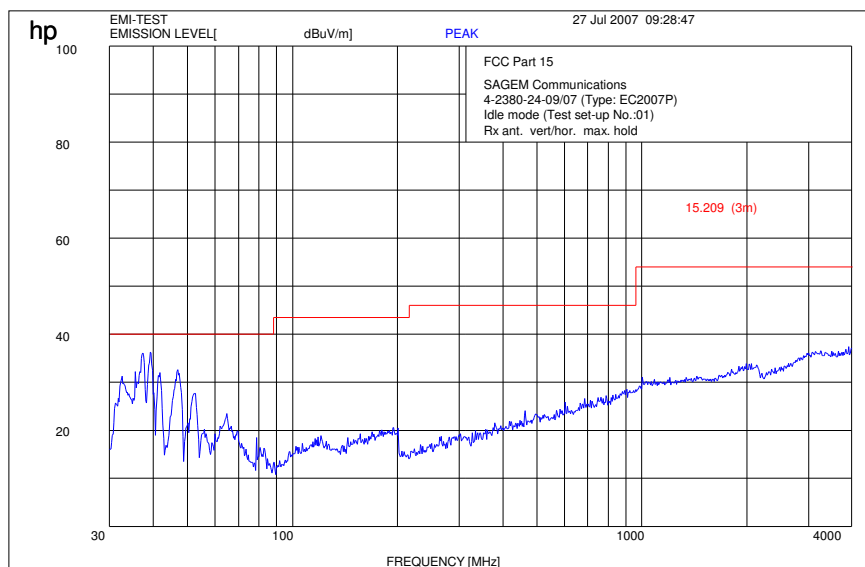
EUT: : AC/DC Adaptor myG 5V 500mA CE
(with mobile EC2007P)

Power AC (measured) : 115 V / 60 Hz

Manufacturer: : Sagem

Test set – up No.: 01

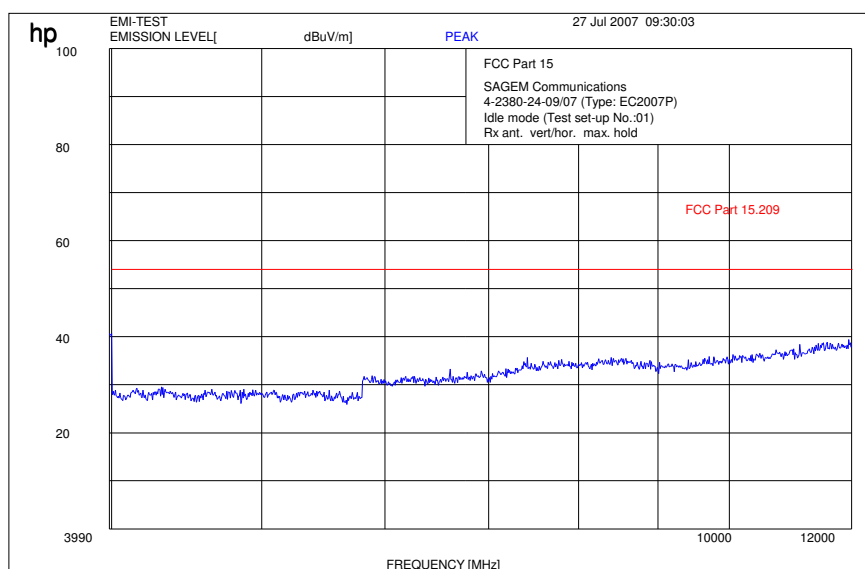
IDLE MODE (30 MHz - 4 GHz)



$f < 1 \text{ GHz}$: RBW/VBW: 100 kHz

$f \geq 1 \text{ GHz}$: RBW / VBW 1 MHz

Idle Mode (4 GHz – 12.0 GHz)



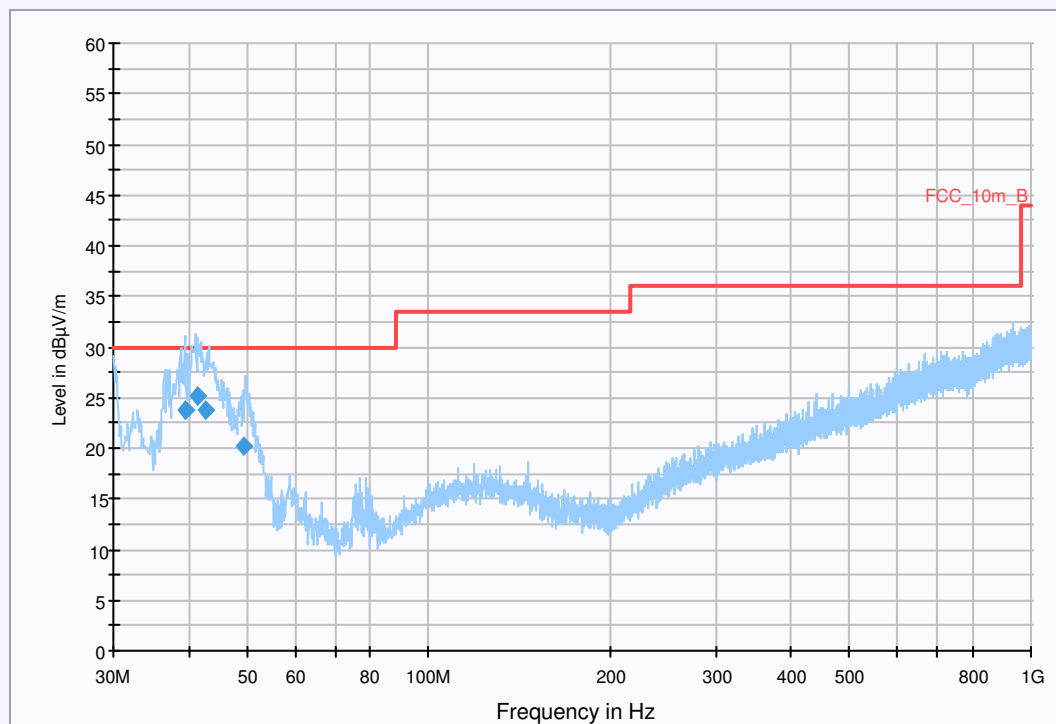
$f \geq 1 \text{ GHz}$: RBW / VBW 1 MHz

EUT:	SAGEM EC2007P and PS77/2701 (AC/DC Adaptor EU)
Serial Number:	35493101001294-4 and 189665359
Test Description:	FCC part 15 B class B @ 10m
Operating Conditions:	IDLE 1900 + charging
Operator Name:	Hennemann
Comment:	AC: 115 V / 60 Hz

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	EMI radiated\Electric Field (NOS)			
Level Unit:	dB μ V/m			
Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30MHz - 1GHz	QuasiPeak	120kHz	15s	Receiver

FCC part 15 B



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)	Comment
39.653550	23.8	15000.000	120.000	154.0	V	319.0	13.2	6.2	30.0	
41.477900	25.2	15000.000	120.000	196.0	V	227.0	12.1	4.8	30.0	
42.646400	23.7	15000.000	120.000	122.0	V	131.0	11.4	6.3	30.0	
49.422500	20.3	15000.000	120.000	202.0	V	20.0	9.2	9.7	30.0	

Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

Subrange 1

Frequency Range: 30MHz - 2GHz

Receiver: Receiver [ESCI 3]
@ GPIB0 (ADR 20), SN 100083/003, FW 3.32, CAL 07.01.2009
ohne Notch

Signal Path:

Antenna: Chase Broadband BiLog Antenna CBL 6112
SN 2110, FW A, CAL 07.01.2009
Correction Table (vertical): Chase Broadband BiLog Antenna CBL 6112
Correction Table (horizontal): Chase Broadband BiLog Antenna CBL 6112
Correction Table: Antennenkabel mit schalter (0507)

Antenna Tower:

Tower [EMCO 2090 Antenna Tower]

Turntable:

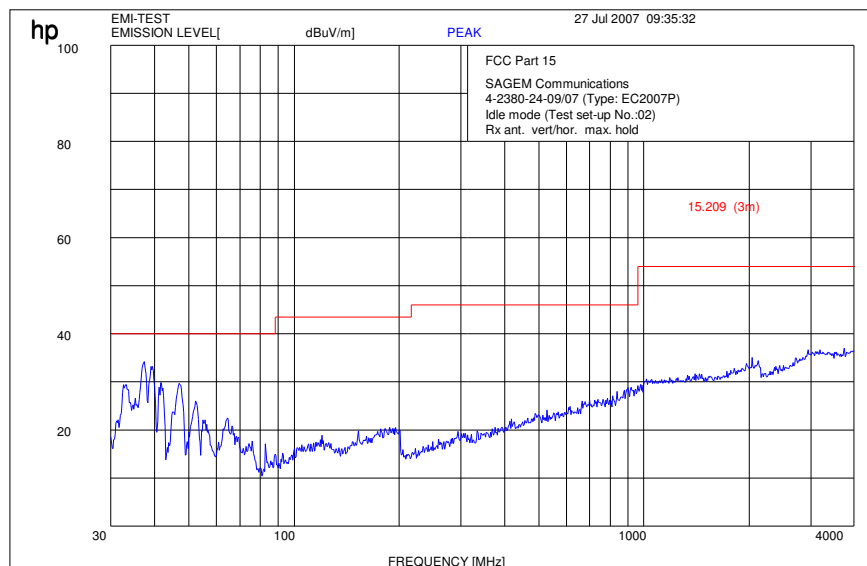
Turntable [EMCO Turntable]
@ GPIB0 (ADR 9)

EUT: : AC/DC Adaptor myG 5V 500mA US
(with mobile EC2007P)

Power AC (measured) : 115 V / 60 Hz

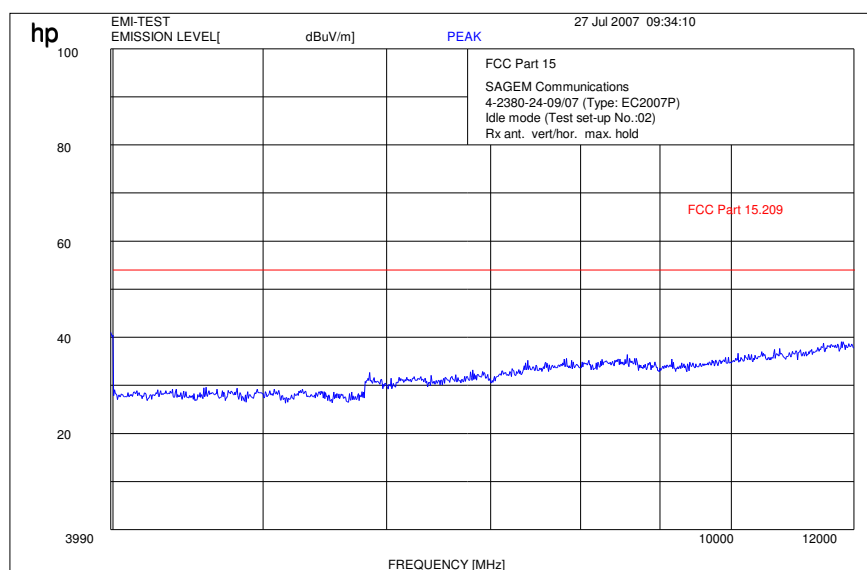
Manufacturer: : Sagem

Test set – up No.: 02



$f < 1 \text{ GHz}$: RBW/VBW: 100 kHz

$f \geq 1 \text{ GHz}$: RBW / VBW 1 MHz



$f \geq 1 \text{ GHz}$: RBW / VBW 1 MHz

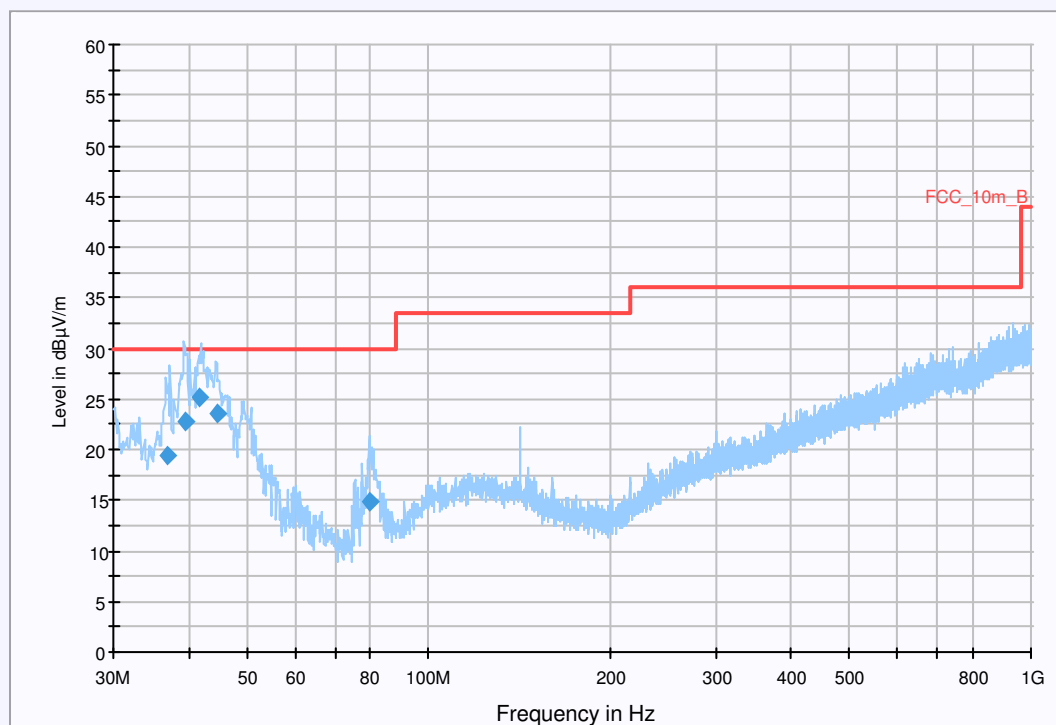
Information

EUT: SAGEM EC2007P and PS77/2702 (AC/DC Adaptor US)
Serial Number: 35493101001294-4 and 189665411
Test Description: FCC part 15 B class B @ 10m
Operating Conditions: IDLE 1900 + charging
Operator Name: Hennemann
Comment: AC: 115 V / 60 Hz

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: EMI radiated\Electric Field (NOS)
Level Unit: dB μ V/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30MHz - 1GHz	QuasiPeak	120kHz	15s	Receiver

FC part 15 B

Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)	Comment
36.891600	19.3	15000.000	120.000	204.0	V	142.0	14.5	10.7	30.0	
39.487450	22.9	15000.000	120.000	173.0	V	219.0	13.3	7.1	30.0	
41.736550	25.1	15000.000	120.000	168.0	V	267.0	12.0	4.9	30.0	
44.555200	23.6	15000.000	120.000	164.0	V	122.0	10.3	6.4	30.0	
80.173300	14.8	15000.000	120.000	384.0	V	277.0	8.2	15.2	30.0	

Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

Subrange 1

Frequency Range: 30MHz - 2GHz

Receiver: Receiver [ESCI 3]
@ GPIB0 (ADR 20), SN 100083/003, FW 3.32, CAL 07.01.2009

Signal Path: ohne Notch

Antenna: Chase Broadband BiLog Antenna CBL 6112
SN 2110, FW A, CAL 07.01.2009
Correction Table (vertical): Chase Broadband BiLog Antenna CBL 6112
Correction Table (horizontal): Chase Broadband BiLog Antenna CBL 6112
Correction Table: Antennenkabel mit schalter (0507)

Antenna Tower: Tower [EMCO 2090 Antenna Tower]
@ GPIB0 (ADR 8)

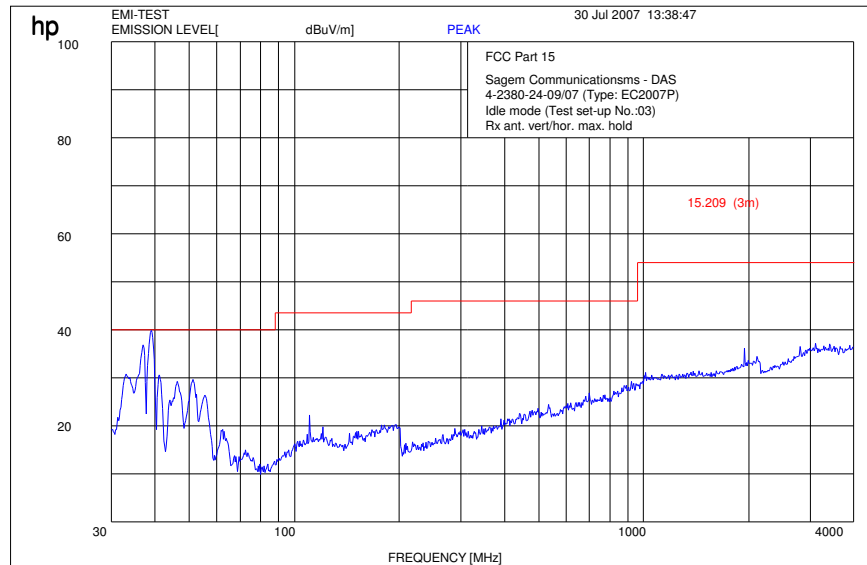
Turntable: Turntable [EMCO Turntable]
@ GPIB0 (ADR 9)

EUT: : AC/DC Adaptor myG 5V 500mA UK
(with mobile EC2007P)

Power AC (measured) : 115 V / 60 Hz

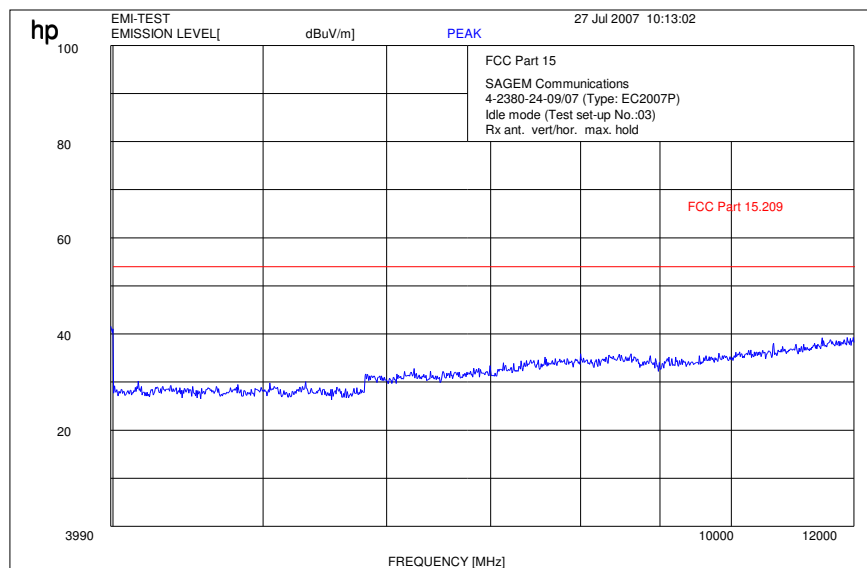
Manufacturer: : Sagem

Test set – up No.: 03



$f < 1 \text{ GHz}$: RBW/VBW: 100 kHz

$f \geq 1 \text{ GHz}$: RBW / VBW 1 MHz



$f \geq 1 \text{ GHz}$: RBW / VBW 1 MHz

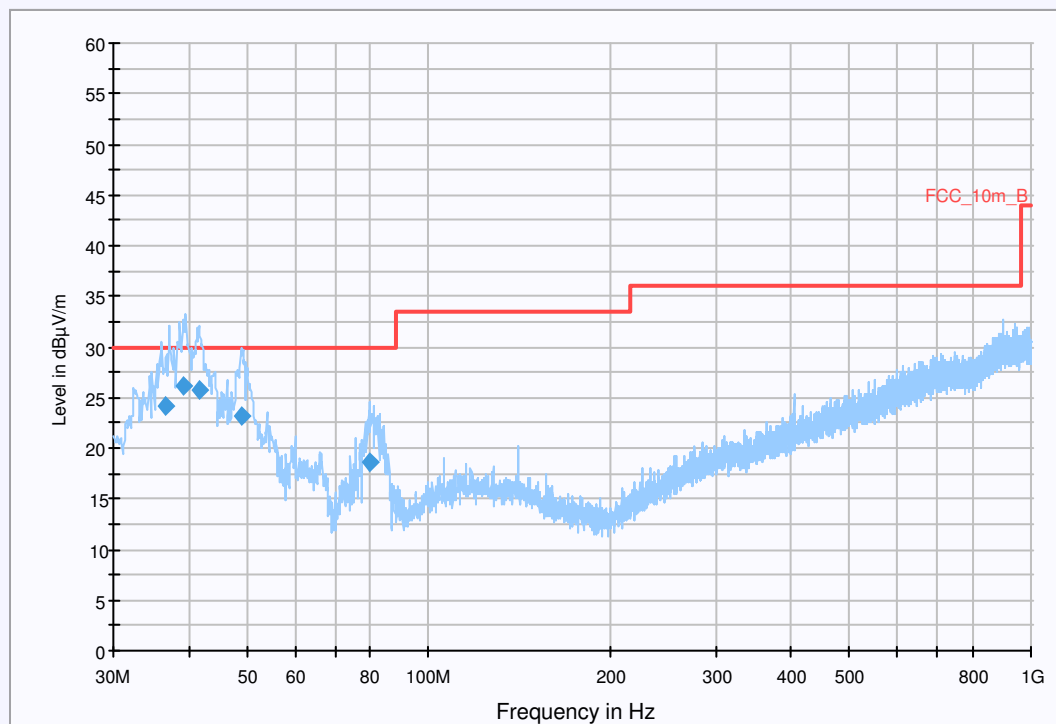
Information

EUT: SAGEM EC2007P and PS77/2703 (AC/DC Adaptor UK)
Serial Number: 35493101001294-4 and 189665403
Test Description: FCC part 15 B class B @ 10m
Operating Conditions: IDLE 1900 + charging
Operator Name: Hennemann
Comment: AC: 115 V / 60 Hz

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: EMI radiated\Electric Field (NOS)
Level Unit: dB μ V/m
Subrange **Detectors** **IF Bandwidth** **Meas. Time** **Receiver**
30MHz - 1GHz QuasiPeak 120kHz 15s Receiver

FCC part 15 B



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)	Comment
36.629650	24.1	15000.000	120.000	204.0	V	106.0	14.6	5.9	30.0	
39.322100	26.1	15000.000	120.000	202.0	V	343.0	13.3	3.9	30.0	
41.680800	25.7	15000.000	120.000	104.0	V	227.0	12.0	4.3	30.0	
48.978000	23.1	15000.000	120.000	204.0	V	24.0	9.3	6.9	30.0	
79.708000	18.7	15000.000	120.000	291.0	V	272.0	8.3	11.3	30.000	

Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

Subrange 1

Frequency Range: 30MHz - 2GHz

Receiver: Receiver [ESCI 3]
@ GPIB0 (ADR 20), SN 100083/003, FW 3.32, CAL 07.01.2009

Signal Path: ohne Notch

Antenna: Chase Broadband BiLog Antenna CBL 6112
SN 2110, FW A, CAL 07.01.2009
Correction Table (vertical): Chase Broadband BiLog Antenna CBL 6112
Correction Table (horizontal): Chase Broadband BiLog Antenna CBL 6112
Correction Table: Antennenkabel mit schalter (0507)

Antenna Tower: Tower [EMCO 2090 Antenna Tower]

@ GPIB0 (ADR 8)
Turntable: Turntable [EMCO Turntable]
@ GPIB0 (ADR 9)

Idle Mode (12 GHz - 25 GHz) valid for all 3 test set - ups

