

# RF TEST REPORT

Test item : Cellular/PCS GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA  
Phone with Bluetooth and WLAN  
Model No. : LG-P720, P720, LGP720  
Order No. : 1112-01758  
Date of receipt : 2011-12-14  
Test duration : 2012-01-05 ~ 2012-01-12  
Date of issue : 2012-01-25  
Use of report : FCC Original Grant

Applicant : LG Electronics, Inc.  
60-39, Gasan-dong, Gumchon-gu, Seoul, 153-023, Korea

Test laboratory : Digital EMC Co., Ltd.  
683-3, Yubang-Dong, Cheoin-Gu, Yongin-Si, Kyunggi-Do, 449-080, Korea

Test specification : FCC Part 15.225 Subpart C  
Test environment : See appended test report  
Test result :  Pass  Fail

The test results presented in this test report are limited only to the sample supplied by applicant and the use of this test report is inhibited other than its purpose. This test report shall not be reproduced except in full, without the written approval of DIGITAL EMC CO., LTD.

Tested by:



Engineer  
J.J.LEE

Witnessed by:

N/A

Reviewed by:



Technical Director  
Harvey Sung

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## 1. Equipment information

### 1.1 Equipment description

FCC Equipment Class	Low Power Communications Device Transmitter(DXX)
Equipment type	Cellular/PCS GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA Phone with Bluetooth and WLAN
Equipment model name	LG-P720
Equipment add model name	P720, LGP720 ※ Three models are same mechanical, electrical and functional. ※ The only difference is the model name, which are changed for marketing purpose.
Equipment serial no.	Identical prototype
Frequency band	13.56MHz
Modulation type	ASK
Channel	1
Power	Li-ion polymer Battery: DC 3.7V AC-DC Adaptor: AC 120V 60Hz
Antenna type	Loop Antenna

### 1.2 Ancillary equipment

Equipment	Model No.	Serial No.	Manufacturer	Note
-	-	-	-	-
-	-	-	-	-

## 2. Information about test items

### 2.1 Test mode

<b>Test mode</b>	Continuous transmitting mode
------------------	------------------------------

Note: For the test mode, a test program was supported by manufacturer.

### 2.2 Auxiliary equipment

Equipment	Model No.	Serial No.	Manufacturer	Note
-	-	-	-	-
-	-	-	-	-

### 2.3 Tested frequency

	TX Frequency (MHz)	RX Frequency (MHz)
<b>Lowest Channel</b>	13.56	13.56
<b>Middle Channel</b>	-	-
<b>Highest Channel</b>	-	-

### 2.4 Tested environment

<b>Temperature</b>	: 21 ~ 24 °C
<b>Relative humidity content</b>	: 35 ~ 42 % R.H.
<b>Details of power supply</b>	: Battery: DC 3.7 V AC 120V 60Hz

### 2.5 EMI Suppression Device(s)/Modifications

EMI suppression device(s) added and/or modifications made during testing

→ None

### 3. Test Report

#### 3.1 Summary of tests

FCC Part Section(s)	Parameter	Limit	Test Condition	Status Note 1
<b>I. Test Items</b>				
2.1049	20 dB Bandwidth	N/A	Radiated	<b>C</b>
15.225 (a)	In-Band Emissions	15,848 $\mu$ V/m @ 30m 15.553 – 13.567 MHz		<b>C</b>
15.225 (b)	In-Band Emissions	334 $\mu$ V/m @ 30m 13.410 – 13.553 MHz 13.567 – 13.710 MHz		<b>C</b>
15.225 (c)	In-Band Emissions	106 $\mu$ V/m @ 30m 13.110 – 13.410 MHz 13.710 – 14.010 MHz		<b>C</b>
15.225 (d) 15.205 15.209	Out-of Band Emissions	Emissions outside of the specified band (13.110-14.010 MHz) must meet the radiated limits detailed in 15.209		<b>C</b>
15.225 (e)	Frequency Stability Tolerance	$\pm$ 0.01% of operating frequency	Conducted	<b>C</b>
15.207	AC Conducted Emissions	EN 55022	AC Line Conducted	<b>C</b>
15.203	Antenna requirements	FCC Part 15.203	-	<b>C</b>
Note 1: <b>C</b> =Comply <b>NC</b> =Not Comply <b>NT</b> =Not Tested <b>NA</b> =Not Applicable				

The sample was tested according to the following specification:  
ANSI C-63.4-2003

### 3.2 Transmitter requirements

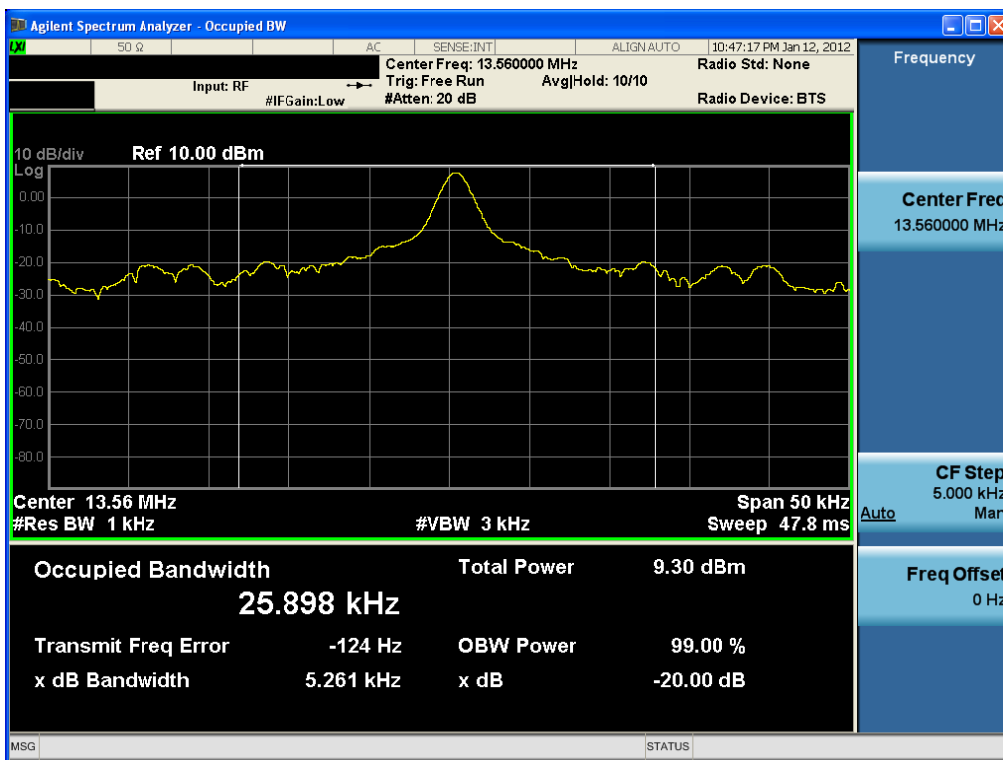
#### 3.2.1 20dB Bandwidth Measurement (§2.1049)

**- Procedure:**

The 20dB Bandwidth is measured with a spectrum analyzer connected via a receive antenna placed near the EUT while the EUT is operating in transmission mode.

**- Measurement Data: Comply**

Tested Frequency(MHz)	Test Results(KHz)
13.56	5.261



**- Minimum Standard:**

None
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**3.2.2 In-Band Radiated Spurious Emission (§15.225(a), (b), (c))****- Procedure:**

The EUT was placed on a 0.8m high wooden table inside a 10m semi anechoic chamber. An antenna was placed at 3 m distance from the EUT. Measurements were performed with the EUT oriented in 3 orthogonal axis and rotated 360 degrees to determine worst-case orientation for maximum emissions. A loop antenna was used for this test item. And this test item was performed for both vertical and horizontal polarization.

**- Measurement Data: Comply**

Frequency Band [MHz]	Frequency [MHz]	EUT Posi.	Reading Level [dBuV]	T.F	Field Strength @3m [dBuV/m]	Field Strength @30m [dBuV/m]	Limit [dBuV/m]	Margin [dB]
13.110 ~ 13.410	13.409	Y	50.20	-12.90	37.30	-2.70	40.51	43.21
13.410 ~ 13.553	13.553	Y	62.00	-13.00	49.00	9.00	50.47	41.47
13.553 ~ 13.567	13.564	Y	66.60	-13.00	53.60	13.60	84.00	70.40
13.567 ~ 13.710	13.569	Y	60.60	-13.00	47.60	7.60	50.47	42.87
13.710 ~ 14.010	13.722	Y	50.10	-13.00	37.10	-2.90	40.51	43.41

**Note 1.** This test item was performed using a loop antenna.

**Note 2.** This test item was performed at 3m and the data were extrapolated to the specified measurement distance of 30m using the square of an inverse linear distance extrapolation factor (40 dB/decade) as specified in §15.31(f)2.

▪ Extrapolation Factor =  $20 \log_{10}(30/3)^2 = 40\text{dB}$

**Note 3.** All data were recorded using a spectrum analyzer employing a peak detector.

If PK results were meet Quasi-peak limit, Quasi-peak measurements were omitted.

**Note 4.** Sample Calculation.

Margin = Limit – Field Strength @ 30m / Field Strength @ 30m = Field Strength @ 3m – 40

Field Strength @ 3m = Reading + T.F / T.F = AF + CL – AG

Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain

**- Minimum Standard**

Frequency Band [MHz]	Limit	
	[uV/m]	[dBuV/m]
13.553-13.567	15,848	84.00
13.410-13.553 13.567-13.710	334	50.47
13.110-13.410 13.710-14.010	106	40.51

**3.2.3 Radiated Spurious Emission Measurements, Out-of-Band (§15.225(d) / §15.205 and 209)****- Procedure:**

The EUT was tested from 9kHz up to the 1GHz excluding the band 13.110-14.010MHz. All measurements were recorded with spectrum analyzer employing a peak detector for emissions below 30MHz. Above 30MHz a Quasi-peak detector was used. All out-of-band emissions must not exceed the limits §15.209. A loop antenna was used for searching for emissions below 30MHz.

**- Measurement Data: Comply** (refer to the next page)**- Minimum Standard****• FCC Part 15.205 (a):** Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	MHz	GHz	GHz
0.009 ~ 0.110	8.41425 ~ 8.41475	108 ~ 121.94	1300 ~ 1427	3.6 ~ 4.4	14.47 ~ 14.5
0.495 ~ 0.505	12.29 ~ 12.293	123 ~ 138	1435 ~ 1626.5	4.5 ~ 5.15	15.35 ~ 16.2
2.1735 ~ 2.1905	12.51975 ~ 12.52025	149.9 ~ 150.05	1645.5 ~ 1646.5	5.35 ~ 5.46	17.7 ~ 21.4
4.125 ~ 4.128	12.57675 ~ 12.57725	156.52475 ~ 156.52525	1660 ~ 1710	7.25 ~ 7.75	22.01 ~ 23.12
4.17725 ~ 4.17775	13.36 ~ 13.41	156.7 ~ 156.9	1718.8 ~ 1722.2	8.025 ~ 8.5	23.6 ~ 24.0
4.20725 ~ 4.20775	16.42 ~ 16.423	162.0125 ~ 167.17	2200 ~ 2300	9.0 ~ 9.2	31.2 ~ 31.8
6.215 ~ 6.218	16.69475 ~ 16.69525	167.72 ~ 173.2	2310 ~ 2390	9.3 ~ 9.5	36.43 ~ 36.5
6.26775 ~ 6.26825	16.80425 ~ 16.80475	240 ~ 285	2483.5 ~ 2500	10.6 ~ 12.7	Above 38.6
6.31175 ~ 6.31225	25.5 ~ 25.67	322 ~ 335.4	2655 ~ 2900	13.25 ~ 13.4	
8.291 ~ 8.294	37.5 ~ 38.25	399.90 ~ 410	3260 ~ 3267		
8.362 ~ 8.366	73 ~ 74.6	608 ~ 614	3332 ~ 3339		
8.37625 ~ 8.38675	74.8 ~ 75.2	960 ~ 1240	3345.8 ~ 3358		

**• FCC Part 15.205(b):**

The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

**• FCC Part 15.209(a):**

Frequency [MHz]	Field Strength [uV/m]	Measurement Distance [Meters]
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30	30	30
30 ~ 88	100 **	3
88 ~ 216	150 **	3
216 ~ 960	200 **	3
Above 960	200	3

\*\* Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88MHz, 174-216MHz or 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

**• FCC Part 15.209(b):**

In the emission table above, the tighter limit applies at the band edges.





**3.2.4 Frequency Stability (§15.225(e))****- Procedure:**

Part 15.225 requires that devices operating in the 13.553 – 13.567 MHz shall maintain the carrier frequency within 0.01% of the operating frequency over the temperature variation of -20 degrees to + 50 degrees C at normal supply voltage.

**- Measurement Data: Comply**

Operating Frequency : 13,560,436 Hz

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100%	3.700	+23(ref)	13,560,436	0	0.0000
100%		-20	13,560,596	160	0.0012
100%		-10	13,560,580	144	0.0011
100%		0	13,560,571	135	0.0010
100%		+10	13,560,541	105	0.0008
100%		+20	13,560,474	38	0.0003
100%		+30	13,560,427	-9	-0.0001
100%		+40	13,560,398	-38	-0.0003
100%		+50	13,560,365	-71	-0.0005
85%		3.145	+25	13,560,432	-4
115%	4.255	+25	13,560,410	-26	-0.0002
BATT.ENDPOINT	3.050	+25	13,560,449	13	0.0001

**- Minimum Standard**

The frequency tolerance of the carrier signal shall be maintained within  $\pm 0.01\%$  of the operating frequency.

**3.2.5 AC Line Conducted Emissions (§15.207/EN 55022)****- Procedure:**

The conducted emissions are measured in the shielded room with a spectrum analyzer in peak hold. While the measurement, EUT had its hopping function disabled at the middle channels in line with Section 15.21(m). Emissions closest to the limit are measured in the quasi-peak and average detector mode with the tuned receiver using a bandwidth of 9 kHz. The emissions are maximized further by cable manipulation and Exerciser operation. The highest emissions relative to the limit are listed.

**- Measurement Data: Comply** (refer to the next page)

**- Minimum Standard: FCC Part 15.207(a)**

Frequency Range (MHz)	Conducted Limit (dBuV)	
	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

- Measurement Data:



### Results of Conducted Emission

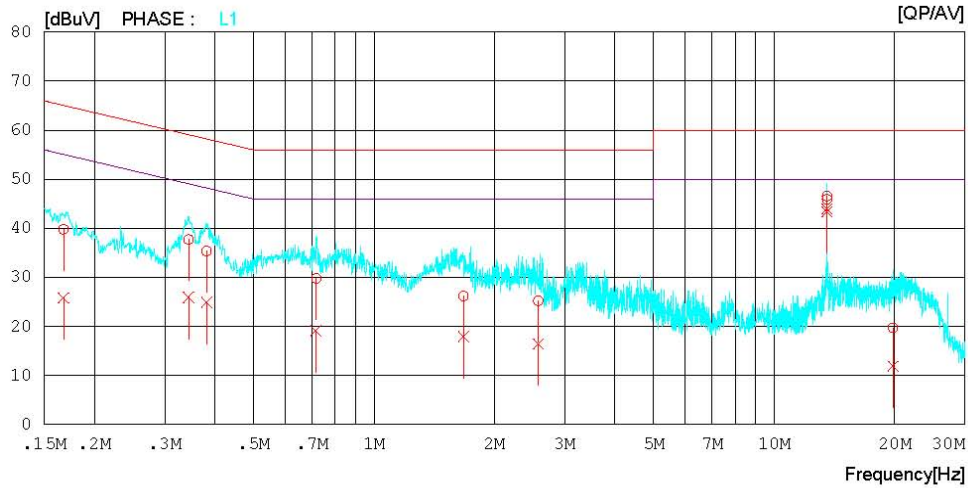
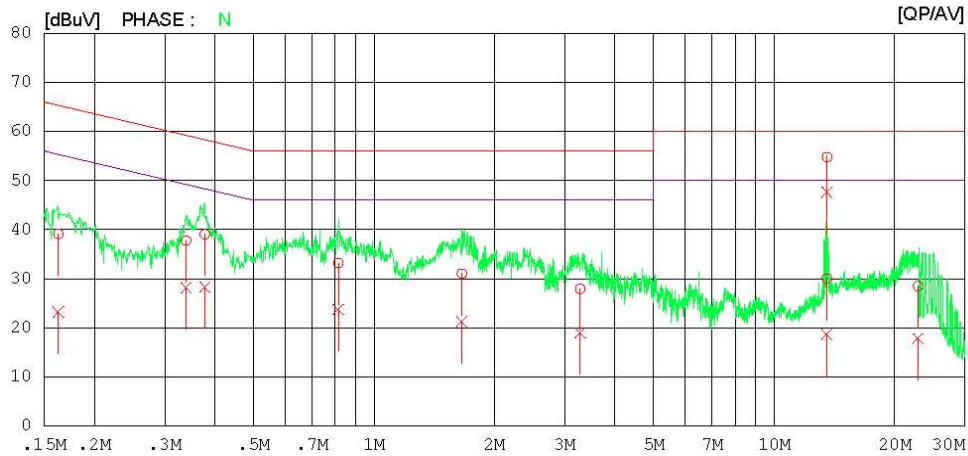
Digital EMC  
 Date: 2012-01-07

Model No. : LG-P720  
 Type :  
 Serial No. : Identical prototype  
 Test Condition : NFC

Reference No. :  
 Power Supply : 120 V 60 Hz  
 Temp/Humi. : 23 °C 39 % R.H.  
 Operator : J.J.LEE

Memo : 13.56MHz

LIMIT : CISPR22\_B QP  
 CISPR22\_B AV





### Results of Conducted Emission

Digital EMC  
 Date : 2012-01-07

Model No. : LG-P720  
 Type :  
 Serial No. : Identical prototype  
 Test Condition : NFC  
 Reference No. :  
 Power Supply : 120 V 60Hz  
 Temp/Humi. : 23°C 39 % R.H.  
 Operator : J.J.LEE  
 Memo : 13.56MHz

LIMIT : CISPR22\_B QP  
 CISPR22\_B AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.16276	38.9	23.0	0.2	39.1	23.2	65.3	55.3	26.2	32.1	N
2	0.33943	37.5	28.0	0.2	37.7	28.2	59.2	49.2	21.5	21.0	N
3	0.37805	38.8	28.1	0.2	39.0	28.3	58.3	48.3	19.3	20.0	N
4	0.81505	33.0	23.5	0.2	33.2	23.7	56.0	46.0	22.8	22.3	N
5	1.65950	30.8	21.0	0.2	31.0	21.2	56.0	46.0	25.0	24.8	N
6	3.27800	27.5	18.6	0.4	27.9	19.0	56.0	46.0	28.1	27.0	N
7	13.55000	29.1	17.7	0.9	30.0	18.6	60.0	50.0	30.0	31.4	N
8	13.56000	53.9	46.7	0.9	54.8	47.6	60.0	50.0	5.2	2.4	N
9	22.90150	27.4	16.7	1.1	28.5	17.8	60.0	50.0	31.5	32.2	N
10	0.16756	39.6	25.6	0.2	39.8	25.8	65.1	55.1	25.3	29.3	L1
11	0.34406	37.5	25.7	0.2	37.7	25.9	59.1	49.1	21.4	23.2	L1
12	0.38173	35.2	24.8	0.2	35.4	25.0	58.2	48.2	22.8	23.2	L1
13	0.71743	29.7	19.0	0.1	29.8	19.1	56.0	46.0	26.2	26.9	L1
14	1.67500	26.0	17.7	0.2	26.2	17.9	56.0	46.0	29.8	28.1	L1
15	2.57350	24.9	16.2	0.3	25.2	16.5	56.0	46.0	30.8	29.5	L1
16	13.55900	45.0	42.5	0.9	45.9	43.4	60.0	50.0	14.1	6.6	L1
17	13.56000	45.7	43.1	0.9	46.6	44.0	60.0	50.0	13.4	6.0	L1
18	19.82200	18.6	10.8	1.1	19.7	11.9	60.0	50.0	40.3	38.1	L1

# **APPENDIX**

## **TEST EQUIPMENT FOR TESTS**

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment.

	Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
<input type="checkbox"/>	Spectrum Analyzer	Agilent	E4440A	11/09/30	12/09/30	MY45304199
<input type="checkbox"/>	Spectrum Analyzer	Rohde Schwarz	FSQ26	12/01/09	13/01/09	200445
<input type="checkbox"/>	Spectrum analyzer	Agilent	E4404B	11/03/08	12/03/08	US41061134
<input type="checkbox"/>	Spectrum Analyzer(RE)	H.P	8563E	11/10/04	12/10/04	3551A04634
<input checked="" type="checkbox"/>	MXA Signal Analyzer	Agilent Technologies, Inc	N9020A	12/01/09	13/01/09	MY49100833
<input type="checkbox"/>	Power Meter	H.P	EPM-442A	11/07/01	12/07/01	GB37170413
<input type="checkbox"/>	Power Sensor	H.P	8481A	11/07/01	12/07/01	3318A96332
<input type="checkbox"/>	Wideband Power Sensor	Rohde Schwarz	NRP-Z81	11/06/04	12/06/04	1137.9009.02-101001
<input type="checkbox"/>	Virtual Power Meter(S/W)	Rohde Schwarz	R&S Power Viewer Plus	-	-	V 4.1.0
<input type="checkbox"/>	Power Divider	Agilent	11636B	11/09/30	12/09/30	56471
<input type="checkbox"/>	4-Way Power Divider	ET Industries	D-0526-4	11/12/01	12/12/01	210195001
<input type="checkbox"/>	Power Splitter	Anritsu	K241B	11/09/30	12/09/30	020611
<input type="checkbox"/>	Power Splitter	Anritsu	K241B	11/07/01	12/07/01	017060
<input type="checkbox"/>	Power Splitters & Dividers	Aeroflex/Weinschel	1594	11/02/21	12/02/21	1177
<input type="checkbox"/>	Frequency Counter	H.P	5342A	11/07/01	12/07/01	2119A04450
<input checked="" type="checkbox"/>	TEMP & HUMIDITY Chamber	JISCO	KR-100/J-RHC2	11/09/30	12/09/30	30604493/021031
<input checked="" type="checkbox"/>	Digital Multimeter	H.P	34401A	11/03/07	12/03/07	3146A13475, US36122178
<input type="checkbox"/>	Multifunction Synthesizer	HP	8904A	11/10/06	12/10/06	3633A08404
<input type="checkbox"/>	Signal Generator	Rohde Schwarz	SMR20	11/03/08	12/03/08	101251
<input type="checkbox"/>	Signal Generator	H.P	ESG-3000A	11/07/01	12/07/01	US37230529
<input checked="" type="checkbox"/>	Vector Signal Generator	Rohde Schwarz	SMJ100A	12/01/09	13/01/09	100148
<input type="checkbox"/>	Vector Signal Generator	Rohde Schwarz	SMBV100A	12/01/09	13/01/09	255571
<input type="checkbox"/>	Audio Analyzer	H.P	8903B	11/07/02	12/07/02	3011A09448
<input type="checkbox"/>	Modulation Analyzer	H.P	8901B	11/07/01	12/07/01	3028A03029
<input type="checkbox"/>	8960 Series 10 Wireless Comms. Test Set	Agilent	E5515C	11/03/07	12/03/07	GB43461134
<input type="checkbox"/>	Universal Radio communication Tester	Rohde Schwarz	CMU200	11/03/07	12/03/07	106760
<input type="checkbox"/>	Bluetooth Tester	TESCOM	TC-3000B	11/07/01	12/07/01	3000B000268
<input type="checkbox"/>	Thermo hygrometer	BODYCOM	BJ5478	12/01/13	13/01/13	090205-3
<input checked="" type="checkbox"/>	Thermo hygrometer	BODYCOM	BJ5478	12/01/13	13/01/13	090205-2
<input type="checkbox"/>	Thermo hygrometer	BODYCOM	BJ5478	12/01/13	13/01/13	090205-4
<input type="checkbox"/>	AC Power supply	DAEKWANG	5KVA	11/03/08	12/03/08	20060321-1
<input type="checkbox"/>	DC Power Supply	HP	6622A	11/03/07	12/03/07	3448A03760
<input checked="" type="checkbox"/>	DC Power Supply	HP	6633A	11/03/07	12/03/07	3524A06634
<input type="checkbox"/>	DC Power Supply	Protek	PWS-3010D	11/09/30	12/09/30	4072702
<input type="checkbox"/>	DC Power Supply	SM techno	SDP30-5D	11/05/20	12/05/20	305DKA013
<input type="checkbox"/>	BAND Reject Filter	Microwave Circuits	N0308372	11/09/30	12/09/30	3125-01DC0352
<input type="checkbox"/>	BAND Reject Filter	Wainwright	WRCG1750	11/09/30	12/09/30	2
<input type="checkbox"/>	High-Pass Filter	ANRITSU	MP526D	11/09/30	12/09/30	M27756

	Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
<input type="checkbox"/>	High-pass filter	Wainwright	WHNX2.1	11/09/30	12/09/30	1
<input type="checkbox"/>	High-pass filter	Wainwright	WHNX3.0	11/09/30	12/09/30	9
<input type="checkbox"/>	High-pass filter	Wainwright	WHNX5.0	11/09/19	12/09/19	8
<input type="checkbox"/>	High-Pass Filter	Wainwright	WHKX8.5	11/09/19	12/09/19	1
<input type="checkbox"/>	High-Pass Filter	Wainwright	WHKX1.0	11/09/30	12/09/30	9
<input type="checkbox"/>	Tunable Notch Filter	Wainwright	WRCT800.0 /960.0-0.2/40-8SSK	N/A	N/A	32
<input type="checkbox"/>	Tunable Notch Filter	Wainwright	WRCD1700.0 /2000.0-0.2/40-10SSK	N/A	N/A	53
<input type="checkbox"/>	Tunable Notch Filter	Wainwright	WRCT1900.0/ 2200.0-5/40-10SSK	N/A	N/A	30
<input type="checkbox"/>	HORN ANT	ETS	3115	11/09/06	12/09/06	21097
<input type="checkbox"/>	HORN ANT	ETS	3115	11/03/22	12/03/22	6419
<input type="checkbox"/>	HORN ANT	A.H.Systems	SAS-574	11/03/25	13/03/25	154
<input type="checkbox"/>	HORN ANT	A.H.Systems	SAS-574	11/03/25	13/03/25	155
<input type="checkbox"/>	HORN ANT	SCHWARZBECK	BBHA9120A	10/04/13	12/04/13	322
<input type="checkbox"/>	Dipole Antenna	Schwarzbeck	VHA9103	11/11/22	12/11/22	2116
<input type="checkbox"/>	Dipole Antenna	Schwarzbeck	VHA9103	11/11/22	12/11/22	2117
<input type="checkbox"/>	Dipole Antenna	Schwarzbeck	UHA9105	11/11/22	12/11/22	2261
<input type="checkbox"/>	Dipole Antenna	Schwarzbeck	UHA9105	11/11/22	12/11/22	2262
<input checked="" type="checkbox"/>	LOOP Antenna	ETS	6502	10/10/29	12/10/29	3471
<input type="checkbox"/>	Coaxial Fixed Attenuators	Agilent	8491B	11/07/02	12/07/02	MY39260700
<input type="checkbox"/>	Attenuator (3dB)	WEINSCHHEL	56-3	11/09/30	12/09/30	Y2342
<input type="checkbox"/>	Attenuator (3dB)	WEINSCHHEL	56-3	11/09/30	12/09/30	Y2370
<input type="checkbox"/>	Attenuator (10dB)	WEINSCHHEL	23-10-34	11/09/30	12/09/30	BP4386
<input type="checkbox"/>	Attenuator (10dB)	WEINSCHHEL	23-10-34	12/01/09	13/01/09	BP4387
<input type="checkbox"/>	Attenuator (10dB)	WEINSCHHEL	86-10-11	11/09/30	12/09/30	446
<input type="checkbox"/>	Attenuator (10dB)	WEINSCHHEL	86-10-11	11/09/30	12/09/30	408
<input type="checkbox"/>	Attenuator (20dB)	WEINSCHHEL	86-20-11	11/09/30	12/09/30	432
<input type="checkbox"/>	Attenuator (30dB)	JFW	50FH-030-300	11/03/07	12/03/07	060320-1
<input type="checkbox"/>	Attenuator (40dB)	WEINSCHHEL	57-40-33	11/09/30	12/09/30	NN837
<input type="checkbox"/>	Termination	H.P	HP-909D	11/07/02	12/07/02	02750
<input type="checkbox"/>	Termination	H.P	HP-909D	11/07/02	12/07/02	02702
<input type="checkbox"/>	Type N Coaxial CIRCULATOR	NOVA MICROWAVE	0088CAN	11/07/01	12/07/01	788
<input type="checkbox"/>	Type N Coaxial CIRCULATOR	NOVA MICROWAVE	0185CAN	11/07/01	12/07/01	790
<input type="checkbox"/>	Amplifier (30dB)	Agilent	8449B	11/03/07	12/03/07	3008A01590
<input type="checkbox"/>	Amplifier (30dB)	H.P	8449B	11/03/07	12/03/07	3008A00370
<input type="checkbox"/>	Amplifier	EMPOWER	BBS3Q7ELU	11/09/30	12/09/30	1020
<input type="checkbox"/>	RF Power Amplifier	OPHIRRF	5069F	11/07/01	12/07/01	1006
<input checked="" type="checkbox"/>	EMI TEST RECEIVER	R&S	ESU	12/01/09	13/01/09	100014



	Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
<input checked="" type="checkbox"/>	BILOG ANTENNA	SCHAFFNER	CBL6112B	10/07/14	12/07/14	2737
<input checked="" type="checkbox"/>	Amplifier (22dB)	H.P	8447E	12/01/09	13/01/09	2945A02865
<input type="checkbox"/>	EMI TEST RECEIVER	R&S	ESCI	11/03/08	12/03/08	100364
<input type="checkbox"/>	BICONICAL ANT.	Schwarzbeck	VHA 9103	10/11/29	12/11/29	91032789
<input type="checkbox"/>	LOG-PERIODIC ANT.	Schwarzbeck	UHALP9108A1	10/11/29	12/11/29	1098
<input type="checkbox"/>	BICONICAL ANT.	Schwarzbeck	VHA 9103	10/12/21	12/12/21	91031946
<input type="checkbox"/>	LOG-PERIODIC ANT.	Schwarzbeck	UHALP9108A1	10/07/07	12/07/07	0590
<input type="checkbox"/>	Low Noise Pre Amplifier	TSJ	MLA-100K01-B01-2	11/03/07	12/03/07	1252741
<input type="checkbox"/>	Low Noise Pre Amplifier	TSJ	MLA-00108-B02-36	12/01/09	13/01/09	1518831
<input type="checkbox"/>	Amplifier (25dB)	Agilent	8447D	11/03/07	12/03/07	2944A10144
<input type="checkbox"/>	Amplifier (25dB)	Agilent	8447D	11/07/01	12/07/01	2648A04922
<input type="checkbox"/>	Spectrum Analyzer(CE)	H.P	8591E	11/03/07	12/03/07	3649A05889
<input type="checkbox"/>	LISN	Kyoritsu	KNW-407	12/01/09	13/01/09	8-317-8
<input type="checkbox"/>	LISN	Kyoritsu	KNW-242	11/07/02	12/07/02	8-654-15
<input type="checkbox"/>	CVCF	NF Electronic	4420	11/09/15	12/19/15	304935/4420023
<input checked="" type="checkbox"/>	50 ohm Terminator	HME	CT-01	12/01/09	13/01/09	N/A
<input type="checkbox"/>	RFI/FIELD Intensity Meter	Kyoritsu	KNM-2402	11/07/02	12/07/02	4N-170-3
<input checked="" type="checkbox"/>	EMI Test Receiver	R&S	ECSI	11/03/08	12/03/08	100364
<input checked="" type="checkbox"/>	LISN	R&S	ESH2-Z5	11/09/30	12/09/30	8287391006
<input checked="" type="checkbox"/>	CVCF	NF Electronic	4420	11/03/08	12/03/08	304935/337980
<input checked="" type="checkbox"/>	RFI/FIELD Intensity Meter	ES4152	424059	11/09/30	12/09/30	424059
<input type="checkbox"/>	Wideband Radio Communication Tester	R&S	CMW500	11/09/30	12/09/30	100989