DANAK
Reg.nr. 225

TELE DANMARK

TEST REPORT

An Accredited Technical Test Executed under the Danish Accreditation Scheme

Prøvningsrapport

for akkrediteret prøvning i henhold til Dansk Akkrediterings Ordning

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No. of annexes 1
Antal bilag

Test-report No *Prøvningsrapport Nr.*	UPRR010053-01	**Our reference** *Vor reference*	FBOLL	**Copy No** *Eksemplar Nr.*	1
Equipment *Udstyr*	Bluetooth Printer Adapter				
Manufacture *Fabrikat*	i-Data				
Type *Type*	x42100				
Serial No *Serie Nr.*	-	**Equipment received** *Udstyr modtaget*	14.05.2001		
Client *Rekvirent*	i-data international A/S				
Address *Adresse*	Vadstrupvej 35-43				
Postal code *Post Nr.*	2880	**City** *By*	Bagsværd	**Country** *Land*	Danmark
The testing has been carried out in accordance with *Prøvningen er udført i henhold til*	ETS 300 328 (November 1996)				
Remarks *Bemærkninger*	All the tested parameters fulfil the requirements				
Date and signature *Dato og underskrift*	31 MAY 2001				

The test result is only valid for the equipment tested.
Prøvningsresultatet gælder kun for det afprøvede udstyr.

Sven Lundbech
M.Sc.(E.E.)

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Course of tests Filled in: 30 / 5 - 2001 by: FCB

☒ **The course of tests was normal**

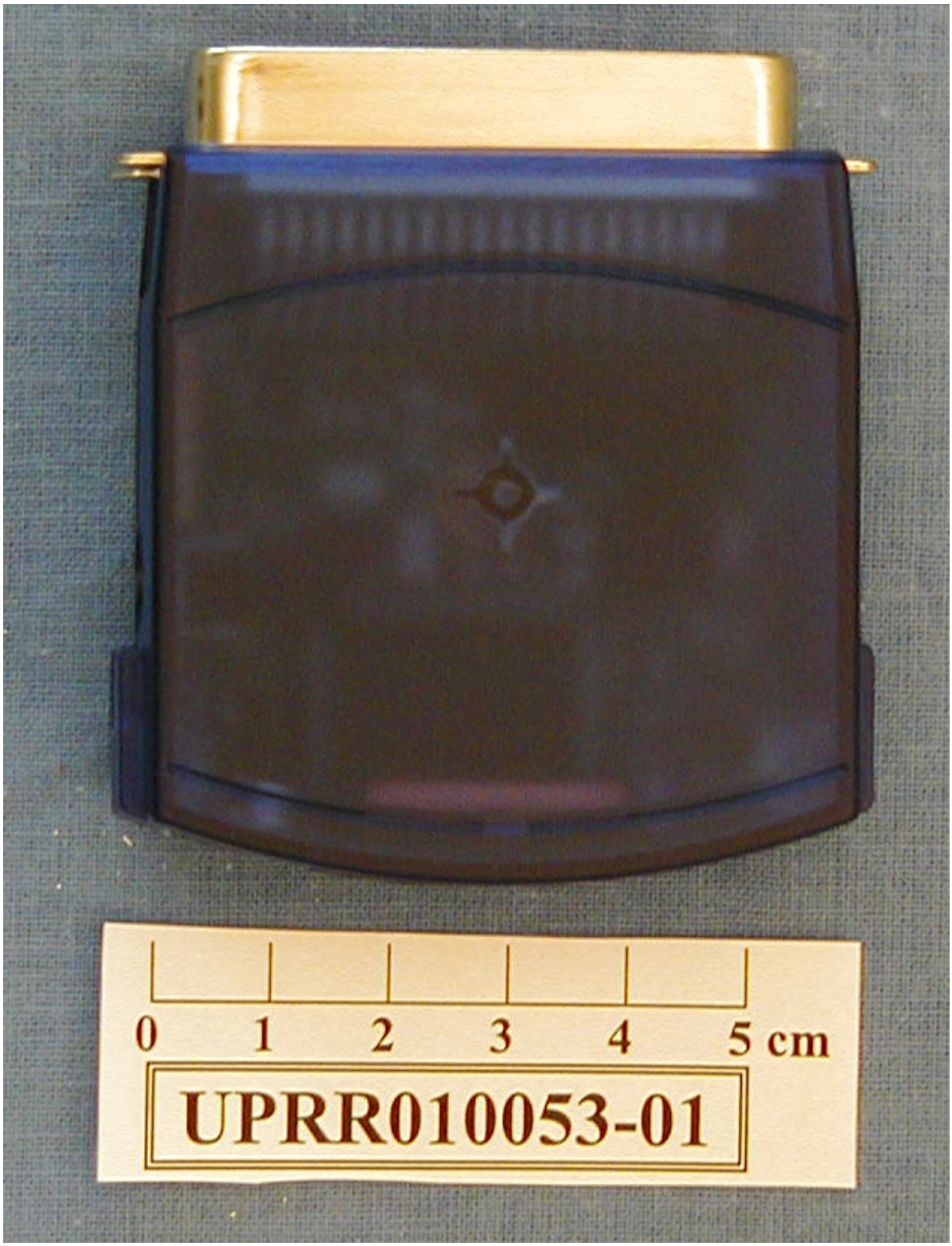
or

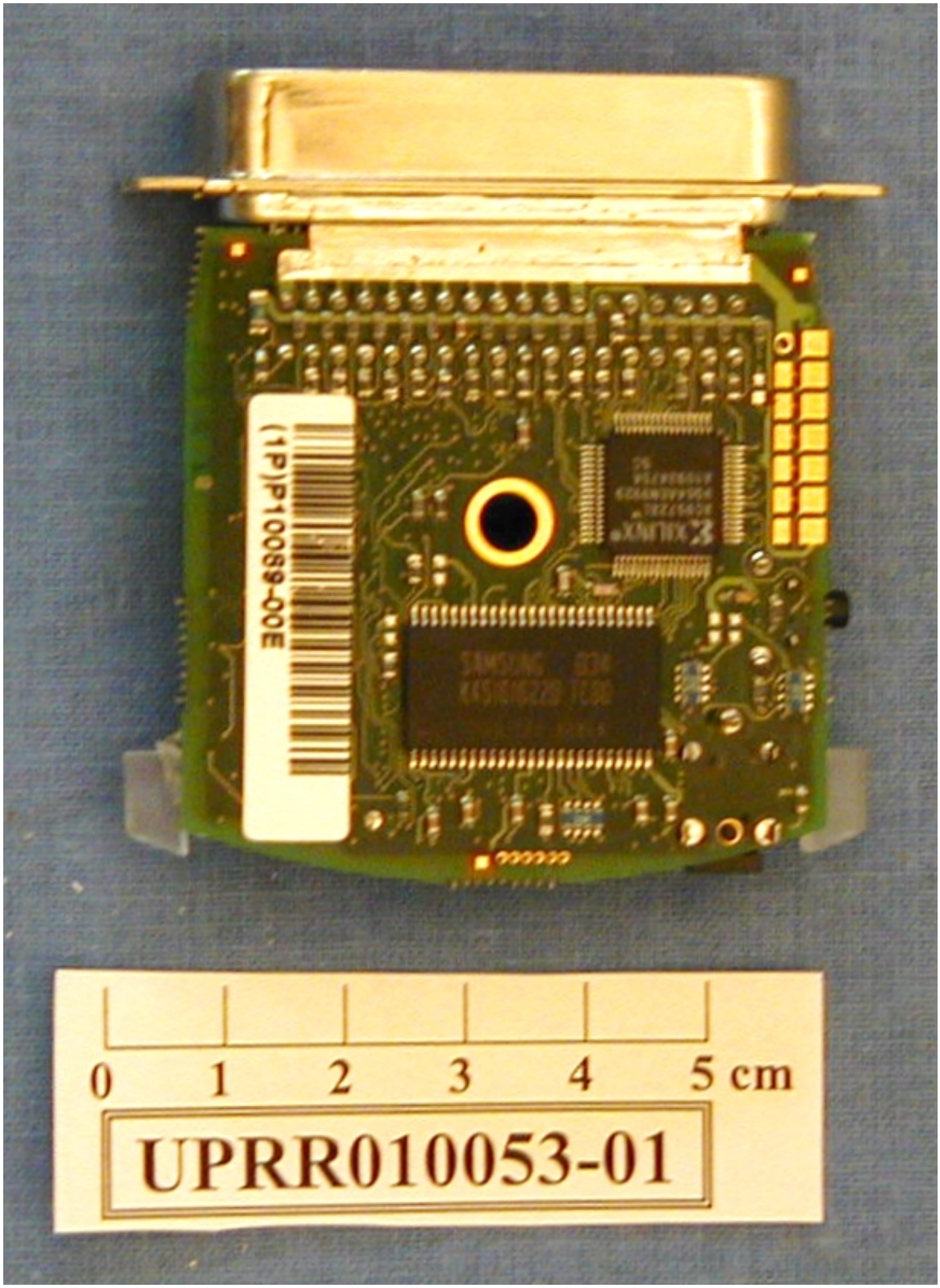
☐ **The course of tests deviated in the following manner(s):**

Remark(s):

Photo(s) of the equipment

MPI TECH
Bluetooth Printer Adapter
Power 5.0V DC 300mA
P/N: G10089-A0D
Type No: x42100
P/O: 127563
This equipment complies with the requirements in Part 15 of FCC Rules. See manual.
CE
S/N:(1S)1053420
BD Addr:00036E1012EC
Made in Denmark
0 1 2 3 4 5 cm
UPRR010053-01


0 1 2 3 4 5 cm
UPRR010053-01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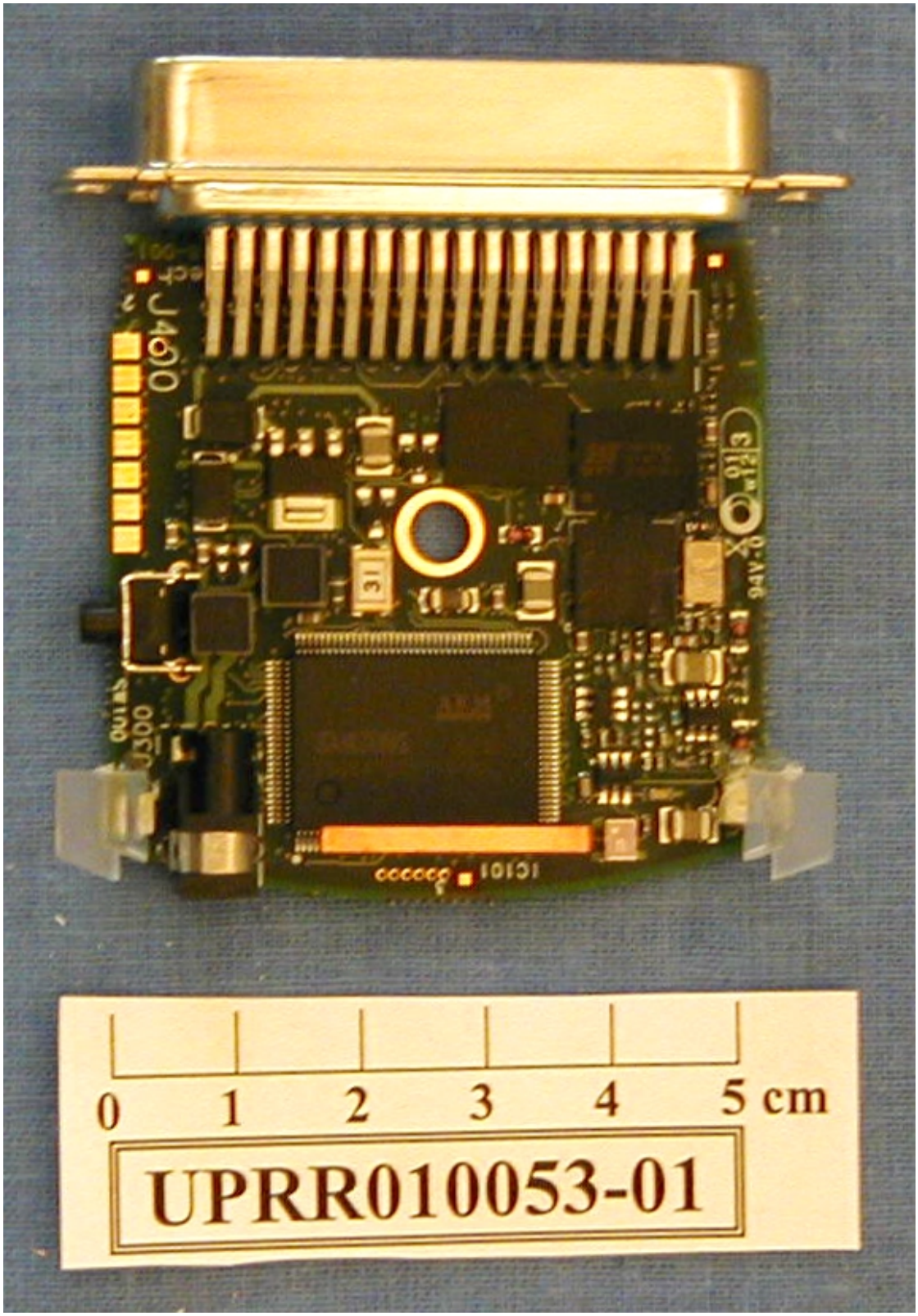
0 1 2 3 4 5 cm
UPRR010053-01


0 1 2 3 4 5 cm
UPRR010053-01

Definitions

Test frequencies

Transmitter						
Channel	Lowest	Middle	Highest			
Freq. (MHz)	2402.000	-	2480.000			
Extent of tests	☒ Full ☐ Limited	☐ Full ☐ Limited	☒ Full ☐ Limited			
Receiver						
Channel	Lowest	Middle	Highest			
Freq. (MHz)	2402.000	-	2480.000			
Extent of tests	☒ Full ☐ Limited	☐ Full ☐ Limited	☒ Full ☐ Limited			

Test voltages

Transmitter (Volts)		**Receiver** (Volts)	
Normal	230	Normal	
Max.	253	Max.	-
Min.	207	Min.	-

Extreme temperature range

Category I	(General):	-20°C to +55°C
Category II	(Equipment for normal indoor use):	0°C to +35°C

The transmitter is tested as category: ☐ I ☒ II
The receiver is tested as category: ☐ I ☐ II

Test antenna

Symbol	Polarisation of measuring antenna
H	Horizontal
V	Vertical

Antenna connector used:

TX: ☐ Permanent internal (50 Ω) ☐ Temporary (50 Ω) ☒ Integral antenna
RX: ☐ Permanent internal (50 Ω) ☐ Temporary (50 Ω) ☒ Integral antenna

Remark(s):

4.1 Declarations by the applicant

When submitting equipment for type testing, the applicant shall supply the necessary information according to the appropriate application form.

Satisfactory: ☒ YES ☐ NO

4.3 Mechanical and electrical design

4.3.1 General

The equipment submitted shall be designed, constructed and manufactured in accordance with sound engineering practice and with the aim of minimizing harmful inteference to other equipment and services.

Satisfactory: ☒ YES ☐ NO

4.3.2 Controls

Those controls (of the radio part) which, if maladjusted, might increase the interfering potential of the equipment shall not be easily accessible to the user.

Satisfactory: ☒ YES ☐ NO

Remark(s):

Transmitter

Amb. temp.: 22 C Rel. humidity: 40 % Carried out: 25 / 5 - 2001 by: FCB

7.2.1 Effective radiated power (conducted, by using test fixture)

Rated output power 20 dBm

Antenna assembly gain 5.5 dBi

Duty cycle of the equipment during the test x = 0.85

Temp.	**Voltage**	**Transmitter power** (dBm)		
		Lowest frequency	Middle frequency	Highst frequency
Normal	Normal	Pk: 16.6	Pk:	Pk: 16.7
		Av: 6.5	Av:	Av: 6.9
Min.	Max.	Pk: 17.0	Pk:	Pk: 17.5
		Av: 6.9	Av:	Av: 7.7
	Min.	Pk: 17.0	Pk:	Pk: 17.6
		Av: 6.9	Av:	Av: 7.8
Max.	Max.	Pk: 15.6	Pk:	Pk: 15.5
		Av: 5.5	Av:	Av: 5.7
	Min.	Pk: 15.5	Pk:	Pk: 15.6
		Av: 5.4	Av:	Av: 5.8

5.2.1 Limit:	Under all test conditions	Pk: 23 dBm/ -7 dBW Av: 20 dBm/ -10 dBW
Measurement uncertainty:		U_{95} = +1.96 * 8.0% = +1.3 dB U_{95} = -1.96 * 7.34% = -1.2 dB

Note: Pk is the peak power as defined in clause 7.2.1 step 4 (C + G)
Av is the average power as defined in clause 7.2.1 step 2 (D)

Satisfactory: ☒ YES ☐ NO

For these tests, the following measuring equipment is used (ref. appendix A):

Power meter	no.:424
Oscilloscope	no.:308
Signal generator	no.:443
Thermometer	no.:439
Test chamber	no.:437
Test fixture	Created and calibrated by telelaboratoriet

Remark(s):

Amb. temp.: 20 C Rel. humidity: 29 % Carried out: 17 / 5 - 2001 by: SS/FCB

7.2.1 Effective radiated power E.I.R.P.

Rated output power 20 dBm

Antenna assembly gain 5.5 dBi

(Applies only to equipment with an integral antenna)

Operating frequency	***)Band width** (kHz)	**Antenna polarisation**	**Transmitter power, included antenna gain** (dBm)
Lowest	10	Horizontal/ Vertical	Pk: 16.6
Highest	10	Horizontal/ Vertical	Pk: 16.7
5.2.1 Limit:			Pk: 23 dBm/ -7 dBW
Measurement uncertainty:			U_{95} = + 2.4/ -3.2 dB

Note: Pk is the peak power as defined in clause 7.2.1 step 4 (C + G)

Satisfactory: ☒ YES ☐ NO

For these tests, the following measuring equipment is used (ref. appendix A):

Spectrum analyzer no.: 300
Power meter no.: 424
Oscilloscope no.: 308
Signal generator no.: 443

Remark(s):

Amb. temp.: 22 C Rel. humidity: 40 % Carried out: 25 / 5 - 2001 by: FCB

7.2.2 Peak power density

FHSS modulation

Rated power density: 2.0 dBm/ 100 kHz

Is Tx on time > 10 usec.: Yes

Under normal test conditions only	Peak power density		
	Lowest Frequency 2402.000 MHz	Middle Frequency __MHz	Highest Frequency 24080.000 MHz
Measured power density (dBm/100 kHz)	6.6		5.5
Measurement uncertainty:	U_{95} = +1.96 * 14.0% = +2.1 dB U_{95} = -1.96 * 13.7% = -2.1 dB		
5.2.2 Limit	20 dBm/ 100 kHz		

Satisfactory: ☒ YES ☐ NO

For these tests, the following measuring equipment is used (ref. appendix A):

Power meter no.: 424
Spectrum analyzer no.: 300
Signal generator no.: 443

Remark(s):

Amb. temp.: 22 C Rel. humidity: 40 % Carried out: 25 / 5 - 2001 by: FCB

7.2.3 Frequency range af equipment using FHSS modulation

Temp.	Voltage	Frequency (MHz) at which -30 dBm/ 100 kHz occurs lowest	highest
Normal	Normal	2400.766	2481.295
Min	Min	2400.766	2481.296
	Max	2400.766	2481.296
Max	Min	2400.767	2481.300
	Max	2400.767	2481.300
Measured frequencies (lowest and highest)		f_L = 2400.766	f_H = 2481.300
Measurement uncertainty		U_{95} = +1.96 * (0.69 dB * 5 kHz/ dB) = +6.55 kHz U_{95} = -1.96 * (0.61 dB * 5 kHz/ dB) = -6.0 kHz	
5.2.3 Limits		f_L > 2400 MHz f_H < 2483.5 MHz	

Satisfactory: ☒ YES ☐ NO

For these tests, the following measuring equipment is used (ref. appendix A):

Spectrum analyzer no.: 300 and 1011
Signal generator no.: 443

Remark(s):

Amb. temp.: C Rel. humidity: % Carried out: / - 2001 by:

7.2.5 Spurious emissions - conducted (TX-on)
(Applies only to equipment with an external RF-connector)

Rated power level: ____ Watt / ____ dBm			Modulation: FHSS		
Operating frequency	**Spurious frequency** MHz	*)**Band-width** kHz	Narrow band dBm	Wide band dBm/Hz	**Excess** dB
Lowest					
	Others				
Highest					
	Others				
Measurement uncertainty:		U_{95} = 1.96 * 0.63 = ± 1.2 dB			

5.2.4 Limits

Frequency range	Narrow band	Wide band
	Operating	Operating
30 MHz - 1 GHz	-36 dBm	-86 dBm/ Hz
> 1 GHz - 12.75 GHz	-30 dBm	-80 dBm/ Hz
1.8 - 1.9 GHz 5.15 - 5.3 GHz	-47 dBm	-97 dBm/ Hz

Satisfactory: ☐ YES ☐ NO

For these tests, the following measuring equipment is used (ref. appendix A):

Spectrum analyzer no.:
Signal generator no.:

Remark(s): N/A

Amb. temp.: C Rel. humidity: % Carried out: / - 2001 by:

7.2.5 **Spurious emissions conducted** (TX-standby)

(Applies only to equipment with an external RF-connector)

Operating frequency	**Spurious frequency** MHz	*)**Band-width** kHz	Narrow band dBm	Wide band dBm/Hz	**Excess** dB
Lowest					
	Others				
Highest					
	Others				
Measurement uncertainty:		U_{95} = 1.96 * 0.63 = ± 1.2 dB			

5.2.4 Limits

Frequency range	Narrow band Standby	Wide band Standby
30 MHz - 1 GHz	-57 dBm	-107 dBm/ Hz
> 1 GHz – 12.75 GHz	-47 dBm	-97 dBm/ Hz
1.8 - 1.9 GHz 5.15 - 5.3 GHz	-47 dBm	-97 dBm/ Hz

Satisfactory: ☐ YES ☐ NO

For these tests, the following measuring equipment is used (ref. appendix A):

Spectrum analyzer no.:
Signal generator no.:

Remark(s): N/A

Amb. temp.: 20 C Rel. humidity: 29 % Carried out: 17 / 5 - 2001 by: SS/FCB

7.2.5 Spurious emissions, radiated (TX-on) Rated power level: ☒ High ☐ Low

Lowest frequency			**FHSS modulation**		
Spurious frequency (MHz)	*)**Band-width** (kHz)	**Symbol**	**Radiated emissions** Narrow band (dBm)	Wide band (dBm/Hz)	**Excess** dB
4804.00	10	H	-33.5		-
		V			
7206.00	10	H	-32.3		-
		V			
9608.000	10	H	-39.0		-
		V			
		H			
		V			
		H			
		V			
Measurement uncertainty:		U_{95} = + 2.4/-3.2 dB			

5.2.4 Limits

Frequency range	Narrow band Operating	Wide band Operating
30 MHz - 1 GHz	-36 dBm	-86 dBm/ Hz
> 1 GHz - 12.75 GHz	-30 dBm	-80 dBm/ Hz
1.8 - 1.9 GHz 5.15 - 5.3 GHz	-47 dBm	-97 dBm/ Hz

A preliminary scan in 1 m test distance in the whole frequency range 25 – 12750 MHz has been performed, to register the frequencies where spurious emissions is observed. The reported values in the table are the measured spurious emission at the significant frequencies determined in 3 m test distance.

Satisfactory: ☒ YES ☐ NO *) = Bandwidth of measuring receiver

For this test, the measuring equipment listed in appendix B is used.

Remark(s):

Amb. temp.: 20 C Rel. humidity: 29 % Carried out: 17 / 5 - 2001 by: SS/FCB

7.2.5 Spurious emissions, radiated (TX-on) Rated power level: ☒ High ☐ Low

Highest frequency			**FHSS modulation**		
Spurious frequency (MHz)	*)**Band-width** (kHz)	**Symbol**	**Spurious emissions** Narrow band (dBm)	Wide band (dBm/Hz)	**Excess** dB
4960.000	10	H	-33.5		-
		V			
7440.000	10	H	-32.1		-
		V			
9920.000	10	H	-39.2		-
		V			
		H			
		V			
		H			
		V			
Measurement uncertainty:		U_{95} = + 2.4/-3.2 dB			

5.2.4 Limits

Frequency range	Narrow band Operating	Wide band Operating
30 MHz - 1 GHz	-36 dBm	-86 dBm/ Hz
> 1 GHz - 12.75 GHz	-30 dBm	-80 dBm/ Hz
1.8 - 1.9 GHz 5.15 - 5.3 GHz	-47 dBm	-97 dBm/ Hz

A preliminary scan in 1 m test distance in the whole frequency range 25 – 12750 MHz has been performed, to register the frequencies where spurious emissions is observed. The reported values in the table are the measured spurious emission at the significant frequencies determined in 3 m test distance.

Satisfactory: ☒ YES ☐ NO *) = Bandwidth of measuring receiver

For this test, the measuring equipment listed in appendix B is used.

Remark(s):

Amb. temp.: 20 C Rel. humidity: 29 % Carried out: 17 / 5 - 2001 by: FCB

7.2.5 Spurious emissions, radiated (TX-standby)

Spurious frequency (MHz)	*) **Band-width** (kHz)	**Symbol**	**Spurious emissions**		**Excess** dB
			Narrow band (dBm)	**Wide band** (dBm/Hz)	
< 1 GHz	-	H	< -60		-
		V			
> 1GHz	-	H	< -50		-
		V			
		H			
		V			
		H			
		V			
		H			
		V			
Measurement uncertainty:			U_{95} = + 2.4/-3.2 dB		

5.2.4 Limits

Frequency range	Narrow band	Wide band
	Standby	Standby
30 MHz - 1 GHz	-57 dBm	-107 dBm/ Hz
> 1 GHz - 12.75 GHz	-47 dBm	-97 dBm/ Hz
1.8 - 1.9 GHz 5.15 - 5.3 GHz	-47 dBm	-97 dBm/ Hz

A preliminary scan in 1 m test distance in the whole frequency range 25 – 12750 MHz has been performed, to register the frequencies where spurious emissions is observed. The reported values in the table are the measured spurious emission at the significant frequencies determined in 3 m test distance.

Satisfactory: ☒ YES ☐ NO *) = Bandwidth of measuring receiver

For this test, the measuring equipment listed in appendix B is used.

Remark(s):

Receiver

Amb. temp.: C Rel. humidity: % Carried out: / - 2001 by:

7.3.2 Spurious emissions - conducted

(Applies only to equipment with an external RF-connector)

Operating frequency	**Spurious frequency** MHz	*)**Band-width** kHz	**Spurious emissions**		**Excess** dB
			Narrow band (dBm)	**Wide band** (dBm/Hz)	
Lowest					
	Others				
Highest					
	Others				
Measurement uncertainty:		U_{95} = 1.96 * 0.63 = ± 1.2 dB			

5.3.2 Limits

Frequency range	Narrow band	Wide band
30 MHz - 1 GHz	-57 dBm	-107 dBm/ Hz
> 1 GHz - 12.75 GHz	-47 dBm	-97 dBm/ Hz

Satisfactory: ☐ YES ☐ NO *) = Bandwidth of measuring receiver

For this test, the following measuring equipment is used (ref. appendix A).

Spectrum analyzer no.:
Bandpass filter no.:
Signal generator no.:

Remark(s): N/A

Amb. temp.: 20 C Rel. humidity: 29 % Carried out: 17 / 5 - 2001 by: FCB

7.3.2 Spurious emissions (Radiated)

Spurious frequency (MHz)	*) **Band-width** (kHz)	**Symbol**	**Spurious emissions** Narrow band (dBm)	Wide band (dBm/Hz)	**Excess** dB
< 1 GHz	-	H	< -60		-
		V			
> 1GHz	-	H	< -50		-
		V			
		H			
		V			
		H			
		V			
		H			
		V			
Measurement uncertainty:		U_{95} = + 2.4/-3.2 dB			

5.3.2 Limits

Frequency range	Narrow band	Wide band
30 MHz - 1 GHz	-57 dBm	-107 dBm/ Hz
> 1 GHz - 12.75 GHz	-47 dBm	-97 dBm/ Hz

A preliminary scan in 1 m test distance in the whole frequency range 25 – 12750 MHz has been performed, to register the frequencies where spurious emissions is observed. The reported values in the table are the measured spurious emission at the significant frequencies determined in 3 m test distance.

Satisfactory: ☒ YES ☐ NO *) = Bandwidth of measuring receiver

For this test, the measuring equipment listed in appendix B is used.

Remark(s): N/A

Additional information supplementary to the test report:

Appendix A

List of measurement equipment (conducted):

No.:	Category:	Manufacture:	Type:	Serial no.:
100				
101	Signal generator	Hewlett-Packard	8642B	2427A00116
102	Signal generator	Hewlett-Packard	8642B	2709A01083
103	Signal generator	Hewlett-Packard	8656B	2447A00384
104	Signal generator	Hewlett-Packard	8662A	2033A00534
105	Signal generator	Hewlett-Packard	8640B	1434U00310
106	Signal generator	Schlumberger	4002	024325
107	Modulation analyzer	Hewlett-Packard	8901B	2718A01344
108	Modulation analyzer	Hewlett-Packard	8901B	2806A01670
109	Power sensor	Hewlett-Packard	11722A	2716A02090
110	Power sensor	Hewlett-Packard	11722A	2716A02006
111	Power meter	Hewlett-Packard	436A	2101A10324
112	Power sensor	Hewlett-Packard	8482A	2235A06153
113	Audio analyzer	Hewlett-Packard	8903A	2444A04820
114	Audio analyzer	Hewlett-Packard	8903A	2233A02188
115	Dynamic signal analyzer	Hewlett-Packard	3562A	2738A03663
116	Dynamic signal analyzer	Hewlett-Packard	3561A	2338A00297
117	Display	Hewlett-Packard	85662A	2237A04233
118	Spectrum analyzer	Hewlett-Packard	8566B	2240A01973
119	Spectrum analyzer	Hewlett-Packard	8569A	2113A00183
120	Power supply	Hewlett-Packard	6024A	2129A00902
121	Power supply	Hewlett-Packard	6033A	2343A00101
122	Power supply	Tektronix	TM503	B103135
123	Power supply	Tektronix	TM503	203966
124	AF-generator	Tektronix	SG 505	B53608
125	AF-generator	Tektronix	SG 505	B53619
126	AF-generator	Tektronix	SG 505	B500739
127	AF-generator	Tektronix	SG 505	B500685
128	AF-generator	Brüel & Kjær	1023	863060

Appendix A

List of measurement equipment (conducted):

No.:	Category:	Manufacture:	Type:	Serial no.:
129	Amplifier	Brüel & Kjær	2609	905548
130	Amplifier	Brüel & Kjær	2610	863845
131	Amplifier	Brüel & Kjær	2619	896031
132	Amplifier	Brüel & Kjær	2706	1353997
133	Artificial voice	Brüel & Kjær	4227	1785276
134	Microphone	Brüel & Kjær	4134	906650
135	Microphone	Brüel & Kjær	4136	853427
136	Microphone	Brüel & Kjær	4165	732392
137	Sound level calibrator	Brüel & Kjær	4230	725233
138	Sound level calibrator	Brüel & Kjær	4230	908866
139	Sound level meter	Brüel & Kjær	2215	738777
140	Volt meter	Brüel & Kjær	2427	450138
141	Test head	Brüel & Kjær	4905	910355
142	Noise generator	Brüel & Kjær	1405	882226
143	Filter	TELECOM TD-L/UDV	----	----
144	Compander	TELECOM TD-L/RDA	----	000001
145	Frequency doubler	Hewlett-Packard	11721A	1950A00191
146	Bandpass-filter	Telonic	TTF-750-2-5EE	89001-1
147	Bandpass-filter	Telonic	TTF-1500-2-5EE1	89002-1
148	Bandpass-filter	Telonic	TTF-3000-5-5EE	60245-1
149	Circulator	Philips	2722 162 01572	----
150	Circulator	Philips	2722 162 01572	----
151	Circulator	Philips	2722 162 01555	----
152	Circulator	Philips	2722 162 01555	----
153	Circulator	Philips	2722 162 03261	----
154	Circulator	Philips	2722 162 03261	----
155	Circulator	Philips	2722 162 06962	----
156	Attenuator	Hewlett-Packard	8494B	2550A10123
157	Attenuator	Hewlett-Packard	8496B	2551A06369

Appendix A

List of measurement equipment (conducted):

No.:	Category:	Manufacture:	Type:	Serial no.:
158	Frequency doubler	Hewlett-Packard	WD-102	D/C 8629
159	Power supply	TELECOM TD-L/RDA	----	000002
160	Signal generator	Hewlett-Packard	8656A	2035A00302
161	Signal generator	Hewlett-Packard	8662A	2024A00427
162	Power supply	Rhode & Schwarz	NGPU 70/20	192.0055.92
163	Power supply	Hewlett-Packard	6038A	2933A08018
164	Multi meter	Hewlett-Packard	3478A	2911A62825
165	Switch control unit	Hewlett-Packard	3488A	2719A11828
166	Plotter	Hewlett-Packard	7440A	2929A03317
167	Signal generator	Hewlett-Packard	8665A	2036A00576
168	RH & temp. probe	Vaisala	HMB 1221 B	201020
169	Oscilloscope	Hewlett-Packard	54520A	3344A00105
170	Test chamber	Köttermann	2771	580101
171	Thermometer	Almemo	2190-1	17503
172	Signal generator	Hewlett-Packard	8642B	2534A00424
173	Signal generator	Hewlett-Packard	8656B	2530A02348
174	Dynamic analyzer	Hewlett-Packard	3561A	2549A03266
175	Audio analyzer	Hewlett-Packard	8903B	2742A03453
176	Modulation analyzer	Hewlett-Packard	8901A	2031A00934
177	Spectrum analyzer	Hewlett-Packard	8568B	1921A00642
178	Power meter	RACAL-DANA	9303	1079
179	Power sensor	RACAL-DANA	11-1478	1079
180				
181				
182				
183				
184				
185				
186				

Appendix A

List of measurement equipment (conducted):

No.:	Category:	Manufacture:	Type:	Serial no.:
300	Spectrum analyzer	Hewlett-Packard	8593E	3242U00178
301	Signal generator	Hewlett-Packard	83731A	3239A00201
302	Signal generator	Hewlett-Packard	8664A	3438A00600
303	Power Meter	Hewlett-Packard	437B	3125U06011
304	Power supply DC	Hewlett-Packard	6633A	3145A03842
305	Power supply AC	Hewlett-Packard	6812A	3523A00440
306	Multi meter	Hewlett-Packard	3478A	2911A62850
307	Switch control unit	Hewlett-Packard	3488A	3415A
308	Oscilloscope	Hewlett-Packard	54522A	3344A00105
309	Test chamber	Heraeus Vötsch	VMT04/240	24576
310	Thermometer	Keithley	866	T-23700
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Appendix A

List of measurement equipment (conducted):

No.:	Category:	Manufacture:	Type:	Serial no.:
400	Audio analyzer	Hewlett-Packard	8903A	2016A00341
401	Audio analyzer	Hewlett-Packard	8903B	2614A01163
402	Audio analyzer	Hewlett-Packard	8903B	2614A01669
403	Counter	Hewlett-Packard	5305B	2116A02181
404	Counter	Hewlett-Packard	5316A	2216A02595
405	Dynamic analyzer	Hewlett-Packard	3561A	2549A03792
406	Dynamic analyzer	Hewlett-Packard	3562A	3005A05371
407	Bandpass-filter	Telonic	TTA-3000-5-5EE	90121-3
408	Bandpass-filter	Telonic	TTF-1000-5-5EE	50027-1
409	Bandpass-filter	Telonic	TTF-1000-5-5EE	N726-3
410	Bandpass-filter	Telonic	TTF-125-5-5EE	3053-3
411	Bandpass-filter	Telonic	TTF-125-5-5EE	N723-2
412	Bandpass-filter	Telonic	TTF-2250-5-5EE	40235-1
413	Bandpass-filter	Telonic	TTF-2250-5-5EE	3006-1
414	Bandpass-filter	Telonic	TTF-250-5-5EE	3059-5
415	Bandpass-filter	Telonic	TTF-250-5-5EE	N724-2
416	Bandpass-filter	Telonic	TTF-500-2-5EE	3030-2
417	Bandpass-filter	Telonic	TTF-500-2-5EE1	F182-1
418	Bandpass-filter	Telonic	TTF-72-5-5EE	3071-1
419	Bandpass-filter	Telonic	TTF-72-5-5EE	N740-1
420	Measuring receiver	Hewlett-Packard	8902A	2621A01047
421	Modulation analyzer	Hewlett-Packard	8901A	2239A02220
422	Modulation analyzer	Hewlett-Packard	8901A	2705A04501
423	Power meter	Hewlett-Packard	436A	2515U03253
424	Power meter	Hewlett-Packard	436A	1921U00493
425	Power sensor	Hewlett-Packard	8482A	1551A02686
426	Power sensor	Hewlett-Packard	8482A	2349A10167
427	Signal generator	Hewlett-Packard	8640B	1814U01939
428	Signal generator	Hewlett-Packard	8640B	1602U00788

Appendix A

List of measurement equipment (conducted):

No.:	Category:	Manufacture:	Type:	Serial no.:
429	Signal generator	Hewlett-Packard	8642B	2642A00861
430	Signal generator	Hewlett-Packard	8642B	2527A00291
431	Signal generator	Hewlett-Packard	8656B	2523U00211
432	Signal generator	Hewlett-Packard	8657A	2823U00575
433	Signal generator	Hewlett-Packard	8657B	2948U00553
434	Signal generator	Marconi	2019	118428/012
435	Spectrum analyzer	Hewlett-Packard	8562A	2712A00452
436	Spectrum analyzer	Hewlett-Packard	8562A	2724A00867
437	Test chamber	EC	VKF-875	-
438	Test chamber	H&B	-	950.023H
439	Thermo meter	Keithley	866	T23713
440	Power measuring receiver	Telecom	-	L1
441	Power measuring receiver	Telecom	-	L2
442	Spectrum analyzer	Hewlett-Packard	70004A	3020A00617
443	Signal generator	Hewlett-Packard	83732A	3429A00500
444	Stripline	Telecom TD-L/RDA	-	000001
445	Thermometer	Almemo	2190-1	17501
446	Bandpass-filter	Telonic	TCS 6-4000-5-5G1	95103-1
447	Power Amplifier	Amplifier Research	500W1000M7	15211
448	Modulation analyzer	Hewlett-Packard	8901B	2806A01671
449	Signal generator	Hewlett-Packard	8644B	3512A00616
450	Signal generator	Hewlett-Packard	8644A	3045A01371
451	Oscilloscope	Hewlett-Packard	54501A	2841A02434
452	Mixer	Lorch dect.	201z	-
453	IF-filter	Telecom	-	-
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Appendix A

List of measurement equipment (conducted):

No.:	Category:	Manufacture:	Type:	Serial no.:
700	Audio analyzer	Hewlett-Packard	8903B	2450A00272
701	Audio analyzer	Hewlett-Packard	8903B	2818A04731
702	Bandpass filter	Telonic	TCK 6-3000-5-5G	40389-1
703				
704	Logic pattern generator	Hewlett-Packard	8170A	203601387
705				
706	Signal generator	Hewlett-Packard	8665B	3438A00603
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710	Multifunction generator	Hewlett-Packard	8904A	2948A05971
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712	Multifunction generator	Hewlett-Packard	8904A	2740A00333
713	DCF-77 receiver	Erling B. Ibsen	DKMFX10-9TSI	86446
714	Dynamic analyzer	Hewlett-Packard	3562A	2738A03740
715	Dynamic analyzer	Hewlett-Packard	3561A	2338A02203
716	Spectrum analyzer	Hewlett-Packard	8562A	2809A02739
717	Spectrum analyzer	Hewlett-Packard	3585A	-
718	Oscilloscope	Hewlett-Packard	1741A	1704A00667
719	Exiter	S.P.	1301S	235461
720	DC IF mixer	Anzac	MD-141	-
721	Signal generator	Hewlett-Packard	8642B	2642A00857
722	Combiner	Anzac	DS-4-4	-
723	Computer	Hewlett-Packard	98581A	-
724	BB. power amplifier	ENI	550L	372
725	DSC test station	Thrane & Thrane	-	-
726				
727	Filter box	Telelab.	-	-
728	Computer	Olivetti	M380-XPI	89142806

Appendix A

List of measurement equipment (conducted):

No.:	Category:	Manufacture:	Type:	Serial no.:
729	Power supply	Hewlett-Packard	6032	2818A03313
730	DSC prtc.analyzer/enc.	Commodore	SX-64	614A01163
731	Modulation analyzer	Hewlett-Packard	8901B	2531A00713
732	DSC analyzer/enc.softw.	Telecom/LAHAL	PC-DSC	v. 2.77
733	Signal generator	Hewlett-Packard	8644A	2933A00590
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735				
736	Up/down-sw.	Telecom	OPSRDLAB	950514
737	Digital delayline	Telecom/Commodore	SX-64	614A01163
738	Strip-line	Telecom	-	-
739	Up/down-sw.	Telecom	OPSMOT3	-
740	Protocol analyzer	Hewlett-Packard	4957A	3235A02966
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Appendix A

List of measurement equipment (conducted):

No.:	Category:	Manufacture:	Type:	Serial no.:
1001	Circulator	Alcatel	Ferrocom 9630-41	-
1002	Fading generator	Elektrobit ltd.	TetraSim	962101
1003	Filter	Tele Danmark	50	-
1004	Mixer	Mini-circuits	ZFM-2H	-
1005	Mixer	Mini-circuits	ZLW-2H	-
1006	Power meter	HP	436A	2515U03253
1007	Power meter	HP	437B	2835A00785
1008	Signal generator (T1)	Anritsu	MG3660A	M18889
1009	Signal generator (T1)	Anritsu	MG3670B	M19495
1010	Spectrum analyzer	Rohde & Schwarz	FSEA 30	845097/029
1011	Spectrum analyzer	Rohde & Schwarz	FSEB 30	842110/004
1012	Signal generator (T2)	Marconi	2050T	119835/042
1013	TETRA signal analyser	IFR	2310	M19123
1014	TETRA signal analyser	IFR	2310	969950/005
1015	Signal generator (T2)	Rohde & Schwarz	SMIQ03	?
1016	Signal generator (T1)	Rohde & Schwarz	PSM7/CMD91	TDUPTR18999
1017	Rubidium standard	Ball	MBU	TDUPTR19003
1018	Power meter	Rohde & Schwarz	NRVD	TDUPTR 18997
1019	Power probe	Rohde & Schwarz	NRVD-Z1	8411112/00
1020	Power probe	Rohde & Schwarz	NRVD-Z1	841112/007
1021	Power supply	HP	HP6674A	US36370351
1022	Power supply	HP	HP6674A	US36370342
1023	Power supply	Rohde & Schwarz	6024A	2229A-01510
1024	Test chamber	mb-teknik	-	-

Appendix B

List of measurement equipment (radiated):

No.:	Category:	Manufacture:	Type:	Reg. no.:
1	Antenna	Watkins-Johnson	AR7-17A	15854
2	Antenna	Watkins-Johnson	AR7-19	14078
3	Antenna	Schwarzbeck	VHA 9103	14116
4	Antenna	Schwarzbeck	VHA 9103 (c)	14117
5	Balun	Schwarzbeck	VHA 9103 (c)	17094
6	Balun	Schwarzbeck	VHA 9103 (c)	16123
7	Log. per. antenna	Schwarzbeck	UHALP 9107	17093
8	Log. per. antenna	Schwarzbeck	UHALP 9107 (c)	15855
9	Log. per. antenna	Schwarzbeck	UHALP 9107 (c)	16066
10	Log. per. antenna	Schwarzbeck	UHALP 9107 (c)	17380
11	Broadband antenna	Schwarzbeck	BBA 9106	15676
12	Broadband antenna	Schwarzbeck	BBA 9106	15773
13	Broadband horn	EMCO	3115	15781
14	Dipole antenna	Anritsu	MP 663A	14127
15	Spectrum analyzer	Hewlett-Packard	8593A	15631
16	Spectrum analyzer	Hewlett-Packard	8563E	16148
17	Spectrum analyzer	Rohde & Schwarz	FSMS26	17029
18	Spectrum analyzer	Rohde & Schwarz	ESMI	17642
19	Sweep generator	Hewlett-Packard	8341B	14388
20	Sweep generator	Hewlett-Packard	83620A	15510
21	Signal generator	Marconi	2024	17642
22	Audio analyzer	Hewlett-Packard	8903A	15019
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Enclosure(s)

Accreditation
to perform
technical testing

DANAK

Laboratory:	**Tele Danmark A/S** **Telelaboratoriet** **Telegade 2** **DK-2630 Taastrup** **Denmark**
Accreditation to:	**Testing of telecommunications equipment and other types of electronic equipment.**
Registration number:	**225**
Valid to:	**2001 06 30**

Field of testing:

A. EMC-testing, including:
- **Emission of electromagnetic disturbances.**
- **Immunity against electromagnetic disturbances.**

B. Validation of Means of testing intended for testing of telecommunications equipment within the scope of accreditation C, D, E and F.

C. Analog and digital radiocommunications equipment and systems.

D. Cellular radiocommunications equipment and systems.

E. Electrical and electroacoustical characteristics of telecommunications equipment.

F. ISDN and DATA equipment / systems.

G. Mechanical environmental aspects.

H. Climatic environmental aspects.

The testing areas cover among others:
- **Analog and digital radiocommunications equipment for public and private, landmobile and maritime networks, such as NMT, GSM and DECT-terminals.**
- **Analog and digital terminal equipment for public switched telephone network and leased lines, such as PSTN, PSDN and ISDN-equipment.**

The testing is carried out according to current lists of test-methods approved by DANAK. In addition to fulfilling the requirements in EN 45001 the accreditation fulfils the requirements in CEPT Rec. T/G 01-01.

The Accreditation is granted in pursuance of §5 in order No. 258 of 11. April 1994 of the Danish Agency for Development of Trade and Industry on Accreditation of laboratories to Perform Accredited Technical Testing etc. EN 45001 is an integrated part of the above mentioned order.

The Laboratory shall at all times comply with existing regulations concerning its activity as an accredited laboratory and with the special conditions attached to this accreditation and notified to the laboratory by separate document.

Date: **1996 08 07**

Dansk Akkreditering (Danish Accreditation)
DANAK

Niels Rudolph Hartmann

Mette Holst / Niels Rudolph Hartmann

By settlement of any disputes, this Document in Danish language shall have priority.