

TEST-REPORT No. 50305-10055-1

Product Description	Wireless Keyboard
Brand	Cherry
Model / Type	RS13800WL
Serial No.	
Applicant	Cherry GmbH Cherrystrasse D-91275 Auerbach / Germany
Contact	Mrs. Angelika Gradl
Order / Date Test sample received	January 24, 2001 January 30, 2001
Test Specification	FCC Rules Part 15, Subpart C, Section 15.249
	Industry Canada RSS 210, Issue 2,
Test Result	The tested sample complies with the test specifications
Tested by	March 08, 2001
Johann Roidt	Date
Checked	March 08, 2001
Johann Roidt	Date
Note	The test data of this report relate only to the individual item which has been tested. This report shall not be reproduced except in full extent without the written approval of the testing laboratory.



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1. Operation Mode of EUT

The EUT was equipped with a test software which allowed independent access to individual RF channels. All tests were performed at lowest and highest RF-channel.



2. Changes made to the EUT during this certification test

No changes have been made to the EUT during this certification test.



3. Configuration of EUT and periperal devices

Configuration of cables	connected to	the EUT
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Not applicable

Configuration of peripheral devices connected to the EUT

Not applicable



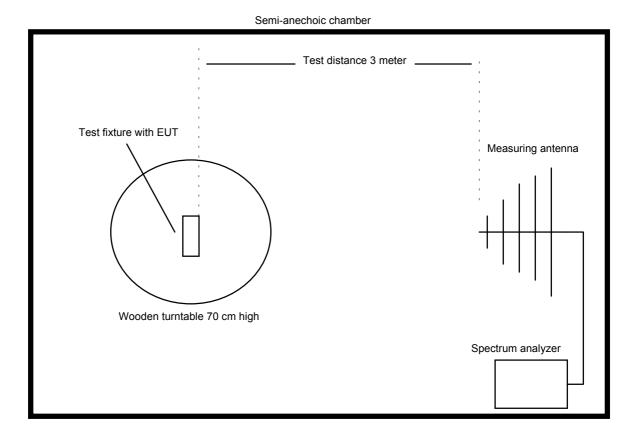
4. Measuring Methods

Transmitter Parameter TestS (§15.209)

All transmitter parameter radiated tests are performed at a test distance of 3 meteters in a semianechoic chamber. During the tests the EUT will be rotated all around and the receiving antenna will be raised and lowered from 1 meter to 4 meter to find the maximum levels of emission. Cables and equipment will be placed and moved within the position likely to find their maximum emissions. Measurements will be made in horizontal and vertical polarization of the receiving antenna.

The EUT was operating in transmit mode with its internal modulation.

The bandwidth of the emission will be measured with a spectrum analyzer. Resolution Bandwidth and Video Bandwidth will be set to 10 kHz.





Radiated Emissions 0.009 – 30 MHz (FCC §15.109, RSS-210 Section 7.3)

Radiated emissions in the frequency range 0.009 – 30 MHz will be measured initially at a distance of 3 meters. A prescan at 3 meter distance will be performed in a shielded room with the detector of the spectrum analyzer or EMI Receiver set to peak. Final measurement is then performed at 30 meter distance. In case the regulation requires testing at other distances, the result will be extrapolated. The extrapolation factor will be determined by making a second measurement at 10 meter distance. The provisions of 15.31 (d) apply.

According to section 15.209 (d) final measurement is performed with the detector set to Quasi Peak except for the frequency bands 9 – 90 kHz and 110 – 490 kHz where average detector is employed.



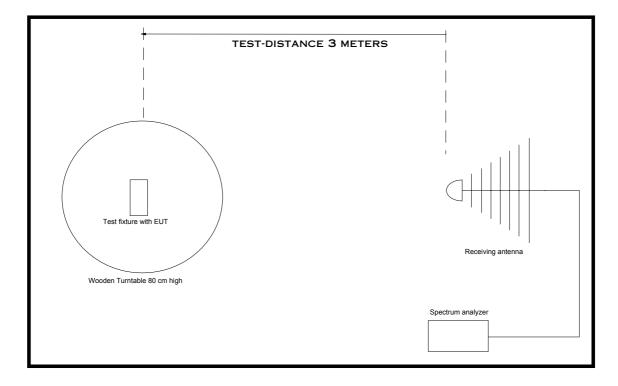
Radiated Emissions 30 MHz - 1 GHz (FCC §15.109, RSS-210 Section 7.3)

Radiated emissions in the frequency range 30 – 1000 MHz will be measured at a distance of 3 meter. The bandwidth of the spectrum analyzer will be set to 100 kHz and the detector function set to Quasi Peak.

The test setup will be made in accordance with ANSI C.63.4-1992.

Measurements will be made in horizontal and vertical polarization of the receiving antenna. Prescans will be taken in a semianechoic chamber using a spectrum analyzer with the detector function set to peak. All tests will be performed at a test distance of 3 meters. For final testing an open field test site will be used. During the tests the EUT will be rotated all around and the receiving antenna will be raised and lowered from 1 meter to 4 meterto find maximum levels of emissions.

For handheld equipment the tests will be performed in three orthogonal axes.





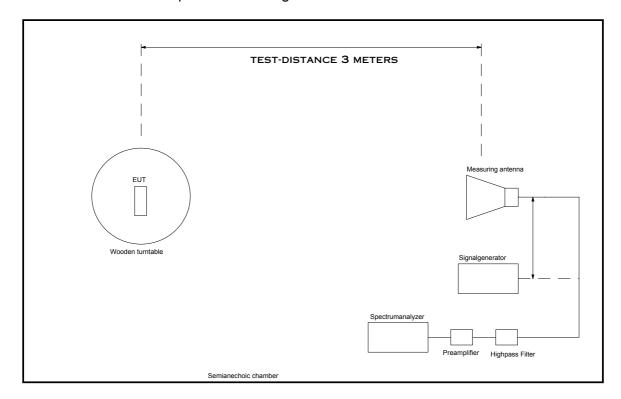
Radiated Emissions above 1 GHz (FCC §15.109, RSS-210 Section 7.3)

Radiated emissions were measured in the frequency range 1 GHz to 3.15 GHz in transmit mode .The resolution bandwidth and the video bandwidth of the spectrum analyzer was set to 1 MHz. Prescans with video bandwidth 1 MHz (peak mode) were taken to check out the highest levels (with reference to the limits), see 6.4 for details to prescan procedure. Final measurements were performed at the three highest emissions per band. EUT was rotated all around and receiving antenna was raised and lowered to find the maximum levels of emission. Cables and equipment were placed and moved within the range of position likely to find their maximum emissions. Measurements were made in horizontal and vertical polarization. All tests were performed in a semi-anechoic chamber with a test-distance of 3 meters. For handheld equipment the tests will be performed in three orthogonal axes.

To avoid overload in transmit mode a high pass filter was connected to the input of the preamplifier (in case when a preamplifier was necessary)). In this case a signal generator was used for substitution to eliminate the influence of filter and preamplifier.

Substitution was performed in the following steps:

- antenna cable was disconnected from receiving antenna and connected to signal generator output
- level of signal generator was increased until the reading value of the analyzer was the same as caused by EUT
- level of signal generator was noted
- final value was calculated by converting the signal generator level to dBµV/m and adding the antenna correction factor.





Procedure for preliminary Radiated Emission Tests

The procedure for preliminary radiated emission tests follows section 13.4.1 of ANSI C63.4-1992.

In case the EUT is a handheld device preliminary emission measurements will be performed in three orthogonal axes of the EUT.

Prescans are made in the following frequency range:

0.009 – 30 MHz 30 – 230 MHz 230 – 1000 MHz 1000 – 2600 MHz 2600 – 3950 MHz 3950 – 5850 MHz 5850 – 8200 MHz 8200 – 12400 MHz 12400 – 18000 MHz 18000 – 26500 MHz 26500 – 40000 MHz

with the receiving antenna set to horizontal and vertical polarization.

The following step-by-step procedure will be used:

Monitor the frequency range at a fixed antenna height and EUT azimuth

Rotate the EUT by 360 degrees to maximize the suspected highest azimuth signals. Note the amplitude and frequency of the signals. Orient the EUT azimuth for maximum emission.

Move the antenna over its full allowed range of travel to maximize the emission. If the signal or another one at a different frequency is observed to exceed the previously noted highest amplitude signal by 1 dB or more, return to step 2) with the antenna fixed at this height. Otherwise move the antenna to the height that repeats the highest amplitude observation and proceed.

Identify at least the three highest emissions per band by using the multimarker function of the spectrum analyzer. Make a hardcopy of the spectrum.

Repeat steps 1) through 4) for the other orthogonal axes of the EUT.

Repest steps 1) through 5) for other orthogonal antenna polarization.



Method for comparing spectrum analyzer output to the limit

The following procedure will be used:

Maximize the emission according to 6.4.

Set the spectrum analyzer to Max Hold

Wait until the noise is fully maximized.

Put the marker on topof the investigated signal.

Note frequency and level of the investigated signal

Add antenna correction and cable loss to this level and compare it with the limit.

Spectrum analyzer setting for final test

Frequency range	Detector	Resolution Bandwidth	Video Bandwidth	Trace Mode
0.009 – 30 MHz	Quasi Peak	10 kHz	10 kHz	Max Hold
9 – 90 kHz 110 – 490 kHz	Average	10 kHz	100 Hz	Max Hold
30 – 1000 MHz	Quasi Peak	100 kHz	1 MHz	Max Hold
> 1000 MHz	Peak	1 MHz	1 MHz	Max Hold
> 1000 MHz	Average	1 MHz	1 kHz	Max Hold







Radiated emission measurement >30 MHz







6. List of Measurements

FCC Part 15 S	ubpart C		
Section(s):	Test	Page	Result
	:		
15.207.a	Conducted emissions		Not applicable
15.209	Field strength of emissions (RX Mode)		Not applicable
15.249.c	Field strength of emissions (TX Mode)		Passed

List of Measurements according To Industry Canada RSS-210

Industry Canada RSS-210 Issue 2					
Section(s):	Test	Page(s)	Result		
7.4	Conducted emission test 450 kHz - 30 MHz		Not Applicable		
7.3	Radiated emission test 30 MHz - 25 GHz		Passed		
7.2	Antenna power conducted emissions		Not Applicable		



7. Test Results



Field Strength of Emissions according to FCC Rules, Part 15, Subpart C, Section 15.249 Frequency Band > 30 MHz, Fundamental and Harmonics

Model: RS13800WL, Lowest RF-Channel

Type: Wireless Keyboard

Serial No. ---

Applicant: Cherry GmbH

Test Site: Open Field Test Site / Semianechoic Chamber

Distance: 3 Meter

Date of Test: January 30, 2001

Frequency (MHz)	Detector	Antenna Polarization	Analyzer Reading (dBµV)	Correction Factor (dB)	Field Strength (dBµV/m)	Limit dBµV/m	Margin dB
2405.3	Peak	Vertical	55.1	33.9	89.0	94.0	5.0
4815.5	Peak	Vertical	19.6	28.1	47.7	54.0	6.3
7215.6	Peak	Vertical	23.8	30.0	53.8	54.0	0.2
9618.6	Peak	Vertical	25.7	34.7	60.7	74.0	13.3
9618.6	Average	Vertical	18.1	34.7	52.8	54.0	1.2

^{*** =} No emissions above noise floor detected

Sample calculation of field strength values:

Field Strength ($dB\mu V/m$) = Analyzer Reading ($dB\mu V$) + Correction Factor (dB) Correction Factor includes Antenna conversion and cable loss

Test equipment used (see equipment list for details): 02, 13, 14, 16, 38, 40, 42, 57, 64, 67



Field Strength of Emissions according to FCC Rules, Part 15, Subpart C, Section 15.249 Frequency Band > 30 MHz, Fundamental and Harmonics

Model: RS13800WL, Highest RF-Channel

Type: Wireless Keyboard

Serial No. ---

Applicant: Cherry GmbH

Test Site: Open Field Test Site / Semianechoic Chamber

Distance: 3 Meter

Date of Test: January 30, 2001

Frequency (MHz)	Detector	Antenna Polarization	Analyzer Reading (dBµV)	Correction Factor (dB)	Field Strength (dBµV/m)	Limit dBµV/m	Margin dB
2480.8	Peak	Vertical	56.5	33.9	90.4	94.0	3.6
4965.4	Peak	Vertical	23.0	28.1	51.1	54.0	2.9
7445.3	Peak	Vertical	20.2	30.0	50.2	54.0	3.8
9922.2	Peak	Vertical	26.0	34.7	60.7	74.0	13.3
9922.2	Average	Vertical	18.5	34.7	53.2	54.0	0.8
14882.6	Peak	Vertical	14.4	38.4	52.8	54.0	1.2

^{*** =} No emissions above noise floor detected

Sample calculation of field strength values:

Field Strength ($dB\mu V/m$) = Analyzer Reading ($dB\mu V$) + Correction Factor (dB) Correction Factor includes Antenna conversion and cable loss

Test equipment used (see equipment list for details): 02, 13, 14, 16, 38, 40, 42, 57, 64, 67



8. Equipment List

To facilitate reference to test equipment used for related tests, each item of test equipment and ancillaries such as cables are identified (numbered) by the Test Laboratory.

No.	Туре	Model	Serial Number	Manufacturer
01	Spectrum Analyzer	R 3261 A	91720155	Advantest
02	Spectrum Analyzer	R 3271	05050023	Advantest
03	Test Receiver	ESH 3	880112/032	Rohde & Schwarz
04	Test Receiver	ESHS 10	860043/016	Rohde & Schwarz
05	Test Receiver	ESV	881414/009	Rohde & Schwarz
06	Test Receiver	ESVP	881120/024	Rohde & Schwarz
07	Audio Analyzer	UPA	862954	Rohde & Schwarz
80	Power Meter	NRVS	836856/015	Rohde & Schwarz
09	Power Sensor	NRV-Z52	837901/030	Rohde & Schwarz
10	Power Sensor	NRV-Z4	863828/015	Rohde & Schwarz
11	Preamplifier	ESV-Z3	860907/004	Rohde & Schwarz
12	Preamplifier	R14601		Advantest
13	Preamplifier	ACX/080-3030	32640	CTT
14	Preamplifier	ACO/180-3530	32641	CTT
15	Signal Generator	SMS	872166/039	Rohde & Schwarz
16	Signal Generator	HP 8673 D	2930A00966	Hewlett Packard
17	Waveform Generator	HP 33120 A	US34005375	Hewlett Packard
18	UHF Attenuator Set	DPU	300771/075	Rohde & Schwarz
19	UHF Attenuator Set	DPU	300788/006	Rohde & Schwarz
20	Pulse Limiter	ESH 3-Z2	1144	Rohde & Schwarz
21	Pulse Limiter	11947 A	3107A00566	Hewlett Packard
22	V-Network	ESH 3-Z5	862770/018	Rohde & Schwarz
23	V-Network	ESH 3-Z5	894785/005	Rohde & Schwarz
24	V-Network	ESH 3-Z5	830952/025	Rohde & Schwarz
25	V-Network	ESH 3-Z6	830722/010	Rohde & Schwarz
26	V-Network	NSLK 8127	8127152	Schwarzbeck
27	V-Network	NNLA 8119	8119148	Schwarzbeck
28	V-Network	SE 01	01	Senton
29	T-Network	ESH 3-Z4	890602/011	Rohde & Schwarz
30	T-Network	ESH 3-Z4	890602/012	Rohde & Schwarz
31	High Impedance Probe	TK 9416	01	Schwarzbeck
32	High Impedance Probe	TK 9416	02	Schwarzbeck
33	Current Probe	ESH 2-Z1	863366/18	Rohde & Schwarz
34	Current Probe	ESV-Z1	862553/3	Rohde & Schwarz



No.	Туре	Model	Serial Number	Manufacturer
35	Absorbing Clamp	MDS 21	80911	Lüthi
36	Absorbing Clamp	MDS 21	79690	Lüthi
37	Loop Antenna	HFH2-Z2	882964/1	Rohde & Schwarz
38	Biconical Antenna	HK 116	836239/02	Rohde & Schwarz
39	Biconical Antenna	BBA 9106	A0379 324	Schwarzbeck
40	Log. Periodic Antenna	HL 223	834408/12	Rohde & Schwarz
41	Log. Periodic Antenna	UHALP 9107	9107150	Schwarzbeck
42	Horn Antenna	3115	9508-4553	Emco
43	Horn Antenna	3160-03	9112-1003	Emco
44	Horn Antenna	3160-04	9112-1001	Emco
45	Horn Antenna	3160-05	9112-1001	Emco
46	Horn Antenna	3160-06	9112-1001	Emco
47	Horn Antenna	3160-07	9112-1008	Emco
48	Horn Antenna	3160-08	9112-1002	Emco
49	Horn Antenna	3160-09	9403-1025	Emco
50	Digital multimeter	199	463386	Keithley
51	DC Power Supply	NGSM 32/10	203	Rohde & Schwarz
52	DC Power Supply	NGB	2455	Rohde & Schwarz
53	DC Power Supply	NGA	386	Rohde & Schwarz
54	Temperature Test Chamber	HT4010	07065550	Heraeus
55	Cable	RG214	1309	Senton
56	Cable	150CM_001	1479	Rosenberger
57	Cable	150CM_002	1480	Rosenberger
58	Cable Set EG1	RG214	1189 - 1191	Senton
59	Cable Set Cabine 1	RG214		Senton
60	Cable Set Cabine 2	RG214		Senton
61	Cable Set Cabine 3	RG214		Senton
62	Shielded Room	Nr. 1	1451	Senton
63	Shielded Room	Nr. 2	1452	Senton
64	Semi-anechoic Chamber	Nr. 3	1453	Siemens
65	Shielded Room	Nr. 4	1454	Euroshield
66	Open Area Test Site	EG 1		Senton
67	High pass filter			AT & T





Radiated Emission Test 30 MHz - 300 MHz according to FCC Part 15 Subpart B Class B

Model:	800WL			Mode:	
Serial no				tested in full system	
 Applicar	nt·				
	/ GmbH				
Test site	e: anechoic room	n, cabin no. 3			
Tested of Test d		res			
Date of 02/20/		Operator: K. Roidt			
Test per autom	rformed: atically	File name:			
Detector Peak	r:			List of values: Selected by hand	
dBµV/n 60	n			Limit1: FCC	Class B Transducer: HK 116
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Radiated Emission Test 30 MHz - 300 MHz according to FCC Part 15 Subpart B Class B

Model:				Mode:	
RS 13	800WL			tested in full system	
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Applicar Cherry	nt: / GmbH				
Test site	e: anechoic room,	cabin no. 3			
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Date of 1		Operator: K. Roidt			
Test per autom	formed: atically	File name:			
Detector Peak	r:			List of values: Selected by hand	
dBµV/m 60	n			Limit1: FCC	Class B Transducer: HK 116
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Result:				Project file:	
Presca	an			50305-10049	Page of Pages

Radiated Emission Test 300 MHz - 1 GHz according to FCC Part 15 Subpart B Class B

Model: RS 13800WL	Mode: tested in full system
Serial no.:	
Applicant: Cherry GmbH	
Test site: Semi anechoic room, cabin no. 3	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: Operator: 02/20/2001 K. Roidt	
Test performed: File name: automatically	
Detector: Peak	List of values: Selected by hand
dBμV/m 60	Limit1: FCC Class B Transducer: HL 223
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30	M V **
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15	
10 300	1000 MHz
Result: Prescan	Project file: 50305-10049 Page of Pages

Radiated Emission Test 300 MHz - 1 GHz according to FCC Part 15 Subpart B Class B

Model: RS 13800WL		Mode: tested in full system	
Serial no.:		toolog iii igii eyeleiii	
Applicant:			
Cherry GmbH Test site:			
Semi anechoic room, cabin no. 3 Tested on:			
Test distance 3 metres Vertical Polarization			
Date of test: Operator: 02/20/2001 K. Roidt			
Test performed: File name: automatically			
Detector: Peak		List of values: Selected by hand	
dBμV/m 60		Limit1: FCC Clas	ss B Transducer: HL 223
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Result: Prescan		Project file: 50305-10049	Page of Pages

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Model: RS13800)WL				Mode: - Test M	Inde						
Serial No.:					- Lowest channel selected							
#1					Lowes							
Applicant: Cherry G	mbH				- Radiated Measurement - Horizontal Polarisation							
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Start 1.000 RBW 1 MF	dnz Hz			VBW	1 MHz			Stop	2.400 GHz SWP 20 ms			
				Multi Ma	arker List							
		1	No. 1	1.704667	GHz	9.93 dBµ\	V					
Tested by:					Project-No).:						
Johann F	Roidt				50305-1	0055						
Date: January 3	30. 2001						Page	e of	pages			
January				1	1		5					

-									
Model: RS13800WL			Mode: - Test Mode						
Serial No.: #1			- Lowest	channel se	elected				
Applicant: Cherry GmbH			- Radiated Measurement - Vertical Polarisation						
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Start 1.000 GHz	· · · · · · · · · · · · · · · · · · ·					Stop	2.400 GHz WP 20 ms		
RBW 1 MHz		VBW ·				S	WP 20 ms		
	No. 1	Multi Ma 1.704667 (10.48 dBµ	W				
	NO. I	1.704007	סווב	10.46 иБµ	V				
Tested by:			Project-No.						
Johann Roidt			50305-10						
Date: January 30, 2001					Page	of	pages		

Model: RS13800	OWL					Mode: - Test M	lode					
Serial No.:						- Lowest channel selected						
#1						- Radiated Measurement						
Applicant: Cherry G	BmbH						ed Measure ntal Polaris					
Ref.Level 5 dB/Div.	55 dBµ	V			ATT	0 dB			Ref. Offs	et -30.5 dB		
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Start 2.380 RBW 1 MI					VBW	1 MHz			Stop	2.520 GHz SWP 20 ms		
					Multi Ma	arker List						
			No. No. :		99867 GHz 05333 GHz	z 10. z 52.	73 dBµV 10 dBµV					
							,					
Tested by: Johann F	Roidt					Project-No						
Date:						233331		Doca) of			
January	30, 200°	1						Page	e of	pages		

Model: RS13800	0WL					Mode: - Test M	ode					
Serial No.:						- Lowest channel selected						
Applicant:						- Radiated Measurement						
Cherry G	SmbH						ed Measure Il Polarisatio					
Ref.Level 5 dB/Div.	55 dB _L				ATT	0 dB			Ref. Offs	et -30.5 dB		
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Luica AMMAMARAMA	a may raigh.			i 	י י ראו האלובי הלאלים הלאלו	; ; !	an watha in Lindakhilini. an i	i Nun avada seda e-askaliML	Minashatarata ada kasiMM	: : : : : : : : : : : : : : : : : : : :		
Start 2.38							1	1	Stop	2.520 GHz		
RBW 1 MI	HZ					1 MHz arker List				SWP 20 ms		
			No.	1 00	99911 GH		45 dDu\/					
			No. 2		05356 GHz	z 55.	15 dBµV 10 dBµV					
Tested by: Johann F						Project-No 50305-1						
Date:							-	Doca		poges		
January	30, 200	1						Page	e of	pages		

Model: RS13800WL	Mode: - Test Mode
Serial No.: #1	- Lowest channel selected
Applicant: Cherry GmbH	- Radiated Measurement - Vertical Polarisation
, ,	- Vertical Foldinsation
Ref.Level 55 dBμV AT dB/Div.	T 0 dB Ref. Offset -30.5 dB
restance and have soften place as a very soften proper section of the soften person because of the	1874 January 1844 Jack Carle Car
Start 2.480 GHz	Stop 3.950 GHz
	V 1 MHz SWP 20 ms Marker List
No. 1 3.21663	
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Tested by: Johann Roidt	Project-No.: 50305-10055
Date: January 30, 2001	Page of pages

Model: RS13800	WL				Mode: - Test M	ode			
Serial No.: #1					- Lowest	t channel se	elected		
Applicant: Cherry G	mbH					ed Measure			
Chony C					- Horizor	ntal Polarisa	ation		
Ref.Level 5 5 dB/Div.	55 dBµV			ATT	0 dB			Ref. Offs	et -30.5 dB
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Start 2.480		1	1	1	1	1	1	Stop	3.950 GHz SWP 20 ms
RBW 1 MH	łz				1 MHz arker List				SWP 20 ms
			No. 1	3.216633		9.19 dBµ\	/		
		·	10. 1	0.210000	0112	0.10 abp	•		
Tested by: Johann R	toidt				Project-No 50305-1				
Date:	30, 2001						Page	e of	pages

Model: RS13800	WL					Mode: - Test M	lode			
Serial No.: #1							t channel se	elected		
Applicant: Cherry G	mhH						ed Measure			
Cherry G						- Horizo	ntal Polarisa	ation		
Ref.Level & 5 dB/Div.	55 dBµV				ATT	0 dB			Ref. Offs	et -30.5 dB
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Start 3.950 RBW 1 MF	GHz Iz	1	1	· V	'BW	1 MHz	1	1	Stop	5.850 GHz SWP 20 ms
						rker List				
		N	lo. 1	4.815	556 (GHz	18.27 dBµ	V		
Tested by: Johann R	oidt					Project-No				
Date:	2001							Page	e of	pages

Model: RS13800)WL				Mode: - Test M	lode					
Serial No.:					- Lowest channel selected						
#1											
Applicant: Cherry G	imbH					ed Measure Il Polarisatio					
Ref.Level : 5 dB/Div.	55 dBµV			ATT	0 dB			Ref. Offs	et -30.5 dB		
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Start 3.950		1	1	1	ı	1	1	Stop	5.850 GHz		
RBW 1 MH	Hz ————————————————————————————————————				1 MHz				SWP 20 ms		
				Multi Ma	arker List						
		N	lo. 1	4.815556	GHz	19.67 dBµ	V				
Tested by:	5.116				Project-No						
Johann F	Koidt				50305-1	0055					
January :	30, 2001						Page	of	pages		

Model: RS13800)WL				Mode: - Test M	lode			
Serial No.: #1					- Lowes	t channel s	elected		
Applicant: Cherry G	mbH					ted Measure			
					- HOHZO	ntal Polaris	alion		
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Start 5.850	, " "	ILMM/MACAMACA	Austral Monses in	MMM, In any how a	hwyfylfh, ,, ,	handaadd	i hahuma a anna.		9 200 CH-
RBW 1 MH	driz Hz			VBW	1 MHz			Stop	8.200 GHz SWP 20 ms
					rker List				
		٨	lo. 1	7.215611 (GHz	18.76 dB _L	ıV		
Tested by:					Project-No				
Johann F	Roidt				50305-1	10055			
January 3	30. 2001						Page	e of	pages

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Model: RS13800	0WL				Mode:	Mode					
Serial No.:					- Lowest channel selected						
#1											
Applicant: Cherry G	SmbH					ated Measur al Polarisati					
Ref.Level 5 dB/Div.	55 dBµV			ATT	0 dB			Ref. Offs	et -30.5 dB		
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Start 5.85	0 GHz	1	1	\ (D)\(\lambda\)	4 8411	1	1	Stop	8.200 GHz		
RBW 1 MI	HZ				1 MHz arker List			3	SWP 20 ms		
			lo. 1	7.215611		24.25 dD.	.\/				
		ľ	NO. I	7.215011	JUZ	24.25 dB _k	10				
Tested by:					Project-N	No.:					
Johann F	Roidt				50305-						
Date: January	30 2001						Page	e of	pages		
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Model: RS13800	WL				Mode: - Test Mode					
Serial No.: #1					- Lowest channel selected					
Applicant: Cherry G	mbH				- Radiated Measurement					
					- Horizontal Polarisation					
Ref.Level 5 5 dB/Div.	50.5 dBµV			ATT	0 dB Ref. Offset -35 dB					
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Start 8.200			1	1			1	Stop 1	2.400 GHz	
RBW 1 MH	łz			VBW Multi Ma	1 MHz irker List			S	SWP 20 ms	
		No. 1	9.	618667 GH		.51 dBµV				
		No. 2		040667 GH		.04 dBµV				
Tested by: Johann Roidt					Project-No.: 50305-10055					
Date: January 30, 2001							Page	e of	pages	

Model: RS13800WL						Mode: - Test Mode					
Serial No.: #1						- Lowest channel selected					
Applicant: Cherry GmbH						- Radiated Measurement					
Cherry G	ШОП					- Vertical Polarisation					
Ref.Level : 5 dB/Div.	50.5 dBµV				ATT	0 dB Ref. Offset -35 dB					
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Start 8.200	;) GHz					! !	1	1	Stop 1	2.400 GHz SWP 20 ms	
RBW 1 MH	Hz					1 MHz arker List				SWP 20 ms	
		No. 1		9.6	618667 GH		.72 dBµV				
		No. 2)40667 GH		.34 dBµV				
Tested by: Johann Roidt						Project-No.: 50305-10055					
Date:								Page	e of	pages	

Model: RS13800	WL				Mode: - Test Mode							
Serial No.: #1						t channel se	elected					
Applicant:	mhU				- Radiated Measurement							
Cherry G	ШОП				- Horizontal Polarisation							
Ref.Level 5 5 dB/Div.	50.5 dBµV			ATT	0 dB			Ref. Of	fset -35 dB			
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Start 12.40 RBW 1 MF	00 GHz Hz		,	VBW	1 MHz	1		Stop 1	8.000 GHz SWP 40 ms			
					arker List							
		N	lo. 1	15.231111	GHz	9.37 dBµ	V					
Tested by: Johann R	Roidt				Project-No 50305-1							
Date:					33000 1		Dogg					
January 3	30, 2001						Page	of	pages			

Model: RS13800WL	Mode: - Test Mode
Serial No.: #1	- Lowest channel selected
Applicant: Cherry GmbH	- Radiated Measurement - Vertical Polarisation
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Ref.Level 50.5 dBµV ATT 5 dB/Div.	0 dB Ref. Offset -35 dB
Maring maring the Mingrephen with the contraction of the contraction	to the property of the second
Start 12.400 GHz	Stop 18.000 GHz
	1 MHz SWP 40 ms arker List
No. 1 15.231111	
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Tested by: Johann Roidt	Project-No.: 50305-10055
Date: January 30, 2001	Page of pages

Model: RS13800	WL				Mode: - Test Mode						
Serial No.:											
#1					- Highes	t channel s	elected				
Applicant: Cherry G	mbH				- Radiated Measurement - Horizontal Polarisation						
Ref.Level 5 5 dB/Div.	55 dBµV			ATT	0 dB			Ref. Offs	et -30.5 dB		
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Start 1.000		1	1	1	1	1		Stop	2.400 GHz		
RBW 1 MH	łz				1 MHz				SWP 20 ms		
					arker List	0.04 ID 1	,				
		ſ	No. 1	1.706222	GHZ	9.91 dBµ\	V				
Tested by:	oidt				Project-No						
Johann R Date:	olat				50305-1	UU55					
January 3	30, 2001						Page	e of	pages		

Model: RS13800)WL				Mode: - Test Mode							
Serial No.: #1						t channel s	elected					
Applicant: Cherry G	imbH				- Radiated Measurement - Vertical Polarisation							
Doflavel	EE dDu/				0 dB			Dot Otto	et -30.5 dB			
Ref.Level : 5 dB/Div.	ээ авру			AII	U UB			Rei. Oils	et -30.5 ub			
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Start 1.000 RBW 1 MH) GHz			\/D\\/	1 MHz			Stop	2.400 GHz SWP 20 ms			
KDW I WII	12								OVE ZUIIIS			
			la 4		arker List	40 45 dD	V/					
		N	lo. 1	1.706222 (JHZ	10.45 dBµ	V					
Tested by:					Project-No):						
Johann F	Roidt				50305-1							
Date: January :	30 2001						Page	e of	pages			
January .	JJ, 2001			1	1		- 3	-	. 3			

Model: RS13800WL Serial No.: #1 Applicant: Cherry GmbH		Mode: - Test Mode - Highest channel selected - Radiated Measurement - Horizontal Polarisation						
Ref.Level 55 dBµV 5 dB/Div.	ATT	0 dB	R	ef. Offset -30.5 dB				
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				2 - 2				
Start 2.380 GHz RBW 1 MHz	VBW	1 kHz		Stop 2.500 GHz SWP 360 ms				
	Multi Ma	rker List						
	.480000 GHz .483500 GHz							
Tested by: Johann Roidt		Project-No.: 50305-10055						
Date: January 30, 2001			Page	of pages				

Model: RS13800)WL				Mode: - Test Mode							
Serial No.: #1					- Highes	t channel s	elected					
Applicant:	mbll				- Radiated Measurement							
Cherry G	MDH				- Vertical Polarisation							
Ref.Level : 5 dB/Div.	55 dBµV			ATT	0 dB			Ref.	Offs	et -30.	 5 dB	
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Start 2.380 RBW 1 MH			1	VBW	1 MHz	1	1	S	Stop	2.500 SWP 20	GHz 0 ms	
				Multi Ma	rker List							
		No. 1		80800 GHz 83600 GHz	z 56.	47 dBµV 03 dBµV						
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Tested by:					Project-No).:						
Johann R	Roidt				50305-1							
Date: January 3	30 2001						Page	(of	pa	ges	
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Model: RS13800)WL				Mode: - Test Mode						
Serial No.:							olootod				
#1					- Highest channel selected - Radiated Measurement						
Applicant: Cherry G	SmbH				Radiated Measurement Horizontal Polarisation						
Ref.Level : 5 dB/Div.	55 dBµV			ATT	0 dB			Ref. Offs	et -30.5 dB		
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Start 2.480 RBW 1 MH				VBW	1 MHz			Stop	3.950 GHz SWP 20 ms		
				Multi Ma	arker List						
		I	No. 1	3.211733	GHz	8.59 dBµ\	V				
Tested by:					Project-No).:					
Johann F	Roidt				50305-1						
Date: January 3	30, 2001						Page	e of	pages		

Model: RS13800)WL				Mode: - Test M	ode						
Serial No.: #1						t channel s	elected					
Applicant: Cherry G	imbH				- Radiated Measurement - Vertical Polarisation							
Ref.Level 5 dB/Div.	55 dBµV			АТТ	0 dB			Ref. Offs	et -30.5 dB			
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Start 2.480	:) GHz					1		Stop	3.950 GHz			
RBW 1 MI				VBW	1 MHz			S	SWP 20 ms			
				Multi Ma	arker List							
		ı	No. 1	3.211733	GHz	9.25 dBµ\	/					
Tested by:					Project-No	.:						
Johann F	Roidt				50305-1							
Date: January :	30 2001						Page	e of	pages			
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Model:					Mode:							
RS13800)WL				- Test Mode							
Serial No.: #1					- Highes	st channel s	elected					
Applicant: Cherry G	imbH				- Radiated Measurement - Horizontal Polarisation							
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Ref.Level : 5 dB/Div.	55 dBµV			ATT	0 dB			Ref. Offs	et -30.5 dB			
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Start 3.950 RBW 1 MH				VBW	1 MHz			Stop	5.850 GHz SWP 20 ms			
				Multi Ma	arker List							
		١	lo. 1	4.965444	GHz	15.92 dBµ	V					
Tested by: Johann F	Roidt				Project-No.: 50305-10055							
Date:					30000							
January 3	30, 2001						Page	of	pages			

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Model: RS13800	OWL				Mode: - Test Mode							
Serial No.: #1						st channel s	elected					
Applicant:												
Cherry G	SmbH				- Radiated Measurement - Vertical Polarisation							
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Start 3.950 RBW 1 MI	0 GHz			\/ R \//	1 MHz			Stop	5.850 GHz SWP 20 ms			
TOW T WII	12				arker List				20113			
		N	lo. 1	4.965444	GHZ	23.01 dBµ	iV					
Tested by: Johann F	Roidt				Project-No.							
Date:	Volut				30303-	10000						
	30, 2001						Page	of	pages			

Model: RS13800 Serial No.:	WL				Mode: - Test Mode						
#1					- Highes	st channe	el selected				
Applicant: Cherry G	mbH				- Radiate		urement risation				
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Ref.Level 5 5 dB/Div.	55 dBµV			ATT	0 dB			Re	ef. Offs	et -30.5 dB	
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Start 5.850 RBW 1 MF) GHz Iz			VBW	1 MHz				Stop S	8.200 GHz SWP 20 ms	
				Multi Ma	arker List						
		N	lo. 1	7.445389	GHz	13.56 d	IΒμV				
Tested by:					Project-No	· ·					
Johann R	Roidt				50305-1						
Date: January 3	30, 2001						Pa	age	of	pages	

Model: RS13800)WL				Mode: - Test M	lode						
Serial No.:							l colocted					
#1					- Highest channel selected							
Applicant: Cherry G	imbH				- Radiated Measurement - Vertical Polarisation							
Ref.Level : 5 dB/Div.	55 dBµV			ATT	0 dB			Re	f. Offse	et -30.5 dB		
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Start 5.850) GHz			. ,	·	ין יועי		<u> </u>	Stop	8.200 GHz		
RBW 1 MH	l z				1 MHz				 	WP 20 ms		
				Multi Ma	arker List							
		N	lo. 1	7.445389	GHz	20.27 d	BμV					
Tested by:					Project-No							
Johann F	Roidt				50305-1	0055						
Date: January :	30, 2001						Pa	age	of	pages		

Model: RS13800WL					Mode: - Test Mode						
Serial No.:											
#1					- Highest channel selected - Radiated Measurement - Horizontal Polarisation						
Applicant: Cherry G	imbH										
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Stort 9 200				ı	1 1	1	1	Stop 1	2 400 CH-		
Start 8.200 RBW 1 MH				VBW	1 MHz			Stop 1	2.400 GHz SWP 20 ms		
				Multi Ma	arker List						
		N	lo. 1	9.922000 (GHz	16.71 dBµ	V				
Tested by:	S - : -14				Project-No.:						
Johann Roidt Date:					50305-1	0055					
January 30, 2001							Page	e of	pages		

Model: RS13800WL					Mode: - Test Mode					
Serial No.: #1					- Highest channel selected					
Applicant: Cherry GmbH					- Radiated Measurement - Vertical Polarisation					
					- vertical Polarisation					
Ref.Level : 5 dB/Div.	50.5 dBµV			ATT	0 dB Ref. Offset -35 dB					
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Start 8.200 RBW 1 MH		1	1	\/D\\/	1 MHz	1	ı	Stop 1	2.400 GHz SWP 20 ms	
INDVV I IVII	12				arker List				20113	
		N	lo. 1	9.922000 (GHz	26.04 dBµ	ıV			
Tested by:					Project-No	D.:				
Johann Roidt Date:					50305-1	10055				
January 30, 2001							Page	e of	pages	

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Model: RS13800WL	Mode: - Test Mode - Highest channel selected - Radiated Measurement						
Serial No.: #1							
Applicant: Cherry GmbH							
	- Horizontal Polarisation						
Ref.Level 50.5 dBµV ATT 5 dB/Div.	0 dB Ref. Offset -35 dB						
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Start 12.400 GHz RBW 1 MHz VBW	Stop 18.000 GH: 1 MHz SWP 40 ms						
Multi Ma	arker List						
No. 1 12.400000 GH							
No. 2 14.882667 GF	lz 13.23 dBμV						
Tested by: Johann Roidt	Project-No.: 50305-10055						
Date:	Page of pages						

Model: RS13800WL Serial No.: #1					Mode: - Test Mode - Highest channel selected				
Cherry (GmbH					ed Measure I Polarisatio			
Ref.Level	l 50.5 dBµ	V		ATT	0 dB			Ref. O	ffset -35 dB
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Start 12.4		1	1			•		Stop '	18.000 GHz
RBW 1 M	1Hz				1 MHz				SWP 40 ms
		No. 4	. 40		arker List	70 dD\/			
		No. 2 No. 2		400000 GH 382667 GH		.76 dBµV .40 dBµV			
Tested by	:				Project-No).:			
Johann Roidt					50305-1				
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