

Testreport

Conducted Output Power

iCON322

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Test Site: Option Wireless Germany
Dep. SPQ

Measurements performed by:
Oliver Roemer, SPQ Test Engineer

Testreport by:
Wolfgang Kösters, Teamleader EMC

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Version History

Date	Version	Author	Revision	Remarks
June26, 2008	001	W.Koesters		Initial version
Aug29, 2008	002	W.Koesters		update measurement results

1 OBJECTIVE AND METHOD

FCC approval for portable devices requires reporting output power at RF output terminal pursuant to 47 CFR §2.1046 . OPTION devices use special text fixtures with 50 Ohm connection suitable for such measurements. Using a special adapter and connecting the stick to an appropriate load in terms of the input port of the measurement equipment used, the values for the highest power setting are reported.

2 MEASUREMENT RESULTS

The *UE Power (RMS)* Output power of the UE transmitter is averaged over the whole transmit slot.

Power numbers are in dBm .

2.1 WCDMA

WCDMA Channel	U1900			U850		
	9262	9400	9537	4132	4183	4232
FW42869012	21.24	21.21	21.22	21.73	21.38	21.68
FW4286900V	21.11	21.12	21.01	21.55	21.10	21.30
FW428480EH	21.42	21.49	21.15	21.59	20.88	21.26
FW4284801R	21.09	20.99	21.18	21.37	21.00	21.22
FW4286601F	21.23	21.55	21.00	22.00	21.27	21.80

2.2 GSMK

GSMK Channel	GSM850			GSM1900		
	128	190	251	512	661	810
FW42869012	30.97	30.92	30.94	28.02	28.00	27.97
FW4286900V	30.93	30.92	30.90	27.94	27.99	27.96
FW428480EH	30.61	30.99	31.03	28.04	28.01	28.00
FW4284801R	30.93	30.91	30.94	27.99	27.95	27.99
FW4286601F	30.93	30.90	30.91	27.94	27.95	27.92

2.3 EDGE

EDGE Channel	GSM850			GSM1900		
	128	190	251	512	661	810
FW42869012	26.51	26.03	25.48	24.80	24.80	24.54
FW4286900V	26.74	26.19	25.56	24.79	24.93	24.52
FW428480EH	26.76	26.17	25.62	24.68	24.97	24.51
FW4284801R	26.82	26.22	25.68	24.93	24.98	24.57
FW4286601F	26.46	26.04	25.55	24.73	24.55	24.36

2.4 HSDPA / HSUPA

The *UE Power (RMS)* Output power of the UE transmitter is averaged over the whole transmit slot.

Power numbers are in dBm .

IMEI ...906572 (SerNo...4801R)

Band			V			II		
Cable & Clamp Attenuation (compensated)			1.0 dB			1.7 dB		
Test	3GPP 34.121 sec.	ARFCN	4132.00	4182.00	4233.00	9262.00	9400.00	9538.00
		Channel (MHz)	826.4	836.4	846.4	1852.4	1880.0	1907.6
		3GPP 34.121 subtest						
1	5.2 Rel 99		21.30	21.10	21.30	21.20	21.70	21.50
2	5.2AA Rel6 HSDPA	1	20.90	20.80	21.20	20.80	21.20	20.90
3	5.2AA Rel6 HSDPA	2	20.40	20.40	20.60	20.50	20.90	20.60
4	5.2AA Rel6 HSDPA	3	20.50	20.40	20.80	20.60	21.00	20.70
5	5.2AA Rel6 HSDPA	4	20.50	20.60	20.80	20.50	20.90	20.60
6	5.2B Rel6 HSUPA	1	19.10	19.00	19.20	19.00	19.50	19.00
7	5.2B Rel6 HSUPA	2	18.50	18.80	19.30	18.40	18.90	18.50
8	5.2B Rel6 HSUPA	3	20.00	19.40	20.00	19.70	20.20	19.70
9	5.2B Rel6 HSUPA	4	19.30	19.10	19.00	19.00	19.50	19.00
10	5.2B Rel6 HSUPA	5	19.50	18.90	19.30	18.80	19.30	18.80

IMEI ...07646 (SerNo...6900V)

Band			V			II		
Cable & Clamp Attenuation (compensated)			1.0 dB			1.7 dB		
Test	3GPP 34.121 sec.	ARFCN	4132.00	4182.00	4233.00	9262.00	9400.00	9538.00
		Channel (MHz)	826.4	836.4	846.4	1852.4	1880.0	1907.6
		3GPP 34.121 subtest						
1	5.2 Rel 99		20.6	20.4	21.0	20.9	21.3	20.4
2	5.2AA Rel6 HSDPA	1	20.8	20.3	21.0	21.0	21.0	20.4
3	5.2AA Rel6 HSDPA	2	20.4	20.0	20.6	20.4	20.6	20.0
4	5.2AA Rel6 HSDPA	3	20.7	20.2	20.8	20.7	20.9	20.1
5	5.2AA Rel6 HSDPA	4	20.5	20.0	20.7	20.3	20.6	20.1
6	5.2B Rel6 HSUPA	1	19.4	18.3	19.0	19.1	19.5	18.2
7	5.2B Rel6 HSUPA	2	19.5	18.9	18.8	19.0	18.7	18.5
8	5.2B Rel6 HSUPA	3	20.0	19.6	20.3	20.0	20.2	19.1
9	5.2B Rel6 HSUPA	4	19.3	18.5	19.1	19.0	18.8	18.1
10	5.2B Rel6 HSUPA	5	19.1	18.4	18.0	18.4	19.8	18.0

Power numbers in dBm

3 TEST DESCRIPTION

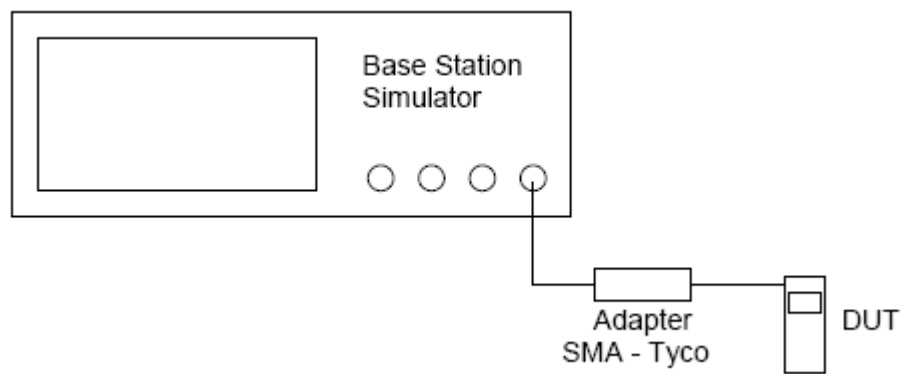
3.1 EUT

USB Stick: Option iCON 322
 Frequency Ranges: GSM850, EGSM900, GSM1800, GSM1900
 WCDMA Band I+II+V
 FCC ID: NCMOGI0322

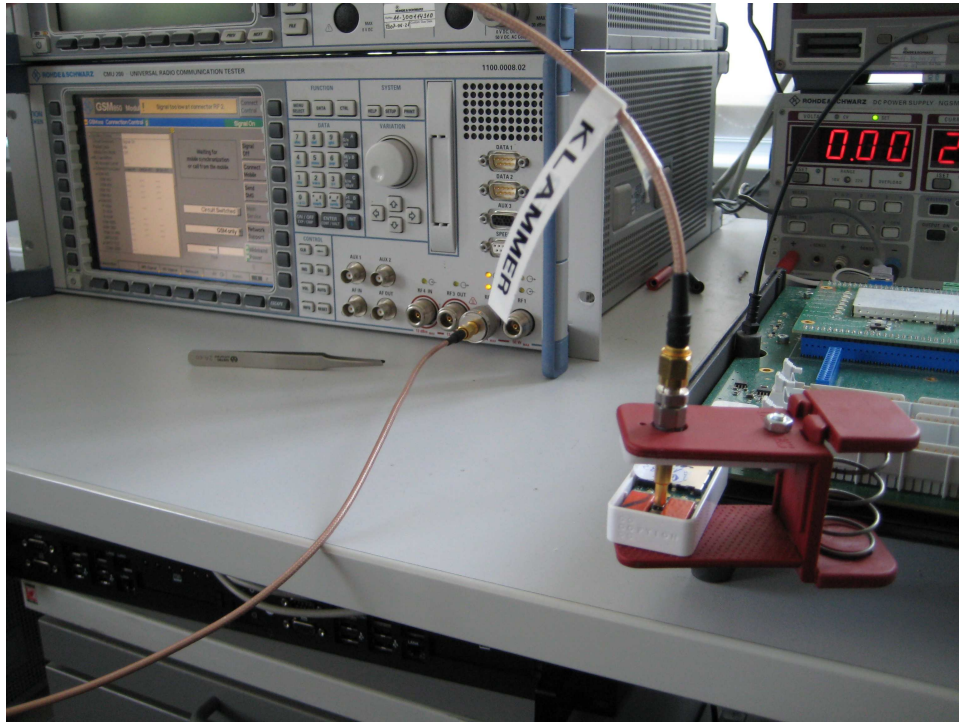
3.2 Measurement uncertainty

Uncertainty due to connecting clamp, cable and CMU200 is calculated 0.7dB .

3.3 Measurement Setup



Basestation Controller: Rohde & Schwarz CMU 200
 Serial Number: 102462
 Software Version: Base: 4.53 / GSM+WCDMA: 4.52





Kalibrierschein
Calibration Certificate

Nummer 11-300128998
Number

Gegenstand <i>Object</i>	Radio Communication Tester	<p>Dieser Kalibrierschein dokumentiert, dass der genannte Gegenstand nach festgelegten Vorgaben geprüft und gemessen wurde. Die Messwerte liegen im Regelfall mit einer Wahrscheinlichkeit von annähernd 95 % im zugeordneten Wertebereich (Erweiterte Messunsicherheit mit $k=2$).</p> <p>Die Kalibrierung erfolgt im Einklang mit den Normen, die direkt oder indirekt durch Akkreditierung als anerkannter Kalibrierinstitut abgeleitet sind, mit Normen der PTB/DKD oder anderer nationaler oder internationaler Akkreditierung zur Darstellung der physikalischen Einheiten in Übereinstimmung mit dem Internationalen Einheitensystem (SI). Wenn keine Norm angegeben ist, erfolgt die Rückführung auf Bezugswerte der NIST-Laboratorien. Grundsätze und Verfahren der Kalibrierung entsprechen EN ISO/IEC 17025. Das angewandte Qualitätsmanagement-System ist zertifiziert nach EN ISO 9001.</p> <p>Dieser Kalibrierschein darf nur vollständig und unverändert weiterverleitet werden. Kalibrierscheine ohne Signifizierung sind ungültig.</p> <p>Für die Einhaltung einer gegenseitigen Freizugabewirtschaftung der Kalibrierung ist der Benutzer verantwortlich.</p> <p>This calibration certificate documents that the named item is tested and measured against defined specifications. Measurements results are usually in the corresponding interval with a probability of approx. 95 % coverage factor $k=2$. Calibration is performed with test equipment and standards directly or indirectly traceable by means of approved calibration institutions to the PTB/DKD or other national or international standards, which realize the physical units of measurement according to the International System of Units (SI). In all cases where national standards are available, measurements are referenced to standards of the NIST laboratories.</p> <p>Principles and methods of calibration correspond with EN ISO/IEC 17025. The applied quality system is certified to EN ISO 9001.</p> <p>This calibration certificate may not be reproduced other than in full. Calibration certificates without signatures are not valid.</p> <p>The user is obliged to give no object recalibrated at appropriate intervals.</p>
Hersteller <i>Manufacturer</i>	ROHDE & SCHWARZ	
Typ <i>Type</i>	CMU200	
Sach-Nr. <i>Ident. No.</i>	1100.0008.02	
Serien-Nr. <i>Serial No.</i>	102462	
Auftraggeber <i>Customer</i>	Option Wireless Germany GmbH Südstraße 9 47475 Kamp-Lintfort	
Kunden-Referenz <i>Customer reference</i>	-	
Ort u. Datum d. Kalibrierung <i>Place and date of calibration</i>	Köln, 2008-01-28	
Umfang der Kalibrierung <i>Scope of calibration</i>	Standardkalibrierung standard calibration	
Eingangsprüfung <i>Performance on receipt</i>	Innerhalb der Toleranz in tolerance	
Kalibrierergebnis <i>Result of calibration</i>	Innerhalb der Toleranz in tolerance	
Umfang des Kalibrierscheins <i>Extent of the certificate</i>	52 Seiten 52 pages	

Ausstellungsdatum
Date of issue

Laborleitung
Head of laboratory

Bearbeiter
Person responsible

2008-01-28

Bakker

Ockemore

ROHDE & SCHWARZ GmbH & Co. KG · Dienstleistungszentrum Köln · Graf-Zippenstein-Str. 18 · D - 51147 Köln
Postfach 88 02 00 · D - 51130 Köln · Telefon (02203) 49-0 · Telefax (02203) 49-61364
Geschäftsbereich: Dept. of Industrial and Process Technology, Dr.-Ing. Manfred Pöschmann Dipl.-Ing. Dipl. Wirtschaft. Ing. Christian Lohrer
82200 München, Hauptverwaltung: ITA - 0297 · Postfach 1010000 · 50524 Köln · Haupt-Geschäft: Köln · Hauptverwaltung: 51147 Köln
<http://www.rohde-schwarz.com>

• EN ISO 17025