Test Report

Conducted Output power GSM 900 / 1800 / 1900

Siemens S75

Report No: S75_Conducted_Power.doc
Issue date: July 14th, 2005

Test Sites: COM MD PD ST2 KLF
Development Center Kamp-Lintfort

Phone: +49 28 42 / 95 44 83
Fax: +49 28 42 / 95 47 17

Thomas Jakobi
RF Test Engineer, System Test

Christian Vieth
Subproject leader RF

Contents

1 Objective and Method

FCC approval for mobile phones requires reporting output power at RF output terminal pursuant to title 47 CFR part 2.1046. SIEMENS devices use special test fixtures with 50 Ohm connection suitable for such measurements. Using a special adapter and connecting the phone to an appropriate load in terms of the input port of the measurement equipment used, we hereby report the values for highest power setting.

2 Measurement Results

2.1 GSM 900 / GMSK Modulation

Device	Average Power during burst at connector		
	Ch. 975 880.2 MHz	Ch. 38 897.6 MHz	Ch. 124 914.8 MHz
Sample 1 IMEI: 004400 00 857493 9	31.5	31.7	32.0
Sample 3 IMEI: 004400 00 857427 7	31.7	31.9	32.1
Sample 6 IMEI: 004400 00 857416 0	31.5	31.7	32.0
Sample 8 IMEI: 004400 00 857500 1	31.6	31.8	32.0
Sample 10 IMEI: 004400 00 857340 2	31.6	31.8	32.0

Table 1: Results of power measurements at connector in the GSM 900 Band

2.2 GSM 900 / 8-PSK Modulation

Device	Average Power during burst at connector		
	Ch. 975 880.2 MHz	Ch. 38 897.6 MHz	Ch. 124 914.8 MHz
Sample 1 IMEI: 004400 00 857493 9	26.0	26.1	26.2
Sample 3 IMEI: 004400 00 857427 7	26.1	26.2	26.3
Sample 6 IMEI: 004400 00 857416 0	26.0	26.2	26.2
Sample 8 IMEI: 004400 00 857500 1	26.0	26.2	26.2
Sample 10 IMEI: 004400 00 857340 2	26.0	26.0	26.1

Table 2: Results of power measurements at connector in the GSM 900 Band

2.3 GSM 1800 / GMSK Modulation

Device	Average Power during burst at connector		
	Ch. 512 1710.2 MHz	Ch. 698 1747.4 MHz	Ch. 885 1784.8 MHz
Sample 1 IMEI: 004400 00 857493 9	29.6	29.8	29.7
Sample 3 IMEI: 004400 00 857427 7	29.7	29.8	29.6
Sample 6 IMEI: 004400 00 857416 0	29.6	29.8	29.6
Sample 8 IMEI: 004400 00 857500 1	29.6	29.7	29.6
Sample 10 IMEI: 004400 00 857340 2	29.7	29.8	29.7

Table 3: Results of power measurements at connector in the GSM 1800 Band

2.4 GSM 1800 / 8-PSK Modulation

Device	Average Power during burst at connector		
	Ch. 512 1710.2 MHz	Ch. 698 1747.4 MHz	Ch. 885 1784.8 MHz
Sample 1 IMEI: 004400 00 857493 9	23.4	23.7	23.8
Sample 3 IMEI: 004400 00 857427 7	23.6	23.7	23.8
Sample 6 IMEI: 004400 00 857416 0	23.5	23.6	23.9
Sample 8 IMEI: 004400 00 857500 1	23.5	23.7	23.7
Sample 10 IMEI: 004400 00 857340 2	23.6	23.7	23.9

Table 4: Results of power measurements at connector in the GSM 1800 Band

2.5 GSM 1900 / GMSK Modulation

Device	Average Power during burst at connector		
	Ch. 512 1850.2 MHz	Ch. 661 1880.0 MHz	Ch. 810 1909.8 MHz
Sample 1 IMEI: 004400 00 857493 9	29.5	29.7	29.8
Sample 3 IMEI: 004400 00 857427 7	29.6	29.8	29.8
Sample 6 IMEI: 004400 00 857416 0	29.6	29.8	29.7
Sample 8 IMEI: 004400 00 857500 1	29.5	29.7	29.8
Sample 10 IMEI: 004400 00 857340 2	29.5	29.7	29.7

Table 5: Results of power measurements at connector in the GSM 1900 Band

2.6 GSM 1900 / 8-PSK Modulation

Device	Average Power during burst at connector		
	Ch. 512 1850.2 MHz	Ch. 661 1880.0 MHz	Ch. 810 1909.8 MHz
Sample 1 IMEI: 004400 00 857493 9	24.4	24.7	24.7
Sample 3 IMEI: 004400 00 857427 7	24.4	24.8	24.7
Sample 6 IMEI: 004400 00 857416 0	24.4	24.8	24.8
Sample 8 IMEI: 004400 00 857500 1	24.5	24.7	24.8
Sample 10 IMEI: 004400 00 857340 2	24.6	24.7	24.7

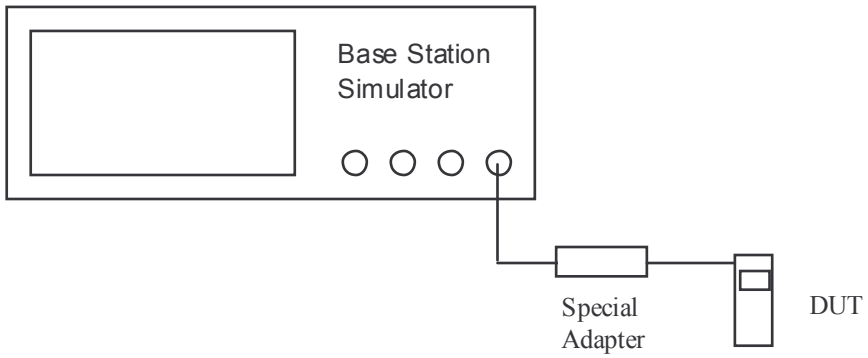
Table 6: Results of power measurements at connector in the GSM 1900 Band

3 Minutes of Test

3.1 Description of device under test

Mobile Phone:	Siemens S75
Frequency Range GSM 900:	880 – 915 MHz
Frequency Range GSM 1800:	1710 – 1785 MHz
Frequency Range GSM 1900:	1850 – 1990 MHz
Siemens Part Number:	S30880-S2500-A90
FCC ID	PWX-S75

3.2 Measurement Set-up



Base Station Simulator:	CMU 200
Serial Number:	103964
Software Version:	Base 3.62 / GSM 3.62

Figure 1: Block Diagram of set-up for conducted power measurement

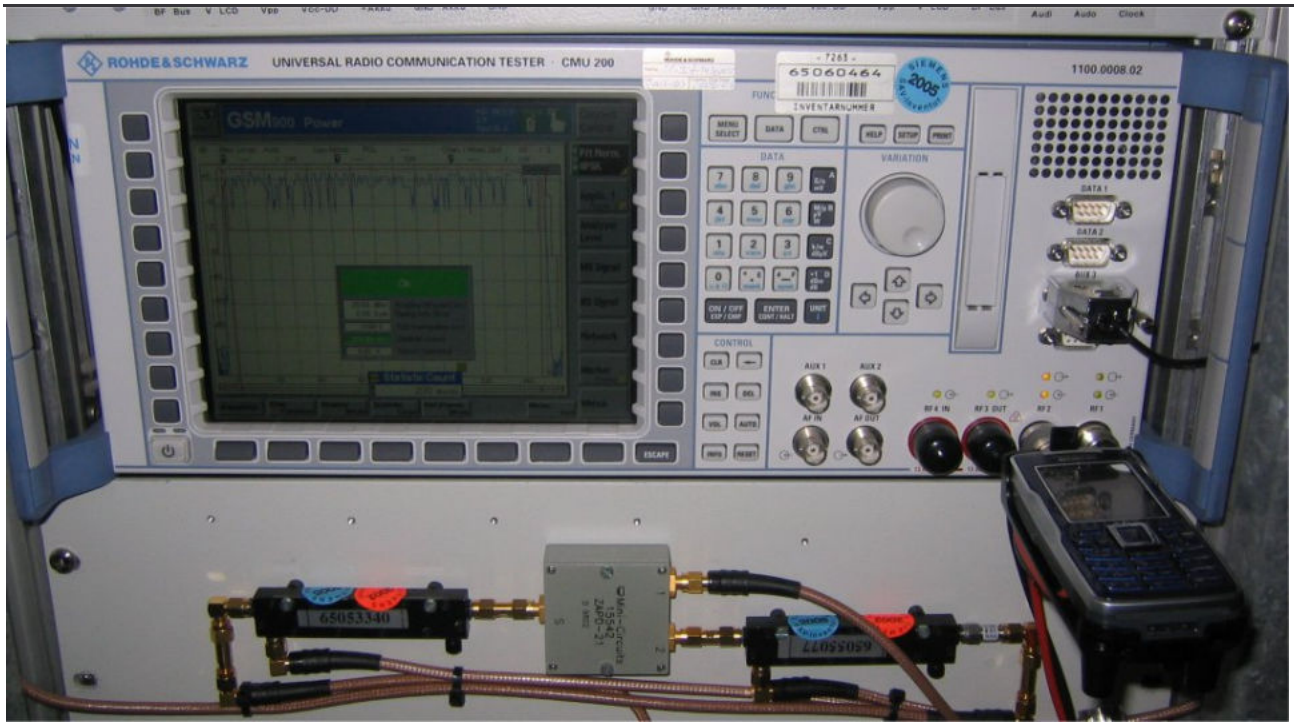


Figure 2: Set-up for conducted power measurement

4 Calibration Certificate

MPL A

ROHDE & SCHWARZ

Kalibrierschein
Calibration Certificate

65 060 464

Nummer 11-907143/000
Number

Gegenstand *Object*	Universal Radio Communication Tester
Hersteller *Manufacturer*	ROHDE & SCHWARZ
Typ *Type*	CMU200
Sach-Nr. *Ident. No.*	1100.0008.02
Serien-Nr. *Serial No.*	103964
Auftraggeber *Customer*	Siemens AG COM A&C AS 35 Frankenstr. 2 46393 Bocholt
Kunden-Referenz *Customer reference*	4300365639/K61
Ort u. Datum d. Kalibrierung *Place and date of calibration*	Köln, 2005-03-17
Umfang der Kalibrierung *Scope of calibration*	Standardkalibrierung *standard calibration*
Eingangsprüfung *Performance on receipt*	innerhalb der Toleranz *in tolerance*
Kalibrierergebnis *Result of calibration*	innerhalb der Toleranz *in tolerance*
Umfang des Kalibrierscheins *Extent of the certificate*	47 Seiten *47 pages*

Dieser Kalibrierschein dokumentiert, dass der genannte Gegenstand nach festgelegten Vorgaben geprüft und gemessen wurde. Die Messwerte lagen im Regelfall mit einer Wahrscheinlichkeit von annähernd 95 % im zugeordneten Werteintervall (Erweiterte Messunsicherheit mit k = 2).
Die Kalibrierung erfolgte mit Messmitteln und Normalen, die direkt oder indirekt durch Ableitung mittels anerkannter Kalibriertechniken rückgeführt sind auf Normale der PTB/DKD oder anderer nationaler/internationaler Standards zur Darstellung der physikalischen Einheiten in Übereinstimmung mit dem Internationalen Einheitensystem (SI).
Wenn keine Normale existieren, erfolgt die Rückführung auf Bezugsnormale der R&S-Laboratorien.
Grundsätze und Verfahren der Kalibrierung entsprechen ISO/IEC 17025. Das Bestätigungssystem für die verwendeten Messmittel entspricht DIN ISO 10012-1. Das angewandte Qualitätsmanagement-System ist zertifiziert nach DIN EN ISO 9001.
Dieser Kalibrierschein darf nur vollständig und unverändert weiterverbreitet werden. Kalibrierscheine ohne Signifizierungen sind ungültig.
Für die Einhaltung einer angemessenen Frist zur Wiederholung der Kalibrierung ist der Benutzer verantwortlich.

This calibration certificate documents, that the named item is tested and measured against defined specifications. Measurement results are located 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 techniques to the PTB/DKD or other national/international standards, which realize the physical units of measurement according to the International System of Units (SI). In all cases where no national standards are available, measurements are referenced to standards of the R&S laboratories.
Principles and methods of calibration correspond with ISO / IEC 17025. The metrological confirmation system for the measuring equipment used is in compliance with DIN ISO 10012-1. The applied quality system is certified to DIN EN ISO 9001.
This calibration certificate may not be reproduced other than in full. Calibration certificates without signatures are not valid.
The user is obliged to have the object recalibrated at appropriate intervals.

Ausstellungsdatum *Date of issue*	Laborleitung *Head of laboratory*	Bearbeiter *Person responsible*
2005-03-18	i.V. Bakker	Perseke

ROHDE & SCHWARZ GmbH & Co. KG · Dienstleistungszentrum Köln · Graf-Zeppelin-Str. 18 · D - 51147 Köln
Postfach 98 02 60 · D - 51130 Köln · Telefon (02203) 49-0 · Telefax (02203) 49-51364
Geschäftsführung: Dipl.-Ing. Dipl.-Wirtsch.-Ing. Friedrich Schwarz (Vorsitzender), Dipl.-Ing. Manfred Fleischmann, Dipl.-Ing. Dipl.-Wirtsch.-Ing. Christian Leicher, Dipl.-Ing. Michael Vohrer
Sitz München · Registereintrag: HRA 16 270 · Persönlich haftender Gesellschafter: RUSEG Verwaltungs-GmbH · Sitz München · Registereintrag: AG München HRB 7 534
http://www.rohde-schwarz.com

vers9801/rsk0007