

Test Report

Conducted Output Power GSM850/PCS1900

SIEMENS A31a

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1 Objective and Method

FCC approval for mobile phone requires reporting output power at RF output terminal pursuant to title 47 CFR part 2.1046. BenQ 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 Device under test

Mobile Phone: Siemens A31a (GSM850/PCS1900)
 Frequency Range GSM 850: 824– 894MHz
 Frequency Range PCS 1900: 1850 – 1990 MHz

There are 10 devices has been tested listed in “Chapter 4 Test Result”.

3 Measurement Set-up

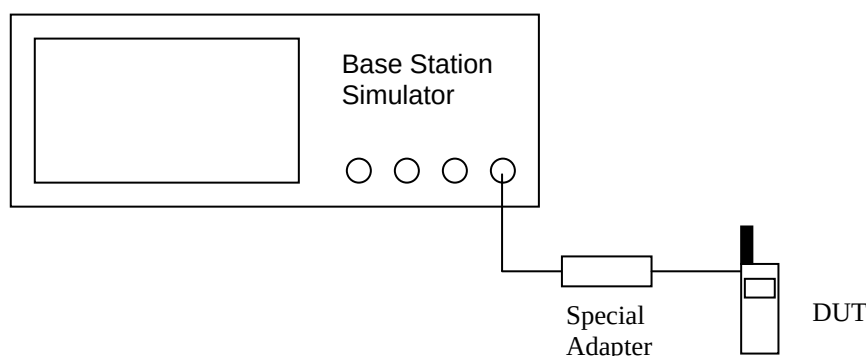


Figure 1: Block Diagram of set-up for conducted power measurement

Base Station Simulator	CMU 200
Serial Number	105851
Software Version	Base 3.81 / GSM 3.80
Calibration Certification	Annex 1

Test Voltage: 4.0 V
 Temperature: Room Temperature



Figure 2: Set-up for conducted power measurement

4 Test Result

Conducted Output Power (GSM850 Band)

EUTs		Average Power during burst at phone connector (dBm)		
A31a	IMEI	Ch. 128 824.2 MHz	Ch. 190 836.6 MHz	Ch. 251 848.8 MHz
Sample #1	004400043312	31.5	31.5	31.6
Sample #2	004400043023	31.5	31.6	31.6
Sample #3	004400042991	31.6	31.6	31.6
Sample #4	004400043080	31.4	31.5	31.5
Sample #5	004400043049	31.5	31.6	31.6
Sample #6	004400042975	31.5	31.6	31.5
Sample #7	004400043189	31.6	31.7	31.7
Sample # 8	004400043163	31.5	31.5	31.5
Sample # 9	004400043452	31.6	31.6	31.6
Sample #10	004400043031	31.4	31.5	31.5

Conducted Output Power (PCS1900 Band)

EUTs		Average Power during burst at phone connector (dBm)		
A31a	IMEI	Ch. 512 1850.2 MHz	Ch. 661 1880.0 MHz	Ch. 810 1909.8 MHz
Sample #1	004400043312	28.7	28.5	29.1
Sample #2	004400043023	28.9	28.7	29.3
Sample #3	004400042991	28.9	28.6	29.3
Sample #4	004400043080	28.9	28.7	29.3
Sample #5	004400043049	28.7	28.5	29.1
Sample #6	004400042975	28.9	28.6	29.3
Sample #7	004400043189	28.8	28.6	29.2
Sample # 8	004400043163	28.8	28.5	29.2
Sample # 9	004400043452	28.8	28.5	29.2
Sample #10	004400043031	28.9	28.7	29.3

Annex 1 Calibration Certificate



ROHDE & SCHWARZ

Messgerätebau GmbH

Kalibrierschein

Calibration Certificate

Nummer 20-137411

Number

Gegenstand
Item CMU200 UNIV.RADIOCOMM.

Hersteller
Manufacturer ROHDE & SCHWARZ

Typ
Type CMU200

Material Nr.
Material No. 1100.0008K02

Serial Nr.
Serial No. 105851

Auftraggeber
Customer

Bestellung Nr.
Order No.

Ort u. Datum d. Kalibrierung
Place and date of calibration Memmingen, 2004-08-11

Umfang der Kalibrierung
Scope of calibration Standard Calibration

Eingangsprüfung
Performance on receipt

Kalibrierergebnis
Result of calibration Measurement results within specifications

Umfang des Kalibrierscheins
Extent of the certificate 3 pages
60 pages test report

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 Normen, 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 IEC/ISO 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 IEC/ISO 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 item recalibrated at appropriate intervals.

ROHDE & SCHWARZ	
RefNo. 20-137411	Customized Due Date
Cal 2004-08-11	

Ausstellungsdatum
Date of issue

2004-08-11

Laborleitung
Head of laboratory

Siegmüller

Bearbeiter
Person responsible

Wolfgang Schöning

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