ELECTRONIC TECHNOLOGY SYSTEMS
DR. GENZ GMBH

FCC - TEST - REPORT

FCC RULES PARTS 22 and 24

FCC ID: JYCPG-1910

Test report no.:

G5M206040048-P-2224

Certificate 1983-01

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1 General Information

1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification.

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems.

The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that is performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.

The test report may only be reproduced or published in full.

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Tester:

Date	ETS-Lab.	Name	Signature
22.05.2006		K. Damm	

Technical responsibility for area of testing:

Date	ETS	Name	Signature
22.05.2006		N. Kaspar	

1.2 Testing laboratory

1.2.1 Location

ELECTRONIC TECHNOLOGY SYSTEM DR. GENZ GMBH (ETS)
Storkower Straße 38c
D-15526 Reichenwalde b. Berlin
Germany
Telephone : +49 33631 888 00
Telefax : +49 33631 888 660

1.2.2 Details of accreditation status

ACCREDITED TESTING LABORATORY
DAR-REGISTRATION NUMBER: DAT-P-201/96

ACCREDITED COMPETENT BODY
DAR-REGISTRATION NUMBER: BPT-ZE-026/96

FCC FILED TEST LABORATORY REG. NO. 96970

BLUETOOTH QUALIFICATION TEST FACILITY (BQTF)
ACCREDITED BY: BLUETOOTH QUALIFICATION REVIEW BOARD (BQRF)

INDUSTRY CANADA FILED TEST LABORATORY REG. NO. IC 3470

A2LA ACCREDITED Certificate Number: 1983-01

1.3 Details of approval holder

Name	: Pantech Co., Ltd.
Street	: Shinsong Center Bldg. 8th Fl., 25-12, Yeouido-dong
Town	: Yeoungdeungpo-gu, Seoul
Country	: Korea
Telephone	: +82-2-3660-5862
Fax	: +82-2-3660-5990
Contact	: Mr. B.W. Kim
E-Mail	: bwkim@pantech.co.kr

1.4 Application details

Date of receipt of application : 13.04.2006
Date of receipt of test item : 13.04.2006
Date of test : 10.05.2006

1.5 Test item

Description of test item : Triple Band GSM 850 /DCS 1800 /PCS 1900 (with WAR & GPRS)

Type identification : PG-1910

Serial number : Test model without serial number.

Photos : See annex A.

Technical data

Frequency range Tx - GSM 850 : 824.2 - 848.80 MHz
Frequency range Tx - PCS : 1850.2 - 1909.8 MHz
Frequency range Rx - GSM 850 : 869.2 - 893.8 MHz
Frequency range Rx - PCS : 1930.2 - 1989.8 MHz
Antenna Type : internal antenna
Antenna Gain (TX) GSM 850 : -2.4 dBi
Antenna Gain (TX) PCS 1900 : -1.3 dBi
Power supply : 3.7 V DC (battery)
Operating mode : duplex
Type of modulation : GMSK (GSM modulation)
Emission : GXW

Manufacturer:
(if applicable)

Name :
Street :
Town :
Country :

1.6 Test standards

Technical standard : FCC Parts 22, 24, 2

Additional information : Because of using the GSM 850 as an alternative technology in 850 MHz band, not all test cases of FCC Part 22 are required.

This device contains 1800 MHz not operational in U.S. Territories. This filing is only applicable for 850/1900 MHz operations.

2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed. ☒

or

The deviations as specified in 2.5 were ascertained in the course of the tests performed. ☐

2.2 Test environment

Temperature	: 25 ° C
Relative humidity content	: 20 ... 75 %
Air pressure	: 86 ... 103 kPa

2.3 Test equipment utilized

No.	Test equipment	Type	Manufacturer
ETS 0001	ESD Gun	SESD 30000	Schlöder
ETS 0002	Test receiver	ESVP	Rohde & Schwarz
ETS 0003	Diode power sensor	NRV-Z2	Rohde & Schwarz
ETS 0004	Spectrum and network analyzer	FSMS 26	Rohde & Schwarz
ETS 0005	Test receiver	SMV 11	MEB
ETS 0006	Test receiver system	SME 12	MEB
ETS 0007	Horn antenna	AT 4004	ar
ETS 0008	Antenna	Loop antenna	Siemens
ETS 0009	Antenna	ARA 2	MEB
ETS 0010	Antenna	Loop antenna	MEB
ETS 0011	Antenna	van Veen/ Frame	Rohde & Schwarz
ETS 0012	Antenna	HK 116	Rohde & Schwarz
ETS 0013	Antenna	HL 223	Rohde & Schwarz
ETS 0014	Antenna	HL 025	Rohde & Schwarz
ETS 0015	Antenna	HL 025	Rohde & Schwarz
ETS 0016	Precision antenna kit	VHAP	Schwarzbeck
ETS 0017	Precision antenna kit	UHAP	Schwarzbeck
ETS 0018	Horn antenna	BBHA 9120 D	Schwarzbeck
ETS 0019	Horn antenna	BBHA 9120 D	Schwarzbeck
ETS 0020	Antenna	DP 21	MEB
ETS 0021	Antenna	DP 3	MEB
ETS 0022	Antenna	SAS-200/ 521	A.H. Systeme+D65
ETS 0023	Antenna	DP 1	MEB
ETS 0024	Antenna mast	AF 2	MEB
ETS 0025	Antenna mast	AF 2	MEB
ETS 0026	Tripod		Heinrich Deisel
ETS 0027	Tripod		Heinrich Deisel
ETS 0028	Tripod	STA 2	C. Lorenz AG
ETS 0029	Tripod		Berlebach
ETS 0030	Antenna	HK 116	Rohde & Schwarz
ETS 0031	Turn table	DS 412	Heinrich Deisel
ETS 0032	Controller	HD 050	Heinrich Deisel
ETS 0033	Calibration Set CDN	3xAdapter 50-150 Ohm	ETS
ETS 0034	RF generator/ Amplifier	SMLR	Rohde & Schwarz
ETS 0035	RF generator/ Amplifier	SMLM	Rohde & Schwarz
ETS 0036	Zirc. Antenna	3102	EMCO
ETS 0037	Zirc. Antenna	3102L	EMCO
ETS 0038	RF amplifier	150L	Amplifier Research
ETS 0039	Absorbing clamp	MDS 21	Rohde & Schwarz
ETS 0040	Artificial mains Network	ESH3-Z5	Rohde & Schwarz
ETS 0041	Artificial mains	ESH3-Z4	Rohde & Schwarz
ETS 0042	Artificial mains	ESH3-Z6	Rohde & Schwarz
ETS 0043	Directional coupler	1850	KRYTAR
ETS 0044	Artificial mains	NNB 111	MEB
ETS 0045	Stripe line	IEC 801-3	ETS

No.	Test equipment	Type	Manufacturer
ETS 0046	Power supply	LTS 006	RFT
ETS 0047	Power supply	TG 20/ 1	Statron
ETS 0048	Power supply	TG 20/ 1	Statron
ETS 0049	Power supply	T 102	TPW
ETS 0050	Power supply	T 101b	TPW
ETS 0051	Oscilloscope	TDS 640A	Tektronix
ETS 0052	Attenuator	776B-10	Narda
ETS 0053	ECAT Control center	CE 40	Keytek/ EMV
ETS 0054	EFT simulator	E 412	Keytek/ EMV
ETS 0055	Module network coupler	E 4551	Keytek/ EMV
ETS 0056	Blank plug-in		Keytek/ EMV
ETS 0057	Module SURGE with DC coupler	E 501	Keytek/ EMV
ETS 0058	Capacitive coupling clamp	E 502 B	Keytek/ EMV
ETS 0059	Kikusui amplifier	PCR 2000L	Keytek/ EMV
ETS 0060	Xitron power analyzer		Keytek/ EMV
ETS 0061	Power/ Arb (Harm., Ramp)		Keytek/ EMV
ETS 0062	Reference impedance		Keytek/ EMV
ETS 0063	Blank plug-in		Keytek/ EMV
ETS 0064	CDN IEC 1000-4-6		Keytek/ EMV
ETS 0065	ESD-generator minizap		Keytek/ EMV
ETS 0066	EM Injection Clamp		FCC/ EMV
ETS 0067	Calibration Fixture	IEC 801-2031 CF	FCC/ EMV
ETS 0068	CDN IEC 1000-4-6	CDN	FCC/ EMV
ETS 0069	EM Radiation Monitor	EMR-20	Wandel & Goltermann
ETS 0070	PC Transfer set EMR-20	EMR-20	Wandel & Goltermann
ETS 0071	Video camera system	KMB012	Kocom
ETS 0072	Interphone system	JS-1400	Jiuh Sheng
ETS 0073	Audio noise meter	GSM 2	MKD/ RFT
ETS 0074	RF Millivoltmeter	QRV 2	MKD/ RFT
ETS 0075	NF generator	GF 22	Präcitronic
ETS 0076	Feeding bridge A	SBA 1000	ESP
ETS 0078	LCR meter	SR 720	SRS
ETS 0079	Functional generator	MX-2020	Maxcom
ETS 0080	EMI Software	ES-K1	Rohde & Schwarz
ETS 0081	EMI Software	ES-K10	Rohde & Schwarz
ETS 0082	PC system	Novell	Esotronic
ETS 0083	Apple computer system	Performa 630	Macintosh
ETS 0084	Process controller	PSA 15	Rohde & Schwarz
ETS 0085	Shielded room	SR 1	Frankonia
ETS 0086	Anechoic chamber	AC 1	Frankonia
ETS 0087	Climatic cell	HC 4033	Heraeus
ETS 0088	Color TV pattern generator	PM 5518-TX VPS	Philips
ETS 0089	Radio communication tester	CMS 54	Rohde & Schwarz
ETS 0090	DECT type approval CTR06	TS 8930	Rohde & Schwarz
ETS 0091	RF signal generator	SME 03	Rohde & Schwarz
ETS 0092	Power amplifier	150W1000	AR Amplifier Research
ETS 0093	Attenuator	57-20-33	Weinschel
ETS 0094	Power sensor	NRV-Z55	Rohde & Schwarz
ETS 0095	DECT system controller	PSMD	Rohde & Schwarz
ETS 0096	DECT Signaling unit	PSMD-B11	Rohde & Schwarz
ETS 0097	Rack, 19", 36 HU	TS 89RA	Rohde & Schwarz

No.	Test equipment	Type	Manufacturer
ETS 0098	System engineering and software	CS 893BE	Rohde & Schwarz
ETS 0099	Extension unit for basic version	TS 8930B	Rohde & Schwarz
ETS 0100	RF signal generator	SME-06	Rohde & Schwarz
ETS 0101	Power amplifier	50W1000B	AR Amplifier Research
ETS 0102	CDN	M3-801/6	MEB
ETS 0103	Magnetic field test set	MF1000	EMC Partner
ETS 0105	High power synthesizer/ sweeper	SMP 22 / 02	Rohde & Schwarz
ETS 0106	Antenna	VAMP 9443	Schwarzbeck Meßelektronik
ETS 0108	DECT protocol tester TBR 22	TS 1220	Rohde & Schwarz
ETS 0109	Process controller	PSM 2	Rohde & Schwarz
ETS 0110	Real time signaling unit	PSMD-B2	Rohde & Schwarz
ETS 0111	PCM Real-time audio interface for PSM	PSMD-B3	Rohde & Schwarz
ETS 0112	Synthesizer Module	PSMD-B4	Rohde & Schwarz
ETS 0113	Keyboard	PSA-Z2	Rohde & Schwarz
ETS 0114	RF step attenuator	RSG	Rohde & Schwarz
ETS 0115	Glide path		Rohde & Schwarz
ETS 0116	Protocol Tester	PTW 70	Rohde & Schwarz
ETS 0117	Insertion unit	URV-Z2	Rohde & Schwarz
ETS 0118	Mixer	MFC 1000	Avcom
ETS 0119	Mixer	MFC 2000	Avcom
ETS 0120	RF step attenuator	TRI-50-20	INCO
ETS 0121	Oscilloscope	EO 147A	Serute
ETS 0122	Oscilloscope	5201	Dagatron
ETS 0123	RF step attenuator	RBU	Rohde & Schwarz
ETS 0124	Tripod	STA 2	Rohde & Schwarz
ETS 0125	Small components		
ETS 0126	Uninterruptible power supply	UPS - 1500	Sendon
ETS 0127	Uninterruptible power supply	UPS - 1000 LC	Sendon
ETS 0128	Uninterruptible power supply	UPS - 1000	Sendon
ETS 0129	Uninterruptible power supply	UPS - 500	Sendon
ETS 0130	Uninterruptible power supply	Power saver	Sendon
ETS 0131	Telephone connection box		Systel
ETS 0132	Frequency doubler	TR-0616	EMG
ETS 0133	Probe body	P6015	Tektronix
ETS 0135	Measuring switching point	AK 11	RFT
ETS 0136	Attenuator	33-6-34	Weinschel
ETS 0137	Multimeter	YX-360TRA	Mastech
ETS 0138	Multimeter	DT-9410	Diditec
ETS 0139	Multimeter	ST-9202	Standard
ETS 0140	High voltage generator	IP 6Wa	TPW
ETS 0141	Sliding bridge	J 573	RFT
ETS 0142	Impedance converter	TK 11	RFT
ETS 0143	Impedance converter	TK 12	RFT
ETS 0146	Active RF probe	ESH2-Z2	Rohde & Schwarz
ETS 0147	Probe	TK 103	MEB
ETS 0148	RF Current Probe	F-65	FCC
ETS 0149	Power divider	ZAPD-21	MCL
ETS 0150	Switcher	HR07-720	Wisi
ETS 0151	Interference pulse generator	NSG 500C	Schaffner
ETS 0152	Simulator for load-dump Impulse	NSG 506C (I)	Schaffner

No.	Test equipment	Type	Manufacturer
ETS 0153	Simulator for load-dump Impulse	NSG 506C (I)	Schaffner
ETS 0155	Signal generator	SMG	Rohde & Schwarz
ETS 0156	Adjacent channel power meter	NKS	Rohde & Schwarz
ETS 0157	TV and Sat-Signal generator	VTG 700	Grundig
ETS 0158	TV and Sat Signal generator	VTG 700	Grundig
ETS 0159	Programmable power supply	TOE 8815	Toellner
ETS 0160	Protective wire and isolation tester	PI 6001 D	SPS electronic
ETS 0161	Harmonic / Flicker Analyzer	HFA 3000	Schlöder
ETS 0162	Acoustic chamber	403-A	IAC
ETS 0163	Test head	BK 4602	Brüel & Kjær
ETS 0164	Simulator ear	BK 4185	Brüel & Kjær
ETS 0165	Simulator mouth	BK 4227	Brüel & Kjær
ETS 0166	Acoustic calibrator	BK 4231	Brüel & Kjær
ETS 0167	Communication Analysis System	CAS TE I	HEAD acoustics
ETS 0168	Acoustical test for DECT	CTR 10	HEAD acoustics
ETS 0169	Measurement - Front-end (analogue)	MFE III	HEAD acoustics
ETS 0170	Measurement - Front-end (digital)	MFE IV	HEAD acoustics
ETS 0171	Electronic test cradle	TEH	HEAD acoustics
ETS 0172	Noise generator	HNG III.1	HEAD acoustics
ETS 0173	Speaker	Canton S Pluss	HEAD acoustics
ETS 0174	Measurement - Front-end line interface	MFE V	HEAD acoustics
ETS 0175	Software line interface (analogue)	COPTZV5	HEAD acoustics
ETS 0176	Acoustic volt meter	COP 4	HEAD acoustics
ETS 0177	Feeding bridge B	SBB 1000	ESP
ETS 0178	Open area test side	10m	ETS
ETS 0179	Open area test side	3m	ETS
ETS 0180	Artificial mains	NNB01/RFZ	RFZ
ETS 0181	Test pin for protective wire	PE 156-i	SPS electronic
ETS 0182	Power supply	MX-9300	Maxcom
ETS 0183	Frequency counter	MX-9300	Maxcom
ETS 0184	Function generator	MX-9300	Maxcom
ETS 0185	Digital multimeter	MX-9300	Maxcom
ETS 0186	Power supply	DF 1730	WJG
ETS 0187	Power supply		TPW/RFT
ETS 0188	High voltage generator		
ETS 0189	Spectrum analyzer	FSEB	Rohde & Schwarz
ETS 0190	Function generator	MX 2020	Maxcom
ETS 0191	Sweep function generator	7202	Dagatron
ETS 0192	Audio generator	7101	Dagatron
ETS 0193	Vibration table	N1-201-M	Sandox
ETS 0194	Digital multimeter	PMM 208	Dagatron
ETS 0195	Thermo hygro recorder		Amarell
ETS 0196	Digital thermometer	AK-688	KD
ETS 0197	Digital thermometer		Prima
ETS 0198	Digital thermometer	ad 170th	ama-digit
ETS 0199	Digital thermometer	ad 31th	ama-digit
ETS 0200	Digital thermometer / hygro meter	ad 90h	ama-digit
ETS 0201	Digital thermometer / hygro meter	37950-10	Cole Parmer
ETS 0202	Digital thermometer	ad 15th	ama-digit

No.	Test equipment	Type	Manufacturer
ETS 0204	Digital thermometer	ad 20th	ama-digit
ETS 0205	High voltage test generator	HA 3300 D	SPS electronic
ETS 0206	High voltage test accessories	HVGZ 312	SPS electronic
ETS 0207	Socket outlet torque balance	F 37.13	PTL
ETS 0208	Unjointed Finger probe	P 10.05	PTL
ETS 0209	Flexible Finger probe	P 10.01	PTL
ETS 0210	Spring operated impact hammer	P 22.50	PTL
ETS 0211	Metallic ball	F 53.32	PTL
ETS 0212	Hazardous live probe	P 10.06	PTL
ETS 0213	Hazardous live probe	P 10.11	PTL
ETS 0214	Ball pressure test apparatus	T 10.02	PTL
ETS 0215	Glow Wire tester	T 03.14	PTL
ETS 0216	Force indicator 50N	P 10.31	PTL
ETS 0218	RF probe	URV5-Z7	Rohde & Schwarz
ETS 0219	Power sensor	NRV-Z2	Rohde & Schwarz
ETS 0221	ISDN-S0-Analyzer	K1403	Siemens
ETS 0222	ISDN Protocol Analyzer	TE965	Tekelec Teleco.
ETS 0223	GSM/ PCN/ PCS-Simul.	TS8915B	Rohde & Schwarz
ETS0224A	Millivoltmeter	URV5	Rohde & Schwarz
ETS0224B	Diode Power Sensor	NRV-Z1	Rohde & Schwarz
ETS0224C	Programmable high resolution time counter	PM6654G	Philips
ETS0224D	RF Step Attenuator	RSP	Rohde & Schwarz
ETS 0225	SIM Simulator		Orga
ETS 0226	SIM Editor		Orga
ETS 0227	Vibration table	TIRA vib	GenRad
ETS 0228	Climatic chamber	VT 4010	Vötsch
ETS 0229	Radio communication tester	CMT 54	Rohde & Schwarz
ETS 0230	Radio communication tester	CMD 65	Rohde & Schwarz
ETS 0232	Radiation test source	VSQ 1	MEB
ETS 0233	Direction coupler	RK 100	MEB
ETS 0234	Power meter	NRVD	Rohde & Schwarz
ETS 0235	RF network-analyzer	8752 C	Hewlett Packard
ETS 0236	RF amplifier	100A100	Amplifier Research
ETS 0237	RF amplifier	100W1000M1	Amplifier Research
ETS 0238	Field strong meter	FM 2000	Amplifier Research
ETS 0239	Isotropic field probe 40 GHz	FP 2080 Kit	Amplifier Research
ETS 0240	Isotropic field probe 1 GHz	FP 2000 Kit	Amplifier Research
ETS 0241	Pulse Generator	4050	PicoSecond PL
ETS 0242	Harmonics analyzer	F 41B	Fluke
ETS 0243	AC-clamp 1000 A	80i 1000s	Fluke
ETS 0244	Burst generator	EFT 200	EM-Test
ETS 0245	Load dump generator	LD 200	EM-Test
ETS 0246	Voltage drop simulator	VDS 200	EM-Test
ETS 0247	Microsecond generator	MPG 200	EM-Test
ETS 0248	Switch unit	AN 200	EM-Test
ETS 0249	Coupling network	CNA 200	EM-Test
ETS 0250	Coupling clamp	ACC	EM-Test
ETS 0251	Climatic chamber	VT 4004	Vötsch
ETS 0252	System controller	PSM 12	Rohde & Schwarz
ETS 0253	Spectrum analyzer	FSIQ	Rohde & Schwarz

No.	Test equipment	Type	Manufacturer
ETS 0254	RF generator	SMIQ 03	Rohde & Schwarz
ETS 0255	RF generator	SMIQ 03	Rohde & Schwarz
ETS 0256	RF generator	SMP 03	Rohde & Schwarz
ETS 0257	Step attenuator	RSP	Rohde & Schwarz
ETS 0258	Rubidium standard	RSTU	DATUM GmbH
ETS 0259	Power meter	NRVD	Rohde & Schwarz
ETS 0260	Power sensor	NRVD-Z1	Rohde & Schwarz
ETS 0261	Power sensor	NRVD-Z1	Rohde & Schwarz
ETS 0262	Switching unit	SSCU	Rohde & Schwarz
ETS 0263	Signaling unit	PTW60	Rohde & Schwarz
ETS 0264	Spectrum analyzer	F 1048	HAMEG
ETS 0265	Loop antenna	HFRA 9150	Schwarzbeck
ETS 0266	Measurement adapter 1:100	50 Ohm	
ETS 0267	RF signal generator	SMT 03	Rohde & Schwarz
ETS 0268	RF signal generator	SMP 02	Rohde & Schwarz
ETS 0269	RF bridge 50 Ohm	86205 A	Aglient
ETS 0270	RF signal generator	SMP 04	Rohde & Schwarz
ETS 0271	Spectrum analyzer	FSEK30	Rohde & Schwarz
ETS 0272	RF signal generator	SME 03	Rohde & Schwarz
ETS 0273	RF signal generator	SME 03	Rohde & Schwarz
ETS 0274	RF signal generator	SMY 01	Rohde & Schwarz
ETS 0275	Power sensor	NRV-Z51	Rohde & Schwarz
ETS 0276	Audio analyzer	UPL	Rohde & Schwarz
ETS 0277	Power sensor	NRV-Z1	Rohde & Schwarz
ETS 0278	Power sensor	NRV-Z31	Rohde & Schwarz
ETS 0279	Step attenuator	RSP	Rohde & Schwarz
ETS 0280	Power meter	NRVD	Rohde & Schwarz
ETS 0281	Spectrum analyzer	FSM	Rohde & Schwarz
ETS 0282	RF bridge 75 Ohm	86207 A	Hewlett Packard
ETS 0283	RF bridge 50 Ohm	86205 A	Hewlett Packard
ETS 0284	Field probe	11940 A	Hewlett Packard
ETS 0285	Field probe	11941 A	Hewlett Packard
ETS 0286	Limiter	11867 A	Hewlett Packard
ETS 0287	Test receiver	ESHS 10	Rohde & Schwarz
ETS 0288	Artificial mains	ESH2-Z5	Rohde & Schwarz
ETS 0289	Audio generator	TAG 101	Troneer
ETS 0290	Audio generator	TAG 101	Troneer
ETS 0291	Loop antenna	HFH2-Z2	Rohde & Schwarz
ETS 0292	RF generator	SMHU	Rohde & Schwarz
ETS 0293	Artificial mains	NNBM 8125	Schwarzbeck
ETS 0294	Biconical antenna	HK 116	Rohde & Schwarz
ETS 0295	LPD antenna	HL 223	Rohde & Schwarz
ETS 0297	Power pulse generator	IGUF 2910	Schwarzbeck
ETS 0298	ICO tester	TS 1232	Rohde & Schwarz
ETS 0299	DECT protocol tester	TS 1220	Rohde & Schwarz
ETS 0300	RF amplifier	75 A 250	Amplifier Research
ETS 0301	Relay switch unit	RSU	Rohde & Schwarz
ETS 0302	Data line CDN	CM-I/O CD	Keytek
ETS 0303	Telecom line CDN	CM-TEL CD	Keytek
ETS 0304	Test receiver	ESHS 10	Rohde & Schwarz
ETS 0305	Test receiver	ESVS 10	Rohde & Schwarz

No.	Test equipment	Type	Manufacturer
ETS 0306	Function generator	HP 33120A	Hewlett Packard
ETS 0307	Commu. Sign. Analyzer	CSA 803 A	Tektronix
ETS 0308	Spectrum analyzer	R 3361A	Advantest
ETS 0309	Anechoic chamber	AC 2	Frankonia
ETS 0310	Anechoic chamber	AC 3	Frankonia
ETS 0311	Anechoic chamber	AC 4	Frankonia
ETS 0312	Climatic chamber	VC 0033	Vötsch
ETS 0313	Power sensor	NRV-Z51	Rohde & Schwarz
ETS 0314	LPD antenna	HL 223	Rohde & Schwarz
ETS 0315	Biconical antenna	HK 116	Rohde & Schwarz
ETS 0316	Switcher	Hr 07-720	WISI
ETS 0318	Dial pulse/ DTMF tester	210	HE
ETS 0319	Opto link	GPIB 140	NI
ETS 0320	Opto link	GPIB 140	NI
ETS 0322	Insertion unit	URV5-Z4	Rohde & Schwarz
ETS 0323	DECT portable part	Gigaset 1000	SIEMENS
ETS 0324	DECT fix part	Gigaset 1000	SIEMENS
ETS 0325	DECT portable part		Philips
ETS 0326	DECT fix part		Philips
ETS 0327	Blue Unit	V 2.0	Nokia
ETS 0328	ELF Field Strength System	HI-3604	Holaday Industries, INC.
ETS 0329	VDT/VLF Radiation System	HI-3603	Holaday Industries, INC.
ETS 0330	Fiber Optic Remote Control	HI.3616	Holaday Industries, INC.
ETS 0331	TS 1220		
ETS 0332	PSM		
ETS 0333	Turn table	DE 350	Heinrich Deisel
ETS 0334	Controller	HD 100	Heinrich Deisel
ETS 0335	BT development kit	CASIRA	CSR
ETS 0336	LPD Antenna	HL 223	Rohde & Schwarz
ETS 0337	Professional Power Amplifier	SE-1200	Wharfedale Pro
ETS 0338	Coupling network	KN002	ETS
ETS 0339	Isolating transformer	KN003	ETS
ETS 0340	Thermometer		Proficell
ETS 0341	Thermometer		Proficell
ETS 0342	Thermometer		Proficell
ETS 0343	Thermometer		Proficell
ETS 0344	Thermometer		Proficell
ETS 0345	Thermometer		Proficell
ETS 0346	Thermometer		Proficell
ETS 0347	Current Probe	EZ-17	Rohde & Schwarz
ETS 0348	RF Millivoltmeter	URV 55	Rohde & Schwarz
ETS 0349	Temperature / humidity logger	OPUS10 THI	LUFFT
ETS 0350	Horn Antenna	BBHA 9120-C	Schwarzbeck
ETS 0351	RF amplifier	DWT-1857	Microwave
ETS 0354	RF amplifier	DBS-0408N423	Microwave
ETS 0355	high pass	H03G12G3	Microwave
ETS 0356	high pass	H03G12G3	Microwave
ETS 0357	high pass	H08G18G3	Microwave
ETS 0358	RF amplifier	AFD3-010040-15-ln	MITEQ
ETS 0359	RF amplifier	M/N AM-1331	MITEQ
ETS 0360	RF amplifier	DBS-0408N423	Microwave

No.	Test equipment	Type	Manufacturer
ETS 0361	RF amplifier	DBS 1826N515	Microwave
ETS 0362	high pass	H03G12G3	Microwave
ETS 0363	high pass	H08G18G3	Microwave
ETS 0364	high pass	H08G18G3	Microwave
ETS 0365	Notch filter 2.4 GHz	WRCT2.40/248	Wain Wright
ETS 0366	high pass	H08G18G3	Microwave
ETS 0367	high pass	H03G12G3	Microwave
ETS 0368	Notch filter 0.5-1 GHz	BN86883	Schomandl
ETS 0369	Notch filter 210-500 MHz	BN86882	Schomandl
ETS 0370	Notch filter 15-90 MHz	BN86880	Schomandl
ETS 0371	Notch filter 85-250 MHz	BN86881	Schomandl
ETS 0372	Direction coupler	RK 100	MEB
ETS 0373	Direction coupler	DC3001	EMV
ETS 0374	Power Supply	NGSM32	Rohde & Schwarz
ETS 0375	Vector Signal Generator	SMIQ03B	Rohde & Schwarz
ETS 0376	Signal Generator	SMP22	Rohde & Schwarz
ETS 0377	Advanced Signal Condi. Unit	ASCU850	Rohde & Schwarz
ETS 0378	Advanced Signal Condi. Unit	ASCU190	Rohde & Schwarz
ETS 0379	Advanced Signal Condi. Unit	ASCU180	Rohde & Schwarz
ETS 0380	Advanced Signal Condi. Unit	ASCU900	Rohde & Schwarz
ETS 0381	Ethernet HUB	CS-HUB	Rohde & Schwarz
ETS 0382	Vector Signal Generator	SMIQ03B	Rohde & Schwarz
ETS 0383	Spectrum Analyzer	FSU26	Rohde & Schwarz
ETS 0384	Main Frame Signal and Con. Unit	SSCU-GW	Rohde & Schwarz
ETS 0385	Universal Protocol Tester	CRTU-RU	Rohde & Schwarz
ETS 0386	Power meter	NRVD	Rohde & Schwarz
ETS 0387	Power sensor	NRV-Z1	Rohde & Schwarz
ETS 0388	Power sensor	NRV-Z1	Rohde & Schwarz
ETS 0389	Fading Simulator	ABFS	Rohde & Schwarz
ETS 0390	System PC PC3600	TS-PC36	Rohde & Schwarz
ETS 0391	Rubidium Frequency Standard	DATUM 8040	DATUM GmbH
ETS 0392	RF Distribution	DATUM 6502	DATUM GmbH
ETS 0393	Insertion unit	URV5-Z4	Rohde & Schwarz
ETS 0394	Advanced Signal Cond. Unit	ASCUFDD-WCDMA	Rohde & Schwarz
ETS 0395	Universal Protocol Tester	CRTU-RU	Rohde & Schwarz
ETS 0396	Universal Protocol Tester	CRTU-RU	Rohde & Schwarz
ETS 0397	Universal Protocol Tester	CRTU-RU	Rohde & Schwarz
ETS 0398	Fading Simulator	ABFS	Rohde & Schwarz
ETS 0399	System Protocol Unit	CRTU-PU	Rohde & Schwarz
ETS 0400	Universal Protocol Tester	CRTU-W	Rohde & Schwarz
ETS 0401	MPEG2 Generator	DVG	Rohde & Schwarz
ETS 0402	TV Messsender	SFQ	Rohde & Schwarz
ETS 0403	RF Current Probe	F-140	Rohde & Schwarz
ETS 0404	Exposure Level Tester	ELT-400	NARDA
ETS 0405	Magnetic Field Probe 100cm^2	2300/90.10	NARDA
ETS 0406	Signal Generator	SML02	Rohde & Schwarz
ETS 0407	EMC Emission tester	Harmonics 1000	EMC Partner
ETS 0408	Transient 2000	TRA1Z191N	EMC Partner
ETS 0409	Stripline	DC220	Schwarzbeck
ETS 0410	BAN	1	ETS
ETS 0418	High pass filter 4-8GHz		Microwave

No.	Test equipment	Type	Manufacturer
ETS 0419	High pass filter 8-18 GHz		Microwave
ETS 0420	Amplifier 0.1-1 GHz	M/N AM-1331	MITEC
ETS 0421	Amplifier 1-4 GHz	AFD3-010040-15-LN	MITEC
ETS 0422	Amplifier 4-8 GHz	DBS-0408N423	Narda
ETS 0423	Amplifier 8-18 GHz	DWT-18057	Narda
ETS 0424	Amplifier 18-26.5 GHz	DBS-1826N515	Narda
ETS 0425	T-network	ESH 3-Z4	Rohde & Schwarz
ETS 0426	CDN	T4 HF	MEB
ETS 0427	Power sensor	NRV-Z6	Rohde & Schwarz
ETS 0428	4-WIRE ISN with B1	ENY41	Rohde & Schwarz
ETS 0429	Current probe test Jig	SW14 7LY	Chase
ETS 0430	RF signal generator	SML02	R&S
ETS 0431	AC mains adapter	BS5733	Travel Emporium
ETS 0432	RF amplifier matrix	RSU-ETS-BT	ETS
ETS 0433	RF amplifier matrix	RSU-ETS-CTR6	ETS
ETS 0434	Reserved Tre	RSU-ETS-GSM	
ETS 0435	HP-Filter	H1G04G01	Microwave
ETS 0436	HP-Filter	H1G04G01	Microwave
ETS 0437	HP-Filter	H0G408G1	Microwave
ETS 0438	HP-Filter	H0G408G1	Microwave
ETS 0439	Amplifier	DBS-1826N515	Narda-DBS-Microwave
ETS 0440	Amplifier	AM-1331	MITEQ
ETS 0441	Bluetooth Protocol Tester	PTW 60	Rohde & Schwarz
ETS 0442	Nokia Tester for Bluetooth 1.1	DTL - 1	Nokia
ETS 0443	IBM BT PC Card	BTPCN101	IBM / Motorola
ETS 0444	Sony BT DUN Modem	BTA- NW 1	Sony
ETS 0445	RF attenuator 6dB	50FH-006-300	JFK
ETS 0446	RF attenuator 30dB	50FH-030-300	JFK
ETS 0447	Motor vehicle artificial network	LN-KFZ/200	R. Heine Hochrequenztechn.
ETS 0448	RF power amplifier	AR 60S1G3	AR Amplifier Research
ETS 0449	Stäubli robot	RX90B L	Stäubli
ETS 0450	Stäubli robot controller	CS/MBs&p	Stäubli
ETS 0451	DASY 4 measurement server		Schmid & Partner
ETS 0452	Control pendant		Stäubli
ETS 0453	Compaq computer	Pentium IV 2 GHz	Schmid & Partner
ETS 0454	Data acquisition electronics	DAE3V1	Schmid & Partner
ETS 0455	Dummy probe		Schmid & Partner
ETS 0456	Dosimetric E-field probe	ET3DV6	Schmid & Partner
ETS 0457	Dosimetric E-field probe	ET3DV6	Schmid & Partner
ETS 0458	Dosimetric H-field probe	H3DV6	Schmid & Partner
ETS 0459	System validation kit	D900V2	Schmid & Partner
ETS 0460	System validation kit	D1800V2	Schmid & Partner
ETS 0461	System validation kit	D1900V2	Schmid & Partner
ETS 0462	System validation kit	D2450V2	Schmid & Partner
ETS 0463	Probe alignment unit	LBV2	Schmid & Partner
ETS 0464	SAM twin phantom	V4.0	
ETS 0465	Mounting device	V 3.1	
ETS 0466	Directional coupler	HP 87300B	
ETS 0468	Isotropic E-Field Probe	ER3DV6	Schmid & Partner
ETS 0469	Dielectric probe kit	85070D	Agilent
ETS 0470	Amplifier	AM-1300-1103	MITEQ

No.	Test equipment	Type	Manufacturer
ETS 0472	Antenna	BTA-H	Frankonia
ETS 0473	GSM / UMTS system simulator	TS 8950	Rohde & Schwarz
ETS 0474	EMI test receiver	ESCS30	Rohde & Schwarz
ETS 0475	Amplifier	AFS4-00101800-U	MITEQ
ETS 0476	Test receiver	ESCS 30	Rohde & Schwarz
ETS 0477	GPS system (active GPS antenna)	4490	HOPF
ETS 0478	Crystal filter	MQF 127.50-2400/F	Vectron International
ETS 0480	Validation dipole	DB 3	EMCO
ETS 0481	40GHz standard gain horn with amplifier	22240-25 CBL26402075	Flann Microwave
ETS 0482	40GHz high gain antenna	AT4560	Amplifier research
ETS 0483	Amplifier	AFD3010040-15-LN	MITEQ
ETS 0485	Radio Communication Tester	CMU 200	Rohde & Schwarz
ETS 0490	Rubidium Frequency Standard	8040	DATUM
ETS 0491	RF Distribution	6502	DATUM
ETS 0492	Indusrtial Cotroller	PSM12	R & S
ETS 0493	Protokoll Tester	PTW60	R & S
ETS 0494	Switching unit	SSCU	R & S
ETS 0495	RF Step Attenuator	RSP	R & S
ETS 0496	Spectrum Analyzer	FSP	R & S
ETS 0497	Power Meter	NRVD	R & S
ETS 0498	Diode Power Sensor	NRV-Z1	R & S
ETS 0499	Diode Power Sensor	NRV-Z1	R & S
ETS 0500	Signal Generator	SMIQ03	R & S
ETS 0501	Signal Generator	SMIQ03	R & S
ETS 0502	Power Splitter	DS-808-4	Macom

2.4 General Test Procedure

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-2003 5.2 using a 50 µH LISN (if necessary). Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-2003 6.4 using a spectrum analyzer. The resolution bandwidth of the spectrum analyzer was 100 kHz for measurements below 1 GHz and RBW 1 MHz was used above 1 GHz. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

FORMULA OF CONVERSION FACTORS for Field strength: The Field Strength at 3 m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBµV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB.

Example:

Freq. (MHz)	METER READING + ACF + CABLE LOSS (to the receiver) = FS
33	20 dBµV + 10.36 dB + 6 dB = 36.36 dBµV/m @3m

ANSI STANDARD C63.4-2003 6.2.1 MEASUREMENT PROCEDURES: The UUT was placed on a table 80 cm high and with dimensions of 1 m by 1.5 m (non metallic table). The UUT was placed in the center of the table. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to at least 10th harmonic of the fundamental.

Peak readings were taken in three (3) orthogonal planes and the highest readings.
Measurements were made by ETS Dr. Genz GmbH at the registered open field test site located at Storkower Str. 38c, 15526 Reichenwalde, Germany.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1 m to 4 m. The antenna was placed in both the horizontal and vertical planes.

ANTENNA & GROUND:
This unit uses internal antennas.

3 Test results (enclosure)

TEST CASE		Required	Test passed	Test failed
RF Power Output	2.1046	☒	☒	☐
ERP, EIRP	22.913; 24.232	☒	☒	☐
Modulation Requirements	2.1047	☐	☐	☐
Audio Filter Characteristics	22.915(d)(1)	☐	☐	☐
Emission Limitation	22.917(b)(d)	☐	☐	☐
Occupied Bandwidth	2.1049	☒	☒	☐
Out of Band Emission at Antenna Terminals Mobile Emissions In Base Frequency Range	2.1051, 24.238(a)	☐	☐	☐
Spurious Radiation	2.1053	☒	☒	☐
Line Conducted Emissions	15.207	☐	☐	☐
Frequency Stability vs. Temperature	2.1055	☒	☒	☐
Frequency Stability vs. Voltage	2.1055	☒	☒	☐

4 RF Power Output (conducted), FCC 2.1046

4.1 Test procedure

The transmitter output was connected to a calibrated coaxial attenuator, the other end of which was connected to a spectrum analyzer. Transmitter output was read off the spectrum analyzer in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to the spectrum analyzer reading.
An HP power meter was also used to measure the RF power.
Tests were performed at three frequencies (low, middle, and high channels) and on all power levels, which can be set-up on the transmitters.

4.2 Test Results

PCS 1900

Frequency Channel	Peak Output Power
512	29.70 dBm
661	29.15 dBm
810	28.52 dBm

GSM 850

Frequency Channel	Peak Output Power
128	32.56 dBm
188	32.67 dBm
251	32.87 dBm

Comment: See attached diagrams.

5 Radiated Power

FCC 22.913
The Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

FCC 24.232
The equivalent Isotropic Radiated Power (EIRP) must not exceed 2 Watts.

5.1 Test Procedure

The EUT was positioned on a non-conductive turntable, 0.8 m above the ground plane on an open test site.
The radiated emission at the fundamental frequency was measured at 3 m distance with a test antenna and spectrum analyzer.

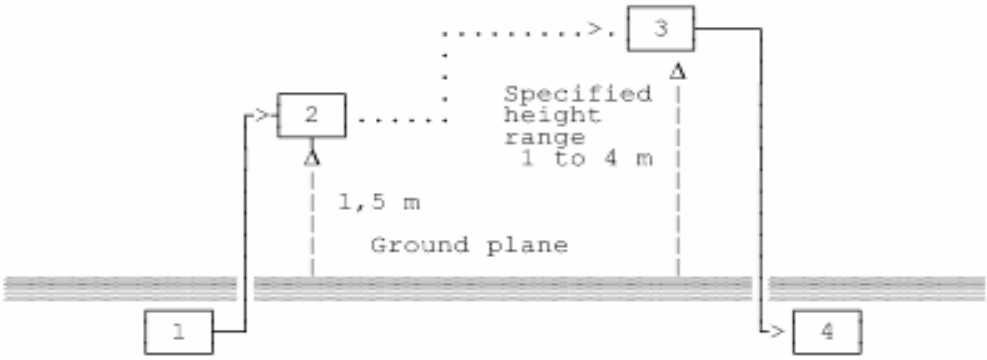
Worst case emission was recorded with the rotation of the turntable and the raising and lowering of the test antenna.

ERP in frequency band 824.2 - 848.8 MHz, and EIRP in frequency band 1850.2 - 1909.8 MHz were measured using a substitution method. The EUT was replaced by half-wave dipole (824.2 - 848.8 MHz) or horn antenna (1850.2 - 1909.8 MHz) connected to a signal generator.

Substitution RF power measurement at ETS Dr Genz GmbH

General:

The applied substitution method follows ANSI/TIA/EIA-603, ANSI/TIA/EIA-102.CAAA or the appropriate ETSI rules respectively.
The actual signal generated by the EUT can be determined by means of a substitution measurement in which a known signal source replaces the device to be measured.



1) Signal generator;
2) Substitution antenna;
3) Test antenna;
4) Spectrum analyzer or selective voltmeter.

The substitution antenna replaces the transmitter antenna at the same position and in vertical polarization. The frequency of the signal generator shall be adjusted to the measurement frequency. The test antenna shall be raised or lowered, if necessary, to ensure that the maximum signal is still received. The input signal to the substitution antenna shall be adjusted in level until an equal or a known related level to that detected from the transmitter is obtained in the measurement receiver.
If a fully anechoic chamber is used as test site in order to provide free space conditions there is no need to change the height of the antenna.
The measurement will be repeated in horizontal position.

Calibration:
In order to make this kind of measurement more effective and to avoid subjective measurement faults ETS has installed automatic computer controlled measurement procedures.
With the above described substitution method a test site is calibrated over the full frequency range which is used in suitable frequency steps. For a certain power level on the substitution antenna the received power over the whole frequency range is documented. All necessary antenna gains, cable losses, filter losses and amplifications of preamplifiers are taken in consideration. The summary of this calibration measurement performs a transducer factor that is related to the considered test site and a certain measurement distance. Differences of the radiated power levels of different test samples are determined by internal attenuation of the measurement receiver. The proper function of such test site will be maintained by short term plausibility checks and periodical re-calibration.

Testing:
Now the test sample will be putted on the table at the defined position and the radiated power will be received and documented by the measurement receiver.
On test sites with ground plane the measurement antenna will be lowered and raised to maximum values at significant frequencies.
For peak power measurements the sample is turned by the turntable over 360 degree in order to find the direction with the maximum radiation or to document the max reading with the MAXHOLD function during the rotation.

5.2 Test results

PCS1900

Radiated Power	
Channel 512	26.31 dBm
Channel 661	27.04 dBm
Channel 810	27.00 dBm

GSM 850

Radiated Power	
Channel 128	22.67 dBm
Channel 188	27.06 dBm
Channel 251	28.67 dBm

Comment: see attached diagrams

6 Modulation Deviation Limiting, FCC 2.1047

Comment: not tested

7 Audio Filter Characteristics, FCC 22.915(d)

Comment: not tested

8 Emission Limitations FCC 22.917(b)(d)

Comment: not tested

9 Occupied Bandwidth, FCC 22.917(b)(d); FCC 2.1049

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power.
The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

9.1 Test procedure

The RF output of the transceiver was connected to the input of the spectrum analyzer through sufficient attenuation.
Occupied Bandwidth was measured with a occupied bandwidth function of the analyzer.
To find the Emission Bandwidth (-26 dB) the delta markers were set -26 dB below transmitter power.

9.2 Test Results

PCS1900

	Occupied Channel Bandwidth	Emission Bandwidth
Channel 512	246.493 kHz	316.633 kHz
Channel 661	248.497 kHz	314.629 kHz
Channel 810	244.489 kHz	314.629 kHz

GSM 850

	Occupied Channel Bandwidth	Emission Bandwidth
Channel 128	248.497 kHz	312.625 kHz
Channel 188	248.497 kHz	310.621 kHz
Channel 251	246.493 kHz	316.633 kHz

Comment: See attached diagrams in appendix.

10 Out of Band Emissions at Antenna Terminals, 24.238(a)

Comment: not tested

11 Spurious Radiation, FCC 2.1053

11.1 Test procedure

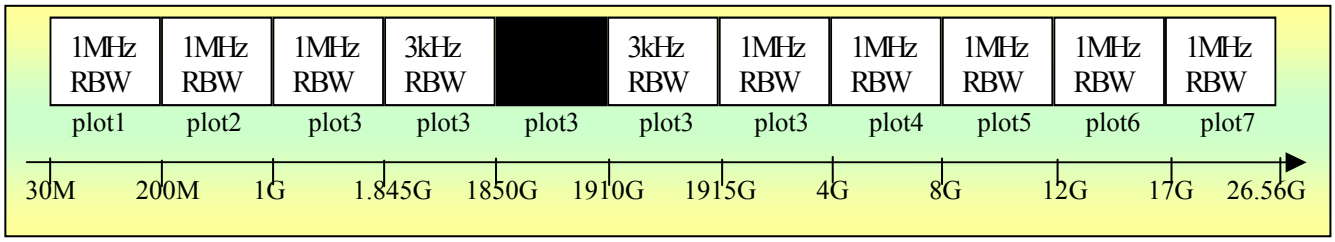
The EUT was positioned on a non-conductive turntable, 0.8 m above the ground plane.
The radiated emission at the fundamental frequency was measured at 3 m distance with a test antenna and spectrum analyzer.

Worst case emission was recorded with the rotation of the turntable and the raising and lowering of the test antenna.

ERP was measured using a substitution method. The EUT was replaced by horn antenna connected to a signal generator.

The frequency range up to tenth harmonic was investigated.

The tests of spurious radiated emission have been carried out with the EKS-Software from Rode & Schwarz.



The analyzer gives automatic the measurements of spectral plots to the EKS software.

In the 1st 1 MHz band outside the band edge nearest the channel of interest a 3 kHz res. BW is used.
The measurements from 30 MHz to 1845 GHz and 1915 GHz to 26.56 GHz were performed with a measurement bandwidth of 1 MHz.

11.2 Test Results

The radiated spurious emissions were measured for channel 512, channel 661 and channel 810, respectively the upper, center, and lower frequencies of the USPCS band (1850.2 MHz, 1880.0 MHz and 1909.8 MHz).
The measurement diagrams show that all significant spurs are well below the limit line.

11.3 Purpose

The measurements of the spurious emissions at the equipment output terminals were performed pursuant to § 2.1053 in order to verify that any emissions are below the limits given by § 24.238.

Calculation of test results:

Such factors like antenna correction, cable loss, external attenuation etc. are already included in the provided measurement results. This is done by using validated test software and calibrated test system according the accreditation requirements.

The peak and average spurious emission plots was measured with the average limits.
In the Table being listed the critical peak and average value an exhibit the compliance with the above calculated Limits.

PCS 1900

Summary table with radiated data of the test plots for Carrier Test Frequency 1850.2 MHz

Spectral Plot	Frequency Marker Indication [MHz]	Indication Power Level [dBm]	External Attn. [dB]	Worst Case Emission Level [dBm]	Compliance Limit [dBm]	Results
vertical	185,691	-61,32	0	-61,32	-13	-48,32
horizontal	63,727	-61,73	0	-61,73	-13	-48,73
vertical	998,397	-48,14	0	-48,14	-13	-35,14
horizontal	854,108	-47	0	-47	-13	-34
vertical	1.850,000	-21,93	0	-21,93	-13	-8,93
horizontal	1.850,000	-22,6	0	-22,6	-13	-9,6
vertical	7.575,000	-42,79	0	-42,79	-13	-29,79
horizontal	5.547,000	-39,82	0	-39,82	-13	-26,82
vertical	10.822,000	-37,89	0	-37,89	-13	-24,89
horizontal	10.733,000	-36,8	0	-36,8	-13	-23,8
vertical	17.880,000	-28,57	0	-28,57	-13	-15,57
horizontal	17.435,000	-28,46	0	-28,46	-13	-15,46
vertical	18.426,000	-32,78	0	-32,78	-13	-19,78
horizontal	18.494,000	-33,07	0	-33,07	-13	-20,07

Summary table with radiated data of the test plots for Carrier Test Frequency 1880.0 MHz

Spectral Plot	Frequency Marker Indication [MHz]	Indication Power Level [dBm]	External Attn.[dB]	Worst Case Emission Level [dBm]	Compliance Limit [dBm]	Results
vertical	187,395	-61,27	0	-61,27	-13	-48,27
horizontal	193,868	-61,19	0	-61,19	-13	-48,19
vertical	985,571	-47,93	0	-47,93	-13	-34,93
horizontal	857,315	-46,04	0	-46,04	-13	-33,04
vertical	3.950,000	-28,86	0	-28,86	-13	-15,86
horizontal	3.762,000	-28,37	0	-28,37	-13	-15,37
vertical	7.527,000	-36,14	0	-36,14	-13	-23,14
horizontal	7.519,000	-37,93	0	-37,93	-13	-24,93
vertical	10.733,000	-37,99	0	-37,99	-13	-24,99
horizontal	10.725,000	-36,43	0	-36,43	-13	-23,43
vertical	17.435,000	-27,7	0	-27,7	-13	-14,7
horizontal	17.856,000	-27,95	0	-27,95	-13	-14,95
vertical	20.879,000	-32,76	0	-32,76	-13	-19,76
horizontal	18.460,000	-32,49	0	-32,49	-13	-19,49

Summary table with radiated data of the test plots for Carrier Test Frequency 1909.8 MHz

Spectral Plot	Frequency Marker Indication [MHz]	Indication Power Level [dBm]	External Attn.[dB]	Worst Case Emission Level [dBm]	Compliance Limit [dBm]	Results
vertical	188,076	-60,84	0	-60,84	-13	-47,84
horizontal	74,970	-61,64	0	-61,64	-13	-48,64
vertical	998,397	-47,65	0	-47,65	-13	-34,65
horizontal	860,521	-46,79	0	-46,79	-13	-33,79
vertical	1.910,000	-20,87	0	-20,87	-13	-7,87
horizontal	1.910,000	-23,08	0	-23,08	-13	-10,08
vertical	7.639,000	-38,8	0	-38,8	-13	-25,8
horizontal	7.639,000	-35,62	0	-35,62	-13	-22,62
vertical	10.774,000	-37,6	0	-37,6	-13	-24,6
horizontal	10.669,000	-37,35	0	-37,35	-13	-24,35
vertical	17.856,000	-28,03	0	-28,03	-13	-15,03
horizontal	17.435,000	-27,7	0	-27,7	-13	-14,7
vertical	20.862,000	-32,27	0	-32,27	-13	-19,27
horizontal	18.426,000	-32,46	0	-32,46	-13	-19,46

Limits

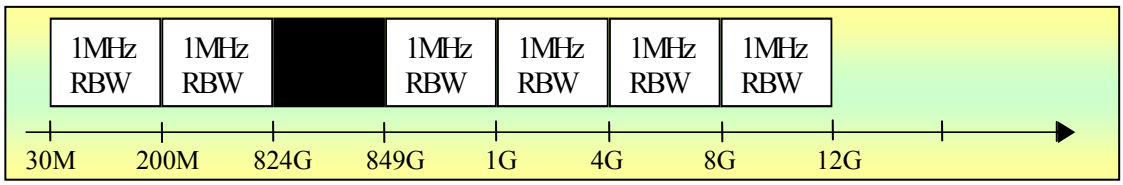
Compliance with § 24.238 requires that any emission be attenuated below the transmitter power by at least 43 + 10 $\log_{10}$ P (P = transmitter power in Watts).

The compliance limit was calculated as per the following table:

Maximum transmitter output power	0.506 W = 27.04 dBm
Required attenuation	43 + 10 $\log_{10}$ 0.736 W = 40.04 dB
Maximum transmitter output power Required attenuation Compliance limit	27.04 dBm -40.04 dB -13 dBm

Comment: See attached diagrams in appendix.

Measurement procedure and results
The tests of spurious radiated emission have been carried out with the EKS-Software from Rohde & Schwarz.



The analyzer gives automatic the measurements of plots to the EKS software.

The measurements from 30 MHz to 824 GHz and 849 GHz to 12 GHz were performed with a measurement bandwidth of 1 MHz.

Purpose
The measurements of the spurious emissions at the equipment output terminals were performed pursuant to § 2.1053 in order to verify that any emissions are below the limits given by § 22.917.

Calculation of test results:

Such factors like antenna correction, cable loss, external attenuation etc. are already included in the provided measurement results. This is done by using validated test software and calibrated test system according the accreditation requirements.

The peak and average spurious emission plots was measured with the average limits.
In the Table being listed the critical peak and average value an exhibit the compliance with the above calculated Limits.

Summary table with radiated data of the test plots for Carrier Test Frequency 824,2 MHz

Spectral Plot	Frequency Marker Indication [MHz]	Indication Power Level [dBm]	External Attn. [dB]	Worst Case Emission Level [dBm]	Compliance Limit [dBm]	Results
vertical	193,527	-60,93	0	-60,93	-13	-47,93
horizontal	199,659	-42,35	0	-42,35	-13	-29,35
vertical	824,000	-44,41	0	-44,41	-13	-31,41
horizontal	824,000	-24,71	0	-24,71	-13	-11,71
vertical	3.892,000	-29,38	0	-29,38	-13	-16,38
horizontal	3.994,000	-29,24	0	-29,24	-13	-16,24
vertical	7.567,000	-42,6	0	-42,6	-13	-29,6
horizontal	6.589,000	-39,21	0	-39,21	-13	-26,21
vertical	11.142,000	-38,12	0	-38,12	-13	-25,12
horizontal	10.693,000	-35,13	0	-35,13	-13	-22,13

Summary table with radiated data of the test plots for Carrier Test Frequency 836,2 MHz

Spectral Plot	Frequency Marker Indication [MHz]	Indication Power Level [dBm]	External Attn.[dB]	Worst Case Emission Level [dBm]	Compliance Limit [dBm]	Results
vertical	194,890	-61,33	0	-61,33	-13	-48,33
horizontal	77,695	-42,92	0	-42,92	-13	-29,92
vertical	912,810	-46,23	0	-46,23	-13	-33,23
horizontal	867,459	-27,85	0	-27,85	-13	-14,85
vertical	3.922,000	-29,01	0	-29,01	-13	-16,01
horizontal	3.976,000	-29,48	0	-29,48	-13	-16,48
vertical	7.463,000	-42,36	0	-42,36	-13	-29,36
horizontal	7.984,000	-39,6	0	-39,6	-13	-26,6
vertical	10.733,000	-38,07	0	-38,07	-13	-25,07
horizontal	10.677,000	-35,27	0	-35,27	-13	-22,27

Summary table with radiated data of the test plots for Carrier Test Frequency 848,8 MHz

Spectral Plot	Frequency Marker Indication [MHz]	Indication Power Level [dBm]	External Attn.[dB]	Worst Case Emission Level [dBm]	Compliance Limit [dBm]	Results
vertical	196,934	-61,05	0	-61,05	-13	-48,05
horizontal	193,186	-43,22	0	-43,22	-13	-30,22
vertical	849,020	-35,44	0	-35,44	-13	-22,44
horizontal	849,010	-22,15	0	-22,15	-13	-9,15
vertical	3.922,000	-29,9	0	-29,9	-13	-16,9
horizontal	3.970,000	-29,58	0	-29,58	-13	-16,58
vertical	7.567,000	-42,52	0	-42,52	-13	-29,52
horizontal	8.000,000	-39,56	0	-39,56	-13	-26,56
vertical	10.806,000	-37,88	0	-37,88	-13	-24,88
horizontal	10.717,000	-35,22	0	-35,22	-13	-22,22

Limits

Compliance with § 22.917 requires that any emission be attenuated below the transmitter power by at least 43 + 10 $\log_{10}$ P (P = transmitter power in Watts).

The compliance limit was calculated as per the following table:

Maximum transmitter output power	0.736 W = 28.67 dBm
Required attenuation	43 + 10 $\log_{10}$ 0.736 W = 41.67 dB
Maximum transmitter output power Required attenuation Compliance limit	28.67 dBm -41.67 dB -13 dBm

12 Line Conducted Emissions, FCC 15.207

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits. Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.
This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.

Test Results

Frequency	Max. Level	
	quasi-peak	average
150 kHz	Lower limit line	Lower limit line

Limits:

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	Quasi Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

Test equipment used: ETS 0003, ETS 0040, ETS 0109, ETS 0125

Comment: see attached diagram.

13 Frequency Stability vs. Temperature, FCC 2.1055, 22.355

13.1 Test Procedure

The equipment under test was connected to an external DC power supply and the RF output was connected to a frequency counter via feed through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable, exited the chamber through an opening made for that purpose.
After the temperature stabilized the frequency output was recorded from the counter.

13.2 Test Results

PCS1900

ϑ / ° C	Frequency Error (Hz)	Frequency Error (ppm)
-30	-29	-0,01543
-20	-19	-0,01011
-10	-31	-0,01649
0	-27	-0,01436
+10	-23	-0,01223
+20	-41	-0,02181
+30	-32	-0,01702
+40	-43	-0,02287
+50	-22	-0,01170

GSM 850

ϑ / ° C	Frequency Error (Hz)	Frequency Error (ppm)
-30	-26	-0,03109
-20	-29	-0,03468
-10	-25	-0,02990
0	-24	-0,02870
+10	-18	-0,02153
+20	-27	-0,03229
+30	-20	-0,02392
+40	-20	-0,02392
+50	-26	-0,03109

Limit: ± 2091 Hz

Note: The measured frequency stability vs. temperature is identical (% difference) in all bands the above table since the Tx frequency is locked to the same TCXO.

14 Frequency Stability vs. Voltage, FCC 2.1055, 22.355

14.1 Test procedure

14.2 Test results

PCS 1900

U_B / V	Frequency Error (Hz)	Frequency Error (ppm)
4,20	-41	-0,02181
4,00	-42	-0,02234
3,80	-41	-0,02181
3,60	-40	-0,02128
3,40	-40	-0,02128
3,20	-42	-0,02234

GSM 850

U_B / V	Frequency Error (Hz)	Frequency Error (ppm)
4,20	-27	-0,03229
4,00	-27	-0,03229
3,80	-25	-0,02990
3,60	-37	-0,04425
3,40	-41	-0,04903
3,20	-44	-0,05262

Appendix

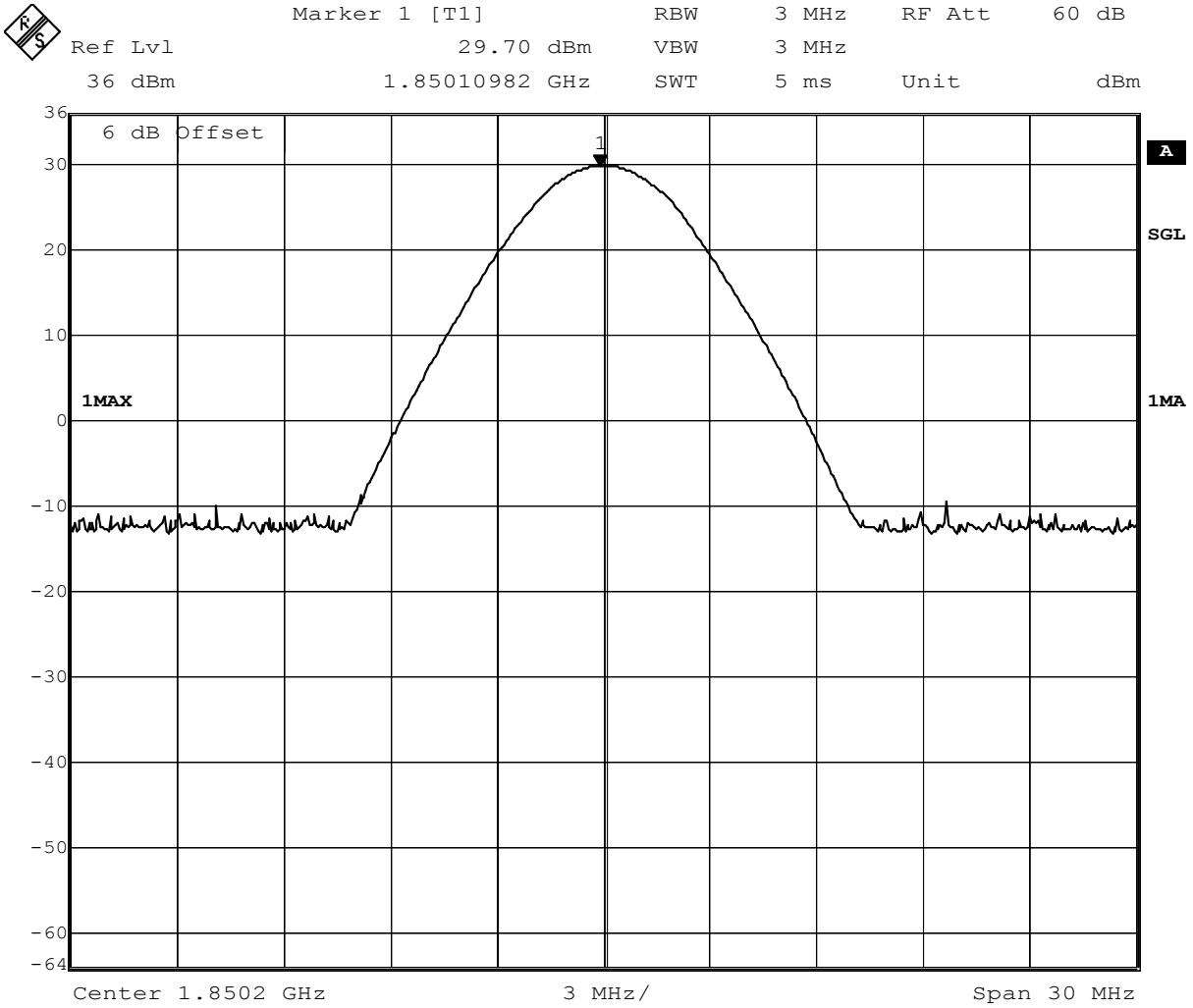
A Pictures
B RF Power Output
C ERP, EIRP
D Modulation Requirements
E Audio Filter Characteristics
F Emission Limitation
G Occupied Bandwidth
H Out of Band Emission at Antenna Terminals Mobile Emissions In Base Frequency Range
I Spurious Radiation
J Line Conducted Emissions
K Frequency Stability vs. Temperature
L Frequency Stability vs. Voltage

Appendix B

RF Power Output

FCC Part 24 E
Output power conducted

EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23 °C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 24 Subpart E - Broadband PCS
Test Case	Channel: 512
Comment 1	
Comment 2	

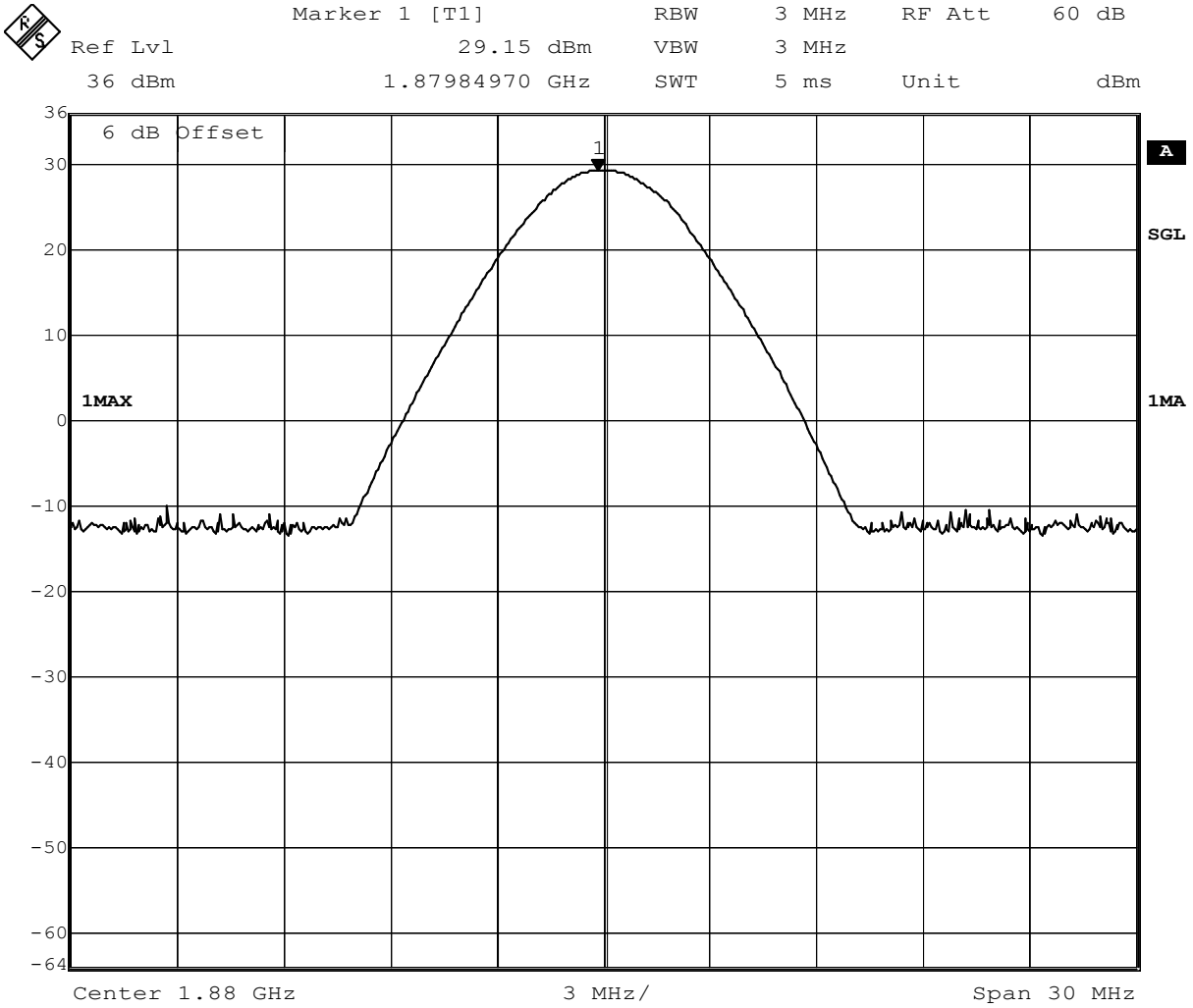


Date: 11.MAY.2006 08:15:51

Measurement diagram

FCC Part 24 E
Output power conducted

EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 24 Subpart E - Broadband PCS
Test Case	Channel: 661
Comment 1	
Comment 2	



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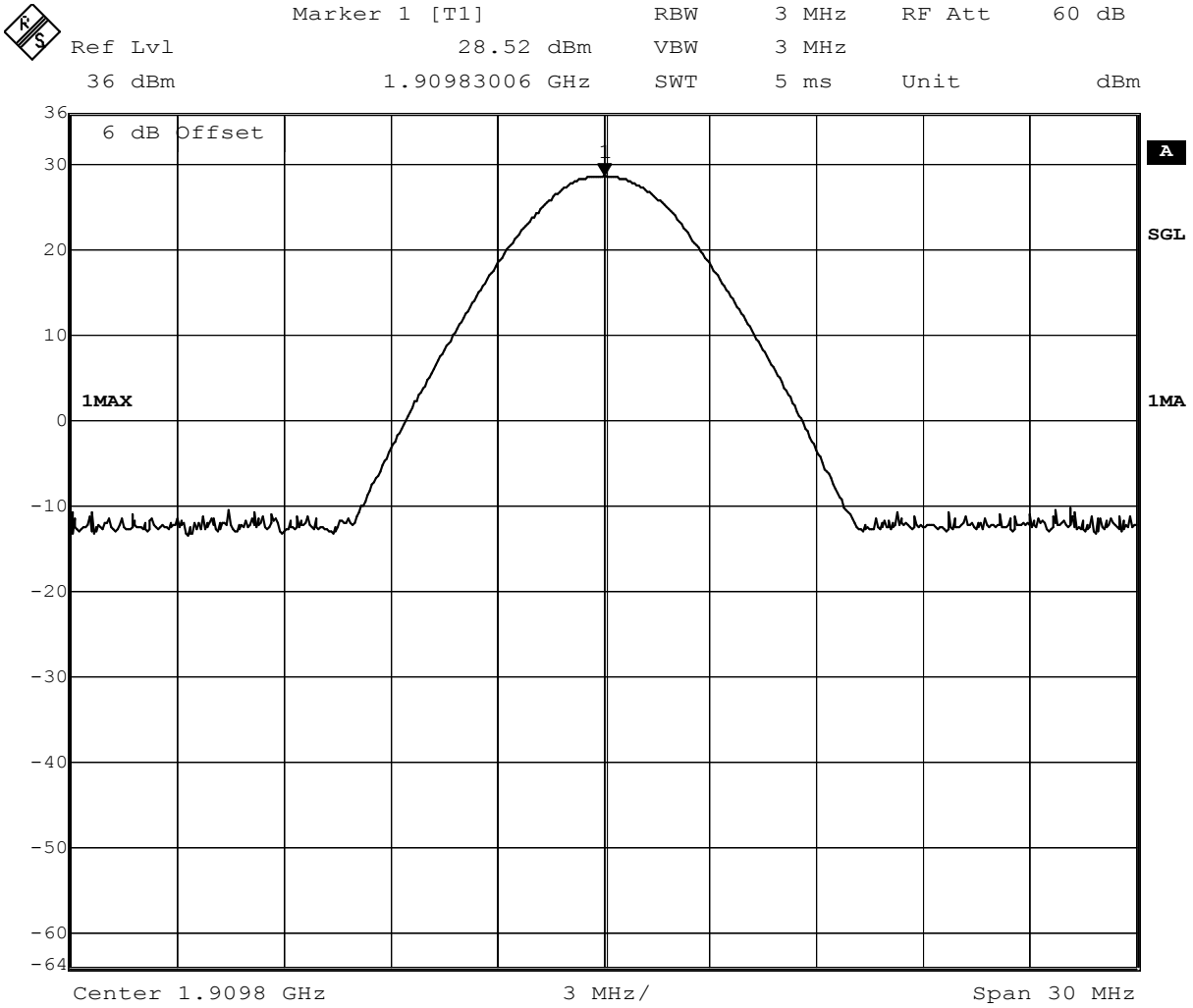
FCC Part 24 E
Output power conducted

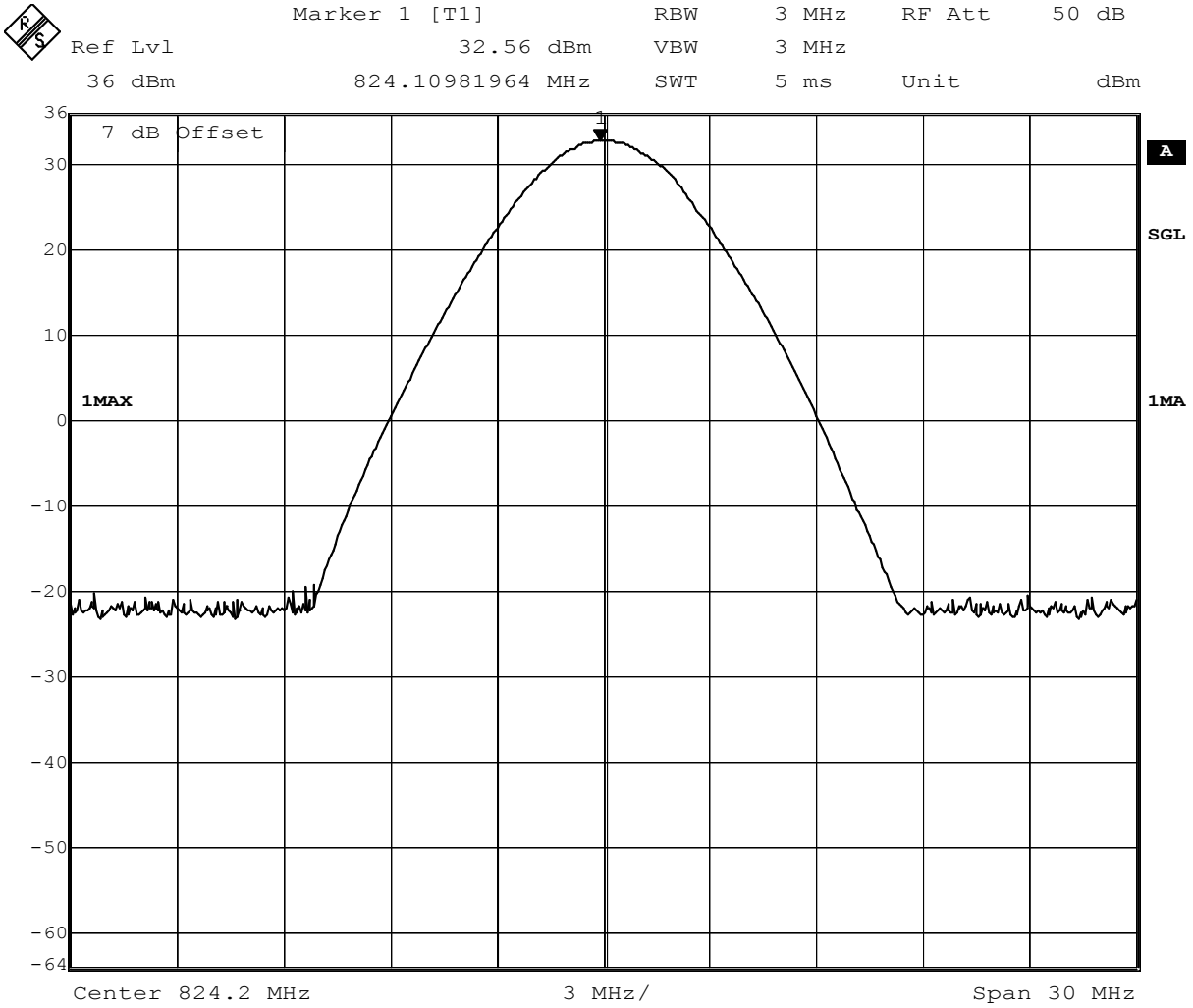
EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 24 Subpart E - Broadband PCS
Test Case	Channel: 810
Comment 1	
Comment 2	



Date: 11.MAY.2006 08:14:29

FCC Part 22 H
Output power conducted

EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 22 Subpart H - Cellular Radiotelephone Service
Test Case	Channel: 128
Comment 1	
Comment 2	

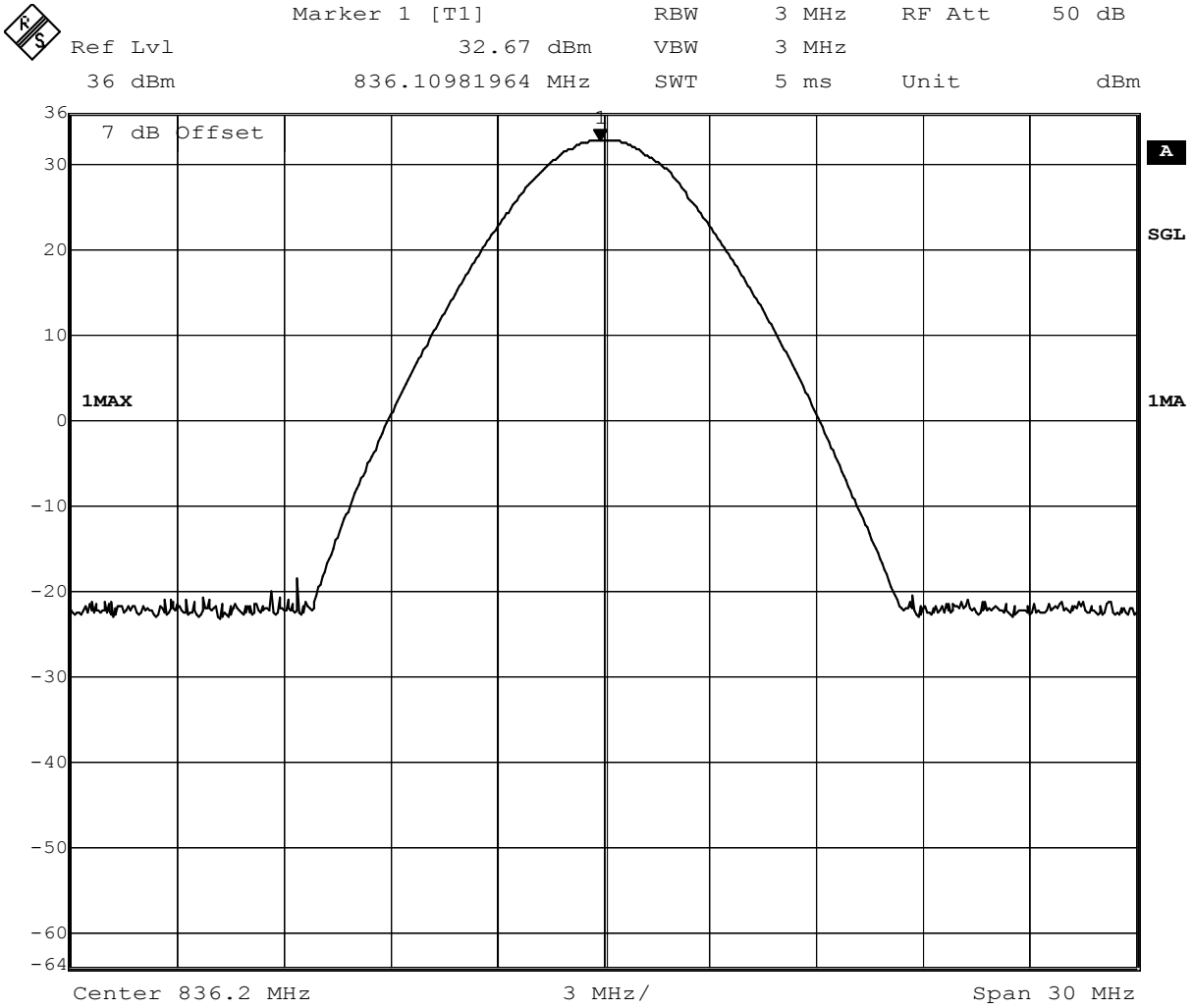


Date: 11.MAY.2006 07:20:33

Measurement diagram

FCC Part 22 H
Output power conducted

EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 22 Subpart H - Cellular Radiotelephone Service
Test Case	Channel: 188
Comment 1	
Comment 2	

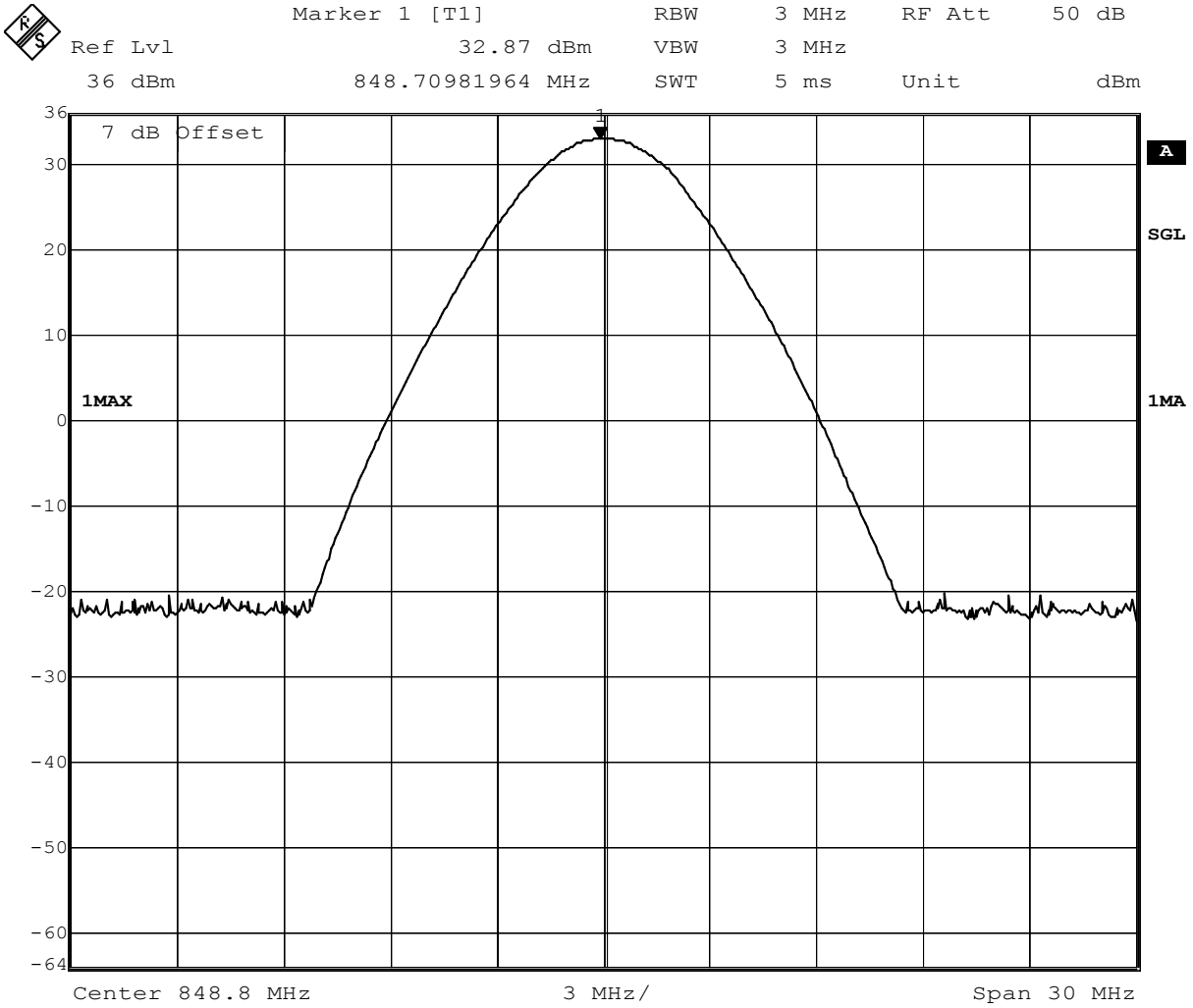


Date: 11.MAY.2006 07:19:56

Measurement diagram

FCC Part 22 H
Output power conducted

EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 22 Subpart H - Cellular Radiotelephone Service
Test Case	Channel: 251
Comment 1	
Comment 2	



Date: 11.MAY.2006 07:19:19

Measurement diagram

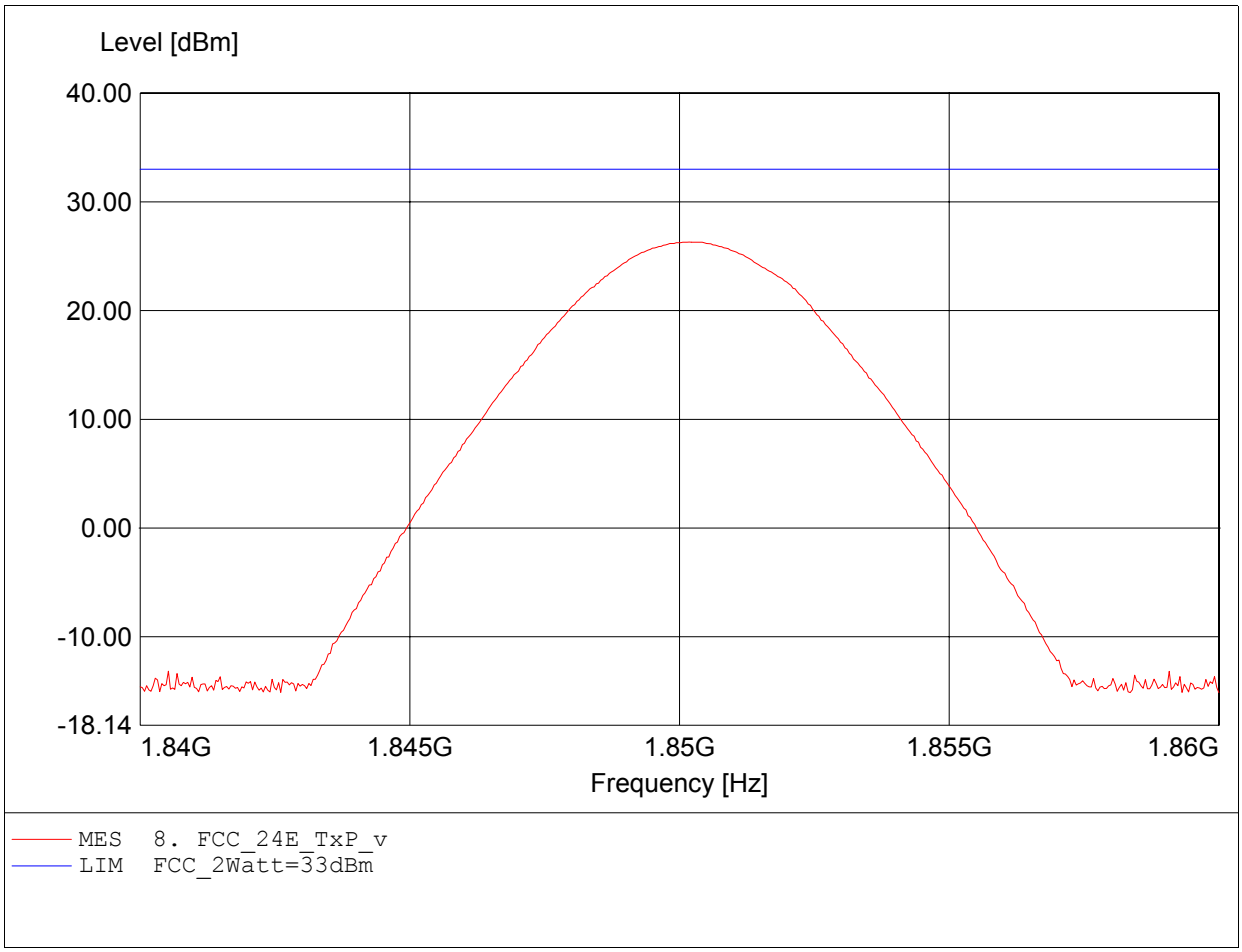
Appendix C

ERP, EIRP

Equivalent Isotropically Radiated Power

FCC RULES PART 24 SUBPART E

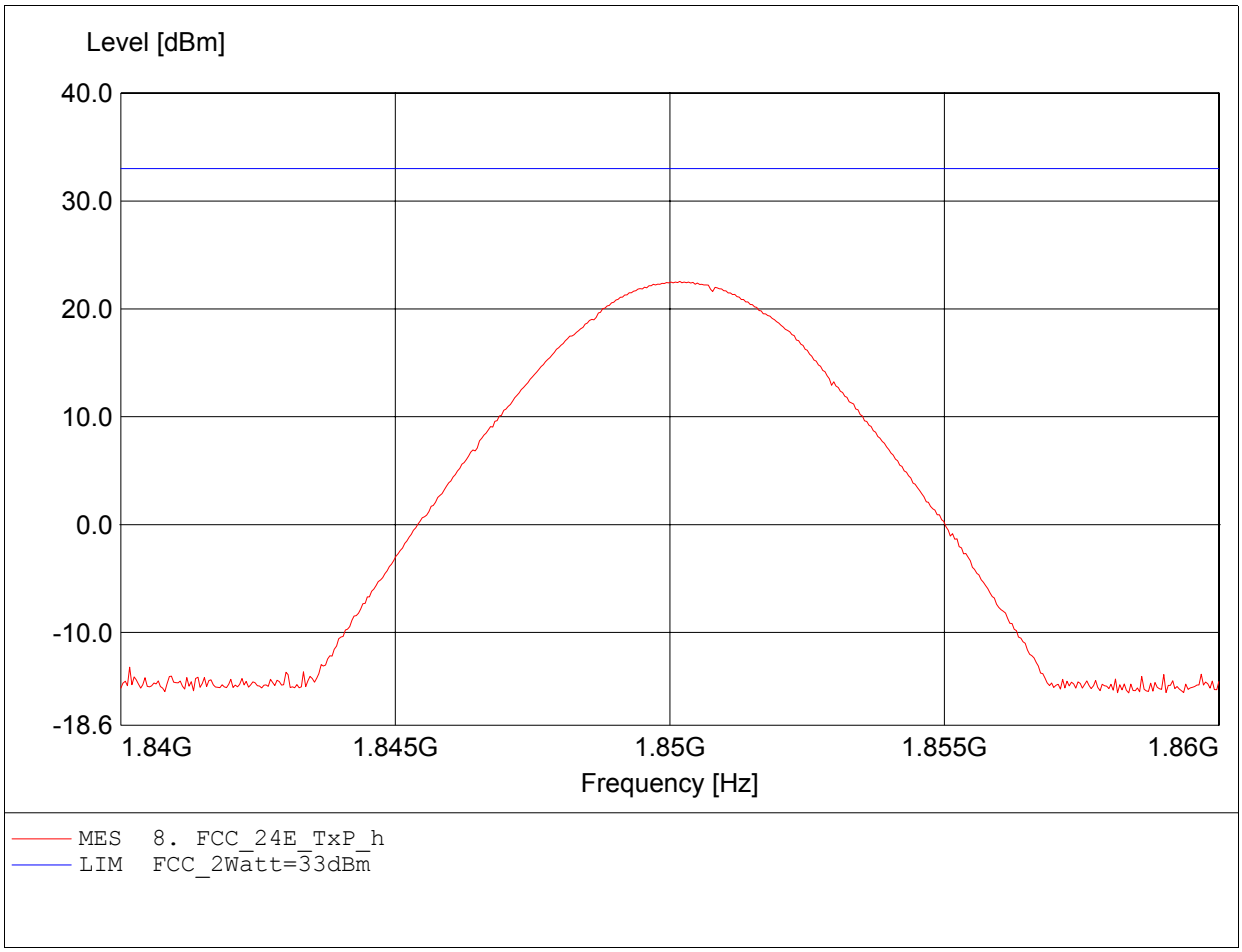
Approval Holder:	Pantech Co. Ltd.
EUT:	Dual Band GSM 850/ PCS 1900 (with WAP & GPRS)
Model / Channel:	PG-1910 / 512
Test Site / Operator:	ETS / Mr. Heide
Temperature/ Voltage:	23°C / Unom.: 4.20 V DC
Test Specification:	according to §24.232
Comment 1:	Dist.: 3m, Ant.: HL025,PCL 0
Comment 2:	Freq: 1.850GHz, Pmax: 26.31dBm, RBW: 3MHz



Equivalent Isotropically Radiated Power

FCC RULES PART 24 SUBPART E

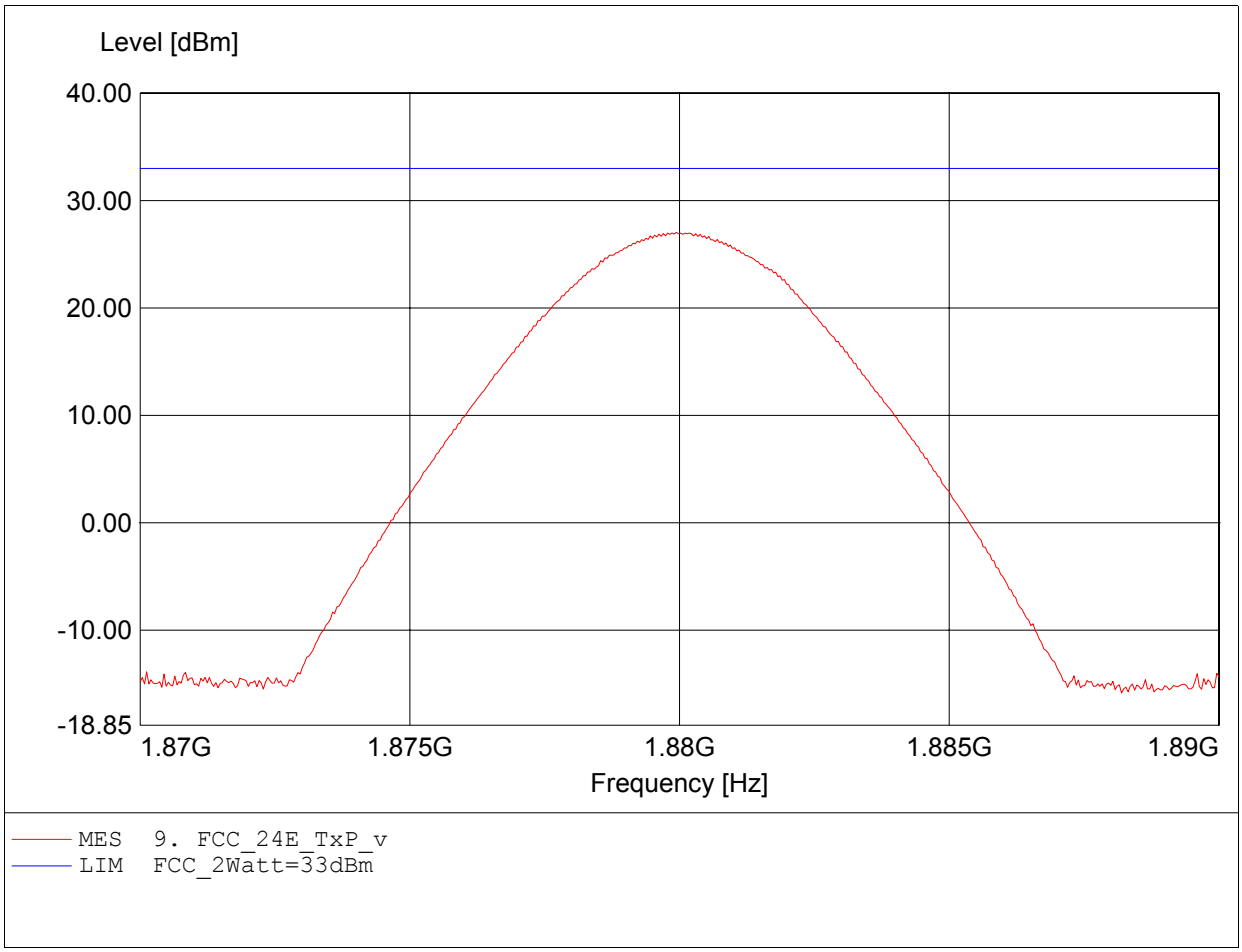
Approval Holder:	Pantech Co. Ltd.
EUT:	Dual Band GSM 850/ PCS 1900 (with WAP & GPRS)
Model / Channel:	PG-1910 / 661
Test Site / Operator:	ETS / Mr. Heide
Temperature/ Voltage:	23°C / Unom.: 4.20 V DC
Test Specification:	according to §24.232
Comment 1:	Dist.: 3m, Ant.: HL025,PCL 0
Comment 2:	Freq: 1.850GHz, Pmax: 22.55dBm, RBW: 3MHz



Equivalent Isotropically Radiated Power

FCC RULES PART 24 SUBPART E

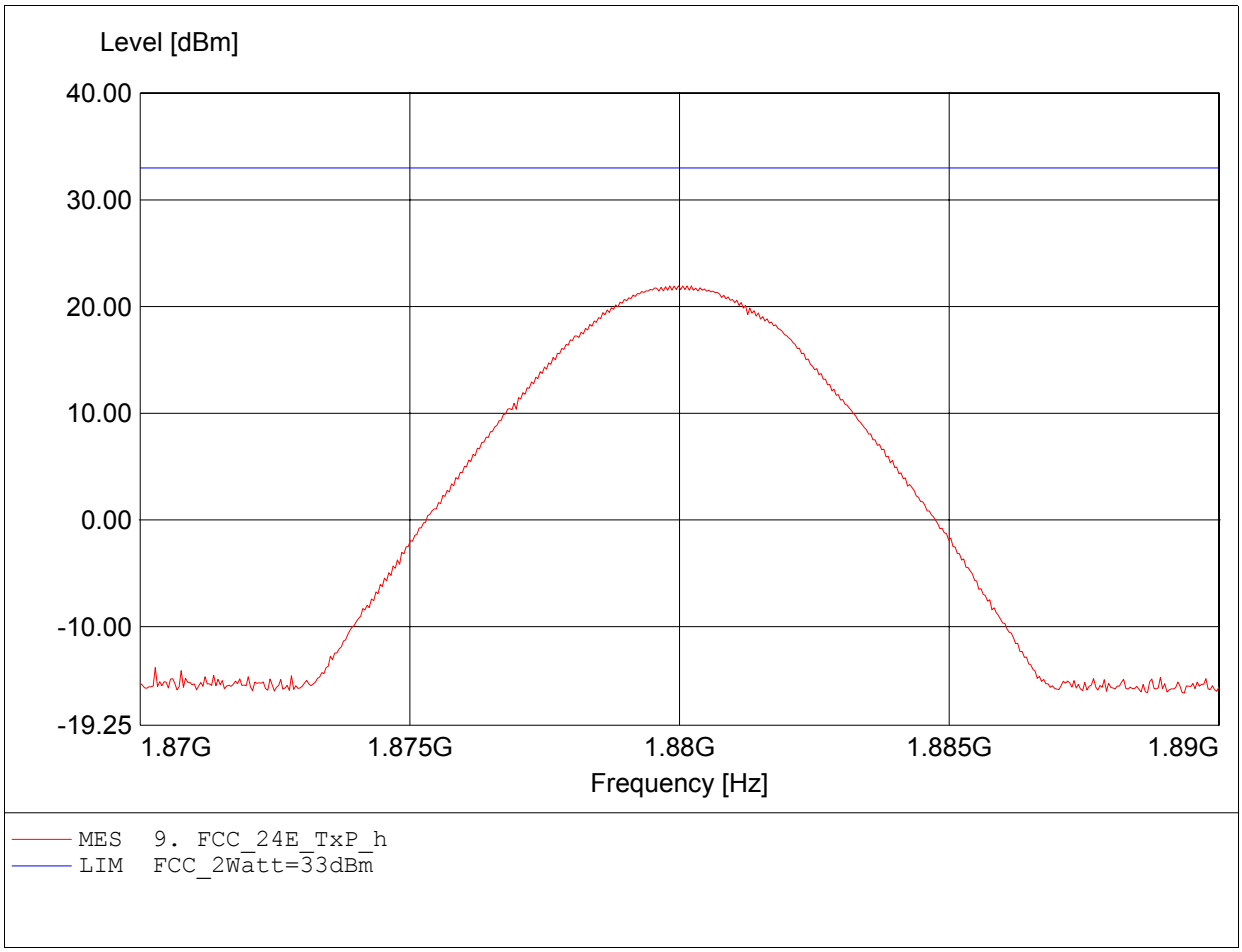
Approval Holder:	Pantech Co. Ltd.
EUT:	Dual Band GSM 850/ PCS 1900 (with WAP & GPRS)
Model / Channel:	PG-1910 / 512
Test Site / Operator:	ETS / Mr. Heide
Temperature/ Voltage:	23°C / Unom.: 4.20 V DC
Test Specification:	according to §24.232
Comment 1:	Dist.: 3m, Ant.: HL025,PCL 0
Comment 2:	Freq: 1.880GHz, Pmax: 27.04dBm, RBW: 3MHz



Equivalent Isotropically Radiated Power

FCC RULES PART 24 SUBPART E

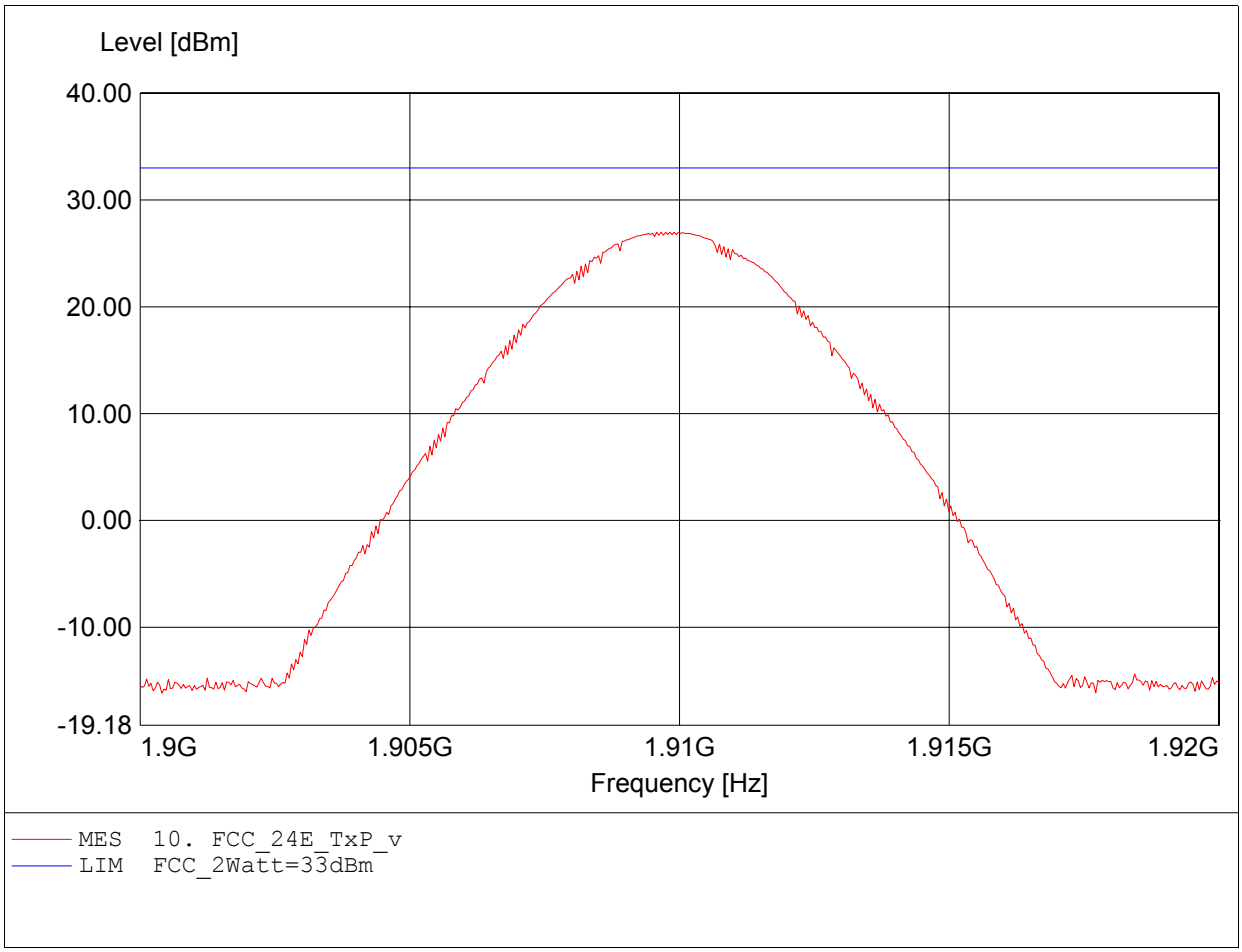
Approval Holder:	Pantech Co. Ltd.
EUT:	Dual Band GSM 850/ PCS 1900 (with WAP & GPRS)
Model / Channel:	PG-1910 / 810
Test Site / Operator:	ETS / Mr. Heide
Temperature/ Voltage:	23°C / Unom.: 4.20 V DC
Test Specification:	according to §24.232
Comment 1:	Dist.: 3m, Ant.: HL025,PCL 0
Comment 2:	Freq: 1.880GHz, Pmax: 21.93dBm, RBW: 3MHz



Equivalent Isotropically Radiated Power

FCC RULES PART 24 SUBPART E

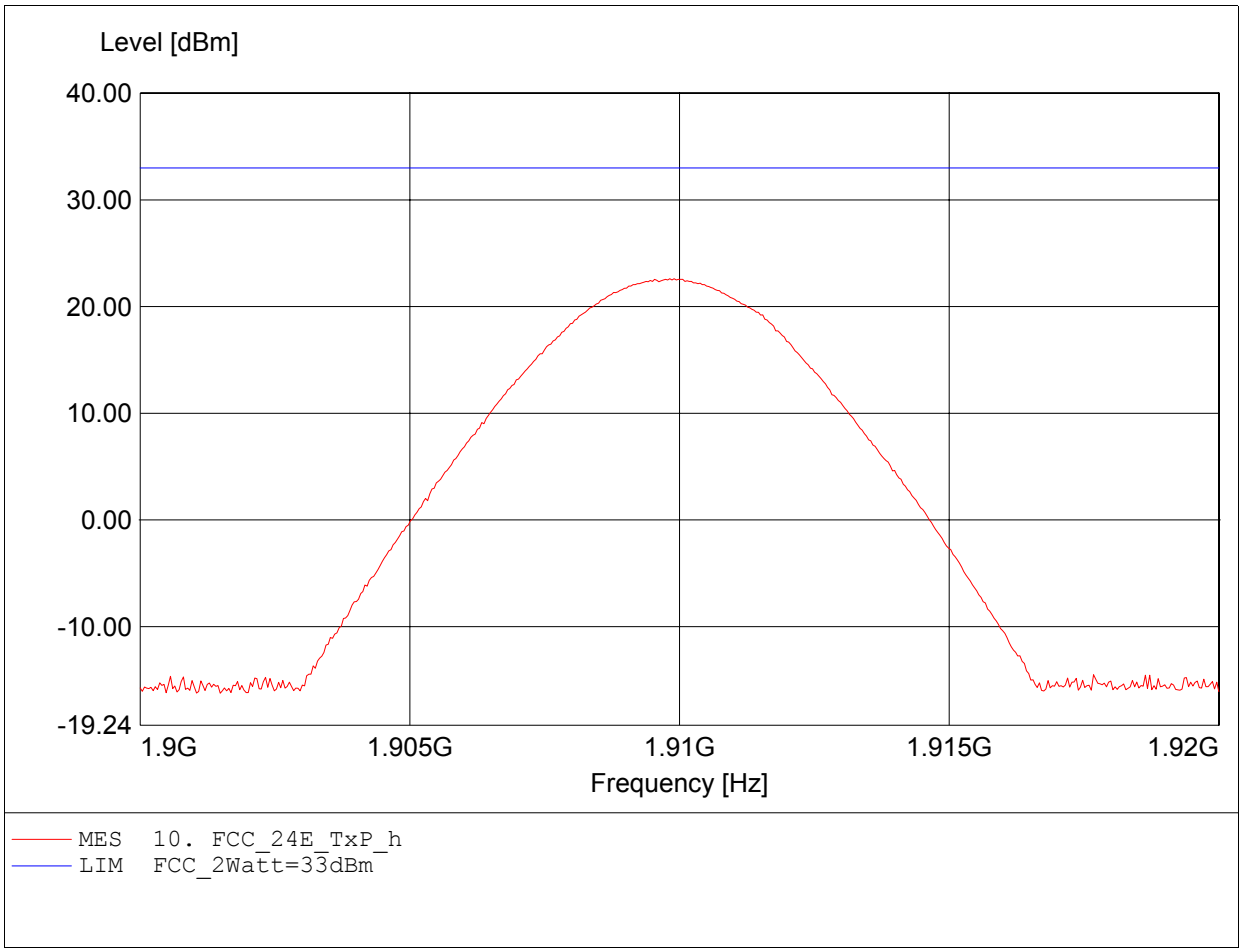
Approval Holder:	Pantech Co. Ltd.
EUT:	Dual Band GSM 850/ PCS 1900 (with WAP & GPRS)
Model / Channel:	PG-1910 / 810
Test Site / Operator:	ETS / Mr. Heide
Temperature/ Voltage:	23°C / Unom.: 4.20 V DC
Test Specification:	according to §24.232
Comment 1:	Dist.: 3m, Ant.: HL025,PCL 0
Comment 2:	Freq: 1.910GHz, Pmax: 27.00dBm, RBW: 3MHz



Equivalent Isotropically Radiated Power

FCC RULES PART 24 SUBPART E

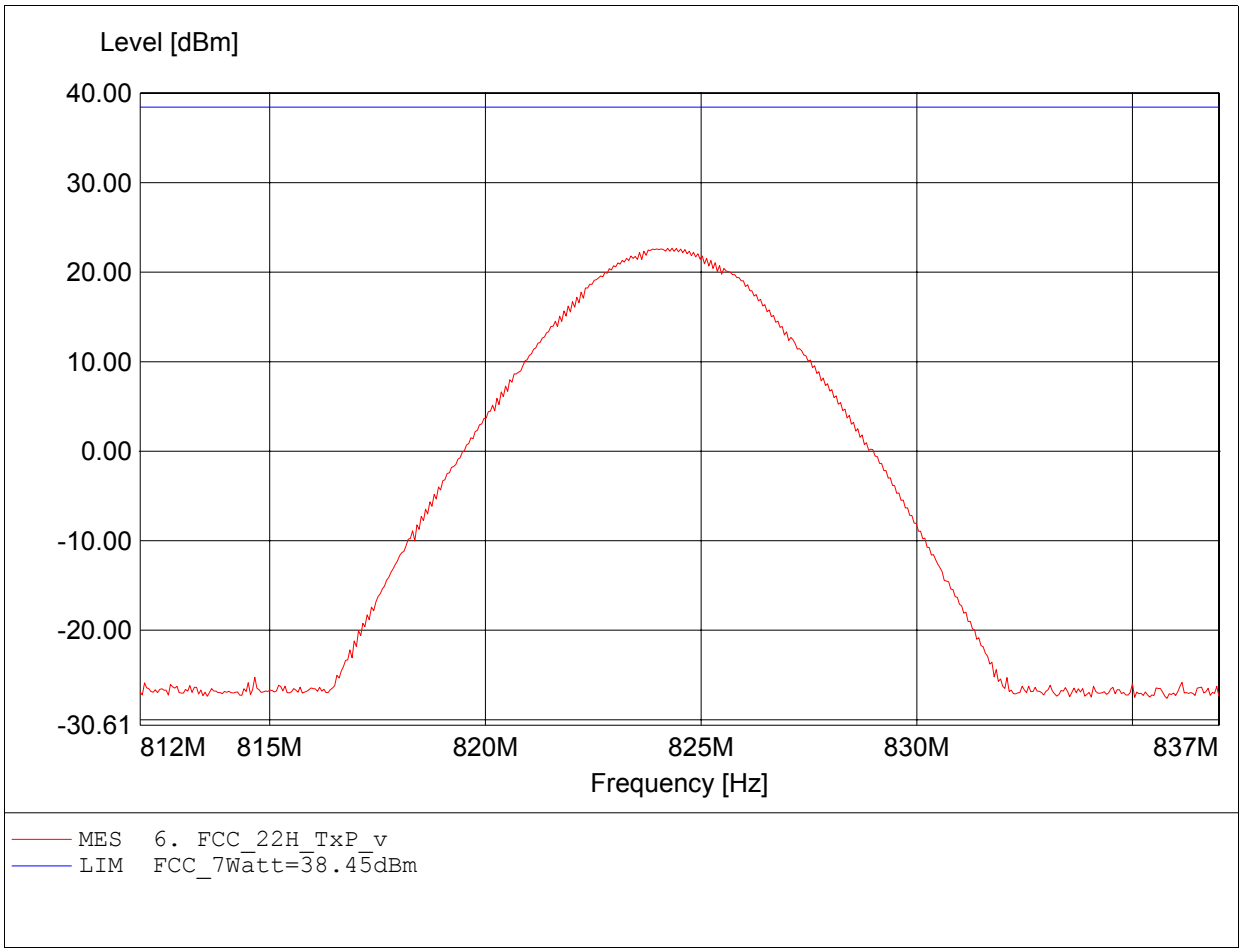
Approval Holder:	Pantech Co. Ltd.
EUT:	Dual Band GSM 850/ PCS 1900 (with WAP & GPRS)
Model / Channel:	PG-1910 / 810
Test Site / Operator:	ETS / Mr. Heide
Temperature/ Voltage:	23°C / Unom.: 4.20 V DC
Test Specification:	according to §24.232
Comment 1:	Dist.: 3m, Ant.: HL025,PCL 0
Comment 2:	Freq: 1.910GHz, Pmax: 22.61dBm, RBW: 3MHz



Effective Radiated Power

FCC RULES PART 22 SUBPART H

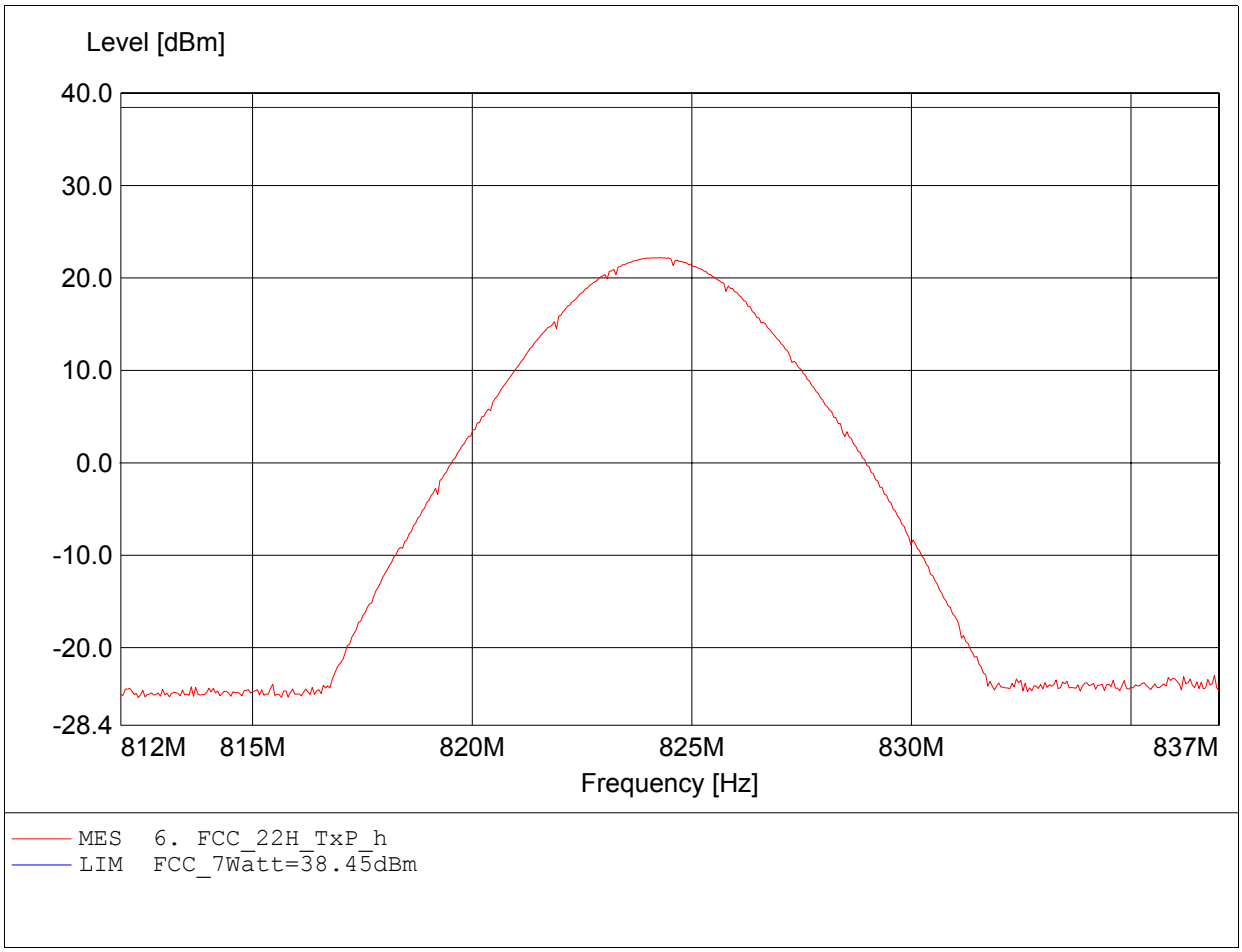
Approval Holder:	Pantech Co. Ltd.
EUT:	Dual Band GSM 850/ PCS 1900 (with WAP & GPRS)
Model / Channel:	PG-1910 / 128
Test Site / Operator:	ETS / Mr. Heide
Temperature/ Voltage:	23°C / Unom.: 4.20 V DC
Test Specification:	according to §22.913
Comment 1:	Dist.: 3m, Ant.: HL223
Comment 2:	Freq: 824.325MHz, Pmax: 22.67dBm, RBW: 3MHz



Effective Radiated Power

FCC RULES PART 22 SUBPART H

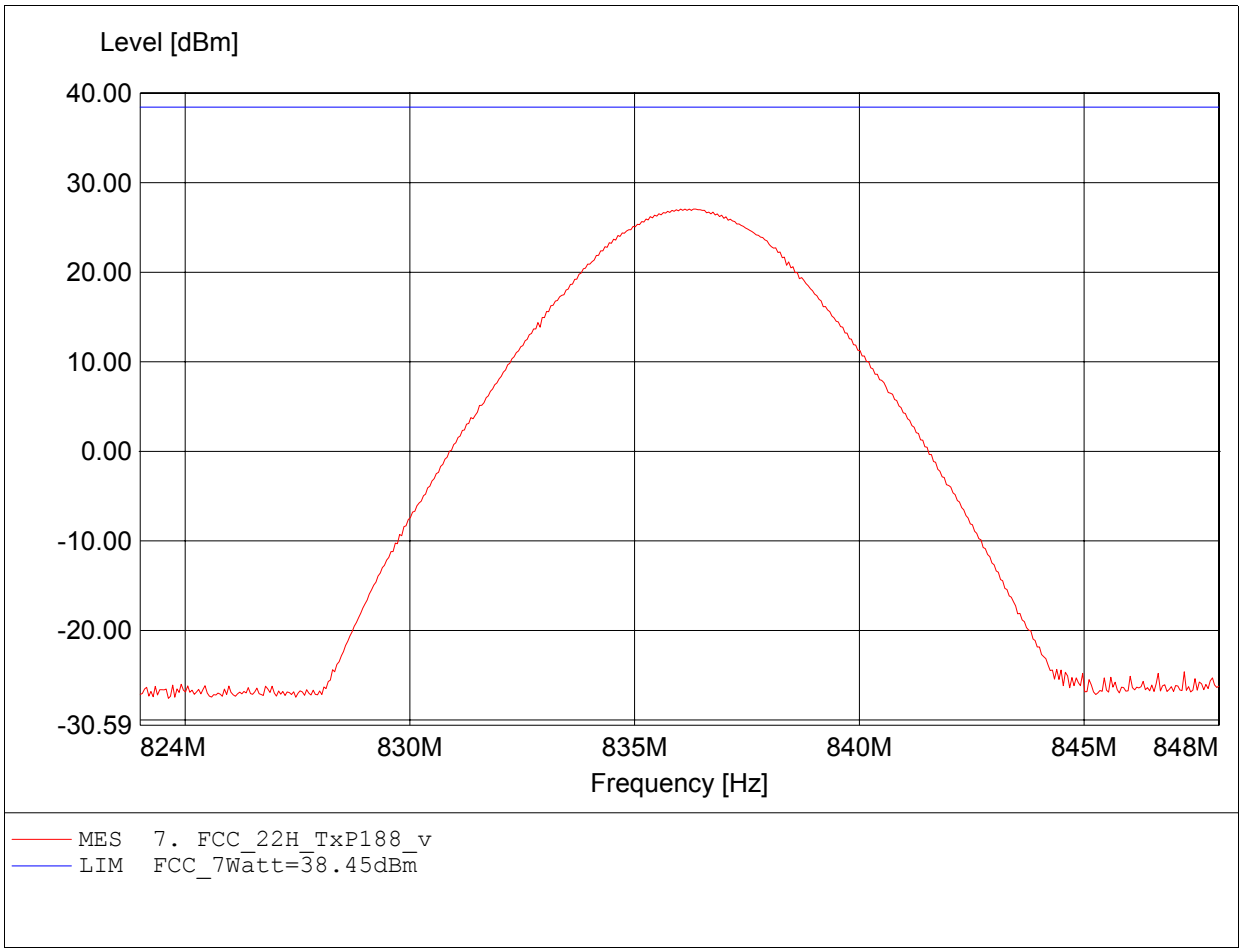
Approval Holder:	Pantech Co. Ltd.
EUT:	Dual Band GSM 850/ PCS 1900 (with WAP & GPRS)
Model / Channel:	PG-1910 / 128
Test Site / Operator:	ETS / Mr. Heide
Temperature/ Voltage:	23°C / Unom.: 4.20 V DC
Test Specification:	according to §22.913
Comment 1:	Dist.: 3m, Ant.: HL223
Comment 2:	Freq: 824.275MHz, Pmax: 22.21dBm, RBW: 3MHz



Effective Radiated Power

FCC RULES PART 22 SUBPART H

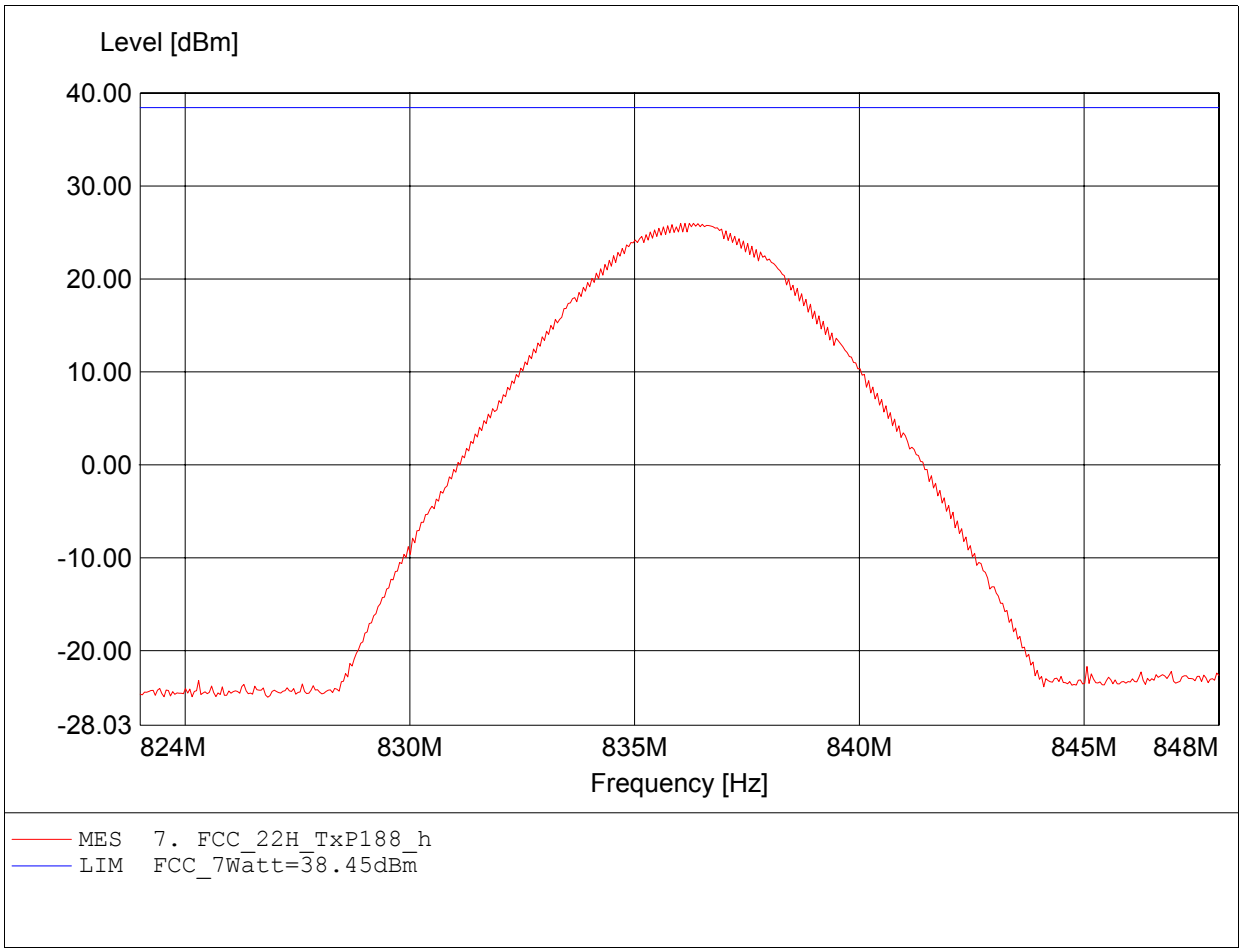
Approval Holder:	Pantech Co. Ltd.
EUT:	Dual Band GSM 850/ PCS 1900 (with WAP & GPRS)
Model / Channel:	PG-1910 / 188
Test Site / Operator:	ETS / Mr. Heide
Temperature/ Voltage:	23°C / Unom.: 4.20 V DC
Test Specification:	according to §22.913
Comment 1:	Dist.: 3m, Ant.: HL223
Comment 2:	Freq: 836.120MHz, Pmax: 27.06dBm, RBW: 3MHz



Effective Radiated Power

FCC RULES PART 22 SUBPART H

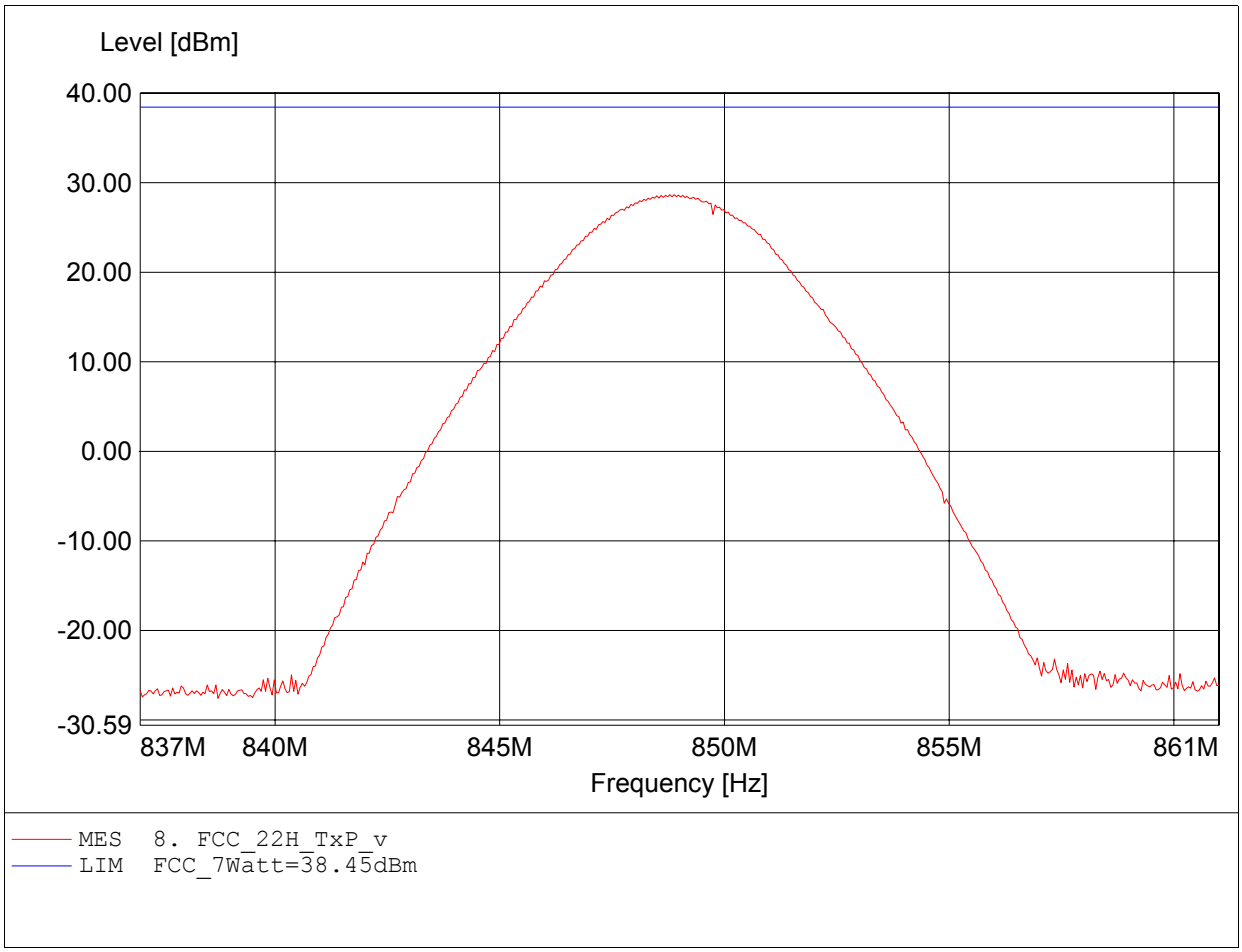
Approval Holder:	Pantech Co. Ltd.
EUT:	Dual Band GSM 850/ PCS 1900 (with WAP & GPRS)
Model / Channel:	PG-1910 / 188
Test Site / Operator:	ETS / Mr. Heide
Temperature/ Voltage:	23°C / Unom.: 4.20 V DC
Test Specification:	according to §22.913
Comment 1:	Dist.: 3m, Ant.: HL223
Comment 2:	Freq: 836.313MHz, Pmax: 26.00dBm, RBW: 3MHz



Effective Radiated Power

FCC RULES PART 22 SUBPART H

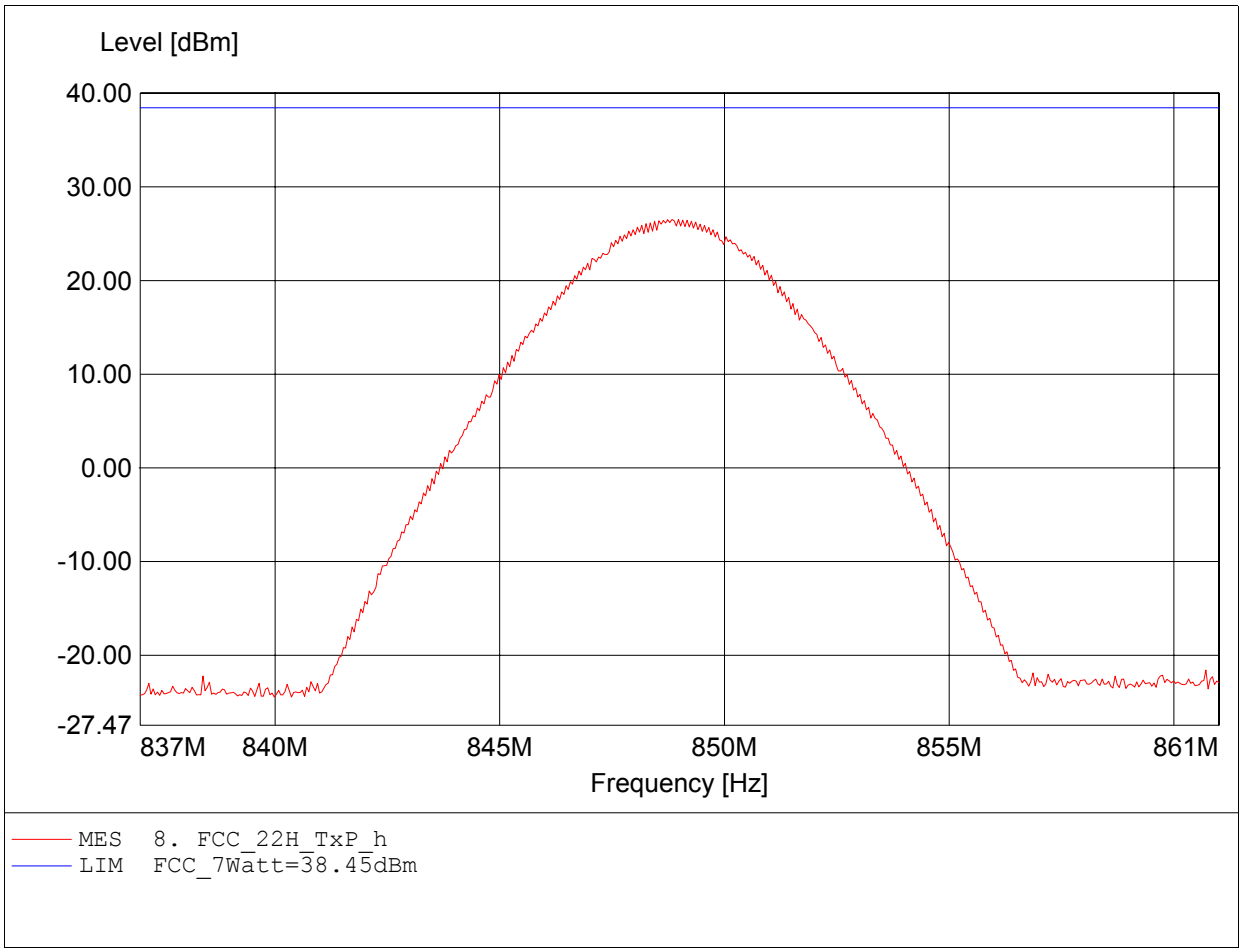
Approval Holder:	Pantech Co. Ltd.
EUT:	Dual Band GSM 850/ PCS 1900 (with WAP & GPRS)
Model / Channel:	PG-1910 / 251
Test Site / Operator:	ETS / Mr. Heide
Temperature/ Voltage:	23°C / Unom.: 4.20 V DC
Test Specification:	according to §22.913
Comment 1:	Dist.: 3m, Ant.: HL223
Comment 2:	Freq: 848.880MHz, Pmax: 28.67dBm, RBW: 3MHz



Effective Radiated Power

FCC RULES PART 22 SUBPART H

Approval Holder:	Pantech Co. Ltd.
EUT:	Dual Band GSM 850/ PCS 1900 (with WAP & GPRS)
Model / Channel:	PG-1910 / 128
Test Site / Operator:	ETS / Mr. Heide
Temperature/ Voltage:	23°C / Unom.: 4.20 V DC
Test Specification:	according to §22.913
Comment 1:	Dist.: 3m, Ant.: HL223
Comment 2:	Freq: 848.976MHz, Pmax: 26.53dBm, RBW: 3MHz



Appendix D

Modulation Requirements

Appendix E

Audio Filter Characteristics

Appendix F

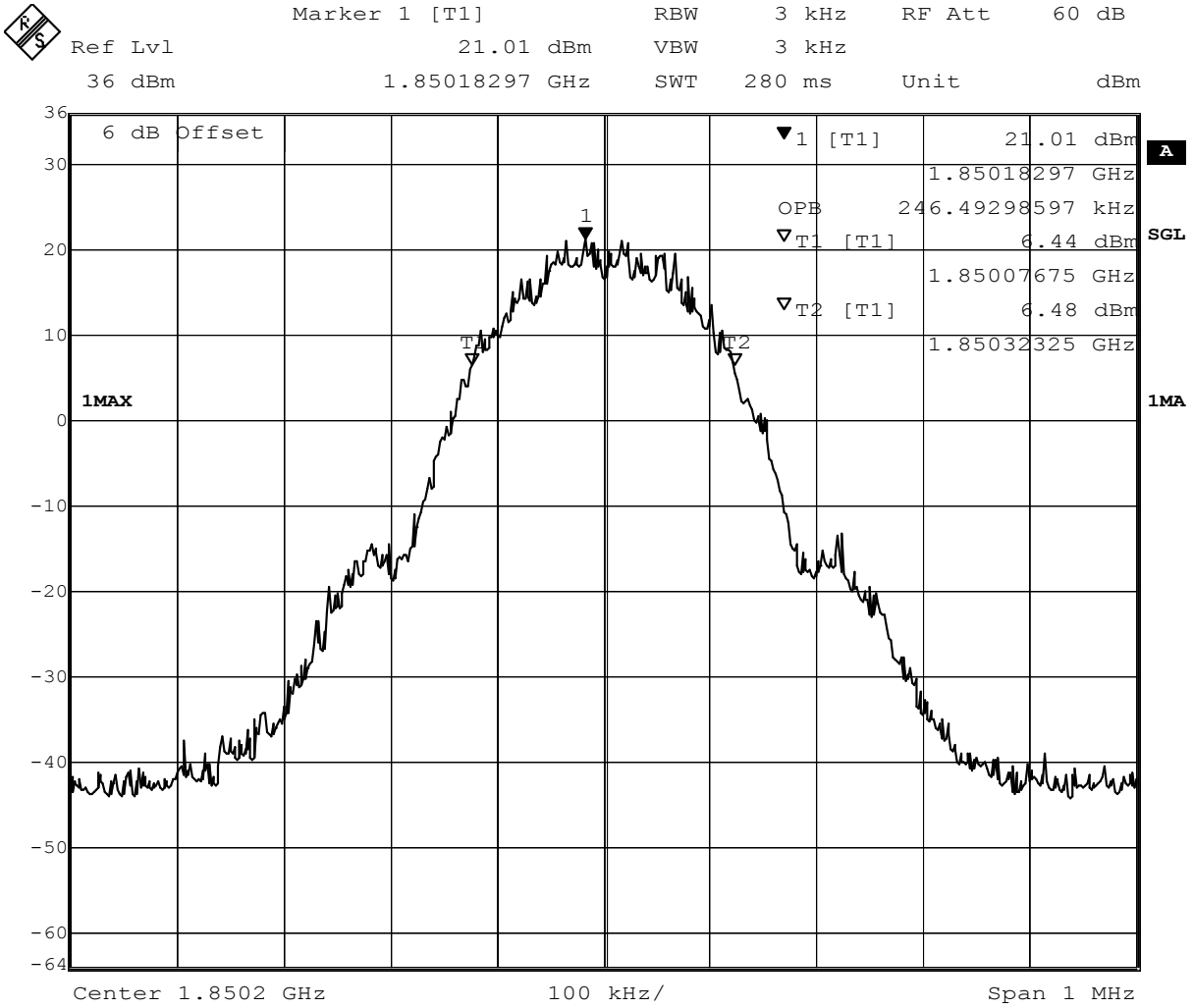
Emission Limitation

Appendix G

Occupied Bandwidth

FCC Part 24 E
Occupied Bandwidth

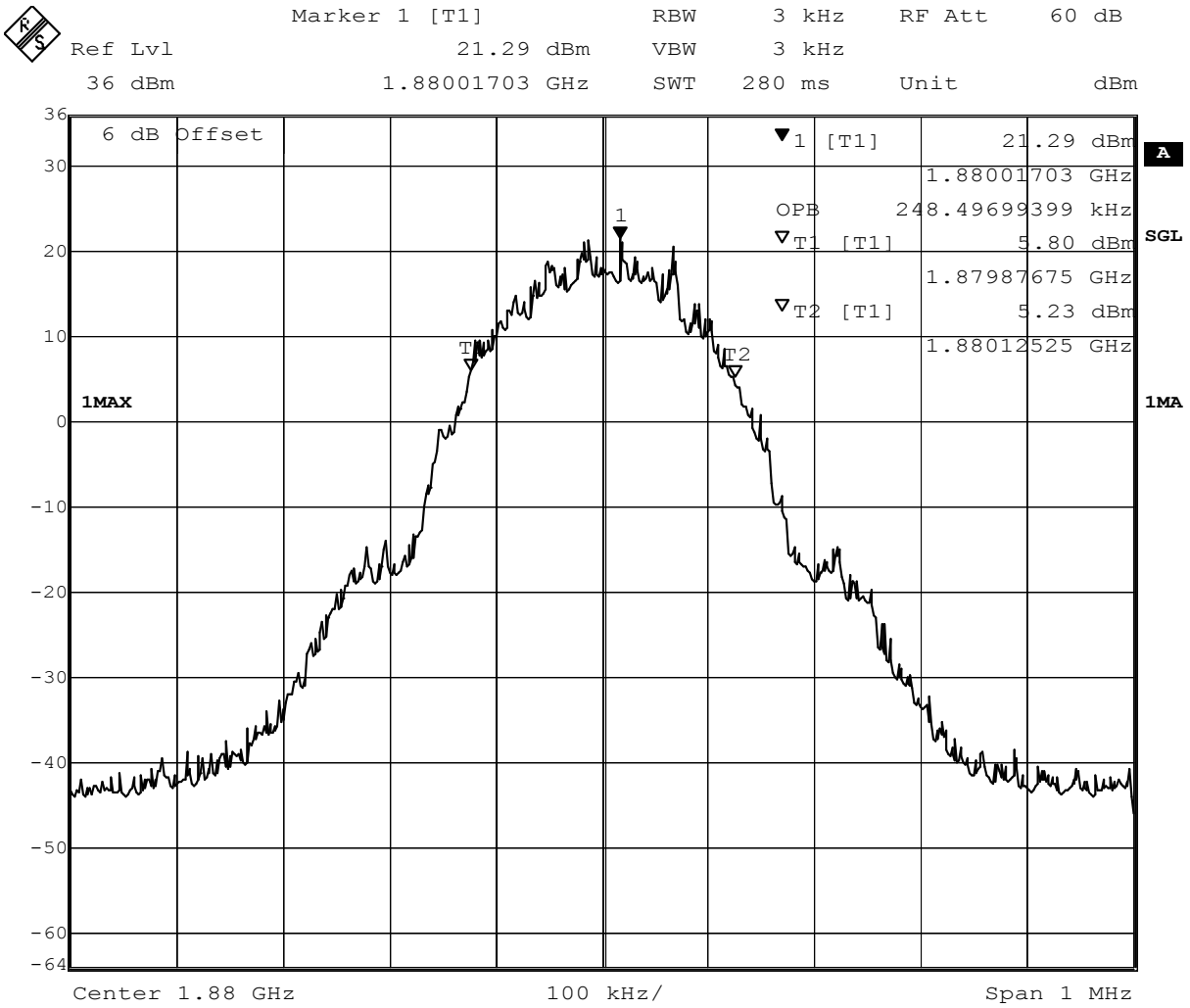
EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 24 Subpart E - Broadband PCS
Test Case	Channel: 512
Comment 1	
Comment 2	



Date: 11.MAY.2006 08:11:19

FCC Part 24 E
Occupied Bandwidth

EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 24 Subpart E - Broadband PCS
Test Case	Channel: 661
Comment 1	
Comment 2	



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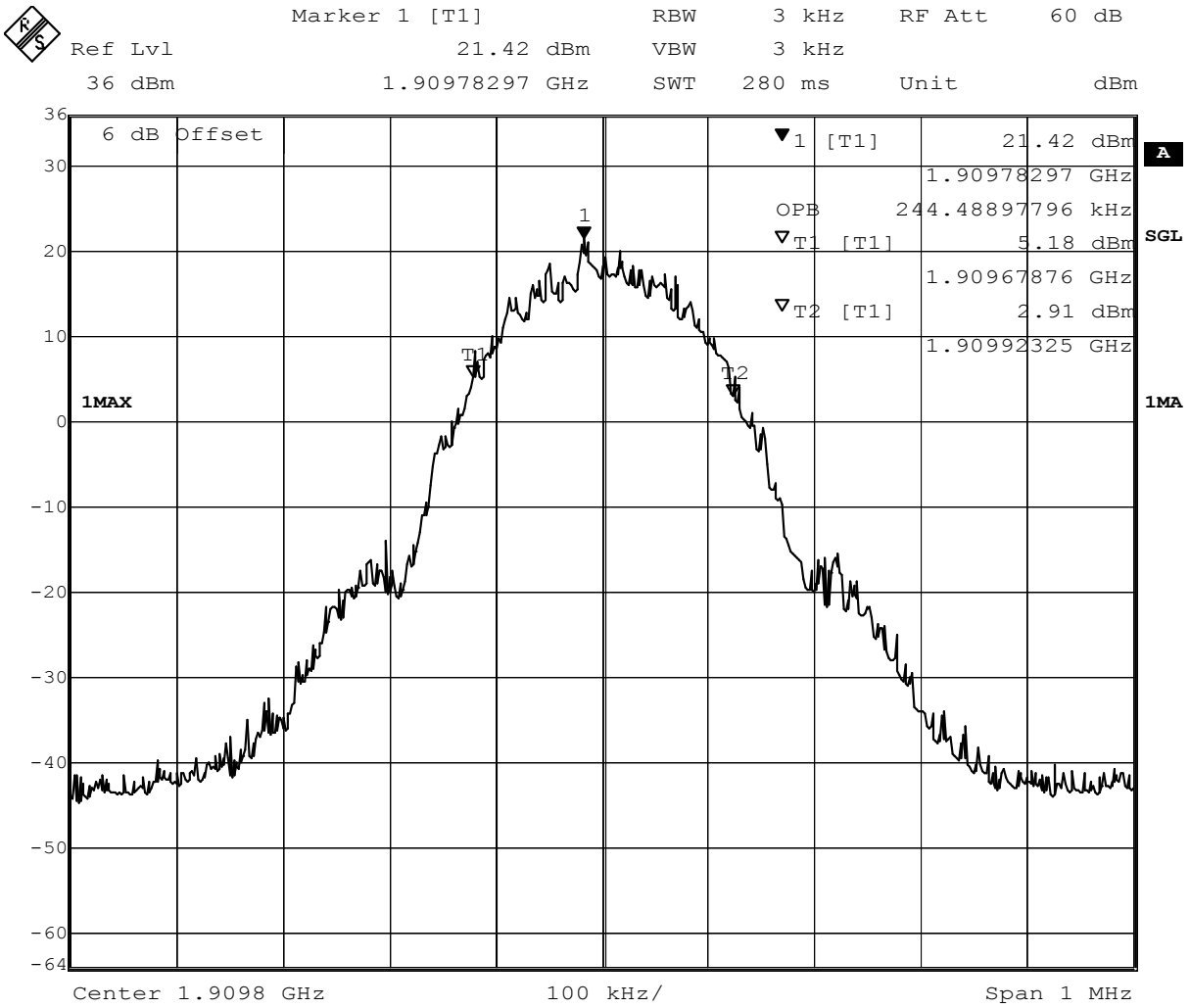
FCC Part 24 E
Occupied Bandwidth

EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 24 Subpart E - Broadband PCS
Test Case	Channel: 810
Comment 1	
Comment 2	

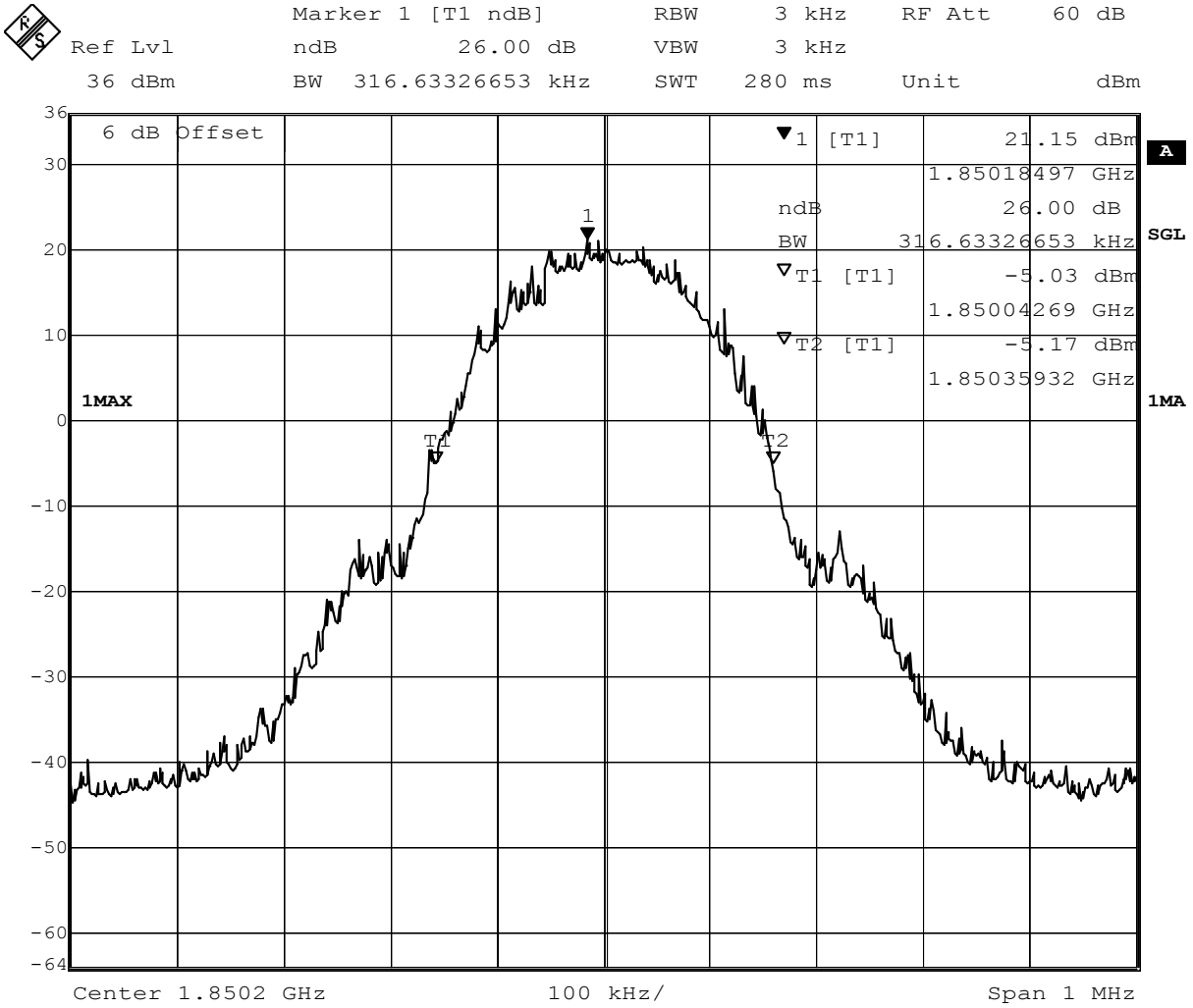


Date: 11.MAY.2006 08:13:41

Measurement diagram

FCC Part 24 E
Emission Bandwidth

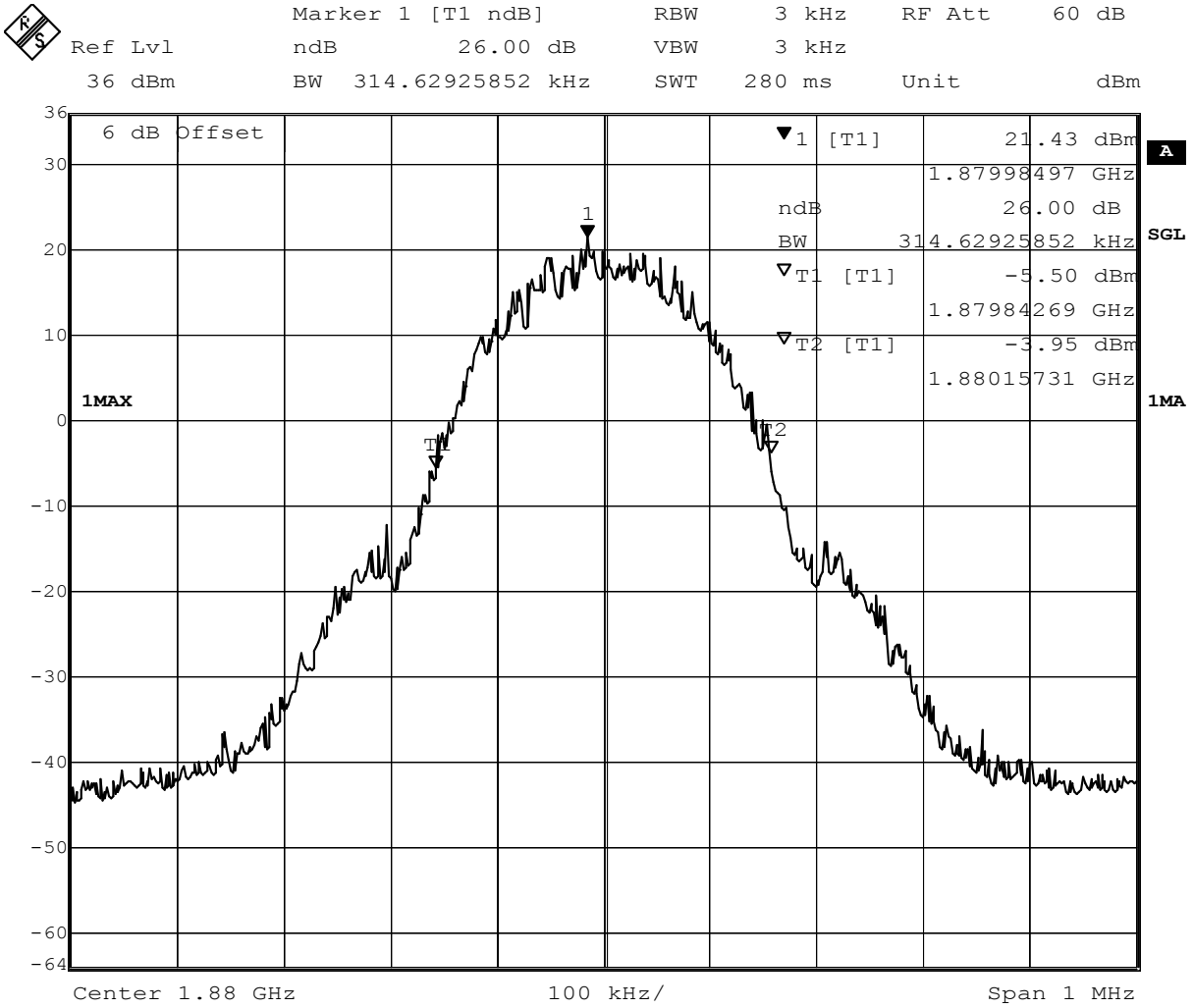
EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 24 Subpart E - Broadband PCS
Test Case	Channel: 512
Comment 1	-26 dB Emission Bandwidth
Comment 2	



Date: 11.MAY.2006 07:24:39

FCC Part 24 E
Emission Bandwidth

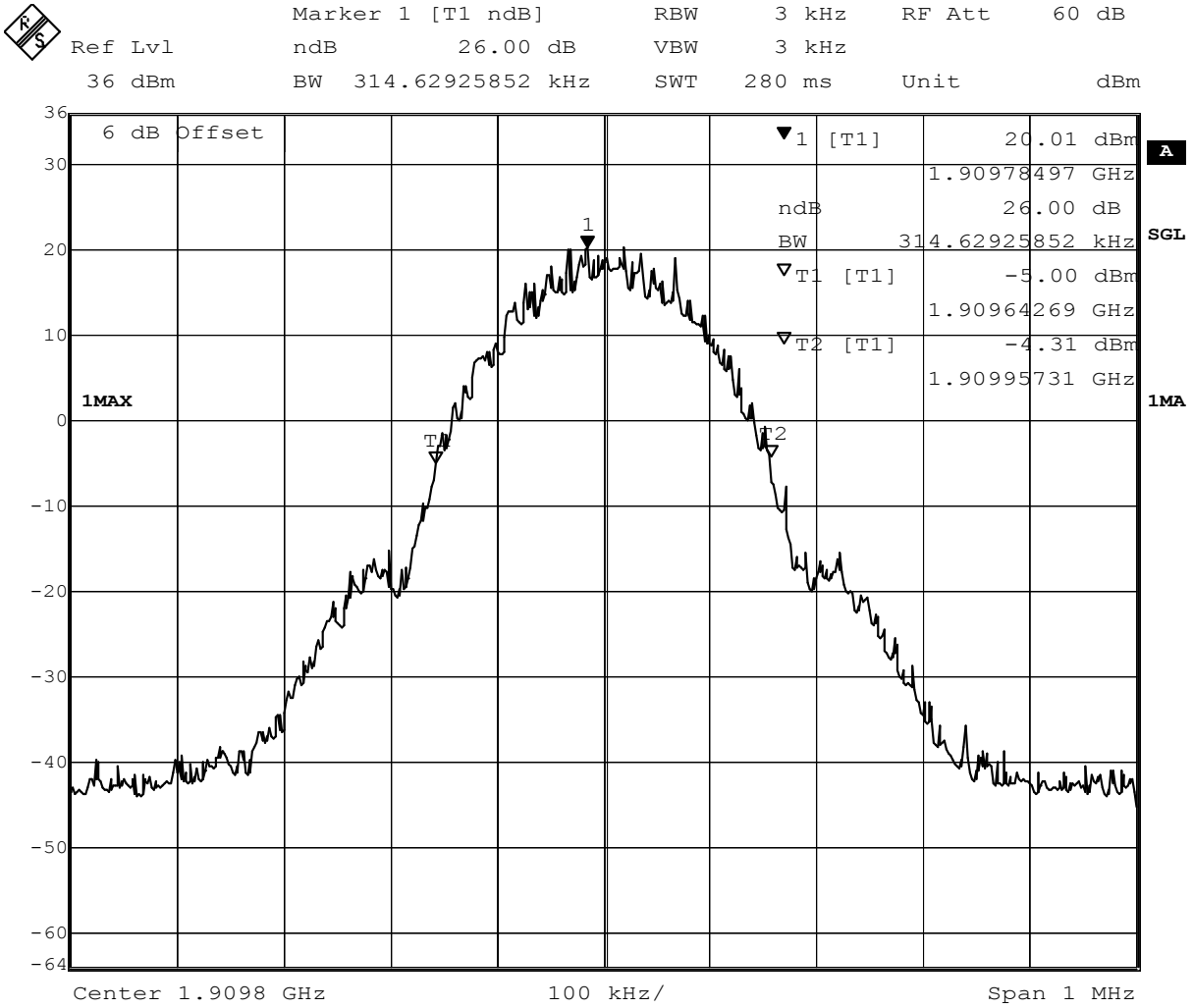
EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 24 Subpart E - Broadband PCS
Test Case	Channel: 661
Comment 1	-26 dB Emission Bandwidth
Comment 2	



Date: 11.MAY.2006 07:25:51

FCC Part 24 E
Emission Bandwidth

EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 24 Subpart E - Broadband PCS
Test Case	Channel: 810
Comment 1	-26 dB Emission Bandwidth
Comment 2	

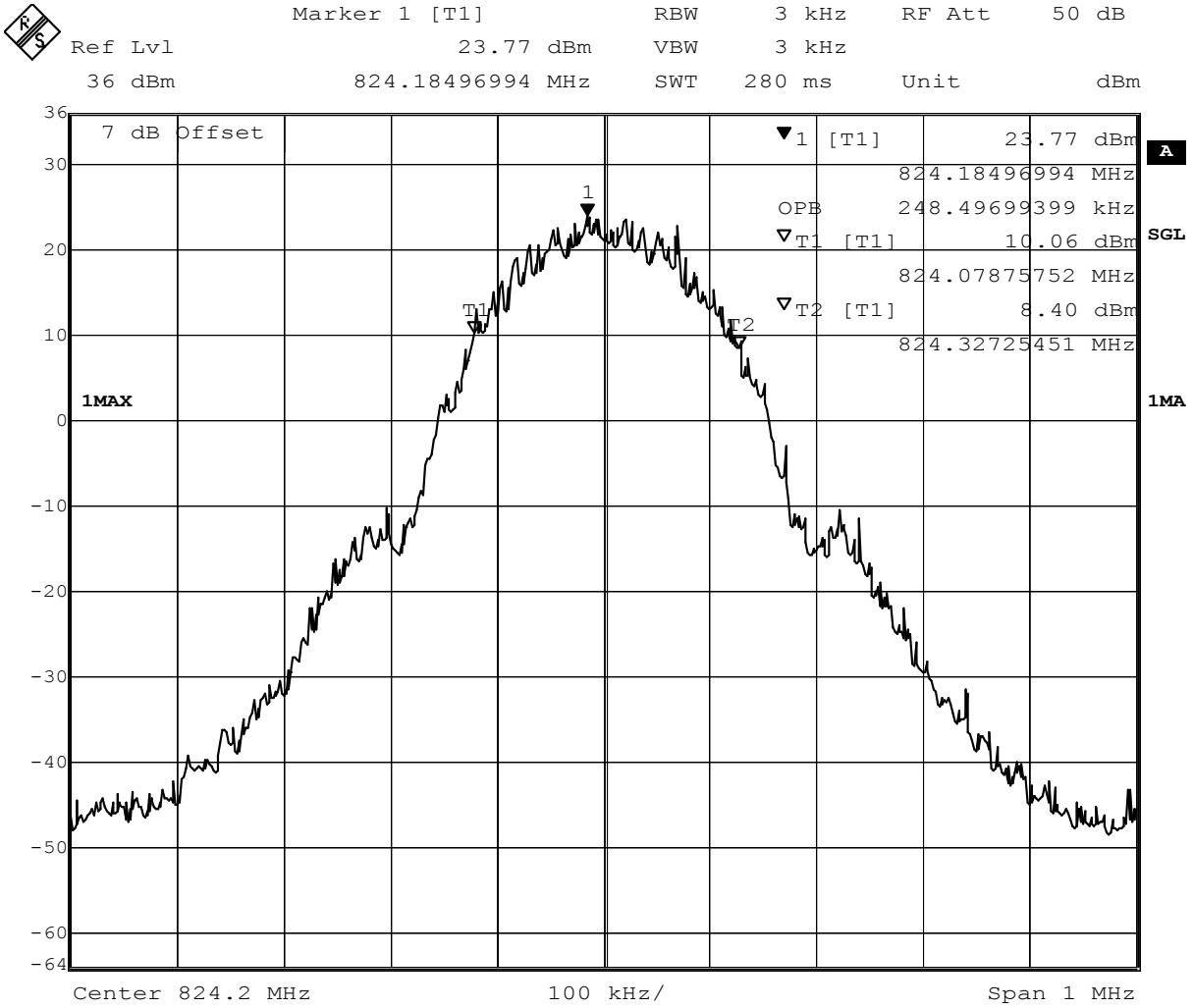


Date: 11.MAY.2006 07:27:29

Measurement diagram

FCC Part 22 H
Occupied Bandwidth

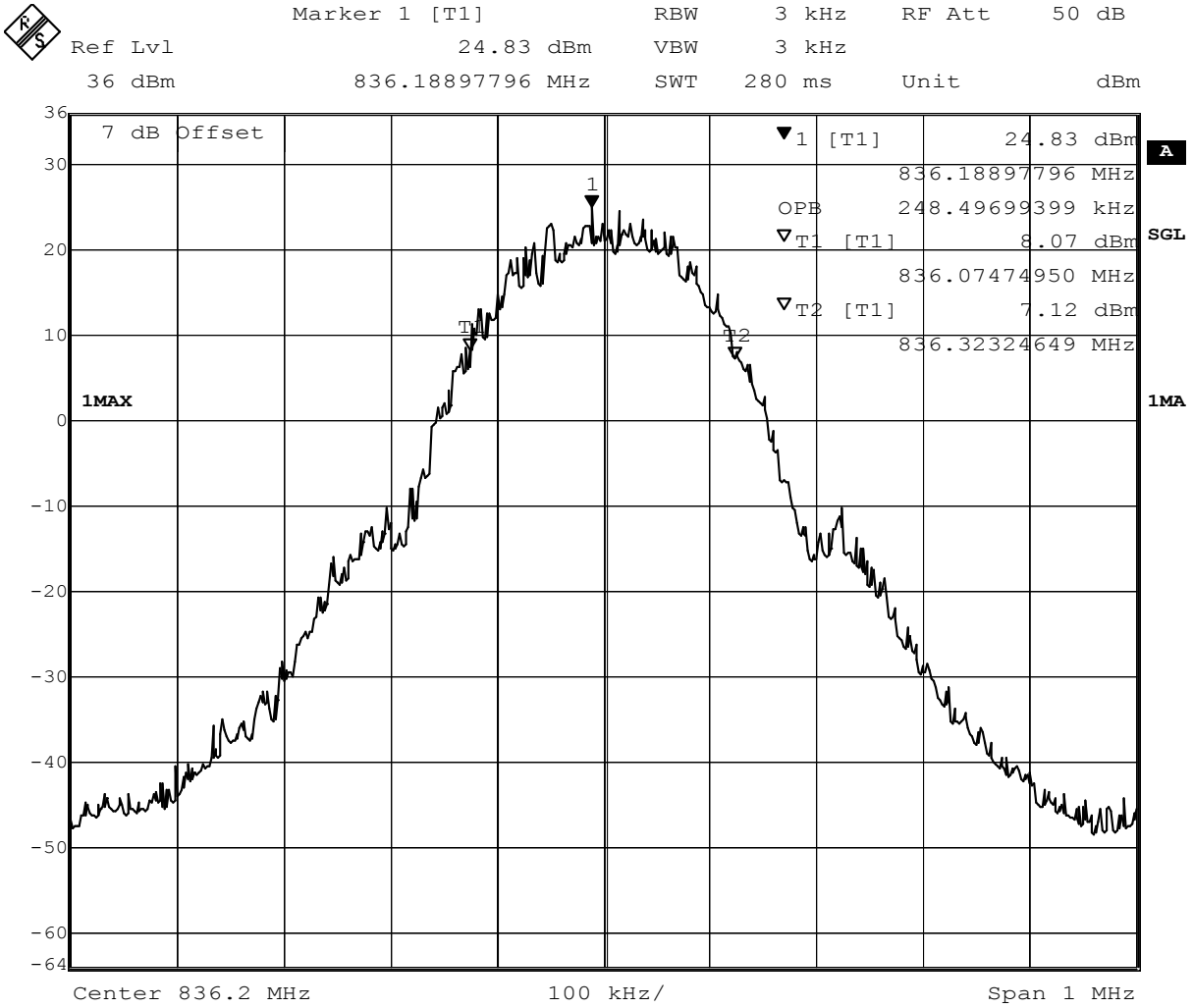
EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 22 Subpart H - Cellular Radiotelephone Service
Test Case	Channel: 128
Comment 1	
Comment 2	



Date: 11.MAY.2006 07:15:26

FCC Part 22 H
Occupied Bandwidth

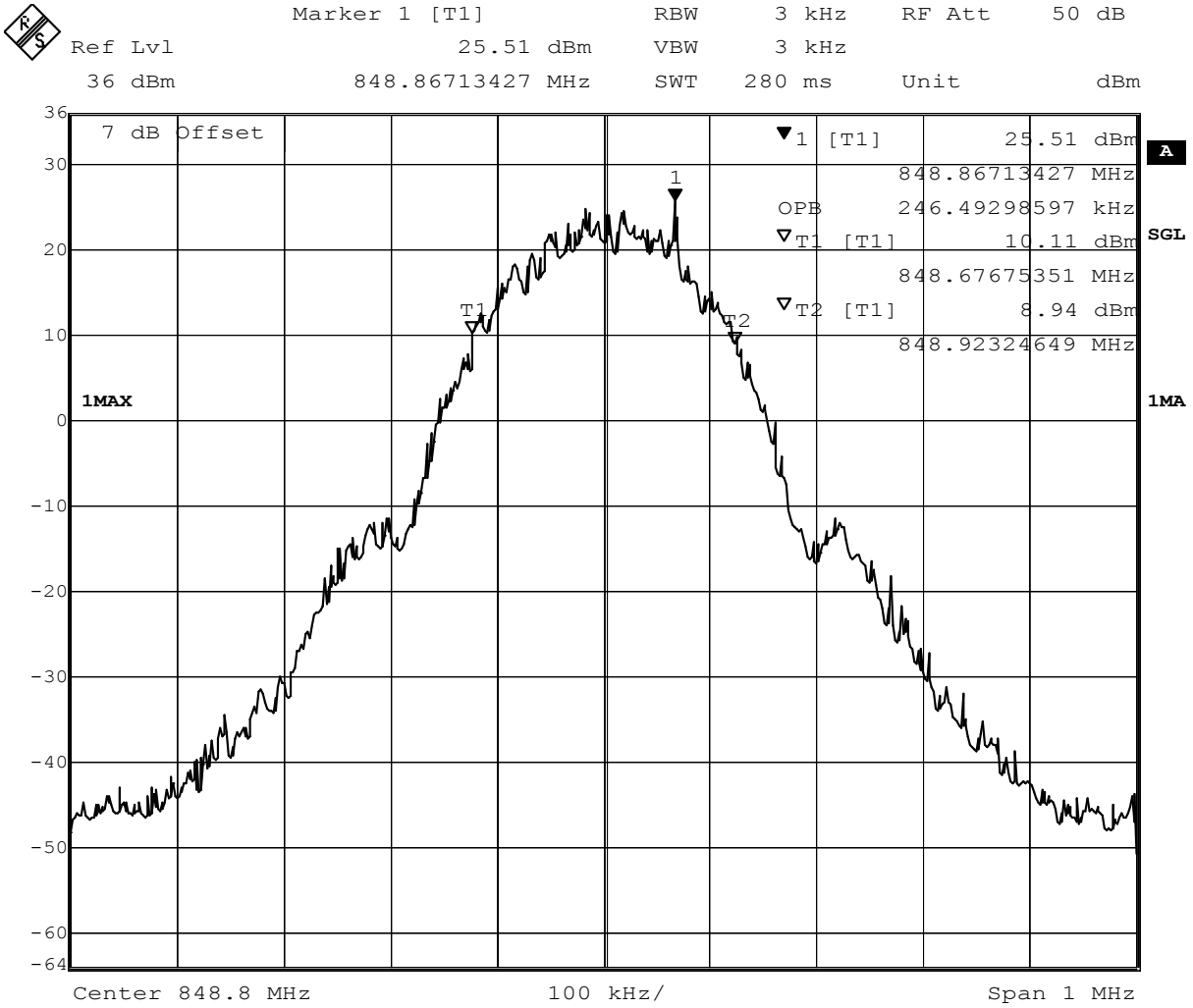
EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 22 Subpart H - Cellular Radiotelephone Service
Test Case	Channel: 188
Comment 1	
Comment 2	



Date: 11.MAY.2006 07:17:15

FCC Part 22 H
Occupied Bandwidth

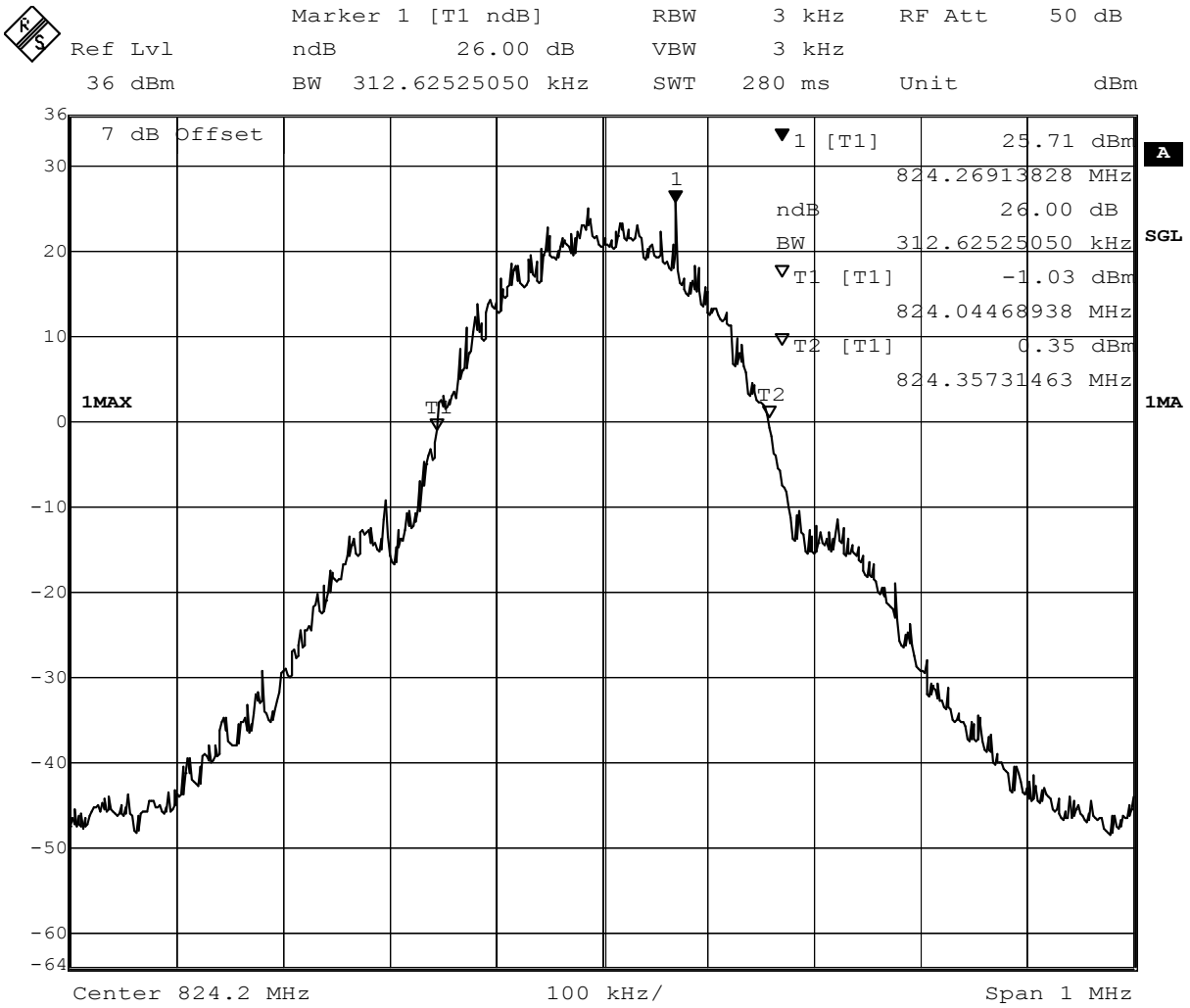
EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 22 Subpart H - Cellular Radiotelephone Service
Test Case	Channel: 251
Comment 1	
Comment 2	



Date: 11.MAY.2006 07:18:26

FCC Part 22 H
Emission Bandwidth

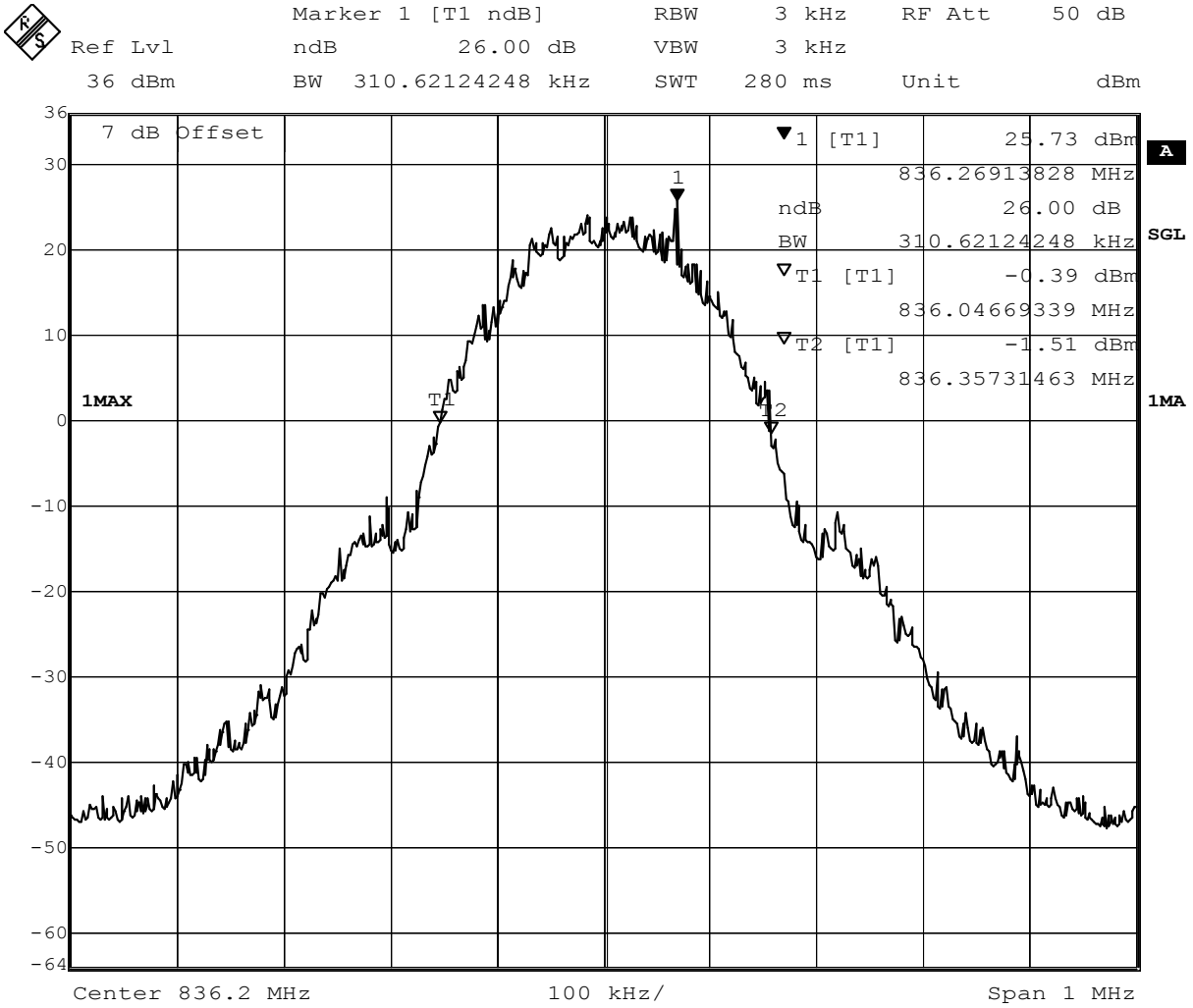
EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 22 Subpart H - Cellular Radiotelephone Service
Test Case	Channel: 128
Comment 1	-26 dB Emission Bandwidth
Comment 2	



Date: 11.MAY.2006 07:04:51

FCC Part 22 H
Emission Bandwidth

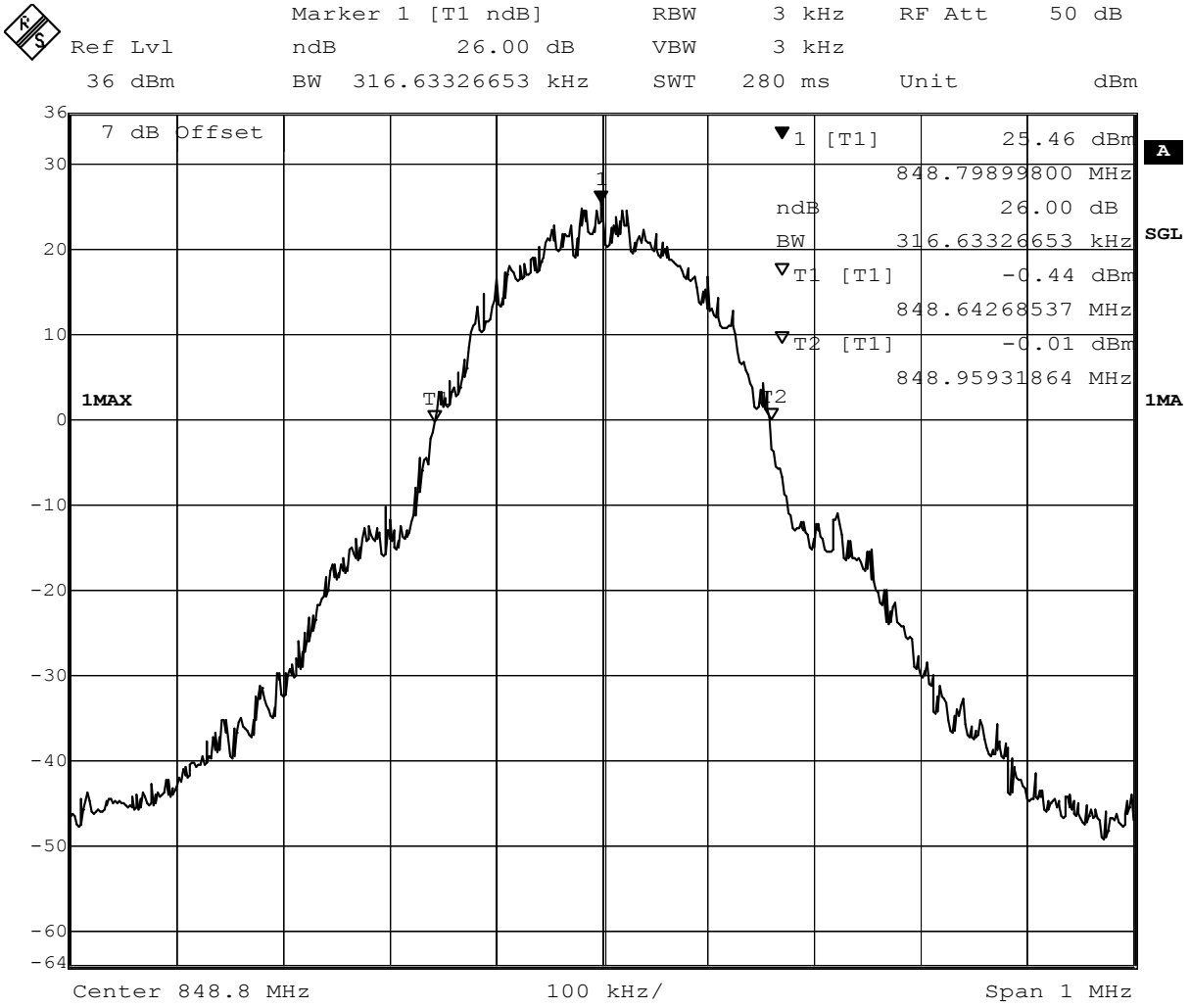
EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 22 Subpart H - Cellular Radiotelephone Service
Test Case	Channel: 188
Comment 1	-26 dB Emission Bandwidth
Comment 2	



Date: 11.MAY.2006 07:06:31

FCC Part 22 H
Emission Bandwidth

EUT	Dual Band GSM 859/PCS 1900 (with WAP & GPRS)
Model	PG-1910
Approval Holder	PANTECH CO., LTD.
Temperature / Voltage	23°C / Unom.: 4.20 V DC
Test Site / Operator	ETS / Mr. Pfeufer
Test Specification	FCC Part 22 Subpart H - Cellular Radiotelephone Service
Test Case	Channel: 251
Comment 1	-26 dB Emission Bandwidth
Comment 2	



Date: 11.MAY.2006 07:08:18

Measurement diagram

Appendix H

Out of Band Emission at Antenna Terminals Mobile Emissions In Base Frequency Range