Conducted emission (AC Mains)

During Preliminary Tests, the following operating mode were investigated

Channel / Frequency	Mode State	**The worst operating condition**
- 1 (2.4048GHz)	Charging Transmitting	
20 (2.439GHz)	Transmitting	X
40 (2.475GHz)	Transmitting	

Power Line Conducted Emissions					FCC Class B	
Frequency (MHz)	Amplitude (dBuV)	Transd (dB)	Conductor	Result	Limit (dBuv)	Margin (dB)
0.465	10.6	0.1	HOT	Quasi-Peak	48.0	37.3
1.330	6.9	0.2	HOT	Quasi-Peak	48.0	41.0
2.080	6.3	0.3	HOT	Quasi-Peak	48.0	41.6
6.520	8.3	0.3	HOT	Quasi-Peak	48.0	39.6
7.505	8.9	0.4	HOT	Quasi-Peak	48.0	39.0
24.910	5.9	0.6	HOT	Quasi-Peak	48.0	42.0
0.525	9.2	0.1	NEUTRAL	Quasi-Peak	48.0	38.7
1.295	6.9	0.2	NEUTRAL	Quasi-Peak	48.0	41.0
2.765	7.0	0.2	NEUTRAL	Quasi-Peak	48.0	40.9
6.665	8.3	0.3	NEUTRAL	Quasi-Peak	48.0	39.6
7.990	8.9	0.4	NEUTRAL	Quasi-Peak	48.0	39.0
23.735	5.9	0.6	NEUTRAL	Quasi-Peak	48.0	42.0

Line Conducted Emissions Tabulated Data

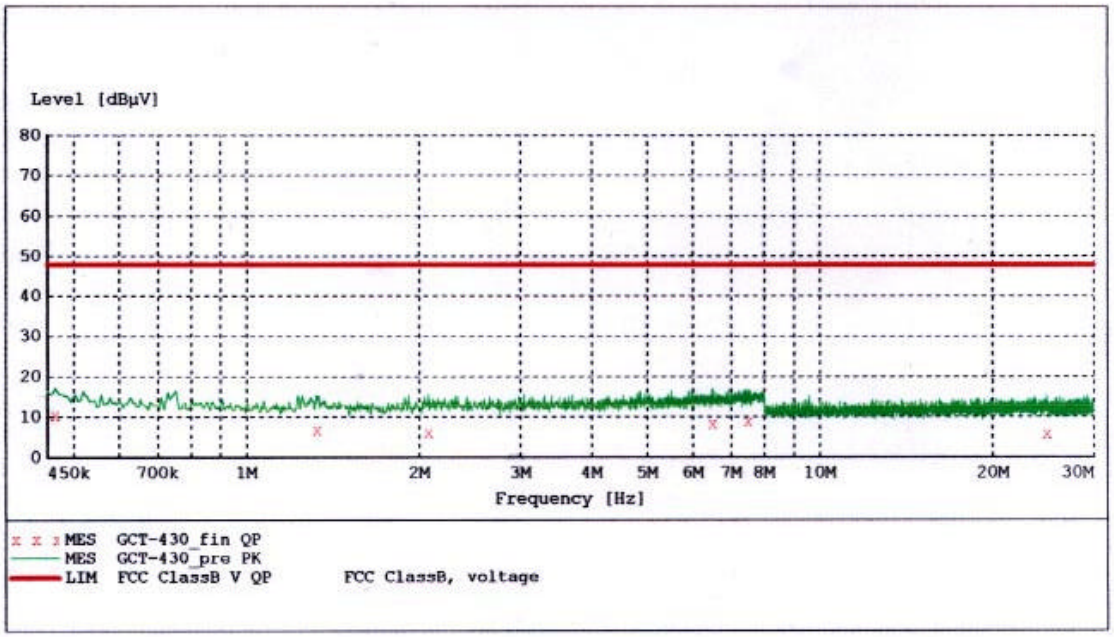
HYUNDAI C-TECH.
EMC Testing Laboratory

EUT:	GCT-430
Manufacturer:	GENEX
Test Site:	SHIELD ROOM
Operator:	SH, KANG
Test Specification:	FCC CLASS B
Comment:	H
Start of Test:	4/28/03 / 1:38:15PM

SCAN TABLE: "FCC ClassB Voltage"

Short Description: FCC ClassB Voltage

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
450.0 kHz	30.0 MHz	5.0 kHz	MaxPeak	10.0 ms	9 kHz	ESH2-Z5



MEASUREMENT RESULT: "GCT-430_fin QP"

4/28/03 1:39PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.465000	10.60	0.1	48	37.3	1	---
1.330000	6.90	0.2	48	41.0	1	---
2.080000	6.30	0.3	48	41.6	1	---
6.520000	8.30	0.3	48	39.6	1	---
7.505000	8.90	0.4	48	39.0	1	---
24.910000	5.90	0.6	48	42.0	1	---

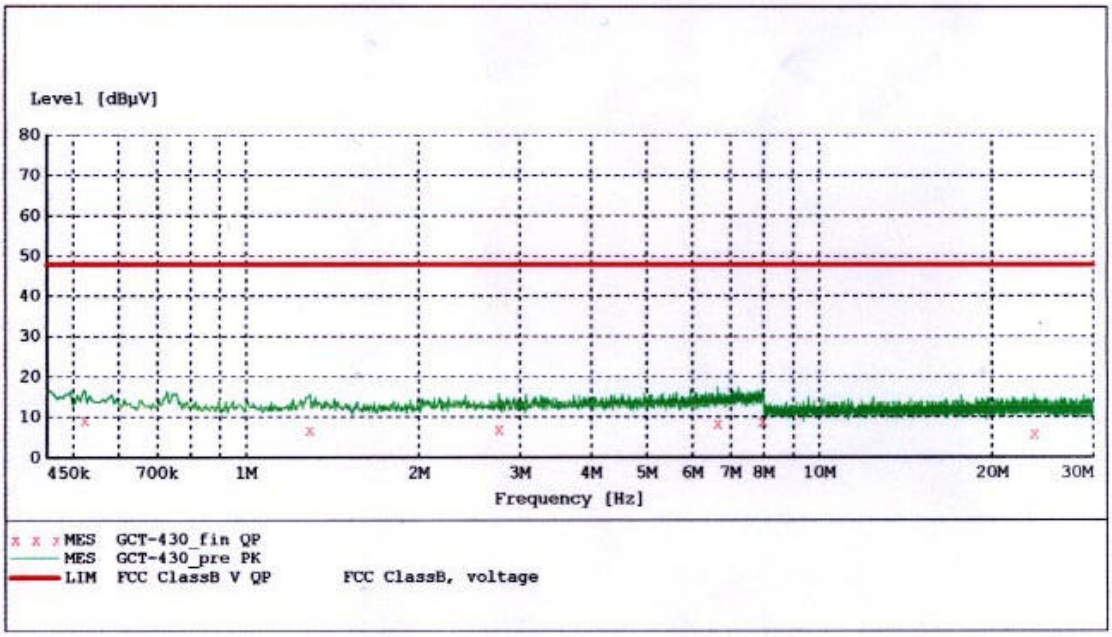
HYUNDAI C-TECH.
EMC Testing Laboratory

EUT:	GCT-430
Manufacturer:	GENEX
Test Site:	SHIELD ROOM
Operator:	SH, KANG
Test Specification:	FCC CLASS B
Comment:	N
Start of Test:	4/28/03 / 1:41:38PM

SCAN TABLE: "FCC ClassB Voltage"

Short Description: FCC ClassB Voltage

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
450.0 kHz	30.0 MHz	5.0 kHz	MaxPeak	10.0 ms	9 kHz	ESH2-Z5



MEASUREMENT RESULT: "GCT-430_fin QP"

4/28/03 1:43PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.525000	9.20	0.1	48	38.7	1	---
1.295000	6.90	0.2	48	41.0	1	---
2.765000	7.00	0.2	48	40.9	1	---
6.665000	8.30	0.3	48	39.6	1	---
7.990000	8.90	0.4	48	39.0	1	---
23.735000	5.90	0.6	48	42.0	1	---

Radiated emission (30MHz~1000MHz)

During Preliminary Tests, the following operating mode were investigated

Mode (Channel)	State	**The worst operating condition**
-	Charging	
1 (2.4048GHz)	Transmitting	X
20 (2.439GHz) 40 (2.475GHz)	Transmitting Transmitting	

BASE

Frequency MHz	Reading dBuV	Ant. Factor dB	Cable Loss dB	ANT POL (H/V)	Total dBuV/m	Limit dBuV/m	Margin dB
46.5	12.26	12.64	1.5	V	26.4	40	-13.6
75.4	20.40	6.60	1.9	V	28.9	40	-11.1
89.6	22.71	8.70	2.1	V	33.5	43.5	-10.0
115.6	17.97	12.26	2.4	V	32.6	43.5	-10.9
128.8	13.69	13.51	2.6	V	29.8	43.5	-13.7
146.6	15.08	14.76	2.7	V	32.5	43.5	-11.0
364.2	12.83	16.58	4.4	H	33.8	46	-12.2
549.2	9.55	20.21	5.3	V	35.1	46	-10.9
640.2	6.29	22.41	5.8	H	34.5	46	-11.5
660.3	5.32	22.68	5.9	H	33.9	46	-12.1

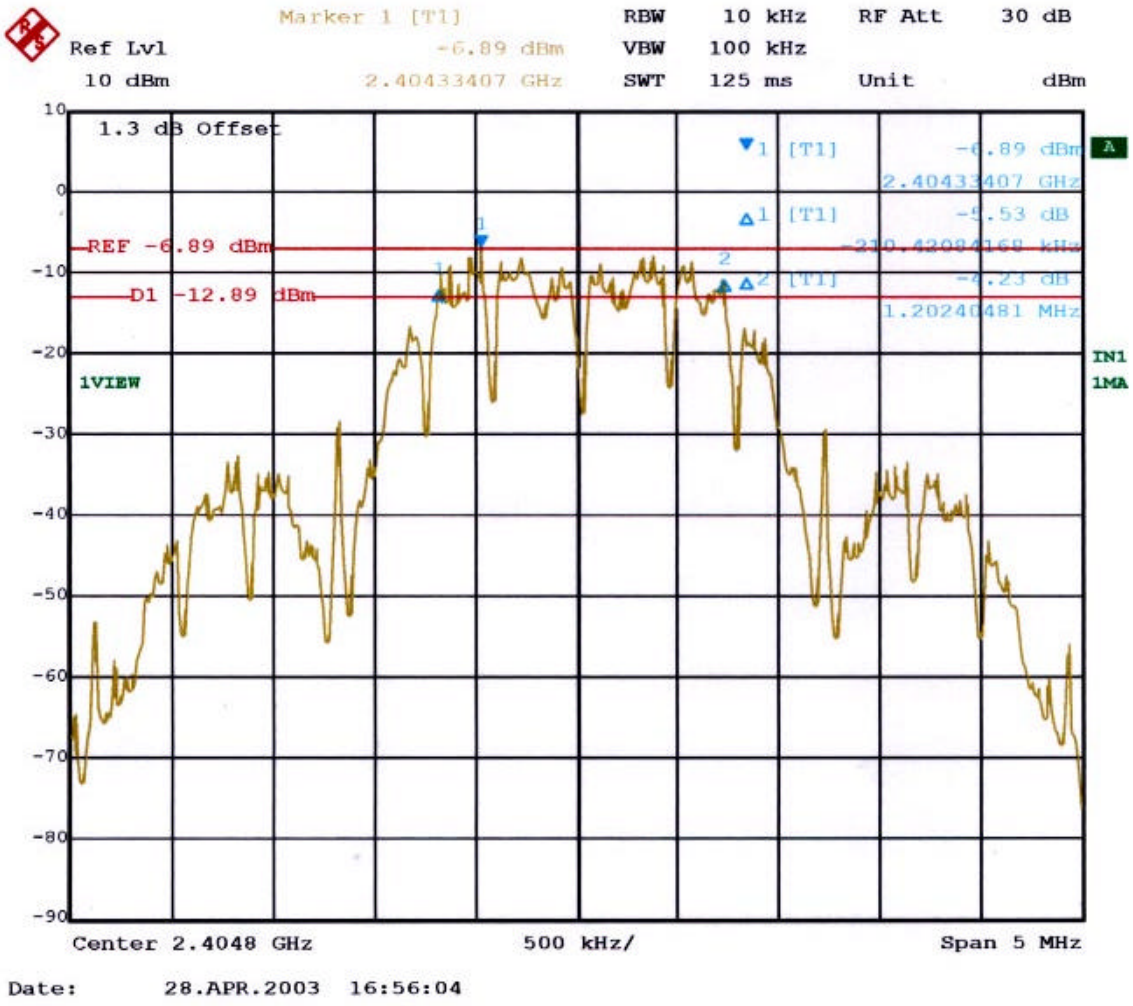
HANDY

Frequency MHz	Reading dBuV	Ant. Factor dB	Cable Loss dB	ANT POL (H/V)	Total dBuV/m	Limit dBuV/m	Margin dB
66.5	18.67	6.73	1.8	V	27.2	40	-12.8
86.4	19.27	8.17	2.1	V	29.5	40	-10.5
98.3	20.77	9.77	2.3	V	32.8	43.5	-10.7
112.5	17.30	11.94	2.4	V	31.6	43.5	-11.9
260.4	12.24	17.68	3.7	V	33.6	46	-12.4
284.6	13.44	18.69	3.9	V	36.0	46	-10.0
348.0	16.08	16.43	4.3	H	36.8	46	-9.2
485.1	12.17	18.90	5.0	H	36.1	46	-9.9
485.6	11.27	18.90	5.0	V	35.2	46	-10.8
581.3	8.02	20.78	5.5	H	34.3	46	-11.7

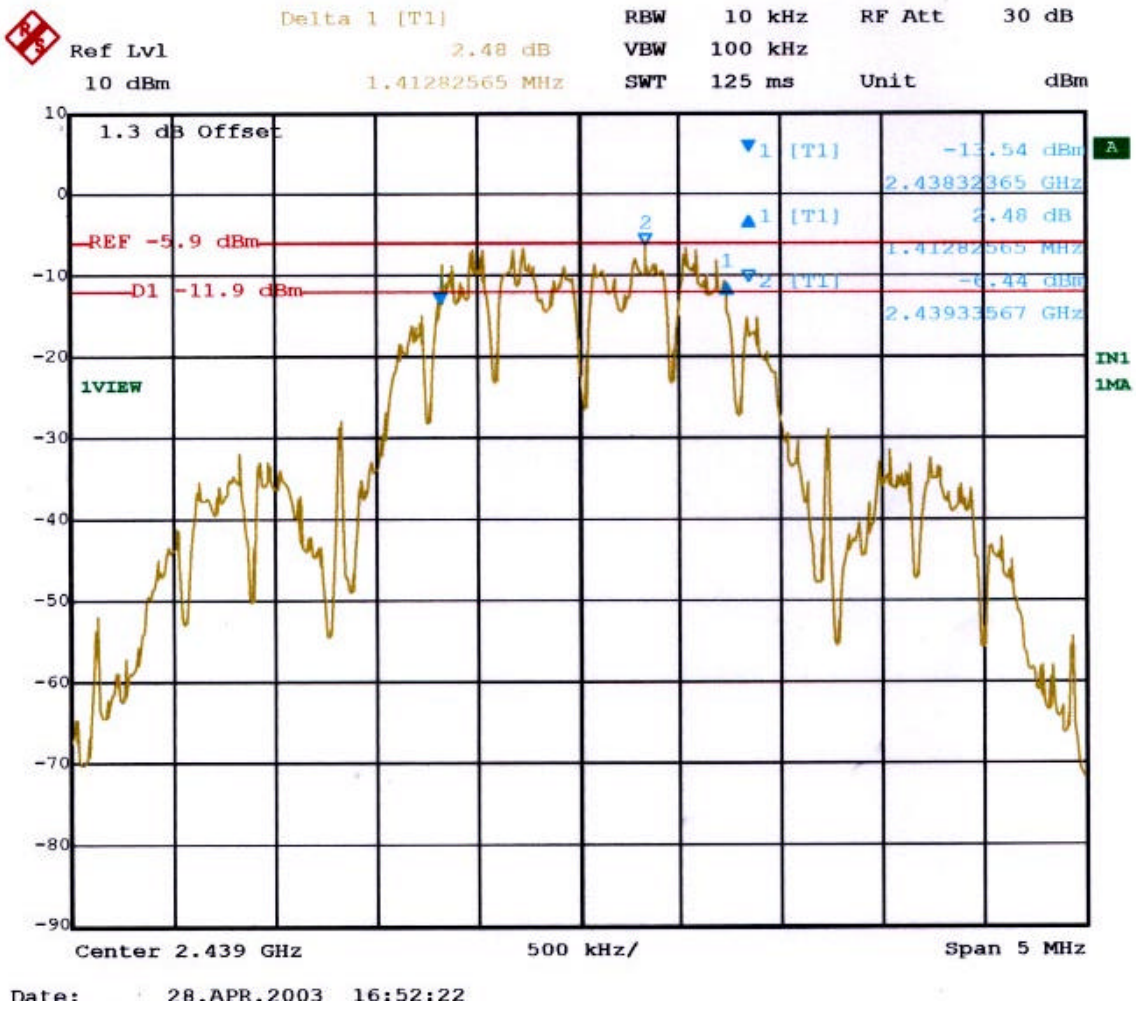
6dB Bandwidth (Conducted)

Frequency (GHz)	Base / Handset	6dB Band width (MHz)	Limit (kHz)	Result
Ch1	Base	1.202	>500	Pass
2.4048	Handset	1.372	>500	Pass
Ch20	Base	1.413	>500	Pass
2.4390	Handset	1.413	>500	Pass
Ch40	Base	1.413	>500	Pass
2.4750	Handset	1.323	>500	Pass

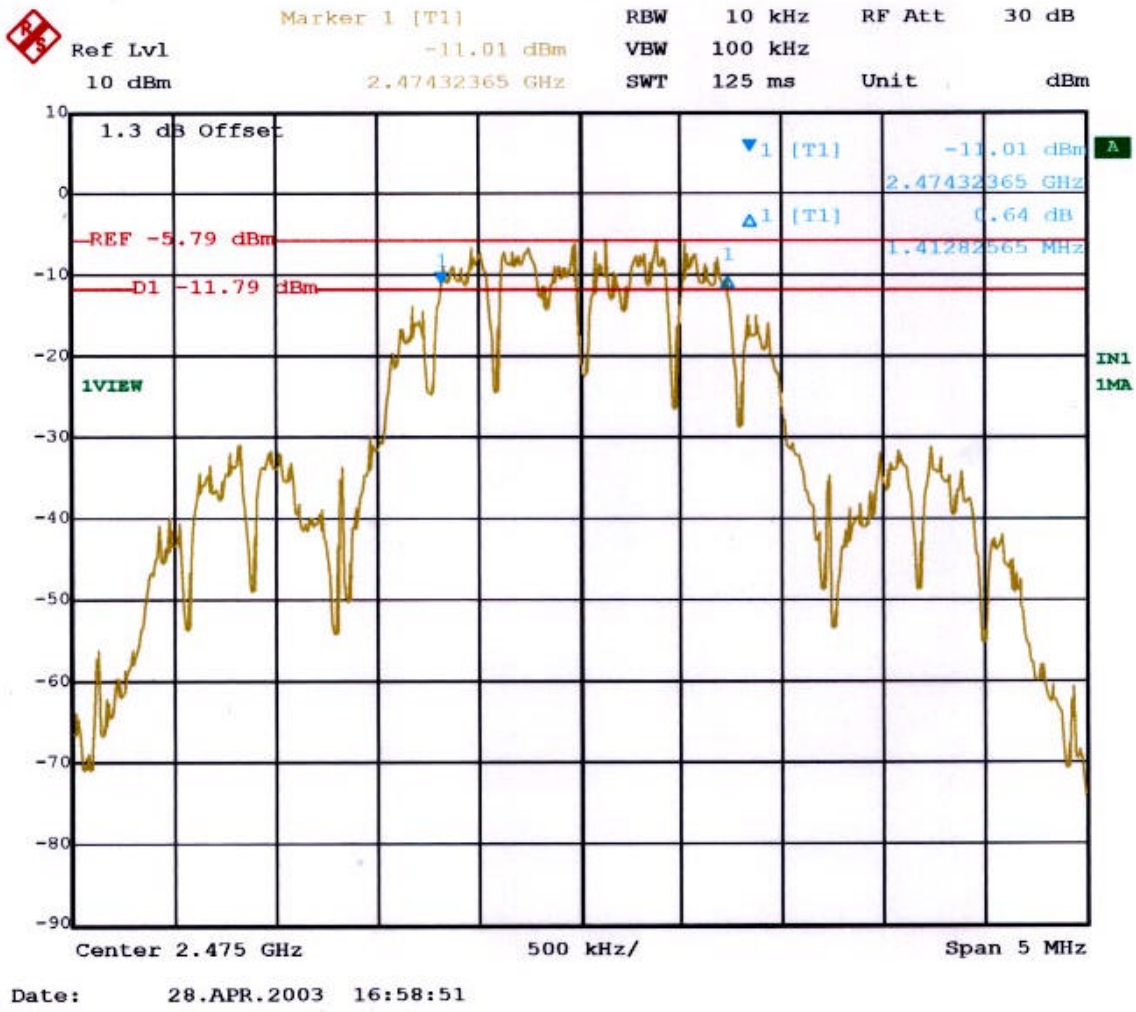
Base Ch. 1: 2.4048GHz



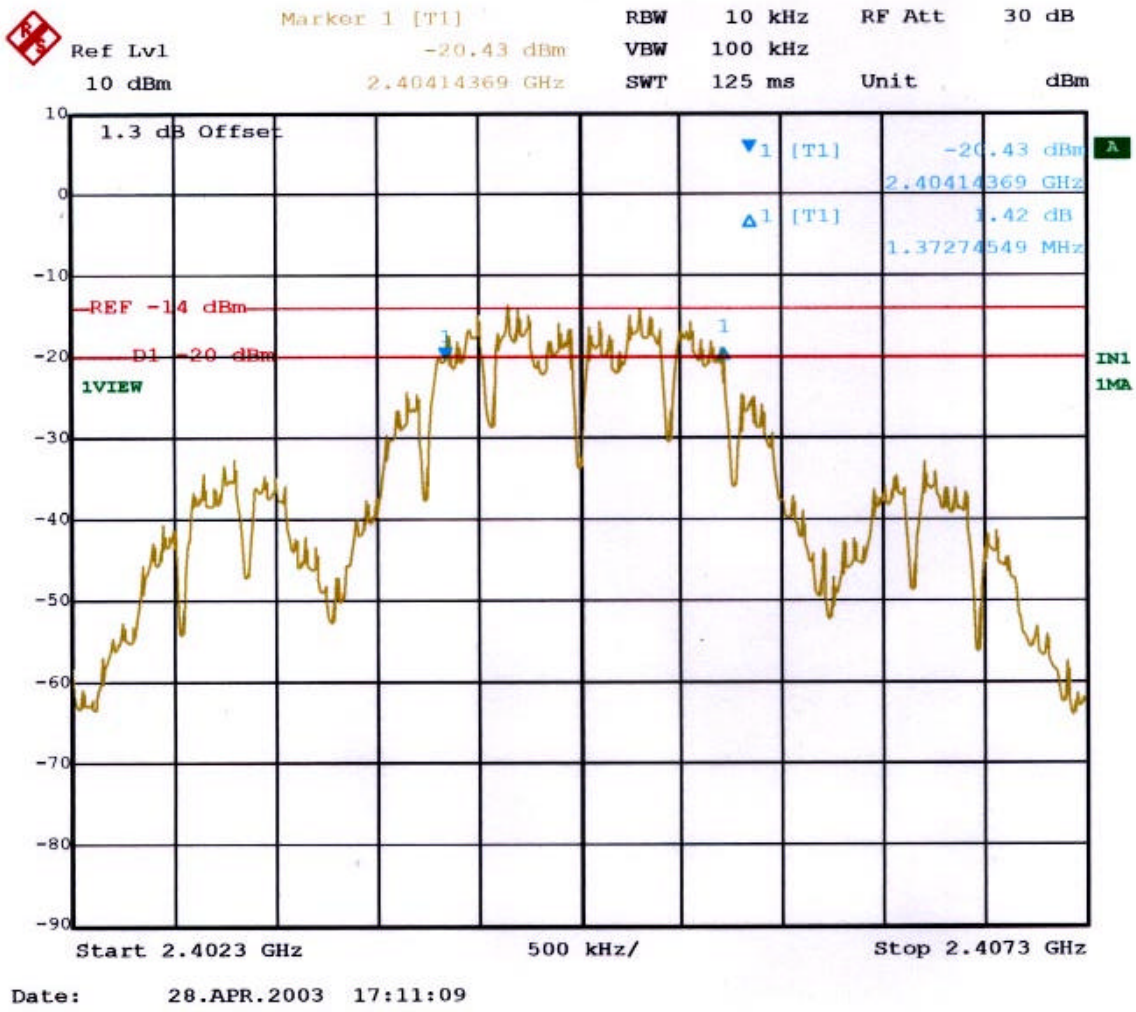
Base Ch. 20: 2.439GHz



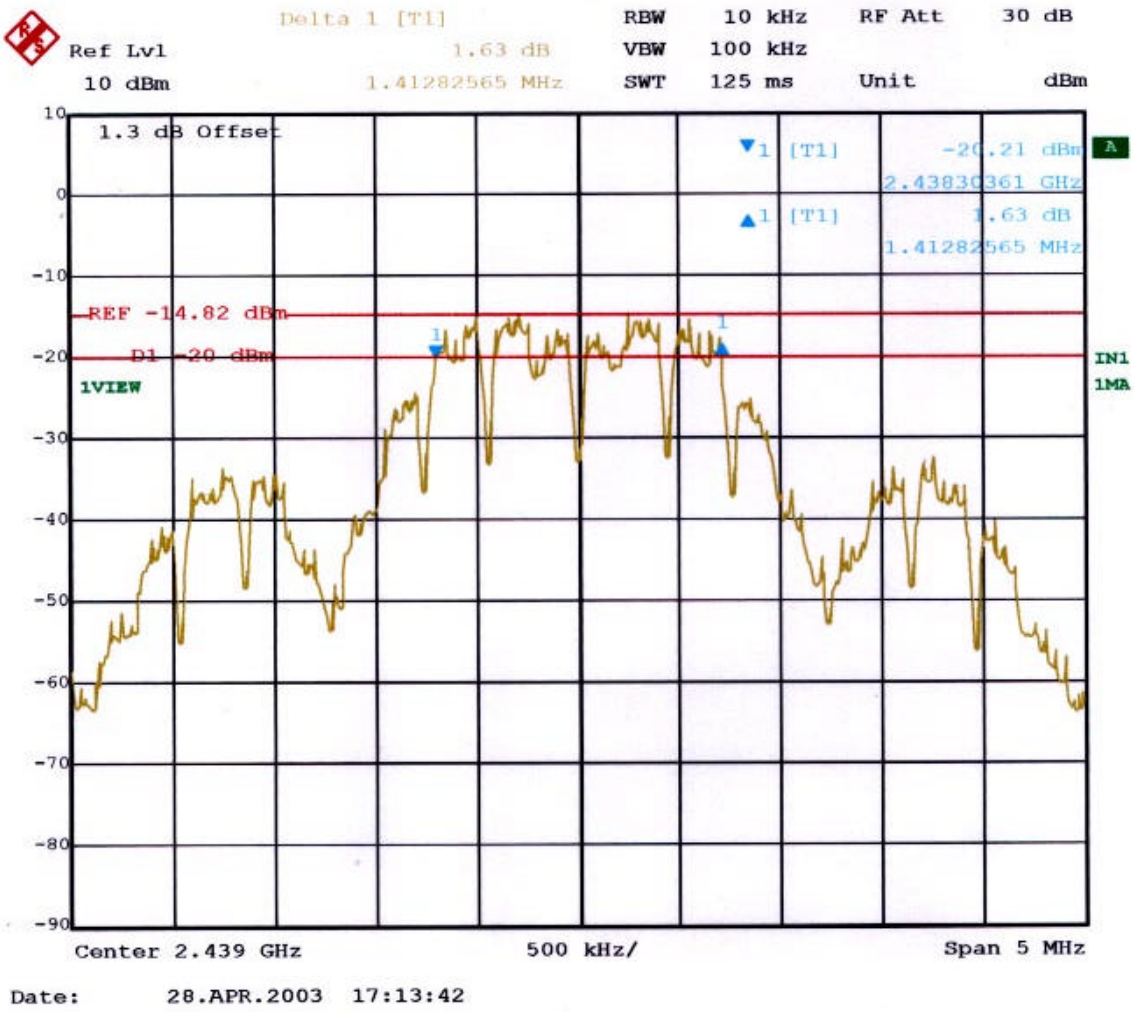
Base Ch. 40: 2.475GHz



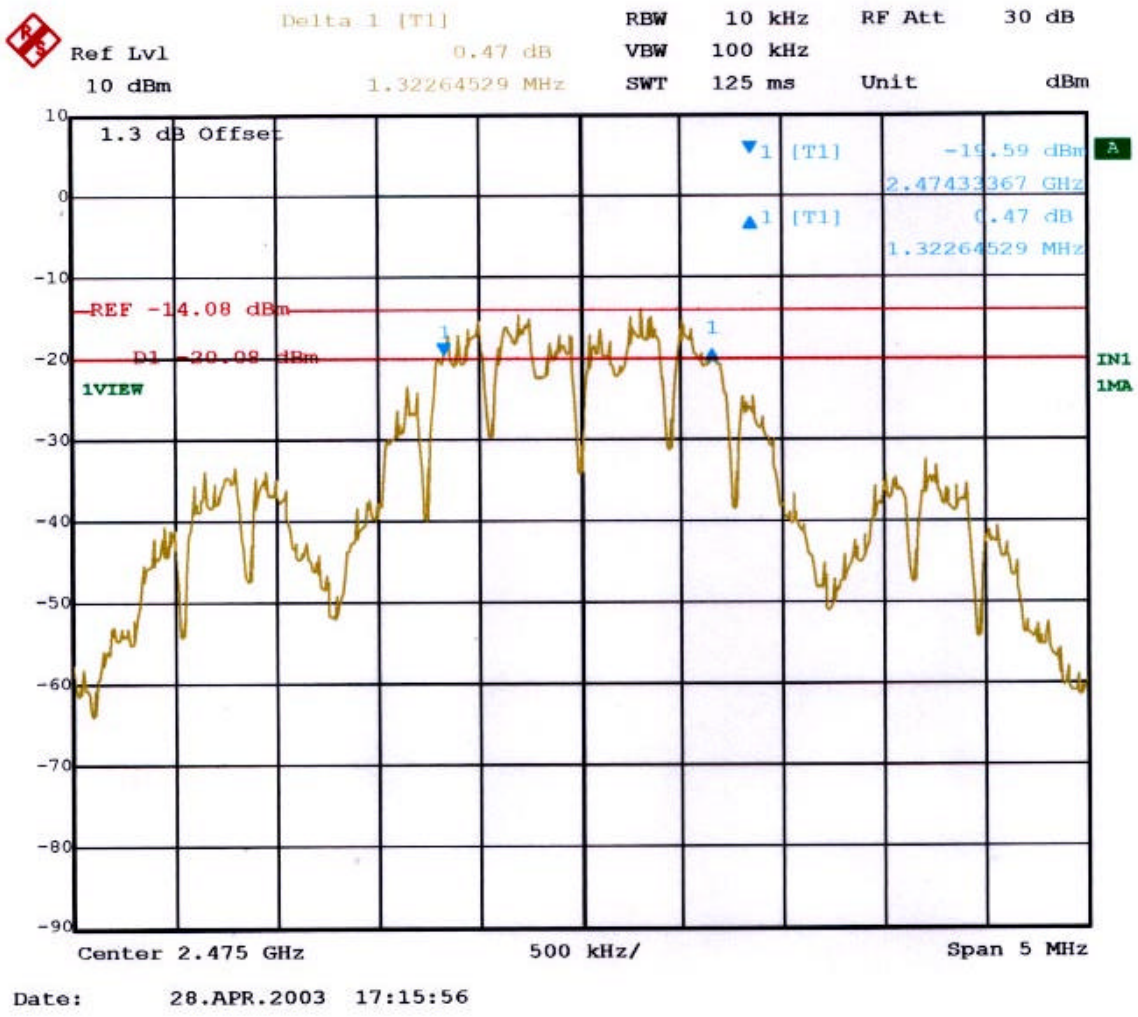
Handy Ch. 1: 2.4048GHz



Handy Ch. 20: 2.439GHz



Handy Ch. 40: 2.475GHz



Maximum peak output power (Conducted)

BASE

CH.	FREQ [MHz]	ATTEN. [dB]	RESULT [dBm]	Convert [mW]	Limit [dBm]	Margin [dB]
1	2.4048	10	10.03	10.06	30.0	19.97
20	2.4390	10	8.80	7.59	30.0	21.20
40	2.4750	10	9.94	9.86	30.0	20.06

HANDY

CH.	FREQ [MHz]	ATTEN. [dB]	RESULT [dBm]	Convert [mW]	Limit [dBm]	Margin [dB]
1	2.4048	10	3.08	2.03	30.0	27.97
20	2.4390	10	2.72	1.87	30.0	28.13
40	2.4750	10	2.50	1.78	30.0	28.22

DATA OF SUPURIOUS EMISSIONS(1GHz to 26GHz)

Cordless Telephone Equipment (Base)

1) Mode: Transmitting (ch1: 2408.8MHz)

PEAK / AVERAGE DETECT: (S/A: RBW: 1MHz and VBW: 1MHz)

No	FREQ [GHz]	S/A Reading [dBuV]	ANT. Factor [dB]	Cable Loss	Result dBuV/m	Limit dBuV/m	Margin [dB]	Detect
1	4.8176	19.7	31.5	4.3	56.4	74	17.6	Peak
2	7.2264	14.3	36.1	5.2	55.6	74	18.4	Peak
3	4.8176	19.7	31.5	4.3	49.5	54	4.5	Average
4	7.2264	14.3	36.1	5.2	48.1	54	5.9	Average

Test Distance 3meters Result= Reading+ ANT. Factor+ Cable Loss

2) Mode: Transmitting (ch20: 2439.0MHz)

PEAK / AVERAGE DETECT: (S/A: RBW: 1MHz and VBW: 1MHz)

No	FREQ [GHz]	S/A Reading [dBuV]	ANT. Factor [dB]	Cable Loss	Result dBuV/m	Limit dBuV/m	Margin [dB]	Detect
1	4.876	20.2	31.7	4.5	56.4	74	17.6	Peak
2	7.315	12.8	36.5	5.4	54.7	74	19.3	Peak
3	4.876	20.2	31.7	4.5	48.9	54	5.1	Average
4	7.315	12.8	36.5	5.4	47.7	54	6.3	Average

Test Distance 3meters Result= Reading+ ANT. Factor+ Cable Loss

3) Mode: Transmitting (ch40: 2475MHz)

PEAK / AVERAGE DETECT: (S/A: RBW: 1MHz and VBW: 1MHz)

No	FREQ [GHz]	S/A Reading [dBuV]	ANT. Factor [dB]	Cable Loss	Result dBuV/m	Limit dBuV/m	Margin [dB]	Detect
1	4.950	20.2	31.8	4.6	57.8	74	16.2	Peak
2	7.425	15.0	36.6	5.6	57.2	74	16.8	Peak
3	4.950	20.2	31.8	4.6	50.7	54	3.3	Average
4	7.425	15.0	36.6	5.6	49.3	54	4.7	Average

Test Distance 3meters Result= Reading+ ANT. Factor+ Cable Loss

Cordless Telephone Equipment (Handset)

1) Mode: Transmitting (ch1: 2408.8MHz)

PEAK / AVERAGE DETECT: (S/A: RBW: 1MHz and VBW: 1MHz)

No	FREQ [GHz]	S/A Reading [dBuV]	ANT. Factor [dB]	Cable Loss	Result dBuV/m	Limit dBuV/m	Margin [dB]	Detect
1	4.8176	19.7	31.5	4.3	52.9	74	21.1	Peak
2	7.2264	14.3	36.1	5.2	54.2	74	19.8	Peak
3	4.8176	19.7	31.5	4.3	46.3	54	7.7	Average
4	7.2264	14.3	36.1	5.2	45.9	54	8.1	Average

Test Distance 3meters Result= Reading+ ANT. Factor+ Cable Loss

2) Mode: Transmitting (ch20: 2439.0MHz)

PEAK / AVERAGE DETECT: (S/A: RBW: 1MHz and VBW: 1MHz)

No	FREQ [GHz]	S/A Reading [dBuV]	ANT. Factor [dB]	Cable Loss	Result dBuV/m	Limit dBuV/m	Margin [dB]	Detect
1	4.876	20.2	31.7	4.5	55.3	74	18.7	Peak
2	7.315	12.8	36.5	5.4	55.7	74	18.3	Peak
3	4.876	20.2	31.7	4.5	47.4	54	6.6	Average
4	7.315	12.8	36.5	5.4	47.2	54	6.8	Average

Test Distance 3meters Result= Reading+ ANT. Factor+ Cable Loss

3) Mode: Transmitting (ch40: 2475MHz)

PEAK / AVERAGE DETECT: (S/A: RBW: 1MHz and VBW: 1MHz)

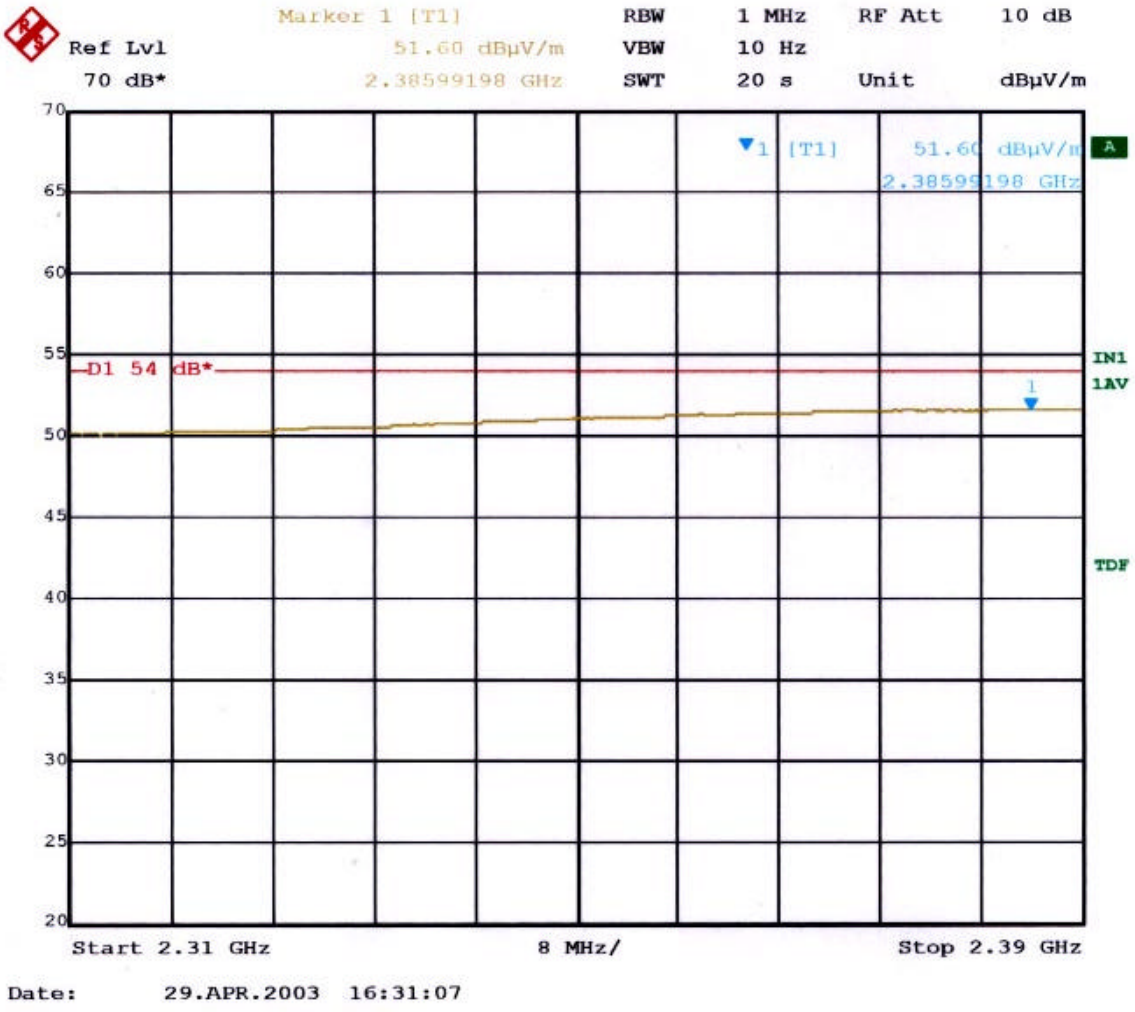
No	FREQ [GHz]	S/A Reading [dBuV]	ANT. Factor [dB]	Cable Loss	Result dBuV/m	Limit dBuV/m	Margin [dB]	Detect
1	4.950	20.2	31.8	4.6	54.8	74	19.2	Peak
2	7.425	15.0	36.6	5.6	54.2	74	19.8	Peak
3	4.950	20.2	31.8	4.6	47.5	54	6.5	Average
4	7.425	15.0	36.6	5.6	47.3	54	6.7	Average

Test Distance 3meters Result= Reading+ ANT. Factor+ Cable Loss

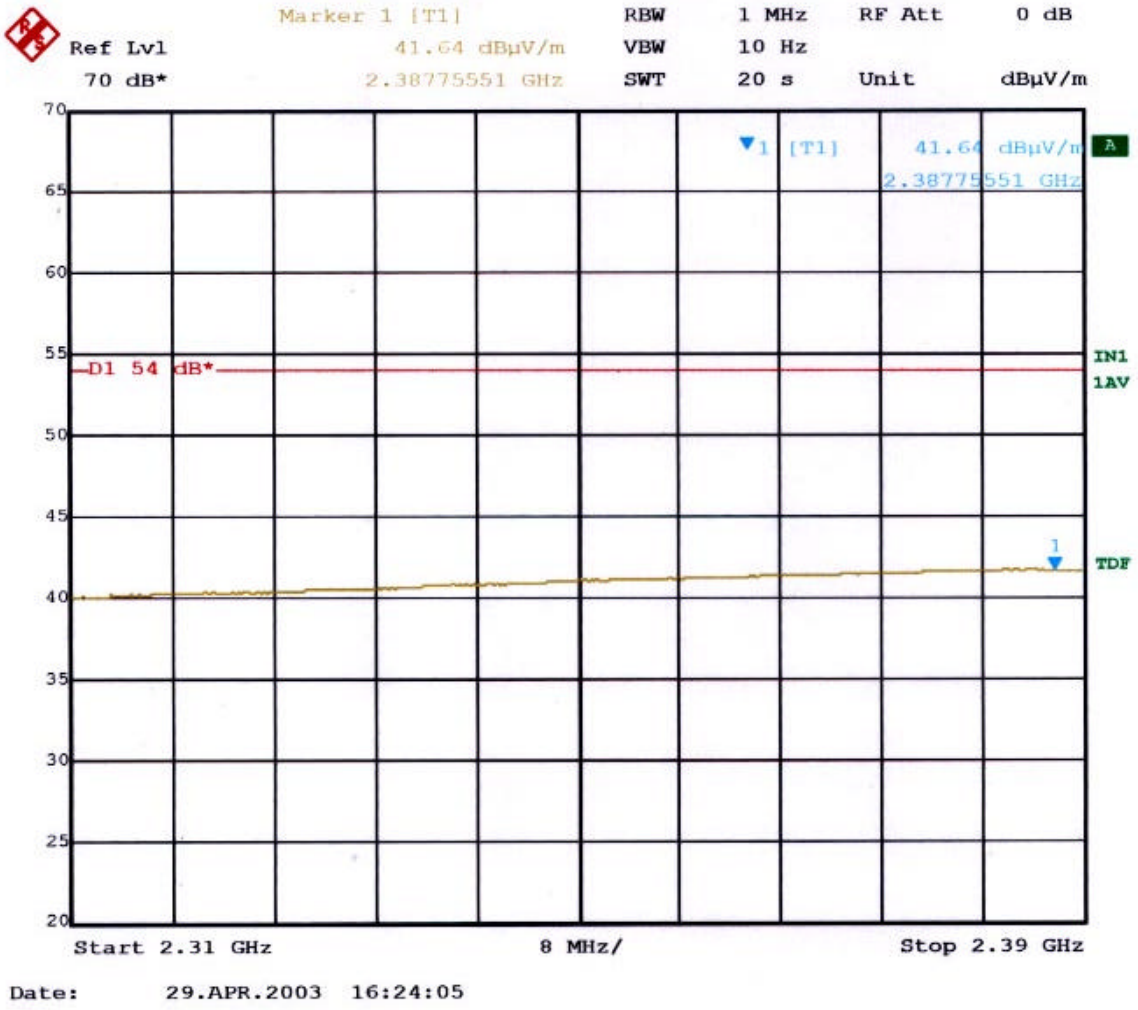
Out of band emissions (Radiated)

Item	CH.	FREQ [MHz]	Ant. Pol. (V / H)	RESULT [dBuV/m]	Limit [dBuV/m]	Margin [dB]
Base	1	2.4048	V	51.60	54	2.40
			H	41.64	54	12.36
	40	2.4750	V	48.65	54	5.35
			H	42.97	54	11.03
Handset	1	2.4048	V	51.60	54	2.40
			H	51.57	54	2.43
	40	2.4750	V	52.00	54	2.00
			H	52.07	54	1.93

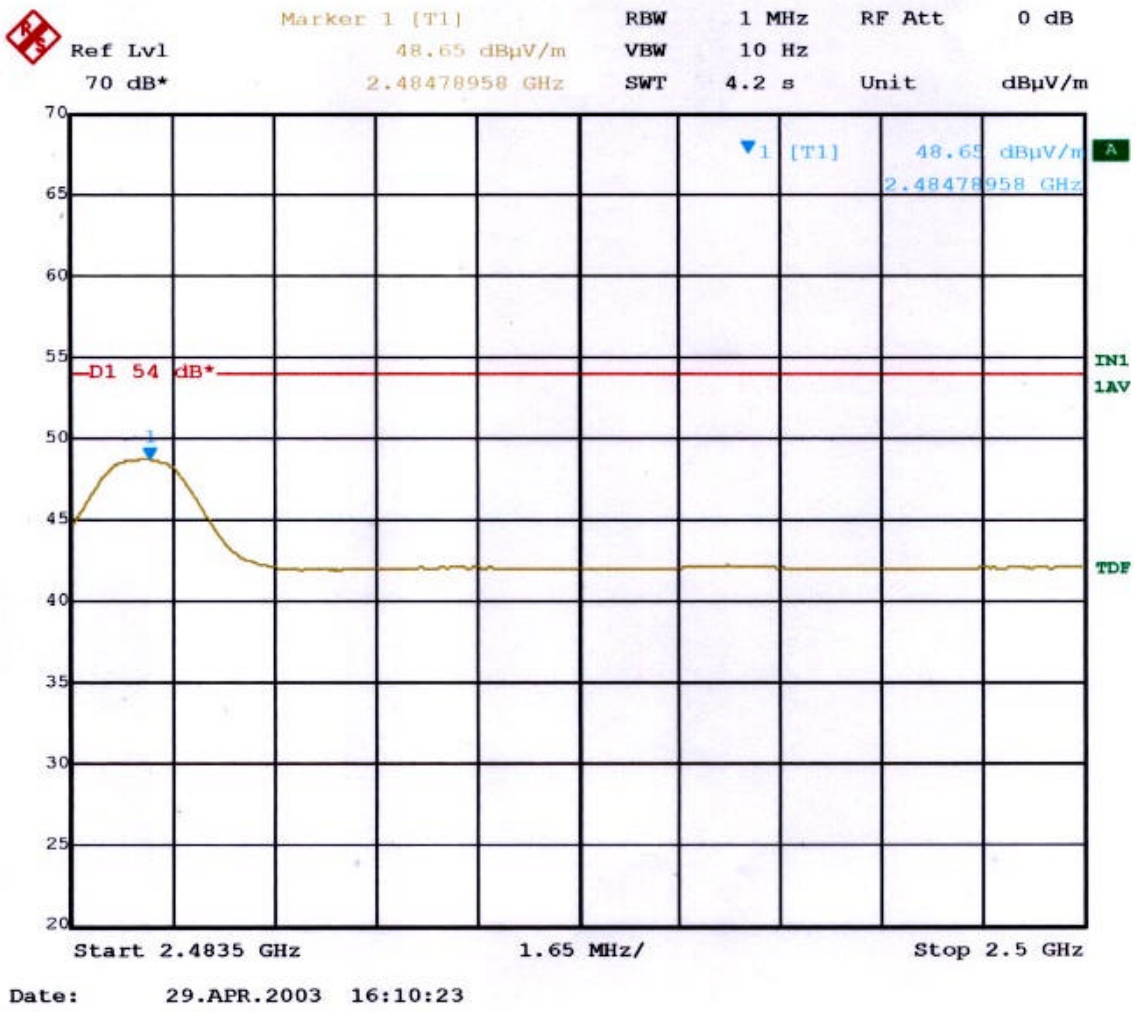
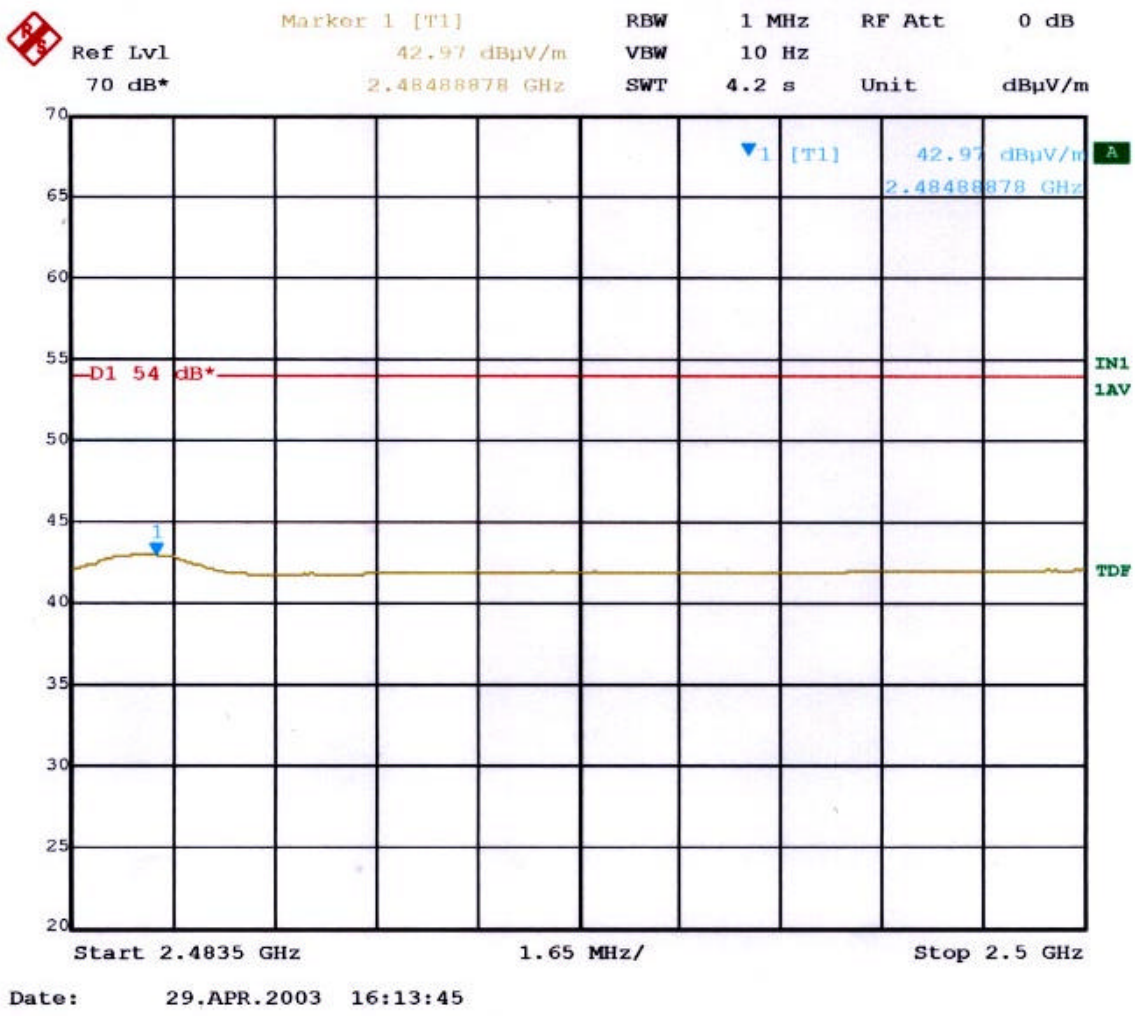
Base Ch. 1: 2.4048GHz [Antenna : V]



Base Ch. 1: 2.4048GHz [Antenna : H]



Base Ch. 40: 2.475GHz [Antenna : V]



Base Ch. 40: 2.475GHz [Antenna : H]