

2.5 Test results

2.5.1 Test result overview

in addition to test report no.:

☐

Correspondance of the test item and its technical description:

☒

in accordance to the technical description

Performance test: Output power and spectrum of transmission:

☒

in accordance to the technical description

TBR 41, February 1998
subclause 5.3: Unwanted emissions outside the band 1610 - 1626.5 MHz and 1628.5 MHz
Emissions radiated by the cabinet(s): 30 MHz - 12.75 GHz, carrier-on

☒

pass

already tested (see test report no. xxx)

not applicable

TBR 41, February 1998
subclause 5.3: Unwanted emissions outside the band 1610 - 1626.5 MHz and 1628.5 MHz
Conducted measurement on antenna port: 100 kHz - 12.75 GHz, carrier-on

☒

pass

already tested (see test report no. xxx)

not applicable

TBR 41, February 1998
subclause 6.3: Unwanted emissions within the band 1610 - 1626.5 MHz and 1628.5 MHz
table 3: nom. bw. is entirely or partially contained in the frequency band 1618.25 - 1626.5 MHz
Conducted measurement on antenna port: in band, carrier-on

☒

pass

fail

already tested (see test report no. xxx)

not applicable

Reference document:

TBR 41, February 1998

S-PCN; MES, incl. handheld earth stations, operating in the 1.6/2.4 GHz bands
5.3 Unwanted emissions outside the band 1610 - 1626.5 MHz and 1626.5 - 1628.5 MHz
Emissions radiated by the cabinet(s): 30 MHz - 12.75 GHz

Environment conditions:

date	07.04.2000
temperature in °C	22
rel. humidity in %	60
voltage in V	13 dc
laboratory / test system	Anechoic chamber 'C'

Test results:

no.	frequency (range)	reading level	ant. angle	attenuation / loss	ant. gain	polar. h v	result	limit	value above limit	plot no.
1	0.03 - 1.0					X		-66		63, 64
2	0.03 - 1.0					X		-66		65, 66
3	1.0 - 1.61					X		-60 to -10		67
4	1.6285 - 4.0					X		-60		67
5	4.0 - 12.75					X		-60		68
6	7.0 - 12.75					X		-60		69, 70
7										
8										
9										
10										

[X] Data of correction is considered in the reading level. These correction values are reported in the quality assurance documentation of the test system because of clearness these correction data are not included in this test report.
[X] The spurious emissions which are shown in the plots given above were detected.
[] No spurious emissions were detected.
[] The table above contains the most important emissions shown in the given plots.
[] The measurement value is out of spec. The difference to the limit value is in the range of measurement uncertainty, however.

Operating conditions of DUT:

see subclause 1.5.2: Operating condition 1

Special quality of measurement:

Plot no. 68 shows the limit is not met in the frequency range 8 - 12.75 GHz. This is not caused by the DUT. The reason for this is the sensitivity of test equipment. A re-test was done manually and results with no spuri from the DUT in this range.

Test setup(s):

see annex 1, test setup 2.1

Test equipment:

see annex 2, subclause 1 and 2: U015, U019, U023, HP8491B

Data of correction:

Photo documentation:

see annex 5

Remark and establishing:

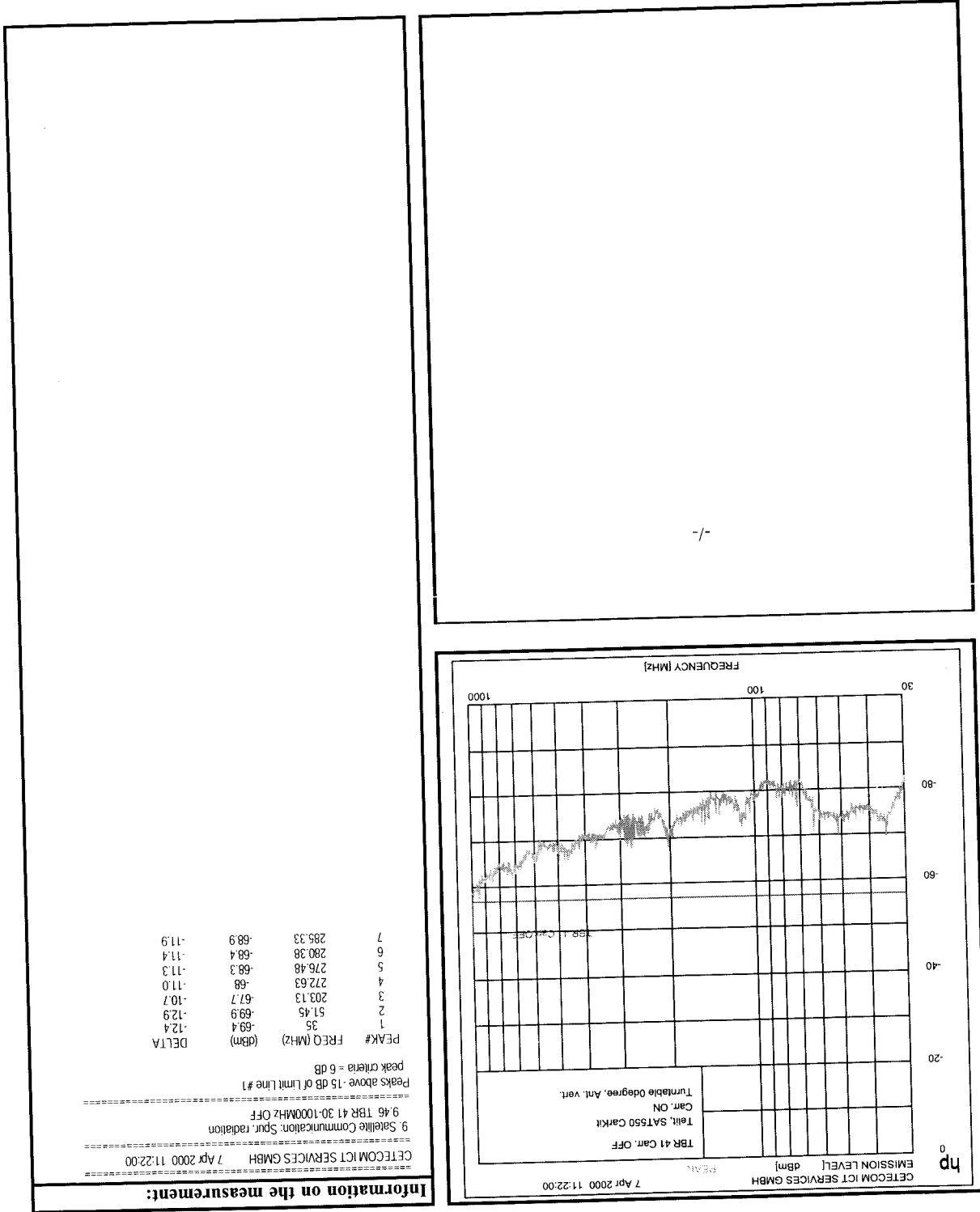
In order to save measuring time the test item was set up in 'carrier-on' state but the test results were compared to the strict limit values valid for 'carrier-off' state, that means if the test has passed all requirements are met.
If the table above is not completely filled out the missing values can be found in the given plots.
Plots 67 and 68 show harmonics generated by overdriving the pre-amplifier.

Result of test:

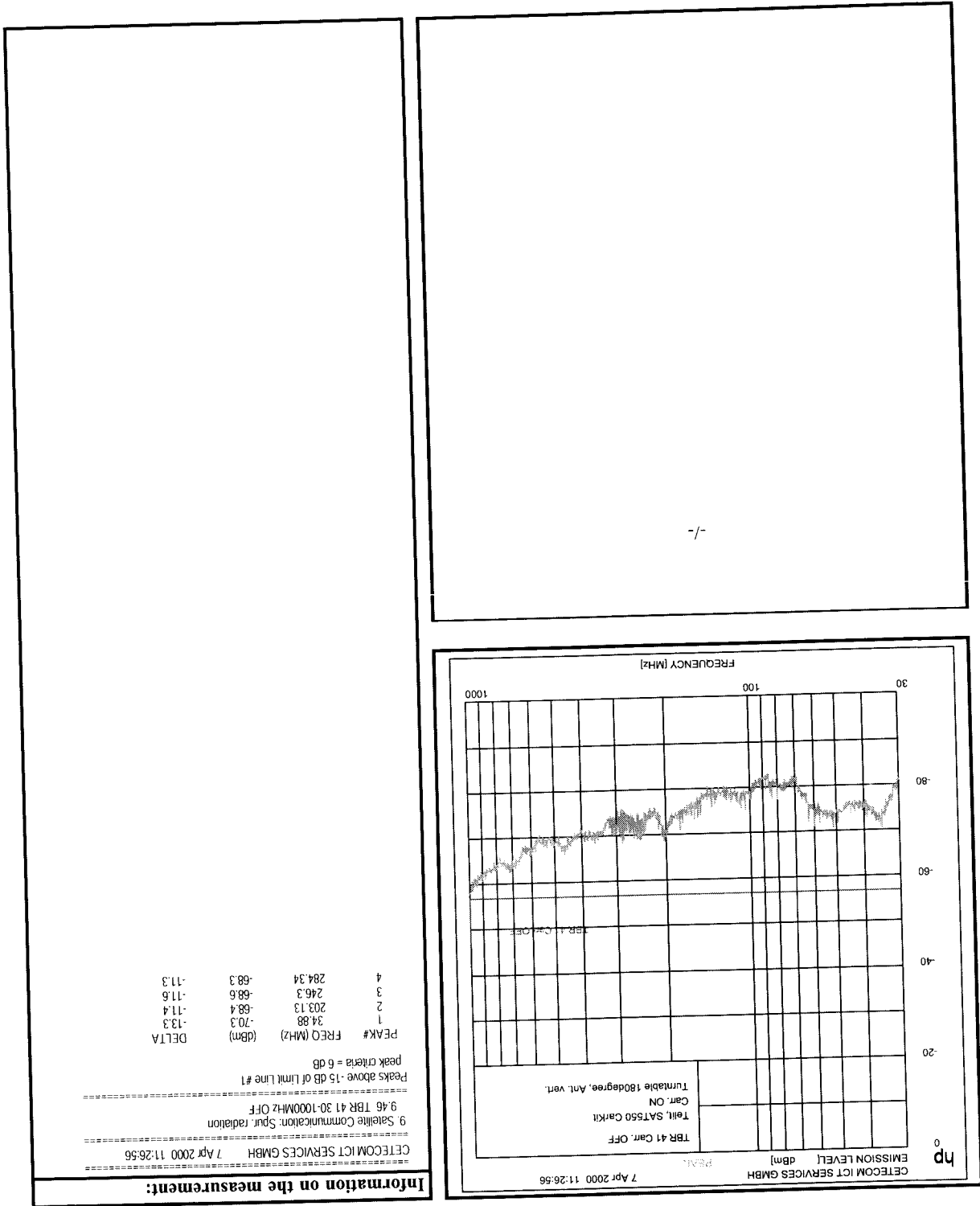
pass [X]

fail []

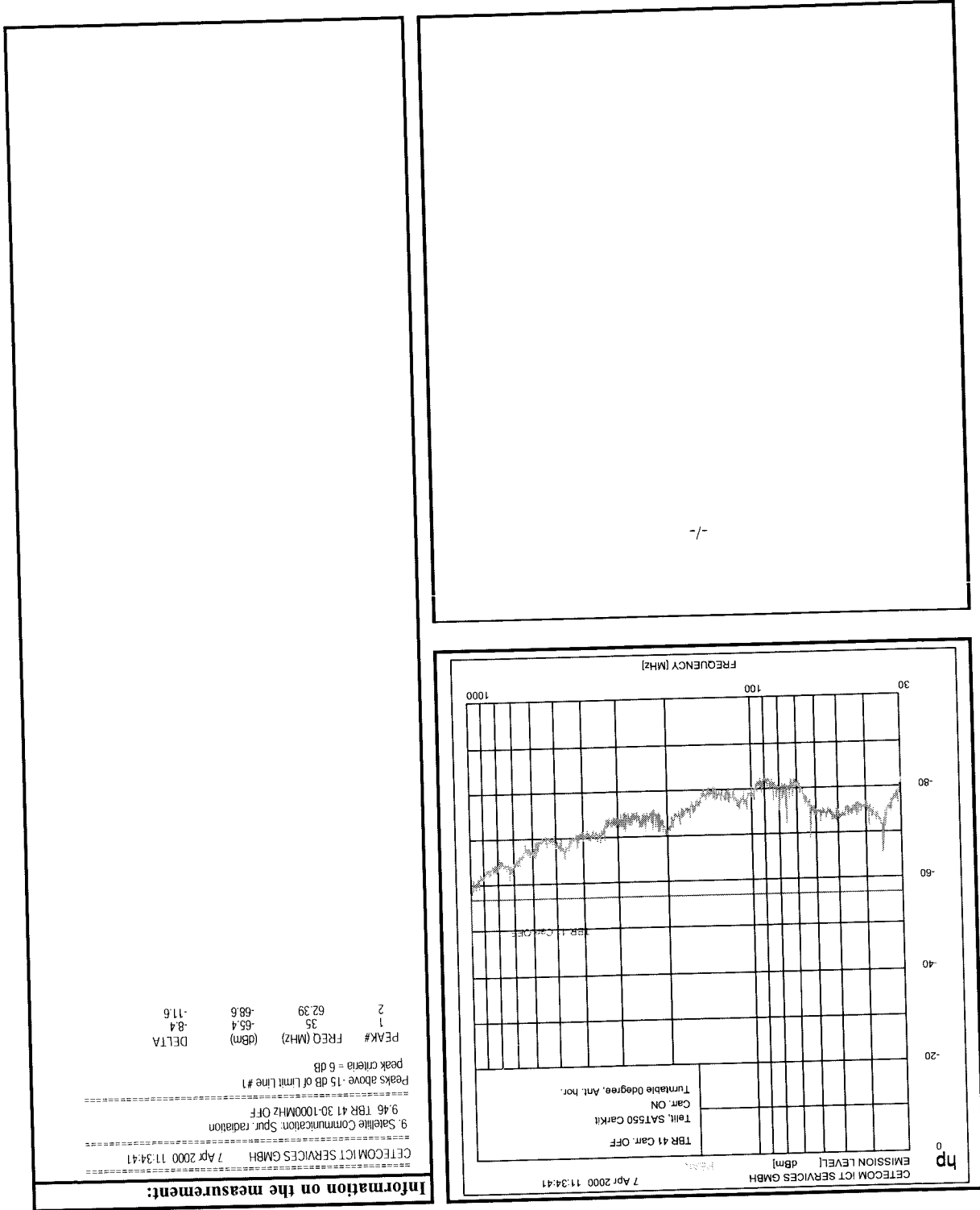
Annex 3: Measurement result no. 63 (74)



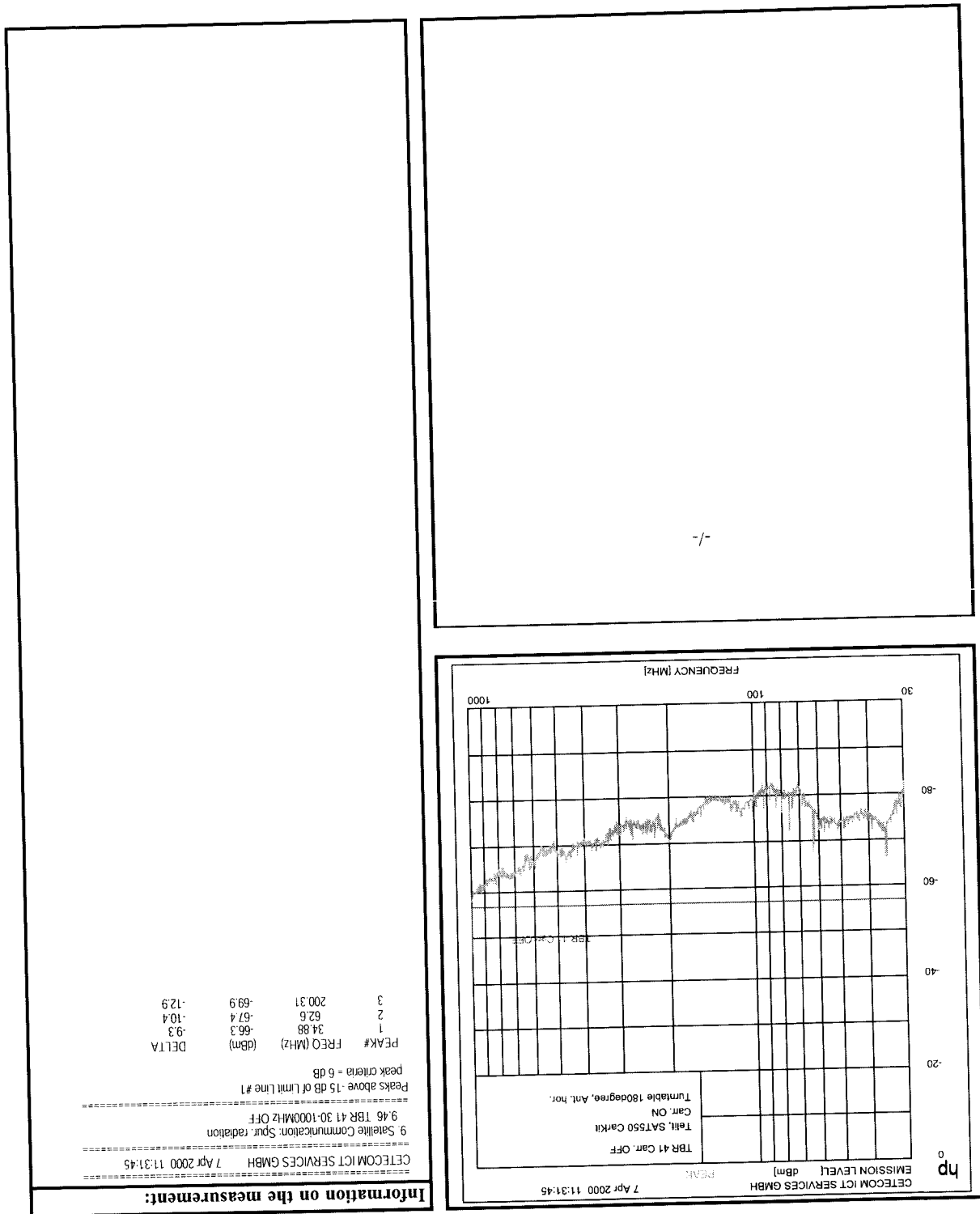
Annex 3: Measurement result no. 64 (74)



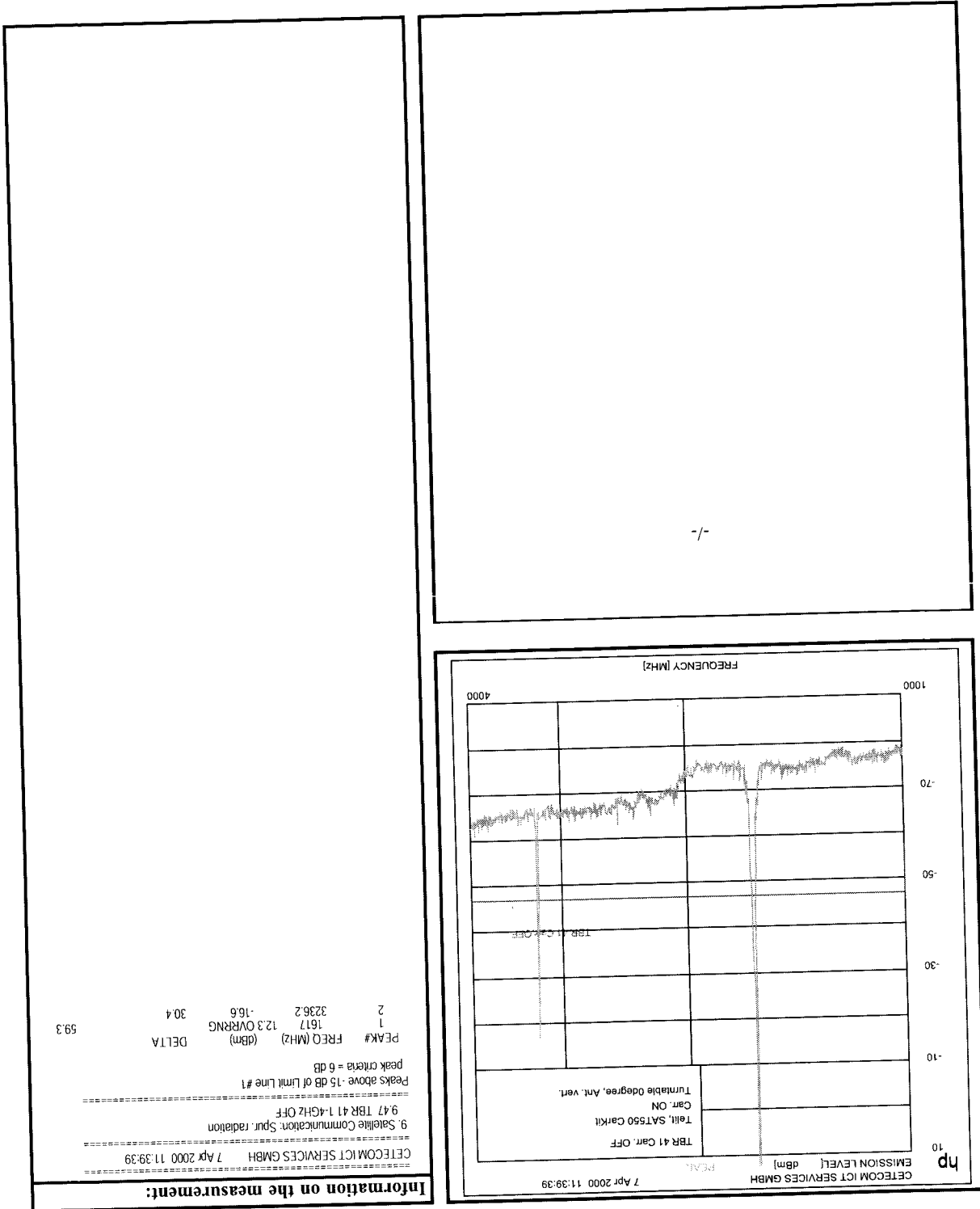
Annex 3: Measurement result no. 65 (74)



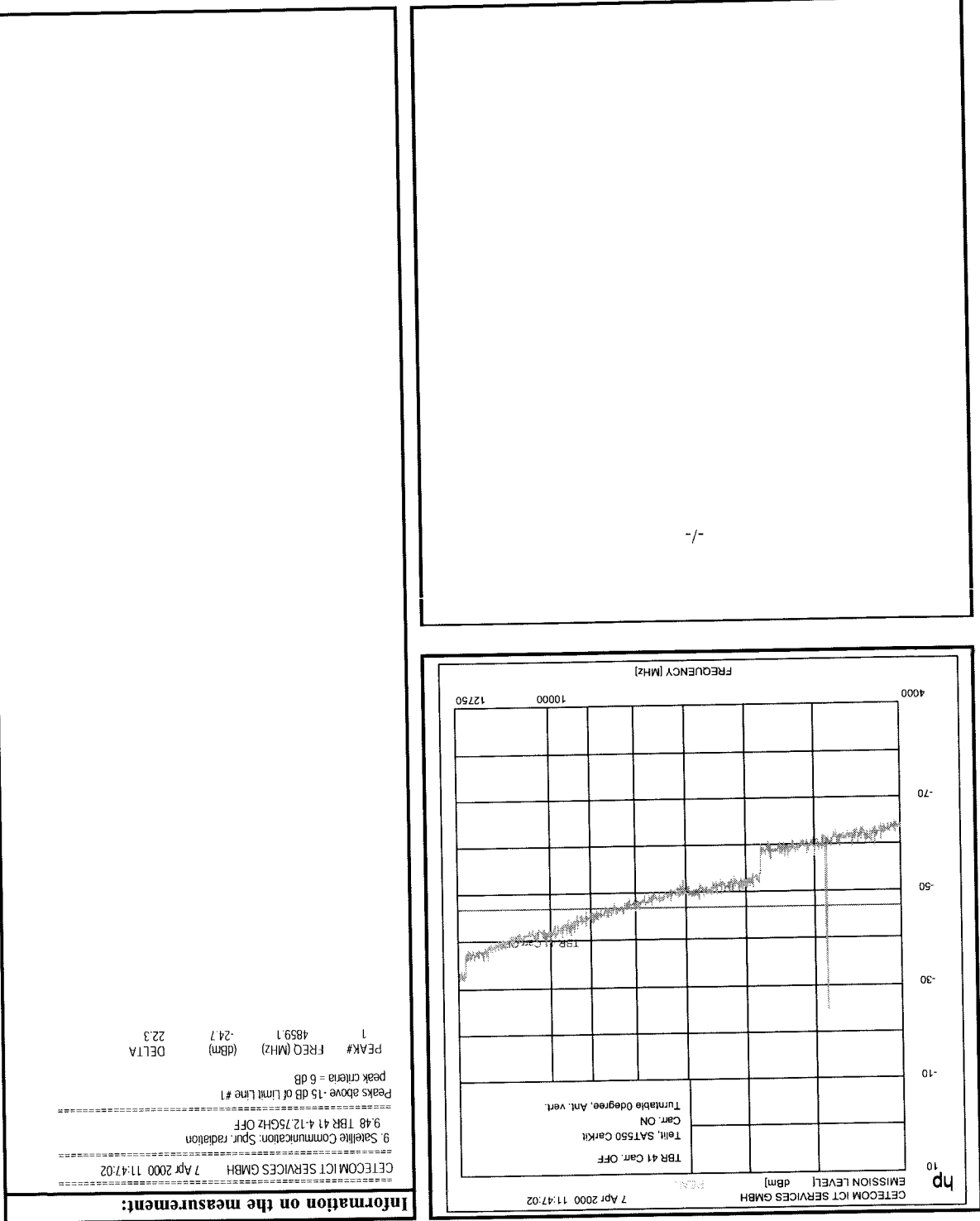
Annex 3: Measurement result no. 66 (74)



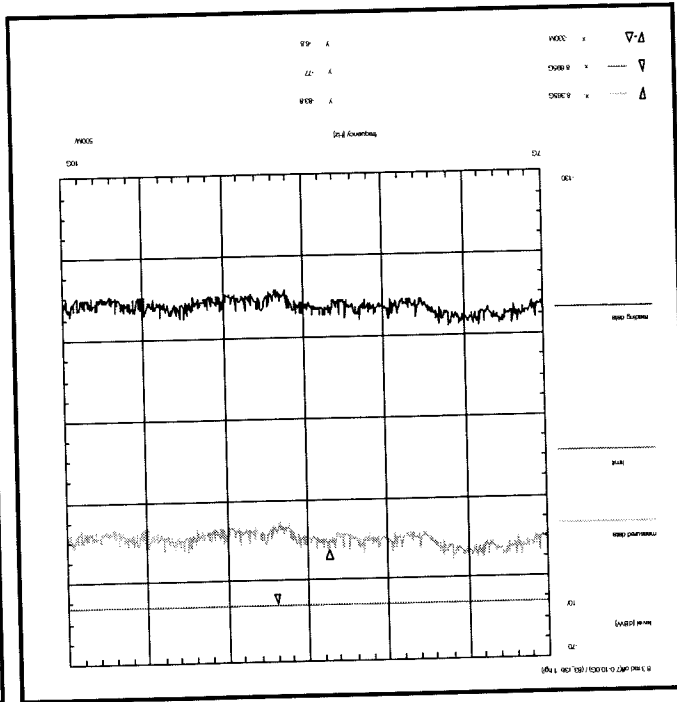
Annex 3: Measurement result no. 67 (74)



Annex 3: Measurement result no. 68 (74)



Annex 3: Measurement result no. 69 (74)



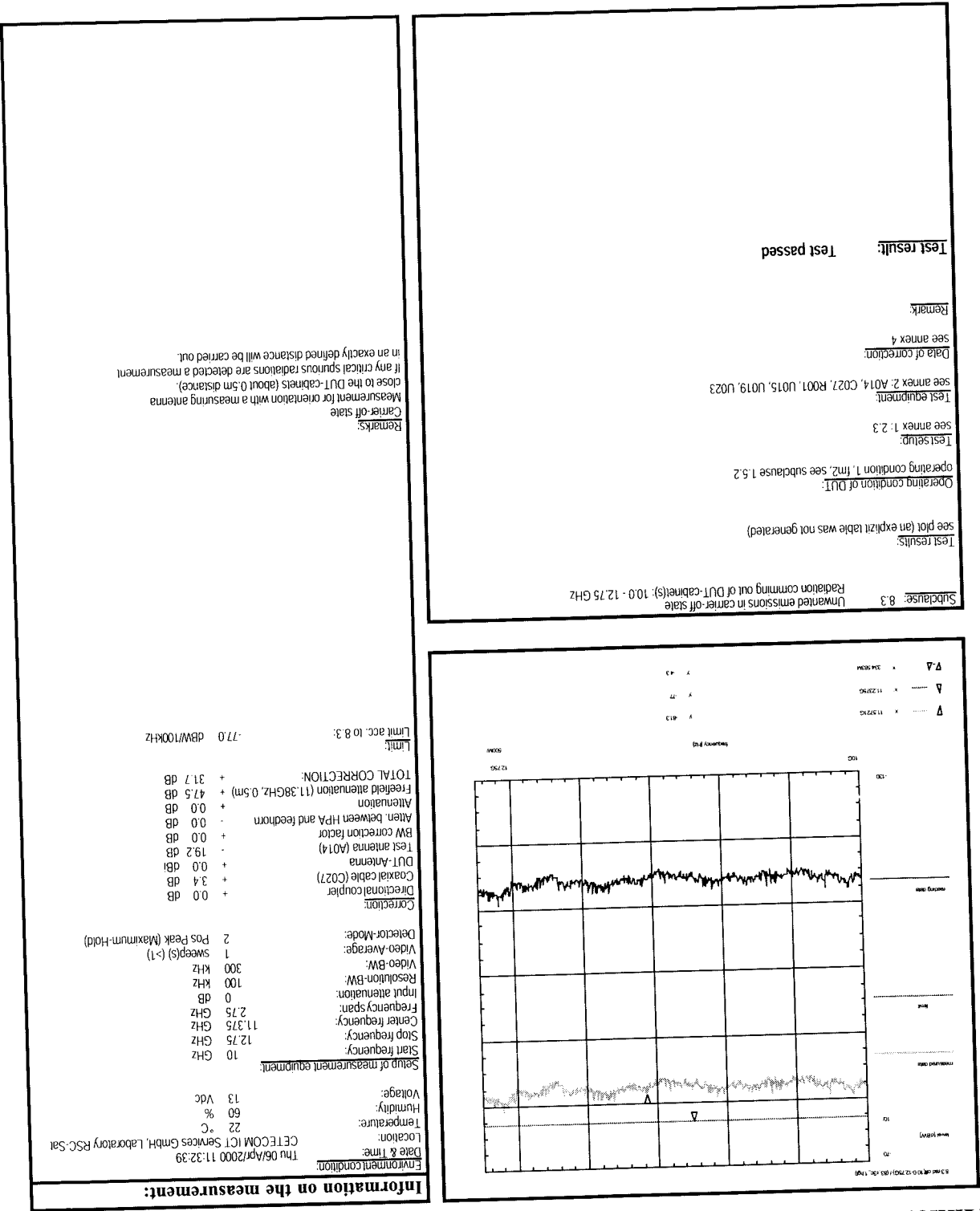
Information on the measurement:

Environmental condition:	Thu 06Apr2000 11:28:04
Date & time:	
Location:	CETECOM ICT Services GmbH, Laboratory RSC-Sai
Temperature:	22 °C
Humidity:	60 %
Voltage:	13 Vdc
Setup of measurement equipment:	
Start frequency:	7 GHz
Stop frequency:	10 GHz
Center frequency:	8.5 GHz
Frequency span:	3 GHz
Input attenuation:	0 dB
Resolution-BW:	100 kHz
Video-BW:	300 kHz
Video-Average:	1 sweep(s) (>1)
Detector-Mode:	2 Pos Peak (Maximum-Hold)
Correction:	
Directional coupler	+ 0.0 dB
Coaxial cable (C027)	+ 3.0 dB
DUT-Antenna	+ 0.0 dBi
Test antenna (A011)	- 19.3 dB
BW correction factor	+ 0.0 dB
Attenu. between HPA and feedhorn	- 0.0 dB
Attenuation	+ 0.0 dB
Freefield attenuation (8.50GHz, 0.5m)	+ 45.0 dB
TOTAL CORRECTION:	+ 28.7 dB
Limit:	-77.0 dBW/100kHz
Limit acc. to 8.3:	

Subclause: 8.3	Unwanted emissions in carrier-off state Radiation coming out of DUT-cabinet(s): 7.0 - 10.0 GHz
Test results:	see plot (an explicit table was not generated)
Operating condition of DUT:	operating condition 1, fm2, see subclause 1.5.2
Test setup:	see annex 1: 2.3
Test equipment:	see annex 2: A011, C027, R001, U015, U019, U023
Data of correction:	see annex 4
Remarks:	
Test result:	Test passed

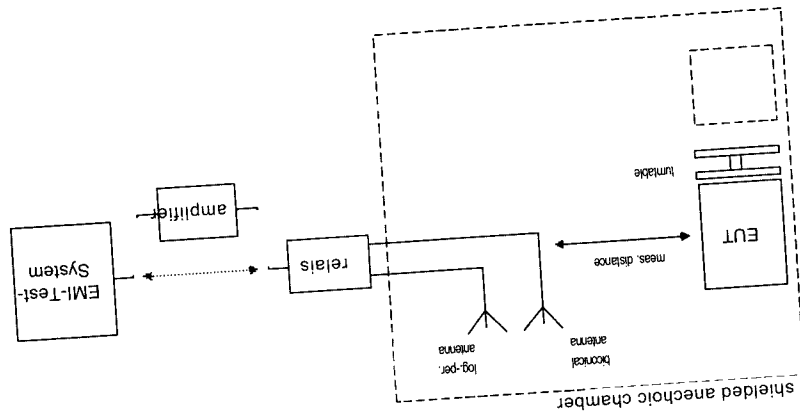
Remarks:	Carrier-off state Measurement for orientation with a measuring antenna close to the DUT-cabinets (about 0.5m distance). If any critical spurious radiations are detected a measurement in an exactly defined distance will be carried out.
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Annex 3: Measurement result no. 70 (74)



2. Radiation measurements

Setup 2.1



Setup 2.2

