



**ELECTRONIC TECHNOLOGY SYSTEMS
DR. GENZ GMBH**

GSM PHASE II TEST - REPORT

**3GPP TS 51.010-1
GCF-CC**

Test report no.: G0M20212-7419-T-51



**ELECTRONIC TECHNOLOGY SYSTEMS
DR. GENZ GMBH**

**Storkower Straße 38c, D-15526 Reichenwalde b. Berlin
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1 General Information

1.1 Notes

The test results of this test report relate exclusively to the test item specified in 1.5. The Electronic Technology Systems Dr. Genz GmbH does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publications of extracts from the test report requires the prior written approval of the Electronic Technology Systems Dr. Genz GmbH.

- Only applicable to protocol testing services -

The purpose of conformity testing is to increase the probability of adherence to essential requirements or conformity specifications, as appropriate. The complexity of the technical specifications, however, means that the full and thorough testing is impracticable 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 test nevertheless provides the confidence that the test sample possess the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

A declaration by the manufacturer has to be submitted for all non tested required parameters and technical procedures which certifies the conformation to the corresponding subclauses of the 3GPP TS 51.010-1 and GCF-CC.

Tester:

23.05.2003

B. Kramer

Date

Name

Signature

Technical responsibility for area of testing:

23.05.2003

Dr. D. Genz

Date

Name

Signature

1.2 Testing laboratory

1.2.1 Location

ELECTRONIC TECHNOLOGY SYSTEM DR. GENZ GMBH (ETS)
Storkower Straße 38c
D-15526 Reichenwalde b. Berlin
Germany
Telefon : +49 33631 888-0
Telefax : +49 33631 888-660

1.2.2 Details of accreditation status

Accredited testing laboratory

DAR-registration number: TTI-P-G 126/96

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

Industry Canada filed test laboratory Reg. No. IC 3470

1.2.3 Test location, where different from ETS

1.3 Details of approval holder

Name : FALCOM GmbH
Street : Gewerbering 6
Town : 98704 Langewiesen
Country : Germany
Telephone : +49 3677 8042-0
Fax : +49 3677 8042-215

Contact : Mr. Leipoldt
Email : leipoldt@falcom.de

1.4 Application details

Date of receipt of application : 12.12.2002
Date of receipt of test item : 12.12.2002
Date of test : 12.12.2002 - 19.05.2003

1.5 Test item

Description of test item : Embedded GSM-GPRS-GPS-Module
Phase Identification : Phase II
Type identification : C2D-SI 900/1800
Serial number : without serial number
Software Version : 4.33
Hardware Version : 04
GPRS class : 2
SIM ATK : Supported

Manufacturer : (if applicable)

Name :
Street :
Town :
Country :

Photos of the test item: see annex I

1.6 Test standard

- **EN 301 419-1, (GSM 13.01) April 2000** version **4.1.1**
- **EN 301 420, (GSM 13.02) December 1999** version **4.0.1**
- **EN 301 511, (GSM 13.11) December 2000** version **7.0.1**
- **3GPP TS 51.010-1 (GSM 11.10), September 2002** version **5.0.0**
- **GCF-CC, October 2002,** version **3.8.1**

1.7 Additional information

This test report is not a complete one and therefore not all test cases of 3GPP TS 51.010-1 and GCF-CC are listed. The test cases listed within this report are those which the customer has requested for.



1.8 Abbreviations used for the test results

passed	EUT passed this test case
failed	EUT failed this test case
inc.	EUT did not pass and did not fail this test case, therefore the verdict "INCONCLUSIVE"
n.a.	Test case not applicable for the EUT
A	Test fully available and fully validated, testing at an accredited test laboratory required
B	Testing at an accredited test laboratory with exceptions (related to GCF-CC)
D	Manufacturers declaration without evidence
N	Tests not applicable to a particular GSM frequency band

2 Technical Test

2.1 Summary of test results

No deviations from the requirements were ascertained in the course of the test performed.

The deviations from the requirements as shown in clause 3 were ascertained in the course of the test performed.

2.2 Test environment

Temperature : 18 ... 25 °C
Relative humidity content : 20 ... 75 %
Air pressure : 860 ... 1030 hPa
Details of power supply : 220 ... 240 V AC
Other parameter :
Test conditions : Operating voltage of the mobile
 $V_{\text{nom}} = 5.00 \text{ V DC}$

2.3 Measurement and test set-up

GSM/ PCN/ PCS Test System TS8916B by Rohde&Schwarz

GSM/ PCN/ PCS/ 850 Test System TS8950G by Rohde&Schwarz

Test configuration and procedures in accordance to the 3GPP TS 51.010-1 (GSM 11.10)

2.4 Test equipment utilized

1. Type: GSM/PCN/PCS/850 TS8950G
Software: System SW V2.07
CRTU-G OP-SW 1V80
Hardware: 1140.0009K02
Manufacturer: Rohde&Schwarz
Applied standard: Global Certification Forum reference document GCF-CC

2. Type: GSM/PCN/PCS TS8916B
Software: CRTC System SW CR02PH2 Rev. 2.07
TS8916B Operation SW Rev. 1.45
Hardware: V 1.130301-04 GDS
Manufacturer: Rohde&Schwarz
Applied standard: Global Certification Forum reference document GCF-CC

3. Type: GSM/PCN/PCS Standalone Tester CRTC02
Software: D02PH2 Rev 1.45
Hardware: DU 848202/003 / AU 848228/003
Manufacturer: Rohde&Schwarz
Applied standard: Global Certification Forum reference document GCF-CC

4. Anechoic chamber by the ETS Dr. Genz GmbH



3 Test Results

3.1 Test group overview

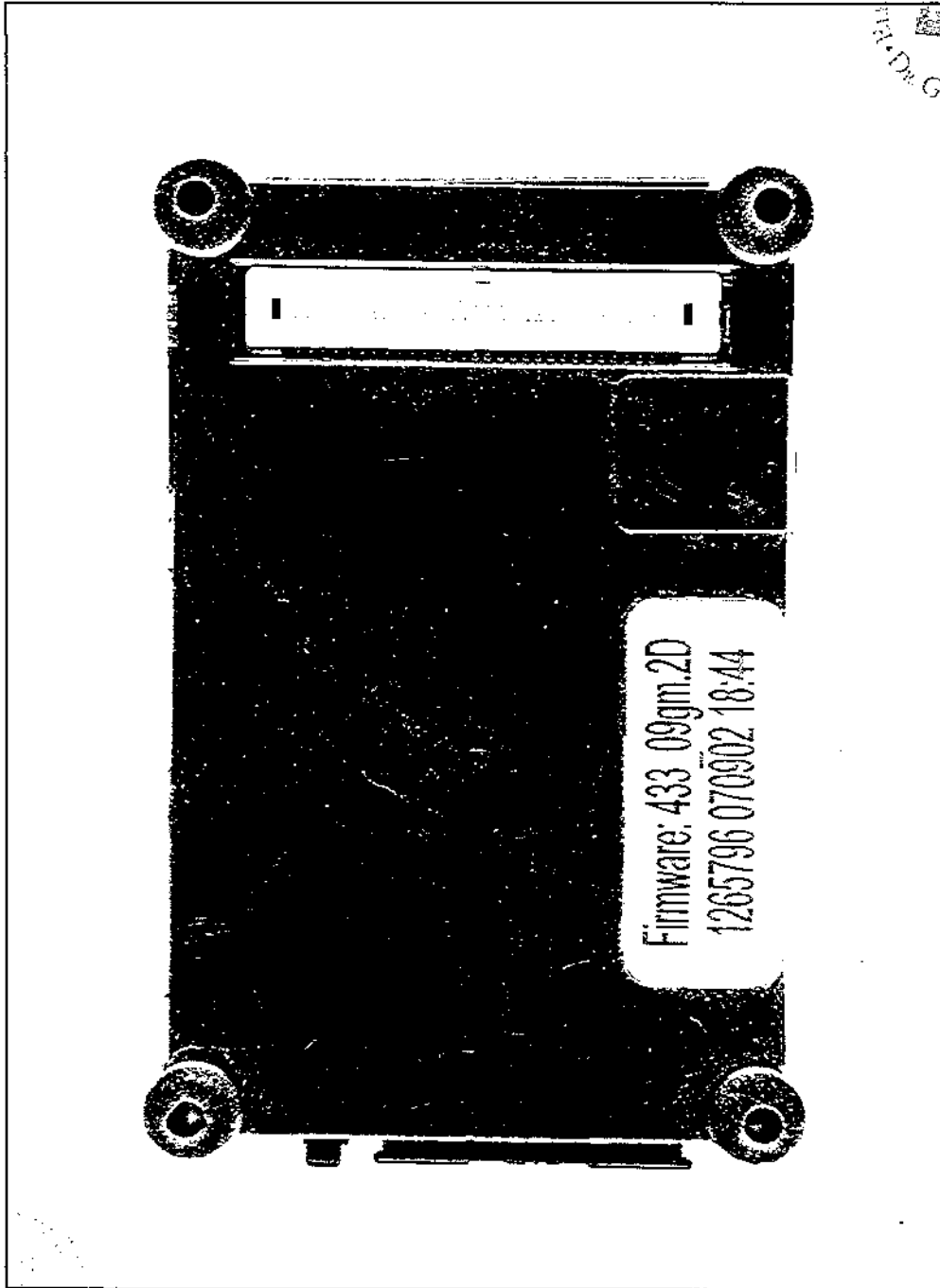
- 12 Transceiver
- 13 Transmitter
- 14 Receiver

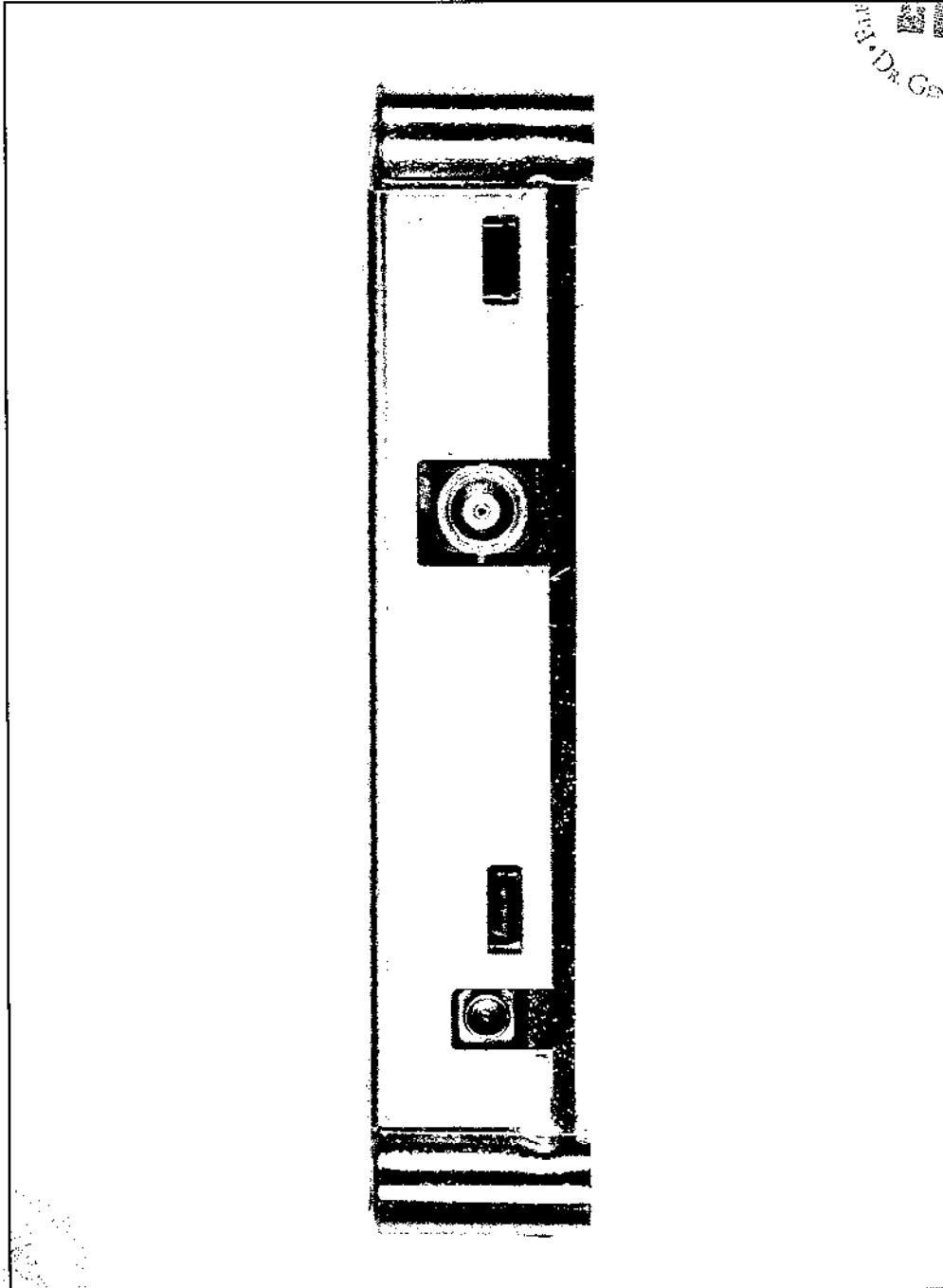
3.2 Tests under normal test conditions

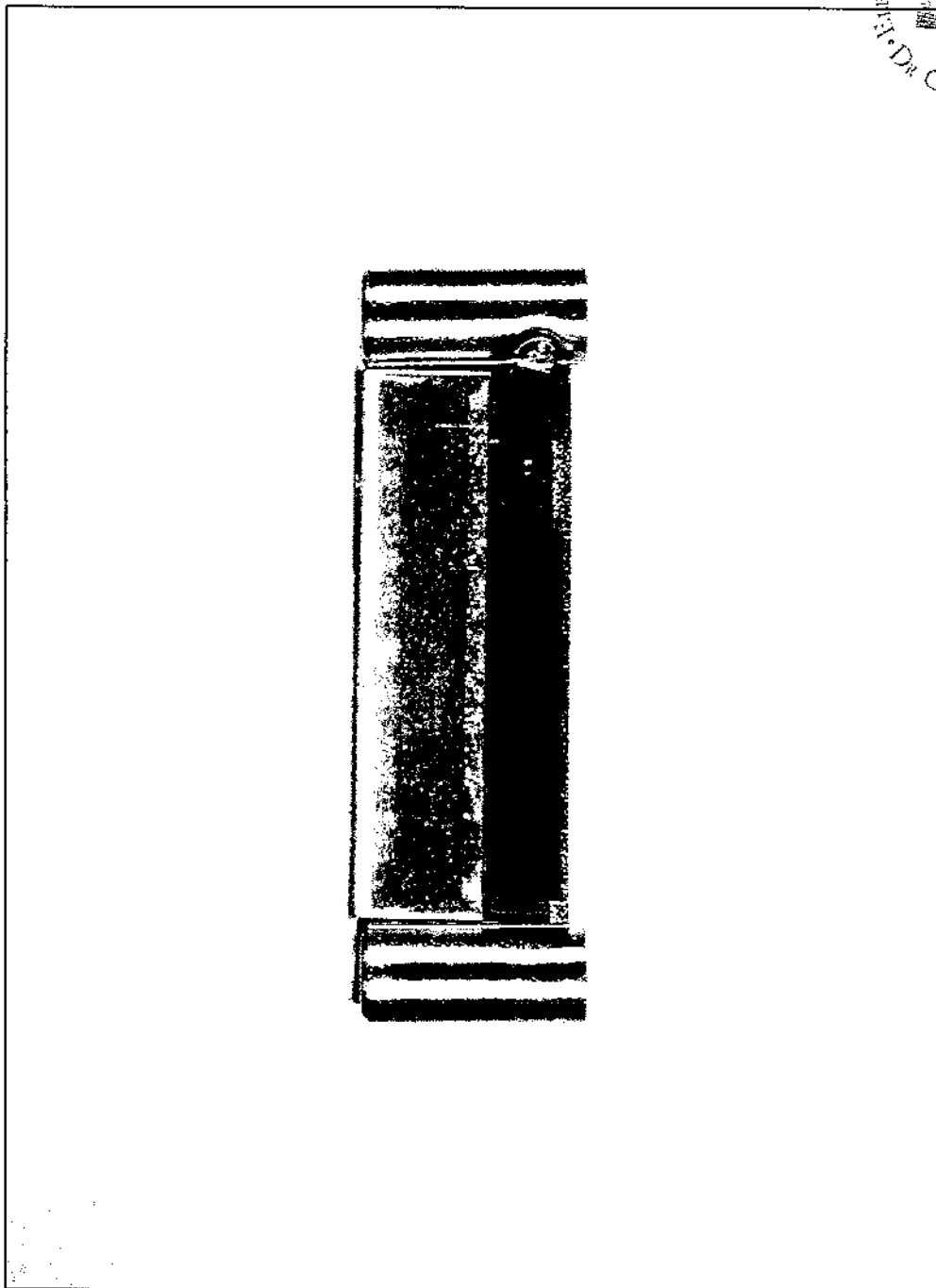
3GPP TS 51.010 Item	TEST DESCRIPTION	GCF GSM 900 Cat	GCF GSM 1800 Cat	GSM 900 / 1800 dualband required	Verdict GSM 900	Verdict GSM 1800	Comments
12							
12.2.1	Radiated spurious emissions - MS allocated a channel - NTC	A	A	All Bands	passed	passed	
12.2.2	Radiated spurious emissions - MS in idle mode - NTC	A	A	All Bands	passed	passed	
13							
13.3-1	Transmitter output power and burst timing - MS with permanent antenna - NTC	A	A	All Bands	passed	passed	
14							
14.2.1	Receiver / Reference sensitivity - TCH/FS - NTC	A	A	All Bands	passed	passed	

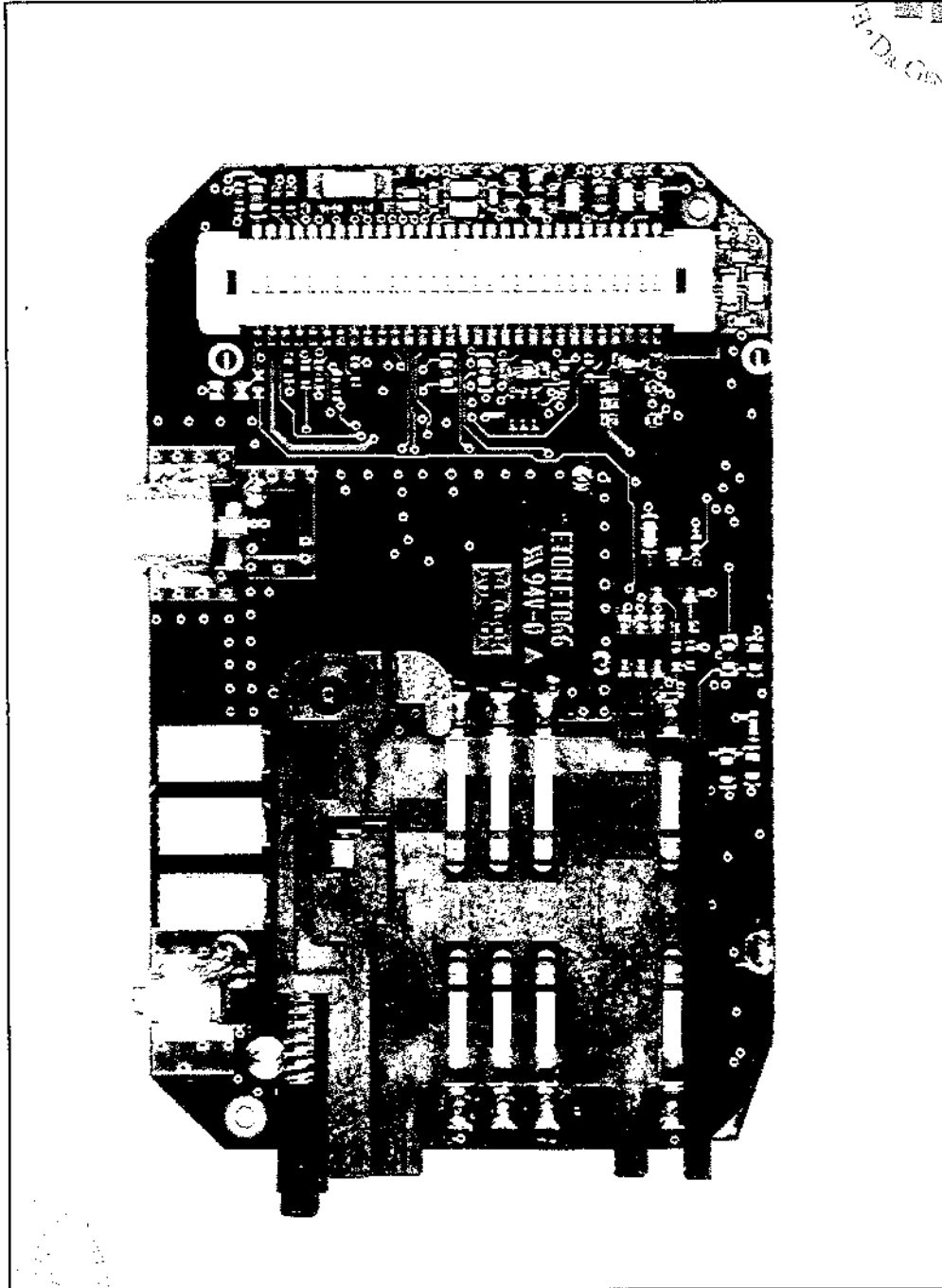
Annex I: Photos of the EUT













Annex II PICS/PIXIT information GSM Phase II

Mobile type: Embedded GSM-GPRS-GPS-Module C2D-SI 900/1800

TYPES OF MOBILE STATION (Table A.1)

1)	Standard GSM Band	Y
2)	Extended GSM Band	Y
3)	DCS 1800	Y
4)	GSM Power Class 2	N
5)	GSM Power Class 3	N
6)	GSM Power Class 4	Y
7)	GSM Power Class 5	N
8)	DCS Power Class 1	Y
9)	DCS Power Class 2	N
10)	DCS Power Class 3	N
11)	Small Mobile Station	N

MOBILE STATION FEATURES (Table A.2)

1)	Display of Called Number	Y
2)	Indication of Call Progress Signals	N
3)	Country / PLMN Indication	Y
4)	Country / PLMN Selection	Y
5)	Keypad	N
6)	IMEI	Y
7)	Short Message Overflow	Y
8)	DTE / DCE Interface	Y
9)	ISDN 'S' Interface	N
10)	International Access Function	Y
11)	Service Indicator	Y
12)	Autocalling restriction capabilities	Y
13)	Dual Tone Multi Frequency function	Y
14)	Subscription Identity Management	Y
15)	On / Off Switch	N
16)	Sub-address	N
17)	Support of Encryption A5/1	Y
18)	Support of Encryption A5/2	Y
19)	Short Message Service Cell Broadcast DRX..	Y
20)	Abbreviated Dialling	Y
21)	Fixed Number Dialling	Y
22)	Barring of Outgoing Calls	N
23)	DTMF Control Digits Separator	N
24)	Selection of Dir. No in Short Messages	N
25)	Last Numbers Dialed	Y
26)	At least one Autocalling Feature	N
27)	Human interface provided	N



TELESERVICES (Table A.3)

1)	Telephony	N
2)	Emergency Call	Y
3)	Short Message MT/PP	N
4)	Short Message MO/PP	N
5)	SMS Cell Broadcast	N
6)	Teles. Alternate Speech and G3 fax	N
7)	Teles. Automatic G3 fax	Y

BEARER SERVICES (Table A.4)

1)	Data cct. duplex async. 300 bit/s	Y
2)	Data cct. duplex async. 1200 b/s	Y
3)	Data cct. duplex async. 1200/75b/s	Y
4)	Data cct. duplex async. 2400 b/s	Y
5)	Data cct. duplex async. 4800 b/s	Y
6)	Data cct. duplex async. 9600 b/s	Y
7)	Data cct. duplex sync. 1200 b/s	N
8)	Data cct. duplex sync. 2400 b/s	N
9)	Data cct. duplex sync. 4800 b/s	N
10)	Data cct. duplex sync. 9600 b/s	N
11)	PAD Access 300 b/s	N
12)	PAD Access 1200 b/s	N
13)	PAD Access 1200/75b/s	N
14)	PAD Access 2400 b/s	N
15)	PAD Access 4800 b/s	N
16)	PAD Access 9600 b/s	N
17)	Packet Access 2400 b/s	N
18)	Packet Access 4800 b/s	N
19)	Packet Access 9600 b/s	N
20)	Alternate Speech/Data	N
21)	Speech Followed by data	N

SUPPLEMENTARY SERVICES (Table A.5)

1)	Calling Line Identification Presentation	Y
2)	Calling Line Identification Restriction	Y
3)	Connected Line Identification Presentation	Y
4)	Connected Line Identification Restriction	Y
5)	Call Forwarding Unconditional	Y
6)	Call Forwarding on Mobile Subscriber Busy	Y
7)	Call Forwarding on No Reply	Y
8)	Call Forw. on Mobile Subscr. Not Reachable	Y
9)	Call Waiting	Y
10)	Call Hold	Y
11)	Multi Party Service	Y
12)	Closed User Group	Y
13)	Advice of Charge (Info)	Y
14)	Advice of Charge (Charging)	Y
15)	Barring of All Outgoing Calls	Y
16)	Barring of Outgoing International Calls	Y
17)	Barring of Outgoing International Calls except those directed to Home PLMN Country	Y
18)	Barring of All Incoming Calls	Y
19)	Barring of Incoming Calls when Roaming Outside Home PLMN Country	Y
20)	Unstructured SS Data	Y

GROUPS FOR POSSIBLE BEARER CAPABILITIES (Table A.6)

1)	Bearer Service 21..26, unrestricted dig. Info Transfer Capability	Y
2)	B.S. 21..26, 3.1 kHz audio ex-PLMN Info Transfer Capability	Y
3)	B.S. 31..34, unrestr. digital Info Transfer Capability; Non-X.32 Cases (BS 31..BS 34)	N
4)	B.S. 31..34, unrestr. digital Info Transfer Capability; X.32 Cases	N
5)	B.S. 31..34, 3.1 kHz audio ex-PLMN Info Transf. Capab.; Non-X.32 Cases (BS 31..BS 34)	N
6)	B.S. 31..34, 3.1 kHz audio ex-PLMN Info Transf. Capab.; X.32 Cases	N
7)	B.S. 41..46, PAD Access Async	N
8)	B.S. 51..53, Data Paket Dupl. Sync	N
9)	Alternate Speech/Data, "Speech"	N
10)	Alt. Speech/Data, 3.1 kHz audio ex-PLMN Info Transf. Cap.; Asynchronous	N
11)	Alt. Speech/Data, 3.1 kHz audio ex-PLMN Info Transf. Cap.; Synchronous	N
12)	Speech followed by Data, "Speech"	N
13)	Speech fol. by Data, 3.1 kHz audio ex-PLMN Info Transf. Cap.; Asynchronous	N
14)	Speech fol. by Data, 3.1 kHz audio ex-PLMN Info Transf. Cap.; Synchronous	N
15)	Teleservice 11..12, Speech	N
16)	Alternate Speech and Facsimile group 3; Speech	N
17)	Alternate Speech and Facsimile group 3; Facsimile group 3	N

BEARER SERVICE 21..26, UDI (Table A.7)

1)	Signalling Access Protocol (SAP)	Y
2)	Connection Element (CE)	Y
3)	User Info Layer 2 Protocol (UIL2P)	Y
4)	Number of Data Bits(NDB)	Y
5)	Parity Information (NPB)	Y
6)	Number of Stop Bits (NSB)	Y
7)	Radio Channel Requirement (RCR)	Y
8)	Intermediate Rate (IR)	Y
9)	User Rate (UR)	Y
10)	all allowed combinations according to GSM 07.01 B.1.2.1 implemented (if not, provide detailed description)	Y

BEARER SERVICE 21..26, 3.1 kHz (Table A.8)

1)	Signalling Access Protocol (SAP)	Y
2)	Connection Element (CE)	Y
3)	User Info Layer 2 Protocol (UIL2P)	Y
4)	Number of Data Bits(NDB)	Y
5)	Parity Information (NPB)	Y
6)	Number of Stop Bits (NSB)	Y
7)	Radio Channel Requirement (RCR)	Y
8)	Intermediate Rate (IR)	Y
9)	User Rate (UR)	Y
10)	Modem Type (MT)	Y
11)	all allowed combinations according to GSM 07.01 B.1.2.2 implemented (if not, provide detailed description)	Y

TELESERVICE 11..12, SPEECH (Table A.21)

1)	Radio Channel Requirement (RCR)	Y
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TELESERVICE 62, AUTOMATIC G3 FAX (Table A.24)

1)	Connection Element (CE)	Y
2)	User Info Layer 2 Protocol (UIL2P)	Y
3)	Intermediate Rate (IR)	Y
4)	User Rate (UR)	Y
5)	all allowed combinations according to GSM 07.01 B.1.11 implemented (if not, provide detailed description)	Y

ADDITIONAL INFORMATION (Table A.25)

1)	At least one half Rate Service	Y
2)	Full Rate Speech Mode	Y
3)	Half Rate Speech Mode	Y
4)	At least one Data Service	Y
5)	At least one Full Rate Data Service	Y
6)	At least one Half Rate Data Service	Y
7)	At least one Non Transparent Data Service.	Y
8)	At least one Transparent Data Service	Y
9)	Only Transparent Data Service	N
10)	At least one asyn. Data Service	Y
11)	At least one asyn. non Transp. Data Serv	Y
12)	2.4k full Rate Data Mode	Y
13)	2.4k half Rate Data Mode	Y
14)	4.8k full Rate Data Mode	Y
15)	4.8k half Rate Data Mode	Y
16)	9.6k full Rate Data Mode	Y
17)	Non transp. Serv. with full Rate Channel at a User Rate of 4.6kbit/s	N
18)	At least one Bearer Capability	Y
19)	At least one MT cct. switched basic Service	Y
20)	At least one MO cct. switched basic Service	Y
21)	Only SDCCH	N
22)	At least one Service on Traffic Channel	Y
23)	Dual Rate Channel Types	Y
24)	Only Full Rate Channel Type	N
25)	At least one Teleservice	Y
26)	CC Protocol for at least one BC	Y
27)	Only cct. switched basic Serv. supported by the Mobile is Emergency Call	N
28)	Fax Error Correction Mode	N
29)	At least one Supplementary Service	Y
30)	Non Call Related Supplementary Service	N
31)	At least one Short Message Service	Y
32)	(SMS) Reply Procedure	N
33)	Replace SMS	N
34)	Display of Received SMS	N
35)	SMS Status Report Capabilities	N
36)	Storing of Short Messages in the SIM	Y
37)	Storing of Short Messages in the ME	N
38)	Detach on Power Down	Y
39)	Detach on SIM Remove	Y
40)	SIM removable without Power down	Y
41)	ID-1 SIM	N
42)	Plug-In SIM	Y
43)	Disable PIN Feature	Y
44)	PIN2 Feature	Y
45)	Feature Requiring Entry of PIN2	Y
46)	Chars 0-9, *, #	Y

47)	A, B, C, D Chars	N
48)	Autom. Enter Automatic Sel. of PLMN Mode	N
49)	Alerting Indication to the User	Y
50)	Appl. Layer is always Running	Y
51)	Immediate Connect	N
52)	In-Call Modification	Y
53)	Follow-On Request Procedure	Y
54)	Refusal of Call	Y
55)	RF amplification	N
56)	No. of B-party no. for Autocalling is greater than no. of Entries in Blacklist	N
57)	Handset MS supporting Speech	N
58)	MT2 Configuration	Y
59)	MT2 Conf. or any other Possibility to send Data over Um Interface	Y
60)	Permanent Antenna Connector	Y
61)	Pseudo HO synchronization capability	Y
62)	5V only SIM/ME interface	N
63)	3V only SIM/ME interface	Y
64)	5V/3V SIM/ME interface	N
65)	3V/5V SIM/ME interface	N
66)	Enhanced full rate speech supported	Y
67)	Controlled Early Classmark Sending	Y
68)	Round Trip Delay for loop C 0 .. 25 bursts	1

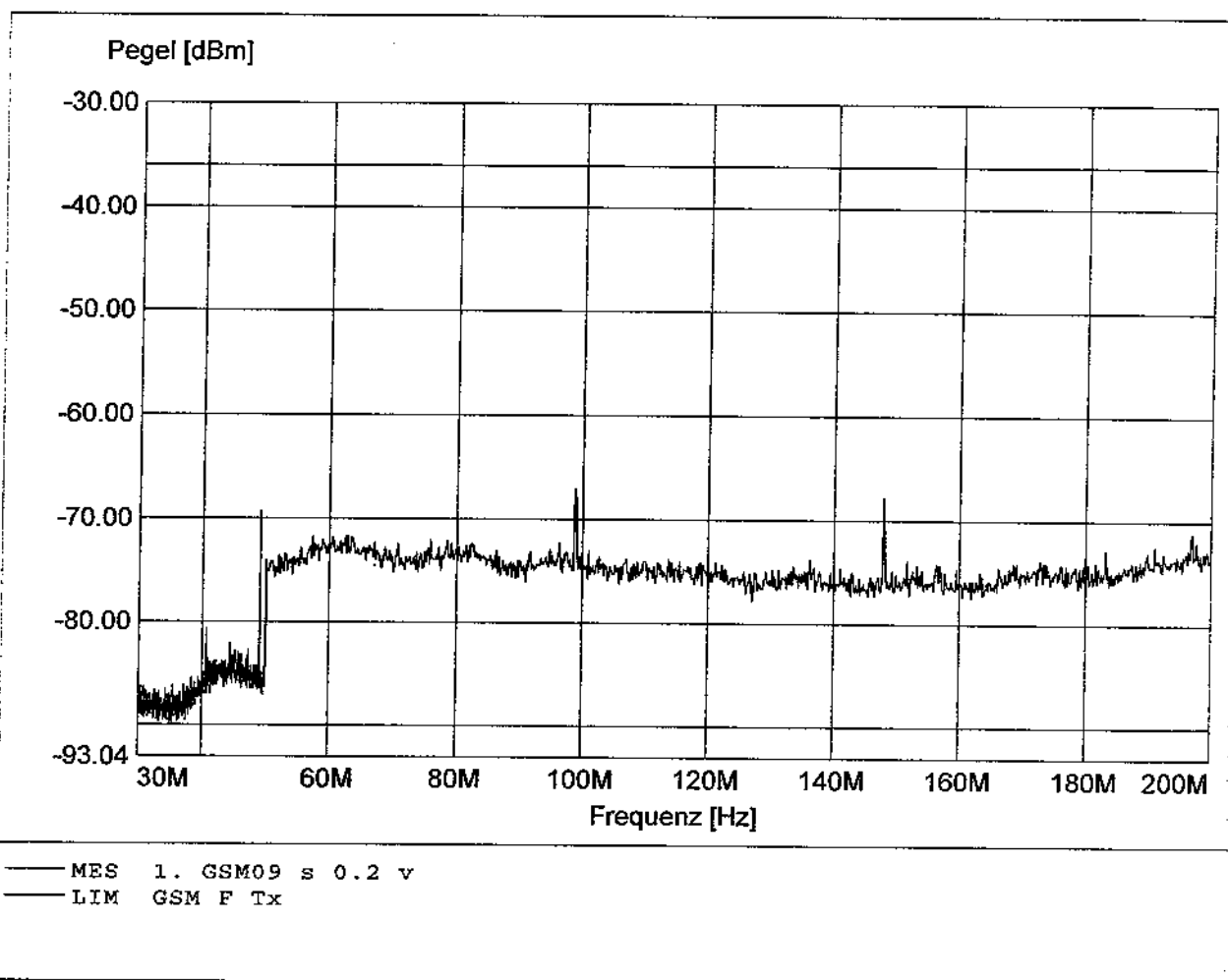


Annex III: Measurement diagrams

**Radiated spurious emissions-MS allocated ARFCN 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

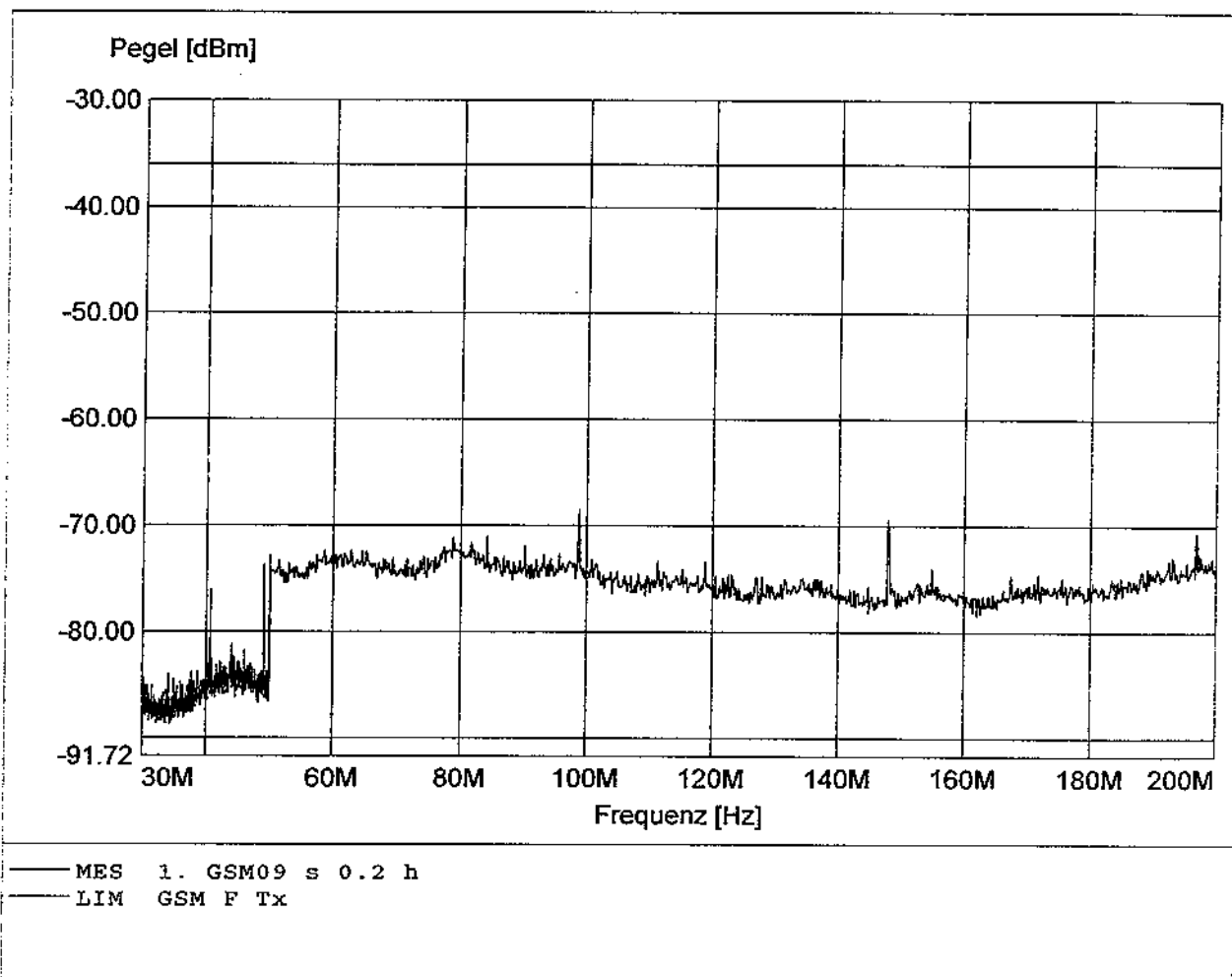
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq:98.833MHz Pmax:-67.04 RBW:10/100KHz



**Radiated spurious emissions-MS allocated ARFCN 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

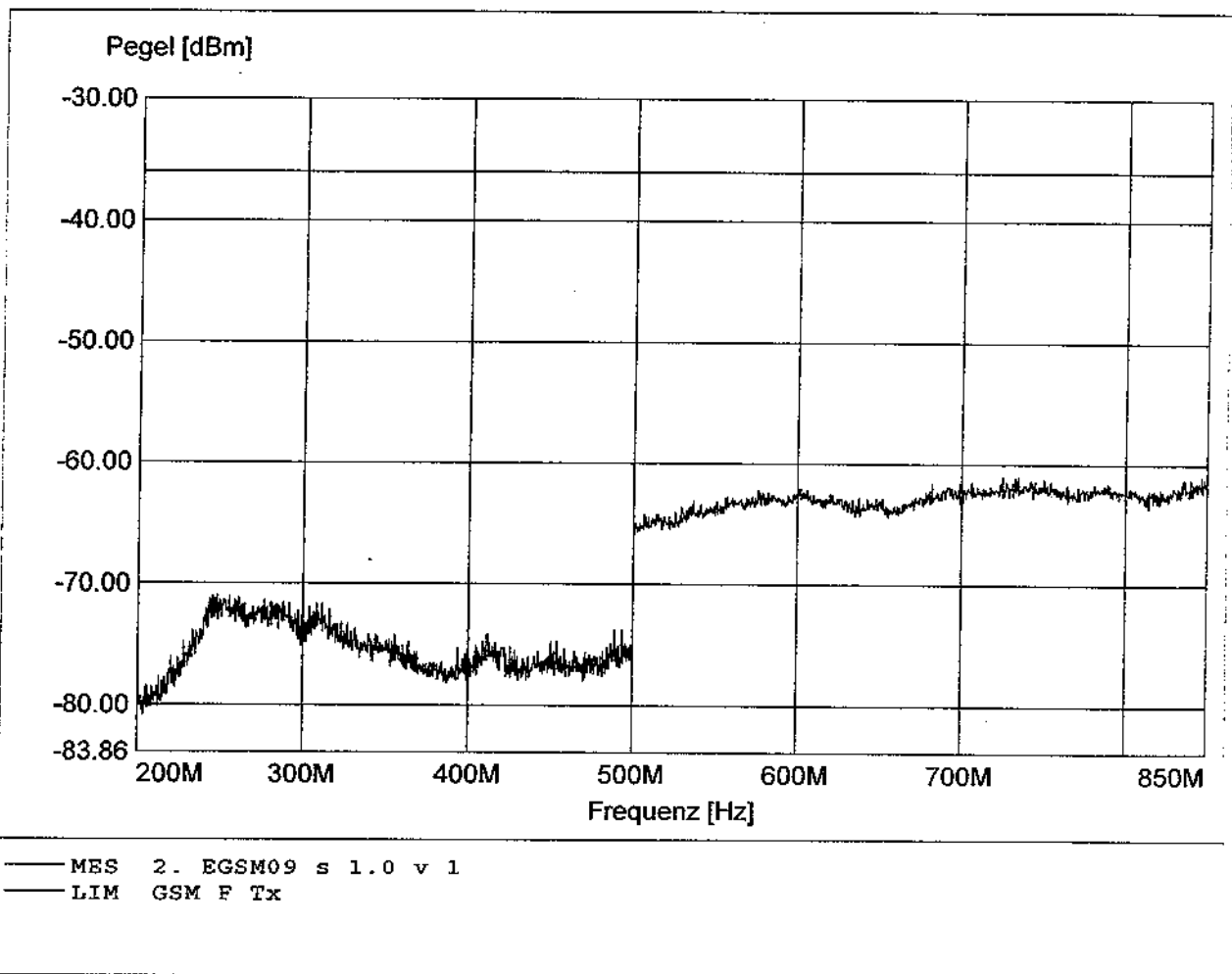
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq:98.833MHz Pmax:-68.50 RBW:10/100KHz



**Radiated spurious emissions-MS allocated ARFCN 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

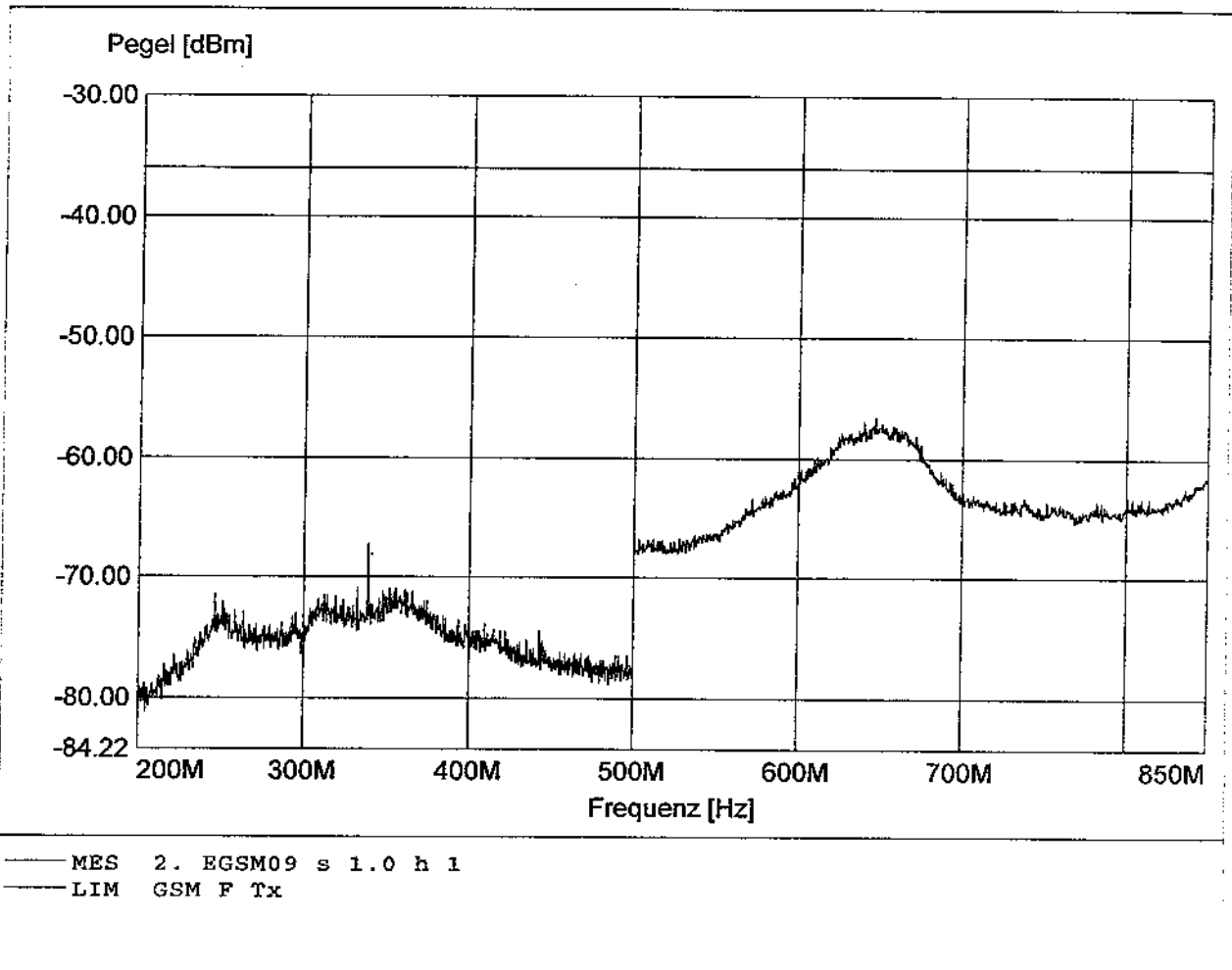
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 223, Ampl.:0.2-1GHz,notch-f.
Comment 2: Freq:724.778MHz Pmax:-60.96 RBW:0.1/3MHz



**Radiated spurious emissions-MS allocated ARFCN 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

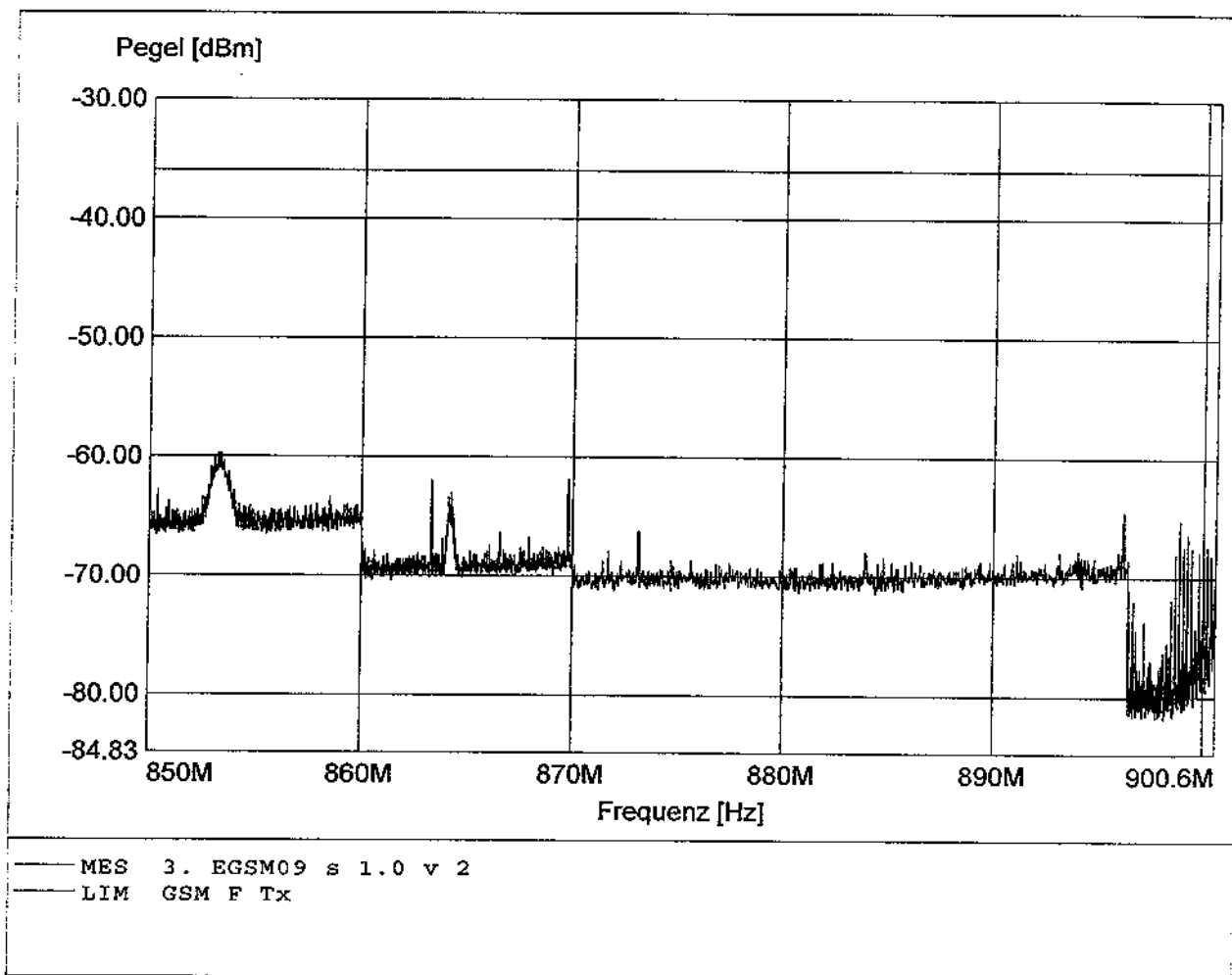
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 223, Ampl.:0.2-1GHz,notch-f.
Comment 2: Freq:646.611MHz Pmax:-56.46 RBW:0.1/3MHz



**Radiated spurious emissions-MS allocated ARFCN 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

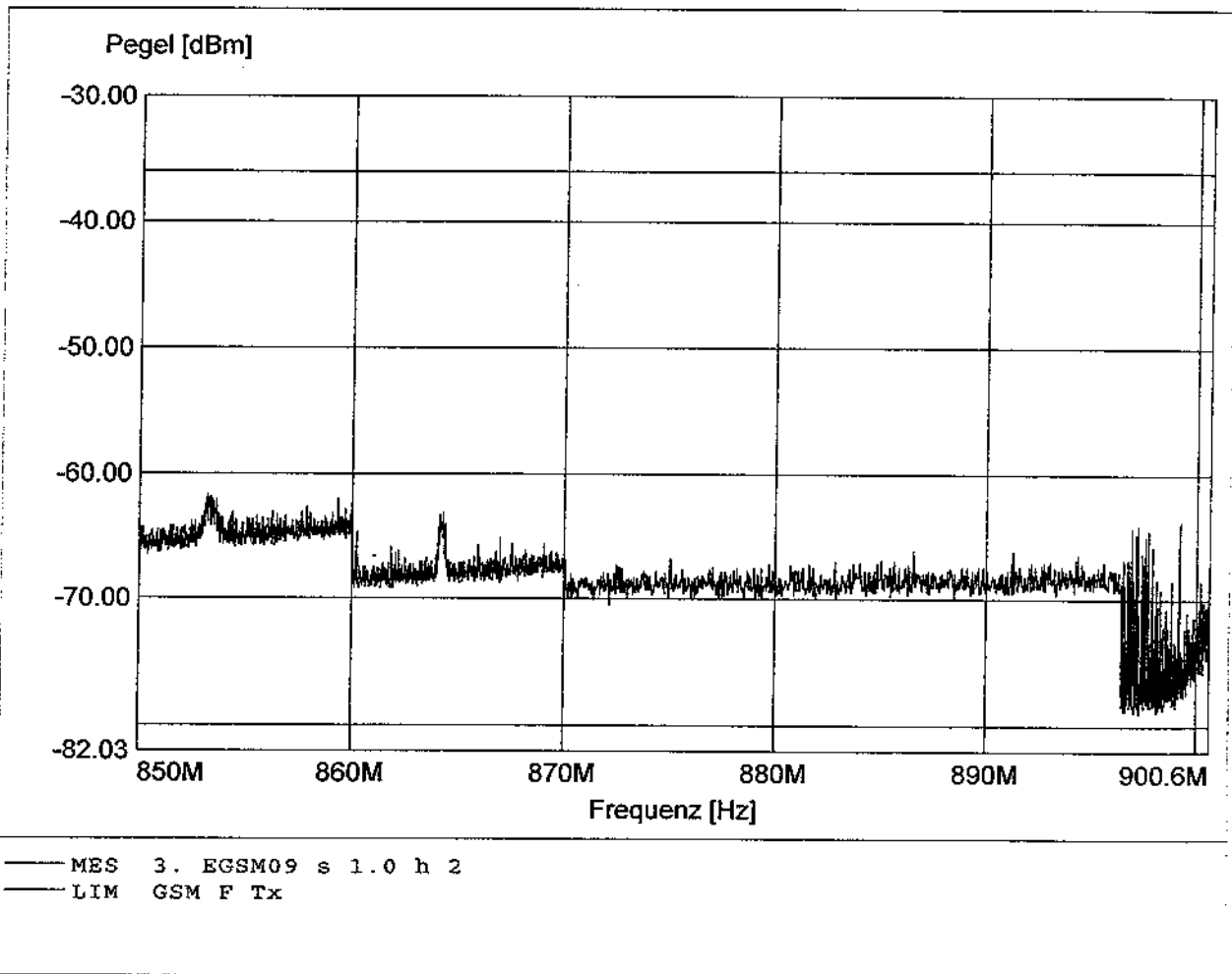
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 223, Ampl.:0.2-1GHz,notch-f.
Comment 2: Freq:853.356MHz Pmax:-59.65 RBW:1MHz to 30KHz



**Radiated spurious emissions-MS allocated ARFCN 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

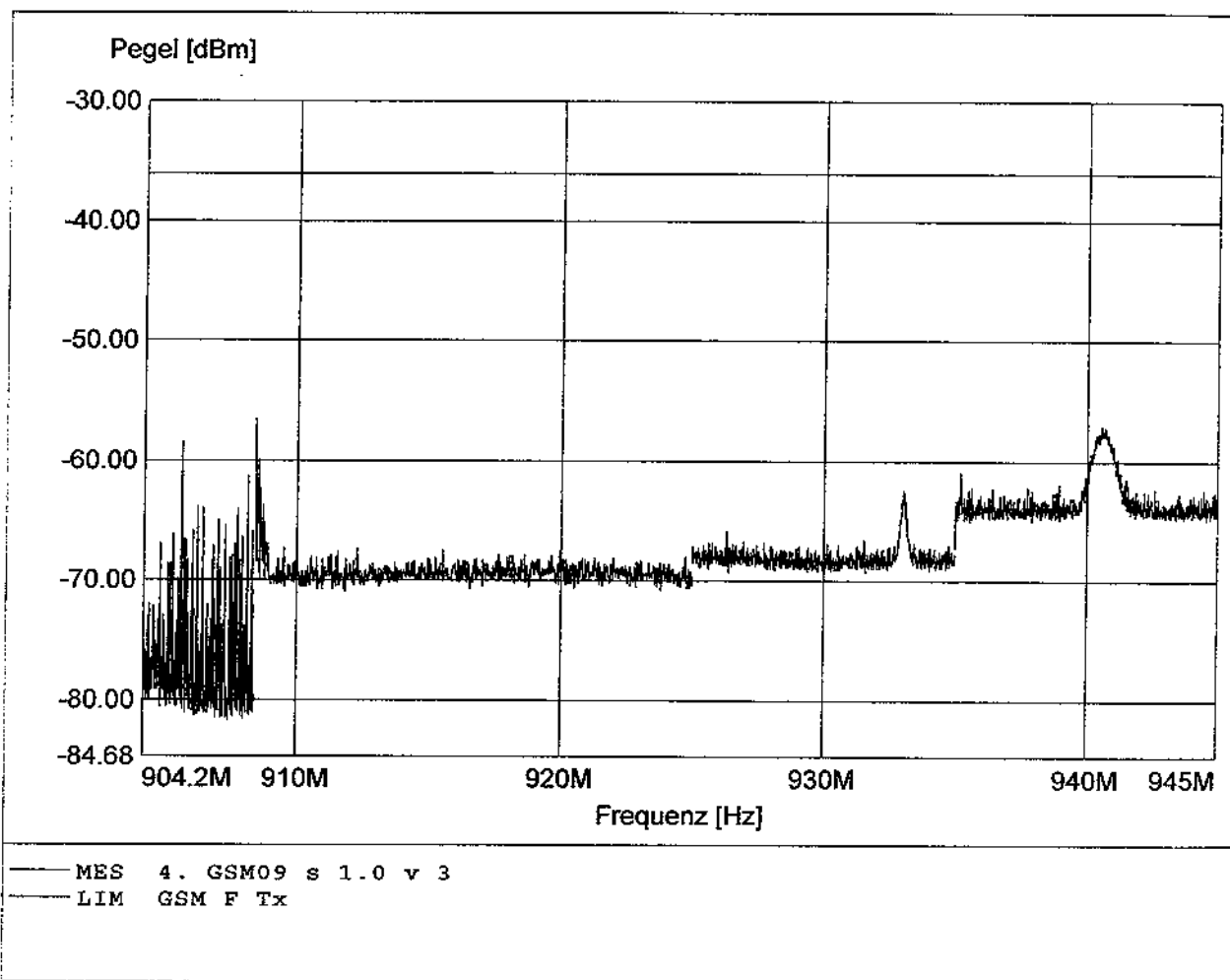
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 223, Ampl.:0.2-1GHz,notch-f.
Comment 2: Freq:853.178MHz Pmax:-61.60 RBW:1MHz to 30KHz



**Radiated spurious emissions-MS allocated ARFCN 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

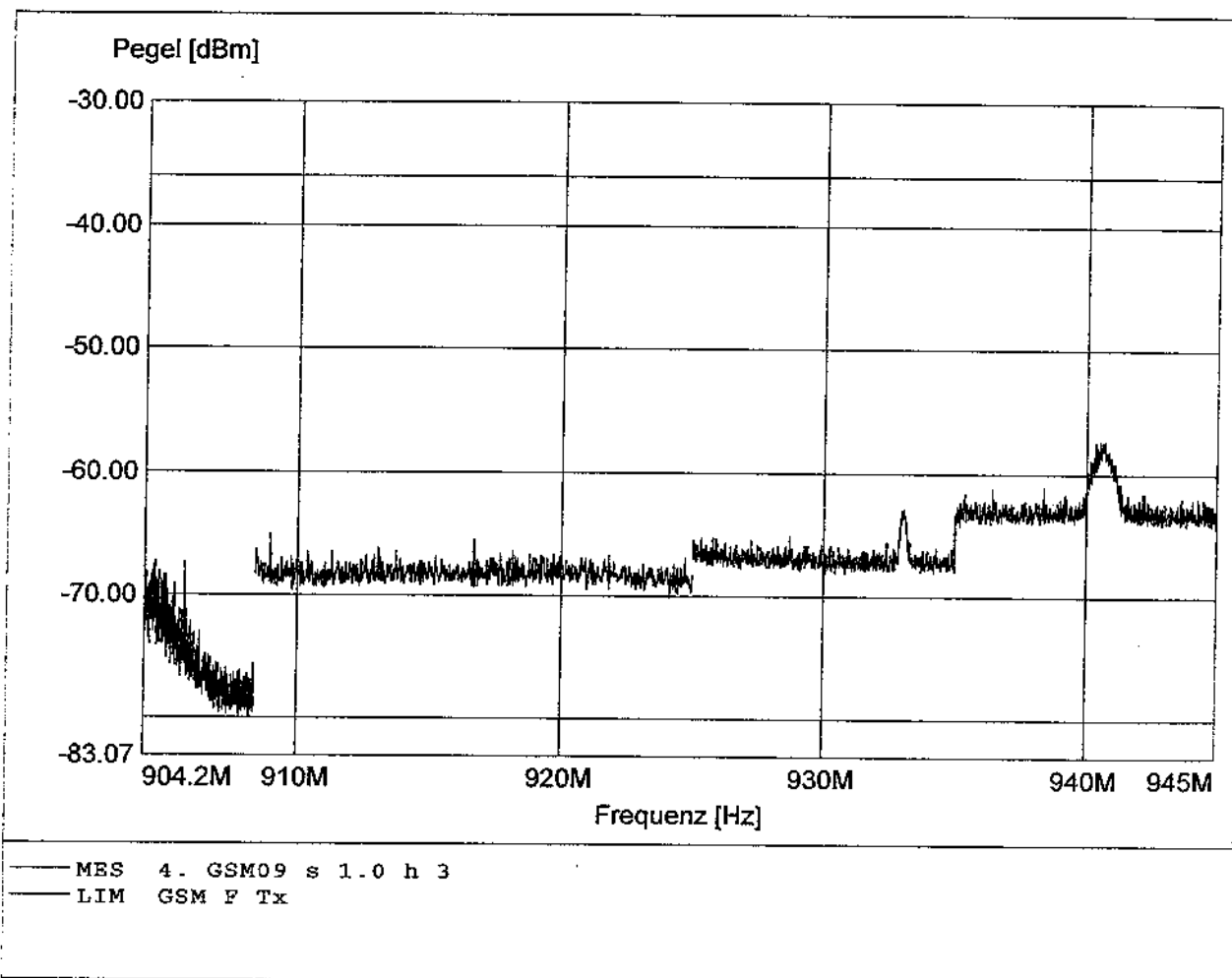
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 223, Ampl.:0.2-1GHz,notch-f.
Comment 2: Freq:908.400MHz Pmax:-56.46 RBW:30KHz to 1MHz



**Radiated spurious emissions-MS allocated ARFCN 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

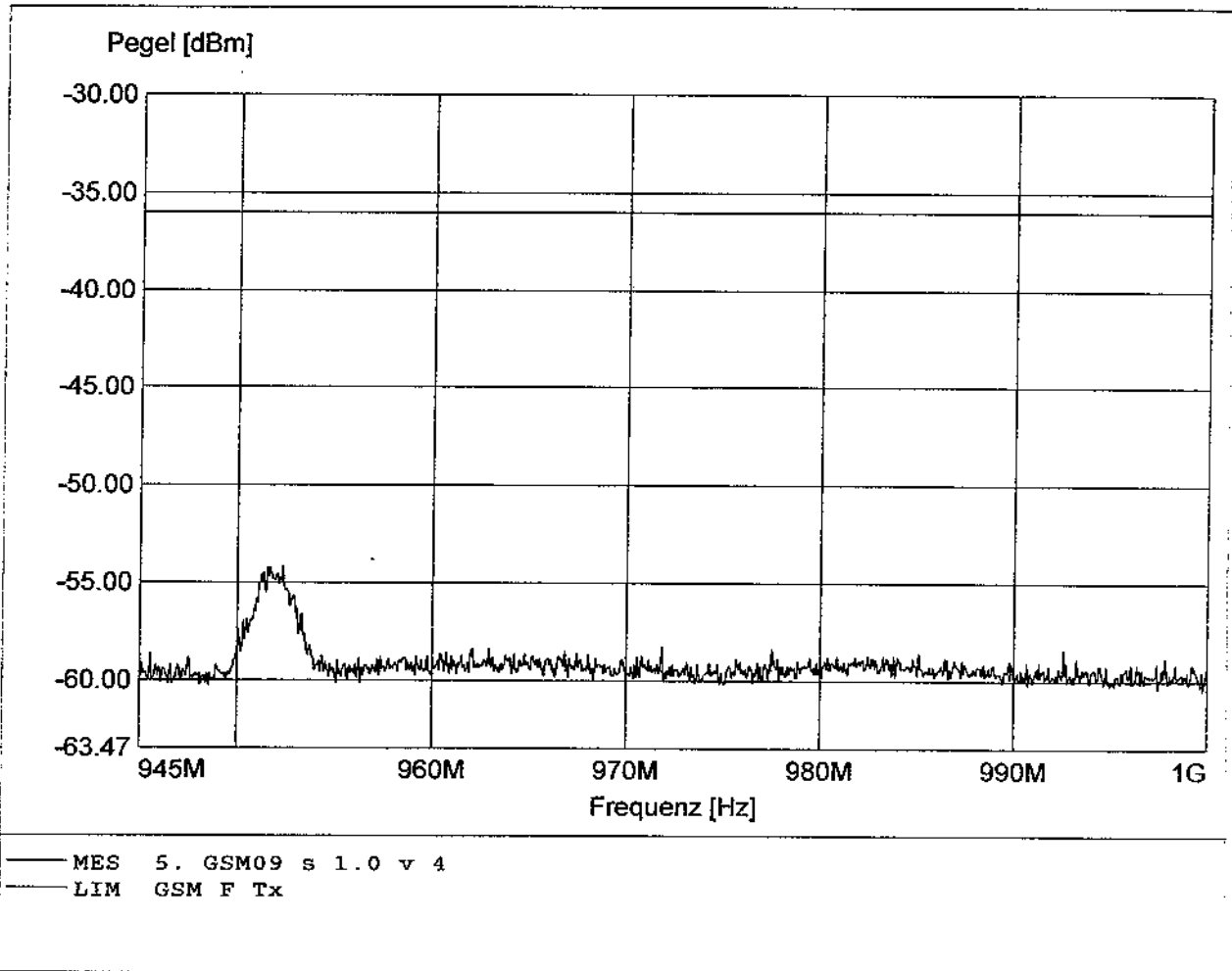
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 223, Ampl.:0.2-1GHz,notch-f.
Comment 2: Freq:940.511MHz Pmax:-57.23 RBW:30KHz to 1MHz



**Radiated spurious emissions-MS allocated ARFCN 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

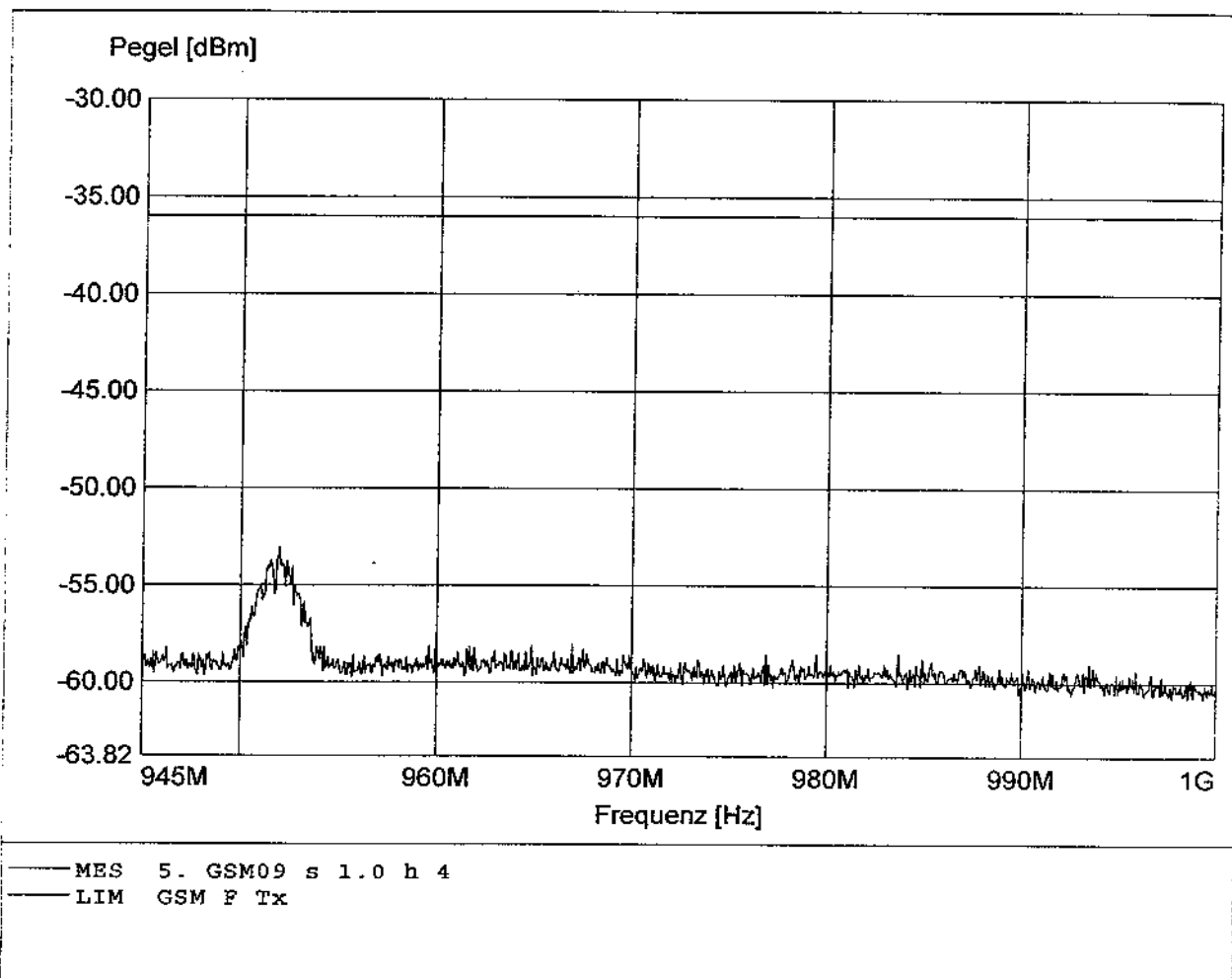
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 223, Ampl.:0.2-1GHz,notch-f.
Comment 2: Freq:952.333MHz Pmax:-54.14 RBW:3MHz



**Radiated spurious emissions-MS allocated ARFCN 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

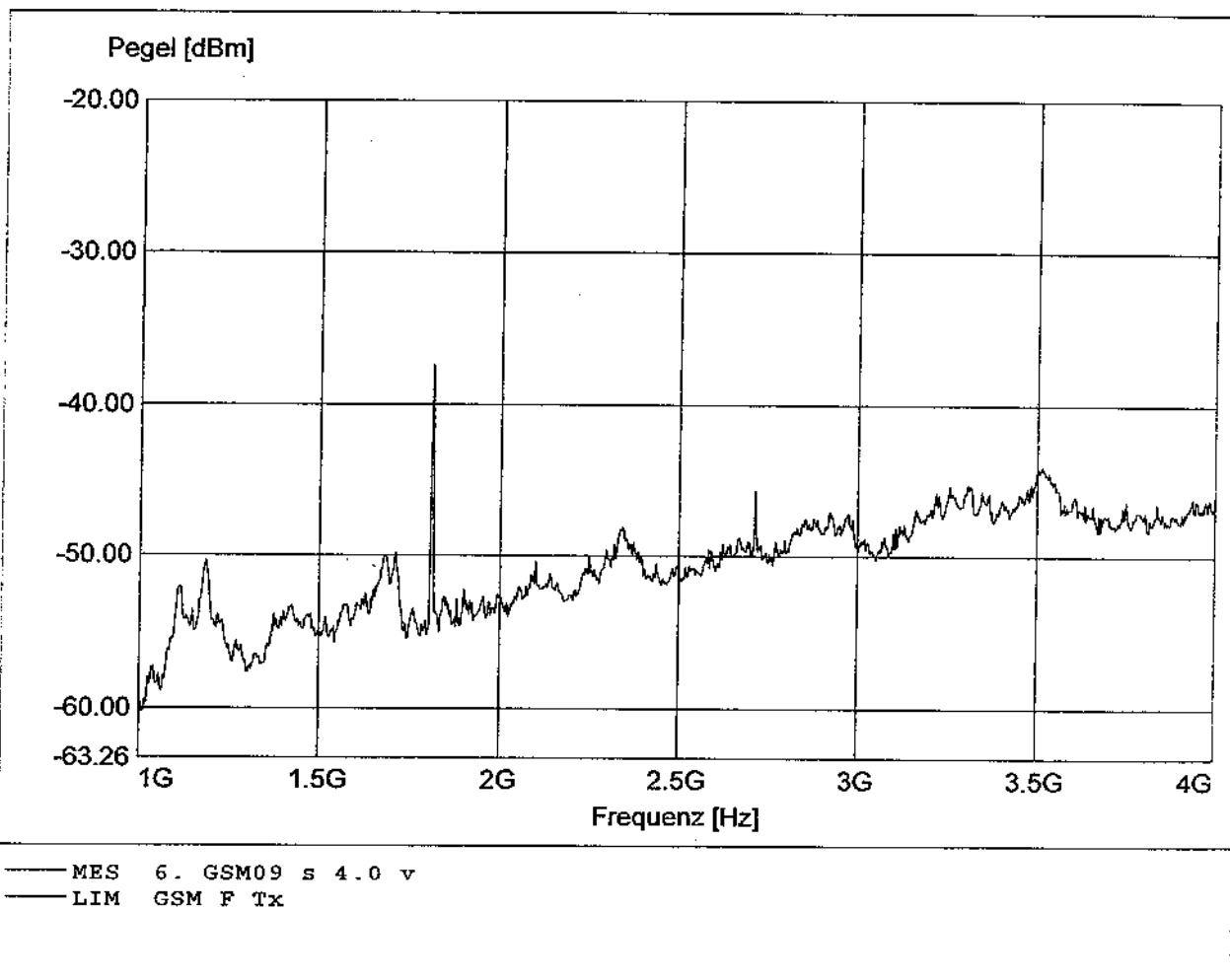
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 223, Ampl.:0.2-1GHz,notch-f.
Comment 2: Freq:951.967MHz Pmax:-52.98 RBW:3MHz



**Radiated spurious emissions-MS allocated ARFCN 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

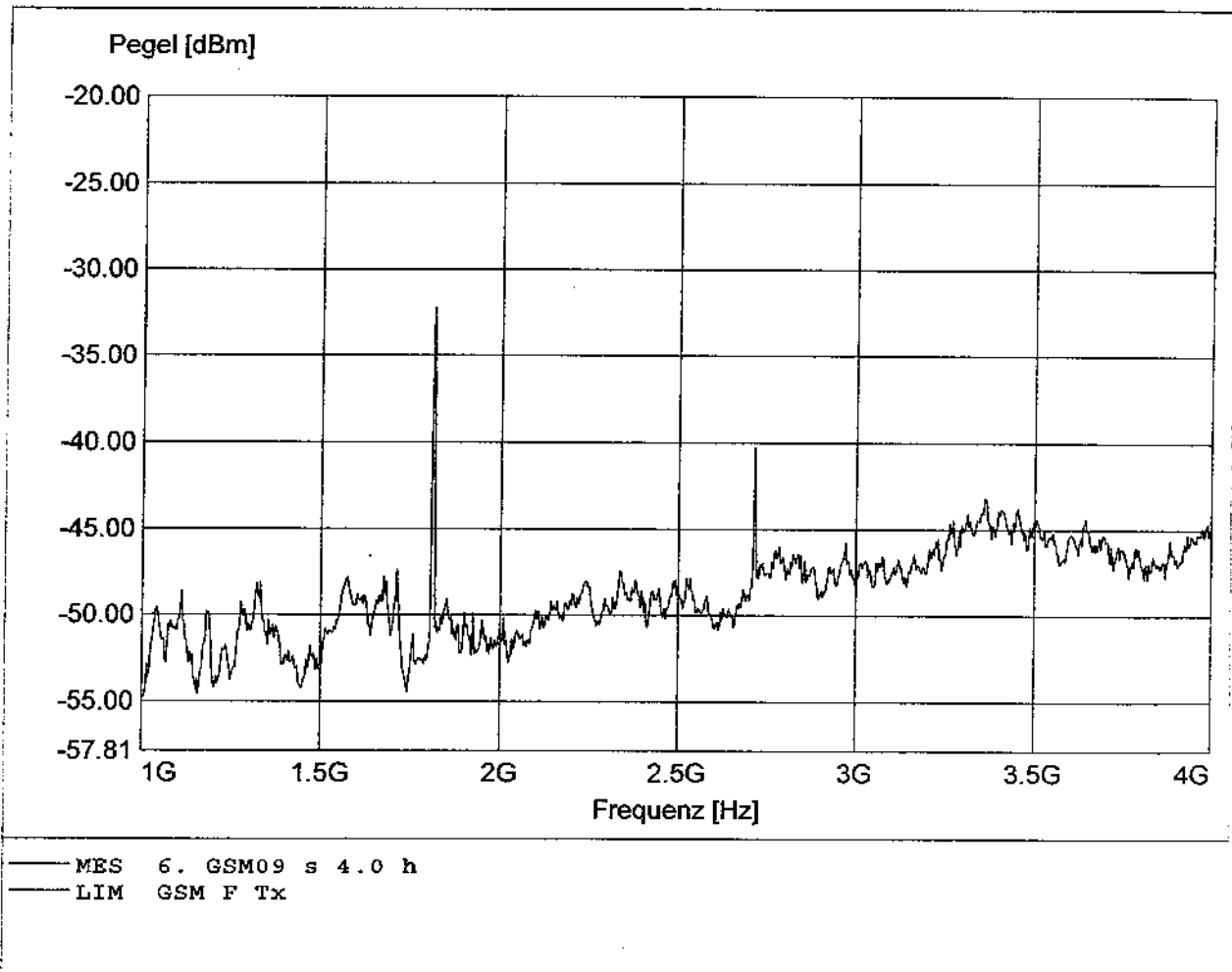
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.:1-4GHz, High Pass
Comment 2: Freq:1.810GHz Pmax:-37.38 RBW:3MHz



**Radiated spurious emissions-MS allocated ARFCN 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

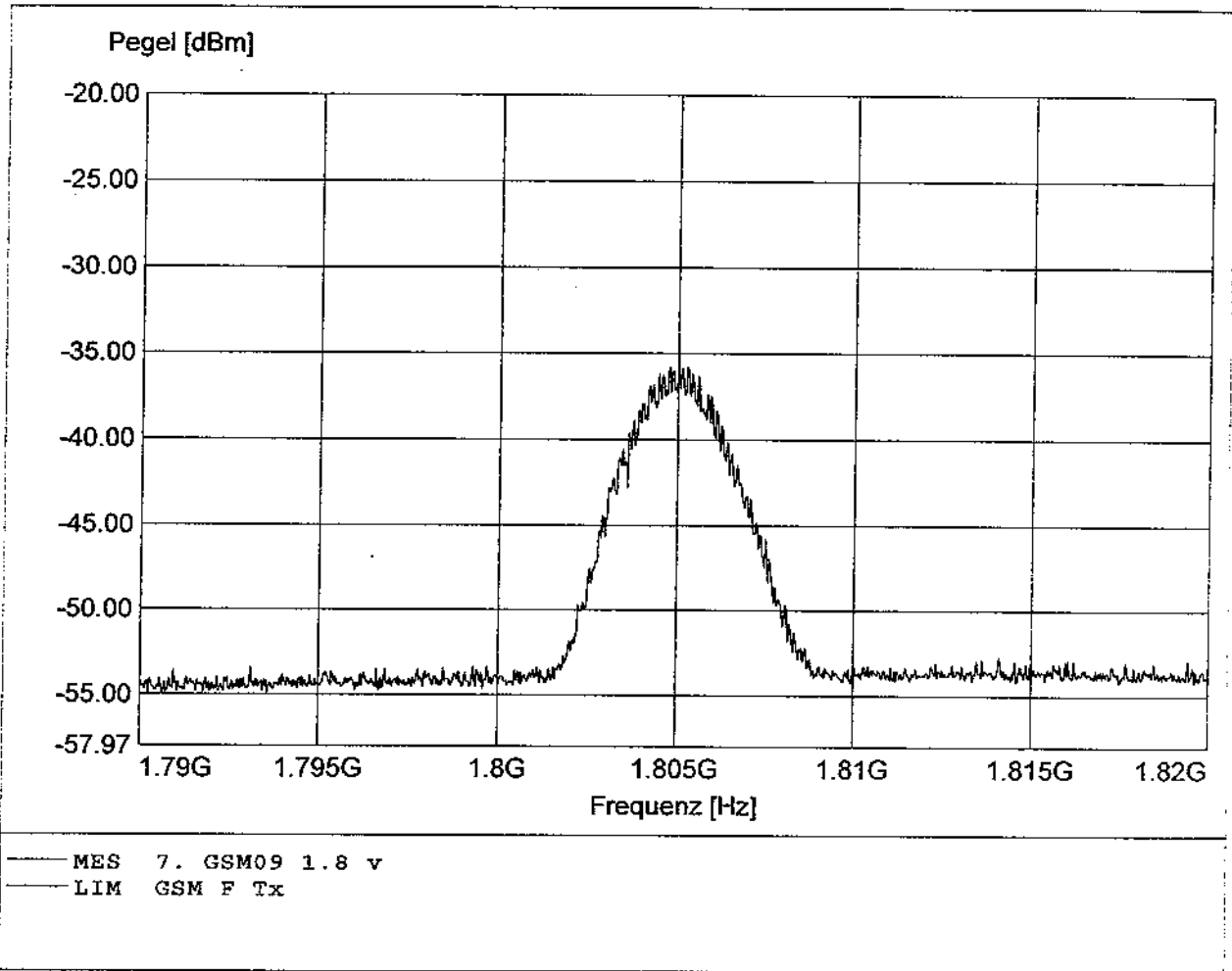
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.:1-4GHz, High Pass
Comment 2: Freq:1.810GHz Pmax:-32.17 RBW:3MHz



**2.Harmonic-MS allocated channel 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

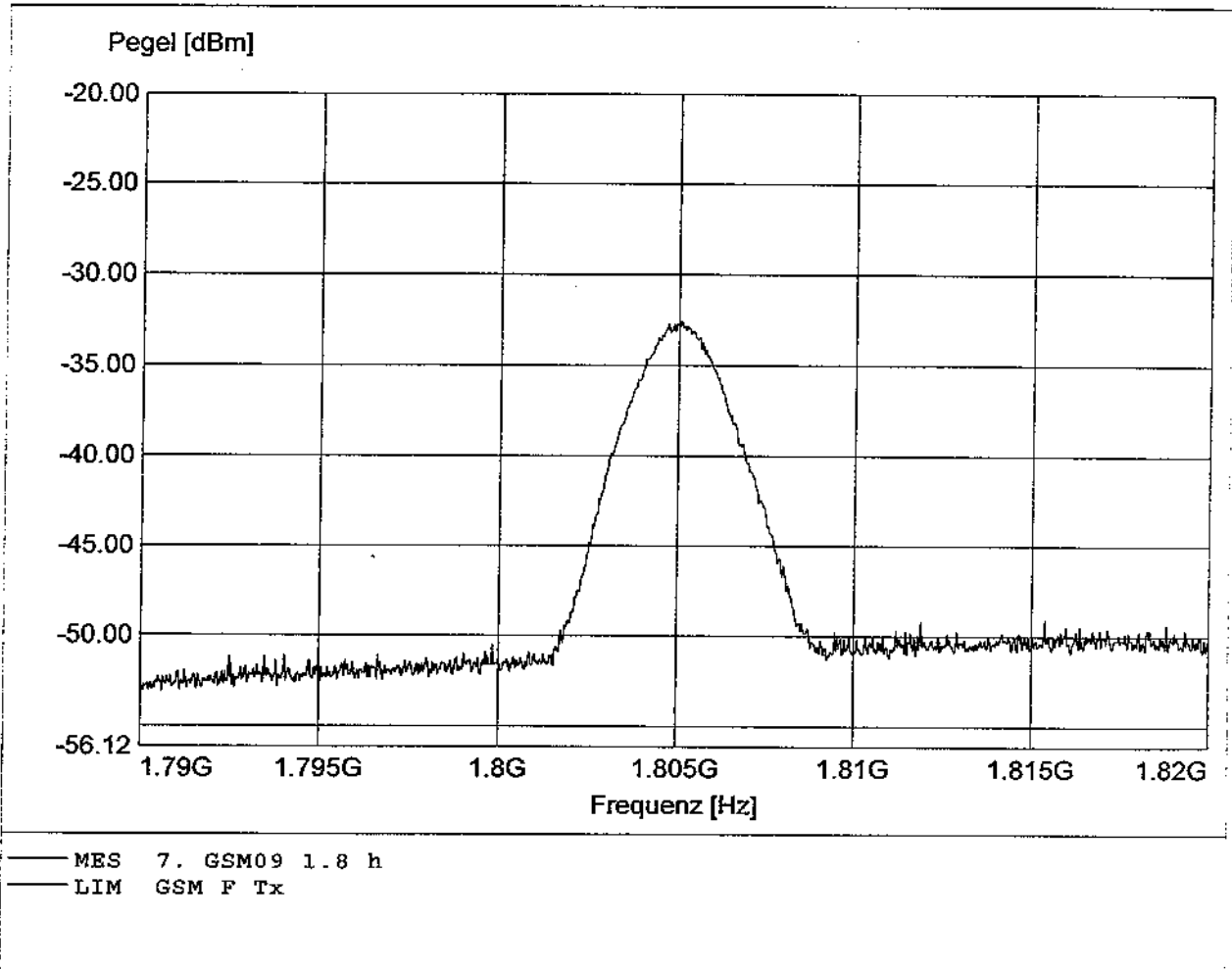
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.:1-4GHz, High Pass
Comment 2: Freq:1.805GHz Pmax:-35.76 RBW:3MHz



**2.Harmonic-MS allocated channel 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

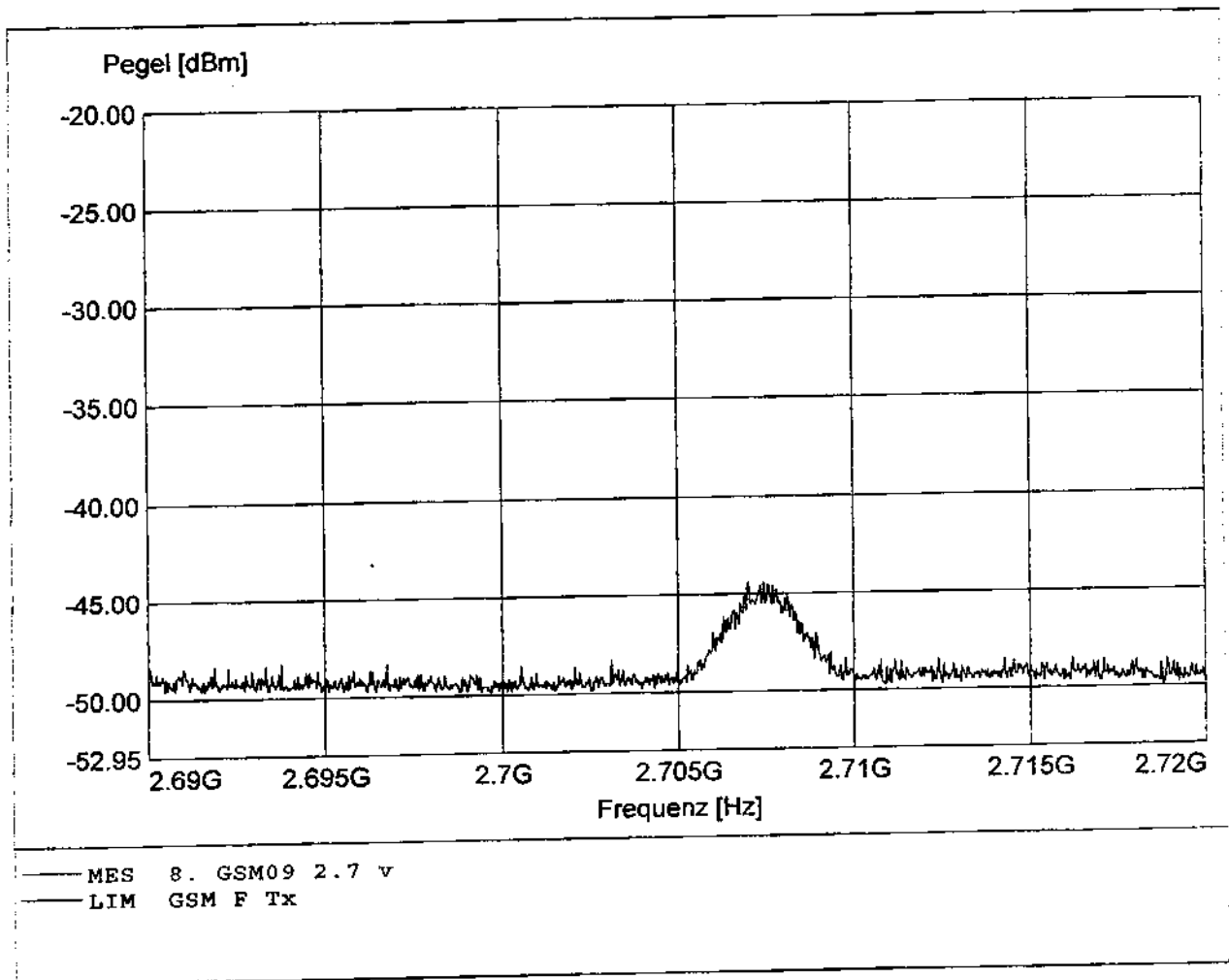
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.:1-4GHz, High Pass
Comment 2: Freq:1.805GHz Pmax:-32.52 RBW:3MHz



3.Harmonic-MS allocated channel 62
EGSM 900 (Fully anechoic chamber)

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.:1-4GHz, High Pass
Comment 2: Freq:2.707GHz Pmax:-44.36 RBW:3MHz



**3.Harmonic-MS allocated channel 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

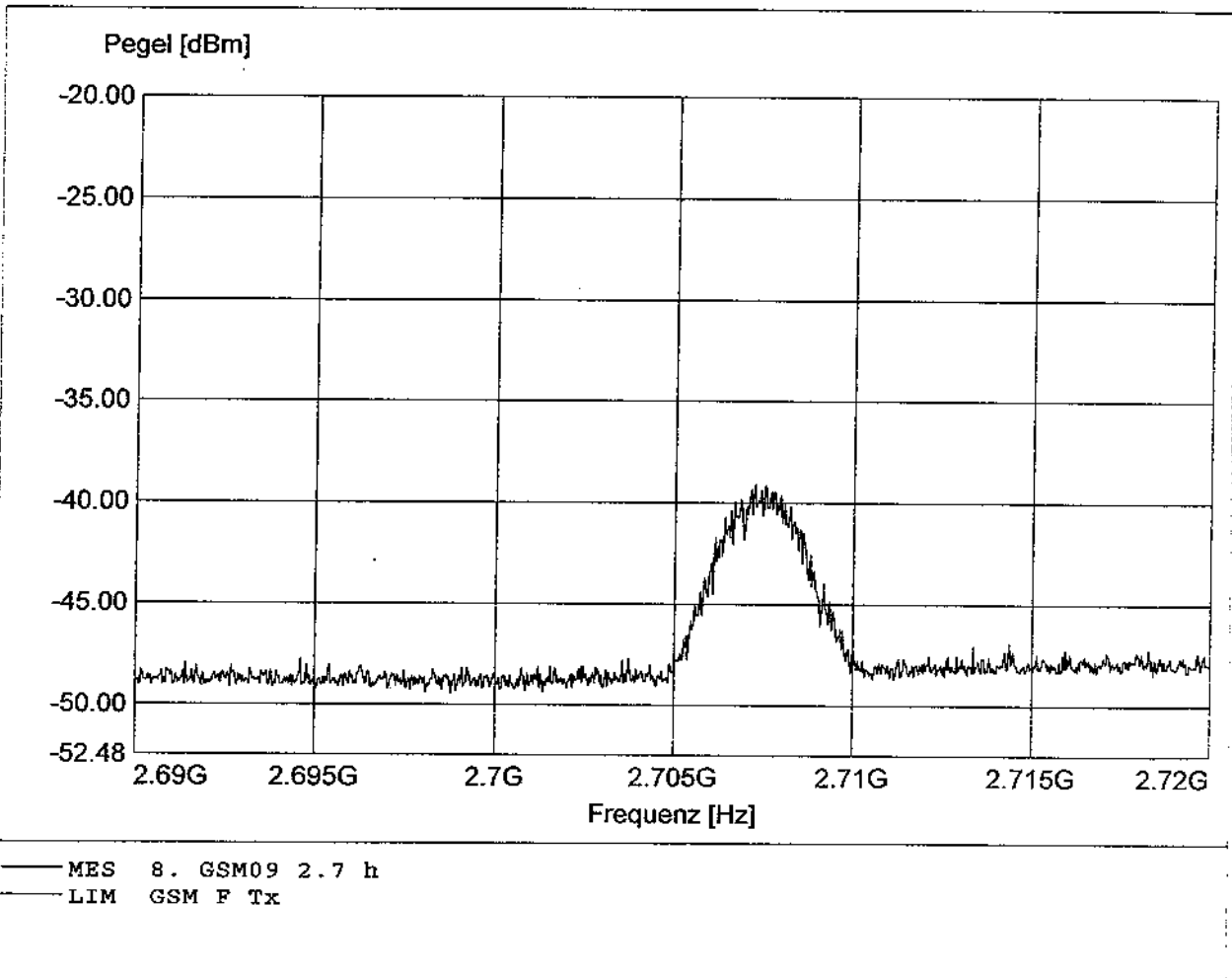
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC

Test Site / Operator: ETS / Mr. F.Schulz

Test Specification: GSM 11.10-1 testcase 12.2.1

Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.:1-4GHz, High Pass

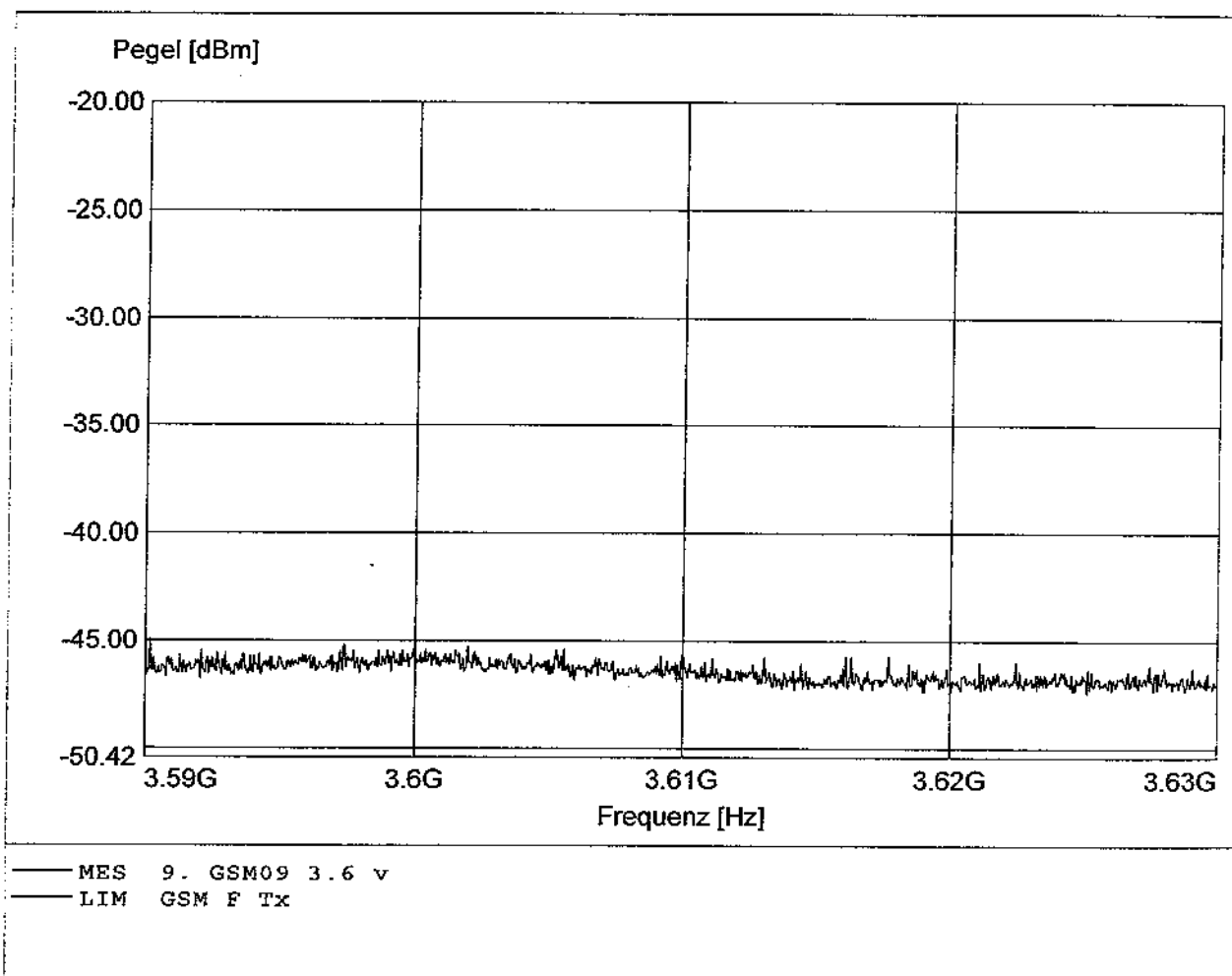
Comment 2: Freq:2.707GHz Pmax:-39.06 RBW:3MHz



**4. Harmonic-MS allocated channel 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

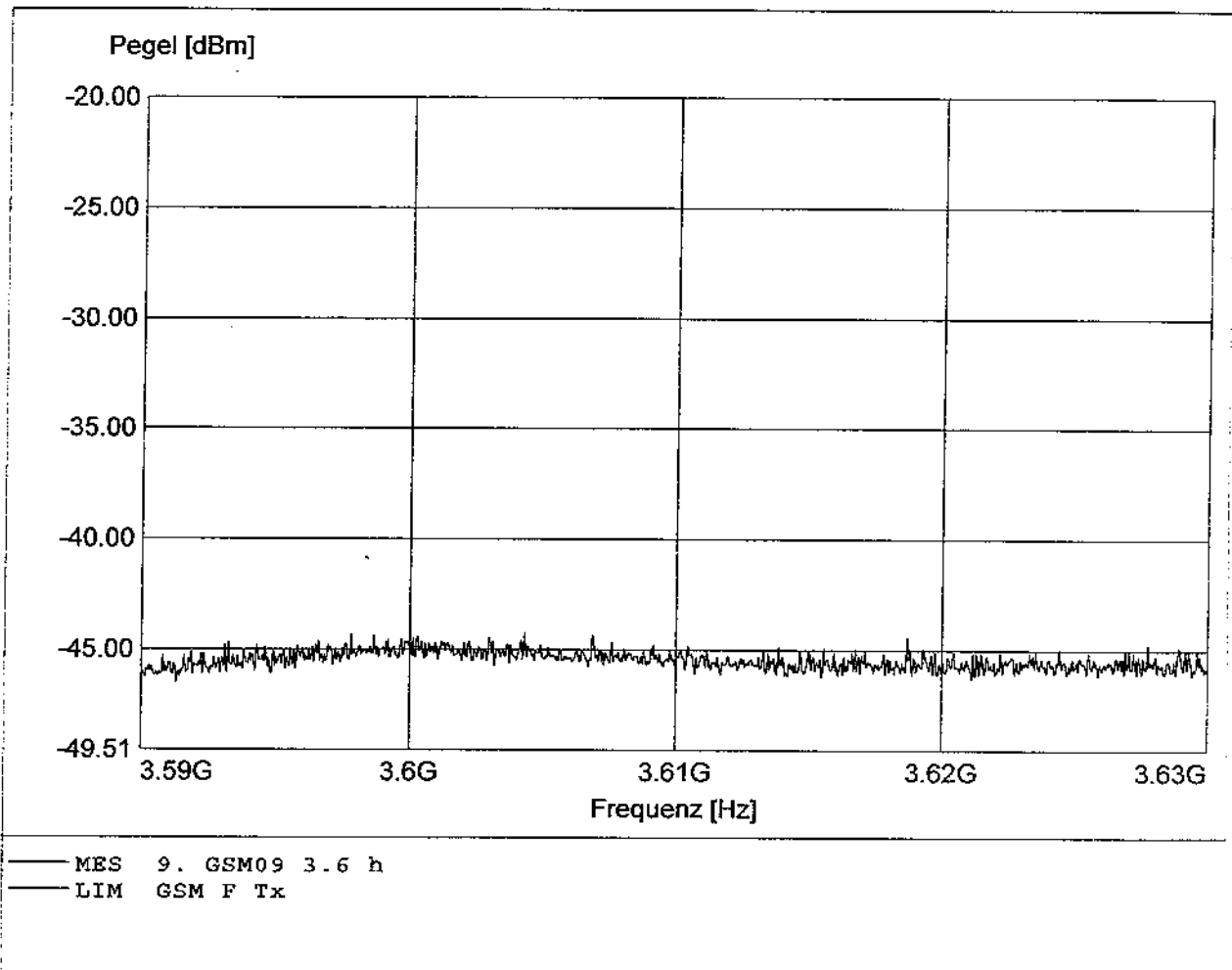
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.:1-4GHz, High Pass
Comment 2: Freq:3.590GHz Pmax:-44.91 RBW:3MHz



**4.Harmonic-MS allocated channel 62
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

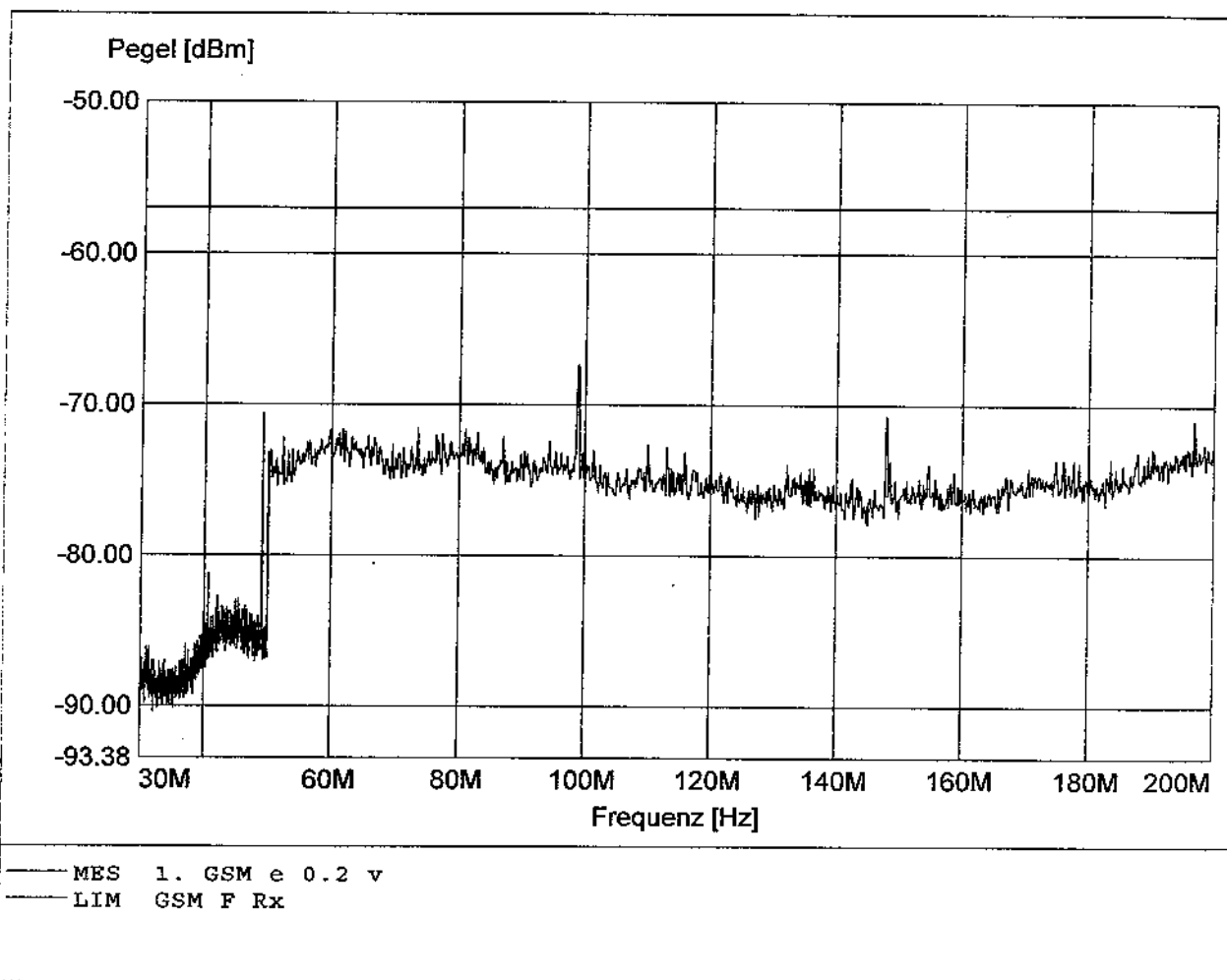
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.:1-4GHz, High Pass
Comment 2: Freq:3.604GHz Pmax:-44.24 RBW:3MHz



**Radiated spurious emissions-MS in idle mode
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

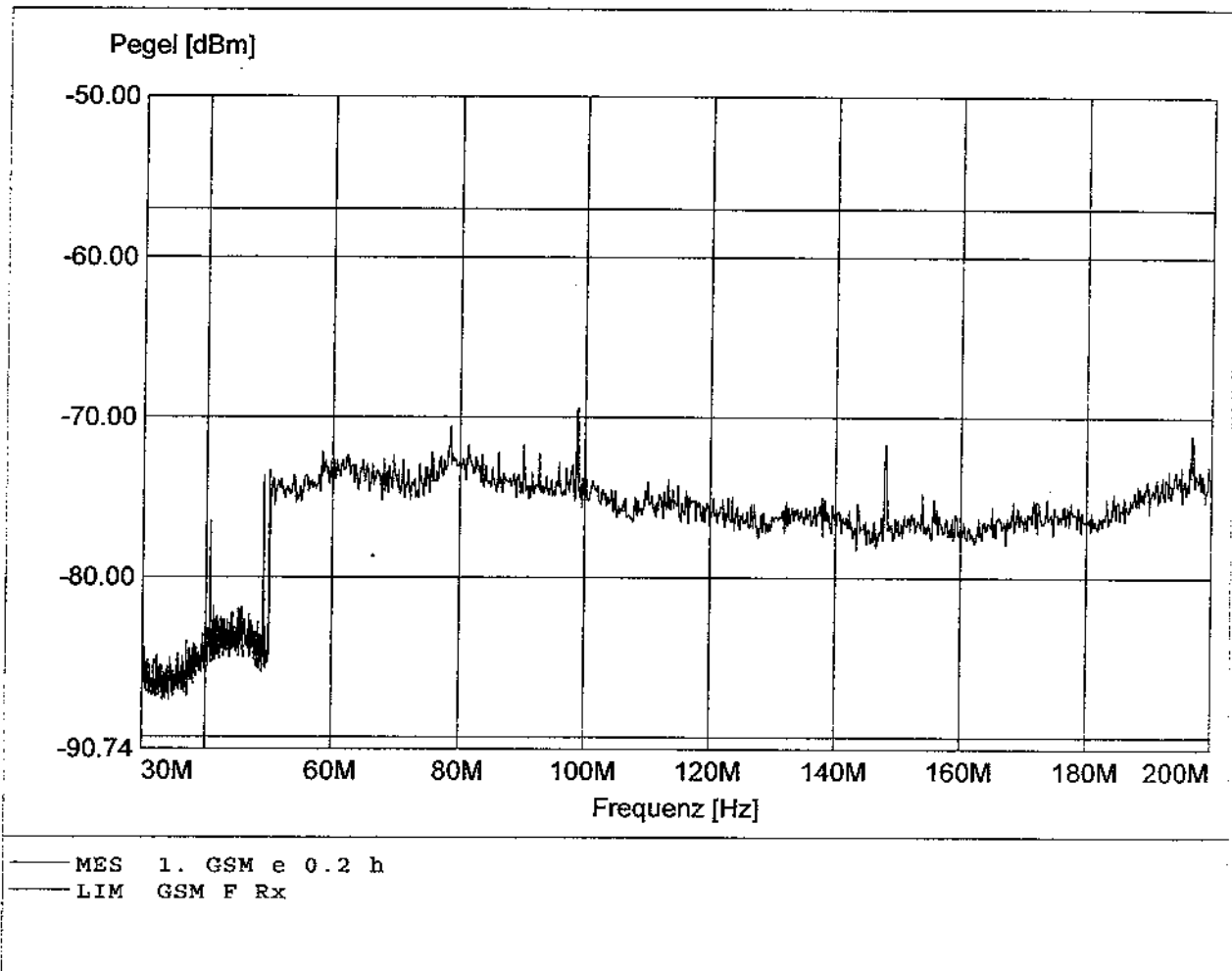
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.2
Comment 1: Dist.: 3m, Ant.: HK 116, Ampl.: None
Comment 2: Freq:98.833MHz Pmax:-67.32 RBW:10-100KHz



**Radiated spurious emissions-MS in idle mode
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

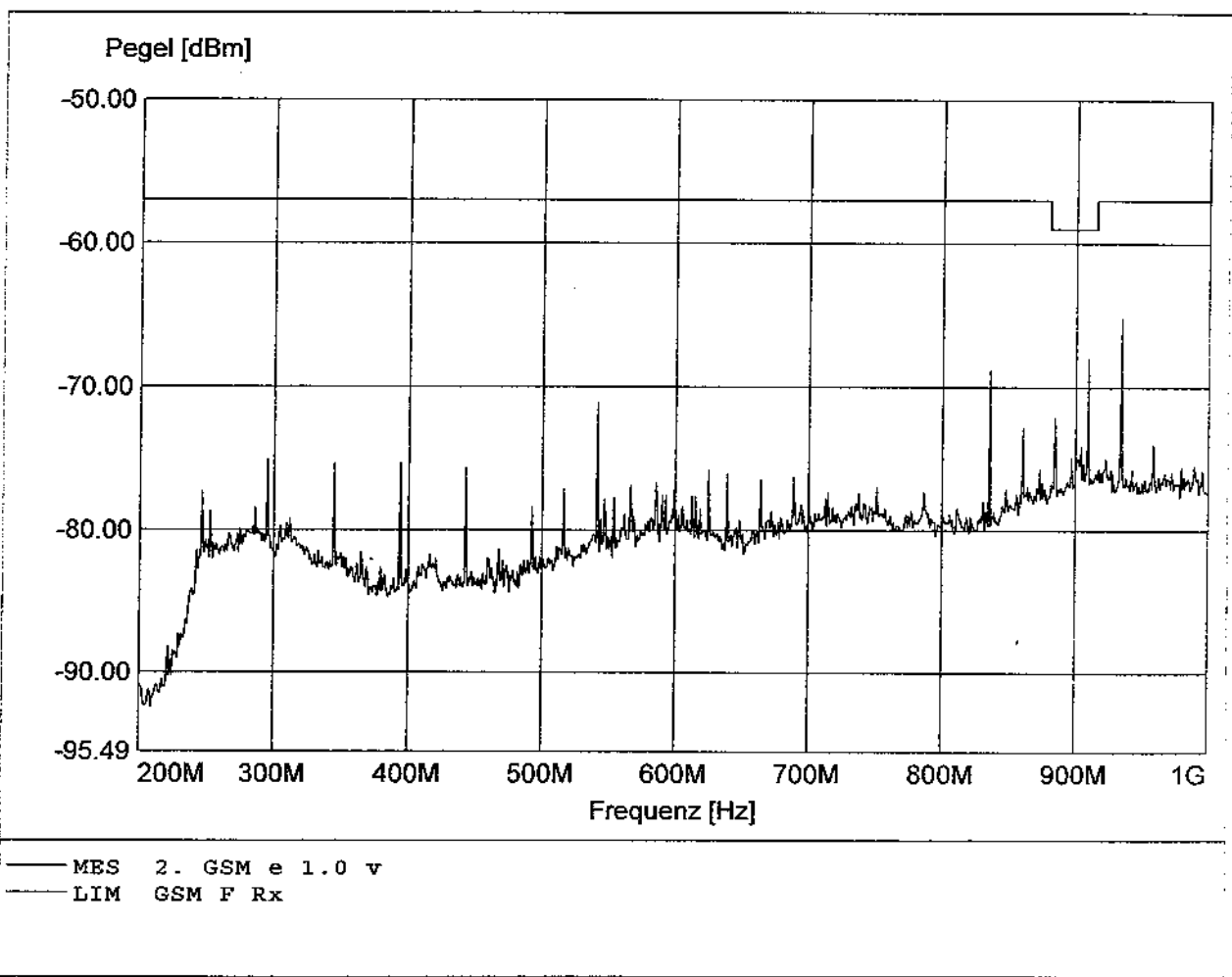
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.2
Comment 1: Dist.: 3m, Ant.: HK 116, Ampl.: None
Comment 2: Freq:98.833MHz Pmax:-69.42 RBW:10-100KHz



**Radiated spurious emissions-MS in idle mode
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

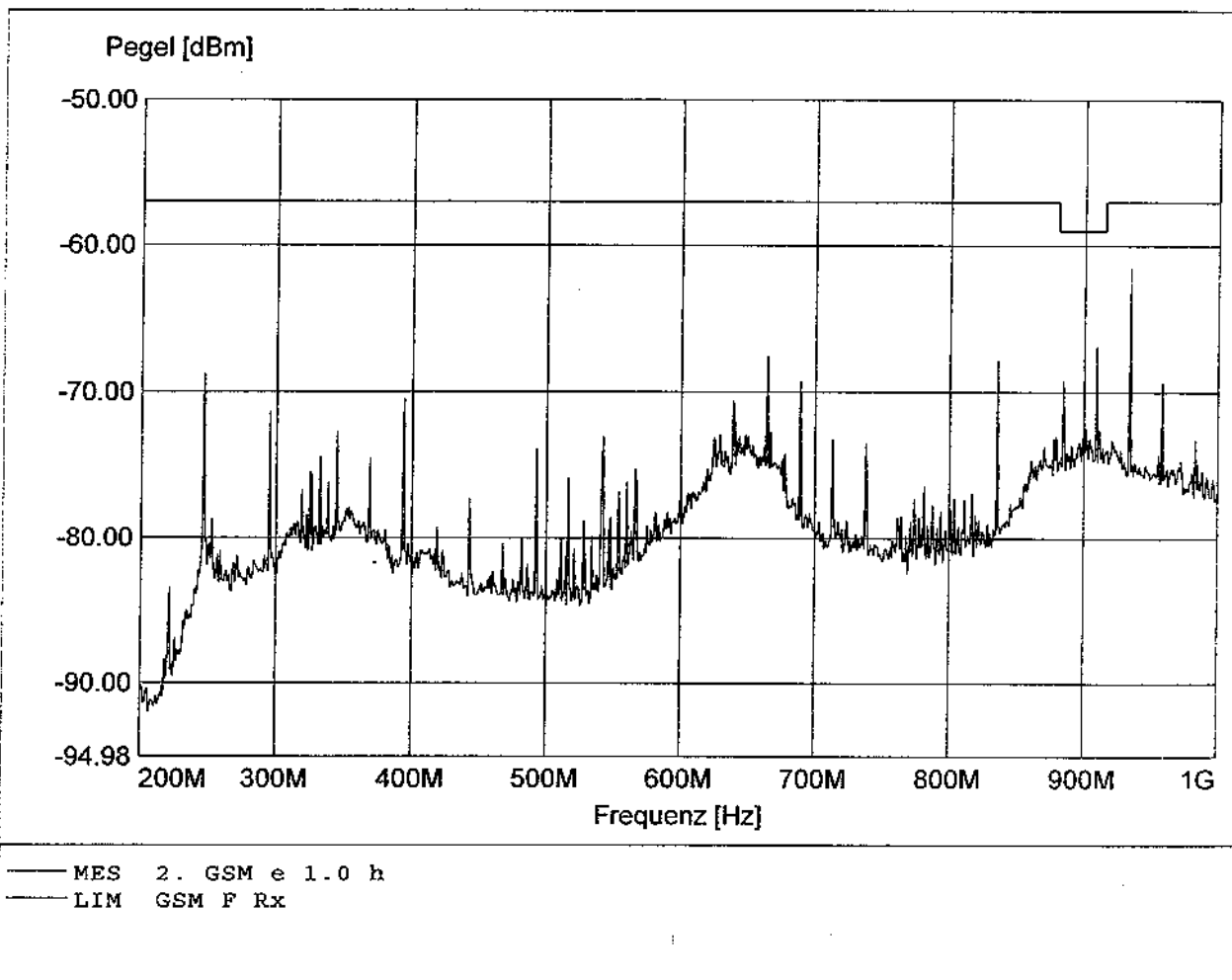
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.2
Comment 1: Dist.: 3m, Ant.: H1 223, Ampl.: 0.2-1GHz
Comment 2: Freq:934.222MHz Pmax:-65.13 RBW:100KHz



**Radiated spurious emissions-MS in idle mode
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.2
Comment 1: Dist.: 3m, Ant.: H1 223, Ampl.: 0.2-1GHz
Comment 2: Freq:934.222MHz Pmax:-61.53 RBW:100KHz



**Radiated spurious emissions-MS in idle mode
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

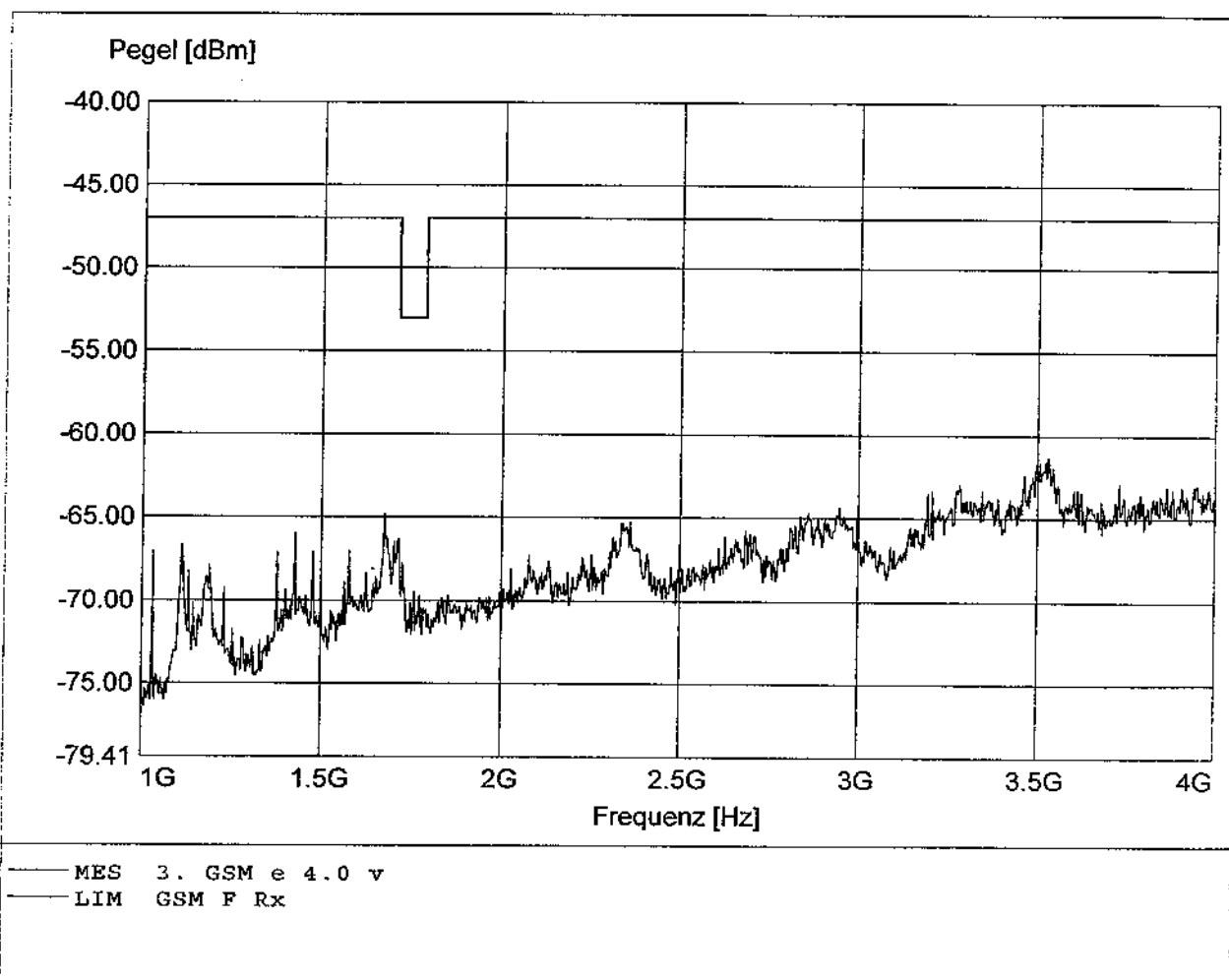
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC

Test Site / Operator: ETS / Mr. F.Schulz

Test Specification: GSM 11.10-1 testcase 12.2.2

Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.: 1-4GHz

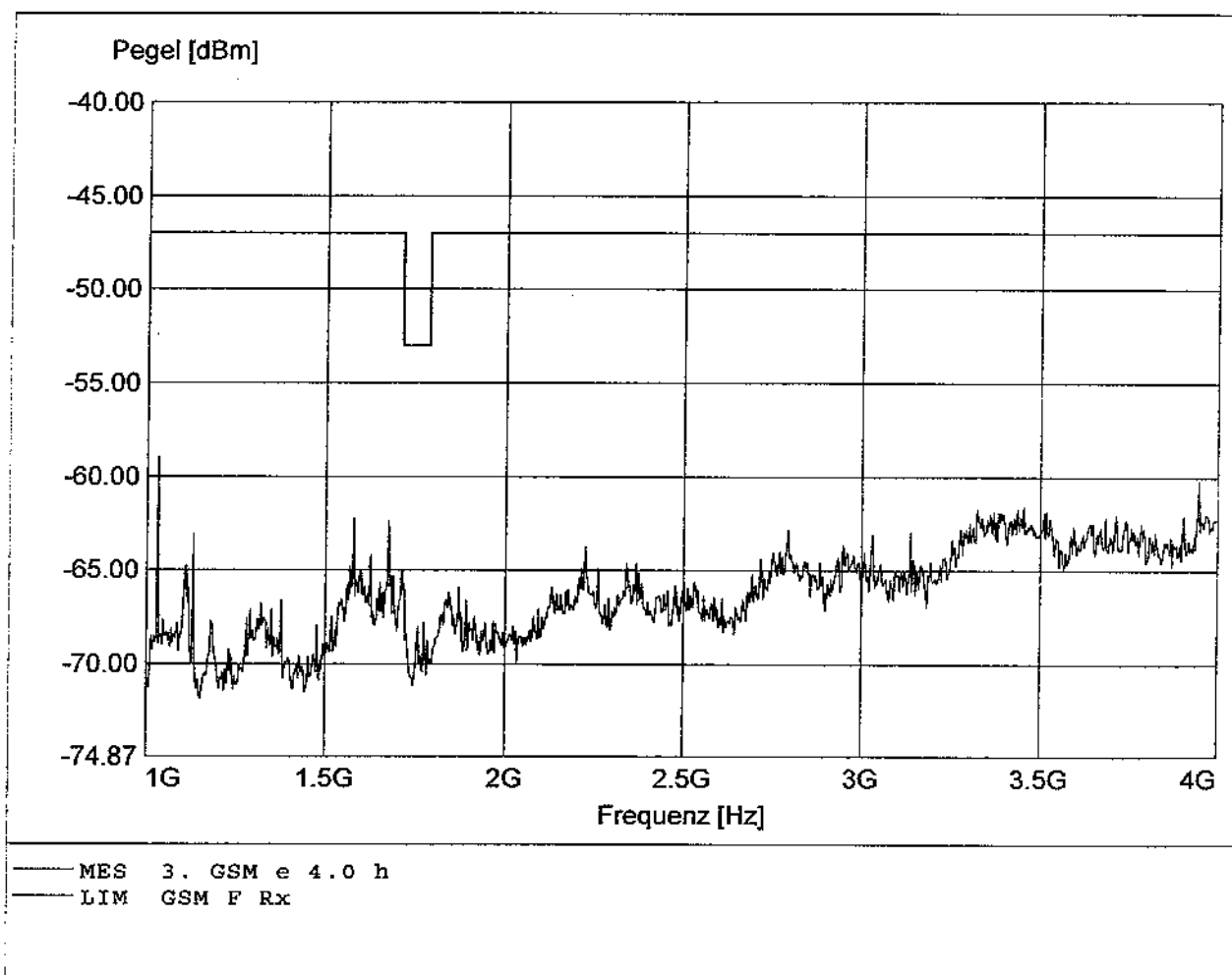
Comment 2: Freq:3.530GHz Pmax:-61.30 RBW:100KHz



**Radiated spurious emissions-MS in idle mode
EGSM 900 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

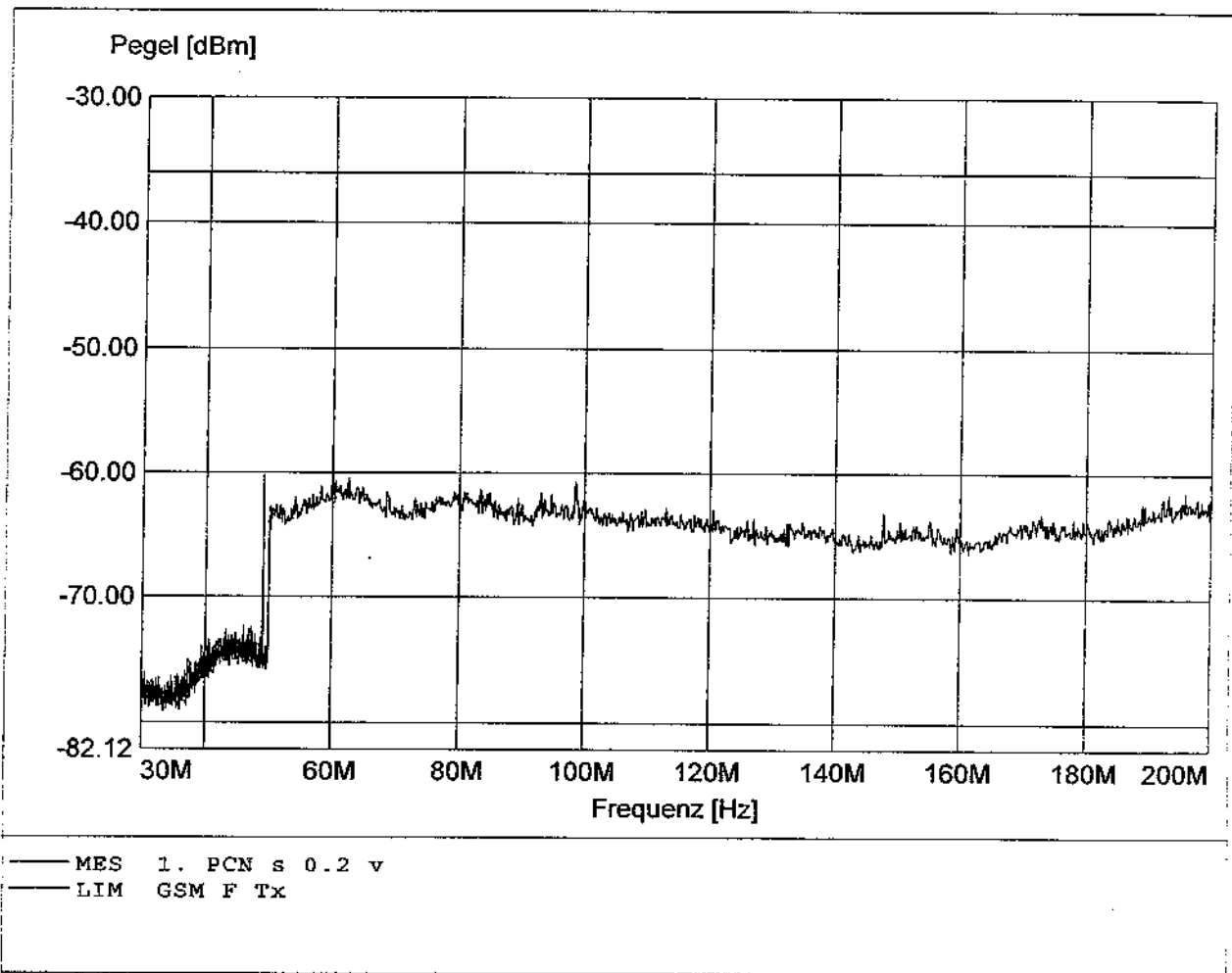
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.2
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.: 1-4GHz
Comment 2: Freq:1.030GHz Pmax:-58.95 RBW:100KHz



**Radiated spurious emissions-MS allocated ch: 697
PCN 1800 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

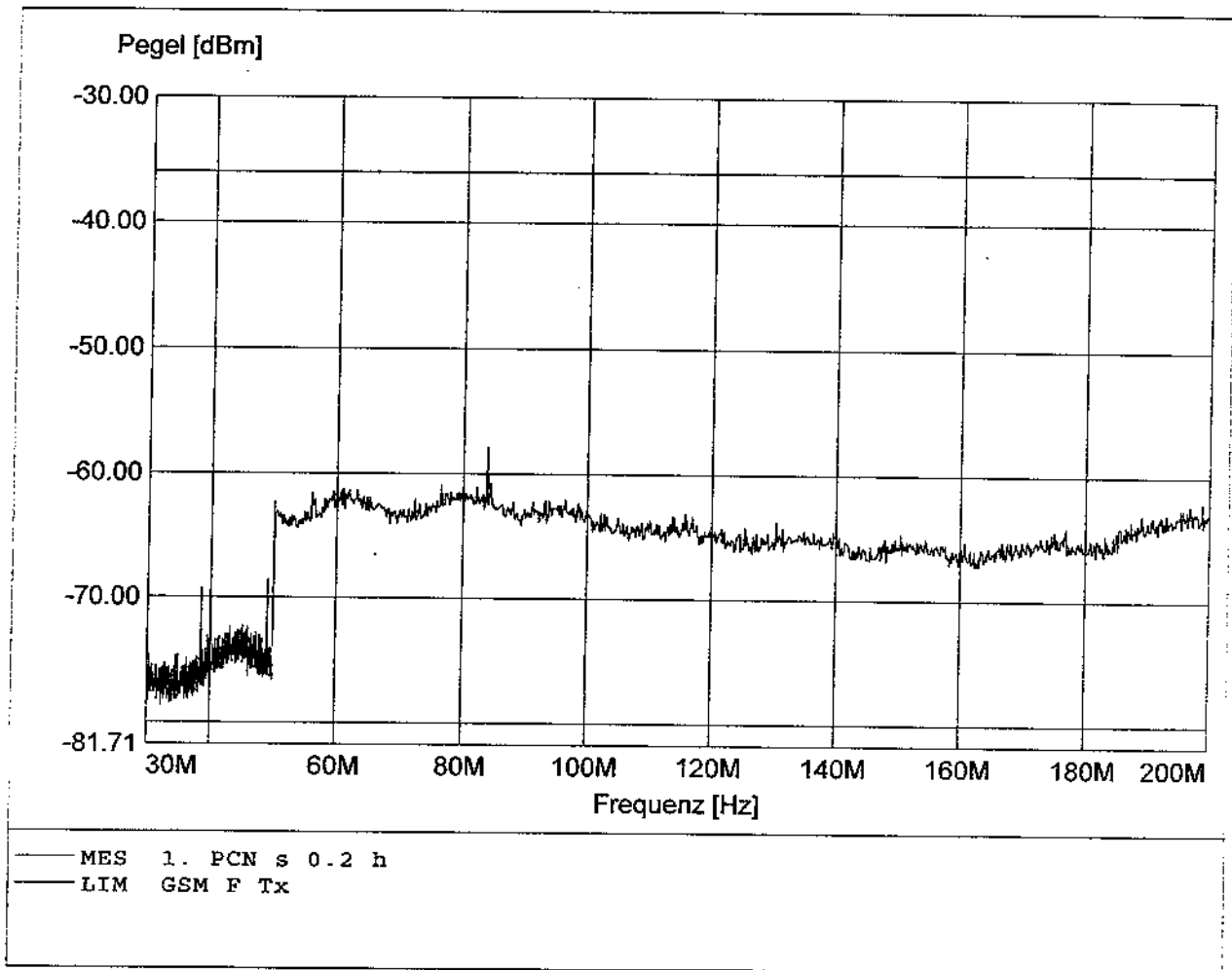
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq:49.111MHz Pmax:-60.16 RBW:10/100KHz



Radiated spurious emissions-MS allocated ch: 697
PCN 1800 (Fully anechoic chamber)

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

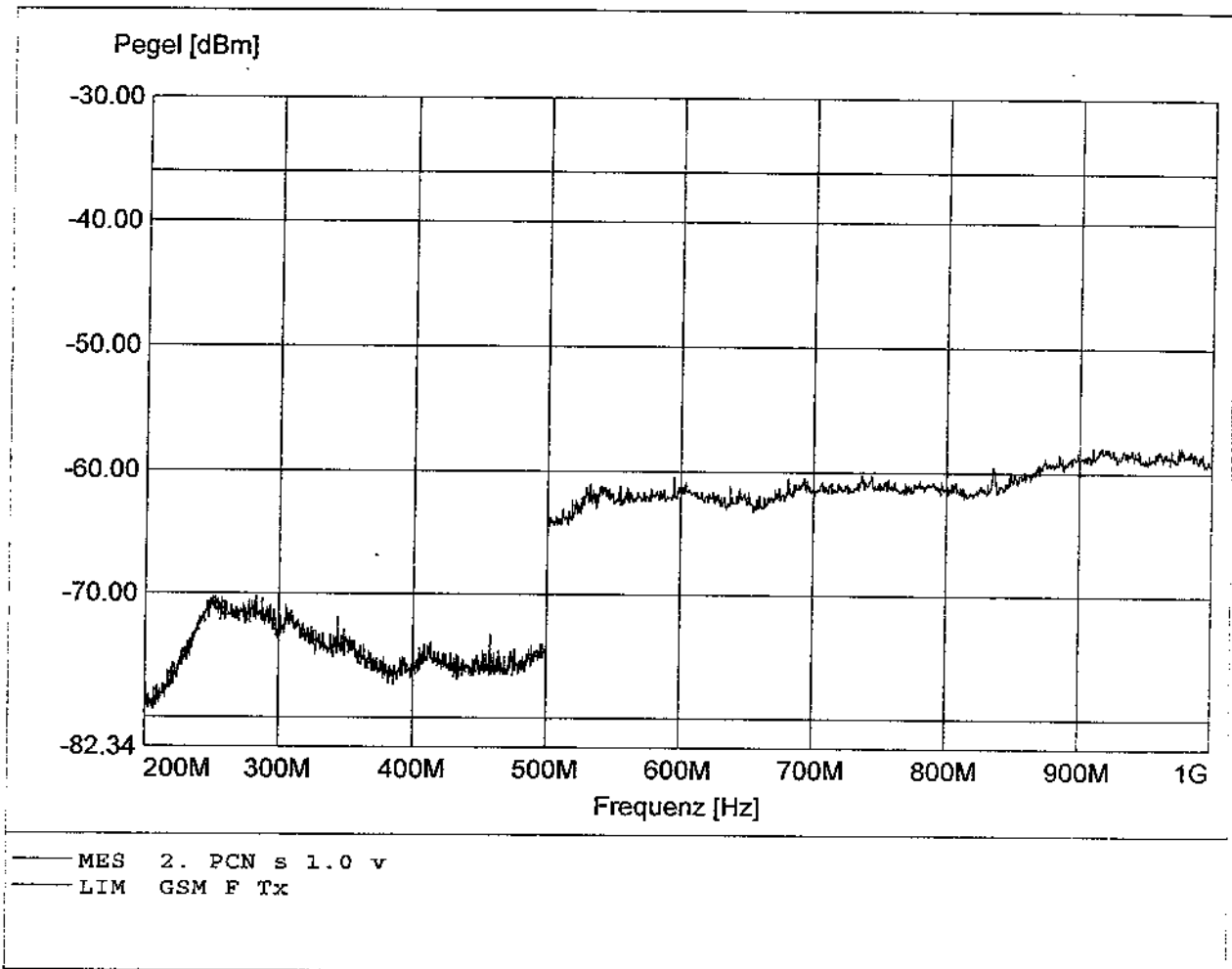
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq:83.833MHz Pmax:-57.89 RBW:10/100KHz



**Radiated spurious emissions-MS allocated ch: 697
PCN 1800 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

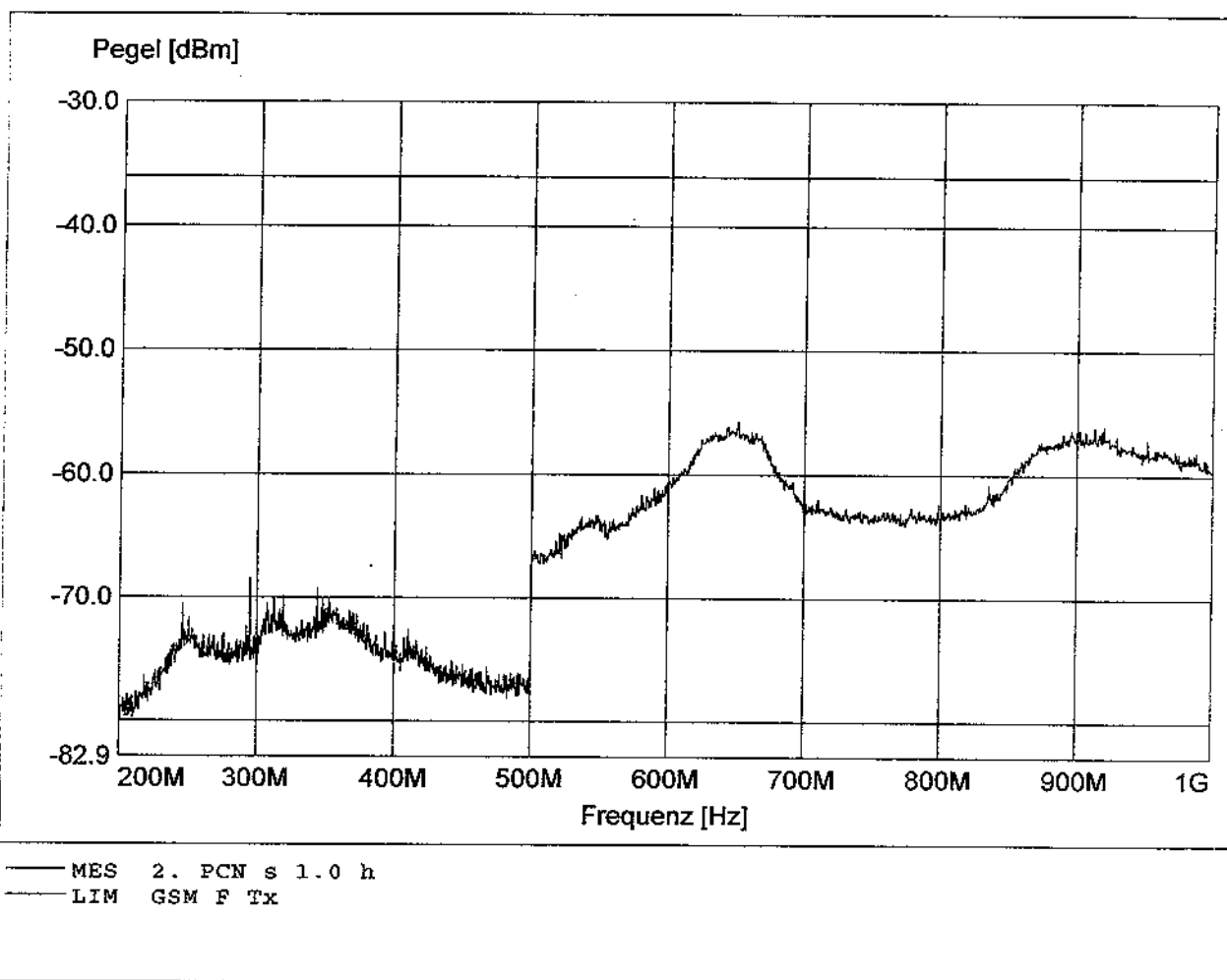
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 223, Ampl.: 0.2-1 GHz
Comment 2: Freq:975.000MHz Pmax:-57.82 RBW:0.1/3MHz



Radiated spurious emissions-MS allocated ch: 697
PCN 1800 (Fully anechoic chamber)

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

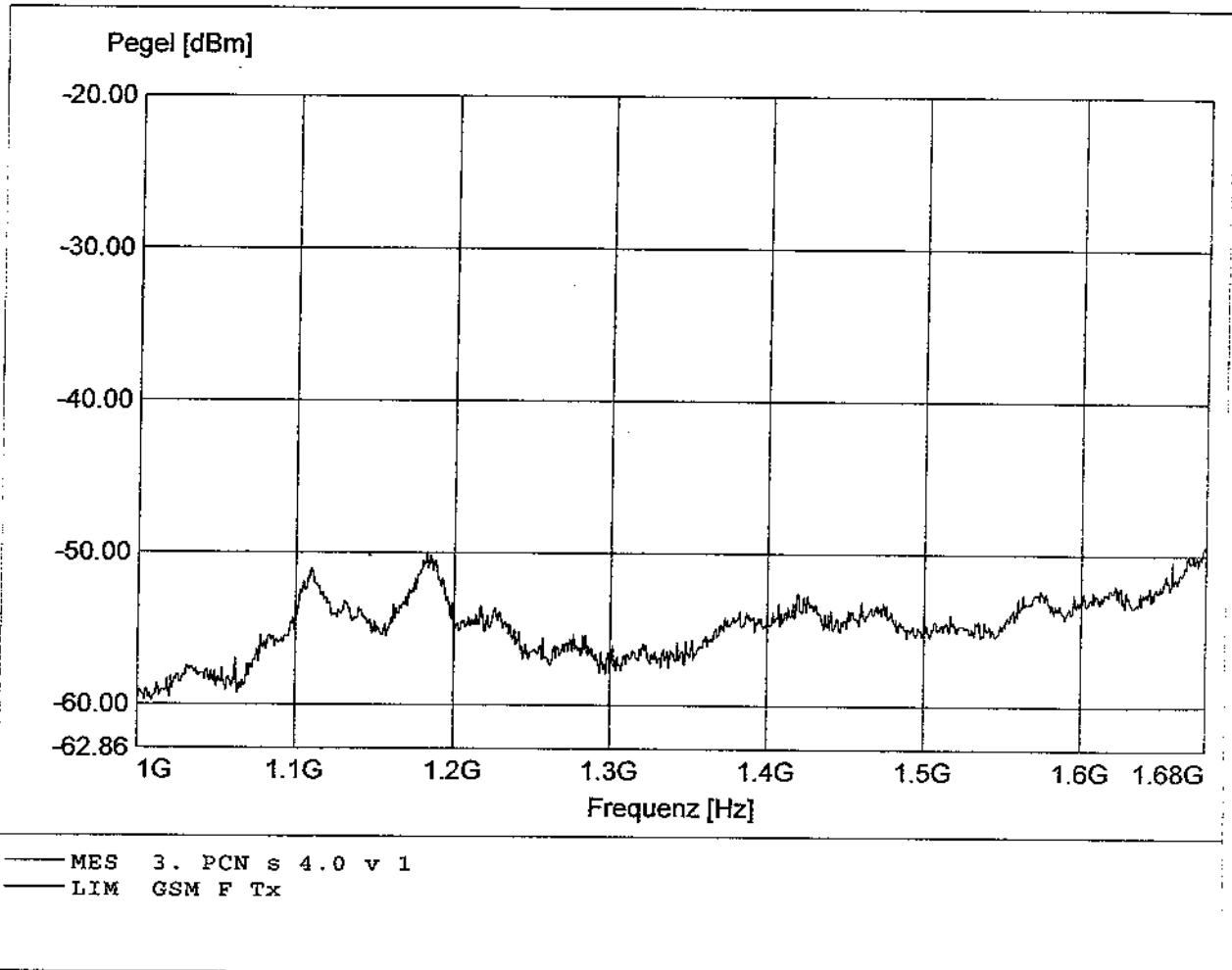
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 223, Ampl.: 0.2-1 GHz
Comment 2: Freq:651.111MHz Pmax:-55.69 RBW:0.1/3MHz



**Radiated spurious emissions-MS allocated ch: 697
PCN 1800 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

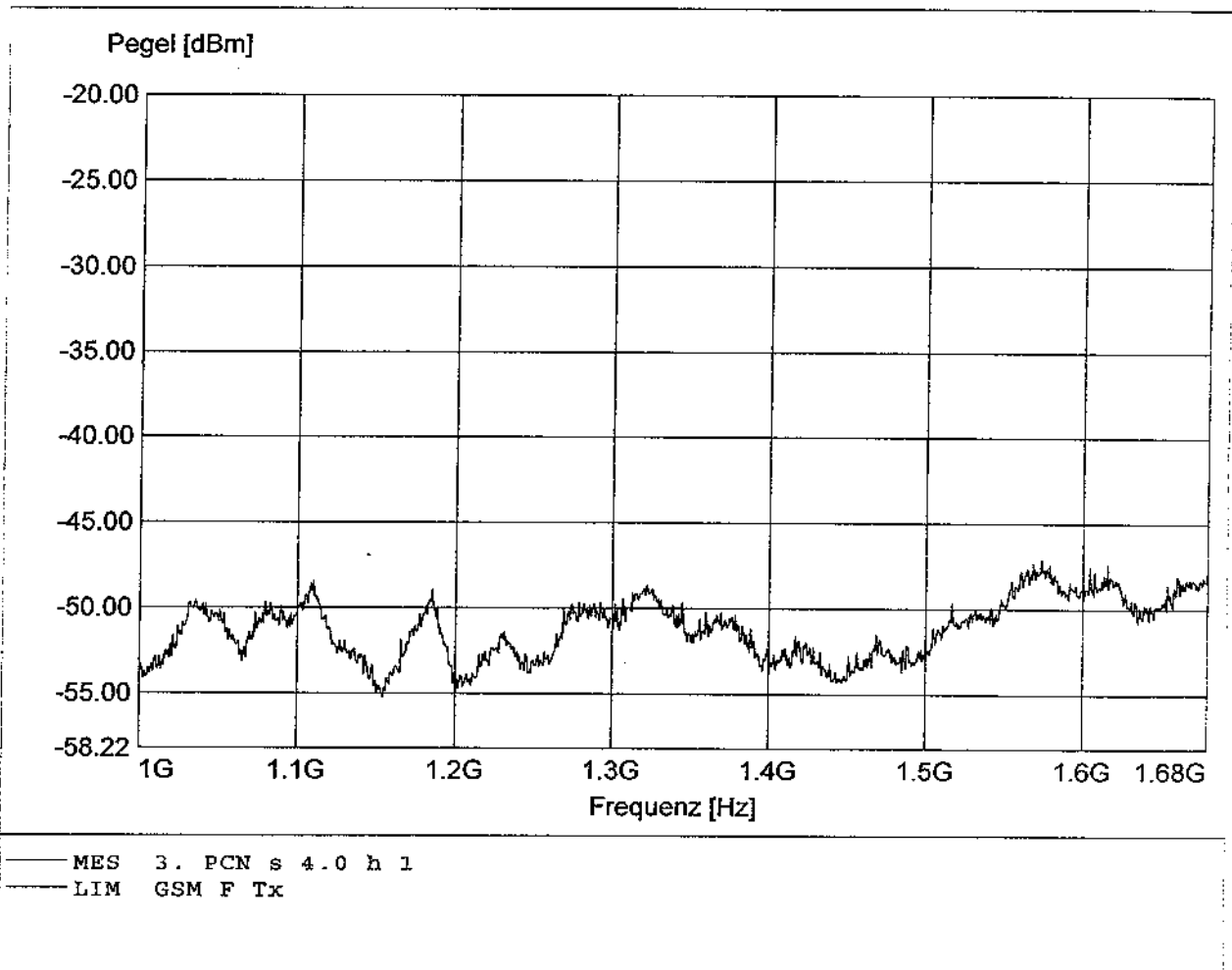
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.: 1-4 GHz
Comment 2: Freq:1.679GHz Pmax:-49.38 RBW:3MHz



**Radiated spurious emissions-MS allocated ch: 697
PCN 1800 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

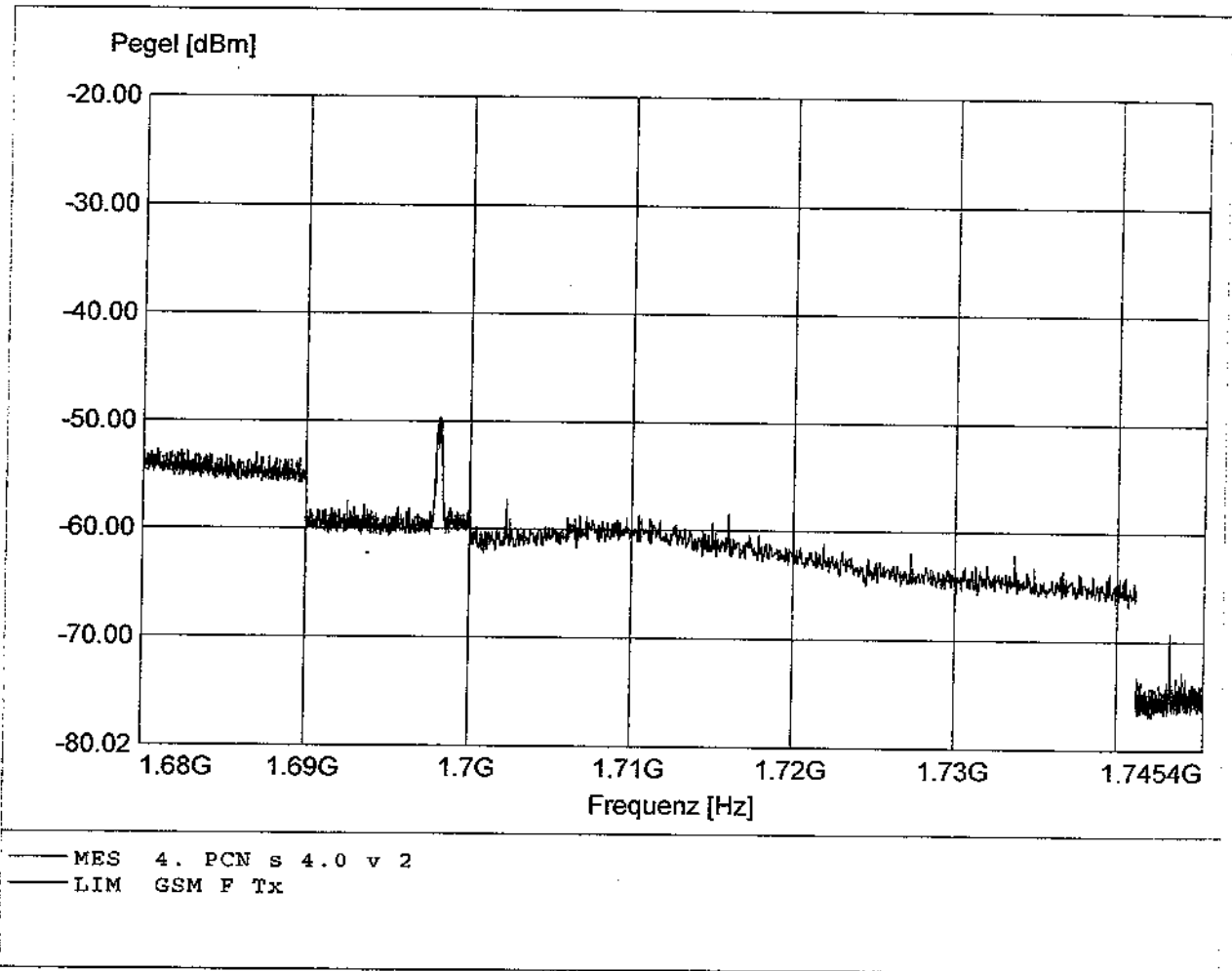
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.: 1-4 GHz
Comment 2: Freq:1.573GHz Pmax:-47.01 RBW:3MHz



Radiated spurious emissions-MS allocated ch: 697
PCN 1800 (Fully anechoic chamber)

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

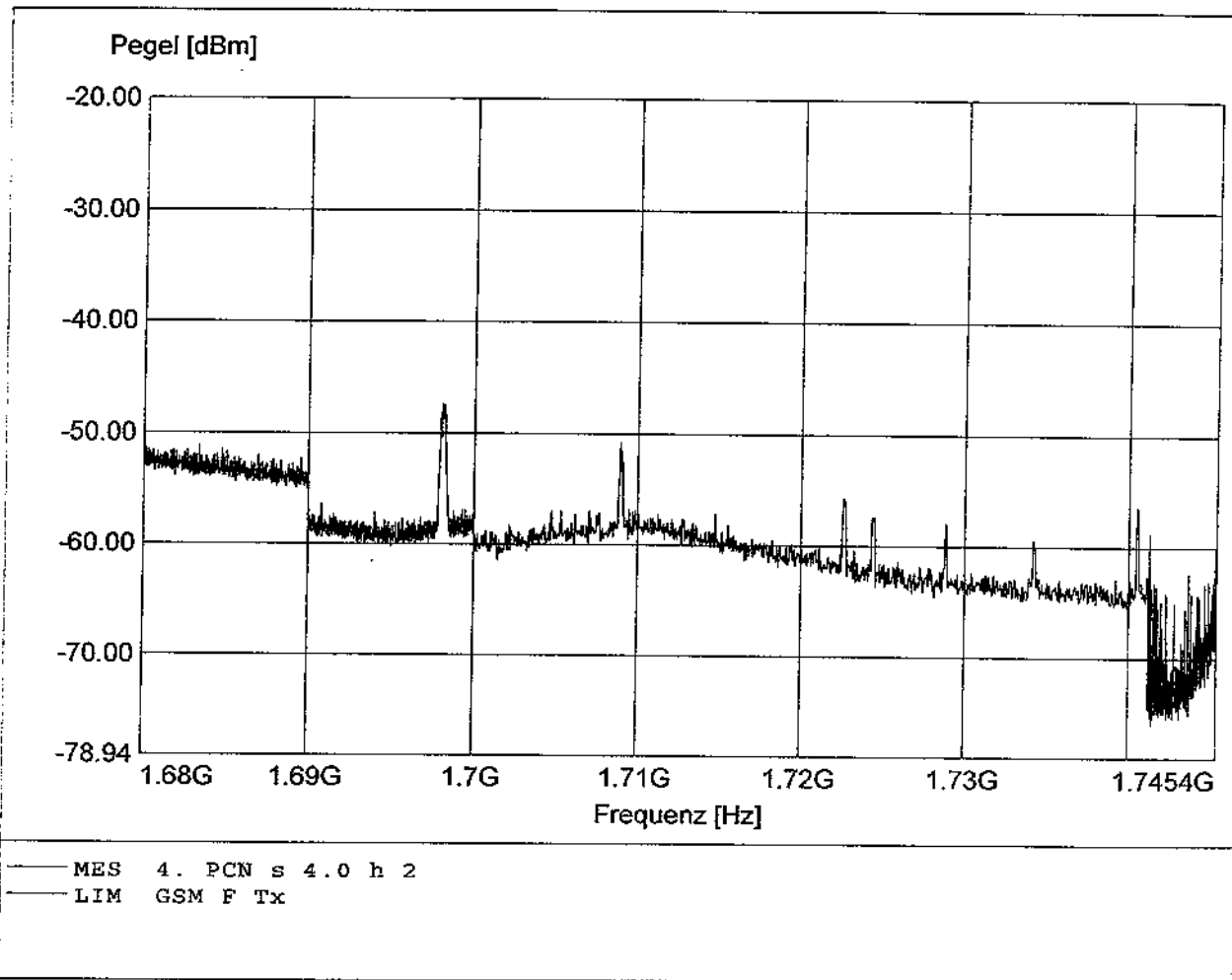
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.: 1-4 GHz
Comment 2: Freq:1.698GHz Pmax:-49.64 RBW:1MHz to 30KHz



**Radiated spurious emissions-MS allocated ch: 697
PCN 1800 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

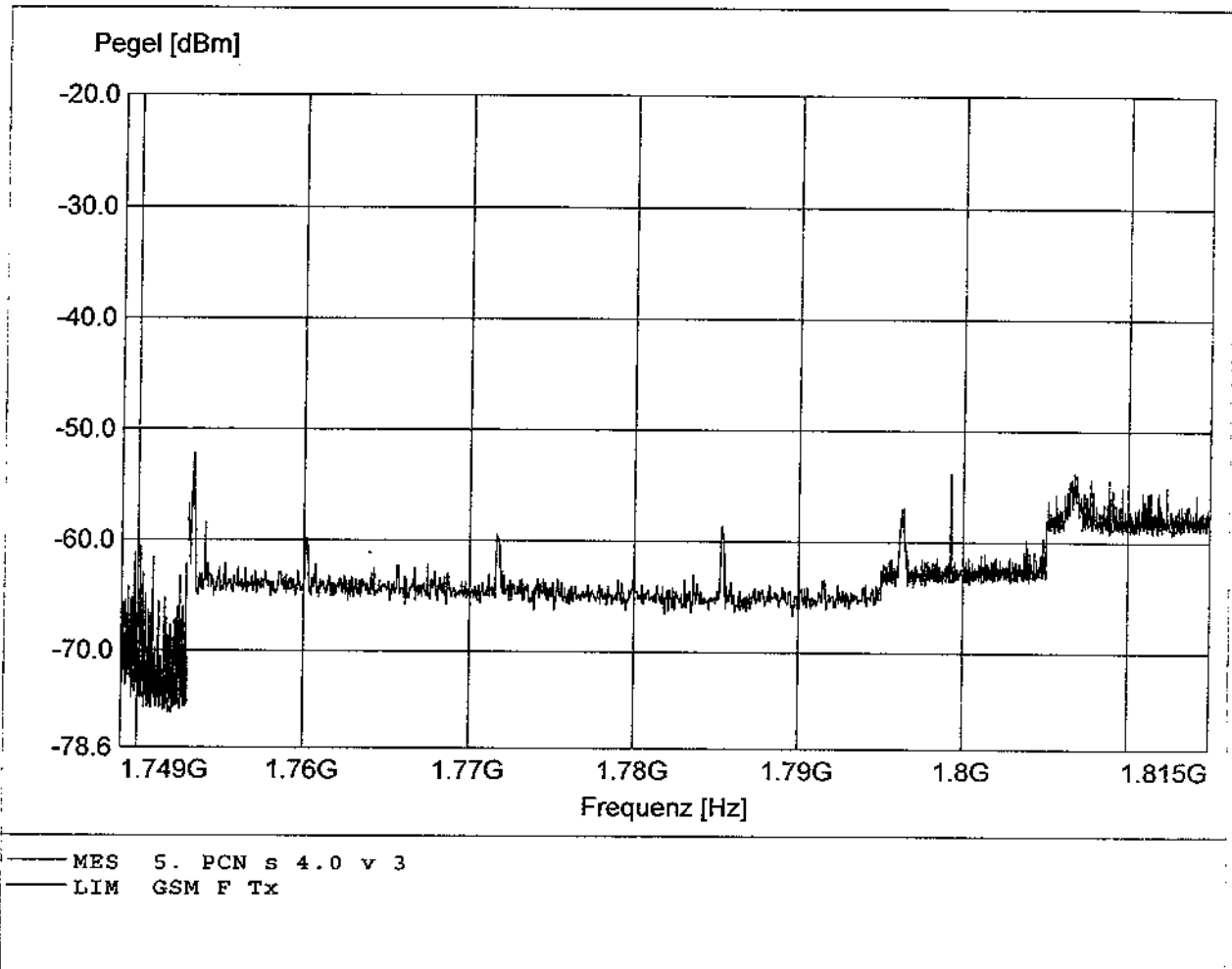
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.: 1-4 GHz
Comment 2: Freq:1.698GHz Pmax:-47.30 RBW:1MHz to 30KHz



Radiated spurious emissions-MS allocated ch: 697
PCN 1800 (Fully anechoic chamber)

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

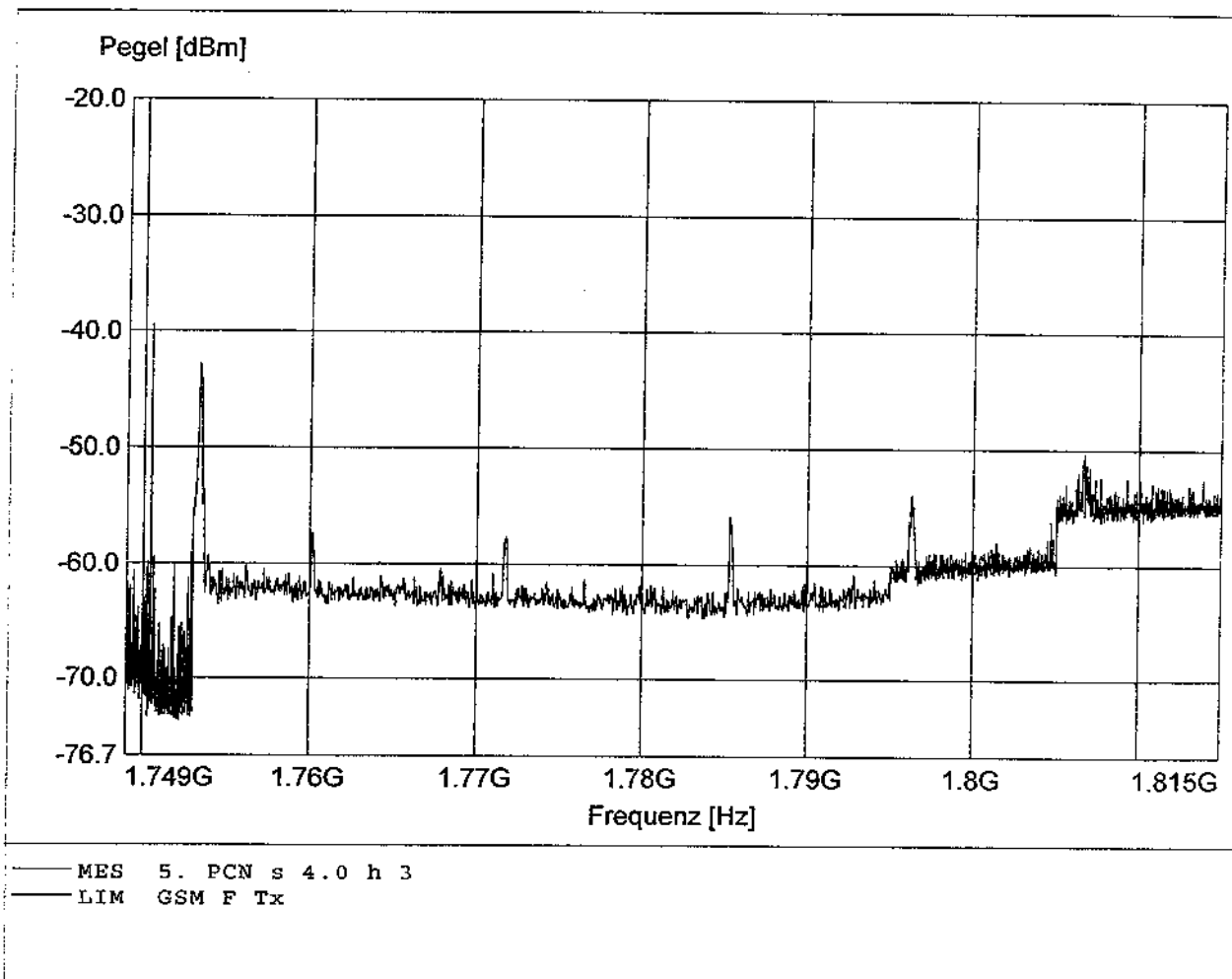
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.: 1-4 GHz
Comment 2: Freq:1.753GHz Pmax:-52.08 RBW:30KHz to 1MHz



**Radiated spurious emissions-MS allocated ch: 697
PCN 1800 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

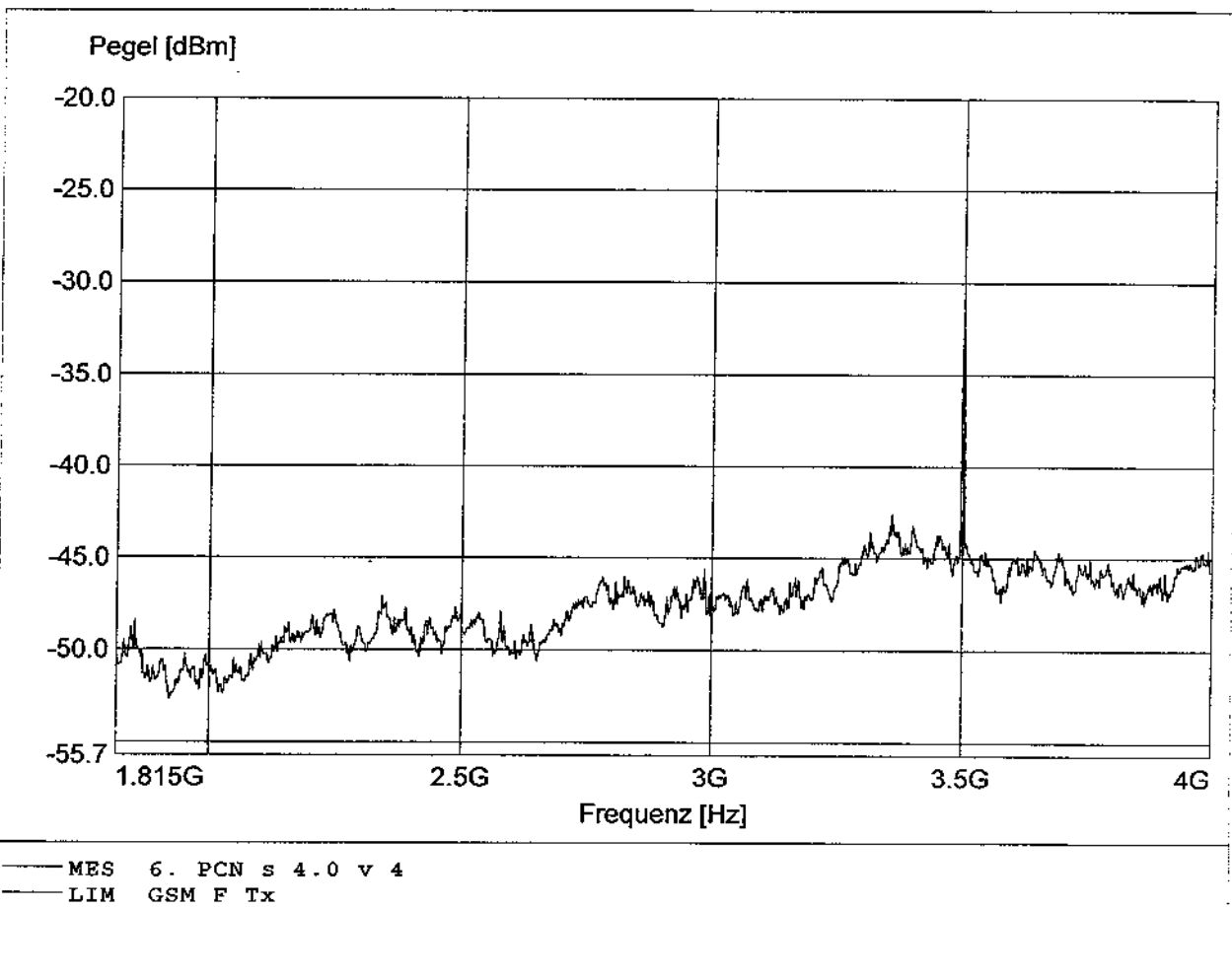
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.: 1-4 GHz
Comment 2: Freq:1.750GHz Pmax:-39.22 RBW:30KHz to 1MHz



**Radiated spurious emissions-MS allocated ch: 697
PCN 1800 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

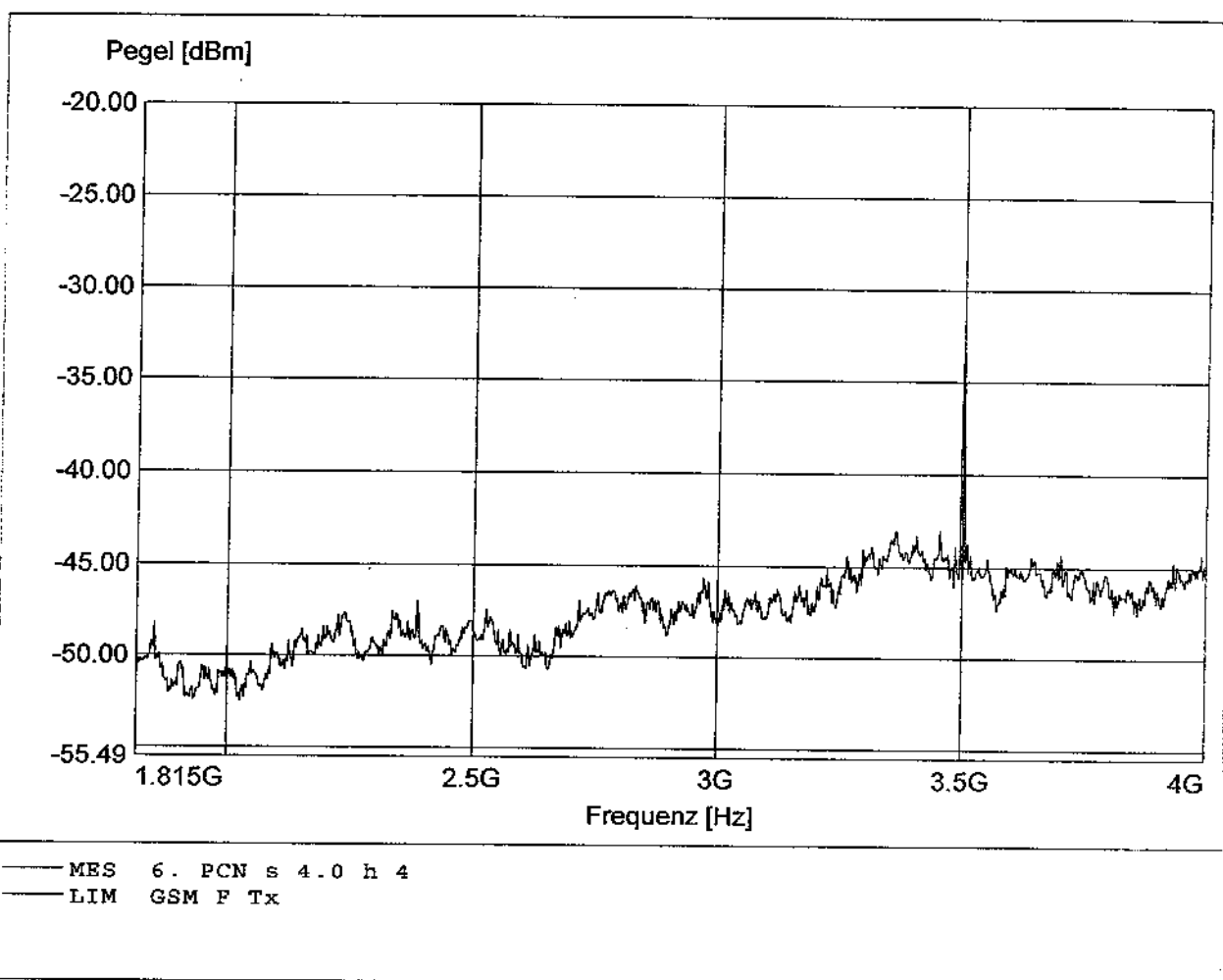
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.: 1-4 GHz
Comment 2: Freq:3.500GHz Pmax:-31.24 RBW:3MHz



Radiated spurious emissions-MS allocated ch: 697
PCN 1800 (Fully anechoic chamber)

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

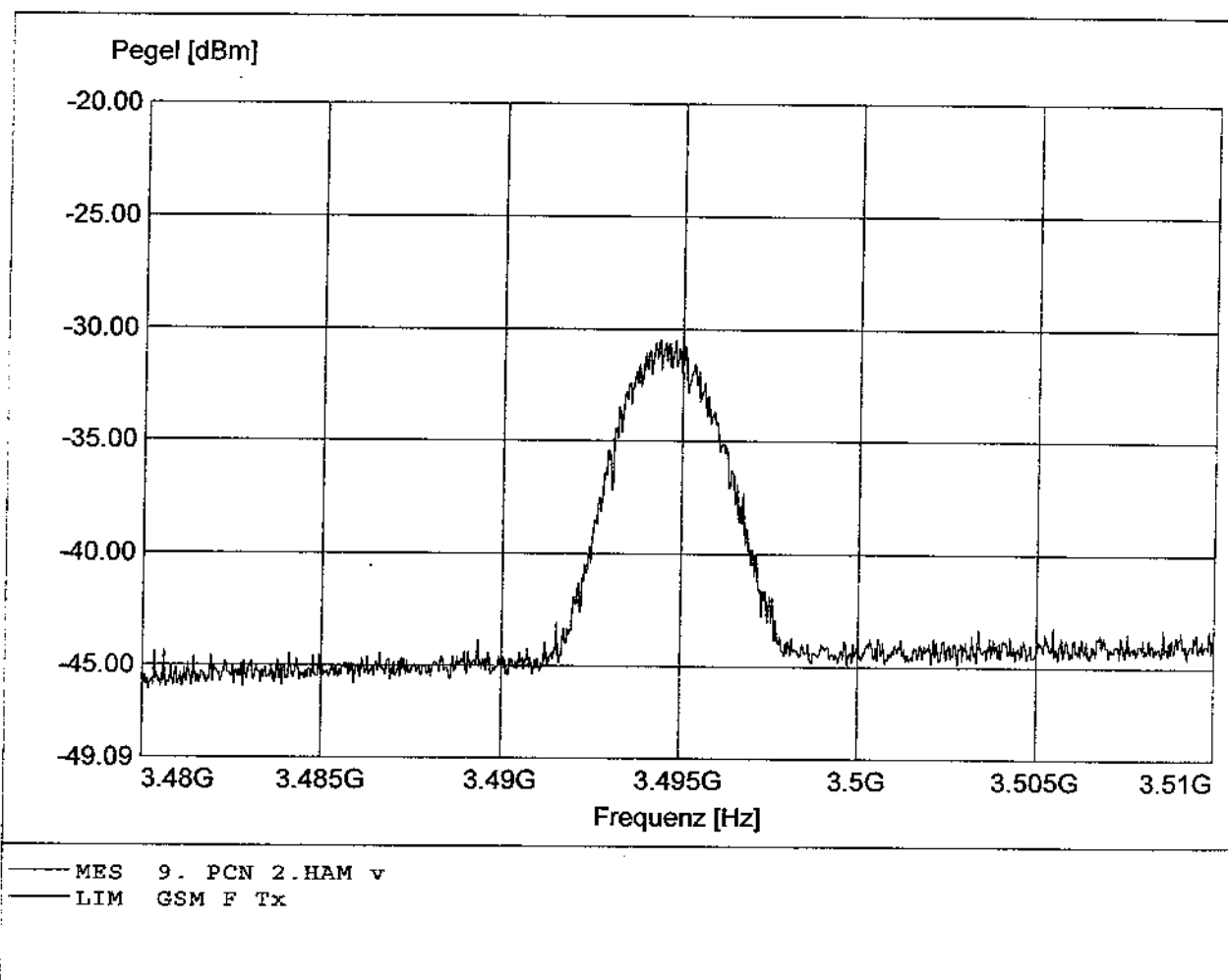
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.: 1-4 GHz
Comment 2: Freq:3.500GHz Pmax:-32.56 RBW:3MHz



2.Harmonic - MS allocated channel 697
PCN 1800 (Fully anechoic chamber)

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

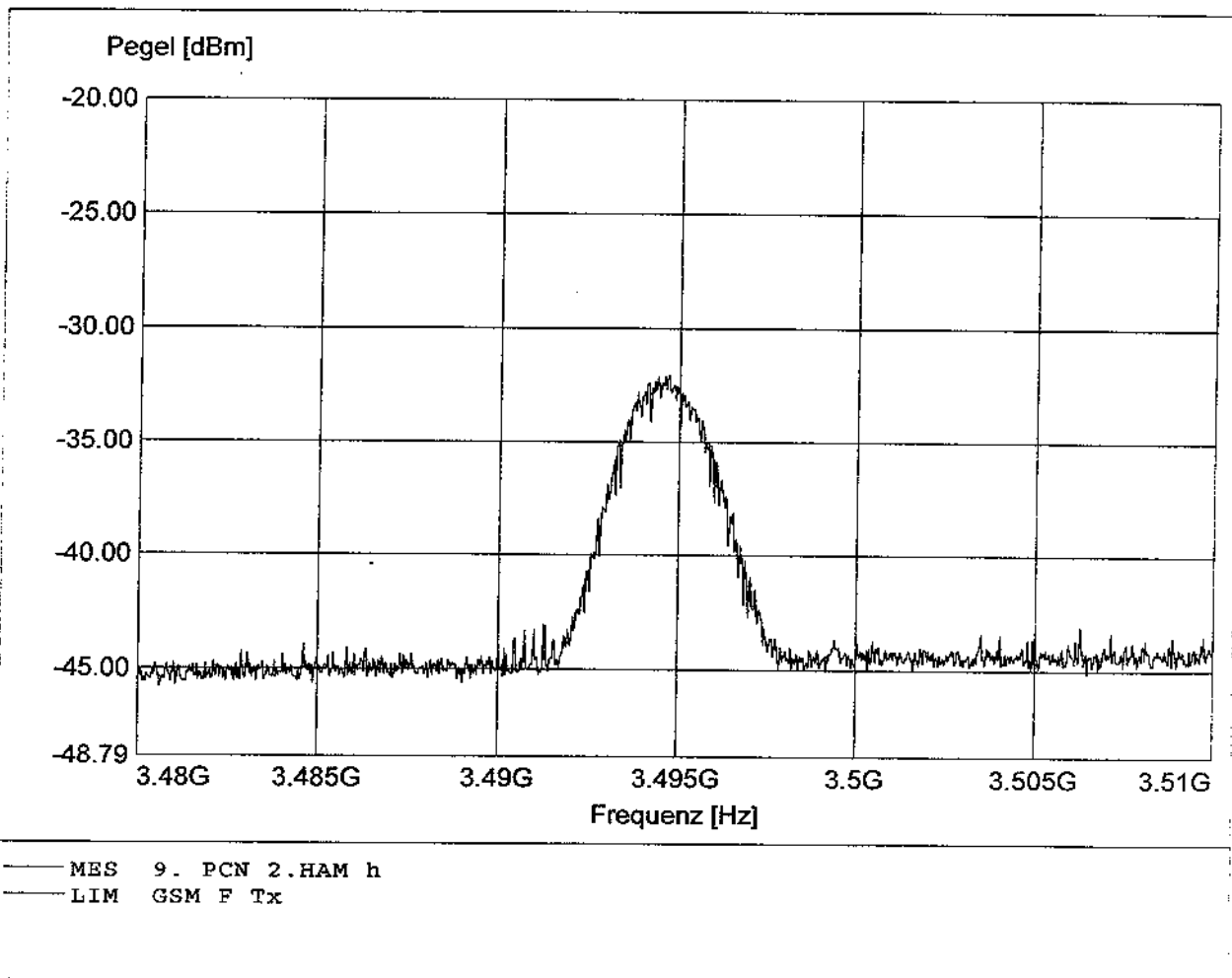
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.: 1-4 GHz
Comment 2: Freq:3.495GHz Pmax:-30.45 RBW:3MHz



2.Harmonic - MS allocated channel 697
PCN 1800 (Fully anechoic chamber)

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

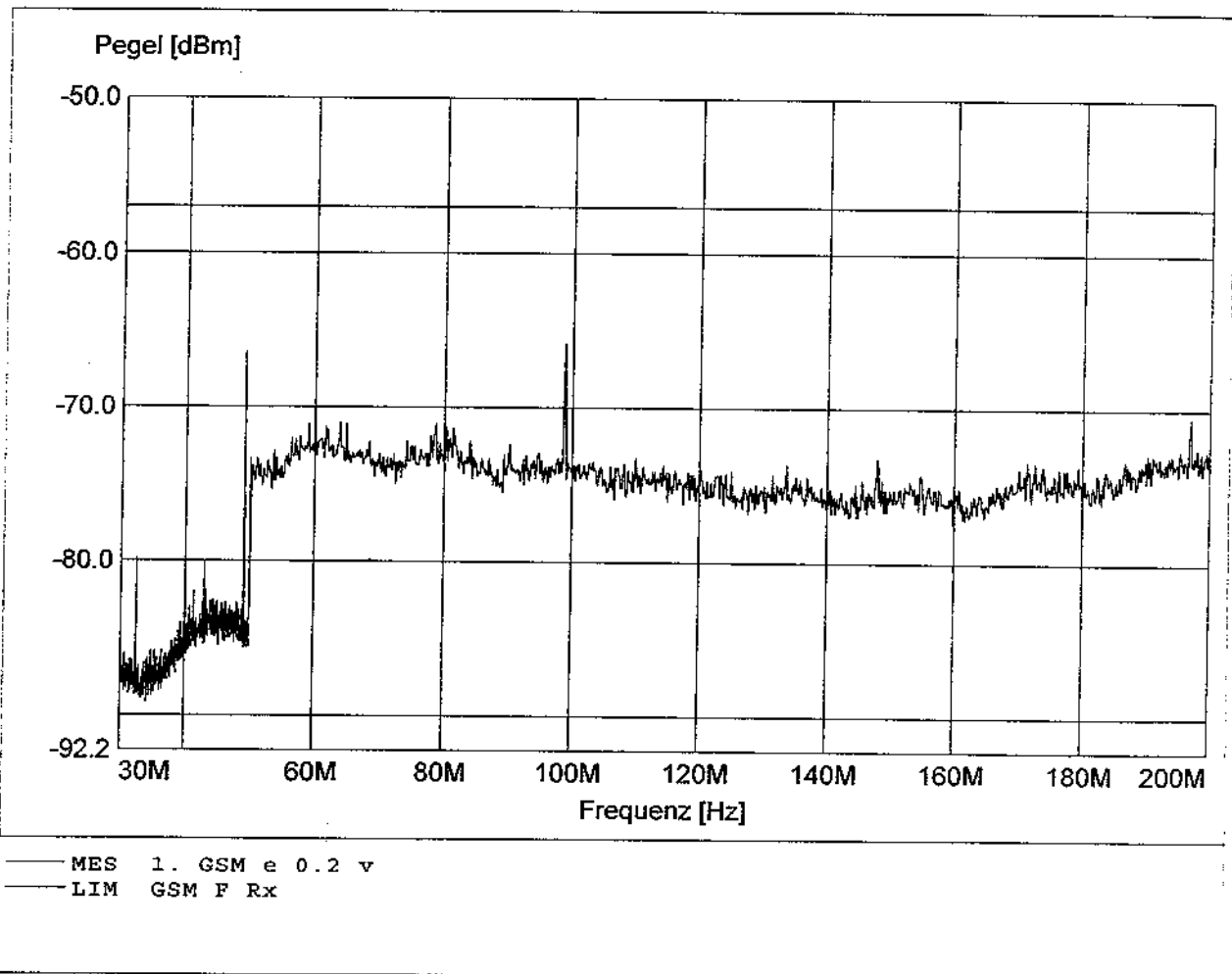
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.1
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.: 1-4 GHz
Comment 2: Freq:3.495GHz Pmax:-32.04 RBW:3MHz



**Radiated spurious emissions-MS in idle mode
PCN 1800 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

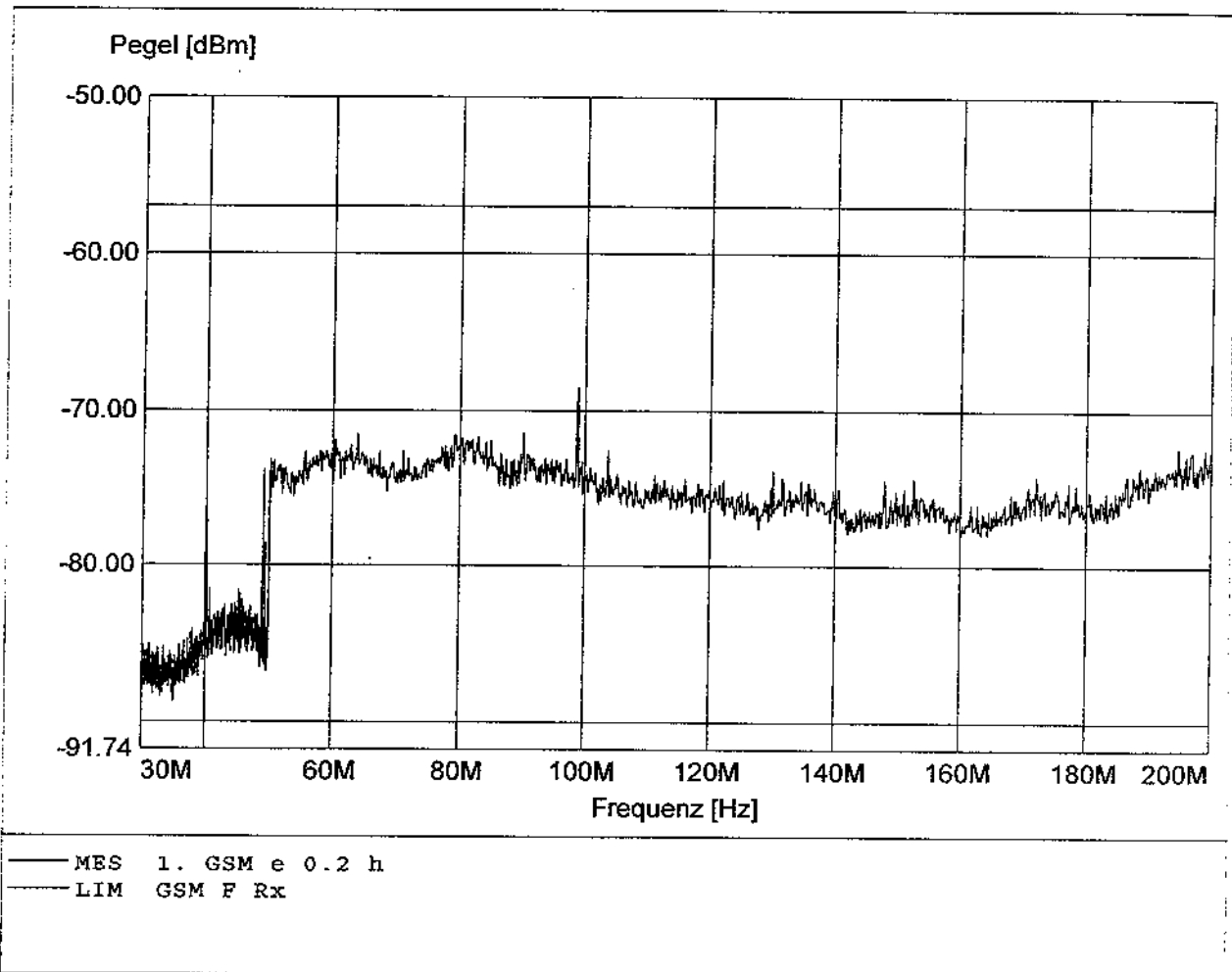
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.2
Comment 1: Dist.: 3m, Ant.: HK 116, Ampl.: None
Comment 2: Freq:98.833MHz Pmax:-65.85 RBW:10-100KHz



Radiated spurious emissions-MS in idle mode
PCN 1800 (Fully anechoic chamber)

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

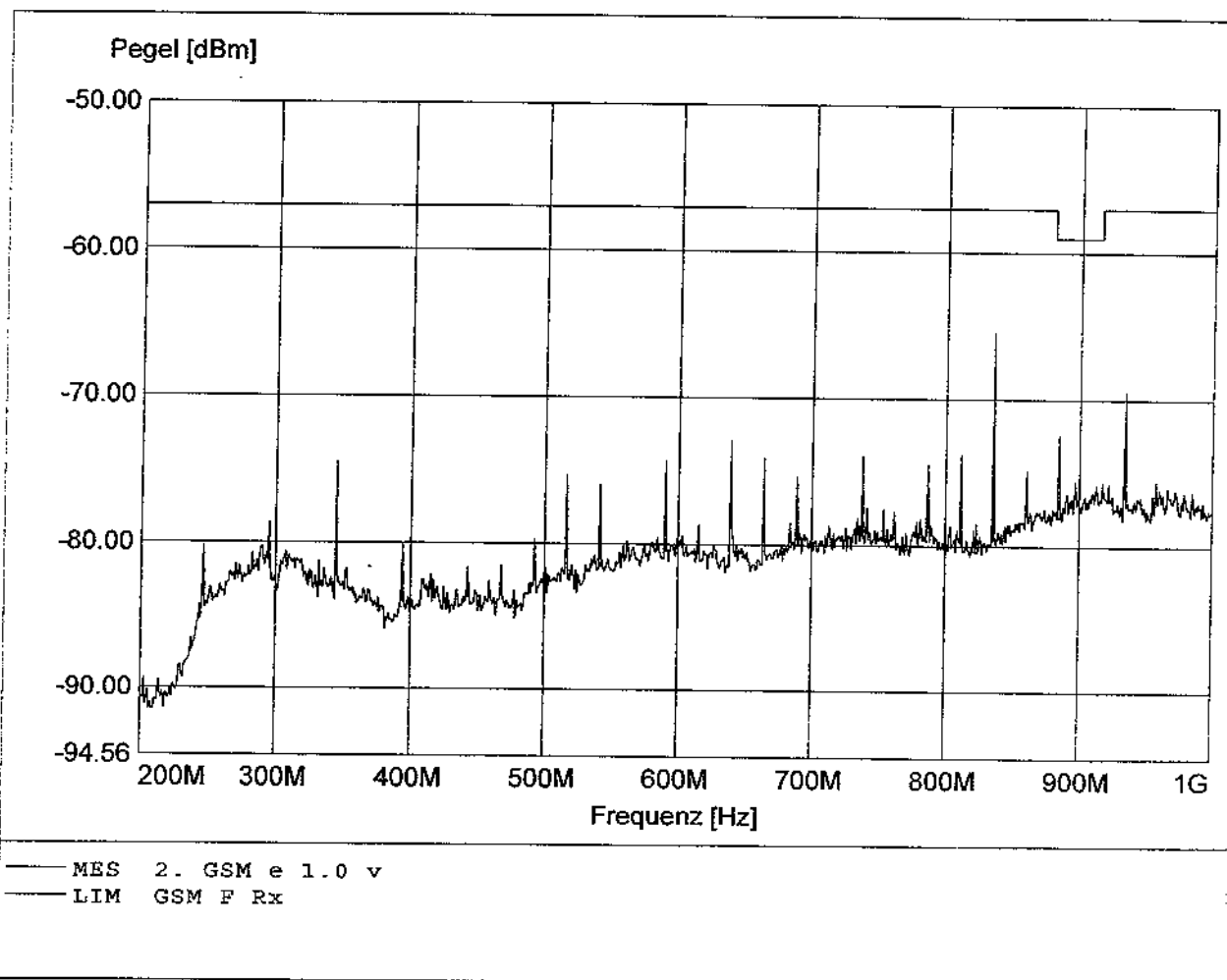
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.2
Comment 1: Dist.: 3m, Ant.: HK 116, Ampl.: None
Comment 2: Freq:98.833MHz Pmax:-68.53 RBW:10-100KHz



**Radiated spurious emissions-MS in idle mode
PCN 1800 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

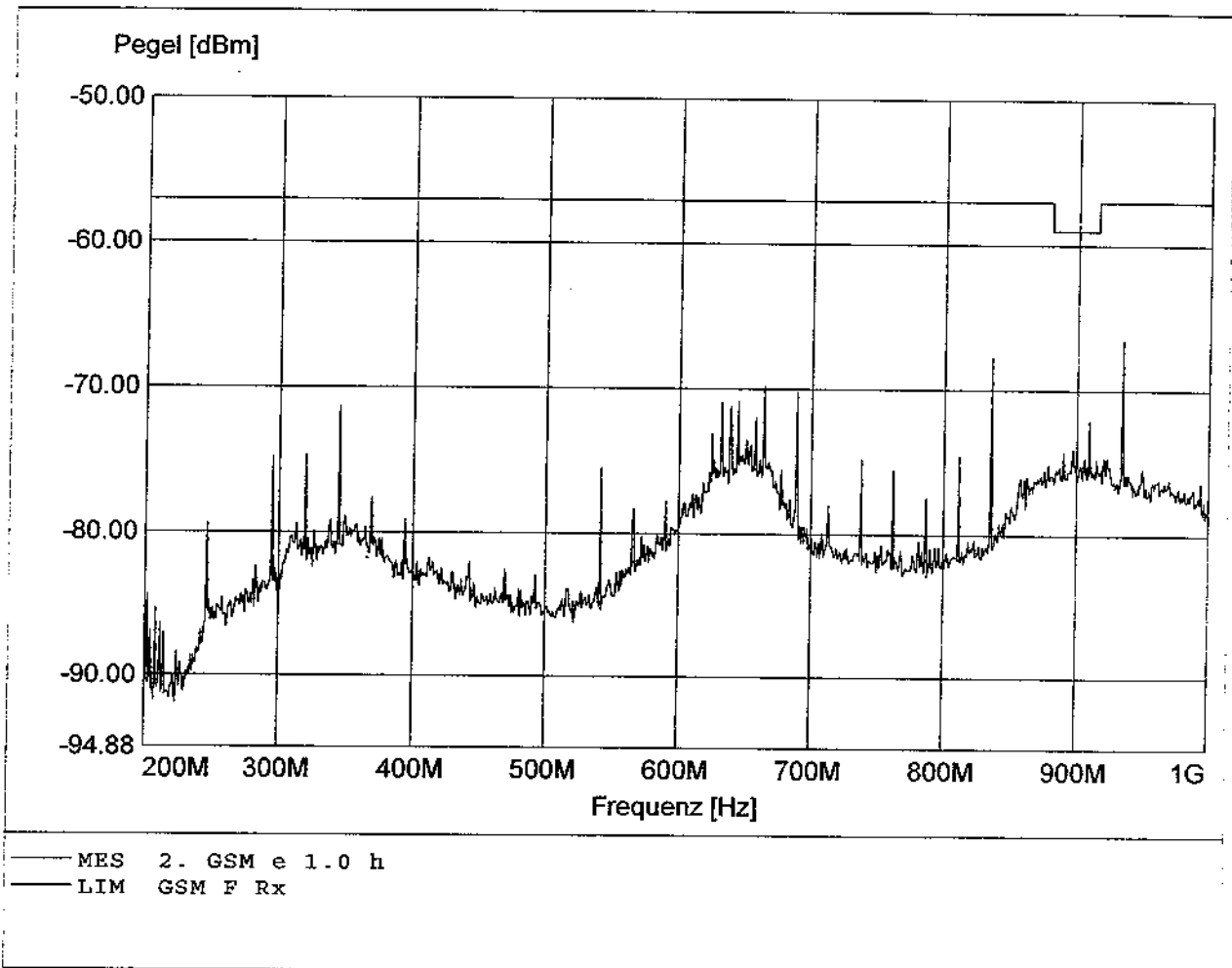
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.2
Comment 1: Dist.: 3m, Ant.: H1 223, Ampl.: 0.2-1GHz
Comment 2: Freq:835.556MHz Pmax:-65.43 RBW:100KHz



**Radiated spurious emissions-MS in idle mode
PCN 1800 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

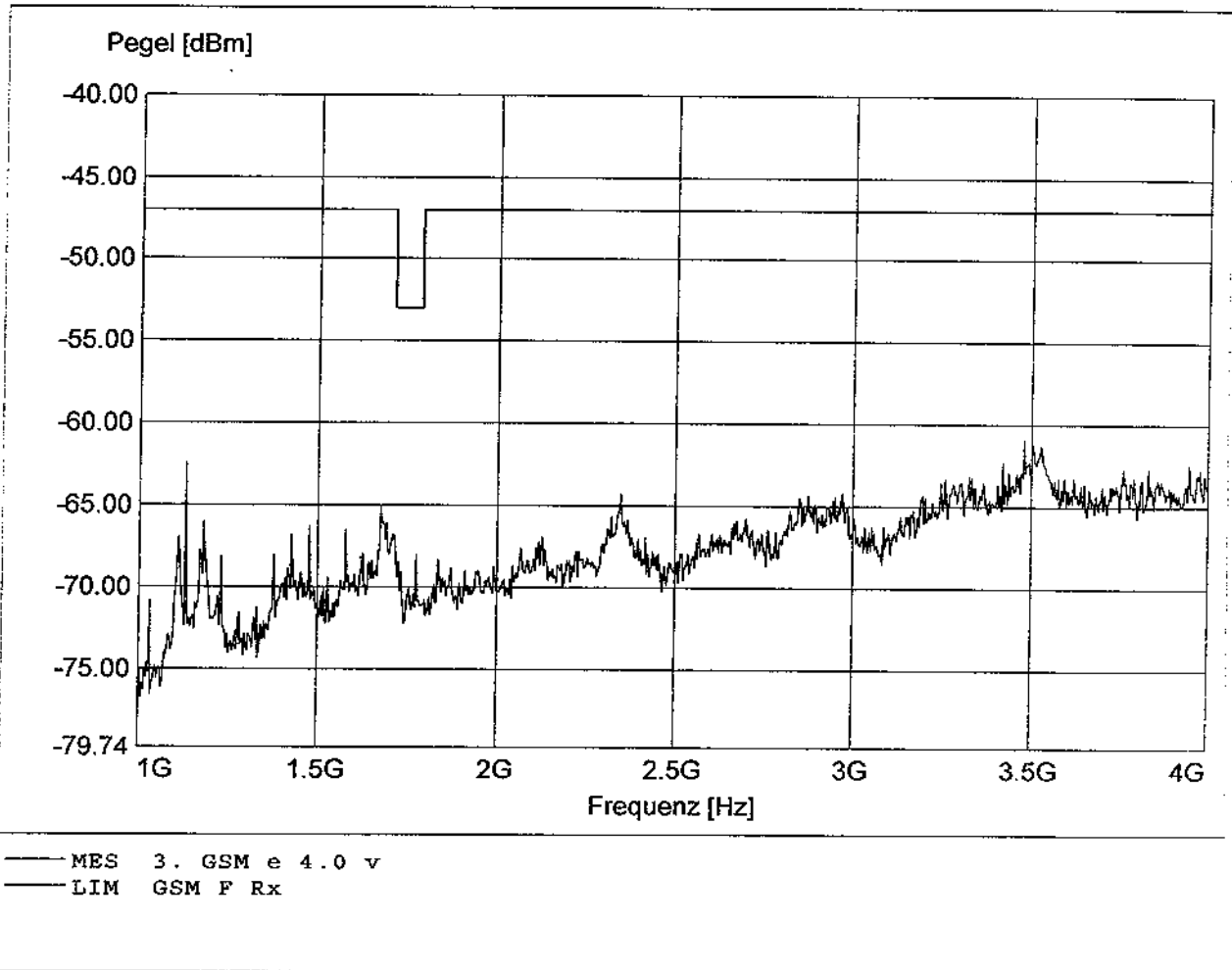
Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.2
Comment 1: Dist.: 3m, Ant.: H1 223, Ampl.: 0.2-1GHz
Comment 2: Freq:934.222MHz Pmax:-66.48 RBW:100KHz



**Radiated spurious emissions-MS in idle mode
PCN 1800 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.2
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.: 1-4GHz
Comment 2: Freq:3.480GHz Pmax:-60.88 RBW:100KHz



**Radiated spurious emissions-MS in idle mode
PCN 1800 (Fully anechoic chamber)**

EUT/Model : Modul / C2D-Si- 900/1800
Applicant: FALCOM GmbH

Temperature/ Voltage: Temp.: 23°C / Unom.: 5.0 VDC
Test Site / Operator: ETS / Mr. F.Schulz
Test Specification: GSM 11.10-1 testcase 12.2.2
Comment 1: Dist.: 3m, Ant.: HL 025, Ampl.: 1-4GHz
Comment 2: Freq:3.370GHz Pmax:-60.59 RBW:100KHz

