

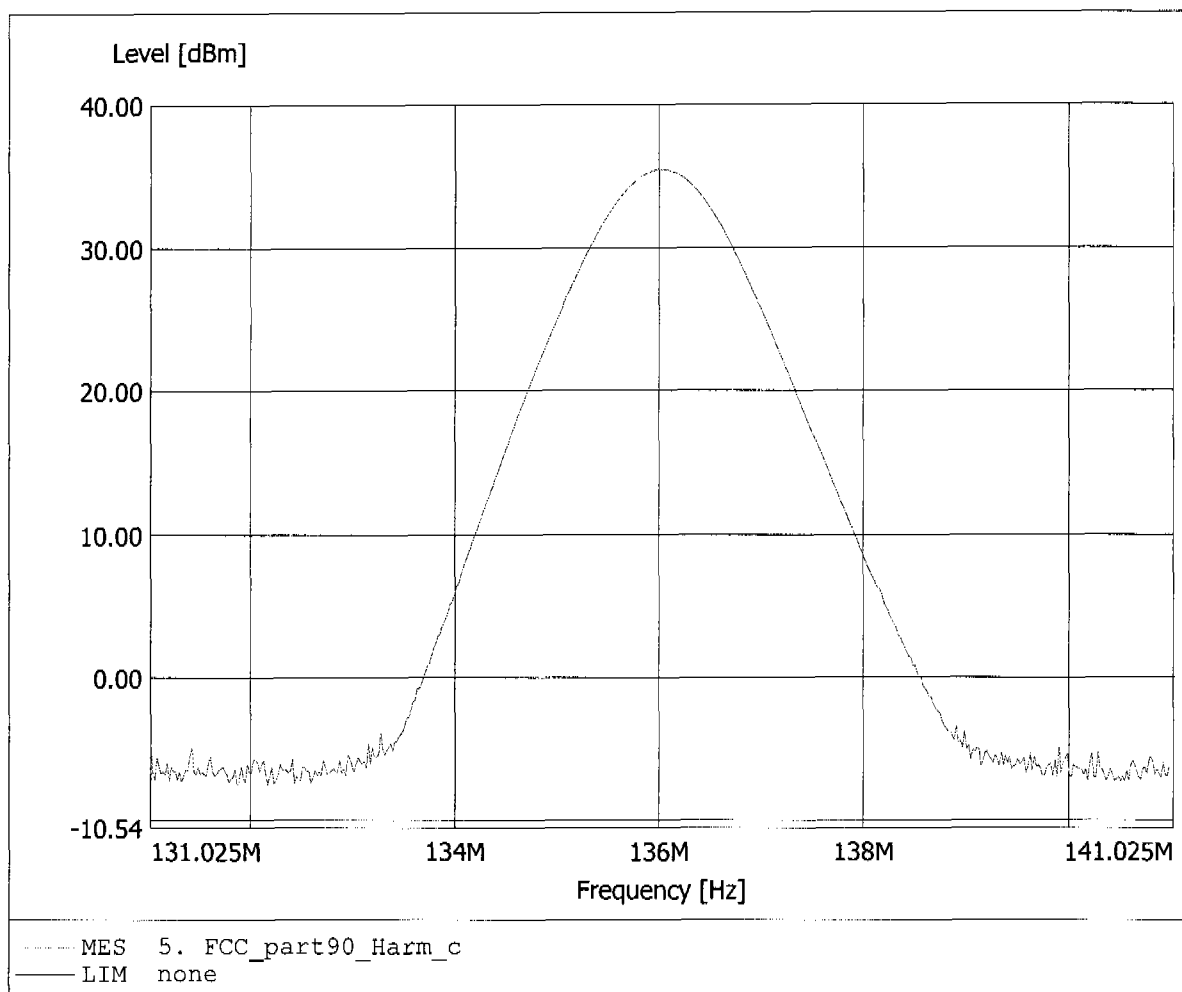


Appendix B

Output Power conducted

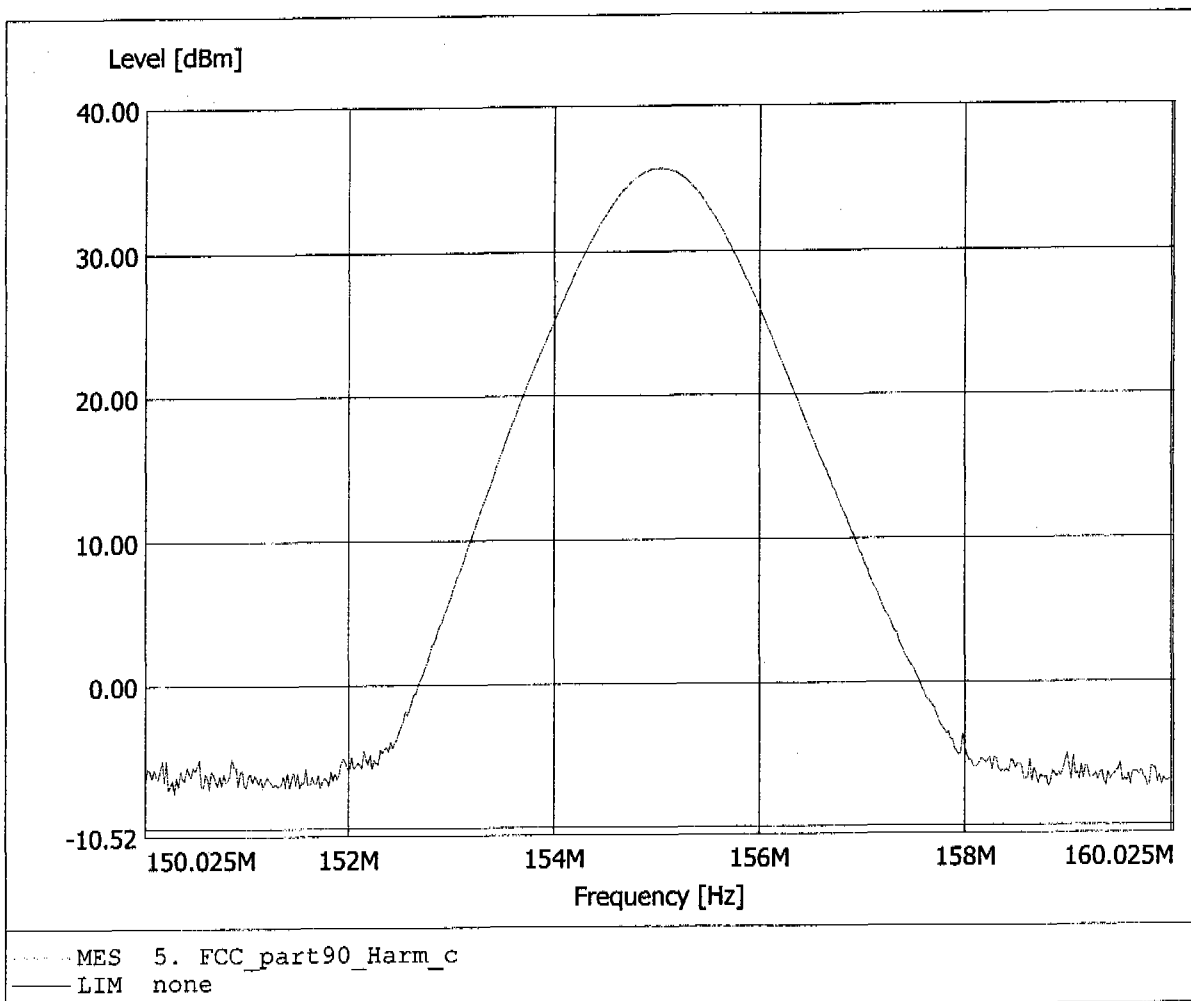
Output power conducted
FCC RULES PART 90

EUT: VHF TRANSCEIVER / 136.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load
Comment 2: Freq:135.995MHz Pmax:35.46dBm RBW: 1MHz



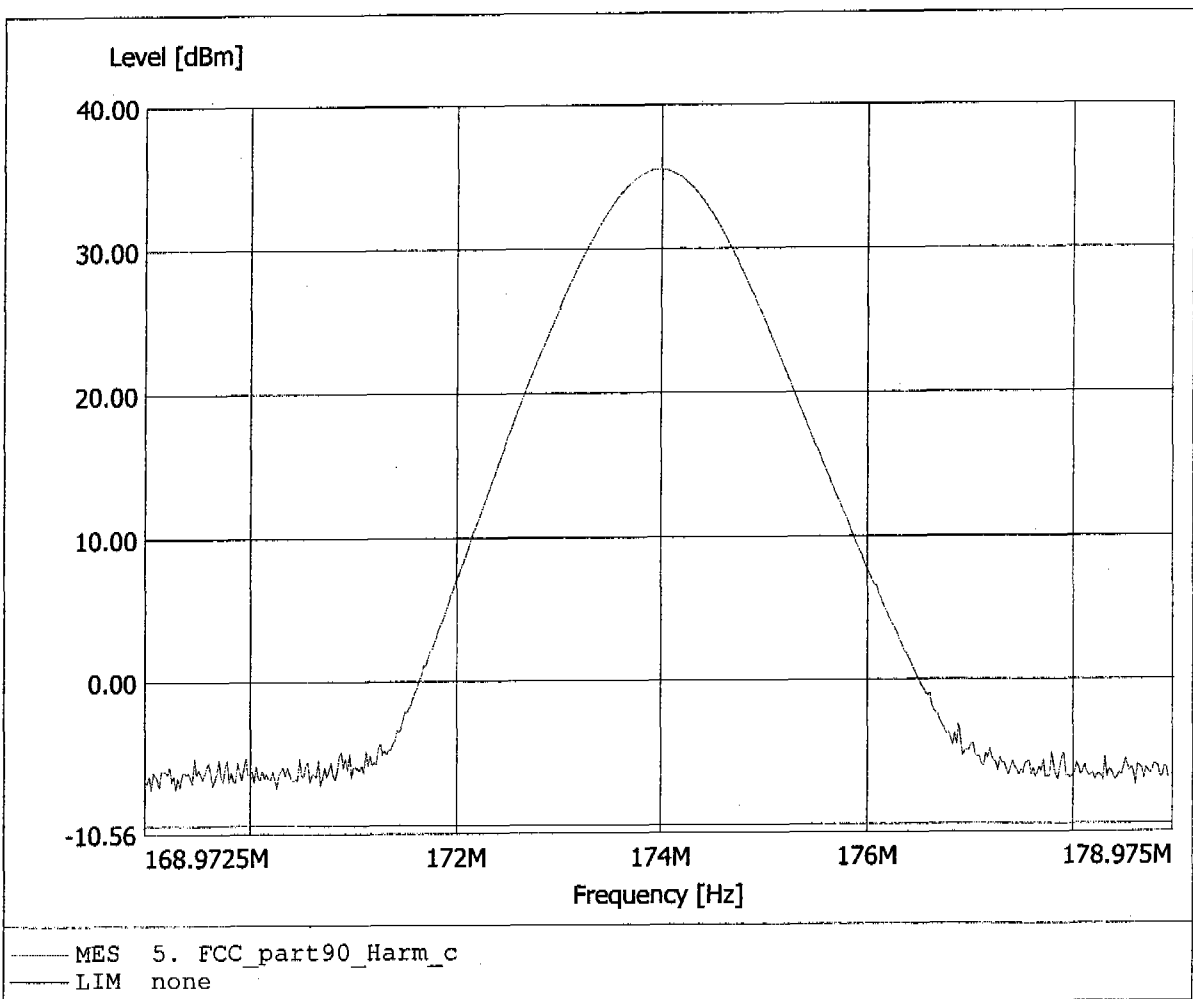
**Output power conducted
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 155.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load
Comment 2: Freq:155.015MHz Pmax:35.72dBm RBW: 1MHz



Output power conducted
FCC RULES PART 90

EUT: VHF TRANSCEIVER / 173.975 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load
Comment 2: Freq:173.984MHz Pmax:35.51dBm RBW: 1MHz



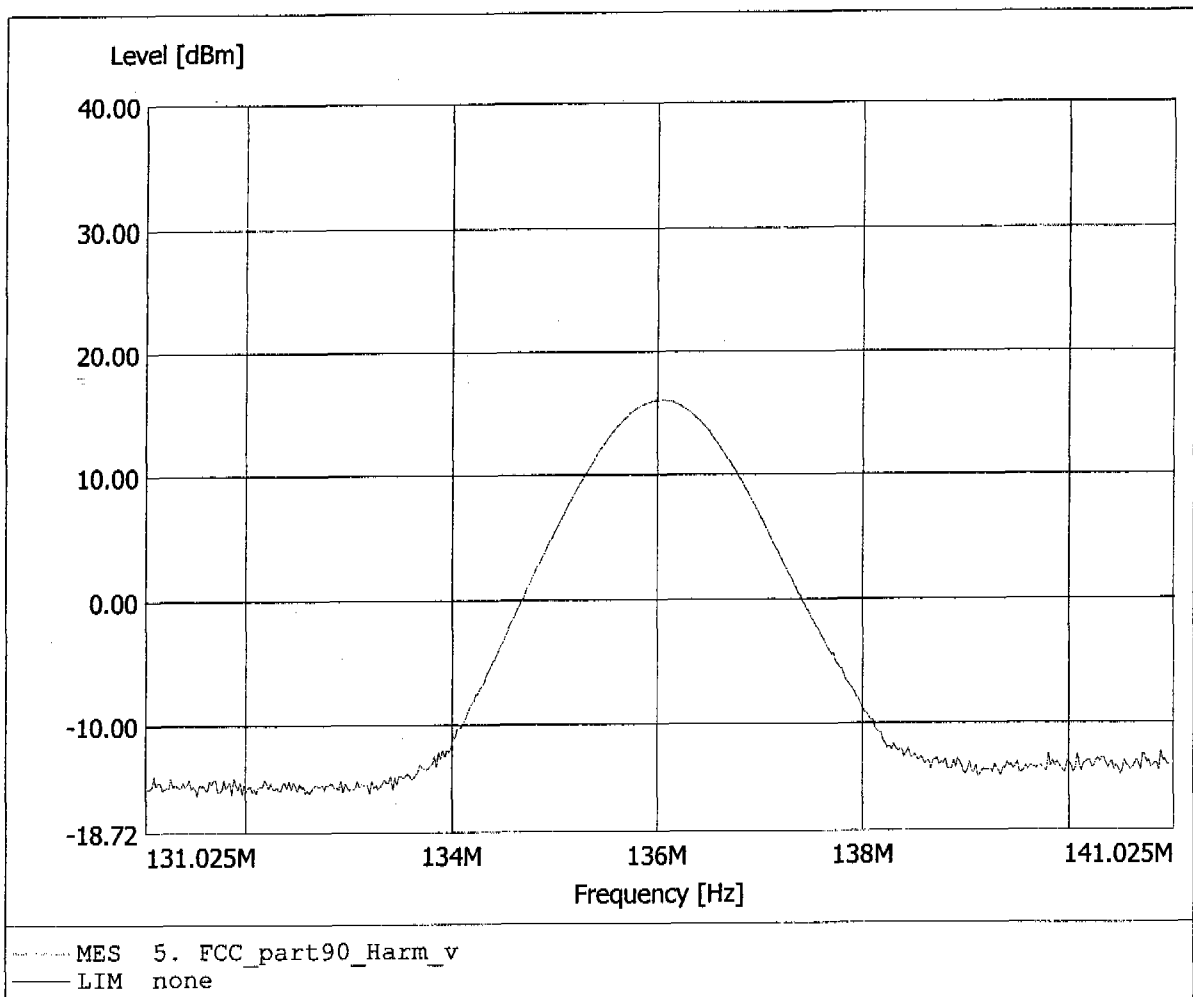


Appendix C

Output Power radiated

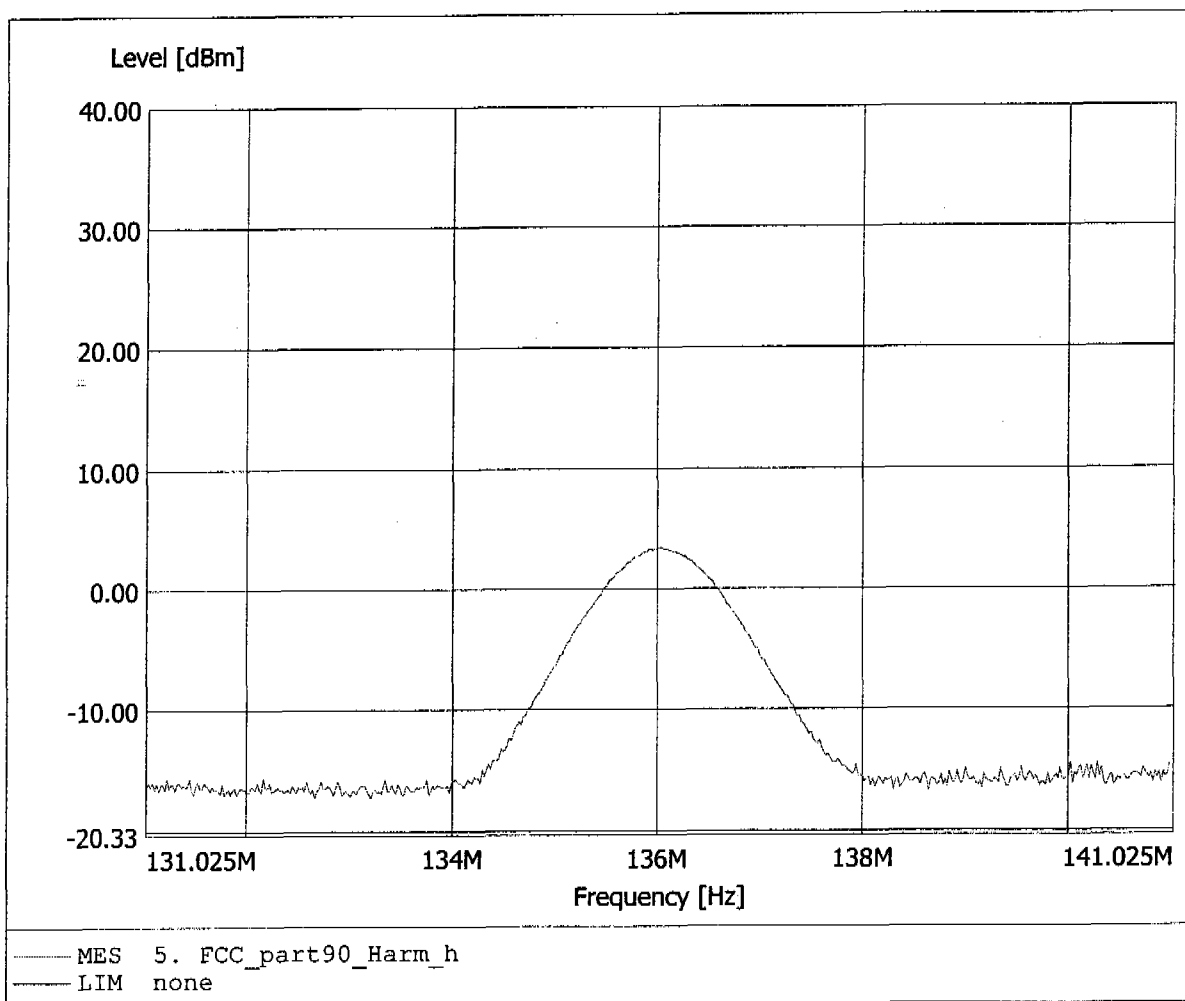
**Radiated power under normal conditions
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 136.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC (rechargeable battery)
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HK 116,
Comment 2: Freq:136.055MHz Pmax:16.04dBm RBW: 1 MHz



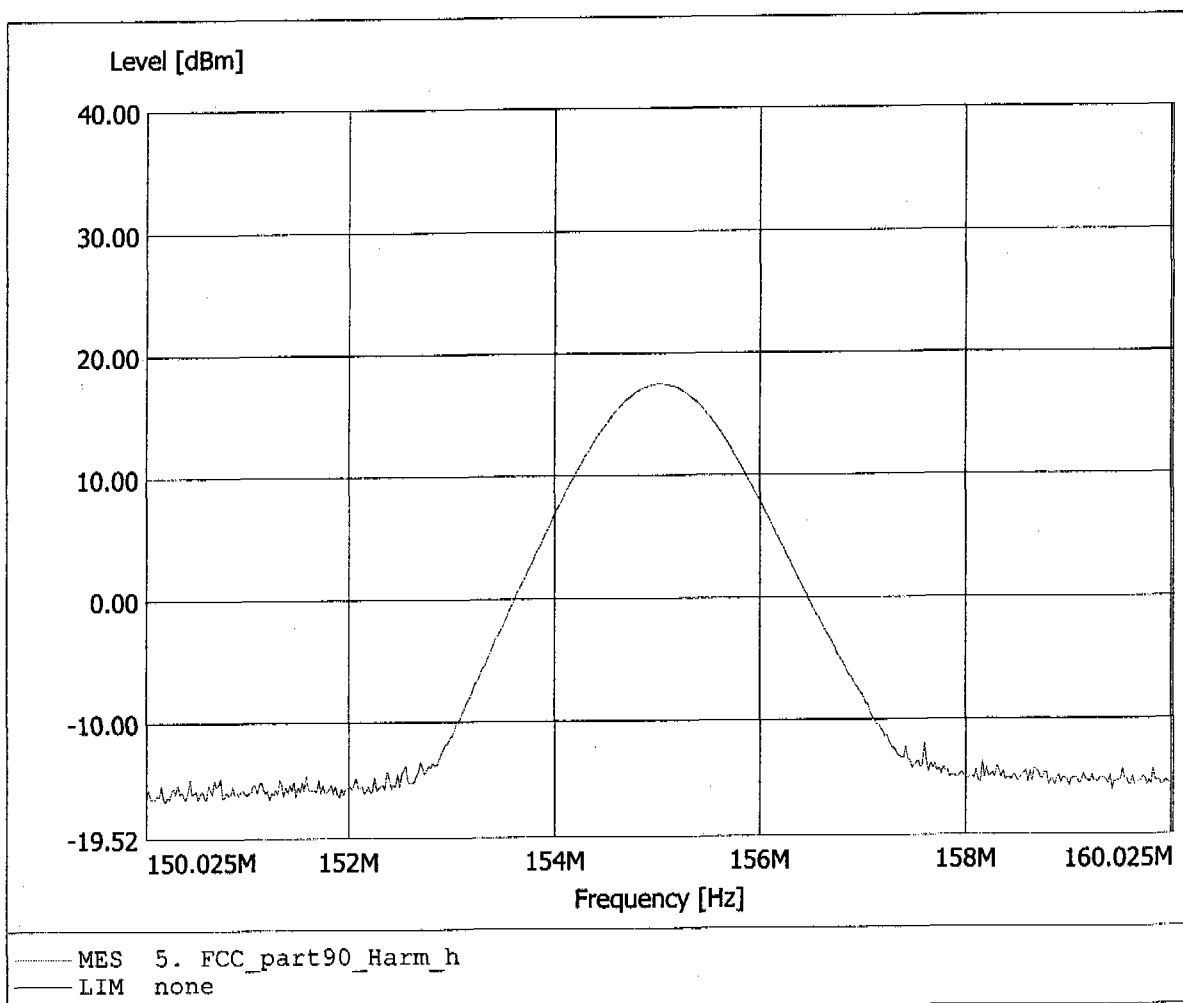
**Radiated power under normal conditions
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 136.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC (rechargeable battery)
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HK 116,
Comment 2: Freq:136.035MHz Pmax:3.44dBm RBW: 1 MHz



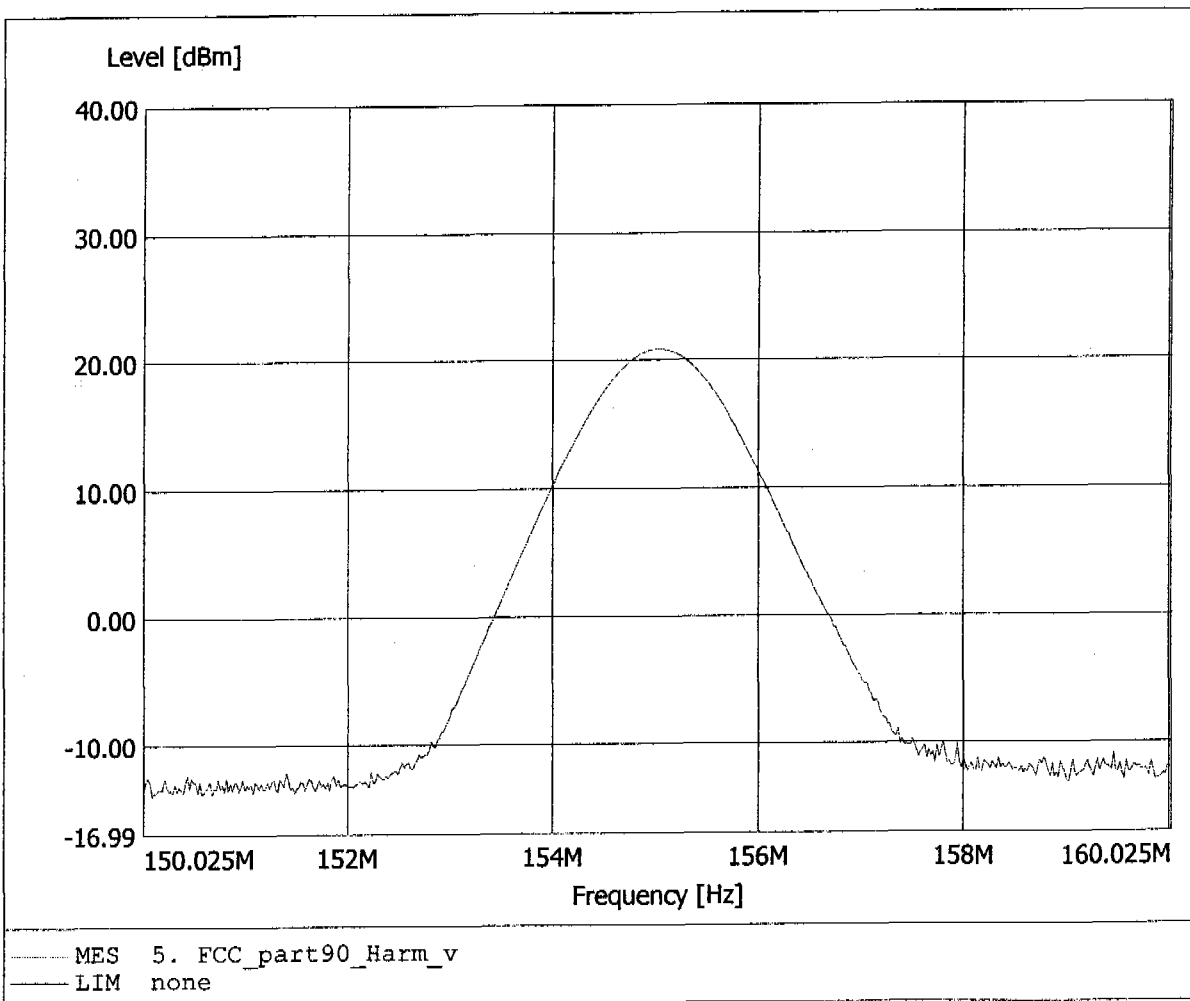
**Radiated power under normal conditions
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 155.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC (rechargeable battery)
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HK 116,
Comment 2: Freq:155.015MHz Pmax:17.48dBm RBW: 1 MHz



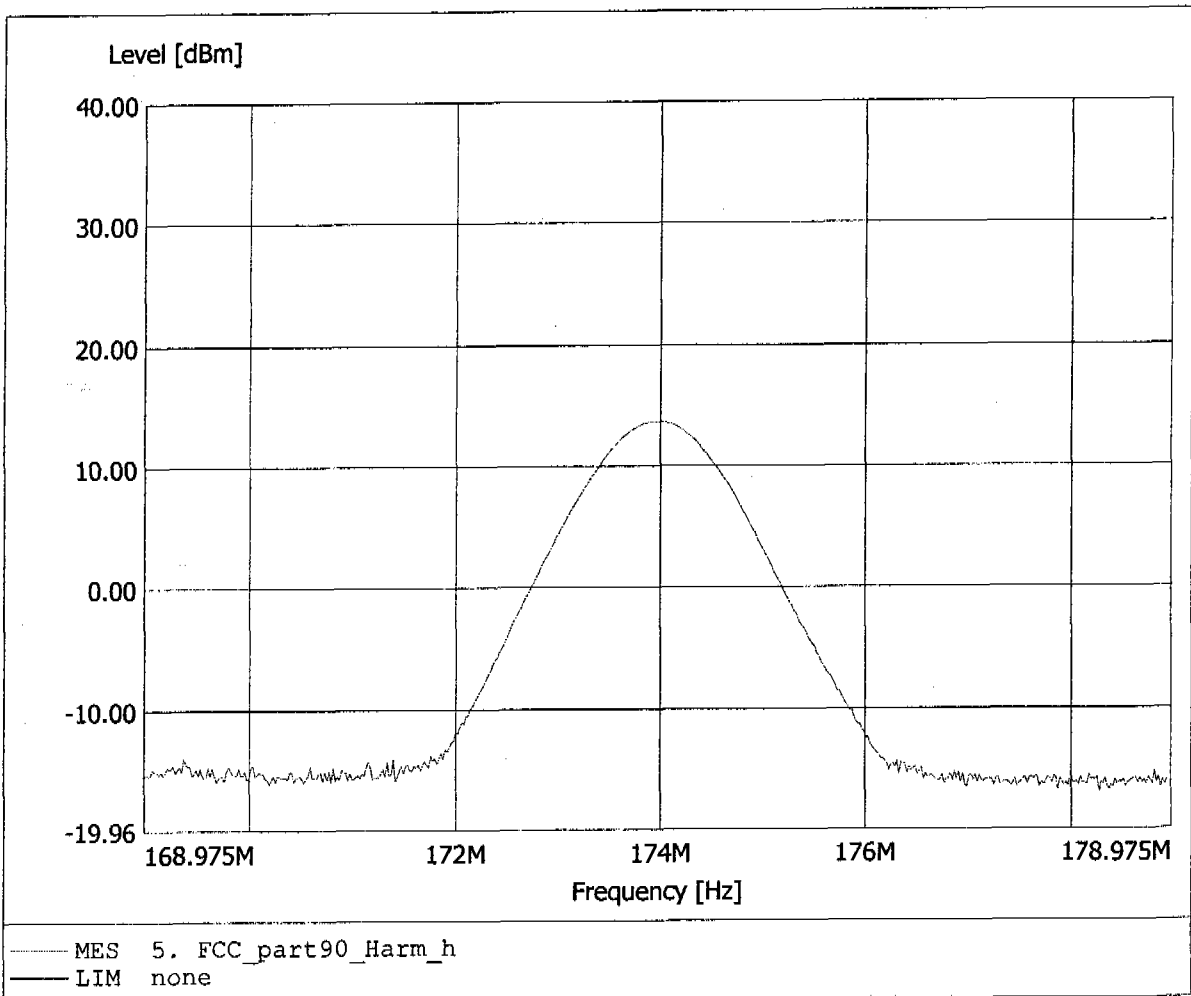
**Radiated power under normal conditions
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 155.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC (rechargeable battery)
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HK 116,
Comment 2: Freq:155.035MHz Emax:20.84dBm RBW: 1 MHz



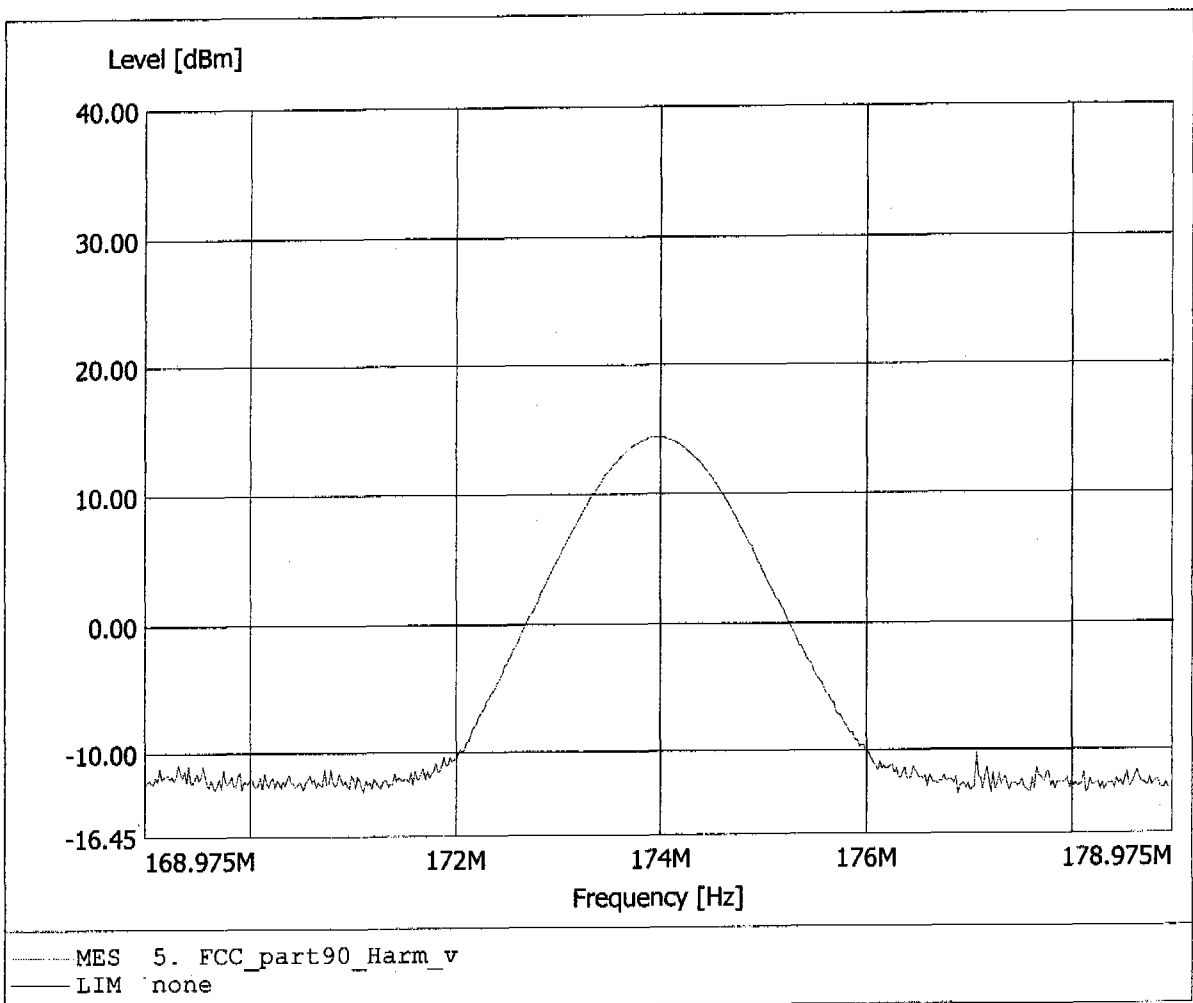
**Radiated power under normal conditions
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 173.975 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC (rechargeable battery)
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HK 116,
Comment 2: Freq:173.925MHz Pmax:13.70dBm RBW: 1 MHz



**Radiated power under normal conditions
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 173.975 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC (rechargeable battery)
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HK 116,
Comment 2: Freq:174.025MHz Pmax:14.41dBm RBW: 1 MHz



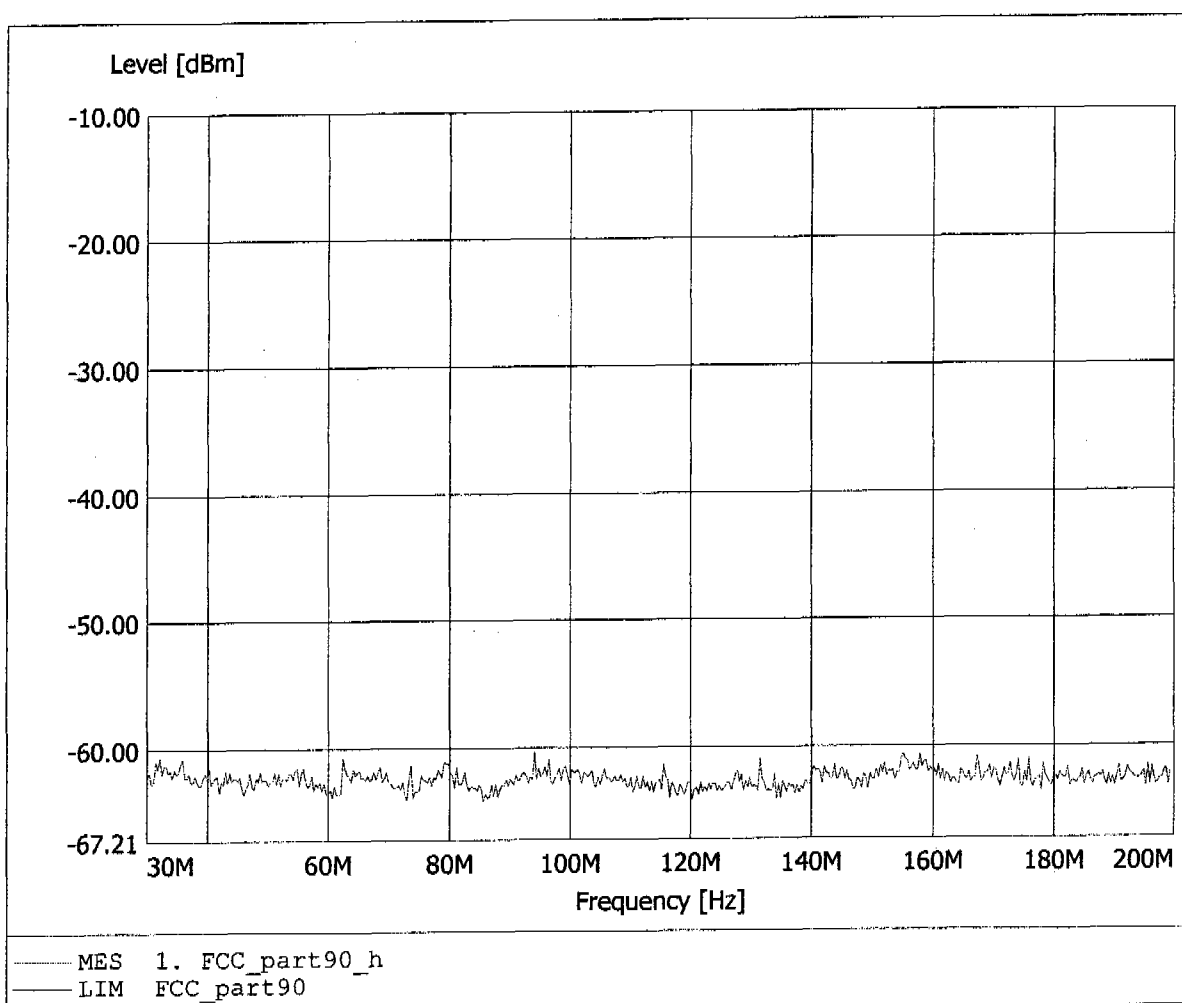


Appendix D

Spurious Emissions radiated - Transmitter operating

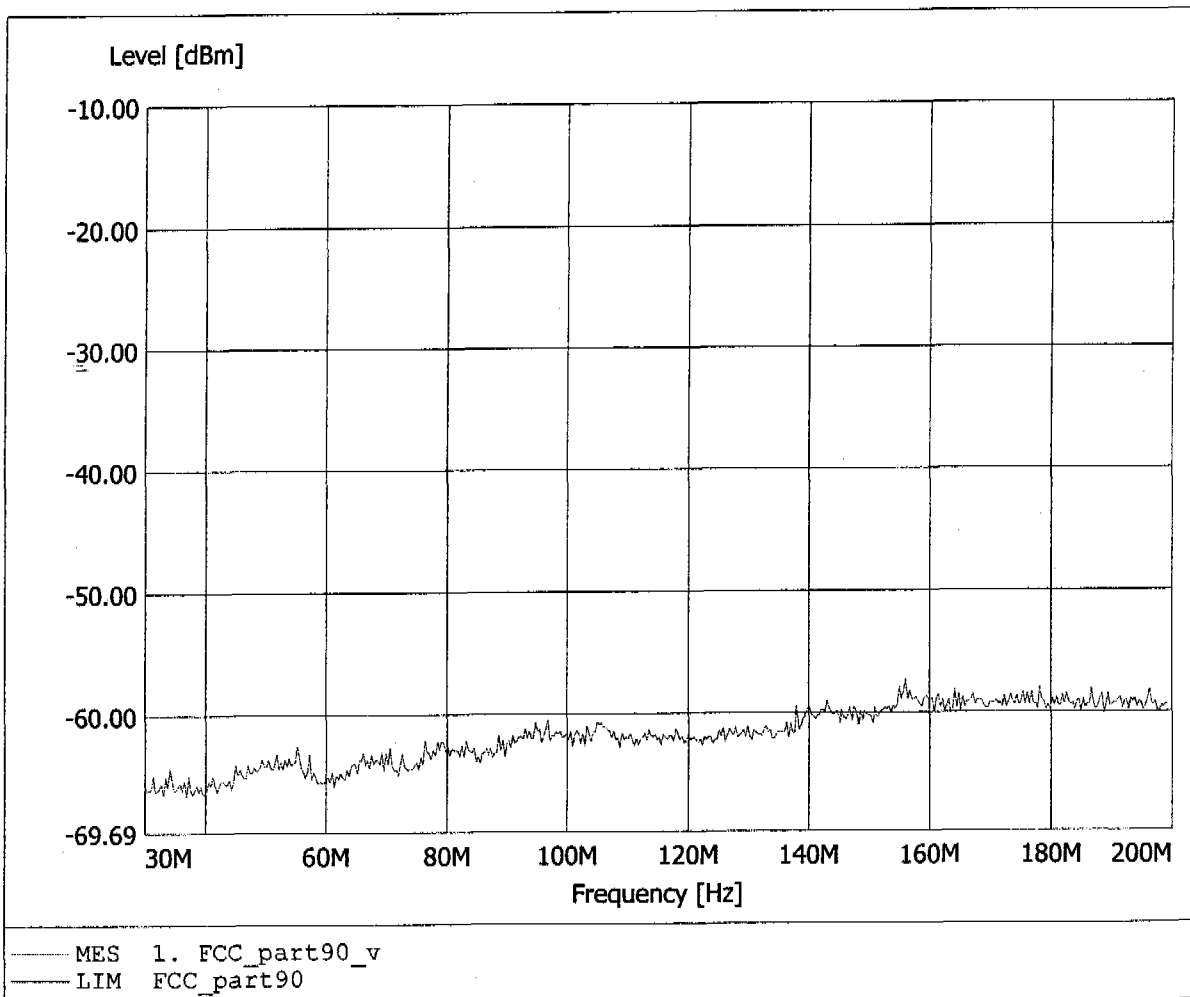
**Spurious emissions under normal conditions
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 155.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC (rechargeable battery)
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HK 116,
Comment 2: Freq:94.048MHz Pmax:-60.40dBm RBW: 100 kHz



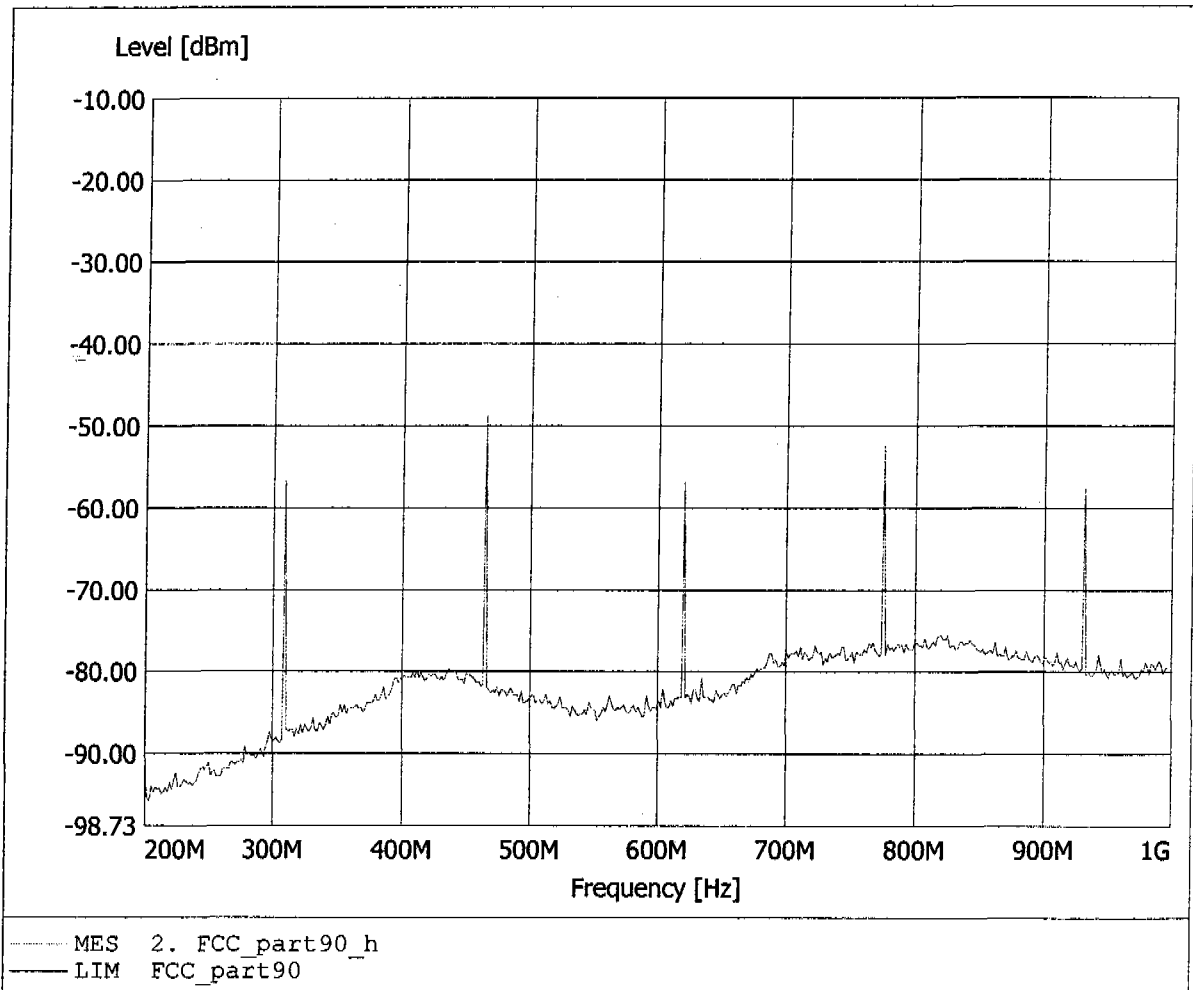
**Spurious emissions under normal conditions
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 155.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC (rechargeable battery)
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HK 116,
Comment 2: Freq:156.052MHz Pmax:-57.24dBm RBW: 100 kHz



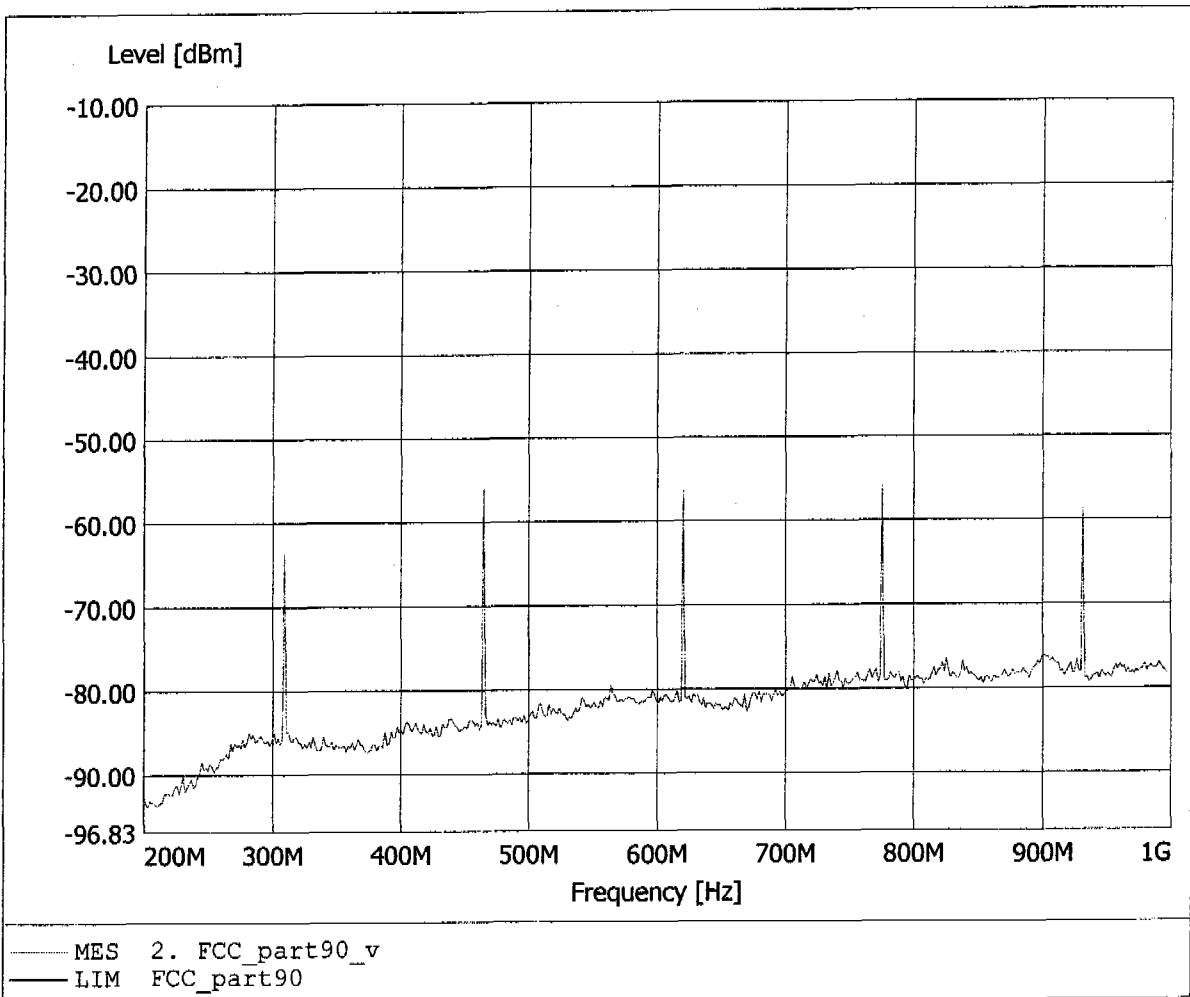
**Spurious emissions under normal conditions
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 155.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC (rechargeable battery)
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 223,
Comment 2: Freq:464.529MHz Pmax:-48.69dBm RBW: 100 kHz



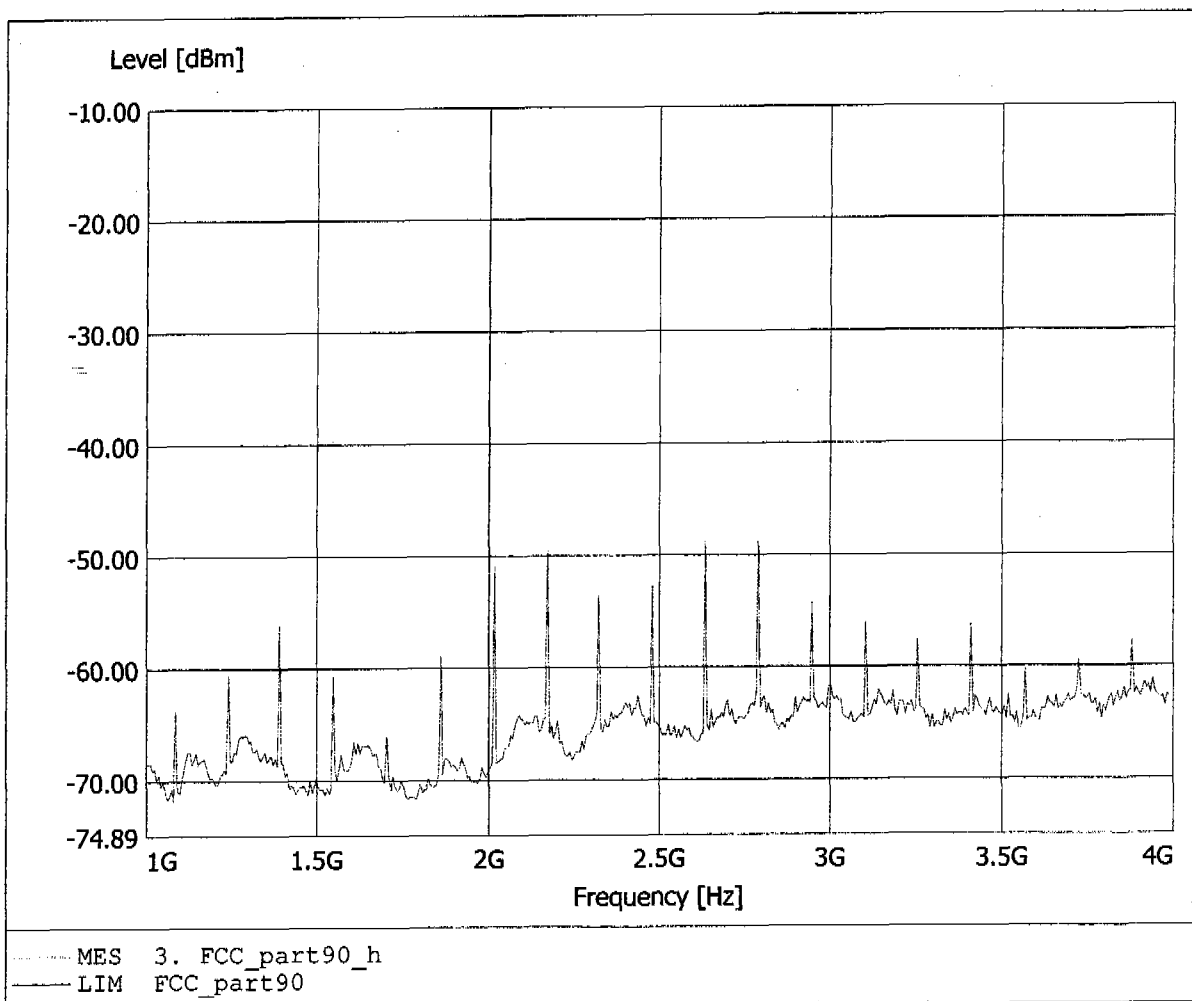
**Spurious emissions under normal conditions
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 155.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC (rechargeable battery)
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 223,
Comment 2: Freq:775.551MHz Pmax:-55.83dBm RBW: 100 kHz



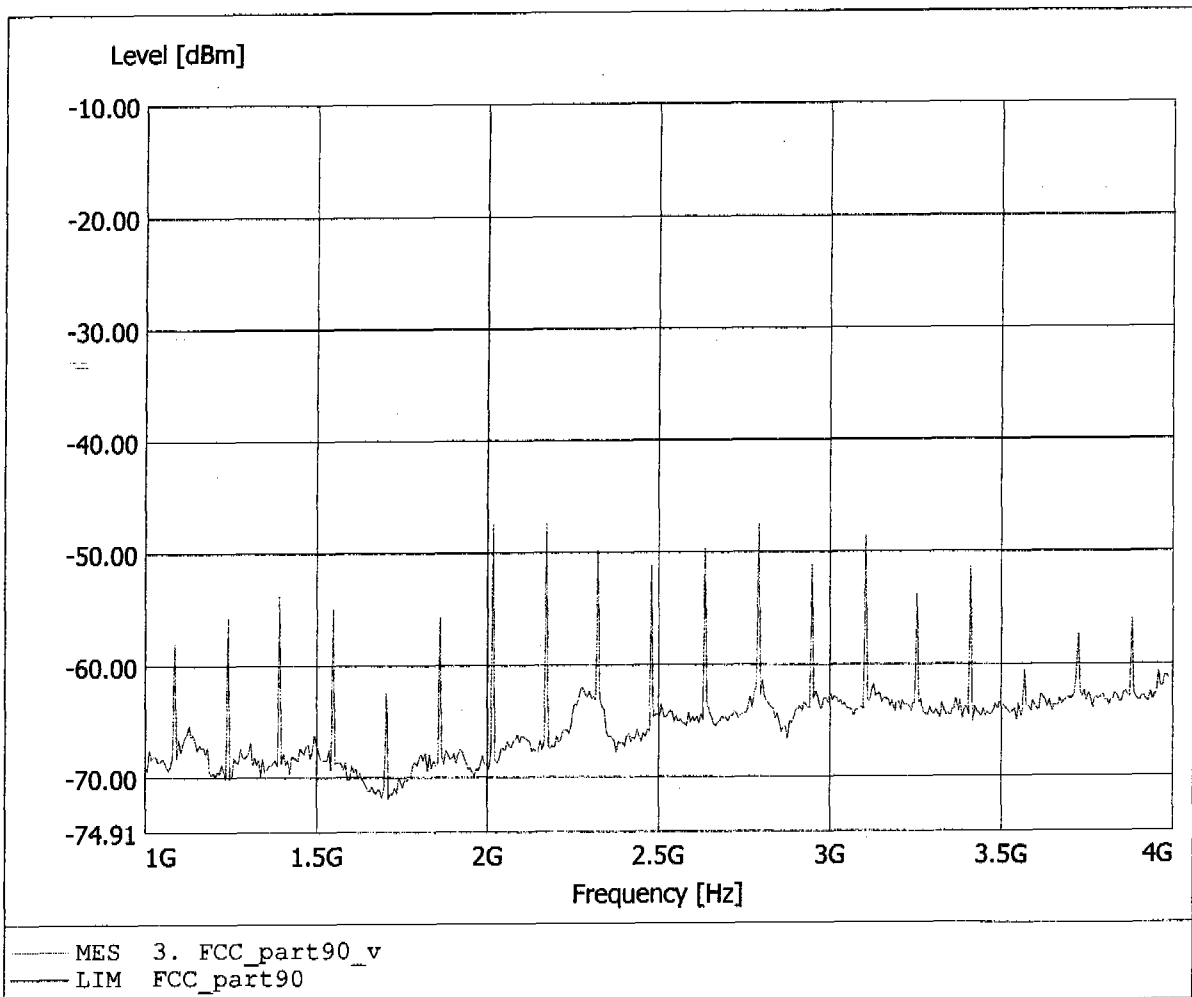
**Spurious emissions under normal conditions
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 155.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC (rechargeable battery)
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: BBHA 9120D, + HP, ampl.: 1-4 GHz
Comment 2: Freq: 2.792GHz Pmax: -48.76dBm RBW: 1 MHz



**Spurious emissions under normal conditions
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 155.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC (rechargeable battery)
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: BBHA 9120D, + HP, ampl.: 1-4 GHz
Comment 2: Freq: 2.016GHz Pmax: -47.28dBm RBW: 1 MHz



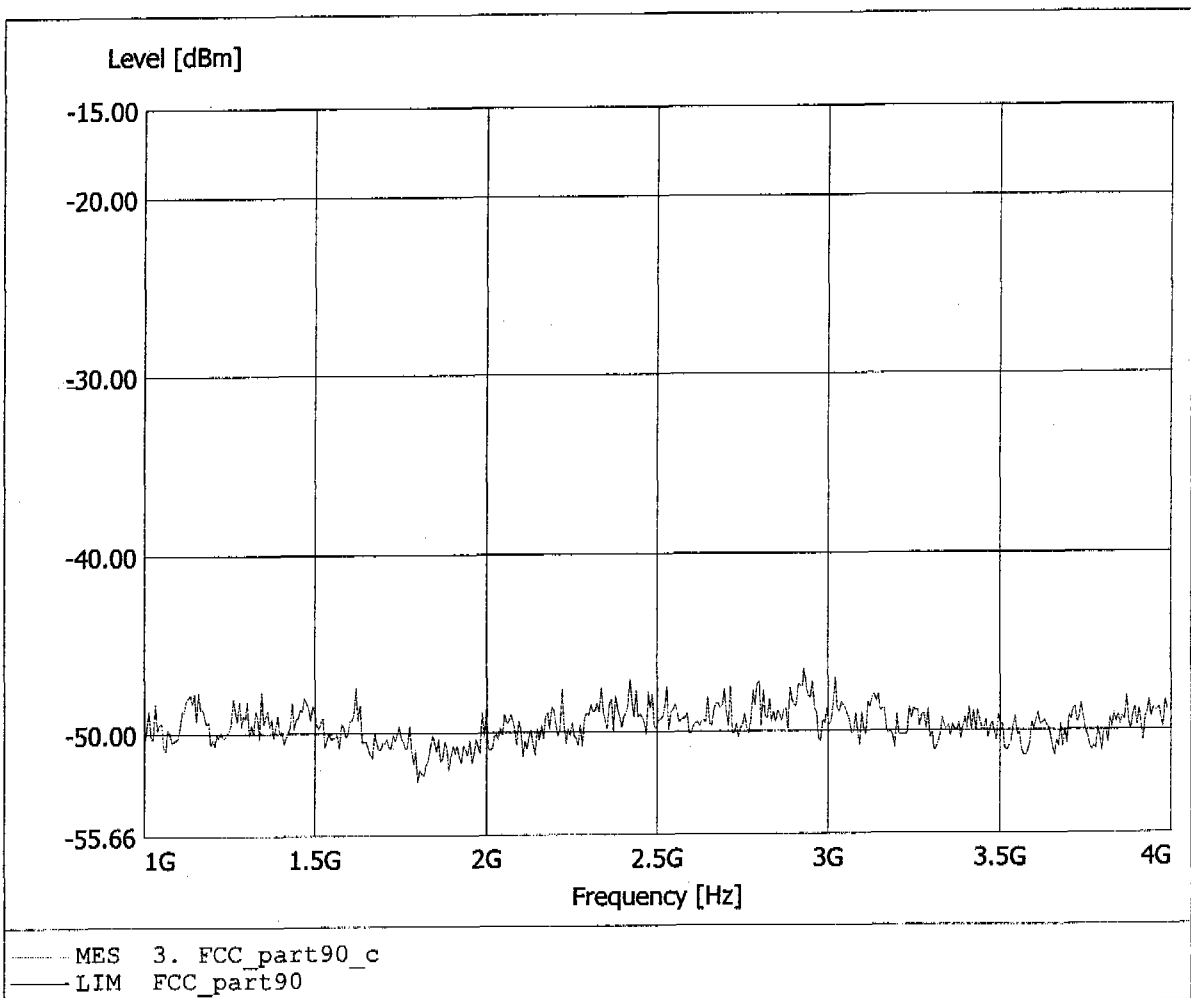


Appendix E

Spurious Emissions at antenna terminal

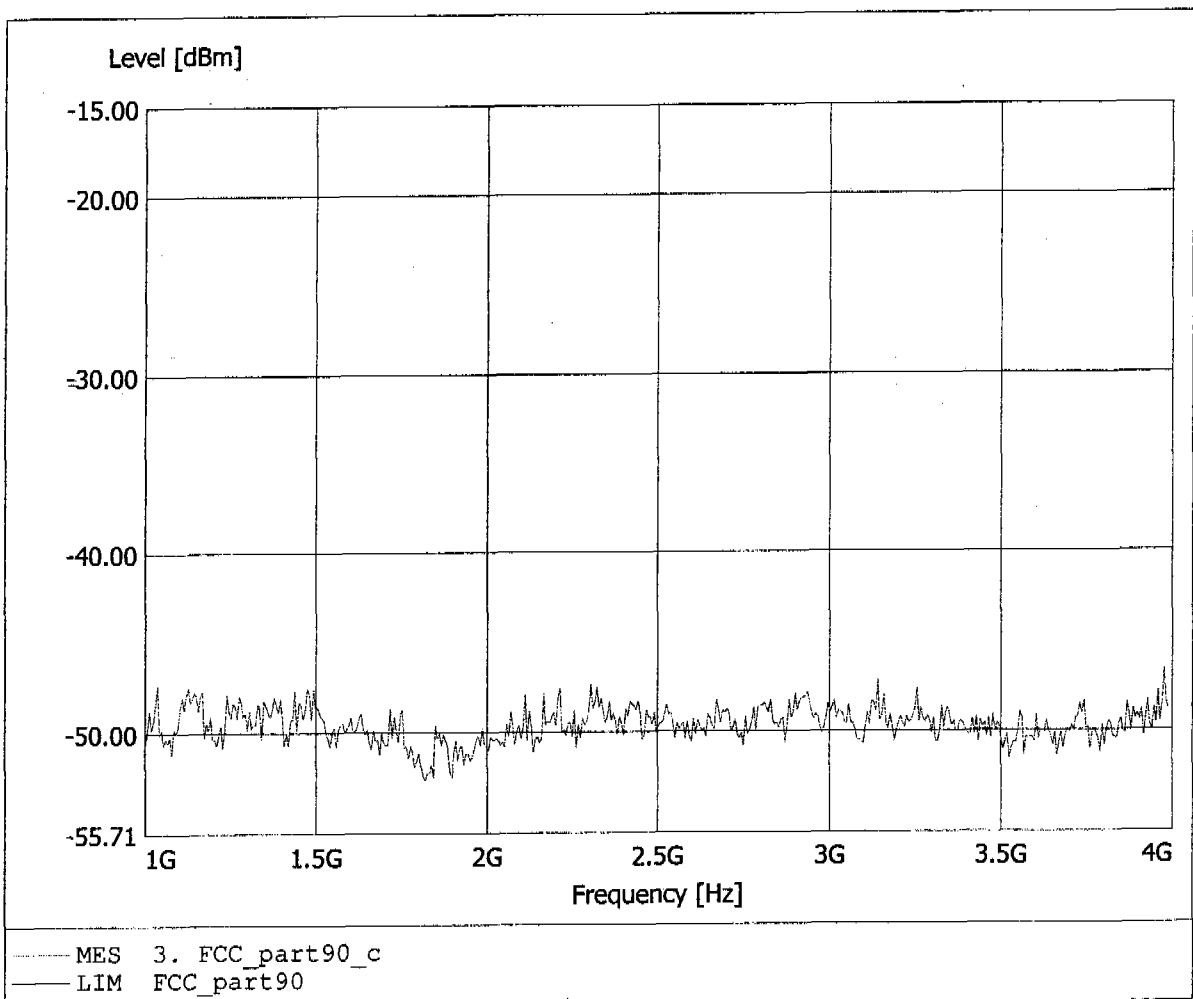
**Spurious emissions at antenna terminal
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 155.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load
Comment 2: Freq:2.930GHz Pmax:-46.58dBm RBW: 1MHz



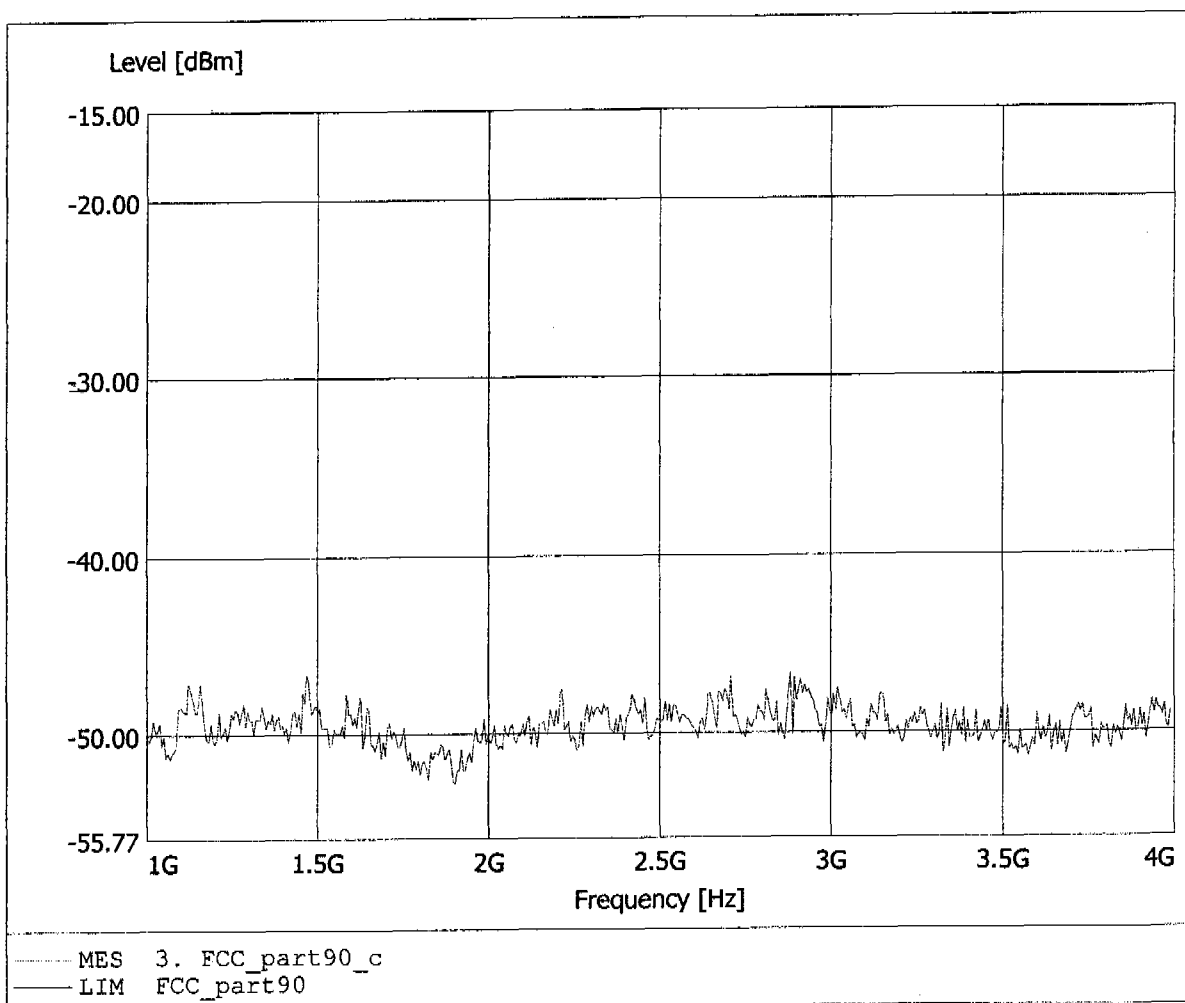
**Spurious emissions at antenna terminal
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 136.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load
Comment 2: Freq:3.976GHz Pmax:-46.64dBm RBW: 1MHz



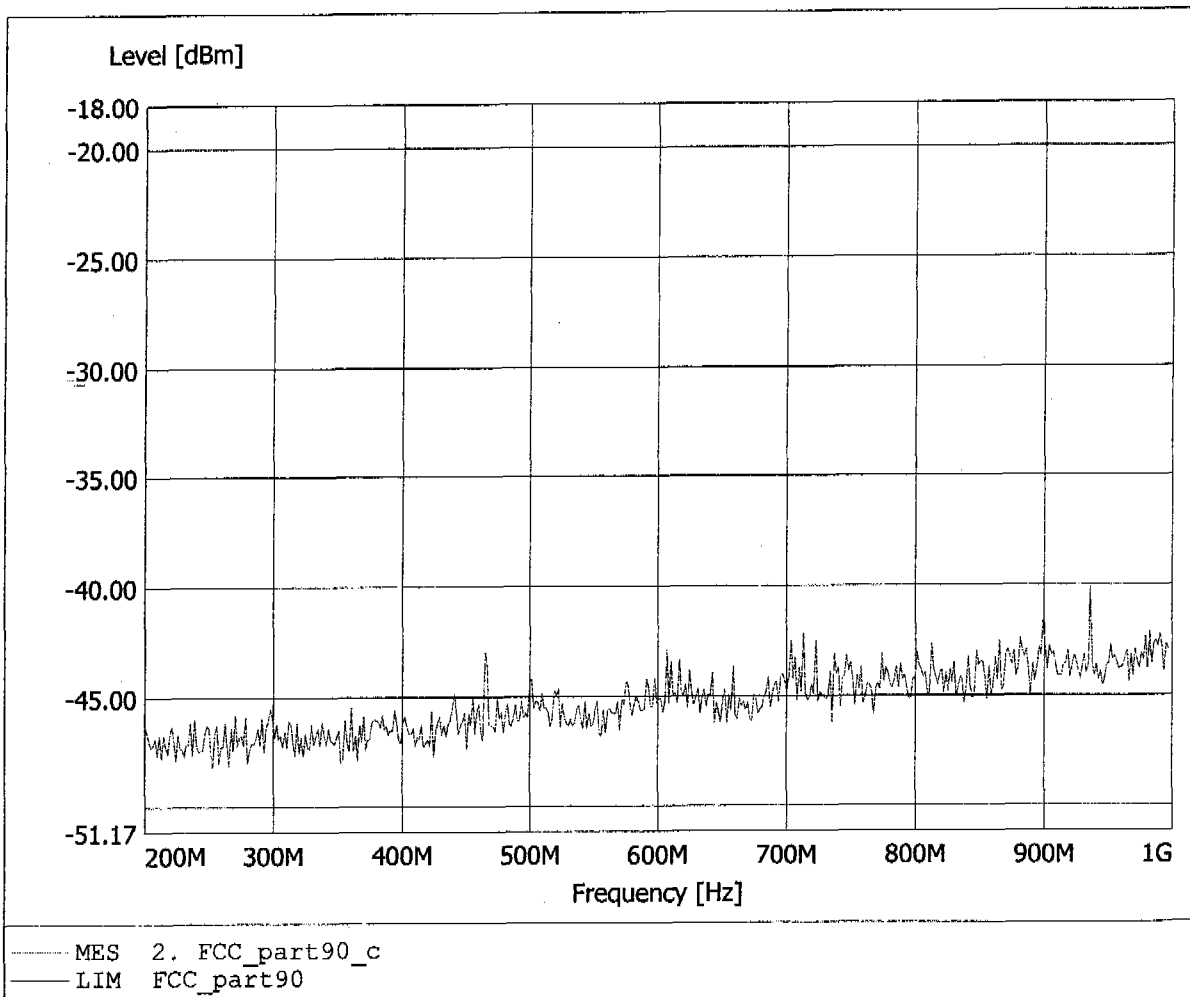
**Spurious emissions at antenna terminal
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 173.975 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load
Comment 2: Freq:1.469GHz Pmax:-46.67dBm RBW: 1MHz



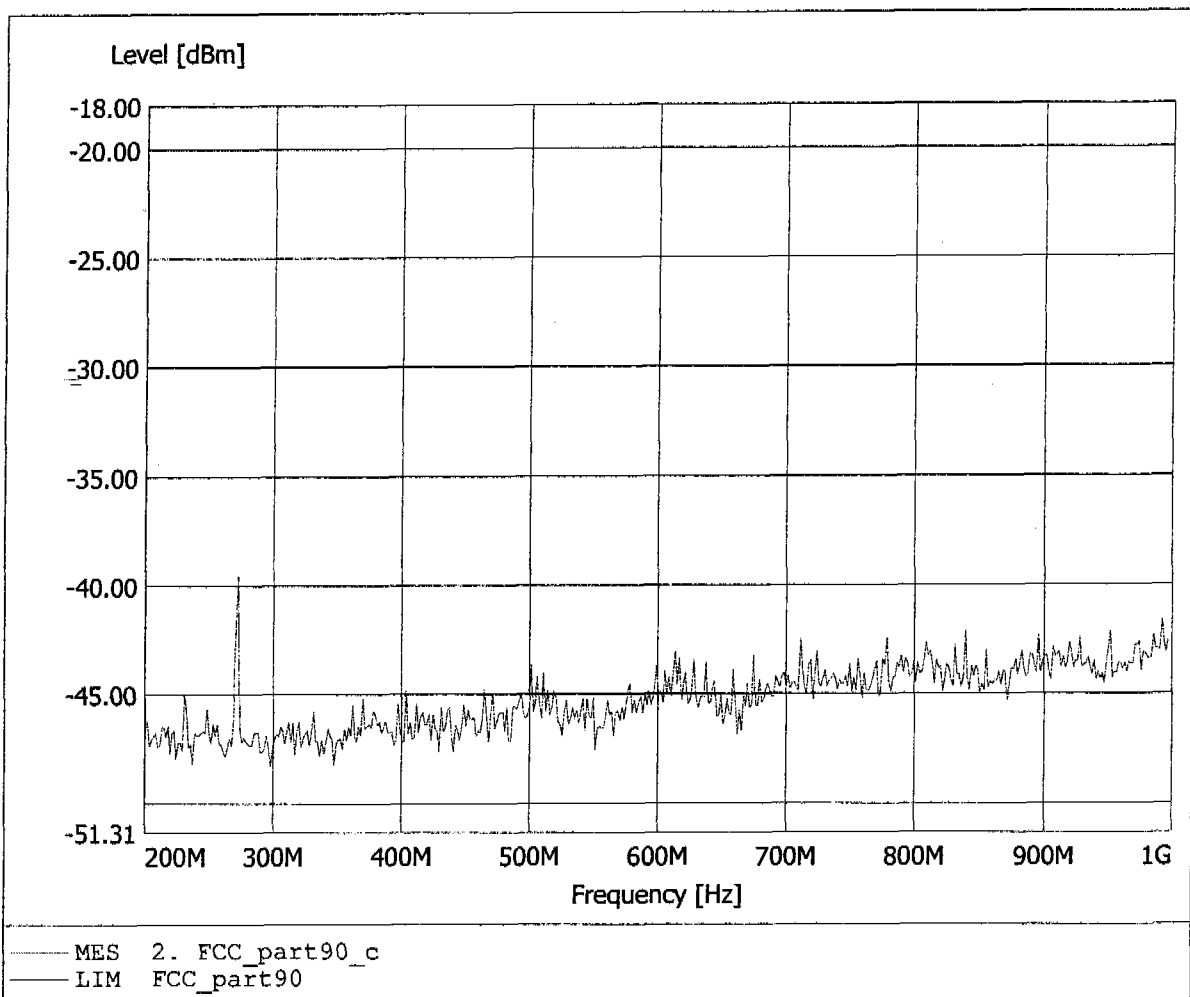
**Spurious emissions at antenna terminal
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 155.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load
Comment 2: Freq:935.872MHz Pmax:-40.09dBm RBW: 100kHz



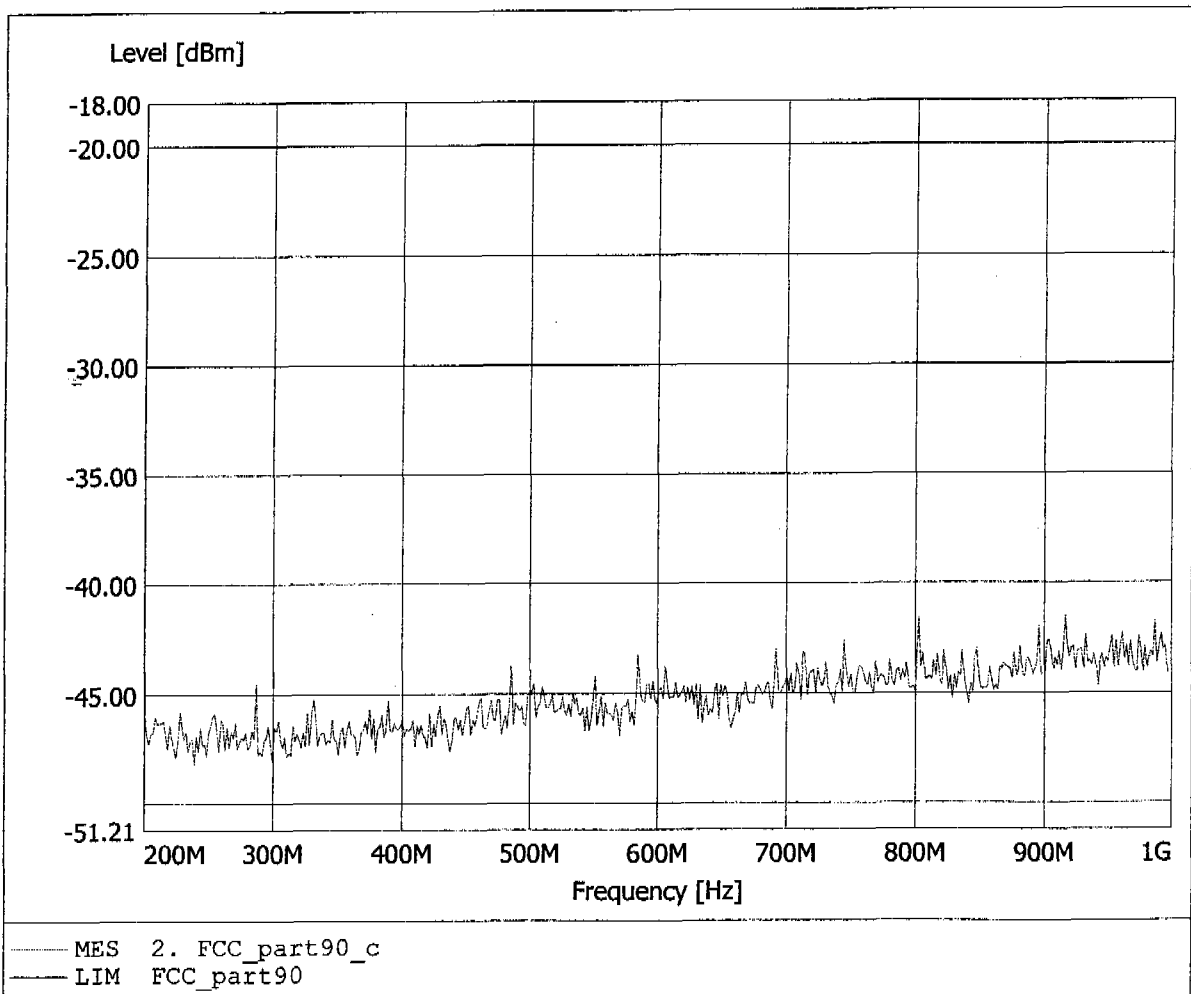
**Spurious emissions at antenna terminal
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 136.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load
Comment 2: Freq:272.144MHz Pmax:-39.56dBm RBW: 100kHz



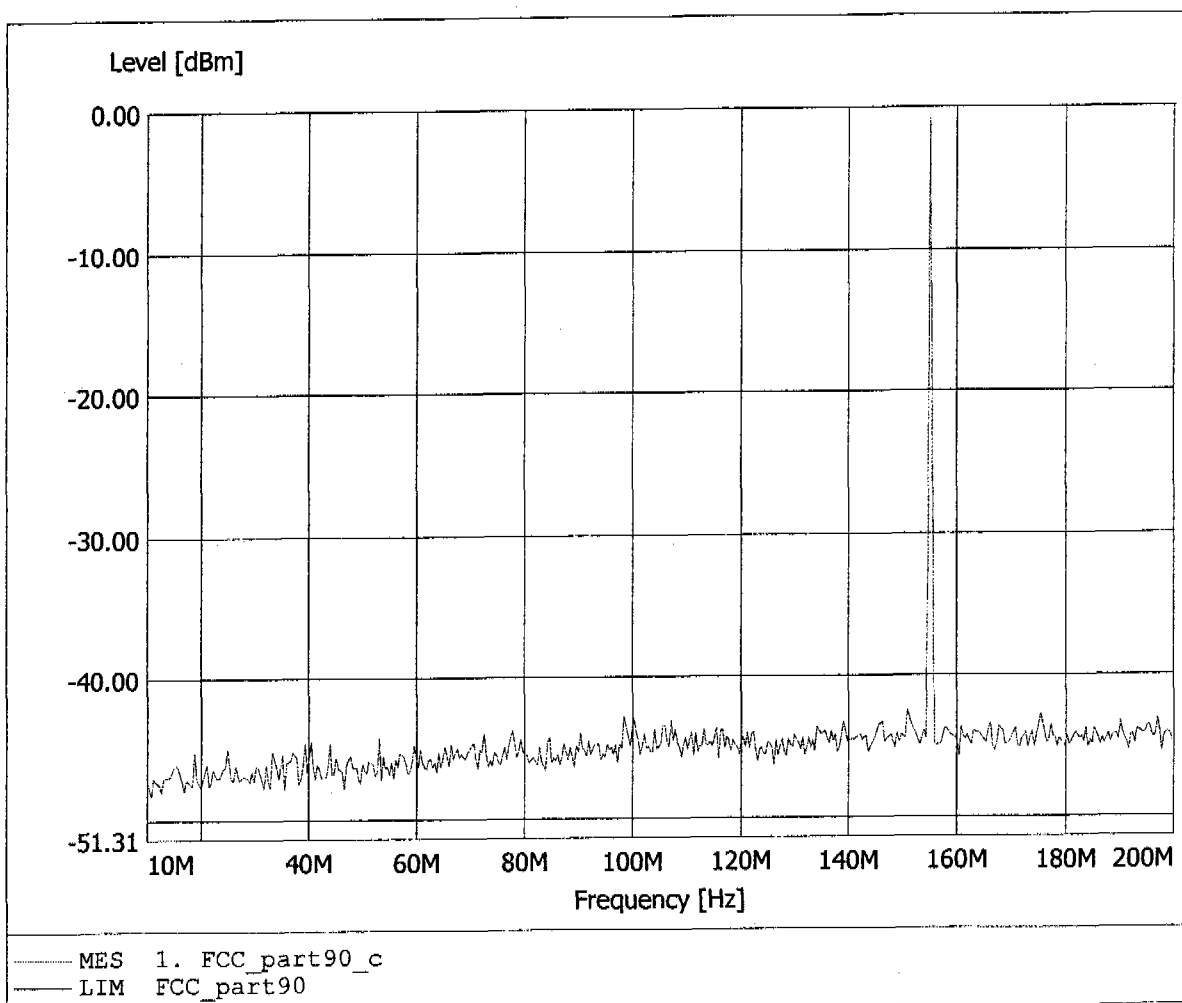
**Spurious emissions at antenna terminal
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 173.975 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load
Comment 2: Freq:916.633MHz Pmax:-41.50dBm RBW: 100kHz



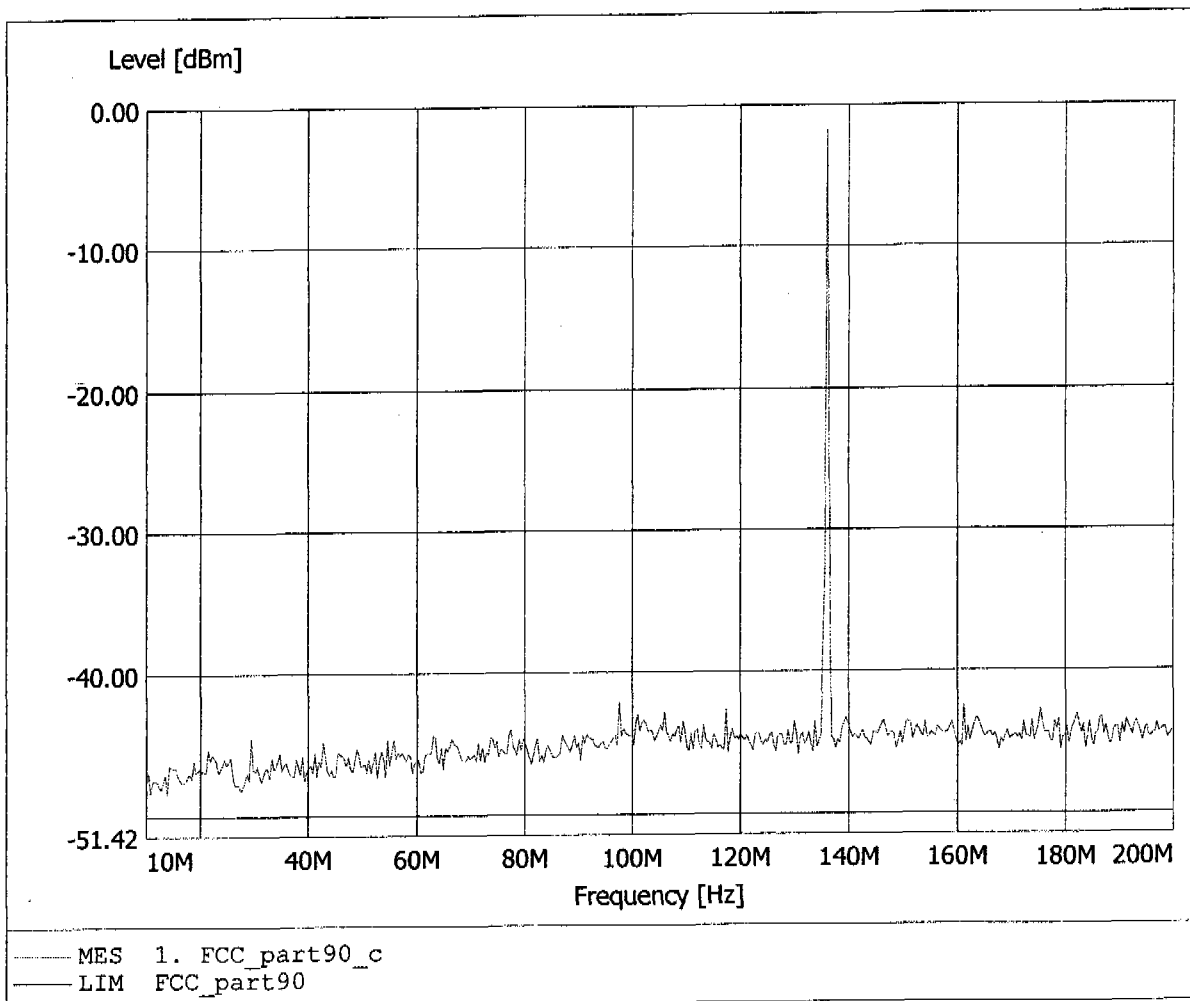
**Spurious emissions at antenna terminal
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 155.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load
Comment 2: Freq:155.070MHz Pmax:-0.80dBm RBW: 100kHz



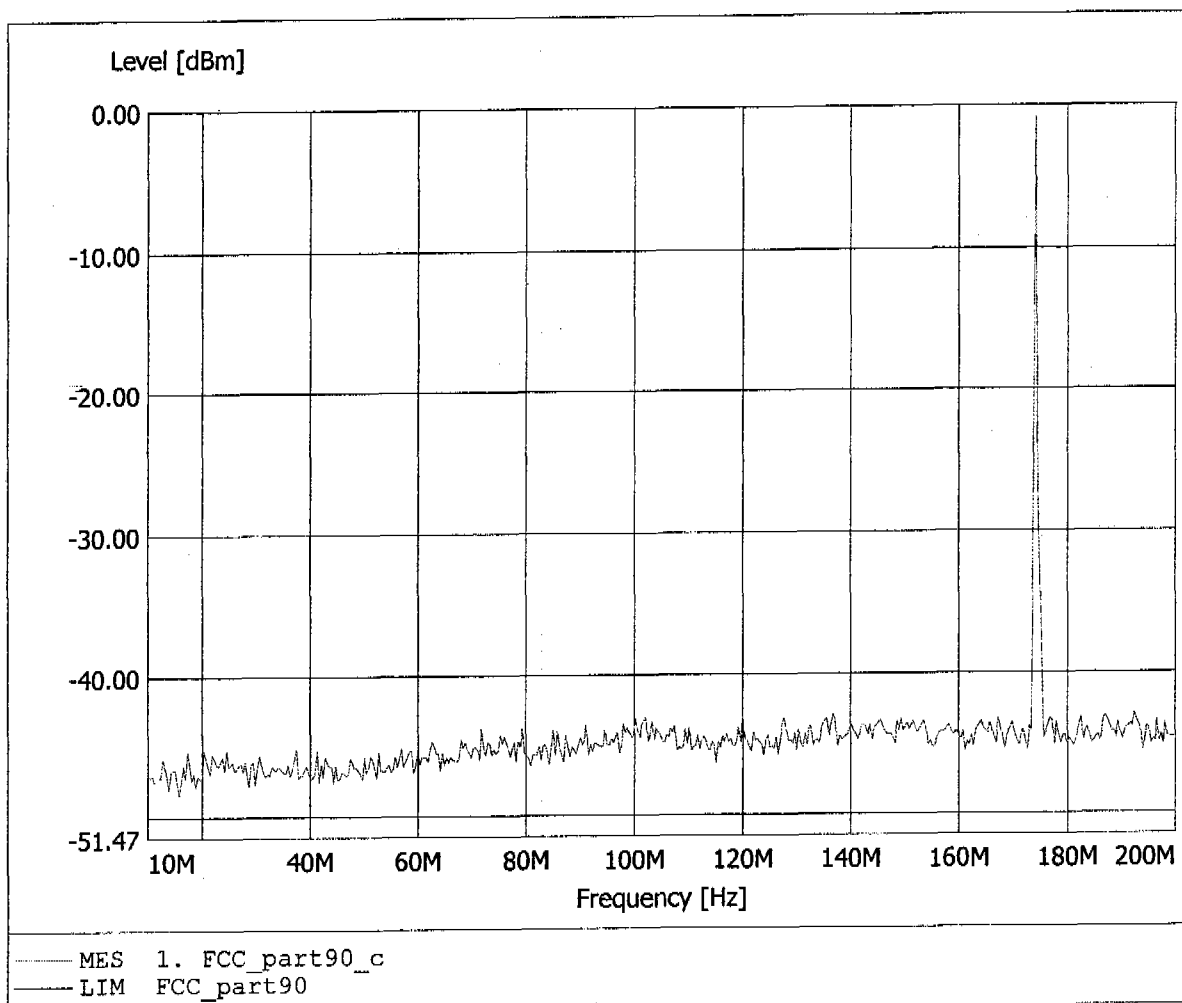
**Spurious emissions at antenna terminal
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 136.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load
Comment 2: Freq:136.032MHz Pmax:-1.82dBm RBW: 100kHz



**Spurious emissions at antenna terminal
FCC RULES PART 90**

EUT: VHF TRANSCEIVER / 173.975 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load
Comment 2: Freq:174.108MHz Pmax:-0.77dBm RBW: 100kHz





Appendix F

Audio frequency response

No diagrams
Refer to point 3.5



Appendix G

Audio low pass filter frequency response

No diagrams
Refer to point 3.6



Appendix H

Modulation limiting

No diagrams

Refer to point 3.7

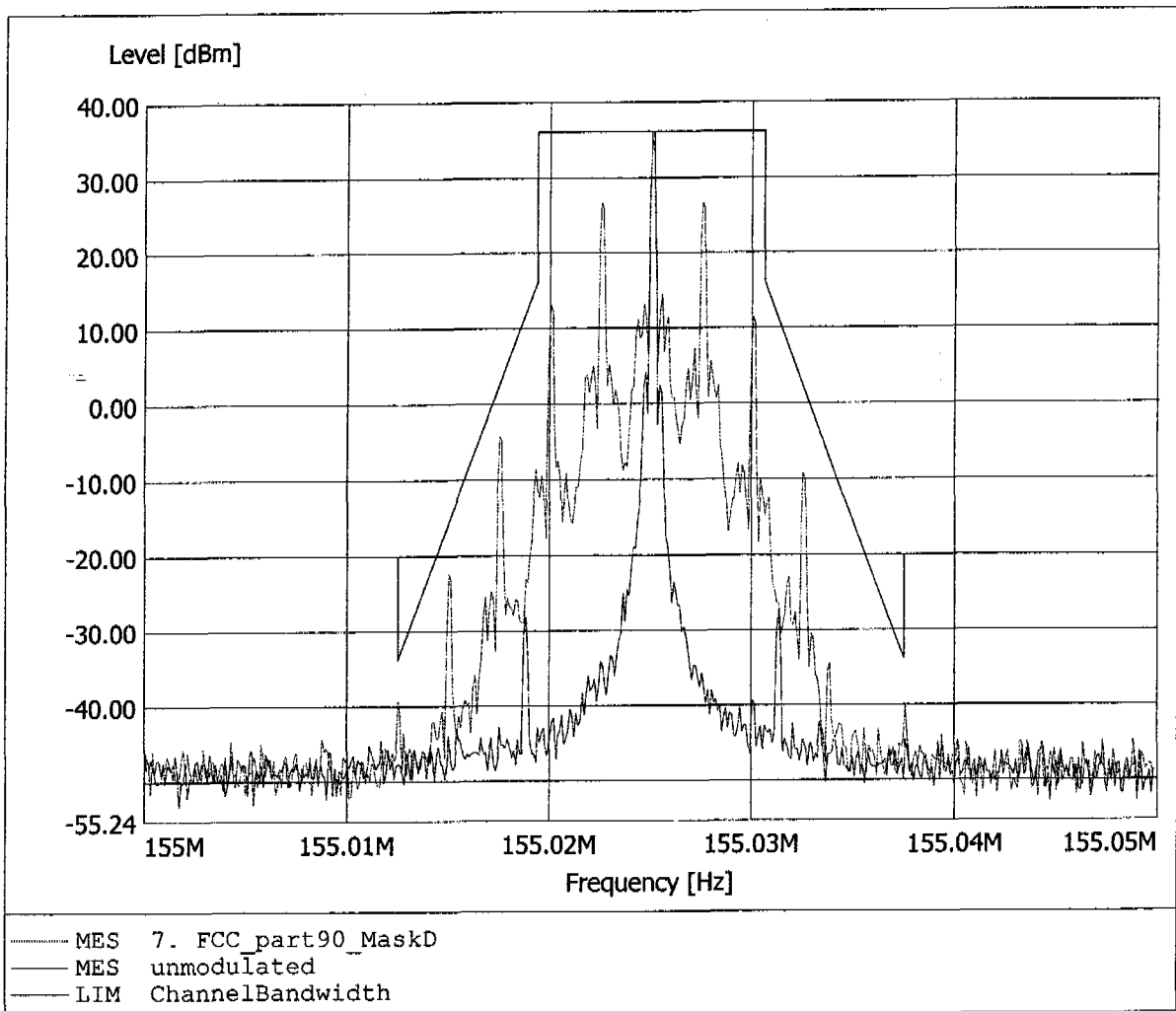


Appendix I

Occupied Bandwidth

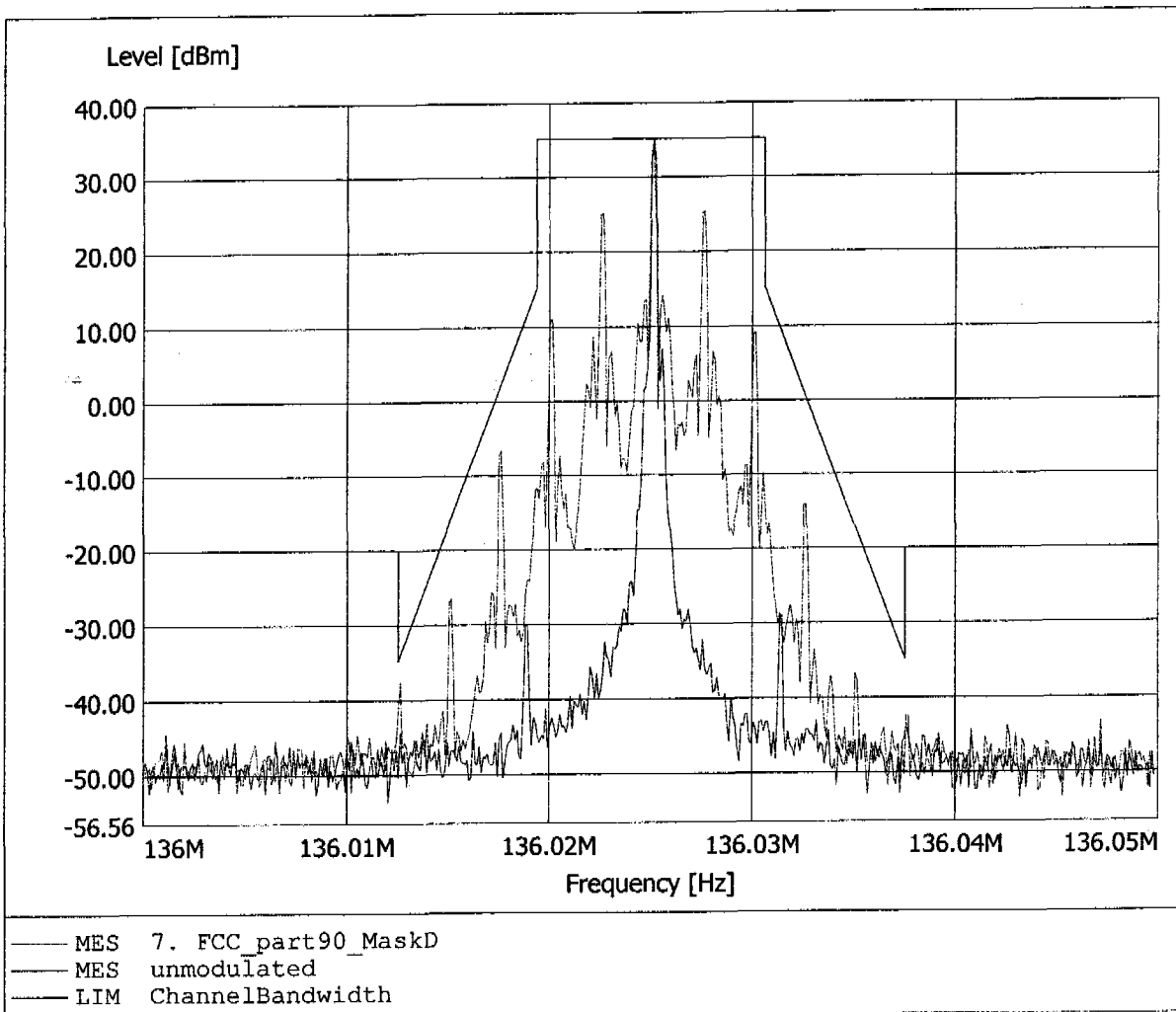
**Occupied Bandwidth Emission Mask D
FCC RULES PART 90 §90.210**

EUT: VHF TRANSCEIVER / 155.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load, Channel spacing 12.5 kHz
Comment 2: Freq:155.025MHz Pmax:34.89dBm RBW: 100Hz



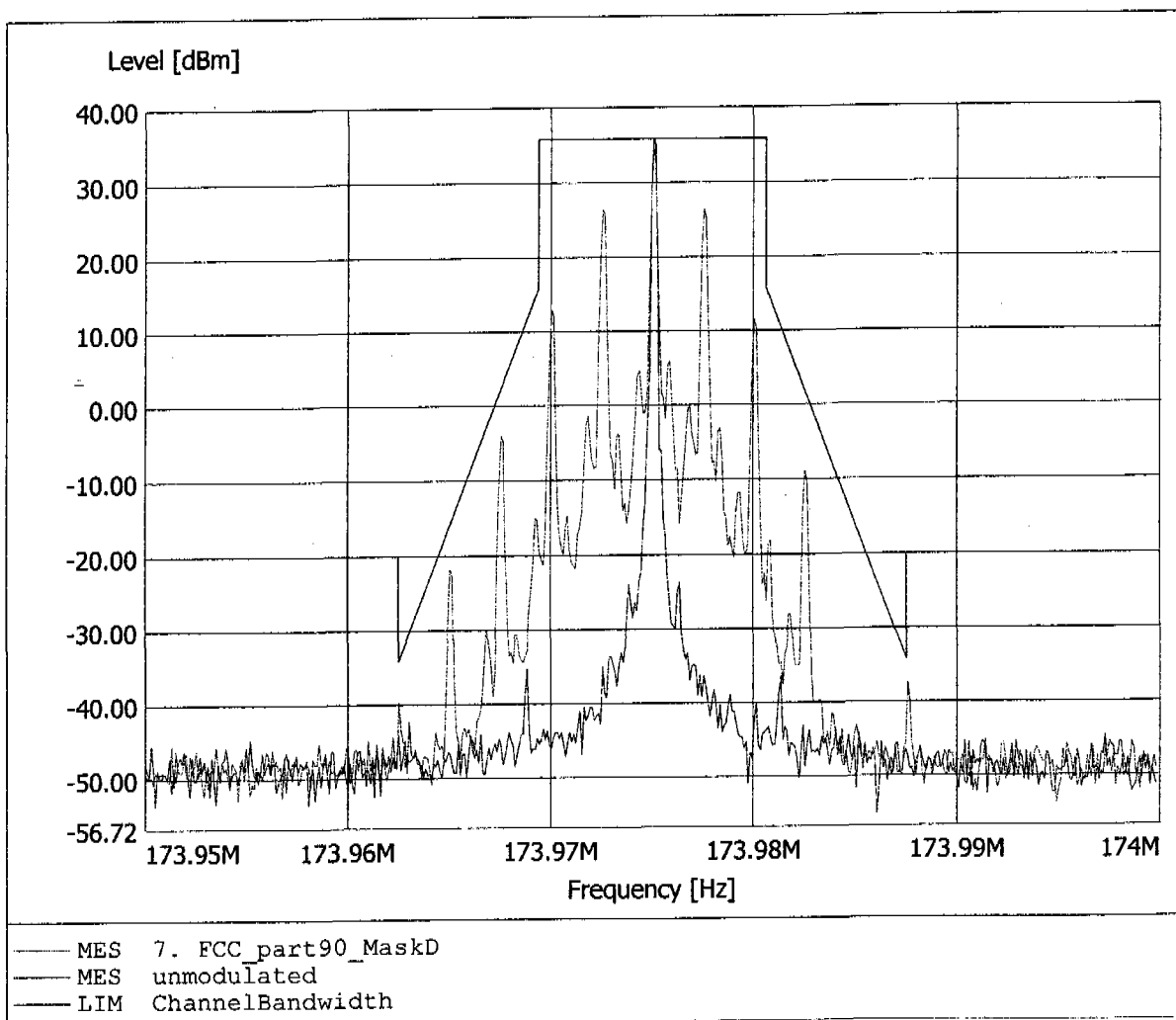
**Occupied Bandwidth Emission Mask D
FCC RULES PART 90 §90.210**

EUT: VHF TRANSCEIVER / 136.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load, Channel spacing 12.5 kHz
Comment 2: Freq:136.025MHz Pmax:34.02dBm RBW: 100Hz



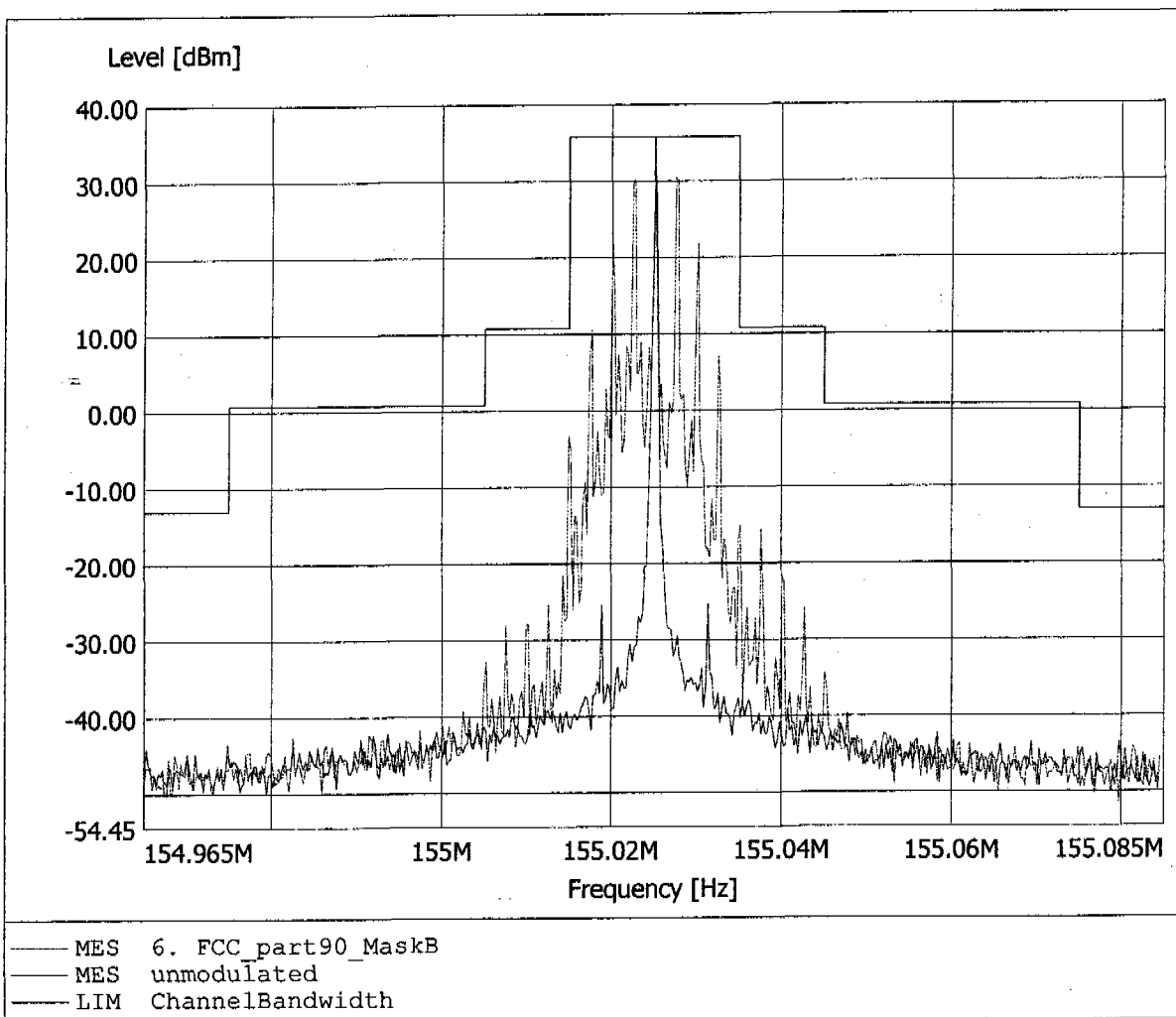
**Occupied Bandwidth Emission Mask D
FCC RULES PART 90 §90.210**

EUT: VHF TRANSCEIVER / 173.975 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load, Channel spacing 12.5 kHz
Comment 2: Freq:173.975MHz Pmax:34.37dBm RBW: 100Hz



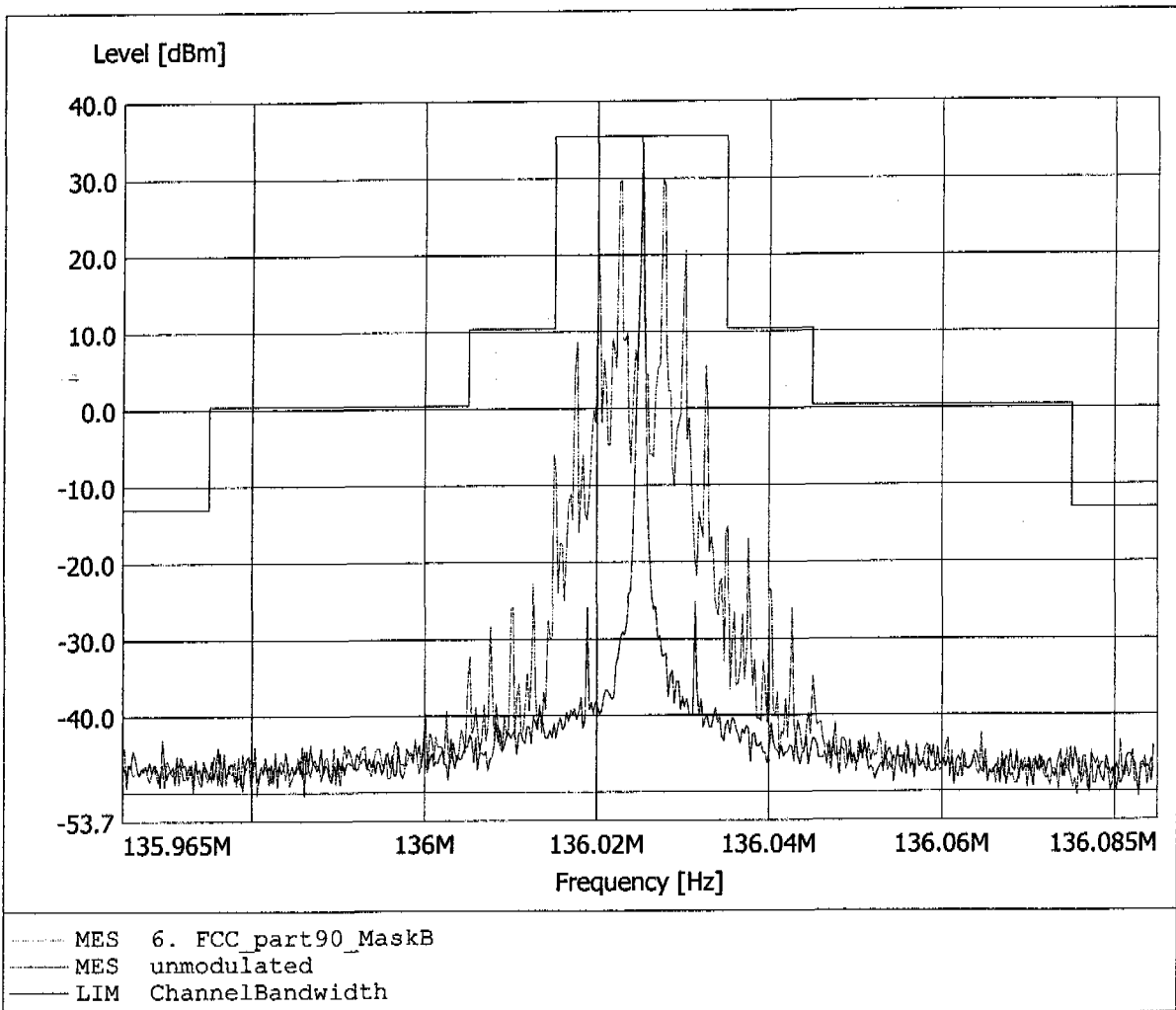
**Occupied Bandwidth Emission Mask B
FCC RULES PART 90 §90.210**

EUT: VHF TRANSCEIVER / 155.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load, Channel spacing 25 kHz
Comment 2: Freq:155.025MHz Pmax:30.76dBm RBW: 100Hz



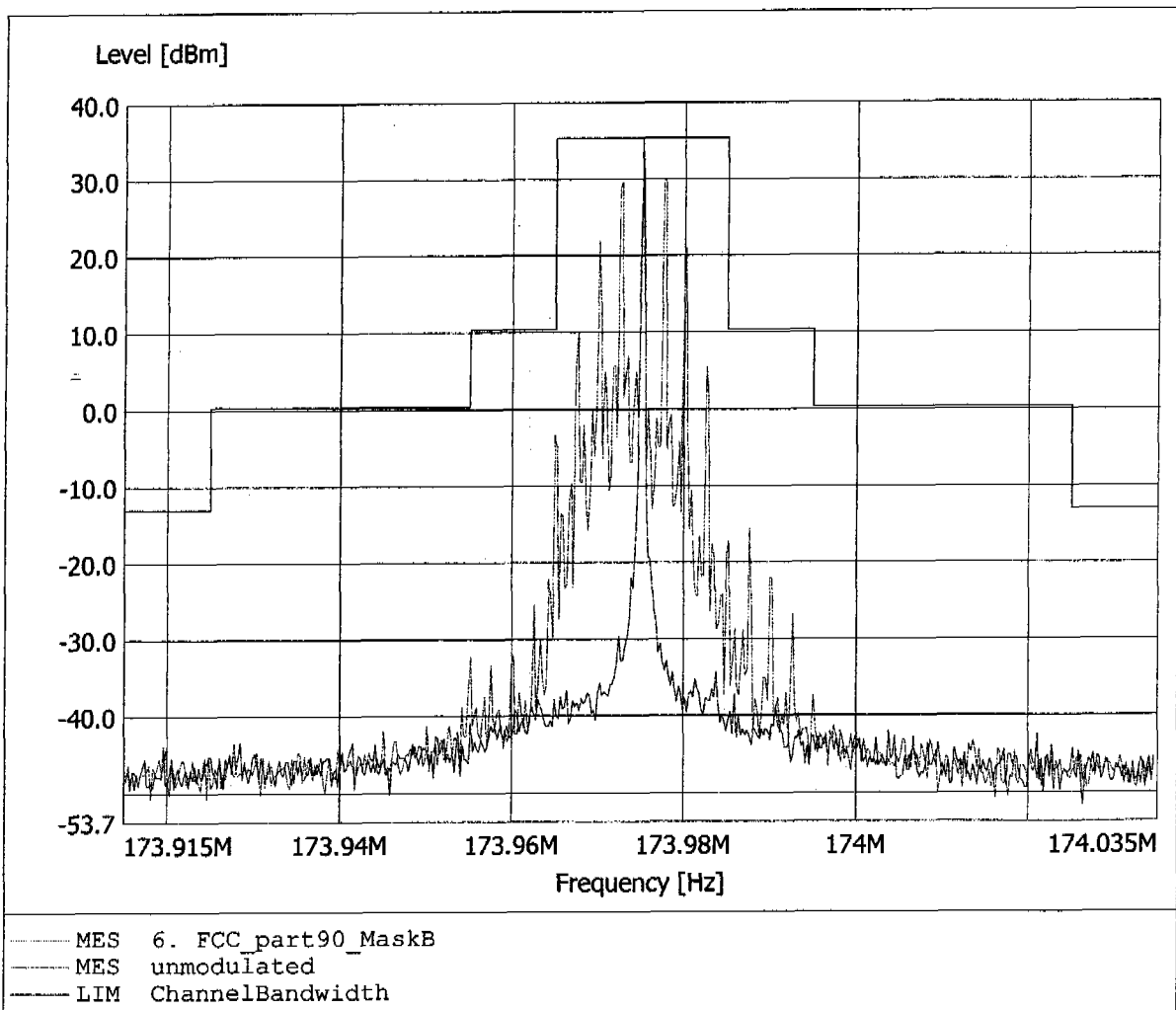
**Occupied Bandwidth Emission Mask B
FCC RULES PART 90 §90.210**

EUT: VHF TRANSCEIVER / 136.025 MHz
Model: ATS-100
Approval Holder: Airtech I & C Co., Ltd.
Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
Test Site / Operator: ETS / Mr. Hoppe
Test Specification: mode: Tx
Comment 1: Conducted, 50 Ohm Load, Channel spacing 25 kHz
Comment 2: Freq:136.025MHz Pmax:30.99dBm RBW: 100Hz



Occupied Bandwidth Emission Mask B
FCC RULES PART 90 §90.210

EUT: VHF TRANSCEIVER / 173.975 MHz
 Model: ATS-100
 Approval Holder: Airtech I & C Co., Ltd.
 Operating Condition: Tnom: 23°C / Unom: 7.5 V DC
 Test Site / Operator: ETS / Mr. Hoppe
 Test Specification: mode: Tx
 Comment 1: Conducted, 50 Ohm Load, Channel spacing 25 kHz
 Comment 2: Freq:173.975MHz Pmax:30.59dBm RBW: 100Hz



Appendix J

Frequency stability

No diagrams
Refer to point 3.9



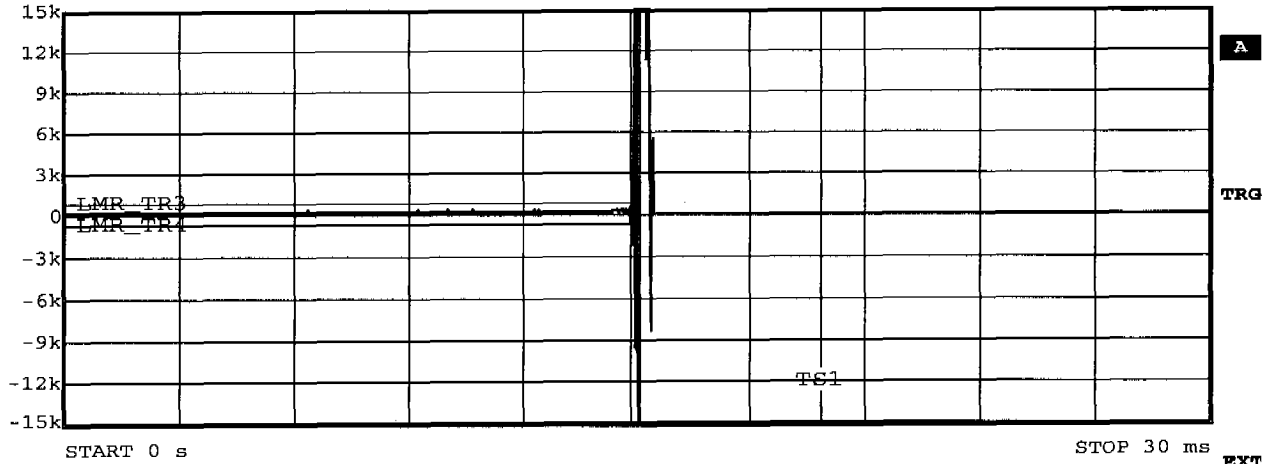
Appendix K

Transient frequency behaviour of the transmitter



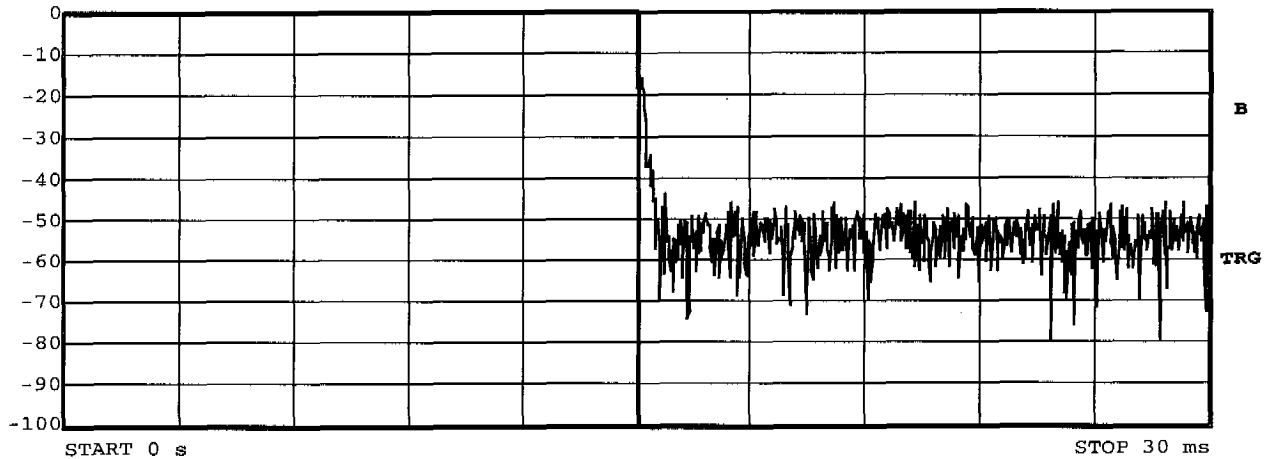
Ref Lvl
30 dBm

CF 155.025 MHz Real Time OFF
DEMOD BW: 30 kHz AF-Signal
FM [Hz]



Ref Lvl
30 dBm

CF 155.025 MHz Real Time OFF
DEMOD BW: 30 kHz AF-Signal
AM [dBm]

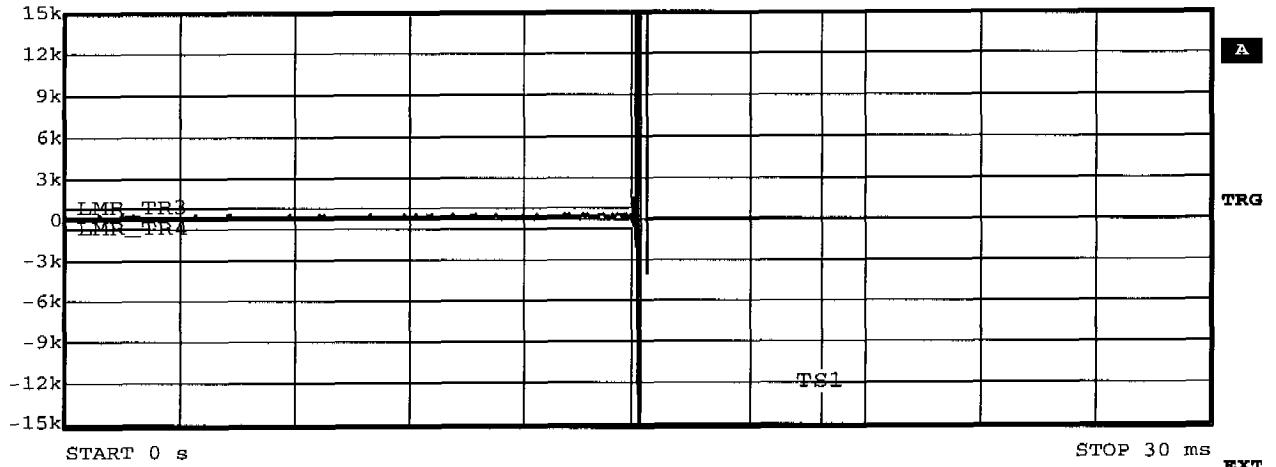


Title: Transient frequency behaviour of the transmitter (switch off)
Comment A: VHF TRANSCEIVER ATS-100 (12.5 kHz channel spacing)
Date: 4.SEP.2003 11:55:04



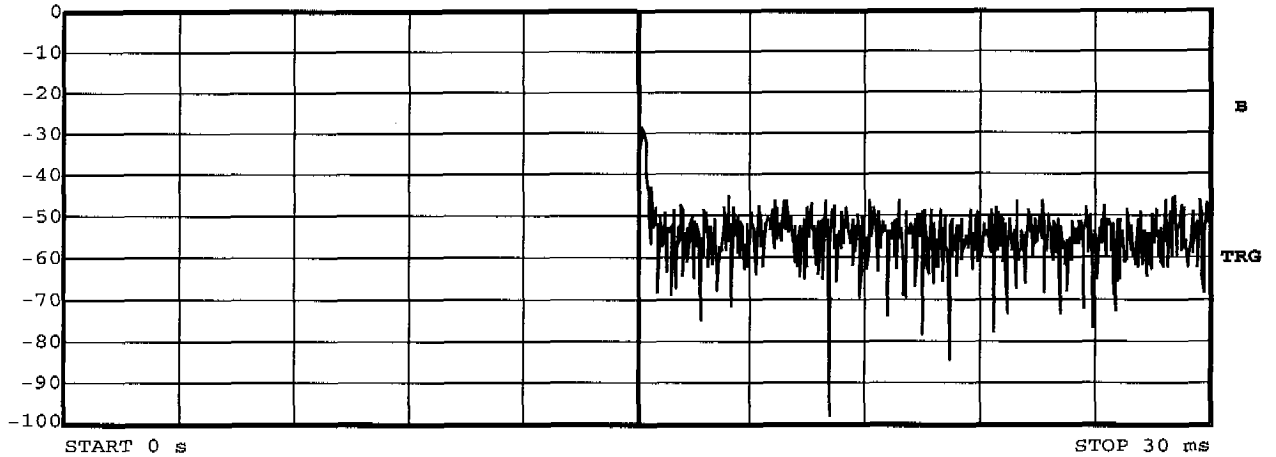
Ref Lvl
30 dBm

CF 155.025 MHz Real Time OFF
DEMOD BW: 30 kHz AF-Signal
FM [Hz]



Ref Lvl
30 dBm

CF 155.025 MHz Real Time OFF
DEMOD BW: 30 kHz AF-Signal
AM [dBm]

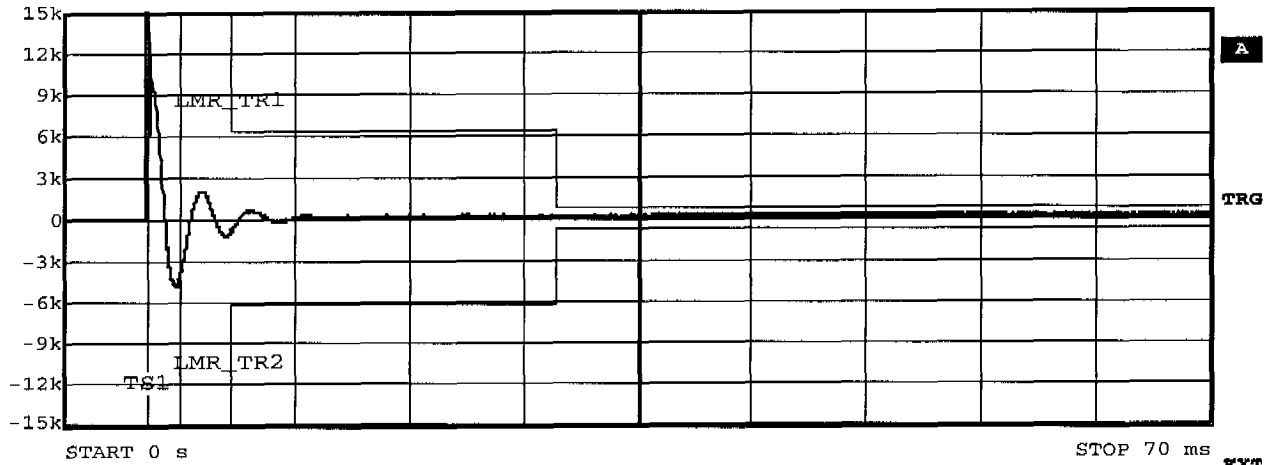


Title: Transient frequency behaviour of the transmitter (switch off)
Comment A: VHF TRANSCEIVER ATS-100 (25 kHz channel spacing)
Date: 4.SEP.2003 11:56:25



Ref Lvl
30 dBm

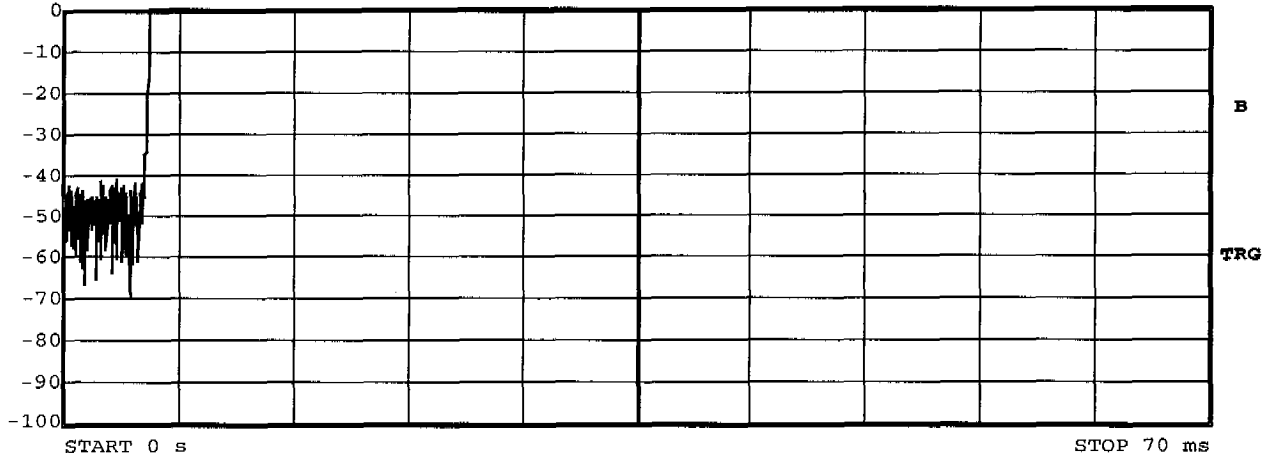
CF 155.025 MHz Real Time OFF
DEMOD BW: 30 kHz AF-Signal
FM [Hz]



EXT

Ref Lvl
30 dBm

CF 155.025 MHz Real Time OFF
DEMOD BW: 30 kHz AF-Signal
AM [dBm]

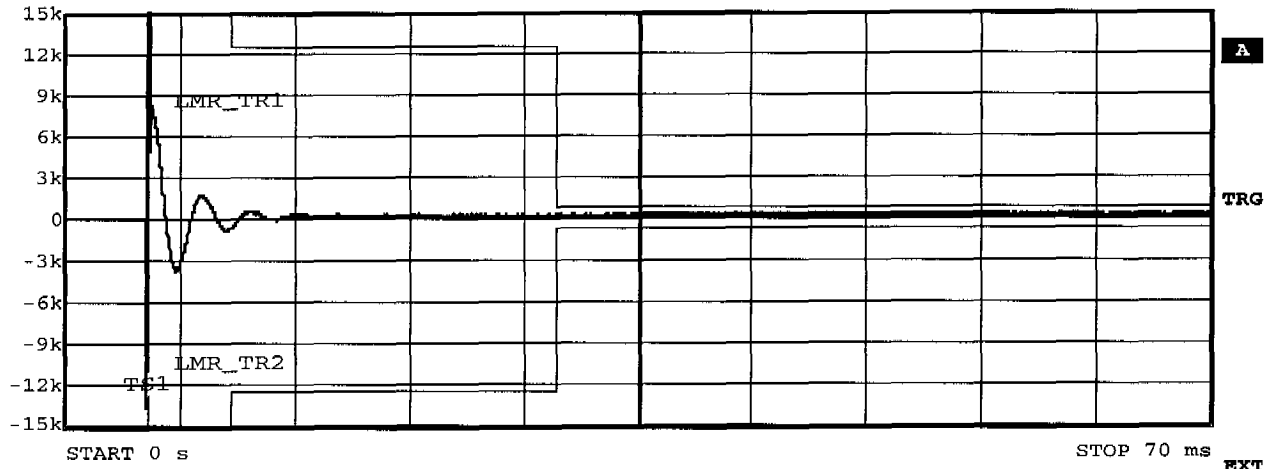


Title: Transient frequency behaviour of the transmitter (switch on)
Comment A: VHF TRANSCEIVER ATS-100 (12.5 kHz channel spacing)
Date: 4.SEP.2003 11:47:22



Ref Lvl
30 dBm

CF 155.025 MHz Real Time OFF
DEMOD BW: 30 kHz AF-Signal
FM [Hz]



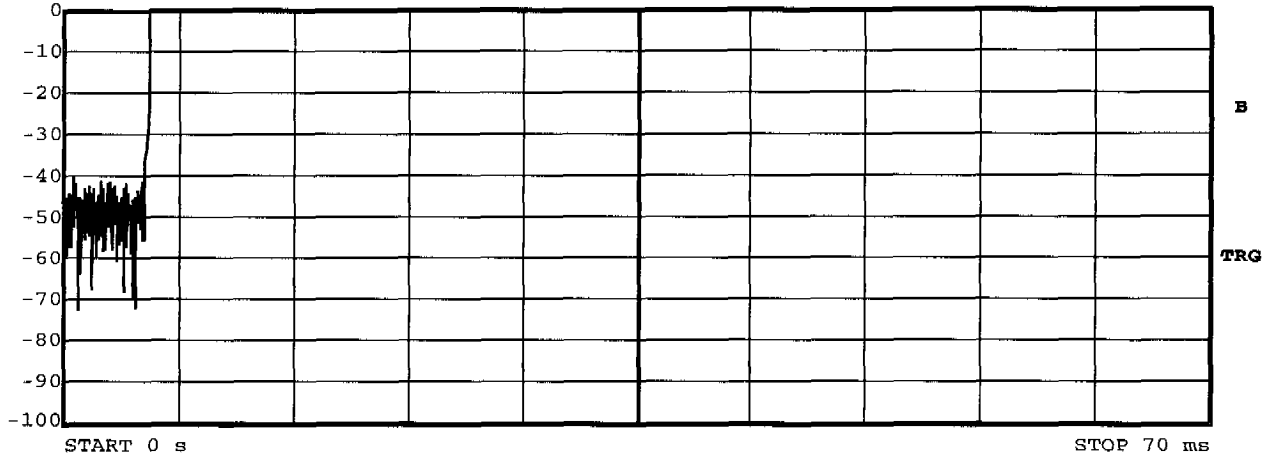
A

TRG

EXT

Ref Lvl
30 dBm

CF 155.025 MHz Real Time OFF
DEMOD BW: 30 kHz AF-Signal
AM [dBm]



B

TRG

Title: Transient frequency behaviour of the transmitter (switch on)
Comment A: VHF TRANSCEIVER ATS-100 (25 kHz channel spacing)
Date: 4.SEP.2003 11:50:53

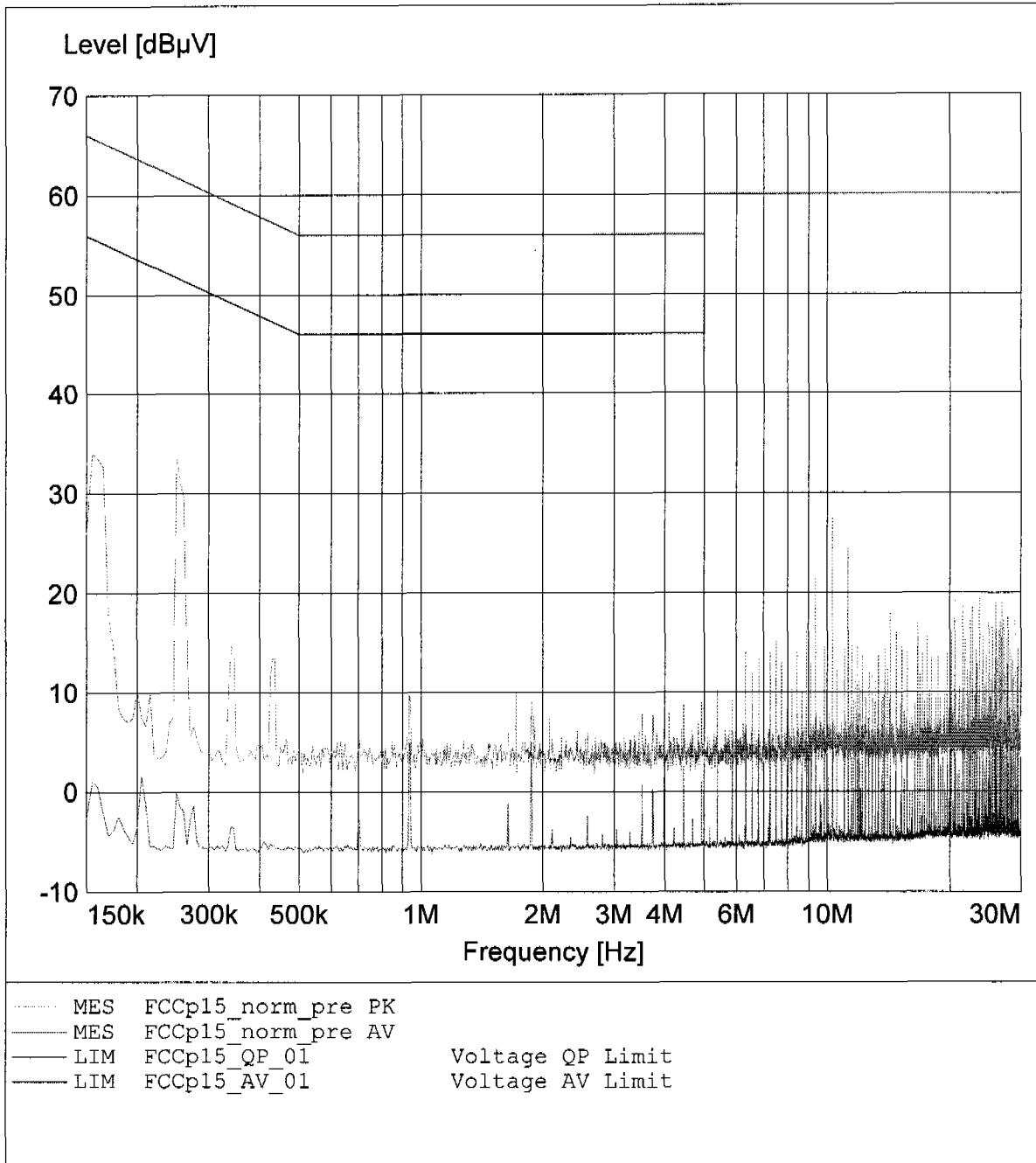


Appendix L

Spurious emissions related to AC power line

EMI voltage test in the ac-mains according to FCC part 15

EUT: VHF Transceiver
Manufacturer: Airtech I & C Co., Ltd.
Operating Condition: Unom: 12VDC (AC/DC adaptor), Tnom: 23°C
Test Site: ETS
Operator: Mr. Pflug
Test Specification: V-Network: ESH2-Z5 (N)
Comment: model: ATS-100 mode: charging
Start of Test:



EMI voltage test in the ac-mains according to FCC part 15

EUT: VHF Transceiver
Manufacturer: Airtech I & C Co., Ltd.
Operating Condition: Unom: 12VDC (AC/DC adaptor), Tnom: 23°C
Test Site: ETS
Operator: Mr. Pflug
Test Specification: V-Network: ESH2-Z5 (L1)
Comment: model: ATS-100 mode: charging
Start of Test:

