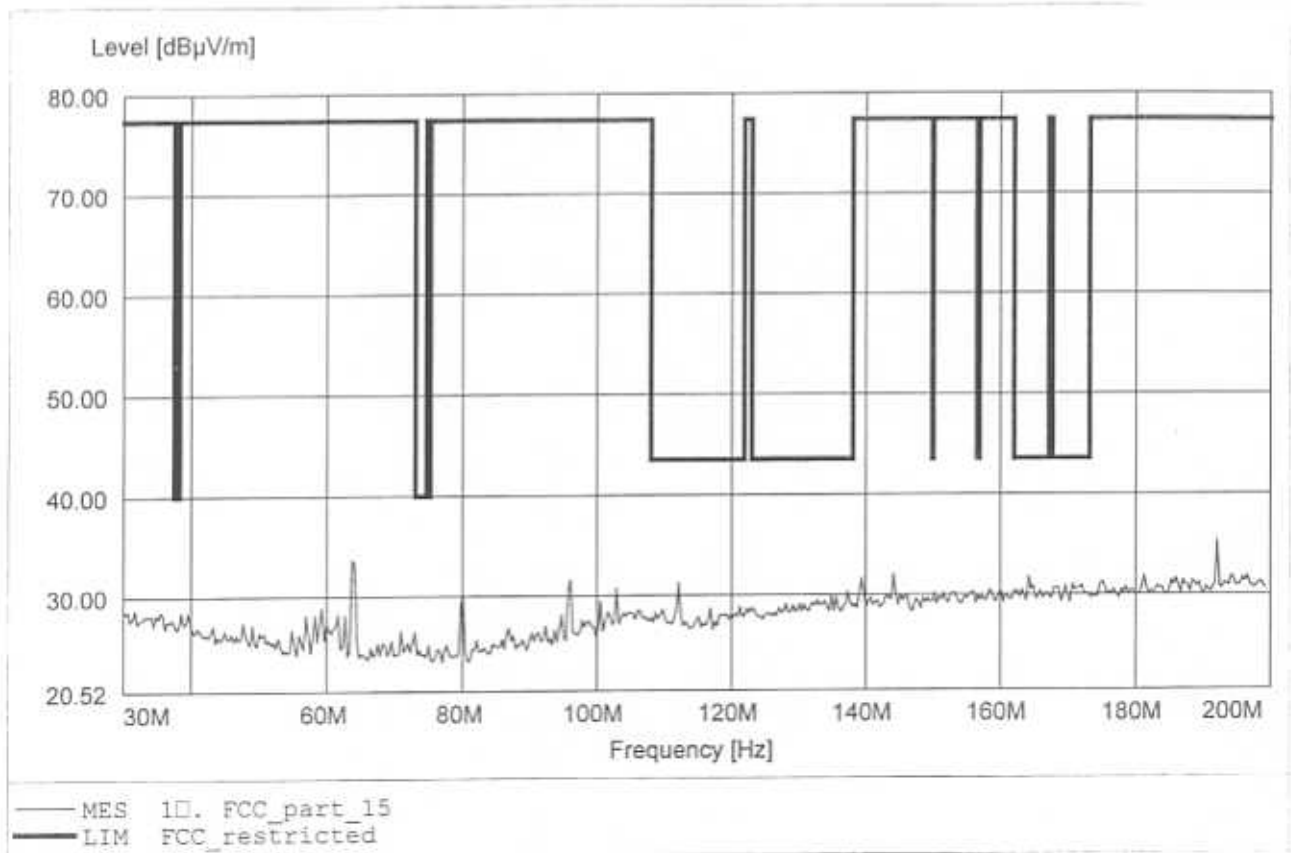


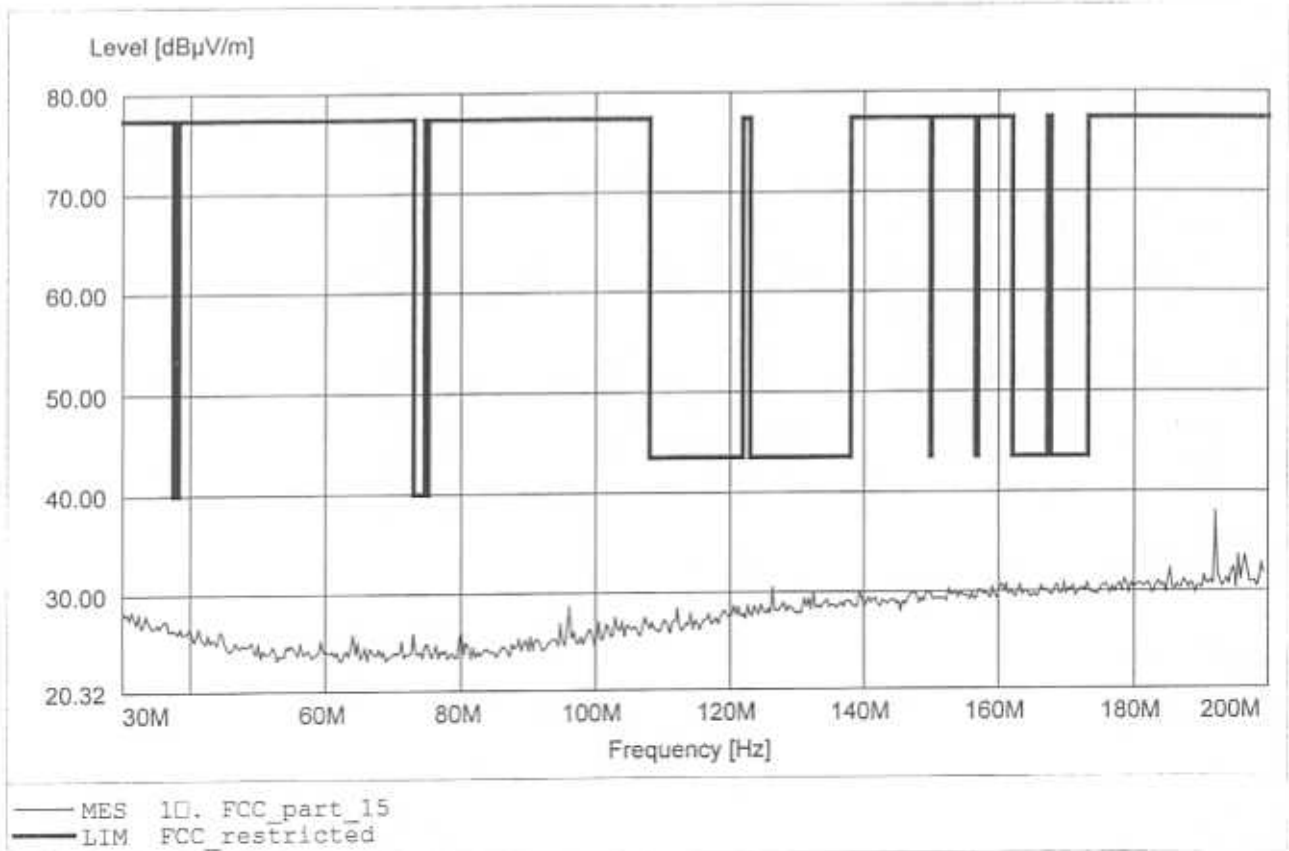
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2402 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Comment 2: Freq: 192.164MHz, Emax: 35.36dBµV/m, RBW: 100kHz



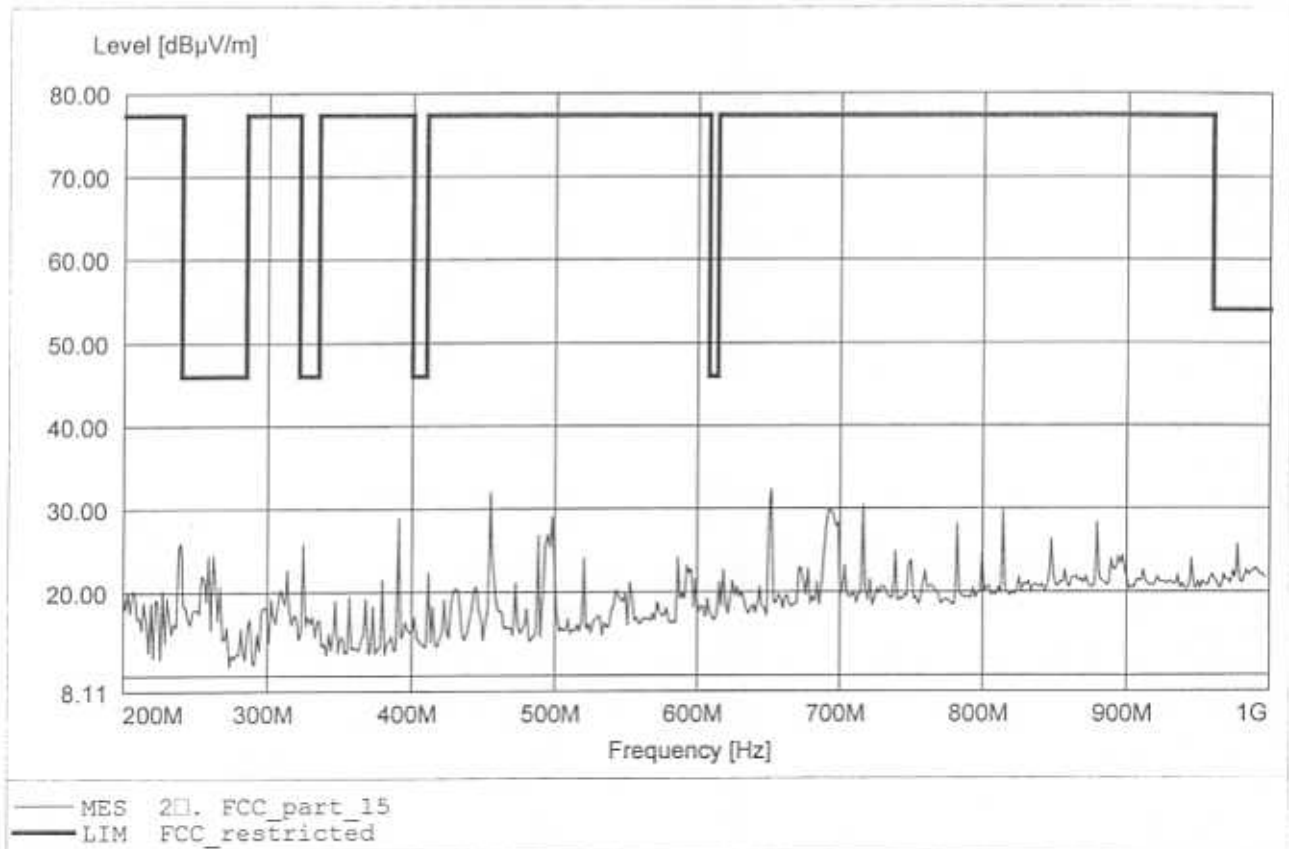
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2402 MHz  
Model: UGPZ2  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Comment 2: Freq: 192.164MHz, Emax: 38.01dBµV/m, RBW: 100kHz



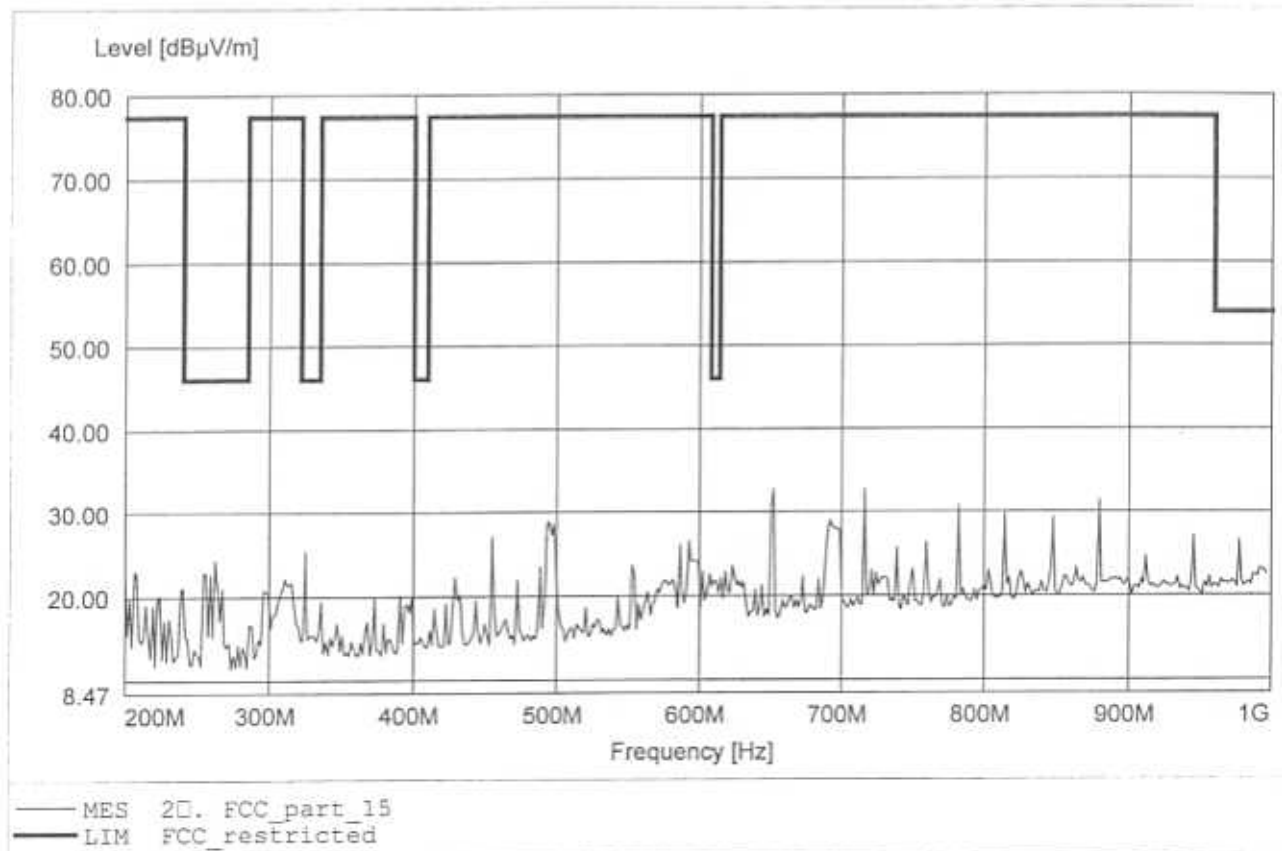
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2402 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.  
Comment 2: Freq: 652.104MHz, Emax: 32.30dBµV/m, RBW: 100kHz



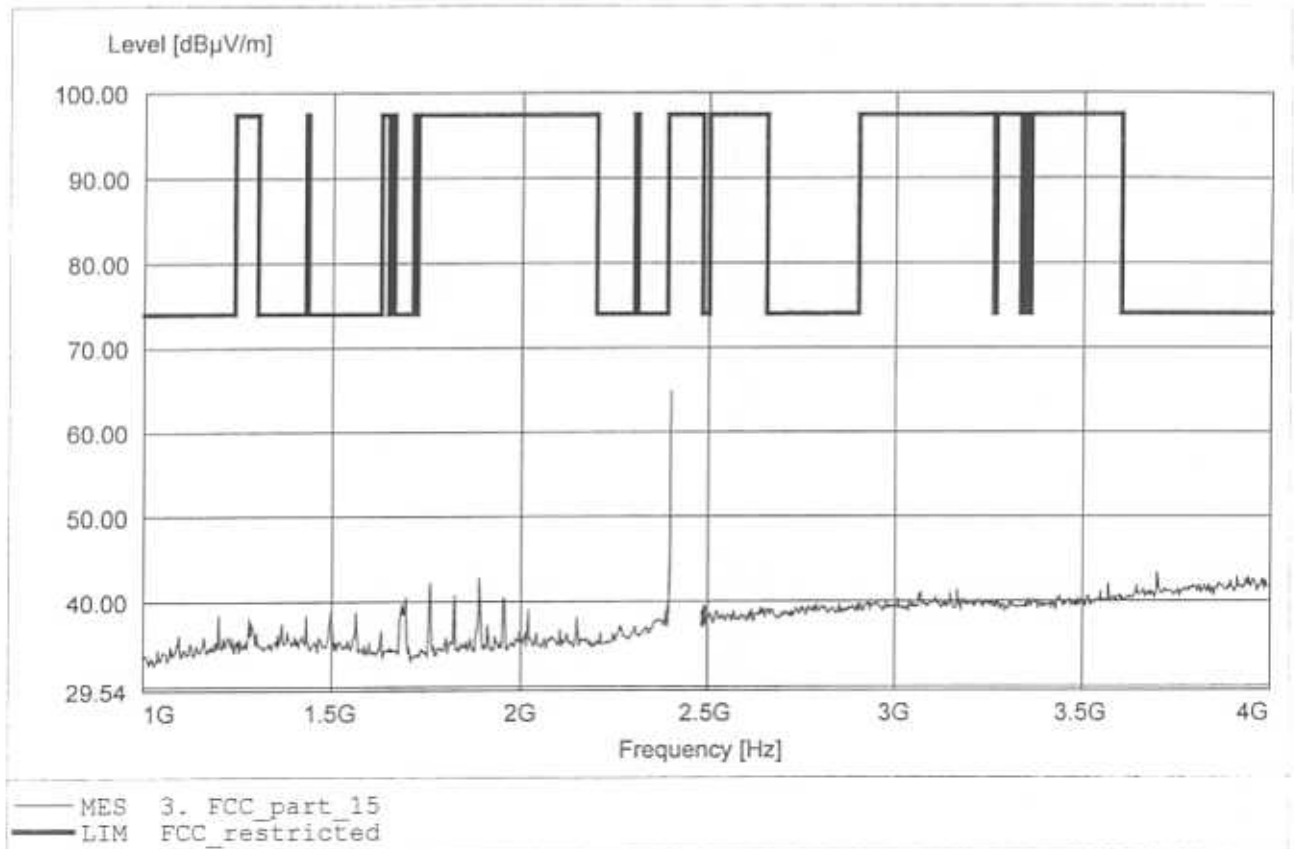
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2402 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.  
Comment 2: Freq: 652.104MHz, Emax: 32.80dBµV/m, RBW: 100kHz



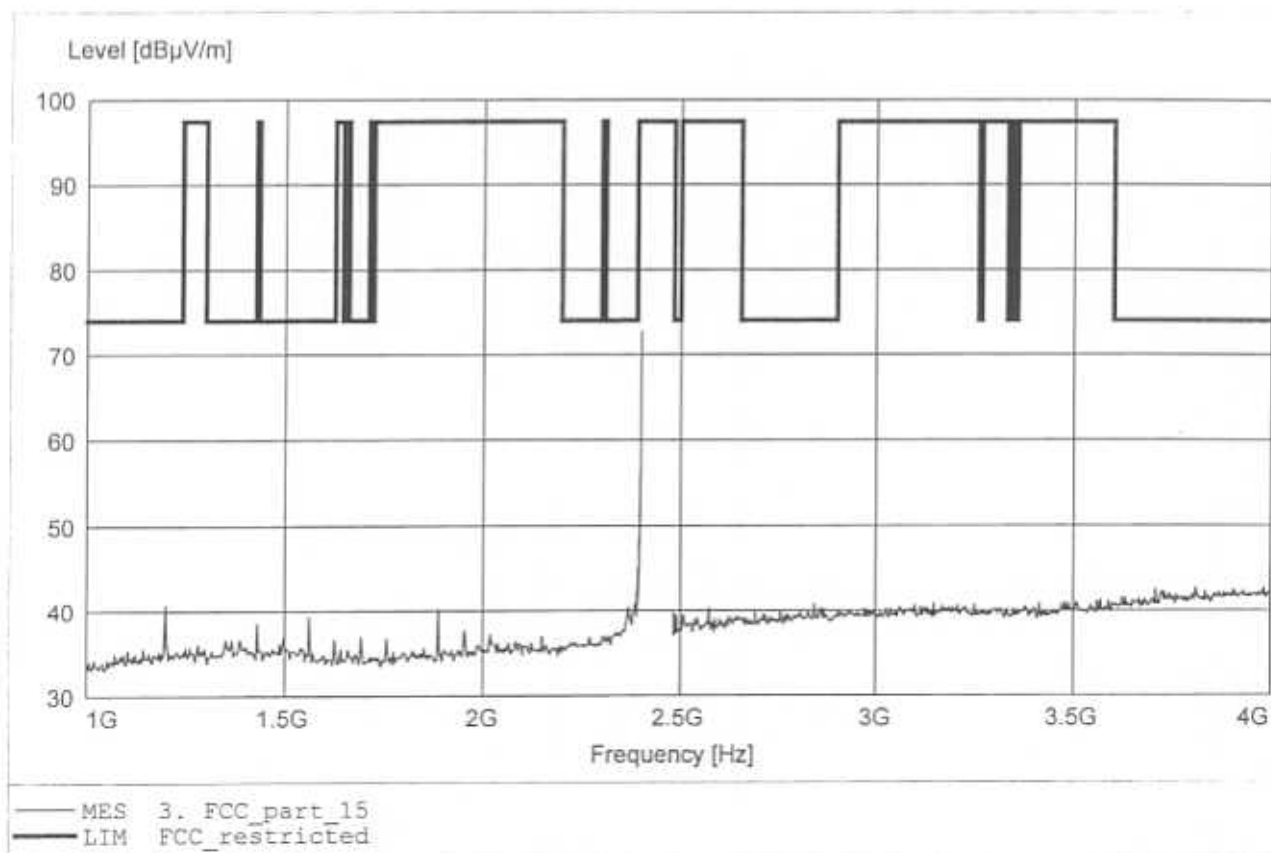
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2402 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to S15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq: 2.400GHz, Emax: 64.80dBuV/m, RBW: 1MHz



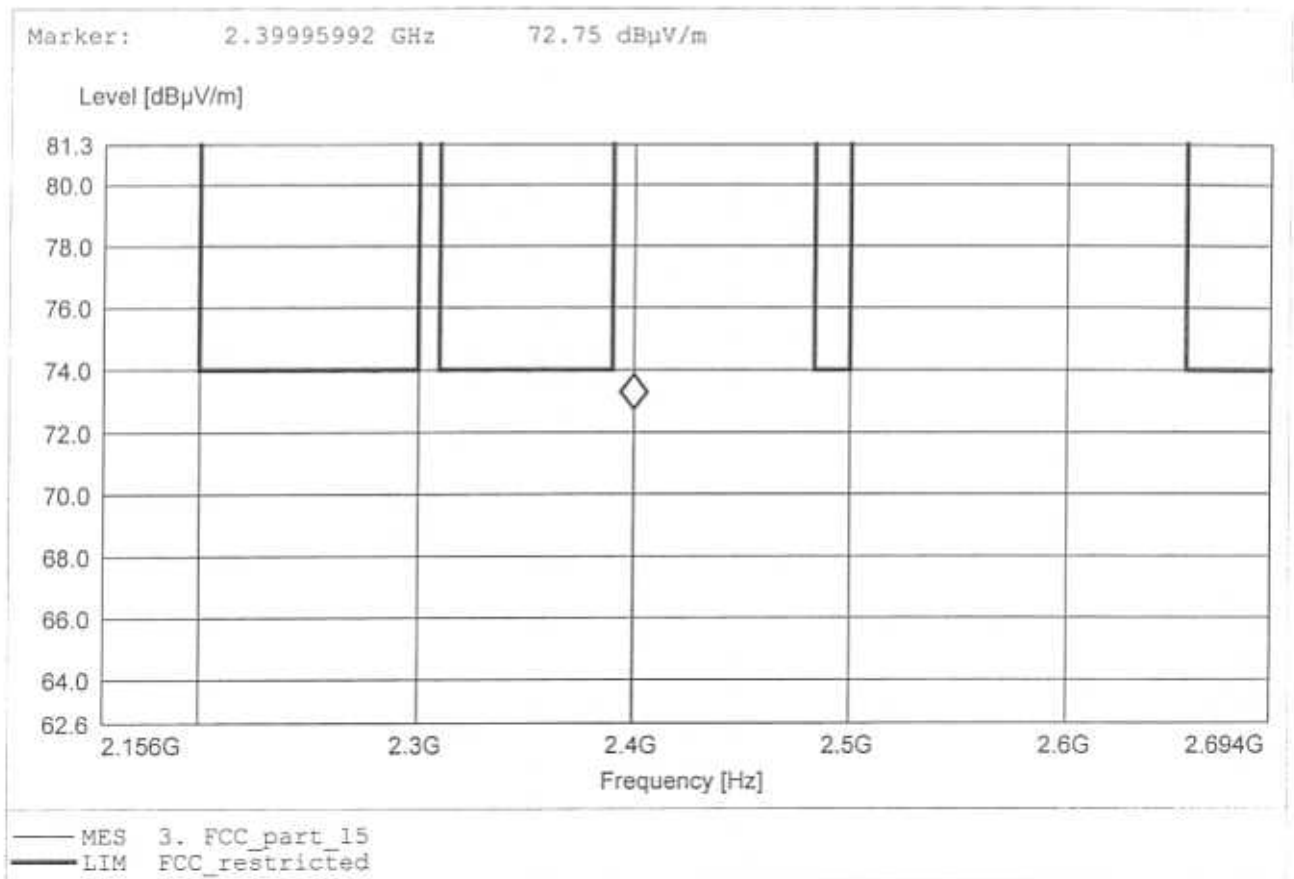
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2402 MHz  
Model: UGPZ2  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to S15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq: 2.400GHz, Emax: 72.75dB $\mu$ V/m, RBW: 1MHz



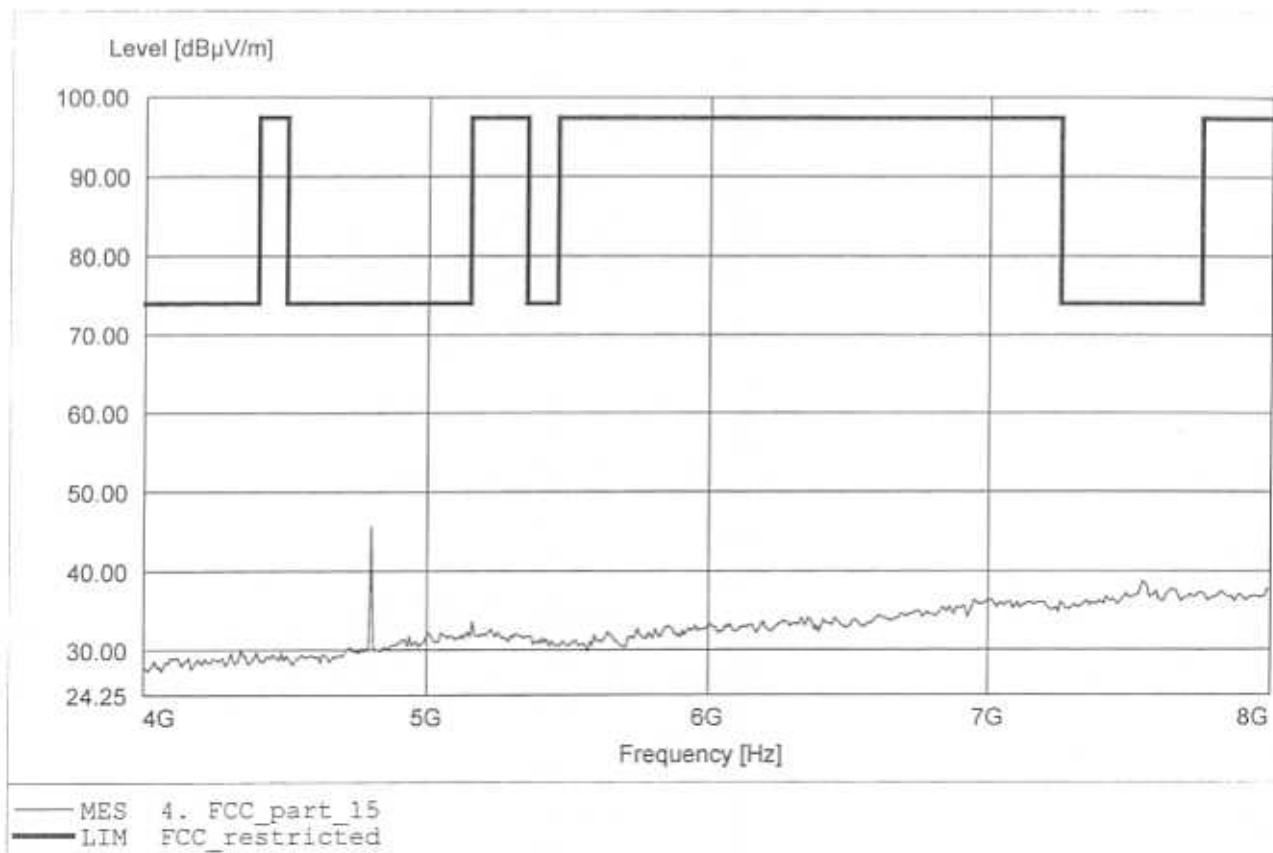
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2402 MHz  
Model: UGPZ2  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS - / Mr. Hoppe  
Test Specification: according to §15.247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq: 2.400GHz, Emax: 72.75dBuV/m, RBW: 1MHz



**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

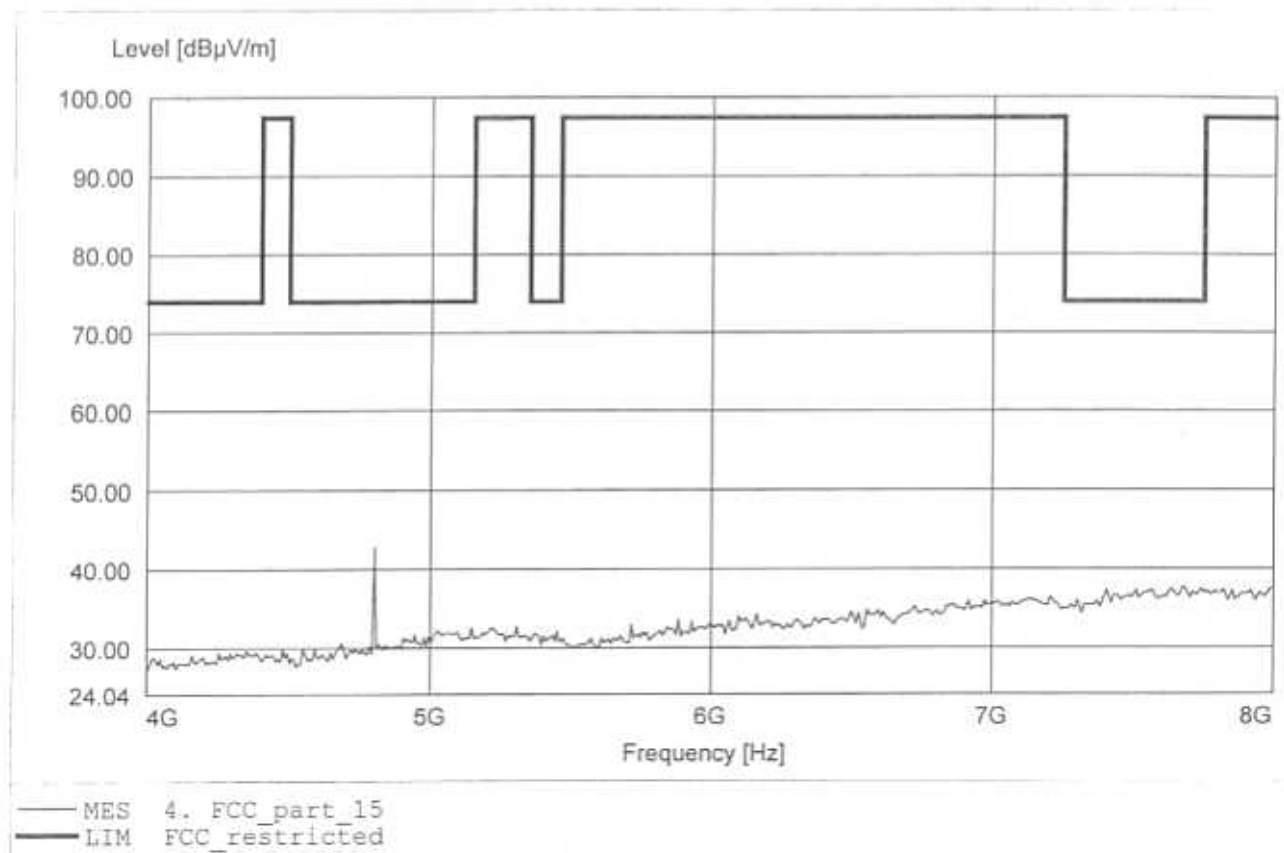
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Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 4.802GHz, Emax: 45.63dBµV/m, RBW: 1MHz





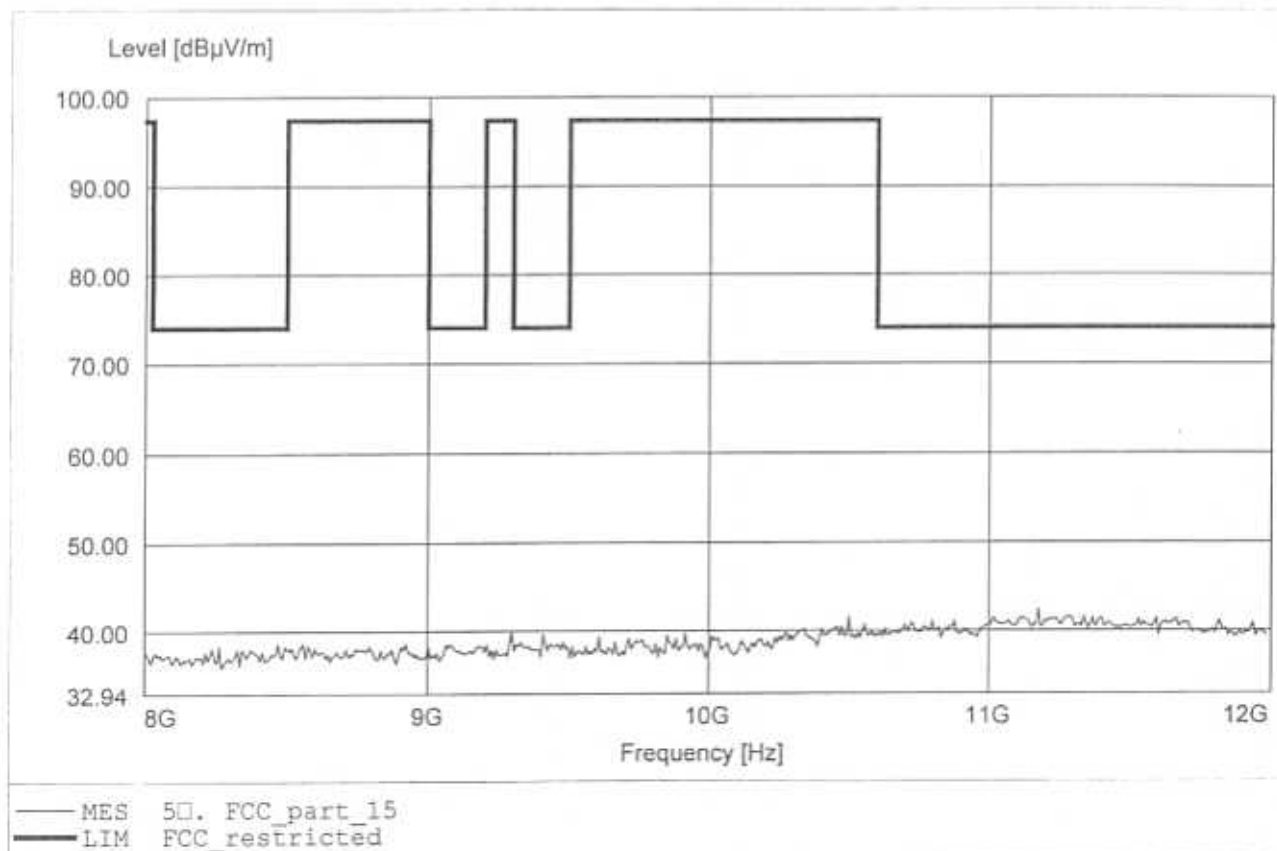
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2402 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 4.802GHz, Emax: 42.82dBμV/m, RBW: 1MHz



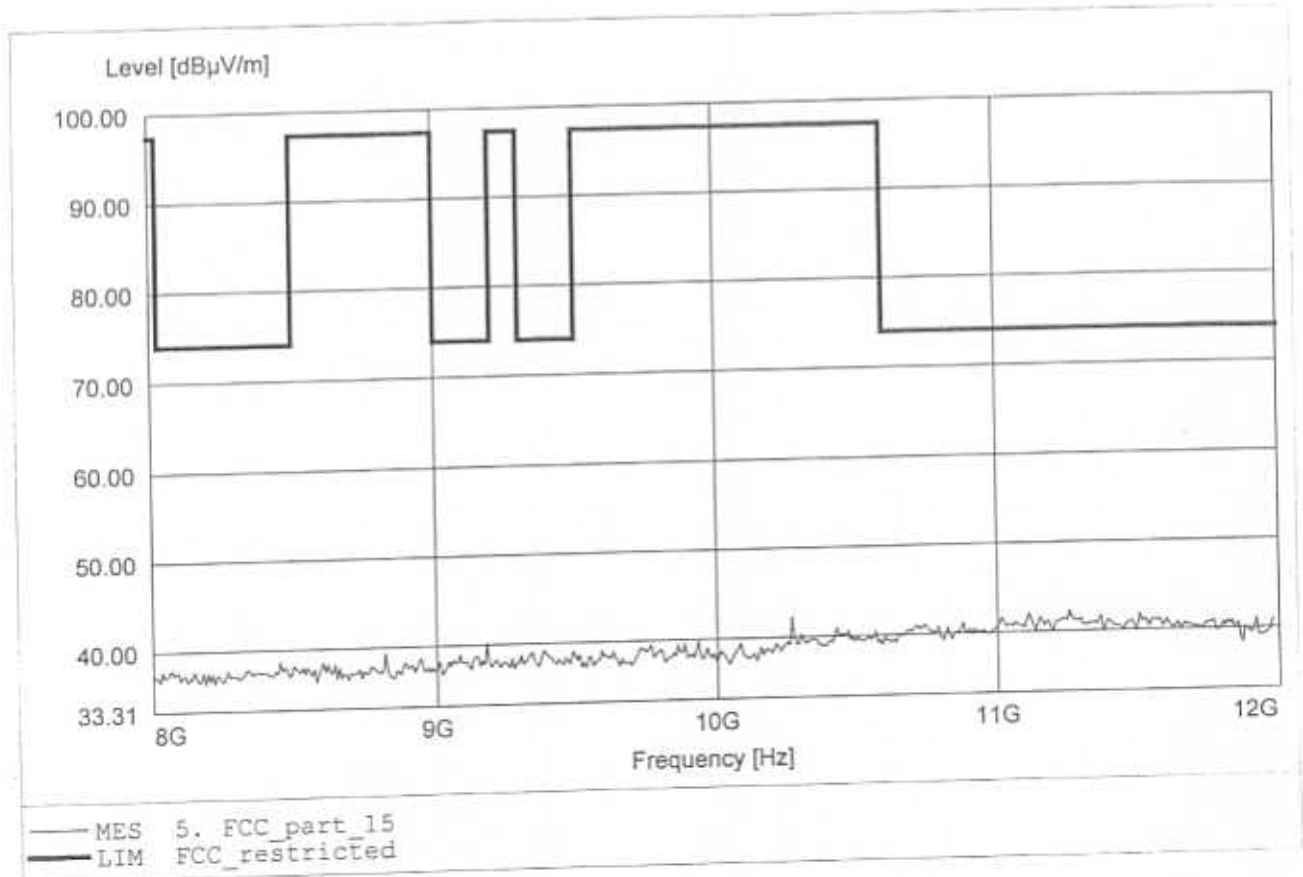
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2402 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 11.174GHz, Emax: 42.43dBμV/m, RBW: 1MHz



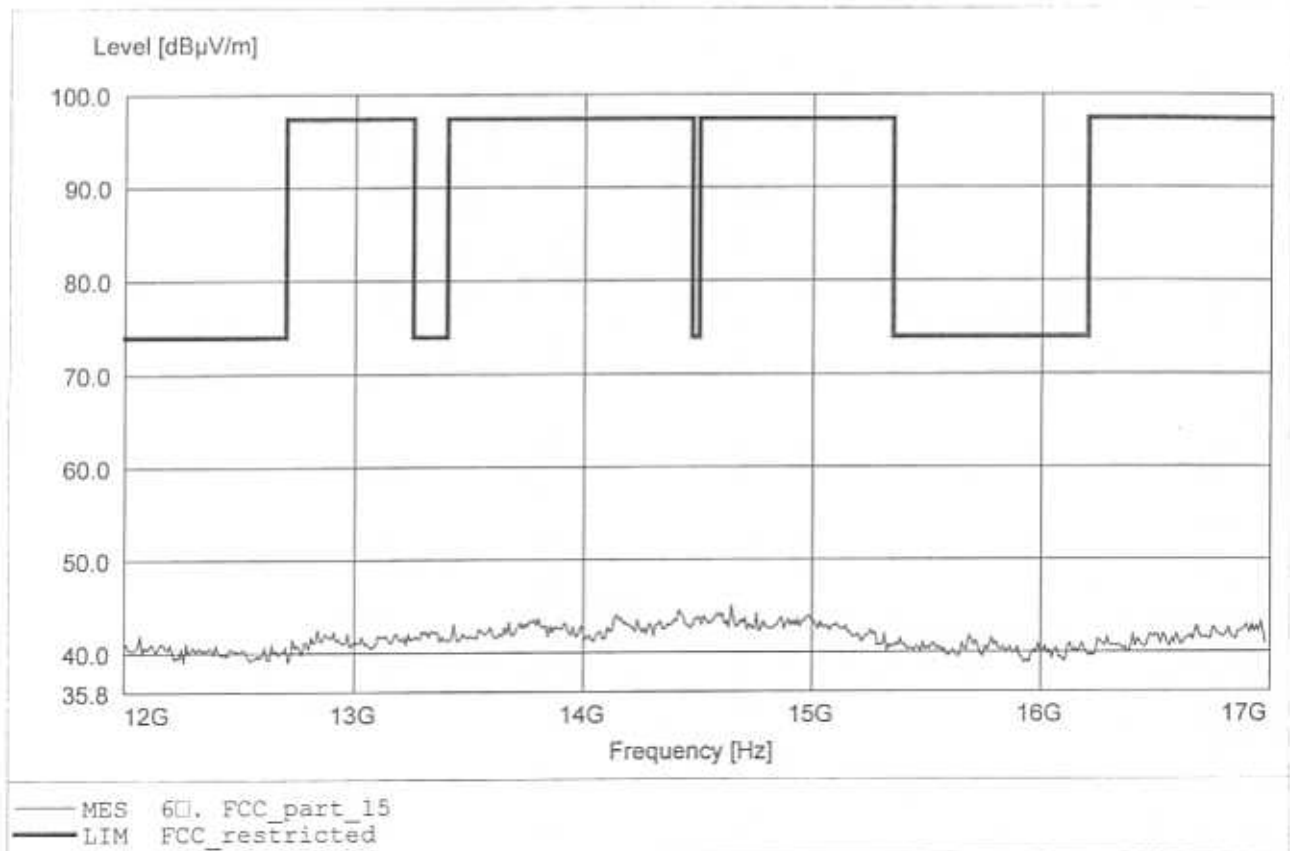
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2402 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to S15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 10.269GHz, Emax: 42.23dBµV/m, RBW: 1MHz



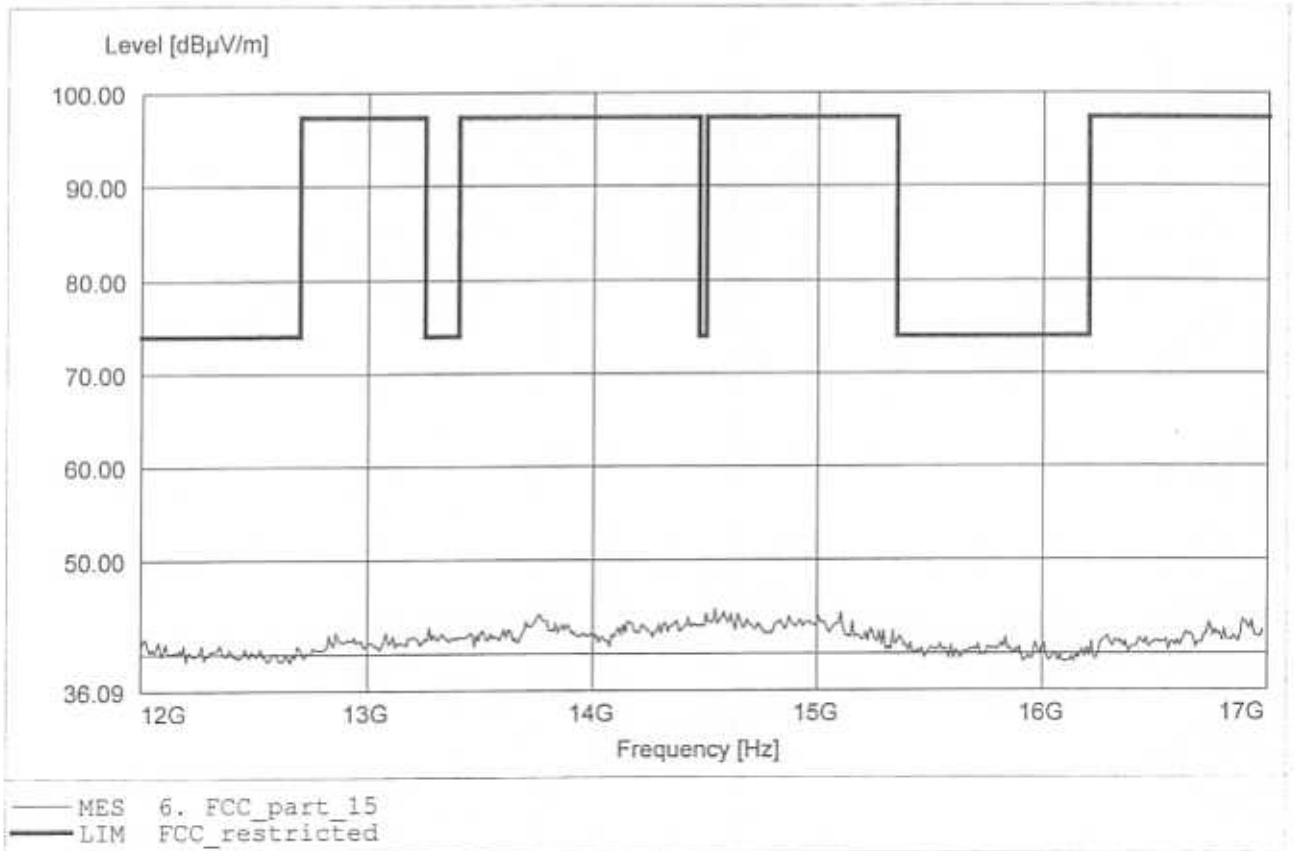
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2402 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 14.645GHz, Emax: 45.05dB $\mu$ V/m, RBW: 1MHz



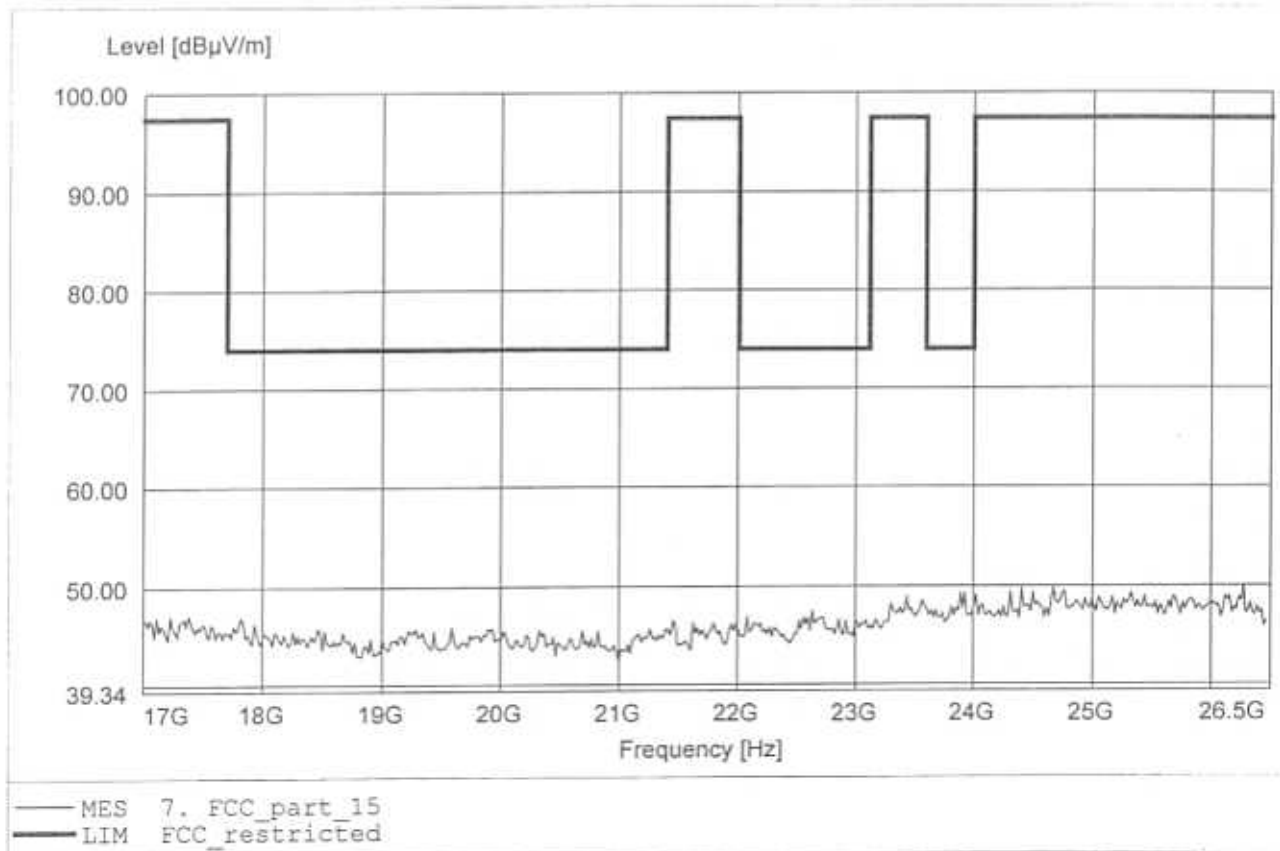
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2402 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to S15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 14.545GHz, Emax: 44.77dBµV/m, RBW: 1MHz



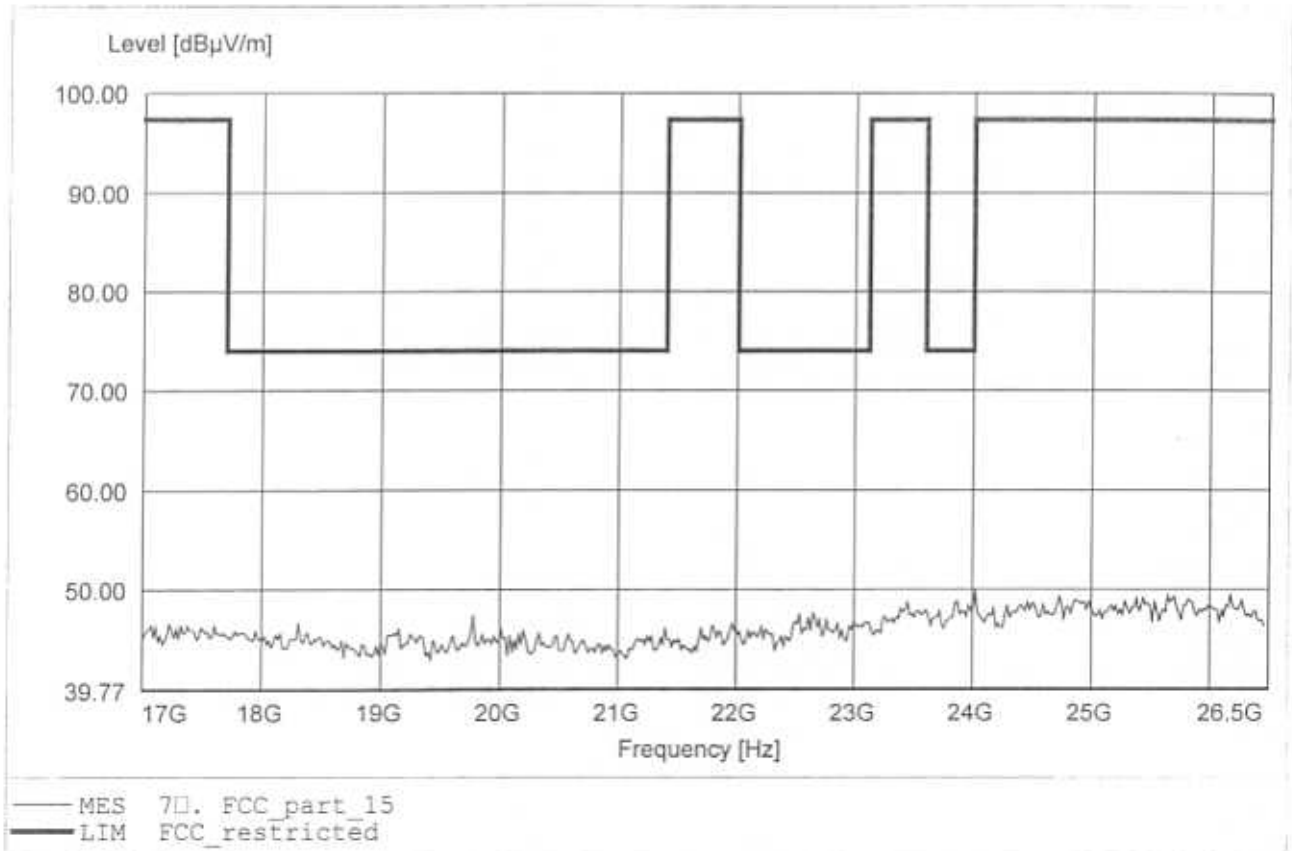
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2402 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to S15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Comment 2: Freq: 26.272GHz, Emax: 50.09dBµV/m, RBW: 1MHz



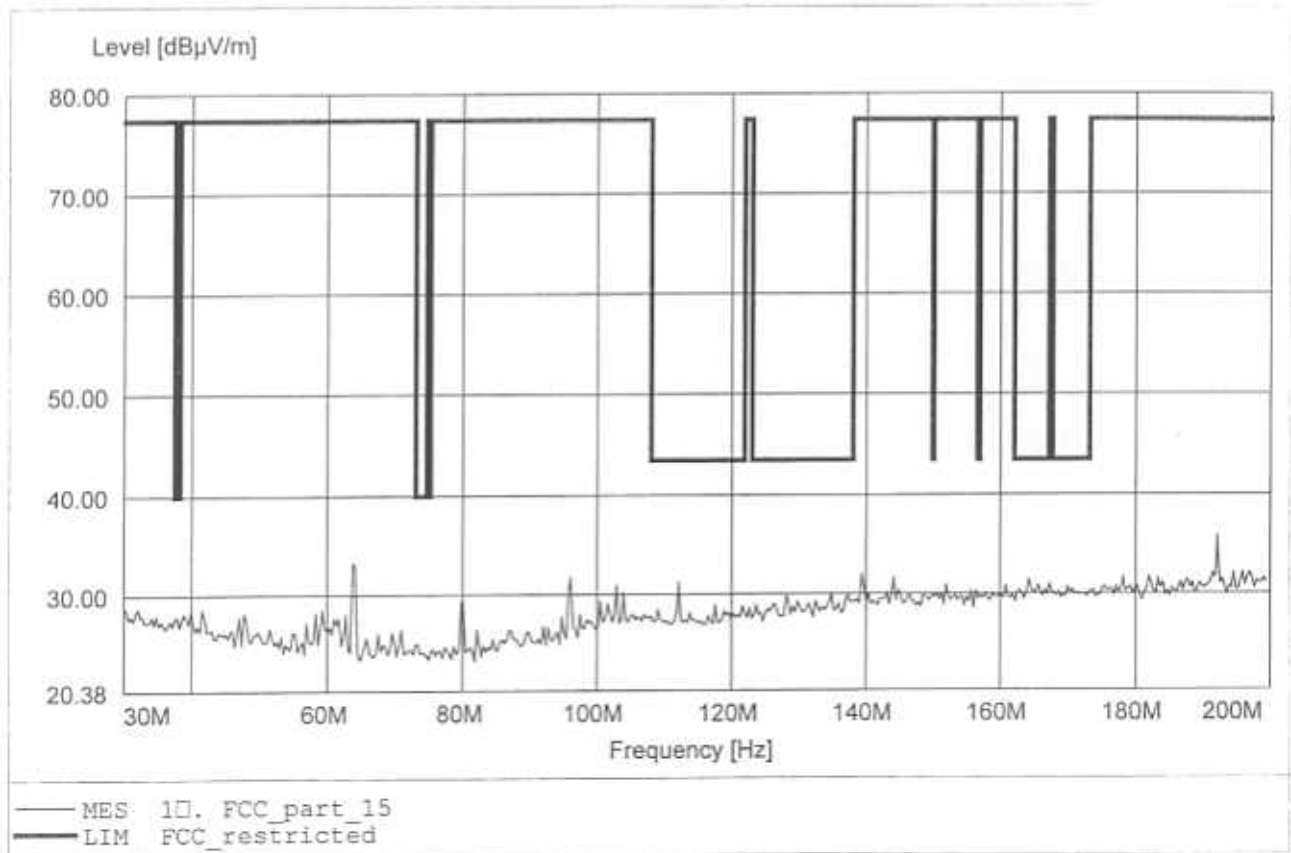
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Fmax / 2402 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Comment 2: Freq: 24.025GHz, Emax: 49.84dBµV/m, RBW: 1MHz



**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

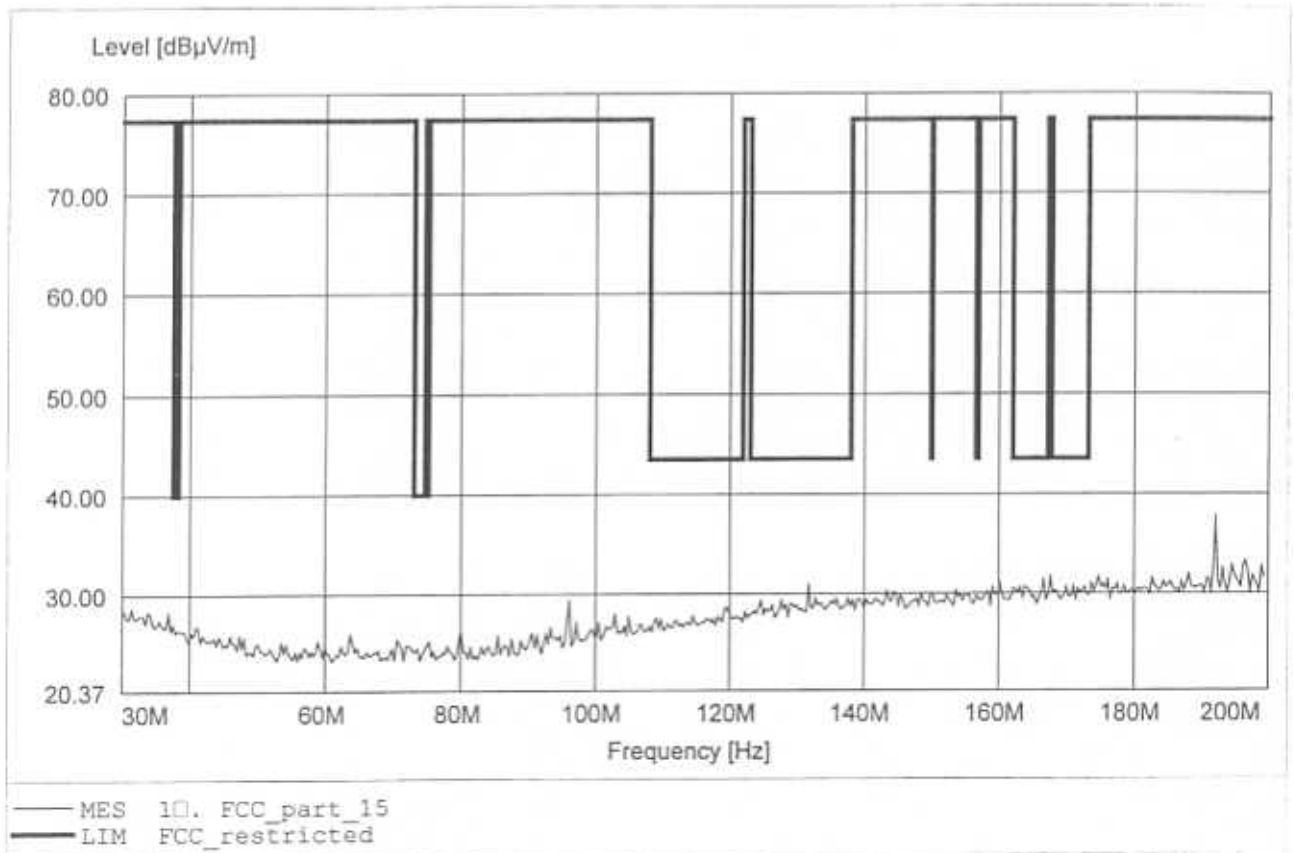
EUT : Bluetooth Module / Ant.: int. / Pmax / 2441 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Comment 2: Freq: 192.164MHz, Emax: 35.90dBµV/m, RBW: 100kHz





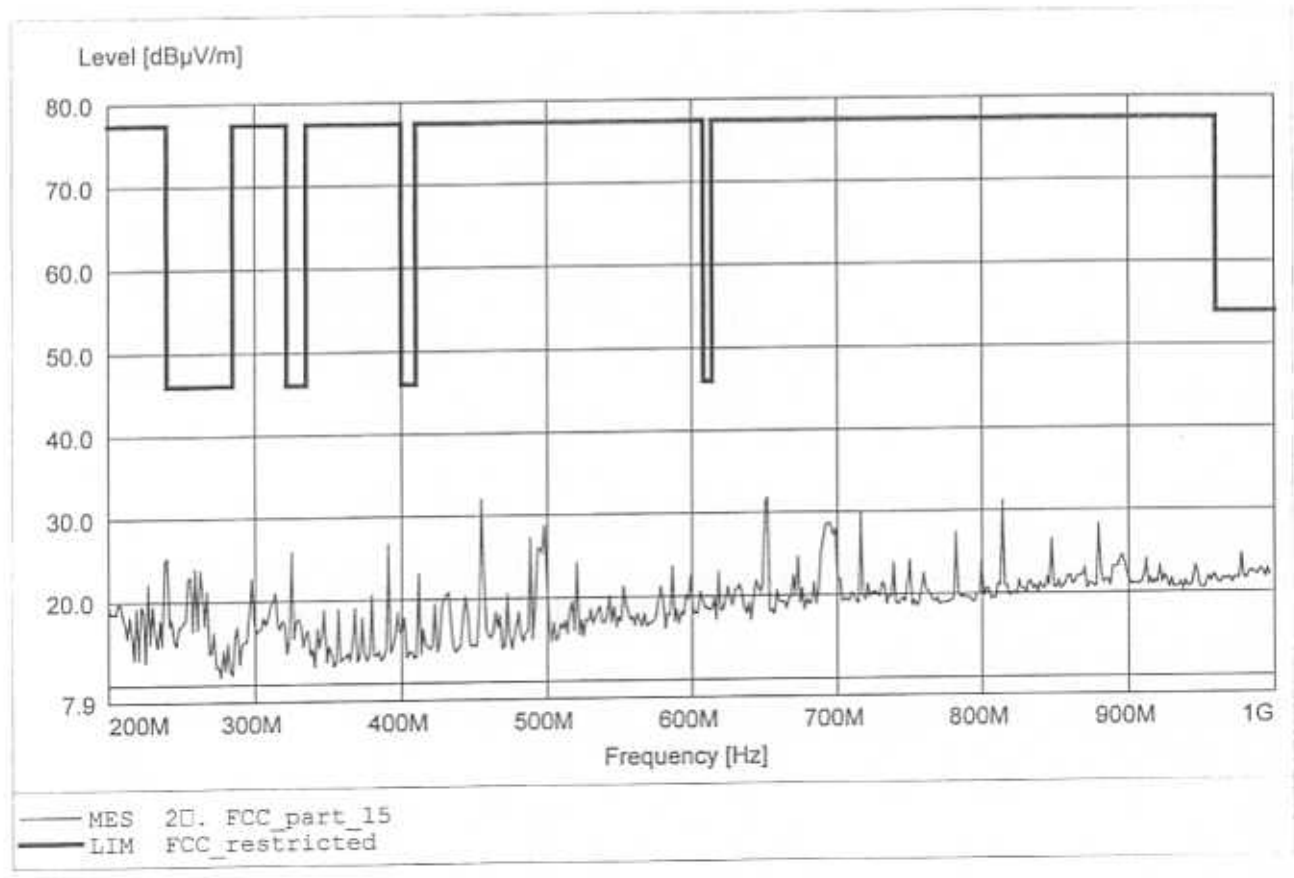
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Fmax / 2441 MHz  
Model: UGPZ2  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Comment 2: Freq: 192.164MHz, Emax: 37.88dBµV/m, RBW: 100kHz



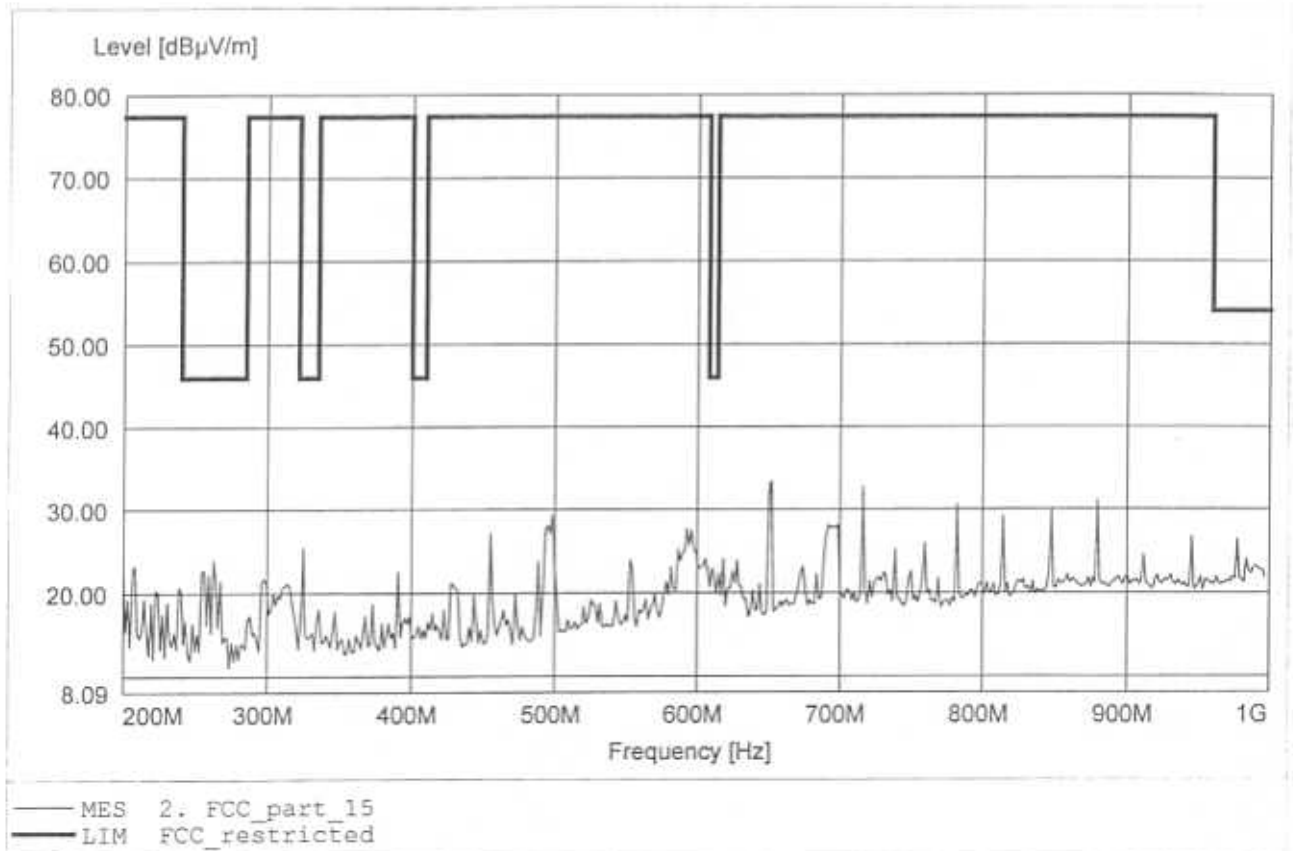
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2441 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.  
Comment 2: Freq: 454.910MHz, Emax: 32.01dBµV/m, RBW: 100kHz



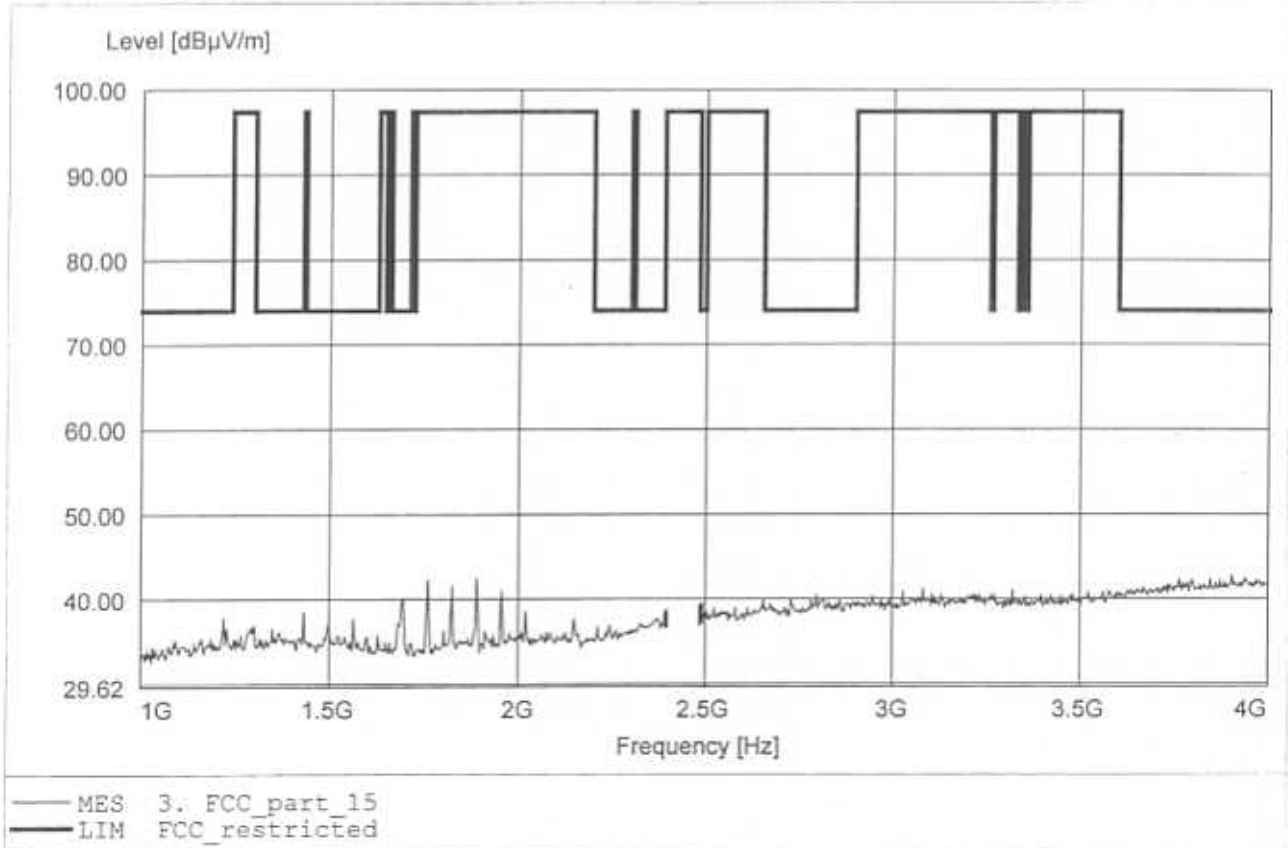
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Emax / 2441 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.  
Comment 2: Freq: 652.104MHz, Emax: 33.37dBµV/m, RBW: 100kHz



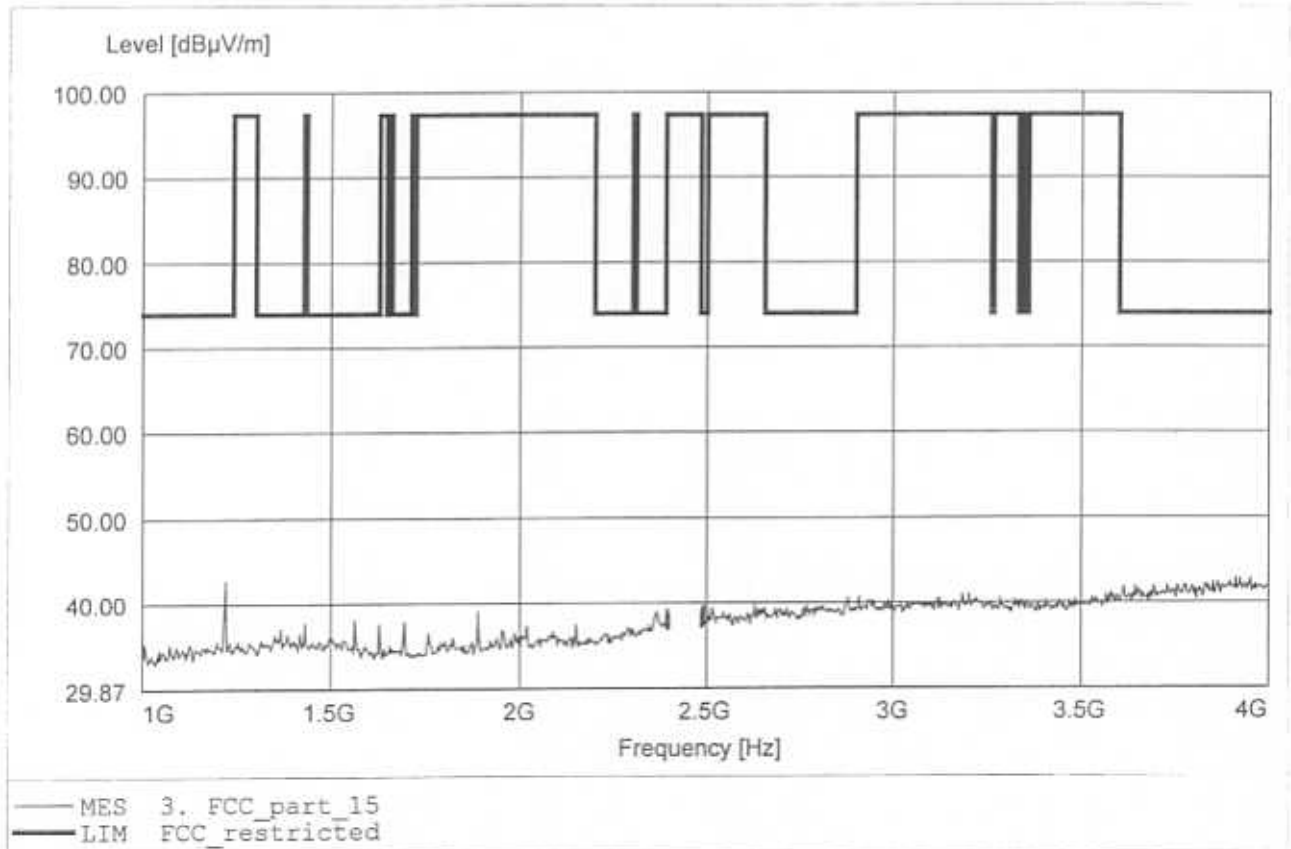
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2441 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq: 3.903GHz, Emax: 42.84dBμV/m, RBW: 1MHz



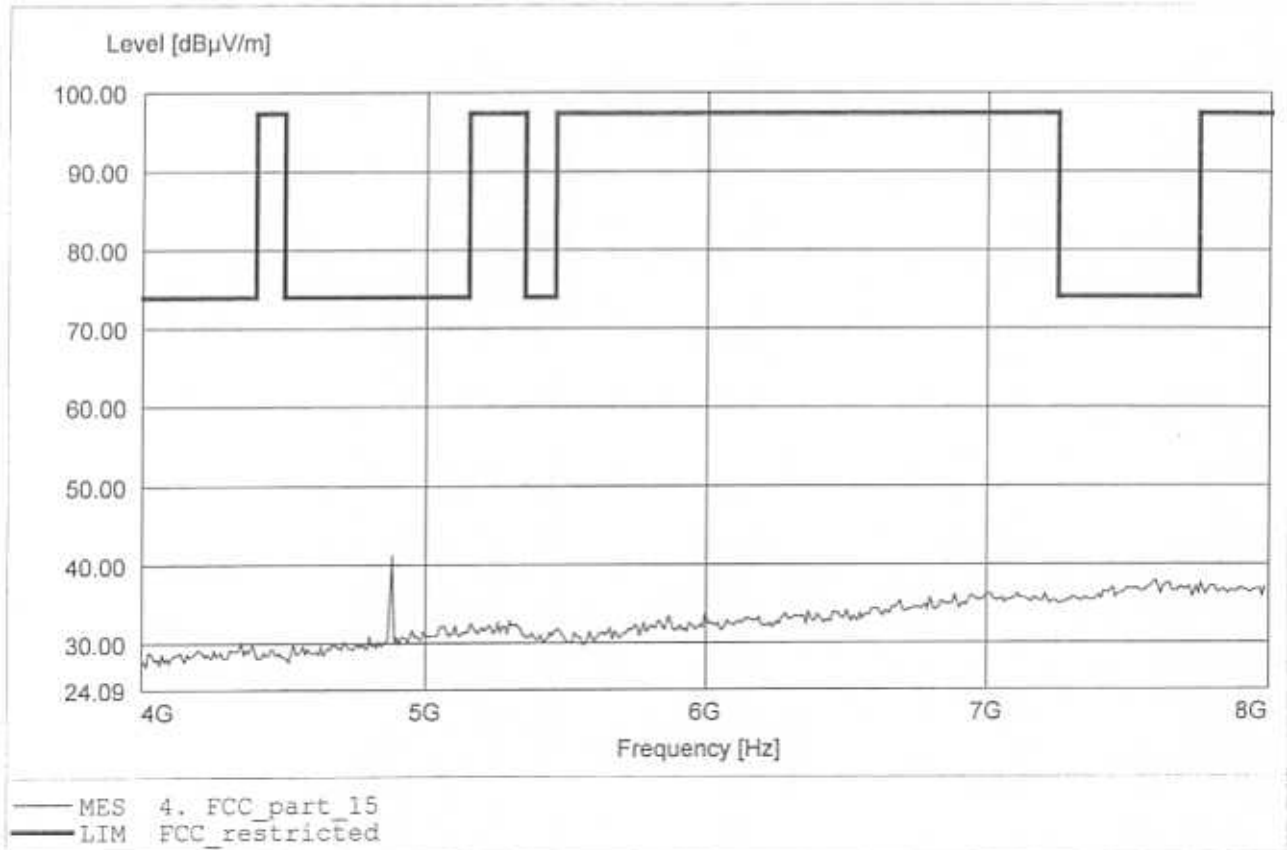
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2441 MHz  
Model: UGPZ2  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq: 3.912GHz, Emax: 42.88dBµV/m, RBW: 1MHz



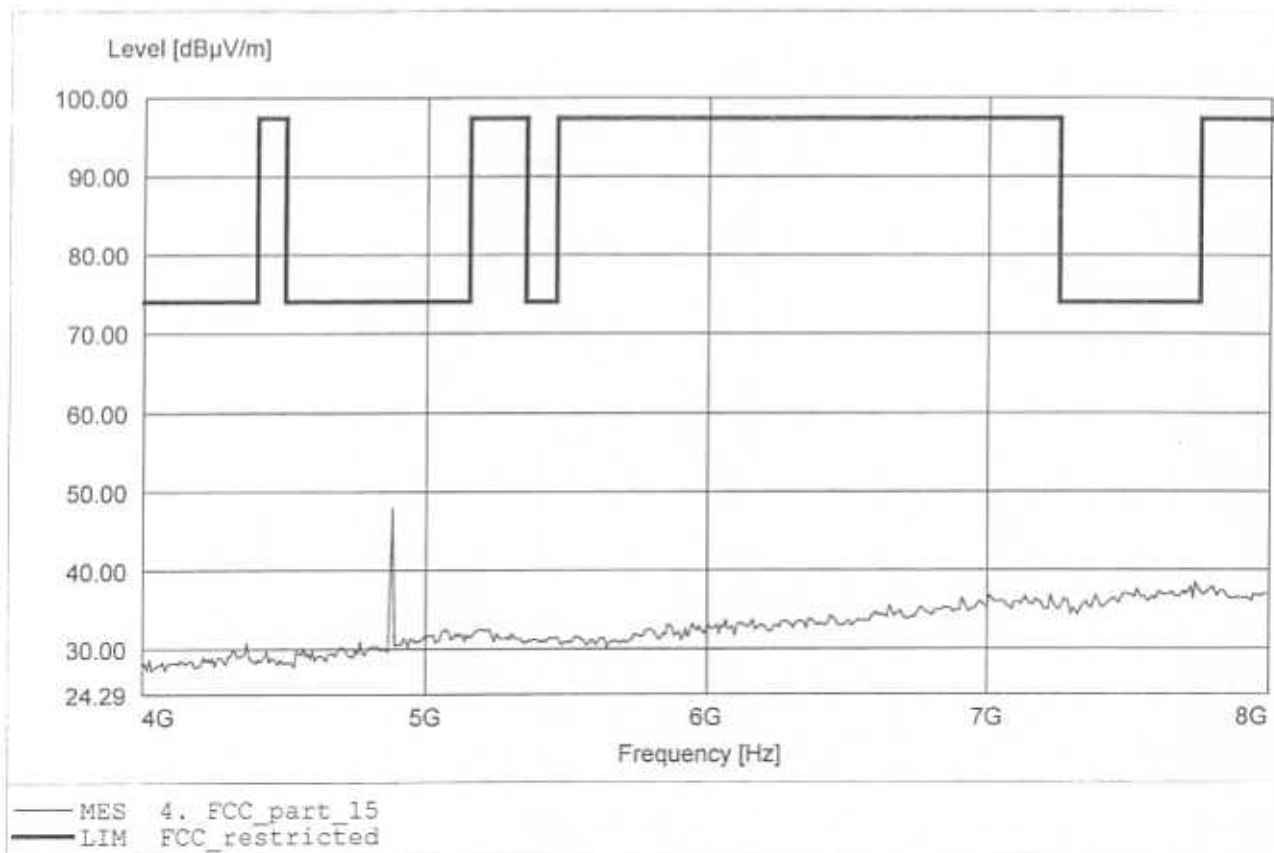
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2441 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 4.882GHz, Emax: 41.26dBµV/m, RBW: 1MHz



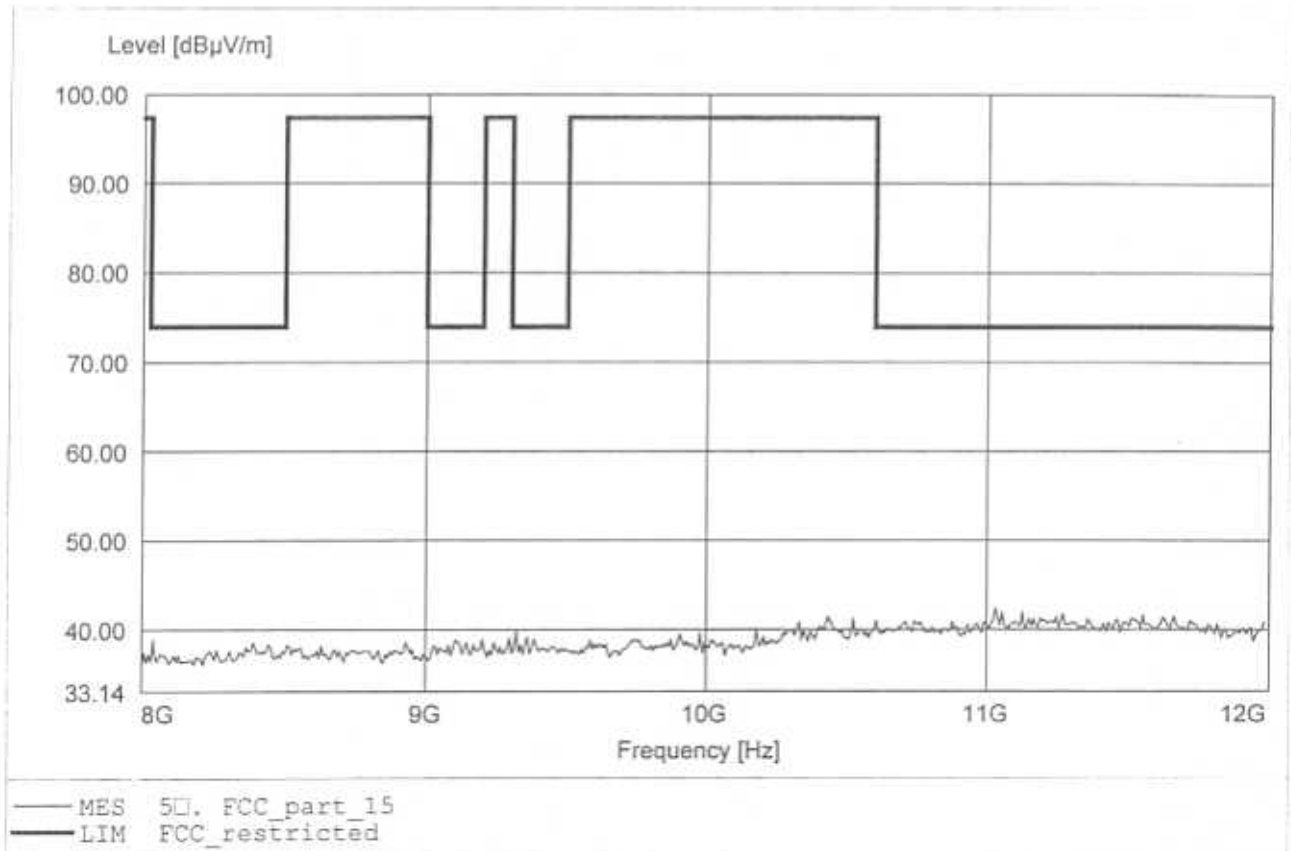
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2441 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 4.882GHz, Emax: 47.99dBµV/m, RBW: 1MHz



**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

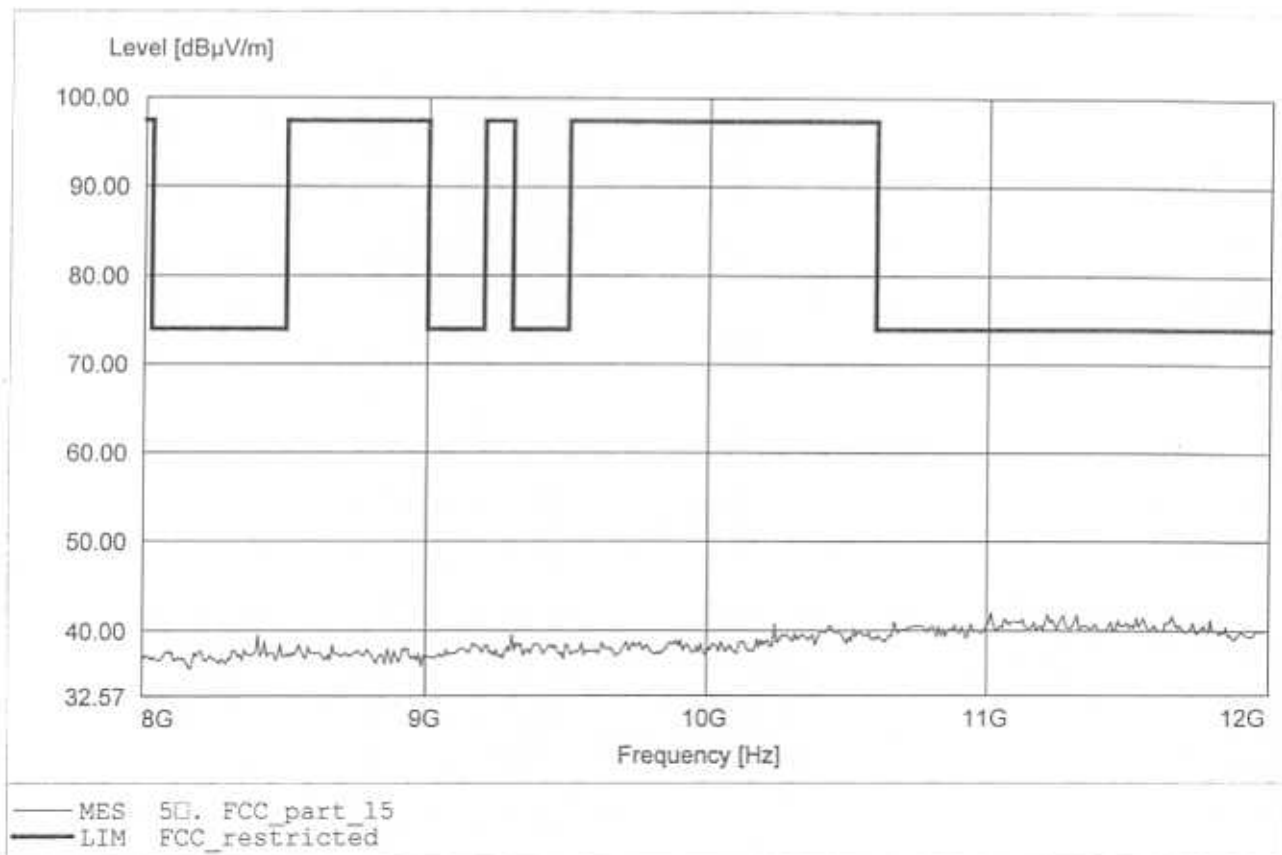
EUT : Bluetooth Module / Ant.: int. / Pmax / 2441 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to S15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 11.030GHz, Emax: 42.44dBuV/m, RBW: 1MHz





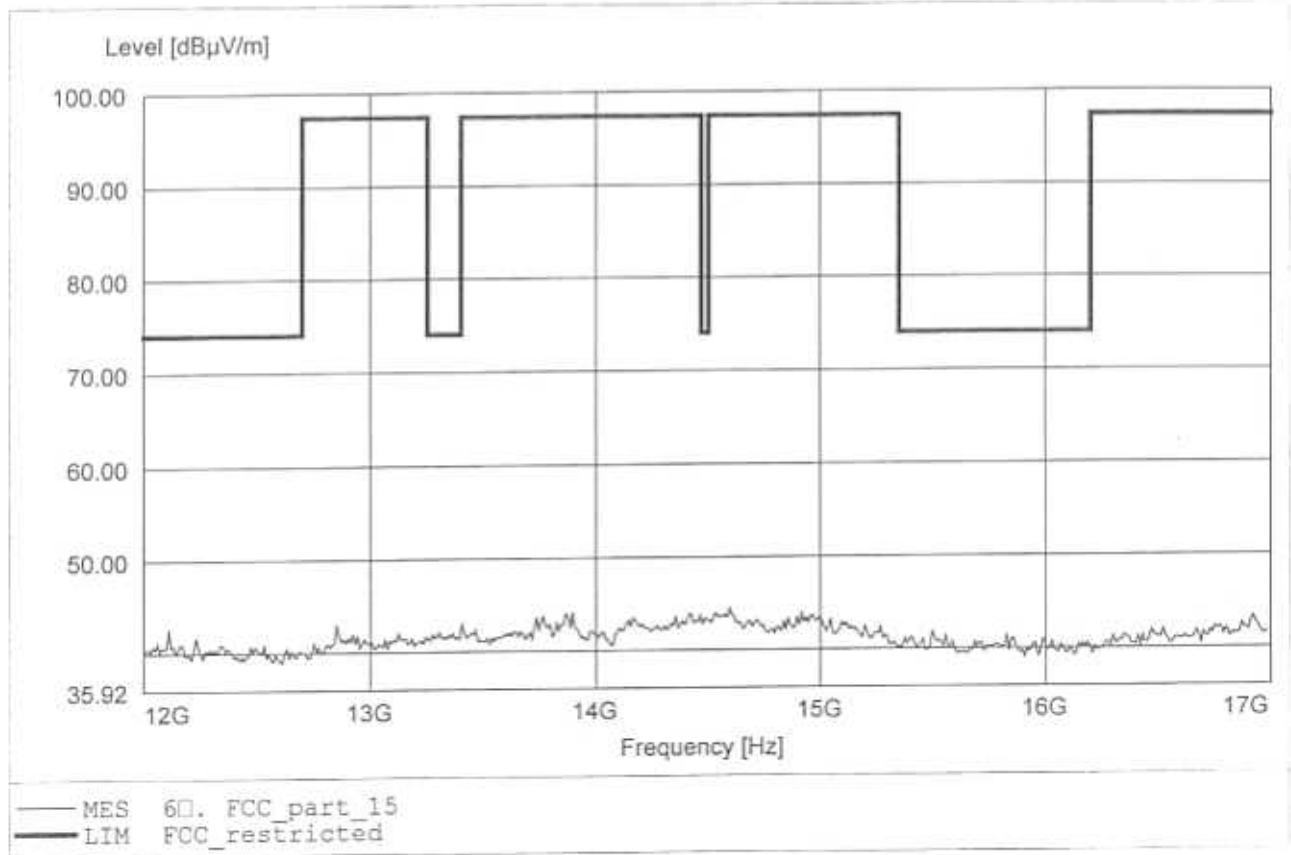
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2441 MHz  
Model: UGPZ2  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to S15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 11.014GHz, Emax: 42.07dBμV/m, RBW: 1MHz



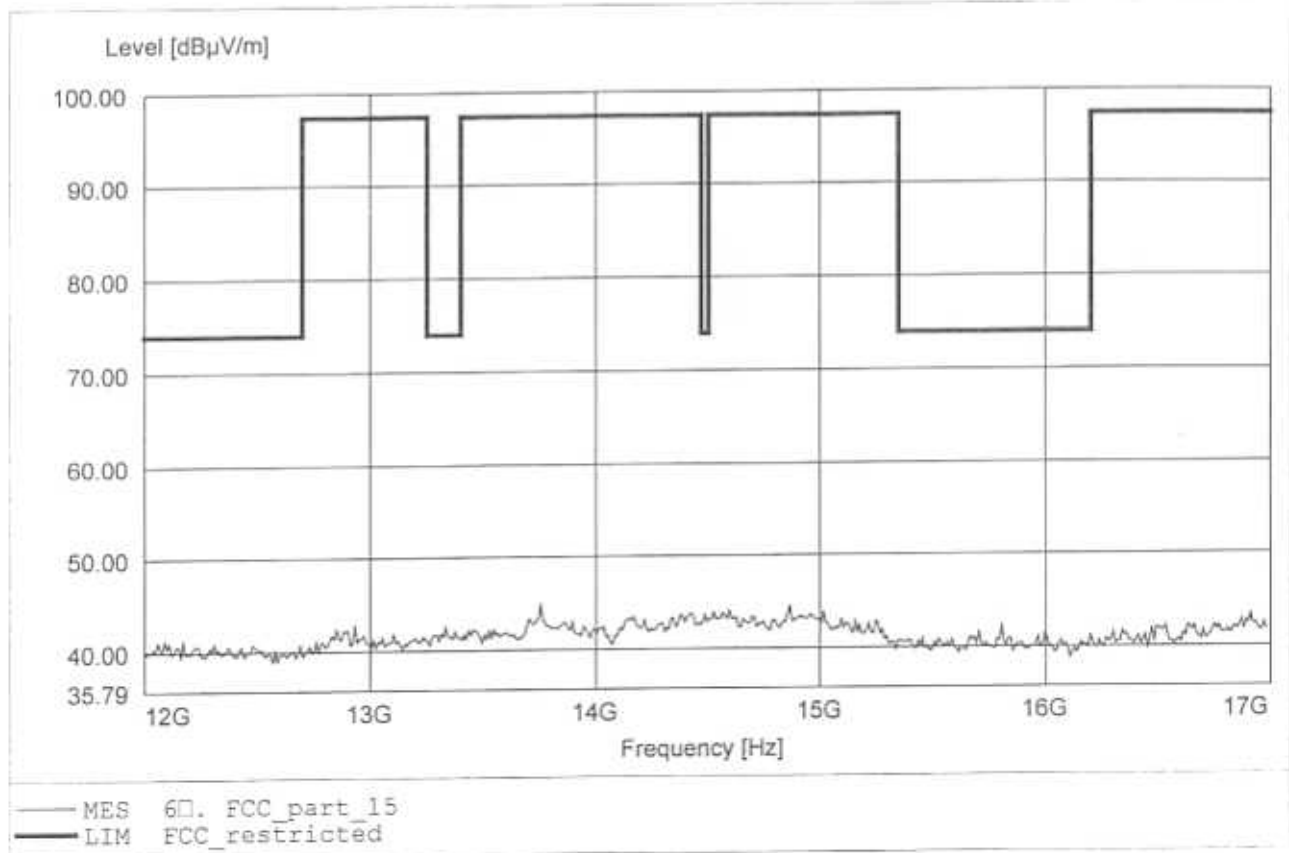
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2441 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+RP.  
Comment 2: Freq: 14.595GHz, Emax: 44.56dBµV/m, RBW: 1MHz



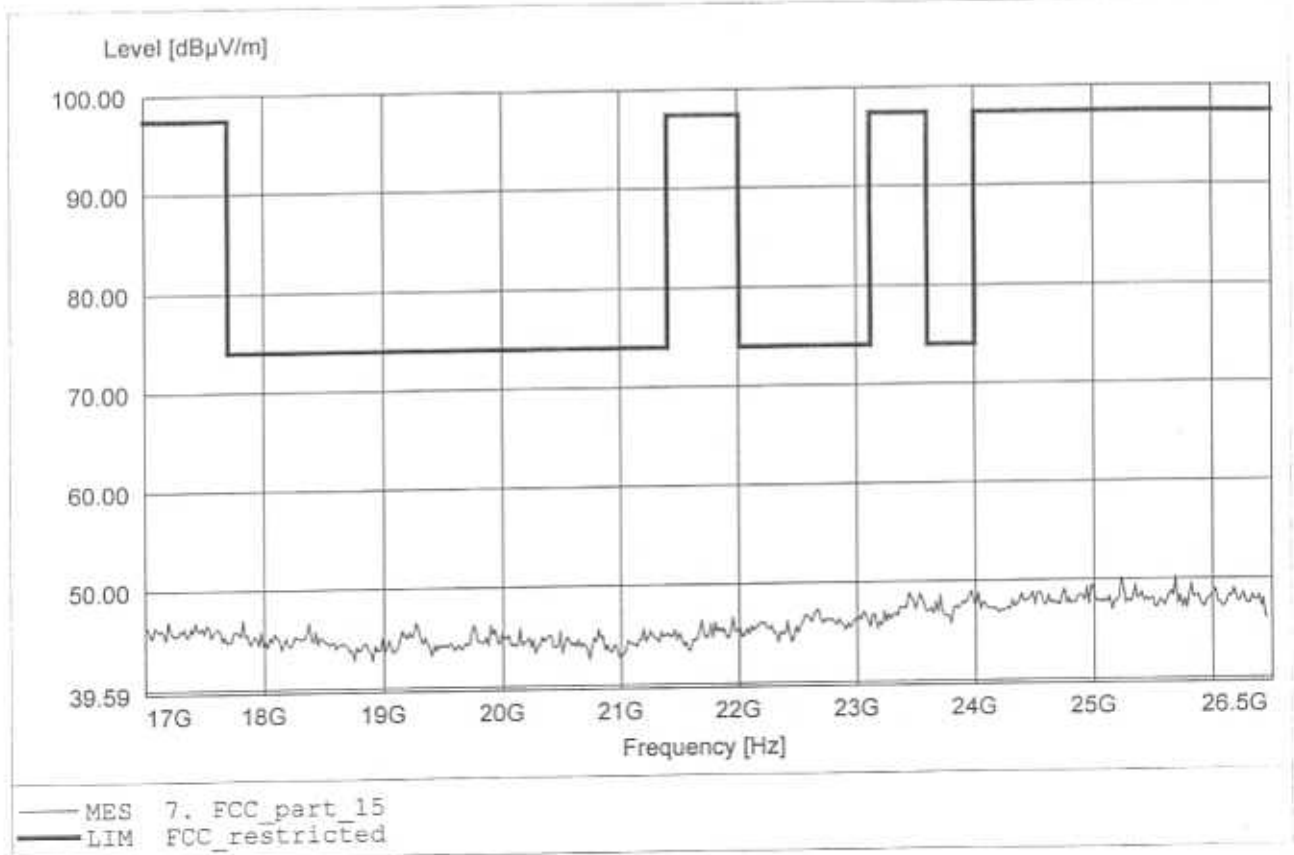
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2441 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 13.754GHz, Emax: 44.97dBuV/m, RBW: 1MHz



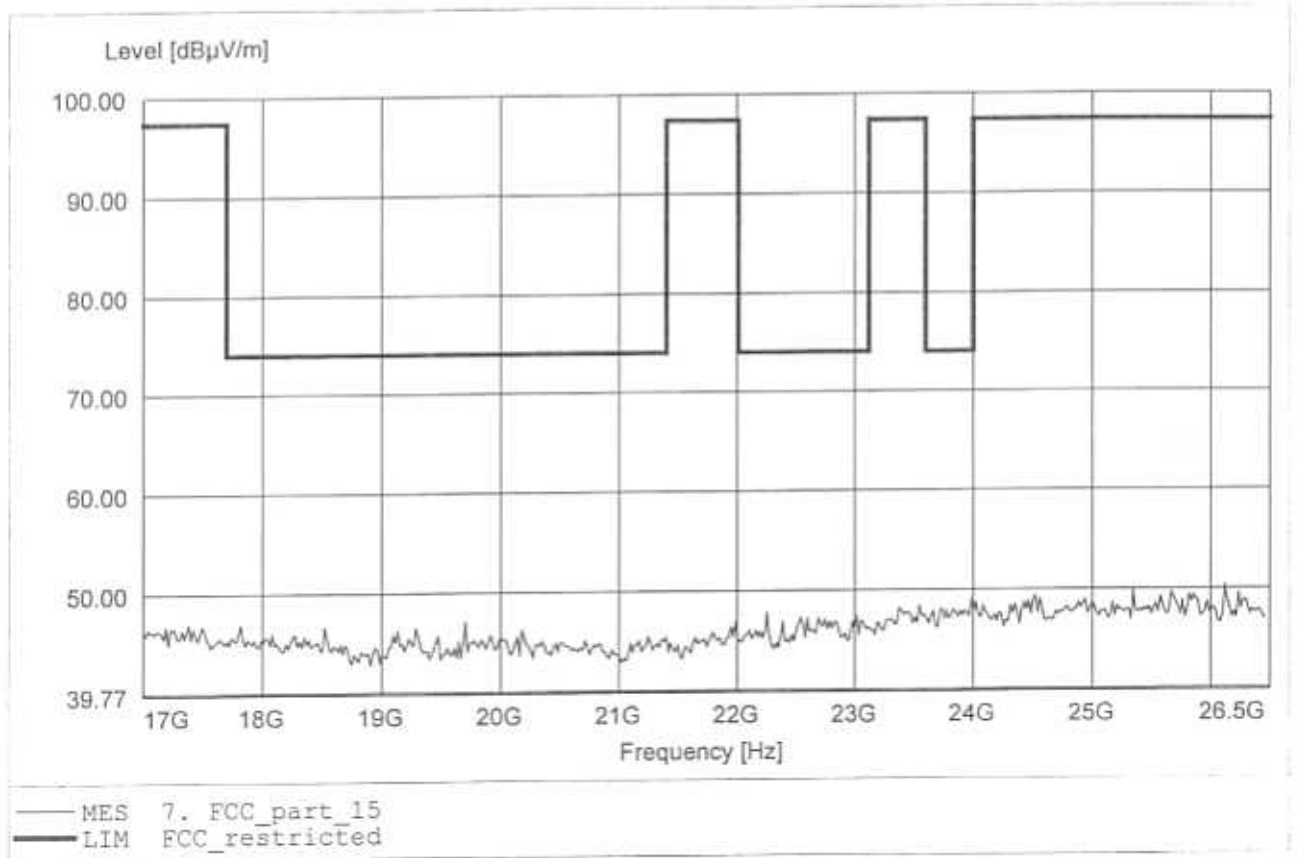
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2441 MHz  
Model: UGPZ2  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Comment 2: Freq: 25.681GHz, Emax: 50.28dBμV/m, RBW: 1MHz



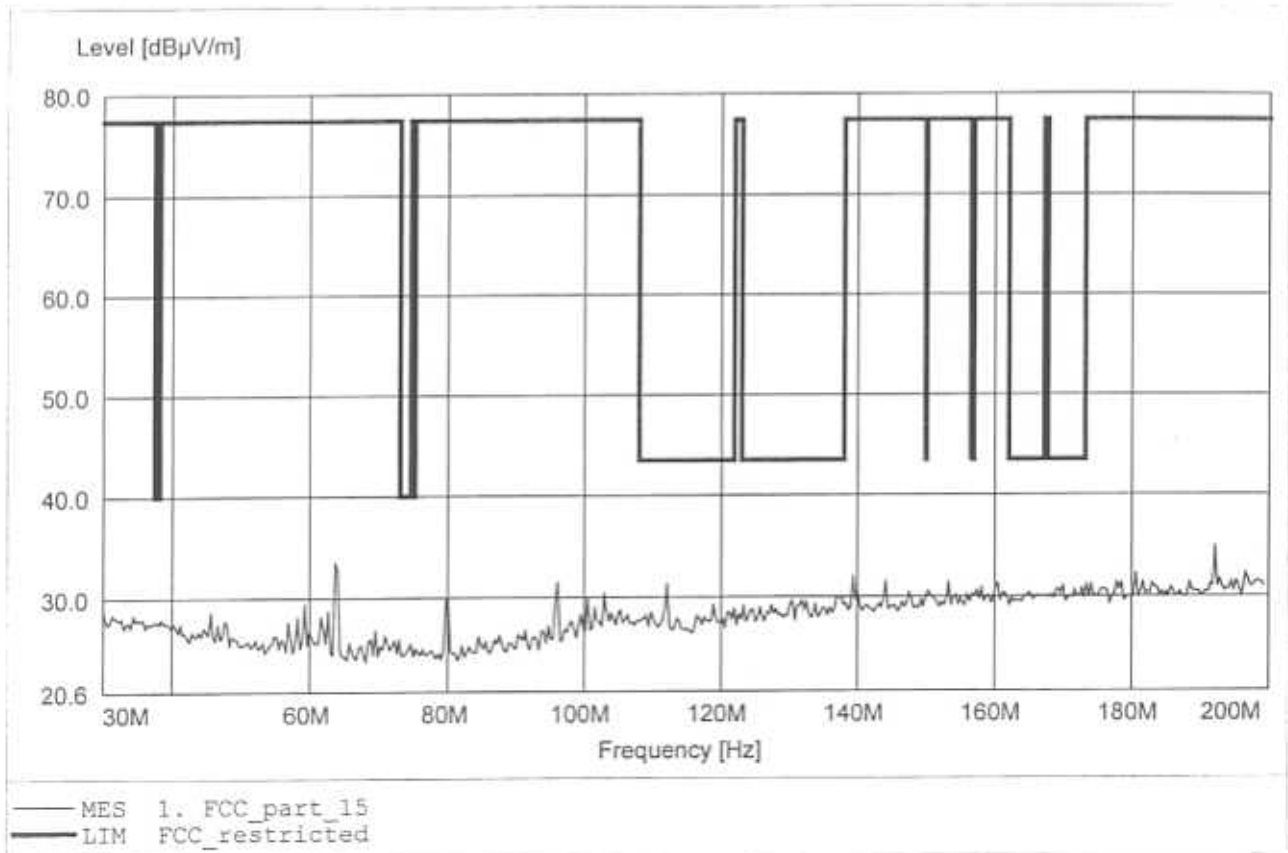
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2441 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Comment 2: Freq: 26.119GHz, Emax: 50.35dBµV/m, RBW: 1MHz



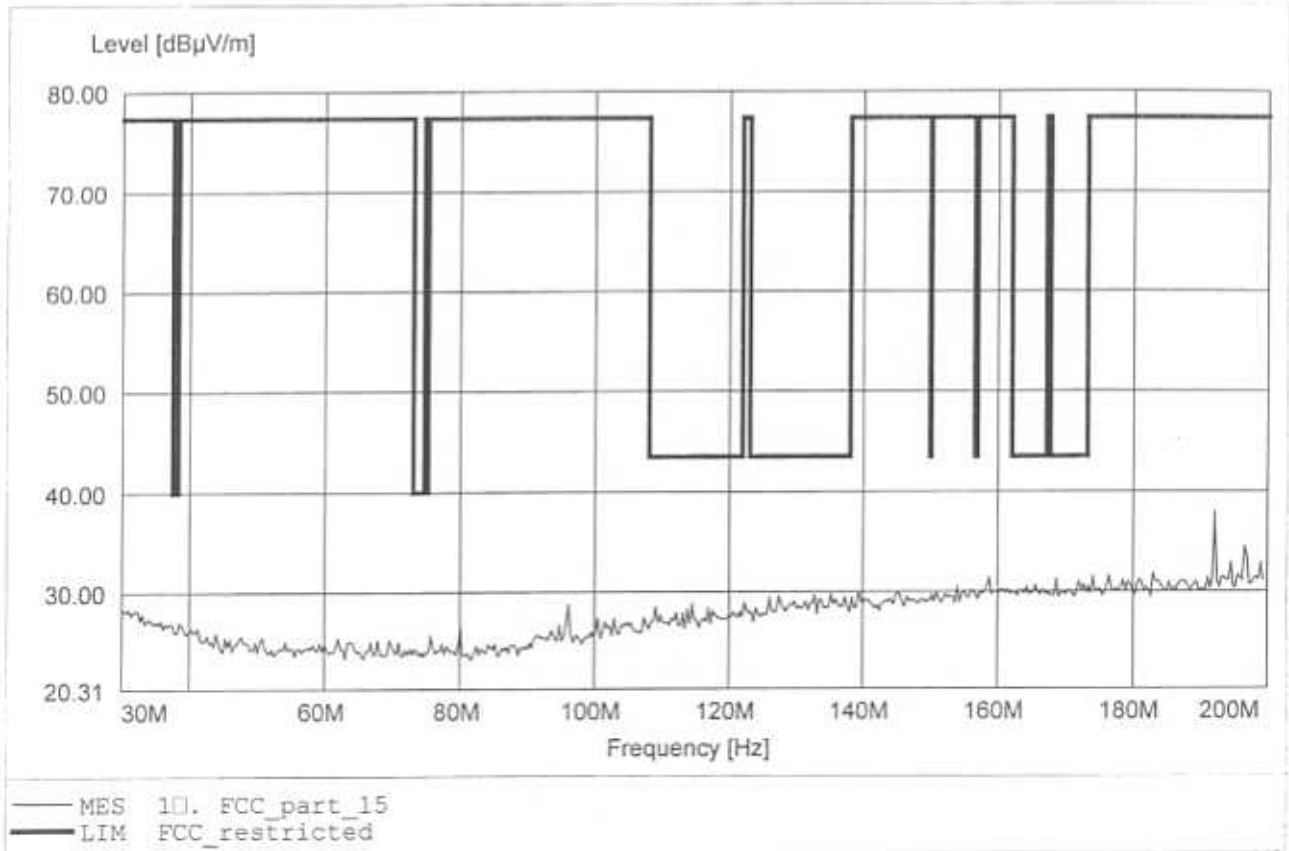
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2480 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Comment 2: Freq: 192.164MHz, Emax: 34.98dBµV/m, RBW: 100kHz



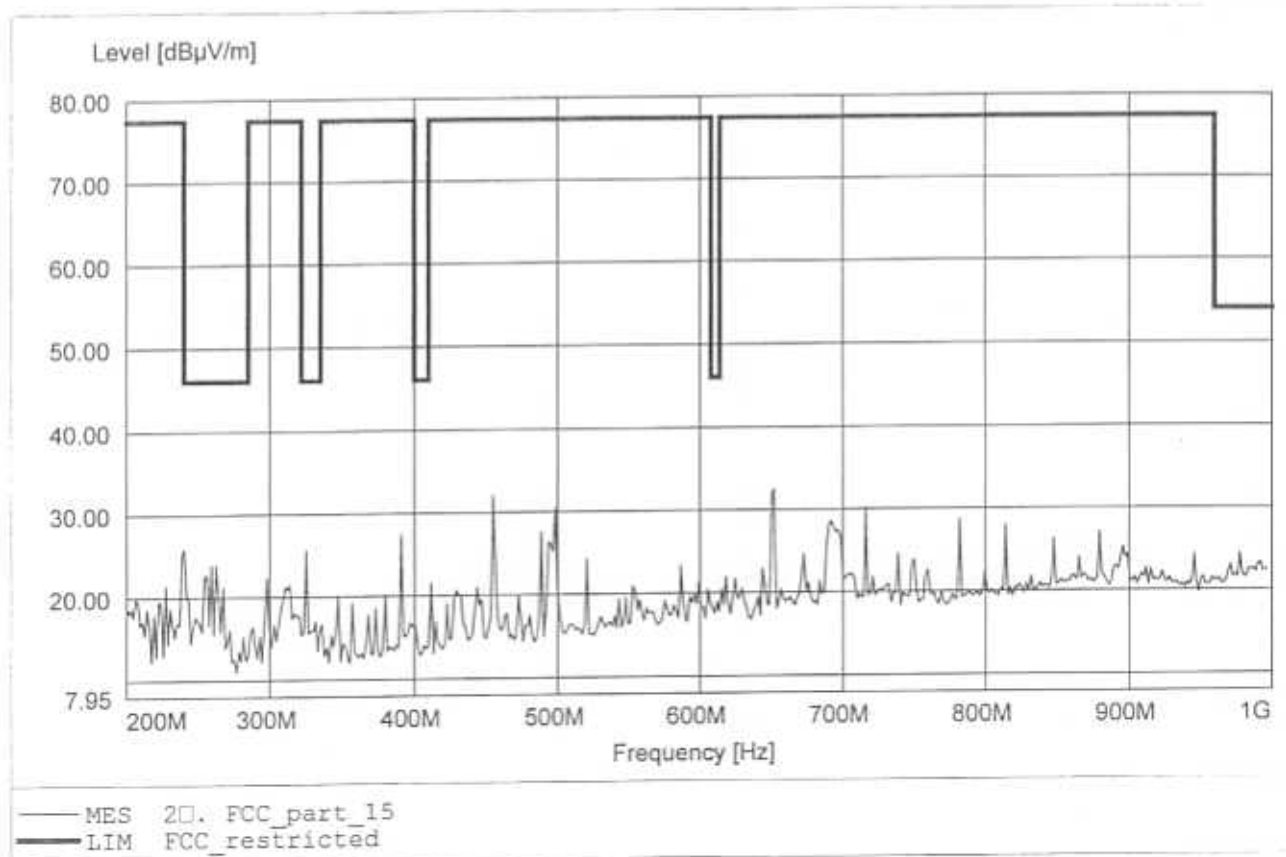
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2480 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Comment 2: Freq: 192.164MHz, Emax: 38.03dBµV/m, RBW: 100kHz



**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

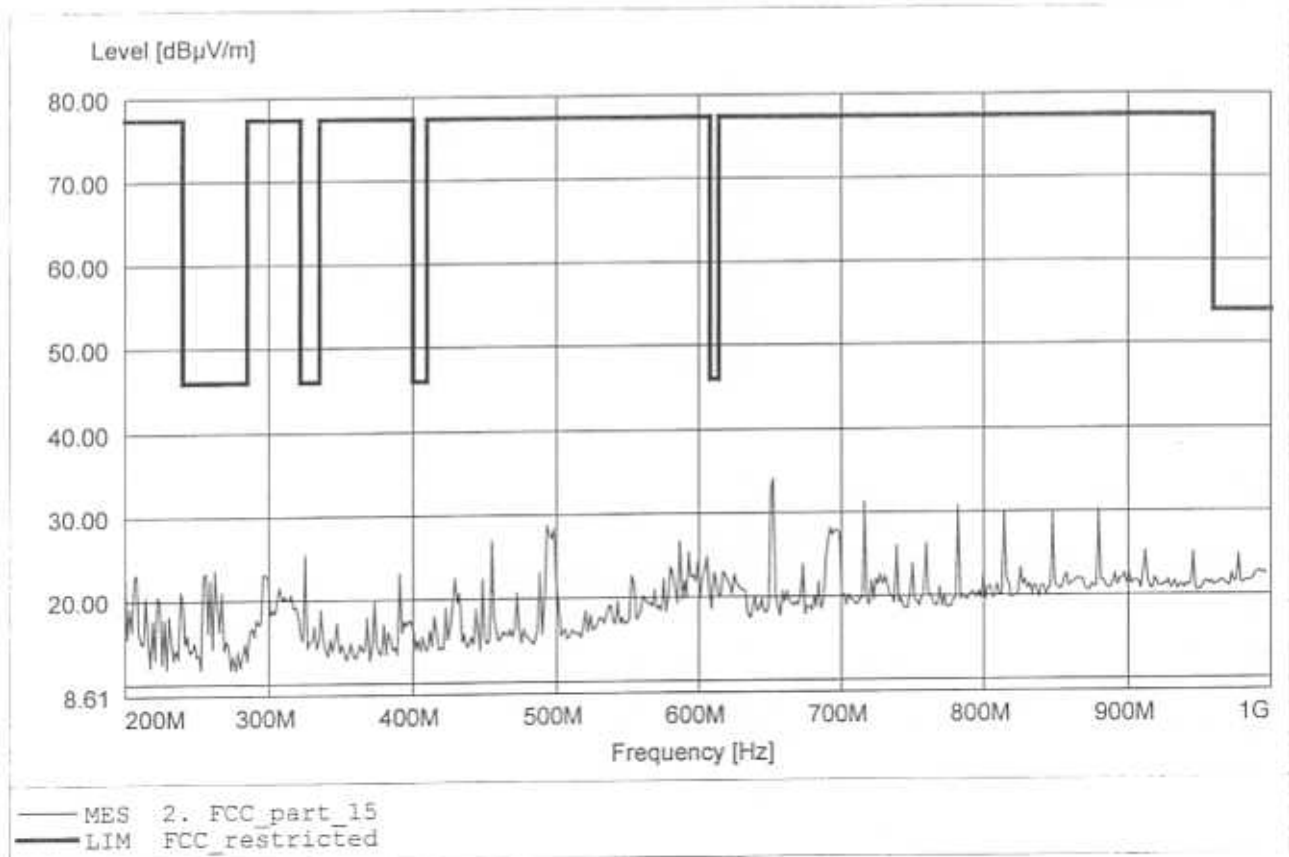
EUT : Bluetooth Module / Ant.: int. / Pmax / 2480 MHz  
Model: UGPZ2  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.  
Comment 2: Freq: 652.104MHz, Emax: 32.53dBµV/m, RBW: 100kHz





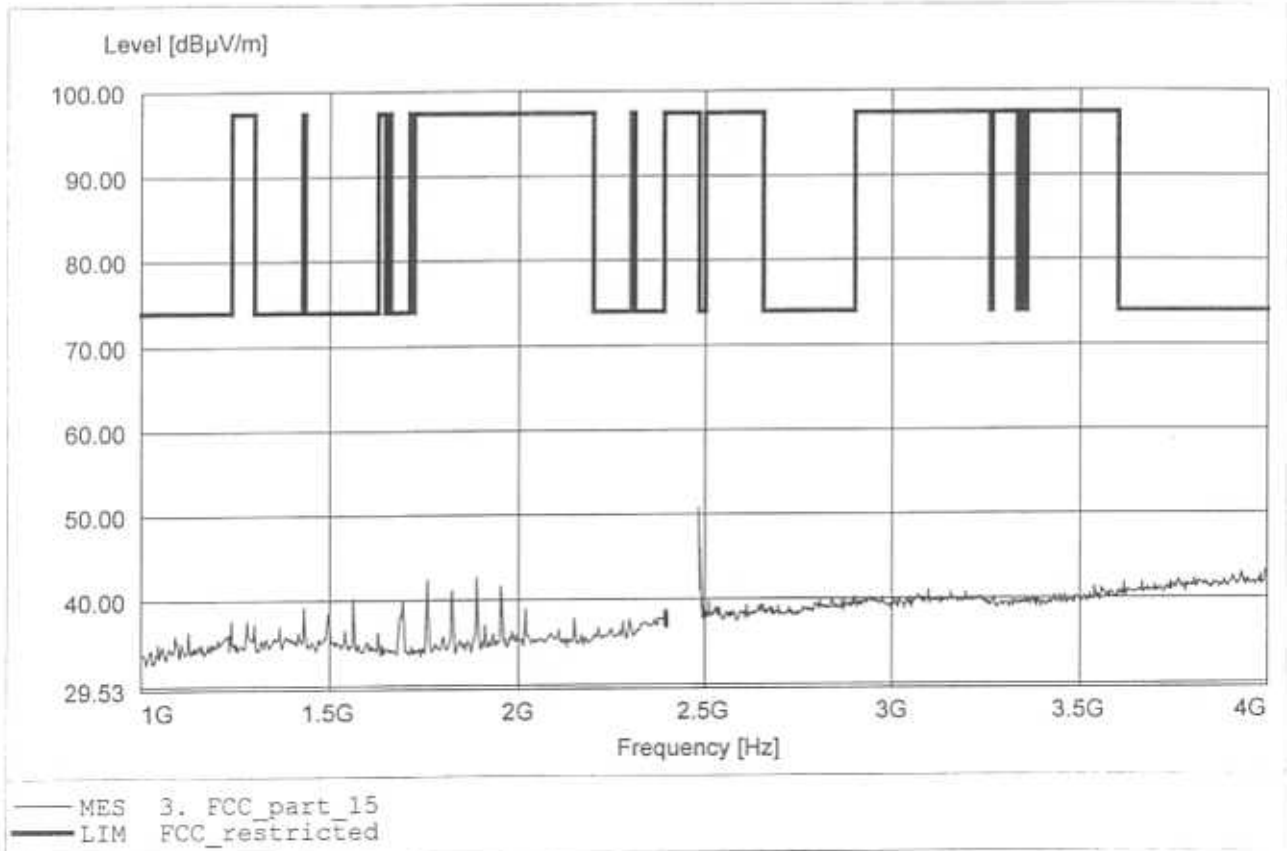
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2480 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15.247  
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.  
Comment 2: Freq: 652.104MHz, Emax: 34.13dBuV/m, RBW: 100kHz



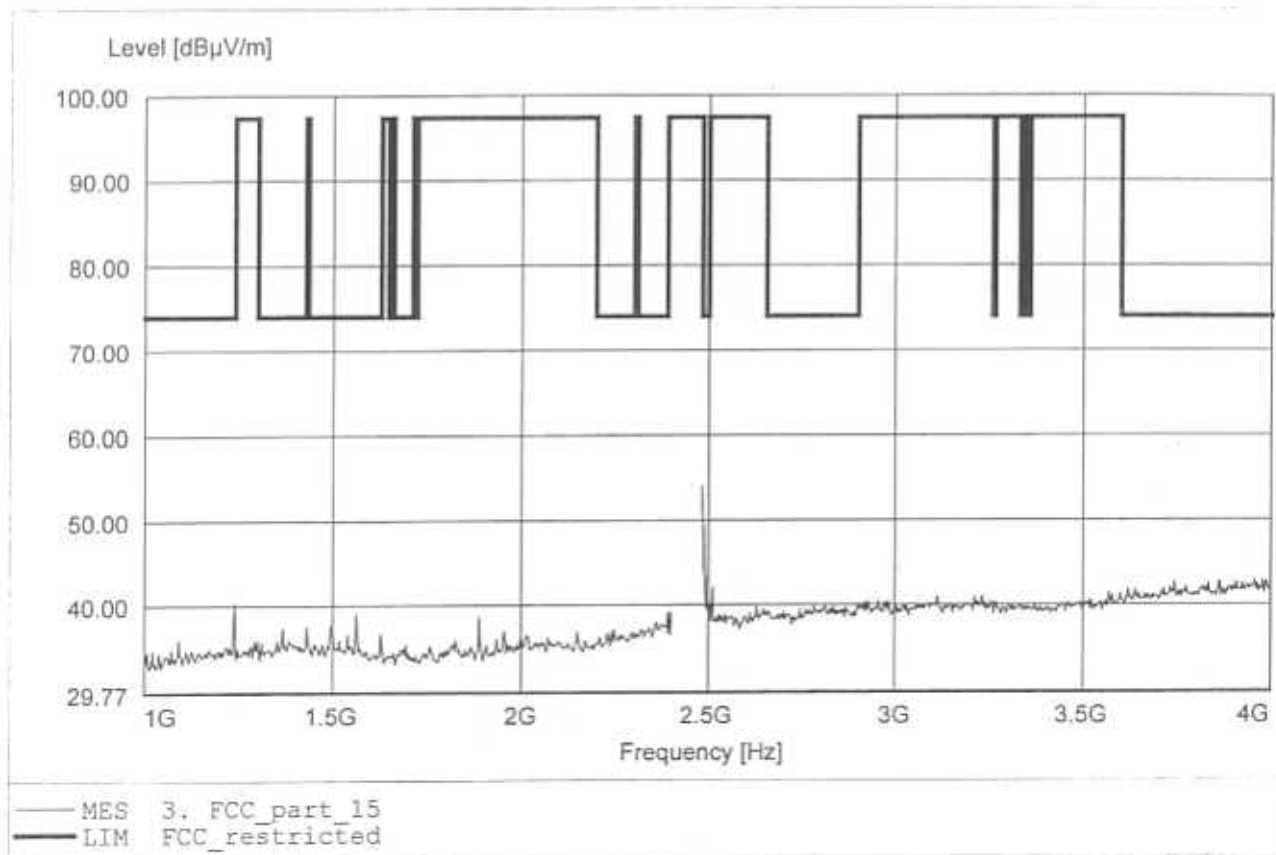
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Fmax / 2480 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq: 2.484GHz, Emax: 50.83dBµV/m, RBW: 1MHz



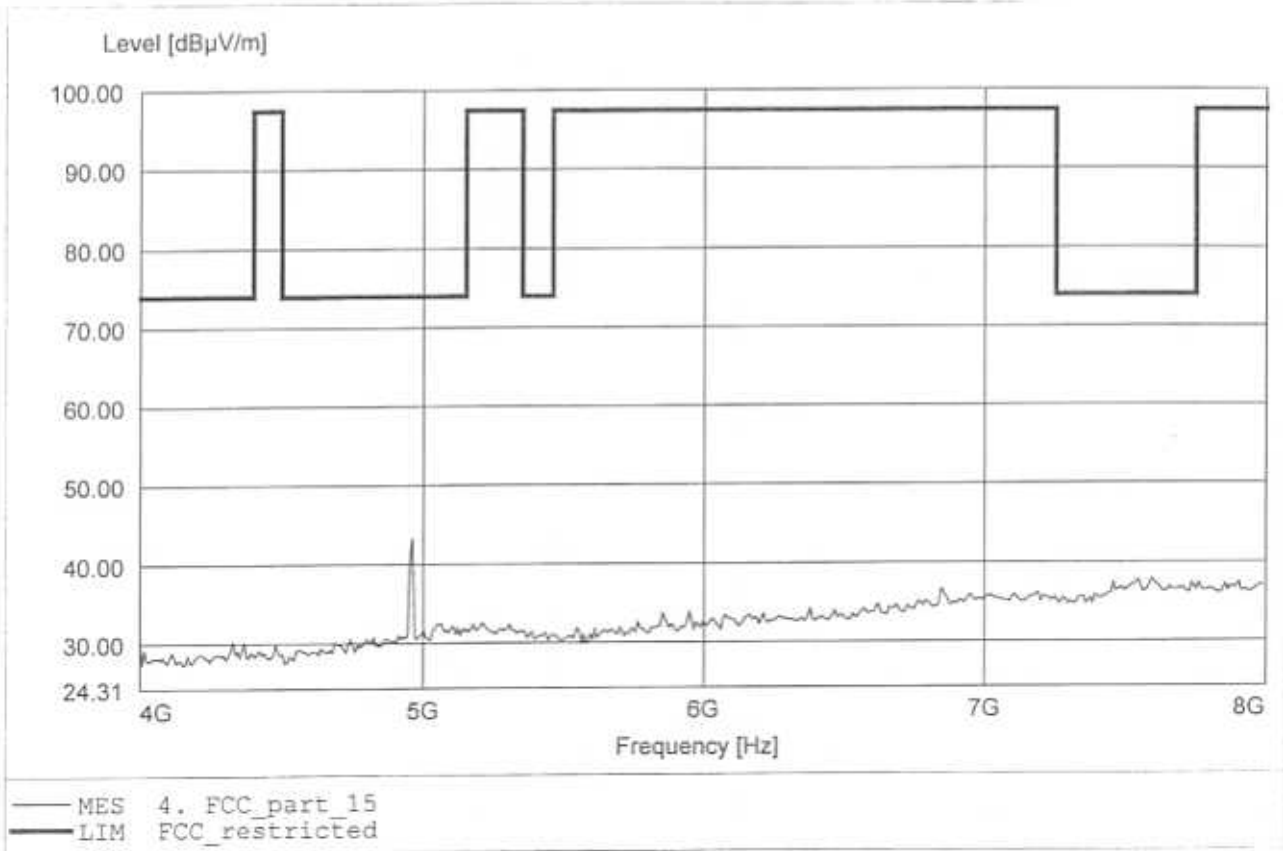
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Fmax / 2480 MHz  
Model: UGPZ2  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq: 2.484GHz, Emax: 54.15dBµV/m, RBW: 1MHz



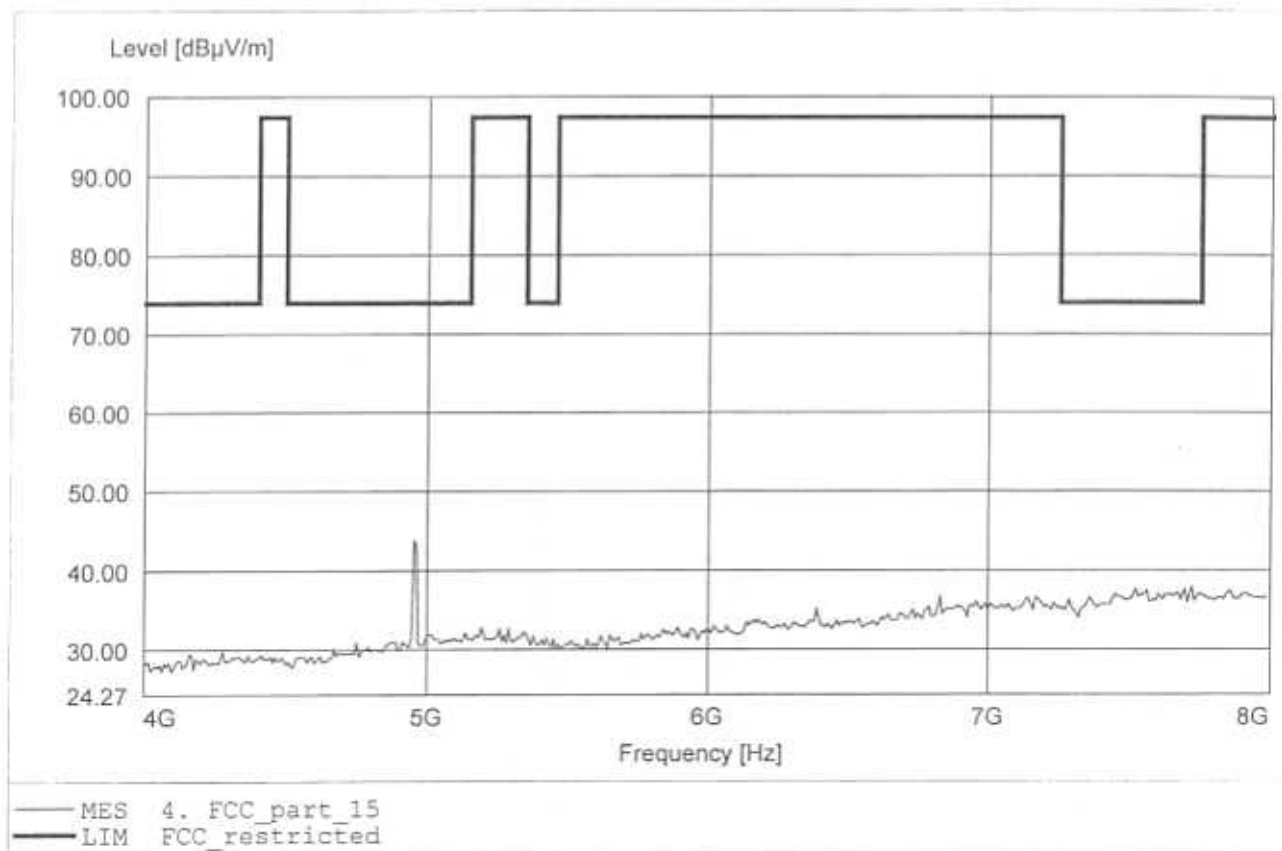
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2480 MHz  
Model: UGPZ2  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to S15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 4.962GHz, Emax: 43.36dBµV/m, RBW: 1MHz



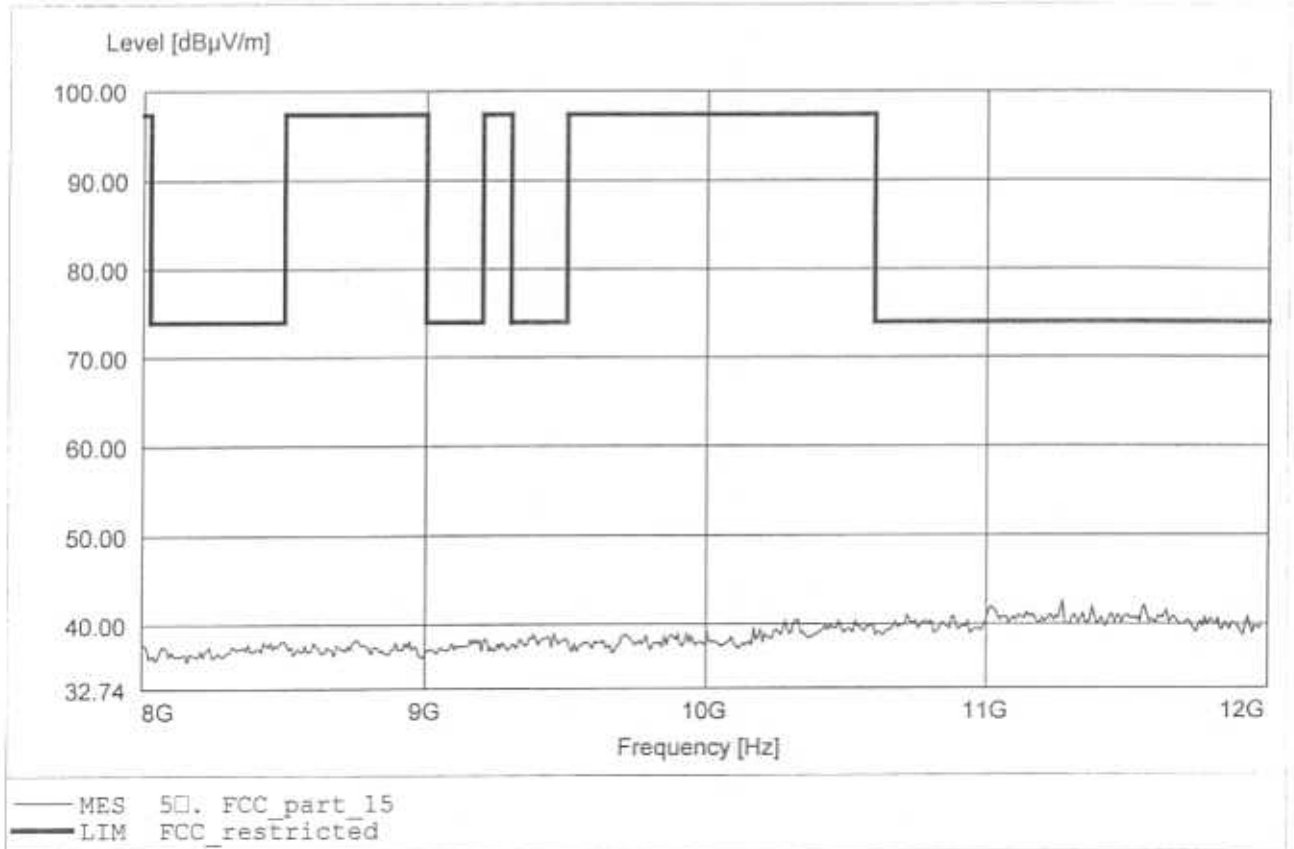
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2480 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to S15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 4.954GHz, Emax: 43.87dBuV/m, RBW: 1MHz



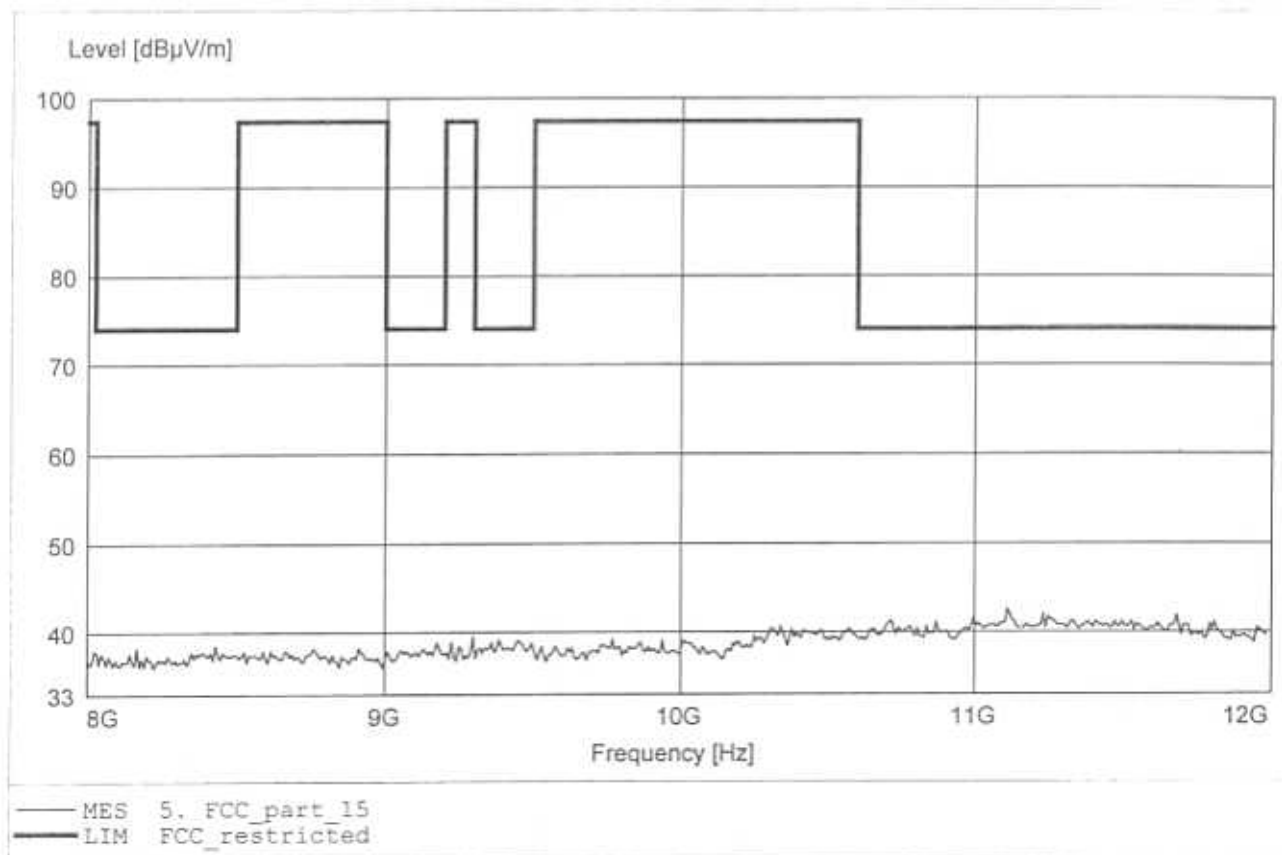
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2480 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to §15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 11.271GHz, Emax: 42.63dBμV/m, RBW: 1MHz



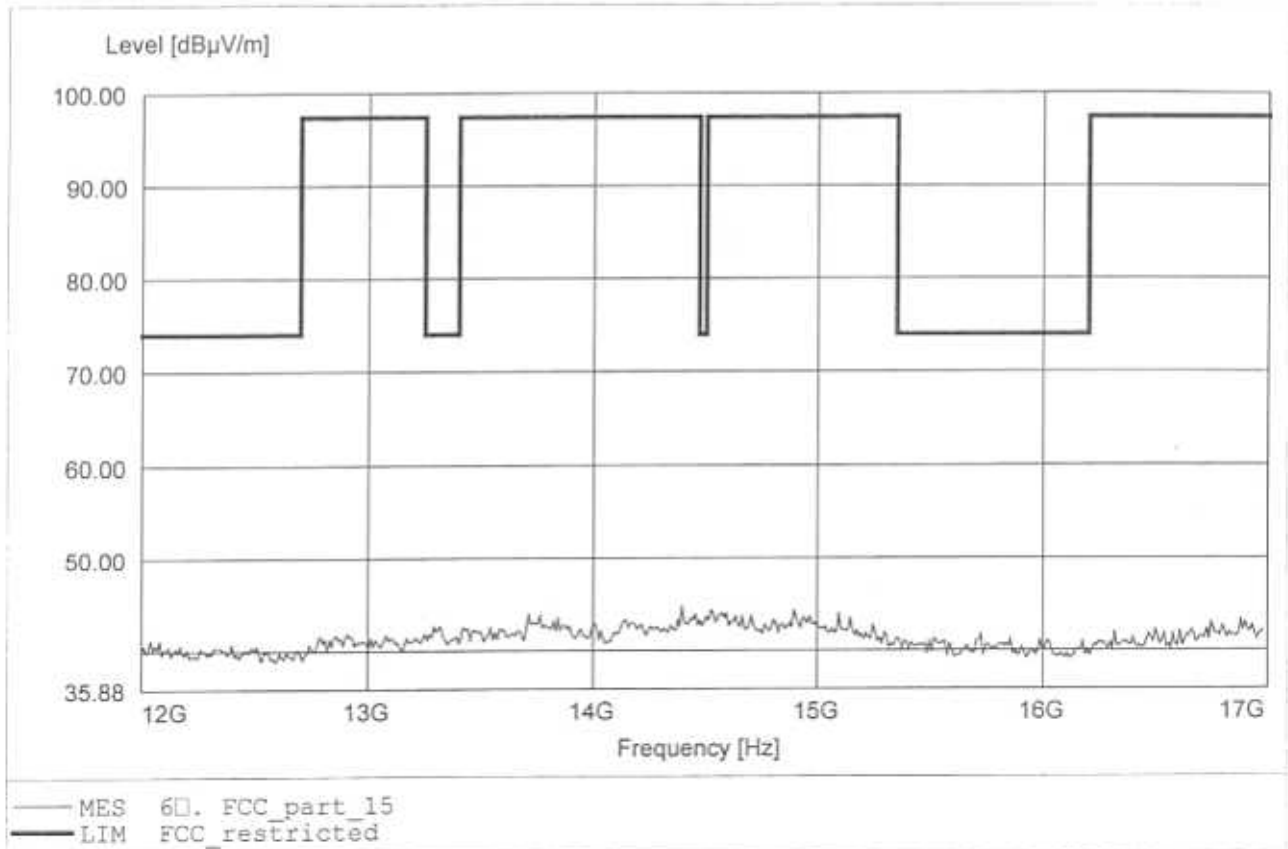
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2480 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to S15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 11.110GHz, Emax: 42.67dBuV/m, RBW: 1MHz



**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

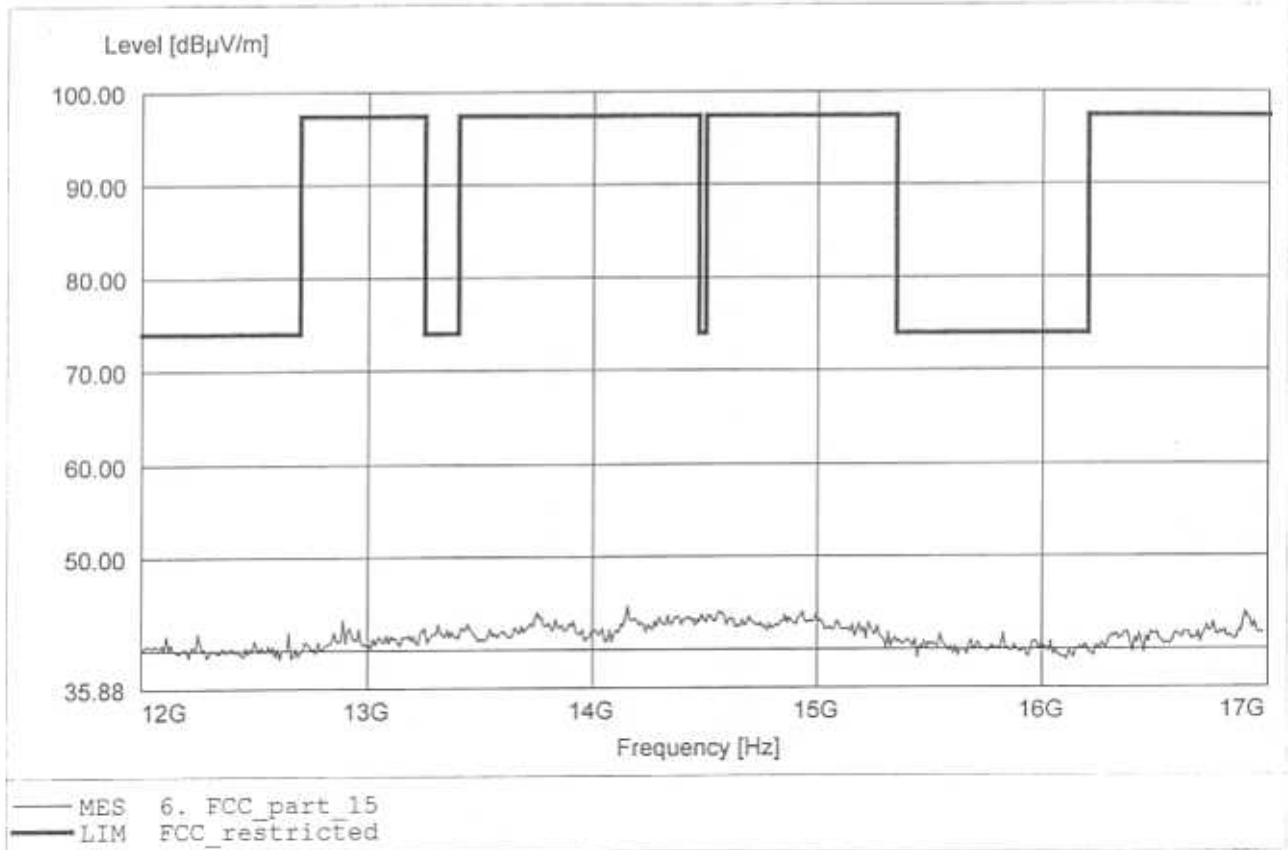
EUT : Bluetooth Module / Ant.: int. / Pmax / 2480 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to S15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 14.395GHz, Emax: 44.89dBμV/m, RBW: 1MHz





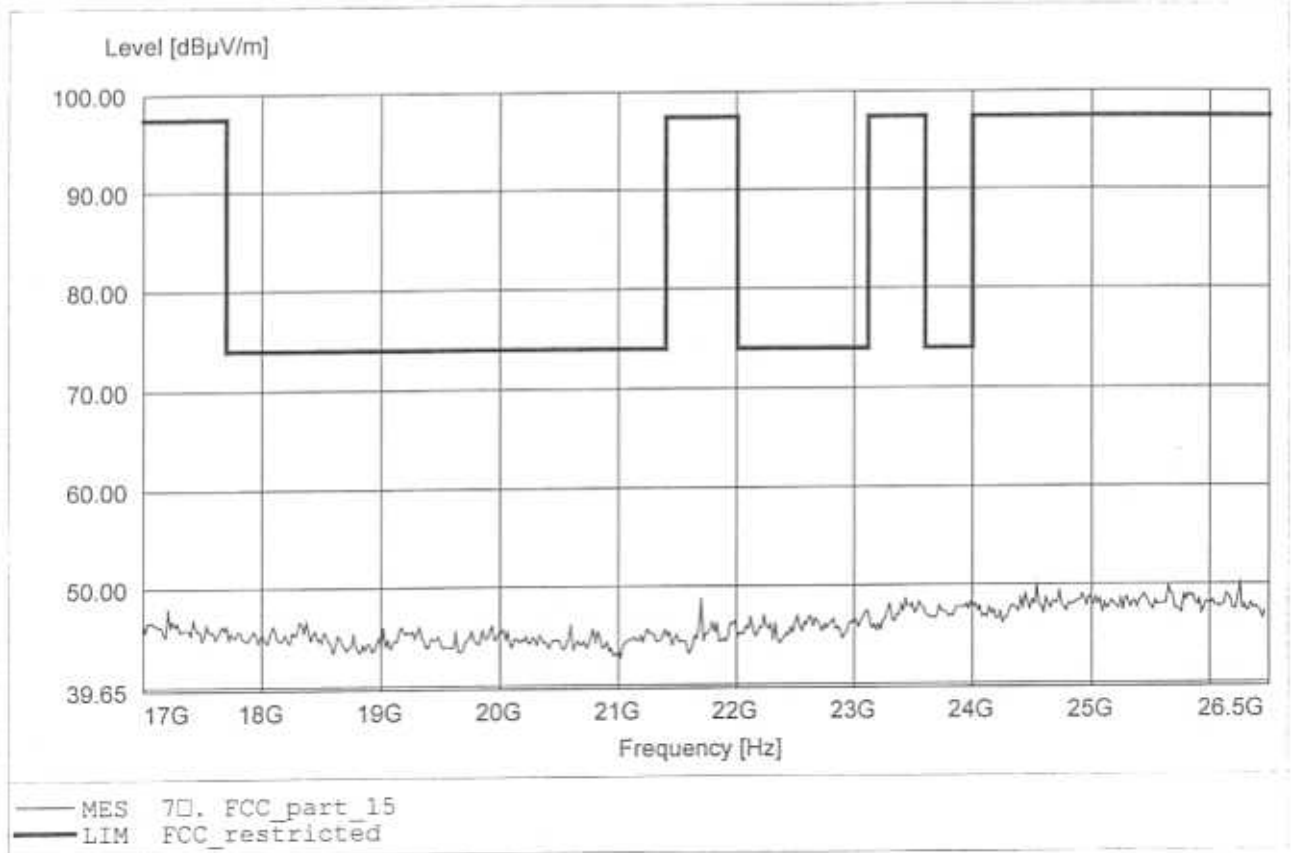
**Spurious emissions Field Strength**  
**FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2480 MHz  
Model: UGPZ2  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to S15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, ampl.+HP.  
Comment 2: Freq: 14.154GHz, Emax: 44.66dBµV/m, RBW: 1MHz



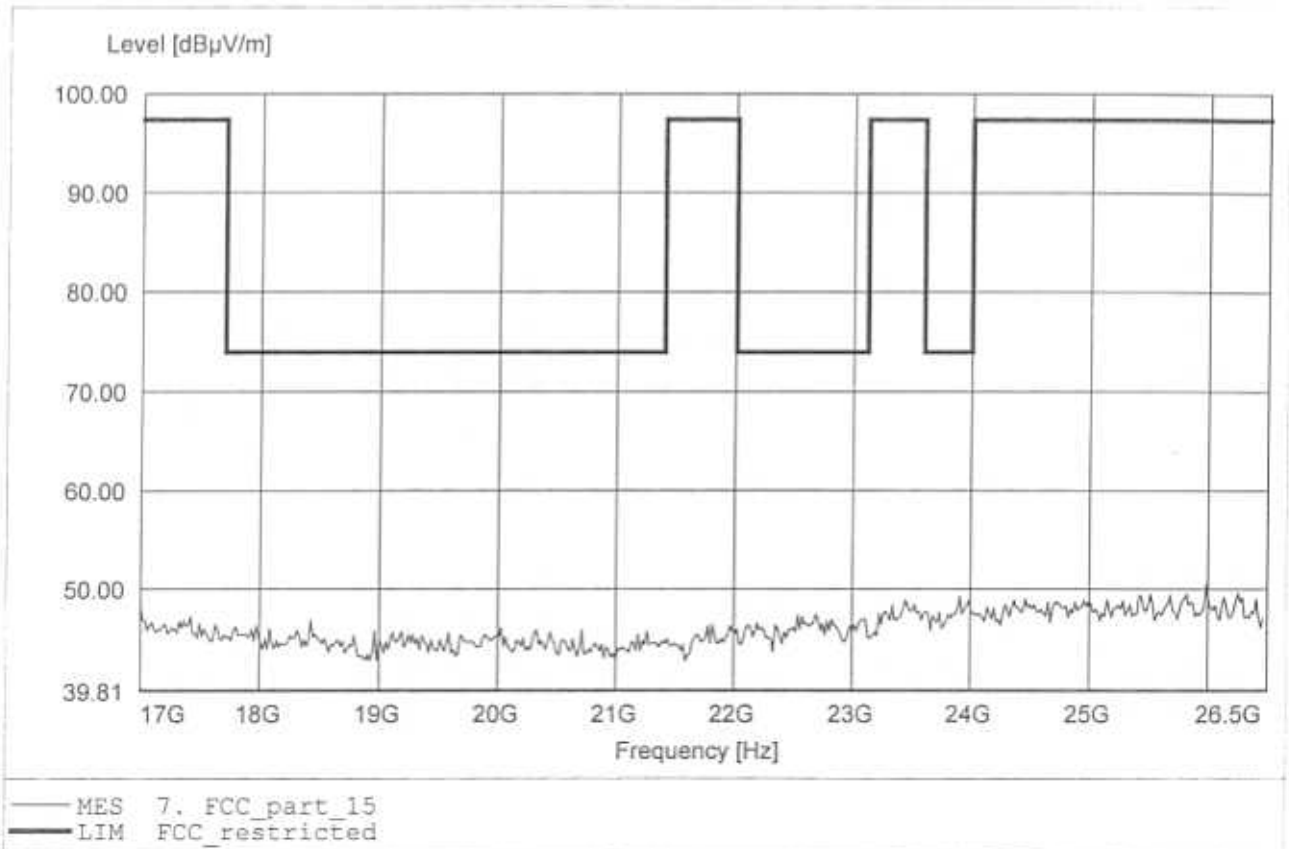
**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Emax / 2480 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to S15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Comment 2: Freq: 26.253GHz, Emax: 50.35dBuV/m, RBW: 1MHz



**Spurious emissions Field Strength  
FCC RULES PART 15, SUBPART C**

EUT : Bluetooth Module / Ant.: int. / Pmax / 2480 MHz  
Model: UGP22  
Approval Holder: Alps Electric Co., Ltd.  
Operating Condition: Tnom:23°C / Unom: 3.3 V DC  
Test Site / Operator: ETS / Mr. Hoppe  
Test Specification: according to S15247, Limit 20 dB up peak detector  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Comment 2: Freq: 25.986GHz, Emax: 50.59dBµV/m, RBW: 1MHz



## Appendix D

Spurious Emissions conducted - Transmitter operating

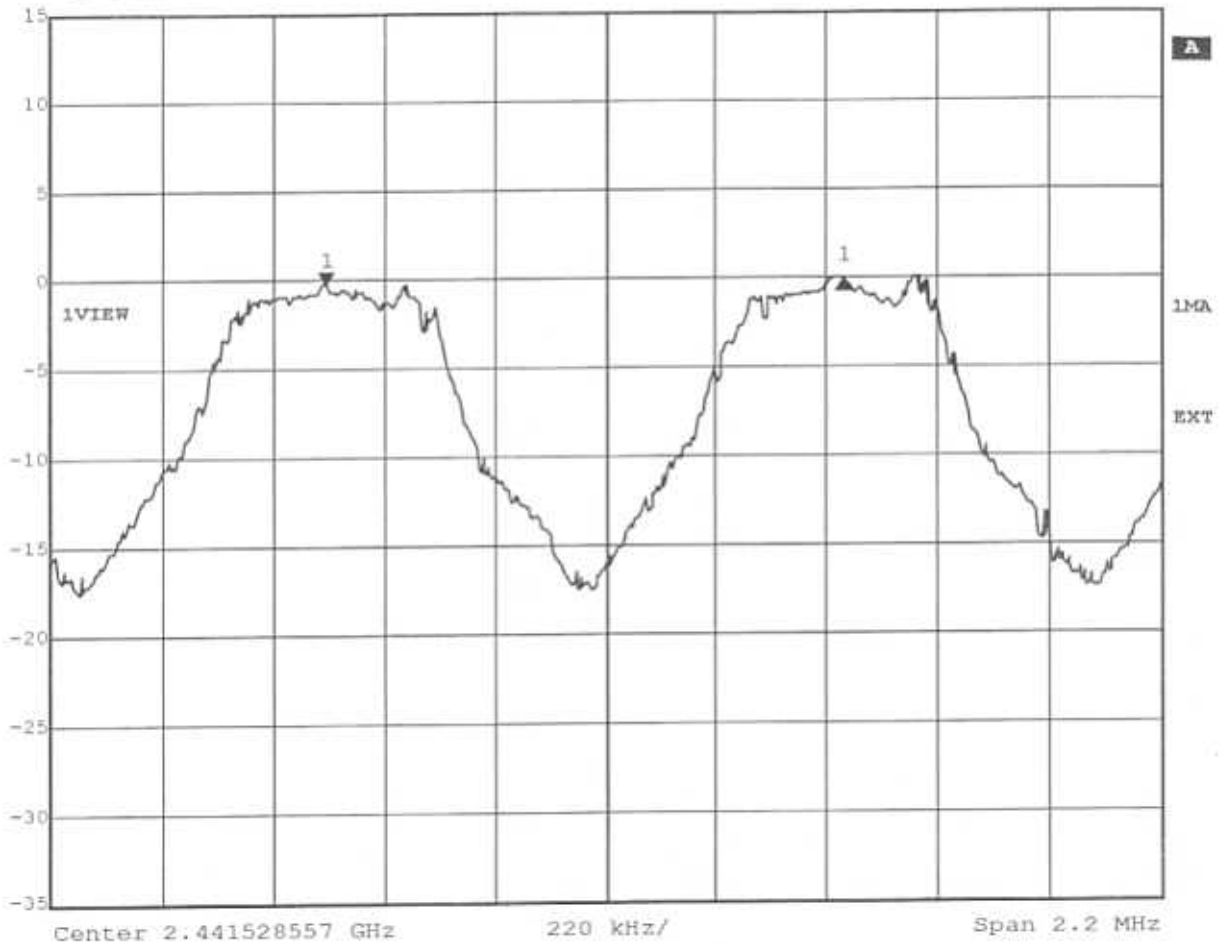


## Appendix E

Carrier Frequency Separation



Delta 1 [T1]	RBW	100 kHz	RF Att	40 dB
0.13 dB	VBW	100 kHz		
1.02725451 MHz	SWT	5 ms	Unit	dBm
Ref Lvl				
15 dBm				



Title: Carrier Frequency Separation  
Comment A: Alps Bluetooth Module UGP22  
Date: 13.JUN.2002 13:17:29

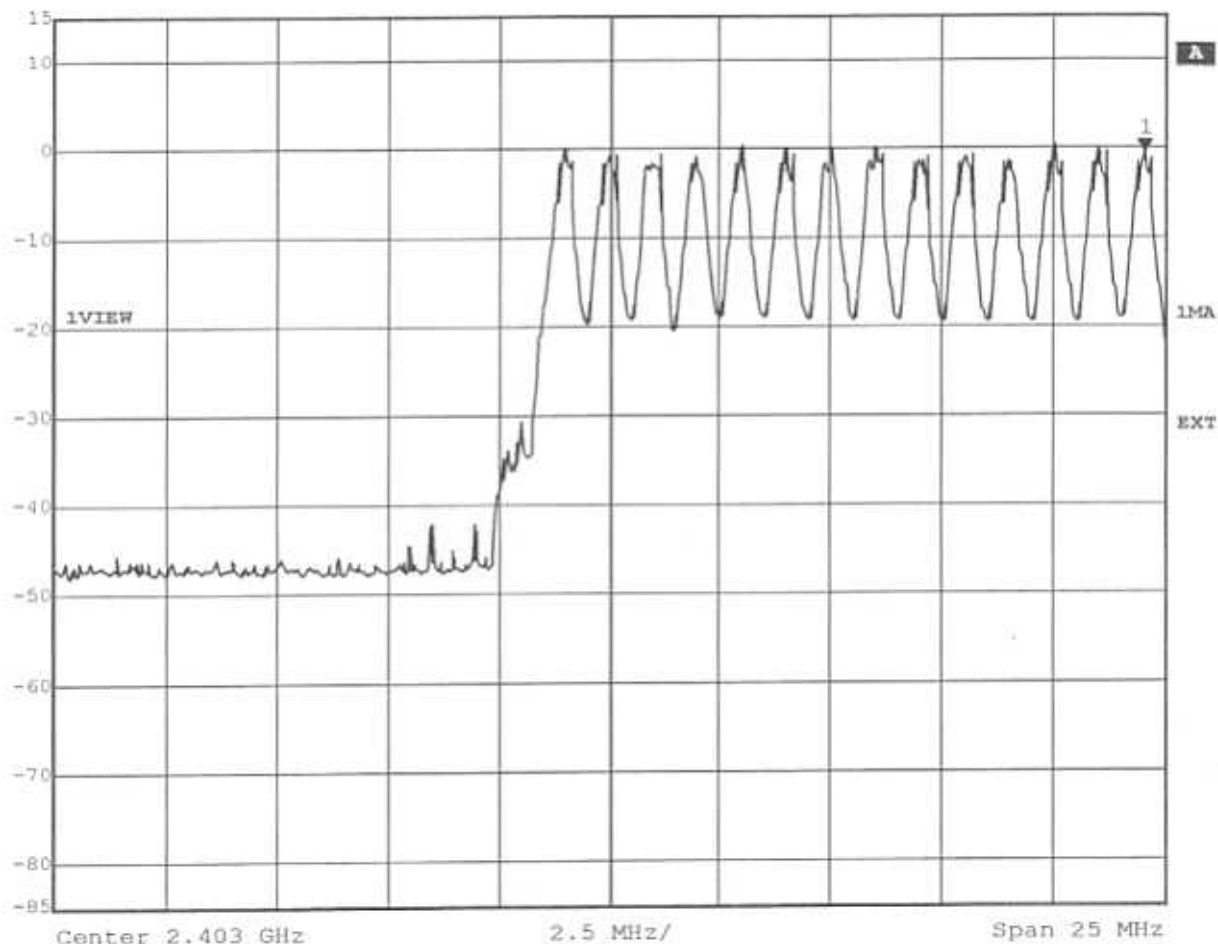


## Appendix F

Number of Hopping Frequencies



Marker 1 [T1] RBW 50 kHz RF Att: 40 dB  
Ref Lvl -0.70 dBm VBW 50 kHz  
15 dBm 2.41504910 GHz SWT 25 ms Unit dBm

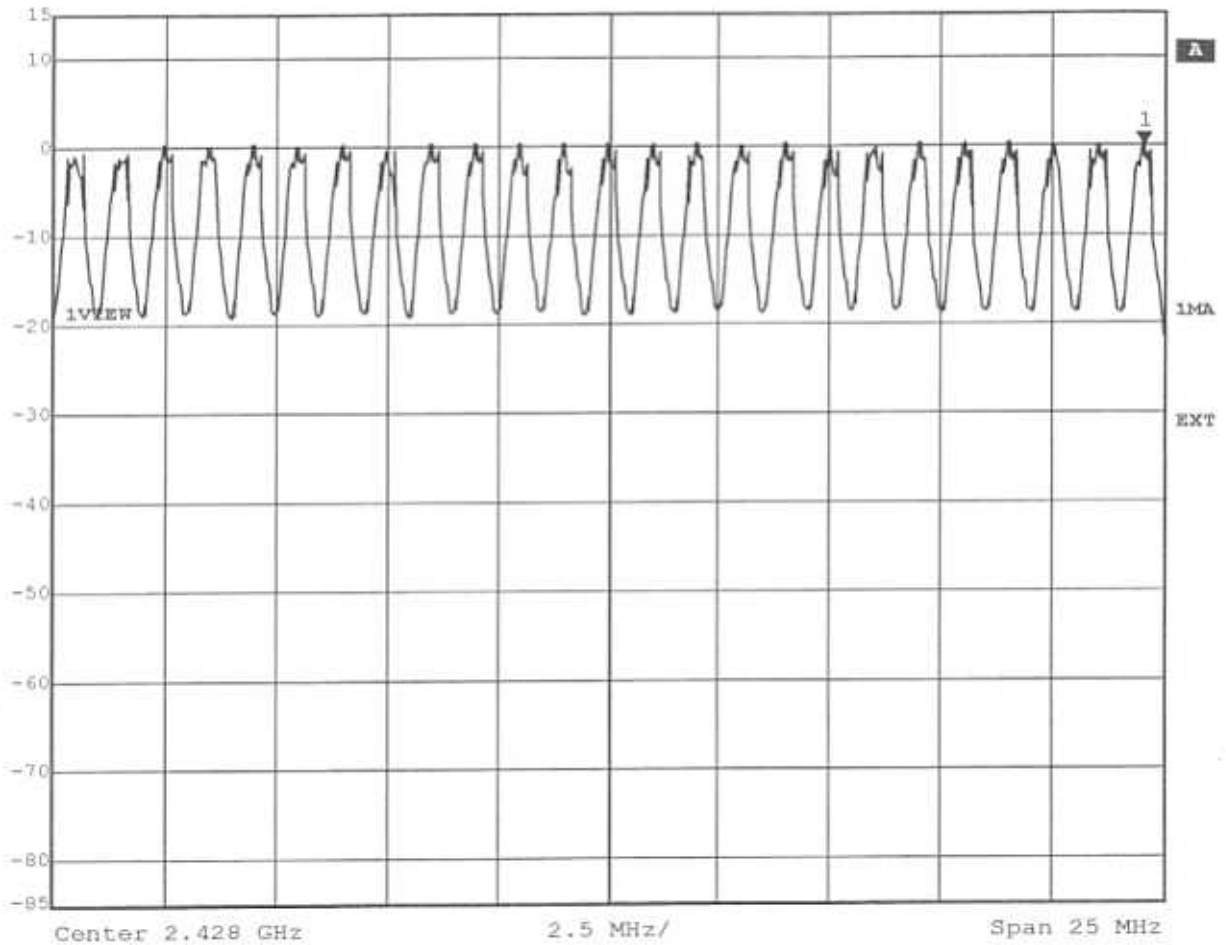


Title: Number of Hopping Frequencies Ch.: 0-13  
Comment A: Alps Bluetooth Module UGP22  
Date: 13.JUN.2002 13:27:59





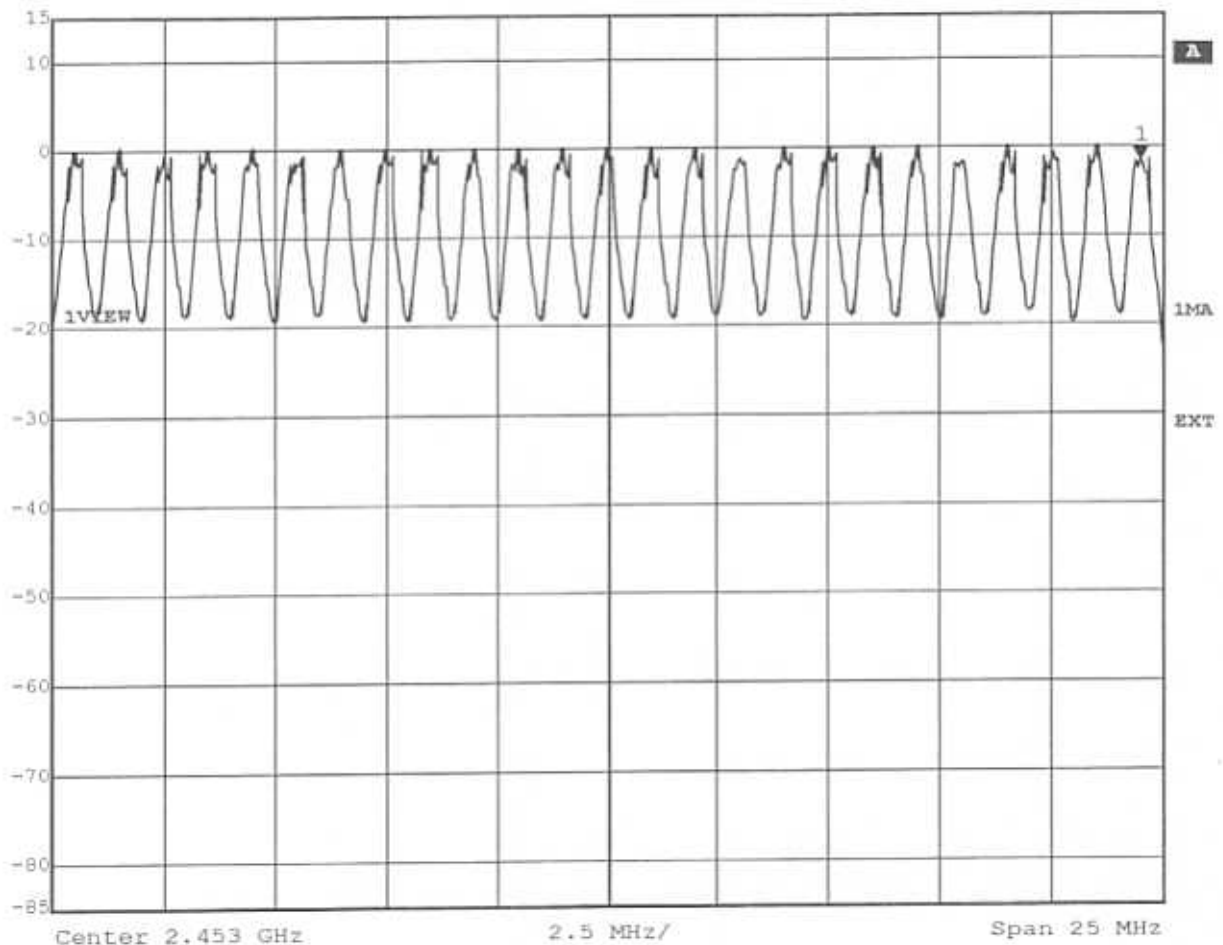
Marker 1 [T1] RBW 50 kHz RF Att 40 dB  
Ref Lvl -0.00 dBm VBW 50 kHz  
15 dBm 2.44004910 GHz SWT 25 ms Unit dBm



Title: Number of Hopping Frequencies Ch.: 14-38  
Comment A: Alps Bluetooth Module UGPZ2  
Date: 13.JUN.2002 13:50:18



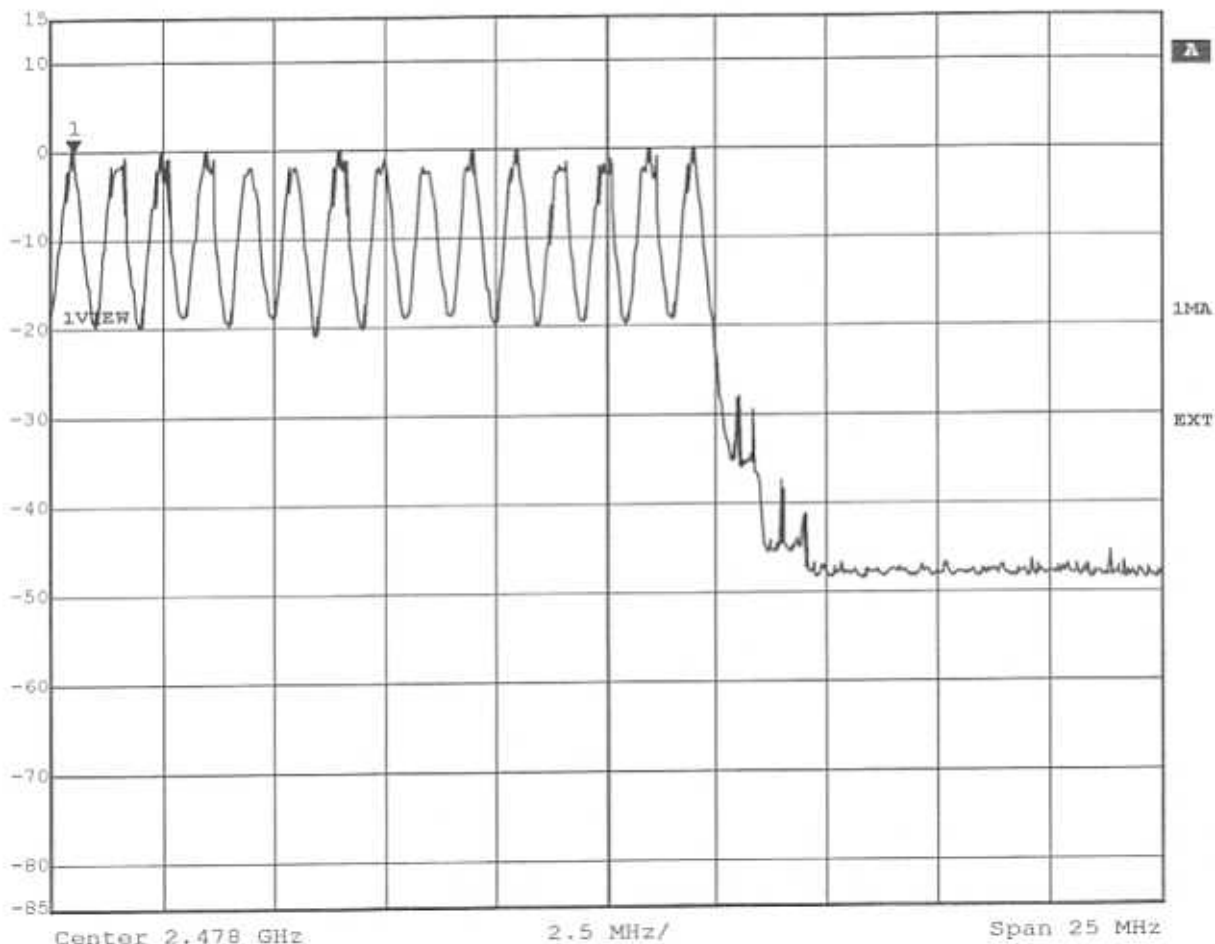
Marker 1 [T1] REW 50 kHz RF Att 40 dB  
Ref Lvl -1.64 dBm VBW 50 kHz  
15 dBm 2.46499900 GHz SWT 25 ms Unit dBm



Title: Number of Hopping Frequencies Ch.: 39-63  
Comment A: Alps Bluetooth Module UGP22  
Date: 13.JUN.2002 14:04:39



Marker 1 [T1] RBW 50 kHz RF Att 40 dB  
Ref Lvl -0.15 dBm VEW 50 kHz  
15 dBm 2.46600100 GHz SWT 25 ms Unit dBm

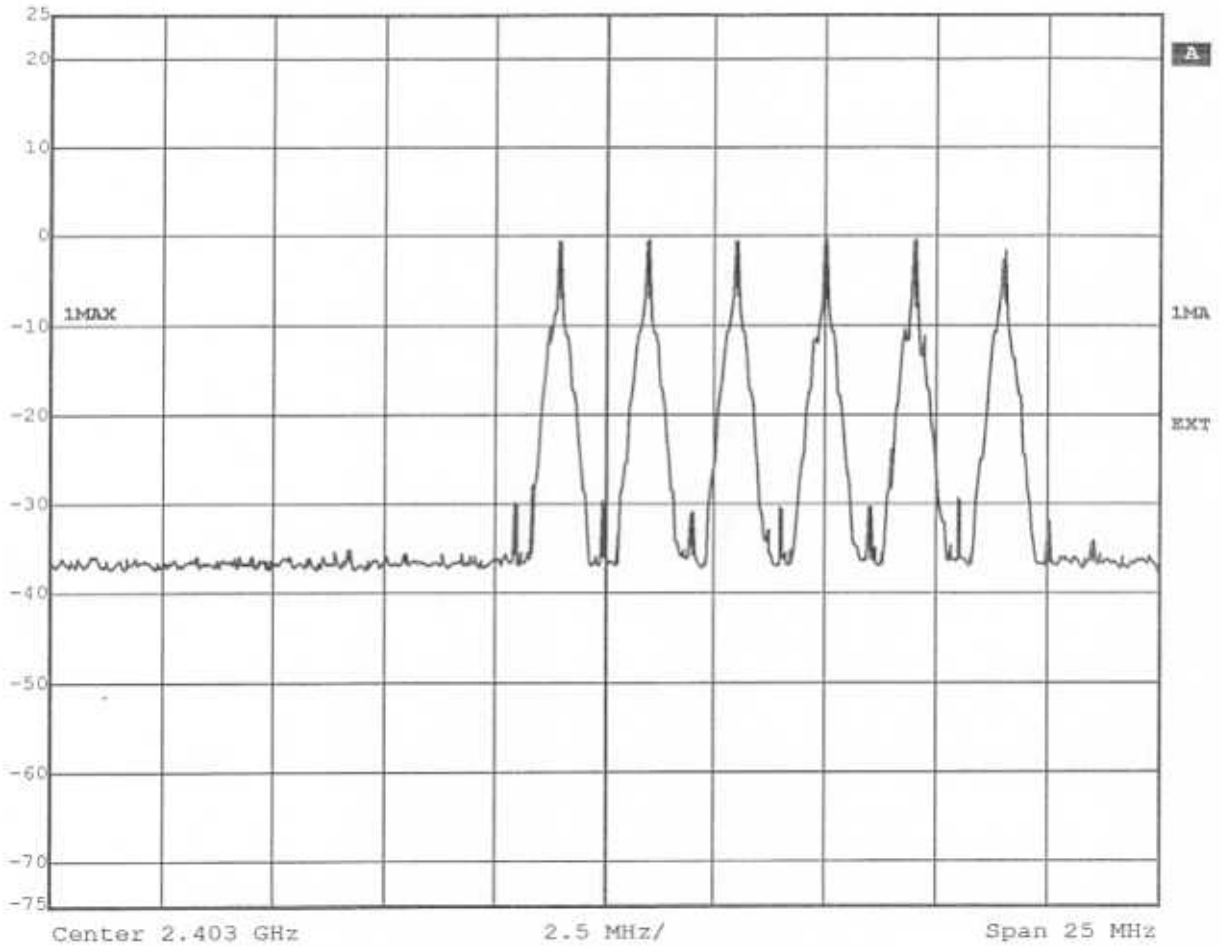


Title: Number of Hopping Frequencies Ch.: 64-78  
Comment A: Alps Bluetooth Module UGPZ2  
Date: 13.JUN.2002 14:11:01



Ref Lvl  
25 dBm

RBW 50 kHz RF Att 50 dB  
VBW 50 kHz  
SWT 25 ms Unit dBm

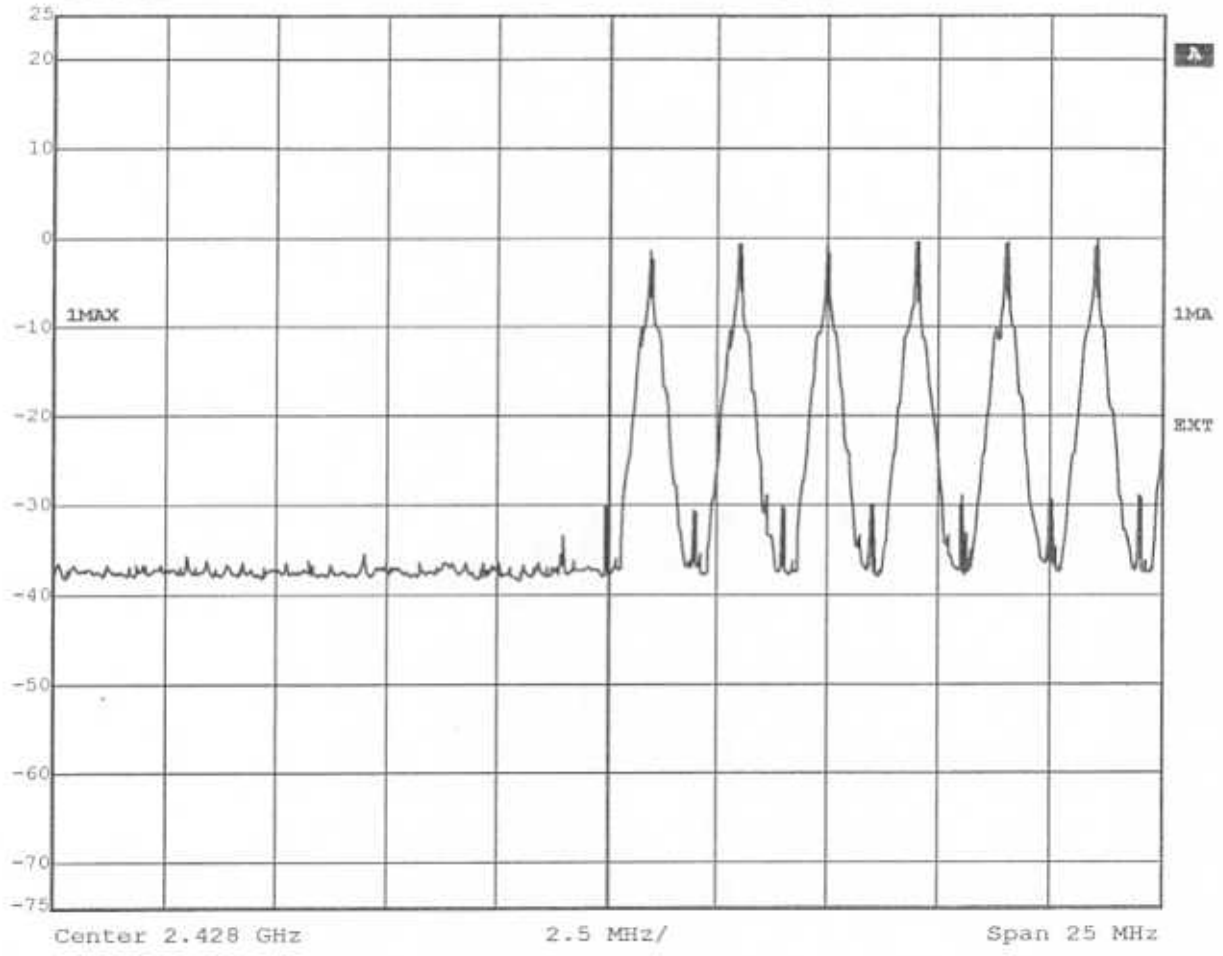


Title:      Number of Hopping Frequencies (Inquiry Mode)  
Comment A: Bluetooth Module UGP22  
Date:      29.AUG.2002 13:06:21



Ref Lvl  
25 dBm

RBW	50 kHz	RF Att	50 dB
VBW	50 kHz		
SWT	25 ms	Unit	dBm

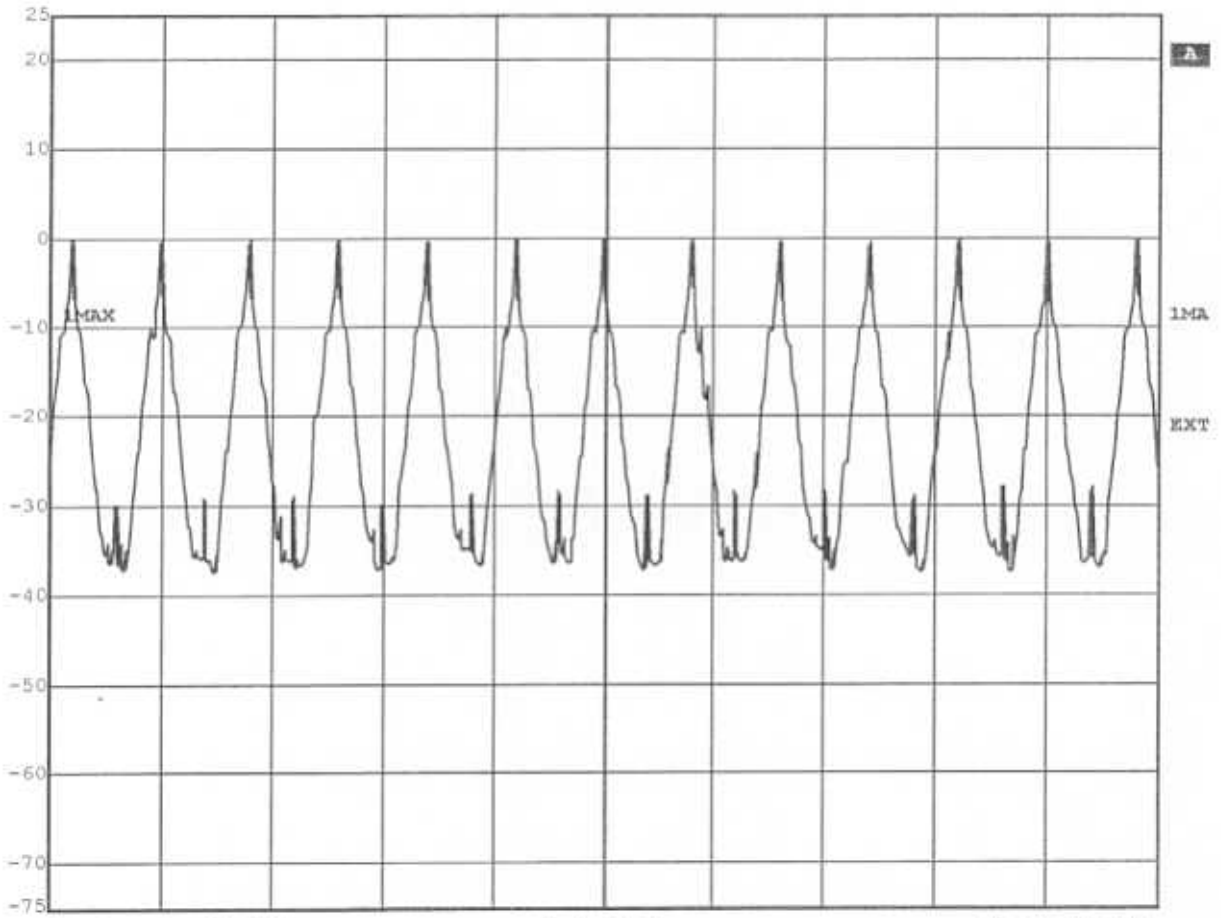


Title: Number of Hopping Frequencies (Inquiry Mode)  
Comment A: Bluetooth Module UGP22  
Date: 29.AUG.2002 13:12:14



Ref Lvl  
25 dBm

RBW 50 kHz RF Att 50 dB  
VBW 50 kHz  
SWT 25 ms Unit dBm



Center 2.453 GHz

2.5 MHz/

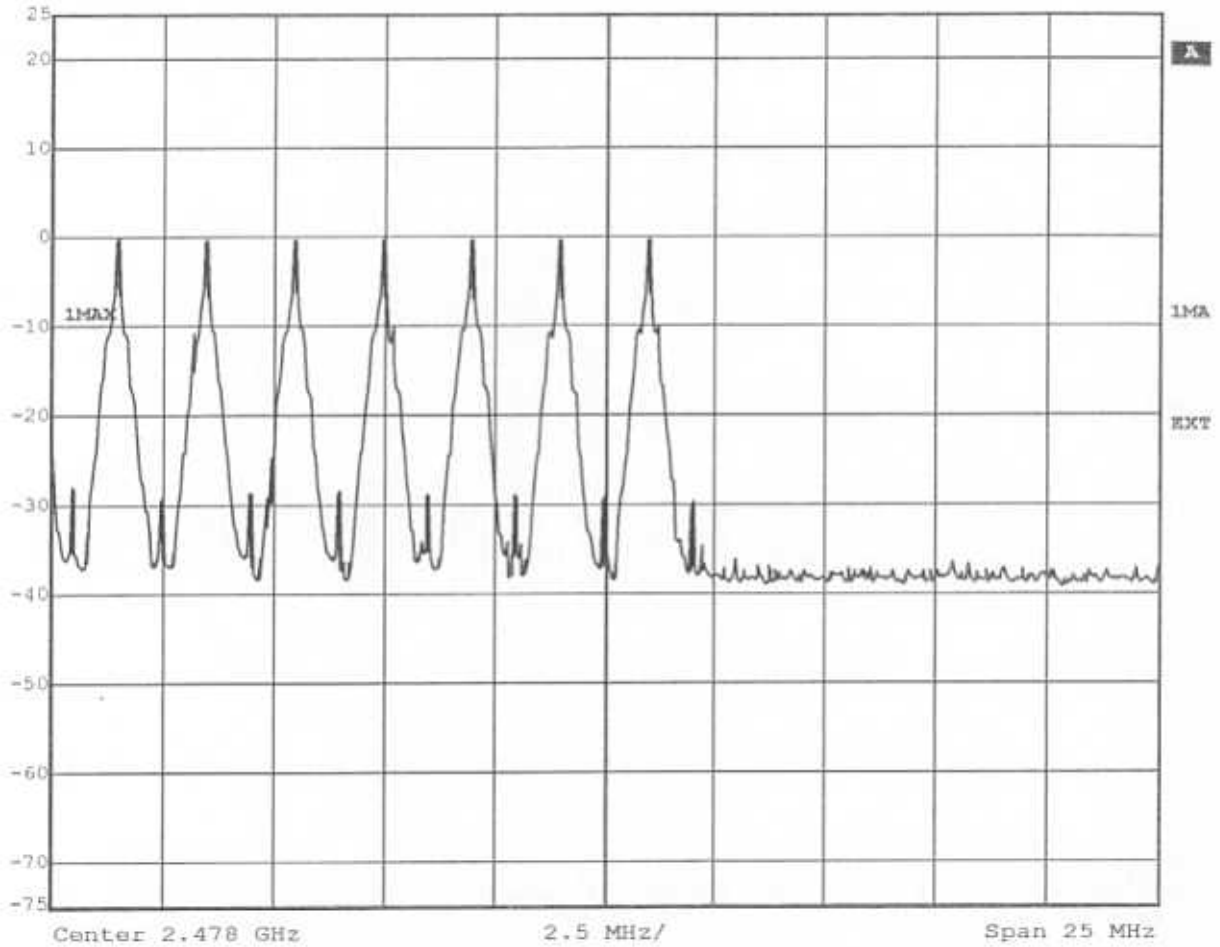
Span 25 MHz

Title: Number of Hopping Frequencies (Inquiry Mode)  
Comment A: Bluetooth Module UGP22  
Date: 29.AUG.2002 13:27:38



Ref Lvl  
25 dBm

RBW 50 kHz RF Att 50 dB  
VBW 50 kHz  
SWT 25 ms Unit dBm



Title: Number of Hopping Frequencies (Inquiry Mode)  
Comment A: Bluetooth Module UGPZ2  
Date: 29.AUG.2002 13:30:49

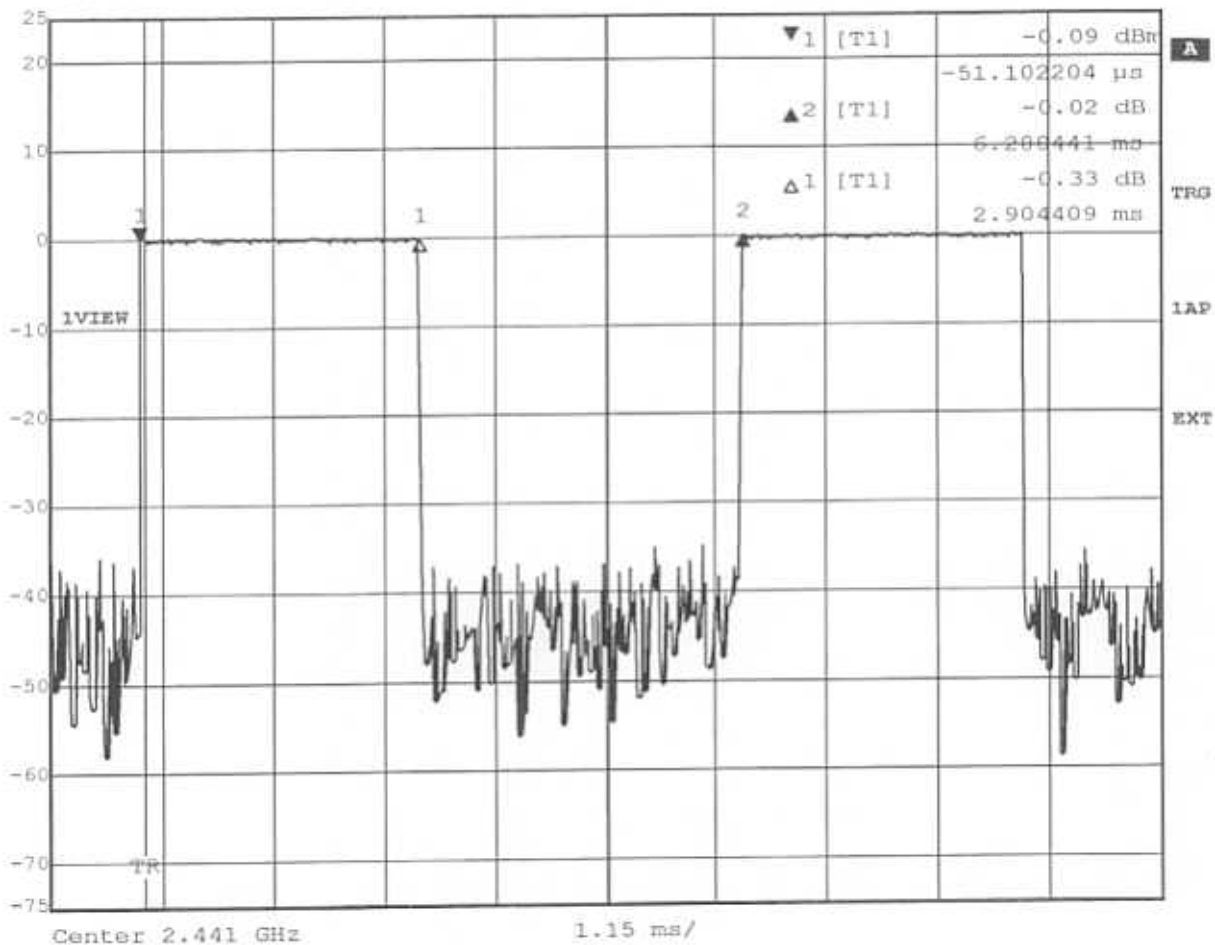
## Appendix G

Time of Occupancy (Dwell Time)





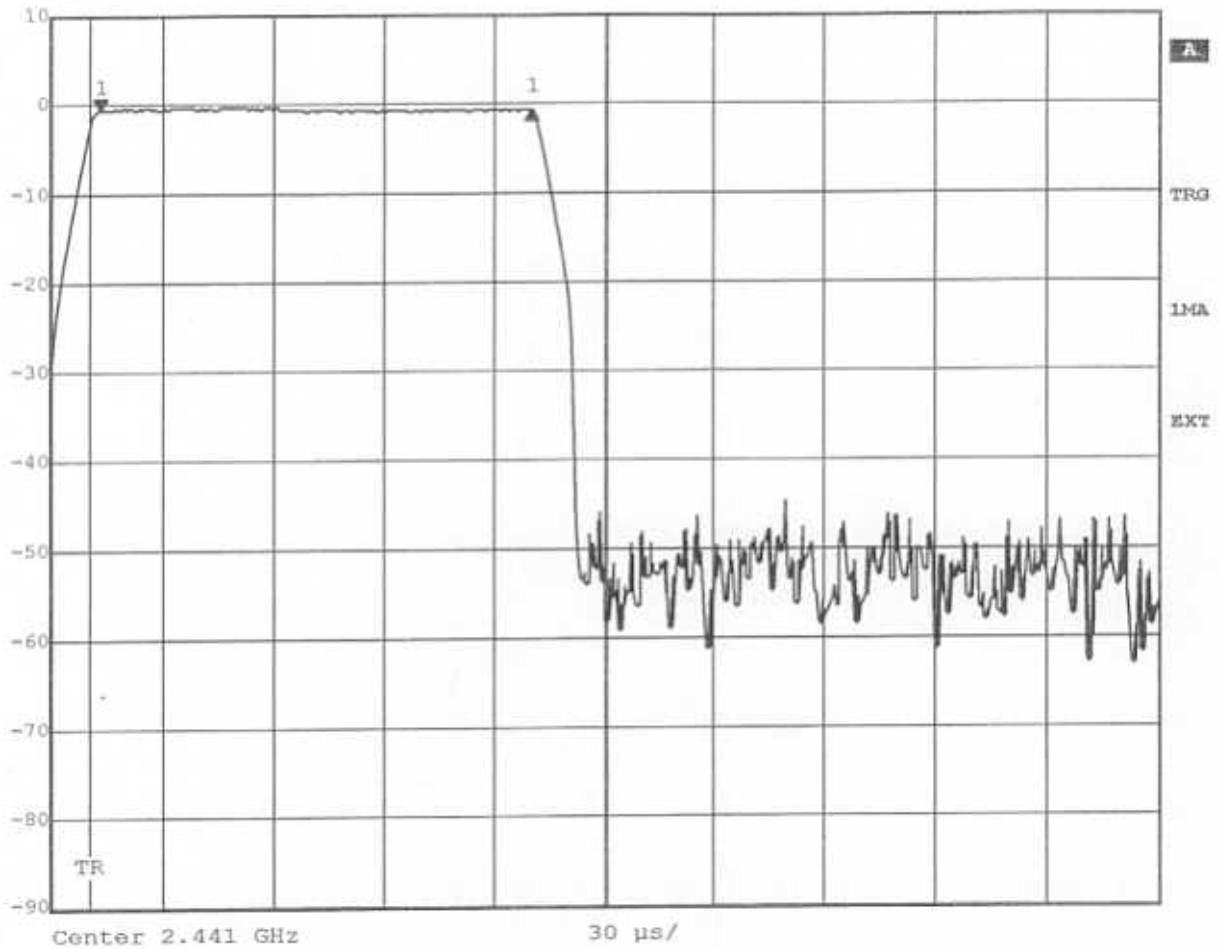
Delta 2 [T1] RBW 1 MHz RF Att 50 dB  
Ref Lvl -0.02 dB VEW 1 MHz  
25 dBm 6.280441 ms SWT 11.5 ms Unit dBm



Title: Dwell Time  
Comment A: Alps Bluetooth Module UGPZ2  
Date: 13.JUN.2002 12:59:16



Delta 1 [T1]	RBW	1 MHz	RF Att	40 dB
-0.12 dB	VBW	1 MHz		
117.098196 us	SWT	300 us	Unit	dBm



Title: Time of occupancy (Inquiry mode) 102 event \* 0.117ms=11.9ms  
Comment A: UGPZ2  
Date: 30.AUG.2002 15:22:50

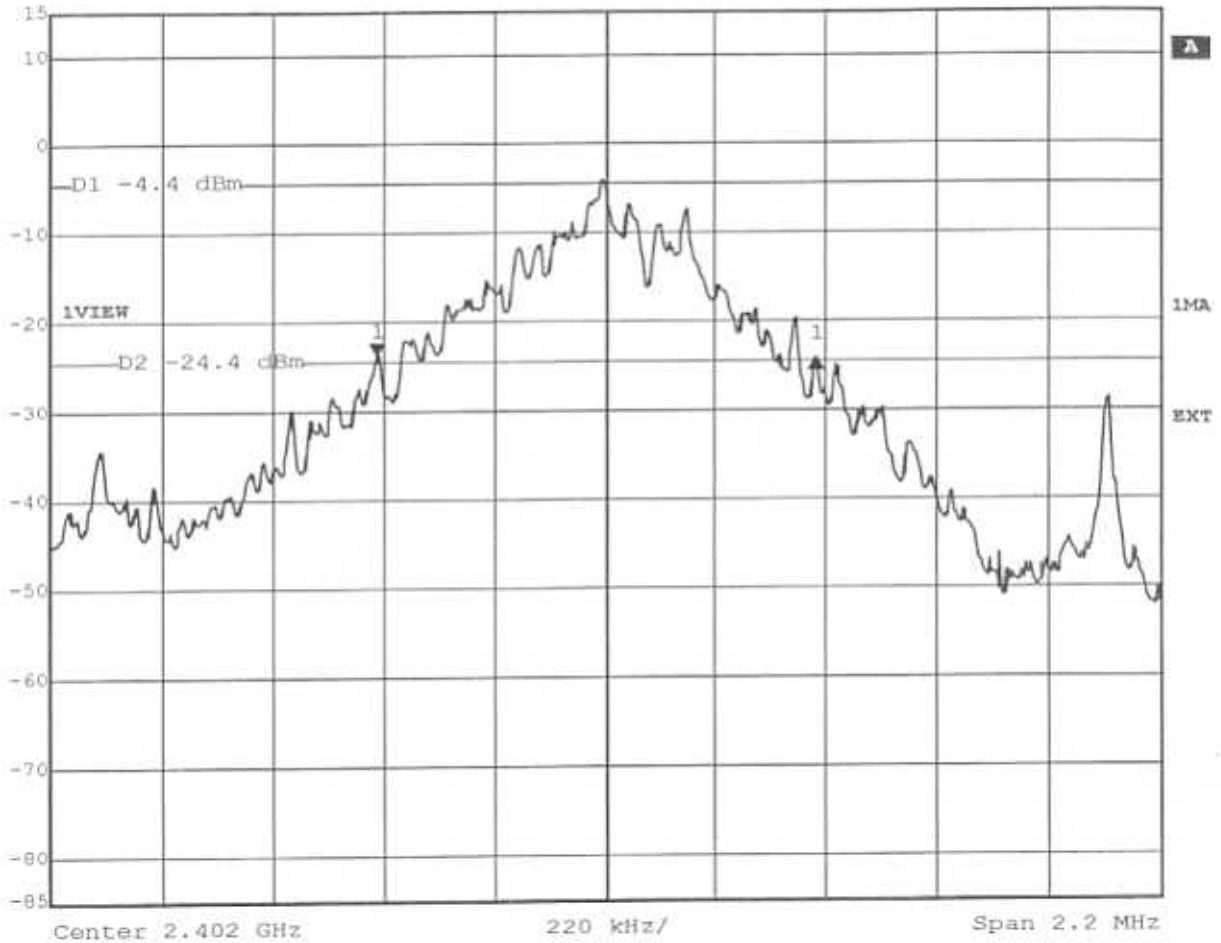


## Appendix H

20dB Bandwidth



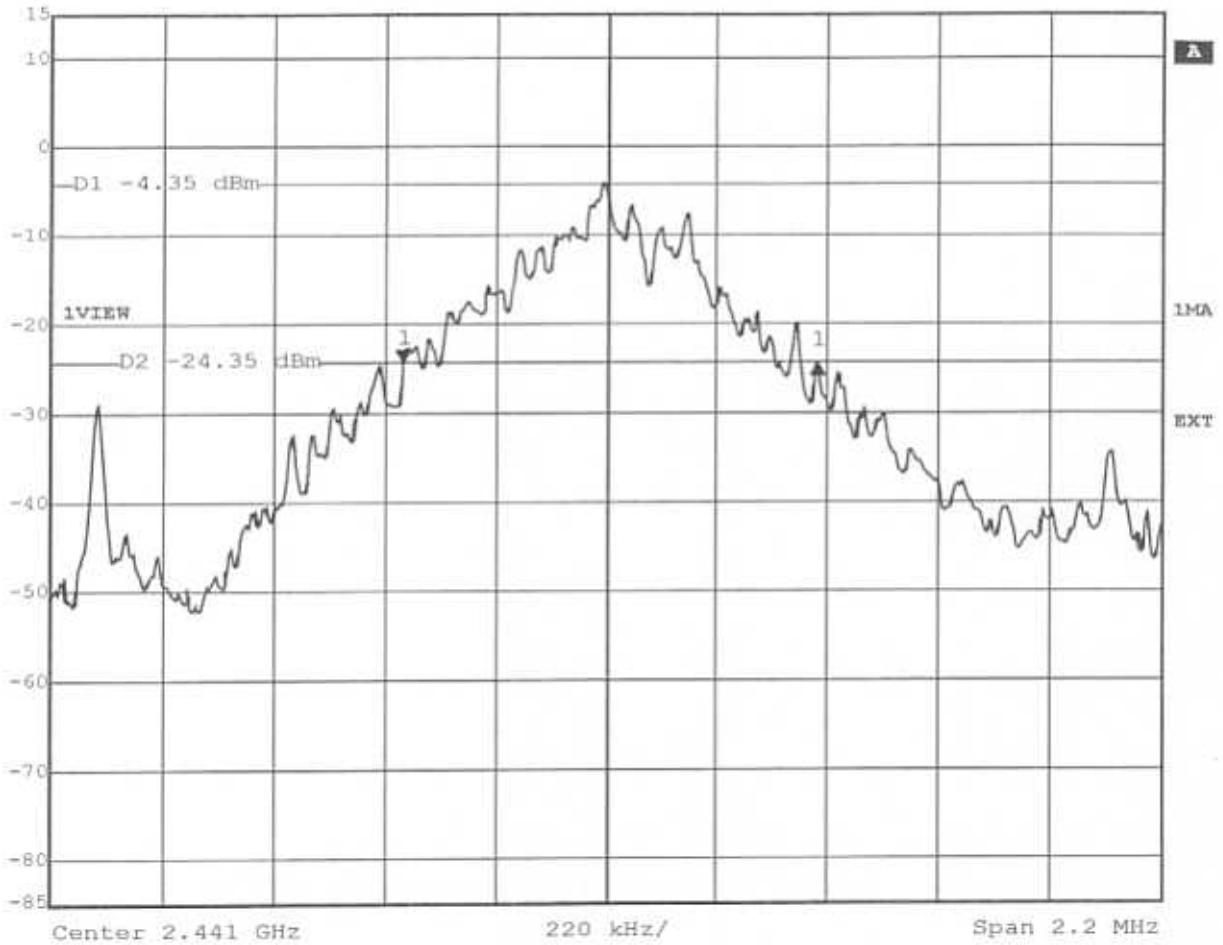
Delta 1 [T1]	RBW	10 kHz	RF Att.	40 dB
-0.50 dB	VBW	10 kHz		
872.94589178 kHz	SWT	56 ms	Unit	dBm
Ref Lvl				
15 dBm				



Title: 20 dB Bandwidth Ch.: 0  
Comment A: Alps Bluetooth Module UGP22  
Date: 13.JUN.2002 12:40:17



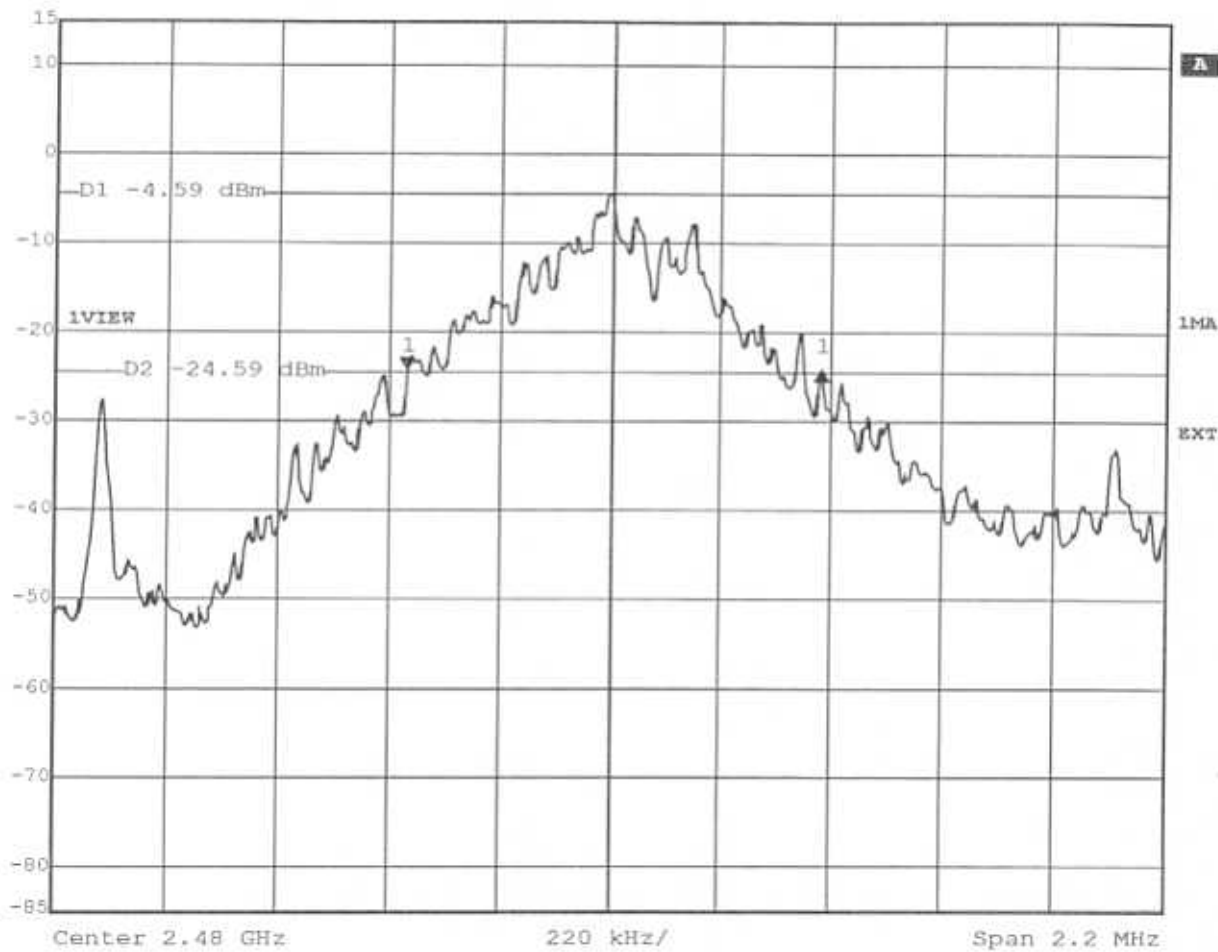
Delta 1 [T1]      RBW    10 kHz    RF Att    40 dB  
Ref Lvl            -0.22 dB    VBW    10 kHz  
15 dBm            824.44889780 kHz    SWT    56 ms    Unit        dBm



Title:      20 dB Bandwidth Ch.: 39  
Comment A: Alps Bluetooth Module UGP22  
Date:      13.JUN.2002 12:44:57



Delta 1 [T1] RBW 10 kHz RF Att 40 dB  
Ref Lvl -0.07 dB VBW 10 kHz  
15 dBm 824.44889779 kHz SWT 56 ms Unit dBm



Title: 20 dB Bandwidth Ch.: 78  
Comment A: Alps Bluetooth Module UGP22  
Date: 13.JUN.2002 12:47:21

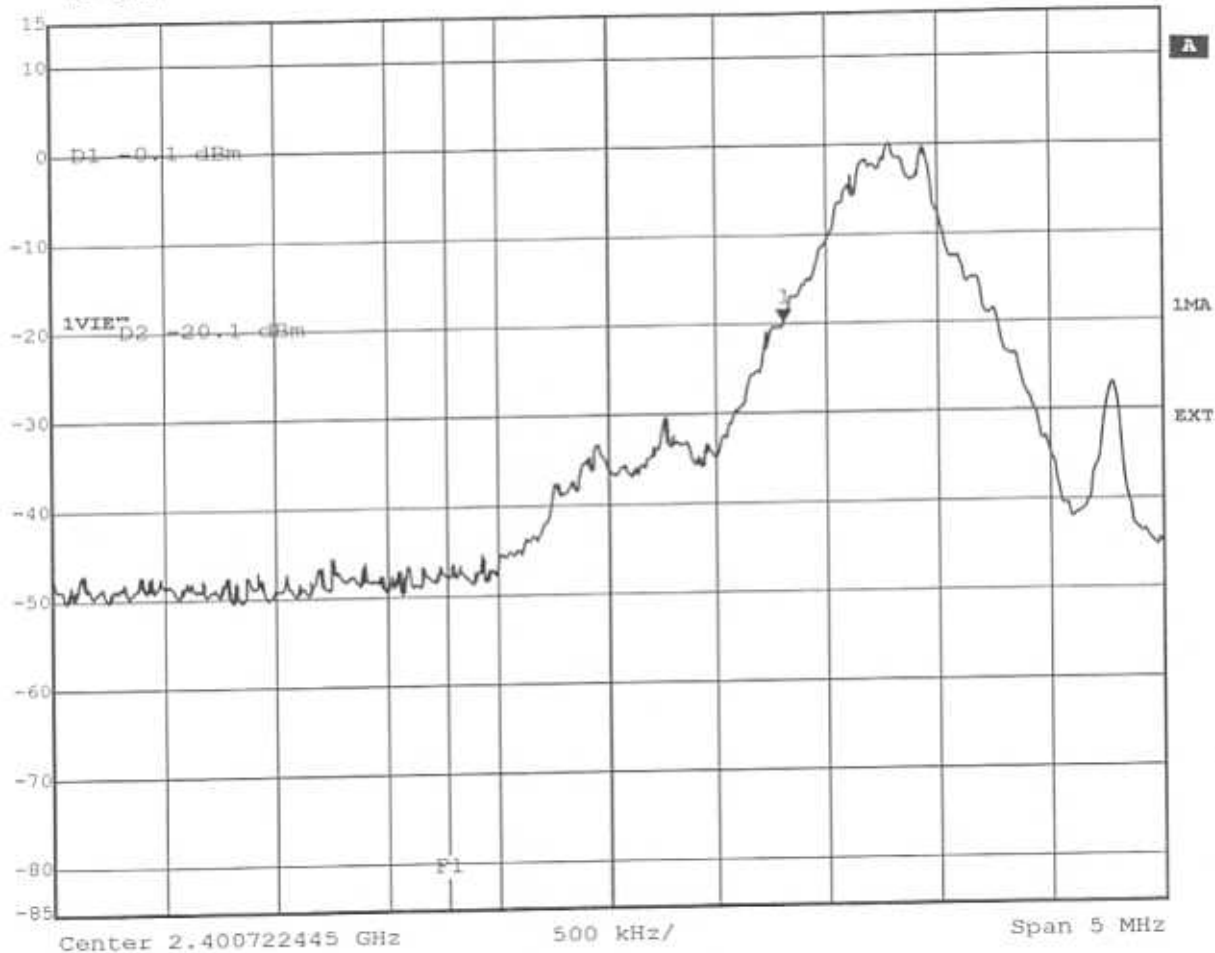


## Appendix I

Band-edge Compliance of RF Emissions



Marker 1 [T1] RBW 50 kHz RF Att 40 dB  
Ref Lvl -19.96 dBm VBW 50 kHz  
15 dBm 2.40152906 GHz SWT 5 ms Unit dBm

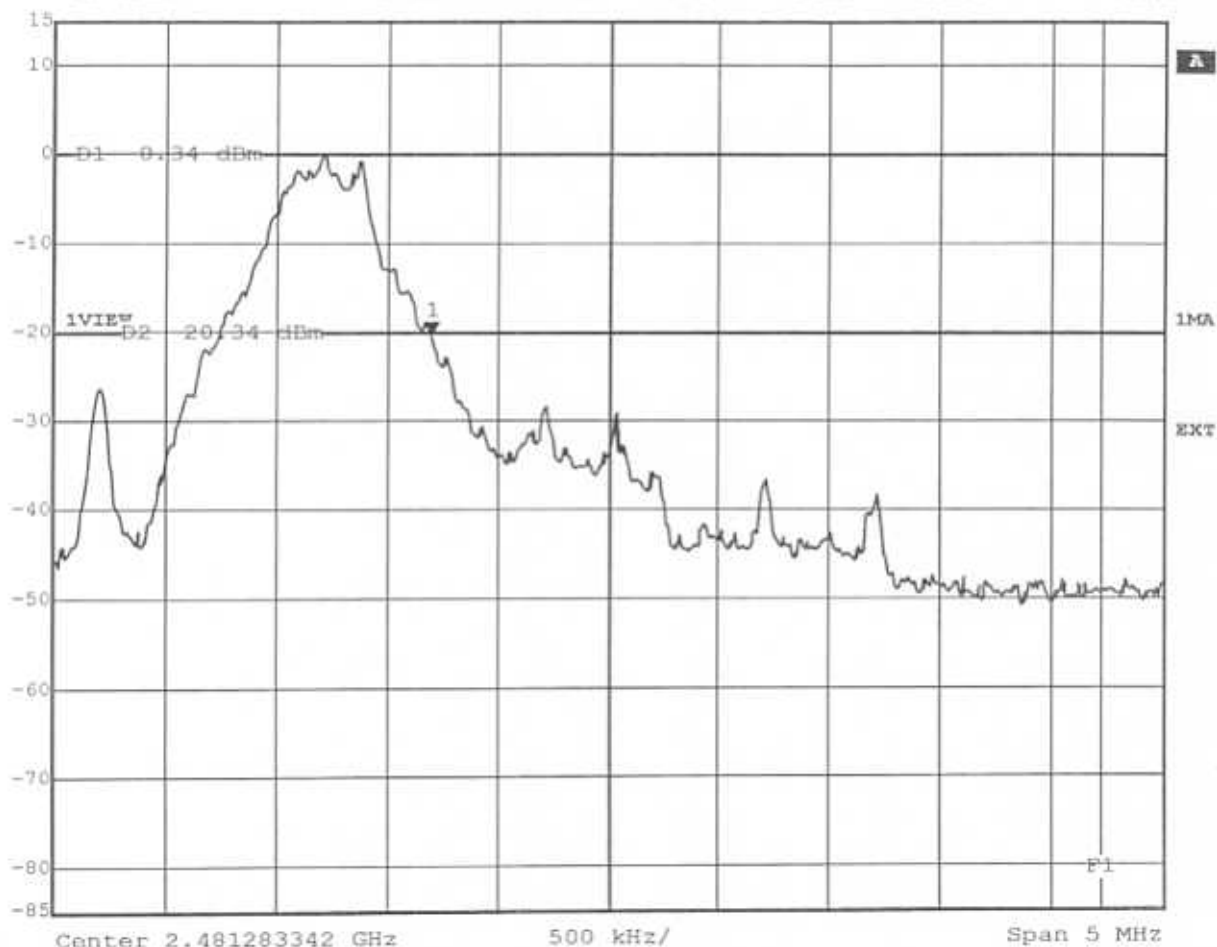


Title: Band-edge Compliance of RF Conducted Emissions Ch.: 0  
Comment A: Alps Bluetooth Module UGP22  
Date: 13.JUN.2002 12:37:17





Ref Lvl	15 dBm	Marker 1 [T1]	2.48048675 GHz	RBW	50 kHz	RF Att	40 dB
				VBW	50 kHz		
				SWT	5 ms	Unit	dBm



Title: Band-edge Compliance of RF Conducted Emissions Ch.: 78  
Comment A: Alps Bluetooth Module UGP22  
Date: 13.JUN.2002 12:35:36



## Appendix J

Conducted Measurement at (AC) Power Line

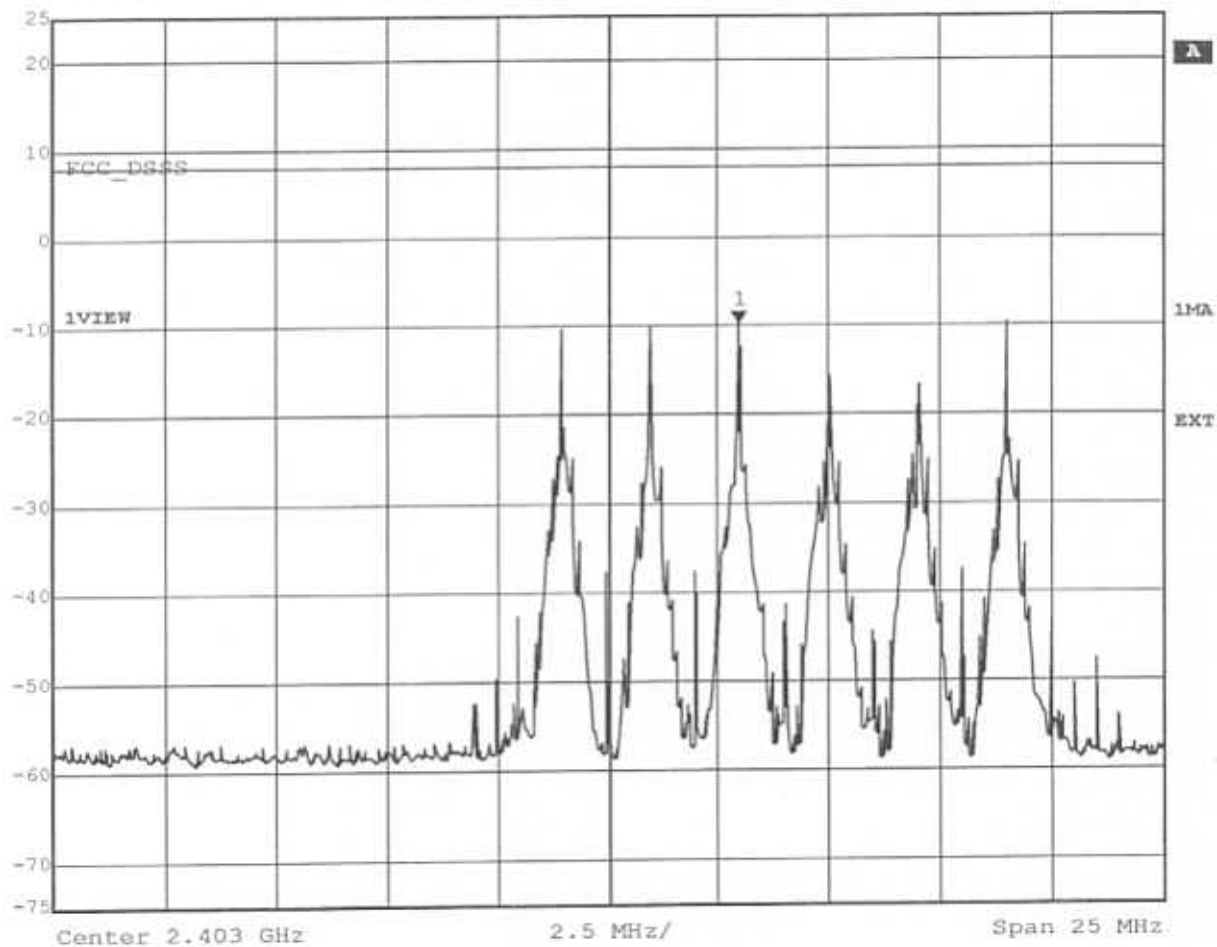


## Appendix K

Peak Power Spectral Density (Master Inquiry Mode)



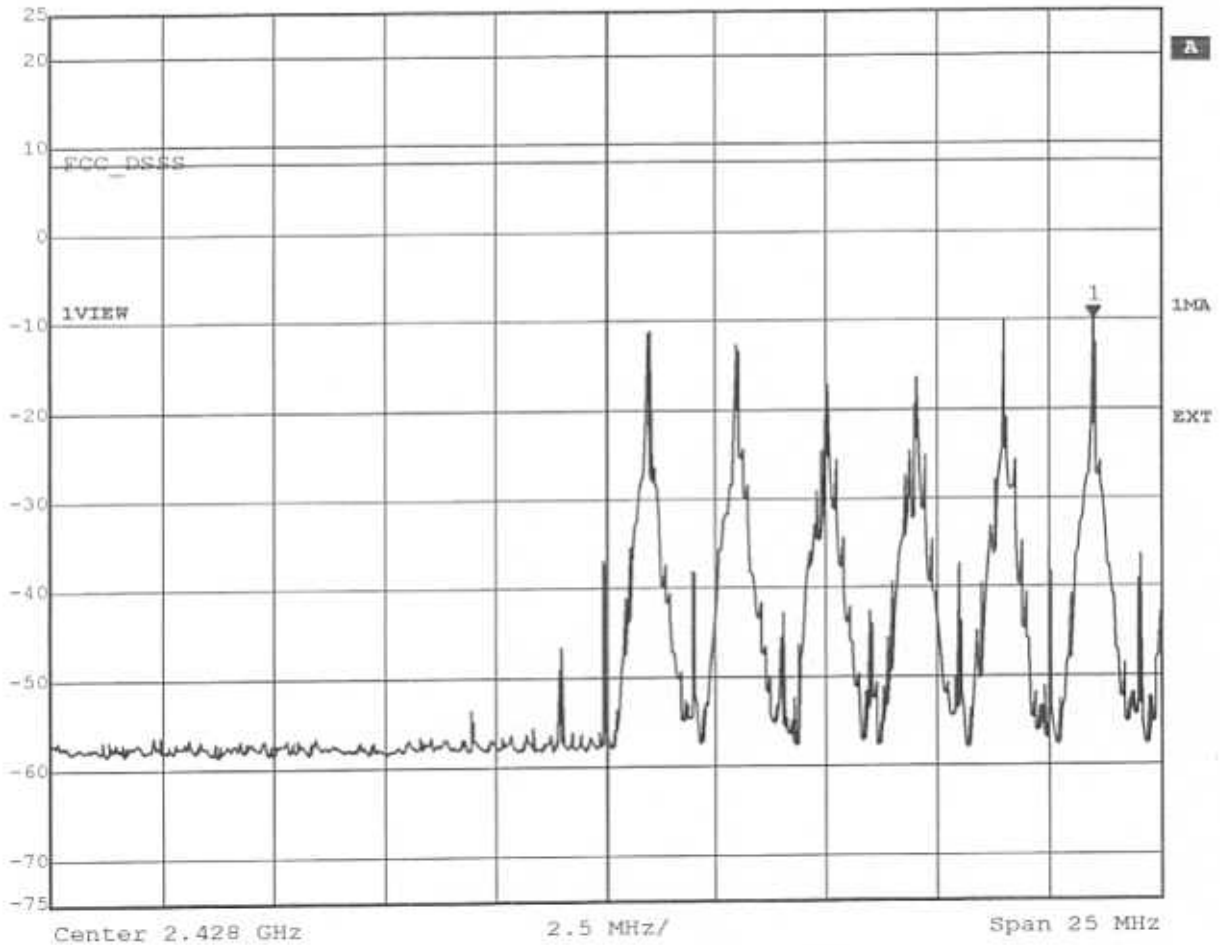
Ref Lvl	Marker 1 [T1]	RBW	3 kHz	RF Att	50 dB
25 dBm	-9.81 dBm	VBW	3 kHz		
	2.40598096 GHz	SWT	10 s	Unit	dBm



Title: Peak Power Spectral Density (Master Inquiry Mode)  
Comment A: Alps Bluetooth Module UGPZ2  
Date: 13.JUN.2002 14:16:26



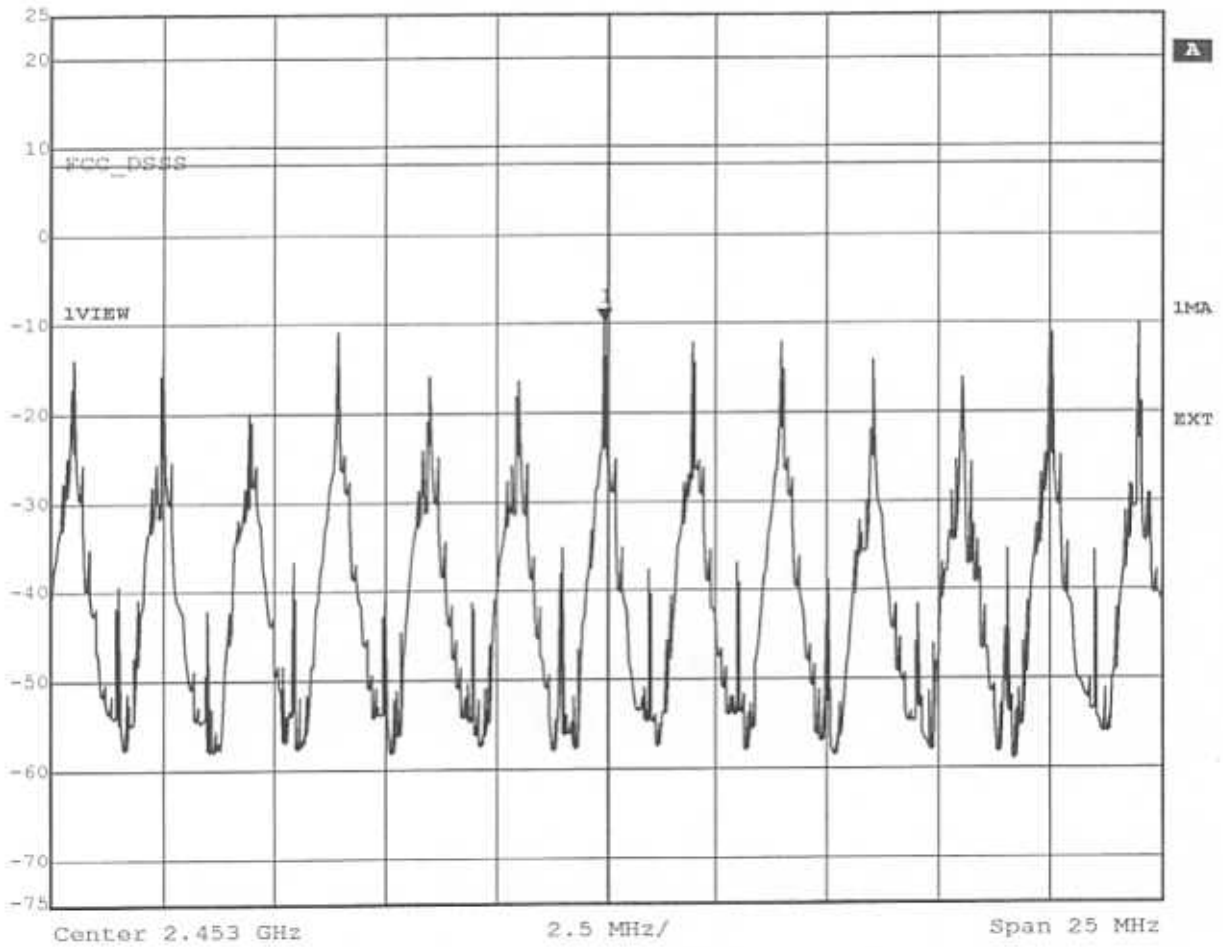
Marker 1 [T1]	RBW	3 kHz	RF Att	50 dB
-10.06 dBm	VBW	3 kHz		
2.43899699 GHz	SWT	10 s	Unit	dBm



Title: Peak Power Spectral Density (Master Inquiry Mode)  
Comment A: Alps Bluetooth Module UGP22  
Date: 13.JUN.2002 14:25:02



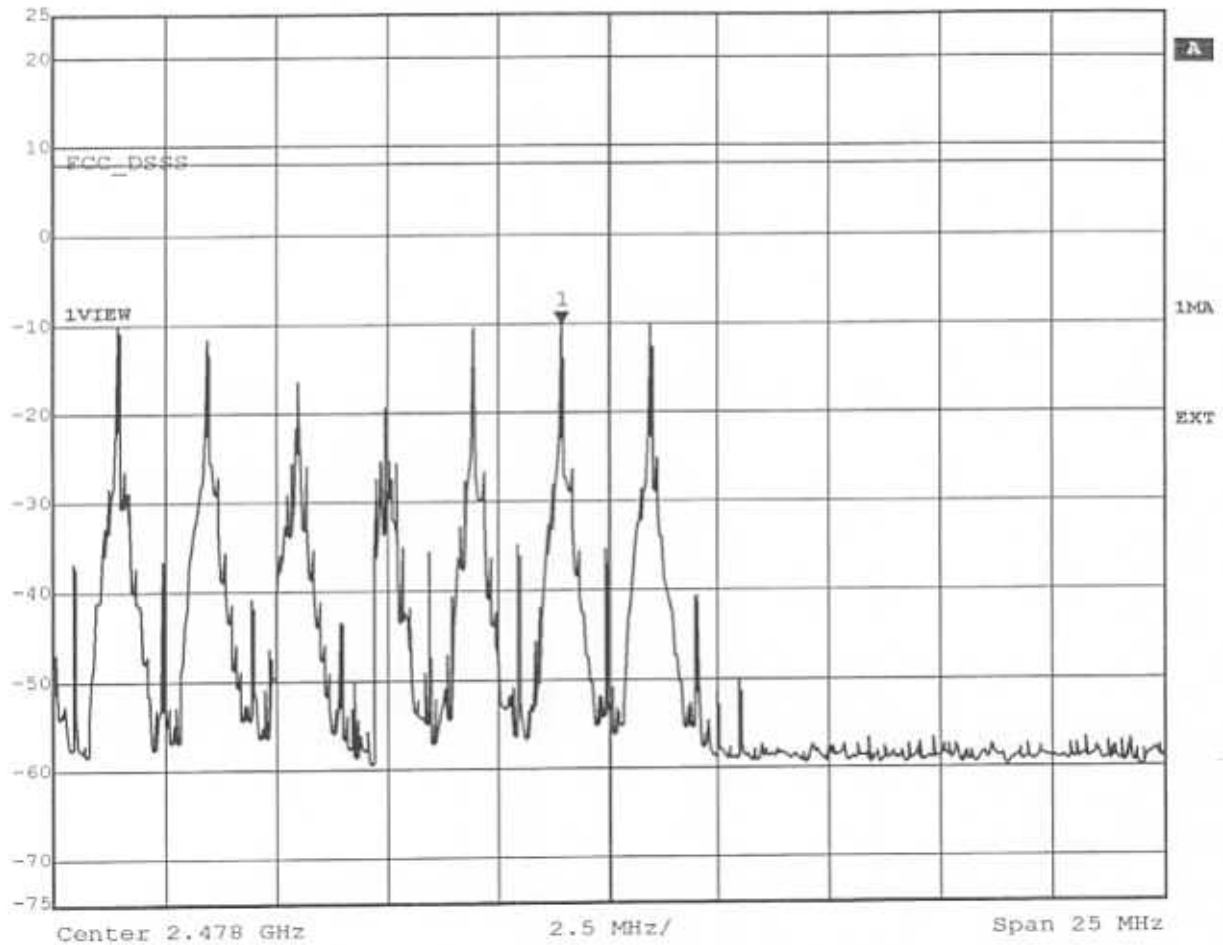
Ref Lvl	Marker 1 [T1]	RBW	3 kHz	RF Att	50 dB
25 dBm	-9.81 dBm	VBW	3 kHz		
	2.45297495 GHz	SWT	10 s	Unit	dBm



Title: Peak Power Spectral Density (Master Inquiry Mode)  
Comment A: Alps Bluetooth Module UGP22  
Date: 13.JUN.2002 14:29:49



Ref Lvl	25 dBm	Marker 1 [T1]	-10.04 dBm	RBW	3 kHz	RF Att	50 dB
			2.47697295 GHz	VBW	3 kHz	Unit	dBm
				SWT	10 s		



Title: Peak Power Spectral Density (Master Inquiry Mode)  
Comment A: Alps Bluetooth Module UGP22  
Date: 13.JUN.2002 14:34:06