

Megatron Antenna Spec. & Airoha RF Spec.

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*Presented by : Merry_RF
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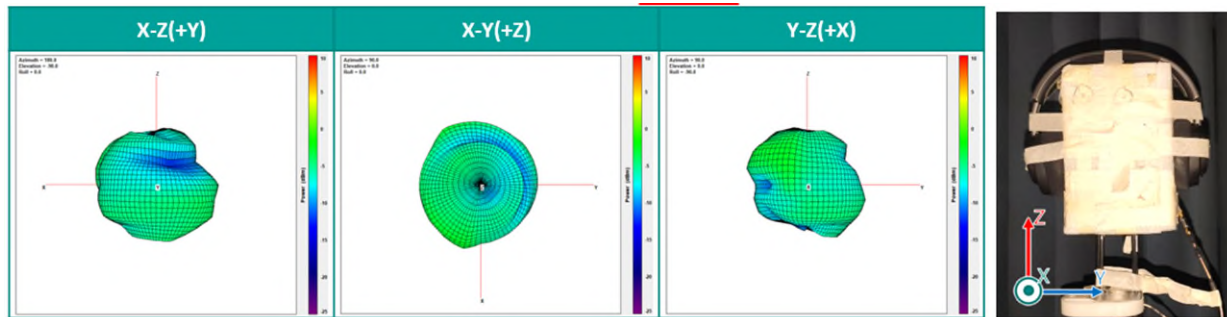
RF antenna spec

- Megatron Headset Antenna for Bluetooth
 - 1) 天線材質Antenna Material : Metal
 - 2) 工作頻段Operating Frequency : 2.4GHz-2.5GHz
 - 3) 輸入阻抗Input Impedance : 50Ω
 - 4) 駐波比Standing-Wave Ratio : 2:1
 - 5) 天線增益Antenna Gain : -0.13 dBi
 - 6) 極化方式Polarization Type : Linear polarization
 - 7) 連接方式Connect Type : 焊接 Soldering

RF antenna spec

- Megatron Headset Antenna for Bluetooth

8) Antenna pattern (2D or 3D):



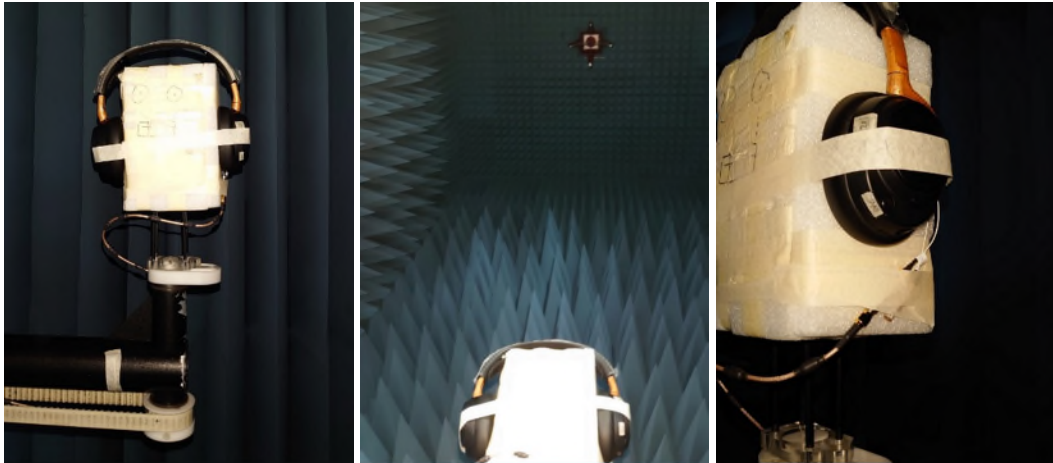
9) Table of calibrated :

- Keysight E5071C ENA Vector Network Analyzer
- Calibration Date: 2024/02/22

10) Names of test personnel : Frankie Chang

RF antenna spec

- Megatron Headset Antenna for Bluetooth
 - 11) Names of commercial test software being used :
 - ETS-Lindgren EMQuest
 - 12) Test setup photos:



RF antenna spec

- Megatron Headset Antenna for Bluetooth
 - 13) description of how measurements are made:
 - Position the DUT on the test turntable.
 - Record the coordinates and take picture.
 - Connect the RF cable.
 - Leave the chamber and close the door.
 - Run the software.
 - Wait for the test to end and confirm the data.

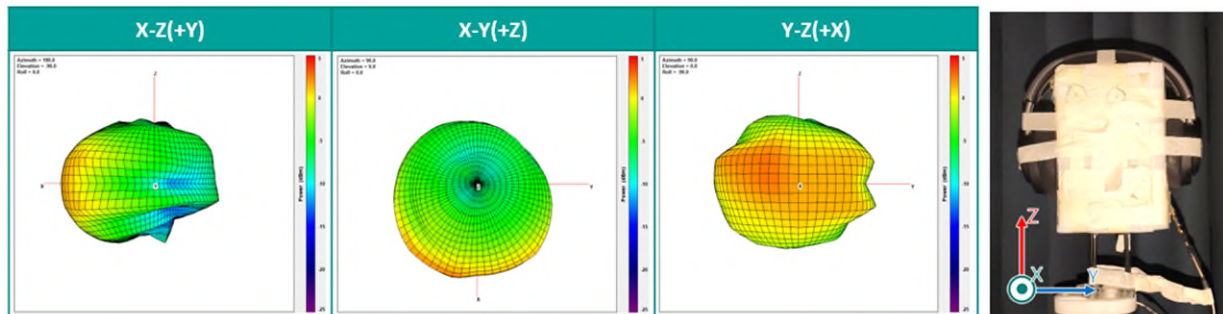
RF antenna spec

- Megatron Headset Antenna for 2.4GHz
 - 1) 天線材質Antenna Material : FPC
 - 2) 工作頻段Operating Frequency : 2.4GHz-2.5GHz
 - 3) 輸入阻抗Input Impedance : 50Ω
 - 4) 駐波比Standing-Wave Ratio : 2:1
 - 5) 天線增益Antenna Gain : 2.67 dBi
 - 6) 極化方式Polarization Type : Linear polarization
 - 7) 連接方式Connect Type : I-PEX RF connector

RF antenna spec

- Megatron Headset Antenna for 2.4GHz

8) Antenna pattern (2D or 3D):



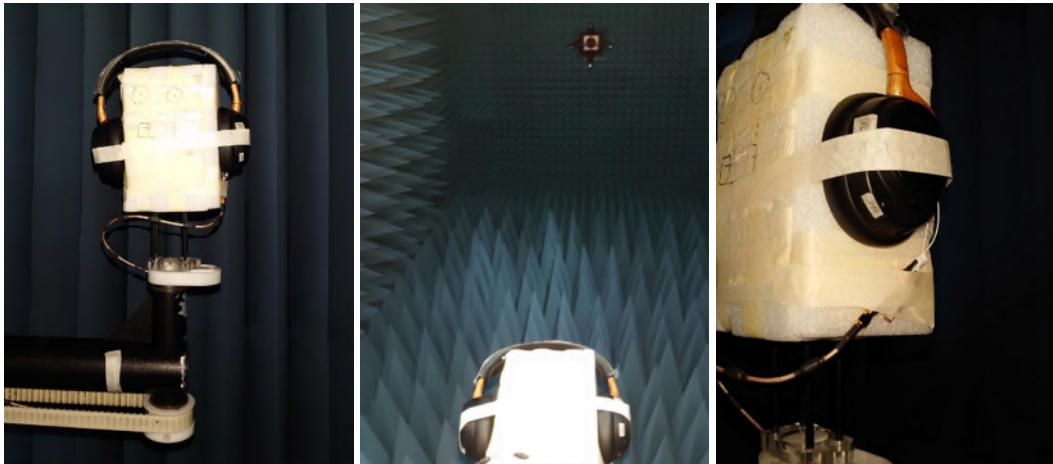
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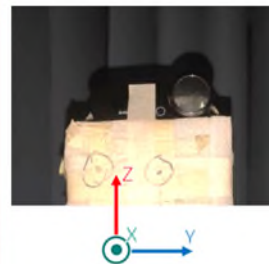
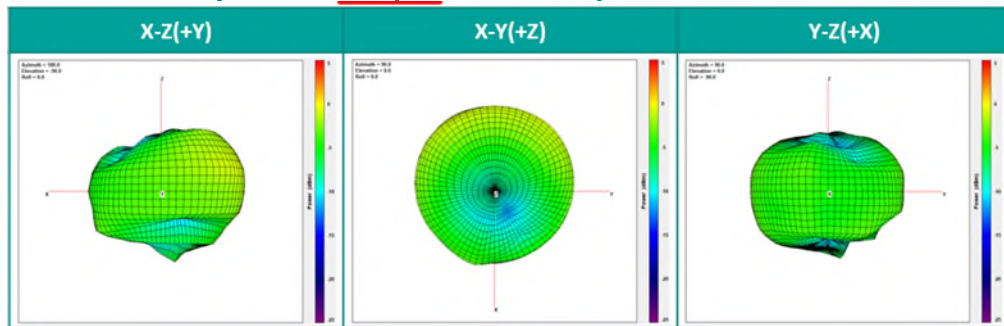
RF antenna spec

- Megatron Dongle Antenna for 2.4GHz
 - 1) 天線材質Antenna Material : Metal
 - 2) 工作頻段Operating Frequency : 2.4GHz-2.5GHz
 - 3) 輸入阻抗Input Impedance : 50Ω
 - 4) 駐波比Standing-Wave Ratio : 2:1
 - 5) 天線增益Antenna Gain : 0.46 dBi
 - 6) 極化方式Polarization Type : Linear polarization
 - 7) 連接方式Connect Type : 焊接 Soldering

RF antenna spec

- Megatron Dongle Antenna for 2.4GHz

8) Antenna pattern (2D or 3D):



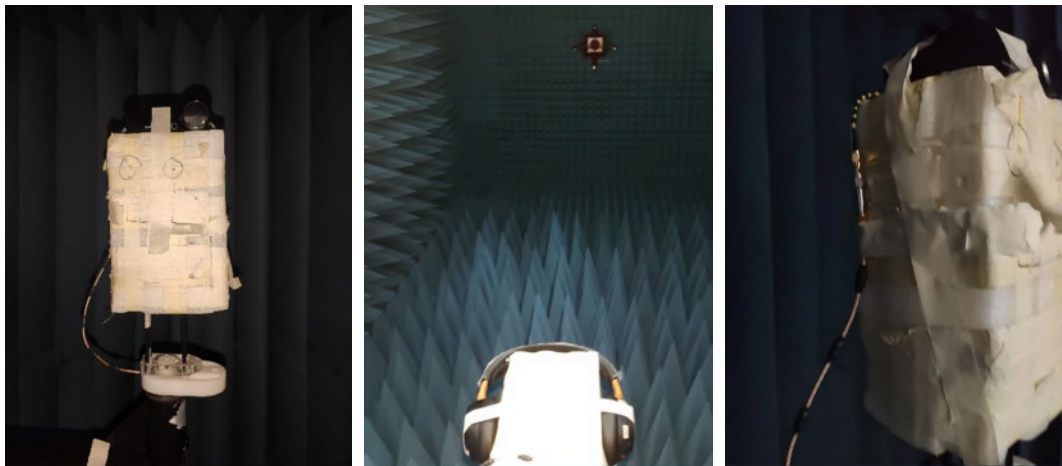
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 - Connect the RF cable.
 - Leave the chamber and close the door.
 - Run the software.
 - Wait for the test to end and confirm the data.

RF Spec (included output power table)

AB1585							
BR/BLE				EDR			
TxGC (Hex)	Power (dBm)	TxGC (Hex)	Power (dBm)	TxGC (Hex)	Power (dBm)	TxGC (Hex)	Power (dBm)
0 (00)	-15.5	32 (20)	0.5	0 (00)	-18	32 (20)	-2
1 (01)	-15	33 (21)	1	1 (01)	-17.5	33 (21)	-1.5
2 (02)	-14.5	34 (22)	1.5	2 (02)	-17	34 (22)	-1
3 (03)	-14	35 (23)	2	3 (03)	-16.5	35 (23)	-0.5
4 (04)	-13.5	36 (24)	2.5	4 (04)	-16	36 (24)	0
5 (05)	-13	37 (25)	3	5 (05)	-15.5	37 (25)	0.5
6 (06)	-12.5	38 (26)	3.5	6 (06)	-15	38 (26)	1
7 (07)	-12	39 (27)	4	7 (07)	-14.5	39 (27)	1.5
8 (08)	-11.5	40 (28)	4.5	8 (08)	-14	40 (28)	2
9 (09)	-11	41 (29)	5	9 (09)	-13.5	41 (29)	2.5
10 (0A)	-10.5	42 (2A)	5.5	10 (0A)	-13	42 (2A)	3
11 (0B)	-10	43 (2B)	6	11 (0B)	-12.5	43 (2B)	3.5
12 (0C)	-9.5	44 (2C)	6.5	12 (0C)	-12	44 (2C)	4
13 (0D)	-9	45 (2D)	7	13 (0D)	-11.5	45 (2D)	4.5
14 (0E)	-8.5	46 (2E)	7.5	14 (0E)	-11	46 (2E)	5
15 (0F)	-8	47 (2F)	8	15 (0F)	-10.5	47 (2F)	5.5
16 (10)	-7.5	48 (30)	8.5	16 (10)	-10	48 (30)	6
17 (11)	-7	49 (31)	9	17 (11)	-9.5	49 (31)	6.5
18 (12)	-6.5	50 (32)	9.5	18 (12)	-9	50 (32)	7
19 (13)	-6	51 (33)	10	19 (13)	-8.5	51 (33)	7.5
20 (14)	-5.5	52 (34)	10.5	20 (14)	-8	52 (34)	8
21 (15)	-5	53 (35)	11	21 (15)	-7.5	53 (35)	8.5
22 (16)	-4.5	54 (36)	11.5	22 (16)	-7	54 (36)	9
23 (17)	-4	55 (37)	12	23 (17)	-6.5	55 (37)	9.5
24 (18)	-3.5	56 (38)	12.5	24 (18)	-6	56 (38)	10
25 (19)	-3	57 (39)	13	25 (19)	-5.5	57 (39)	10.5
26 (1A)	-2.5	58 (3A)	13.5	26 (1A)	-5	58 (3A)	11
27 (1B)	-2	59 (3B)	14	27 (1B)	-4.5	59 (3B)	11.5
28 (1C)	-1.5	60 (3C)	14.5	28 (1C)	-4	60 (3C)	12
29 (1D)	-1	61 (3D)	15	29 (1D)	-3.5	61 (3D)	12.5
30 (1E)	-0.5	62 (3E)	15.5	30 (1E)	-3	62 (3E)	13
31 (1F)	0	63 (3F)	16	31 (1F)	-2.5	63 (3F)	13.5

AB1565							
BR/BLE				EDR			
TxGC (Hex)	Power (dBm)	TxGC (Hex)	Power (dBm)	TxGC (Hex)	Power (dBm)	TxGC (Hex)	Power (dBm)
0 (00)	-20	32 (20)	-4	0 (00)	-22	32 (20)	-6
1 (01)	-19.5	33 (21)	-3.5	1 (01)	-21.5	33 (21)	-5.5
2 (02)	-19	34 (22)	-3	2 (02)	-21	34 (22)	-5
3 (03)	-18.5	35 (23)	-2.5	3 (03)	-20.5	35 (23)	-4.5
4 (04)	-18	36 (24)	-2	4 (04)	-20	36 (24)	-4
5 (05)	-17.5	37 (25)	-1.5	5 (05)	-19.5	37 (25)	-3.5
6 (06)	-17	38 (26)	-1	6 (06)	-19	38 (26)	-3
7 (07)	-16.5	39 (27)	-0.5	7 (07)	-18.5	39 (27)	-2.5
8 (08)	-16	40 (28)	0	8 (08)	-18	40 (28)	-2
9 (09)	-15.5	41 (29)	0.5	9 (09)	-17.5	41 (29)	-1.5
10 (0A)	-15	42 (2A)	1	10 (0A)	-17	42 (2A)	-1
11 (0B)	-14.5	43 (2B)	1.5	11 (0B)	-16.5	43 (2B)	-0.5
12 (0C)	-14	44 (2C)	2	12 (0C)	-16	44 (2C)	0
13 (0D)	-13.5	45 (2D)	2.5	13 (0D)	-15.5	45 (2D)	0.5
14 (0E)	-13	46 (2E)	3	14 (0E)	-15	46 (2E)	1
15 (0F)	-12.5	47 (2F)	3.5	15 (0F)	-14.5	47 (2F)	1.5
16 (10)	-12	48 (30)	4	16 (10)	-14	48 (30)	2
17 (11)	-11.5	49 (31)	4.5	17 (11)	-13.5	49 (31)	2.5
18 (12)	-11	50 (32)	5	18 (12)	-13	50 (32)	3
19 (13)	-10.5	51 (33)	5.5	19 (13)	-12.5	51 (33)	3.5
20 (14)	-10	52 (34)	6	20 (14)	-12	52 (34)	4
21 (15)	-9.5	53 (35)	6.5	21 (15)	-11.5	53 (35)	4.5
22 (16)	-9	54 (36)	7	22 (16)	-11	54 (36)	5
23 (17)	-8.5	55 (37)	7.5	23 (17)	-10.5	55 (37)	5.5
24 (18)	-8	56 (38)	8	24 (18)	-10	56 (38)	6
25 (19)	-7.5	57 (39)	8.5	25 (19)	-9.5	57 (39)	6.5
26 (1A)	-7	58 (3A)	9	26 (1A)	-9	58 (3A)	7
27 (1B)	-6.5	59 (3B)	9.5	27 (1B)	-8.5	59 (3B)	7.5
28 (1C)	-6	60 (3C)	10	28 (1C)	-8	60 (3C)	8
29 (1D)	-5.5	61 (3D)	10.5	29 (1D)	-7.5	61 (3D)	8.5
30 (1E)	-5	62 (3E)	11	30 (1E)	-7	62 (3E)	9
31 (1F)	-4.5	63 (3F)	11.5	31 (1F)	-6.5	63 (3F)	9.5

Thank You

Delivering Fidelity Sound to Enrich Human's Life

