

Antenna Test Report

Report No.: TEOT2401000087E4

Applicant Name: Dyson Operations Pte Ltd
Manufacturer Name: Dyson Operations Pte Ltd

Product Name: Haircare Product
Model Number: 308F

Measurements performed at
SGS Taiwan Ltd.
Hwaya District, Taiwan

Issued Date: February 20, 2024

	Name	Date & Signature	Distribution
Prepared by:	Nandi Chen Sr. Engineer	<i>Nandi Chen</i> February 20, 2024	
Approved by:	Shawn Yen Supervisor	<i>Shawn Yen</i> February 20, 2024	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Revision Version

Report Number	Revision	Date	Memo
TEOT2401000087E4	00	2024/02/20	Initial creation of test report.

This test report contains a reference to the previous version test report that it replaces.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Measurement System Information

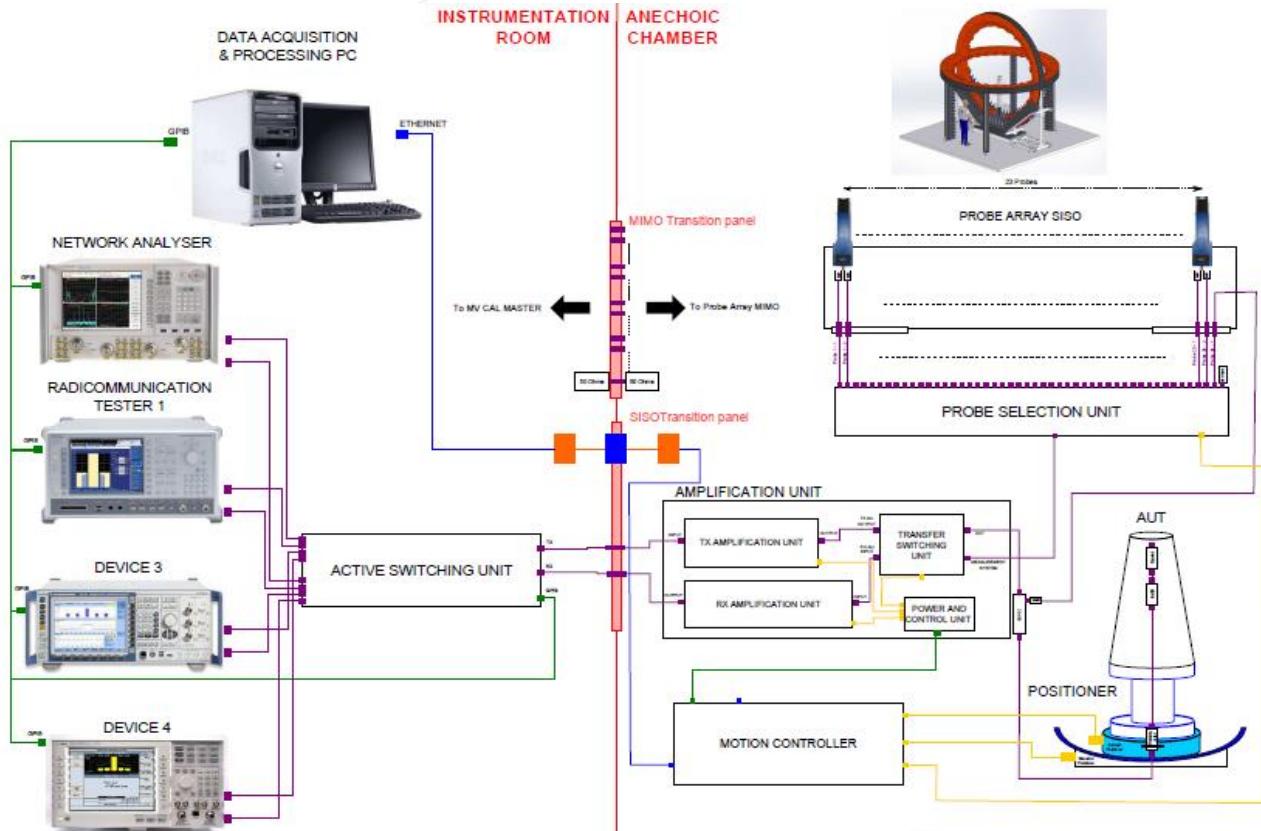
General Information

Testing Condition:

- Temperature: $22 \pm 3^{\circ}\text{C}$
- Humidity: <80%

Measurement Facility:

- Measurement Chamber: MVG 3D fully anechoic chamber and its measuring system (Stargate-24-L)
- Network Analyzer: Agilent E5071C

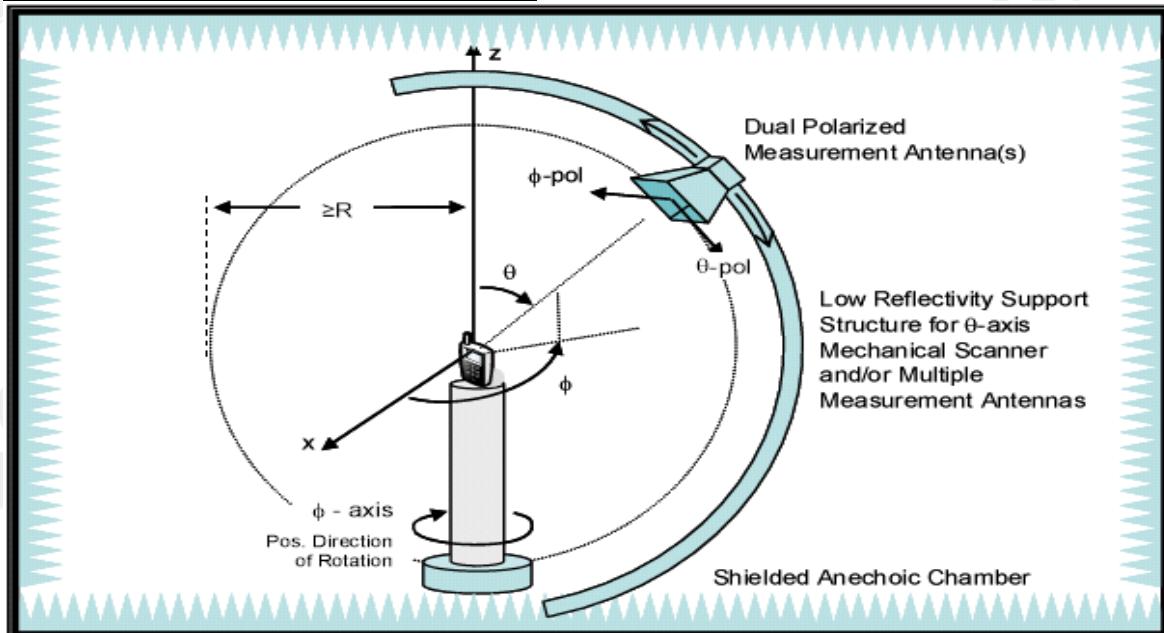


Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Measurements are performed in a MVG **Stargate-24-L** with the StarAct interface for a base station simulator. The **Stargate-24-L** has 23 probe antennas mounted with equal spacing on a circular arch. Electronic switching of the probe antennas provides outstanding measurement speed. The geometry of the setup, with only a Styrofoam column within 1.6 meters of the EUT, ensures minimum interference and low ripple on the measured radiation patterns. The DUT is placed on top of the pedestal, in the center of the system.

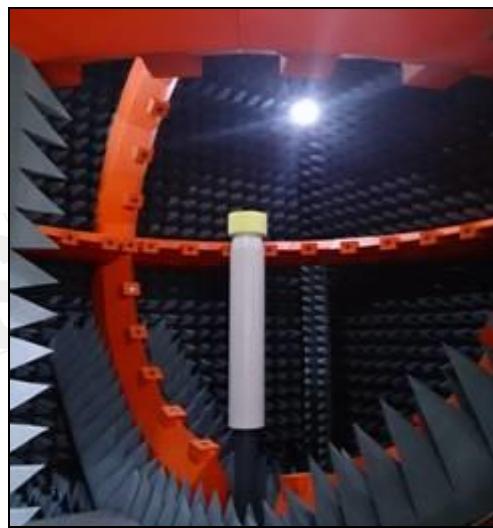
Typical Setup for MVG Stargate-24-L:



Instruments View



Inside View



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Testing Laboratory: Identification of the Responsible Test Laboratory.**● OTA Laboratory:****SGS Taiwan Ltd. Wireless Laboratory**

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803.

Telephone: +886 2 2299 3279

Fax: +886 2 2298 0488

Internet: <http://www.tw.sgs.com>

● Testing Location:

No. 2, Keji 1st Rd., Hwaya Technology Park, Guishan District, Taoyuan City, Taiwan 33383.

Details of Applicant:

Applicant's name:	Dyson Operations Pte Ltd
Applicant's address:	Dyson Global Headquarters, 3 Sentosa Gateway, Singapore 098544
Contact person:	Sim Zhi Wei
Telephone:	+65 90278735
Fax:	N/A
E-mail:	zhiwei.sim@dyson.com

Details of Manufacturer:

Applicant's name:	Dyson Operations Pte Ltd
Applicant's address:	Dyson Global Headquarters, 3 Sentosa Gateway, Singapore 098544
Contact person:	Sim Zhi Wei
Telephone:	+65 90278735
Fax:	N/A
E-mail:	zhiwei.sim@dyson.com

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

List of Equipment

Equipment Summary Sheet

Equipment Description	Manufacturer	Identification no.	Current calibration date	Next calibration date
Network Analyzer	Agilent	E5071C	2023/12/20	2024/12/19
Sleeve Dipole	MVG	SD740	2022/01/07	2025/01/06
Dual Ridge Horn	MVG	SH800	2023/12/14	2024/12/13
Stargate-24-L probe array	MVG	Stargate-24-L	2023/08/16	2024/08/15
Measurement software	MVG	SPM V1.9	N/A	N/A

Reference Measurement Procedure

The reference measurement procedure is described in SGS Working Instruction WI-TESP-EO-002 for OTA service, and MVG Support Document “SG24 active measurements user manual”. Measurements are made by placing the probe in contact with the sample and measuring the admittance or reflection coefficient with respect to the open-circuit end, using a network analyzer or equivalent instrumentation.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Antenna Gain and Efficiency

Note: All data include cable loss of 0.25 dB for 2.4 GHz.

Only 308F body

Frequency (MHz)	Peak Gain (dBi)	Min Antenna Gain (dBi)	Directivity Gain (dBi)	Efficiency (%)	Average Gain (dBi)
2400.00	2.18	-26.34	6.76	34.86%	-4.58
2402.00	2.26	-25.77	6.81	35.10%	-4.55
2404.00	2.30	-25.44	6.82	35.28%	-4.52
2406.00	2.21	-25.10	6.74	35.26%	-4.53
2408.00	2.20	-24.67	6.75	35.11%	-4.55
2410.00	2.25	-24.22	6.84	34.80%	-4.58
2412.00	2.27	-23.93	6.88	34.60%	-4.61
2414.00	2.22	-23.84	6.85	34.50%	-4.62
2416.00	2.22	-24.19	6.84	34.54%	-4.62
2418.00	2.31	-25.06	6.89	34.84%	-4.58
2420.00	2.36	-26.24	6.89	35.22%	-4.53
2422.00	2.30	-27.50	6.84	35.15%	-4.54
2424.00	2.25	-28.46	6.81	34.96%	-4.56
2426.00	2.33	-28.63	6.90	34.91%	-4.57
2428.00	2.31	-28.20	6.88	34.89%	-4.57
2430.00	2.25	-27.79	6.82	34.92%	-4.57
2432.00	2.23	-26.82	6.79	35.01%	-4.56
2434.00	2.22	-25.79	6.78	35.00%	-4.56
2436.00	2.28	-24.88	6.83	35.11%	-4.55
2438.00	2.27	-25.06	6.84	34.94%	-4.57
2440.00	2.17	-25.17	6.77	34.66%	-4.60
2442.00	2.16	-25.22	6.77	34.65%	-4.60
2444.00	2.26	-25.15	6.86	34.69%	-4.60
2446.00	2.52	-26.16	7.11	34.76%	-4.59
2448.00	2.47	-26.83	7.04	34.86%	-4.58
2450.00	2.50	-27.67	7.07	34.93%	-4.57
2452.00	2.59	-29.10	7.19	34.71%	-4.60
2454.00	2.60	-30.24	7.22	34.45%	-4.63
2456.00	2.56	-29.18	7.28	33.76%	-4.72
2458.00	2.53	-29.16	7.29	33.43%	-4.76
2460.00	2.63	-29.58	7.41	33.28%	-4.78
2462.00	2.66	-29.41	7.48	33.02%	-4.81
2464.00	2.61	-28.23	7.44	32.85%	-4.84
2466.00	2.49	-27.96	7.38	32.42%	-4.89
2468.00	2.58	-29.55	7.50	32.17%	-4.92
2470.00	2.63	-30.86	7.60	31.79%	-4.98
2472.00	2.59	-30.22	7.59	31.58%	-5.01
2474.00	2.54	-30.17	7.60	31.20%	-5.06
2476.00	2.40	-30.53	7.56	30.51%	-5.16
2478.00	2.52	-31.27	7.69	30.39%	-5.17
2480.00	2.55	-30.29	7.71	30.46%	-5.16
2482.00	2.52	-29.58	7.71	30.23%	-5.20
2484.00	2.63	-29.42	7.85	30.05%	-5.22
2486.00	2.66	-29.08	7.94	29.64%	-5.28
2488.00	2.65	-28.71	7.96	29.43%	-5.31
2490.00	2.60	-29.65	7.96	29.11%	-5.36
2492.00	2.66	-30.31	8.07	28.78%	-5.41
2494.00	2.77	-30.00	8.20	28.64%	-5.43
2496.00	2.89	-29.30	8.31	28.66%	-5.43
2498.00	2.85	-29.22	8.30	28.56%	-5.44
2500.00	2.88	-29.52	8.35	28.35%	-5.48

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

308F body with Attachment A1

Frequency (MHz)	Peak Gain (dBi)	Min Antenna Gain (dBi)	Directivity Gain (dBi)	Efficiency (%)	Average Gain (dBi)
2400.00	2.35	-25.17	6.82	35.70%	-4.47
2402.00	2.45	-24.14	6.90	35.91%	-4.45
2404.00	2.50	-22.51	6.93	36.06%	-4.43
2406.00	2.43	-20.95	6.86	36.06%	-4.43
2408.00	2.44	-21.29	6.89	35.88%	-4.45
2410.00	2.50	-21.68	6.99	35.53%	-4.49
2412.00	2.53	-22.12	7.06	35.29%	-4.52
2414.00	2.49	-22.54	7.02	35.20%	-4.53
2416.00	2.52	-23.15	7.05	35.27%	-4.53
2418.00	2.61	-23.56	7.11	35.54%	-4.49
2420.00	2.67	-24.02	7.12	35.92%	-4.45
2422.00	2.63	-24.36	7.09	35.85%	-4.45
2424.00	2.60	-24.49	7.08	35.65%	-4.48
2426.00	2.70	-25.02	7.18	35.58%	-4.49
2428.00	2.69	-25.03	7.18	35.56%	-4.49
2430.00	2.66	-25.77	7.15	35.57%	-4.49
2432.00	2.65	-27.92	7.13	35.67%	-4.48
2434.00	2.67	-29.79	7.15	35.63%	-4.48
2436.00	2.73	-33.63	7.21	35.70%	-4.47
2438.00	2.69	-33.44	7.18	35.51%	-4.50
2440.00	2.63	-30.94	7.16	35.21%	-4.53
2442.00	2.65	-28.43	7.19	35.15%	-4.54
2444.00	2.68	-25.07	7.22	35.17%	-4.54
2446.00	2.70	-23.69	7.23	35.19%	-4.54
2448.00	2.68	-23.15	7.20	35.25%	-4.53
2450.00	2.69	-22.56	7.21	35.30%	-4.52
2452.00	2.65	-21.86	7.21	35.07%	-4.55
2454.00	2.59	-21.23	7.18	34.77%	-4.59
2456.00	2.42	-20.81	7.10	34.02%	-4.68
2458.00	2.37	-20.87	7.09	33.67%	-4.73
2460.00	2.38	-20.86	7.13	33.53%	-4.75
2462.00	2.43	-21.12	7.22	33.24%	-4.78
2464.00	2.40	-20.85	7.20	33.08%	-4.80
2466.00	2.31	-20.74	7.17	32.66%	-4.86
2468.00	2.41	-20.61	7.30	32.43%	-4.89
2470.00	2.48	-21.30	7.42	32.06%	-4.94
2472.00	2.48	-21.48	7.45	31.86%	-4.97
2474.00	2.45	-21.70	7.47	31.48%	-5.02
2476.00	2.33	-22.59	7.44	30.82%	-5.11
2478.00	2.47	-23.63	7.60	30.71%	-5.13
2480.00	2.52	-24.21	7.64	30.77%	-5.12
2482.00	2.50	-24.95	7.65	30.55%	-5.15
2484.00	2.62	-26.34	7.80	30.36%	-5.18
2486.00	2.64	-28.42	7.87	29.98%	-5.23
2488.00	2.65	-29.48	7.91	29.76%	-5.26
2490.00	2.60	-29.13	7.91	29.43%	-5.31
2492.00	2.65	-28.45	8.01	29.10%	-5.36
2494.00	2.75	-29.08	8.14	28.96%	-5.38
2496.00	2.86	-30.50	8.23	28.99%	-5.38
2498.00	2.81	-30.98	8.21	28.89%	-5.39
2500.00	2.84	-32.38	8.26	28.70%	-5.42

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

308F body with Attachment A2

Frequency (MHz)	Peak Gain (dBi)	Min Antenna Gain (dBi)	Directivity Gain (dBi)	Efficiency (%)	Average Gain (dBi)
2400.00	2.18	-22.18	5.72	35.77%	-4.46
2402.00	2.28	-21.78	5.74	35.97%	-4.44
2404.00	2.32	-21.43	5.62	36.13%	-4.42
2406.00	2.26	-21.19	5.65	36.13%	-4.42
2408.00	2.26	-21.19	5.80	35.96%	-4.44
2410.00	2.33	-21.67	5.85	35.61%	-4.48
2412.00	2.35	-22.40	5.83	35.37%	-4.51
2414.00	2.30	-23.10	5.94	35.27%	-4.53
2416.00	2.31	-24.08	6.00	35.32%	-4.52
2418.00	2.41	-23.97	6.02	35.62%	-4.48
2420.00	2.46	-25.13	5.98	36.01%	-4.44
2422.00	2.40	-26.39	6.07	35.94%	-4.44
2424.00	2.36	-27.31	6.20	35.75%	-4.47
2426.00	2.45	-27.95	6.14	35.68%	-4.48
2428.00	2.43	-27.80	6.06	35.68%	-4.48
2430.00	2.39	-27.98	6.10	35.71%	-4.47
2432.00	2.38	-27.91	6.19	35.82%	-4.46
2434.00	2.38	-29.05	6.15	35.81%	-4.46
2436.00	2.44	-28.57	6.16	35.89%	-4.45
2438.00	2.38	-27.80	6.13	35.72%	-4.47
2440.00	2.31	-27.26	6.19	35.41%	-4.51
2442.00	2.34	-30.50	6.18	35.37%	-4.51
2444.00	2.38	-33.78	6.07	35.38%	-4.51
2446.00	2.56	-31.14	6.16	35.43%	-4.51
2448.00	2.51	-28.86	6.23	35.51%	-4.50
2450.00	2.54	-25.80	5.92	35.57%	-4.49
2452.00	2.63	-25.17	5.80	35.33%	-4.52
2454.00	2.64	-24.65	5.79	35.02%	-4.56
2456.00	2.63	-23.84	5.54	34.29%	-4.65
2458.00	2.58	-23.06	5.53	33.93%	-4.69
2460.00	2.68	-22.54	5.40	33.77%	-4.71
2462.00	2.73	-22.34	5.34	33.48%	-4.75
2464.00	2.69	-22.10	5.38	33.33%	-4.77
2466.00	2.60	-21.89	4.95	32.93%	-4.82
2468.00	2.70	-22.00	4.84	32.69%	-4.86
2470.00	2.78	-22.43	4.89	32.31%	-4.91
2472.00	2.79	-22.78	4.72	32.12%	-4.93
2474.00	2.76	-23.05	4.72	31.74%	-4.98
2476.00	2.64	-23.77	4.56	31.06%	-5.08
2478.00	2.79	-24.76	4.60	30.96%	-5.09
2480.00	2.84	-25.69	4.51	31.04%	-5.08
2482.00	2.83	-26.35	4.54	30.84%	-5.11
2484.00	2.95	-27.00	4.50	30.66%	-5.13
2486.00	2.97	-27.84	4.43	30.26%	-5.19
2488.00	2.98	-28.57	4.47	30.06%	-5.22
2490.00	2.93	-29.76	4.69	29.75%	-5.27
2492.00	2.99	-29.82	4.80	29.44%	-5.31
2494.00	3.09	-30.07	4.77	29.31%	-5.33
2496.00	3.20	-30.40	4.58	29.37%	-5.32
2498.00	3.16	-30.82	4.52	29.29%	-5.33
2500.00	3.18	-31.19	4.60	29.12%	-5.36

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

308F body with Attachment A3

Frequency (MHz)	Peak Gain (dBi)	Min Antenna Gain (dBi)	Directivity Gain (dBi)	Efficiency (%)	Average Gain (dBi)
2400.00	2.41	-33.31	5.72	35.39%	-4.51
2402.00	2.52	-32.99	5.74	35.58%	-4.49
2404.00	2.56	-31.51	5.62	35.74%	-4.47
2406.00	2.50	-31.68	5.65	35.69%	-4.47
2408.00	2.50	-32.03	5.80	35.47%	-4.50
2410.00	2.57	-31.79	5.85	35.10%	-4.55
2412.00	2.60	-31.98	5.83	34.86%	-4.58
2414.00	2.54	-31.66	5.94	34.74%	-4.59
2416.00	2.57	-30.87	6.00	34.75%	-4.59
2418.00	2.66	-30.28	6.02	35.01%	-4.56
2420.00	2.71	-29.98	5.98	35.36%	-4.51
2422.00	2.66	-29.53	6.07	35.25%	-4.53
2424.00	2.63	-29.42	6.20	35.00%	-4.56
2426.00	2.72	-30.37	6.14	34.89%	-4.57
2428.00	2.71	-33.76	6.06	34.88%	-4.57
2430.00	2.67	-39.91	6.10	34.89%	-4.57
2432.00	2.67	-43.05	6.19	34.97%	-4.56
2434.00	2.68	-37.30	6.15	34.92%	-4.57
2436.00	2.73	-31.71	6.16	35.03%	-4.56
2438.00	2.67	-33.37	6.13	34.84%	-4.58
2440.00	2.61	-33.91	6.19	34.50%	-4.62
2442.00	2.63	-33.44	6.18	34.43%	-4.63
2444.00	2.66	-32.13	6.07	34.45%	-4.63
2446.00	2.66	-31.93	6.16	34.50%	-4.62
2448.00	2.63	-31.68	6.23	34.55%	-4.62
2450.00	2.64	-28.53	5.92	34.56%	-4.61
2452.00	2.60	-27.26	5.80	34.30%	-4.65
2454.00	2.53	-28.16	5.79	33.99%	-4.69
2456.00	2.42	-28.62	5.54	33.20%	-4.79
2458.00	2.43	-28.10	5.53	32.81%	-4.84
2460.00	2.56	-26.76	5.40	32.65%	-4.86
2462.00	2.64	-27.18	5.34	32.38%	-4.90
2464.00	2.64	-27.57	5.38	32.22%	-4.92
2466.00	2.56	-27.97	4.95	31.77%	-4.98
2468.00	2.69	-27.33	4.84	31.54%	-5.01
2470.00	2.78	-25.98	4.89	31.18%	-5.06
2472.00	2.80	-25.65	4.72	30.97%	-5.09
2474.00	2.78	-25.18	4.72	30.59%	-5.14
2476.00	2.66	-24.66	4.56	29.92%	-5.24
2478.00	2.81	-25.68	4.60	29.85%	-5.25
2480.00	2.92	-27.87	4.51	29.87%	-5.25
2482.00	2.90	-27.58	4.54	29.68%	-5.28
2484.00	3.01	-27.23	4.50	29.54%	-5.30
2486.00	3.02	-26.37	4.43	29.22%	-5.34
2488.00	3.02	-25.28	4.47	29.06%	-5.37
2490.00	2.96	-24.54	4.69	28.77%	-5.41
2492.00	2.99	-23.93	4.80	28.52%	-5.45
2494.00	3.08	-23.03	4.77	28.47%	-5.46
2496.00	3.18	-22.83	4.58	28.59%	-5.44
2498.00	3.12	-22.44	4.52	28.56%	-5.44
2500.00	3.13	-21.93	4.60	28.43%	-5.46

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

308F body with Attachment A4

Frequency (MHz)	Peak Gain (dBi)	Min Antenna Gain (dBi)	Directivity Gain (dBi)	Efficiency (%)	Average Gain (dBi)
2400.00	2.59	-25.94	5.72	32.86%	-4.83
2402.00	2.67	-25.08	5.74	33.02%	-4.81
2404.00	2.67	-24.06	5.62	33.17%	-4.79
2406.00	2.55	-24.39	5.65	33.14%	-4.80
2408.00	2.50	-24.74	5.80	32.93%	-4.82
2410.00	2.53	-24.73	5.85	32.60%	-4.87
2412.00	2.51	-24.57	5.83	32.38%	-4.90
2414.00	2.41	-24.28	5.94	32.25%	-4.92
2416.00	2.33	-23.70	6.00	32.20%	-4.92
2418.00	2.40	-22.68	6.02	32.48%	-4.88
2420.00	2.43	-21.92	5.98	32.87%	-4.83
2422.00	2.39	-21.22	6.07	32.82%	-4.84
2424.00	2.36	-20.67	6.20	32.64%	-4.86
2426.00	2.34	-20.58	6.14	32.59%	-4.87
2428.00	2.47	-21.21	6.06	32.65%	-4.86
2430.00	2.48	-21.90	6.10	32.67%	-4.86
2432.00	2.45	-22.30	6.19	32.75%	-4.85
2434.00	2.51	-23.01	6.15	32.76%	-4.85
2436.00	2.75	-23.44	6.16	32.94%	-4.82
2438.00	2.73	-23.83	6.13	32.80%	-4.84
2440.00	2.62	-24.01	6.19	32.54%	-4.88
2442.00	2.62	-23.99	6.18	32.57%	-4.87
2444.00	2.71	-24.96	6.07	32.65%	-4.86
2446.00	2.91	-26.03	6.16	32.75%	-4.85
2448.00	2.84	-27.23	6.23	32.85%	-4.83
2450.00	2.85	-28.27	5.92	32.94%	-4.82
2452.00	2.93	-29.22	5.80	32.78%	-4.84
2454.00	2.94	-30.41	5.79	32.56%	-4.87
2456.00	2.87	-31.97	5.54	31.98%	-4.95
2458.00	2.81	-31.76	5.53	31.74%	-4.98
2460.00	2.89	-31.85	5.40	31.68%	-4.99
2462.00	2.92	-31.61	5.34	31.47%	-5.02
2464.00	2.85	-30.96	5.38	31.34%	-5.04
2466.00	2.66	-30.00	4.95	30.97%	-5.09
2468.00	2.71	-29.74	4.84	30.73%	-5.12
2470.00	2.72	-29.21	4.89	30.34%	-5.18
2472.00	2.68	-29.35	4.72	30.16%	-5.21
2474.00	2.56	-29.74	4.72	29.80%	-5.26
2476.00	2.36	-29.92	4.56	29.15%	-5.35
2478.00	2.42	-31.98	4.60	29.01%	-5.37
2480.00	2.41	-34.92	4.51	29.05%	-5.37
2482.00	2.31	-39.11	4.54	28.81%	-5.40
2484.00	2.37	-41.17	4.50	28.58%	-5.44
2486.00	2.38	-34.34	4.43	28.15%	-5.51
2488.00	2.35	-32.42	4.47	27.94%	-5.54
2490.00	2.27	-32.24	4.69	27.66%	-5.58
2492.00	2.32	-31.61	4.80	27.37%	-5.63
2494.00	2.44	-30.25	4.77	27.24%	-5.65
2496.00	2.54	-29.07	4.58	27.32%	-5.63
2498.00	2.50	-28.67	4.52	27.22%	-5.65
2500.00	2.55	-28.24	4.60	27.01%	-5.68

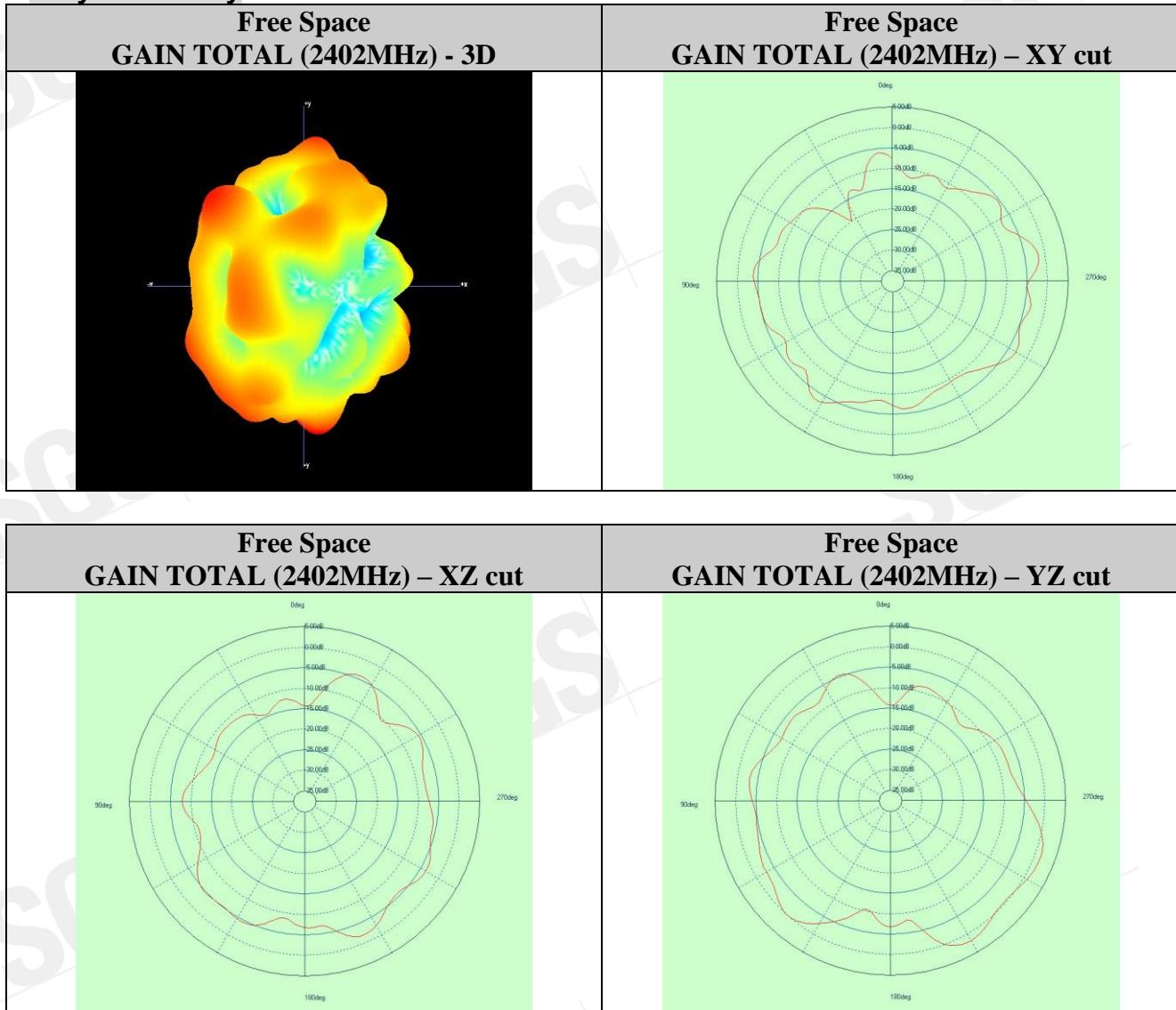
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Antenna 3D Plot Matrix

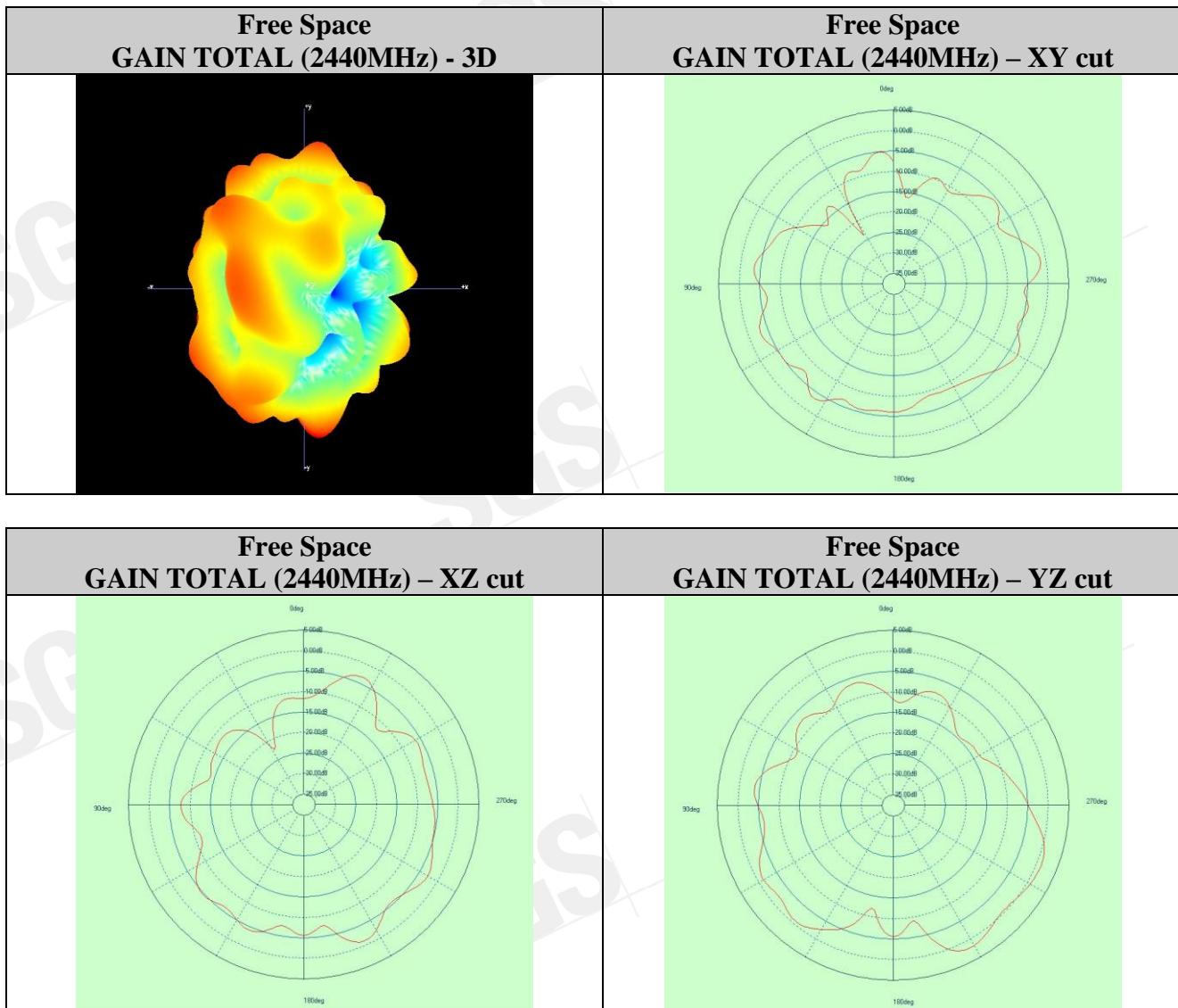
All plots in this section show the total GAIN TOTAL (GAIN TOTAL θ + GAIN TOTAL ϕ) with the +x-axis pointing right, +y-axis pointing up, and +z-axis pointing out of the page.

Only 308F body



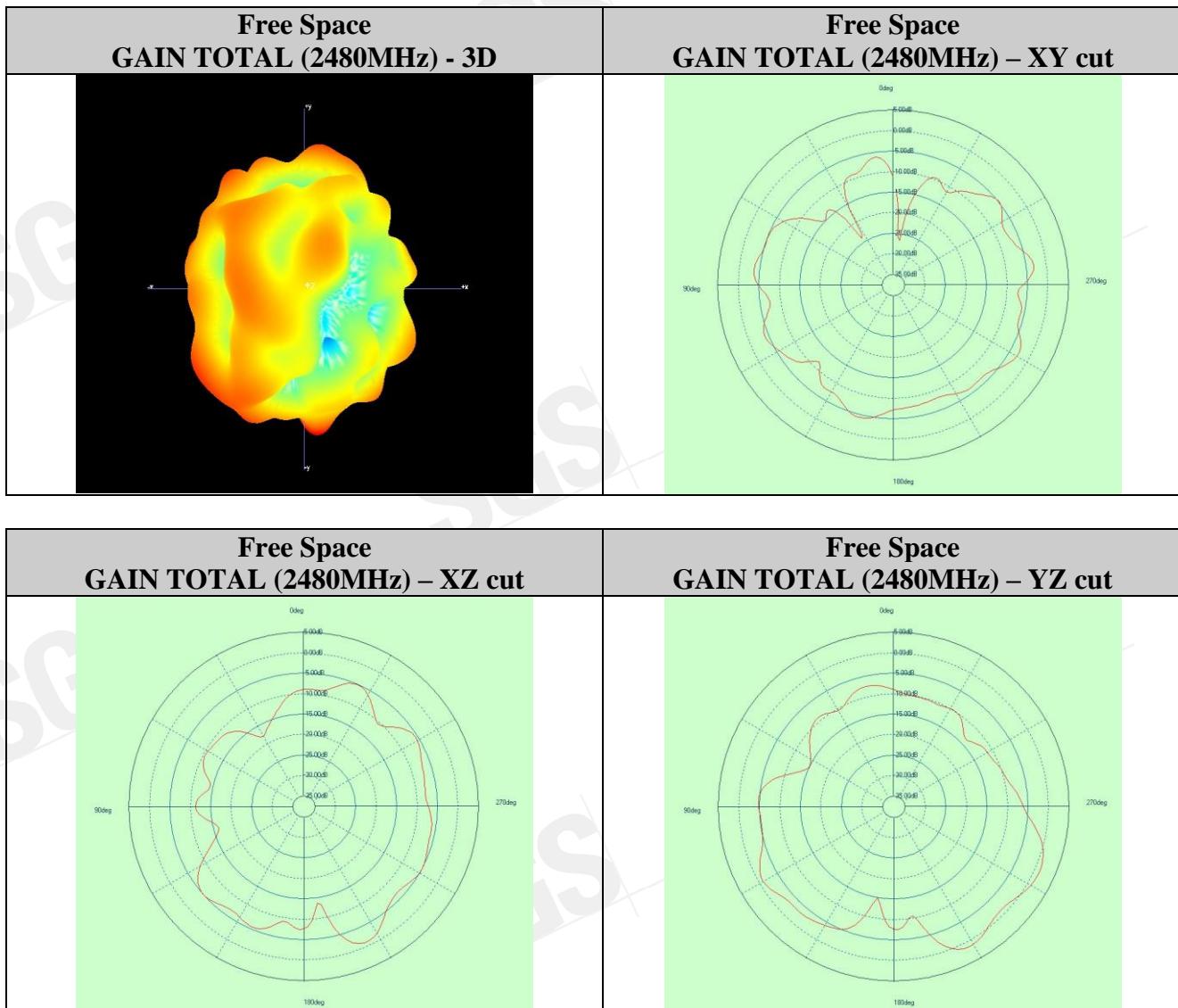
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



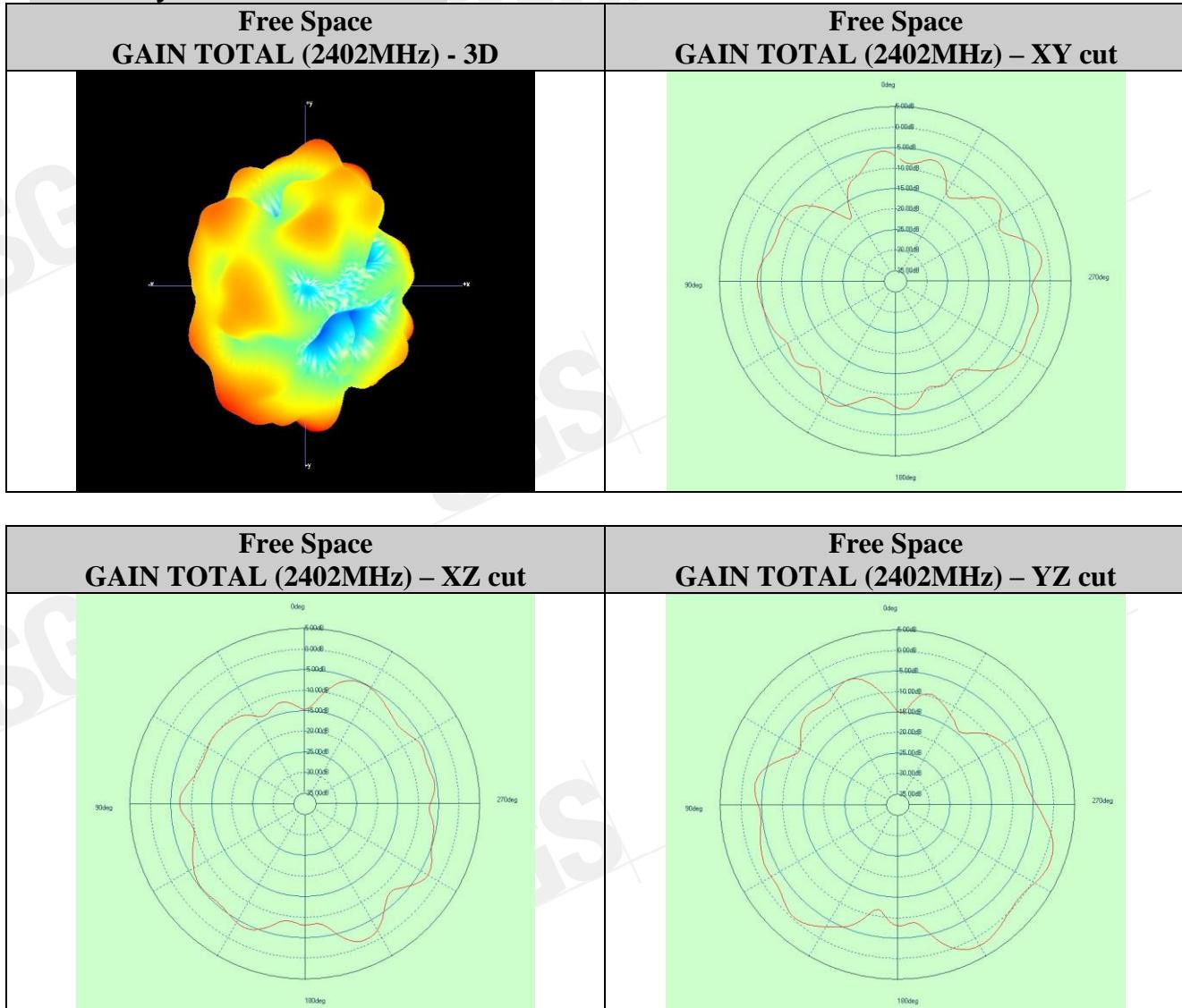
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



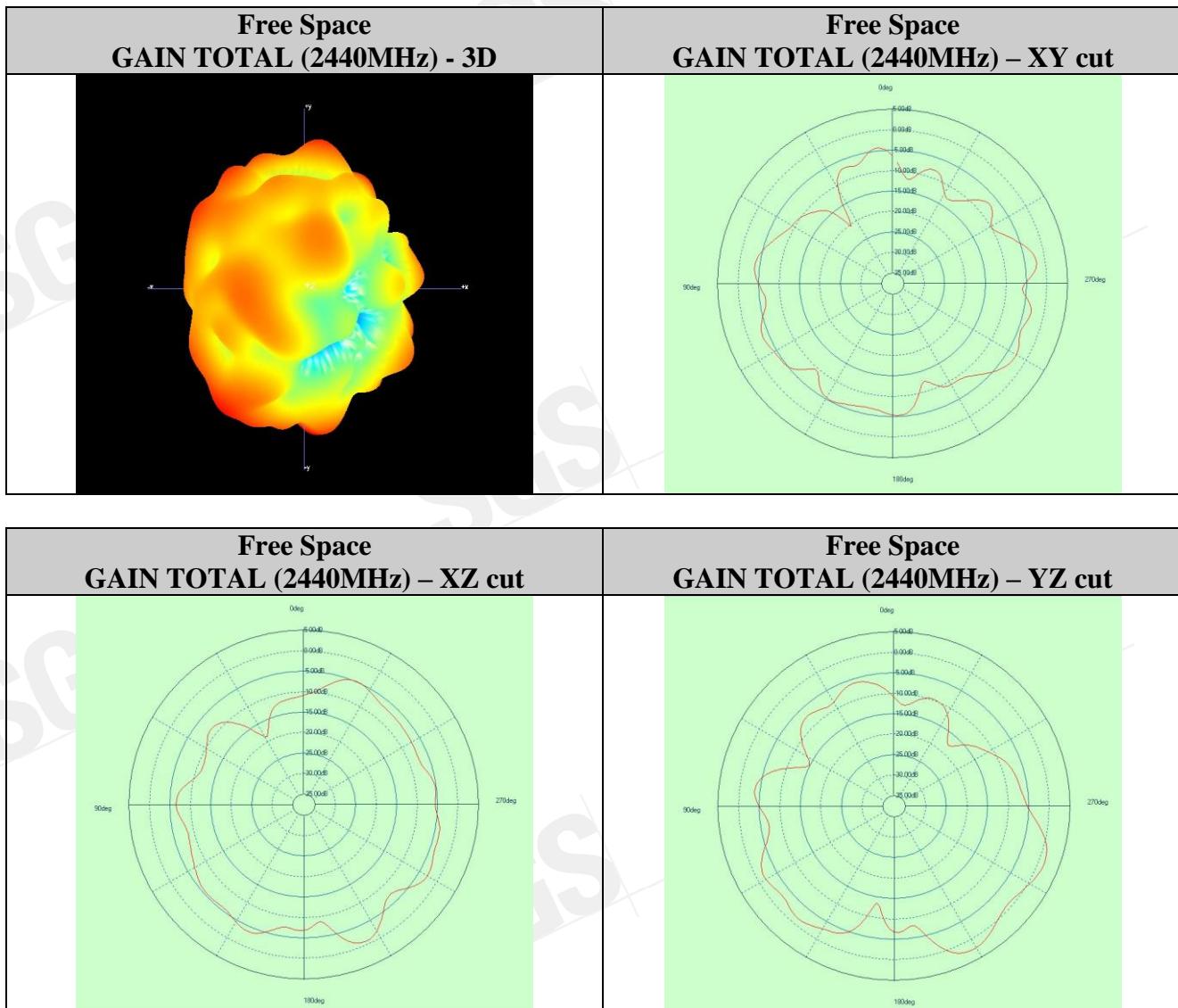
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

308F body with Attachment A1

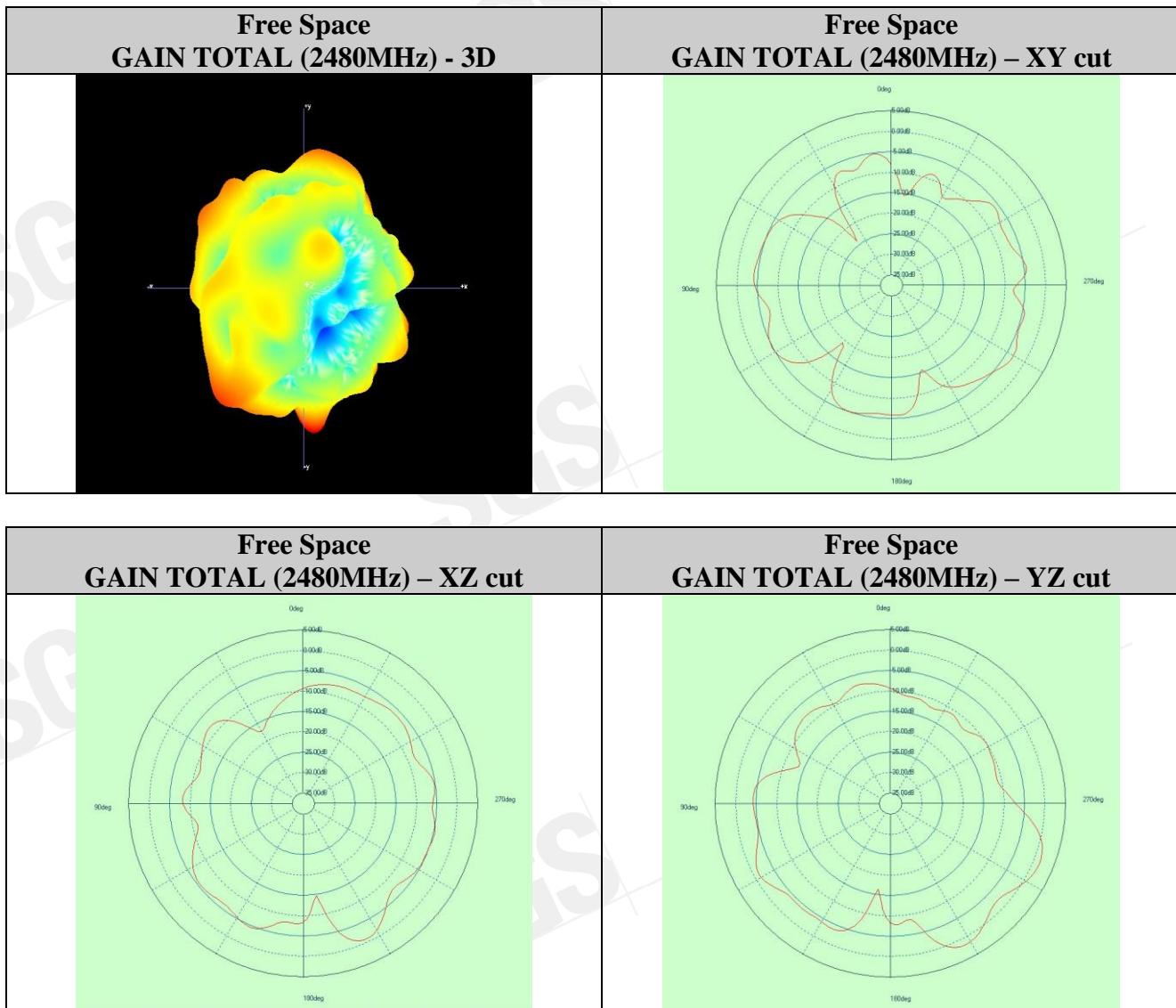
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



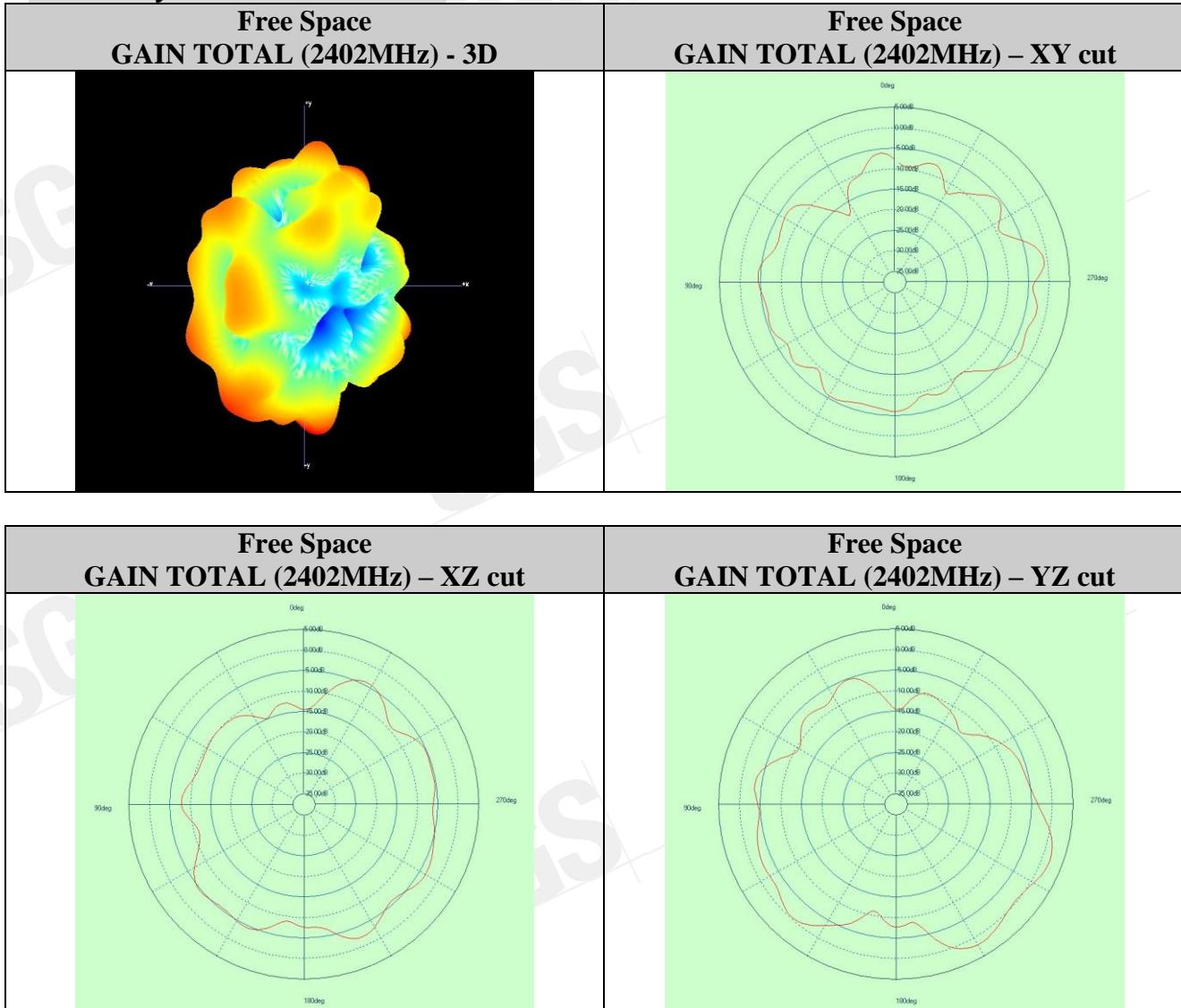
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



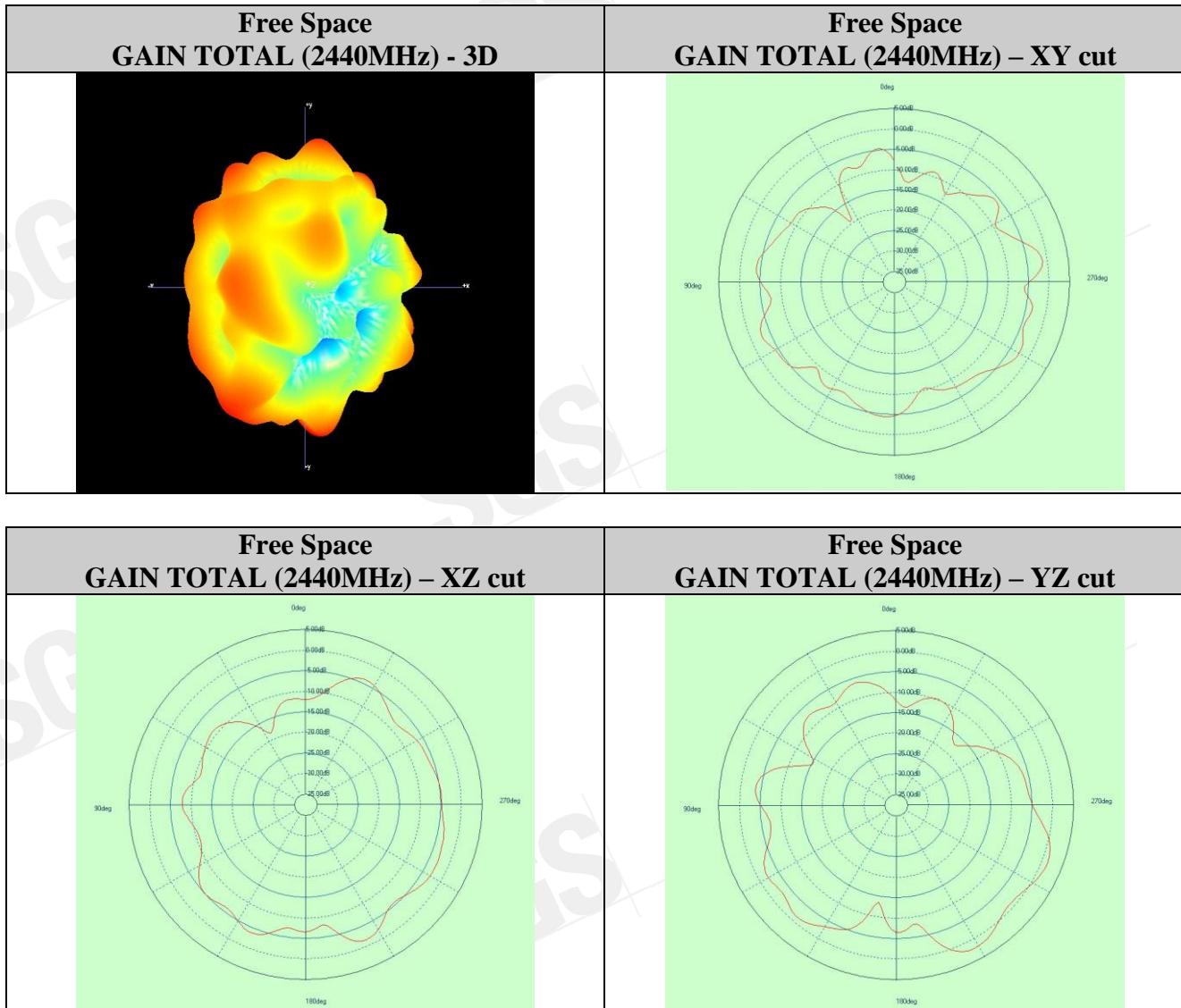
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

308F body with Attachment A2

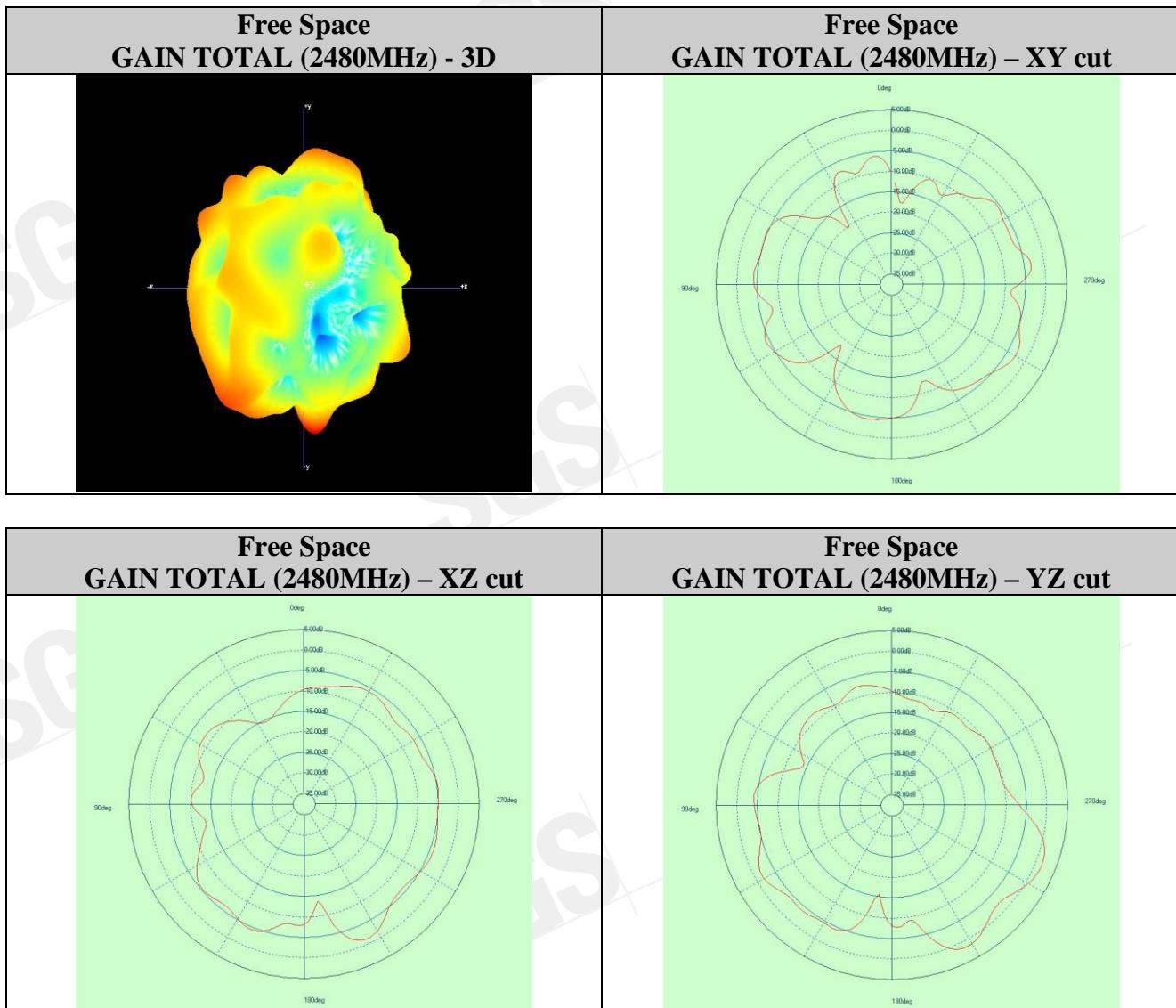
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



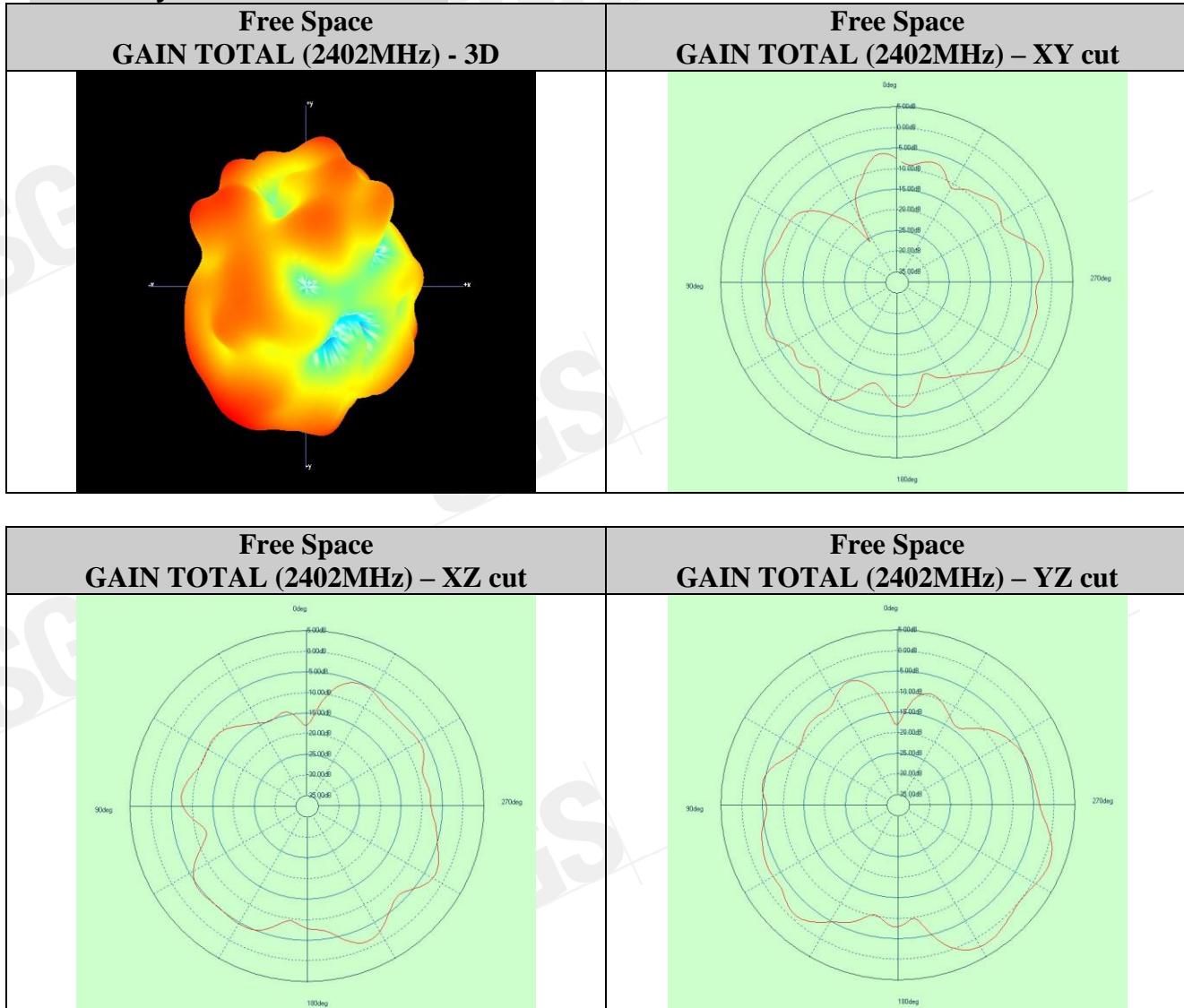
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



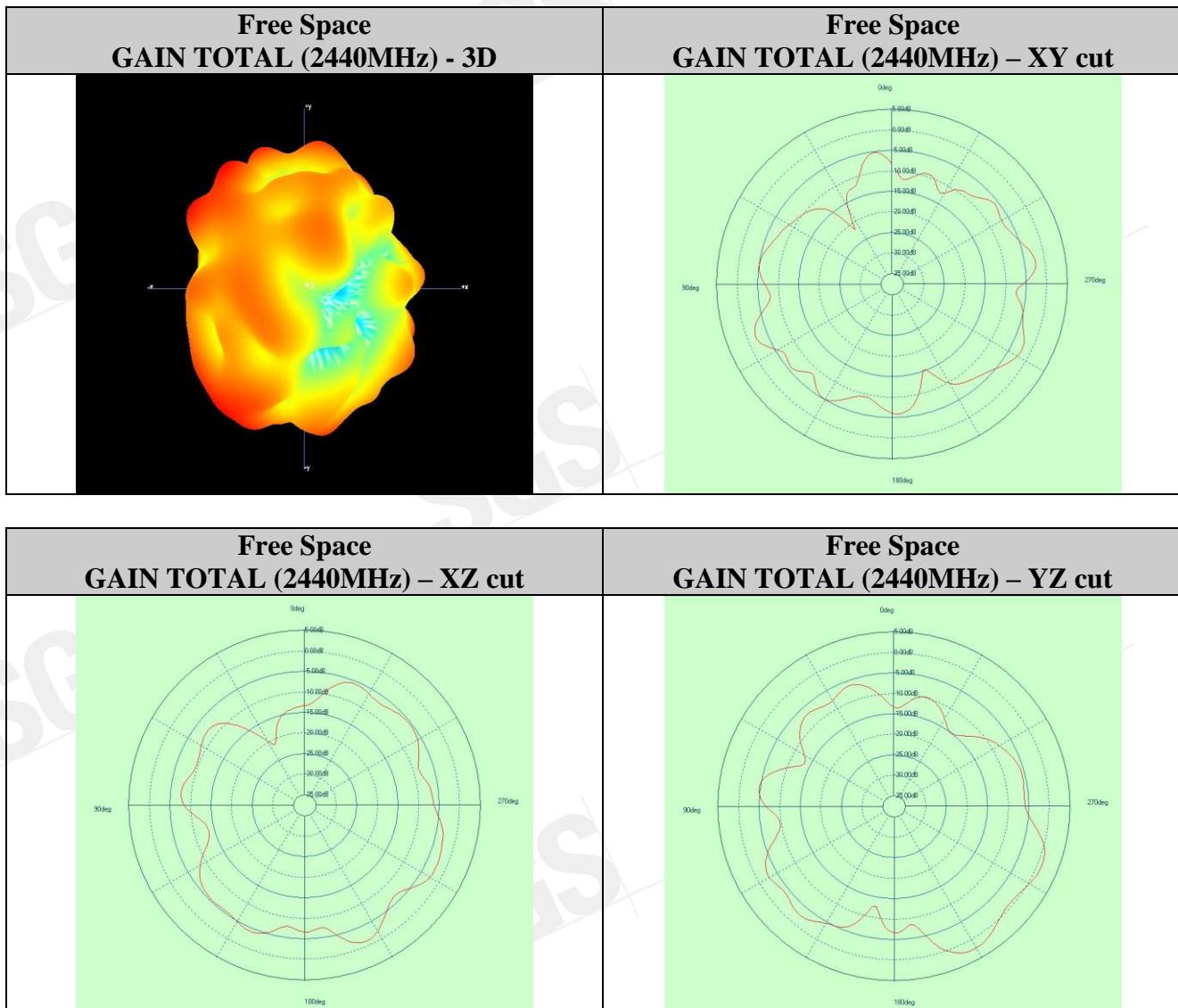
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

308F body with Attachment A3

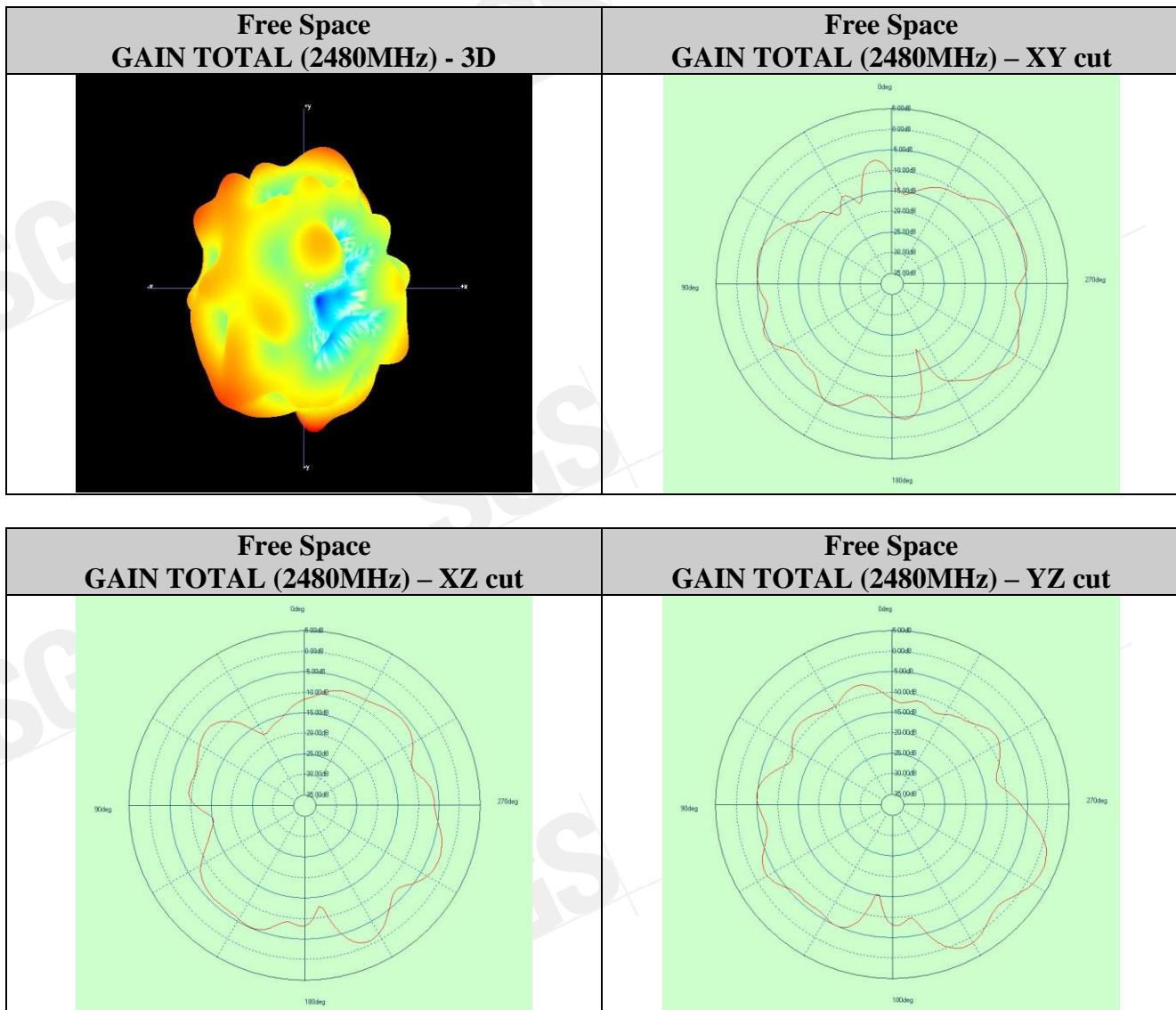
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



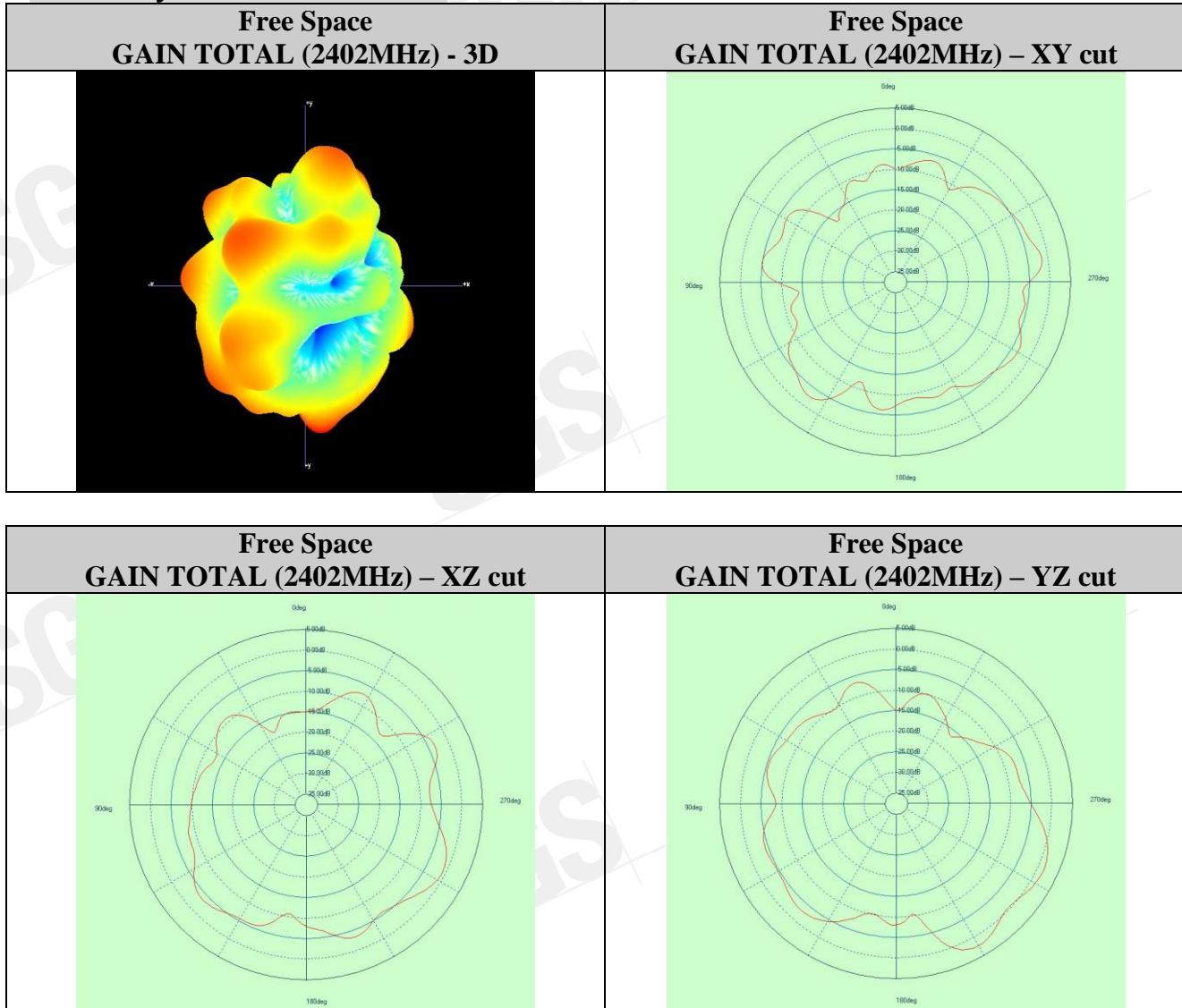
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



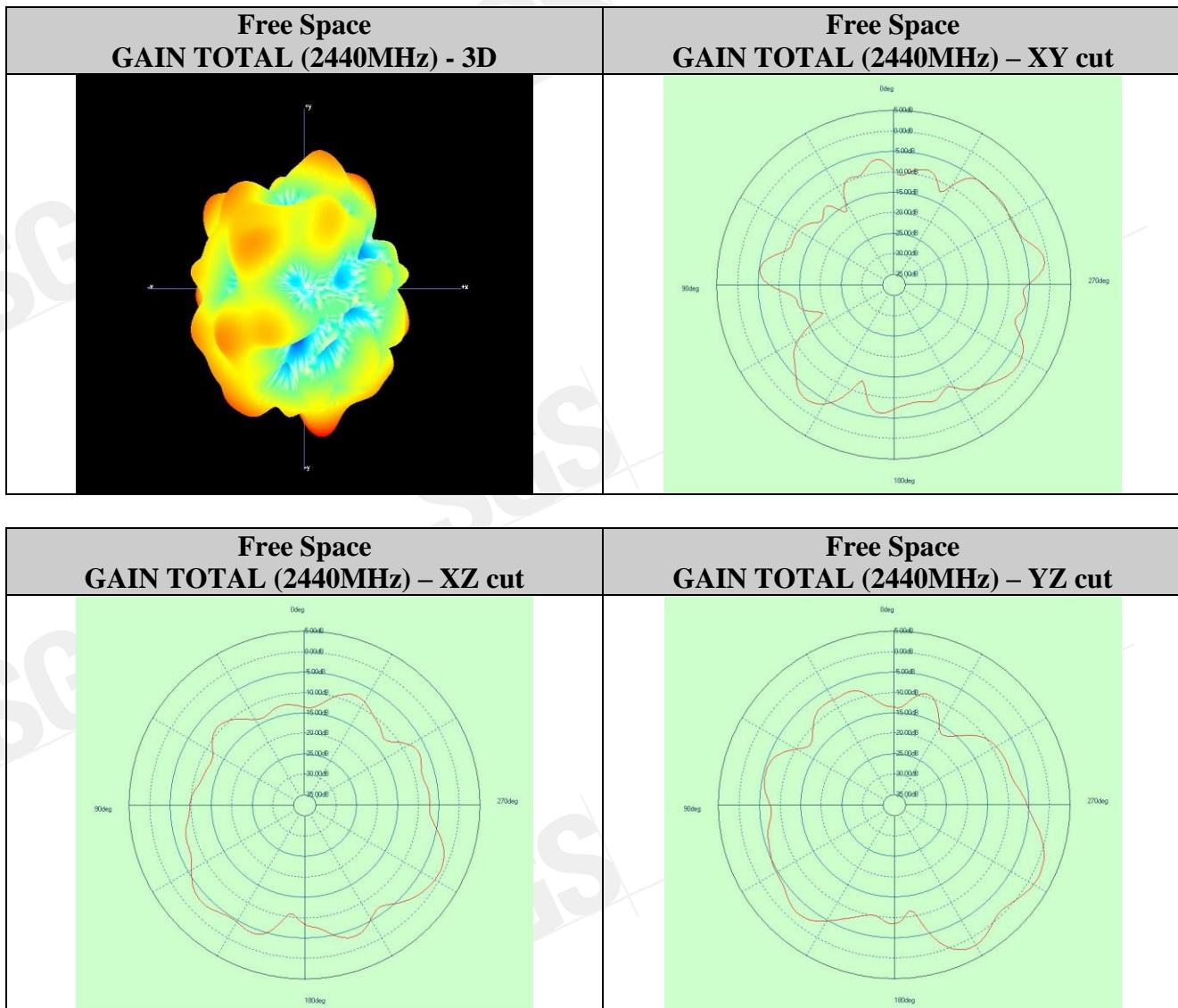
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

308F body with Attachment A4

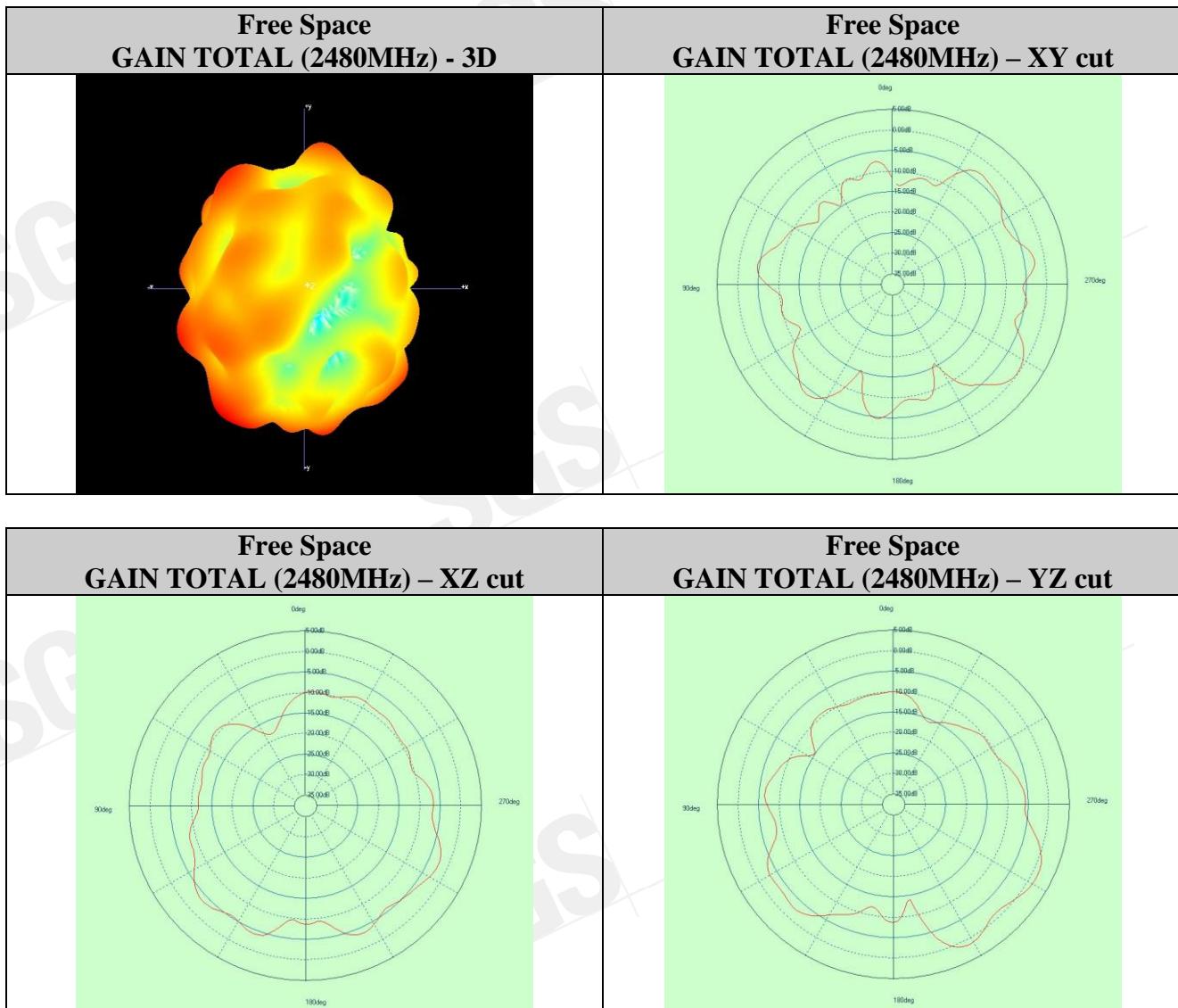
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

**End of Report**

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.