



Pulse

a YAGEO company

RoHS & Halogen Free & REACH Compliance

產 品 規 格 承 認 書

SPECIFICATION FOR APPROVAL

Customer : Sysgration

Vendor code : 100947(臺鑫)

MACHINERY: Swallowtail

PART NAME : WIFI MAIN

Customer P/N : 354-0000491

Manufacturer P/N : TZ2977E **Date :** 250212

CUSTOMER			
ACCEPTED BY :			
核 准	審 核	承 認 者	承認單位
<input type="checkbox"/> APPROVED			
<input type="checkbox"/> REJECTED			

審 核 by	作 成 by	RF by
CHEN/YY	KEN	Charles

Series: Swallowtail

Customer P/N: 354-0000491

Manufacturer P/N: TZ2977E

Revisions

Description: WIFI MAIN

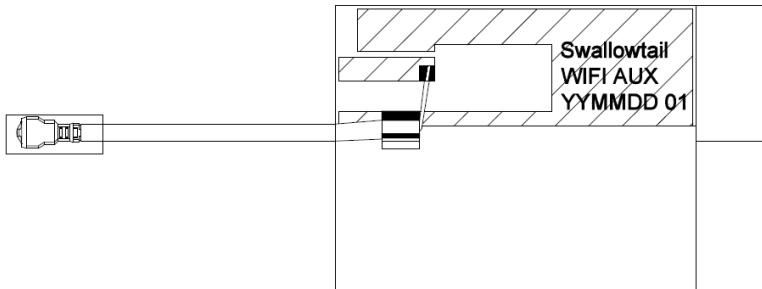
Series: Swallowtail

Customer P/N: 354-0000491

Manufacturer P/N: TZ2977E

Features:

- WIFI Antenna
- PCB
- 1.13 cable LL
- RoHS



Applications:

- IOT

All dimensions are in mm / inches

Series: Swallowtail**Customer P/N: 354-0000491**
Manufacturer P/N: TZ2977E**ELECTRICAL SPECIFICATIONS**

Antenna Type

PIFA

Frequency

2.4~2.5GHz / 5.15~5.85GHz

MECHANICAL SPECIFICATIONS

Overall Length

See table, P5

Antenna Color / Material

See table, P5

Connector type

See table, P5

Cable type

See table, P5

Cable length

See table, P5

Adhesive tape

See table, P5

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature

-40 ~ +85°C

Storage Temperature

-40 ~ +85°C

RoHS Compliant

Yes

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

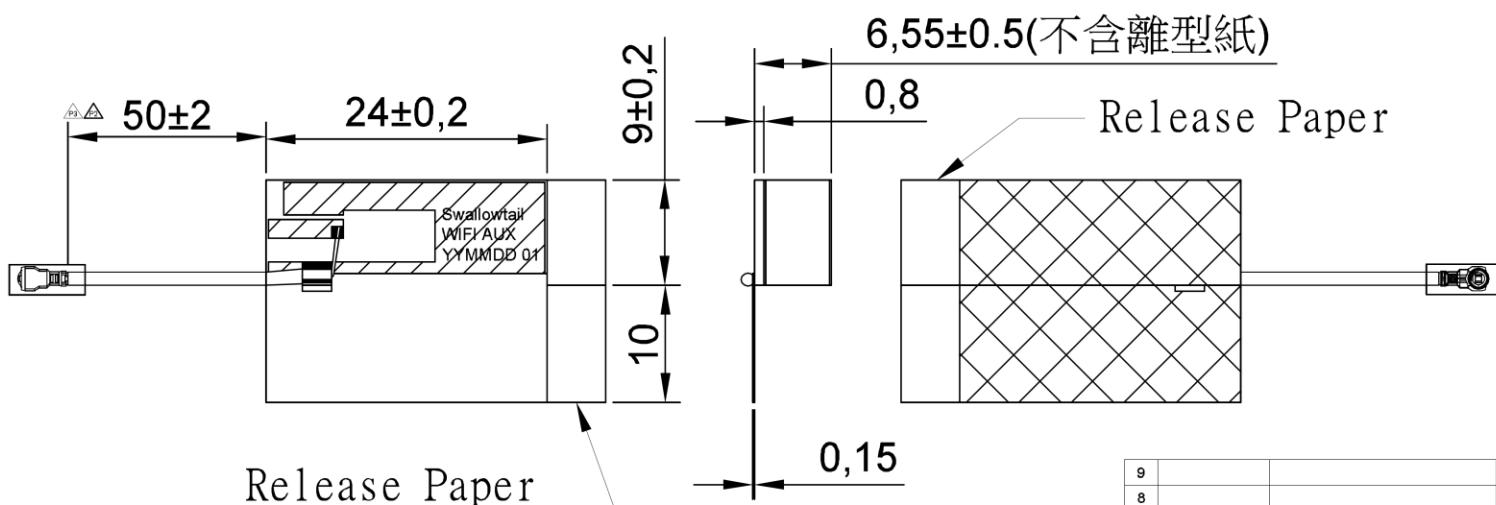
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

Series: Swallowtail

Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

MECHANICAL DRAWING



Note:
1, Surface finish quality to PULSE PQ.5.030.000 class III

1. Surface finish quality to T-1 GSE T Q.3.000.000 class in
No visual requirements, only functional.
2. Part surface must be clean and free from release agent

2. Part surface must be clean and free from release agent, grease, fingerprint oil and dust or any other contaminant.
3. Inkjet markings to be in approximate positions shown.

4. For complete documentation this drawing must be a

4, For complete documentation this drawing must be accompanied by a 3D cad-file with part vers, number as stated in the title block.

頻段
2400-2500MHz
5150-5850MHz

Customer P/N: 354-0000491

備註：
1. 電氣特性必須100%測試以及標註。的尺寸須做重點檢驗(SPC)
2. 此產品及其附屬包裝材料的均質成份須滿足無菌管制要求：
 Br < 900ppm, Cl < 900ppm, Br + Cl < 1500ppm
3. 貼膠貼合，不可溢膠
4. 凡標記* 記號者，為品質檢驗之尺寸

9			
8			
7			
6	HEAT SHRINK TUBE	規格Ø1.5	1
5	CABLE	Ø1.13/LLS8BLACK/ 50mm	1
4	CONNECTOR	IPEX4代	1
3	SPONGE	EVA+3M988T,24x9x5.75mm	1
2	CU FOIL	24x11x0.15mm	1
1	PCB	24x9x0.8mm	1
Item	Name	REMARK	Q'ty

Pulse (Suzhou) Wireless Products Co., Ltd		THIS ANGLE PROJECTION	HANDLING		
			GENERAL TOLERANCE	ISO 2768-1	
			ASSOCIATED		
Pulse A V-GAGE COMPANY 99 HUOLU RD SUZHOU NEW DISTRICT SUZHOU 215009 P.R.CHINA WWW.PULSE-ELECTRONICS.COM/ANTENNAS		Scale 1:1	DESIGN Ken 20240429 CHECKED Cheng 20240429 APPROVED Cheng 20240429	P3	20240402 KEN
PRODUCT(S) TZ297E		DOCUMENT NUMBER TZ297E	PART REVISION P03	DOCUMENT VERSION P3	P2 20240430 KEN P1 20240429 KEN MOD. DATE NAME
ITEM NAME Swallowtail WIFI AUX					

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo. and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden. ✓

Series: Swallowtail

Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

Electrical test_VSWR



In the effort to improve our products, we reserve the right to make changes judged to be necessary.

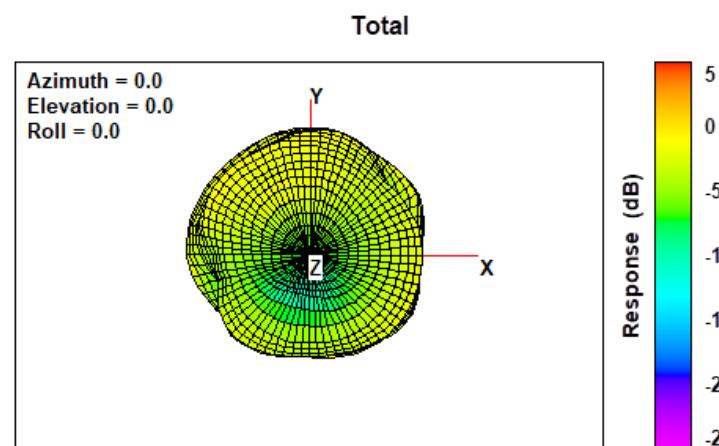
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

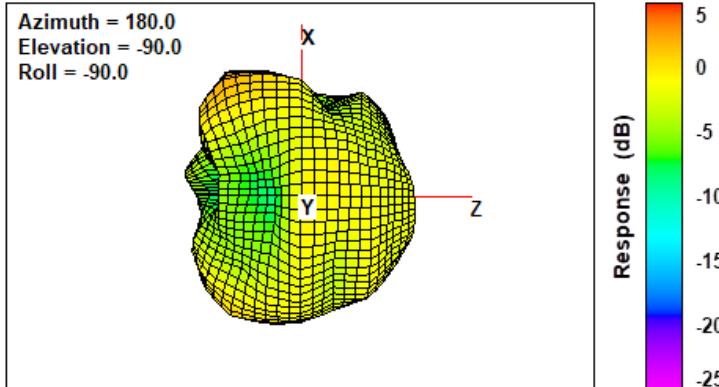
Series: Swallowtail

Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

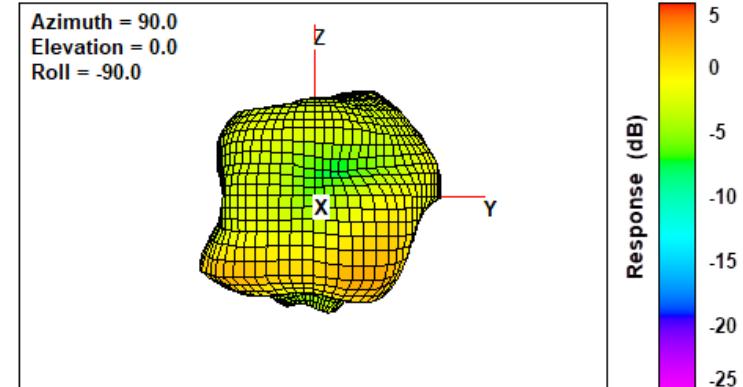
3D Radiation_2400MHz [WIFI MAIN]



Total



Total



In the effort to improve our products, we reserve the right to make changes judged to be necessary.

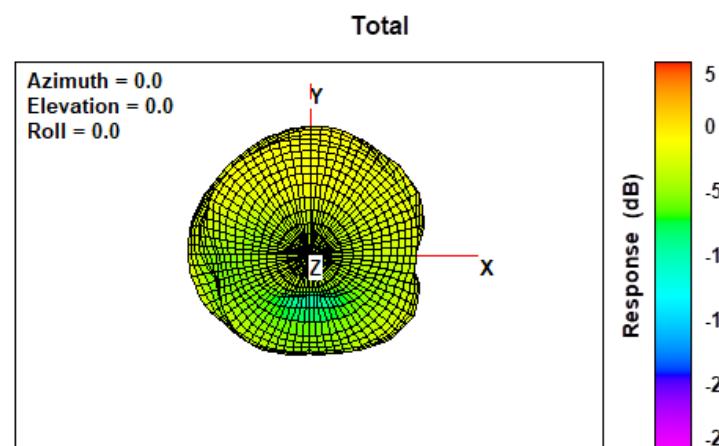
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

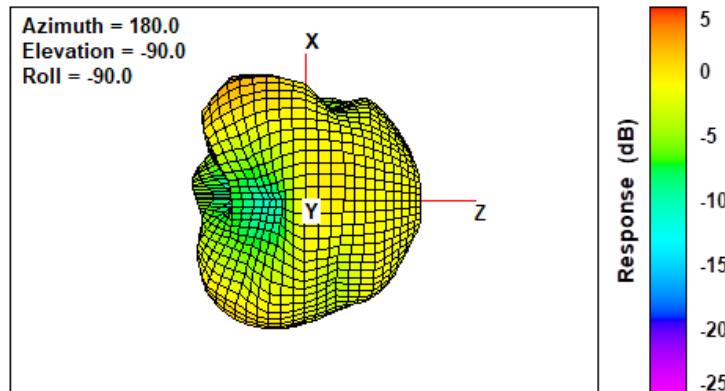
Series: Swallowtail

Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

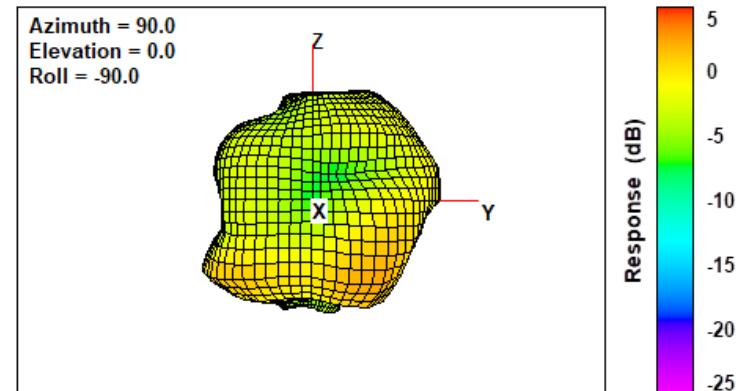
3D Radiation_2450MHz [WIFI MAIN]



Total



Total



In the effort to improve our products, we reserve the right to make changes judged to be necessary.

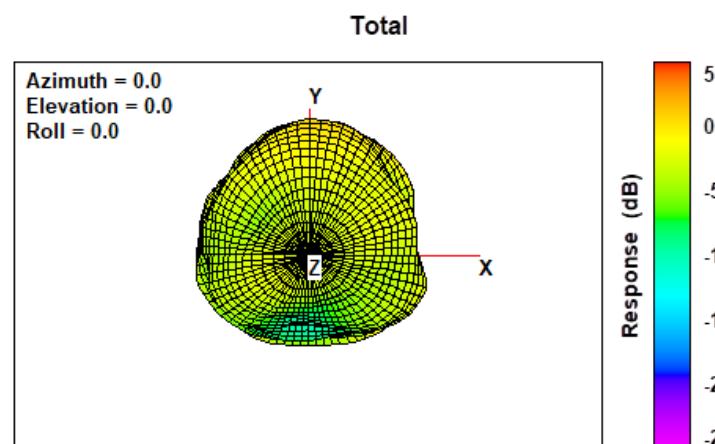
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

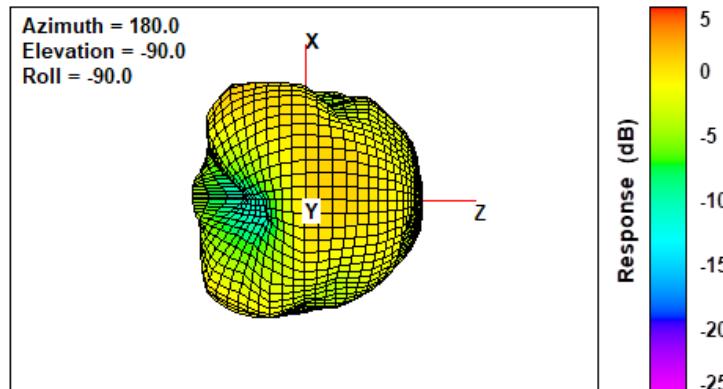
Series: Swallowtail

Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

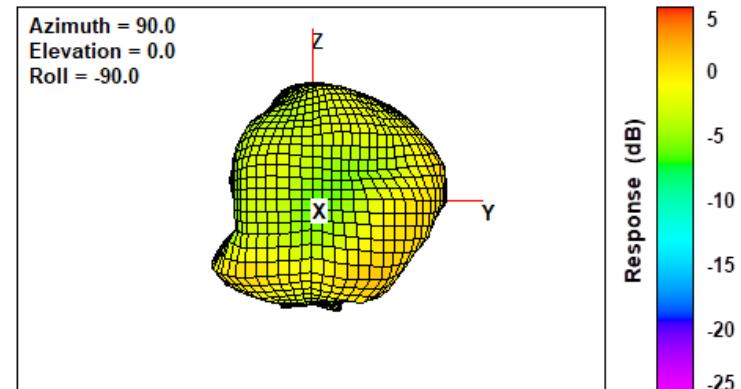
3D Radiation_2500MHz [WIFI MAIN]



Total



Total



In the effort to improve our products, we reserve the right to make changes judged to be necessary.

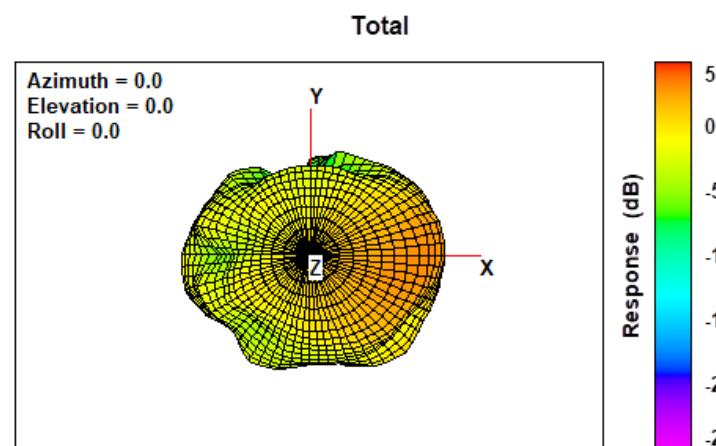
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

Series: Swallowtail

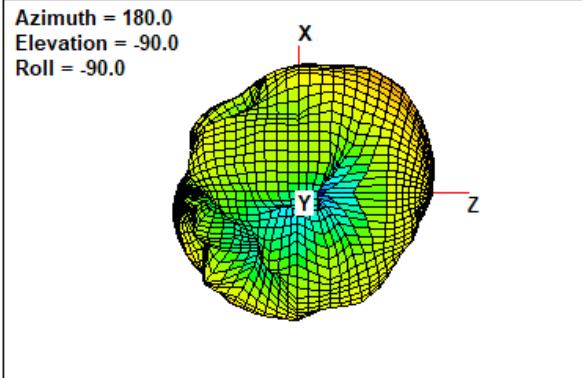
Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

3D Radiation_5150MHz [WIFI MAIN]



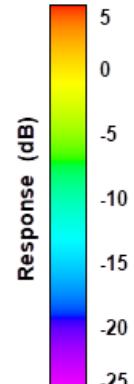
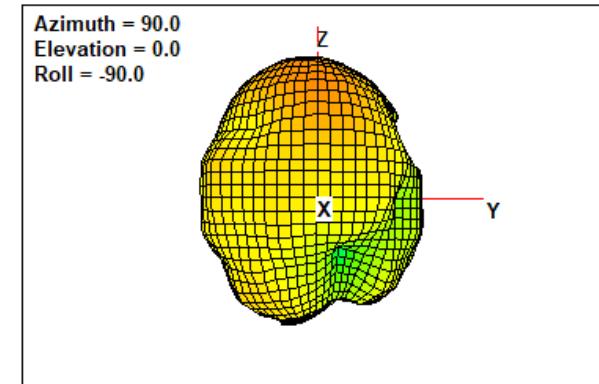
Total

1



Total

2



In the effort to improve our products, we reserve the right to make changes judged to be necessary.

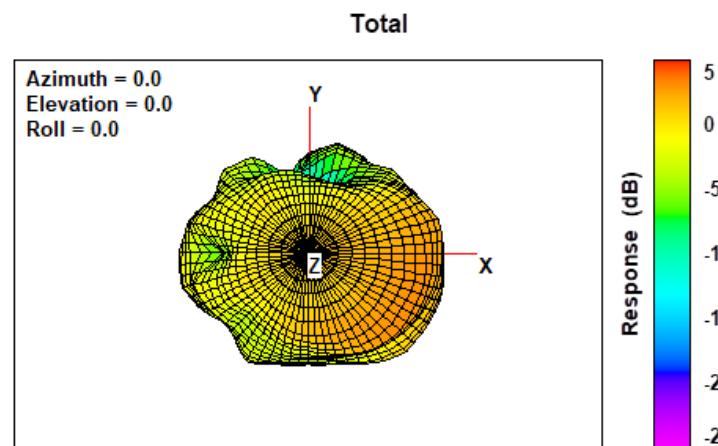
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

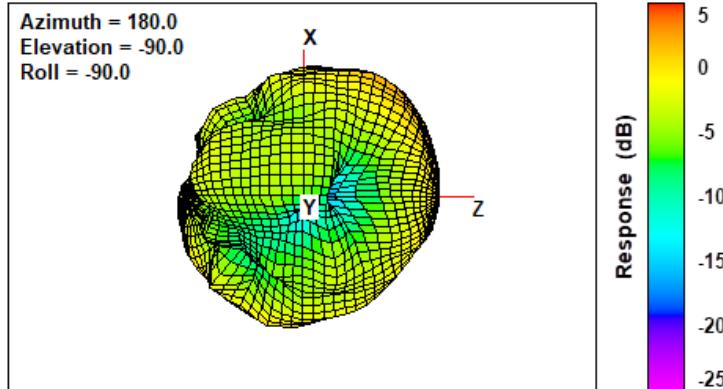
Series: Swallowtail

Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

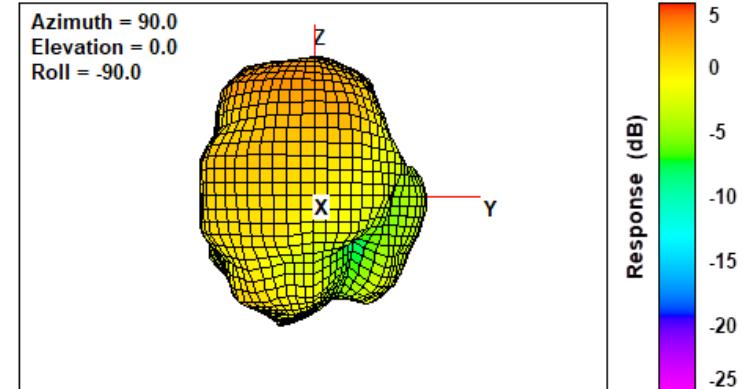
3D Radiation_5250MHz [WIFI MAIN]



Total



Total



In the effort to improve our products, we reserve the right to make changes judged to be necessary.

CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

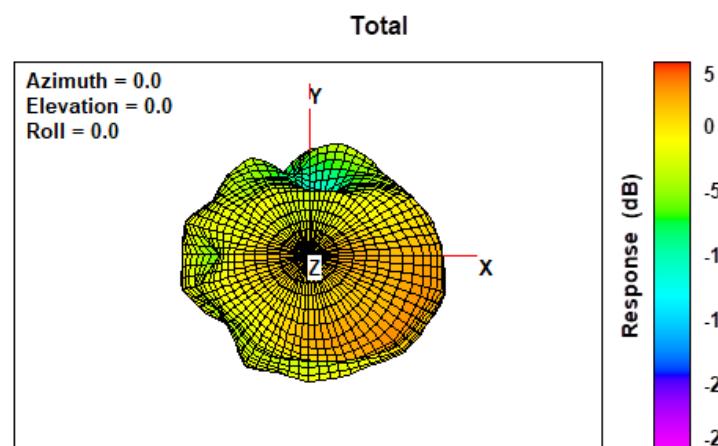
Description: WIFI MAIN



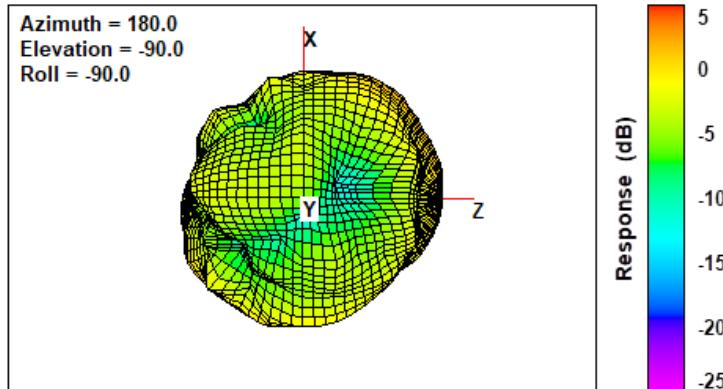
Series: Swallowtail

Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

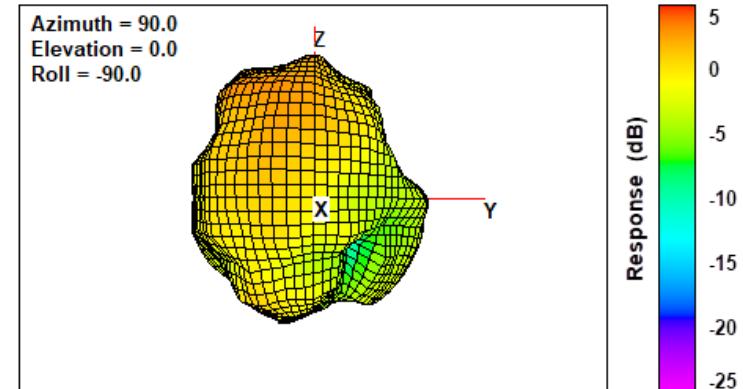
3D Radiation_5350MHz [WIFI MAIN]



Total



Total



In the effort to improve our products, we reserve the right to make changes judged to be necessary.

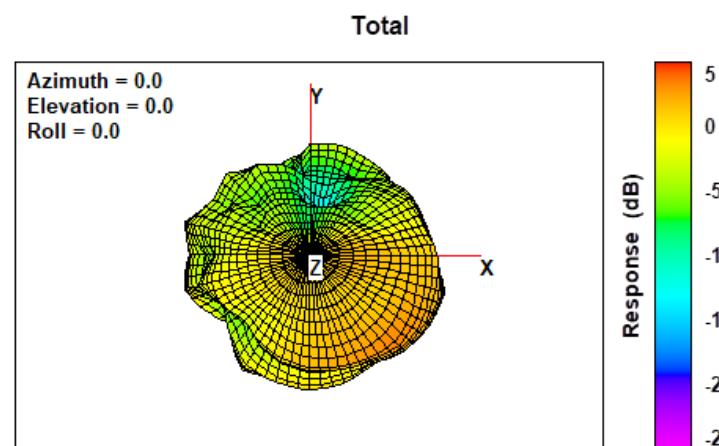
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

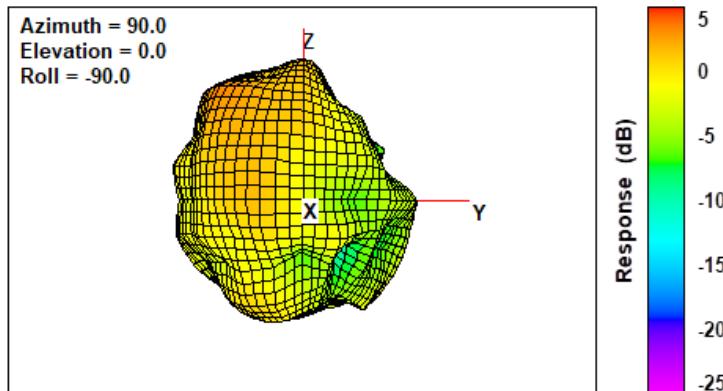
Series: Swallowtail

Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

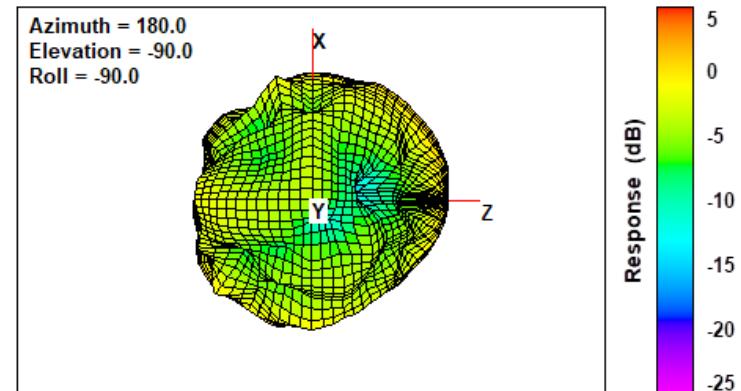
3D Radiation_5470MHz [WIFI MAIN]



Total



Total



In the effort to improve our products, we reserve the right to make changes judged to be necessary.

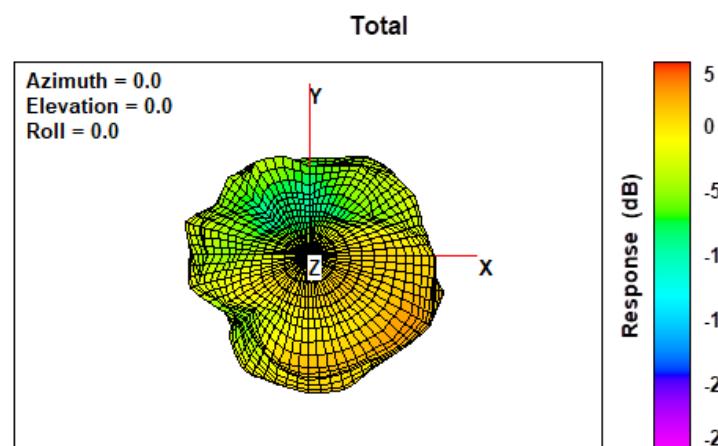
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

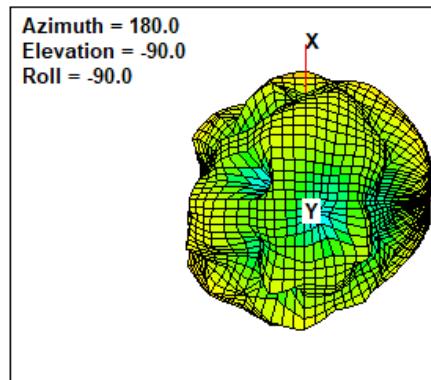
Series: Swallowtail

Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

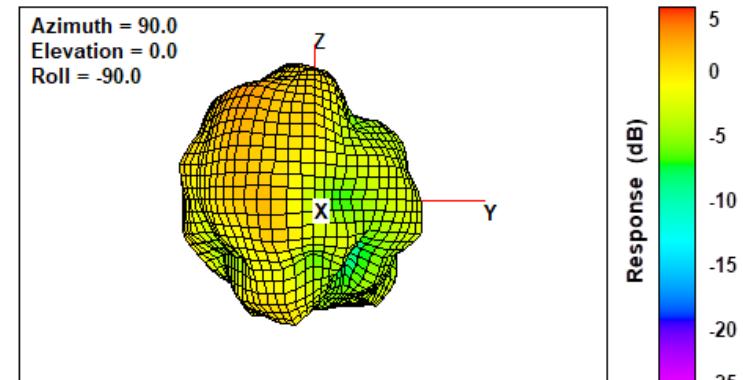
3D Radiation_5600MHz [WIFI MAIN]



Total



Total



In the effort to improve our products, we reserve the right to make changes judged to be necessary.

CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

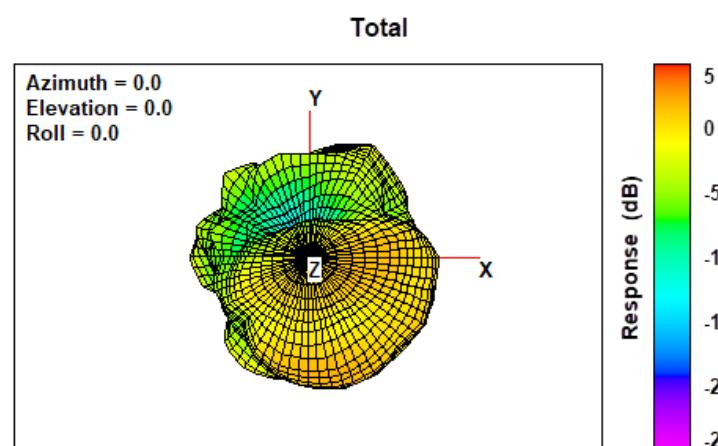
Description: WIFI MAIN



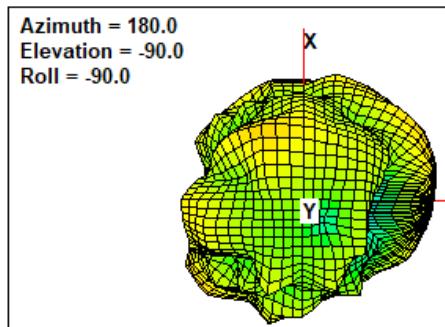
Series: Swallowtail

Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

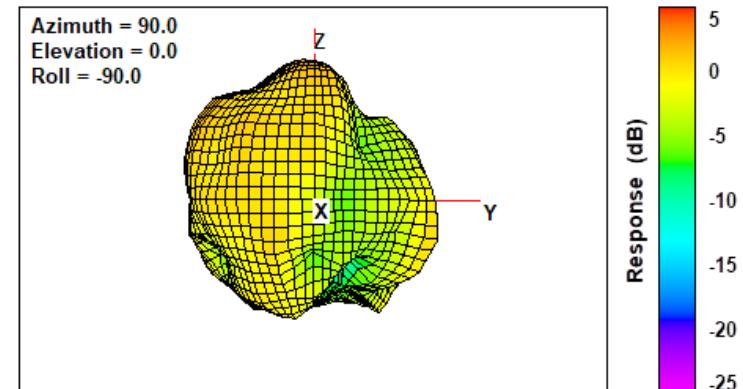
3D Radiation_5725MHz [WIFI MAIN]



Total



Total



In the effort to improve our products, we reserve the right to make changes judged to be necessary.

CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

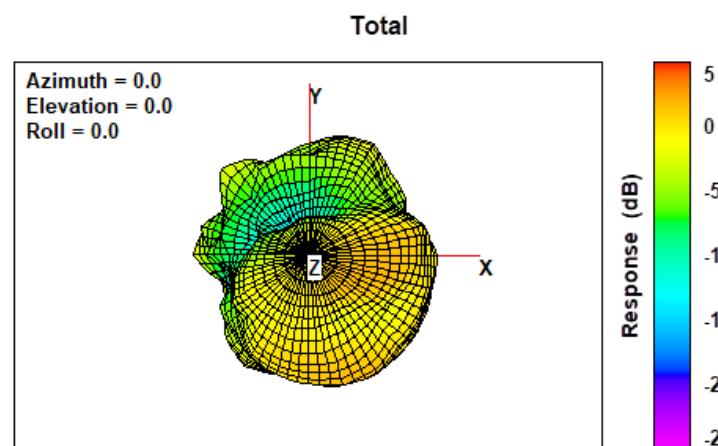
Description: WIFI MAIN

C

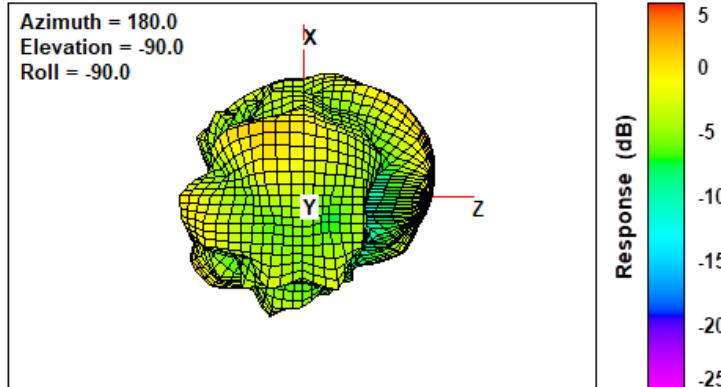
Series: Swallowtail

Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

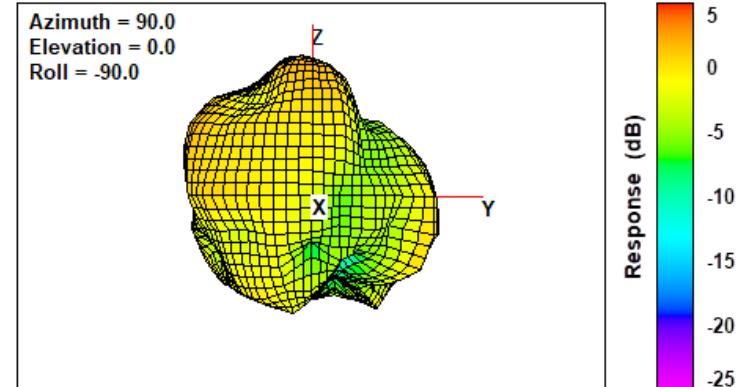
3D Radiation_5785MHz [WIFI MAIN]



Total



Total



In the effort to improve our products, we reserve the right to make changes judged to be necessary.

CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

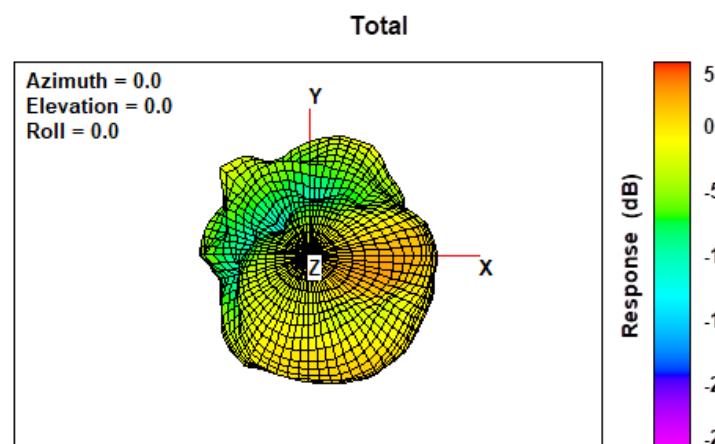
Description: WIFI MAIN



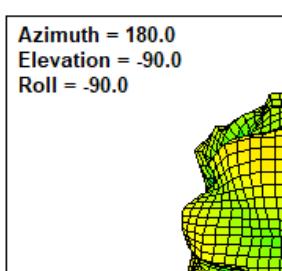
Series: Swallowtail

Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

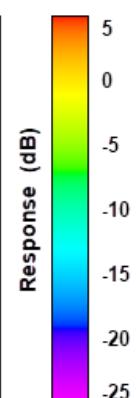
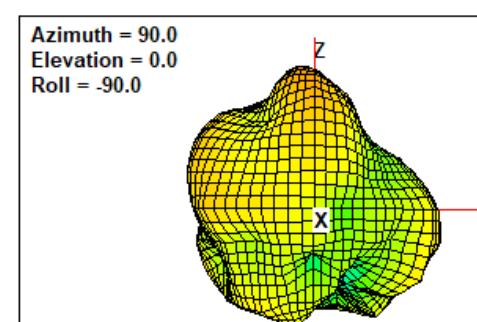
3D Radiation_5850MHz [WIFI MAIN]



Total



Total



In the effort to improve our products, we reserve the right to make changes judged to be necessary.

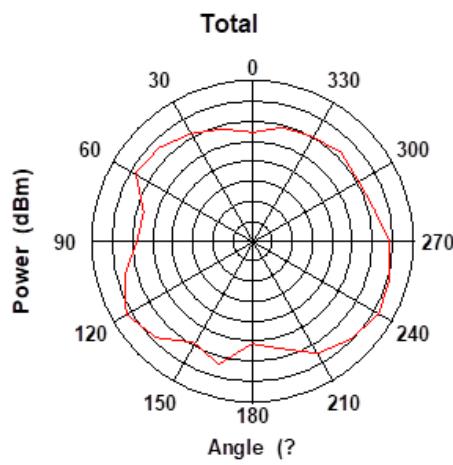
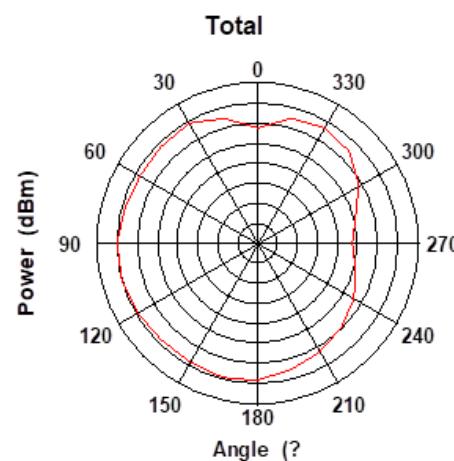
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

Series: Swallowtail

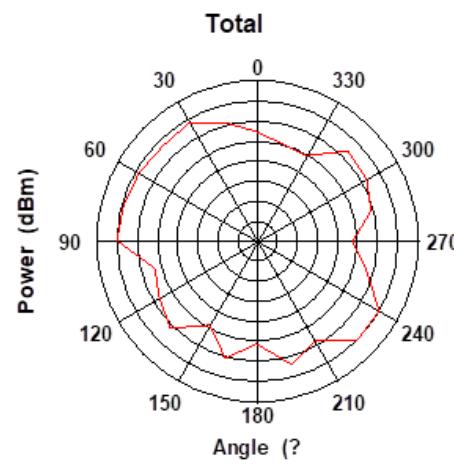
Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

2D Radiation_2400MHz [WIFI MAIN]



Cut-2 XZ Plane

Cut-1 XY Plane



Cut-3 YZ Plane

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

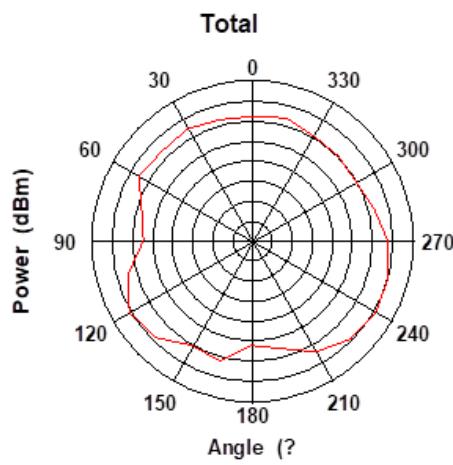
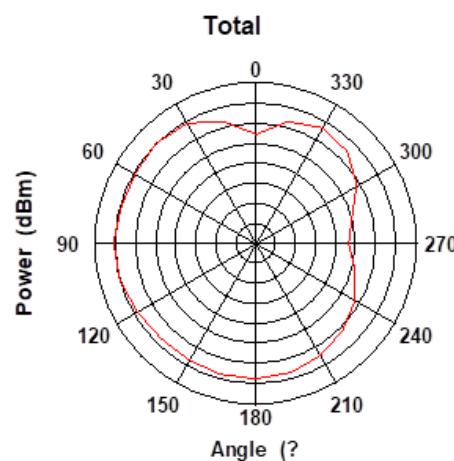
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

Series: Swallowtail

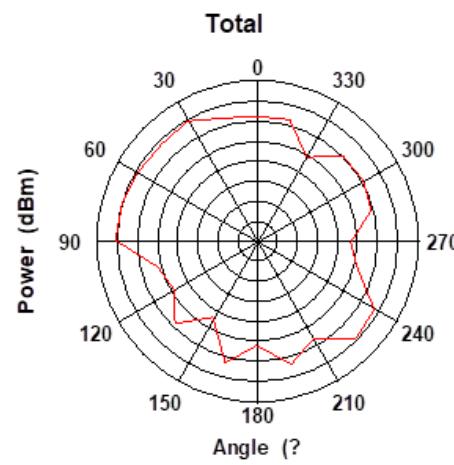
Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

2D Radiation_2450MHz [WIFI MAIN]



Cut-2 XZ Plane

Cut-1 XY Plane



Cut-3 YZ Plane

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

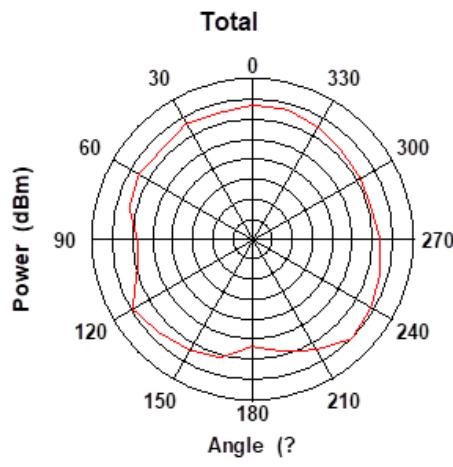
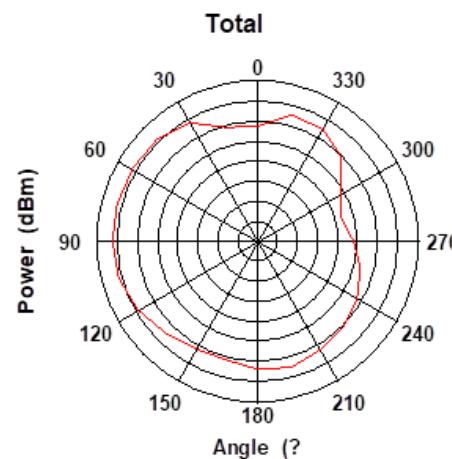
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

Series: Swallowtail

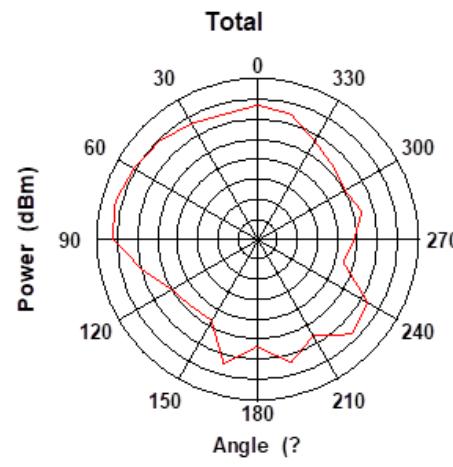
Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

2D Radiation_2500MHz [WIFI MAIN]



Cut-2 XZ Plane

Cut-1 XY Plane



Cut-3 YZ Plane

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

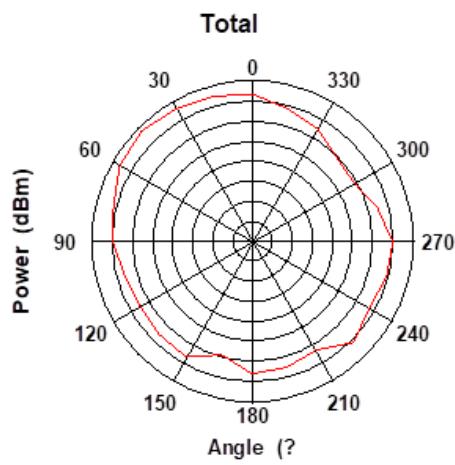
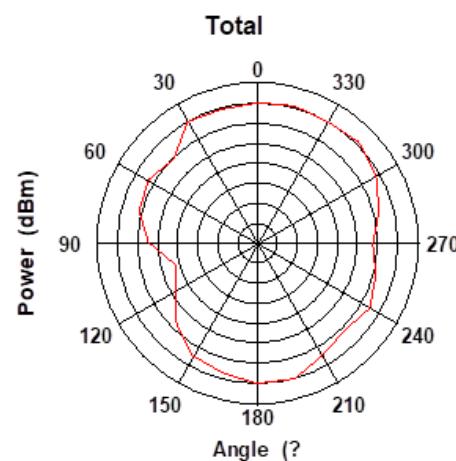
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

Series: Swallowtail

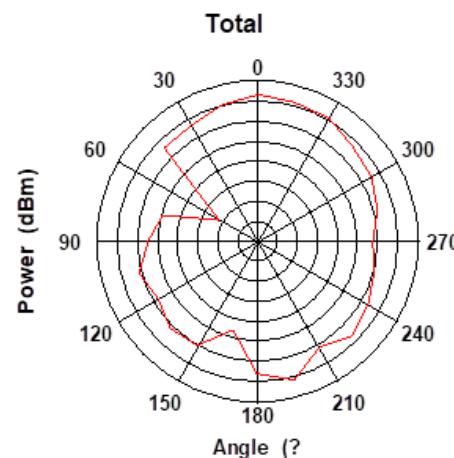
Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

2D Radiation_5150MHz [WIFI MAIN]



Cut-2 XZ Plane

Cut-1 XY Plane



Cut-3 YZ Plane

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

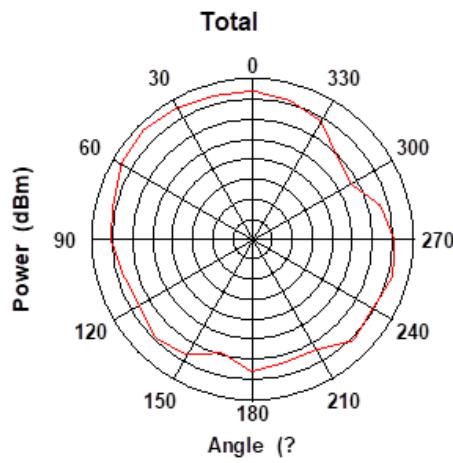
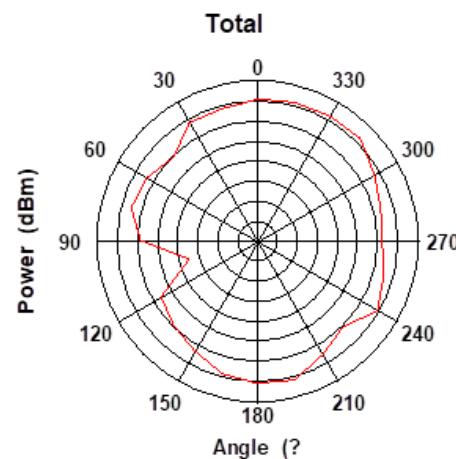
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

Series: Swallowtail

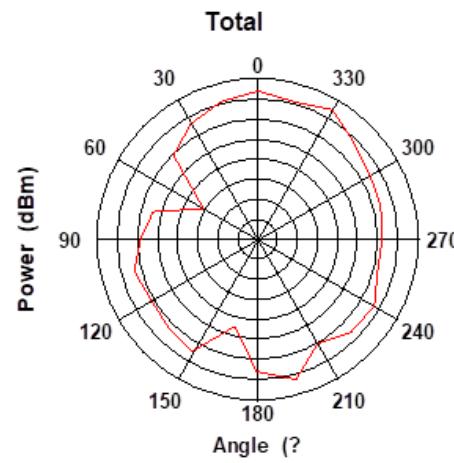
Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

2D Radiation_5250MHz [WIFI MAIN]



Cut-2 XZ Plane

Cut-1 XY Plane



Cut-3 YZ Plane

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

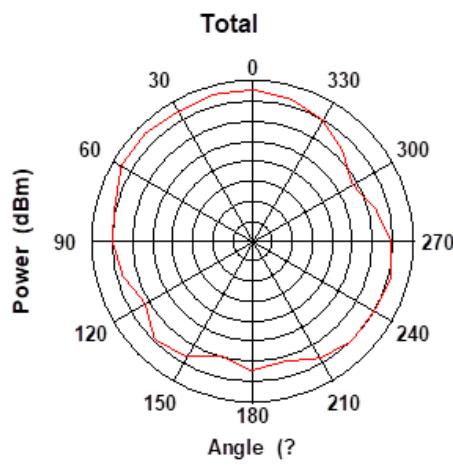
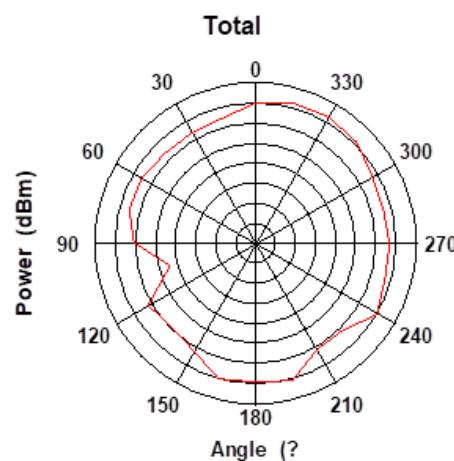
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

Series: Swallowtail

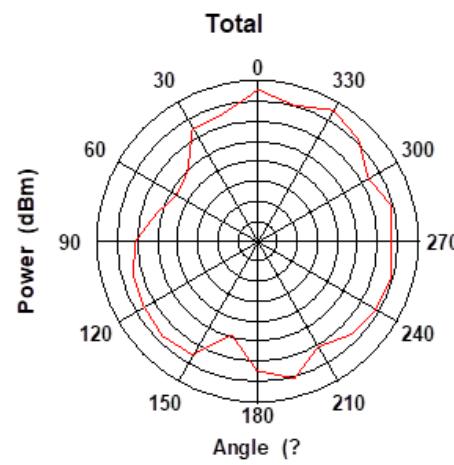
Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

2D Radiation_5350MHz [WIFI MAIN]



Cut-2 XZ Plane

Cut-1 XY Plane



Cut-3 YZ Plane

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

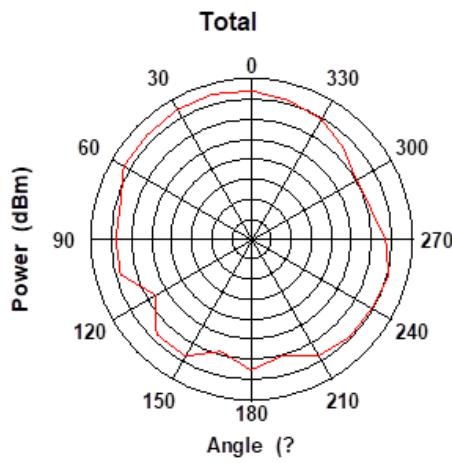
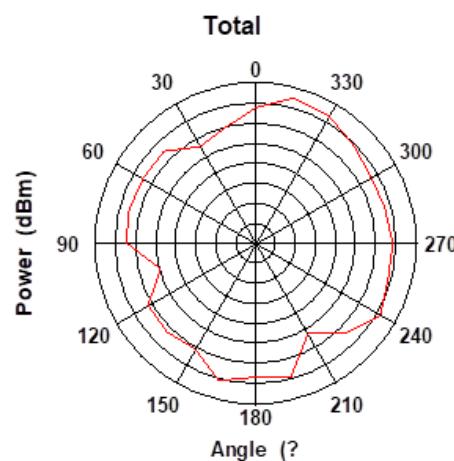
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

Series: Swallowtail

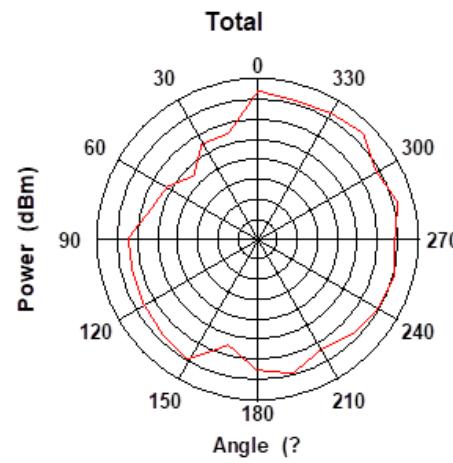
Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

2D Radiation_5470MHz [WIFI MAIN]



Cut-2 XZ Plane

Cut-1 XY Plane



Cut-3 YZ Plane

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

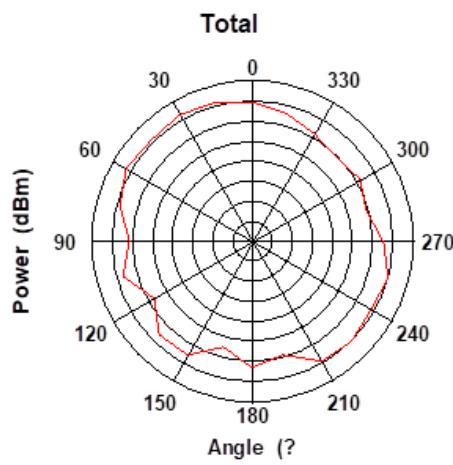
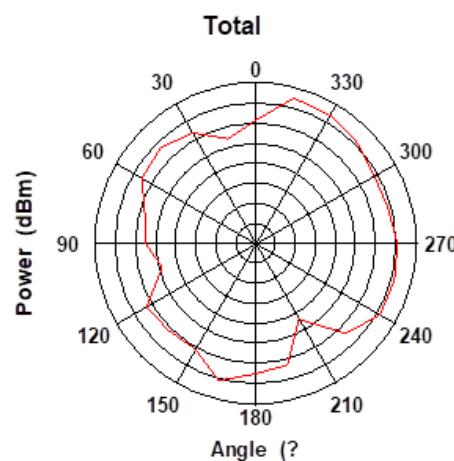
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

Series: Swallowtail

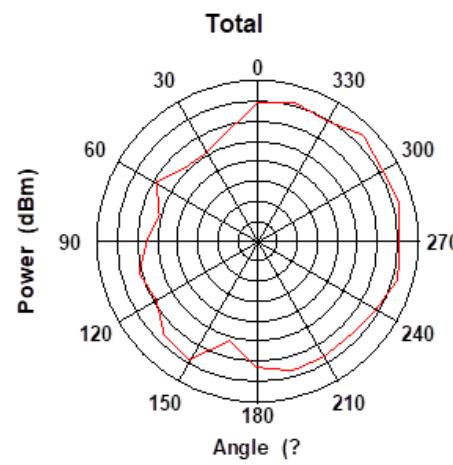
Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

2D Radiation_5600MHz [WIFI MAIN]



Cut-2 XZ Plane

Cut-1 XY Plane



Cut-3 YZ Plane

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

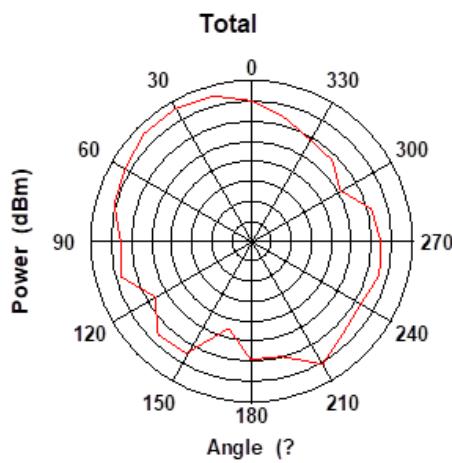
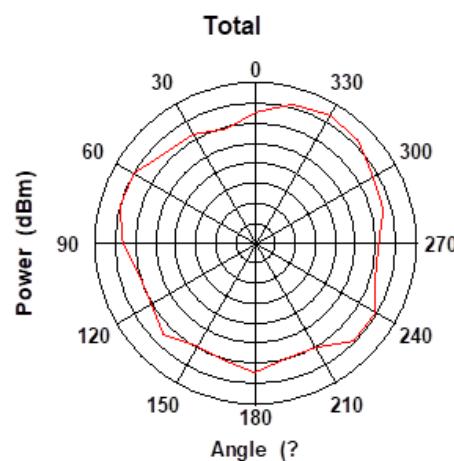
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

Series: Swallowtail

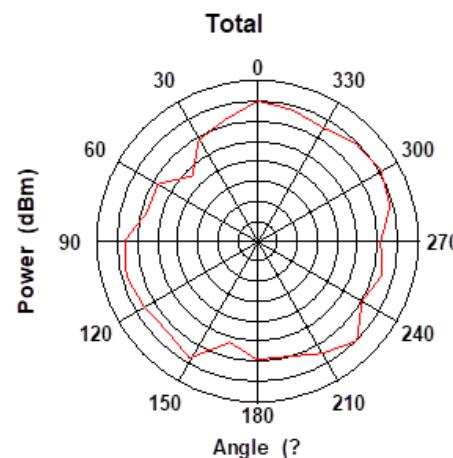
Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

2D Radiation_5725MHz [WIFI MAIN]



Cut-2 XZ Plane

Cut-1 XY Plane



Cut-3 YZ Plane

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

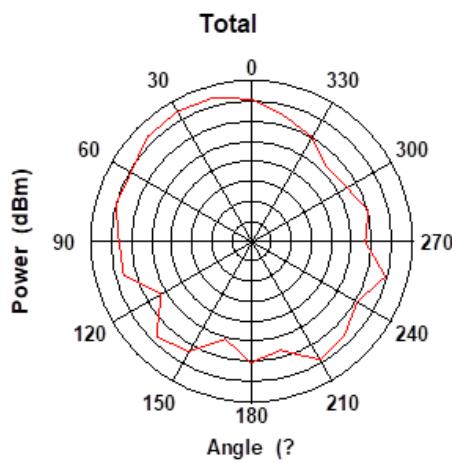
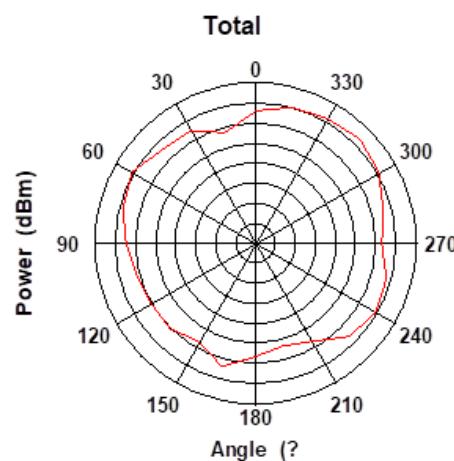
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

Series: Swallowtail

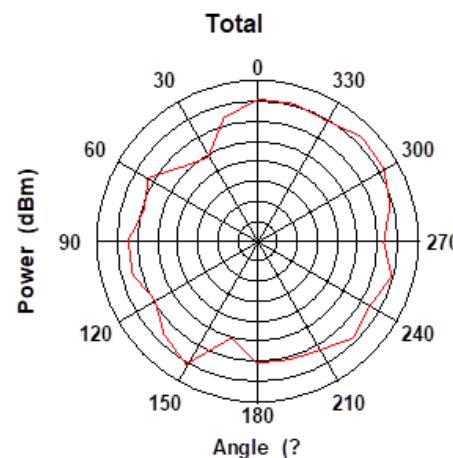
Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

2D Radiation_5785MHz [WIFI MAIN]



Cut-2 XZ Plane

Cut-1 XY Plane



Cut-3 YZ Plane

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

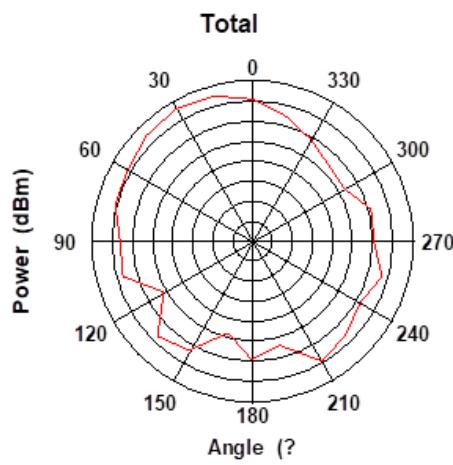
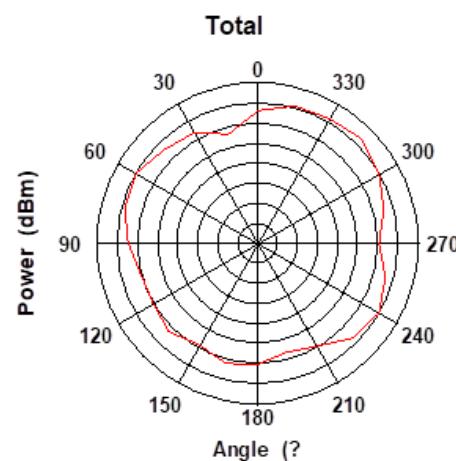
CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

Series: Swallowtail

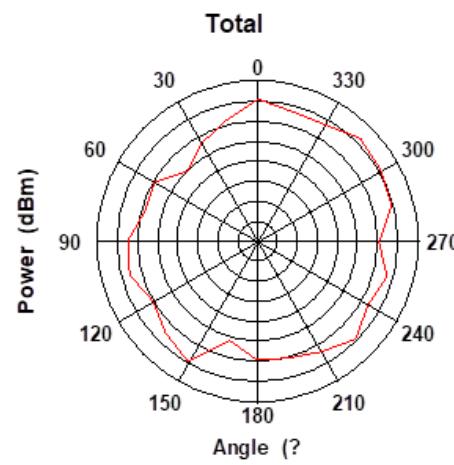
Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E

2D Radiation_5850MHz [WIFI MAIN]



Cut-2 XZ Plane

Cut-1 XY Plane



Cut-3 YZ Plane

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.

Series: Swallowtail
Customer P/N: 354-0000491
Manufacturer P/N: TZ2977E
Electrical test_Paasive data

Frequency	2400	2450	2500	5150	5250	5350	5470	5600	5725	5785	5850
Tot. Rad. Pwr. (dBm)	-2.55	-2.66	-2.95	-1.83	-1.58	-1.59	-1.75	-1.98	-2.06	-2.36	-2.57
Gain (dBi)	2.62	2.69	1.70	3.39	3.19	3.38	3.66	2.97	2.18	2.07	2.65
Directivity (dBi)	5.17	5.35	4.65	5.23	4.77	4.97	5.40	4.96	4.24	4.43	5.22
Efficiency (%)	55.56	54.24	50.75	65.59	69.44	69.35	66.91	63.32	62.23	58.13	55.31

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse -Yageo, and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse-Yageo is strictly forbidden.