



# TAOGLAS®



## Datasheet

### Freedom FXP832

**Part No:**  
FXP832.03.0458D

#### **Description:**

FXP832 Freedom Wi-Fi 2.4GHz and 4.9-6GHz Dipole Antenna

#### **Features:**

Flexible PCB  
Very High Efficiency  
42mm\*7mm\*0.1mm  
Ground-plane Independent  
Cable: 458mm (18 inches) RG174  
Connector: RP-SMA(M) Straight  
RoHS & REACH Compliant

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## 1. Introduction



The Freedom FXP832 is a breakthrough, very high efficiency, small, dual-band Wi-Fi dipole omni-directional antenna for 2.4/5GHz bands. This antenna is designed for DSRC, V2V, Wi-Fi, Bluetooth, Zigbee and other applications in these bands. It is designed in such a narrow rectangular form factor to cover most of the current applications on the market. Taoglas FXP series are conformal flexible antennas and can fit irregular housings.

With dimensions of 42\*7\*.01mm it comes with double-sided 3M tape for easy “peel and stick” mounting. This longer cable length version of the FXP832 is ideal for applications in embedded industrial and automotive environments.

Typical Applications include:

- Automotive
- Remote Monitoring
- Security

Like all embedded omni-directional antennas, care should be taken to keep the antenna away from metal as much as possible, a minimum of 10mm is recommended.

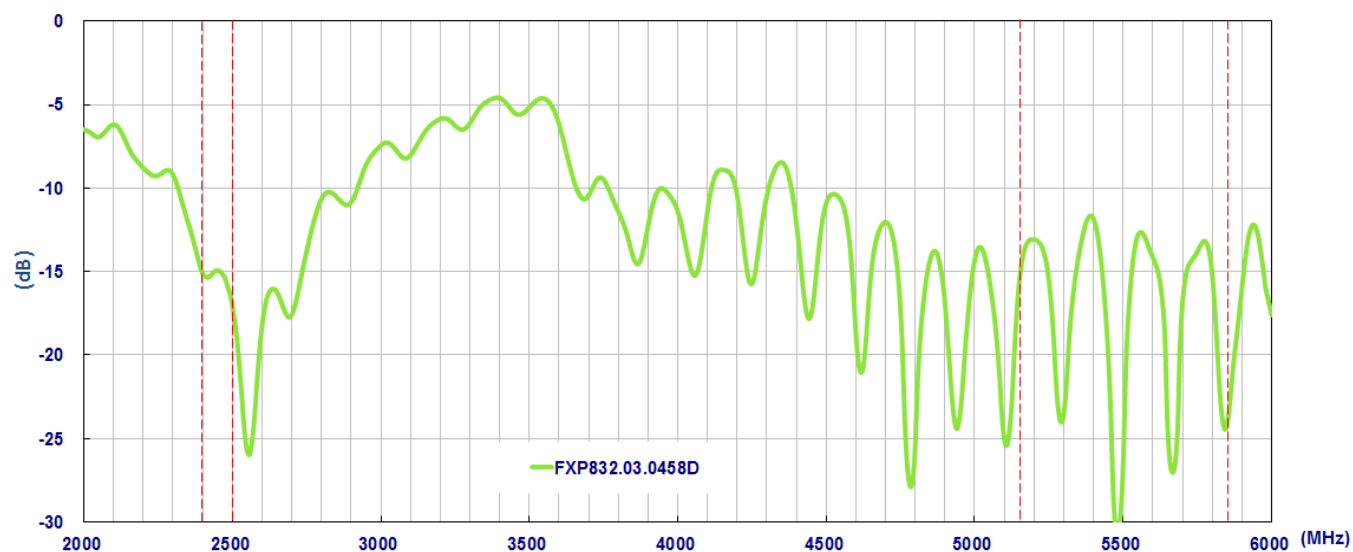
The cable length and connector type are fully customizable, for more information contact your regional Taoglas Customer Support Team.

## 2. Specifications

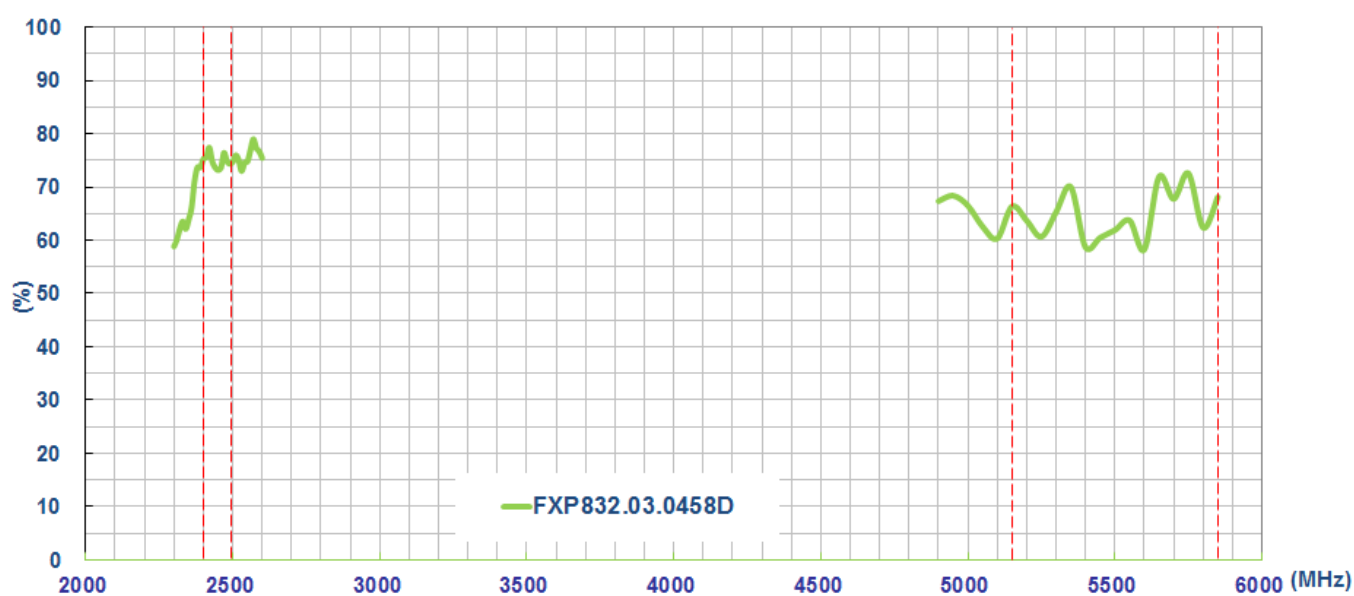
Electrical		
Frequency (MHz)	2400-2500	4900-6000
Peak Gain (dBi)		
On 2mm ABS	3.66	5.33
Average Gain (dB)		
On 2mm ABS	-1.25	-1.89
Efficiency (%)		
On 2mm ABS	74.9	64.7
Impedance	50Ω	
Polarization	Linear	
Radiation Pattern	Omni	
Input Power	2W	
Mechanical		
Dimensions	42mm x 7mm	
Antenna Body Material	Polymer	
Cable	Black 458mm (18 inches) RG174 Coaxial Cable	
Connector	RP-SMA(M) Straight	
Weight	7.5g	
Environmental		
Temperature Range	-40°C to 85°C	
Humidity	Non-condensing 65°C 95% RH	

## 3. Antenna Characteristics

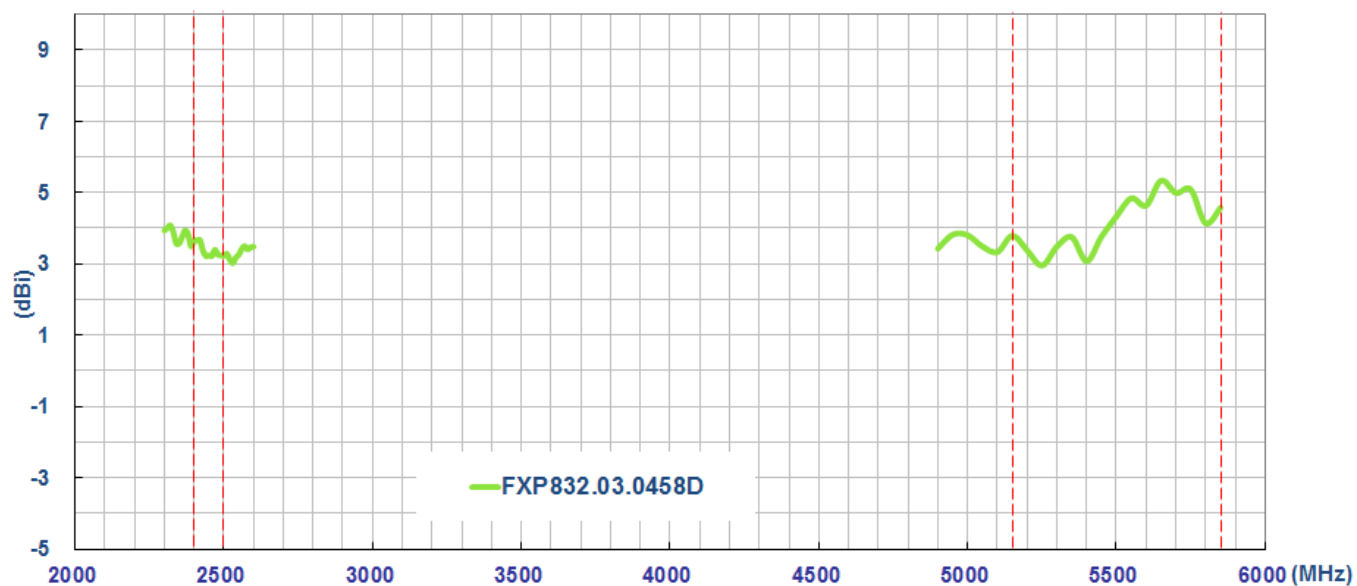
### 3.1 Return Loss



### 3.2 Efficiency

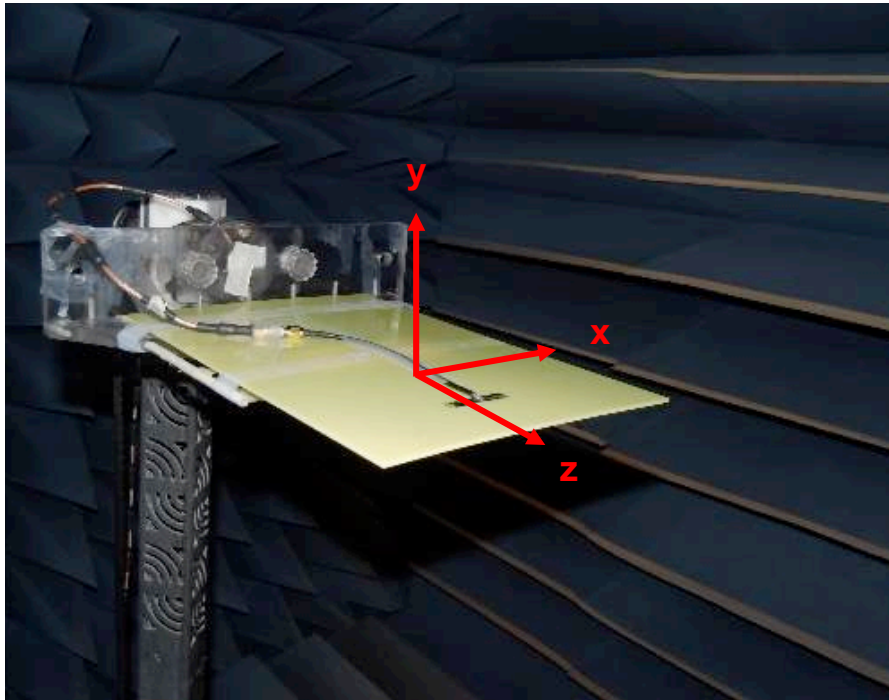


### 3.3 Peak Gain



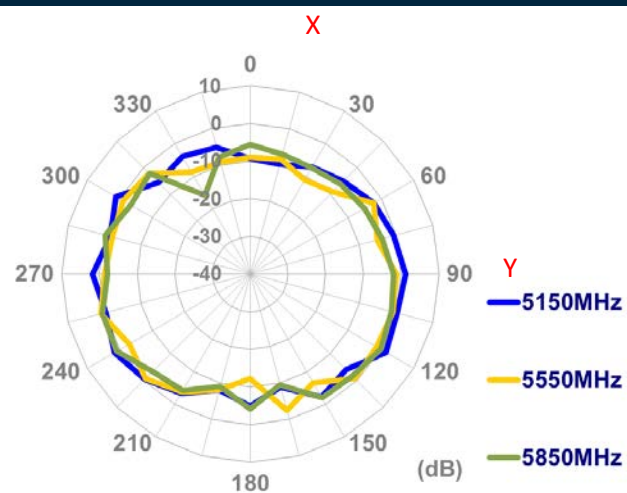
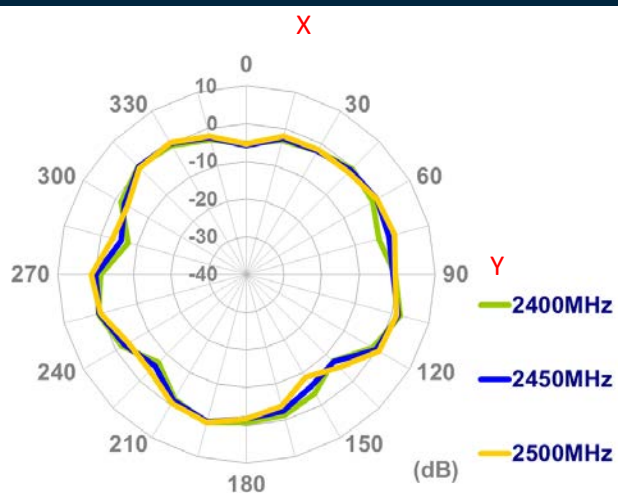
## 4. 2D Radiation Patterns

### 4.1 Test Setup

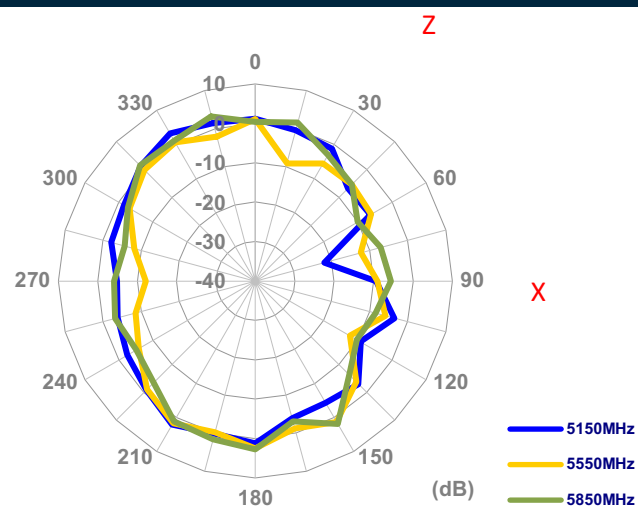
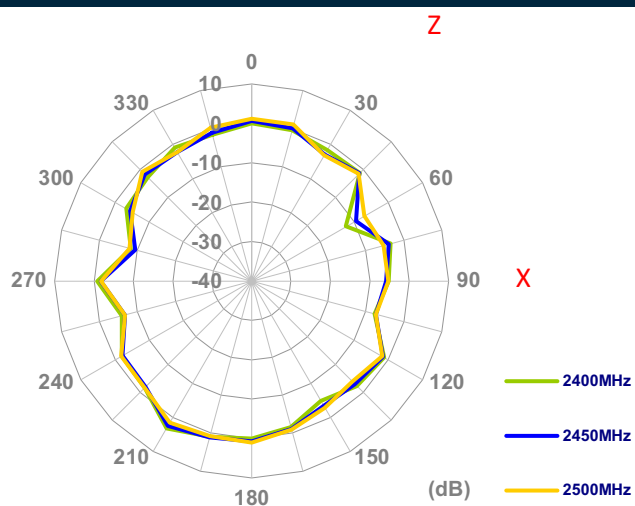


Free space

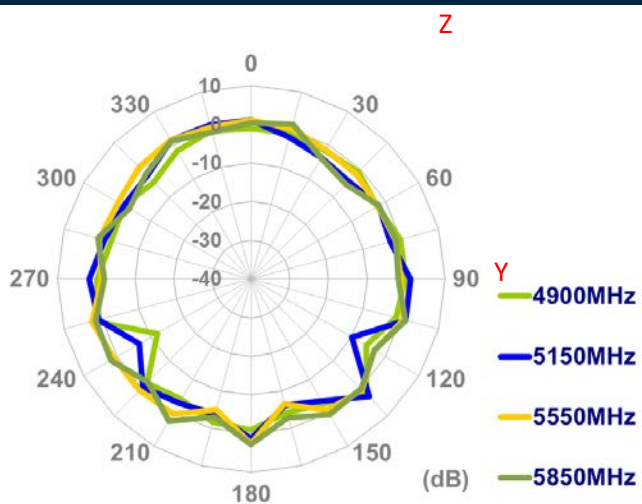
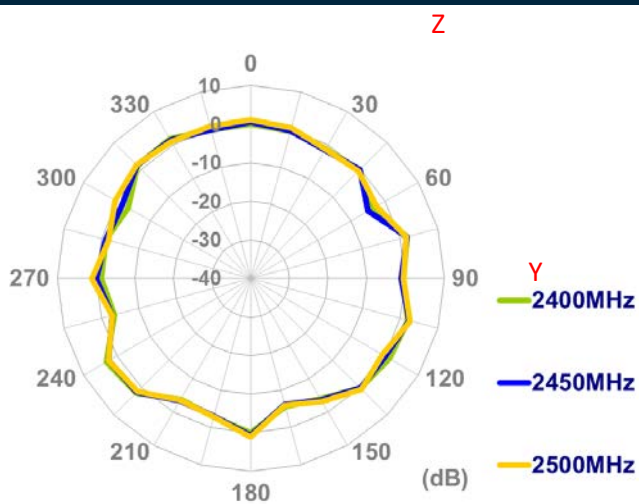
## XY Plane



## XZ Plane



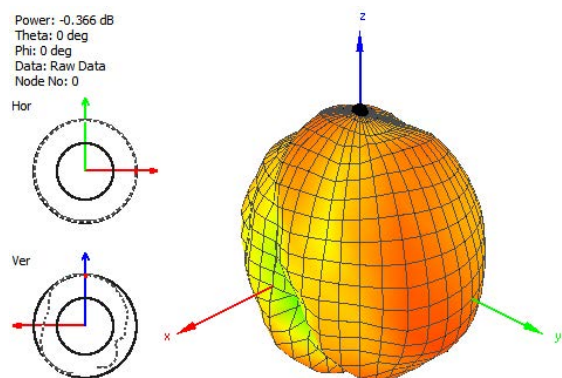
## YZ Plane



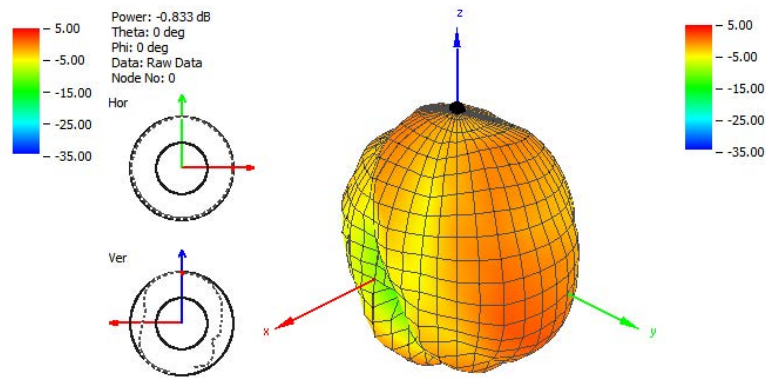


## 5. 3D Radiation Patterns

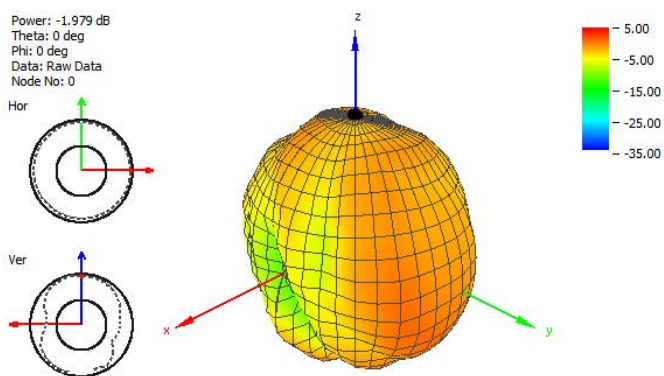
### 5.1 Free Space



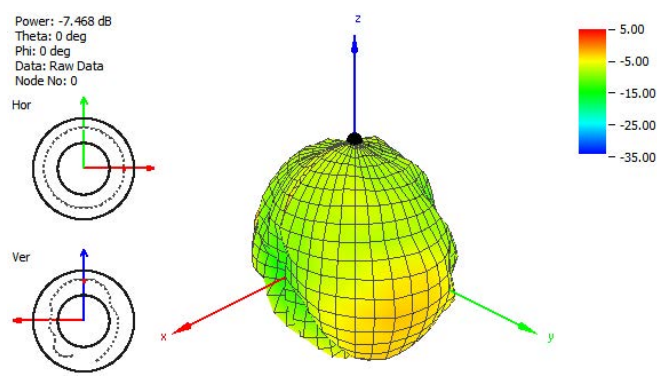
2400MHz



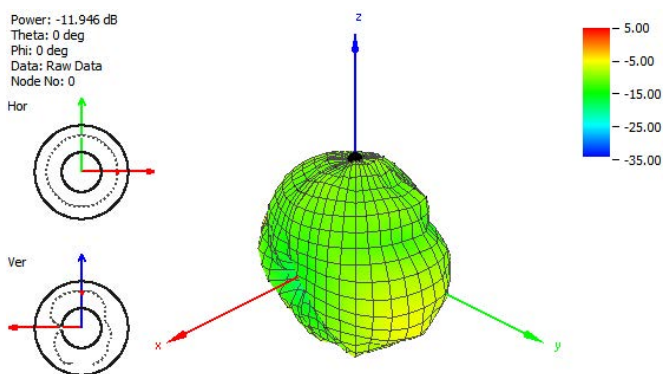
2450MHz



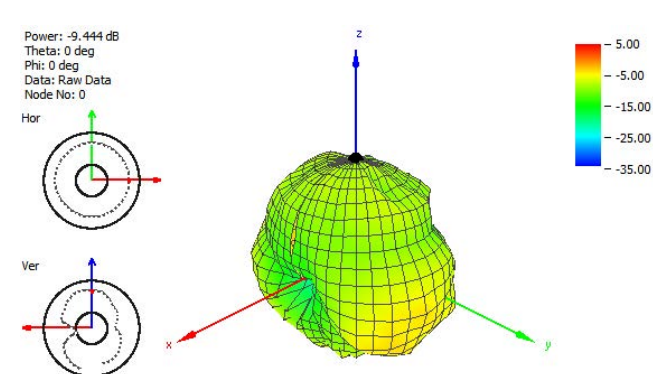
2500MHz



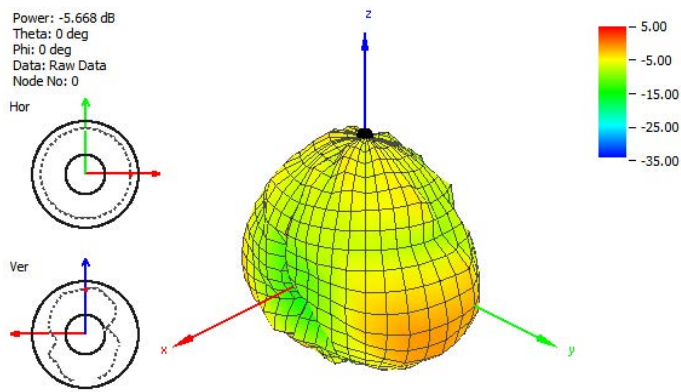
4900MHz



5150MHz

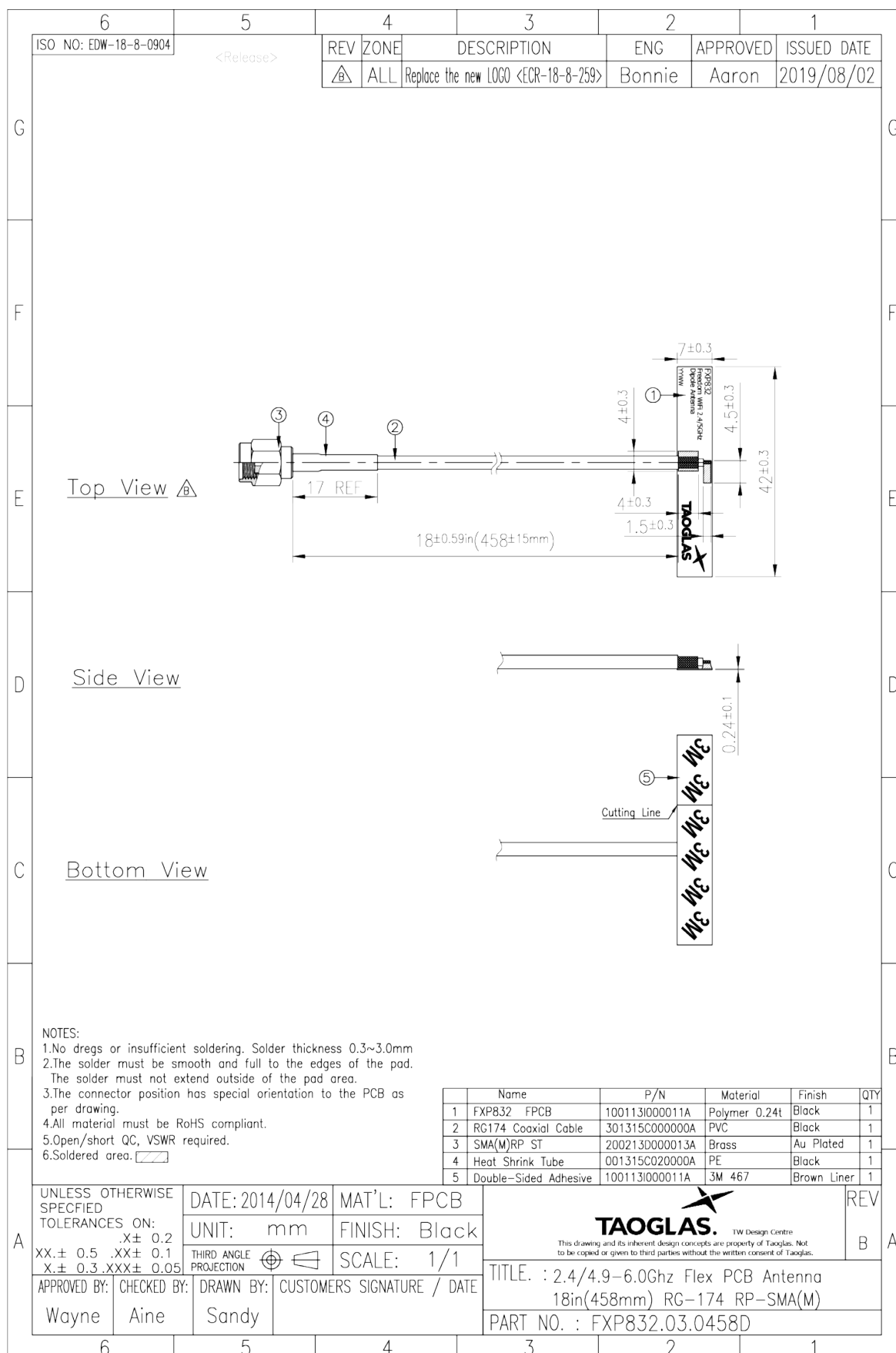


5550MHz



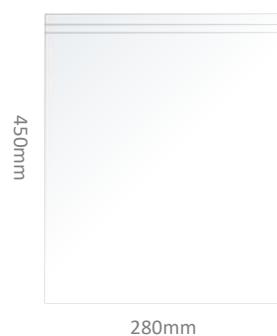
5850MHz

## 6. Mechanical Drawing (Units: mm)

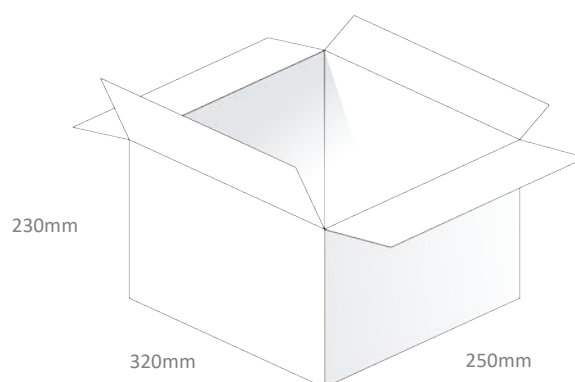


## 7. Packaging

50pcs FXP832.03.0458D per PE Bag  
 Bag Dimensions: 450\*280mm  
 Weight: 375g



500pcs FXP832.03.0458D per carton  
 Dimensions: 320\*250\*230mm  
 Weight: 3.75Kg



## Changelog for the datasheet

### SPE-17-8-042 – FXP832.03.0458D

#### Revision: E (Current Version)

Date:	2019-11-14
Changes:	Updated Images
Changes Made by:	Russell Meyler

#### Previous Revisions

##### Revision: D

Date:	2019-07-23
Changes:	Packaging Amended
Changes Made by:	Jack Conroy

##### Revision: C

Date:	2015-06-30
Changes:	Added DSRC
Changes Made by:	Aine Doyle

##### Revision: B

Date:	2015-01-20
Changes:	added note on gain and 3D radiation patterns
Changes Made by:	Aine Doyle

##### Revision: A (Original First Release)

Date:	2014-04-07
Notes:	
Author:	Aine Doyle



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