



# TAOGLAS®



**Part No:**

**WCM.10.005QQ111**

**Description:**

Stratus 5-5.8GHz 3dBi  
SMA(M) Connector Mount Antenna  
with Semi-Rigid Flexiform 402 Cable

**Features:**

5150-5850 MHz Wi-Fi Antenna  
Designed for UAV / Drone Applications  
Connector Mount  
Right Hand Circularly Polarized  
IP67 Rating  
Dimensions: 30.7x34.9x17mm  
Cable: 50mm SS402 Coaxial Cable  
Connector: RP-SMA(M)



# Datasheet

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# 1 Introduction



The Taoglas Stratus WCM.10 antenna is an external connector mount antenna designed for UAV / Drone applications operating from 5150-5850MHz. The Stratus comes in a compact size, at only 34.8 \* 30.7 \* 17 mm, enabling flexibility of integration. The high efficiency, of nearly 70%, provided by this antenna allows it to meet the high throughput demands of drone applications, especially high definition FPV video streams.

Right Hand Circular Polarization (RHCP) and an optimized omnidirectional radiation pattern helps ensure excellent performance regardless of device orientation. The antenna can be use as either Tx or Rx and includes a high quality, low loss, SS402 semi-rigid cable, frequently used for military and commercial aerospace applications. The cable can be bent to a fixed orientation for ease of installation on either the UAV or goggles and headsets

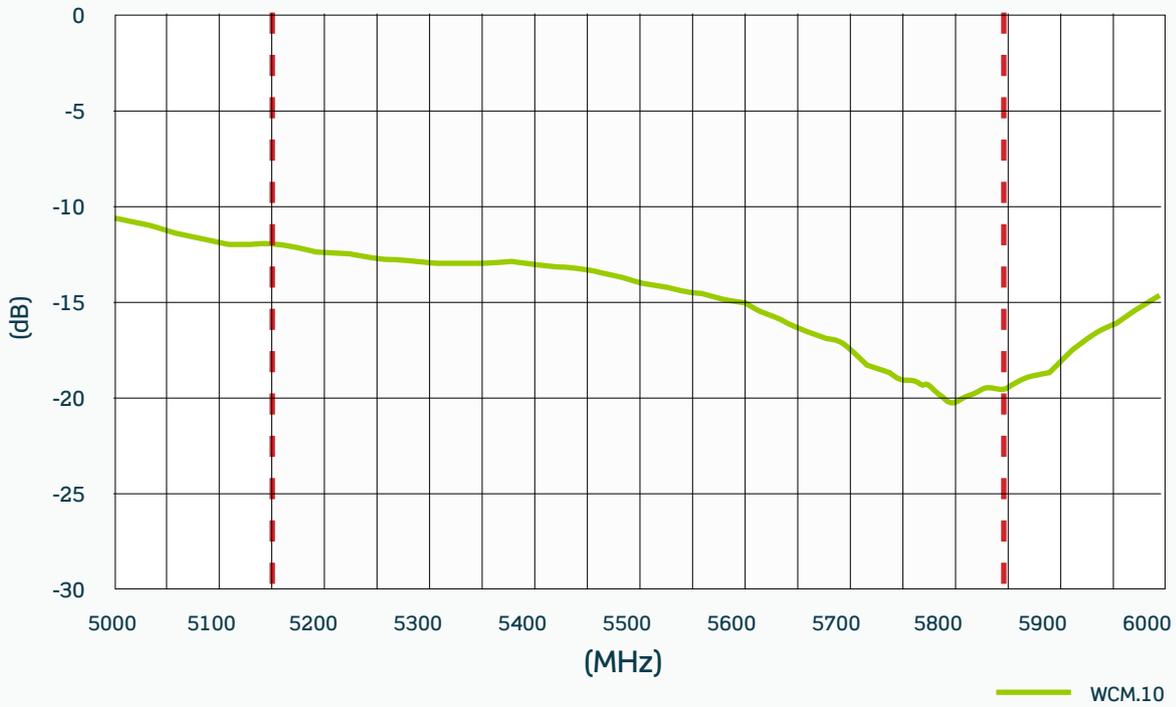
Cable length and connector types on this antenna are customizable. Taoglas can also customize and test antennas on your UAV in any one of our worldwide facilities subject to NRE or MOQ. Contact your regional Taoglas sales office for support.

Electrical *		
Frequency	5150 MHz	5850 MHz
Efficiency (%)	71	63
Average Gain (dB)	-1.6	-2
Peak Gain (dBi)	3.8	3.2
Return Loss (dB)	<-10	<-15
Polarization	RHCP	Linear
Axial ratio at zenith	<1	<7
Impedance	50Ω	
Mechanical		
Cap Material	PMMA	
Housing Material	ASA	
Dimensions (mm)	30.7 * 34.8 * 17	
Color	White & Green	
Connector	RP-SMA(M)ST	
Cable	50mm SS402	
Weight	17g	
IP Rating	IP67	
Environmental		
Operating and Storage Temperature	-40°C to +85°C	
Humidity	Non-condensing 65° C 95% RH	

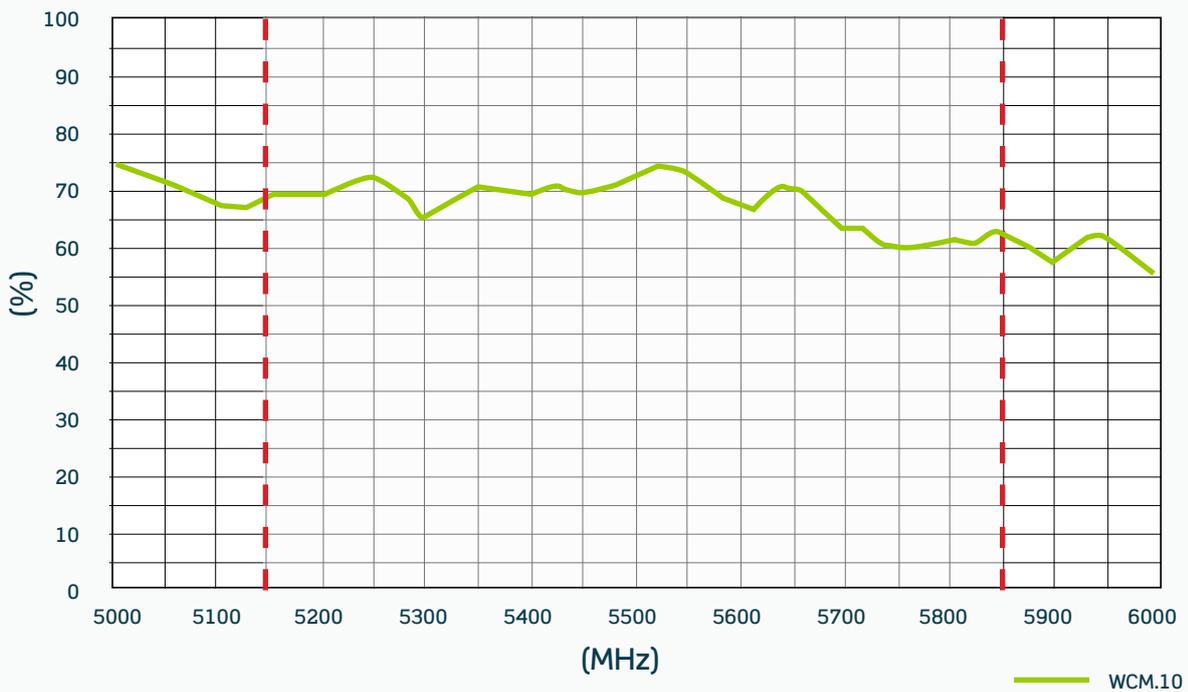
\*Measurements taken in Free Space

# 3 Antenna Characteristics

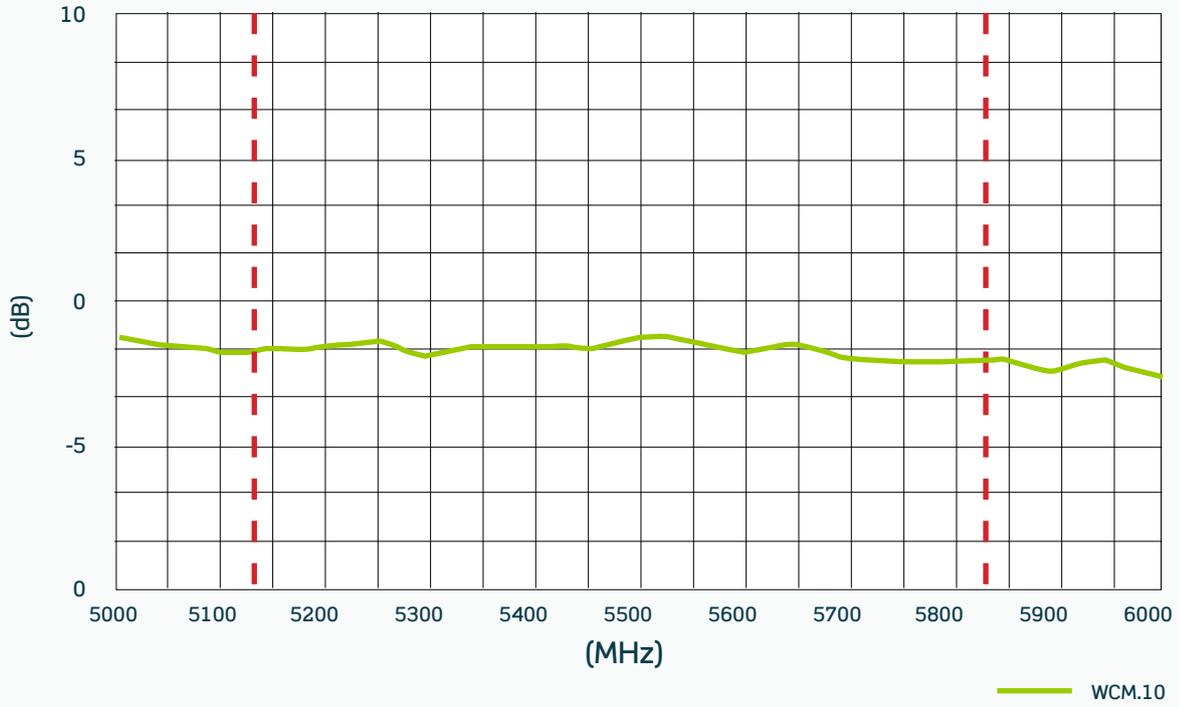
## 3.1 Return Loss



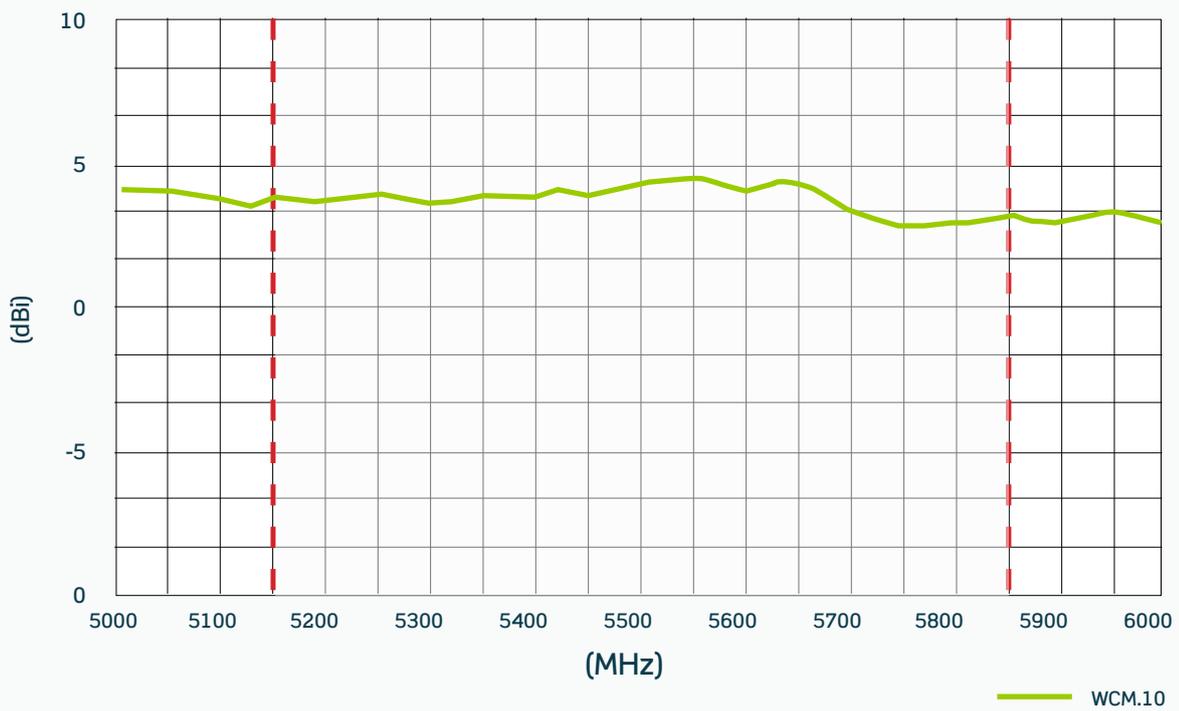
## 3.2 Efficiency



### 3.3 Average Gain



### 3.4 Peak Gain



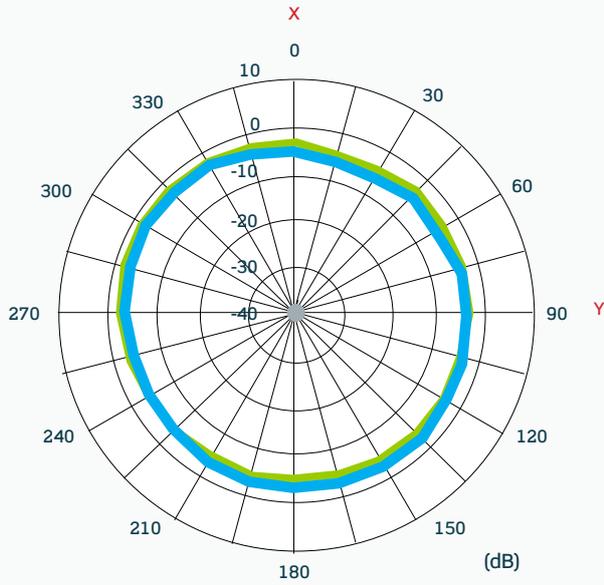
# 4 2D Radiation Pattern

## 4.1 Antenna Test Set Up

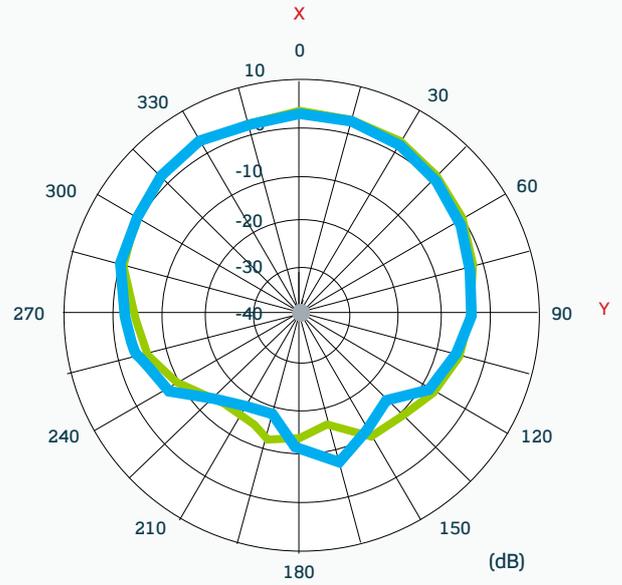


## 4.2 2D Radiation Pattern

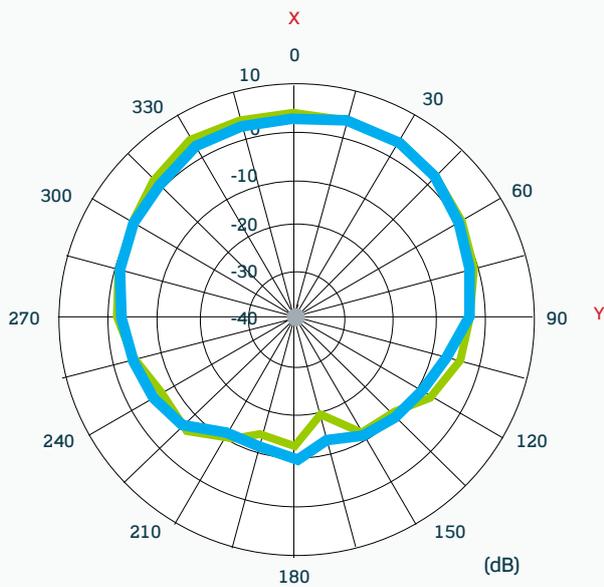
### XY Plane



### XZ Plane



### YZ Plane

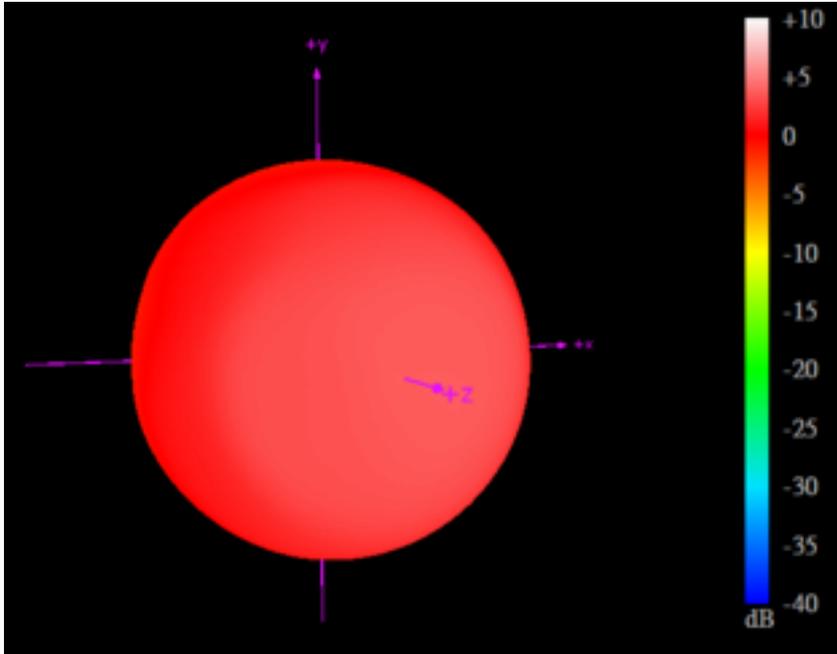


Key:

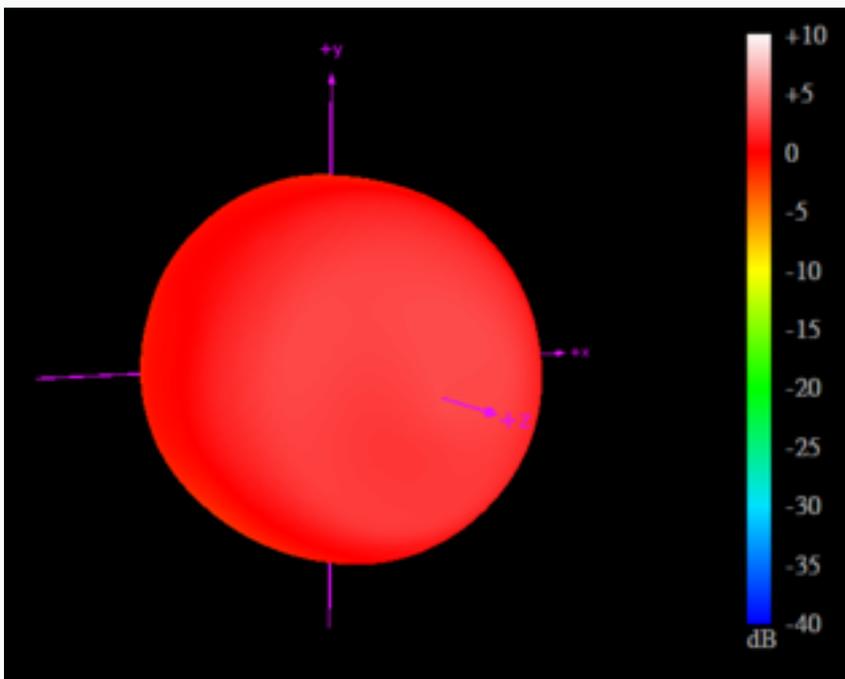
- 5150MHz
- 5850MHz

### 4.3 3D Radiation Pattern

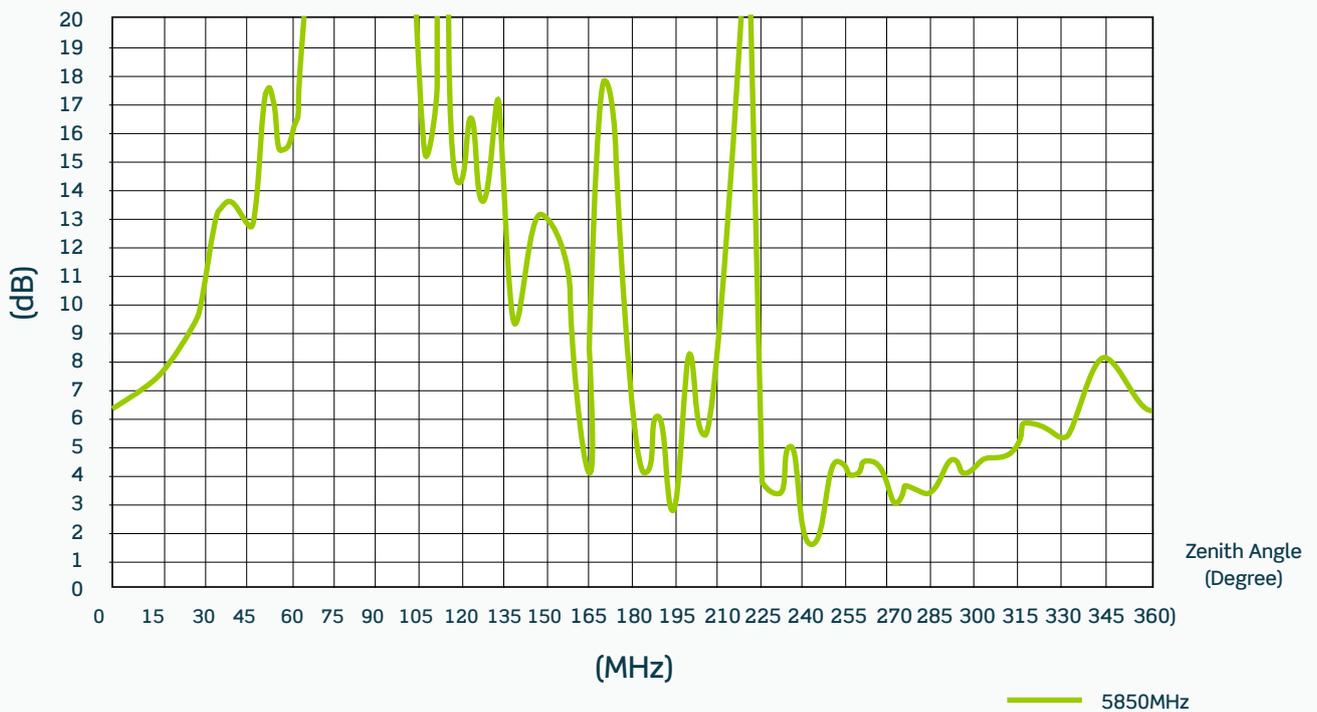
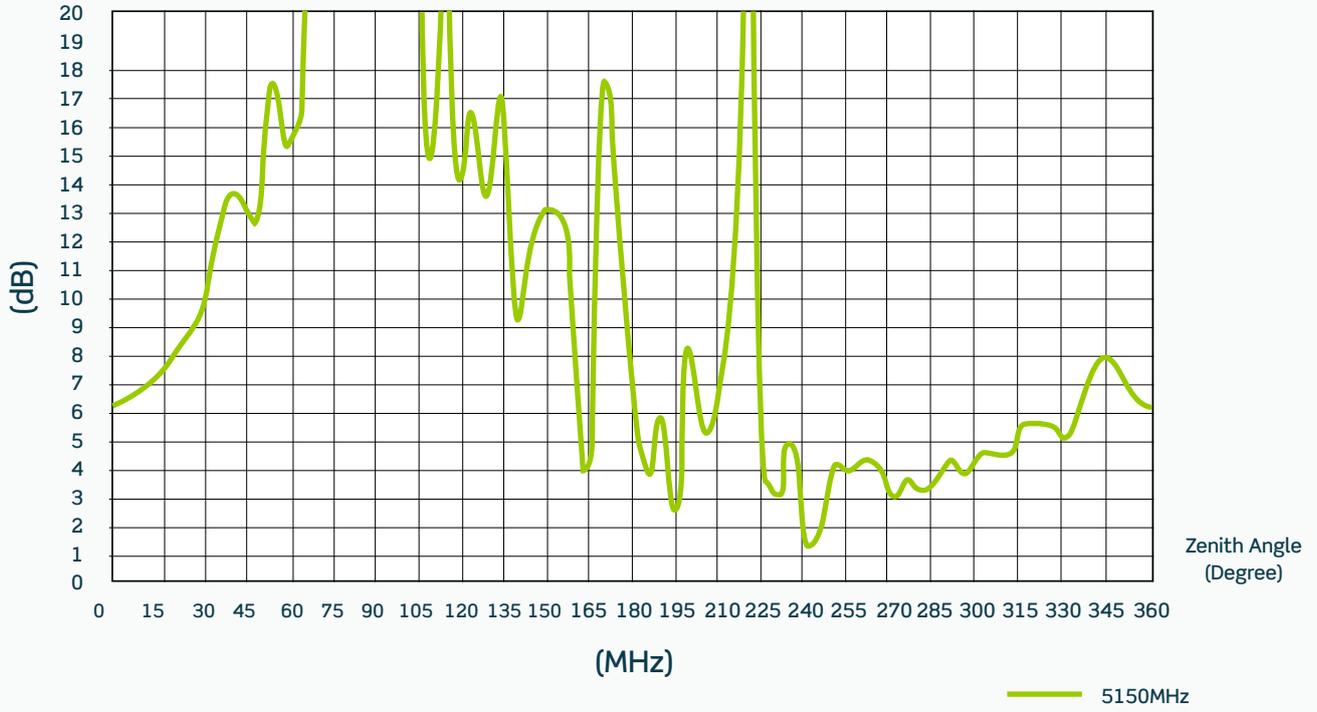
5150MHz



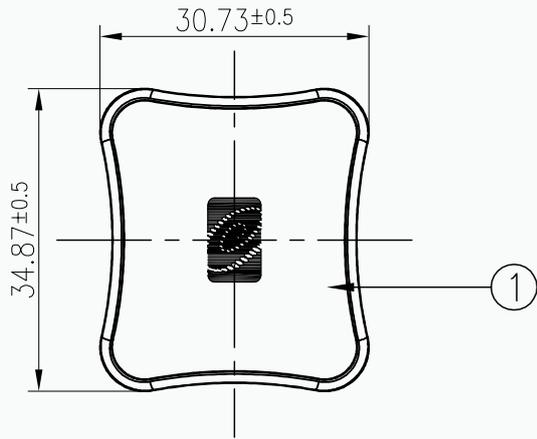
5850MHz



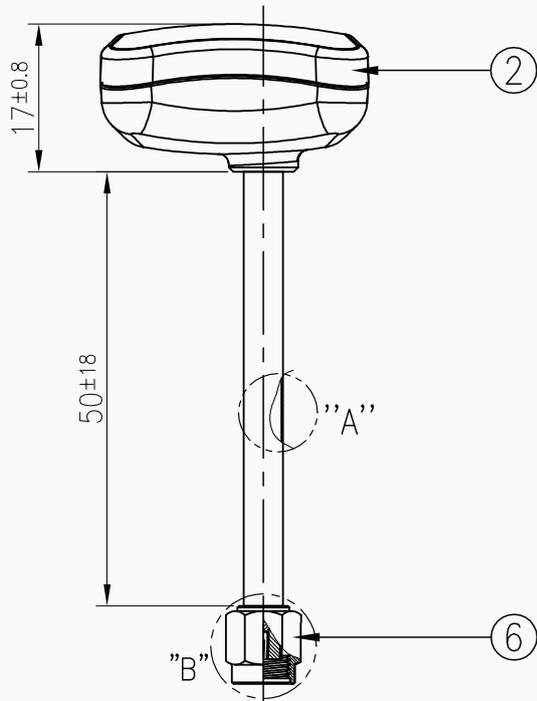
# 5 Axial Ratio



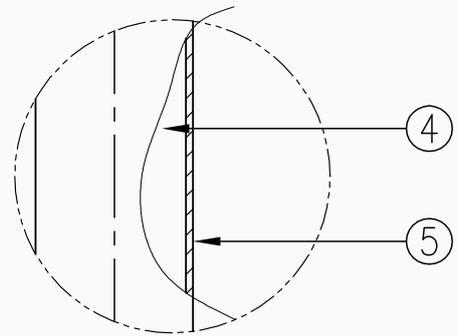
# 6 Mechanical Drawing (Unit: mm)



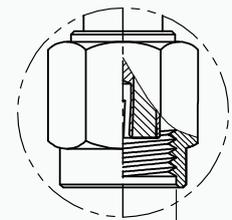
Front View



Side View

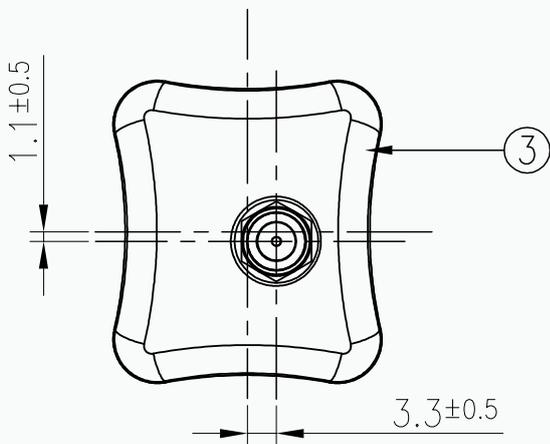


Detail A  
Scale:4:1



1/4-36UNS-2B

Detail B  
Scale:2:1



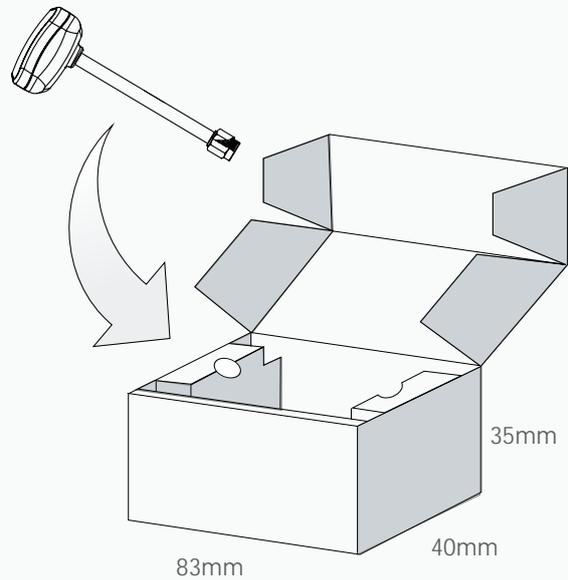
Back View

	Name	Material	Finish	QTY
1	Top Cap	PMMA	Transparent/Bottom White	1
2	Top Housing	ASA	White	1
3	Bottom Housing	ASA	Green	1
4	SS402 Coaxial Cable	FEP	Blue	1
5	Heat Shrink Tube	EVA	White	1
6	RP-SMA(M)ST	Brass	Au Plated	1

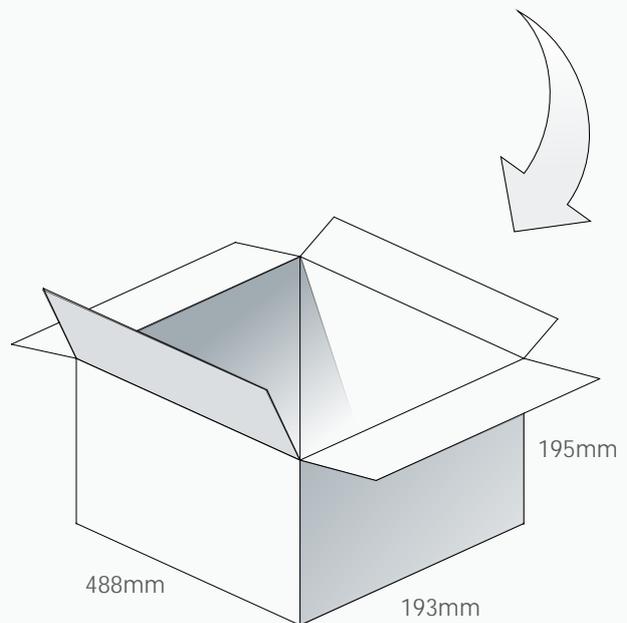


## 8 Packaging

1 pcs WCM.10.005QQ111 per box  
Box Dimensions - 35\*40\*83mm  
Weight - 29.5g



110 pcs WCM.10.005QQ111 per carton  
Carton Dimensions - 488\*193\*195mm  
Weight - 3.75kg





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