

## SPECIFICATION FOR APPROVAL

**CUSTOMER:**   ELO  

**CUSTOMER P/N :**   E598782  

**MODEL NAME:**   Dipole-1 Ant.  

**AWAN P/N:**   AYLE0-100000  



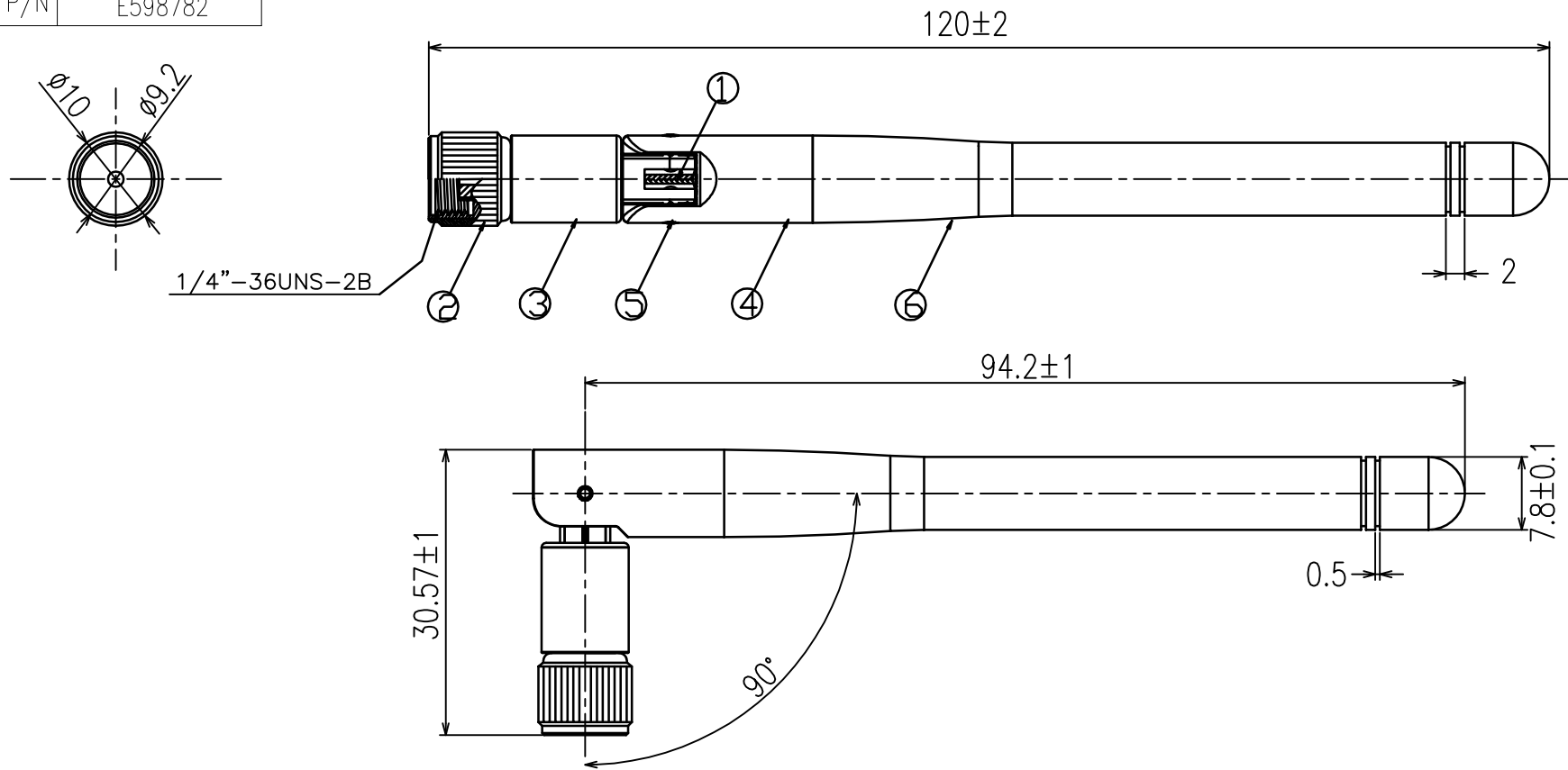
<b>Customer Approval</b>
R&D Manager

<b>AWAN Approved</b>				
				
&D Manager / Dongyan.Jin	Mechanical Manager / Dongyan.Jin	Q&R Manager / Fish Tong	Project Engineer / Jake.Zhu	Product Manager/ Yan.sun



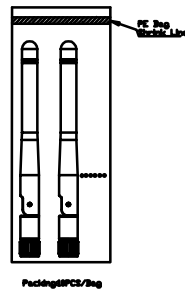
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<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
AWAN P/N	AYLE0-100000				Rev.	EC#	Description
Customer P/N	E598782				X1		Drawn/Date
							Checked/Date
							Approved/Date



SPECIFICATION

1. Frequency Range::2.4~2.5GHz&5.15~5.85GHz
2. Impedance:50 欧姆
3. VSWR:  $\leq 2.0$
4. Polanization:Vertical
5. Radlration:Omni
6. Gain:2.4G@2.0dBi  
5.5G@3.0dB



6	Antenna Cover L79.5mmXØ9.35mm	1		TPEE Black
5	Rivet L3.8mmXØ1.5mm	2		POM Black
4	Antenna Base L28.8XØ9.35mm	1		PBT Black
3	Antenna Base L24.7XØ9.35mm	1		PC Black
2	SMA PLUG REVERSE	1		Connector
1	RG-178 Cable	1		Cable

Item	Name	Q'ty	Part #	Material / Finish
Tolerances Unless Otherwise Specified		Drawn Date		
General	X ±1.00	hongsui 05/14/20'		
	.X ±0.50	Design Date		
	.XX ±0.20	hongsui 05/14/20'		
	.XXX ±0.05	Checked Date		
Angles	X ±3.0'	Arthur 05/14/20'		
	.X ±2.0'	Approved Date		
	.XX ±1.0'	Arthur 05/14/20'		
Scale	1 : 1	Title		
Sheet	1 of 1	Dipole-1 Ant.		
Unit	mm	Series		
		Size A3		
		Rev. X3		
3D File		Customer Drawing		
Dwg No.		Series		

HALOGEN FREE

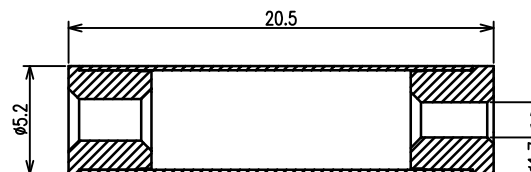
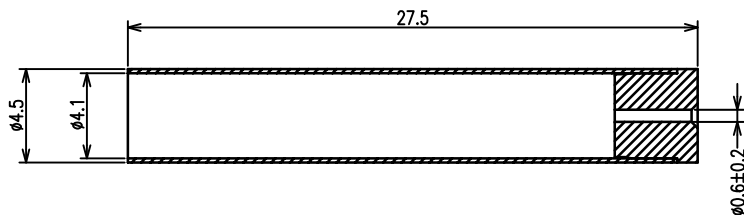
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HSF 相關均質拆分及測試點選擇參照  
<HSF 均質物質拆分作業圖示表>

符合AWAN環境管理物質技術標準  
All materials meet the AWAN's spec. Environment - related substances management technical standard.

**1****2****3****4****5****6****7****8**

Rev.	EC#	Description	Drawn/Date	Checked/Date	Approved/Date
X1			hongsui 05/14/20'	Arthur 05/14/20'	Arthur 05/14/20'



技术:

- 1) 材质: 黄铜
- 2) 塞子: 黄铜镀锡
- 3) “▲”重要管控尺寸
- 4) 所有物料需符合ROHS要求

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HSF相關均質拆分及測試點選擇參照  
<HSF均質物質拆分作業圖示表>

Tolerances Unless Otherwise Specified General X ±1.00 .X ±0.50 .XX ±0.20 .XXX ±0.05 Angles X ±3.0' .X ±2.0' .XX ±1.0'	Drawn	Date	
	Design	Date	
Checked	Date	Title	
Approved	Date	Series	
Scale	1 : 1	Series	Size A3
Sheet	1 of 1	Series	Rev. X3
Uhr	mm	3D File	
		Customer Drawing	

符合AWAN環境管理物質技術標準  
All materials meet the AWAN's spec. Environment - related substances management technical standard.

**A****B****C****D****E****F**

## ELO Dipole MATERIAL LIST for Plastic

PRODUCT NAME : ELO Dipole

No	ITEM	PART No	Material Name	TYPE No	MATERIAL DESCRIPTION	QUANTITY	Remark
1	CABLE	XC17808150	CABLE	CABLE	RG178, FEP 7x0.102, OD=1.8mm, COLOR: BROWN, COAXIAL, PTFE	81.5mm	
2	CONNECTOR	CN18FPS070	SMA	SMA	SMA PLUG-, SMA PLUG 180 Brass L=16.15mm, WHITE, TEFLON, BLACK, 1/4-36NUNS-2B, FOR RG-178	1 PCS	
3	UP BASE	SJ12880B02	PC+PBT	PC+PBT	9.35x28.8mm, PC+PBT, COLOR BLACK	1 PCS	
4	MIDDLE BASE	SJ22000B02	PC+PBT	PC+PBT	9.35x19.7mm, PC+PBT, COLOR BLACK	1 PCS	
5	BASE	SJ30788B01	TPEE	TPEE	9.35x78.8mm, PC+PBT, COLOR BLACK	1PCS	
6	GND copper	TG20500052017	GND copper	BRASS	L20.5*5.2mm brass pom bottom stopper	1 PCS	
7	copper	TG00274500	copper	BRASS	L27.5*4.5mm brass pom bottom stopper	1 PCS	
8	HEAT-SHINKABLE TUBING	FC00255000	HEAT-SHINKABLE TUBING	pvc	GROUND TUBE, 4.5mmxL22.5mm, Brass, SN+PLASTIC	1 PCS	
9	PE BAG	FC14001050	PE BAG	pa	PE bag L140*W105*H0.06mm hyaline	0.1PCS	Not plastic material
10	CARTON	2403013	CARTON	CARTON	CARTON:L400*W225*H200mm	0.000833333	

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# PRODUCT SPECIFICATION

## TITLE

### 2.4GHz/5GHz Dipole Antenna

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# PRODUCT SPECIFICATION

## 2.4GHz/5GHz Dipole Antenna

### 1.0 SCOPE

This Product Specification covers the mechanical, electrical and environmental performances requirements and test methods for 2.4GHz/5GHz Dipole Antenna.

### 2.0 PRODUCTDESCRIPTION

#### 2.1 PRODUCTNAME

Product name: 2.4GHz/5GHz Dipole Antenna

#### 2.2 Design and Construction

Antenna shall be of the design, construction and physical dimensions specified on the applicable sales drawing.

#### 2.3 Materials

- a) Flex: Refer to respective Acon sales or engineering drawings
- b) Plating: Refer to respective Acon sales or engineering drawings
- c) Cable Line: Refer to respective Acon sales or engineering drawings
- d) Connector: SMA plug connector. Please contact sales if you need to use other connector.

### 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

See drawings and other sections of this specification for the relevant reference documents. In cases where the specification differs from the drawings, the drawings take precedence.

### 4.0 RATINGS

#### 4.1 RFPOWER

2 WATTS

#### 4.2 TEMPERATU

Operating: - 20°C to + 80°C  
Storage : 0°C to +60°C

#### 4.3 HUMIDITY

Operating: : +5~95% RH  
Storage +20~90%RH

# PRODUCT SPECIFICATION

## 5.0 PERFORMANCE

### 5.1 ELECTRICAL REQUIREMENTS FOR CABLE LENGTH 100mm (AEM6P-100000A)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
5.1.1	Frequency Range	KEYSIGHT E5071C ENA	2.4GHz~2.5GHz&5.15GHz-5.85GHz
5.1.2	Return Loss	Antenna loads on PC/ABS housing with 100mm; 1.13mm diameter micro coax cable. Measured by E5071C ENA	< -10 dB
5.1.3	Peak Gain	Measure antenna on recommended PC/PBT housing through OTA chamber	2.0+/-0.5 dBi
5.1.4	Total Efficiency	Measure antenna on recommended PC/PBT housing through OTA chamber	>75%
5.1.5	Polarization	Measure antenna through the OTA chamber	Liner
5.1.6	Input Impedance	Measure antenna on recommended PCB Through E5071C ENA	50Ohms

### 5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
5.2.1	Pull test	---	----

### 5.3 RELIABILITY REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
5.3.1	Cross section	Cross section on pad soldering area. Check under microscope	No soldering problem

# PRODUCT SPECIFICATION

## 5.4 ENVIRONMENTALREQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
5.4.1	Temperature /Humidity cycling	Test condition: Constant temperature and humidity: temperature: 65 degrees humidity: 90%RH time: 72H	1)Parts should meet RF spec before and after test. 2) No cosmetic problem
5.4.2	Temperature Shock	Test condition: Hot and cold impact: humidity: -40 degrees ~85 degrees cycle: 24 times each time 1H	1)Parts should meet RF spec before and after test. 2) No cosmetic problem
5.4.3	High Temperature	Test condition: High temperature: temperature: 85+/-2 degrees time: 24H	1)Parts should meet RF spec before and after test. 2)No cosmetic problem
5.4.4	Salt mist test	Salt spray: temperature: 35 degrees concentration: 5%+/-1% time: 24H	1)Parts should meet RF spec before and after test. 2) No visible corrosion. Discoloration accept.

The meaning of text "No Cosmetic Problem" in the table above is:

- a. no soldering problem
- b. no adhesion problem of glue
- c. no peel off of plating



# PRODUCT SPECIFICATION

## 6.0 TEST GROUPINGS

Test Item	Description	Group1	Group2	Group3	Group4	Group5	Group6
5.2.1	Pull test	X					
5.3.1	Cross section		X				
5.4.1	Temperature /Humidity cycling			X			
5.4.2	Temperature Shock				X		
5.4.3	High Temperature					X	
5.4.4	Salt mist test						X
	Sample Quantity	5	5	5	5	5	5

## 7.0 PACKAGING

Refer to the Acon related packaging drawings.

## 8.0 CODING PRINCIPLE

<b>P/N</b>	<b>A</b>	<b>E</b>	<b>M</b>	<b>6</b>	<b>P</b>	<b>-</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>X</b>	<b>X</b>
<b>Code</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	

Code 1	Code 2	Code 3	Code 4	Code 5	Code 6	Code 7~11	Code 12
Product	Category	Antenna material	Cable	Connector	Cable number	Water code/ Frequency	Length
A:Antenna	E: Other	M: Metal	6:OD1.8mm	P: RG-178	1: 1PCS	00000: Normal material/2.4 GHz&5GHz 00002: UV material/2.4 GHz&5GHz	A: 100mm B: 200mm C:300mm D:.....