

# **Specification**

Part No. : **LPDA.03.032111** 

Description : Engager External Wide Band

Directional LPDA Antenna

Features : Frequency: 400-6000MHz

Peak Gain: 7dBi

Dimensions: 520\*630\*42mm

Dimensions with Bracket: 520\*770\*95mm

Cable Length: 300mm

Connector: SMA(M)

RoHS & Reach Compliant





#### 1. Introduction

The LPDA.03.032111 Engager is a wideband directional LPDA exterior antenna that operates within the 450-6000MHz frequency bands. It is an innovative and future proof solution ideal for 5G/4G and 2G/3G networks as well as 2.4GHz and 5.8GHz Wi-Fi.

This wideband design eliminates the need to purchase different antennas for each frequency which simplifies installations since the same antenna can be used for a wide array of wireless applications where wide coverage is desired.

The LPDA.03 has a 70° beam width in both orthogonal planes. The ABS external housing is robust, UV resistant and waterproof IP65 rated. For various mounting options, it is supplied with tilt and swivel wall and pole brackets. The LPDA.03 has been tested for wind resistance up 200 km/h.

5G/4G and 2.4GHz and 5.8GHz Wi-Fi applications demand high speed data uplink and downlink and where required, two LPDA.03 antennas can be mounted in space at 90° to create a MIMO arrangement.

Cable type, length and connectors are customizable for large order volumes. Please contact your regional Taoglas sales office for support.



## 2. Specification

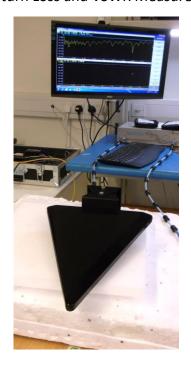
Operation   Frequency (MHz)	ELECTRICAL									
Return Loss (dB)         -10         -10         -10         -10         -10         -6         -6           Efficiency (%)         75         65         65         55         50         40         25           Peak Gain (dBi)         7         7         7         6         5.5         5         2.5           Max VSWR         2:1         2:1         2:1         2:1         3:1         3:1         3:1           Radiation Properties         Directional           Linear           Impedance         50Ω         5	·	LTE 800			LTE 2300	Wi-Fi	LTE 2600	LTE 3500	Wi-Fi	
Efficiency (%)		698-960	1710-1990	1755-2170	2305-2360	2400-2500	2500-2700	3400-3600	5700-5900	
Peak Gain (dBi)         7         7         7         6         5.5         5         2.5           Max VSWR         2:1         2:1         2:1         2:1         3:1         3:1           Radiation Properties         Directional           Polarization         Linear           Impedance         50Ω           Max input Power (Watts)         MECHANICAL           Dimension         S20*630*42mm without Bracket           S20*630*42mm without Bracket           Body: PC Coated UV Stabilized ABS           Bracket: Black Powder Coated 316 Stainless           Connector         SMA(M)           Weight         819g with Bracket           430g without Bracket           430g without Bracket           430g without Bracket           Waterproof Rating           IP65           ENVIRONMENTAL           Operation Temperature         -40°C to 85°C           Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="	Return Loss (dB)	-10	-10	-10		-10	-10	-6	-6	
Max VSWR         2:1         2:1         2:1         2:1         3:1         3:1           Radiation Properties         Directional           Polarization         Linear           Impedance         50Ω           Max input Power (Watts)         10           MECHANICAL           Dimension         520*630*42mm without Bracket           Sody: PC Coated UV Stabilized ABS           Bracket: Black Powder Coated 316 Stainless           Connector         SMA(M)           Weight         819g with Bracket           430g without Bracket           430g without Bracket           430g without Bracket           430g without Bracket           430g mithout Bracket	Efficiency (%)	75	65	65		55	50	40	25	
Radiation Properties  Polarization Linear  Impedance 50Ω Max input Power (Watts)  10  MECHANICAL  Dimension  S20*630*42mm without Bracket 520*770*95mm with Bracket Body: PC Coated UV Stabilized ABS Bracket: Black Powder Coated 316 Stainless  Connector  SMA(M)  Weight  430g without Bracket 430g without	Peak Gain (dBi)	7	7	7		6	5.5	5	2.5	
Polarization       Linear         Impedance       50Ω         Max input Power (Watts)       10         MECHANICAL         Dimension       520*630*42mm without Bracket         520*770*95mm with Bracket         Material       Body: PC Coated UV Stabilized ABS         Bracket: Black Powder Coated 316 Stainless         Connector       SMA(M)         Weight       819g with Bracket         430g without Bracket       430g without Bracket         Cable Type       300mm RG-174         Waterproof Rating       IP65         ENVIRONMENTAL         Operation Temperature       -40°C to 85°C         Storage Temperature       -40°C to 105°C         Humidity       Non-condensing 65°C 95% RH	Max VSWR	2:1	2:1	2:1		2:1	2:1	3:1	3:1	
Impedance 50Ω  Max input Power (Watts) 10  MECHANICAL  Dimension 520*630*42mm without Bracket 520*770*95mm with Bracket  Body: PC Coated UV Stabilized ABS Bracket: Black Powder Coated 316 Stainless  Connector SMA(M)  Weight 819g with Bracket 430g without Bracket  Cable Type 300mm RG-174  Waterproof Rating IP65  ENVIRONMENTAL  Operation Temperature -40°C to 85°C Storage Temperature -40°C to 105°C Humidity Non-condensing 65°C 95% RH	Radiation Properties		Directional							
Max input Power (Watts)    MECHANICAL	Polarization		Linear							
MECHANICALDimension520*630*42mm without Bracket 520*770*95mm with BracketMaterialBody: PC Coated UV Stabilized ABS Bracket: Black Powder Coated 316 StainlessConnectorSMA(M)Weight819g with Bracket 430g without BracketCable Type300mm RG-174Waterproof RatingIP65ENVIRONMENTALOperation Temperature-40°C to 85°CStorage Temperature-40°C to 105°CHumidityNon-condensing 65°C 95% RH	Impedance		50Ω							
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Material  Materi	Dimension		520*630*42mm without Bracket							
Bracket: Black Powder Coated 316 Stainless  Connector SMA(M)  Weight 819g with Bracket 430g without Bracket  Cable Type 300mm RG-174  Waterproof Rating IP65  ENVIRONMENTAL  Operation Temperature -40°C to 85°C Storage Temperature -40°C to 105°C Humidity Non-condensing 65°C 95% RH			520*770*95mm with Bracket							
Connector  SMA(M)  Weight  Respect to 1999  Waterproof Rating  ENVIRONMENTAL  Operation Temperature  SMA(M)  SMA(M)  819g with Bracket 430g without Bracket 430g without Bracket  1965  ENVIRONMENTAL  Operation Temperature  -40°C to 85°C  Storage Temperature  -40°C to 105°C  Humidity  Non-condensing 65°C 95% RH	Material		Body: PC Coated UV Stabilized ABS							
Weight  819g with Bracket 430g without Bracket  Cable Type  300mm RG-174  Waterproof Rating  IP65  ENVIRONMENTAL  Operation Temperature  -40°C to 85°C  Storage Temperature  -40°C to 105°C  Humidity  Non-condensing 65°C 95% RH			Bracket: Black Powder Coated 316 Stainless							
Weight  Cable Type  300mm RG-174  Waterproof Rating  IP65  ENVIRONMENTAL  Operation Temperature  Storage Temperature  Humidity  430g without Bracket  300mm RG-174  ENVIRONMENTAL  Final Page 1965  Final Page 196	Connector		SMA(M)							
Cable Type  300mm RG-174  Waterproof Rating  IP65  ENVIRONMENTAL  Operation Temperature  -40°C to 85°C  Storage Temperature  -40°C to 105°C  Humidity  Non-condensing 65°C 95% RH			819g with Bracket							
Waterproof Rating  ENVIRONMENTAL  Operation Temperature Storage Temperature  Humidity  IP65  ENVIRONMENTAL  -40°C to 85°C  -40°C to 105°C  Non-condensing 65°C 95% RH	weight		430g without Bracket							
ENVIRONMENTAL  Operation Temperature -40°C to 85°C  Storage Temperature -40°C to 105°C  Humidity Non-condensing 65°C 95% RH	Cable Type		300mm RG-174							
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Storage Temperature -40°C to 105°C Humidity Non-condensing 65°C 95% RH	ENVIRONMENTAL									
Humidity Non-condensing 65°C 95% RH	Operation Temp	perature	-40°C to 85°C							
•	Storage Temperature		-40°C to 105°C							
Wind Resistance Up to 200km/h	Humidit	у	Non-condensing 65°C 95% RH							
	Wind Resist	ance	Up to 200km/h							



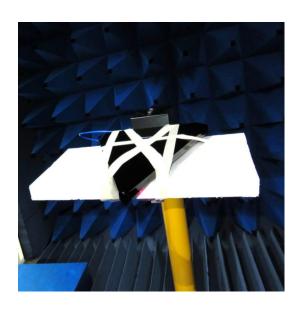
### 3. Antenna Characteristics

#### **3.1 Set up**

Return Loss and VSWR Measurement

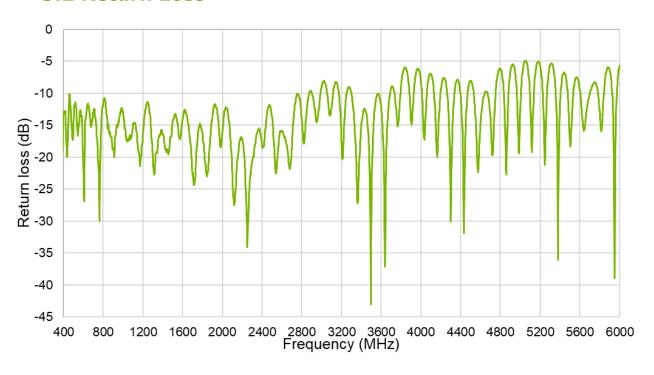


Efficiency and Gain Measurement

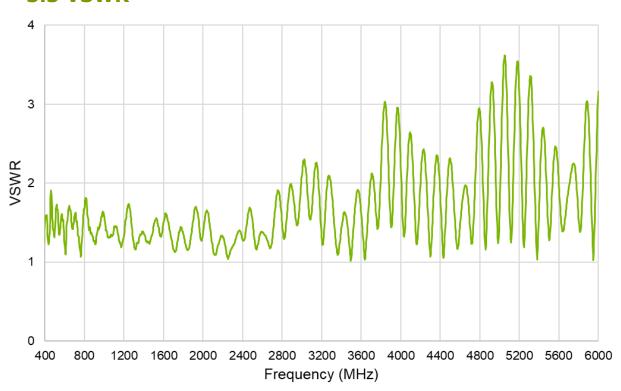




#### 3.2 Return Loss

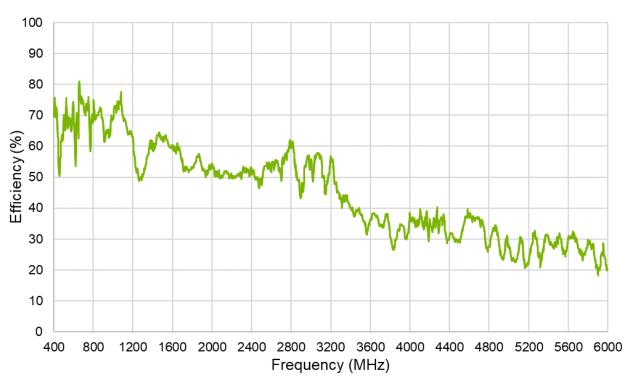


#### **3.3 VSWR**

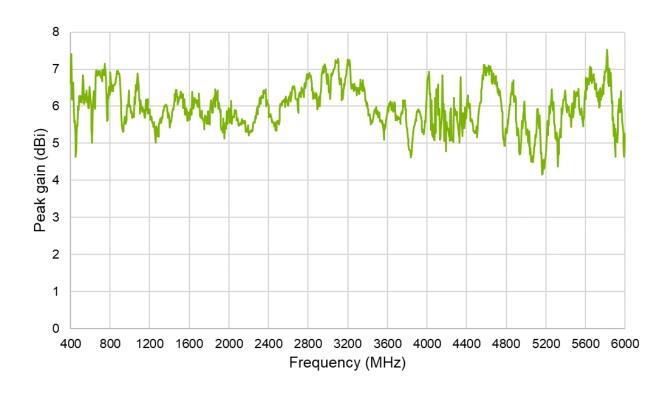




### 3.4 Efficiency

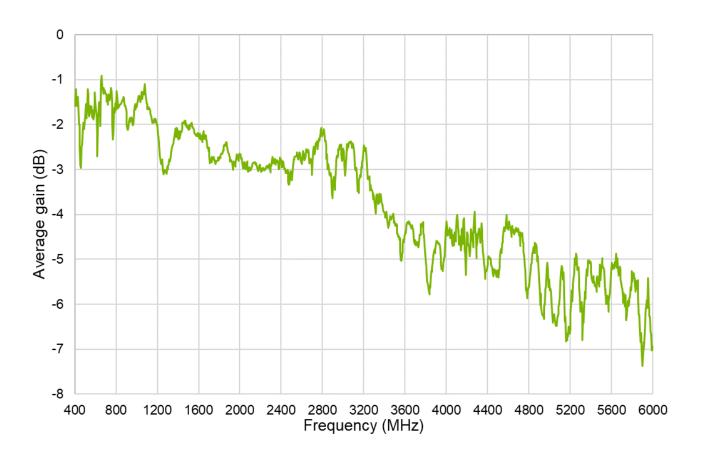


#### 3.5 Peak Gain





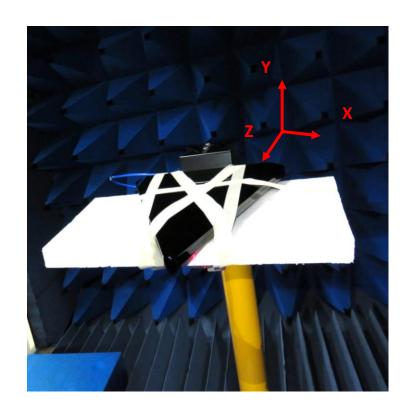
### 3.6 Average Gain





### 4. Antenna Radiation Pattern

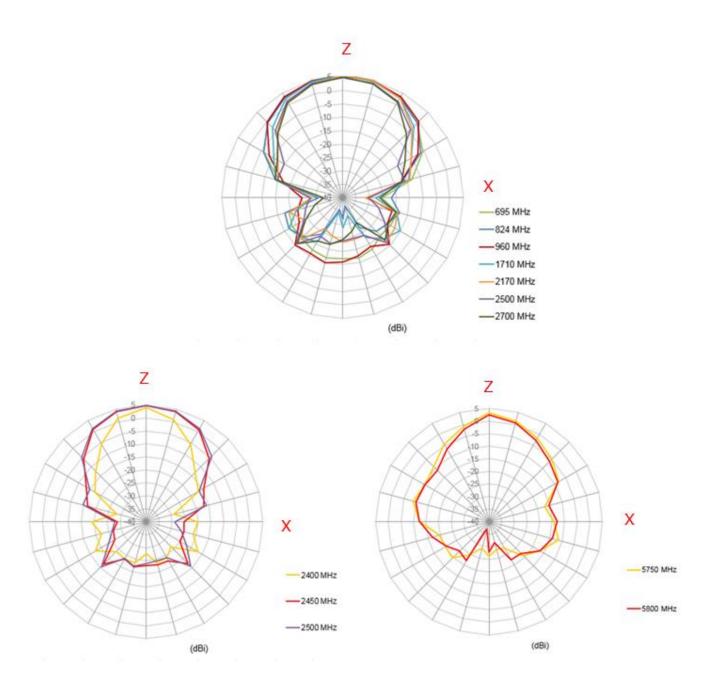
#### **4.1 Measurement Setup**





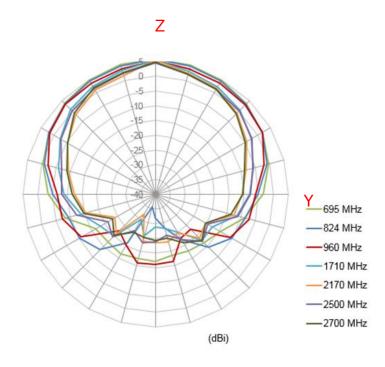
#### 4.2 2D Radiation Pattern

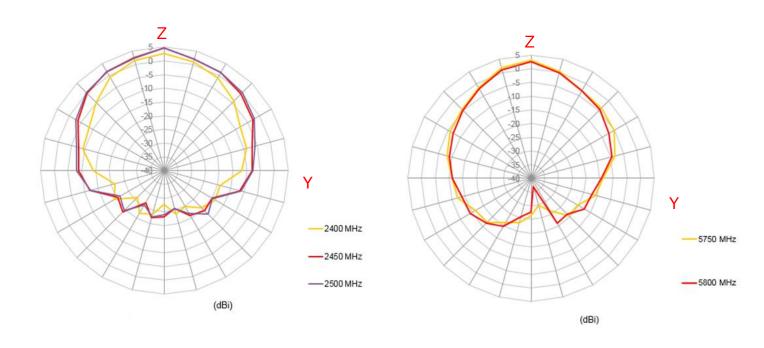
XZ Plane



YZ Plane

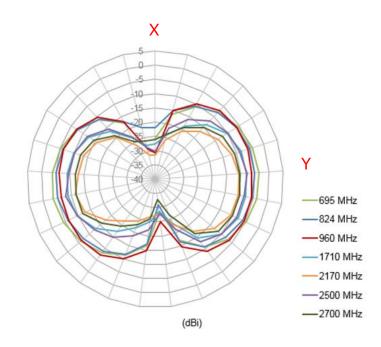


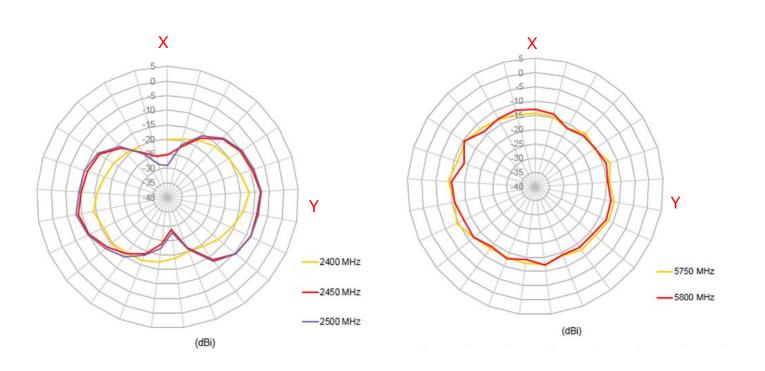






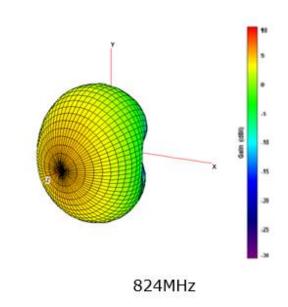
#### XY Plane

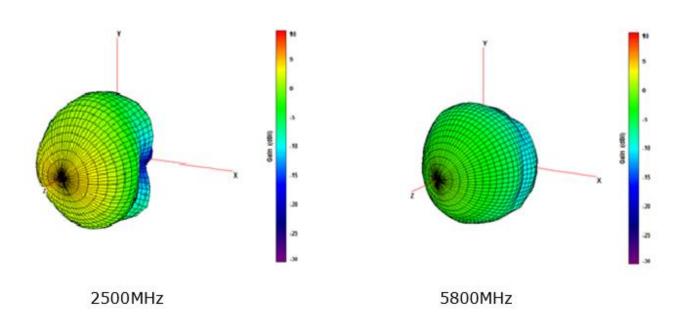






### 4.3 3D Radiation Pattern







## 5. Mechanical Drawing (Unit: mm)

Currently under development



### 6. Packaging

Currently under development.

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