

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

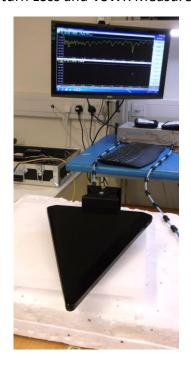
Comparation CTE 700 CTE 800 PCS HSPA LTE 2300 Wi-Fi LTE 2600 LTE 3500 Wi-Fi Frequency (MHz) ESM 900 698-960 1710-1990 1755-2170 2305-2360 2400-2500 2500-2700 3400-3600 5700-5900 750 65 65 55 50 40 25 75 75 75 75 75 75 75	ELECTRICAL									
Return Loss (dB) -10 -10 -10 -10 -10 -6 -6 Efficiency (%) 75 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) 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 <td>Return Loss (dB)</td> <td>-10</td> <td>-10</td> <td>-10</td> <td></td> <td>-10</td> <td>-10</td> <td>-6</td> <td>-6</td>	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	
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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							
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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							
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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	VA/ - :		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							
Operation Temperature -40°C to 85°C Storage Temperature -40°C to 105°C Humidity Non-condensing 65°C 95% RH	Waterproof Rating		IP65							
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							



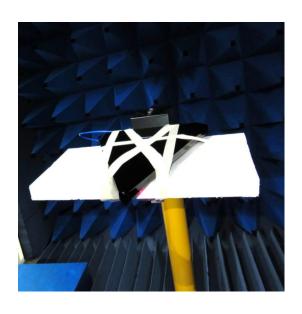
3. Antenna Characteristics

3.1 Set up

Return Loss and VSWR Measurement

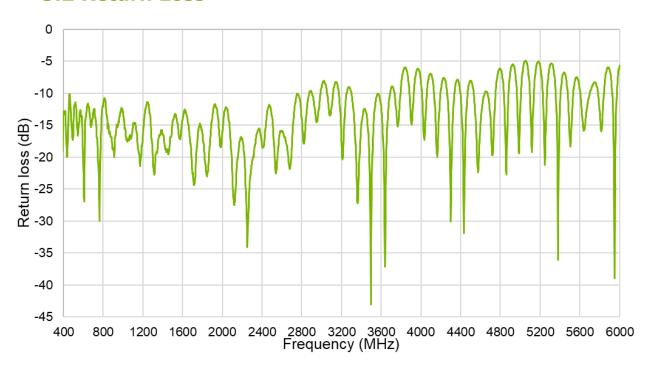


Efficiency and Gain Measurement

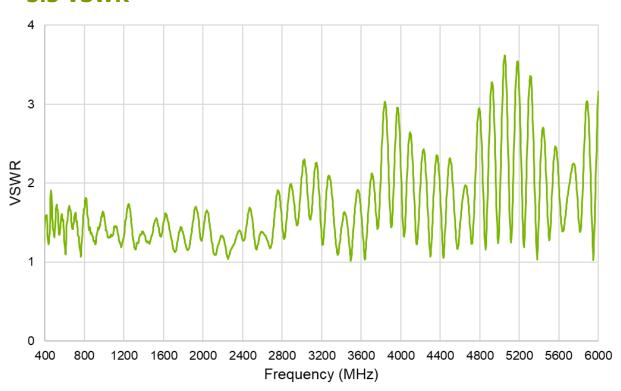




3.2 Return Loss

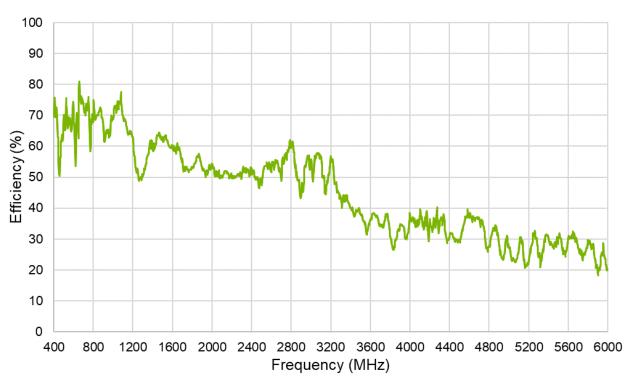


3.3 VSWR

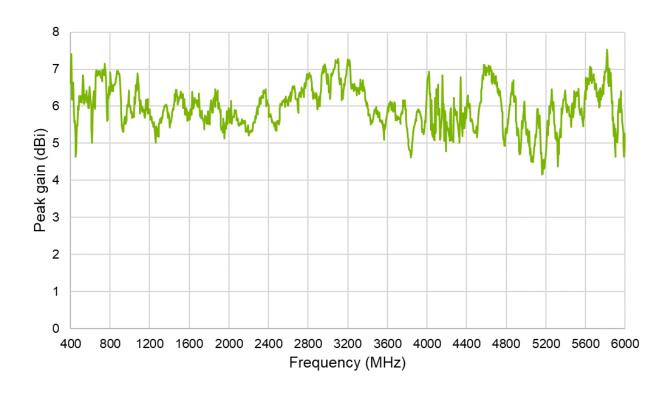




3.4 Efficiency

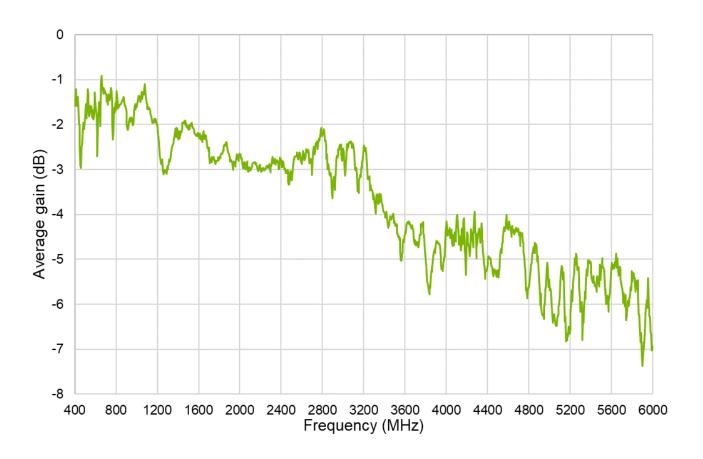


3.5 Peak Gain





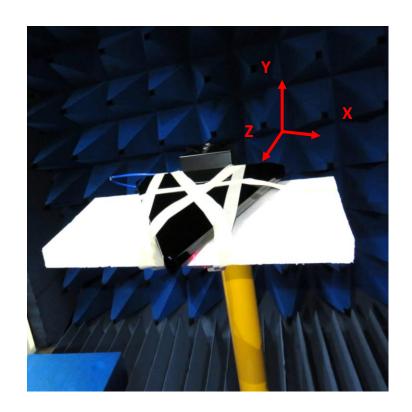
3.6 Average Gain





4. Antenna Radiation Pattern

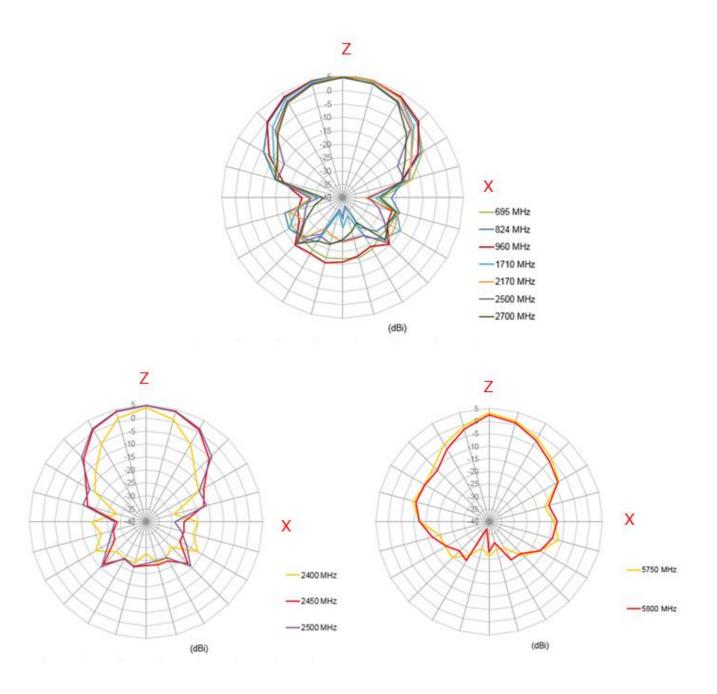
4.1 Measurement Setup





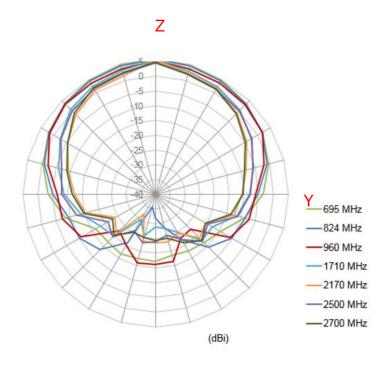
4.2 2D Radiation Pattern

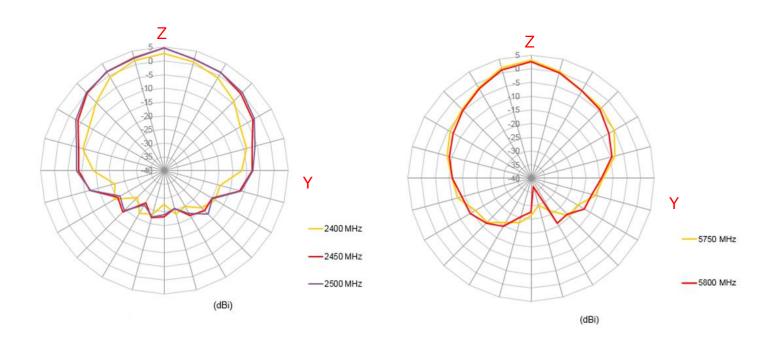
XZ Plane



YZ Plane

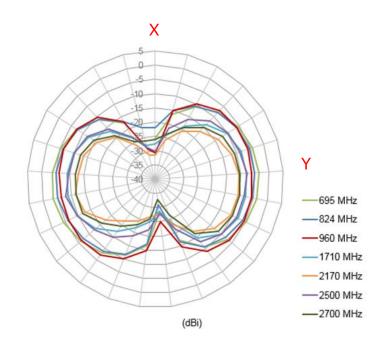


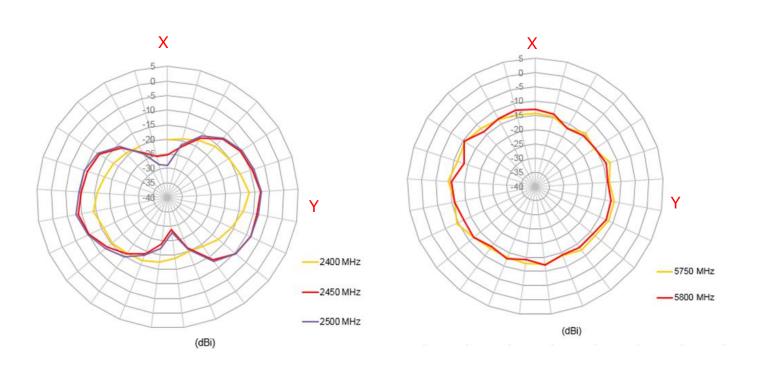






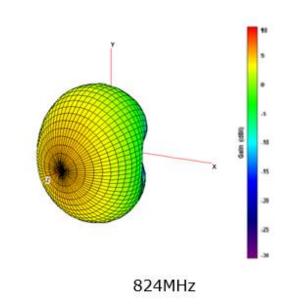
XY Plane

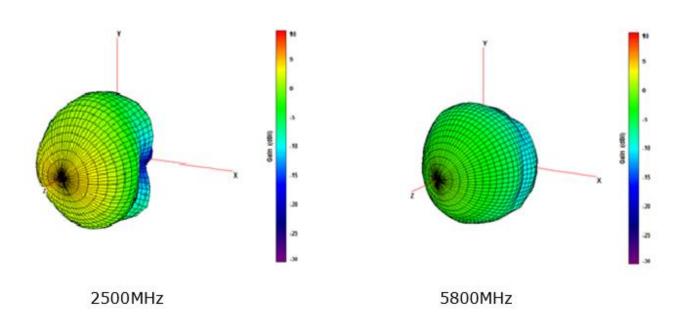






4.3 3D Radiation Pattern







5. Mechanical Drawing (Unit: mm)

Currently under development