



Datasheet



Freedom

Part No:
FXP70.A

Description

2.4GHz Flex PCB Antenna without cable

Features:

- Low profile antenna
- High performance magnetic field antenna
- Flexible PCB Antenna with 3M adhesive
- Dimensions: 27 x 25 x 0.2mm
- RoHS & Reach Compliant

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Taiwan
ISO 9001:2015
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1. Introduction



The FXP70 Freedom 2.4GHz Antenna works on Wi-Fi, ZigBee, Bluetooth and ISM band at 2.4GHz. This antenna has been designed as a general solution to cover the current market applications, with easy installation through a cable connection. The antenna has been designed to work on different plastics material and thickness. We have selected a piece of ABS plastic with 2mm of thickness as a baseline for testing.

The cable and connector are fully customizable, for more information please contact your regional Taoglas customer support team.

2. Specification

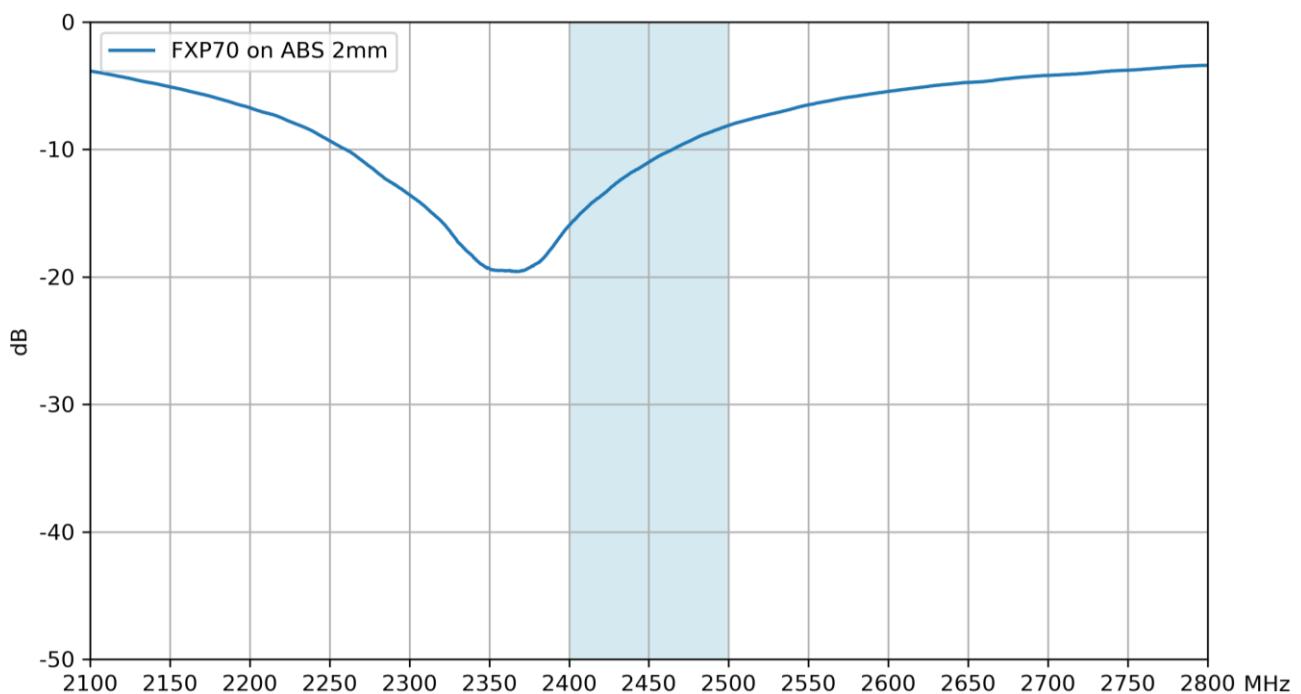
Wi-Fi Electrical									
Band	Frequency (MHz)	Measurement	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
Wi-Fi - 2.4GHz	2400-2500	2mm ABS	63.7	-2.0	1.1	50 Ω	Linear	Omni directional	10W
		Free Space	30.5	-5.2	-1.9				

Mechanical	
Dimensions	27 x 25 x 0.08 mm
Weight	1.2 g
Adhesive	3M 467

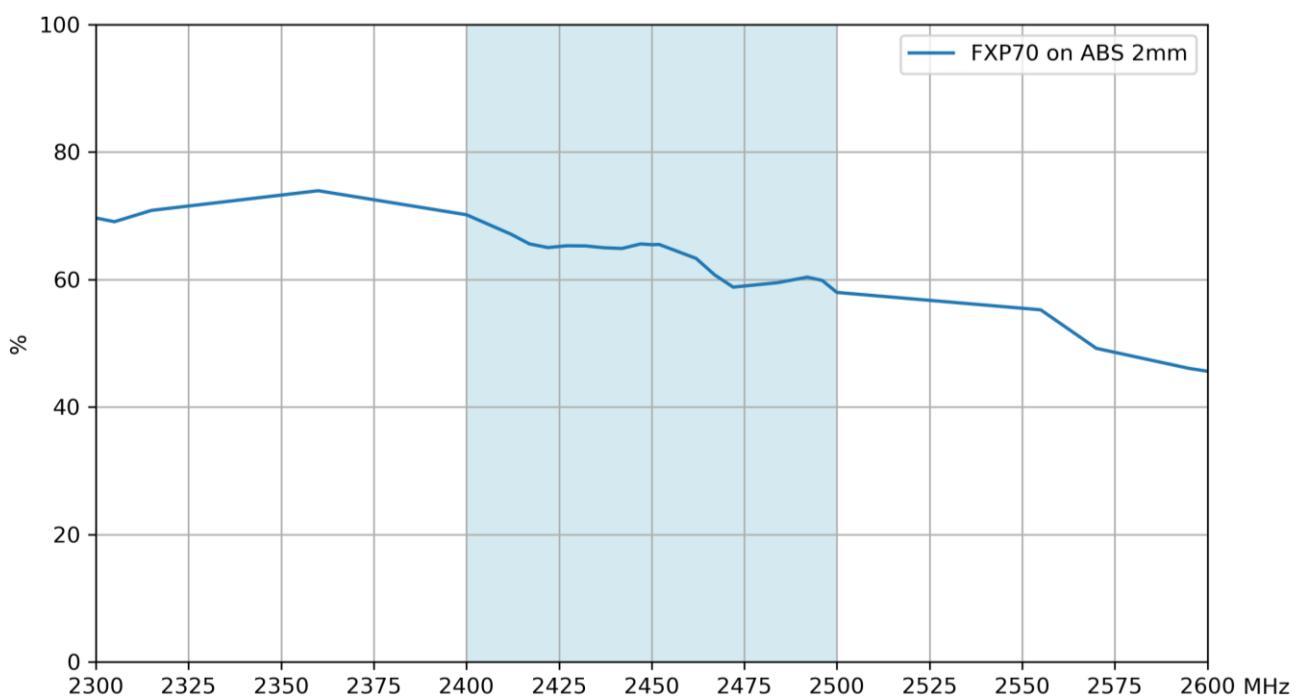
Environmental	
Operation Temperature	-40°C to 85°C
Storage Temperature	-40°C to 85°C
Relative Humidity	Non-condensing 65°C 95% RH

3. Antenna Characteristics

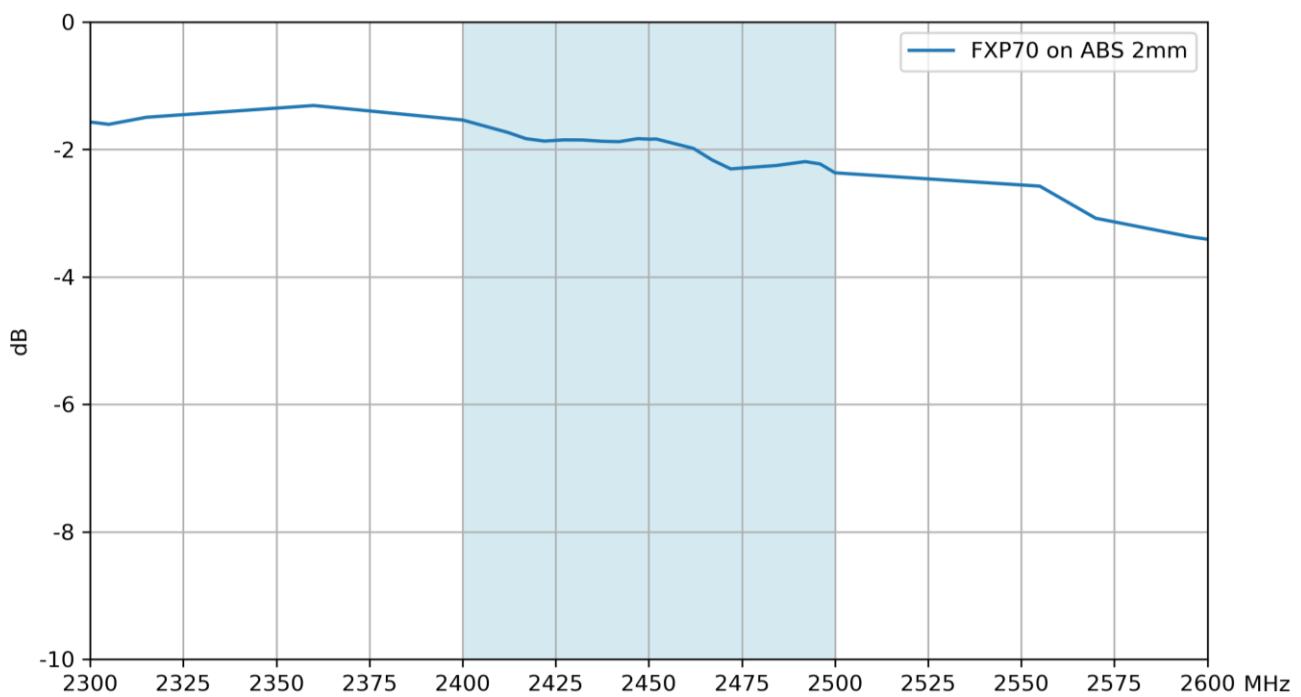
3.1 Return Loss



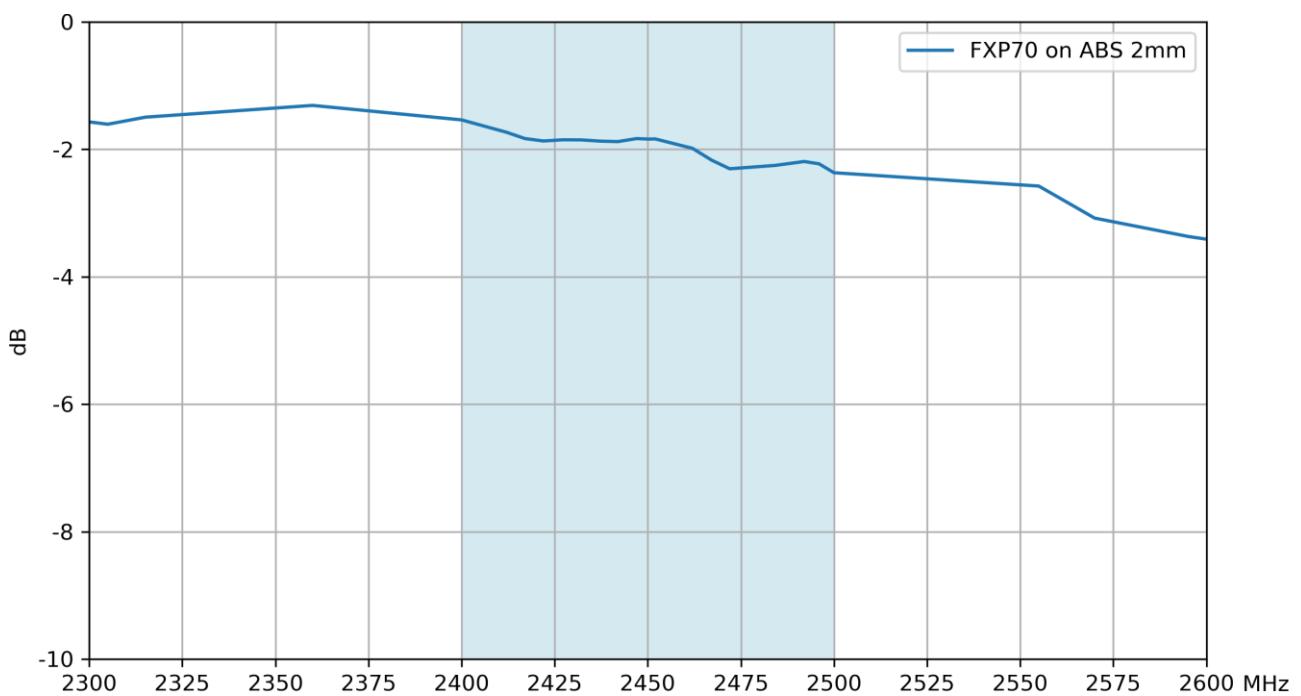
3.2 Efficiency



3.3 Average Gain

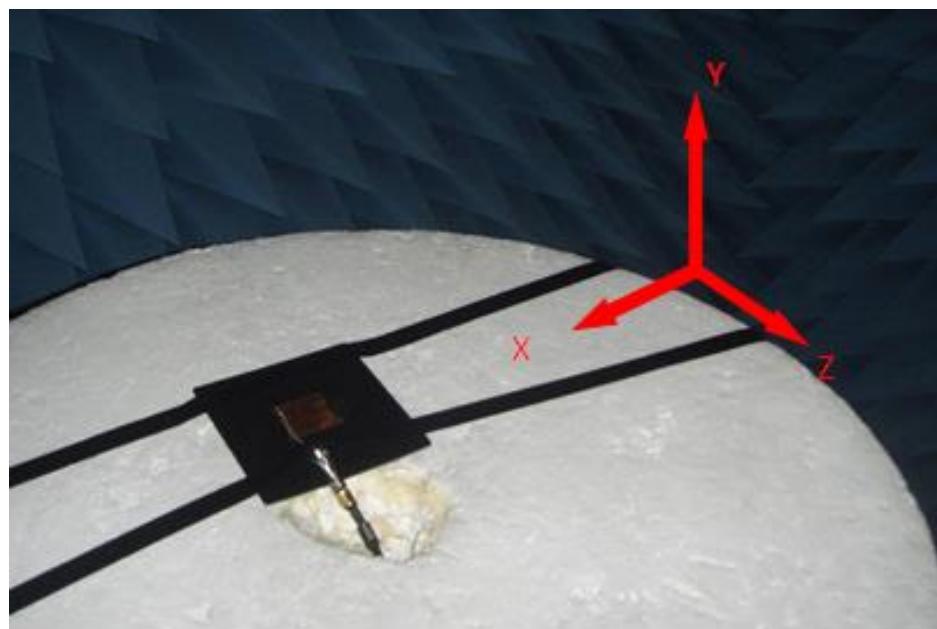
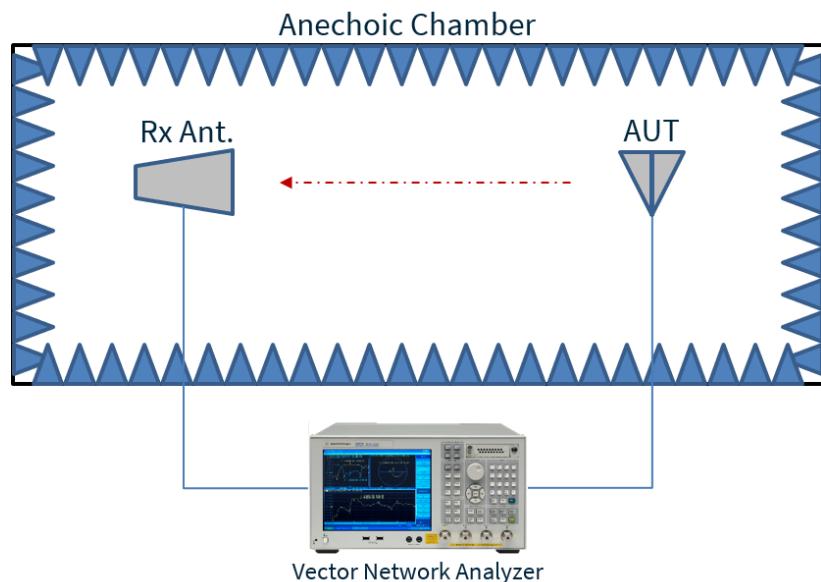


3.4 Peak Gain



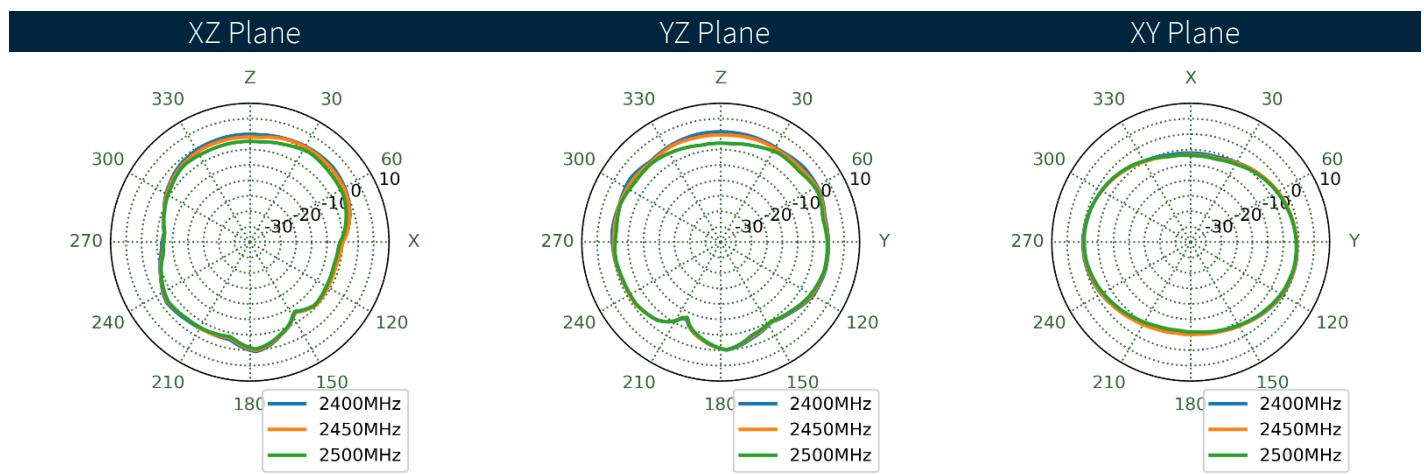
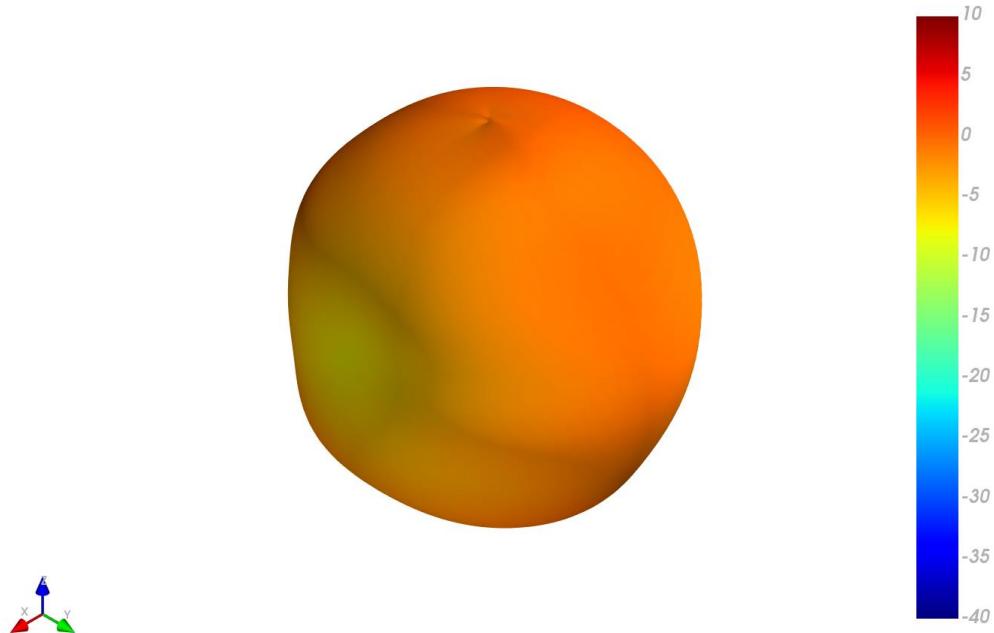
4. Radiation Patterns

4.1 Test Setup

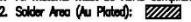


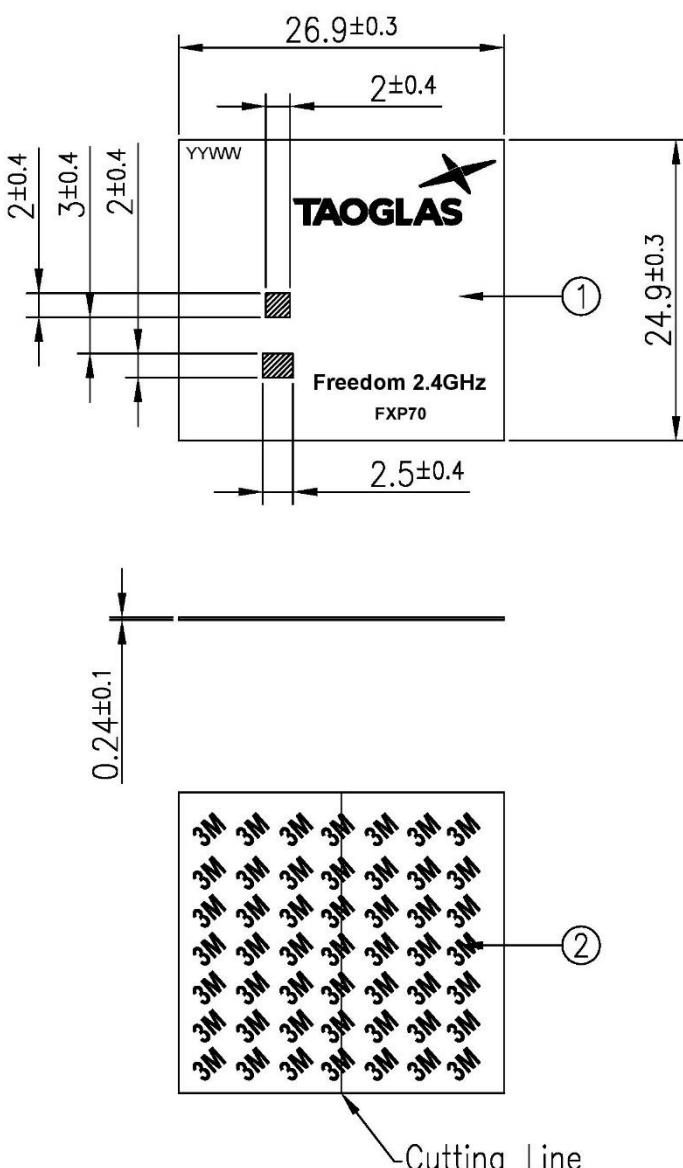
Chamber Test Set-up on 2mm ABS

4.2 Patterns at 2450 MHz



5. Drawing

ISO NO.:	EDW.xxxxxx	REV.	DESCRIPTION	ENG.	APPROVED	DATE
STATE:	Release	1	Initial Design	Ruby	Aaron	2025/01/21
NOTES:	1. All material must be RoHS compliant. 2. Solder Area (Au Plated): 					



APPROVED BY:	Aaron	
CHECK BY:	Aaron	
DRAWN BY:	Ruby	
DATE:	2025/01/21	
UNLESS OTHERWISE SPECIFIED	X1-405 X1-403 X4-02 X6-01 X0-000005	
TOLERANCES ON:		
THIRD ANGLE PROJECTION		
UNIT:	mm	SCALE: 2:1
PAGES:	1/1	REV. D01

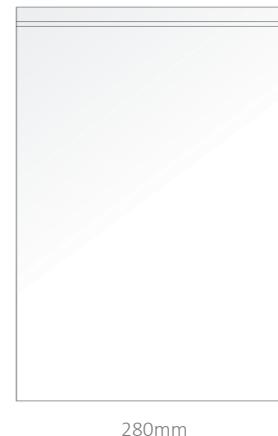
Name	Material	Finish	QTY
1 FPCB	Polymer 0.24t	Black	1
2 Double-Sided Adhesive	3M 487	Brown Liner	1

6. Packaging

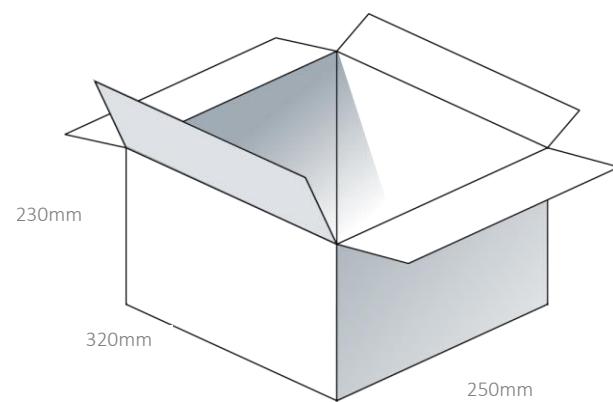
100pcs FXP70.A per PE Bag
Dimensions – 180 x 100mm
Weight - 130g



1000pcs FXP70.A per Large PE Bag
Dimensions – 280 x 450mm
Weight - 1.4Kg



6000pcs FXP70.A per carton
Dimensions – 320 x 250 x 230mm
Weight - 8.5Kg



Changelog for the datasheet

SPE-25-8-019 - FXP70.A

Revision: A (Original First Release)

Date:	2025-01-16
Notes:	Initial Release
Author:	Gary West

Previous Revisions



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