

Datasheet

Part No: MPA.257.A

Description

WiFi Tri-Band 2.4/5.8/7.125GHz SMD Stamp Metal PIFA Antenna

Features:

Wi-Fi Tri Band SMD Stamp Metal PIFA Antenna Covering: 2.4/5.8-7/125GHz Dims: 24 x 5.4 x 4.9mm RoHS & Reach Compliant



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Introduction



The Taoglas MPA.257.A is a stamped metal Wi-Fi antenna for various Bluetooth and Wi-Fi applications. Engineered to cover 2.4, 5.8 and 7.125GHz bands, the antenna is suitable for Wi-Fi 6/7 applications allowing you to future proof your device design. The high-performance antenna, supplied on tape and reel, is designed to be mounted via SMD to the device PCB. The antenna is durable and its robust construction makes it more resistant to physical damage in comparison to other antennas. The metals used in Taoglas' stamped antennas are recyclable, making them a more sustainable choice compared to other materials like plastics or composites.

The lightweight MPA.257.A has a compact form factor of just 24.5 x 4.9 x 5.9mm, making it suitable for modern electronic devices that require a small, efficient antenna design. The MPA.257.A requires a small keep out area of allowing it to be used where other antennas cannot. Many competitor products require large keep out areas and several matching components on much larger ground planes to operate with similar performance.

Typical applications that the MPA.257.A is suitable for include:

- Handheld Wi-Fi devices
- Smart Home and Office Automation
- Entertainment Systems with 4K / 8K Streaming, VR and AR
- Keyless entry systems and Access Control Systems
- Smart Telemedicine and Healthcare
- Industrial Automation and Predictive Maintenance Systems

Taoglas high-performance stamped metal antennas can be specifically tuned to customer-specific device environments, subject to NRE and MOQ. <u>Contact</u> your regional Taoglas customer support team to request these services or additional support to integrate and test this antenna's performance in your device.

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Specification

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Wi-Fi Electrical								
Band	Frequency (MHz)	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
Wi-Fi - 2GHz	2400-2500	60.1	-2.21	1.50				
Wi-Fi - 5GHz	5150-5850	65.0	-1.87	3.78	50 Ω	Linear	Omni	2W
Wi-Fi - 6GHz	5925-7125	70.6	-1.51	4.41				

Mechanical		
Dimensions	24 x 5.4 x 4.9mm	
Antenna Type	SMD	
Material	Tin Plated	

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



Mechanical Drawing

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Frequency (MHz)

SPE-24-8-249-A











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Chamber Test Set-up



























Changelog for the datasheet		
SPE-24-8-249 – MPA.257.A		
Revision: A (Initial R	telease)	
Date:	2024-10-03	
Notes:	Initial Datasheet Release	
Author:	Gary West	

Previous Revisions





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