

Alien Higgs® 3 UHF RFID PCB On-Metal Tag

AZT-H3-PCB-D5T4



Key Features

Operating Frequency (US)902-928 MHz, (EU)865-868 MHz
Chip Type Alien Higgs® 3
International Standard ISO/IEC 18000-6C, EPC Global Gen 2v2
User Memory 512 bits
EPC Memory 96 bits(Up to 480 Bits)
IP Rating IP68
Max. Read Range Up to 1 m on metal

1. Product Overview

Made from durable, tear-resistant, lightweight, moisture-proof, and heat-resistant FR4 PCB, this Alien Higgs® 3 UHF RFID on-metal tag is ideal for metal surfaces in harsh environments, offering a read range of up to 1 meter when mounted on metal. With compact size and flexible mounting options—embedded or adhesive—it allows for easy installation on various metal surfaces. Rated IP68 for dust and water resistance, it is suitable for outdoor use. This UHF RFID on-metal tag is designed for asset tracking, warehouse management, logistics management and equipment tracking in challenging industrial conditions.

2. Product Parameters

2.1 Physical Characteristics

SKU	AZT-H3-PCB-D5T4
Material	FR4(PCB)
Tag Dimension	Diameter: 5mm; Thickness: 4.0mm with IC bump
Net Weight	0.5g
Tag Color	Black(Red, Blue, Green, White)
IP Rating	IP68
Mounting Methods	Embed, Adhesive

2.2 Technical Parameters

Operating Frequency	(US)902-928 MHz, (EU)865-868 MHz
Communication Protocol	ISO/IEC 18000-6C, EPC Global Gen 2v2
Applicable Surface	Metal Surfaces
Read Range (Fix Reader)	1m-(US)902-928 MHz, on metal 0.9m-(EU)865-868 MHz, on metal
Read Range (Handheld Reader)	0.6m-(US)902-928 MHz, on metal 0.55m-(EU)865-868 MHz, on metal



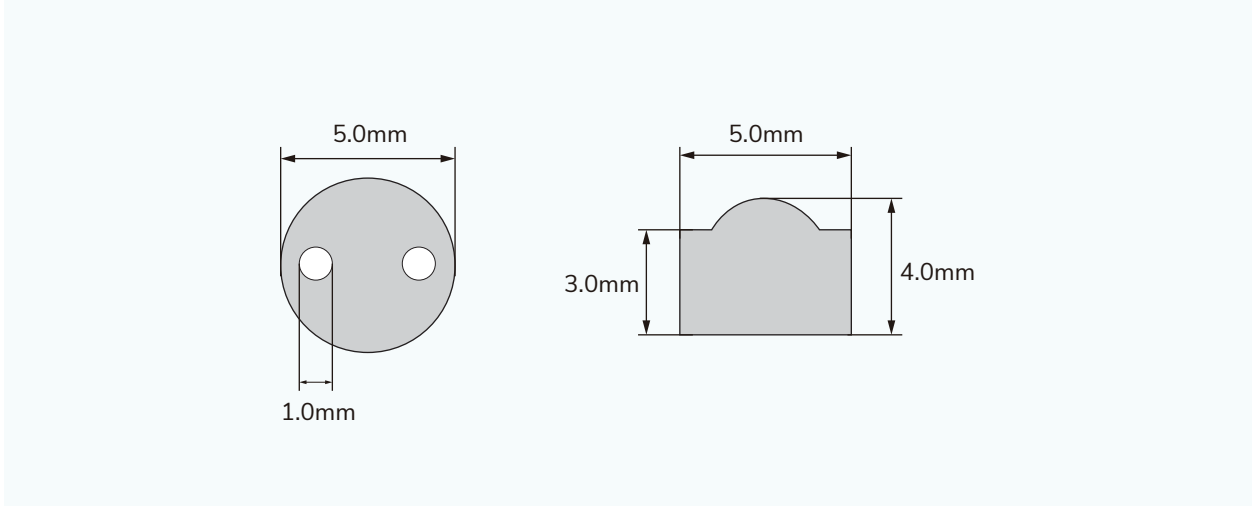
2.3 Chip Characteristics

Chip Manufacturer	Alien®
Chip Type	Alien Higgs® 3
Write Endurance	100,000 times
Data Retention	50 years
User Memory	512 bits
EPC Memory	96 bits(Up to 480 Bits)
TID Memory	64 bits
Dynamic Authentication™ Protection	Support
Permanently Lock User Memory	Support
Mandatory And Optional Command Adaptation	Support

2.4 Additional Information

Operating Environment	-40°C~+100°C
Storage Environment	+18°C~+28°C
Applications	Asset tracking, warehouse management, logistics management and equipment tracking in challenging industrial conditions.

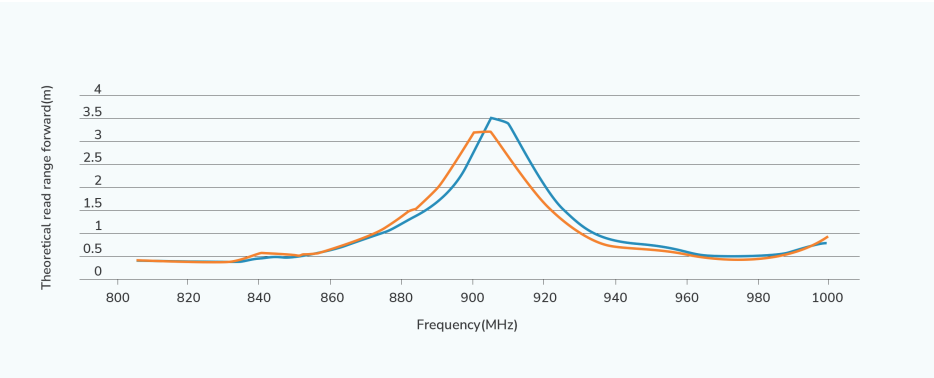
3. Dimensions



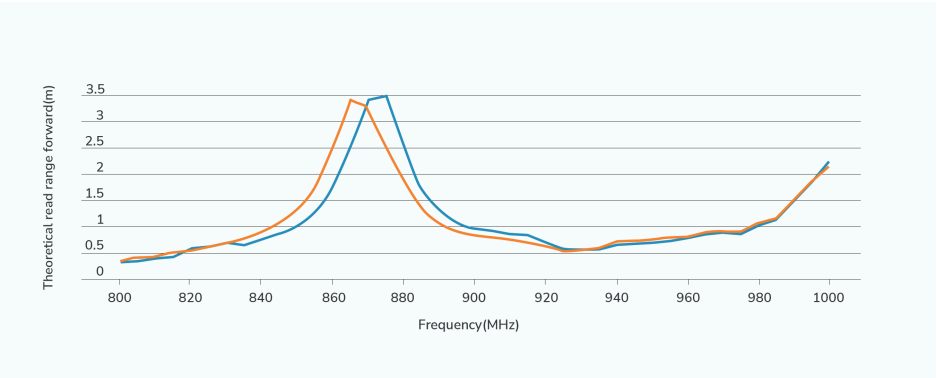
4. Testing Graphs

4.1 Reading range under different frequency

PCBD5U1:

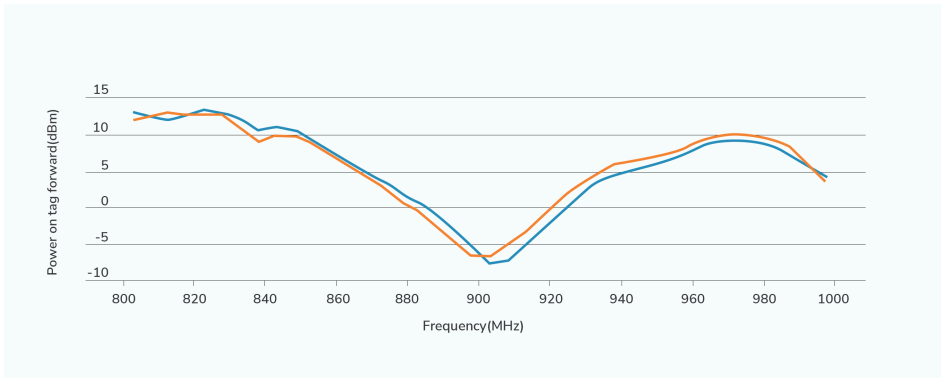


PCBD5E4:

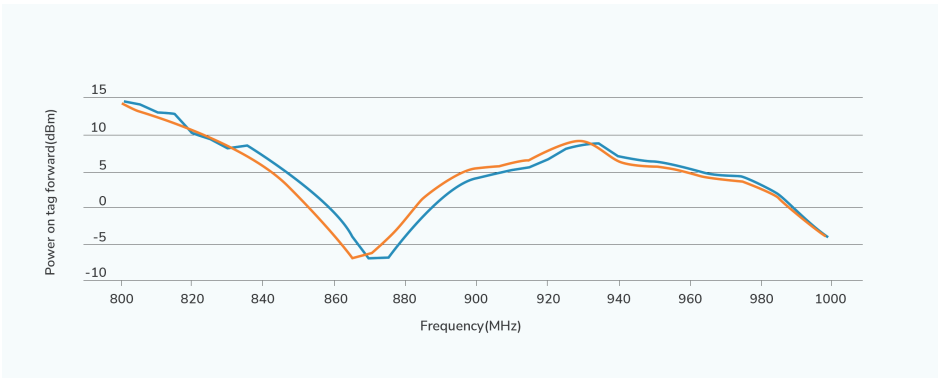


4.2 Tag power under different frequency

PCBD5U1:



PCBD5E4:



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