

HID 2-in-1 Antenna Specification

Product Name: HID 2-in-1 Antenna

Product Model: AC20-F-ME(T456)

Original Model: AC20-F-ME(T456)

Part Number: C15060151

HID 2-in-1 antenna for AC20 model/Dimensions:

Specification: 44.6*41.8mm (± 0.1 mm)/Thickness: 3.5mm/Wire Length: 30mm ± 5 mm with ferrite/Back adhesive

Sampling Date: 2023.6.9

Sample Qt.: 4 PCS

Supplier Confirmation	Prepared	Reviewed	Approved
Customer Confirmation	Prepared	Reviewed	Approved

Address	6th Floor, West Building 6, Tian'an Yungu, Xuegang North Road, Bantian Street, Longgang District, Shenzhen		
QQ	3005026195	Mobile Number	13424153481
Email	Xiangmuguanli1@zkrfid.com		
Contact Person	Tang Riyan		

Company Address: 16th Floor, West Building 6, Tian'an Yungu, Xuegang North Road, Bantian Street, Longgang District, Shenzhen, Switchboard: 0755-29062099

Factory Address: 4th Floor, Building A, Zhongjin Industrial Park, No. 3 Pusha South Road, Shahu Village, Tangxia Town, Dongguan, Switchboard: 0769-87880899/82866329

Company Website: www.zkradio.com

AC20-F-ME(T456) 2-in-1 Antenna

I. Basic Characteristics and Application Fields

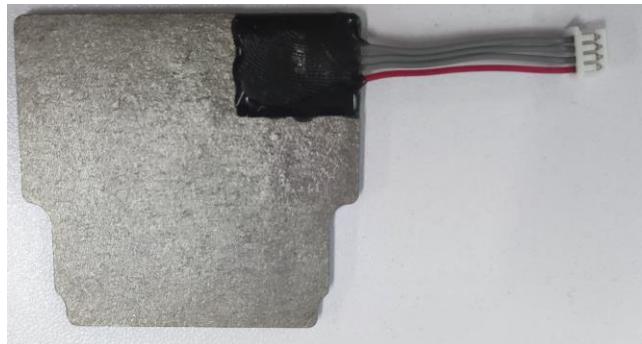
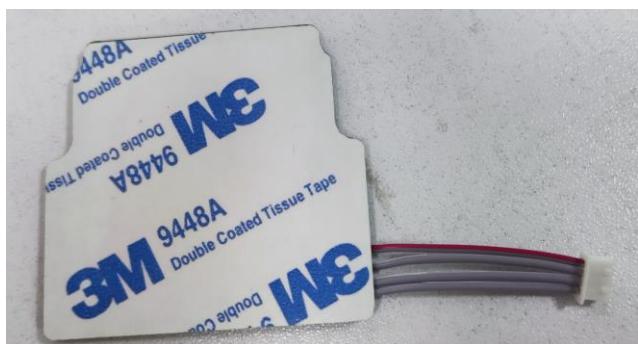
1. Basic Characteristics

RFID antennas have two main functions: 1. Providing an RF field to activate cards. 2. Receiving data replied by cards. The parameters of RFID antennas are determined based on the antenna's structural dimensions and required sensing values during actual application. Specific adjustments are made according to the specific environment.

2. Application Fields

RFID antennas can be widely used in RF card reading devices and similar applications.

II. Product Appearance



III. Technical Parameters

1. Basic Technical Parameters

Feature	Details
Model	AC20-F-ME(T456)
PCB Size	Outer Length* Outer Width: 44.6*41.8MM(± 0.1 MM)
PCB Thickness	1.6 ± 0.1 MM
Overall Thickness	3.5MM(± 0.6 mm)
PCB MATERIAL PCB Material	FR-4
Cable Length	30MM ± 5 MM
Supported Cards	IC, ID, HID iClass, HID prox, desfire, Felica, CPU cards
Voltage	5V($\pm 5\%$)
Compatible Models	Compatible with ACF20 and M356i modules
Test Environment	Temperature: 25°C-30°C, Humidity: 85%RH

Company Address: 16th Floor, West Building 6, Tian'an Yungu, Xuegang North Road, Bantian Street, Longgang District, Shenzhen, Switchboard: 0755-29062099

Factory Address: 4th Floor, Building A, Zhongjin Industrial Park, No. 3 Pusha South Road, Shahu Village, Tangxia Town, Dongguan, Switchboard: 0769-87880899/82866329

Company Website: www.zkradio.com

Frequency	13.56MHZ,125KHZ
Terminal Connector	4P1.25
Inductance	420±10uH
PCB Version	AC20-F-ME(T456)_V1.00_20230203

2. Card reading distance

Number	Card Type	Test Distance L	Remark
1	ID(Thin Card)TK4100	0~L: L≥2.5CM	
2	ID(Thick Card)TK4100	0~L: L≥2.0CM	
3	ID(Thick Card)EM4200	0~L: L≥4.5CM	
4	ID Key Fob	0~L: L≥1.5CM	
5	HID prox(Thick Card)	0~L: L≥3.0CM	
6	HID 0008P(Thin Card)	0~L: L≥1.5CM	
7	HID 0009P(Thin Card)	0~L: L≥2.0CM	
8	HID prox(Key Fob)	0~L: L≥1.5CM	
9	S70 Card	0~L: L≥3.0CM	
10	S70 Key Fob	0~L: L≥1.5CM	
11	S50 Card	0~L: L≥2.5CM	
12	MF7 Byte Card	0~L: L≥3.5CM	
13	CPUCard	0~L: L≥1.5CM	
14	Desfire Card	0~L: L≥1.5CM	
15	Felica Card	0~L: L≥1.0CM	
16	NTAG Card	0~L: L≥1.5CM	
17	Ultralight	0~L: L≥2.0CM	
18	TypeB	0~L: L≥0.5CM	
19	15693 Card	0~L: L≥3.0CM	
20	HID iclass(Key Fob)	0~L: L≥1.5CM	
21	HID iclass PX D9P	0~L: L≥2.5CM	
22	HID iclass GP	0~L: L≥2.5CM	
23	HID iclass DL	0~L: L≥2.5CM	
24	HID iclass Thick Card	0~L: L≥2.5CM	
25	HID iclass seos IP Thin Card	0~L: L≥0.5CM	
26	HID iclass seos px19p	0~L: L≥3.0CM	The installation test distance and actual distance are dependent on the specific card and application environment.

Company Address: 16th Floor, West Building 6, Tian'an Yungu, Xuegang North Road, Bantian Street, Longgang District, Shenzhen, Switchboard: 0755-29062099

Factory Address: 4th Floor, Building A, Zhongjin Industrial Park, No. 3 Pusha South Road, Shahu Village, Tangxia Town, Dongguan, Switchboard: 0769-87880899/82866329

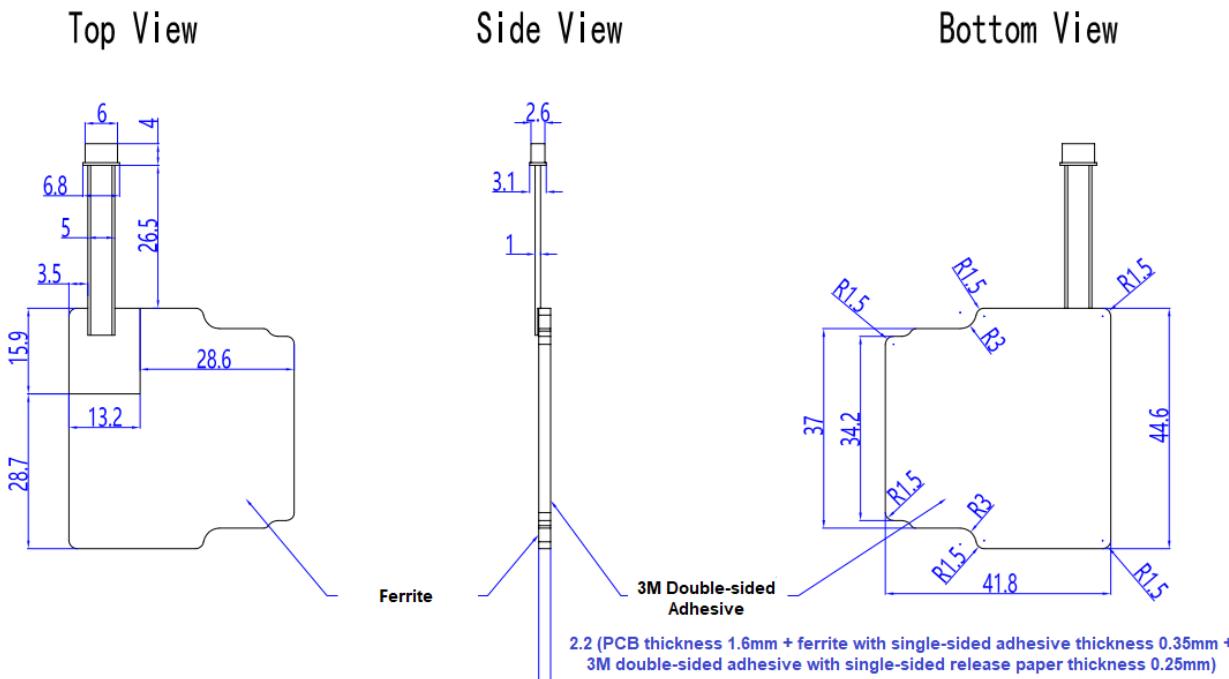
Company Website: www.zkradio.com

IV. Compatible Host



V. Dimension

1. External Dimension (Unit: mm)

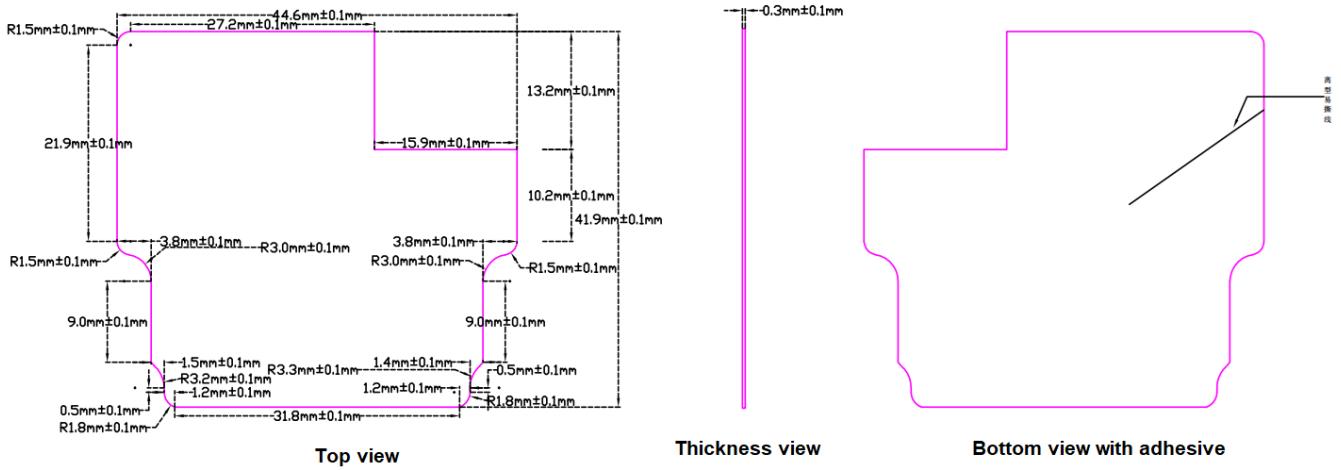


2. Ferrite (unit: mm)

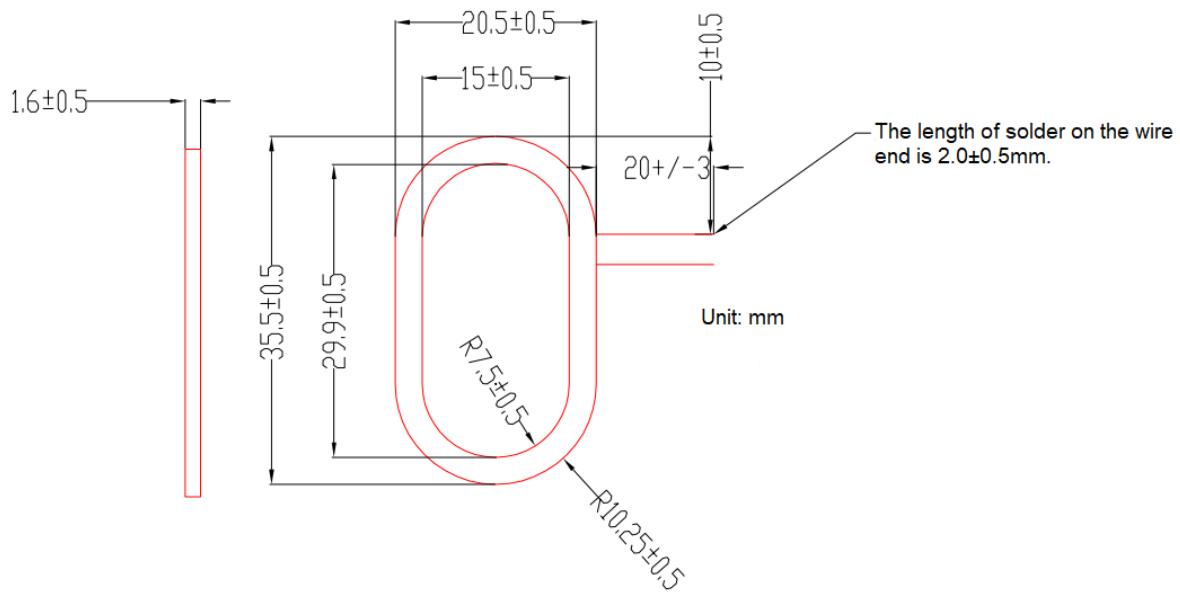
Company Address: 16th Floor, West Building 6, Tian'an Yungu, Xuegang North Road, Bantian Street, Longgang District, Shenzhen, Switchboard: 0755-29062099

Factory Address: 4th Floor, Building A, Zhongjin Industrial Park, No. 3 Pusha South Road, Shahu Village, Tangxia Town, Dongguan, Switchboard: 0769-87880899/82866329

Company Website: www.zkradio.com



3. ID Coil (unit: mm)



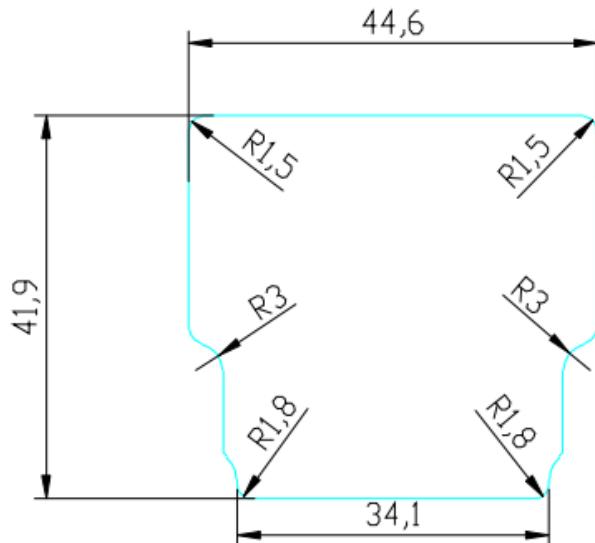
4. Back adhesive (unit: mm)

Company Address: 16th Floor, West Building 6, Tian'an Yungu, Xuegang North Road, Bantian Street, Longgang District, Shenzhen, Switchboard: 0755-29062099

Factory Address: 4th Floor, Building A, Zhongjin Industrial Park, No. 3 Pusha South Road, Shahu Village, Tangxia Town, Dongguan, Switchboard: 0769-87880899/82866329

Company Website: www.zkradio.com

3M adhesive at the V3L-ME(T380) antenna: 3M single-sided adhesive, thickness 0.15mm.



VI. Change log

Date	Material Number	Name	Reason for Change	Before Change	After Change
2023/6/2	C15060151	HID 2-in-1 Antenna (T456)	AC20-F machine with M356i+T456 failed FCC and CE testing, so the antenna was adjusted.	1. No ferrite 2. Coil: Inner diameter 30*15MM/ Outer diameter35.5*20.5MM/ Side width 2.5MM/ Thickness1.6MM/Wire diameter 0.21MM/Inductance 500±5%UH/ Lead length12MM 3.C1=C7=5P C3=C5=C6=39P C4=10P	1. Added ferrite 2. Coil: Inner diameter 29.9*15MM/Outer diameter 35.5*20.5MM/ Side width 3.0MM/ Thickness11.6MM/ Wire diameter 0.21MM/Inductance 420±10UH/ Lead length12MM 3.C1=C7=15P C3=C5=C6=27P C4=NC

Company Address: 16th Floor, West Building 6, Tian'an Yungu, Xuegang North Road, Bantian Street, Longgang District, Shenzhen, Switchboard: 0755-29062099

Factory Address: 4th Floor, Building A, Zhongjin Industrial Park, No. 3 Pusha South Road, Shahu Village, Tangxia Town, Dongguan, Switchboard: 0769-87880899/82866329

Company Website: www.zkradio.com

Environmental Compliance Statement

We hereby declare the following regarding our provided products:

1. This product complies with GB/T 26572-2011 "Requirements for Concentration Limits of Hazardous Substances in Electrical and Electronic Products," as well as the exceptions for restricted substances specified by national regulations.
2. This product meets the testing methods specified in GB/T 26125-2011 "Testing Methods for Six Restricted Substances in Electrical and Electronic Products."
3. This product complies with SJ/T 11364-2014 "Requirements for Marking of Restricted Substances in Electrical and Electronic Products."
4. Product Description:

Number	Material Code	Product Model	Remarks
1	C15060151	AC20-F-ME(T456)	

Guangdong ZK Radio Electronic Tech Co., Ltd

June 9, 2023

Company Address: 16th Floor, West Building 6, Tian'an Yungu, Xuegang North Road, Bantian Street, Longgang District, Shenzhen, Switchboard: 0755-29062099

Factory Address: 4th Floor, Building A, Zhongjin Industrial Park, No. 3 Pusha South Road, Shahu Village, Tangxia Town, Dongguan, Switchboard: 0769-87880899/82866329

Company Website: www.zkradio.com