

# Rectangular Near Field Communication (NFC) Antenna >

NFC Antenna, with or without Ferrite



*Near Field Communication (NFC) Antennas optimize detection performance for both Ferrite and non-Ferrite based applications*

Rectangular NFC Antennas maximize effectiveness of quick, two-way read/write operations over a wide range of detection distances in metallic and nonmetallic substrate applications.

## ADVANTAGES AND FEATURES

### Helps provide electrical contact to connecting spring clips or pogo pins mounted on the application PCB

The plated pads enhance the functionality and reliability of the NFC Antenna by providing effective and stable electrical contact points for connecting components on the PCB.

### Offers increased design flexibility to the application developer

The availability of multiple antenna sizes (mm): (15 by 15), (15 by 25), (23 by 27), (34 by 46) and (45 by 55) offers application developers the flexibility to tailor their design for space, performance and aesthetic requirements, leading to more innovative and effective NFC-enabled products.

### Facilitates easy integration on the application substrate due to its pliability

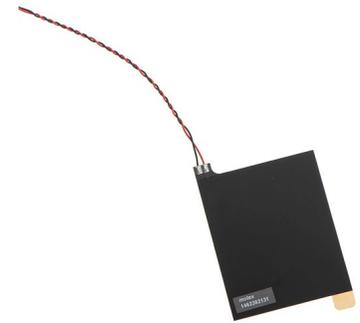
The flexi material allows for easier integration of the NFC Antenna into diverse application substrates, improving installation efficiency, performance and durability while accommodating various design requirements.

### Enables easy peel-and-stick mounting on the application substrate

The double-sided adhesive tape with liner feature simplifies the mounting process for the NFC Antenna, ensuring secure, efficient and precise installation on various substrates.

### Eliminates interference effects from metallic or conductive surfaces

The ferrite layer enhances the performance of Molex NFC Antennas by shielding against interference from metallic surfaces, thereby ensuring efficient and reliable communication.



## MARKETS AND APPLICATIONS

### Automotive

Infotainment systems  
Smart car functions

### Consumer

Payment processing systems  
Apparel tagging readers

### Industrial

Airline ticketing systems  
Air baggage and cargo  
Logistics, conveyors and roll cages  
Security access control systems  
Electronic keys



*Airline Ticketing Systems*



*Payment Processing Systems*



*Apparel Tagging Readers*

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## SPECIFICATIONS

### Reference Information

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 Packaging: PE film  
 Use With: RFID tags  
 Designed In: Millimeters  
 RoHS: Yes  
 Low Halogen: Yes  
 Glow Wire Compliant: No

### Electrical

Operating Frequency: 13.56 MHz  
 RF Power: 2W  
 Inductance ( $\mu$ H): Refer to Order Table

### Mechanical

Mode: Peel-and-stick

### Physical

Flexi Material: Polyimide  
 Ferrite: TRF220  
 Adhesive (FPC): 3M9077  
 Plating Thickness: Copper 28 to 38 $\mu$ m  
 Nickel: 2 to 6 $\mu$ m  
 Gold: 0.05 $\mu$ m min.  
 Operating Temperature: -40 to +85°C

## ORDERING INFORMATION

Series No.	Ferrite Option	Part Numbers	Dimensions (mm)	Inductance ( $\mu$ H)
<a href="#">146236</a>	With Ferrite	1462360151	15.00 by 15.00 by 0.27	2.10
		1462360101	15.00 by 25.00 by 0.27	3.10
		1462360111	23.00 by 27.00 by 0.27	3.00
		1462360121	34.00 by 46.00 by 0.27	3.80
		1462360131	45.00 by 55.00 by 0.27	3.50
		1462360051	15.00 by 15.00 by 0.17	1.40
	Without Ferrite	1462360001	15.00 by 25.00 by 0.17	2.00
		1462360011	23.00 by 27.00 by 0.17	2.00
		1462360021	34.00 by 46.00 by 0.17	2.60
		1462360031	45.00 by 55.00 by 0.17	2.40
		1462362151	15.00 by 15.00 by 0.27	2.40
		1462362102	15.00 by 25.00 by 0.27	3.30
	With Ferrite and twisted pair	1462362111	23.00 by 27.30 by 0.27	3.30
		1462362122	34.39 by 46.10 by 0.27	4.20
		1462362131	45.00 by 55.00 by 0.27	4.10

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