Rectangular Near Field Communication (NFC) Antenna

NFC Antenna, with or without Ferrite

molex

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



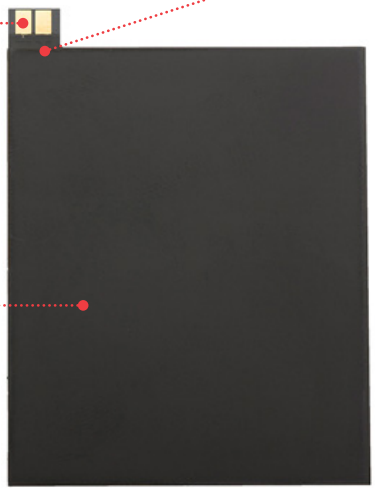
Near Field Communication (NFC) Antennas optimize detection performance for both Ferrite and non-Ferrite based applications

Features and Benefits

Plated Pads
Provide electrical contact to connecting spring clips or pogo pins mounted on the application PCB

Flexi material
Facilitates easy integration on the application substrate due to its pliability

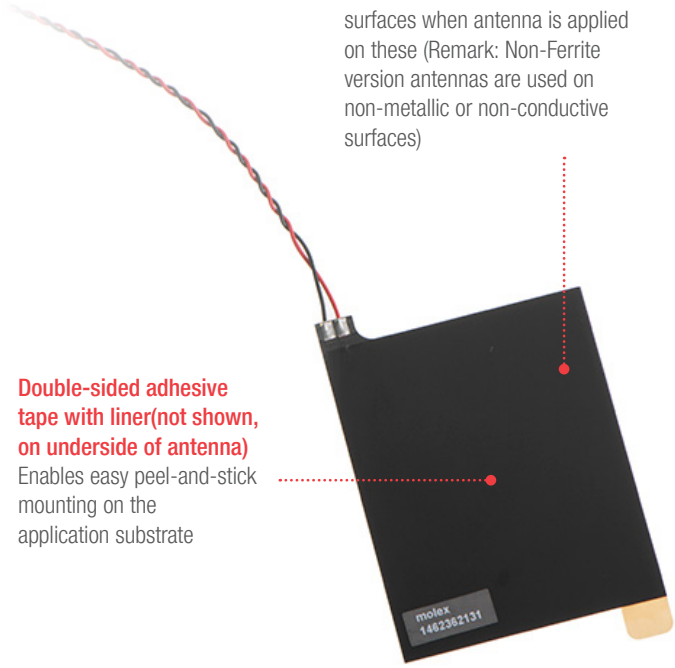
Selection of antenna sizes (mm): (15 by 15), (15 by 25), (23 by 27), (34 by 46) and (45 by 55)
Offer increased design flexibility to the application developer



Standard NFC Antenna

Ferrite* layer
Eliminates interference effects from metallic or conductive surfaces when antenna is applied on these (Remark: Non-Ferrite version antennas are used on non-metallic or non-conductive surfaces)

Double-sided adhesive tape with liner(not shown, on underside of antenna)
Enables easy peel-and-stick mounting on the application substrate



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

Rectangular Near Field Communication (NFC) Antenna

NFC Antenna, with or without Ferrite

molex

Specifications

REFERENCE INFORMATION
Reference Information
Packaging: PE film
Use With: RFID tags
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes
Glow Wire Compliant: No

ELECTRICAL
Operating Frequency: 13.56 MHz
RF Power: 2W
Inductance (µH): Refer to Order Table

MECHANICAL
Mode: Peel-and-stick

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

Ordering Information

Series No.	Ferrite Option	Part Numbers	Dimensions (mm)	Inductance (µH)
146236	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
	Without Ferrite	1462360051	15.00 by 15.00 by 0.17	1.40
		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
	With Ferrite and twisted pair	1462362151	15.00 by 15.00 by 0.27	2.40
		1462362102	15.00 by 25.00 by 0.27	3.30
		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

www.molex.com/link/nfc.html

Molex is a registered trademark of Molex, LLC in the United States of America and may be registered in other countries; all other trademarks listed herein belong to their respective owners.

Order No. 987651-6471 APS/0k/GF/2019.12

©2019 Molex