

Circus™ On-Metal

Overview

Frequency Band

HF 13.56 MHz

Chip

NXP NTAG213

Antenna Dimensions

Ø 20 mm / 0.79 in

International Standard

ISO 14443A

Industry Segments

Industrial Applications
Media and Document Management

Applications

NFC
Electronics

RoHS

EU Directive 2011/65/EC and
Directive (EU) 2015/863

REACH

Regulation (EC) No. 1907/2006



Flexible ferrite-based NFC tags for multiple use

Our Circus™ On-Metal tags have been specifically designed to work on metallic objects. They open the door to all applications involving the tagging of metal surfaces that need to be identified or interacted with, such as metallic parts, tools, machines, spare parts and even domestic items.

In our Circus™ On-Metal tags, we combine flexible ferrite materials with a performance-optimized antenna design. The super-thin ferrite-based inlay is produced by applying a layer of ferrite material to the inlay, which isolates the magnetic field from the metal surface. Ferrite redirects the reader's inductive field, and prevents energy from being wasted as heat within the metallic surface.

The flexible ferrite-based NFC inlays are suitable for roll-to-roll manufacturing processes, which make onward processing much easier and more cost-effective, and allow converters to overprint the inlays if required.

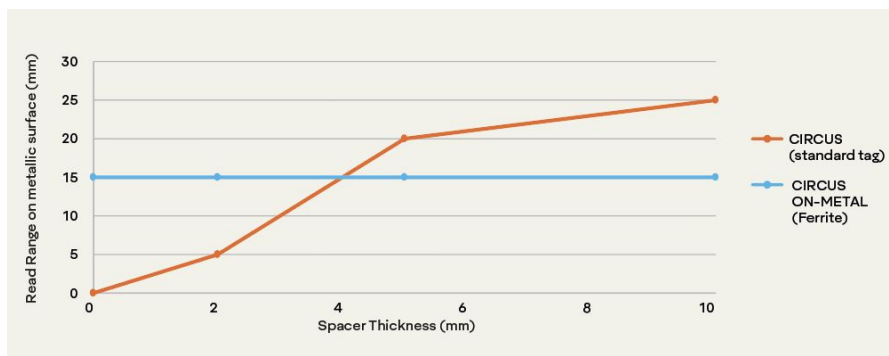
Circus™ On-Metal is equipped with the NXP NTAG213 IC. This chip offers (UID) mirror functionality that enables the IC's serial number to be mirrored as part of its encoded data, and identifies unique reads from the application perspective.

Our inlays and tags are compliant with ISO 9001:2008 Quality Management and ISO 14001:2004 Environmental Management. This ensures a reliable and state-of-the-art product that meets a variety of application needs, where high performance is a critical parameter.

Technical features

Chip	NXP NTAG213
User Memory	144 bytes
Product Code	3006703
Delivery Format	White wet inlay
Die-Cut Dimension	Ø 22 mm / 0.866 in
Inlay Substrate	PET
Face Sheet	White PP
Standard Pitch	25 mm / 0.984 in
Web Width	28 mm / 1 in
Core Size	76 mm / 3 in
Quantity / Reel	2,000 pcs/reel 4,000 pcs/box
Operating Temperature	-25 °C to 70 °C / -13 °F to 158 °F

Comparison standard inlays with spacer and inlays with ferrite material



All graphs are indicative: performance in real life applications may vary.

Contact information

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Warranty: Please refer to Avery Dennison standard terms and conditions: [rfid.averydennison.com/termsandconditions](https://www.averydennison.com/termsandconditions)

Care and handling: RFID inlays are sensitive to ESD. Observe standard industry practices relating to electronics / RFID to keep environmental impact and static charge to a minimum.

Applications: This product should be tested by the customer / user thoroughly under end use conditions to ensure the product meets the particular requirements. Avery Dennison does not represent that this product is fit for any particular purpose or use. Avery Dennison reserves the right to modify, change, supplement or discontinue product offerings at any time without notice. The information contained herein is believed to be reliable but Avery Dennison makes no representation concerning the accuracy or correctness of the data.

