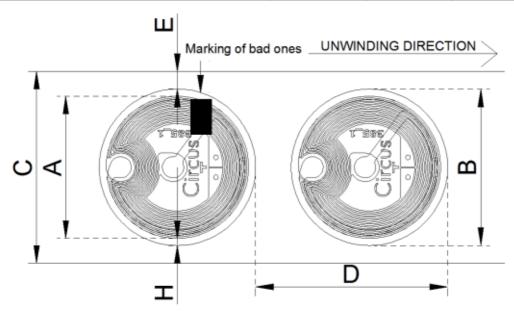


Preliminary Product Specification

Circus NFC White Wet Inlay ISO 14 443 A NXP NTAG213 Sales code 3002991

Mechanical dimensions

Α	Antenna size	20 mm	± 0,5 mm	0,787 in
			, , , , , , , , , , , , , , , , , , ,	0,866 in
С	Web width	27 mm	± 0,5 mm	1,063 in
D	Pitch, length per piece MD	27 mm	± 1,5 mm	1,063 in
E	Die-cut to web edge	2,5 mm	± 1,5 mm	0,098 in
Н	Antenna to die-cut (CD)	1 mm	± 1,0 mm	0,039 in
	Thickness of the IC	75 µm	± 10 %	
	Overall thickness of the transponder package (excluding IC and siliconized paper)	184 μm	± 10 %	
	Thickness of the siliconized paper	56 µm	±5%	



Electrical characteristics

Integrated Circuit (IC)	NXP NTAG213
Air interface protocol	ISO 14 443 A
Operation frequency	13,56 MHz
Unloaded resonance frequency	13,32 MHz ± 0,35 MHz
Memory	144 byte

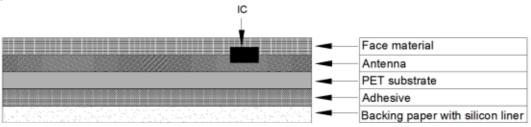
General characteristics of transponder

Operating temperature	-25 °C / +70 °C	-13 °F / 158 °F
(electronics parts)		
ESD voltage immunity	± 2 kV peak HBM	
Shelf life: From the date of manufacture 2 years in	+20 °C, 50 % RH	68 °F, 50 % RH
Bending diameter (D)	> 50 mm, tension less than 10 N	

Delivery form

Transponder format	Die-cut		
Transponder face material	White PP 60		
Transponder backing material	Siliconized Paper 56		
Transponder antenna material	Aluminum, crimped coil		
Transponder adhesive	RA-5		
- labelling temperature	min. +0 °C	min. 32 °F	
- usage temperature	-20 °C - 80 °C	-4 °F - 176 °F	
- peel	min. 2 N / 25 mm (FTM 1)		
Final inspection	100 %, known faulty ones marked		
Minimum delivery yield	95 %		
Reel Label	Reel number, Material number, Material description, Yield, Qty of functional inlays, Qty of non-functional inlays, Date		
Printability	Needs to be tested by customer		

Structure



Delivery details

Appearance	Single row reel form
Reel core	Paper core inner diameter 76 mm (3 in)
Transponder alignment	Chip in front of transponder
Winding of the reel	Face out
Reel size	5000 pcs/reel
Package size	20000 pcs/box Deliveries only in full packages.

Disclaimer:

SMARTRAC reserves the right to change its products and services at any time without notice. Our recommendations are based on our best knowledge and experience. As the products are used outside our control we cannot take responsibility for any damage that may be caused when using the product. Use extra care in handling the product.

Products classified as CES samples have the released for production (RFP) product's form factor, RF performance and IC functionality. CES samples represent the RFP products in most aspects. CES samples are delivered without any warranty. During the CES phase, SMARTRAC reserves the right to modify product specifications without notice.

This technical specification replaces all earlier ones.

Version

Väisänen/Smartrac





