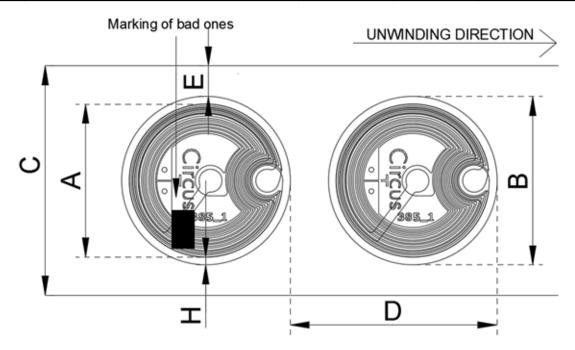


Preliminary Product Specification

Circus Dura Wet Inlay ISO 14 443 A NXP NTAG213 Sales code 3006451

Mechanical dimensions

Α	Antenna size	20 mm	± 0,5 mm	0,787 in
В	Die-cut size	22 mm	± 0,2 mm	0,866 in
С	Web width	30 mm	± 0,5 mm	1,181 in
D	Pitch, length per piece MD	27 mm	± 1,5 mm	1,063 in
E	Die-cut to web edge	4 mm	± 1,5 mm	0,157 in
H	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)	525 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 bytes user memory	

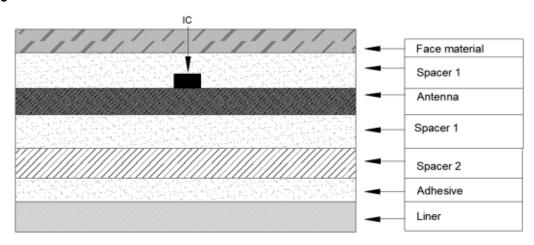
General characteristics of transponder

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	Clear PET 50		
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 at rear of transponder		
Winding of the reel	Face out		
Reel size	2 000 pcs/reel		

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

Update date 17 February 2017 Author SMARTRAC /

Approved SMARTRAC / 20.2.2017 k705115

