



The Biofore
Company

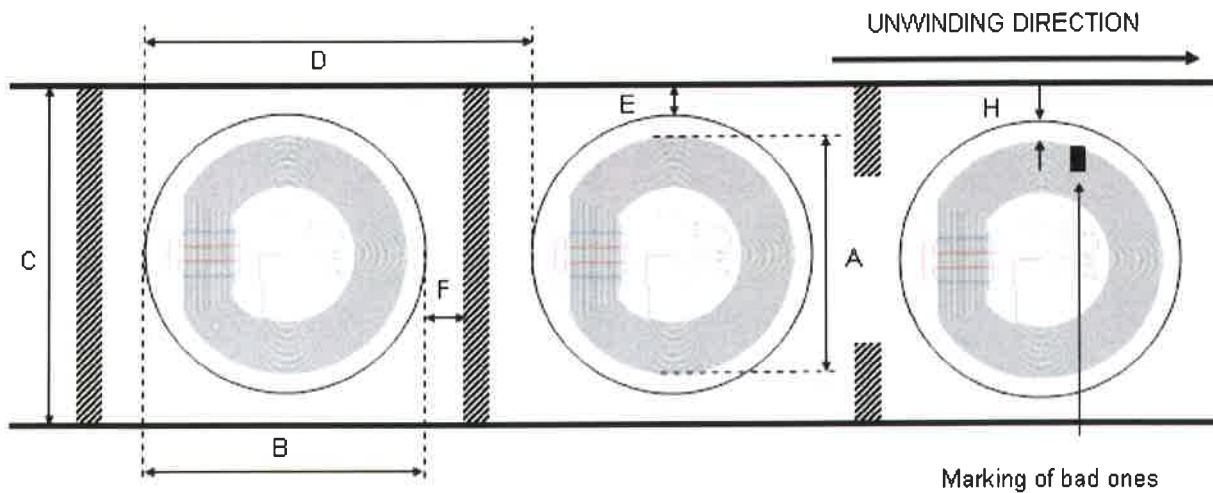
UPM RFID

Preliminary Product
Specification

HF Round 19 Paper Tag
ISO 15 693, ISO 18 000-3 Mode 1
NXP ICode SLI
Sales code 3001801

Mechanical dimensions

A	Coil diameter	16 mm	± 0,5 mm	0,630 in
B	Die-cut diameter	19 mm	± 0,2 mm	0,748 in
C	Web width	24 mm	± 0,5 mm	0,945 in
D	Pitch, length per piece MD	24 mm	± 1,5 mm	0,945 in
E	Die-cut to web edge	2,5 mm	± 1,5 mm	0,098 in
F	Die-cut to register mark	1 mm	± 1,5 mm	0,039 in
H	Coil to die-cut	1,5 mm	± 1,5 mm	0,059 in
	Thickness of the IC	150 µm	± 10 %	
	Overall thickness of the transponder package (excluding IC and siliconized paper)	240 µm	± 10 %	



Electrical characteristics

Integrated Circuit (IC)	NXP ICode SLI
Air interface protocol	ISO 15 693, ISO 18 000-3 Mode 1
Operation frequency	13,56 MHz
Unloaded resonance frequency	TBD
Memory	1k bit R/W EEPROM

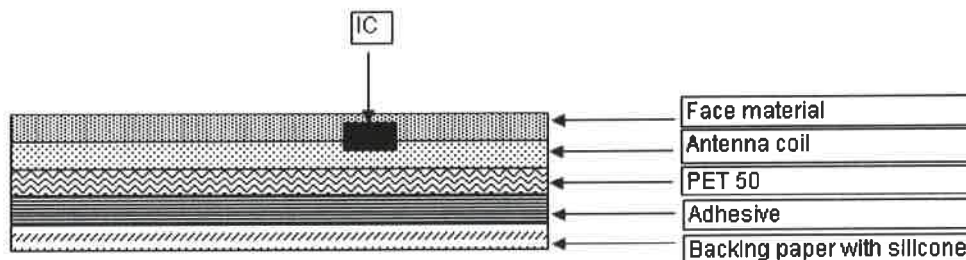
General characteristics of transponder

Operating temperature (electronics parts)	-25 °C / +85 °C	-13 °F / 185 °F
Thermal cycle resistance (electronics parts)	200 cycles -40 °C / +80 °C (JESD22-A104-B)	200 cycles -40 °F / 176 °F (JESD22-A104-B)
Temperature humidity resistance (electronics parts)	85 °C, 85 % RH, 168 h (IEC60068-2-67)	185 °F, 85 % RH, 168 h (IEC60068-2-67)
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	
Static pressure (P)	< 10 MPa (10 N/mm ²)	

Delivery form

Transponder format	Die-cut	
Transponder face material	Opaque Matt Paper 79	
Transponder backing material	Siliconized Paper 56	
Transponder antenna material	Copper	
Transponder adhesive	RA-4	
- labelling temperature	min. +5 °C	min. 41 °F
- usage temperature	-10 °C - 90 °C	14 °F - 194 °F
- peel	min. 10 N / 25 mm (FTM 1)	
Final inspection	100% , yield >95%, 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, time	

Structure



Delivery details

Appearance	Single row reel form
Reel core	Card board core, inner diameter 76 mm (3in)
Transponder alignment	Chip at rear of transponder
Winding of the reel	Face out

Disclaimer:

UPM RFID 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, UPM RFID reserves the right to modify product specifications without notice.

This technical specification replaces all earlier ones.

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