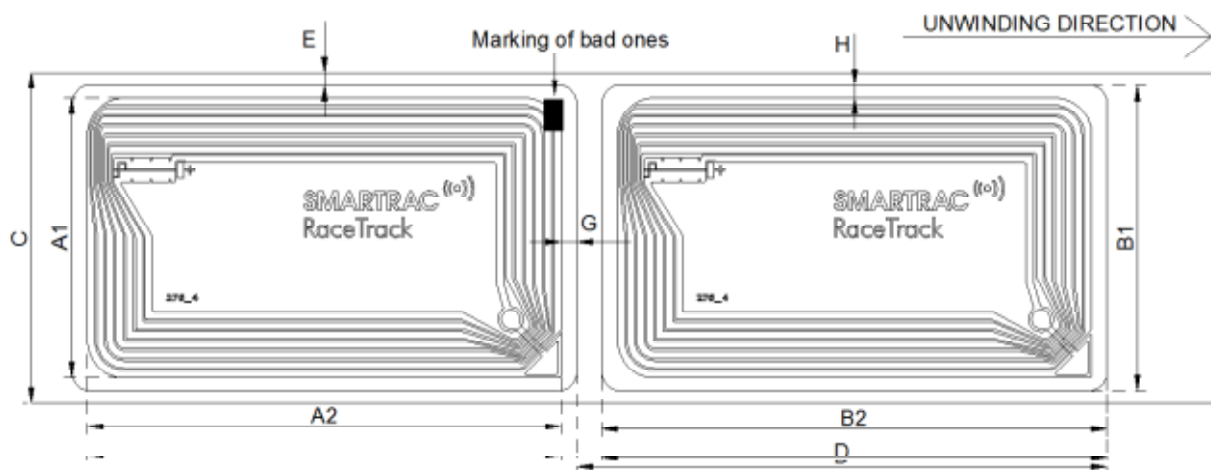


**RaceTrack-Lite Paper Tag Lite**  
**ISO 15 693, ISO 18 000-3 Mode 1**  
**NXP ICode SLIX**  
**Sales code 3002103**

### Mechanical dimensions

A1 x A2	Antenna size	45 x 76 mm	± 0,5 mm	1,772 x 2,992 in
B1 x B2	Die-cut size	49 x 81 mm	± 0,2 mm	1,929 x 3,189 in
C	Web width	53 mm	± 0,5 mm	2,087 in
D	Pitch, length per piece MD	85 mm	± 1,5 mm	3,346 in
E	Die-cut to web edge	2 mm	± 1,5 mm	0,079 in
G	Antenna to die-cut (MD)	2,5 mm	± 1,5 mm	0,098 in
H	Antenna to die-cut (CD)	2 mm	± 1,5 mm	0,079 in
	Thickness of the IC	120 µm	± 15 %	
	Overall thickness of transponder package (excluding IC and siliconized paper)	196 µm	± 10 %	
	Thickness of the siliconized paper	56 µm	± 5 %	



### Electrical characteristics

Integrated Circuit (IC)	NXP ICode SLIX
Air interface protocol	ISO 15 693, ISO 18 000-3 Mode 1
Operation frequency	13,56 MHz
Unloaded resonance frequency	14,25 MHz ± 0,35 MHz
Memory	1k bit

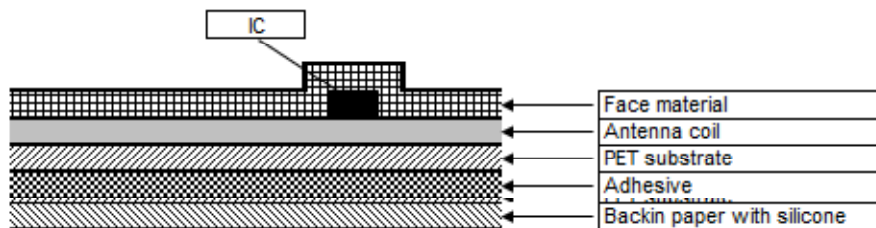
### General characteristics of transponder

Operating temperature (electronics parts)	-40 °C / +85 °C	-40 °F / 185 °F
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	Mid-gloss paper 70	
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	97 %	
Reel label	Reel number, Material number, Material description, Yield, qty of functional inlays, qty of non-functional inlays, date, time	
Printability	Flexography and TTR with selected ribbons. Do not print over IC area	

### 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	1500 pcs/reel Diameter: < 305 mm
Package size	3000 pcs/box Deliveries only in full packages.

**Warranty:**

SMARTRAC tags designated for books and sold into library applications are guaranteed for the lifetime\* of the book in standard environmental conditions (typically +20 °C, 50 % relative humidity). The warranty starts from the date of delivery by SMARTRAC. The storage of book tags prior to use must be as per SMARTRAC guidelines (+15 – +25 °C, 40 – 60 % relative humidity).

\* Lifetime in a public lending library is considered to be 10 years.

N.B.

- a. It is highly recommended that book tags are placed on the inside of the back cover.
- b. Extremes of temperature and/or humidity may adversely affect the performance of the book tag.
- c. Damage through physical and malicious abuse is not covered.
- d. IC data retention is guaranteed for 50 years, with a minimum endurance of 100,000 re-writes.
- e. Adhesive performance may vary depending on the substrate.  
Surfaces which are rough and fibrous will reduce adhesive performance.  
Surfaces which contain plasticizers (PVC/vinyl) should be avoided.  
Surfaces which are highly varnished or have high silicone content will affect adhesive performance.
- f. The warranty covers the replacement cost of the tag only.  
Claims for consequential damages are excluded.
- g. All claims are investigated before approval.

**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.

This technical specification replaces all earlier ones.

Version	4
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Author	SMARTRAC / k731743
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