

### Block-Lite Paper Tag

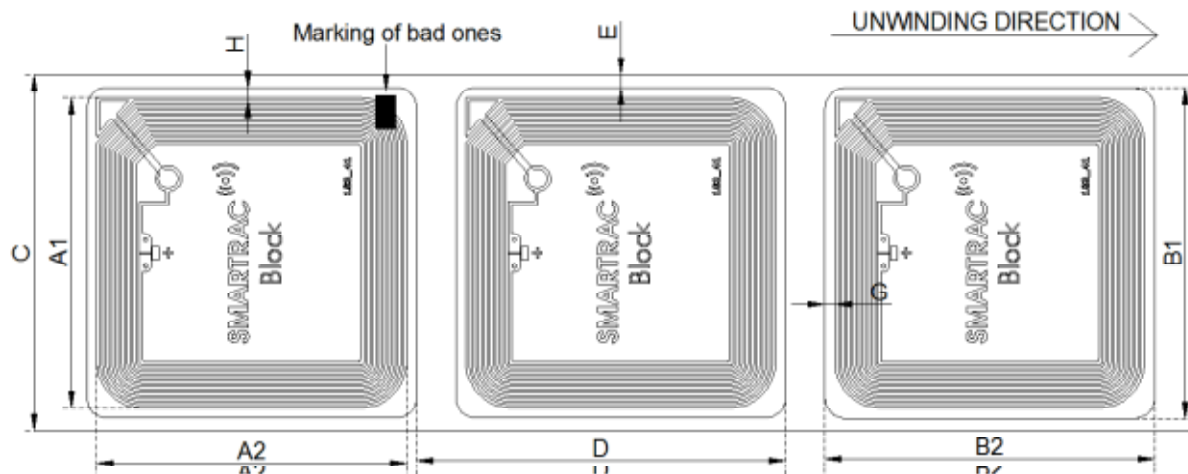
ISO 15 693, ISO 18 000-3 Mode 1

NXP ICode SLIX

Sales code 3002138

### Mechanical dimensions

|         |   |            |          |                  |
|---------|---|------------|----------|------------------|
| A1 x A2 | Antenna size  | 47 x 47 mm | ± 0,5 mm | 1,850 x 1,850 in |
| B1 x B2 | Die-cut size  | 50 x 50 mm | ± 0,2 mm | 1,969 x 1,969 in |
| C       | Web width   | 54 mm      | ± 0,5 mm | 2,126 in         |
| D       | Pitch, length per piece MD  | 56 mm      | ± 1,5 mm | 2,205 in         |
| E       | Die-cut to web edge   | 2 mm       | ± 1,5 mm | 0,079 in         |
| G       | Antenna to die-cut (MD)   | 1,5 mm     | ± 1,5 mm | 0,059 in         |
| H       | Antenna to die-cut (CD)   | 1,5 mm     | ± 1,5 mm | 0,059 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 | 14,15 MHz ± 0,35 MHz            |
| Memory                       | 1k bit                          |

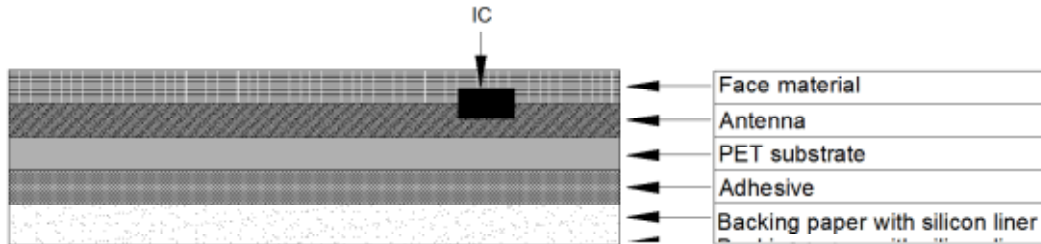
### General characteristics of transponder

|   |                                 |                 |
|---|---------------------------------|-----------------|
| 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             | 2000 pcs/reel Diameter: < 205 mm               |
| Package size          | 6000 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     | 3   |
| Update date | 4 September 2012                                |
| Author      | SMARTRAC / k731743                              |
| Approved    | SMARTRAC / 04.09.2012 Mervi<br>Väisänen/RSC/UPM |





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