

S1256 MarkTag HS

Read/Only ID-Tag



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MarkTag S1256 is a 2.45 GHz identification tag with short reading time allowing for very fast passing speed.

Each tag has been permanently programmed with an 8 decimal number from the factory, and this "mark" is unique to all tags in the TagMaster family.

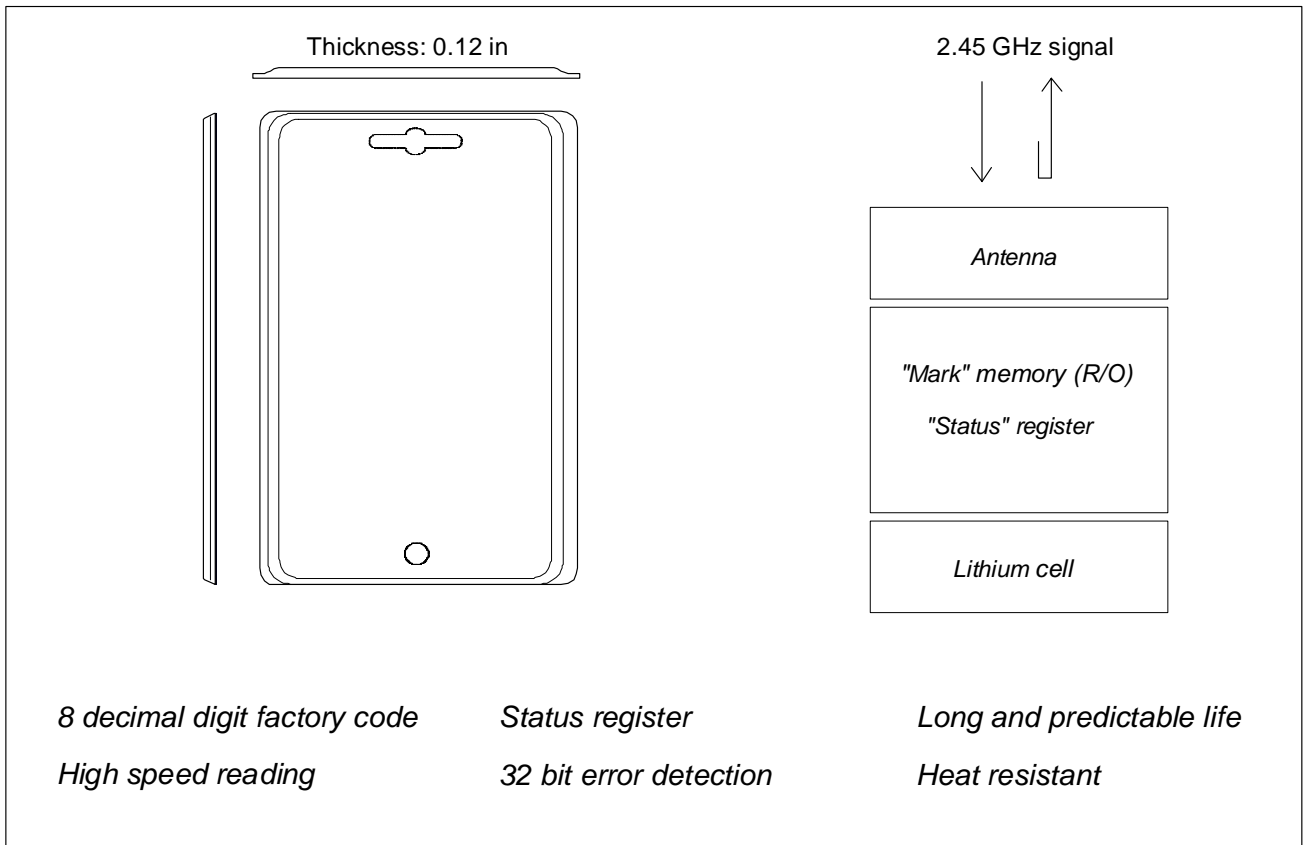
The programmed code comprises a 32 bit checksum for automatic verification of the "mark", thereby effectively eliminating substitution errors.

A lithium battery cell gives long tag life and the cell life is independent from how many times the tag is read.

The cell resists long term operation at elevated temperatures. When the capacity is about to run out, a status bit is set to give automatic warning to the user via the tag reader.

MarkTag S1256 can be fitted by a clip, a credit card holder and by use of adhesive tape.

The design is vibration resistant, watertight, corrosion free, UV stable and withstands chemicals. The front panel is made from a polymer that can be printed according to user requirements. The back panel is printed with type code and serial number, and is permanently attached to the front panel.



Reading range

MarkTag S1256 receives and reflects its signals through the front panel and rejects signals in the back direction. The maximum reading range is defined by a number of factors such as the positioning between the reader and the tag. The read range is also depending on the combination of the Tag and the Reader in use.

Example: The reading range using an LR-6 XL will result in a firm read at up to 33 feet.

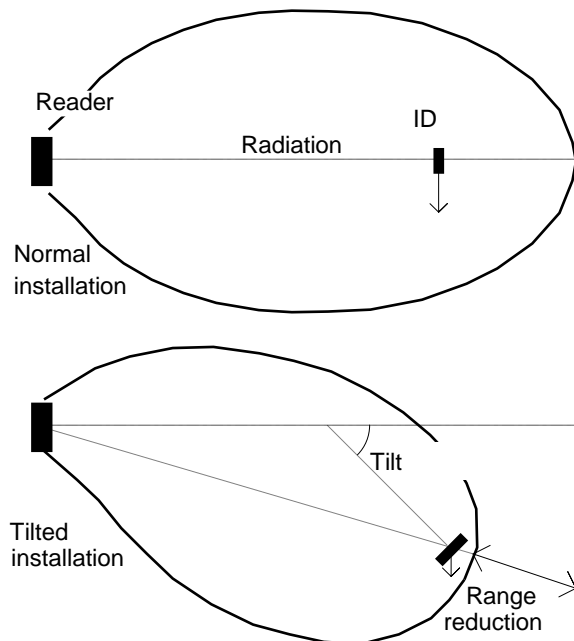
The tag reads at all distances from the maximum reading distance down to zero. The maximum reading range can be reduced using the function Read range in the Reader.

The lobe is unaffected if the tag is mounted on a metal surface. Non metallic materials in front of the tag usually have limited effect on the range.

Lobe shape

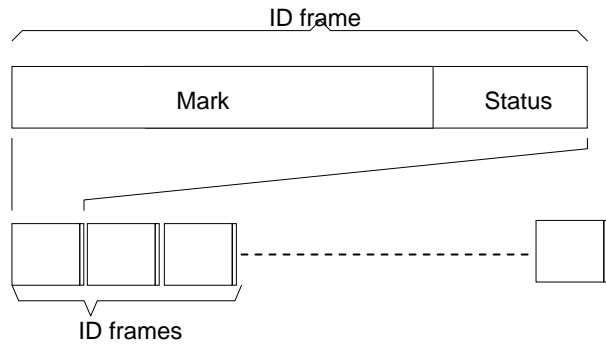
The typical lobe shape is found in the Reader's data sheet. Usually the Readers have circular polarisation, making reading and writing unaffected by tag rotation around the radiation axis. The lobe is unaffected if the MarkTag S1256 is mounted on a metal surface, and non metallic materials in front of the tag usually have little effect on the range.

If the tag is tilted in relation to the radiation axis, the lobe is "squinted" in direction to the position where the tag faces the Reader. See figure:



Communication

The ID tag repeatedly reflects information to any illuminating Reader. This reflection is wide band, i. e. reading works on all channels within the frequency band. If Readers at different channels simultaneously illuminate the tag, it will be safely read by all of these without interference.



Reflections comprise the factory coded "mark" number from the R/O memory, including a 32 bit checksum, and the "status" field. A "mark" + "status" sequence is called an "ID frame".

The ID frame is reflected from the tag continuously (repetitively).

The read time for each ID frame is 10 ms. This means that the tag reflects its ID frame about 100 times every second.

Tag life

The lithium cell life is typically 6 years. Since the ID tags are always "awake" and reflect their data, the cell life is independent of how often the tags are read. Electromagnetic interference cannot "wake up" the tag and cause unintended discharge.

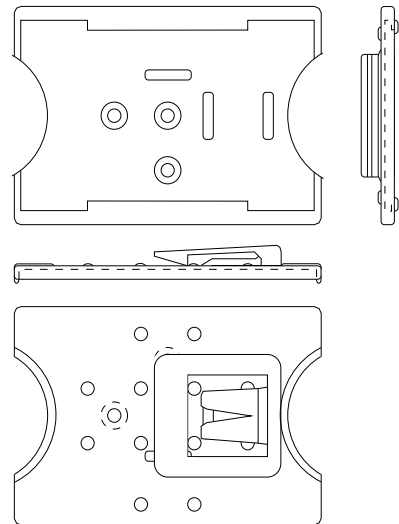
The lithium cell is specially designed for long term, high temperature operation, such as when the tag is installed in a car window. The cell in itself has a capacity deterioration of about 0.5% per year and if stored at 185°F for 1.000 hours, the capacity loss is only about 10%.

The cell is from a manufacturer that has life recordings spanning up to 15 years (1995) for the category of lithium cells used in S1256. The lithium cell has been qualified against the UL safety standards and does not contain corrosive or toxic active materials.

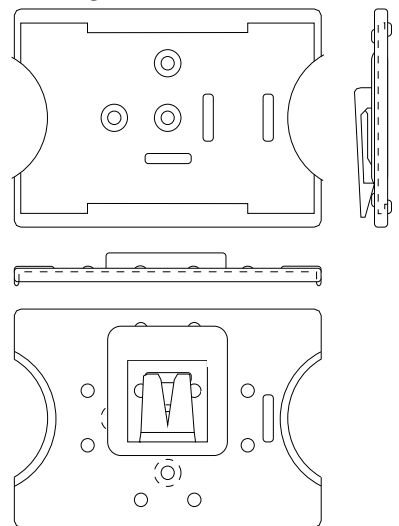
ID-Tag holders

Different ID tag holders are shown below. Please refer to the individual data sheet for more information.

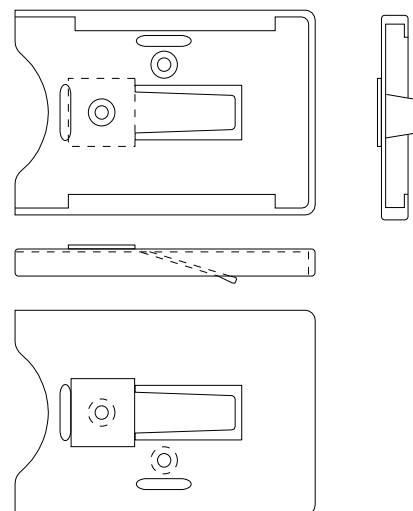
Vertical badge



Horizontal badge

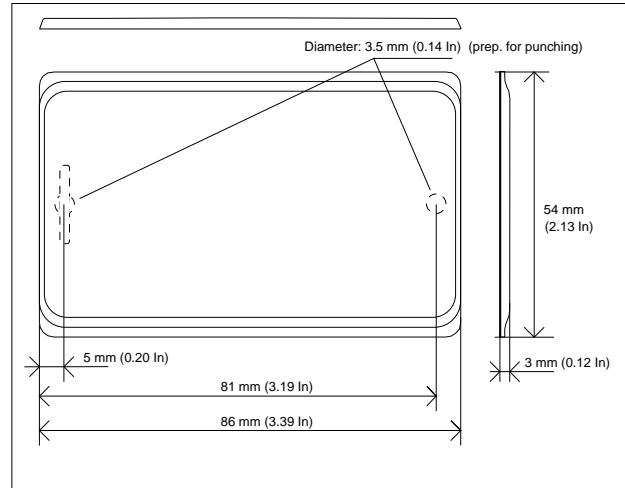
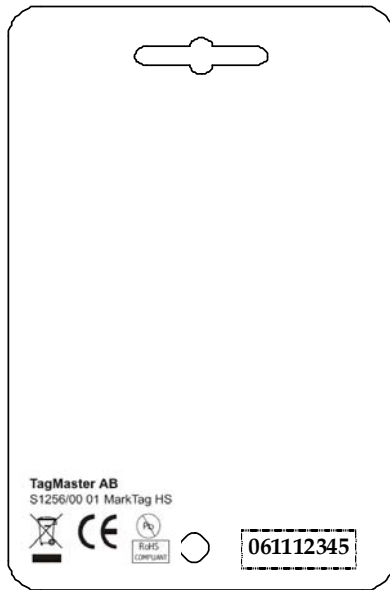


Car window



Mechanical data

Product information according to the figure below is printed on the back panel of the MarkTag.



Weight	0.03 lbs
Front colour	Light grey
Back colour	Light grey
Front material	Polymer
Back material	Polymer
Sealing method	Adhesive

The revision code is for internal use only

For security reasons, there is no relation between the serial number and the 8 digit electronic “mark”. Both are running numbers that never are repeated.

Environmental data

Cold IEC68-2-1 Ad	- 4 °F	Shock IEC68-2-27 test Ea	500 g 1 ms, 100x 3 dir	Immunity prETS 300 683	Acc. to CE leg.
Heat IEC68-2-2 Bd	+ 185 °F	Bump IEC68-2-29 Eb	40 g 6 ms, 1000x 3 dir	Emission I-ETS 300 440	Acc. to CE leg.
Sealing IEC 529	IP 54	Free fall IEC68-2-32 Ed	1.0 m, 100x	Solar radiation IEC68-2-5 Sa C	1120 W/sqm 56 days

Communication range examples

Reading range	LR-6	Up to 20 feet
	LR-6 XL	Up to 33 feet

Options

The ordering code of the product in this data sheet is “MarkTag S1256/00”.

* For other information please see the S1256 Product Sheet, available on <http://www.tagmasterna.com>