TheTagFactory
ENGINEERING RFID SOLUTIONS

Data Sheet

M-Crown Tag (3-in-1)

FEATURES

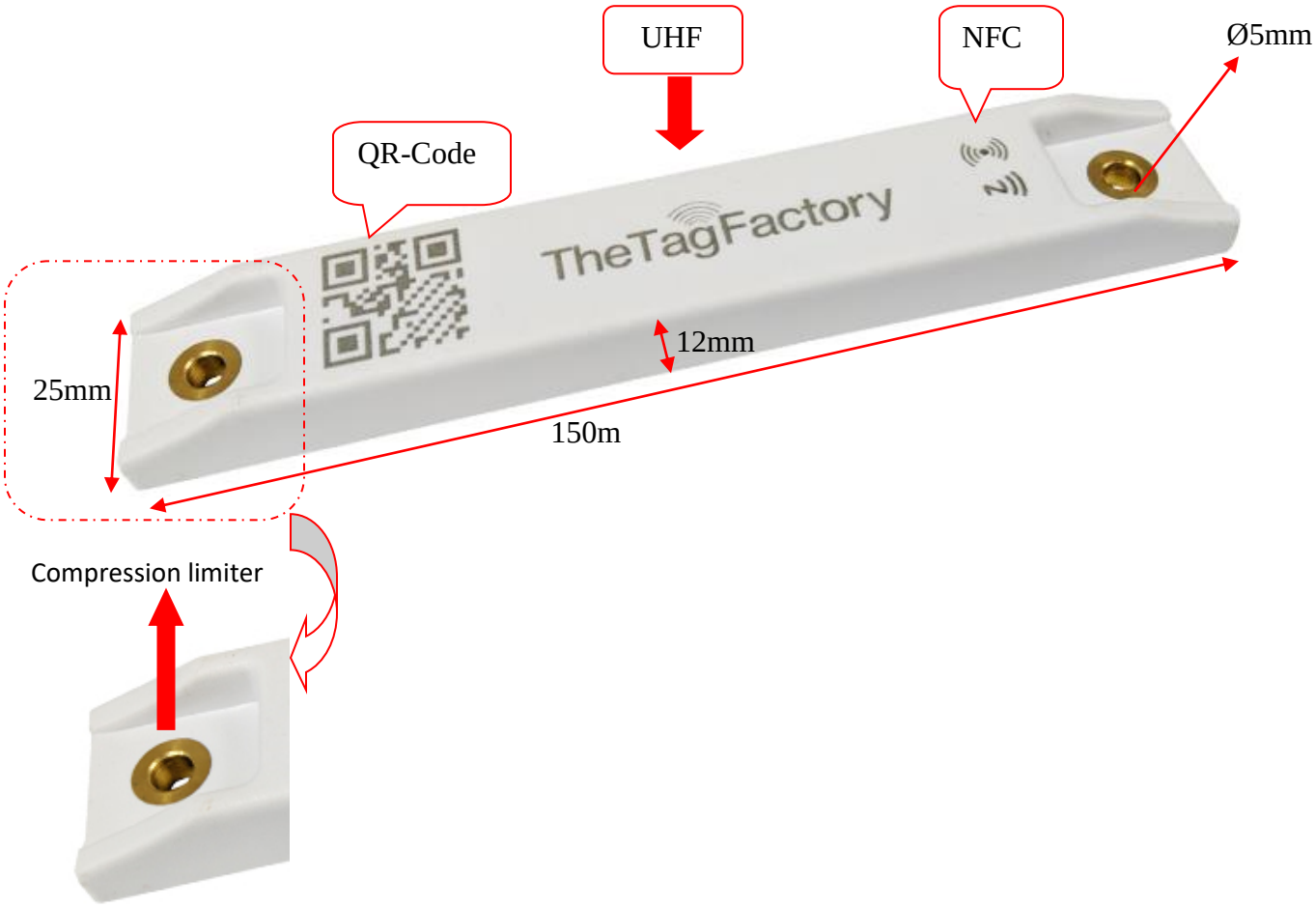
- 3 reading possibilities in single Tag
  - **UHF:** over 15m reading distance when tagged to metal substrate.
  - **NFC:** With any NFC enabled Smartphone
  - **QR-Code:** With any Smartphone
- Rugged construction for high durability.
- Can be attached by screws/pop-nail with the help of two compression limiters.

APPLICATIONS

- Can be effectively used in asset tracking, warehouse management, containers, and railway coaches' identification.
- Factory automation, automotive & security purpose.

Chip Type:	**Description**	**Alien Higgs 9 chip, EPC Class 1 Gen 2**	**NTAG213, 13.56 MHz**
	EPC Memory:	Up to 496-EPC Bits (nominally 96 bits)	Fully compliant with NFC Forum Type 2 Tag and ISO/IEC14443 Type A specifications.
	User Memory:	688 bits	144 bytes user programmable read/write memory.
	Data retention:	50 years	10 years
	Write endurance:	200,000 cycles	100,000 cycles
Mechanical:	**Dimension**	150 x 25 x 12 mm	
	Material	ABS	
	Colour	White	
	Weight	32 g	
Electrical:	**Operating Freq.**	**UHF:** 865-868MHz, ETSI Freq.	**NFC:** 13.56MHz
	Operating mode	Passive (battery-less transponder)	
Ingress Protection:	IP67		
Thermal:	**Storage Temp.**	-25°C to +85°C	
	Operating Temp.	-25°C to +85°C	
Part Number:	415Z1		
Options:	**Available with:**		
	Other IC type on request		
	Other plastic material and colours e.g., PC		
	Adhesive backing for easy mounting		

Dimension



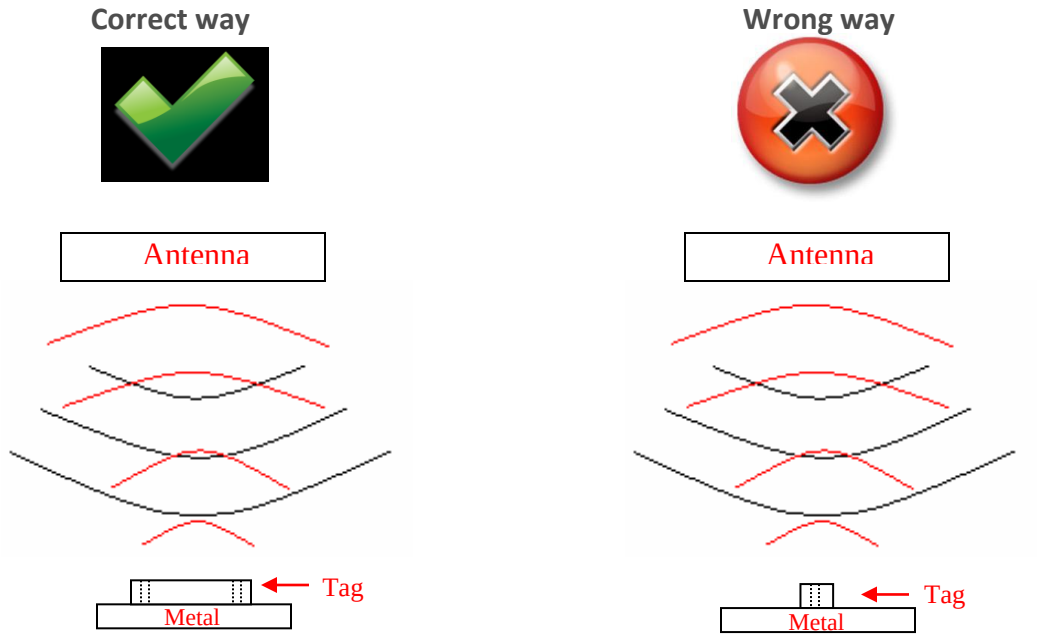
Note: Tolerance applicable are **Length:** ±1mm, **Width:** ±0.5mm and **Thickness:** ±0.3mm.

Tag Placement

- M-Crown Tag is polarized perpendicular to length of tag.

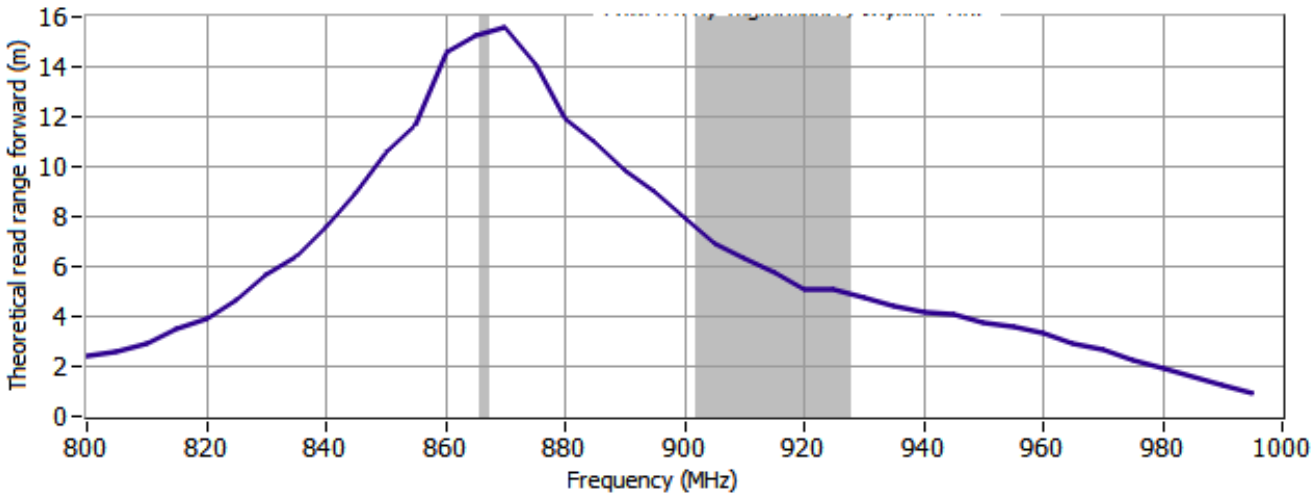
- Place the tag in such a way that most of its bottom area comes in direct contact with metal.
- Ensure that there is no hindrance between the tag and the reader antenna.

- Reader antenna should be parallel to the tag length as shown in below figure:



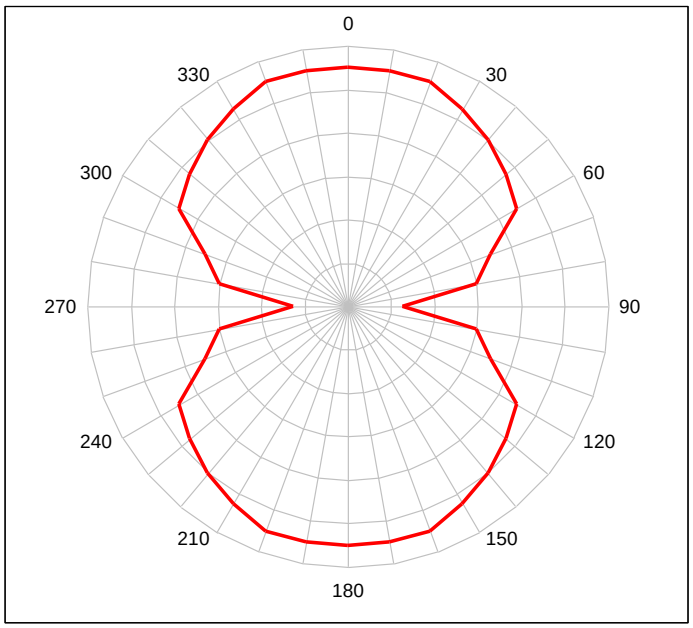
- Tag can be attached either through screw M4/M5 and adhesive tape.
- The distance between hole to hole is 126mm.

Frequency v/s Read Range Graph

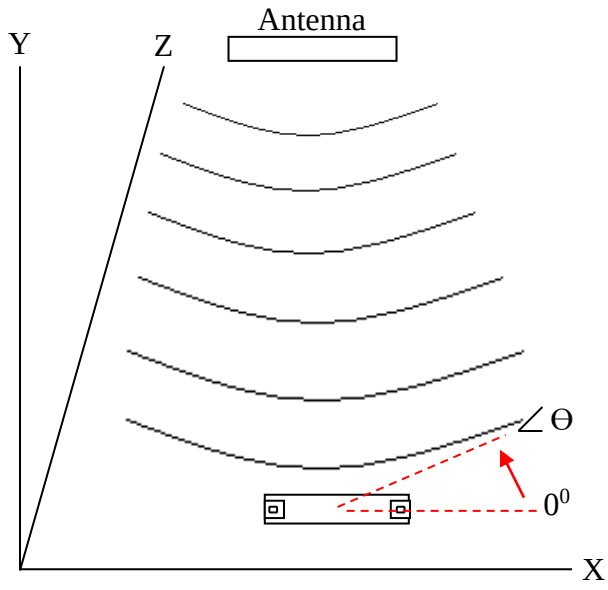


M-Crown Tag Angular Sensitivity

(Relative Read Range vs. Orientation)



Read range (in percent) at various angle



Tag is rotated in the X-Y plane about the z axis