

Data Sheet



M-Knight Tag

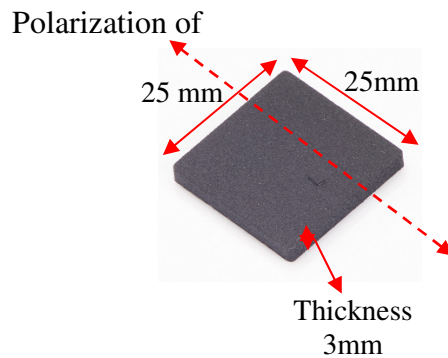
FEATURES

- M-Knight Tag has very good size to performance ratio, when attached to metal.
- The product has been designed to be easily attached by adhesive.
- Flexible Read/Write Range (reader dependant).

APPLICATIONS

- Used in IT asset tracking applications such as backup tapes, servers, hard drives and media tapes without any human intervention.
- Inventory control of small tools and manufacturing equipment, servers and network routers.

Chip Type:	Alien Higgs 3 EPC Class 1 Gen 2	
	EPC 96 bit extendable up to 480 bits	
	User Memory 512 bit	
	Data retention of 50 years	
	Write endurance 100.000 cycles at Room temperature	
Mechanical:	Length	25±0.5 mm
	Width	25±0.5 mm
	Thickness	3±0.5 mm (at chip area: 3.5±0.5mm)
	Material	Ceramic
	Encasing	Durable Paint
	Colour	Black
	Weight	8.6 g
Electrical:	Operating Frequency	865-868MHz, (902-928MHz also available on request)
	Operating mode	Passive (battery-less transponder)
Ingress Protection:	IP68	
Thermal:	Storage Temp.	-40 °C to +150 °C
	Operating Temp.	-40 °C to +85 °C
Part Number:	383V1	



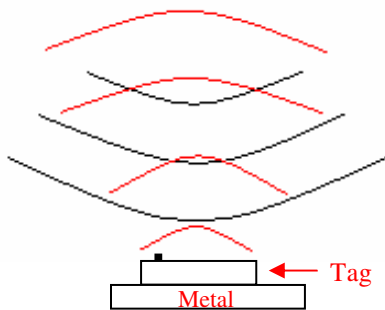
Tag Placement

- Tag can be easily attached through adhesive tape at back.
- M-Knight tag is polarized along with the dotted line in the above picture (Dimension section).
- 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 dotted line as shown in above figure:

Correct way



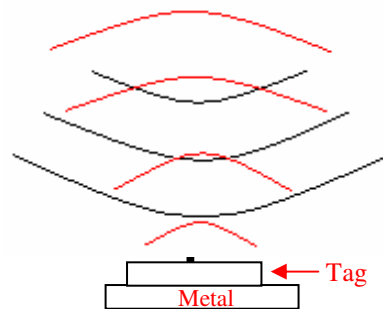
Antenna



Wrong way

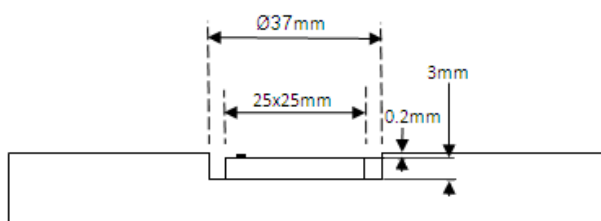


Antenna

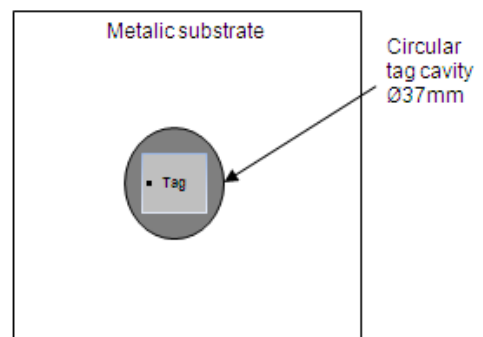


- If the tag is to be placed/embed in metal then:

- Ensure that the tag should be surrounded by metallic surface to get optimum read range.
- It is recommended to make a round cavity in metal substrate having dimensions as per below drawing



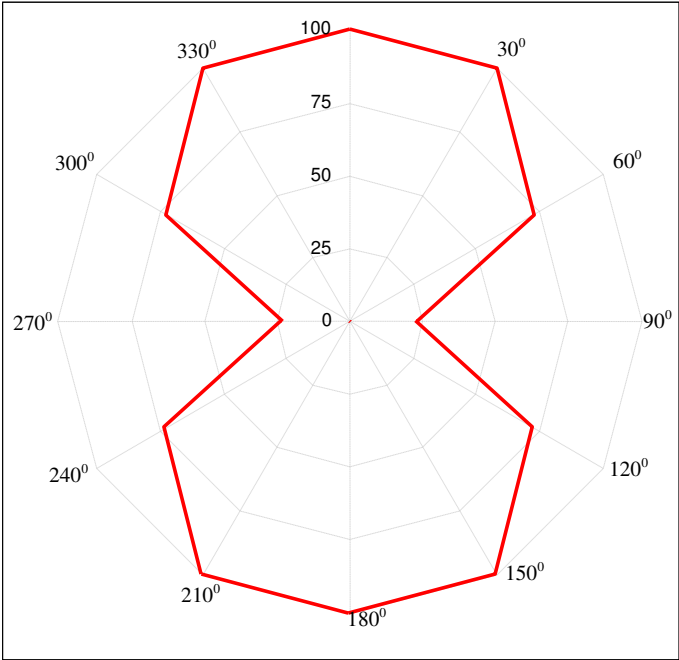
Side view



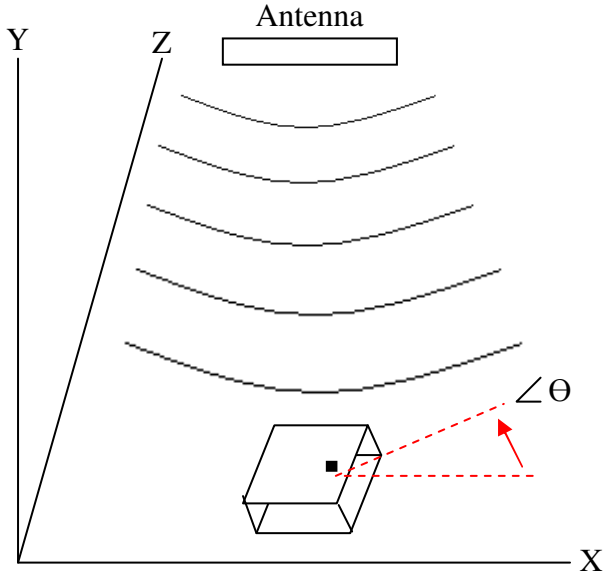
Top view

M-Knight 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



Flexible electronic solutions