

**Melange Systems Private Limited**  
*Wireless controls in action*

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## TI08BL02 PCB antenna radiation patterns

Melange Systems (P) Ltd.

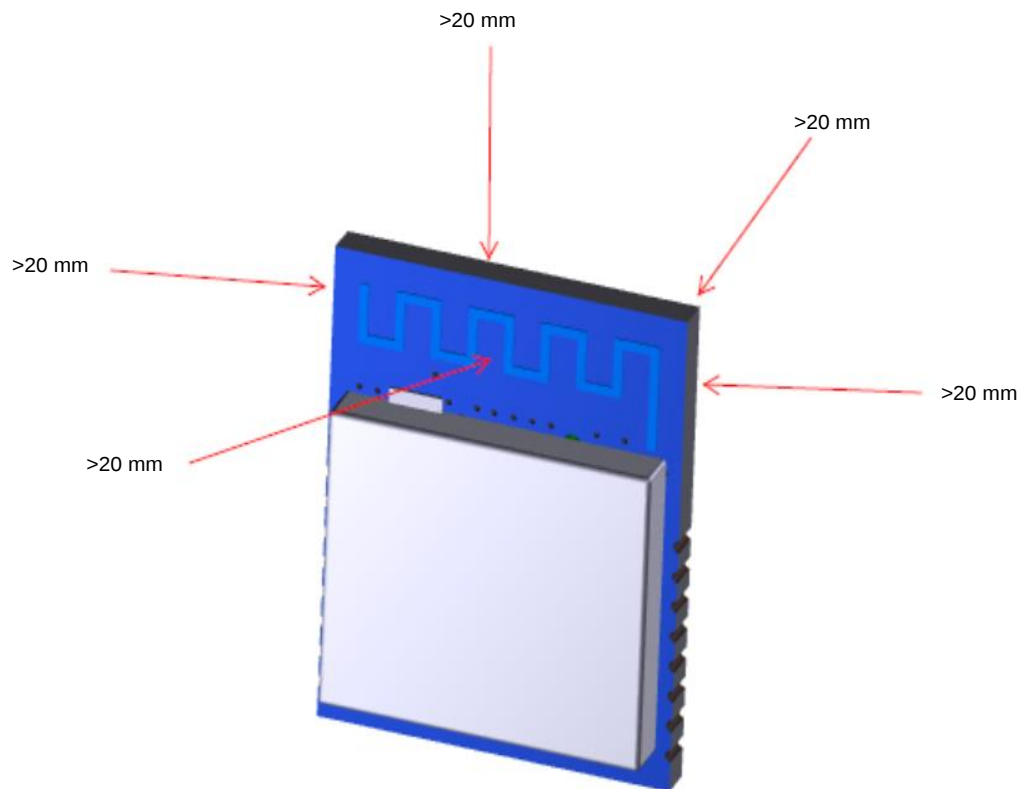
# 4/1, 7<sup>th</sup> Cross, KumaraPark West,

Bangalore - 560 020, India.

Tel: +91 (80) 23561023, 23462175

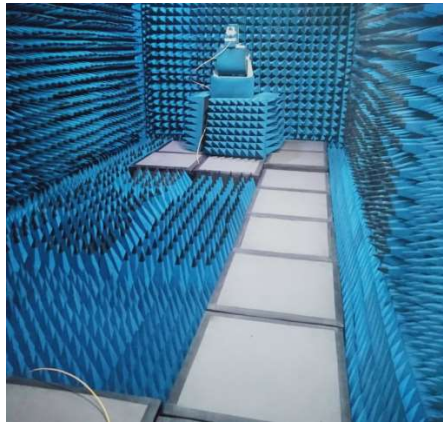
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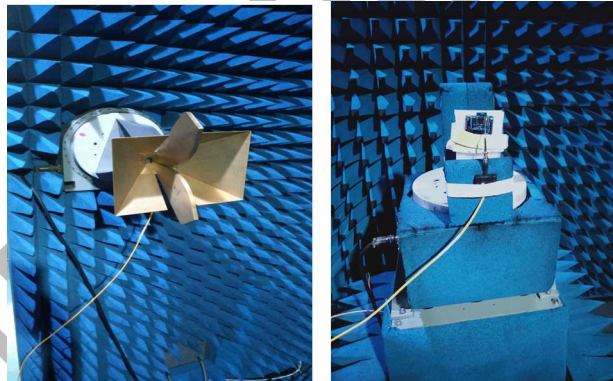




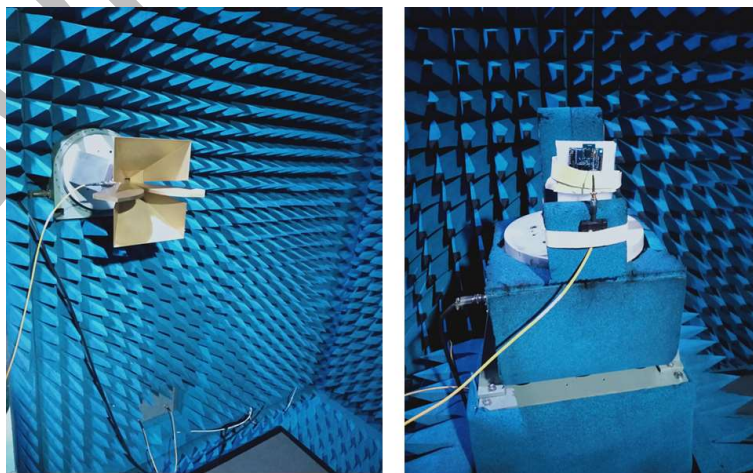
## 1. Module placement in anechoic chamber



## 2. Module position in H-plane, co-polarization with reference to Horn antenna

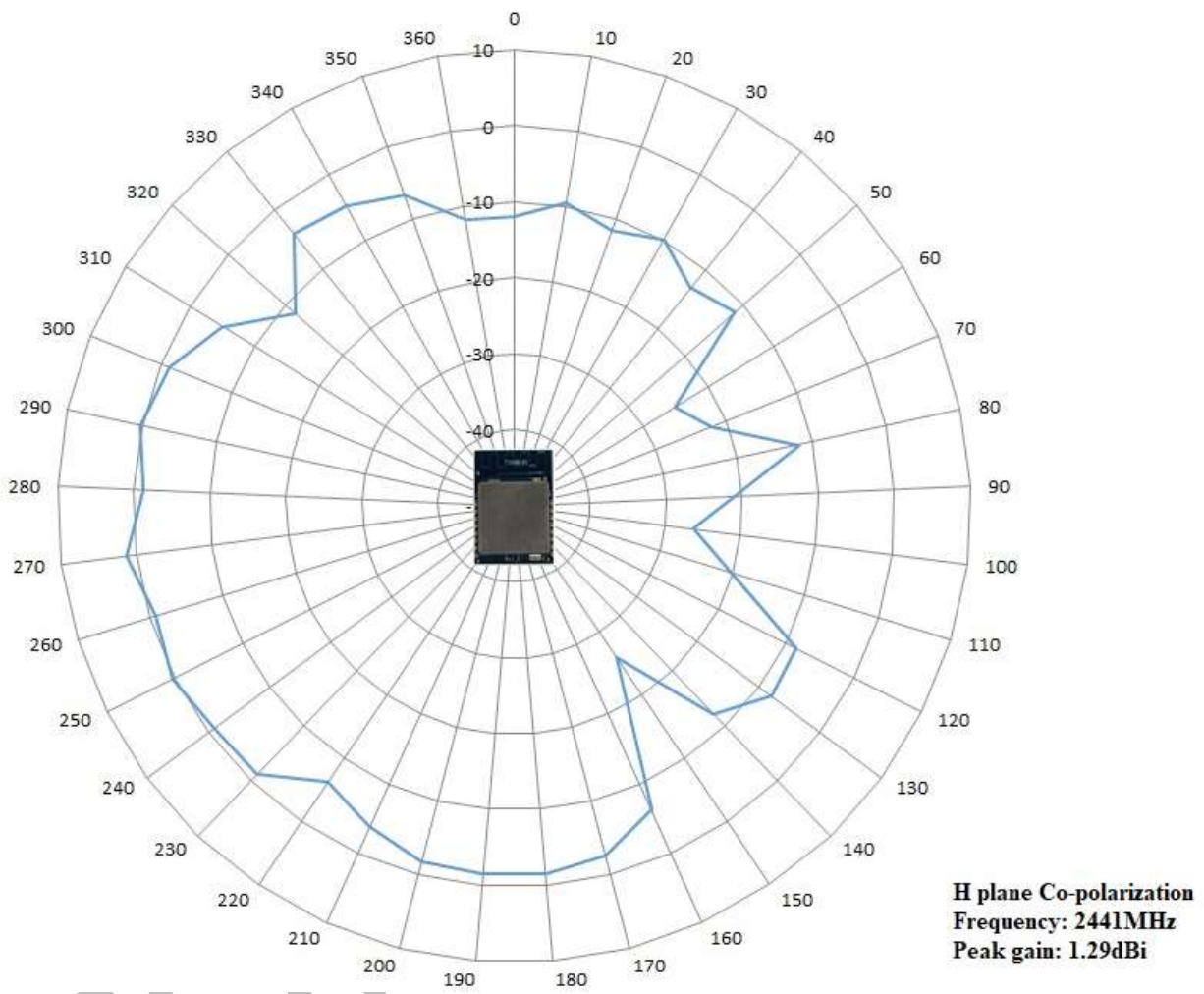


## 3. Module position in H-plane, cross-polarization with reference to Horn antenna



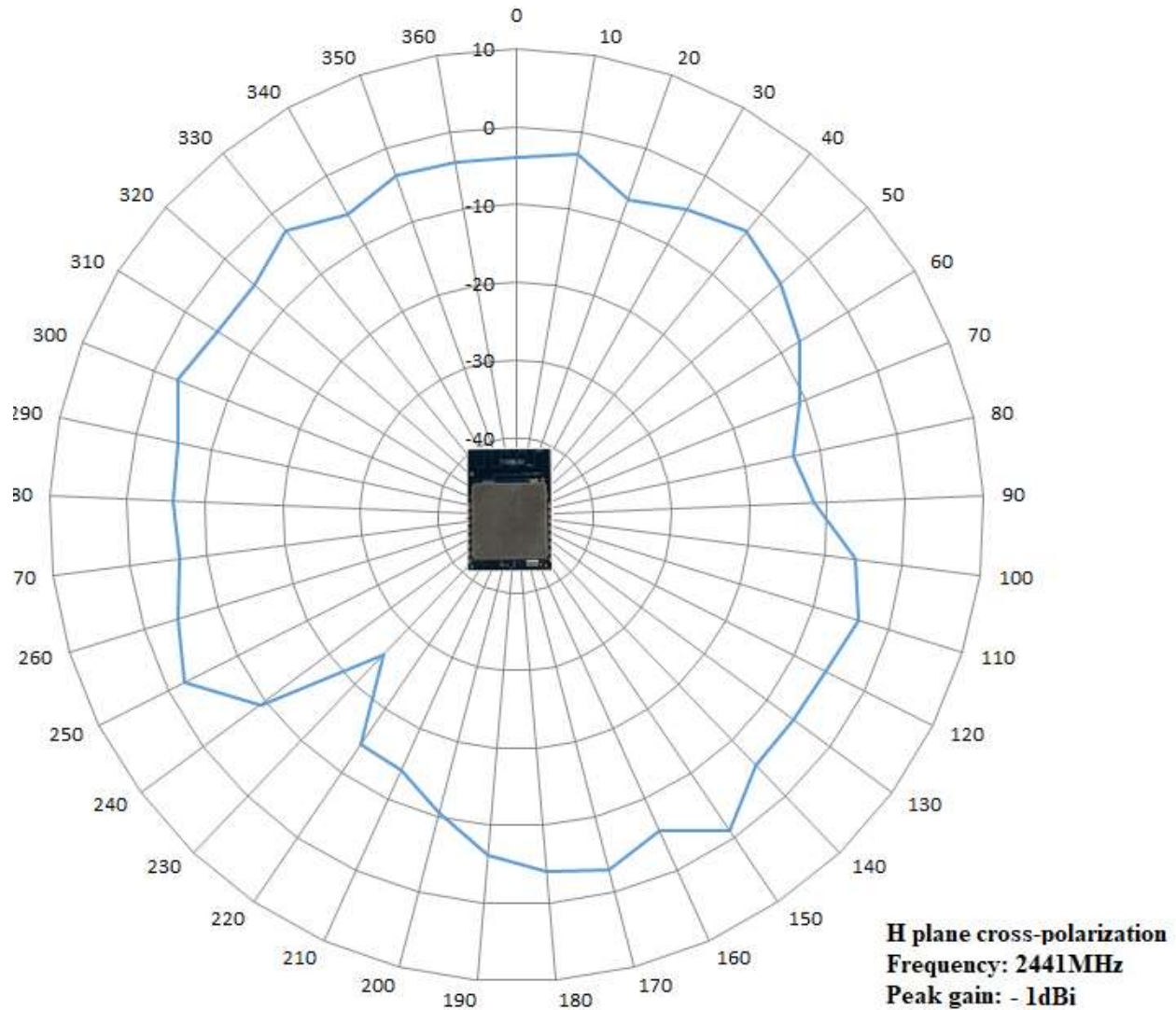


#### 4. 2D pattern of the module in H-plane Co-polarization





## 5. 2D pattern of the module in H-plane Cross-polarization



$$\begin{aligned}\text{Peak Antenna Gain} &= (\text{H plane gain} + \text{V plane gain}) / 2 \\ &= (-1 \text{ dBi} + 1.29 \text{ dBi}) / 2 \\ &= 0.29 \text{ dBi} / 2 = 0.145 \text{ dBi} \sim 0 \text{ dBi}\end{aligned}$$

Note: The radiation pattern can be affected by mounting structures and nearby obstacles located in the proximity of the antenna (near-field)