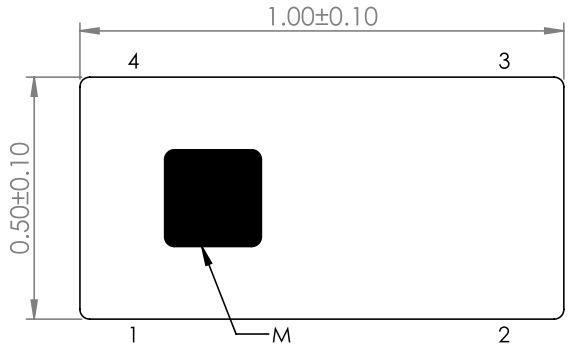
2.4GHz Loop Chip Antenna

AANI-CH-0070

Request Samples | Check Inventory

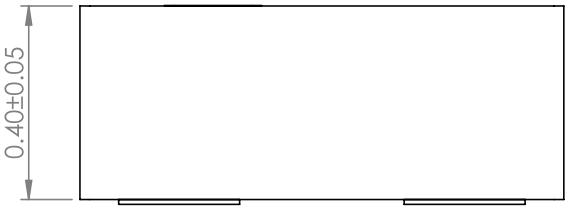
1.0 x 0.5 x 0.4 mm
RoHS/RoHS II Compliant
MSL Level = 1

Product Dimensions and Terminal Configuration

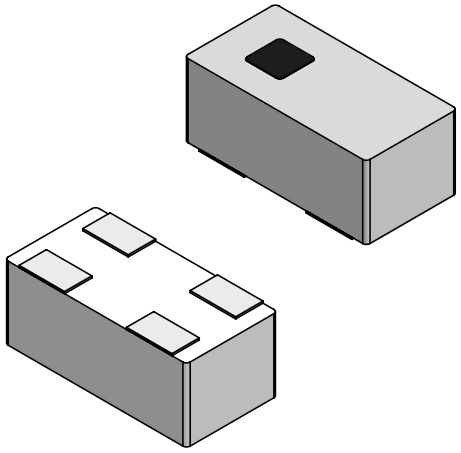


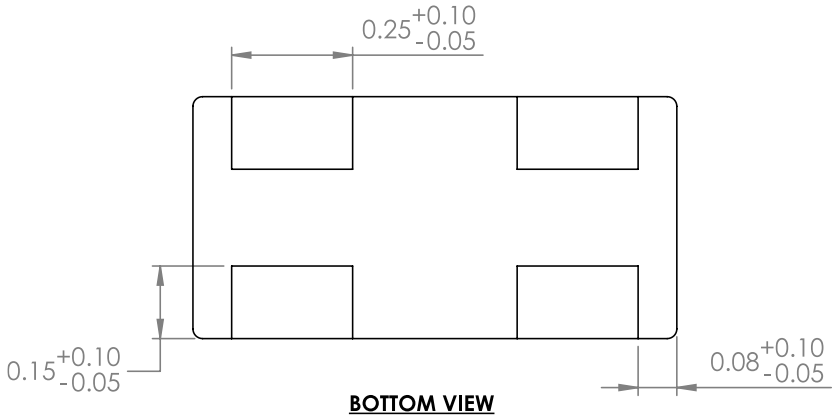
TOP VIEW

Pin #	Function
1	FEED
2	GND
3	GND
4	FEED
M	MARK



FRONT VIEW





BOTTOM VIEW

Unit: mm

ABRACON

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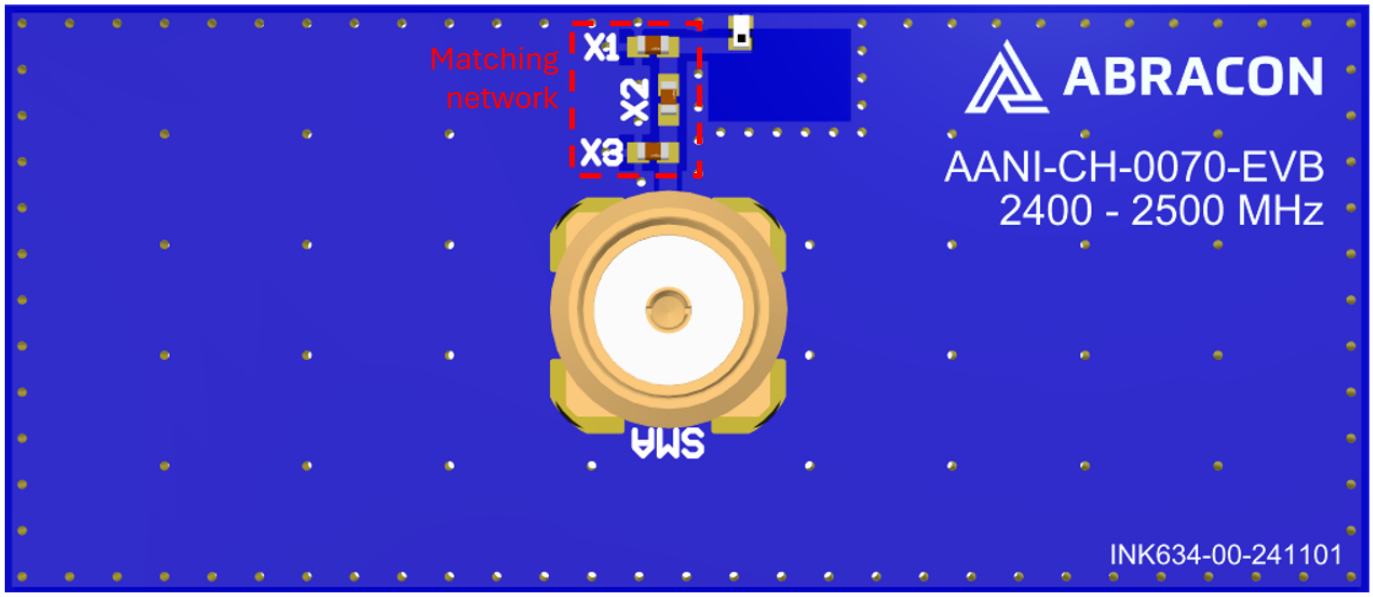
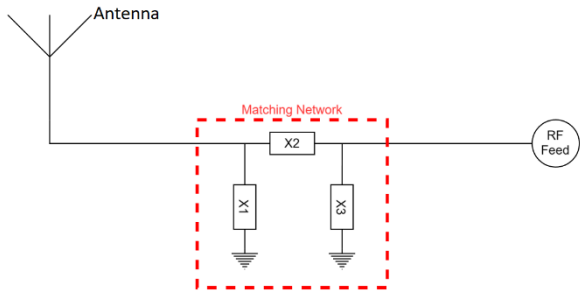
Evaluation Board Outline & Matching Circuit

The evaluation board (Abracon AANI-CH-0070-EVB) is developed to simplify antenna testing and evaluation. It has an arbitrary size of 44 x 19 mm and includes an SMA connector. The purpose is to give a reference design for an optimal antenna implementation. The evaluation board can also be used to test other implementations by cutting and soldering the PCB into any device.



The evaluation board has a matching circuit implemented next to the antenna. This is aimed to enable optimization possibilities for the user. The component positions are sized for 0402 (1005 metric) SMD components.

The antenna requires a matching circuit to fine-tune the resonant frequency and achieve optimal balance. The evaluation board is pre-tuned for optimal performance in the 2.4–2.5 GHz range using the components listed below (equivalents may be used):



X1 = not mounted
X2 = 5.1 pF (Murata GJM1555C1H5R1WB01)
X3 = 2.2 nH (Murata LQW15AN2N2C10)

However, it is common that the resonant frequency will shift during implementation in an arbitrary device. Therefore, this matching may be changed with other values/components/brands for compensation of such effects. This is further described in the General Implementation Guidelines section below.