



Anten'it Multi-Microwave Kit for Researchers and System Engineers

A MULTI-MICROWAVE SOLUTION FOR YOUR LABORATORY/DEPARTMENT INCLUDING MANY PASSIVE COMPONENTS UP TO 6 GHZ

Anten'it Multi-Microwave kit is useful with Anten'it Multi-Antenna kit. They can be combined to create RF front end structures. Anten'it Multi-Microwave Kit provides many advantages to its users:

1. This kit is appropriate for researchers and system engineers at the universities, institutions and companies. They can use the kit in their research stages.
2. There are many datasheets with measured results in the datasheet booklet and microwave building instructions include how to build those components step by step. They can follow the steps, build the passive microwave components.
3. It saves their budget for purchasing microwave components. Waveguide components have high cost. If you work in a wide frequency range, you need the components for each frequency range which increases the costs dramatically. The reusable structure of this kit enables the usage of the same blocks for different components. This also decreases the cost of waveguide structures.
4. It saves the waiting duration of purchasing microwave components.
5. System engineers and researchers need to iterate their system design. When RF requirements change during the project, they can change the RF parameters easily by hand. If this kit is used with the Anten'it antenna kits, it is possible to build RF front end structures.
6. Anten'it Multi-Antenna Kit can be used for conceptual designs.
7. They can build microwave structures for academic purposes (journals, conferences, books).
8. They can learn microwave design by using it and iterate in front of a network analyzer.
9. If your research partner has Anten'it kits, they can share the design with you and you can build the same structure in your organization.

Typical Application of Anten'it Multi-Microwave Kit

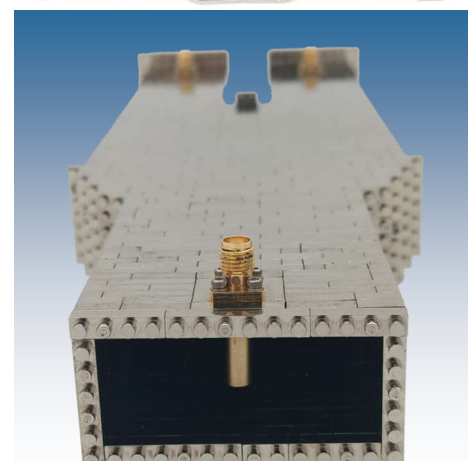
Select the component type for your application

Check the Microwave Datasheet Booklet to find the appropriate component for your application

Check Microwave Building Instructions and build the component by following the steps

Use the component

Dismount the blocks and reuse them for microwave component



Anten'it can be ordered via distributors in www.antenit.com or sales@antenit.com
Anten'it is a patent pending product of Antenom Antenna Technologies



Theoretical Background Behind Anten'it Kits

HARDWARE MESH CELLS

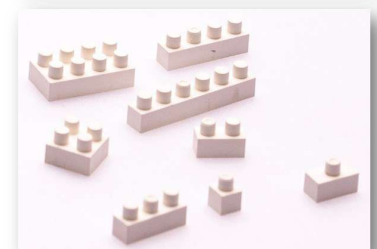
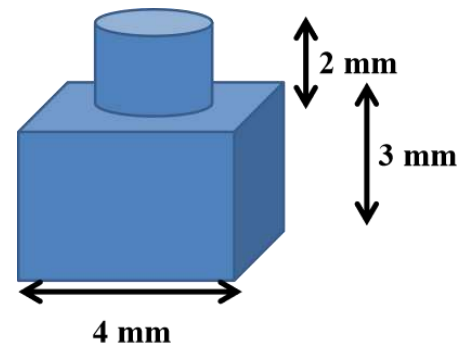
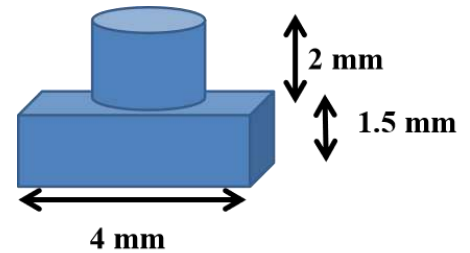
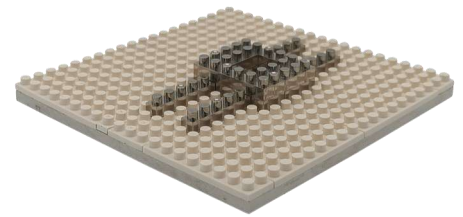
Electromagnetic simulation programs generally include CAD interfaces. When the designers draw a solid structure in the CAD interface, simulation programs discretize the solid structure into small pieces called “mesh cells”. Maxwell equations are calculated within each mesh cell by using numerical methods such as method of moments (MOM), finite-difference time-domain (FDTD), finite element method (FEM) etc. Each numerical method uses different mesh cell shapes.

FDTD type of simulation programs use cubic mesh cells. In order to get accurate results, the mesh cell dimensions are selected lower than $\lambda/10$.

Anten'it Microwave Kits use brick-type hardware cells. Brick types of mesh cells are very similar to cubic shapes. There are two resolutions in this kit. One of them is 4 mm (length) X 4 mm (width) X 3 mm (height) and the other one is 1.5 mm height with the same length and width. The largest dimension 4 mm corresponds to $\lambda/12.5$ at 6 GHz. 6 GHz is the highest frequency of Anten'it kits.

CONTENT OF MULTI-MICROWAVE KIT

1. Metal Blocks
2. Dielectric Blocks with 3 different dielectric constants and colours
3. Ground Planes
4. Connectors
5. Electromagnetic Absorber Blocks
6. Cables
7. Adapters
8. 50 ohm Terminations
9. Removers
10. Case
11. Microwave Datasheet Booklet & Microwave Component Building Instructions
12. Anten'it User Manual



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