

Attenuation of Near-field Electromagnetic Waves of Silver Mesh through Numerical Analysis of a Microstrip Line

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Near-field communication is recently significant because it makes easier to harmonize today's diverse contactless technologies, enabling current and future solutions in diversified areas. In this situation, electrode devices are increasingly used in higher frequency range and more intergrated. For this reason, radiated electromagnetic waves generate noise interference with communication devices and may cause damage to the state of health of the human body. Therefore, electromagnetic interference (EMI) shielding technologies are considered as an important factor or issue.

Metal mesh is used as a transient substrate. Specially, silver is a soft metal with a characteristic sheen. It has the highest thermal and electrical conductivities of all metals.