Public Abstract
First Name:Nattaphong
Middle Name:
Last Name:Boriraksantikul
Adviser's First Name:Naz
Adviser's Last Name:Islam
Co-Adviser's First Name:
Co-Adviser's Last Name:
Graduation Term:SS 2008
Department:Electrical Engineering
Degree:MS
Title:A TEM CELL DESIGN TO STUDY ELECTROMAGNETIC RADIATION EXPOSURE FROM CELLULAR PHONES

Electromagnetic radiation effects of the GSM 900 and 1800 commercial cellular phones were estimated using a TEM cell. A standard TEM cell was modified with a double-ended monopole antenna as a signal leader for incoming and outgoing signals between the TEM cellâ€™s outer surface. The electric field distribution was studied with parameters such as the cellular phone position, polarization, dialing type, and dialing frequency. The field uniformity can be improved with either the use of a shorter signal leader or the TEM cell with a reduction in size. It also showed a good agreement between the results from experiments and simulations.