

**ELECTROMAGNETIC DYADIC GREEN'S FUNCTIONS OF A SECTORAL CYLINDRICAL
CAVITY**

Electromagnetic dyadic green's functions of a sectoral cylindrical cavity

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Abstract

This paper presents the electromagnetic dyadic Green's functions of a sectoral cylindrical cavity. These dyadic Green's functions are derived by using the eigenfunction expansion method in conjunction with the scattering superposition method. The results of the derivation are in series form. These Green's functions are necessary to determine the electromagnetic field inside this cavity. Furthermore, this cavity was proposed to excite the slot to form the a sectoral cylindrical cavity-backed slot antenna