Title	Concerning to the electromagetic field distribution of cavity resonator of microwave electronic tube
Sub Title	
Author	廖, 栄耀(Ryo, Ei-yo)
Publisher	慶応義塾大学藤原記念工学部
Publication year	1965
Jtitle	Proceedings of the Fujihara Memorial Faculty of Engineering Keio University (慶応義塾大学藤原記念工学部研究報告). Vol.18, No.71 (1965.) ,p.107(43)- 107(43)
JaLC DOI	
Abstract	
Notes	Summaries of Doctor and Master Theses Master of Engineering, 1965 Electrical Engineering
Genre	Departmental Bulletin Paper
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=KO50001004-00180071-0043

Concerning to the Electromagetic Field Distribution of Cavity Resonator of Microwave Electronic Tube

Ei-yo RYO*

The purpose of the thesis is to explore a practical method to find the microwave field in a cavity resonator of electron tube. A rule can be obtained, which represents the relations between the microwave field and the two-dimensional electrostatic field whose cross section has the same shape as that of the microwave cavity.

The electrostatic field for the following two cases are measured by the equipotential line method in the electrolytic tank. The first has the three-dimensional boundary condition which is similar to the microwave cavity. The second has the two-dimensional boundary condition whose cross section has the same shape like above. Then the ratio is defined as a function of the distance from the center of symmentry (of a line or a plane).

For microwave field, let ridge waveguide be two dimensional field and reentrant cavity be the three dimensional field. The two-dimensional field may be analized theoretically.

The two dimensional field multiplied by the function must be expected to be same approximately to the three dimensional field. These expected values coincide with the experimental values in microwave cavity which is measured from changing the resonant frequencies by small dielectric disturdances.

*廖　栄耀