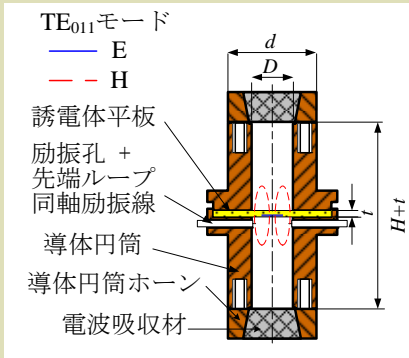


遮断円筒導波管法によるミリ波複素誘電率測定

遮断円筒導波管法



(a) 共振器構造

比誘電率 ϵ_r

$$\det H(\epsilon_r : f_0, t, d, D) = 0$$

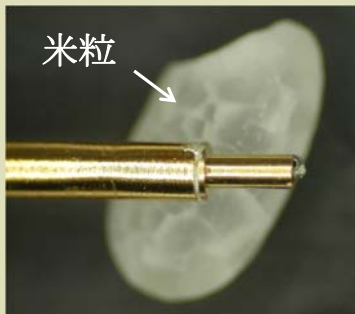
誘電正接 $\tan \delta$

$$\tan \delta = A/Q_u - BR_s \quad A, B : \text{定数}$$

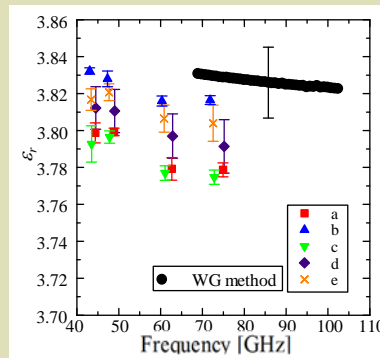
周波数依存性測定



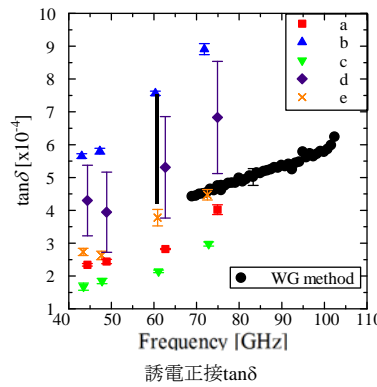
(a) 円筒空洞共振器



(b) 同軸励振線

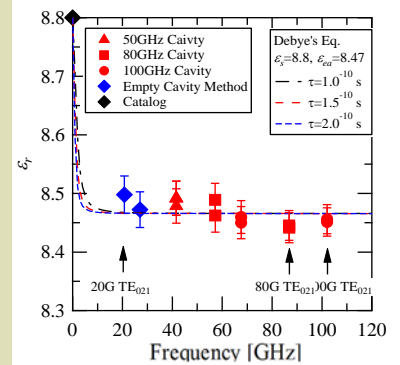


比誘電率 ϵ_r

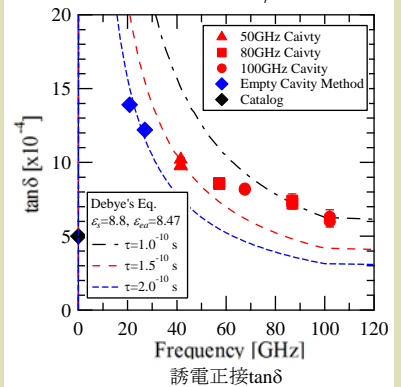


誘電正接 $\tan \delta$

(c) 5種類の石英ガラス平板



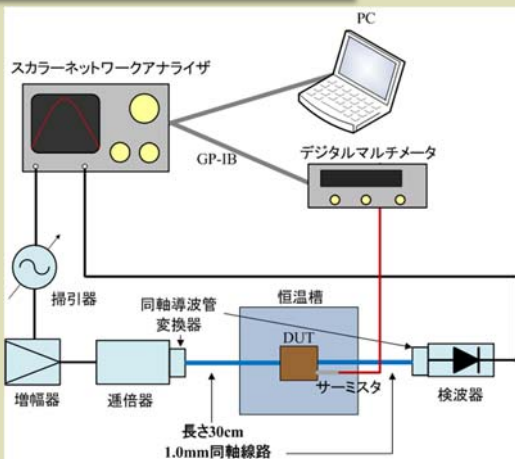
比誘電率 ϵ_r



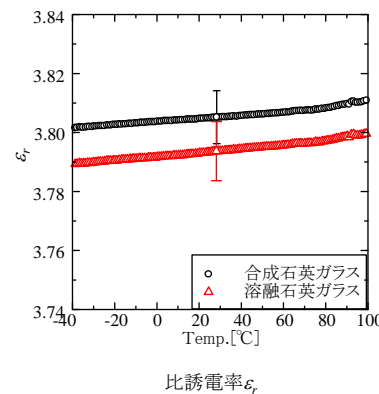
誘電正接 $\tan \delta$

(d) 窒化アルミ平板

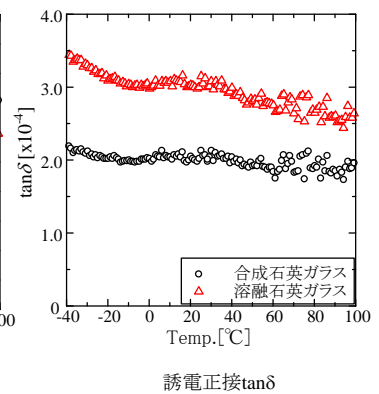
温度依存性測定



(a) 測定システム



比誘電率 ϵ_r



誘電正接 $\tan \delta$

(b) 石英ガラス