

## Bead Pull

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This is the first result of bead pull in the hybrid structure. We used a metal bead to measure. The position was not precisely determined because the bead is pulled “by hand”. However I think it is enough to see the field balance in the structure.

The frequency is at  $\pi$  mode in SW structure, 2851.3 MHz. This is measured by detuning TW section.

In Fig 2 and 3, the Electric field strength and phase, respectively, is shown. The left side is the TW section and right two peaks are in SW. The phase in the SW looks same but it can have 180 deg phase difference due to the equation,

$$\Delta\Gamma \propto |E|^2 e^{i2\phi}$$

Here we assume no magnetic field.

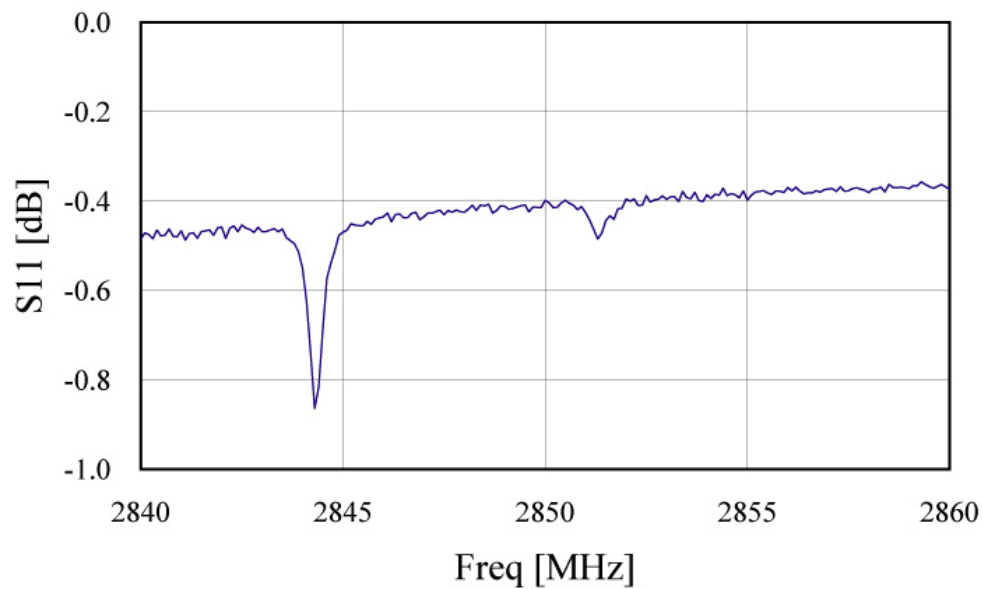


Fig. 1 S11 of SW structure measured by detuning TW structure.

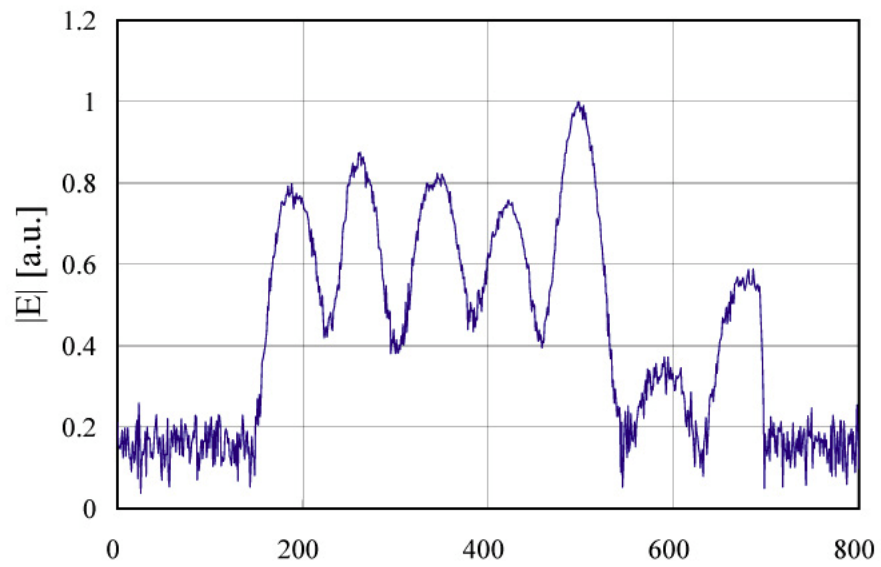


Fig. 2 Electric Field Strength in the hybrid structure. Left is TW section and right two is SW.

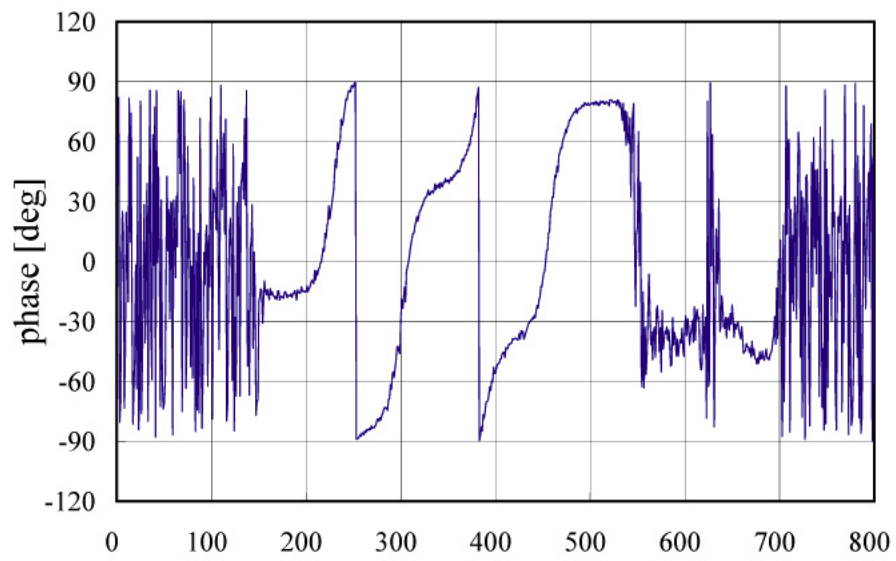


Fig. 3 Electric Field phase of the hybrid structure.