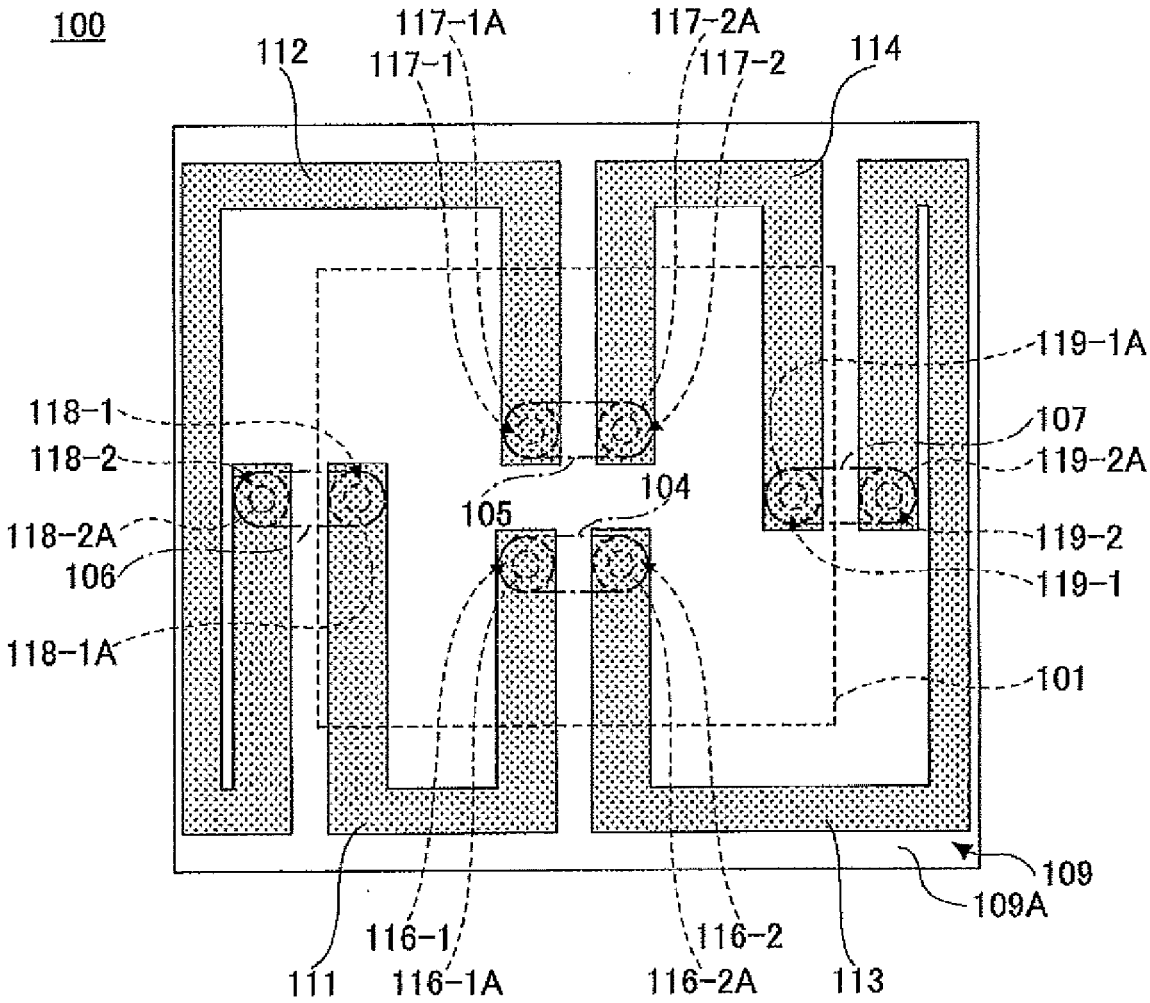FIG.2 RELATED ART