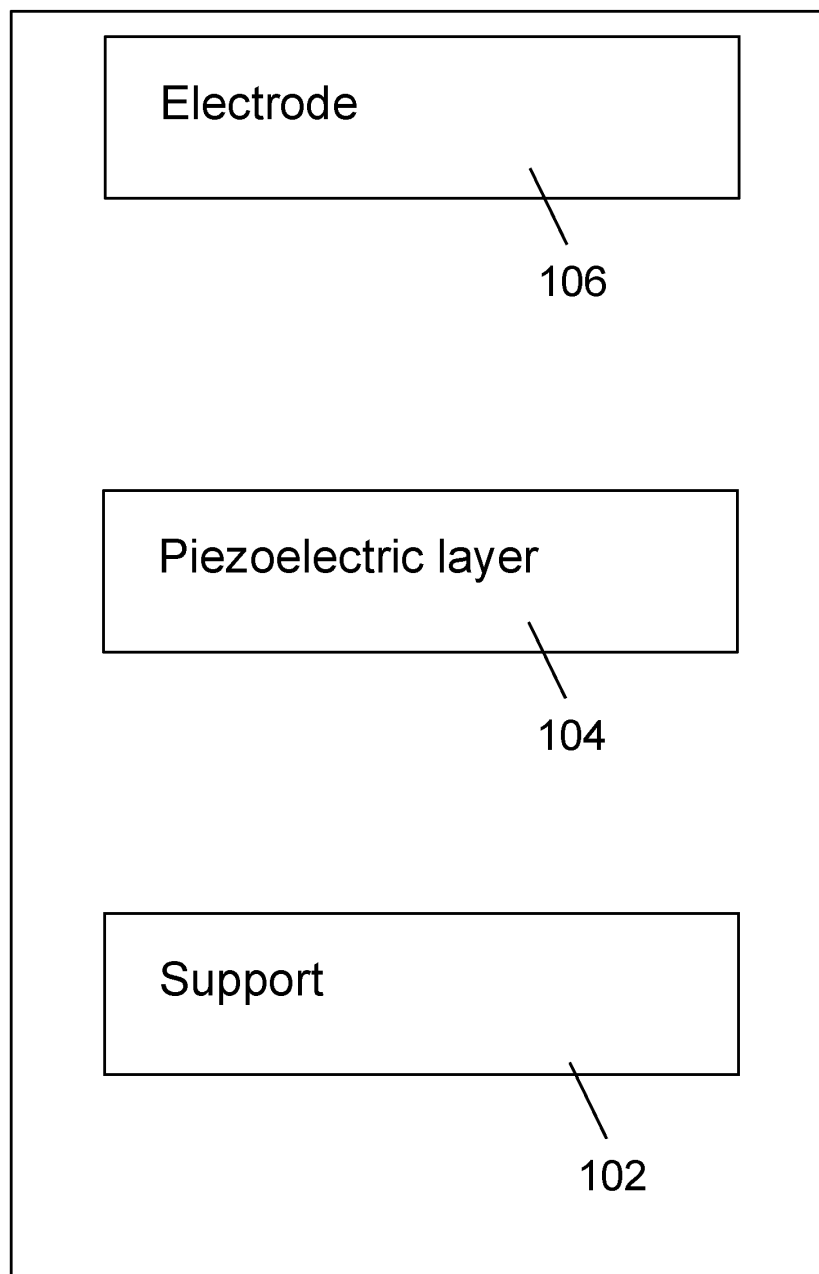


FIG. 1



2/22

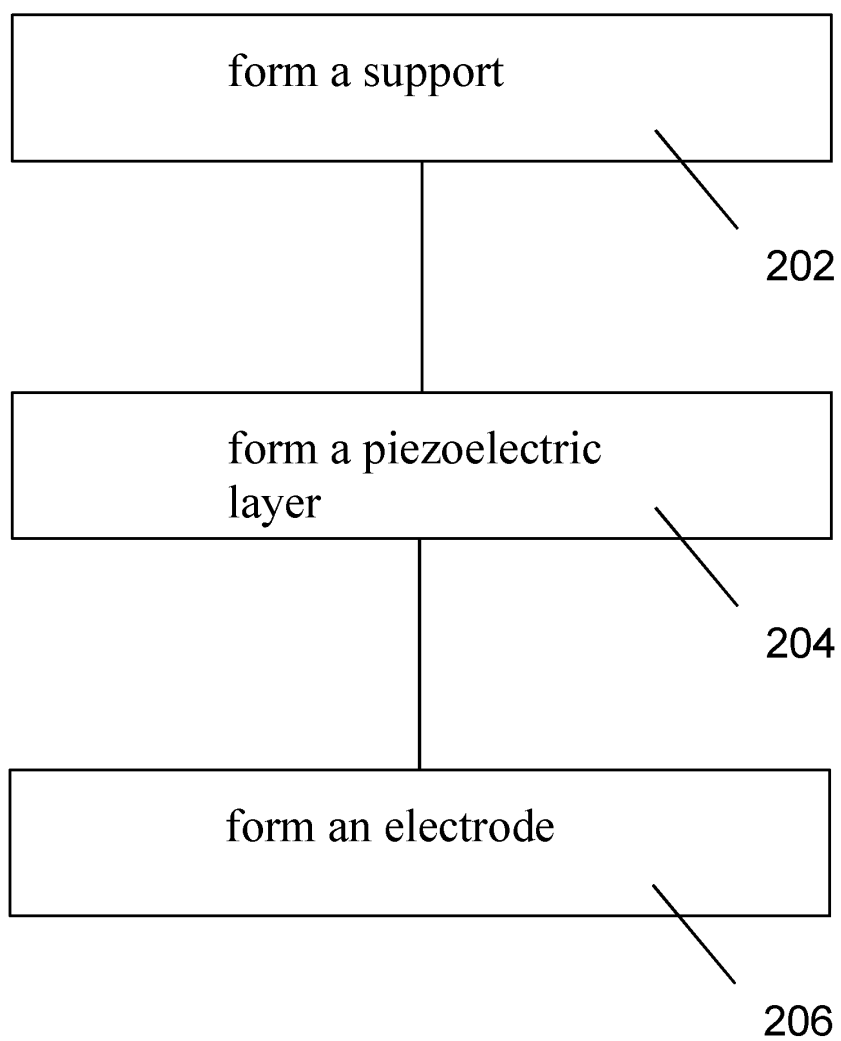
FIG. 2

FIG. 3

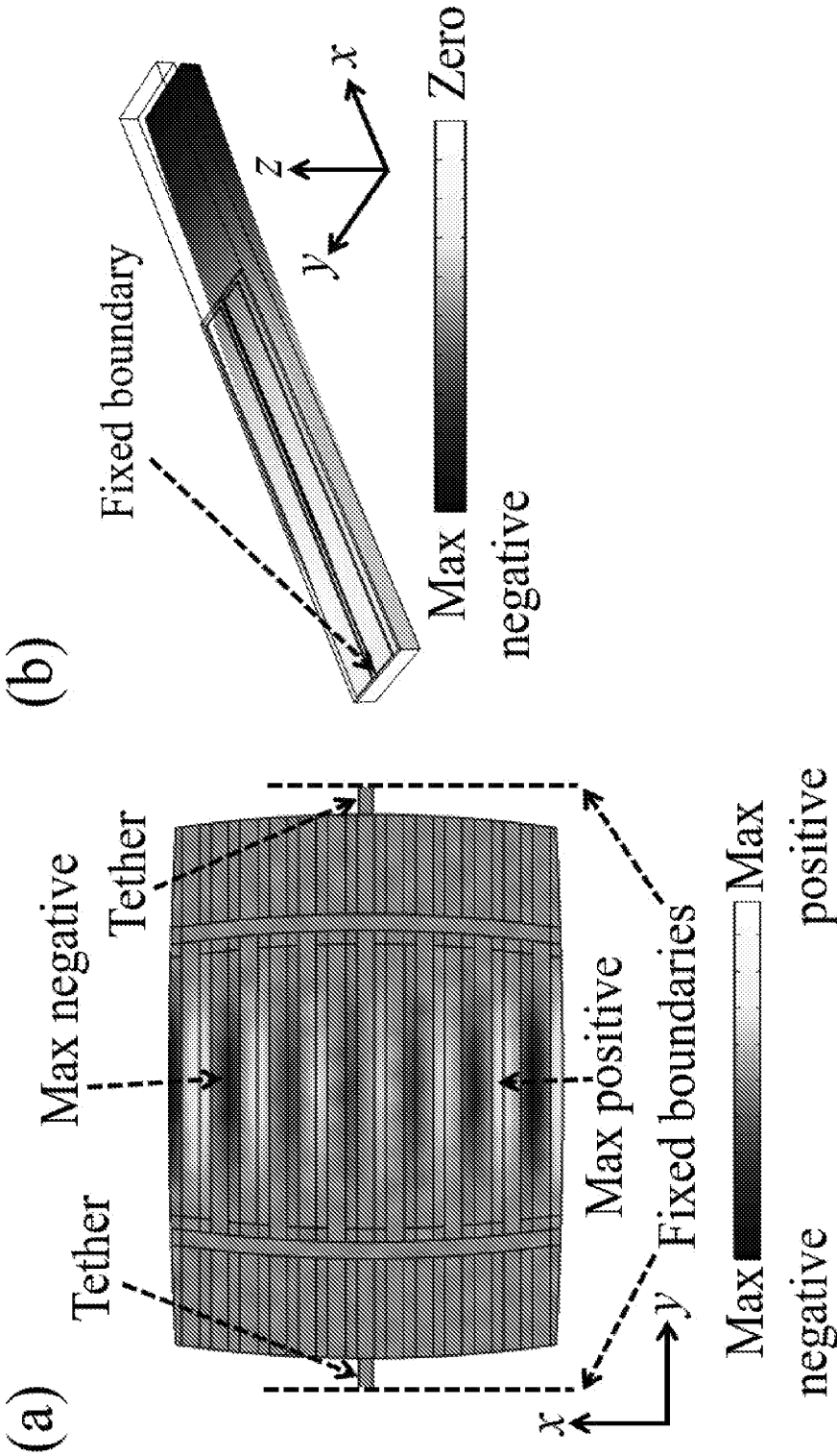


FIG. 4

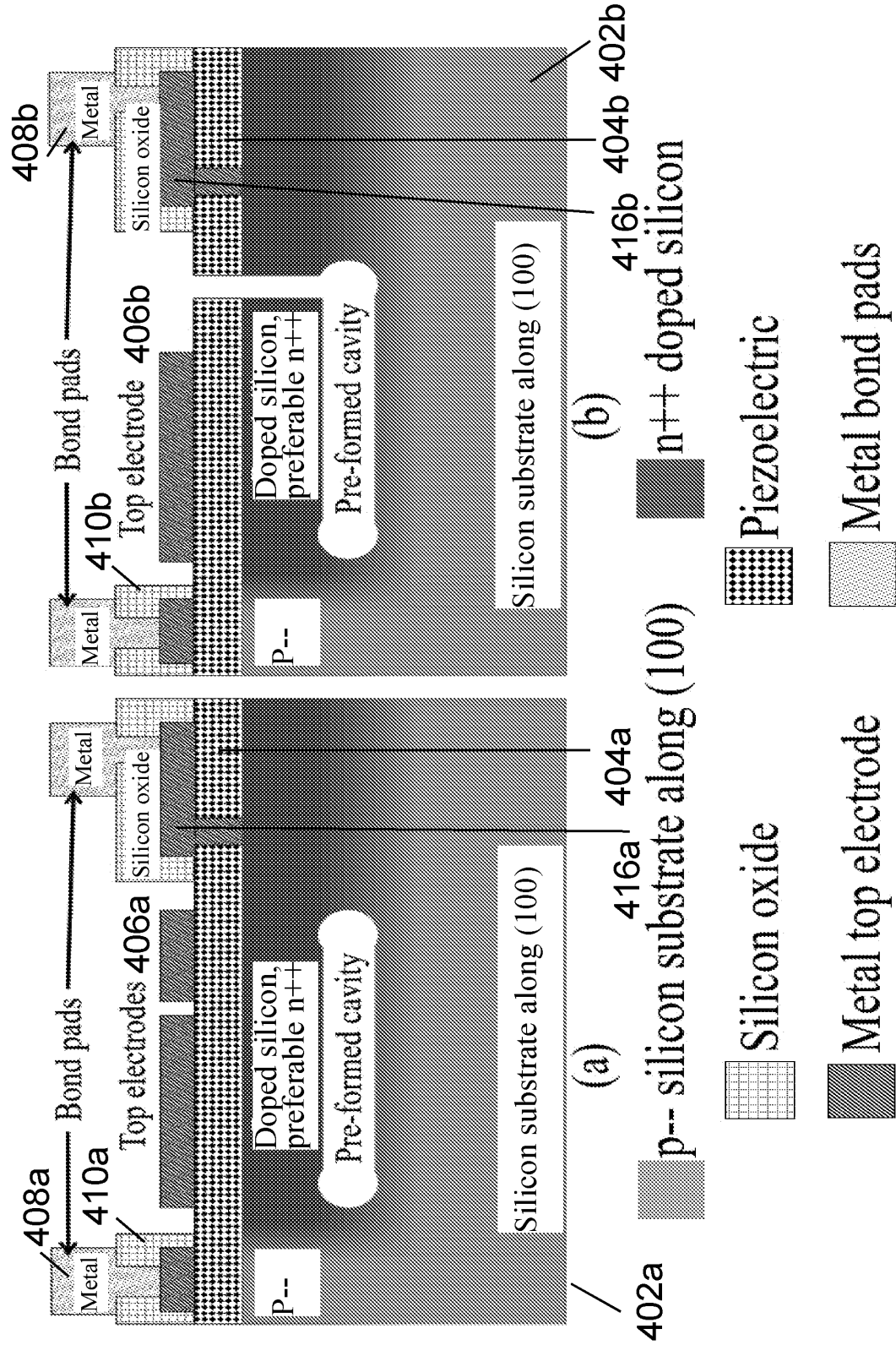


FIG. 5

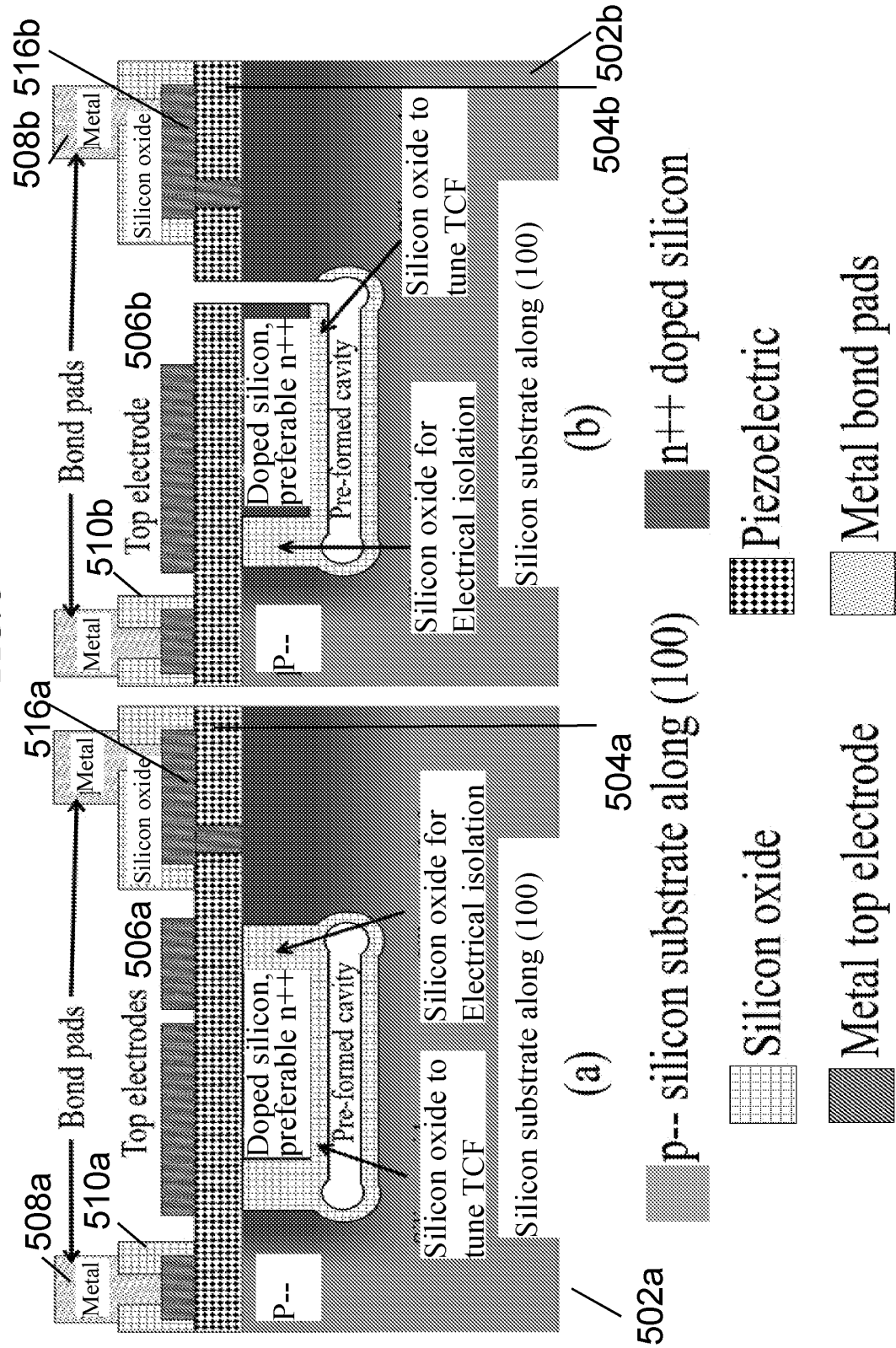


FIG. 6

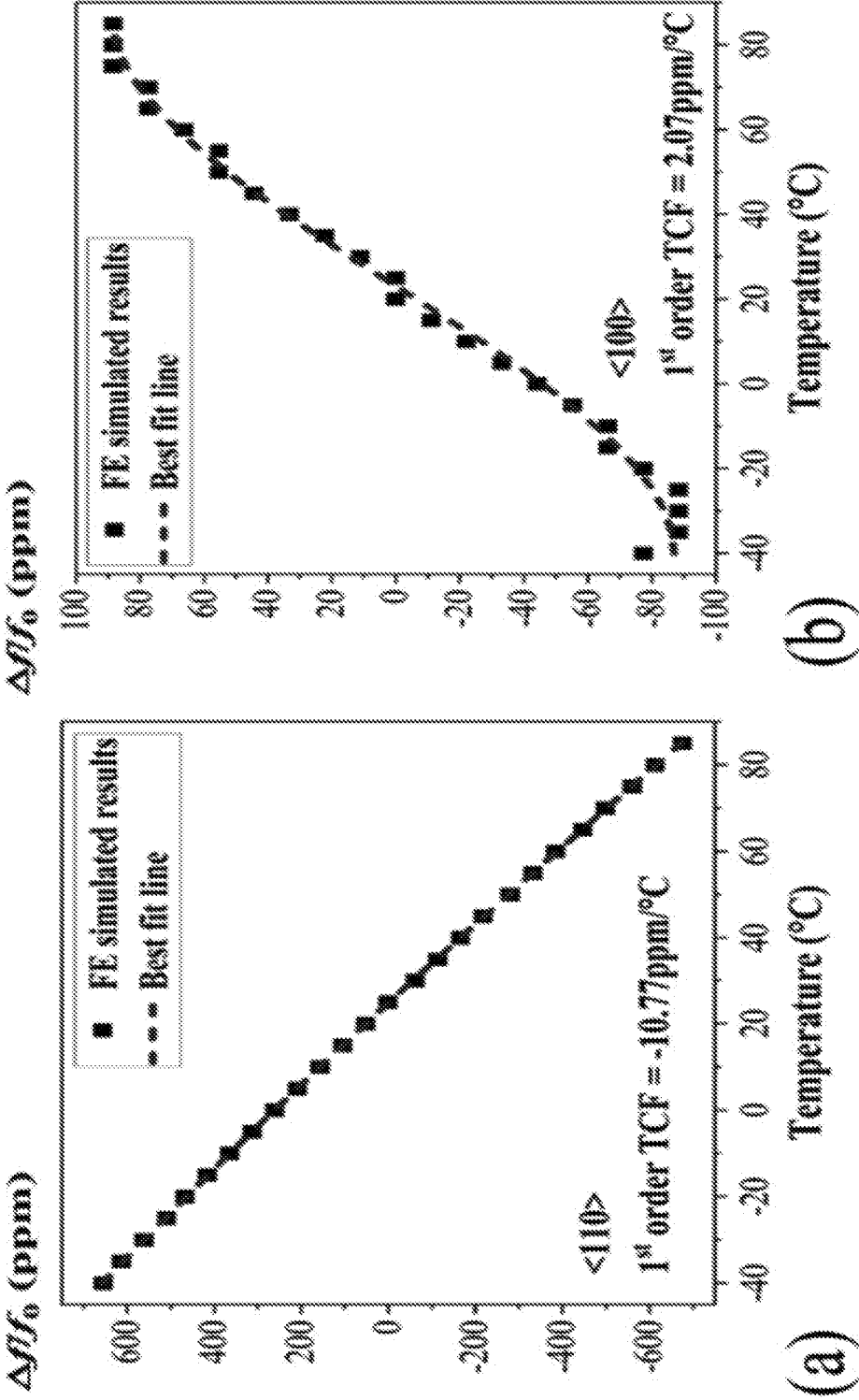


FIG. 7

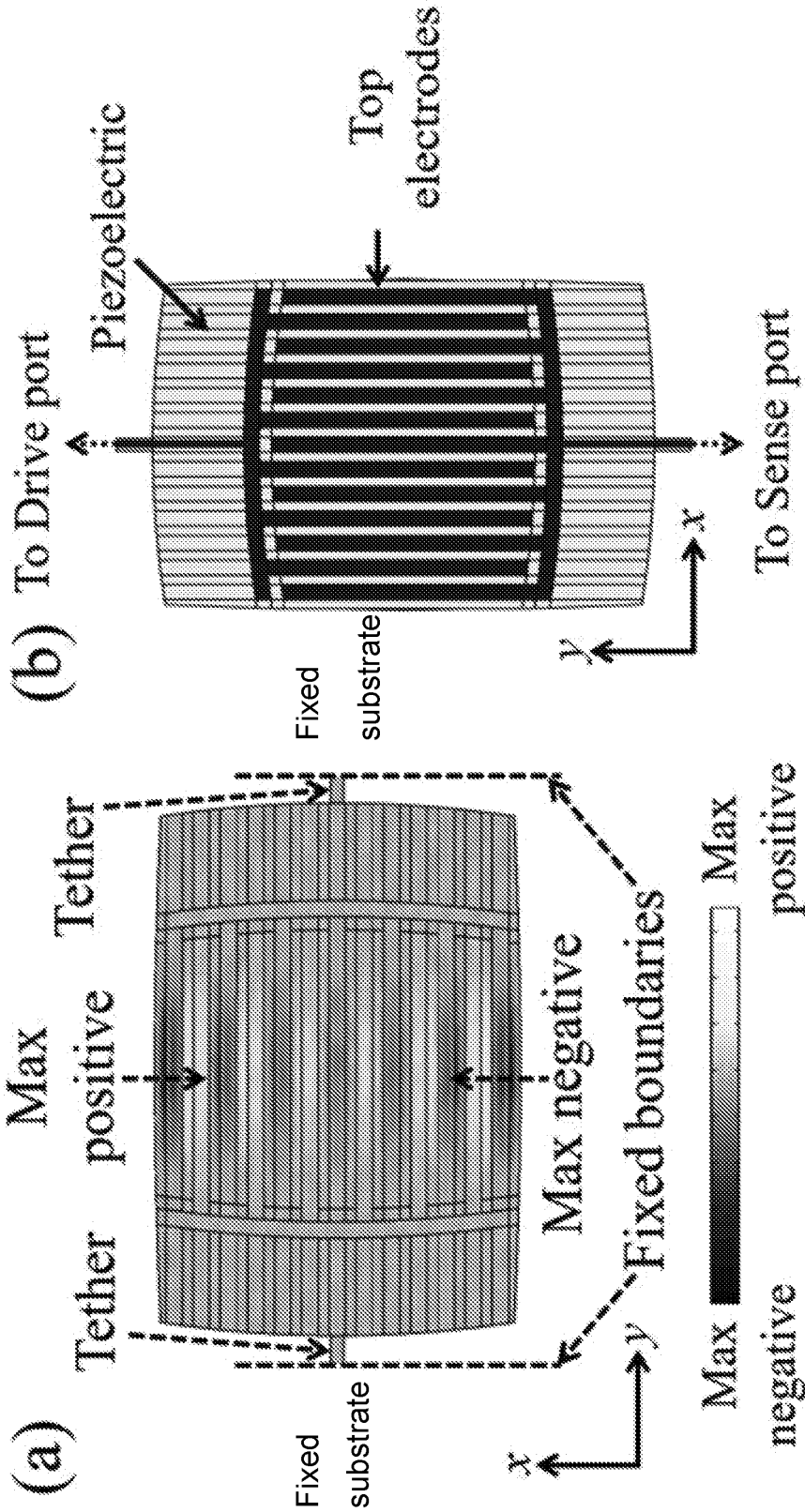


FIG. 8

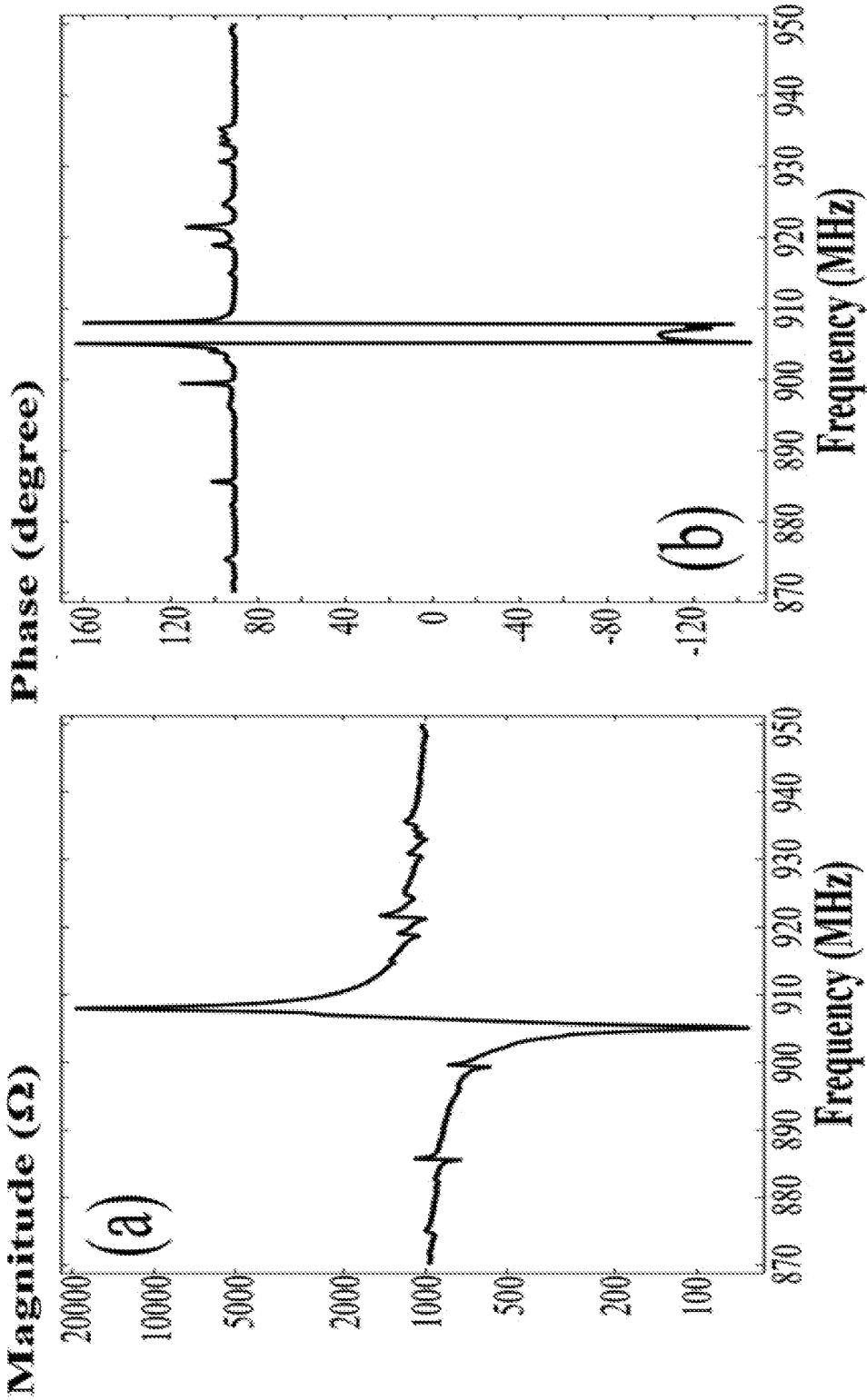
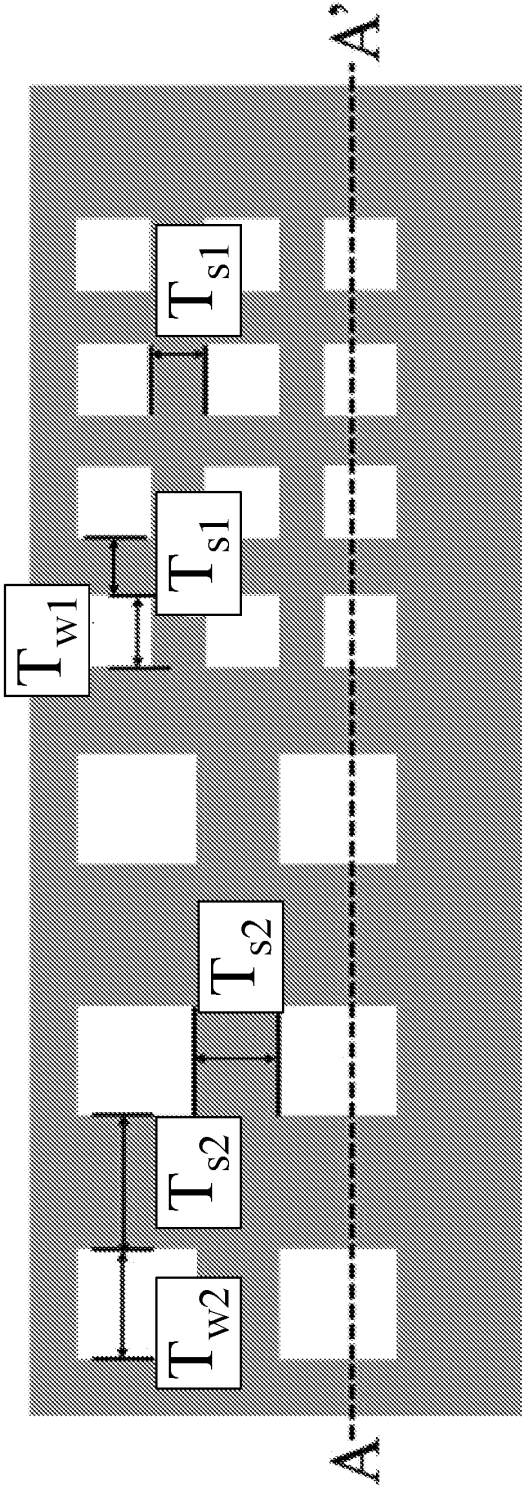
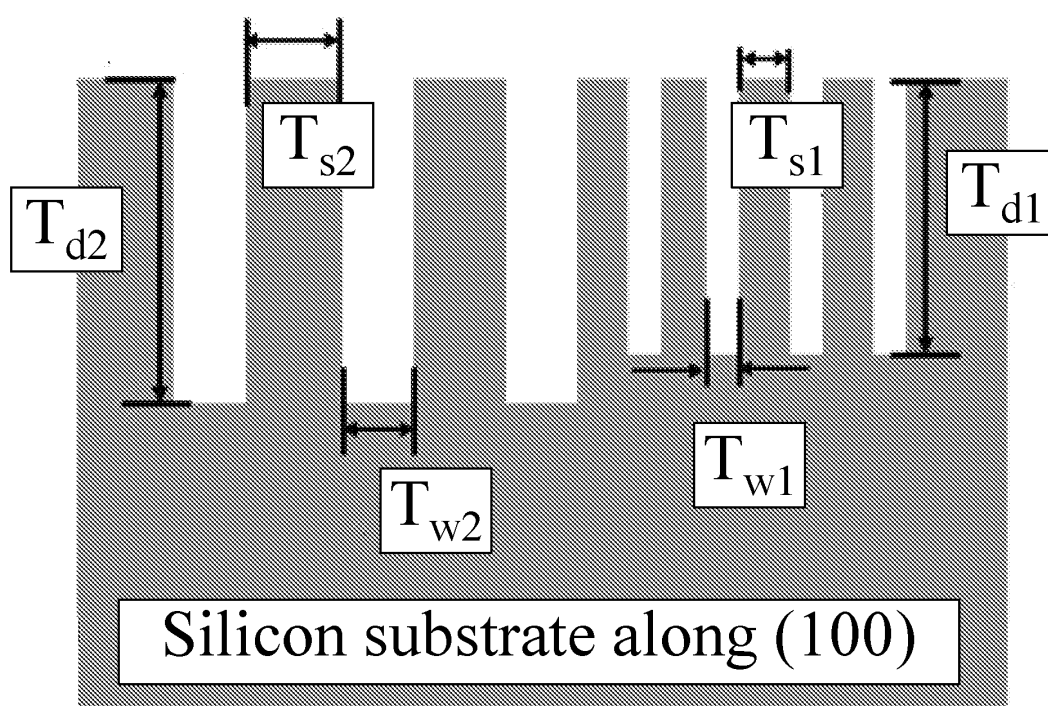


FIG. 9A

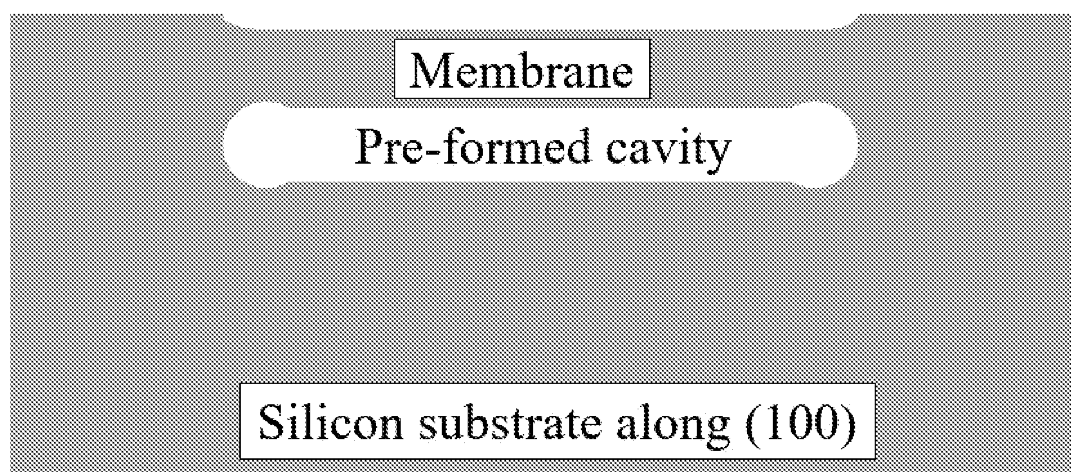


10/22

FIG. 9B

11/22

FIG. 9C



12/22

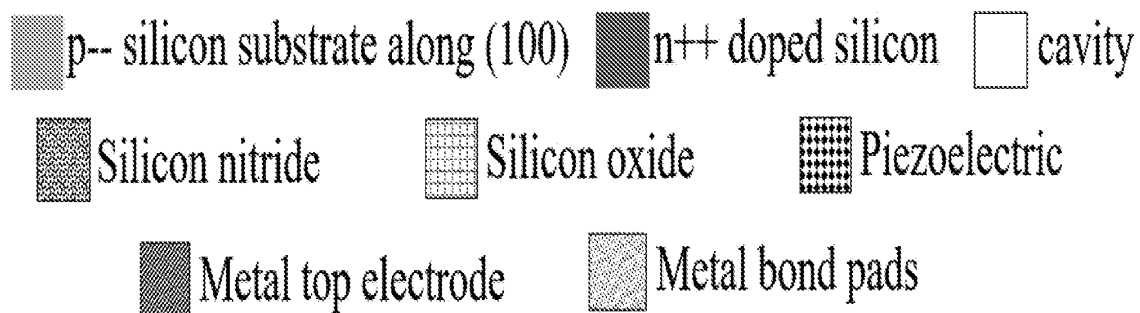
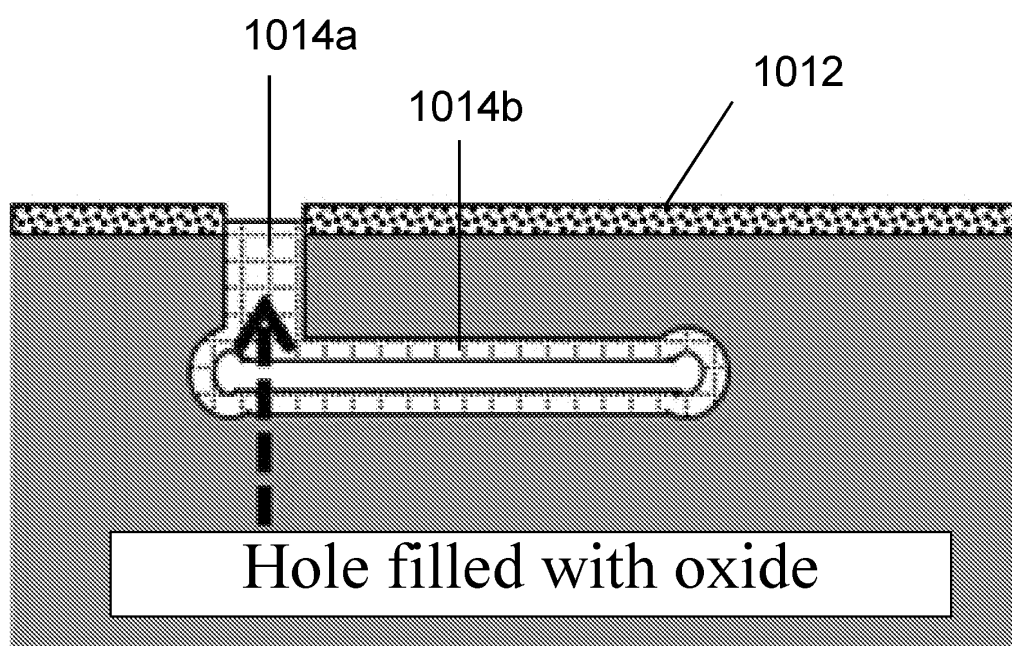
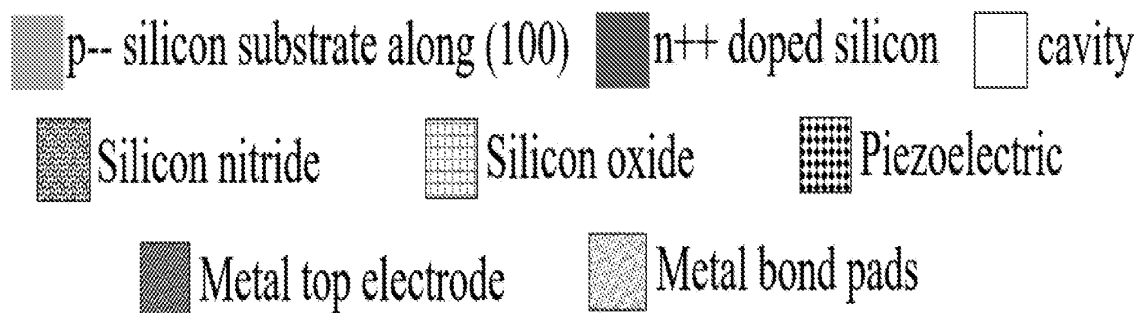
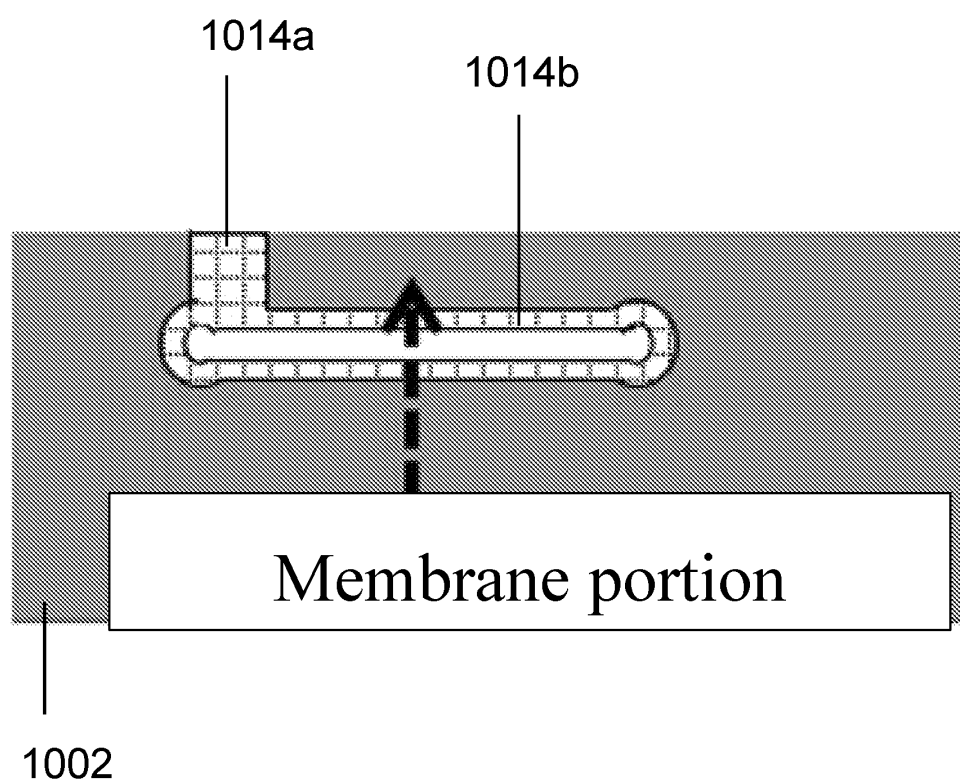
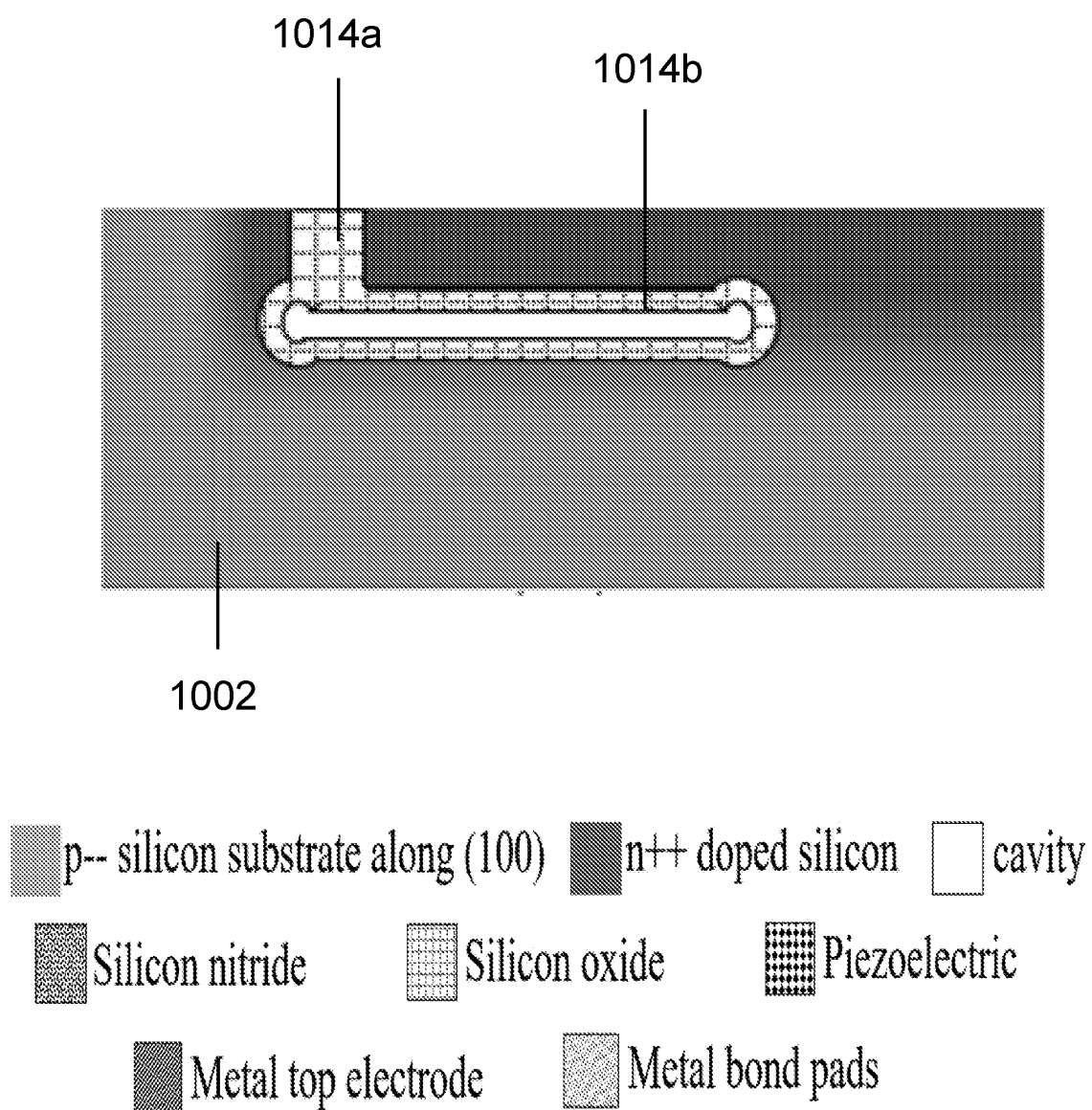
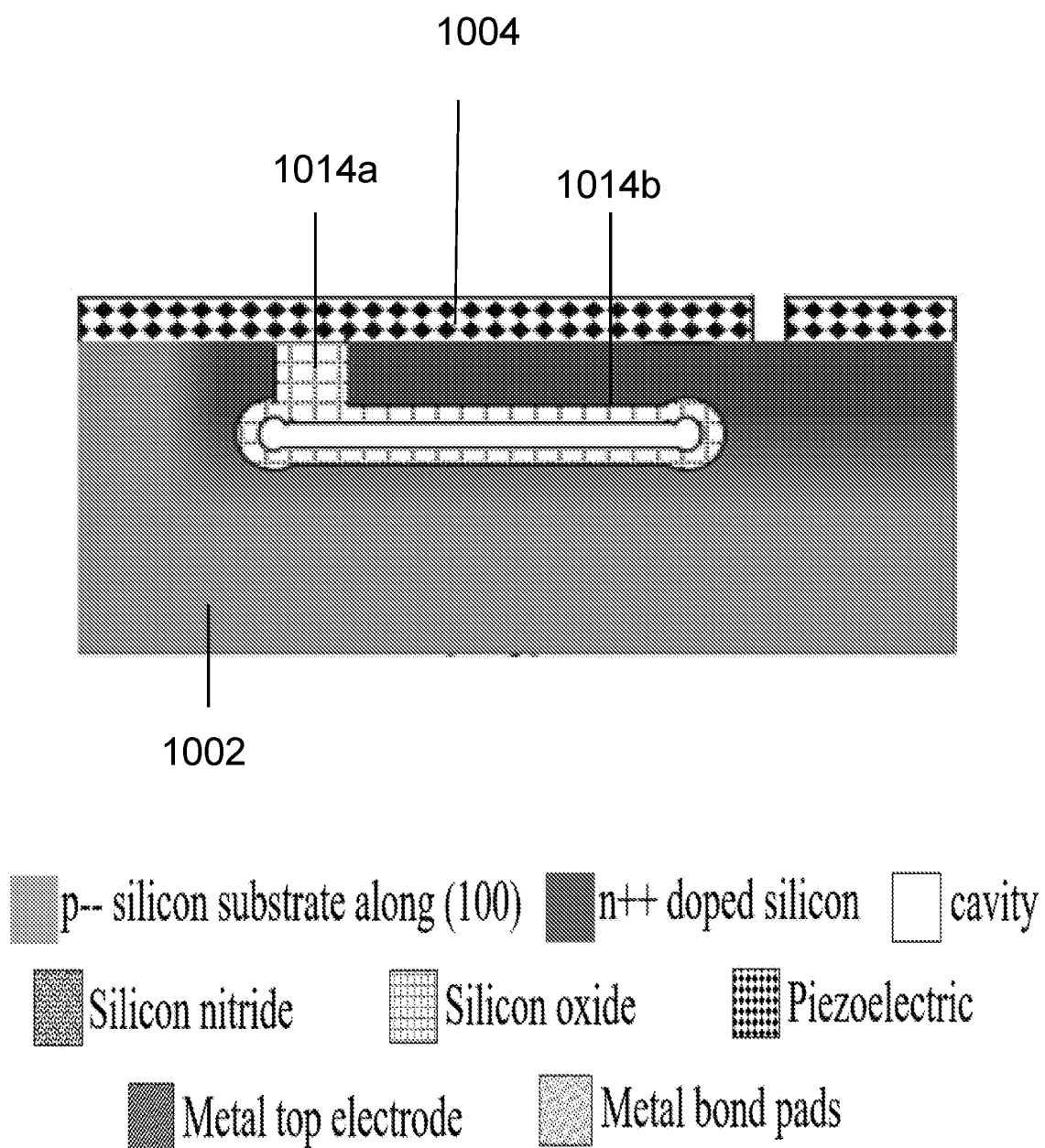
FIG. 10A

FIG. 10B

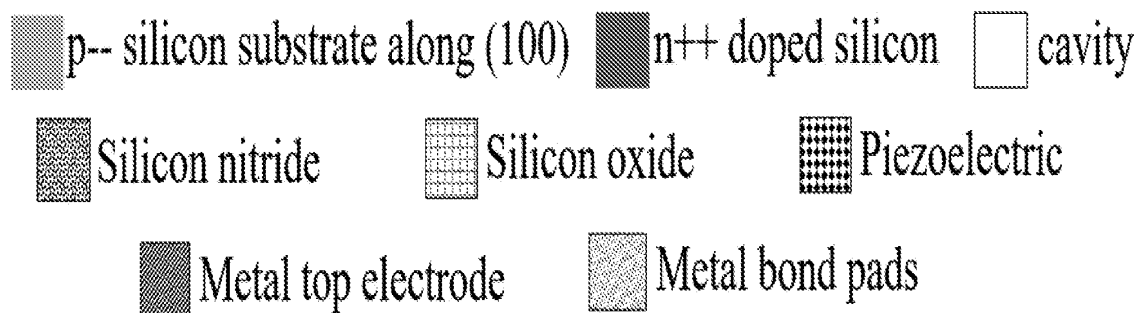
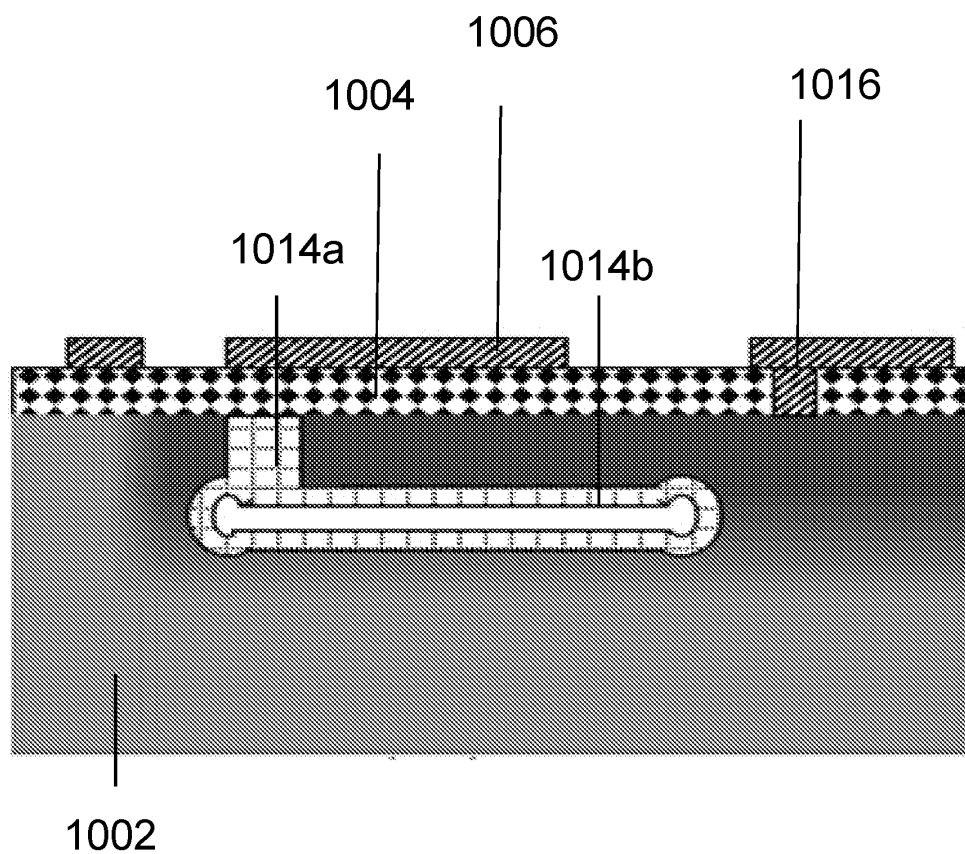
14/22

FIG. 10C

15/22

FIG. 10D

16/22

FIG. 10E

17/22

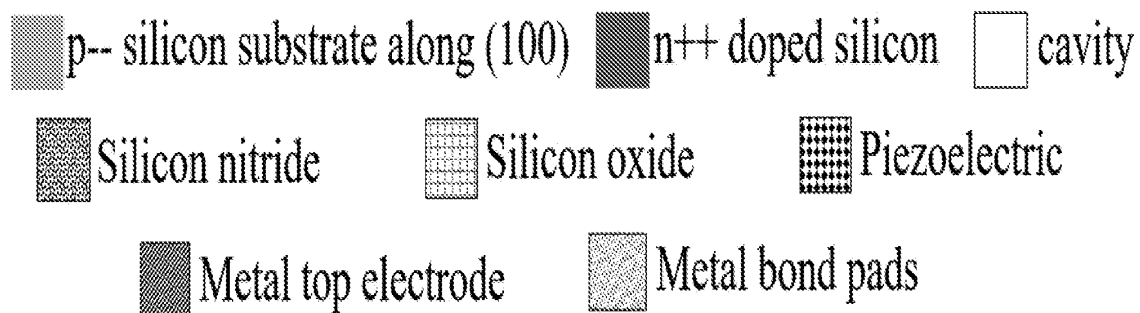
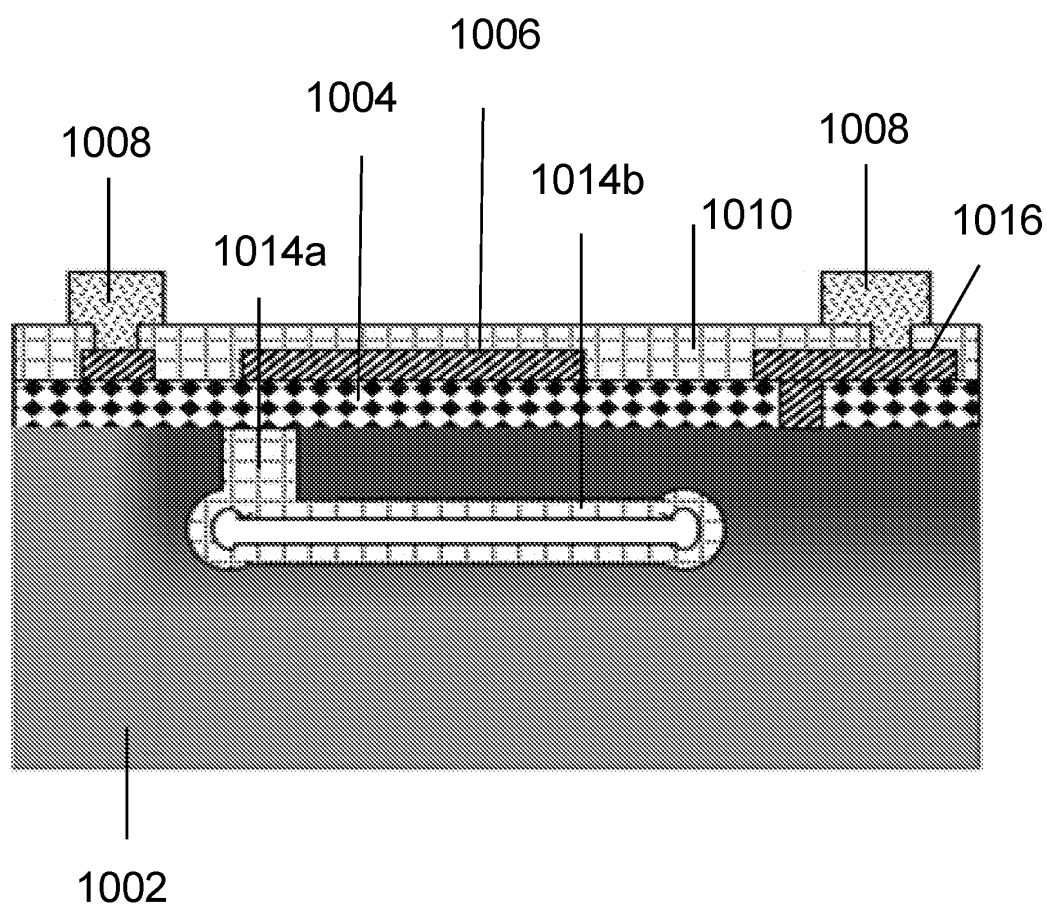
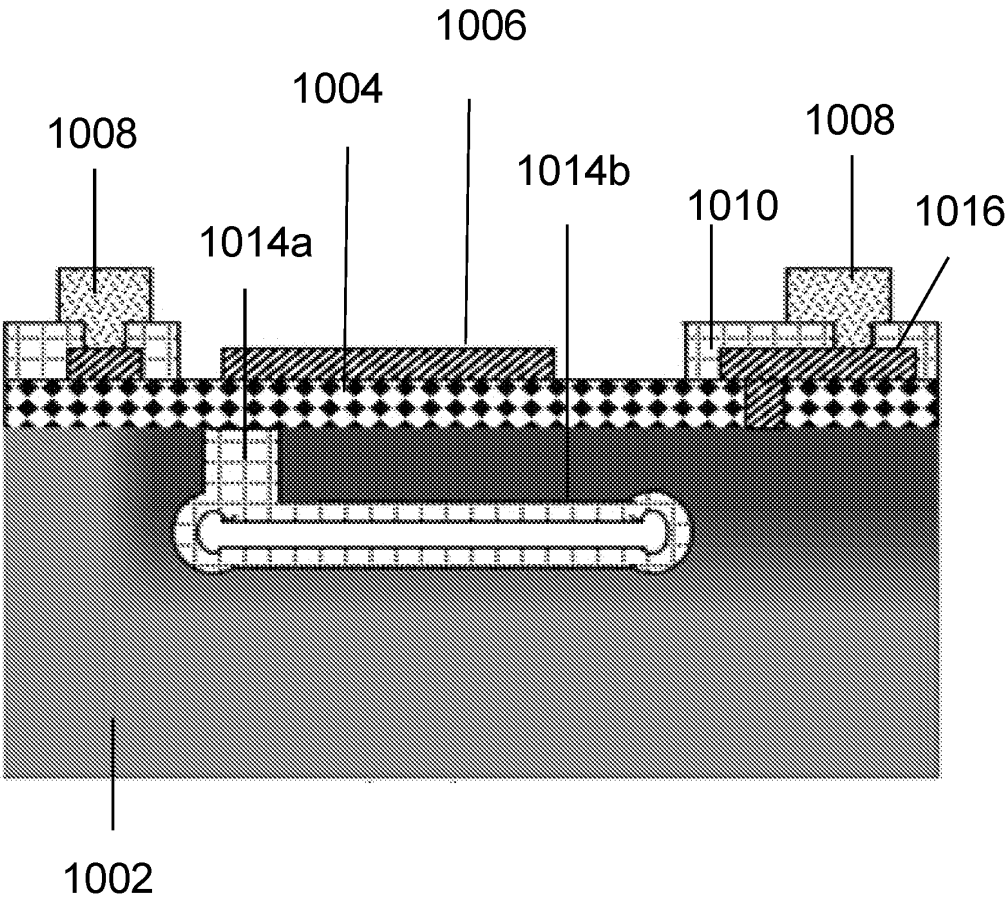
FIG. 10F

FIG. 10G



- p-- silicon substrate along (100)
- n++ doped silicon
- cavity
- Silicon nitride
- Silicon oxide
- Piezoelectric
- Metal top electrode
- Metal bond pads

19/22

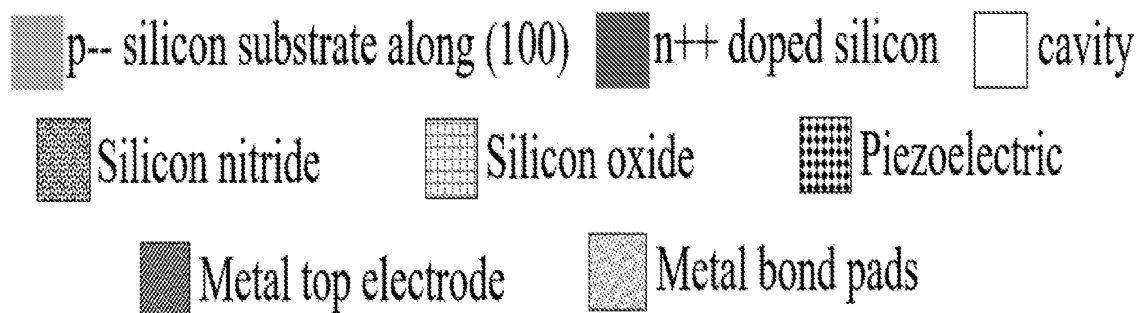
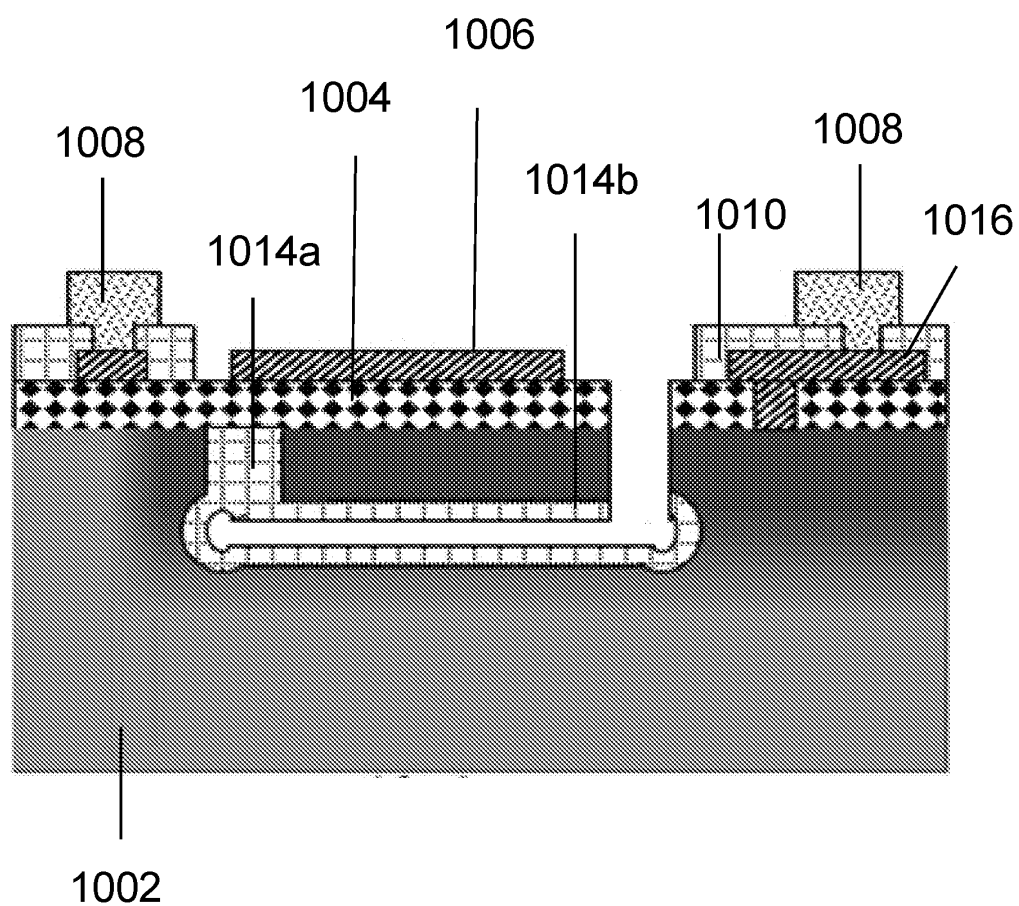
FIG. 10H

FIG. 10I

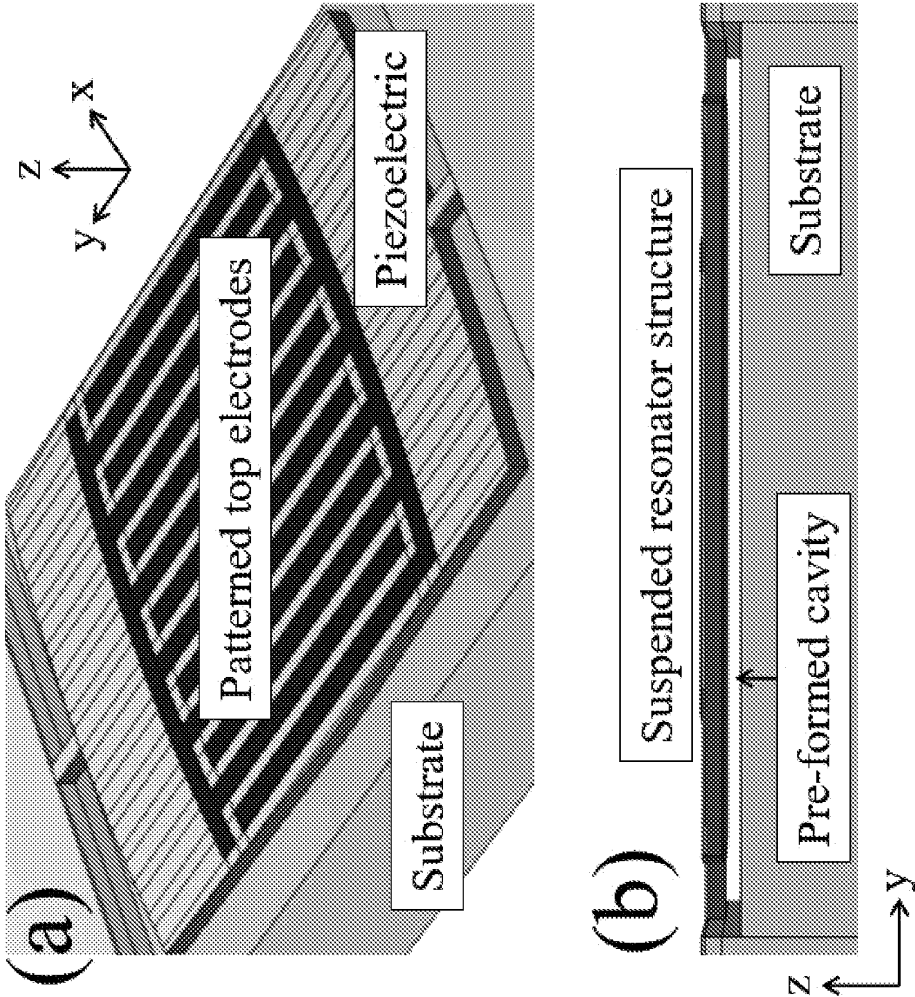
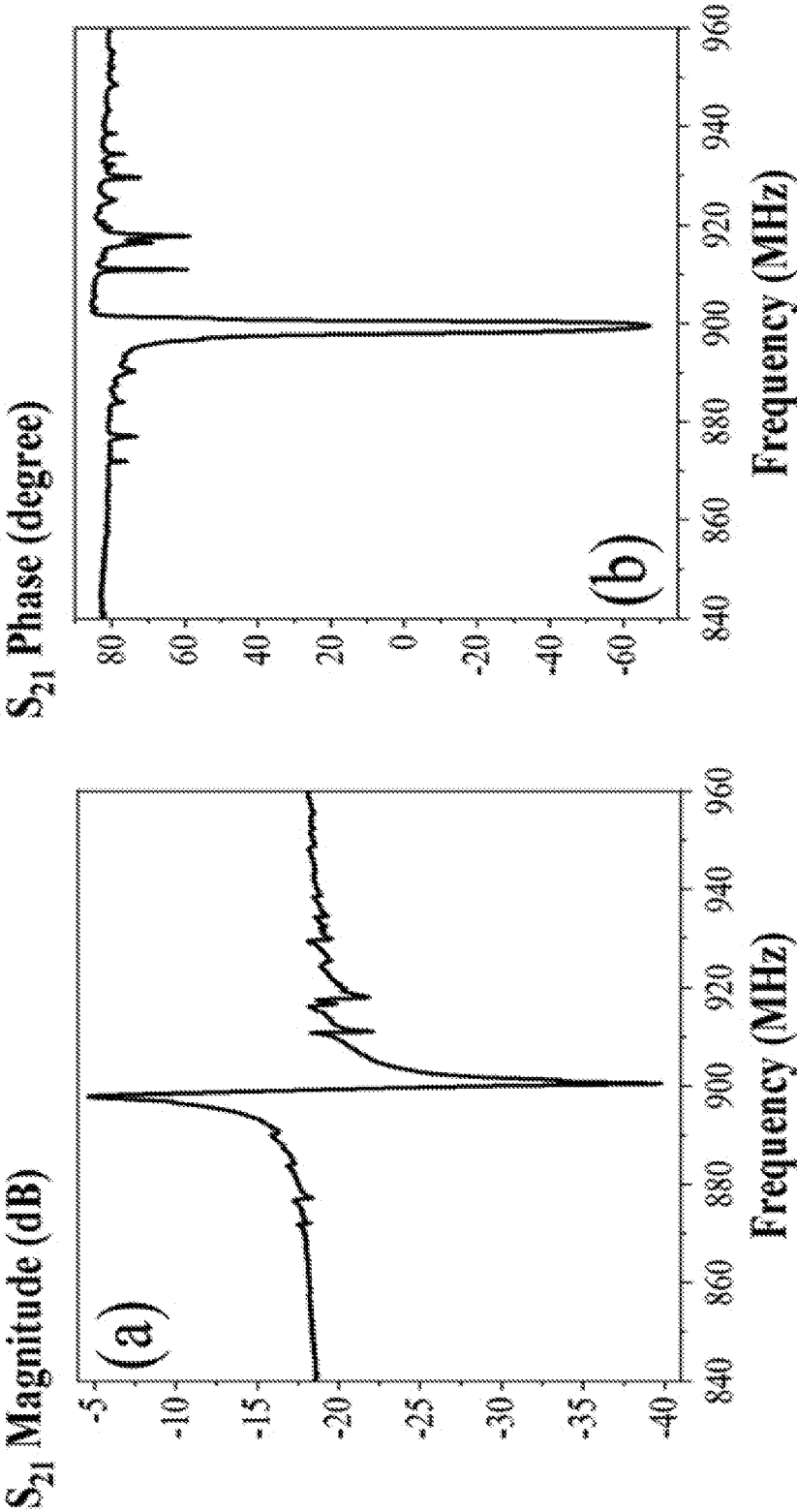


FIG. 11



22/22

FIG. 12