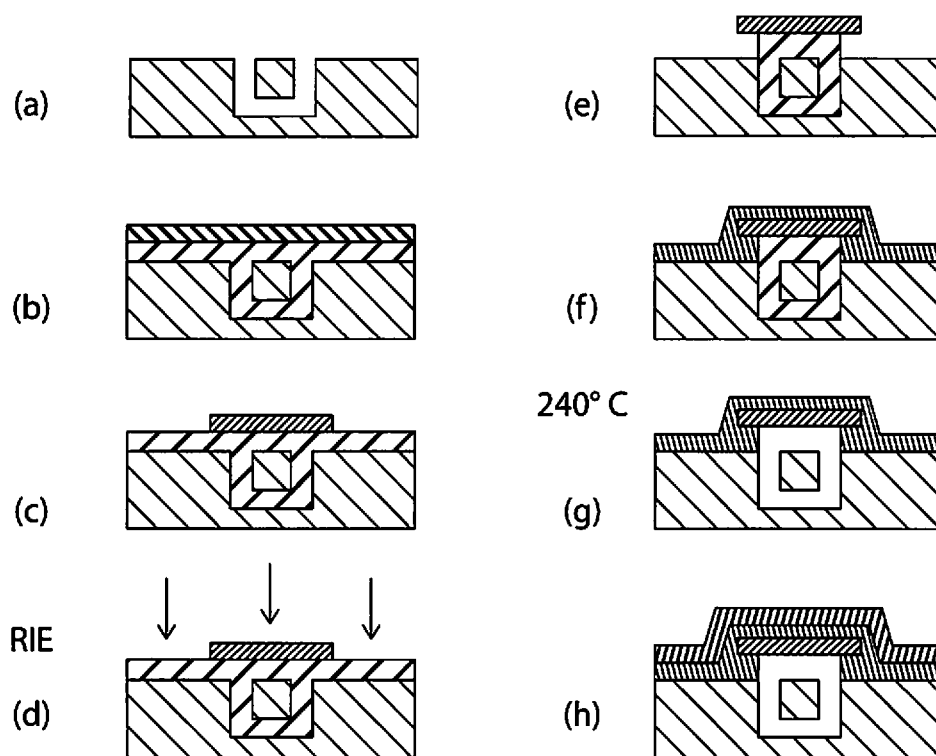
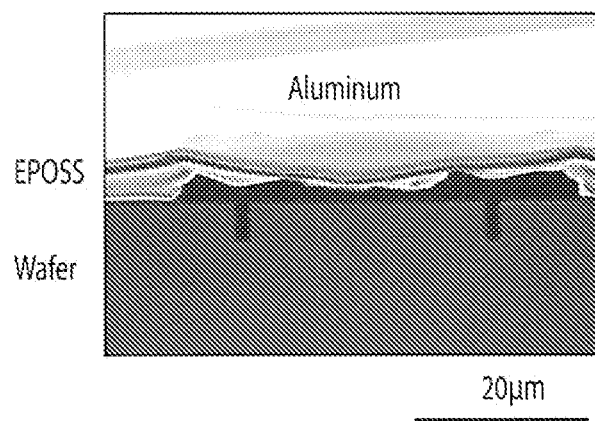
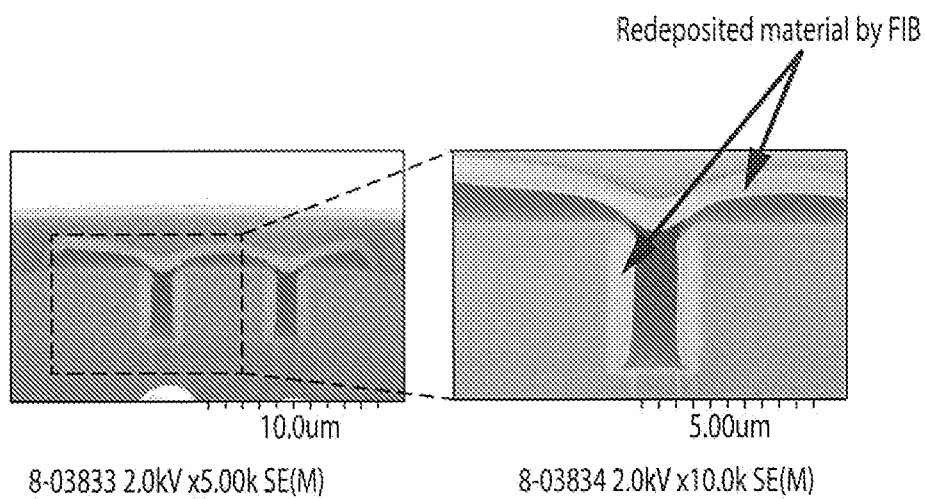


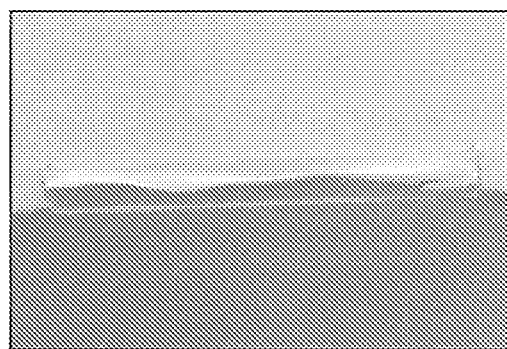
1/13

**FIG. 1**

2/13

**FIG. 2A****FIG. 2B**

3/13



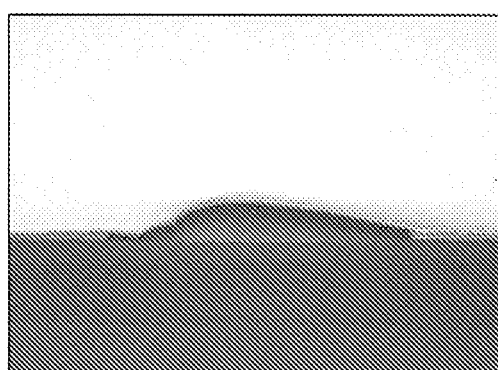
SE 20-Apr-09 WD30.5mm 7.00kV x350

FIG. 3A



SE 10-Aug-09 WD25.4mm 5.00kV x500

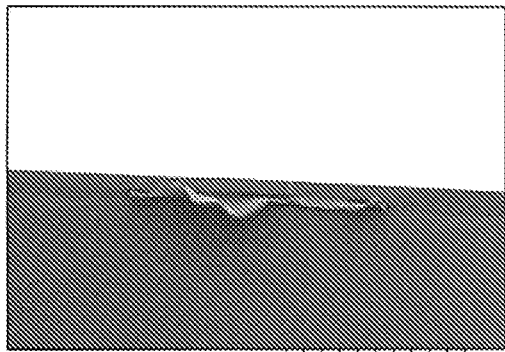
FIG. 3B



SE 03-Aug-09 WD27.3mm 5.00kV x500

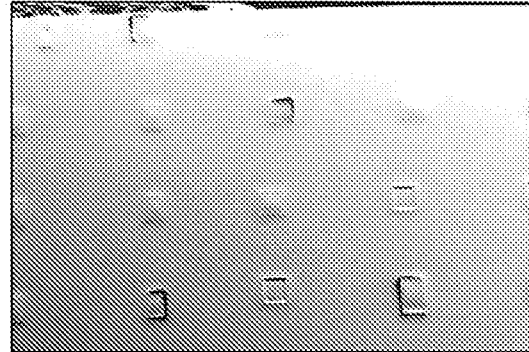
FIG. 3C

4/13



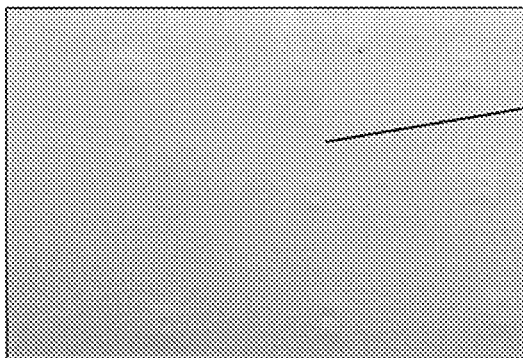
SE 11-Aug-09 WD24.2mm 5.00kV x450

FIG. 4A



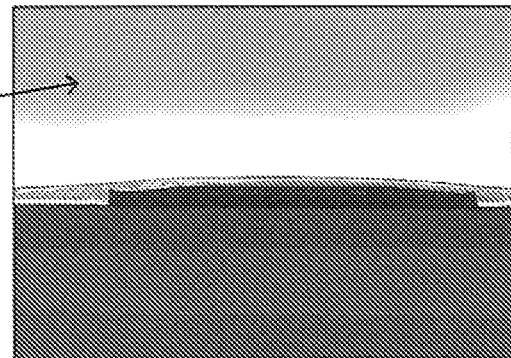
SE 30-Aug-09 WD34.1mm 5.00kV x25

FIG. 4B



SE 03-Aug-09 WD29.7mm 5.00kV x30

FIG. 4C



SE 03-Aug-09 WD27.7mm 5.00kV x600

FIG. 4D

5/13

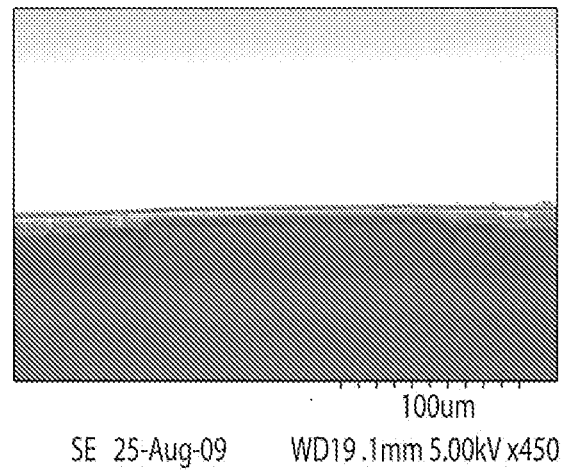


FIG. 5A

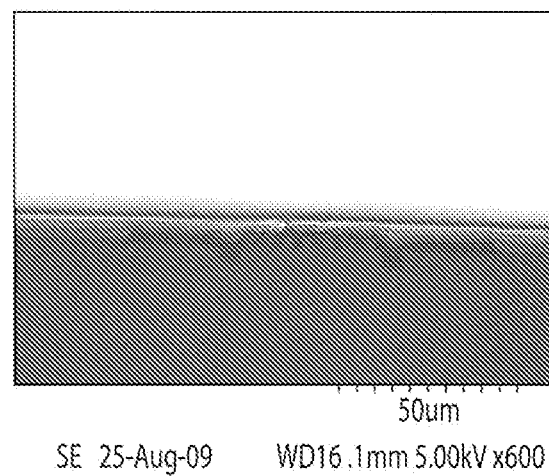
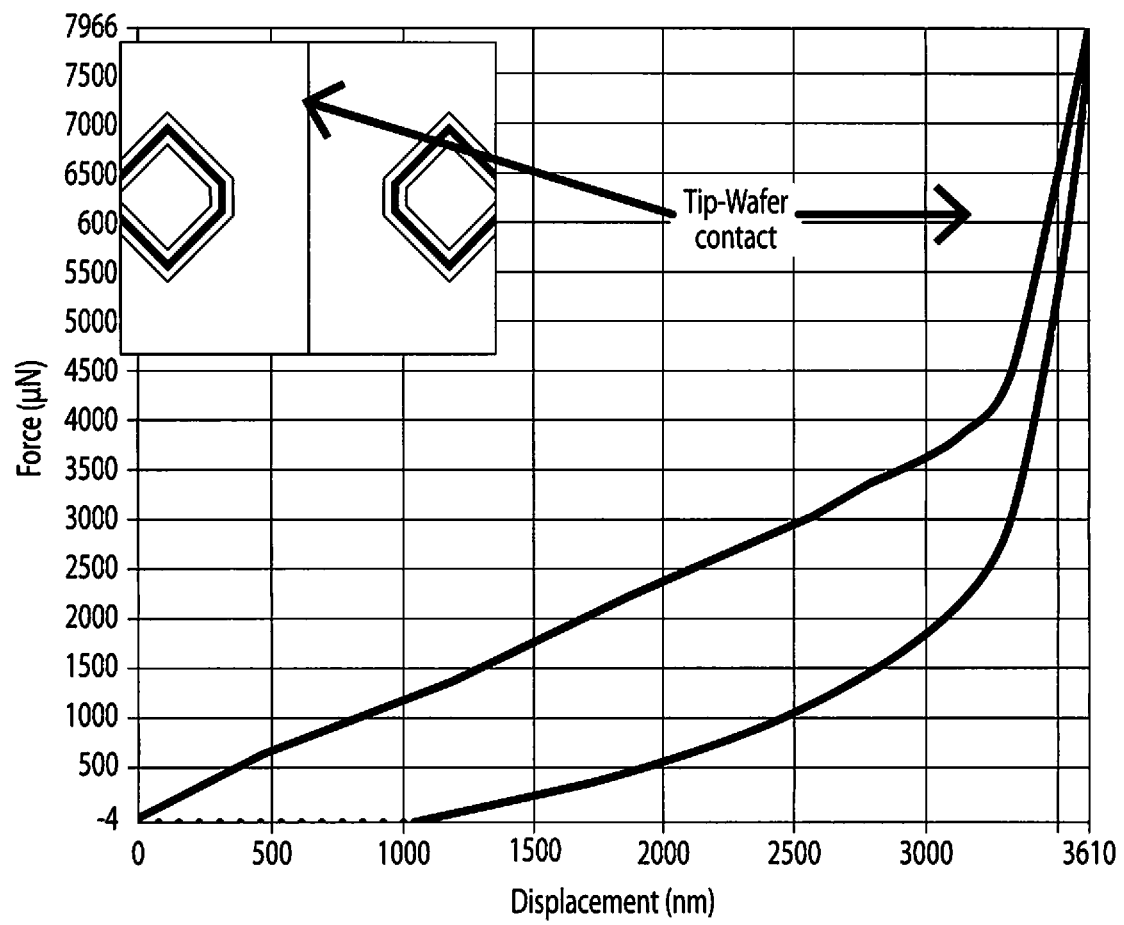


FIG. 5B

6/13

**FIG. 6**

7/13

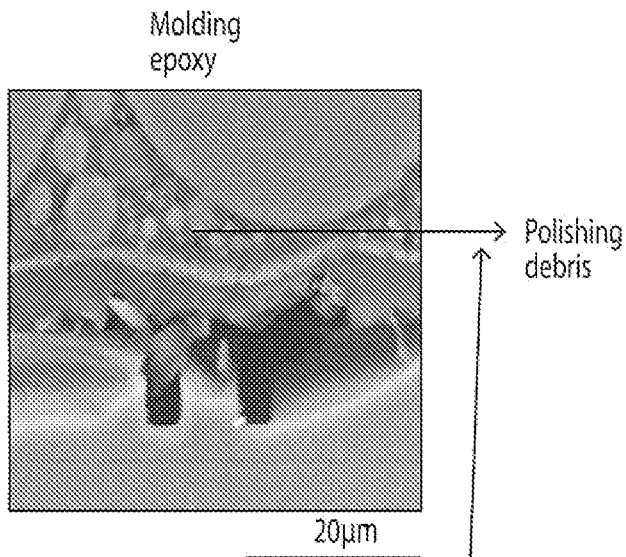


FIG. 7A

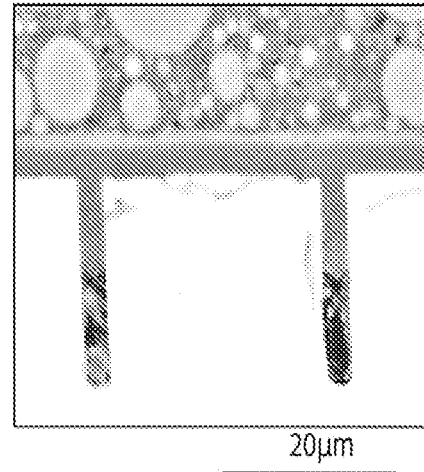
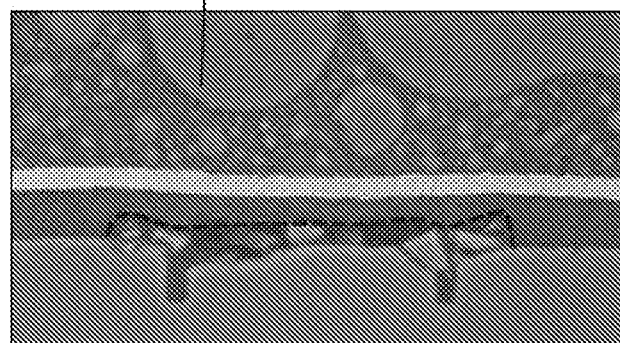


FIG. 7B



GTI0005

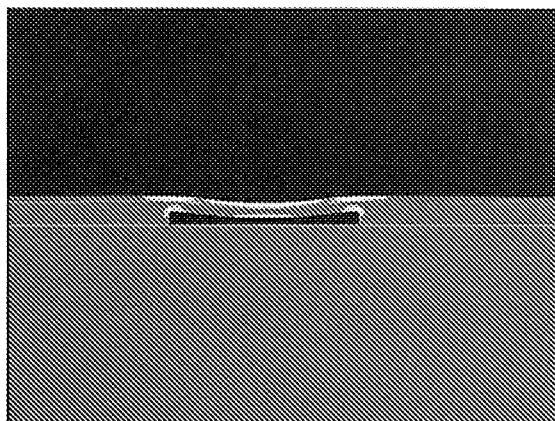
2010/10/18

x2.5k

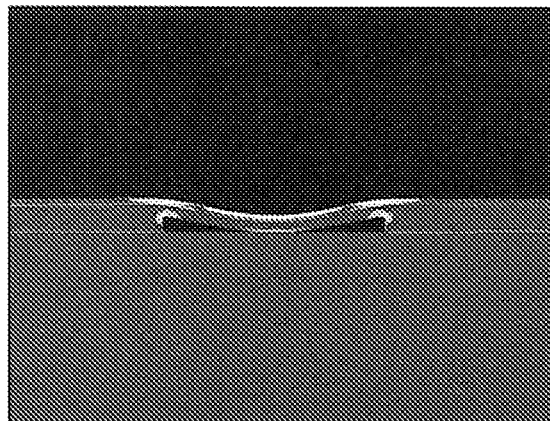
30µm

FIG. 7C

8/13



40 atm



100 atm

Rectangular "Bulge" equation:

$$P = \frac{4}{3} \frac{h^3}{a^2} \frac{Et}{(1-\nu^2)}$$

P(atm)	a(μm)	t(μm)	h(μm)
40	10	0.7	2.8
100	10	0.7	2

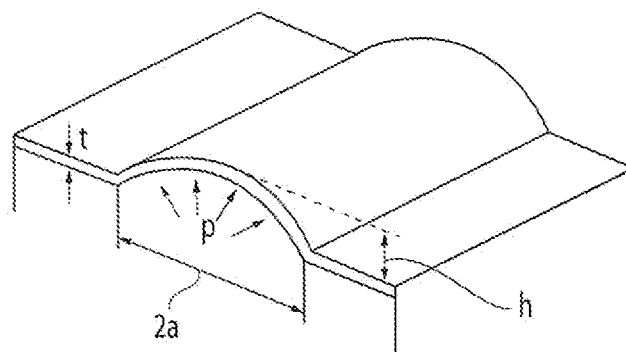
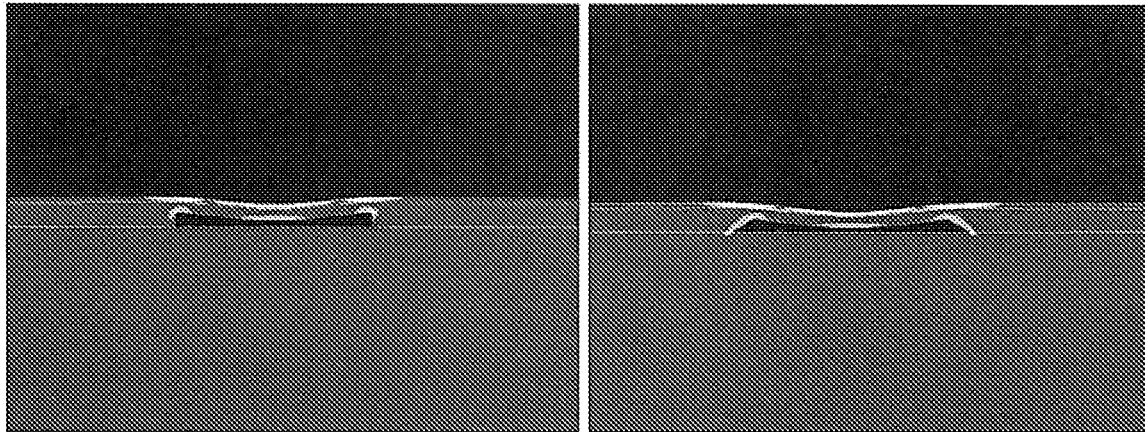


FIG. 8A

9/13

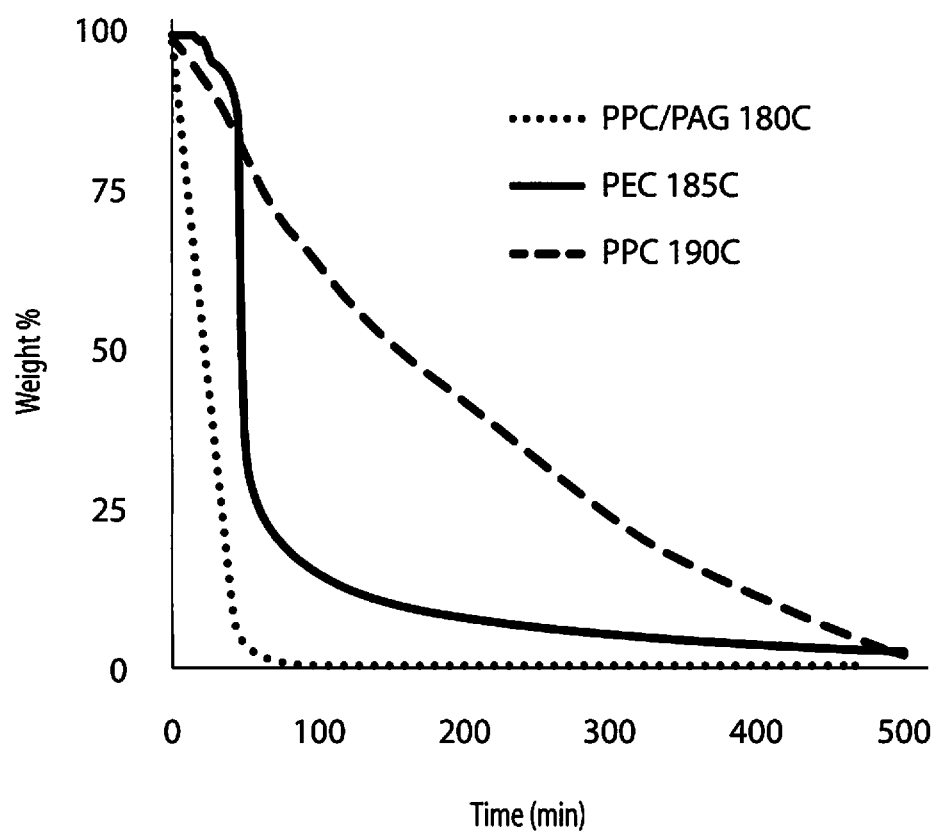


Straight sidewalls

Angled (30°) sidewalls

FIG. 8B

10/13

**FIG. 9**

11/13

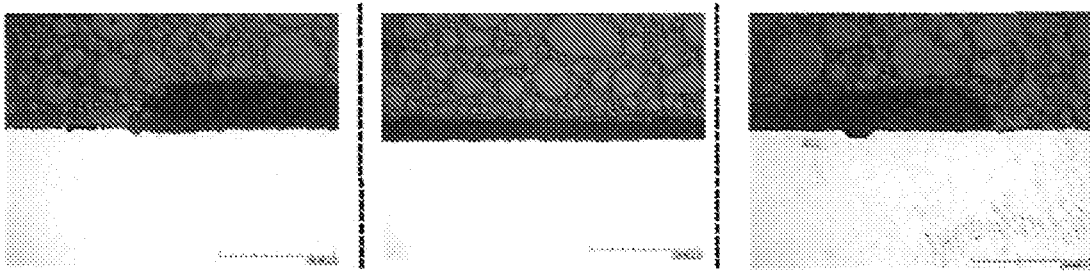


FIG. 10A

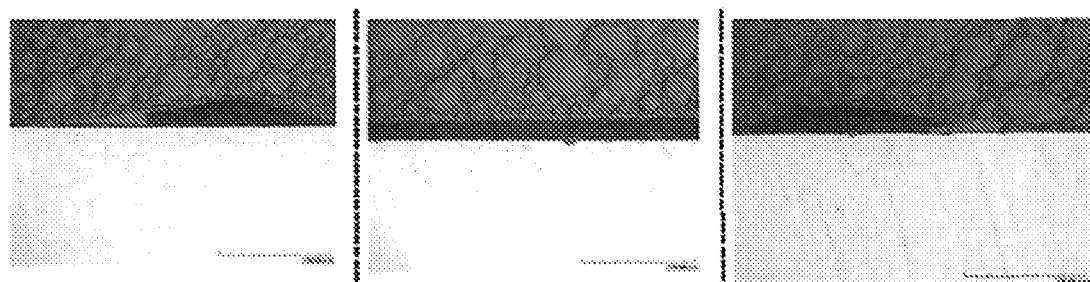


FIG. 10B

12/13

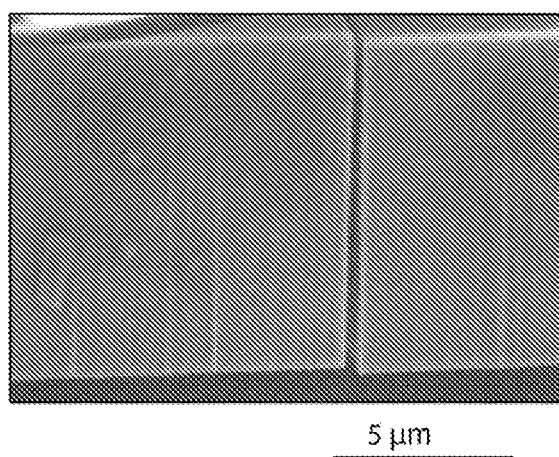
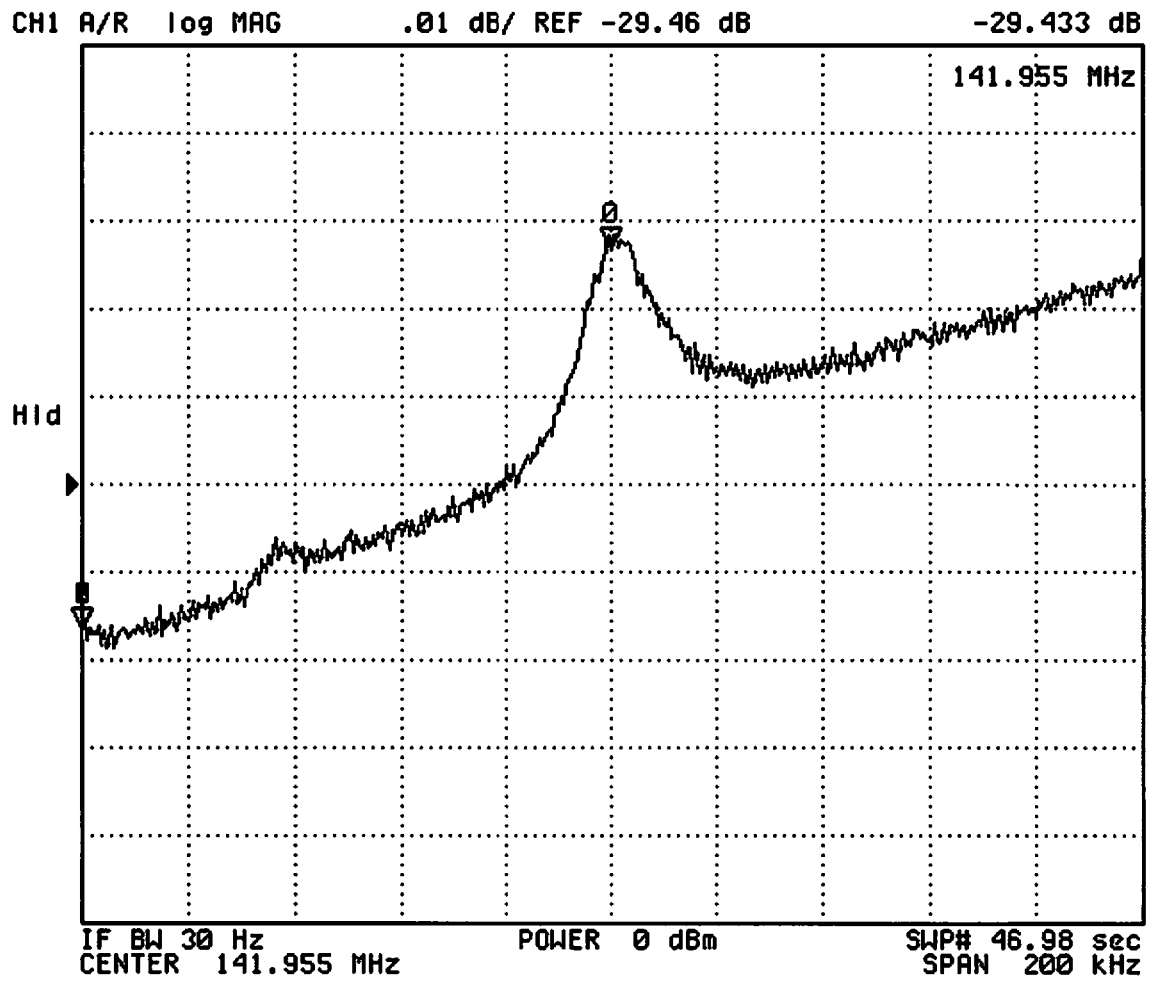


FIG. 11A

13/13

**FIG. 11B**