

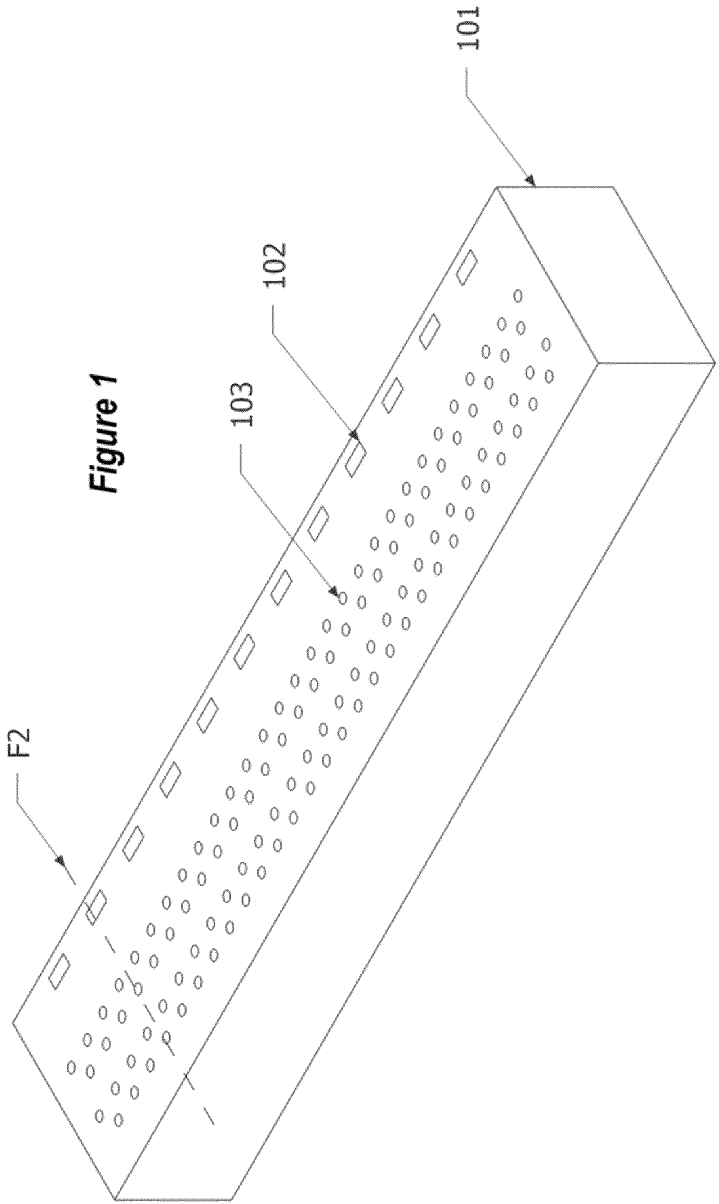


Figure 2

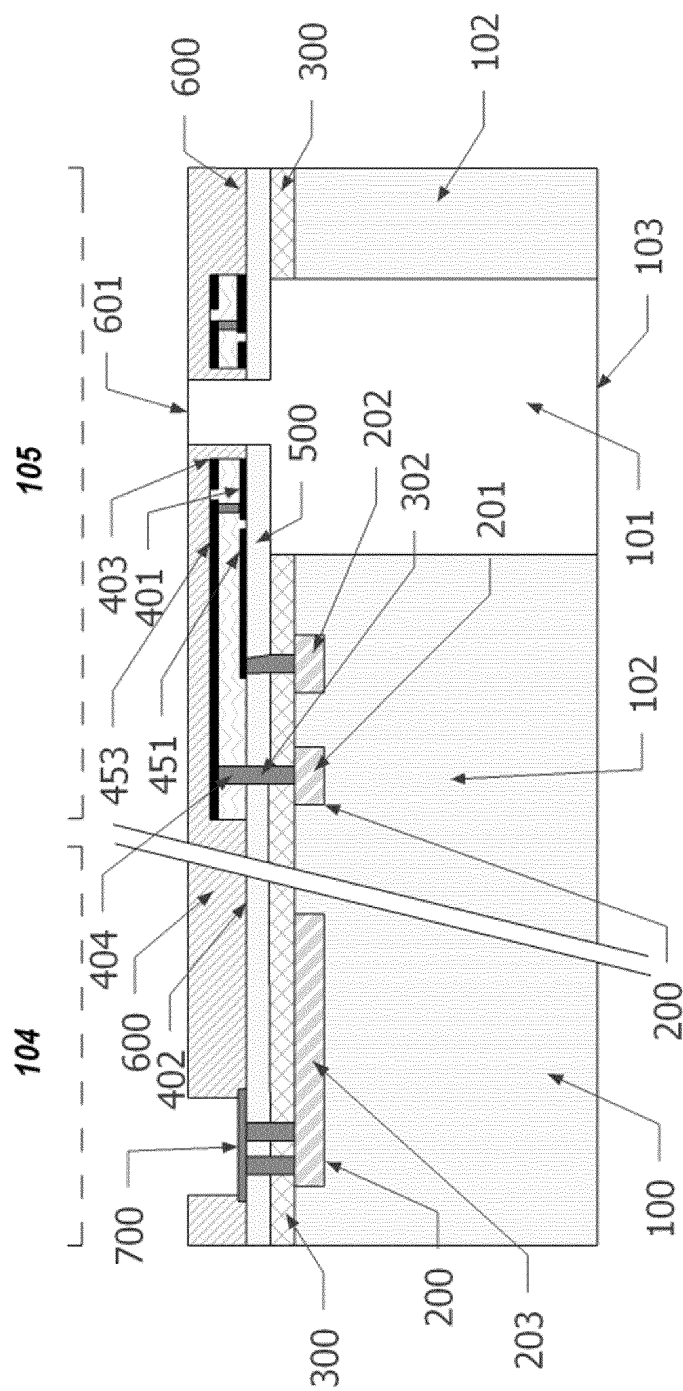
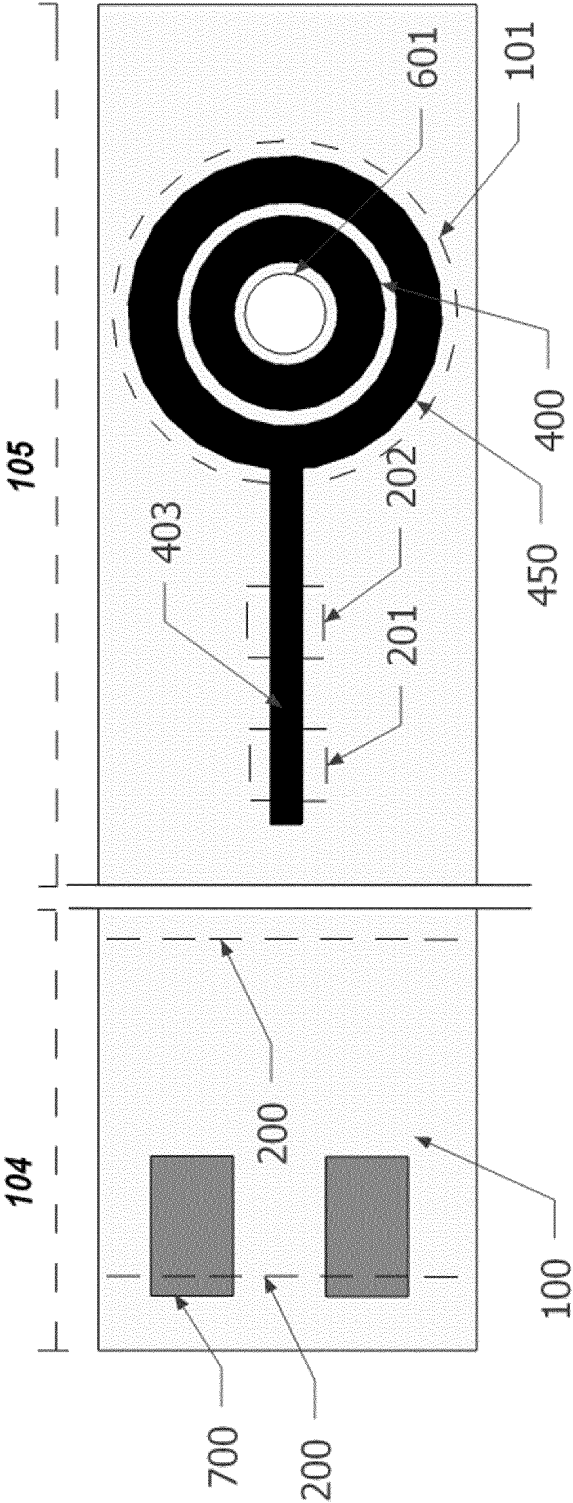


Figure 3



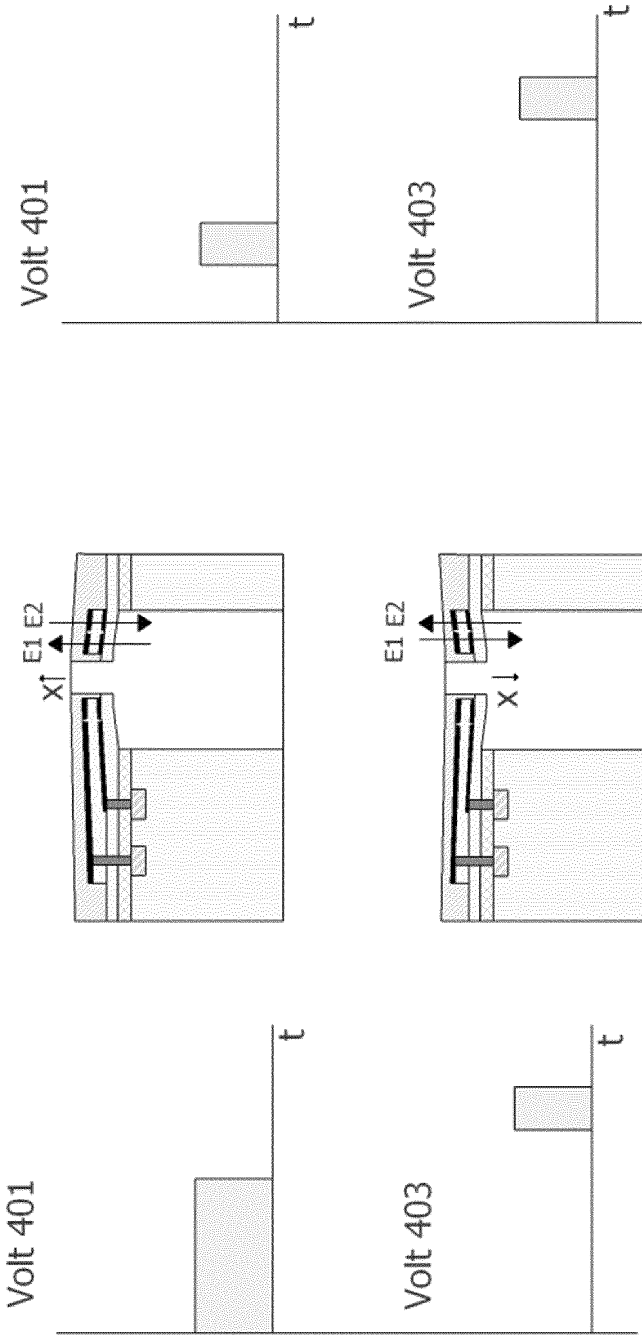


Figure 4(b)

Figure 4(a)

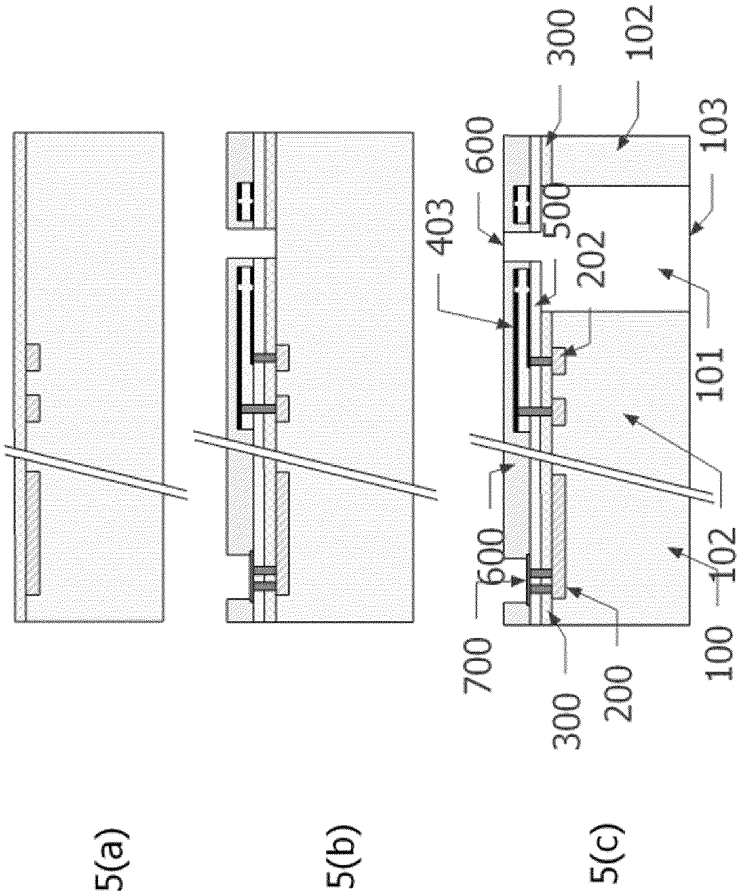
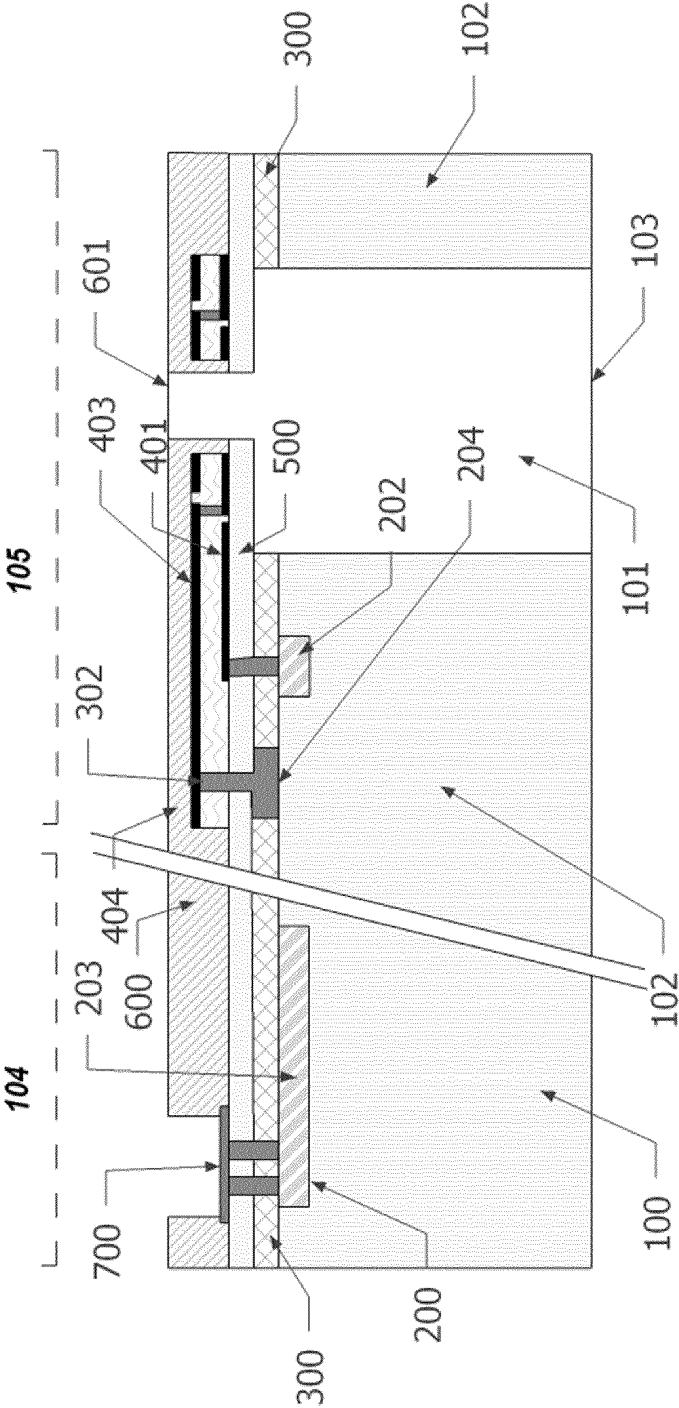


Figure 5

Figure 6



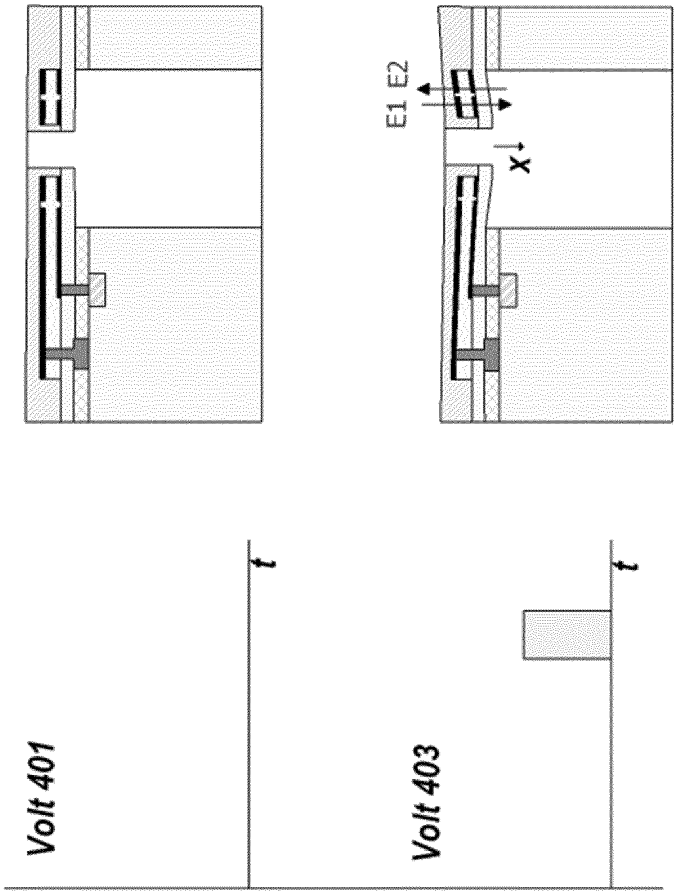


Figure 7

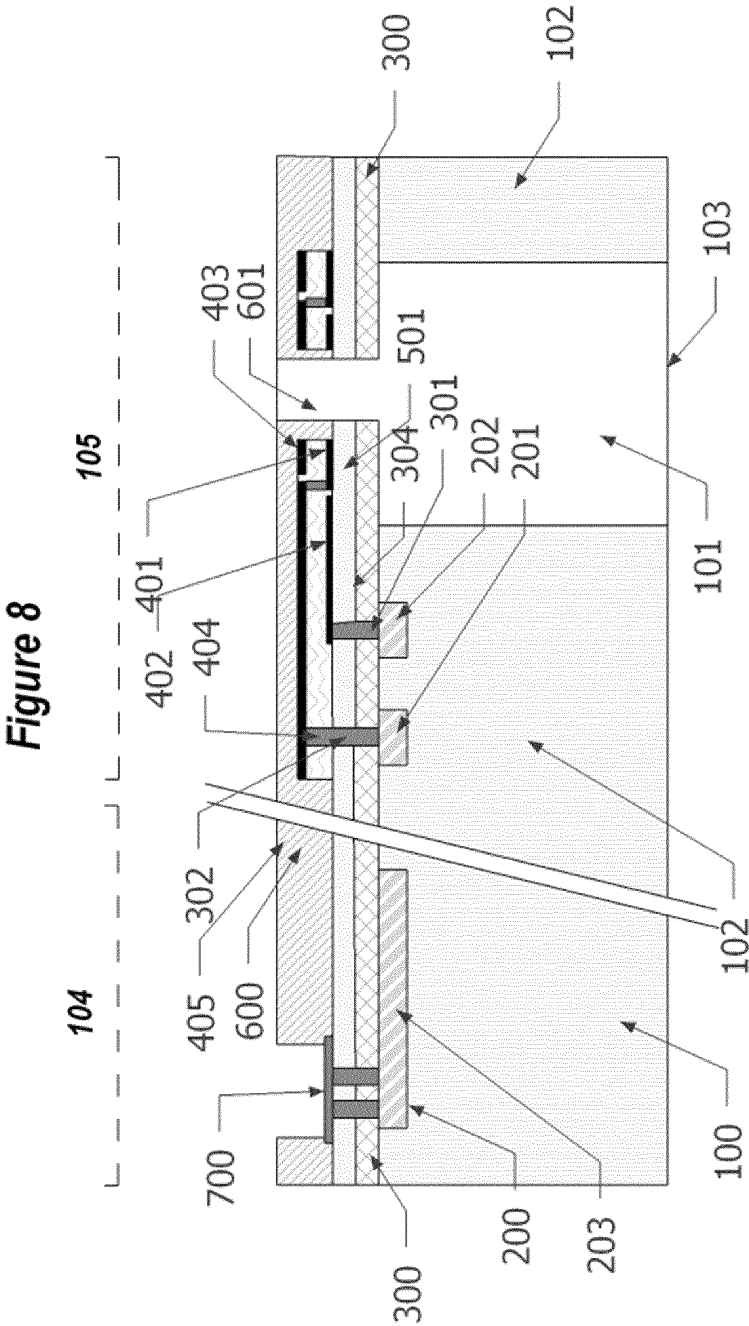
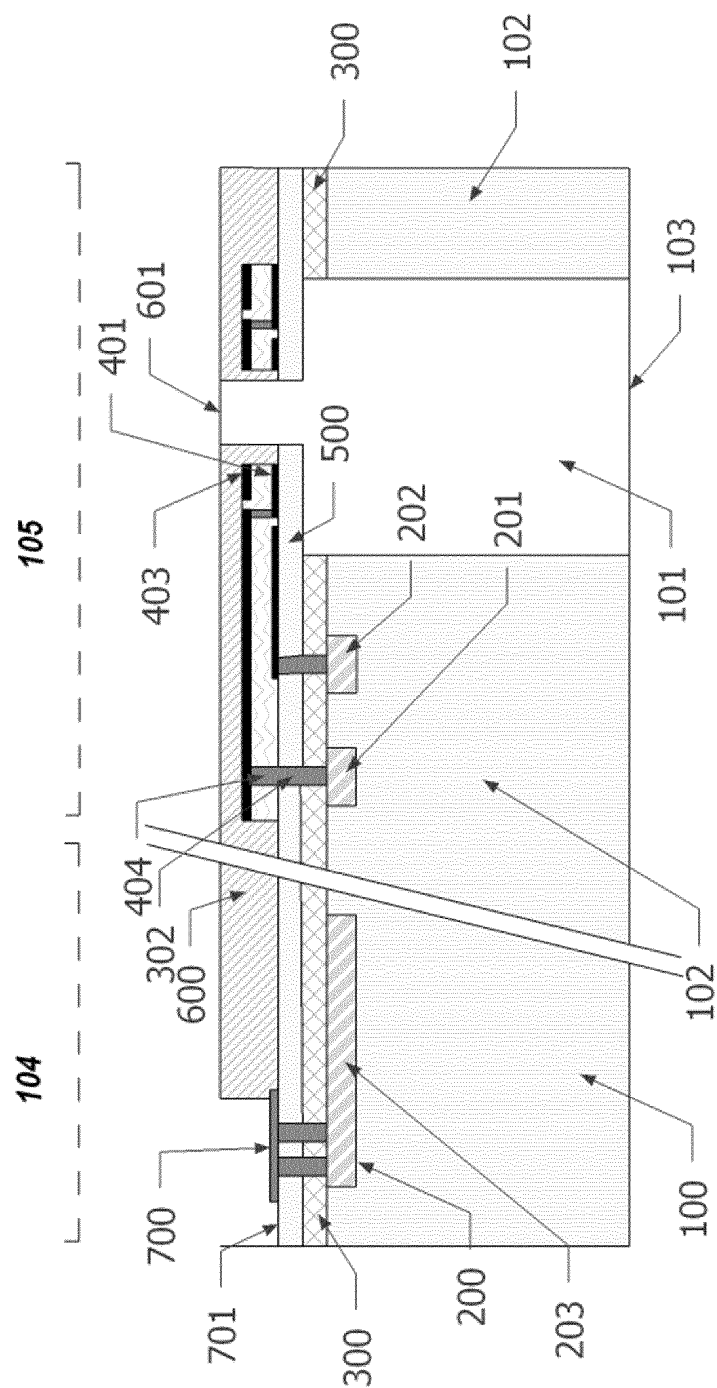


Figure 9



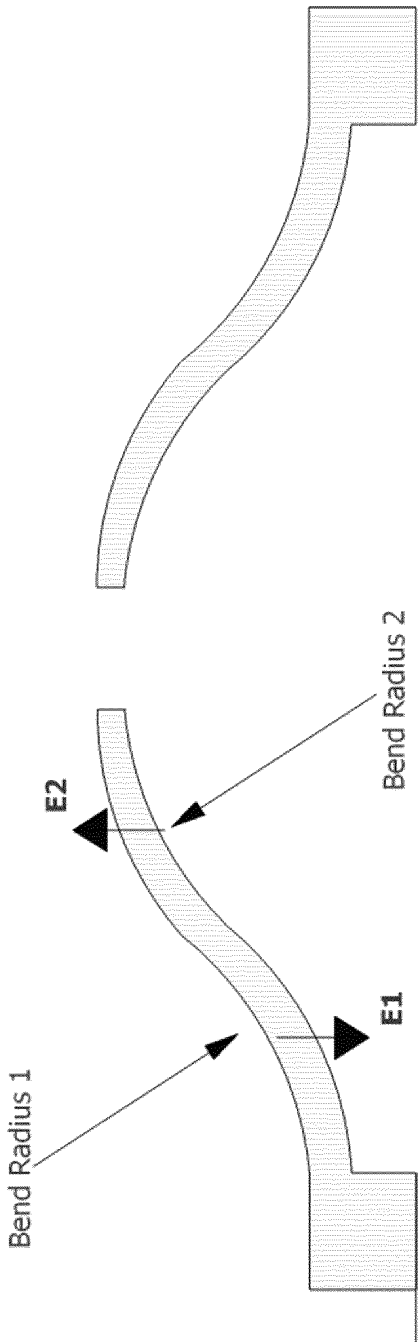


Figure 10

Figure 11

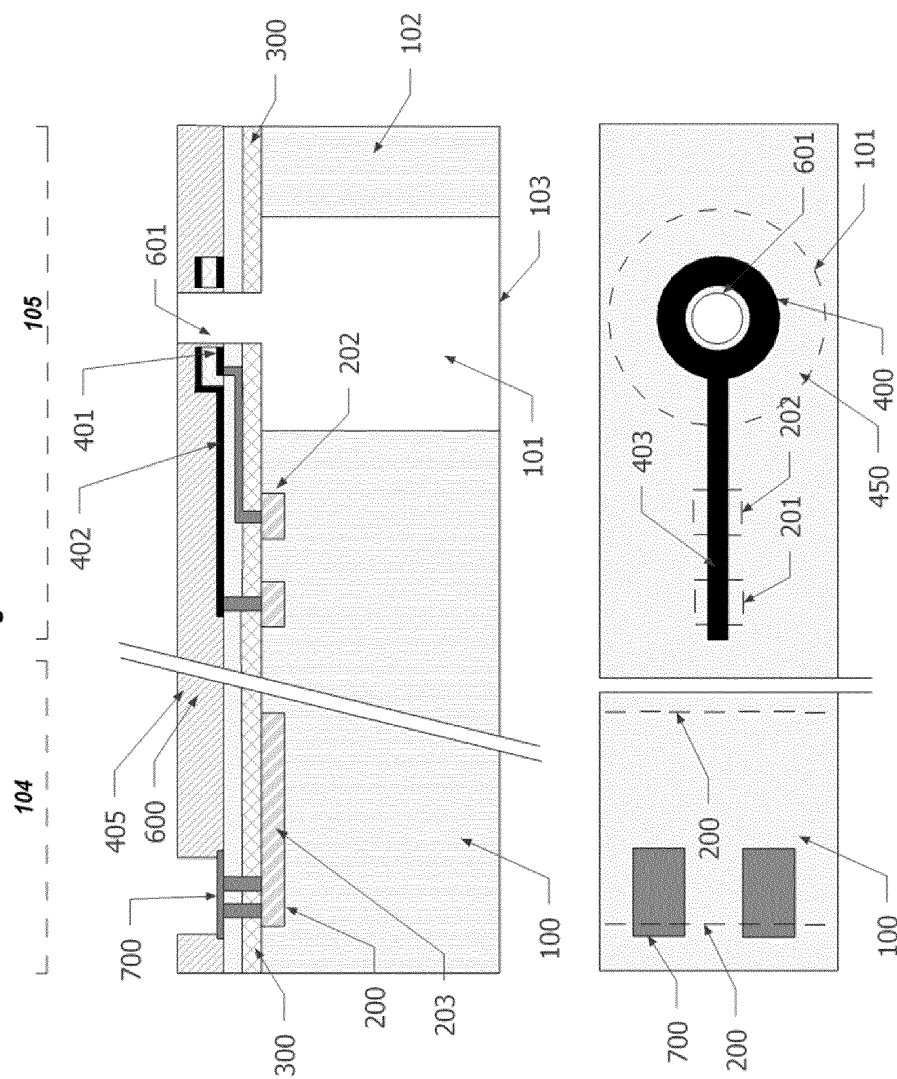


Figure 12

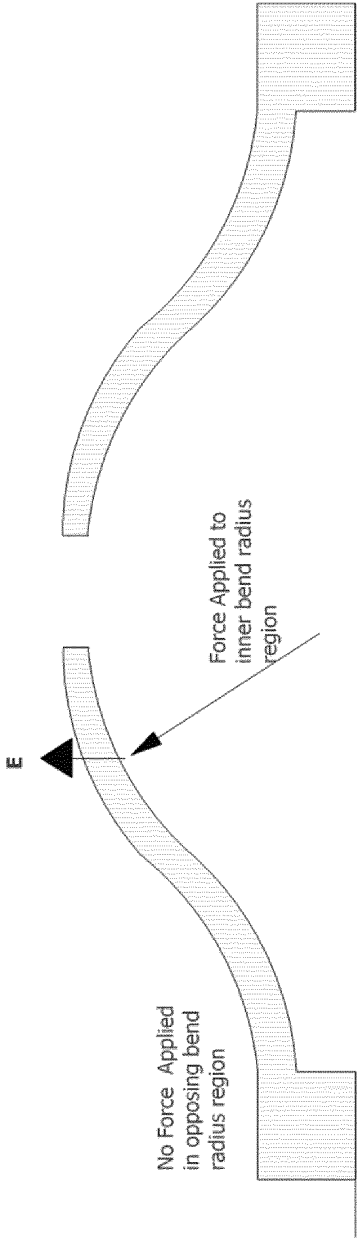
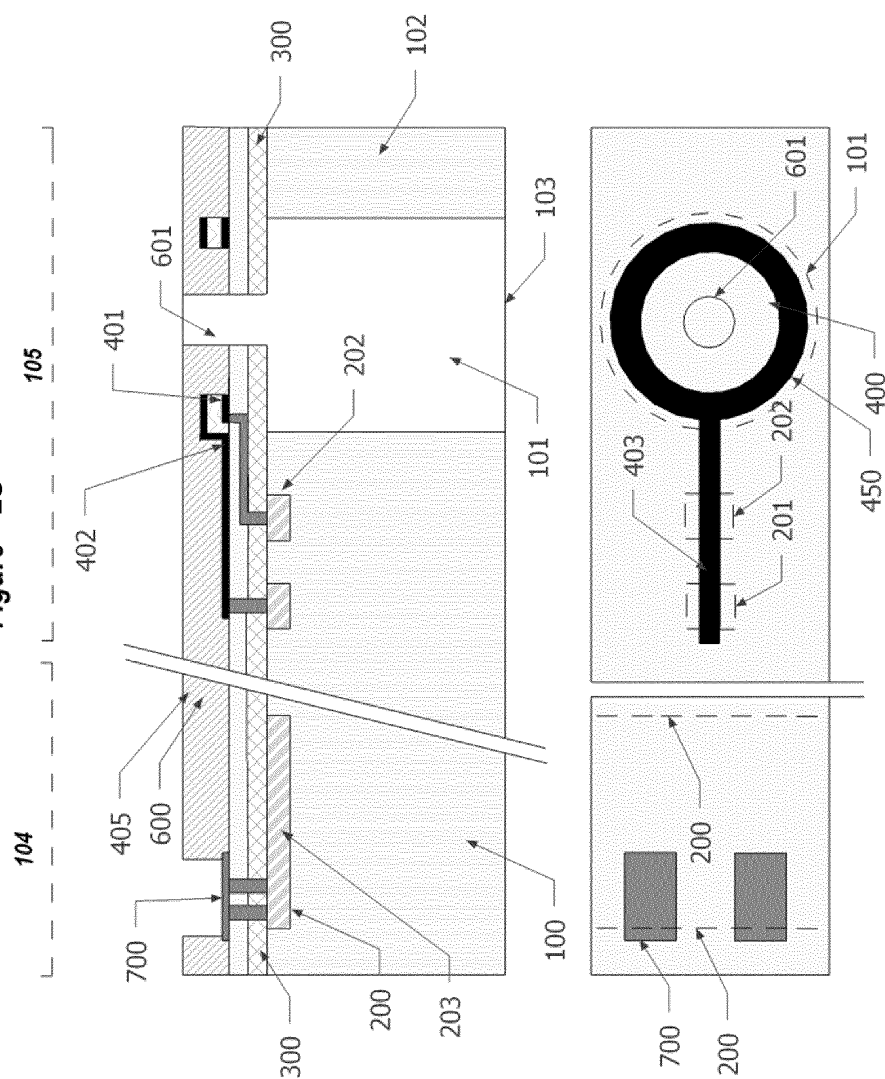
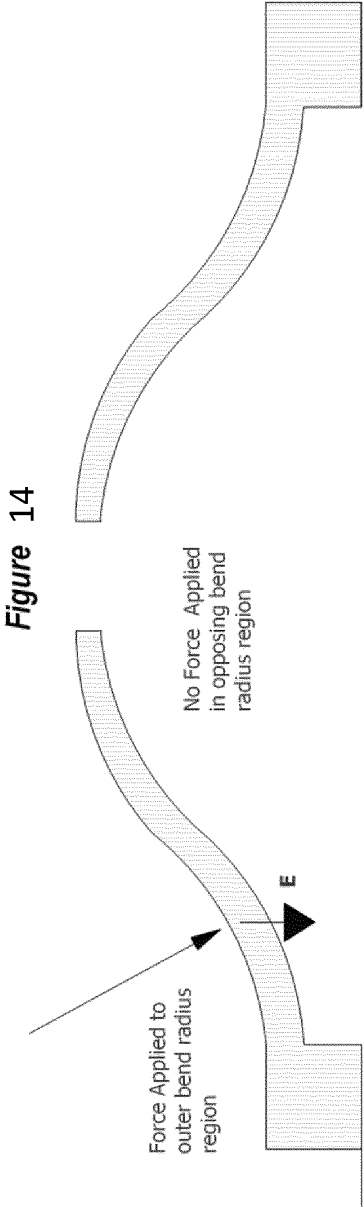


Figure 13





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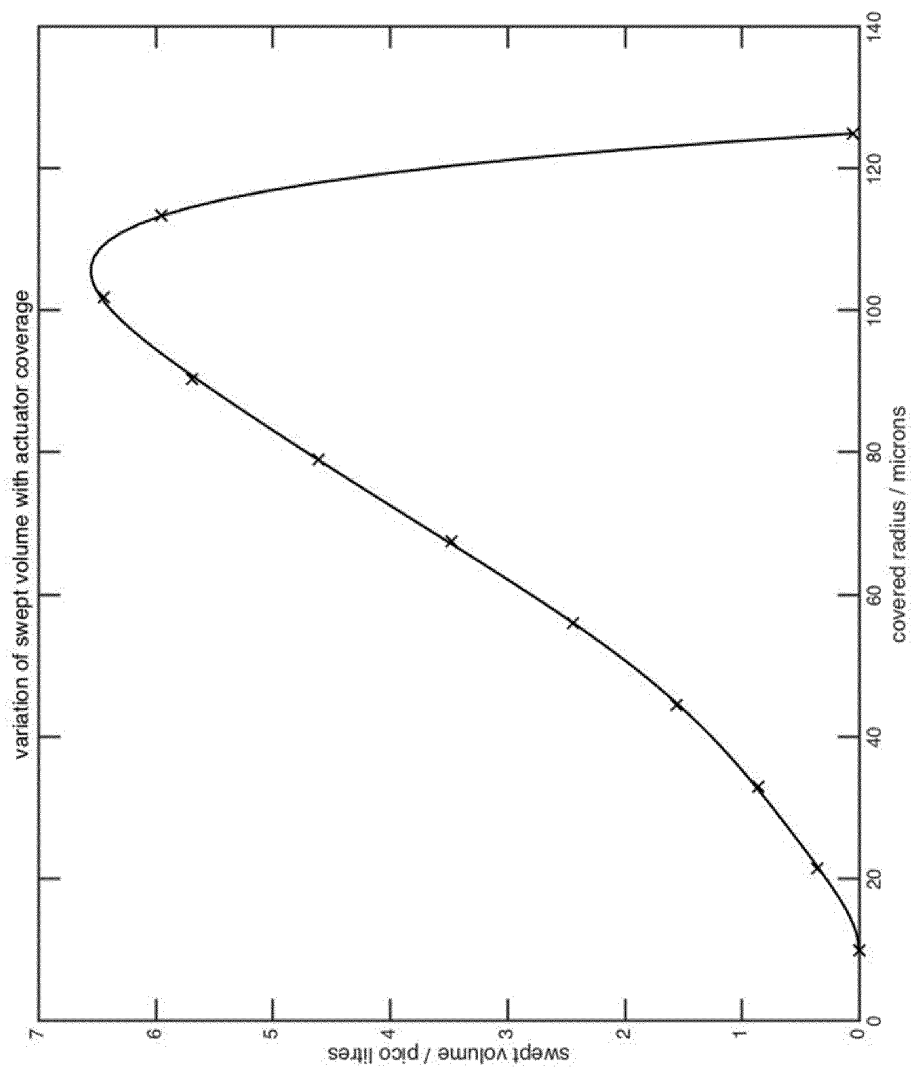


Fig. 15

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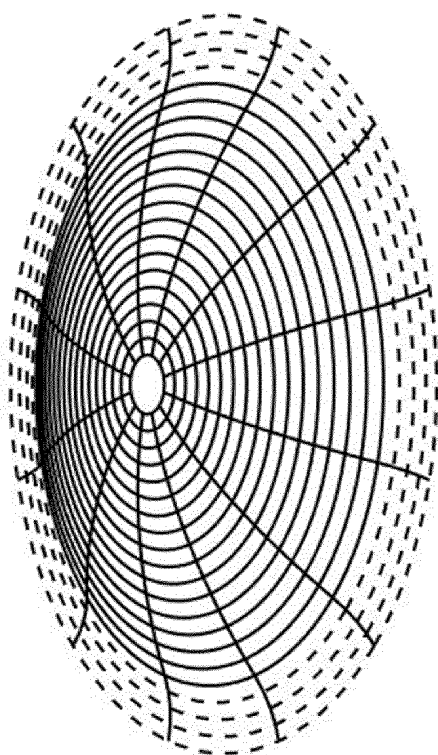


Fig. 16

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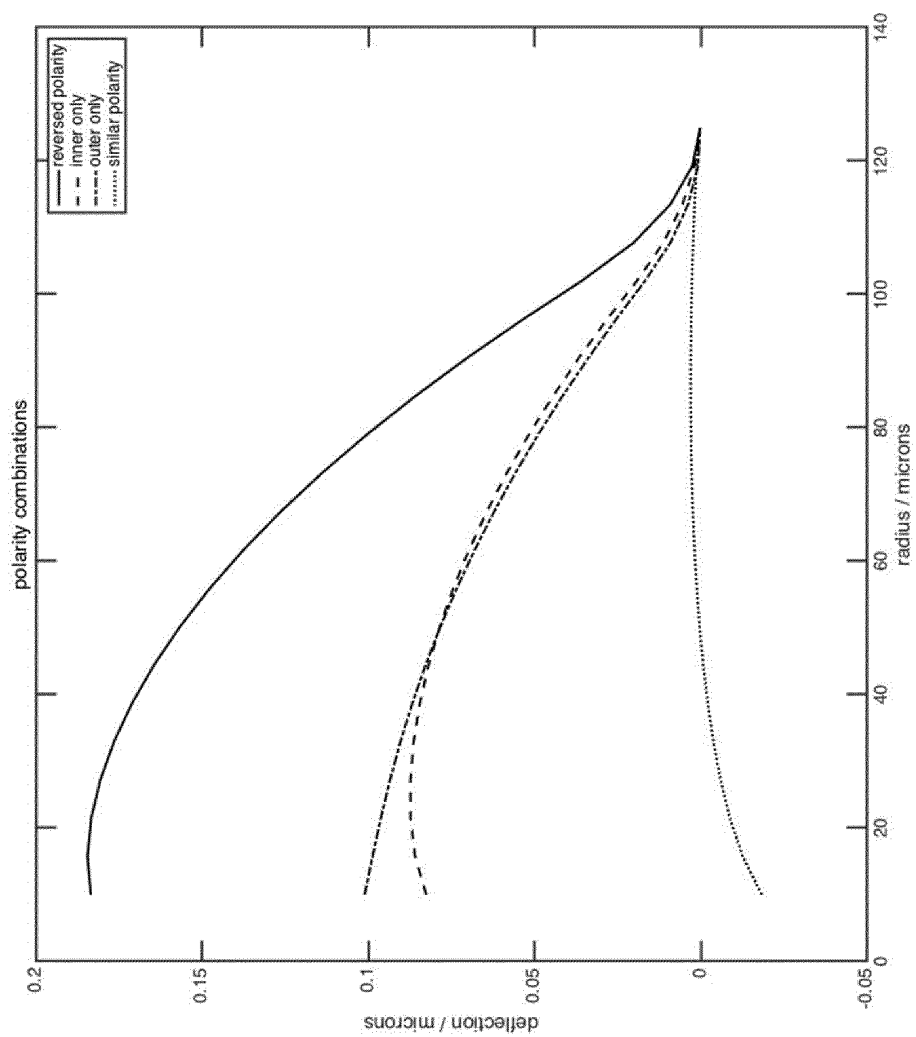


Fig. 17

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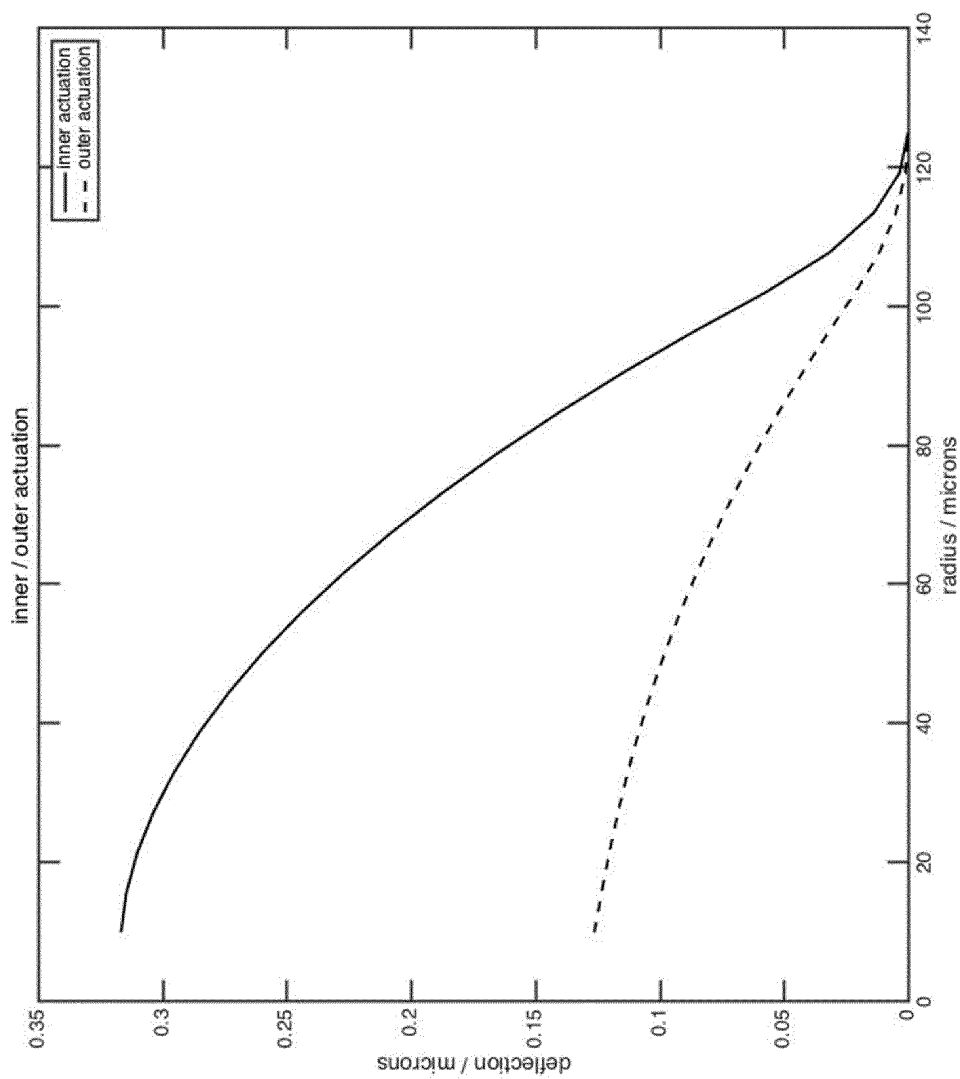


Fig. 18

Material	Deposition Method	Peak Temperature	CMOS compatability	d ₃₁ (pC/N)
PZT	PVD + Anneal + Poling	>450°C	No	-152 to -259
PZT	Sol Gel + Anneal + Poling	650°C	No	-116
ZnO	PVD	Room Temp	Yes	-3.3
AlN	PVD	200° C	Yes	-1.9
ScAlN	PVD	Room Temp	Yes	-5.8

Table 1