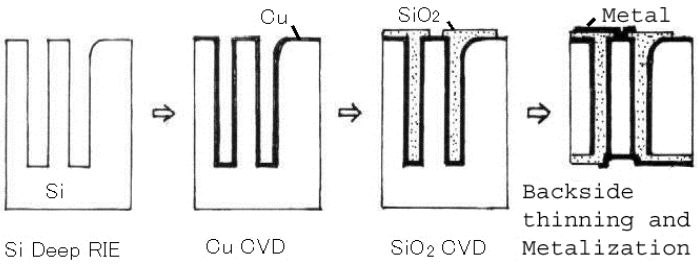
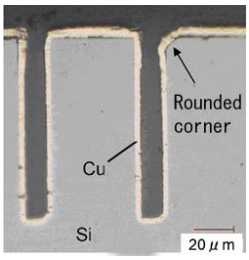
# Deposition



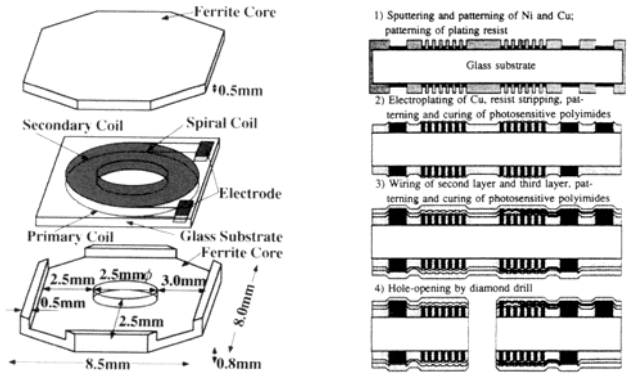


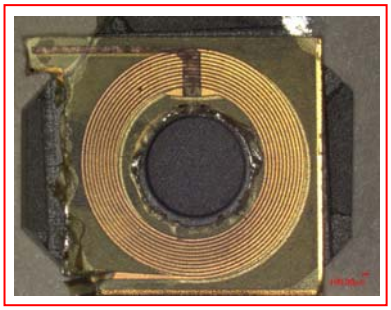
Electrical interconnection through Si wafer for high speed signal, (Tohoku Univ. – Sharp Inc.)

Cu conformal CVD

Ozone TEOS $SiO_2$ CVD (Trench refill)

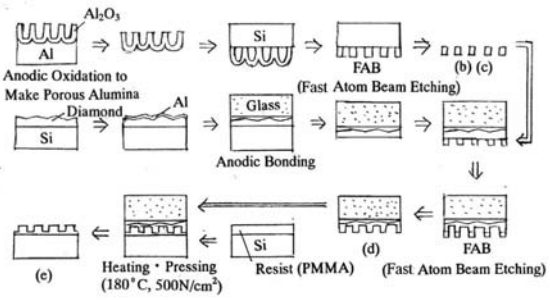
Reference : M.Sumikawa and M.Esashi, Electrical interconnection through Si wafer for high speed signal , 19th Electronic packaging Convention (2005) pp.117-118

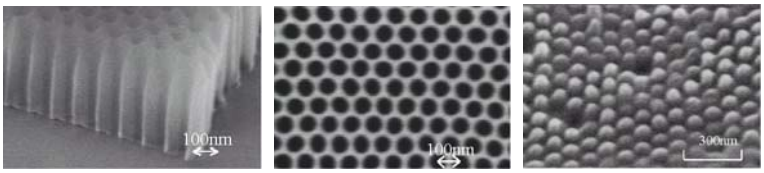


Planar transformer using electroplated coil (Tohoku Univ. – Japan Signal)

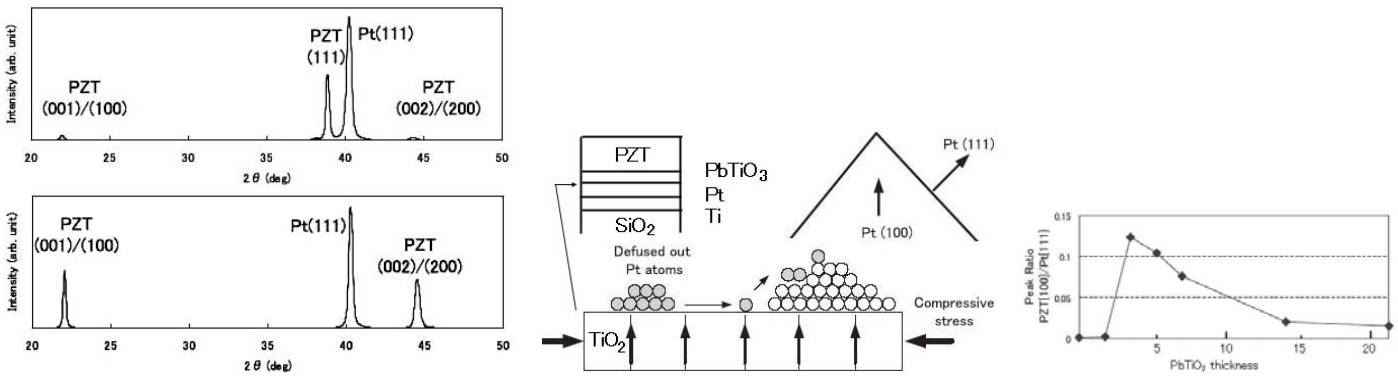
Reference : N.Asada, H.Matsumoto and M.Esashi, A Fail-Saif Logic Operator Using an Insulated Planar Transformer, Trans. of IEE in Japan, 114-A (1994) pp.255-259




Nanoimprint using diamond mold (b) (c) (d)

Reference : T.Ono, C.Konoma, H.Miyashita, Y.Kanamori and M.Esashi, Pattern Transfer of Self-Ordered Structure with Diamond Mold, Jpn. J. Appl. Phys., 42, Part 1 (2003) pp.3867-3870




(100) oriented PZTfilm by LD MO (Liquid Delivery Metal Organic) CVD (Tohoku Univ. – Japan Signal)

Reference : H.Matsuo, Y.Kawai, S.Tanaka and M.Esashi, Investigation for (100)-/(001)-Oriented $Pb(Zr,Ti)O_3$ Films Using Platinum Nanofacets and $PbTiO_3$ Seeding Layer, Jap. J. Appl. Phys, 49 (2010) 061503