II. DIFFERENCE BETWEEN FLOATING SURFACE AND PINNED SURFACE BURIED PHOTODIODES

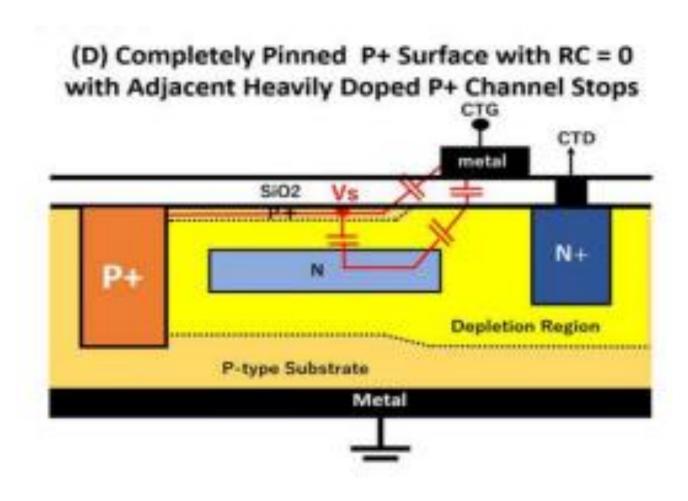


Fig.4 Difference of Buried Photodiode and Pinned Photodiode

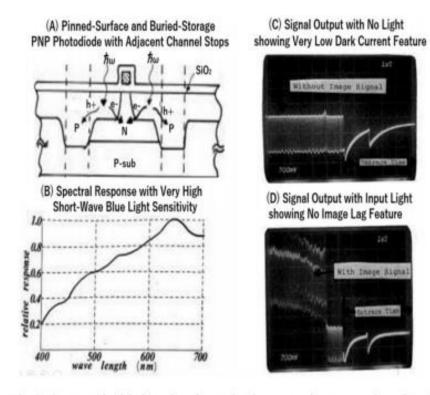


Fig 8 The PNP double junction dynamic photo transistor type Pinned Buried Photodiode reported at SSDM1978 in Tokyo. Sony was working secretly on the critical image-lag problem since 1975 and had no image lag problem completely by 1980 while other companies were suffering image lag problems with the N+P floating-surface single-junction type photo sensor with poor blue light sensitivity.

[5] Y. Hagiwara, Motoaki Abe and Chikara Okada,"A 380H X 488V CCD Imager with Narrow Channel Transfer Gates", Proceeding of the 10th Conference on Solid StateDevices, Tokyo 1978.