

No Image Lag Feature

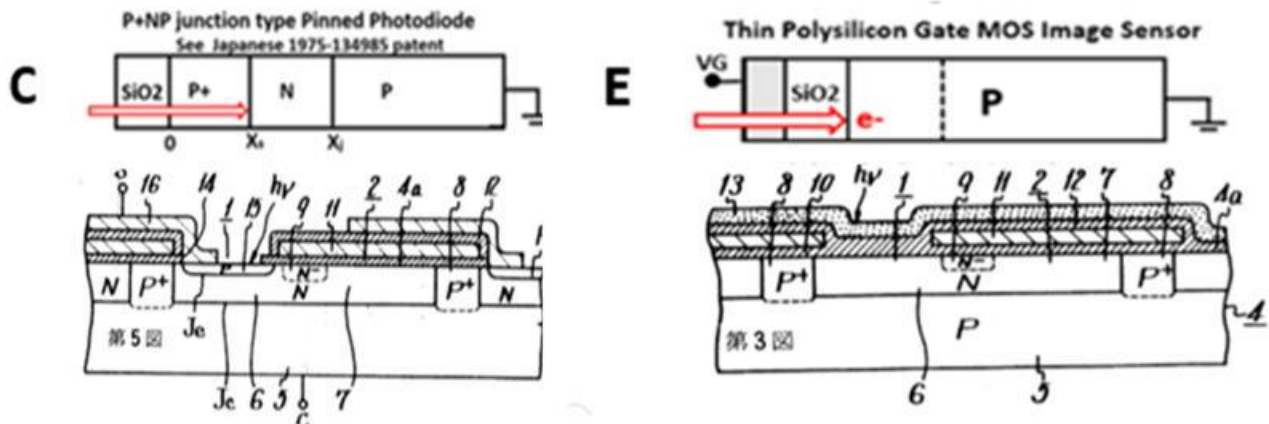


Fig. 6: Cross sectional views of Type C P+NP junction Pinned Photodiode sensor, Type E MOS capacitor photo sensor



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Figure 6 shows the Cross sectional views of the type C of the P+NP junction Pinned Photodiode sensor and Type E of the MOS capacitor photo sensor in comparison.

Both structures do not have the image lag problems.

However, the Type C of the P+NP junction Pinned Photodiode sensor has, in this example, the external metal contact pin as an option to achieve the vertical overflow drain, that is, the VOD function.

But it is very clear that the surface P layer can be connected to the adjacent P+ channel stops instead, if the VOD function was not necessary.

In search for the low leakage and low dark current device, related various historical silicon related photodiode structures now have been reviewed.