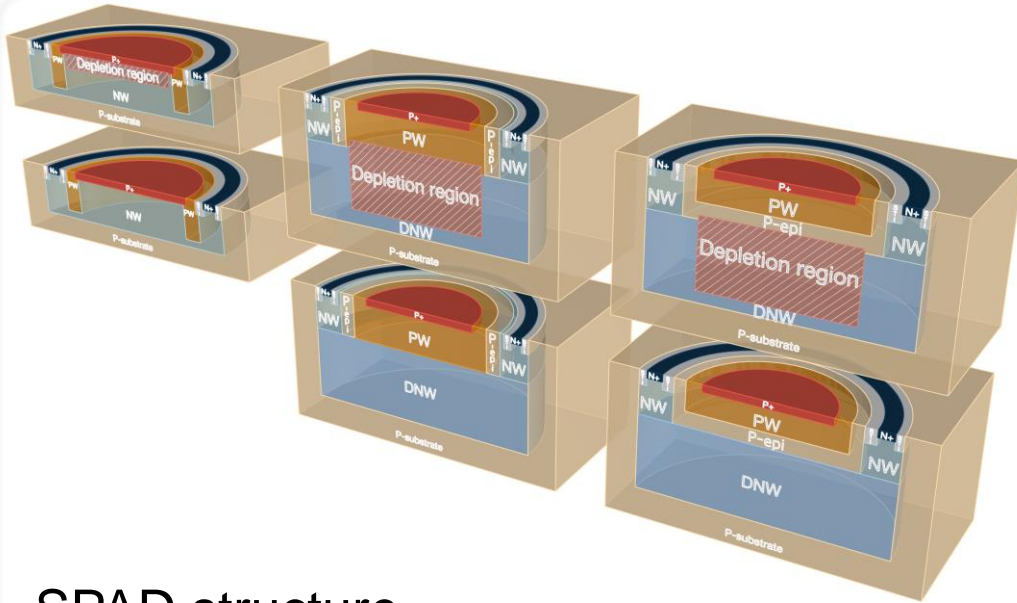


Single - photon avalanche diode

>> High sensitivity

>> Low noise

SPAD (Single-photon avalanche diode) / ToF (Time of Flight) Sensor



SPAD structure

1) Junction

- P+/NW
- PW/NW
- P-I-N structure

2) Guardring

- PW
- P-epi

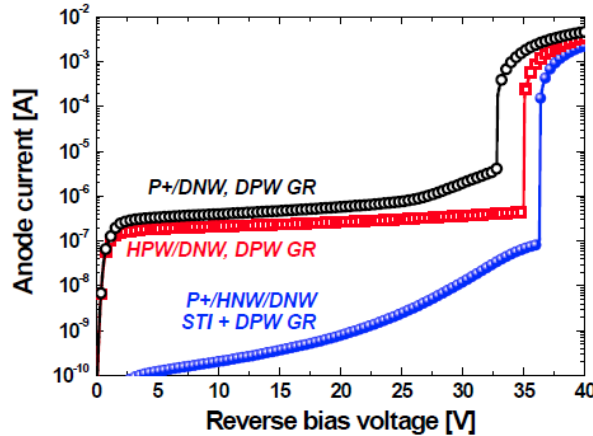
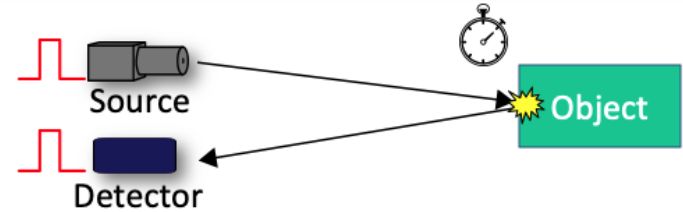
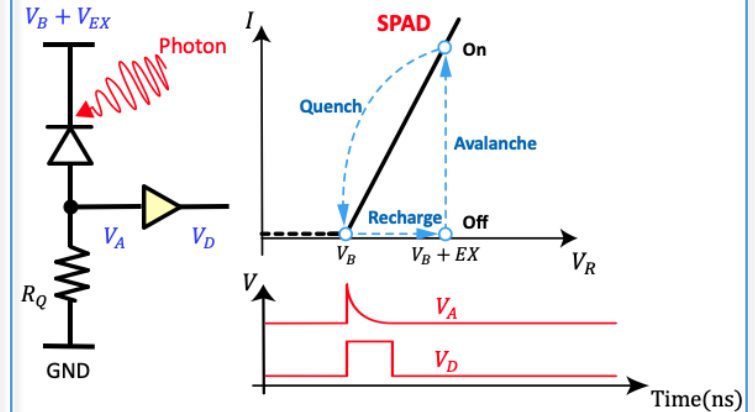


Figure 16. I-V measurement results of SPAD 296 (represented by black), SPAD 347 (represented by red), and SPAD 652 (represented by blue).



Very high gain of Geiger-mode operation allows for **Single Photon Detection**

Digital nature of SPAD output allows for **Time-of-Arrival Detection & Photon Counting**