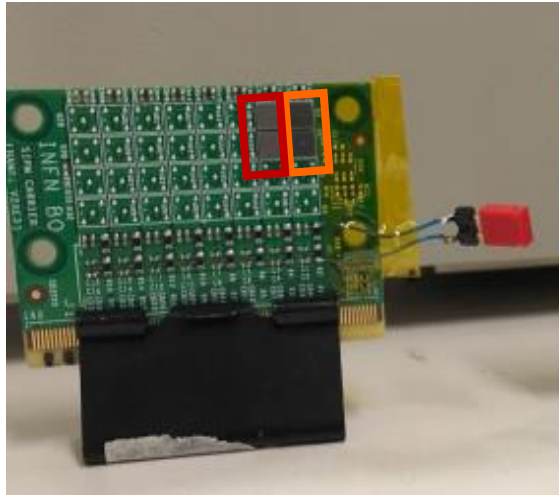


# UPDATE on Direct current annealing

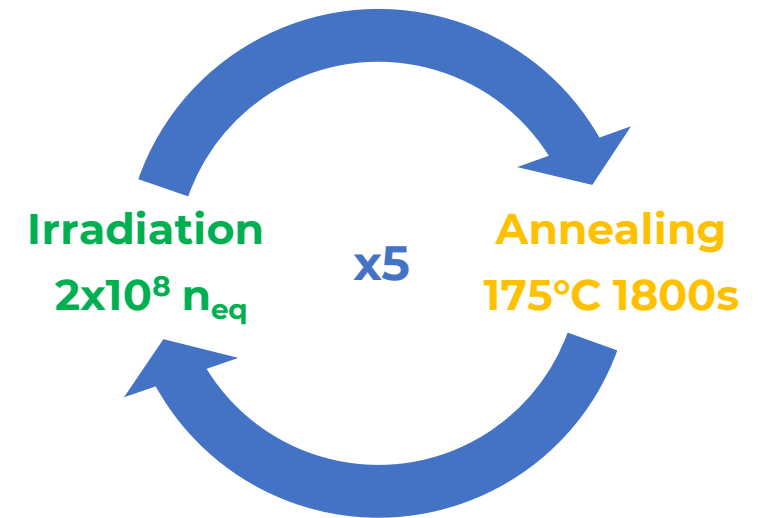
HAMA1L board equipped with **HPK S13360**  
irradiated for a total of  $10^9 n_{eq}$



2 kind of direct current annealing:

- **Online** for the **3050** (50um spad)
- **Offline** for the **3025** (25um spad)

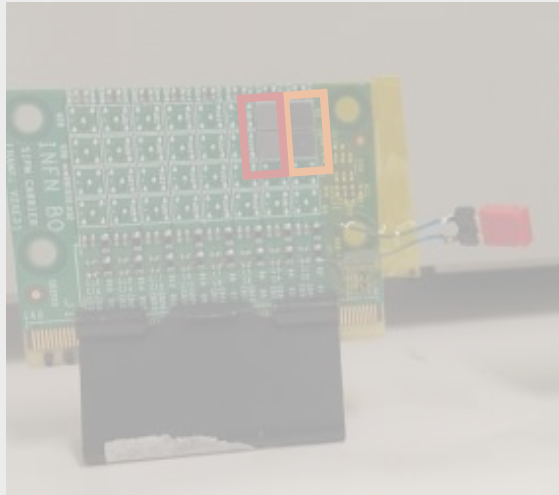
**Online:** irradiation divided in **5** cycles interleaved  
by direct current annealing @**175°C** for 30 min  
(**2.5h** total)



**Online:** two phase annealing in Bologna. @**175°C**  
for 30 min and 175°C for 2 h (**2.5h** total)

# UPDATE on Direct current annealing

HAMA1L board equipped with HP  
irradiated for a total of  $10^9$  n



radiation divided in **5** cycles interleaved  
current annealing @**175°C** for 30 min  
(**2.5h** total)



2 kind of direct current annealing

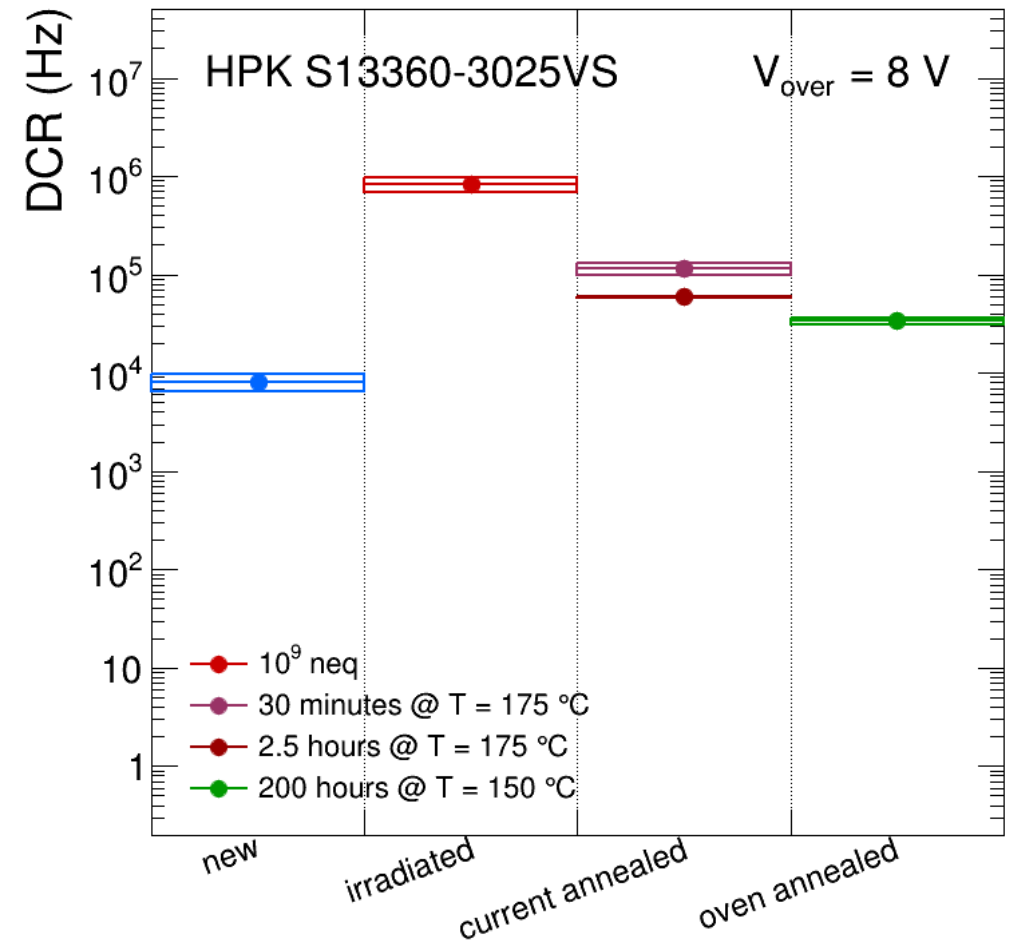
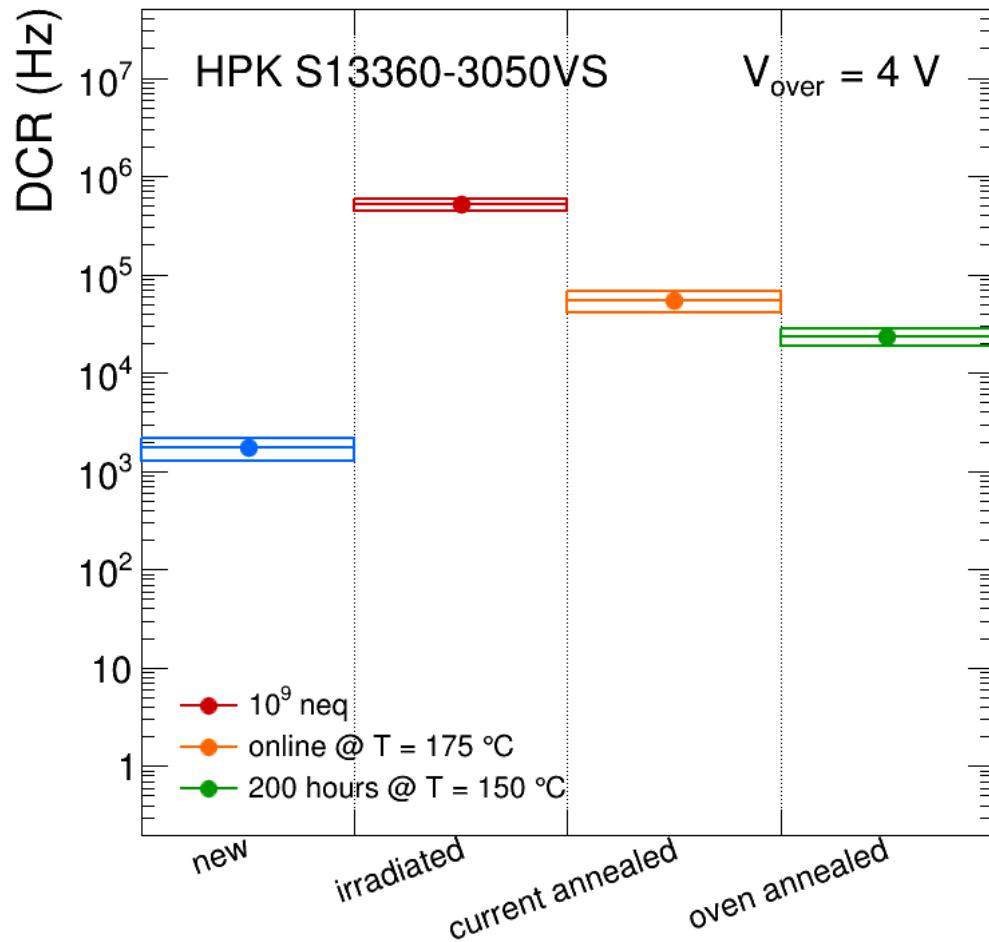
- **Online** for the **3050** (50um sp)
- **Offline** for the **3025** (25um sp)

two phase annealing in Bologna. @**175°C**  
for 30 min and 175°C for 2 h (**2.5h** total)

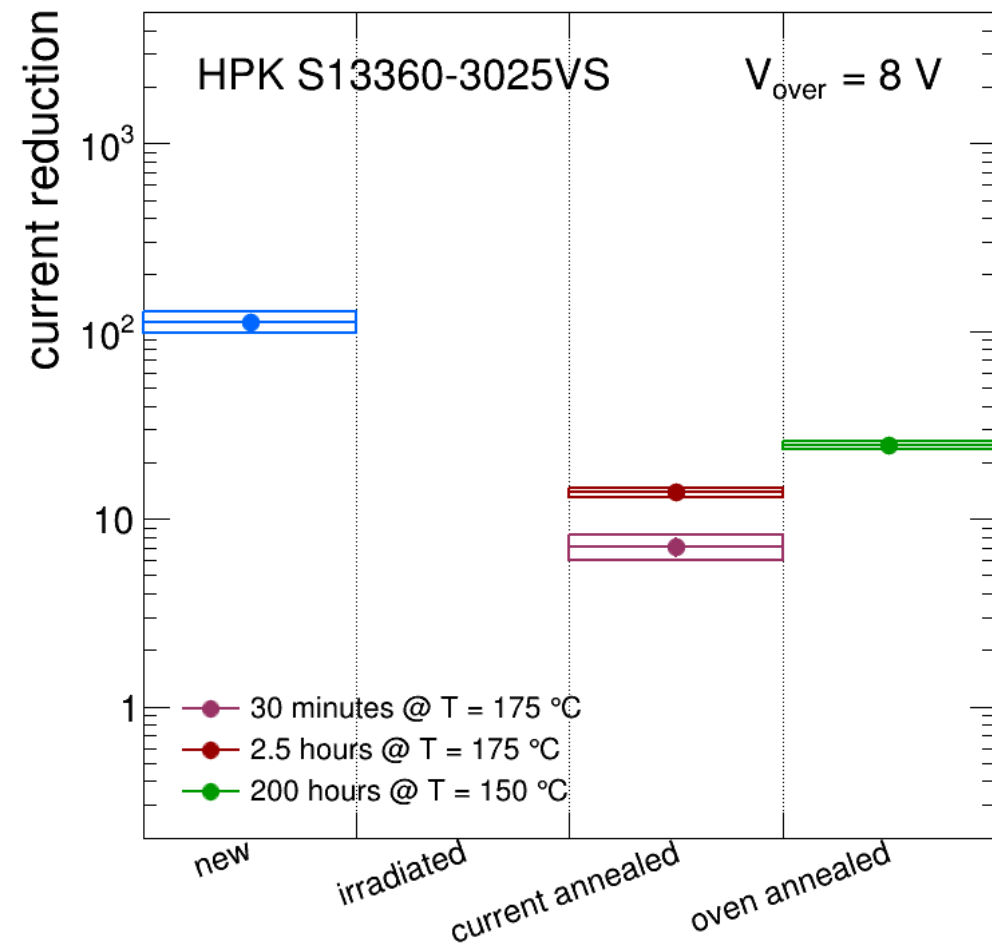
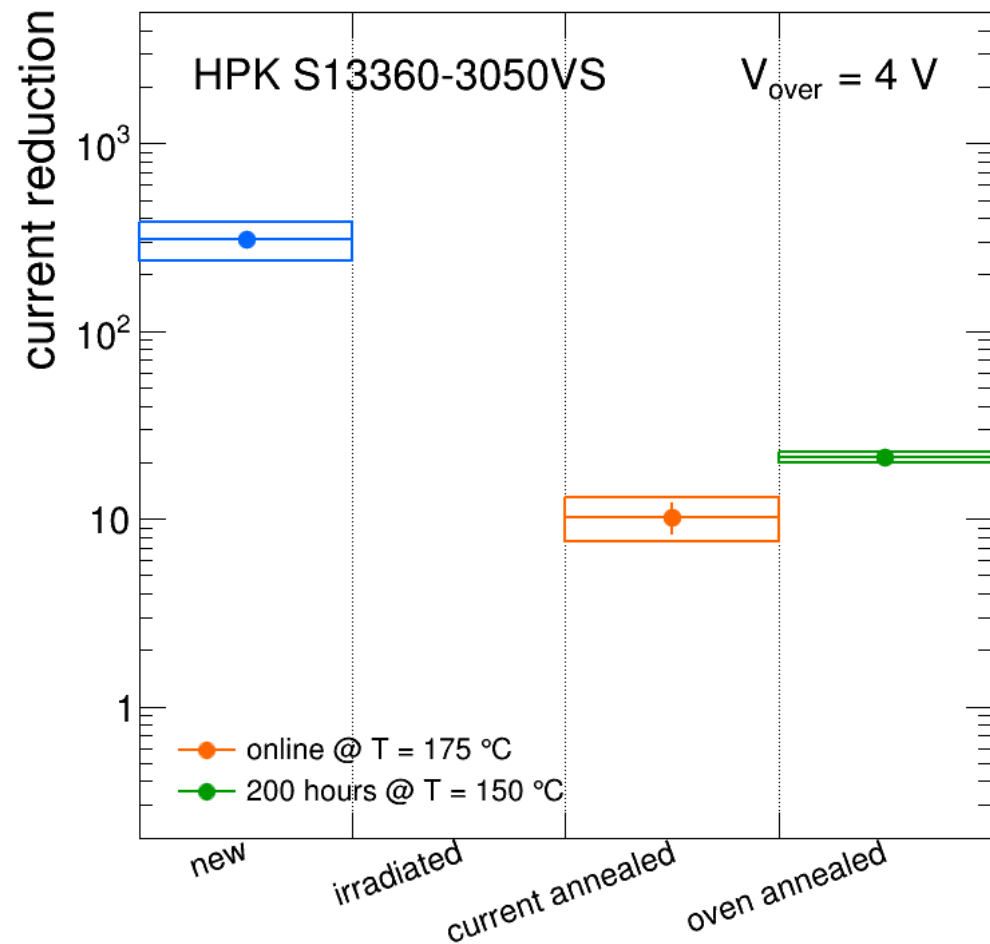
**Temperature monitored via a FLIR thermo-camera  
calibrated with Luca Barion**

2% uncertainty

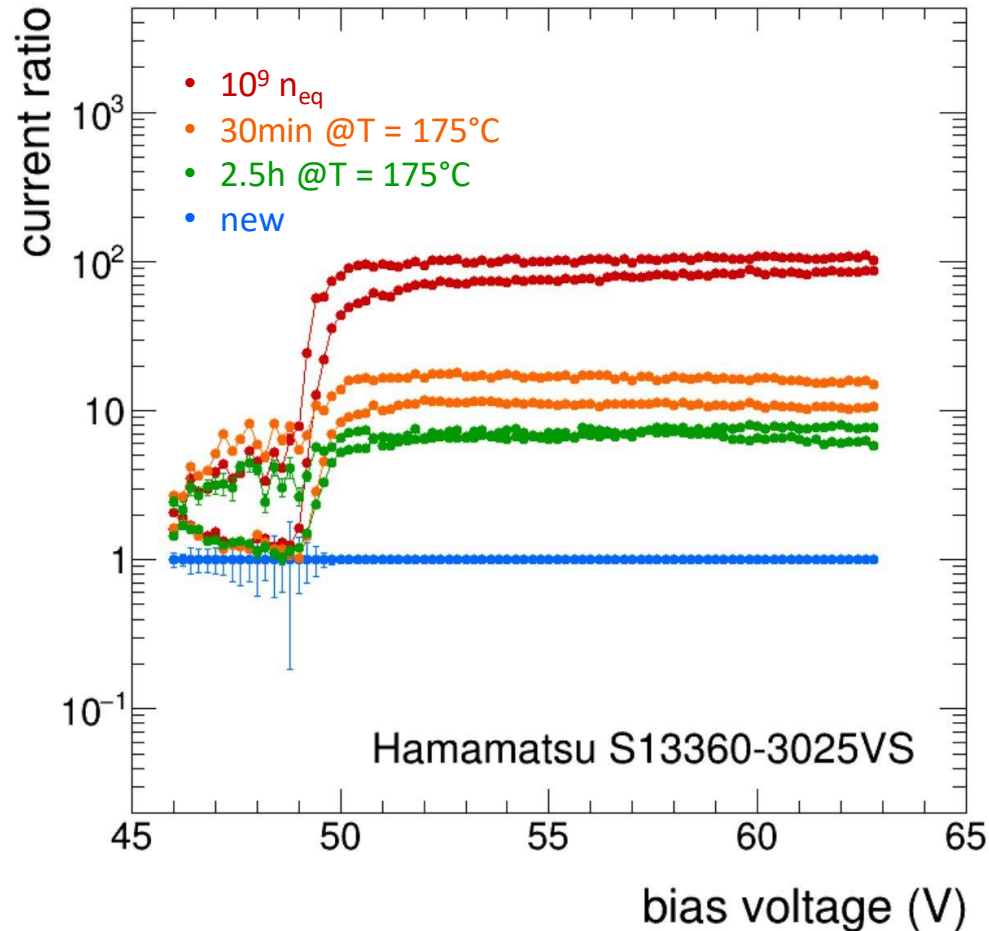
# Results: Direct current annealing (DCR)



# Results: Direct current annealing (Current reduction)



## Results: Direct current annealing 3025 details



In the first **30 min** of annealing, a factor  $\approx 7$  of dark current is recovered. In the next **2 hours**, only a factor  $\approx 2$  is recovered but the homogeneity is far better