Hybrid 5z148 Traveler

March 20, 2000

1 Connectivity

Repairs on shorts:
High resistance HV+ short to gnd in hybrid. Fixed by:

- removing 0 Ohm resistors, R11A and R11B, on right side
- scratching HV+ surface trace between HV resistor on left side and HV via at corner of trace
- adding a wire from HV+ pad on R11A on right side to HV resistor on left

Fixes for opens:

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 5Z148 has die: 142-026 142-027 142-028 142-029 142-030

3 Data Analysis Summary

The following summarizes the findings of the Burn-in data analysis program. The first chip in the readout name is numbered 0.

```
% Hybrid 5z148 classification info. Created 09:10:43 03/01/00

Hybrid 5z148 quality: good
Chip classification: good good good good good
Bad channels: none
Bad cells: none
Random bad capacitors: none
Channels at pedestal needed for DCMS: 32.7 34.6 36.3 36.7 33.6
```

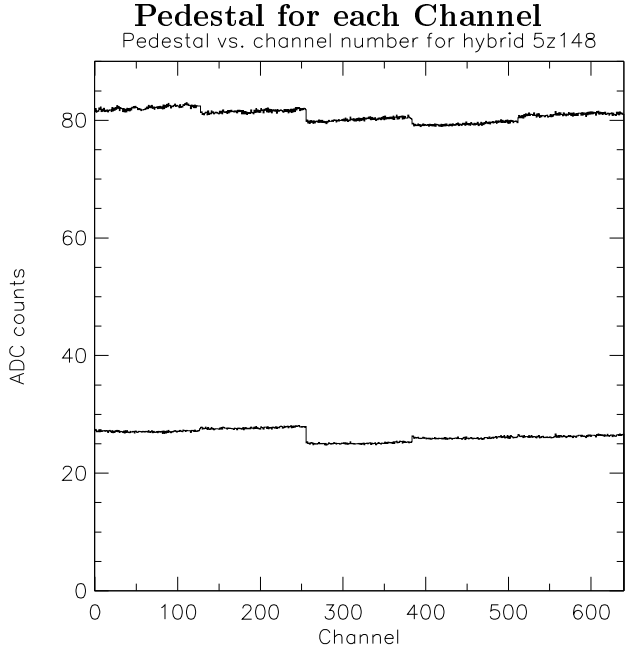
4 Comments

Encapsulated. FE DV finger gold bonds. HV short on green board.

5 Pedestal

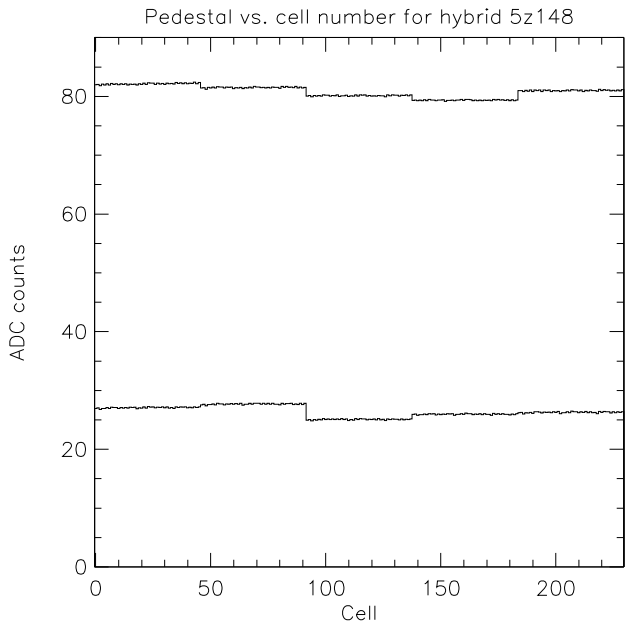
The following plot shows the pedestals vs. channel number with and without charge injection:

Pedestal for each Channel



The following plot shows the average pedestal vs. pipeline cell ID with and without charge injection. The x-axis is cell ID offset by 46 for each chip. Thus cell ID 5 for chip 1 is at x=5, chip 2 at x=51, chip 3 at x=97, etc.

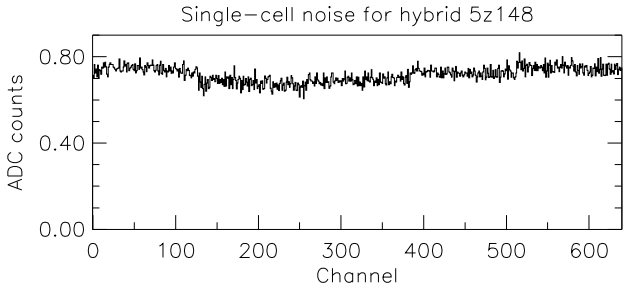
Pedestal vs. Pipeline Cell ID

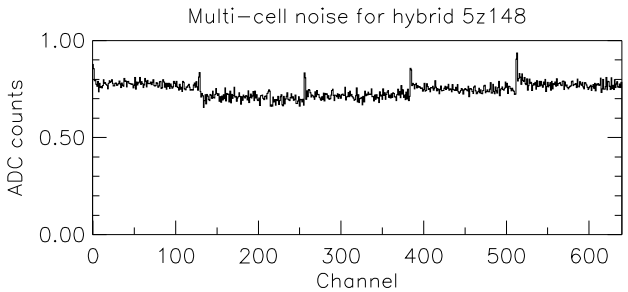


6 Noise

The following plots show the single-cell and multi-cell RMS noise:

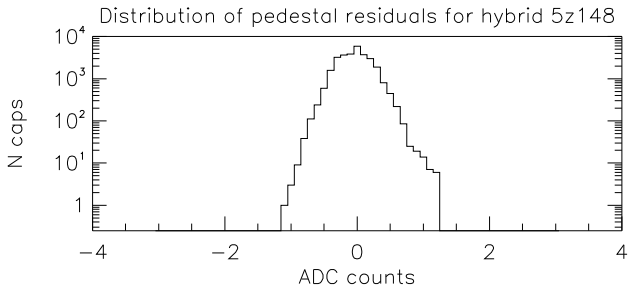
RMS Noise

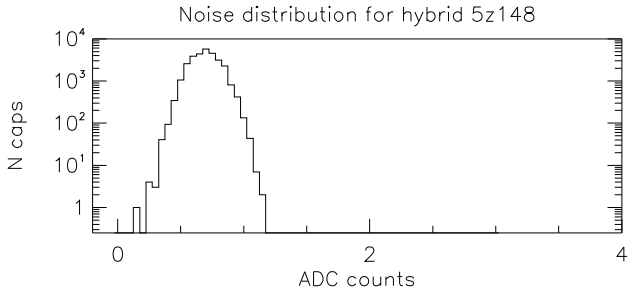




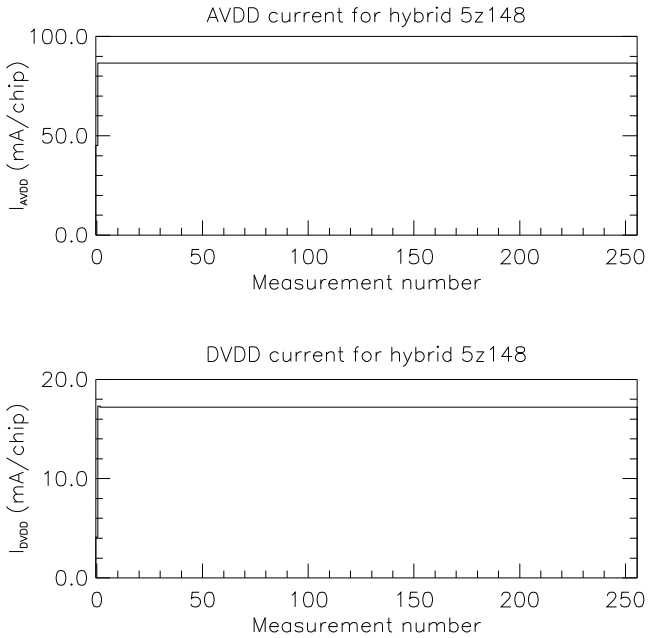
The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

Distribution of Pedestals and Noise





7 Currents

The following plots show the supply currents per chip as a function of measurment number. Currents are measured approximately every 10 minutes:

Supply Currents During Burn-in