Hybrid 4z38 Traveler

February 7, 2000

1 Connectivity

Repairs on shorts: Short between TN and Bus 0H, fixed by scraping through trace in between two 2-chip hybrids. Short between TN and Gnd; fixed by scraping through TN trace in solder field.

Fixes for opens:

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 4Z38 has die: 130-013 113-016 113-017 210-037

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 4z38 classification info. Created 11:33:43 02/04/00

Hybrid 4z38 quality: good
Chip classification: good good good good
Bad channels: none
Bad cells: none
Random bad capacitors: none
Channels at pedestal needed for DCMS: 32.7 35.6 33.7 27.7
```

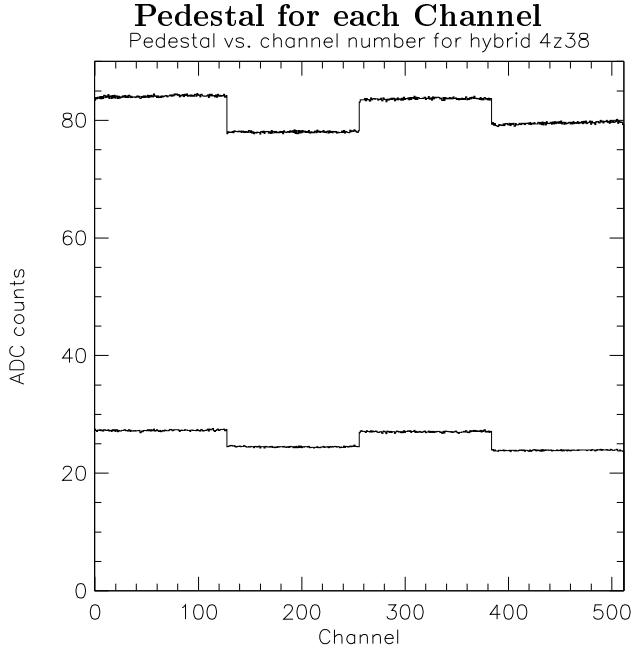
4 Comments

Short between TN and Bus0H, fixed by scraping through trace in between two 2-chip hybrids. Encapsulated. HV tested. Has Au FE DVDD and DGND wirebonds.

5 Pedestal

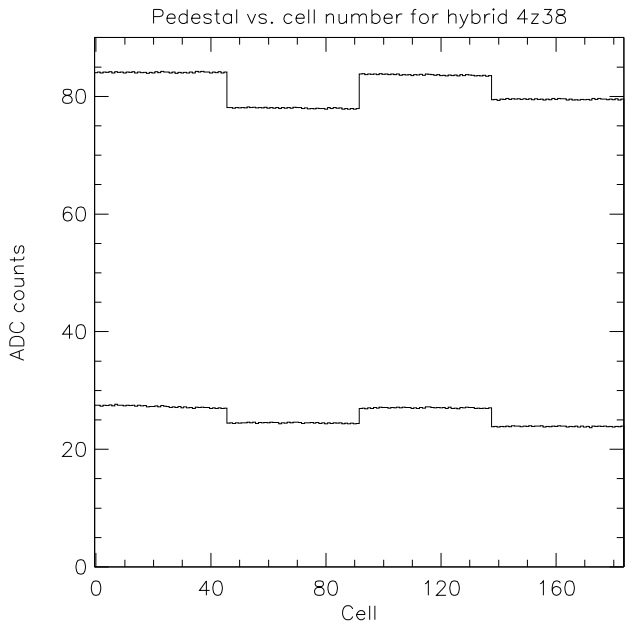
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

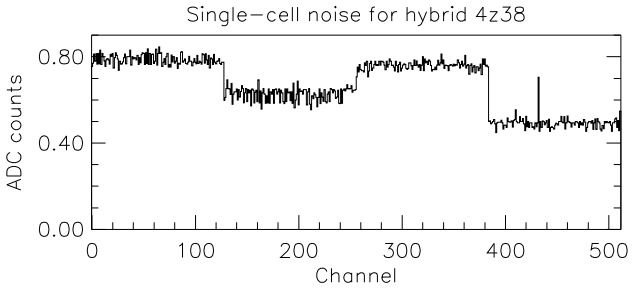
Pedestal vs. Pipeline Cell ID

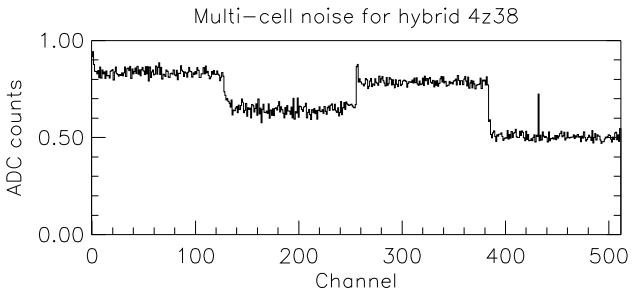


6 Noise

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

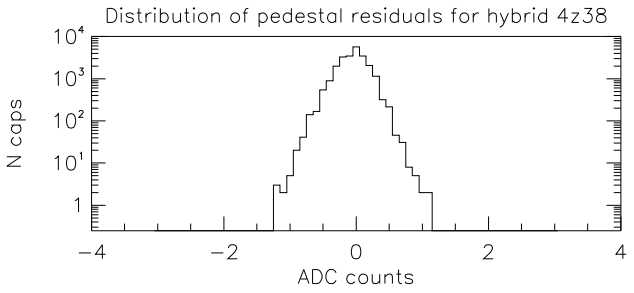
RMS Noise

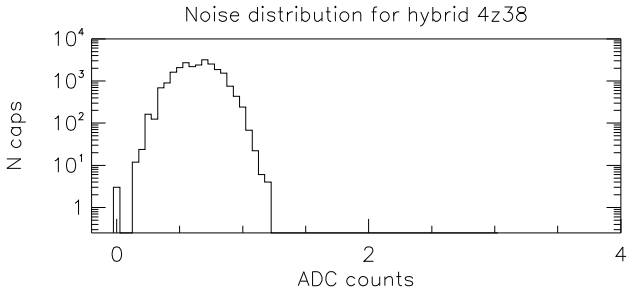




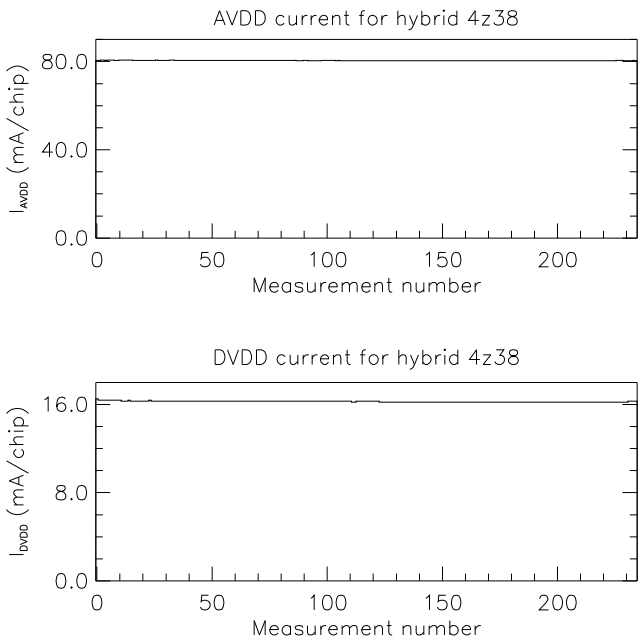
The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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