Hybrid 4z246 Traveler

May 12, 2000

1 Connectivity

Repairs on shorts:
Fixes for opens: HV short to Silicon pad: Fixed with Jumper wirebond.

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 4Z246 has die: 164-096 164-098 164-105 164-107

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 4z246 classification info. Created 09:43:02 05/11/00

Hybrid 4z246 quality: fair
Chip classification: fair fair good fair
Bad channels (chip-channel): 3-119
Bad cells: none
Random bad capacitors (chip-cell-channel): 0-31-121 0-43-106 1-18-115
   1-25-70
Channels at pedestal needed for DCMS: 32.6 31.7 32.6 49.7
```

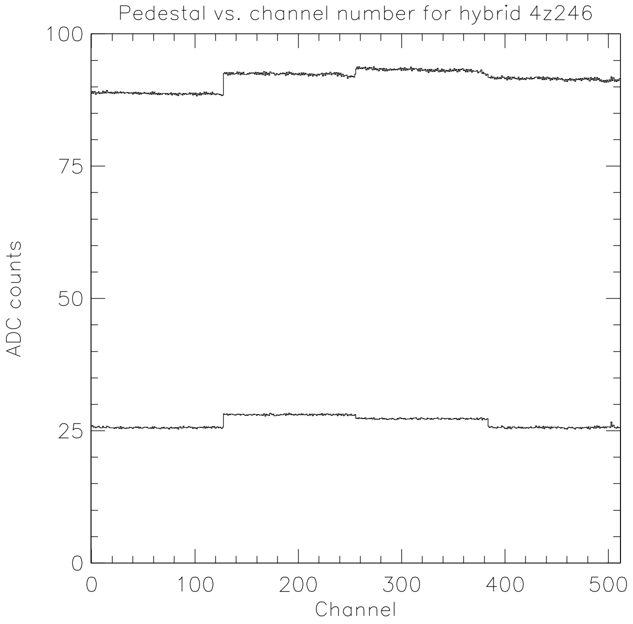
4 Comments

Encapsulated. FE DV finger gold bonds. HV tested.

5 Pedestal

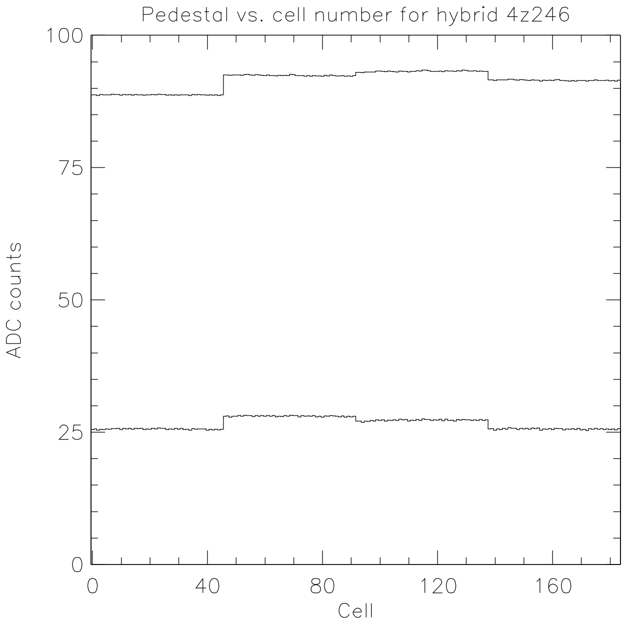
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

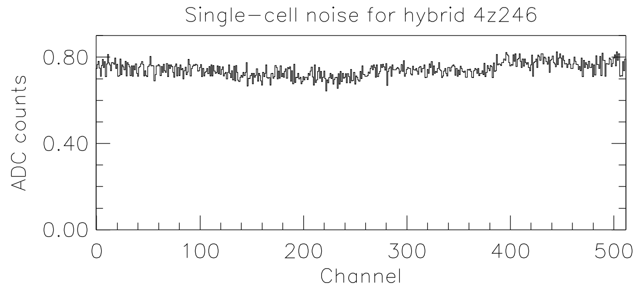
Pedestal vs. Pipeline Cell ID

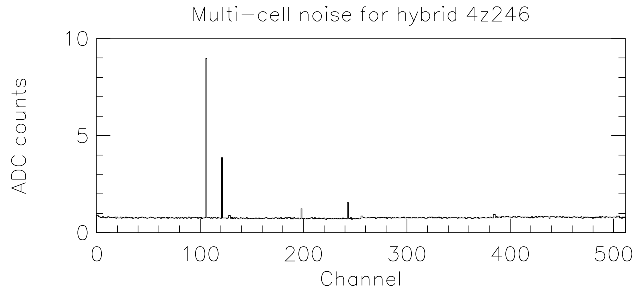


6 Noise

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

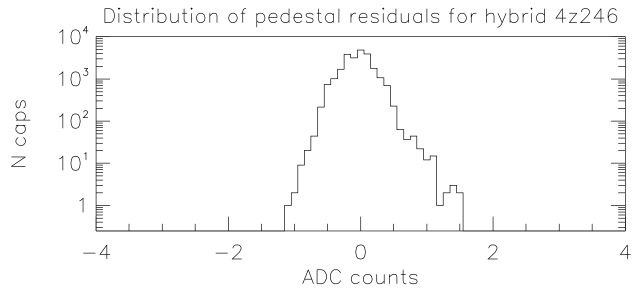
RMS Noise

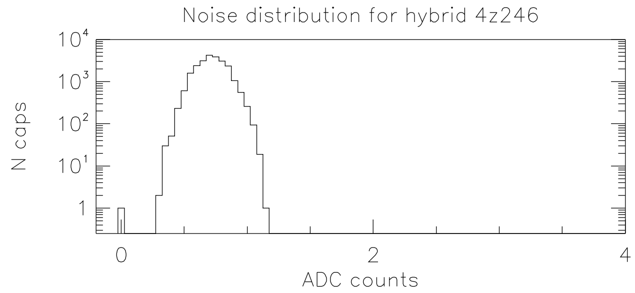




The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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