Status of Silicon Testing at Stony Brook

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Hangup Fixed

was in general call to the SMU

avoid general call (use more specific calls)
or process error message and retry

Have done all tests which can be done on sensors.

Picking up test structures today.

Have developed a plan for matrix scan which includes all production tests, even

R_{poly} C_{int} R_{int}

Measurements on sensor 237-9d1

1) Total strip capacitance and interstrip capacitance (as in NEW QA document but at 100kHz):

Strip	C_{Tot}(pF)	C_{int}
4	13.1	4.8
8	12.7	4.6
12	12.8	4.7
16	12.7	4.4
20	13.6	4.9

2) Interstrip resistance (as in QA document)

Strip	R_{int}(Gohm)
30	3.08
32	2.86
34	2.74
36	2.82
38	2.94

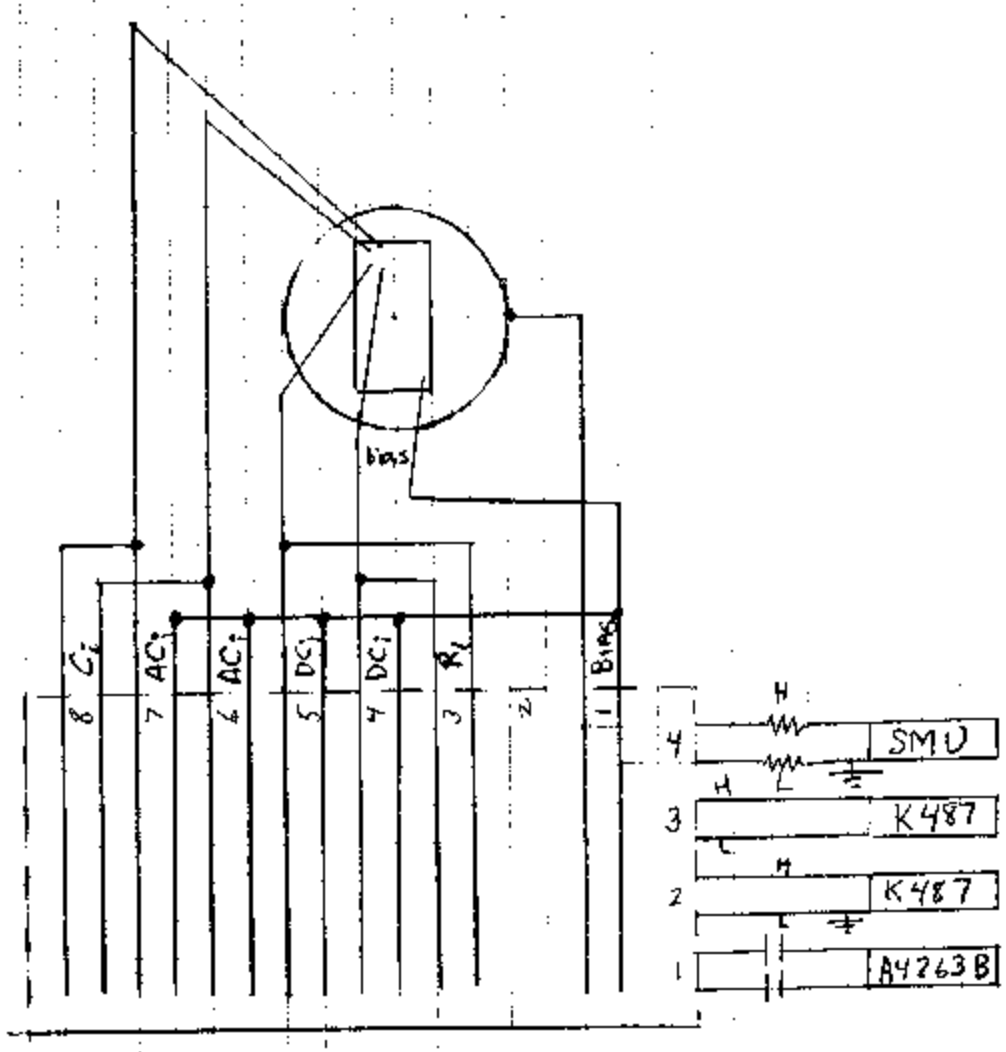
3) Metal series resistance (as in QA document)

29.1 Ohm/cm

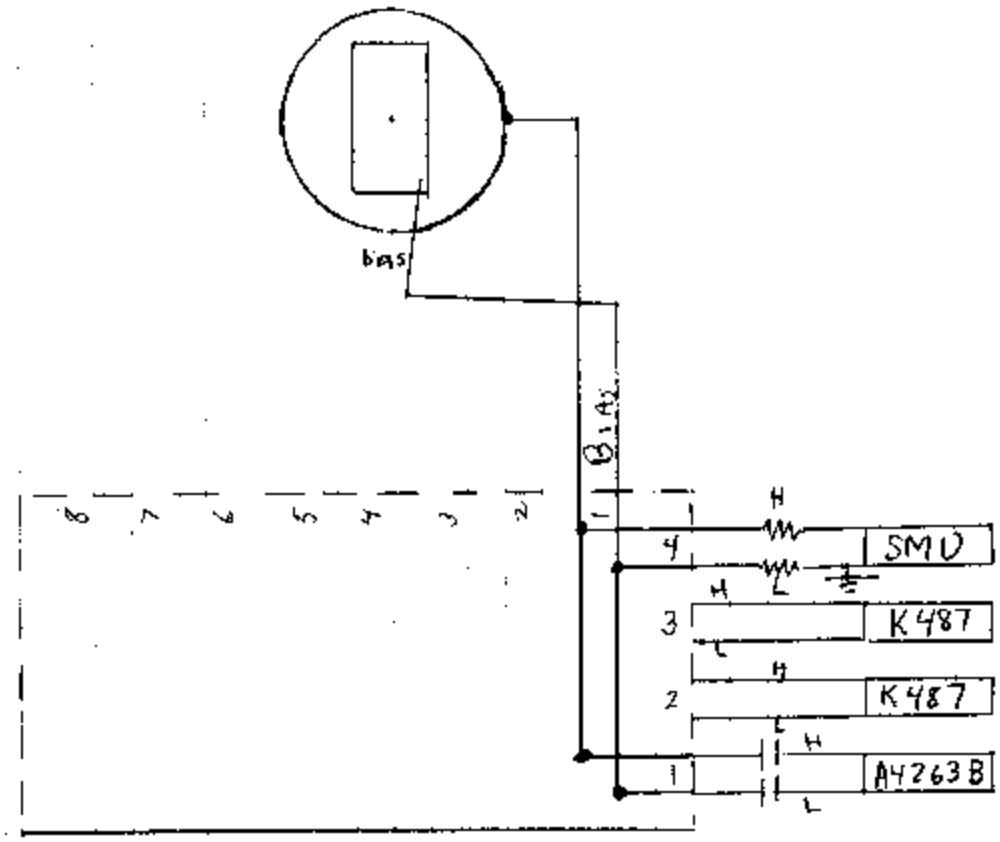
4) Polysilicon resistance (as in OLD QA document, sensor not biased)

Strip	R_{poly}(Mohm)
10	0.116
11	0.116
12	0.115
13	0.115
14	0.114

Overall Connections

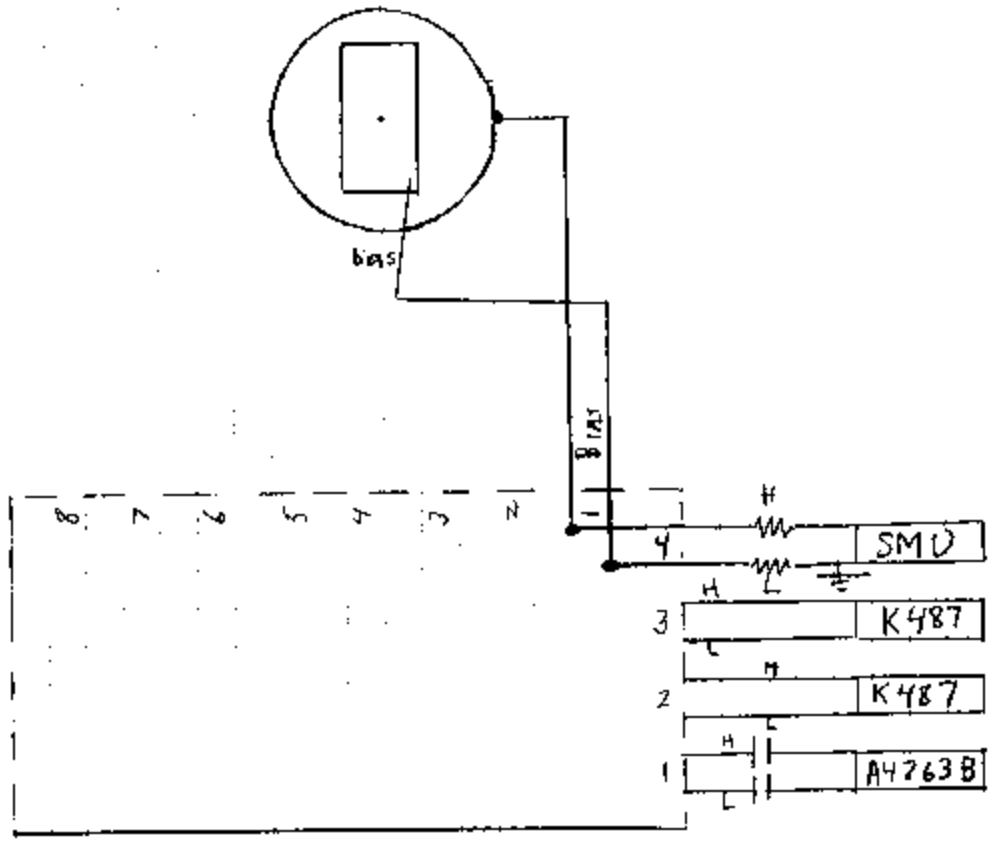


C-V Measurement

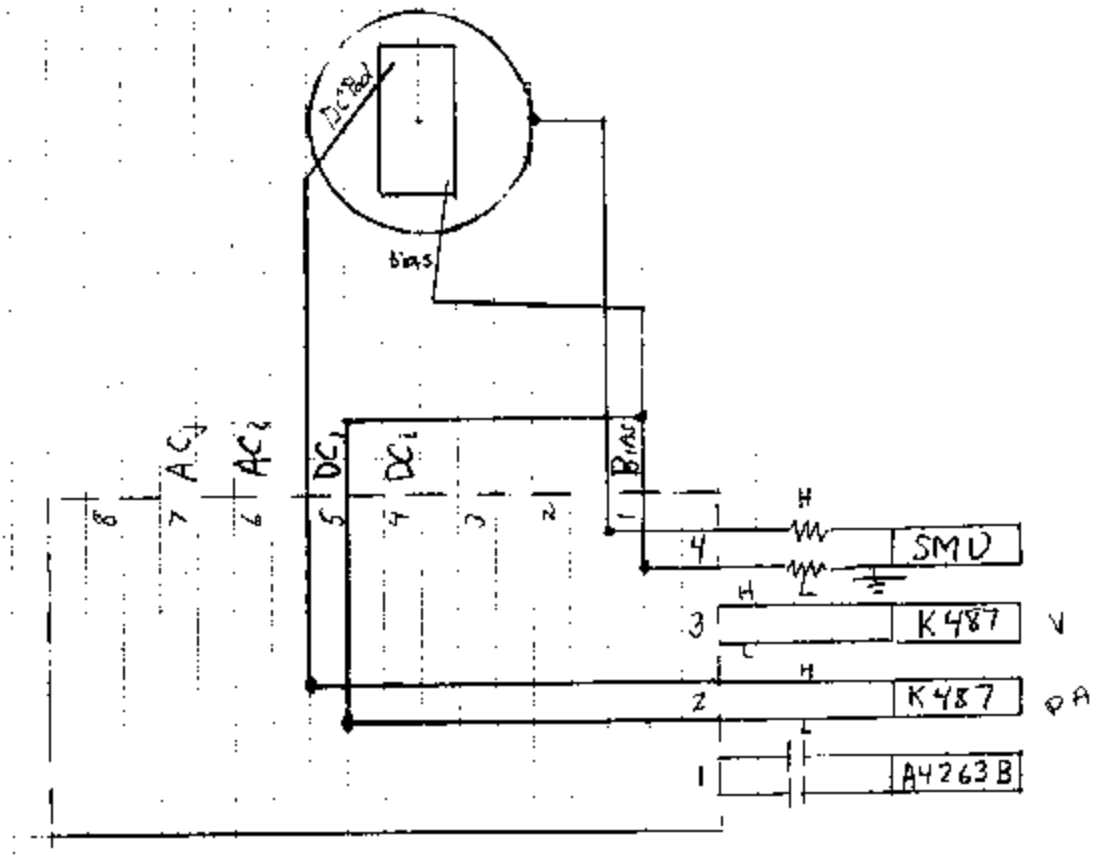


I-V Measurement

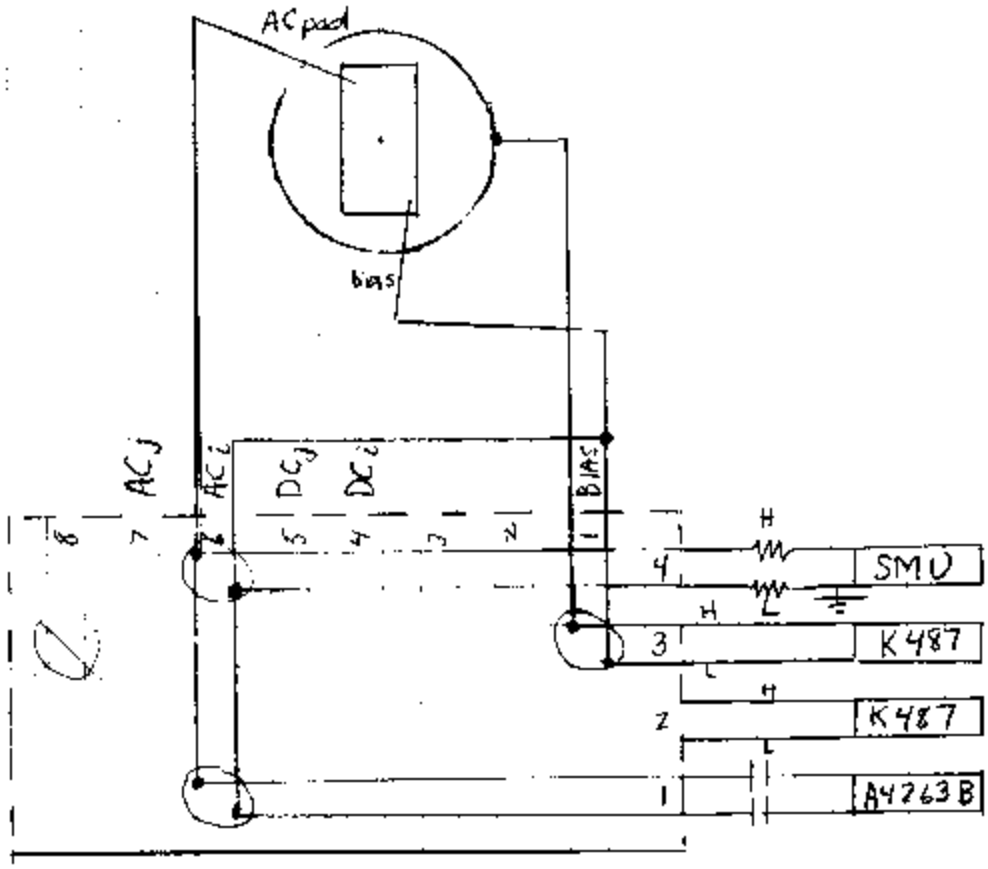
If necessary, disconnect from matrix and connect cables directly.



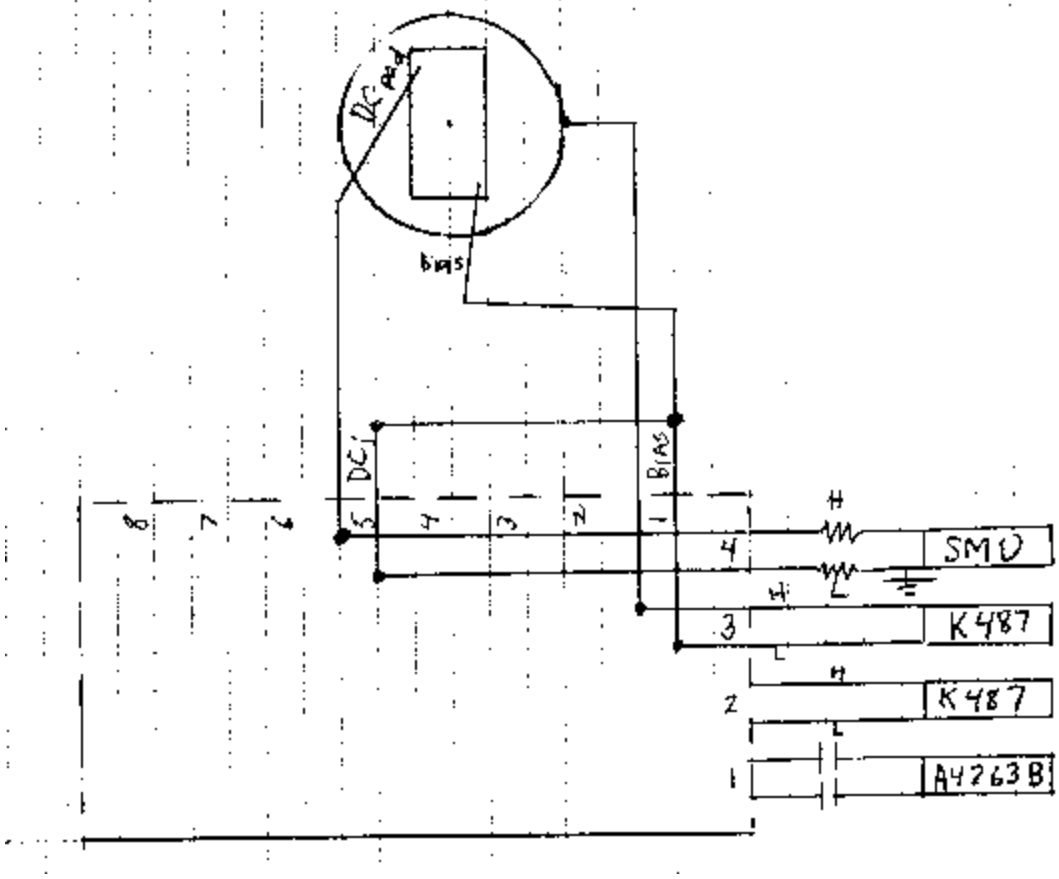
DC Scan


DC Bal
bias
AC1
AC2
DC1
DC2
BIAS
8
7
6
5
4
3
2
1
H
L
SMU
K487
V
K487
PA
A4263B

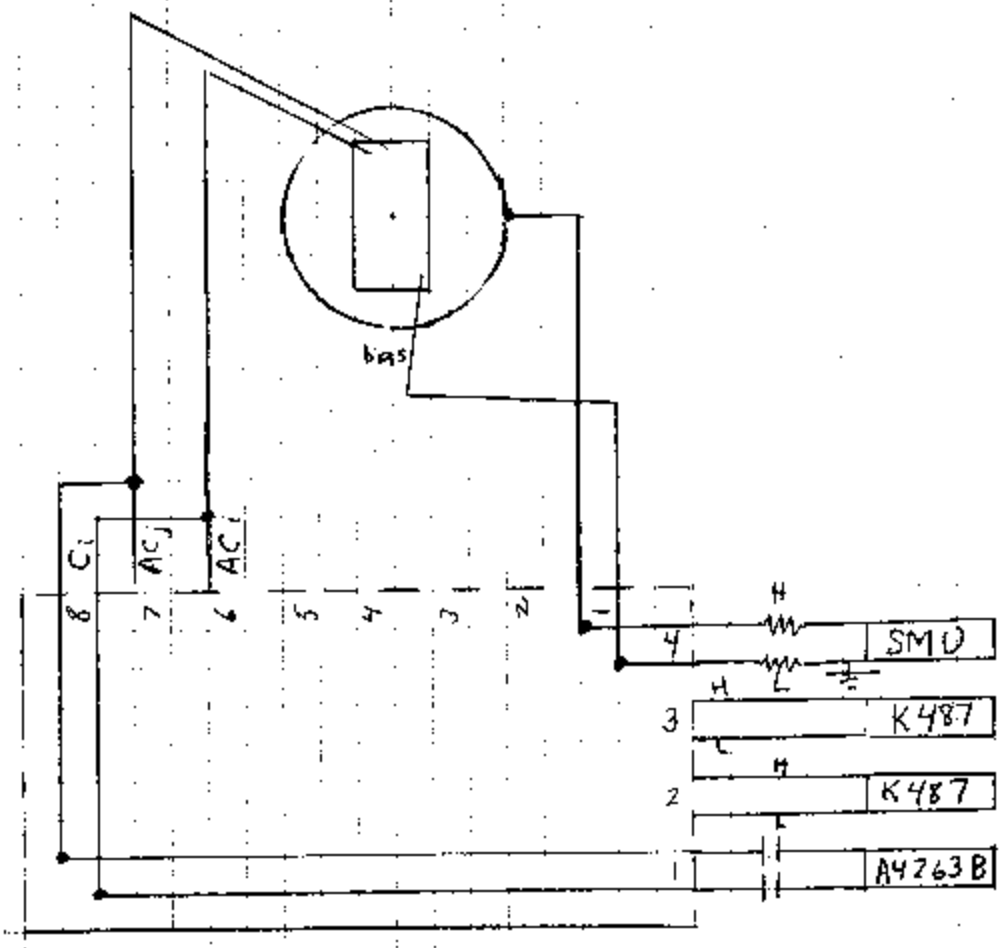
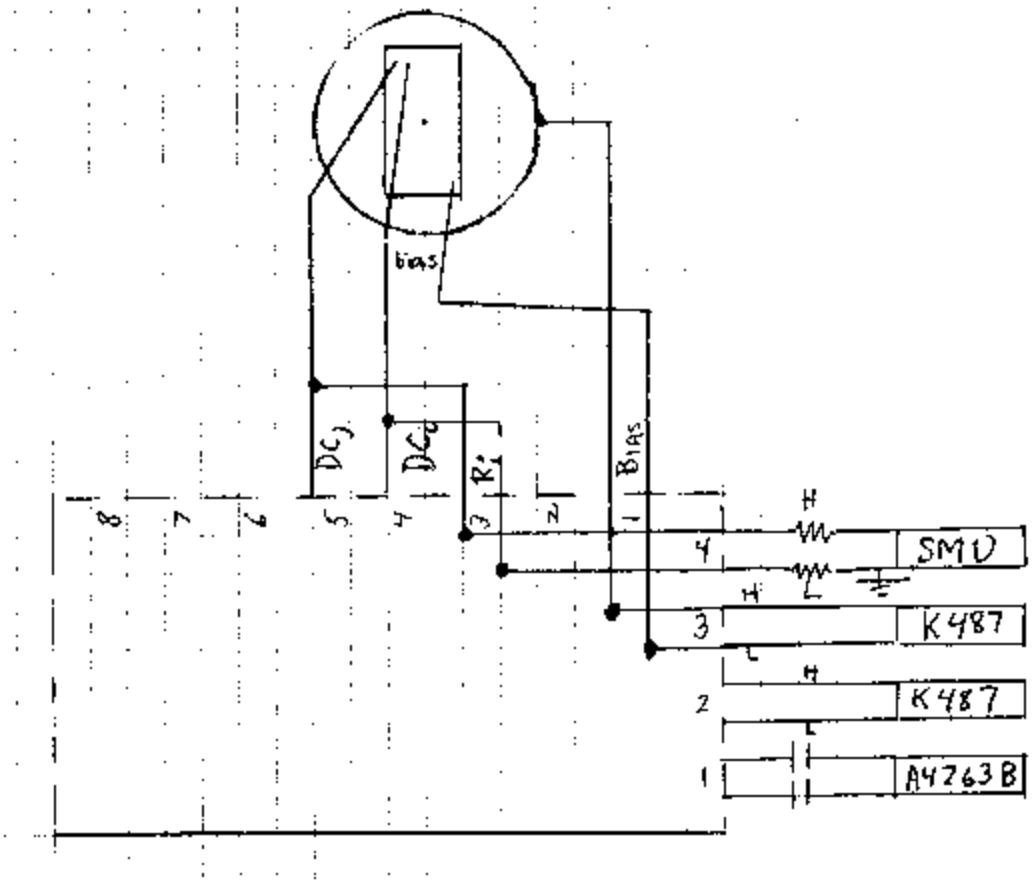
AC Scan



R_{poly} (must subtract 2 × 270k)



Interstrip Capacitance



Interstrip Resistance