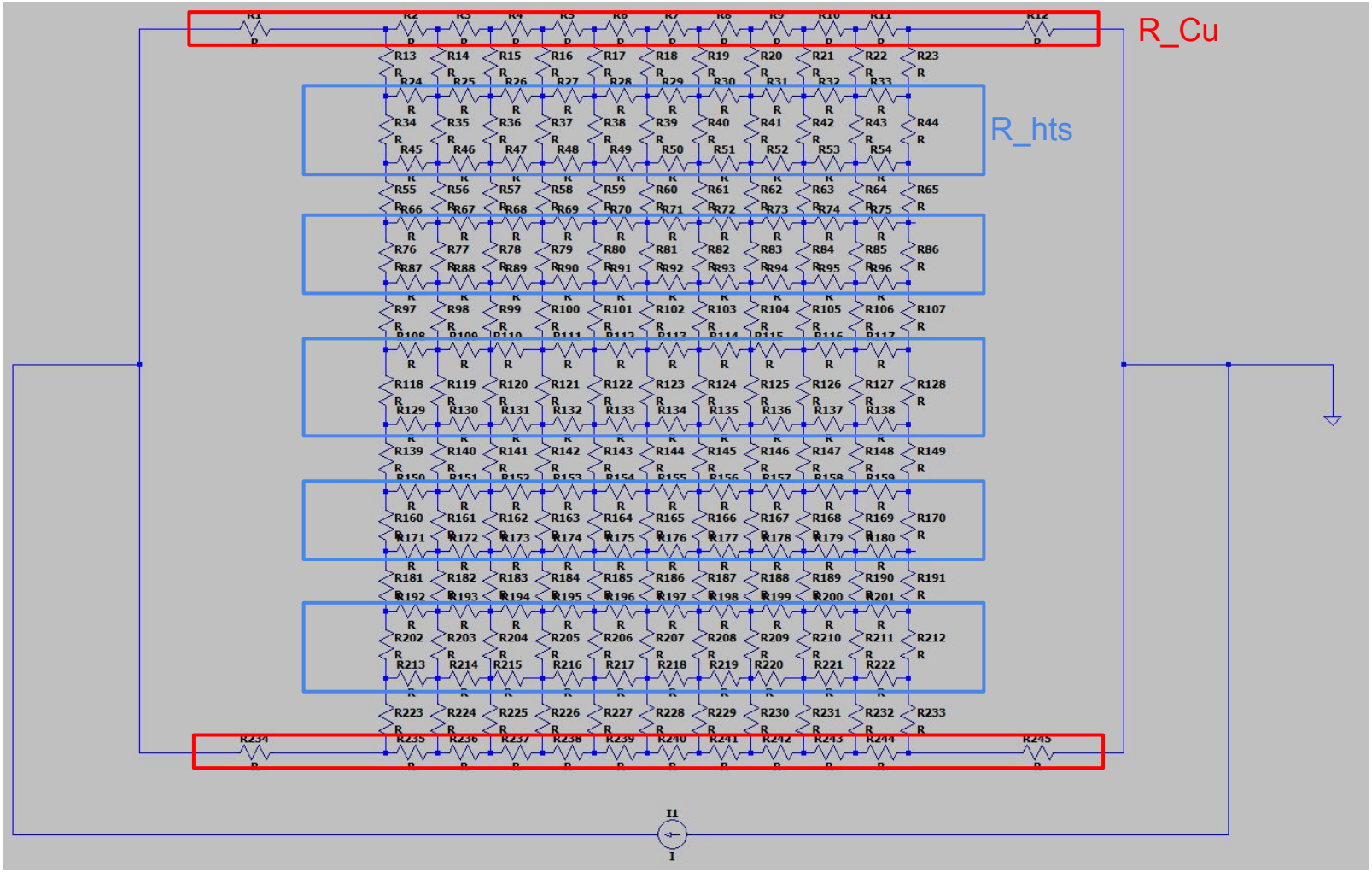
3/11/24 - 5/31/24

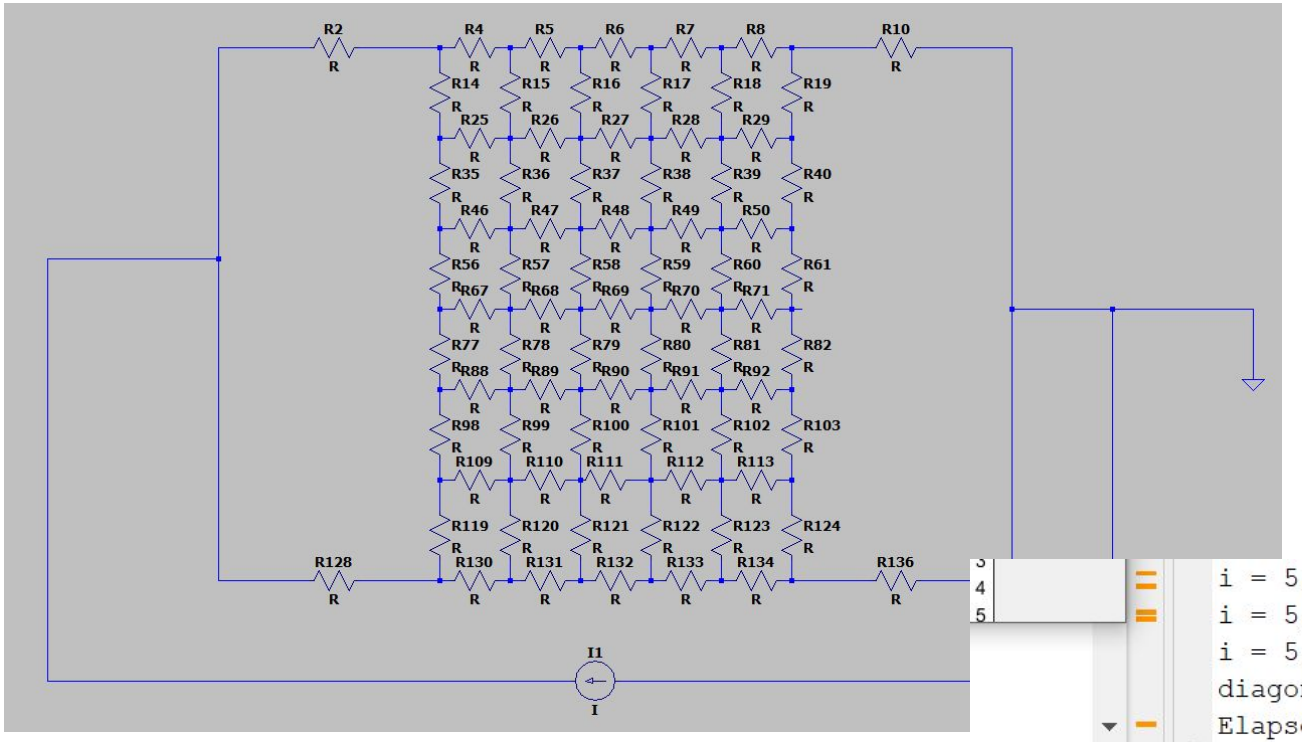


- 10x10
- Higher tape res
- Other layouts?

Notes

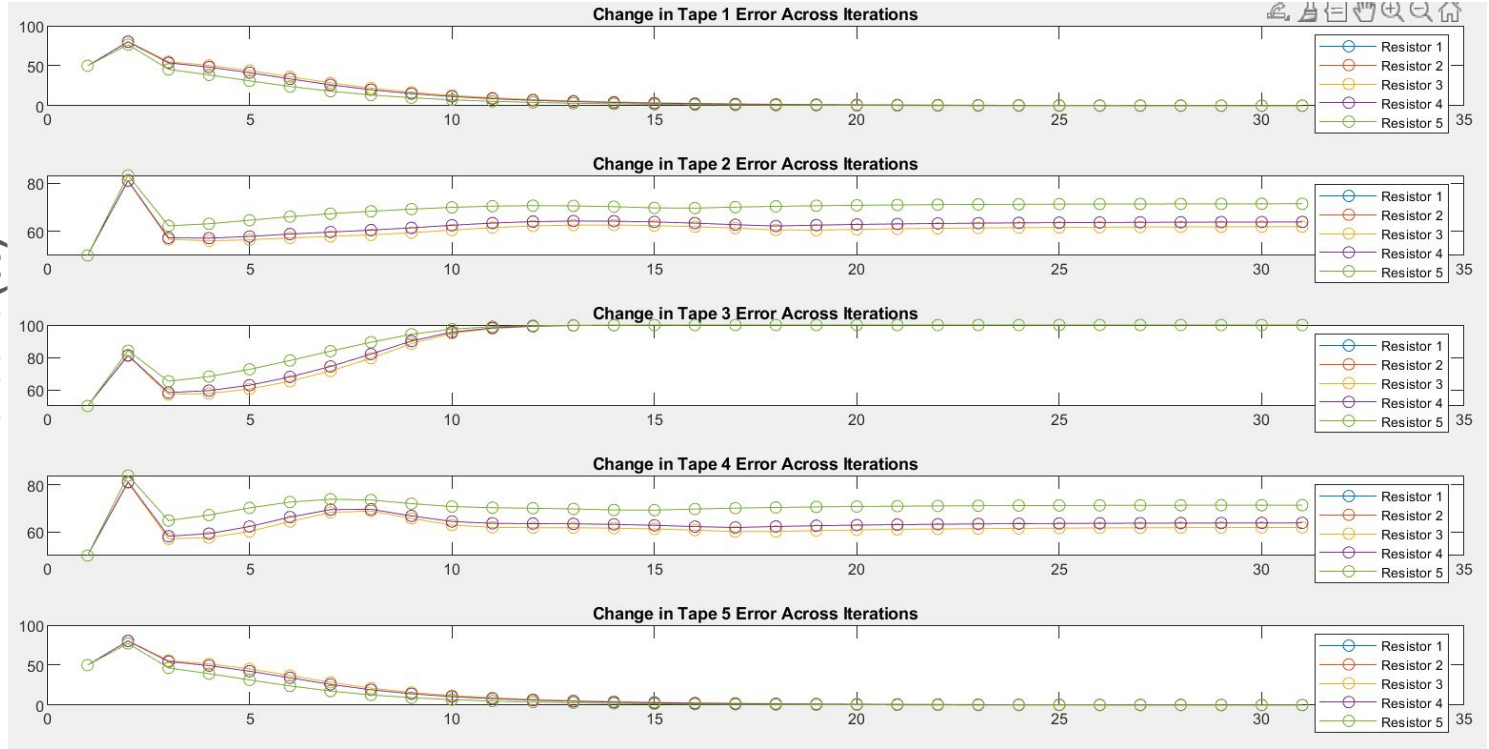
- Might be more complicated than originally thought, we'll stick to a single row representing a single tape
- Kept same geometric properties, just changed number of resistors along the tape from 5 to 10
- Still 5 tapes, but more resistors make up each tape

5 slices, 5 tapes



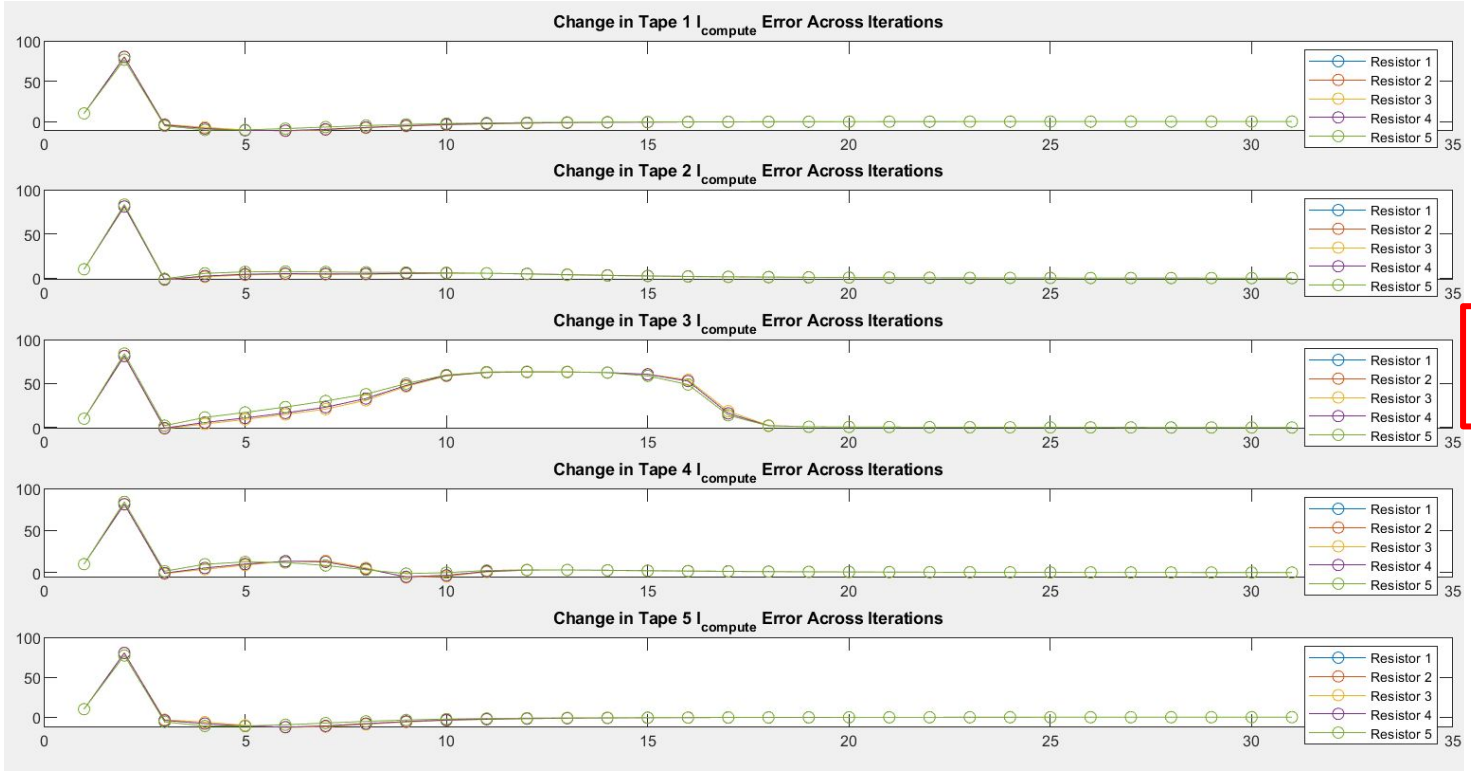

```
i = 5, j = 3
i = 5, j = 4
i = 5, j = 5
diagonal check passed
Elapsed time is 0.153665 seconds.
>>
```

Initial Error Measure



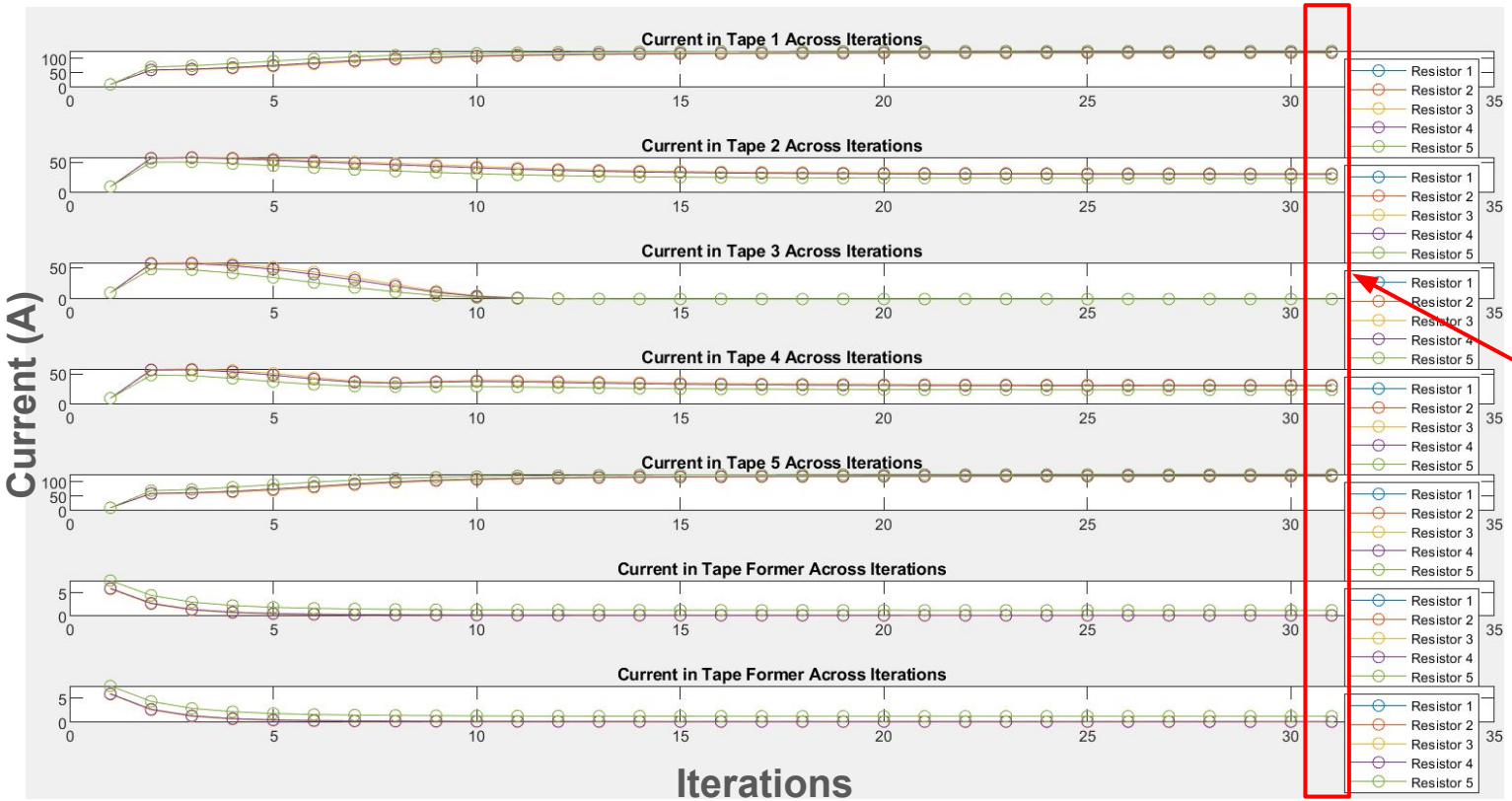
$$\left(\frac{I_{\text{hts old}}(i,j) - I_{\text{compute}}}{I_{\text{hts old}}(i,j)}\right) \times 100$$

Alternative Error Measure



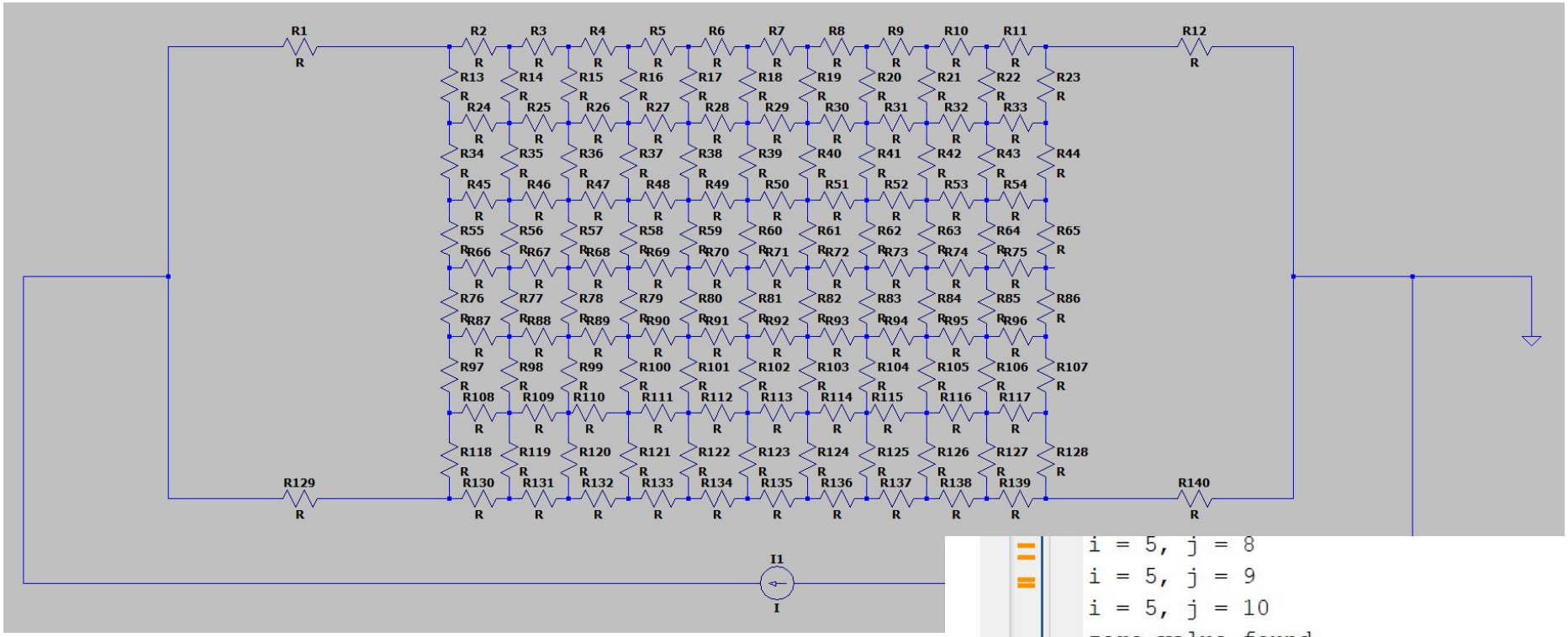
$$\left(\frac{I_{\text{compute old}}(i,j) - I_{\text{compute}}}{I_{\text{compute old}}(i,j)}\right) \times 100$$

Iterations Until Convergence



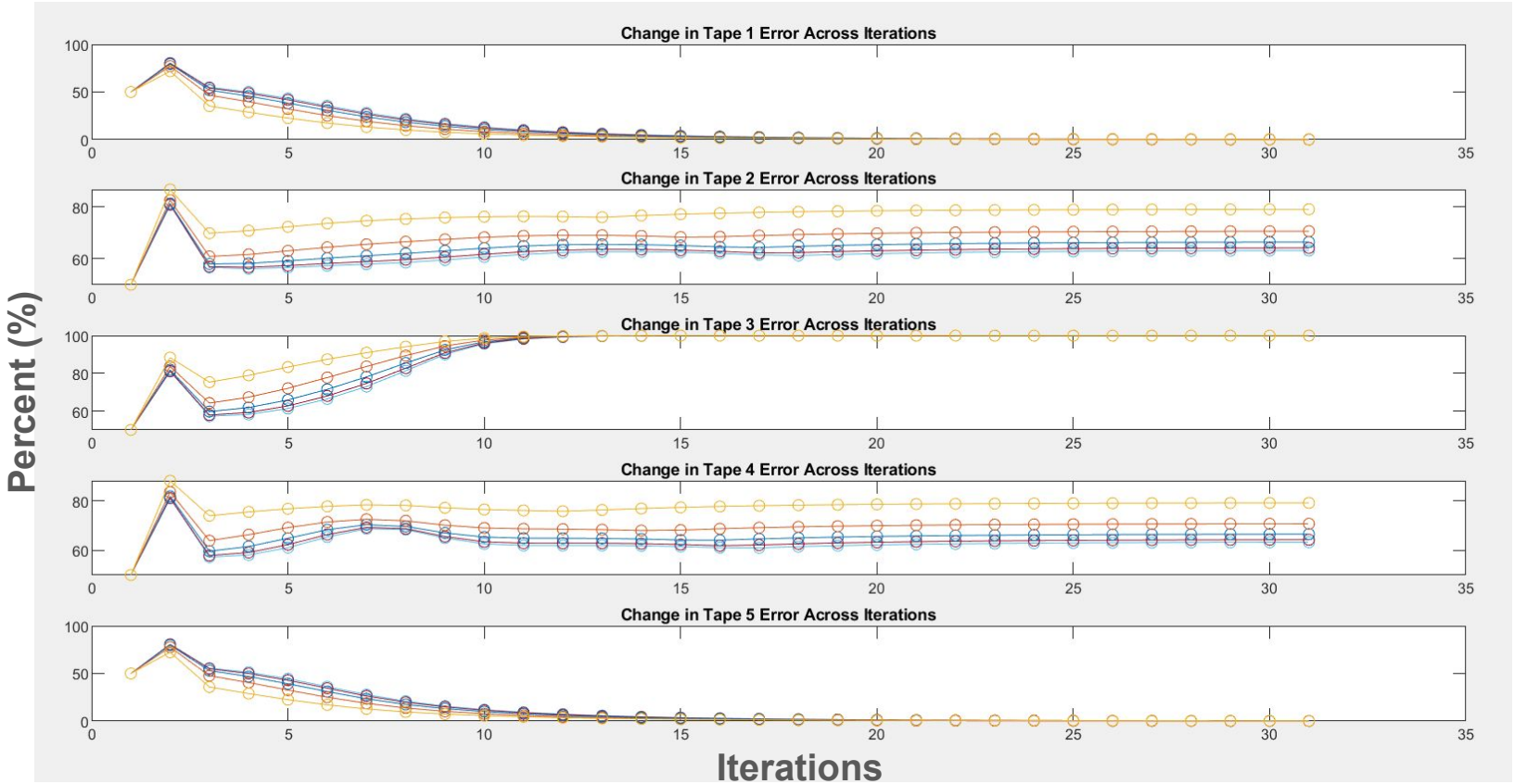
Converged Current Values

10 slices, 5 tapes

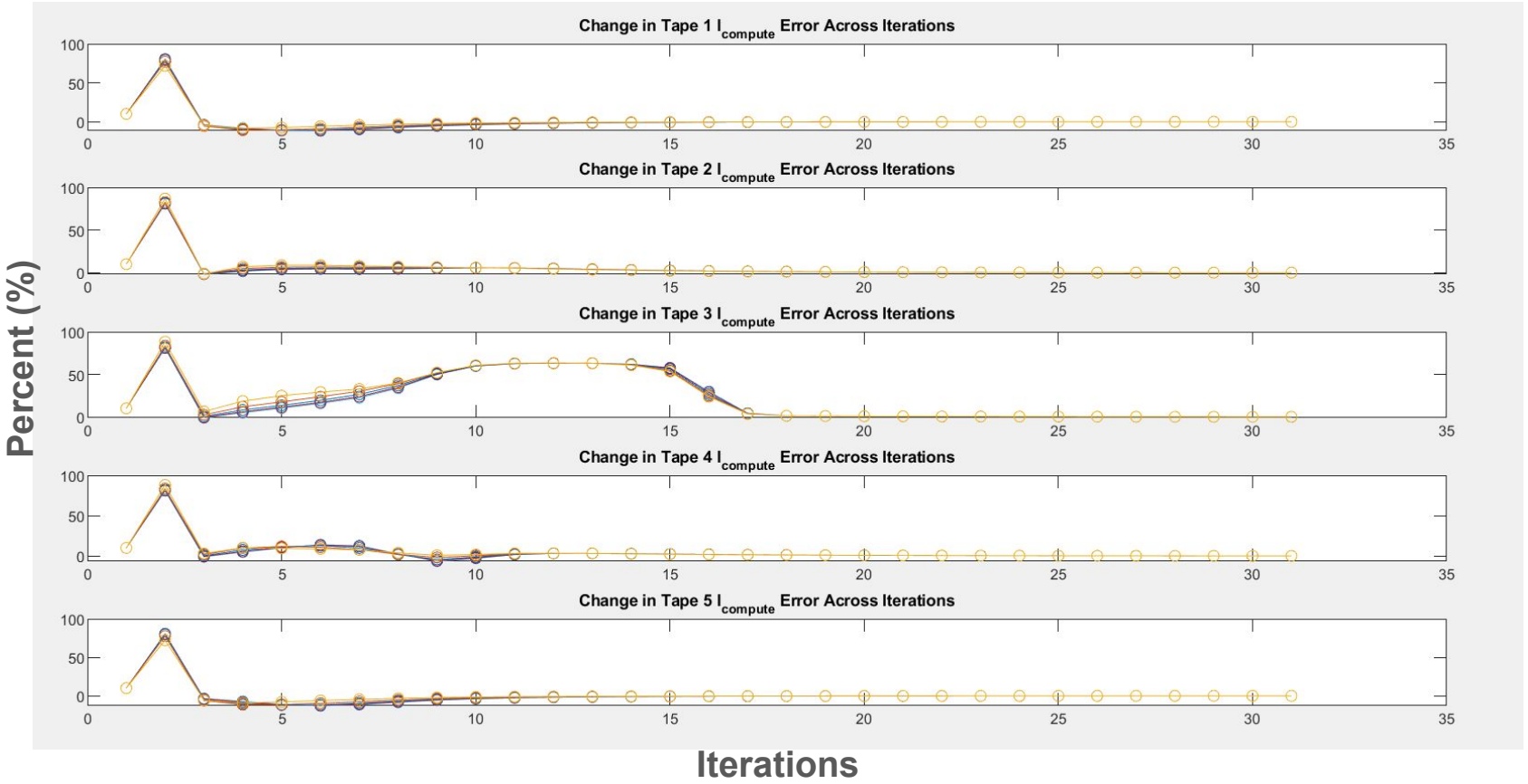



```
i = 5, j = 8
i = 5, j = 9
i = 5, j = 10
zero value found
Elapsed time is 0.333614 seconds.
>>
```

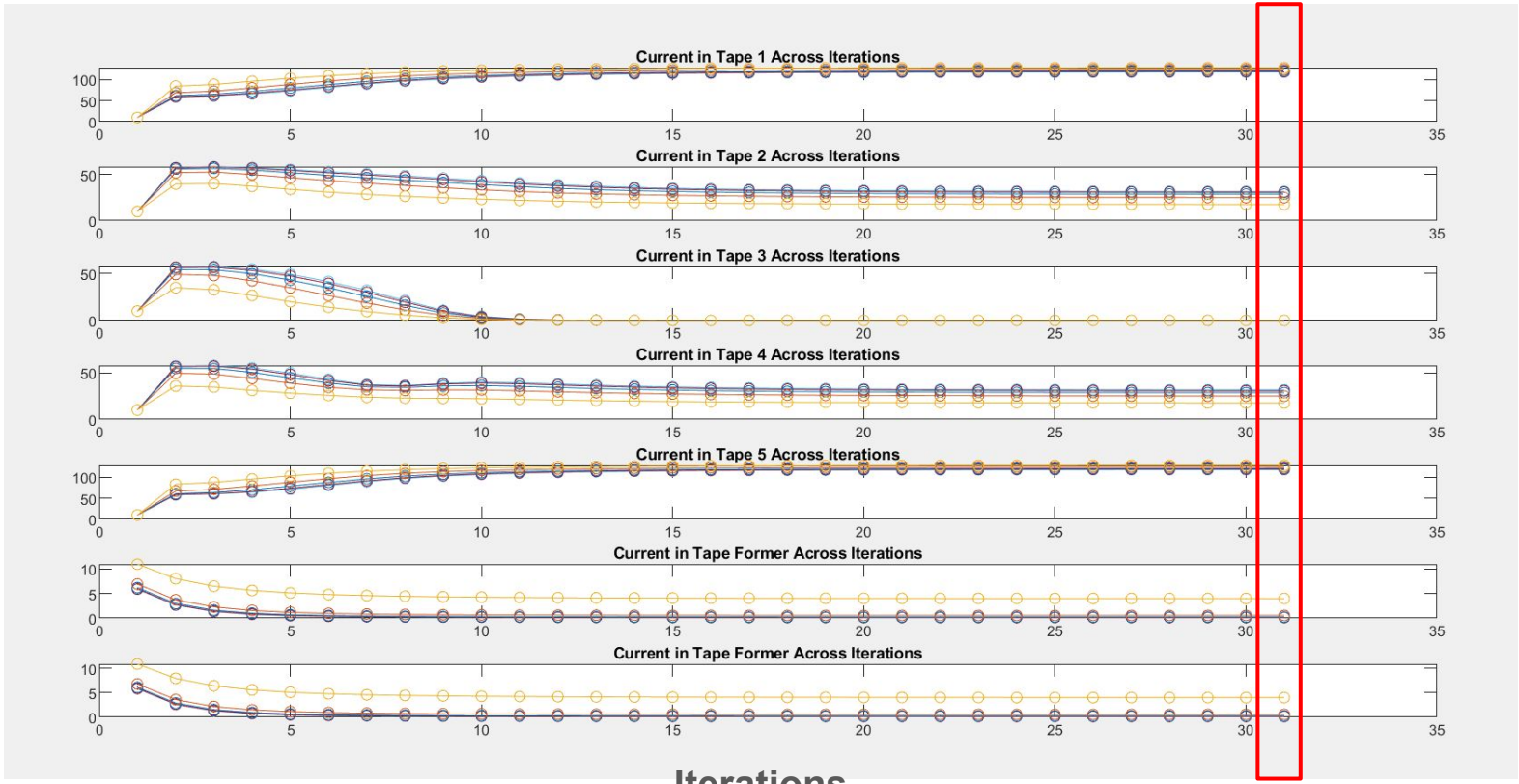
Initial Error Measure



Alternative Error Measure

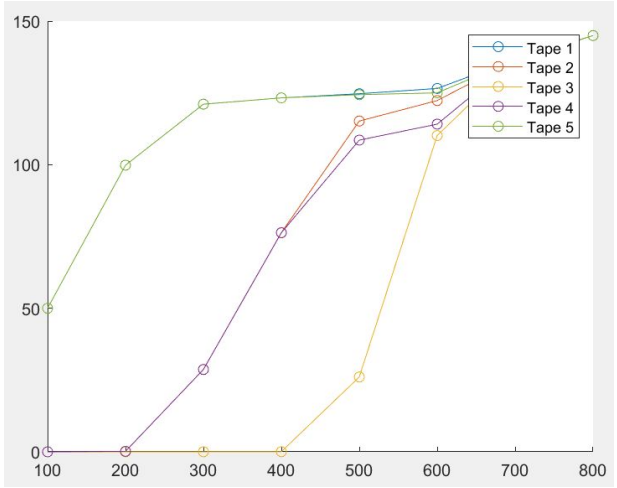


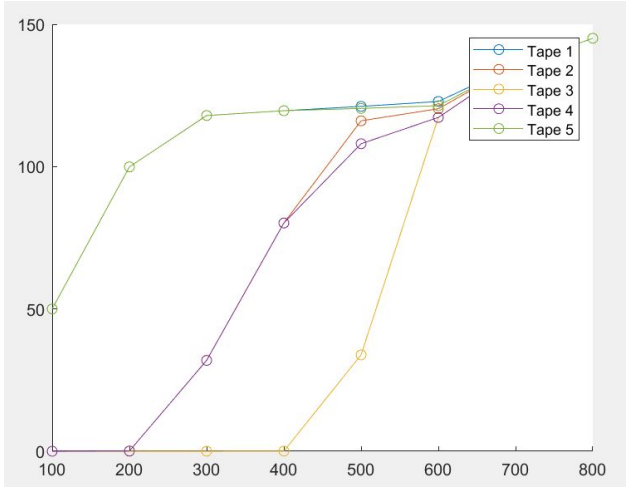
Iterations Until Convergence

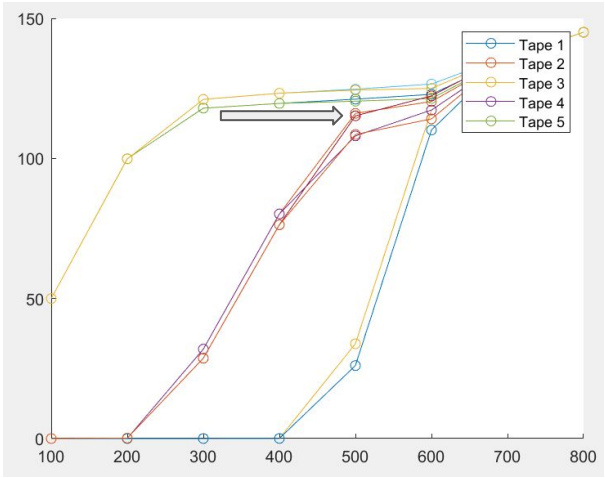


Current Distribution Using New Model -

Slice 3



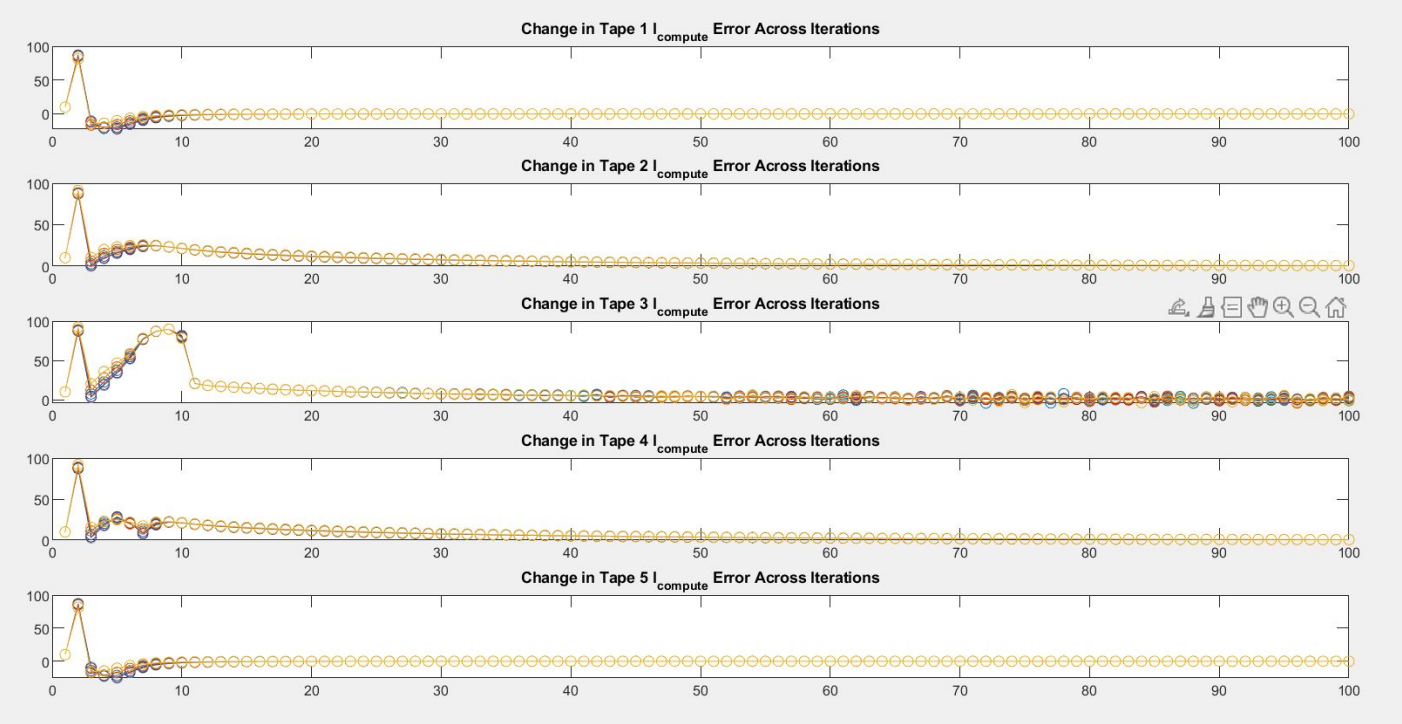




expanded

5x5

Behavior at 200A



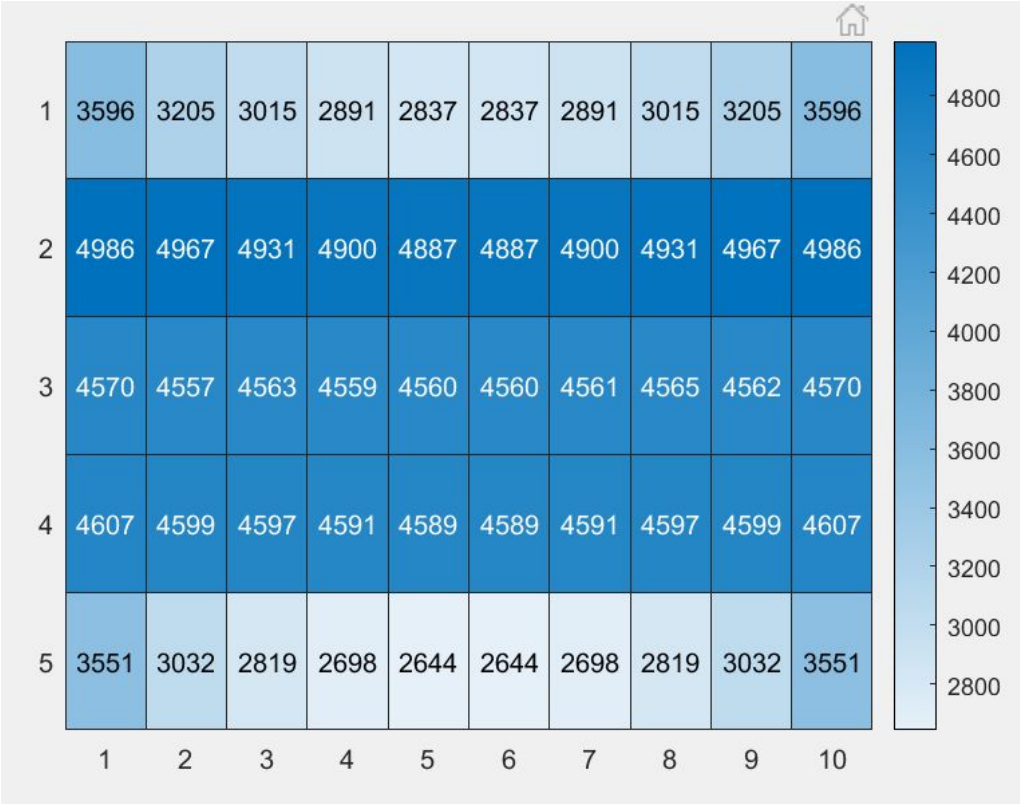
- Oscillations in tape 4
- Made the model stop at converged values or 50 iterations

Unit check

μV / μΩ = A

μV * A = μW

100 gets stuck



Analysis of Results

2 defects

- 50!/(2!*48!) = 1225 possibilities
- Without repetitions

$$ {}_nC_r = \frac{n!}{r!(n-r)!} $$

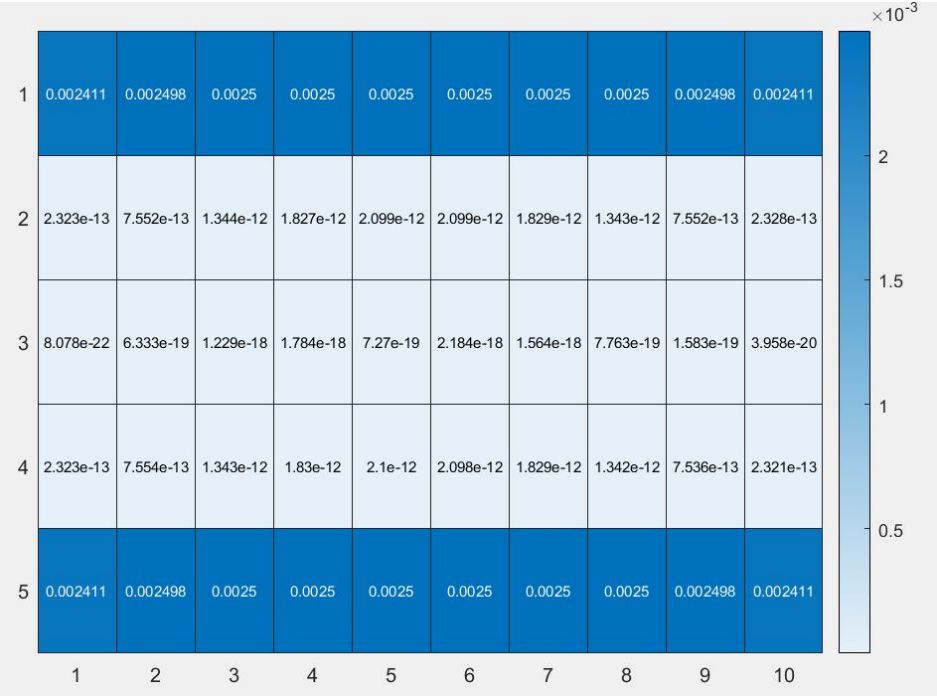
```
     0     0     0     0     0     0     0     0     0     0
     0     0     0     0     0     0     0     0     0     0
     0     0     0     0     0     0     0     0     0     1
     0     0     0     0     0     0     0     0     0     1
     0     0     0     0     0     0     0     0     0     0

Combination 1223
     0     0     0     0     0     0     0     0     0     0
     0     0     0     0     0     0     0     0     0     0
     0     0     0     0     0     0     0     0     0     1
     0     0     0     0     0     0     0     0     0     0
     0     0     0     0     0     0     0     0     0     1

Combination 1224
     0     0     0     0     0     0     0     0     0     0
     0     0     0     0     0     0     0     0     0     0
     0     0     0     0     0     0     0     0     0     0
     0     0     0     0     0     0     0     0     0     1
     0     0     0     0     0     0     0     0     0     1

Combination 1225
```

100A

- Inf or Nan encountered at 3,4
- Check if different R_inf values work

100A no defect

Power dissipated by each resistor




```
I_total = 100 converged
Total Power = 4.963591e-02
```

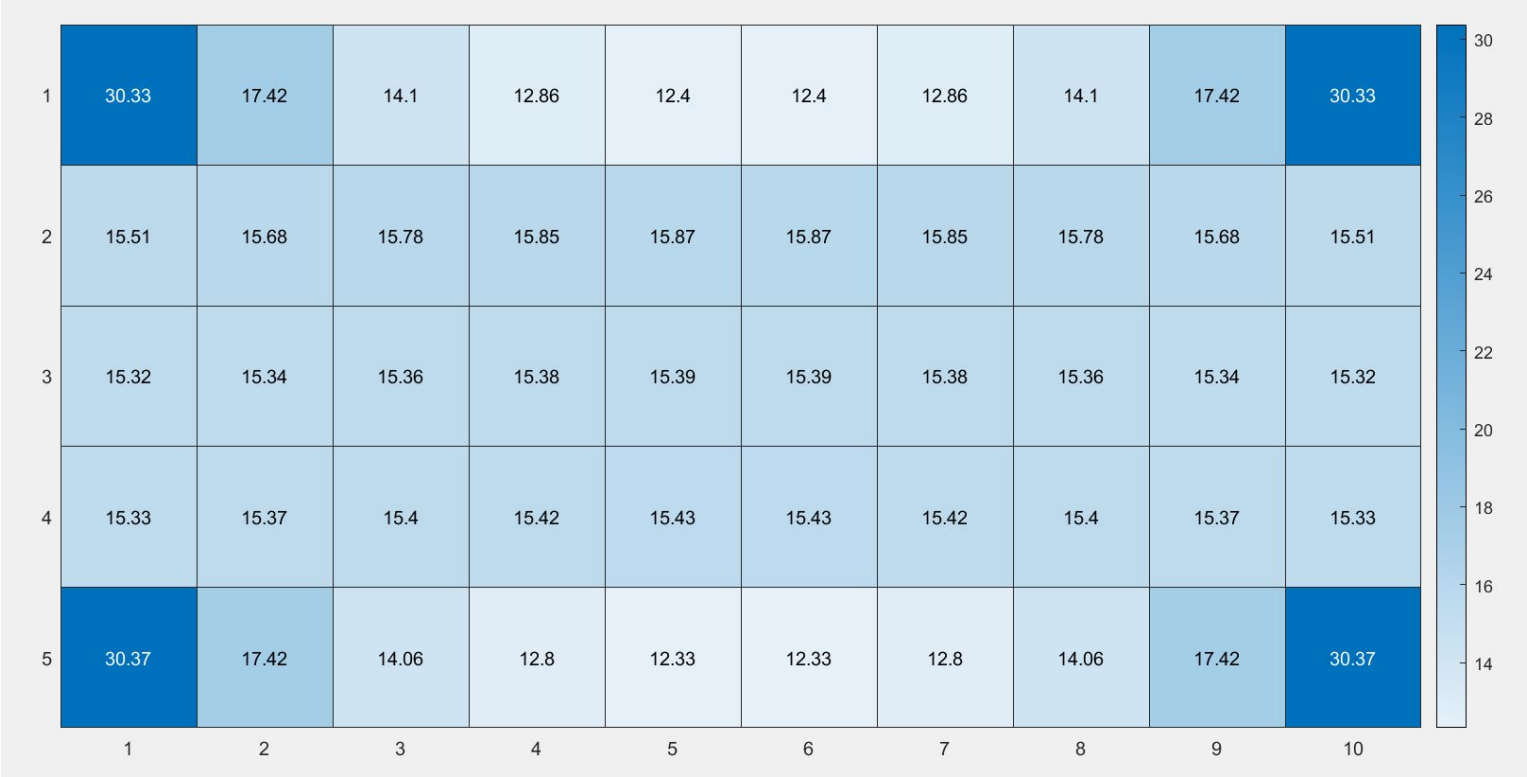
Unit Check

μV / μΩ = A

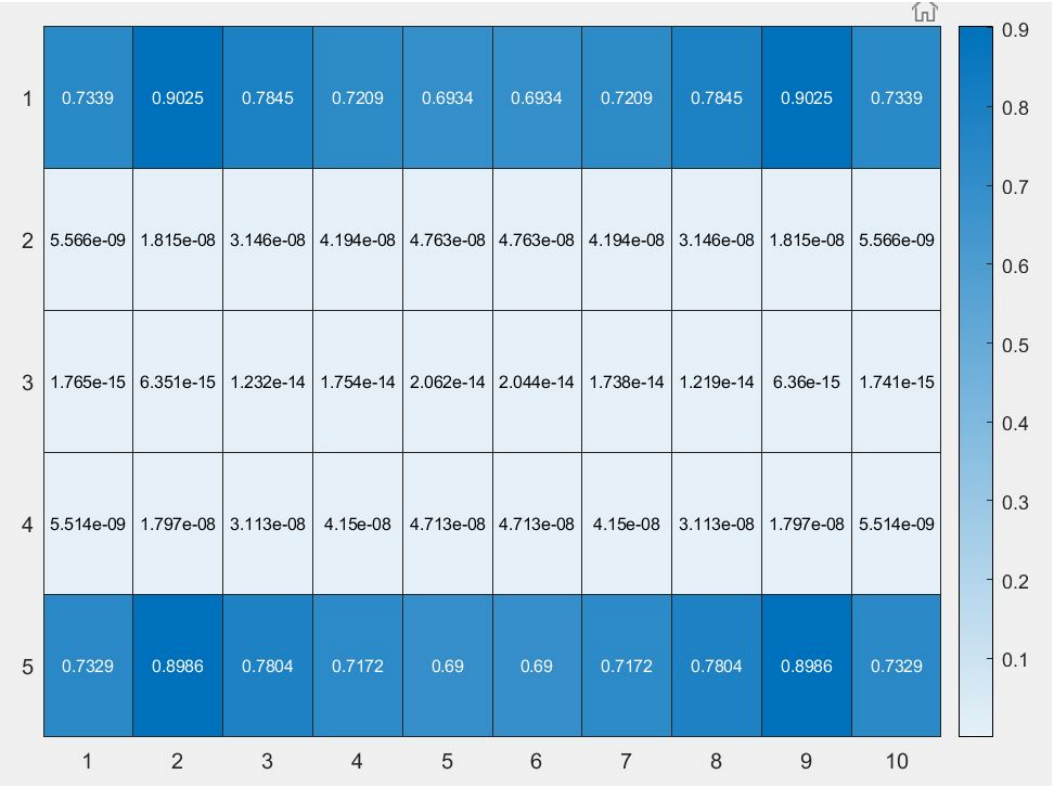
μV * A = μW

200A

μW


1 30.33 17.42 14.1 12.86 12.4 12.4 12.86 14.1 17.42 30.33
2 15.51 15.68 15.78 15.85 15.87 15.87 15.85 15.78 15.68 15.51
3 15.32 15.34 15.36 15.38 15.39 15.39 15.38 15.36 15.34 15.32
4 15.33 15.37 15.4 15.42 15.43 15.43 15.42 15.4 15.37 15.33
5 30.37 17.42 14.06 12.8 12.33 12.33 12.8 14.06 17.42 30.37
1 2 3 4 5 6 7 8 9 10
30 28 26 24 22 20 18 16 14

200A no defect




```
I_total = 200 converged
Total Power = 1.530851e+01
```

Feature Scaling

Standardization:

- Rescales data to have a μ of 0 and σ of 1 (standard normal distribution)
- Preferred if data contains outliers

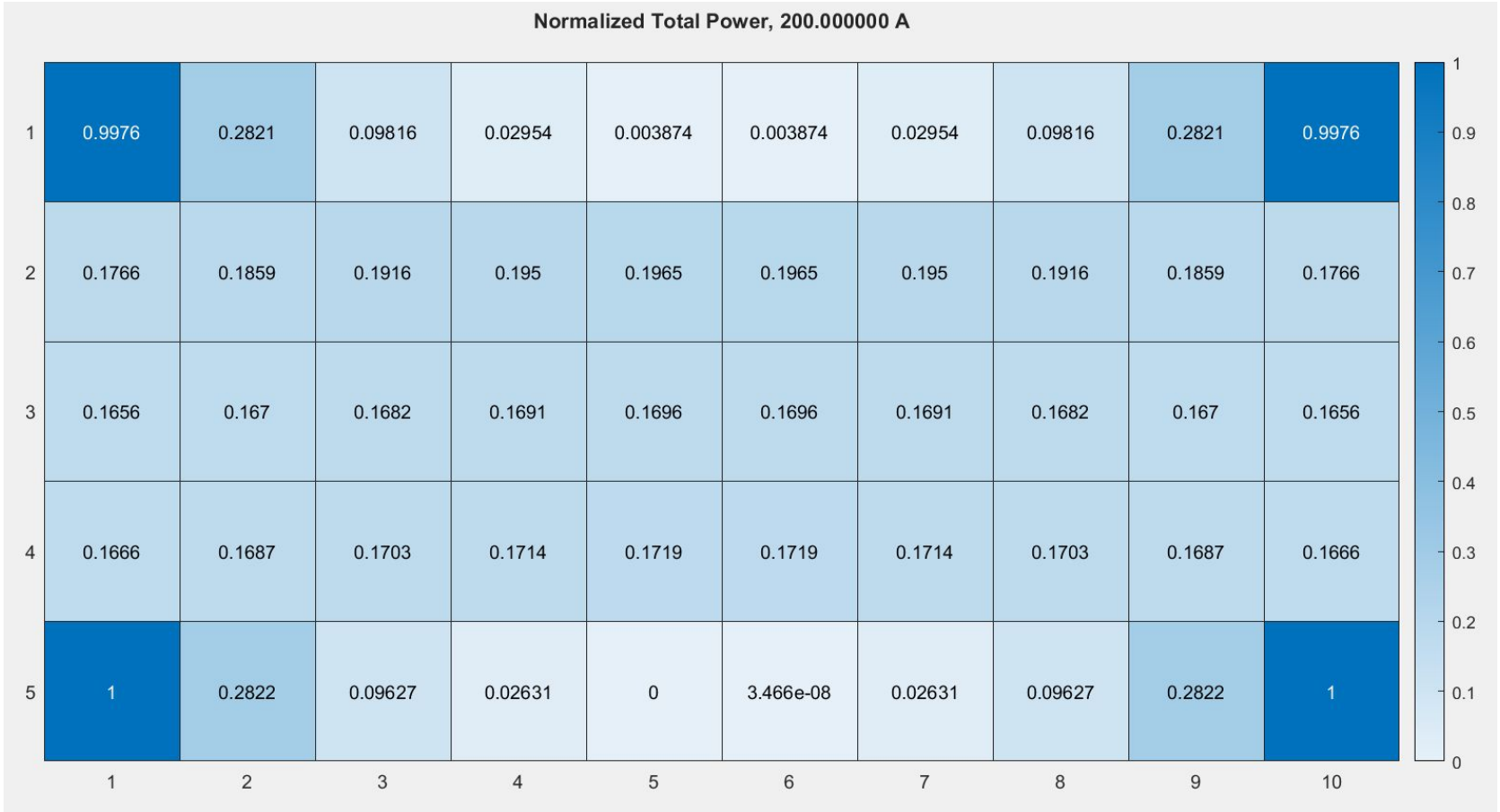
$$X_{changed} = \frac{X - \mu}{\sigma}$$

Normalization:

- Rescales data into a range of [0,1]
- Gives us a common scale but ratios may still be useful to compare between circuits

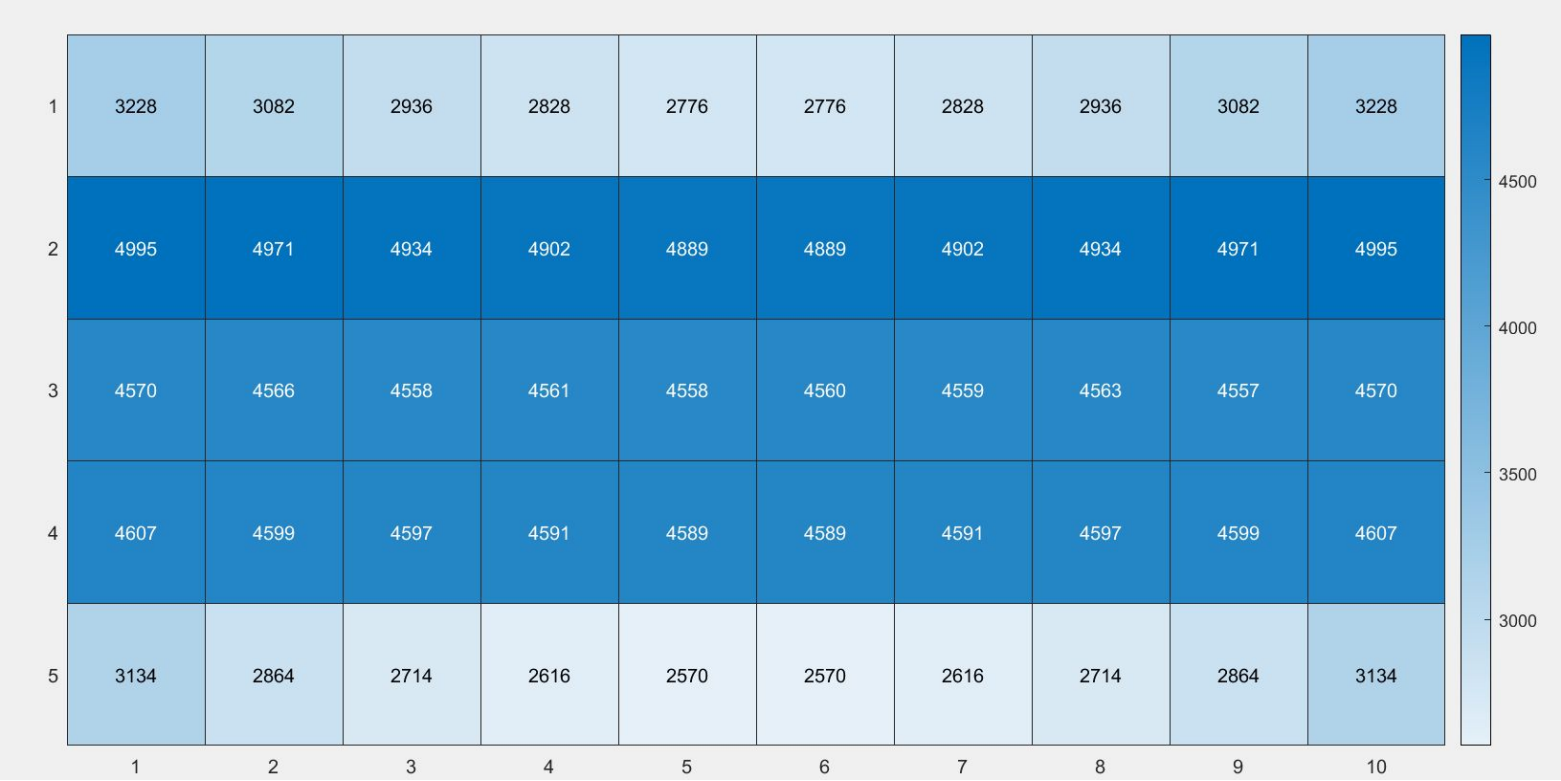
$$X_{changed} = \frac{X - X_{min}}{X_{max} - X_{min}}$$


Proportion of Nominal Total Power, 200.000000 A
1 1.981 1.138 0.921 0.8401 0.8098 0.8098 0.8401 0.921 1.138 1.981
2 1.013 1.024 1.031 1.035 1.037 1.037 1.035 1.031 1.024 1.013
3 1 1.002 1.004 1.005 1.005 1.005 1.005 1.004 1.002 1
4 1.002 1.004 1.006 1.007 1.008 1.008 1.007 1.006 1.004 1.002
5 1.984 1.138 0.9187 0.8363 0.8053 0.8053 0.8363 0.9187 1.138 1.984
1 2 3 4 5 6 7 8 9 10
1.9 1.8 1.7 1.6 1.5 1.4 1.3 1.2 1.1 1 0.9

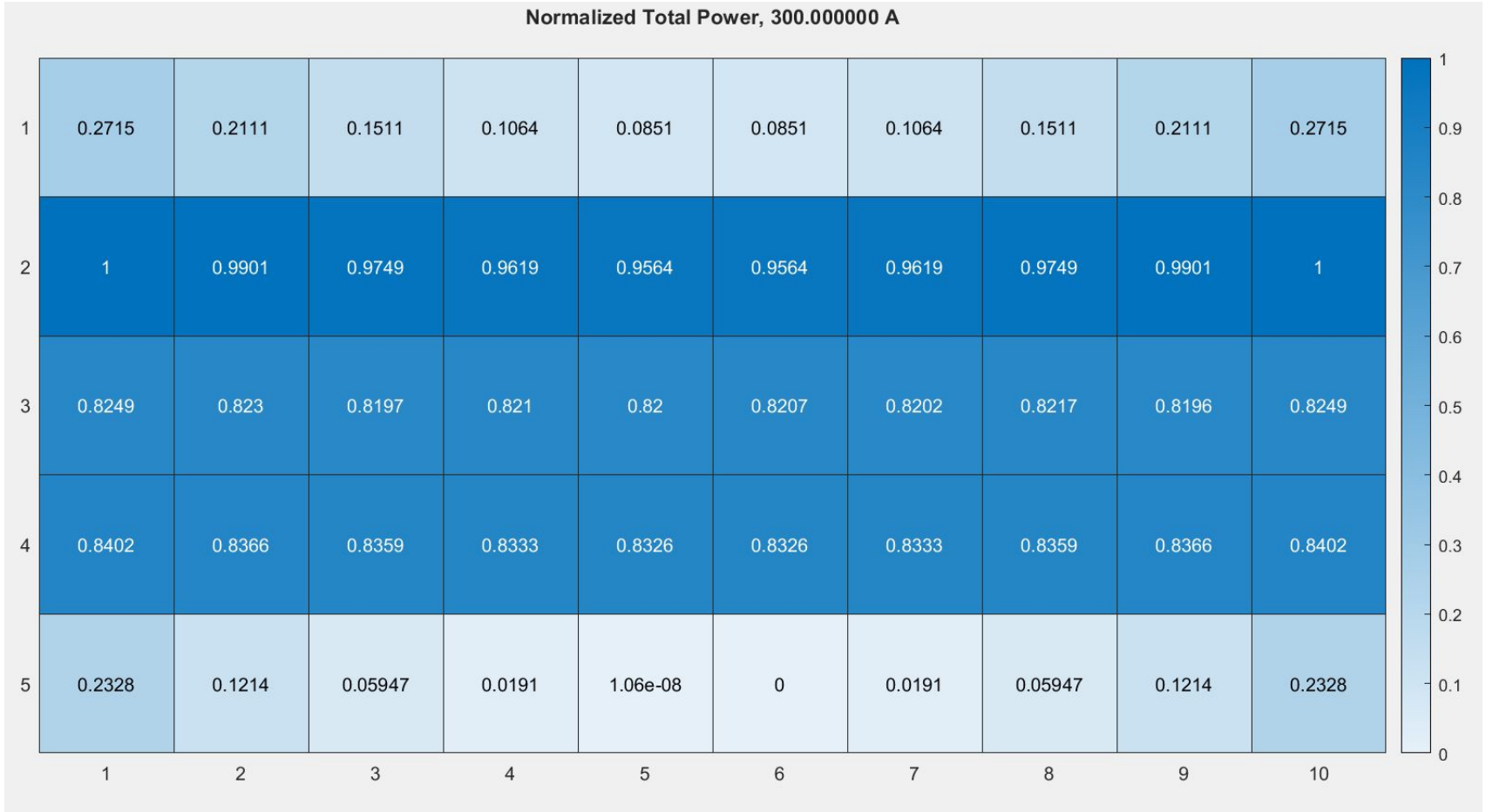

Normalized Total Power, 200.000000 A
1 0.9976 0.2821 0.09816 0.02954 0.003874 0.003874 0.02954 0.09816 0.2821 0.9976
2 0.1766 0.1859 0.1916 0.195 0.1965 0.1965 0.195 0.1916 0.1859 0.1766
3 0.1656 0.167 0.1682 0.1691 0.1696 0.1696 0.1691 0.1682 0.167 0.1656
4 0.1666 0.1687 0.1703 0.1714 0.1719 0.1719 0.1714 0.1703 0.1687 0.1666
5 1 0.2822 0.09627 0.02631 0 3.466e-08 0.02631 0.09627 0.2822 1
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

300A

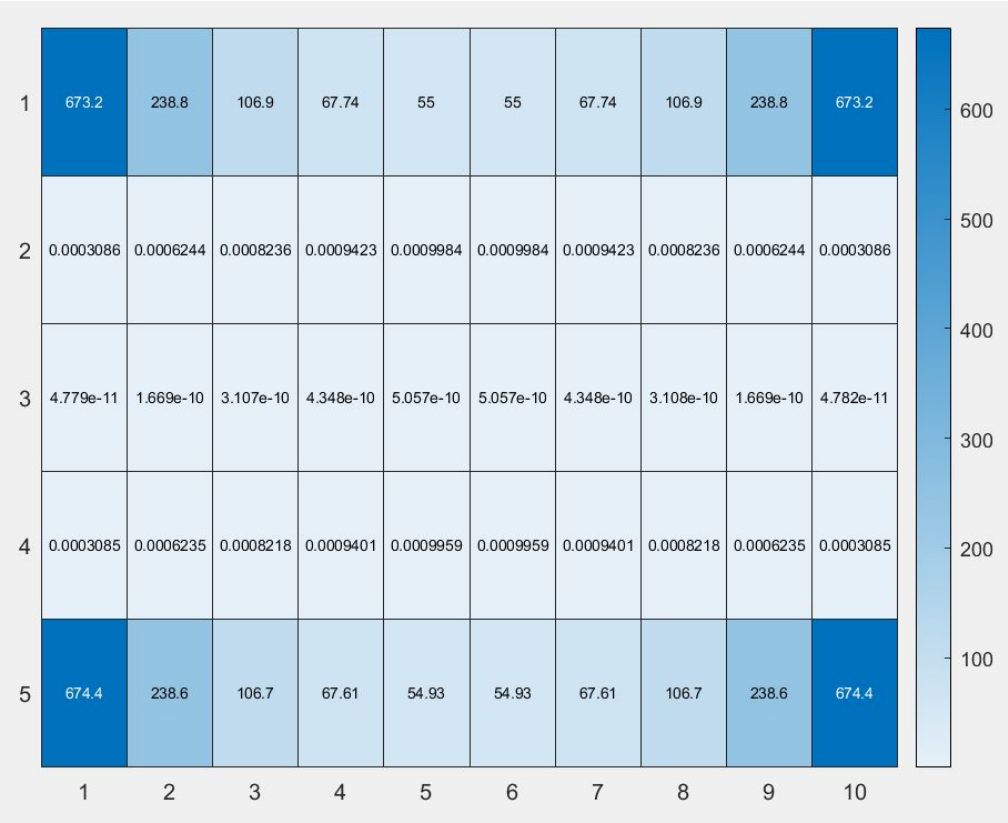
μW


1 3228 3082 2936 2828 2776 2776 2828 2936 3082 3228
2 4995 4971 4934 4902 4889 4889 4902 4934 4971 4995
3 4570 4566 4558 4561 4558 4560 4559 4563 4557 4570
4 4607 4599 4597 4591 4589 4589 4591 4597 4599 4607
5 3134 2864 2714 2616 2570 2570 2616 2714 2864 3134
1 2 3 4 5 6 7 8 9 10
4500
4000
3500
3000


Proportion of Nominal Total Power, 300.000000 A
1 0.7067 0.6746 0.6428 0.6191 0.6078 0.6078 0.6191 0.6428 0.6746 0.7067
2 1.094 1.088 1.08 1.073 1.07 1.07 1.073 1.08 1.088 1.094
3 1.001 0.9995 0.9978 0.9985 0.9979 0.9983 0.9981 0.9989 0.9977 1.001
4 1.009 1.007 1.006 1.005 1.005 1.005 1.005 1.006 1.007 1.009
5 0.6862 0.627 0.5941 0.5727 0.5626 0.5626 0.5727 0.5941 0.627 0.6862
1 2 3 4 5 6 7 8 9 10
1.05
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6


Normalized Total Power, 300.000000 A
1 0.2715 0.2111 0.1511 0.1064 0.0851 0.0851 0.1064 0.1511 0.2111 0.2715
2 1 0.9901 0.9749 0.9619 0.9564 0.9564 0.9619 0.9749 0.9901 1
3 0.8249 0.823 0.8197 0.821 0.82 0.8207 0.8202 0.8217 0.8196 0.8249
4 0.8402 0.8366 0.8359 0.8333 0.8326 0.8326 0.8333 0.8359 0.8366 0.8402
5 0.2328 0.1214 0.05947 0.0191 1.06e-08 0 0.0191 0.05947 0.1214 0.2328
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

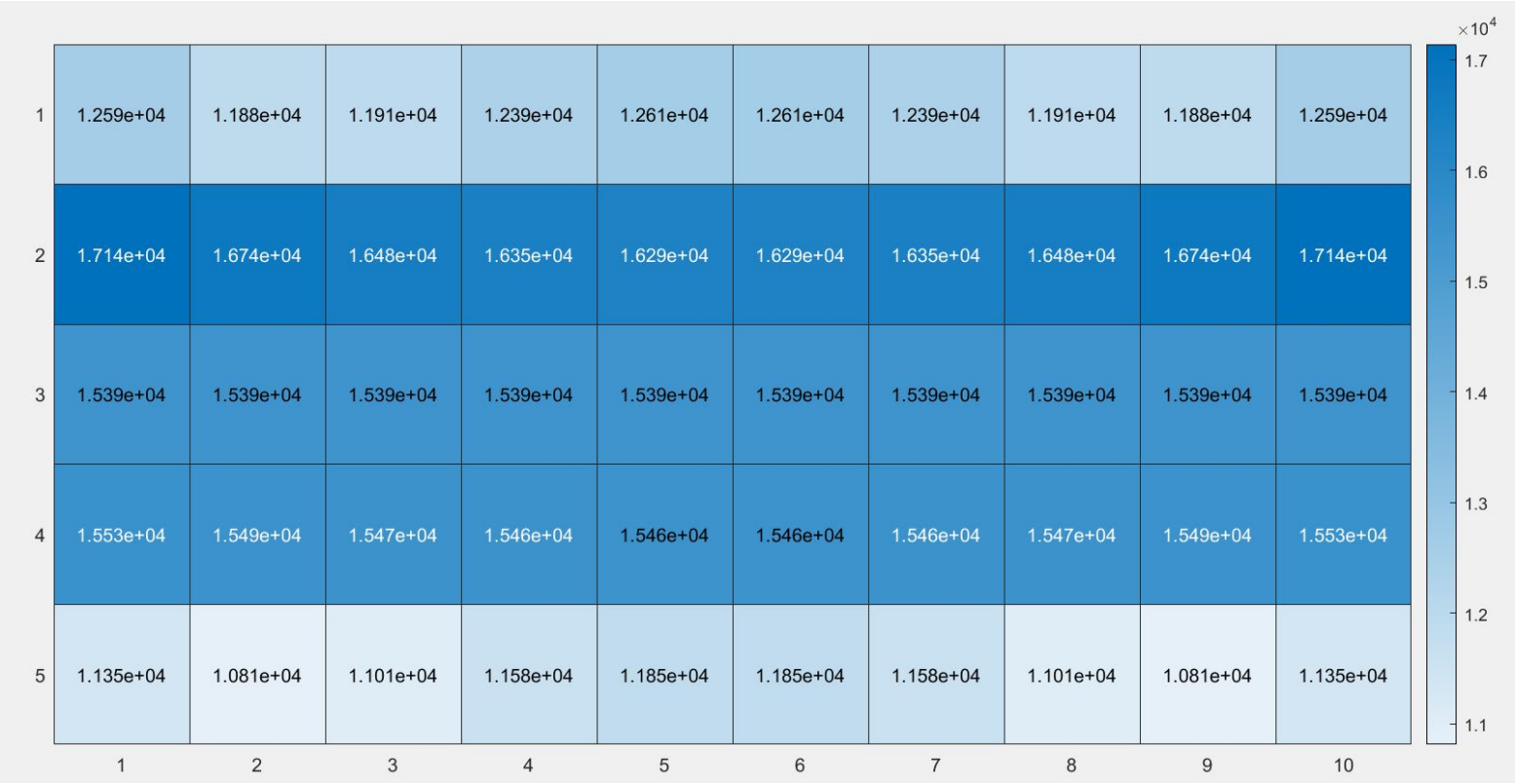
300A no defect

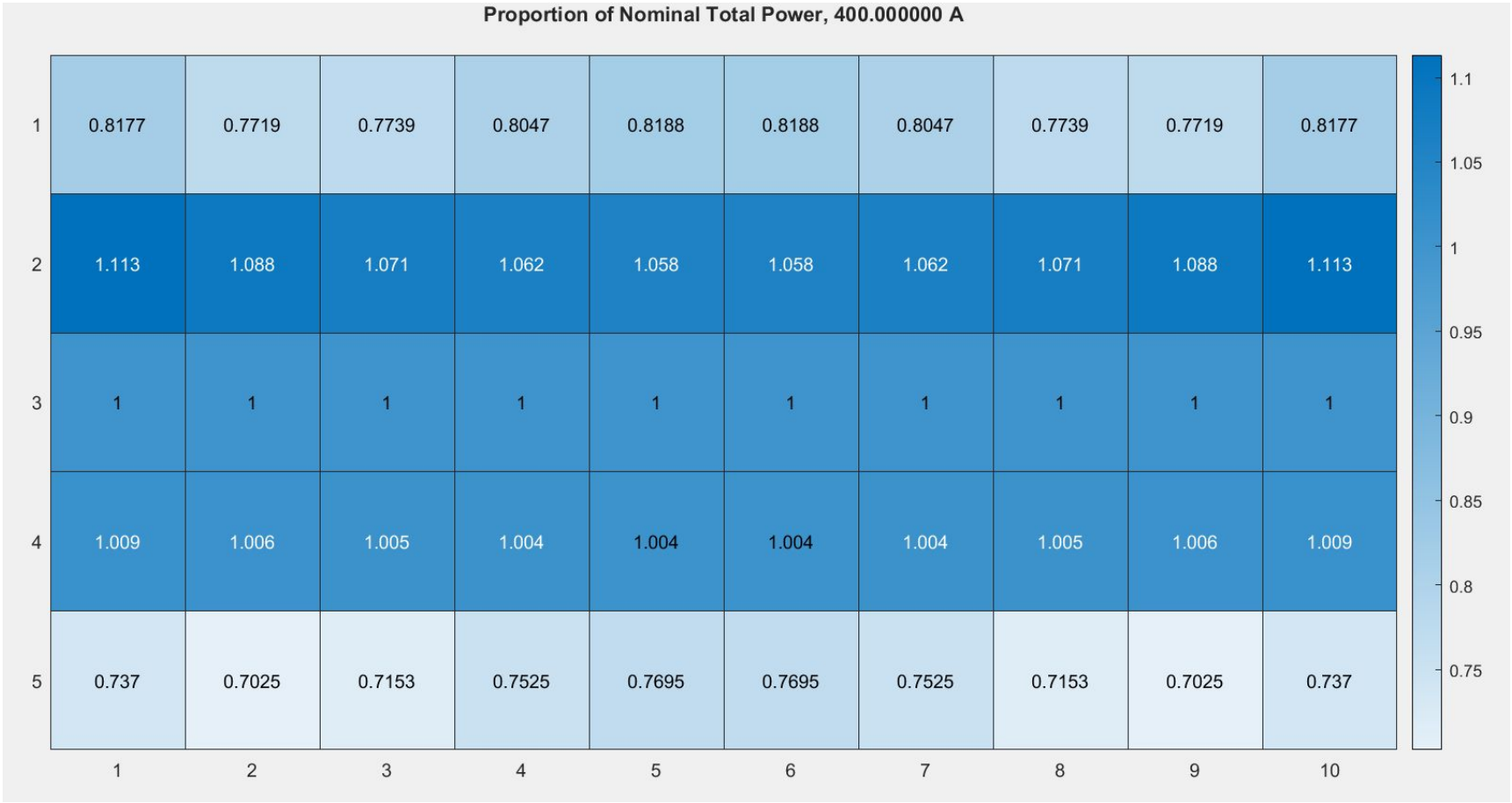


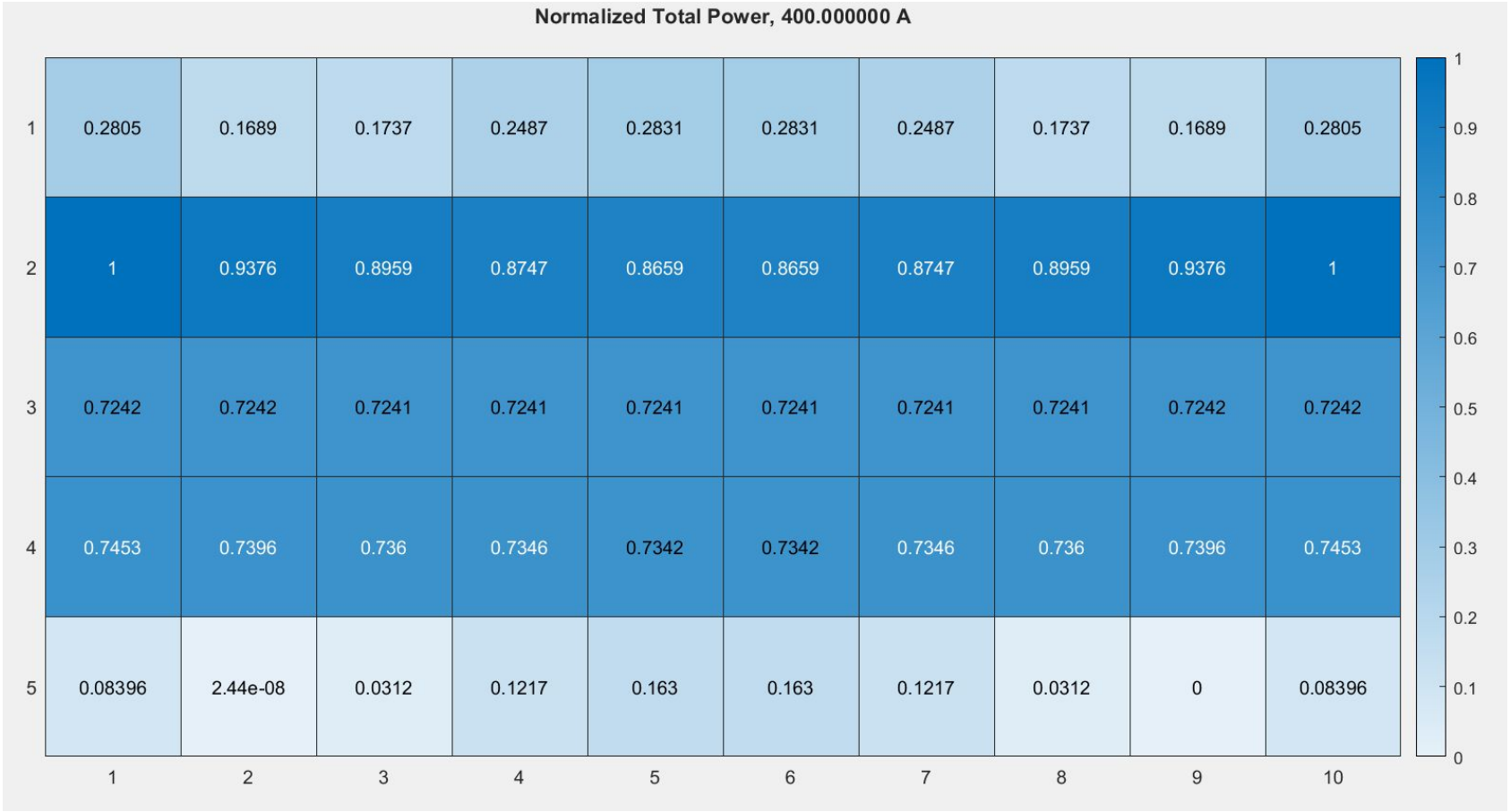

```
I_total = 300 converged
Total Power = 4.567806e+03
```

400A

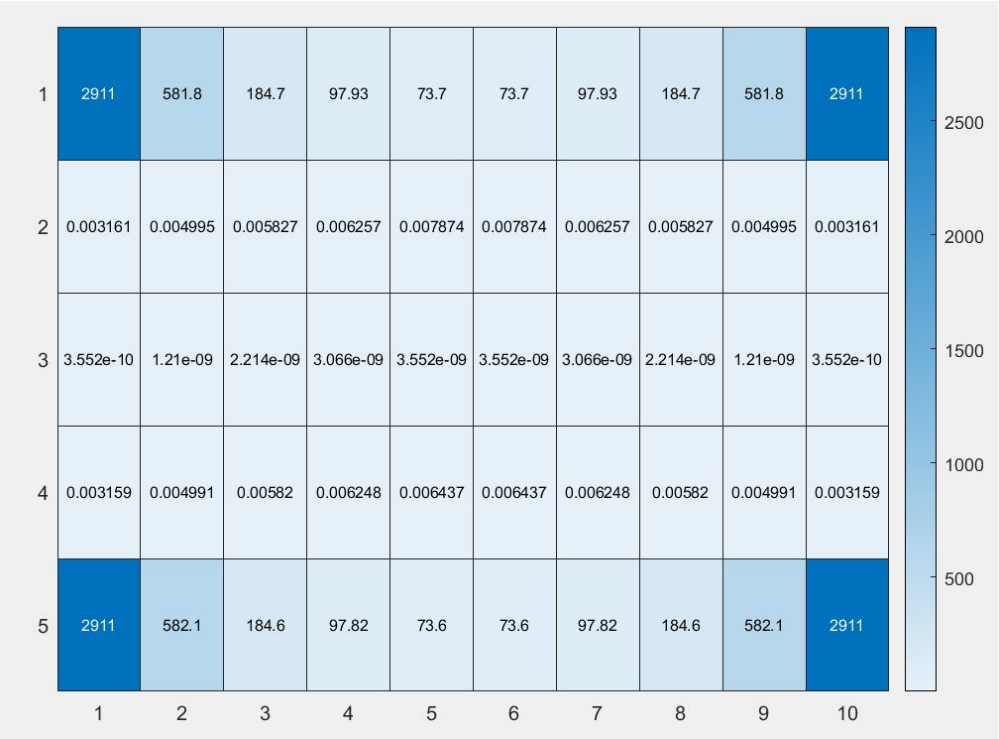
μW


1 1.259e+04 1.188e+04 1.191e+04 1.239e+04 1.261e+04 1.261e+04 1.239e+04 1.191e+04 1.188e+04 1.259e+04
2 1.714e+04 1.674e+04 1.648e+04 1.635e+04 1.629e+04 1.629e+04 1.635e+04 1.648e+04 1.674e+04 1.714e+04
3 1.539e+04 1.539e+04 1.539e+04 1.539e+04 1.539e+04 1.539e+04 1.539e+04 1.539e+04 1.539e+04 1.539e+04
4 1.553e+04 1.549e+04 1.547e+04 1.546e+04 1.546e+04 1.546e+04 1.546e+04 1.547e+04 1.549e+04 1.553e+04
5 1.135e+04 1.081e+04 1.101e+04 1.158e+04 1.185e+04 1.185e+04 1.158e+04 1.101e+04 1.081e+04 1.135e+04
1 2 3 4 5 6 7 8 9 10
×10^4
1.7
1.6
1.5
1.4
1.3
1.2
1.1


Proportion of Nominal Total Power, 400.000000 A
1 0.8177 0.7719 0.7739 0.8047 0.8188 0.8188 0.8047 0.7739 0.7719 0.8177
2 1.113 1.088 1.071 1.062 1.058 1.058 1.062 1.071 1.088 1.113
3 1 1 1 1 1 1 1 1 1 1
4 1.009 1.006 1.005 1.004 1.004 1.004 1.004 1.005 1.006 1.009
5 0.737 0.7025 0.7153 0.7525 0.7695 0.7695 0.7525 0.7153 0.7025 0.737
1 2 3 4 5 6 7 8 9 10
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75


Normalized Total Power, 400.000000 A
1 0.2805 0.1689 0.1737 0.2487 0.2831 0.2831 0.2487 0.1737 0.1689 0.2805
2 1 0.9376 0.8959 0.8747 0.8659 0.8659 0.8747 0.8959 0.9376 1
3 0.7242 0.7242 0.7241 0.7241 0.7241 0.7241 0.7241 0.7241 0.7242 0.7242
4 0.7453 0.7396 0.736 0.7346 0.7342 0.7342 0.7346 0.736 0.7396 0.7453
5 0.08396 2.44e-08 0.0312 0.1217 0.163 0.163 0.1217 0.0312 0 0.08396
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

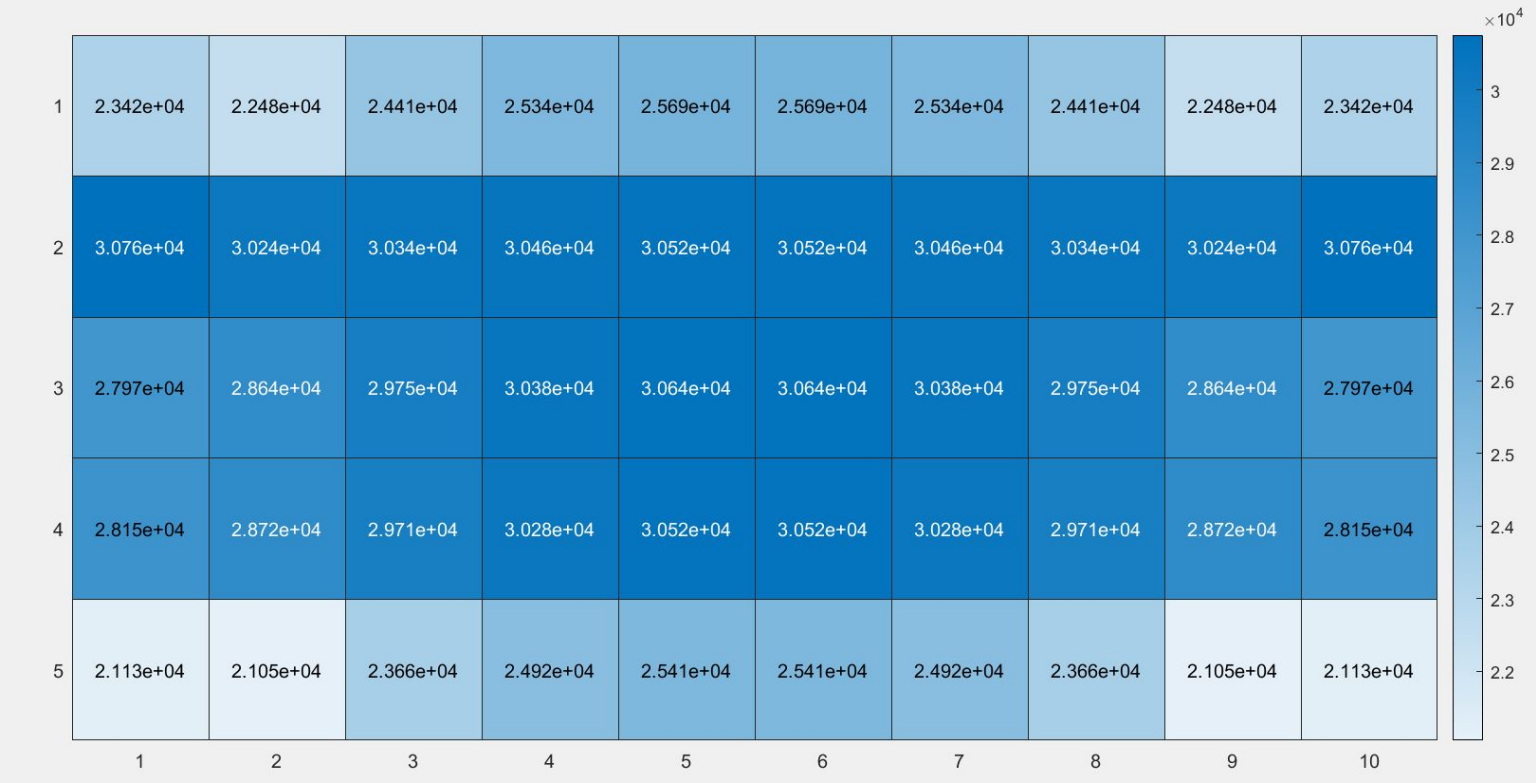
400A no defect



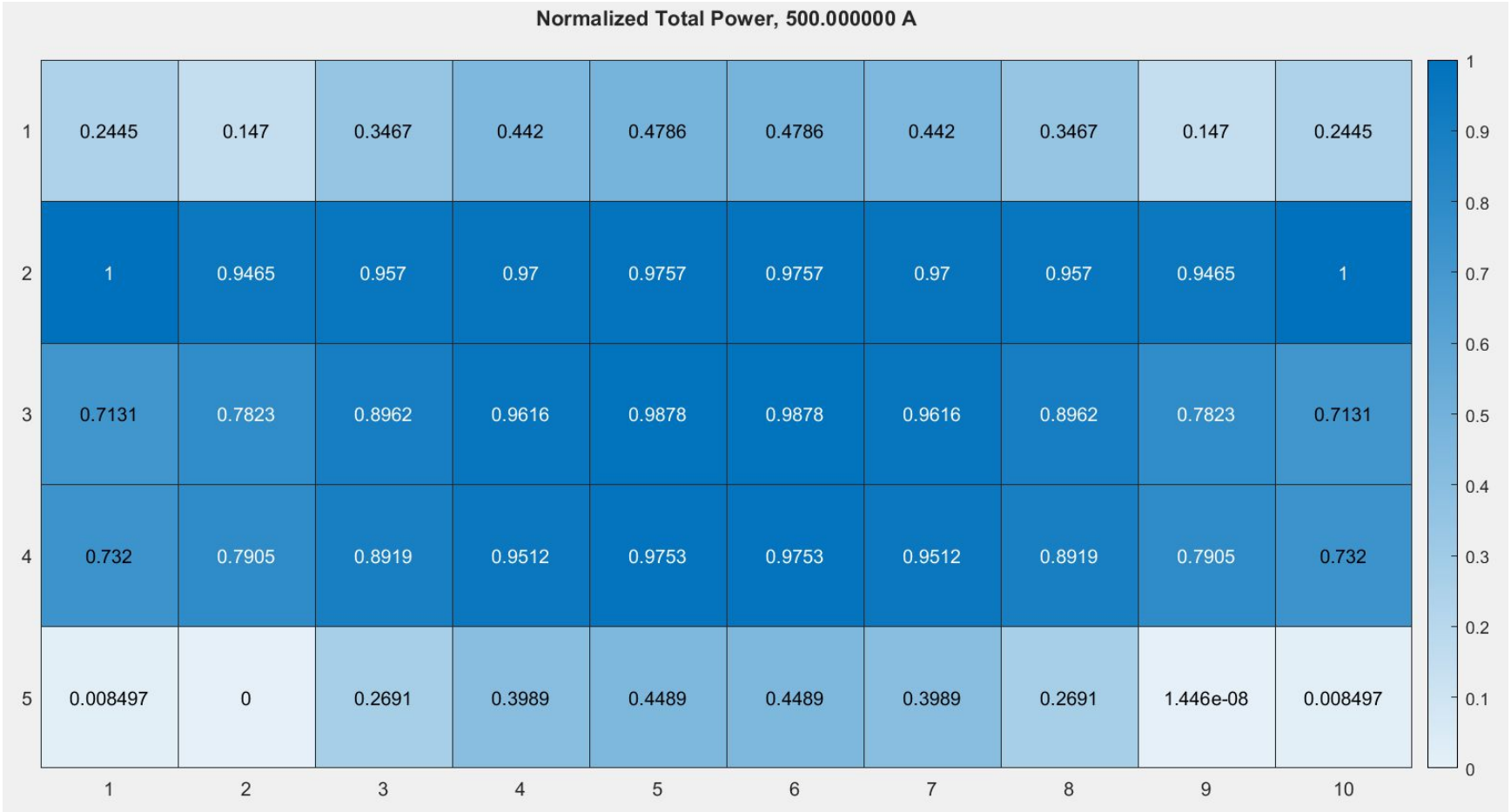

```
I_total = 400 converged
Total Power = 1.539491e+04
```

500A

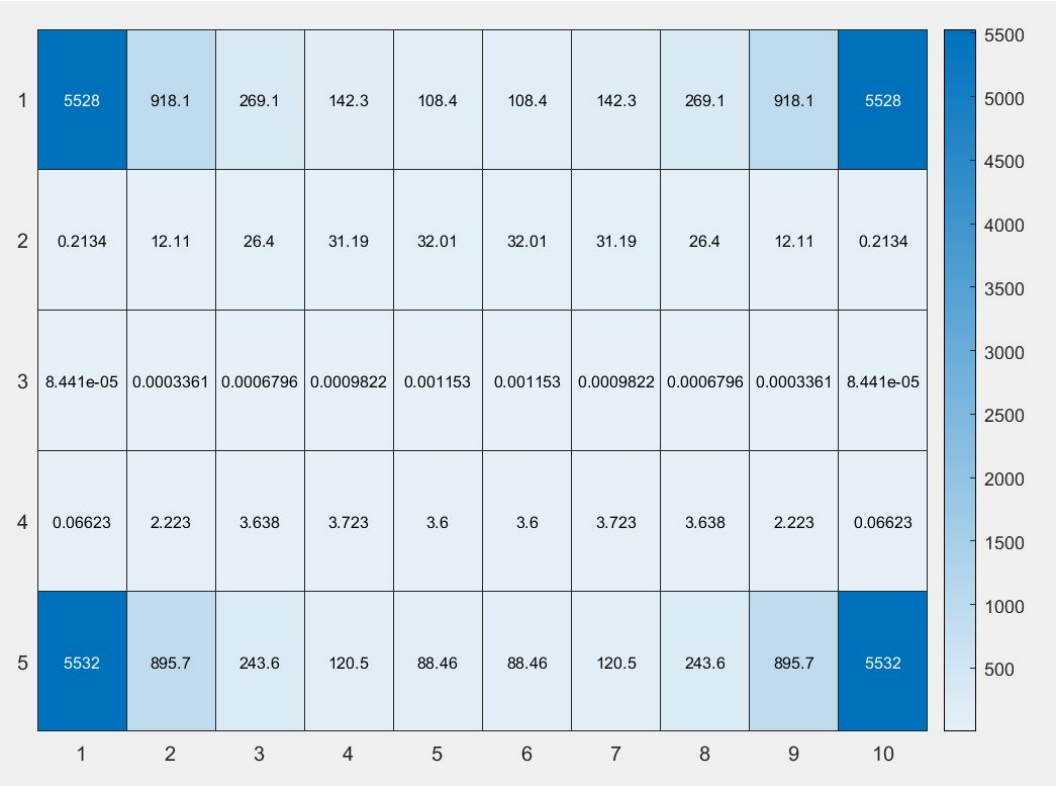
μW


×10^4
3
2.9
2.8
2.7
2.6
2.5
2.4
2.3
2.2
1 2.342e+04 2.248e+04 2.441e+04 2.534e+04 2.569e+04 2.569e+04 2.534e+04 2.441e+04 2.248e+04 2.342e+04
2 3.076e+04 3.024e+04 3.034e+04 3.046e+04 3.052e+04 3.052e+04 3.046e+04 3.034e+04 3.024e+04 3.076e+04
3 2.797e+04 2.864e+04 2.975e+04 3.038e+04 3.064e+04 3.064e+04 3.038e+04 2.975e+04 2.864e+04 2.797e+04
4 2.815e+04 2.872e+04 2.971e+04 3.028e+04 3.052e+04 3.052e+04 3.028e+04 2.971e+04 2.872e+04 2.815e+04
5 2.113e+04 2.105e+04 2.366e+04 2.492e+04 2.541e+04 2.541e+04 2.492e+04 2.366e+04 2.105e+04 2.113e+04
1 2 3 4 5 6 7 8 9 10


Proportion of Nominal Total Power, 500.000000 A
1
2
3
4
5
0.8388
0.8049
0.8743
0.9075
0.9202
0.9202
0.9075
0.8743
0.8049
0.8388
1.101
1.083
1.086
1.091
1.093
1.093
1.091
1.086
1.083
1.101
1.002
1.026
1.065
1.088
1.097
1.097
1.088
1.065
1.026
1.002
1.008
1.029
1.064
1.084
1.093
1.093
1.084
1.064
1.029
1.008
0.7568
0.7538
0.8474
0.8925
0.9099
0.9099
0.8925
0.8474
0.7538
0.7568
1
2
3
4
5
6
7
8
9
10
1.1
1.05
1
0.95
0.9
0.85
0.8


Normalized Total Power, 500.000000 A
1 0.2445 0.147 0.3467 0.442 0.4786 0.4786 0.442 0.3467 0.147 0.2445
2 1 0.9465 0.957 0.97 0.9757 0.9757 0.97 0.957 0.9465 1
3 0.7131 0.7823 0.8962 0.9616 0.9878 0.9878 0.9616 0.8962 0.7823 0.7131
4 0.732 0.7905 0.8919 0.9512 0.9753 0.9753 0.9512 0.8919 0.7905 0.732
5 0.008497 0 0.2691 0.3989 0.4489 0.4489 0.3989 0.2691 1.446e-08 0.008497
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

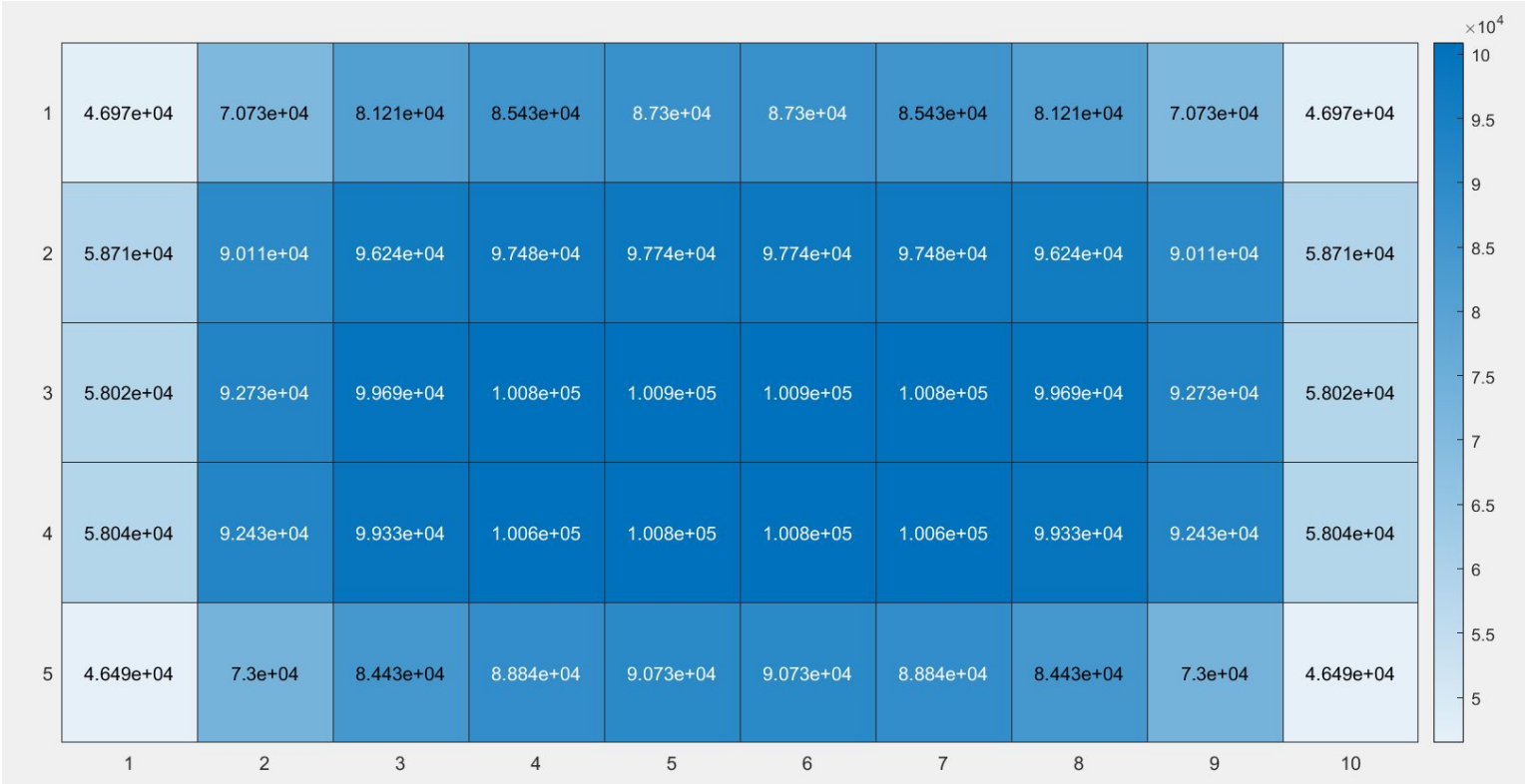
500A no defect



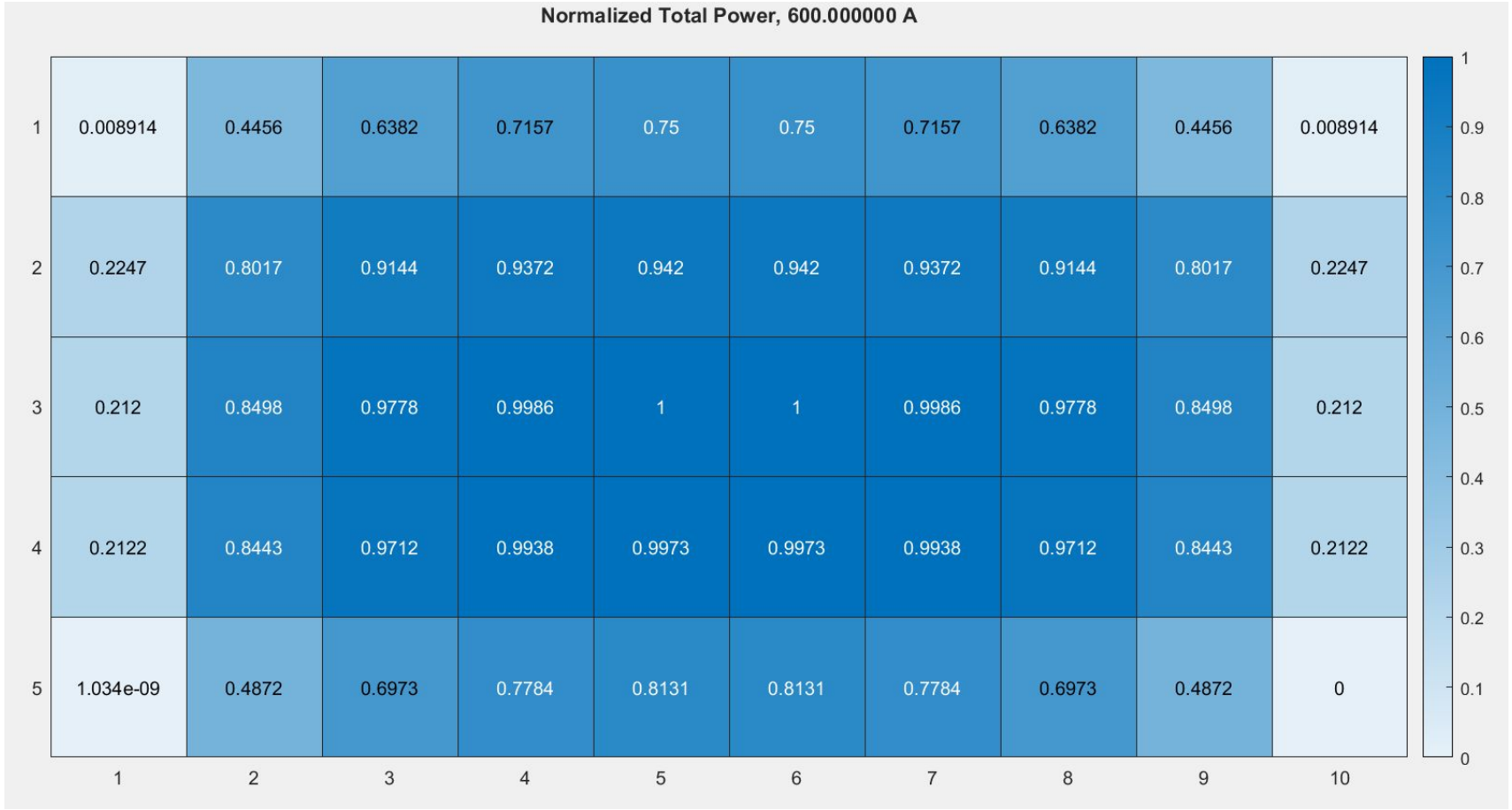

```
I_total = 500 converged
Total Power = 2.792316e+04
```

600A

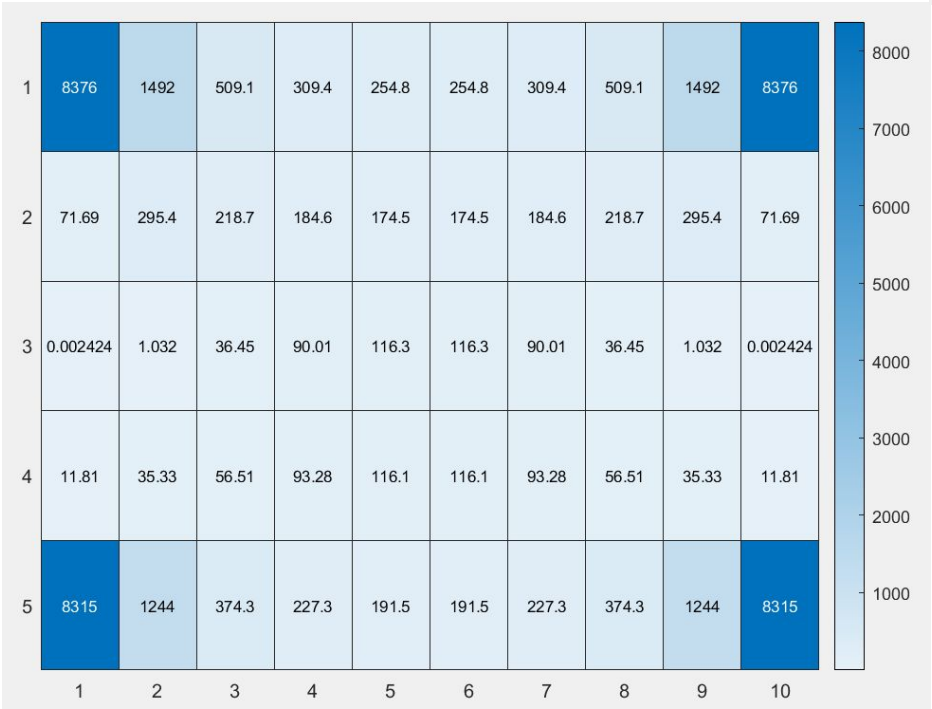
μW


1 4.697e+04 7.073e+04 8.121e+04 8.543e+04 8.73e+04 8.73e+04 8.543e+04 8.121e+04 7.073e+04 4.697e+04
2 5.871e+04 9.011e+04 9.624e+04 9.748e+04 9.774e+04 9.774e+04 9.748e+04 9.624e+04 9.011e+04 5.871e+04
3 5.802e+04 9.273e+04 9.969e+04 1.008e+05 1.009e+05 1.009e+05 1.008e+05 9.969e+04 9.273e+04 5.802e+04
4 5.804e+04 9.243e+04 9.933e+04 1.006e+05 1.008e+05 1.008e+05 1.006e+05 9.933e+04 9.243e+04 5.804e+04
5 4.649e+04 7.3e+04 8.443e+04 8.884e+04 9.073e+04 9.073e+04 8.884e+04 8.443e+04 7.3e+04 4.649e+04
1 2 3 4 5 6 7 8 9 10
×10^4
10 9.5 9 8.5 8 7.5 7 6.5 6 5.5 5


Proportion of Nominal Total Power, 600.000000 A
1 1.03 1.552 1.781 1.874 1.915 1.915 1.874 1.781 1.552 1.03
2 1.288 1.977 2.111 2.138 2.144 2.144 2.138 2.111 1.977 1.288
3 1.273 2.034 2.187 2.212 2.213 2.213 2.212 2.187 2.034 1.273
4 1.273 2.027 2.179 2.206 2.21 2.21 2.206 2.179 2.027 1.273
5 1.02 1.601 1.852 1.949 1.99 1.99 1.949 1.852 1.601 1.02
1 2 3 4 5 6 7 8 9 10
2.2
2
1.8
1.6
1.4
1.2

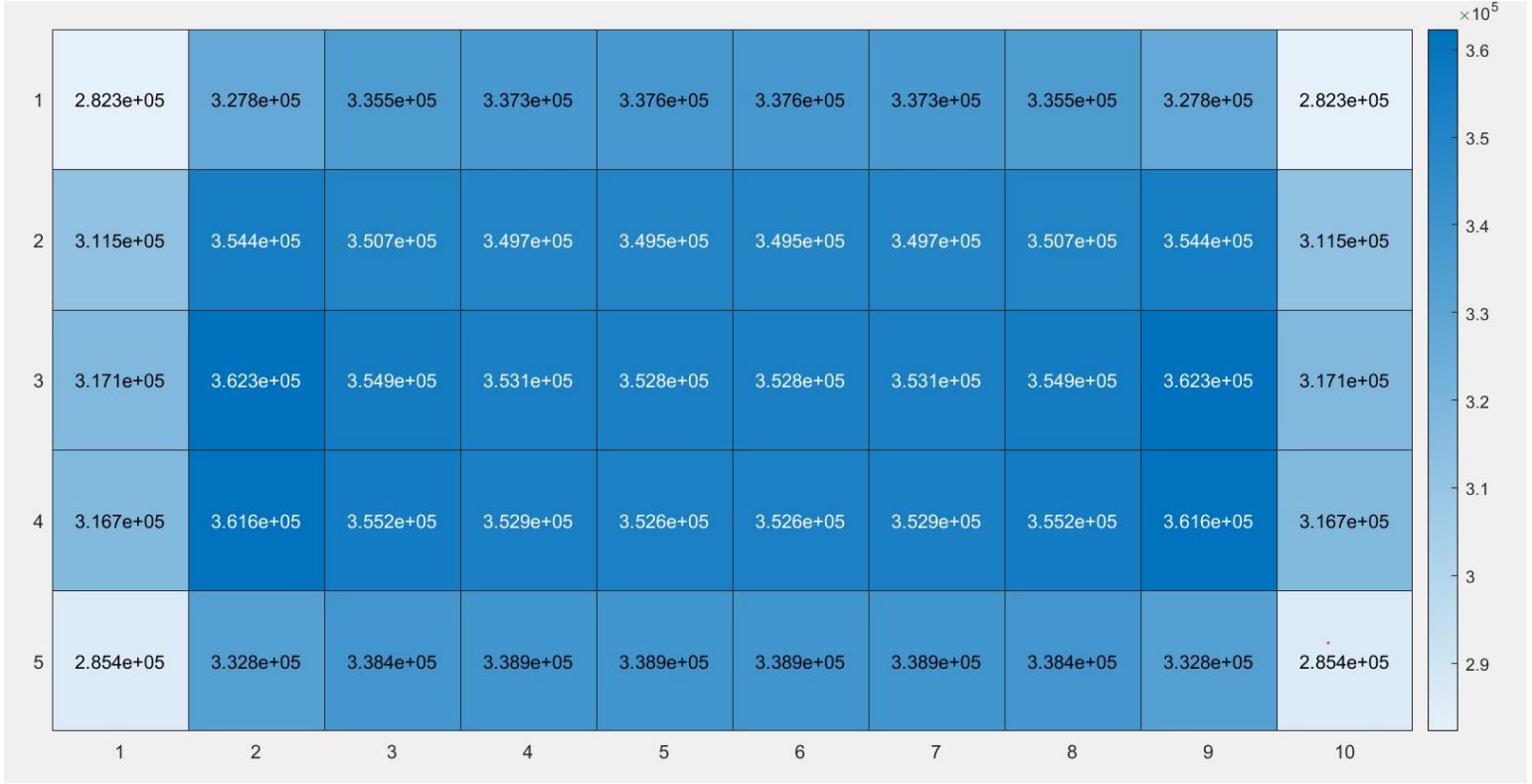

Normalized Total Power, 600.000000 A
1 0.008914 0.4456 0.6382 0.7157 0.75 0.75 0.7157 0.6382 0.4456 0.008914
2 0.2247 0.8017 0.9144 0.9372 0.942 0.942 0.9372 0.9144 0.8017 0.2247
3 0.212 0.8498 0.9778 0.9986 1 1 0.9986 0.9778 0.8498 0.212
4 0.2122 0.8443 0.9712 0.9938 0.9973 0.9973 0.9938 0.9712 0.8443 0.2122
5 1.034e-09 0.4872 0.6973 0.7784 0.8131 0.8131 0.7784 0.6973 0.4872 0
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

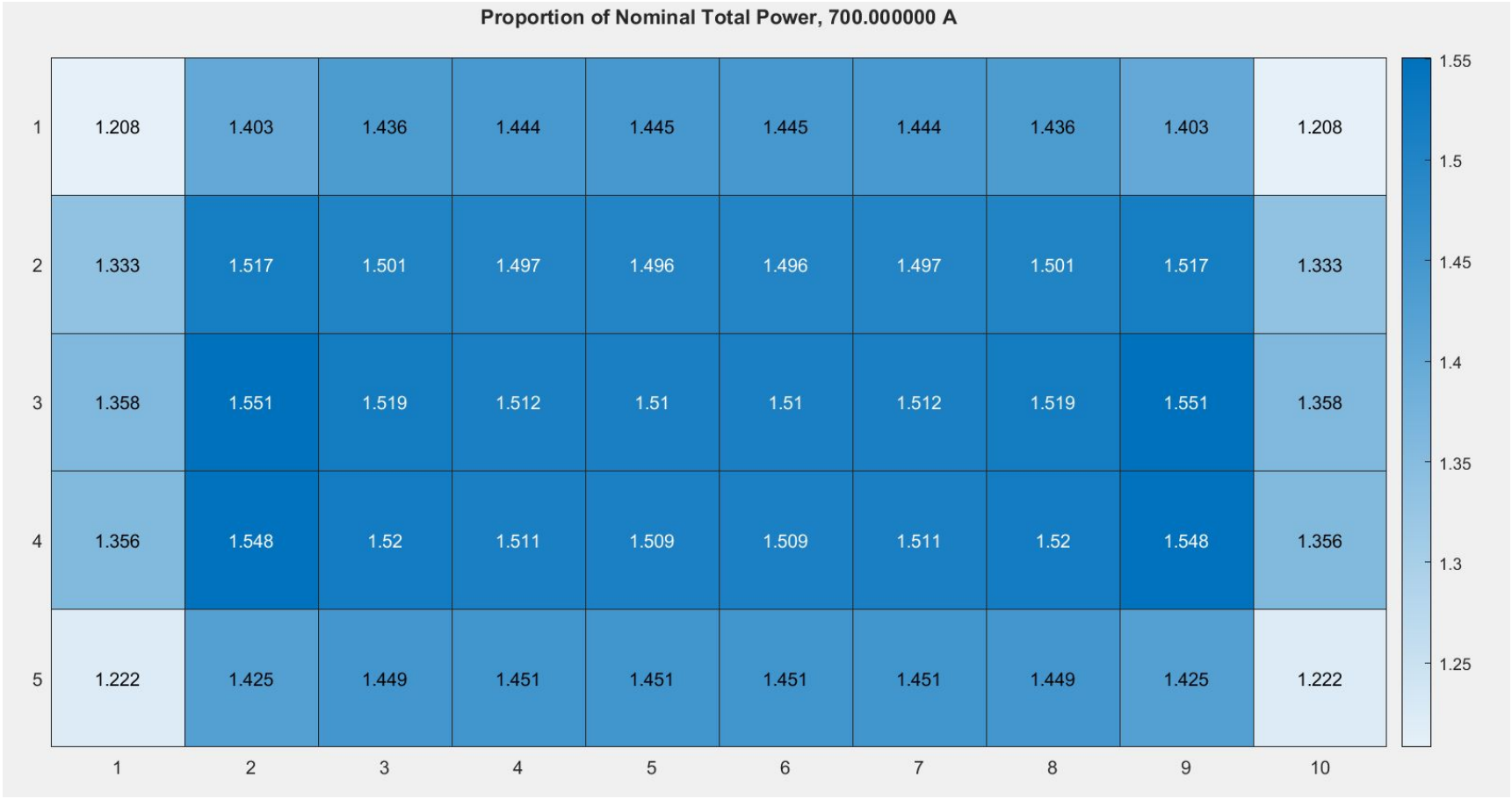
```
I_total = 600 converged
Total Power = 4.558944e+04
```

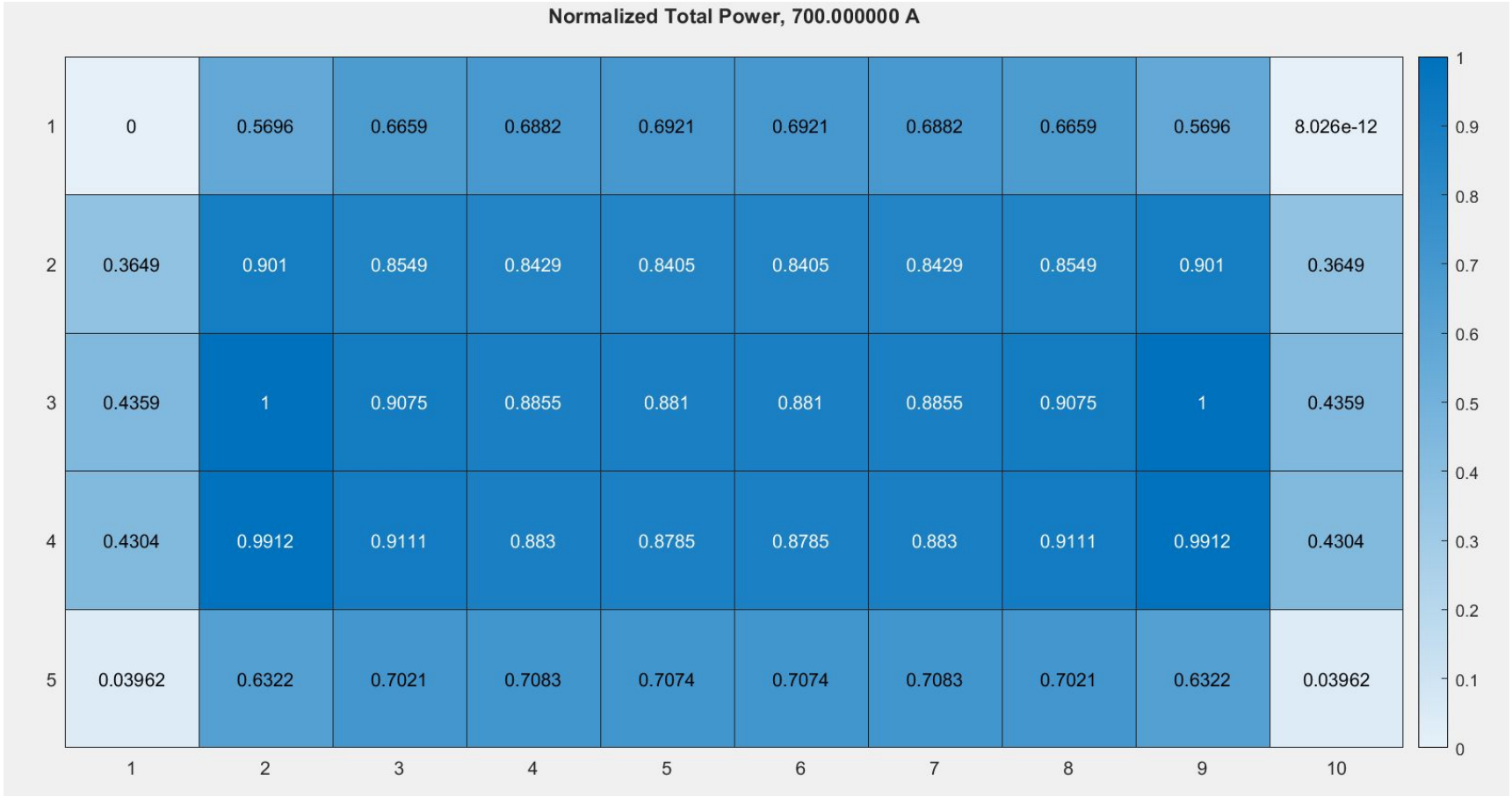


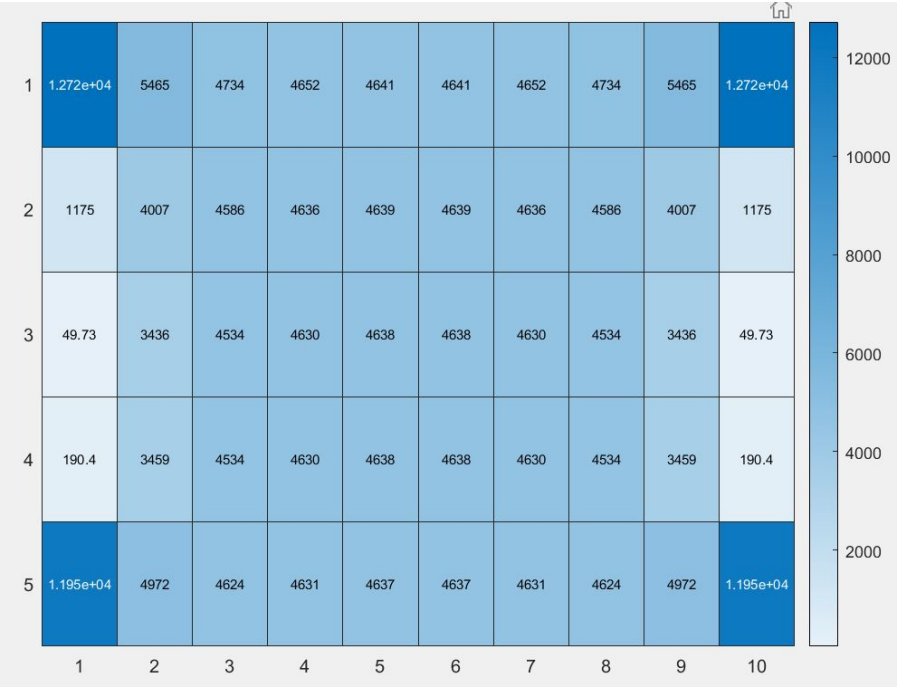
700A

μW


1 2.823e+05 3.278e+05 3.355e+05 3.373e+05 3.376e+05 3.376e+05 3.373e+05 3.355e+05 3.278e+05 2.823e+05
2 3.115e+05 3.544e+05 3.507e+05 3.497e+05 3.495e+05 3.495e+05 3.497e+05 3.507e+05 3.544e+05 3.115e+05
3 3.171e+05 3.623e+05 3.549e+05 3.531e+05 3.528e+05 3.528e+05 3.531e+05 3.549e+05 3.623e+05 3.171e+05
4 3.167e+05 3.616e+05 3.552e+05 3.529e+05 3.526e+05 3.526e+05 3.529e+05 3.552e+05 3.616e+05 3.167e+05
5 2.854e+05 3.328e+05 3.384e+05 3.389e+05 3.389e+05 3.389e+05 3.389e+05 3.384e+05 3.328e+05 2.854e+05
1 2 3 4 5 6 7 8 9 10
×10^5
3.6
3.5
3.4
3.3
3.2
3.1
3
2.9


Proportion of Nominal Total Power, 700.000000 A
1 1.208 1.403 1.436 1.444 1.445 1.445 1.444 1.436 1.403 1.208
2 1.333 1.517 1.501 1.497 1.496 1.496 1.497 1.501 1.517 1.333
3 1.358 1.551 1.519 1.512 1.51 1.51 1.512 1.519 1.551 1.358
4 1.356 1.548 1.52 1.511 1.509 1.509 1.511 1.52 1.548 1.356
5 1.222 1.425 1.449 1.451 1.451 1.451 1.451 1.449 1.425 1.222
1 2 3 4 5 6 7 8 9 10
1.55
1.5
1.45
1.4
1.35
1.3
1.25

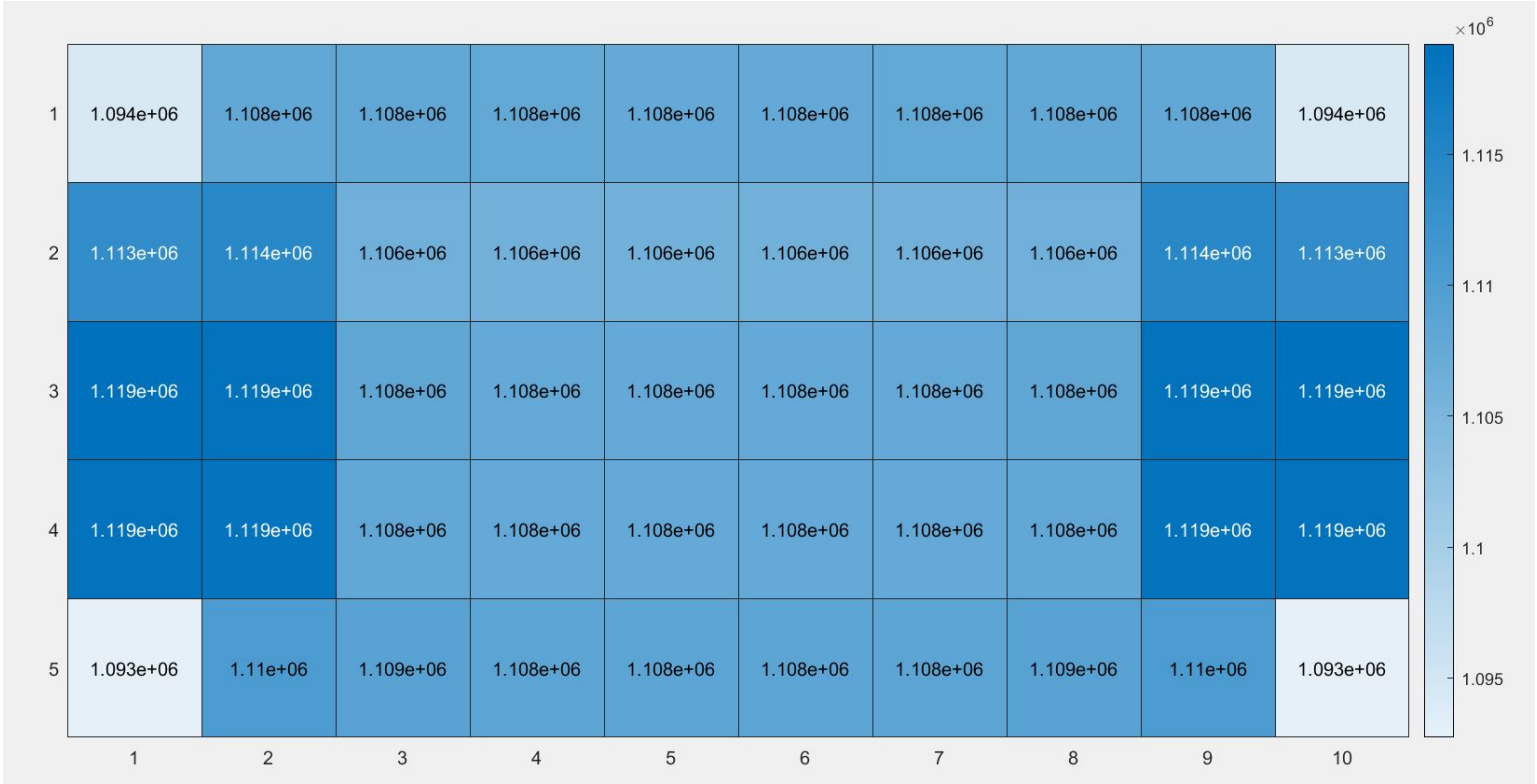

Normalized Total Power, 700.000000 A
1
2
3
4
5
0
0.5696
0.6659
0.6882
0.6921
0.6921
0.6882
0.6659
0.5696
8.026e-12
0.3649
0.901
0.8549
0.8429
0.8405
0.8405
0.8429
0.8549
0.901
0.3649
0.4359
1
0.9075
0.8855
0.881
0.881
0.8855
0.9075
1
0.4359
0.4304
0.9912
0.9111
0.883
0.8785
0.8785
0.883
0.9111
0.9912
0.4304
0.03962
0.6322
0.7021
0.7083
0.7074
0.7074
0.7083
0.7021
0.6322
0.03962
1
2
3
4
5
6
7
8
9
10
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0

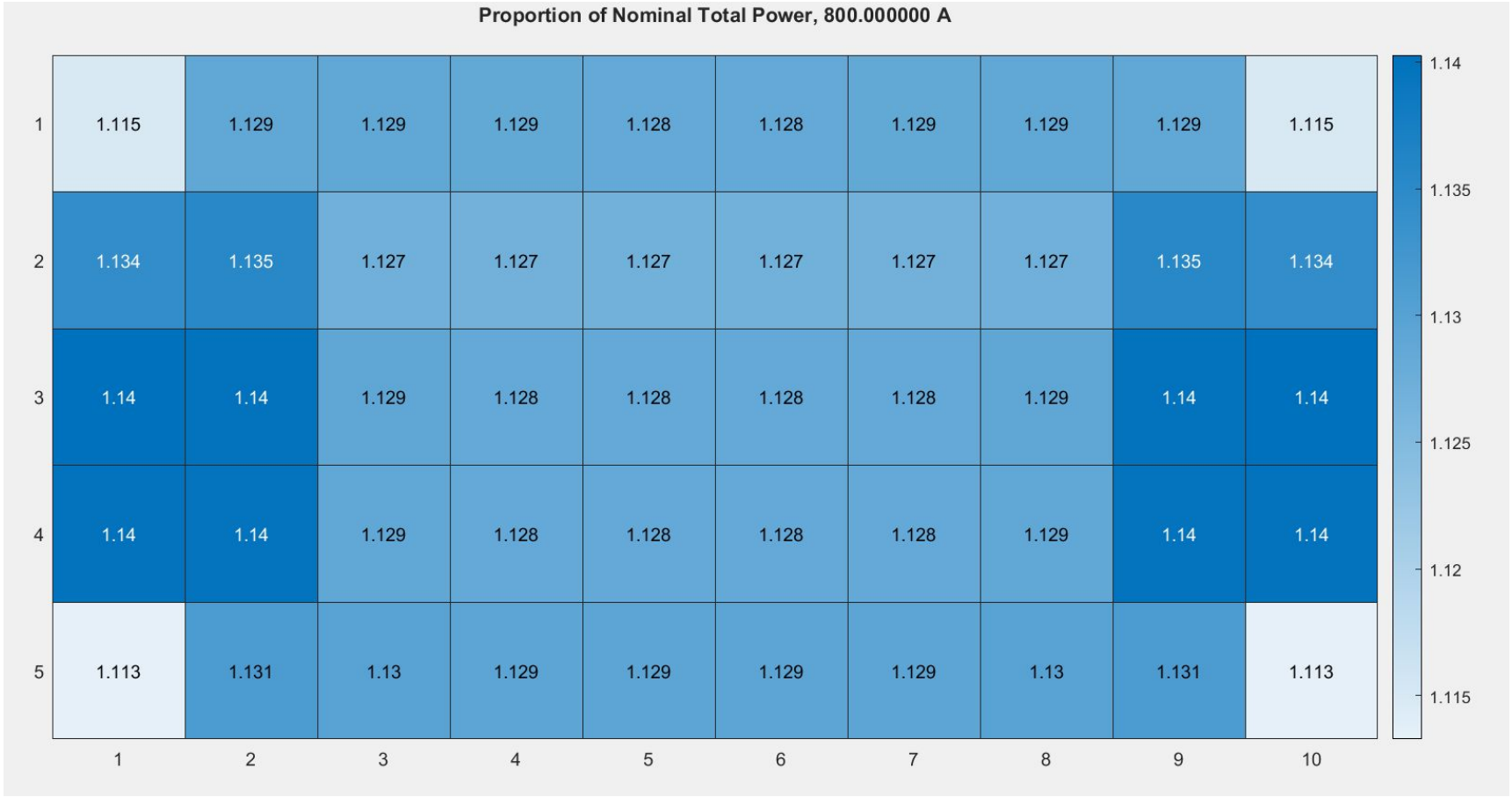


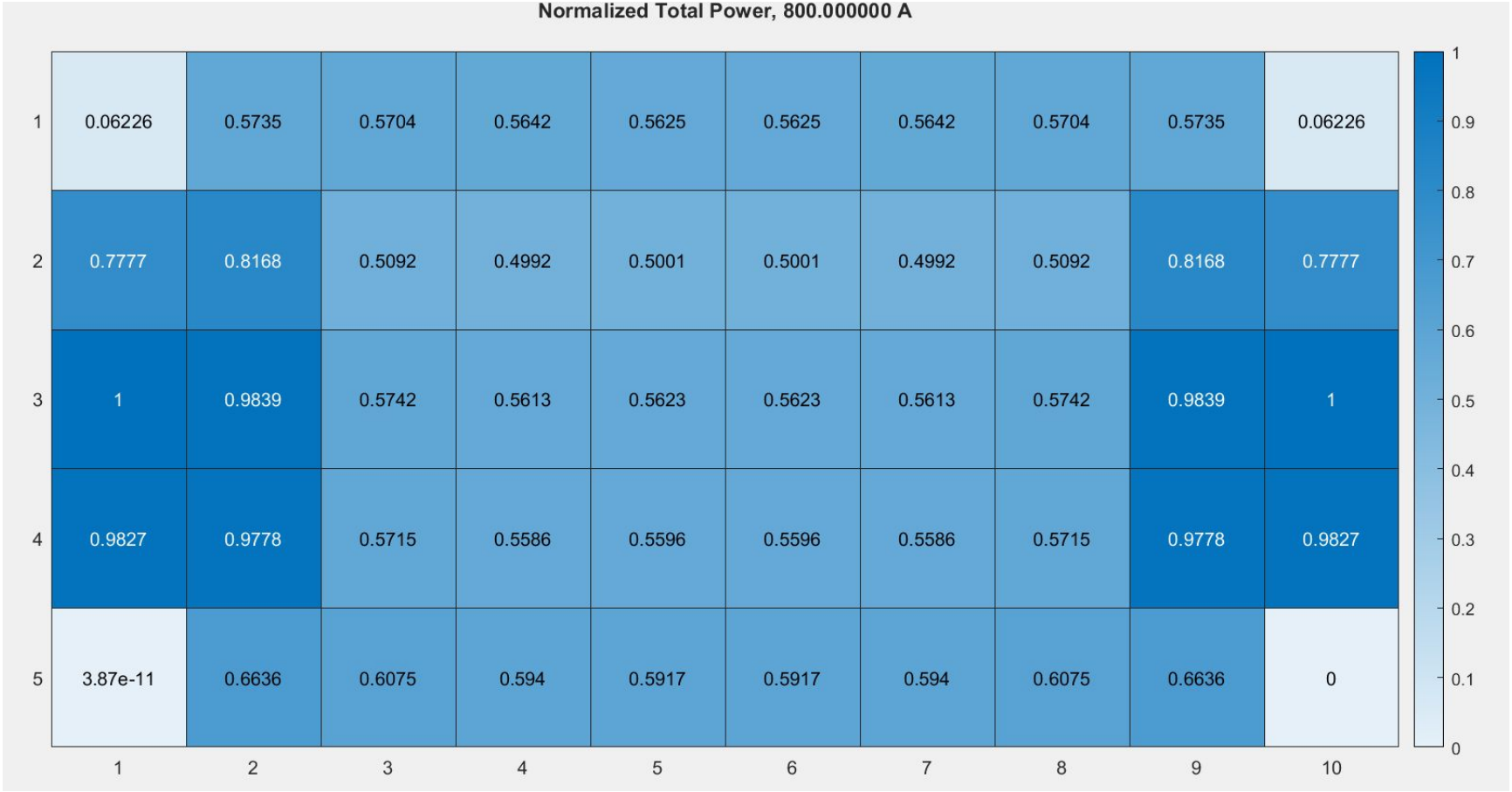

```
I_total = 700 converged
Total Power = 2.336089e+05
```

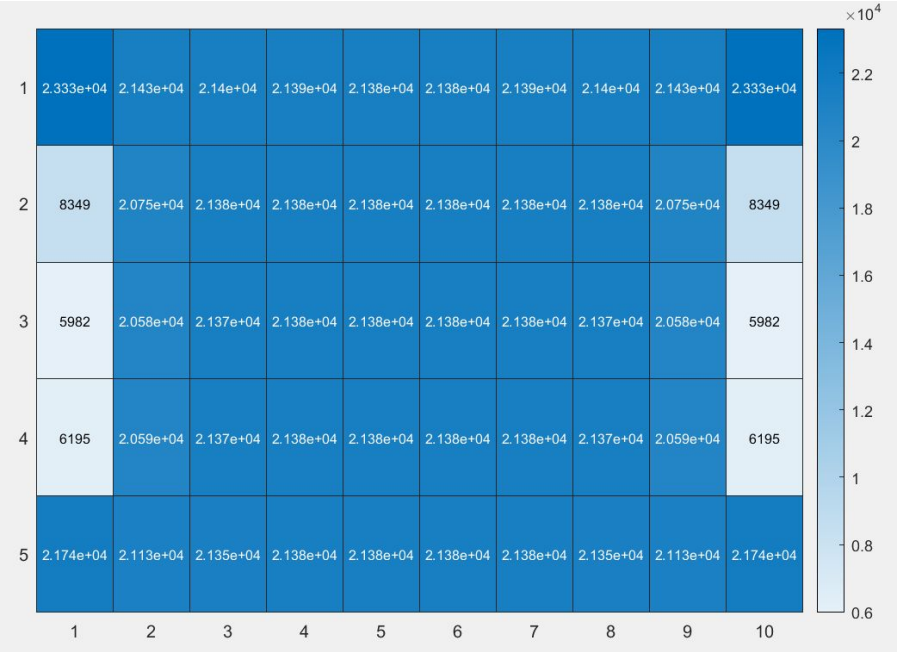
800A

μW


1 1.094e+06 1.108e+06 1.108e+06 1.108e+06 1.108e+06 1.108e+06 1.108e+06 1.108e+06 1.108e+06 1.094e+06
2 1.113e+06 1.114e+06 1.106e+06 1.106e+06 1.106e+06 1.106e+06 1.106e+06 1.106e+06 1.114e+06 1.113e+06
3 1.119e+06 1.119e+06 1.108e+06 1.108e+06 1.108e+06 1.108e+06 1.108e+06 1.108e+06 1.119e+06 1.119e+06
4 1.119e+06 1.119e+06 1.108e+06 1.108e+06 1.108e+06 1.108e+06 1.108e+06 1.108e+06 1.119e+06 1.119e+06
5 1.093e+06 1.11e+06 1.109e+06 1.108e+06 1.108e+06 1.108e+06 1.108e+06 1.109e+06 1.11e+06 1.093e+06
1 2 3 4 5 6 7 8 9 10
×10^6
1.115
1.11
1.105
1.1
1.095


Proportion of Nominal Total Power, 800.000000 A
1 1.115 1.129 1.129 1.129 1.128 1.128 1.129 1.129 1.129 1.115
2 1.134 1.135 1.127 1.127 1.127 1.127 1.127 1.127 1.135 1.134
3 1.14 1.14 1.129 1.128 1.128 1.128 1.128 1.129 1.14 1.14
4 1.14 1.14 1.129 1.128 1.128 1.128 1.128 1.129 1.14 1.14
5 1.113 1.131 1.13 1.129 1.129 1.129 1.129 1.13 1.131 1.113
1 2 3 4 5 6 7 8 9 10
1.14
1.135
1.13
1.125
1.12
1.115

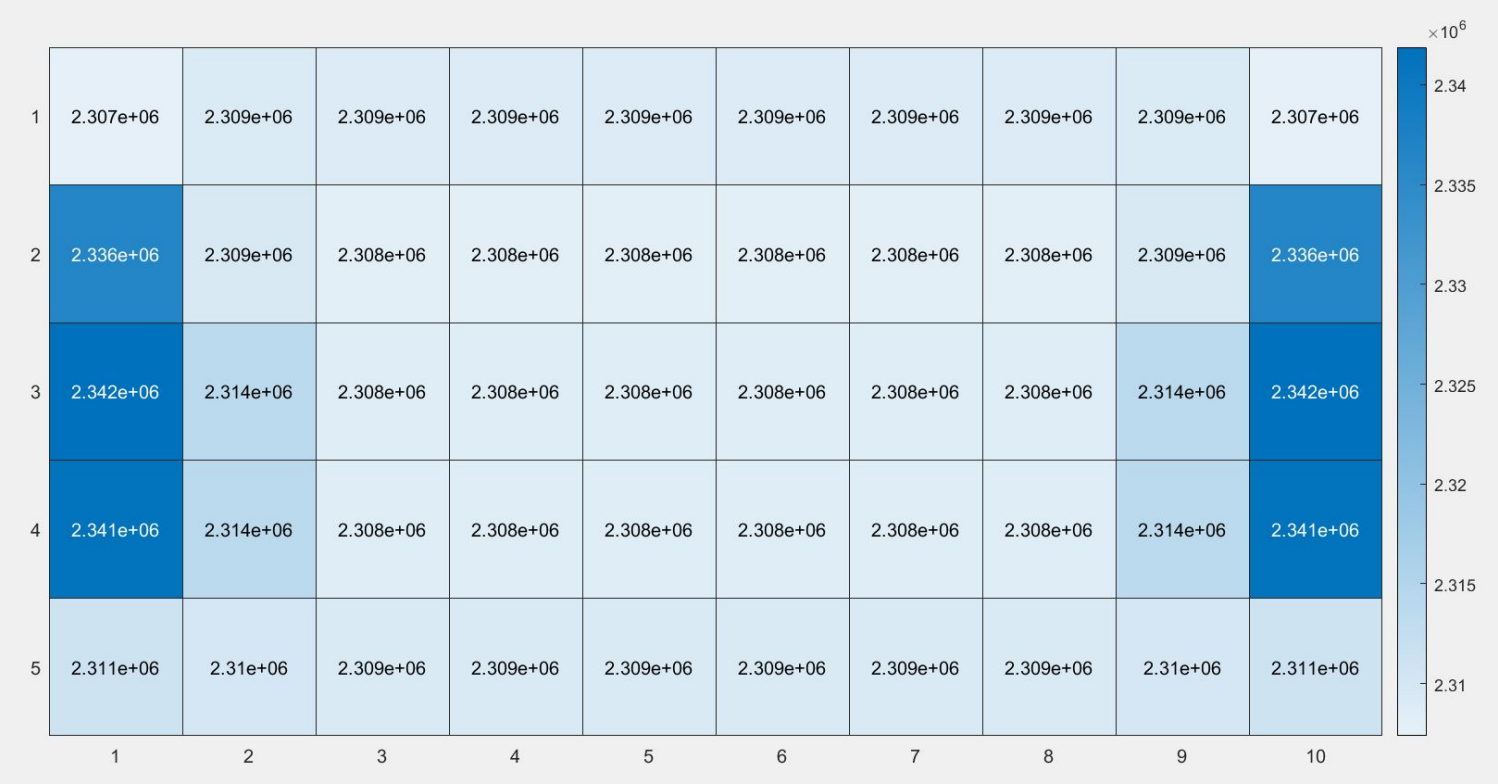

Normalized Total Power, 800.000000 A
1 0.06226 0.5735 0.5704 0.5642 0.5625 0.5625 0.5642 0.5704 0.5735 0.06226
2 0.7777 0.8168 0.5092 0.4992 0.5001 0.5001 0.4992 0.5092 0.8168 0.7777
3 1 0.9839 0.5742 0.5613 0.5623 0.5623 0.5613 0.5742 0.9839 1
4 0.9827 0.9778 0.5715 0.5586 0.5596 0.5596 0.5586 0.5715 0.9778 0.9827
5 3.87e-11 0.6636 0.6075 0.594 0.5917 0.5917 0.594 0.6075 0.6636 0
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

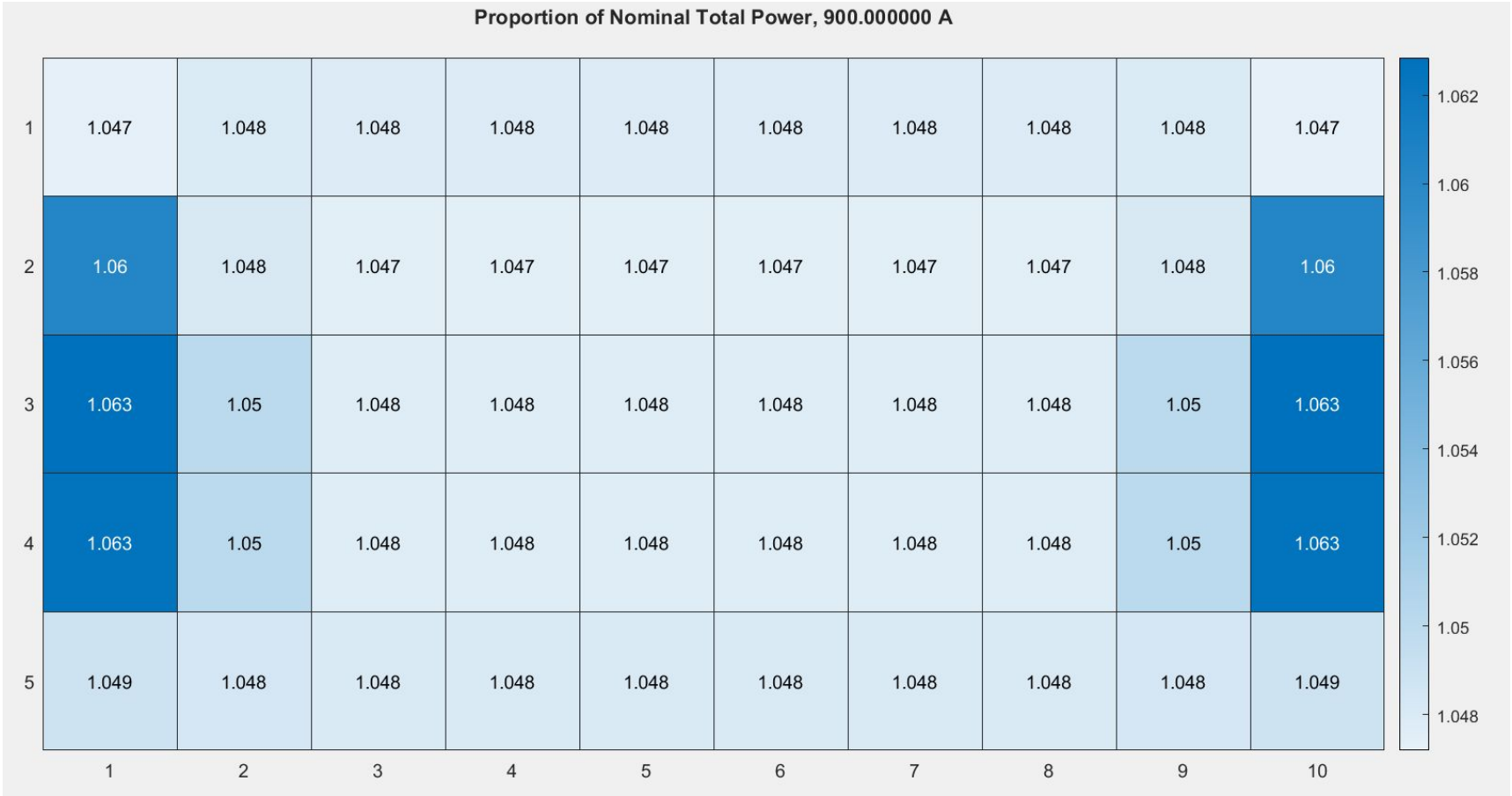


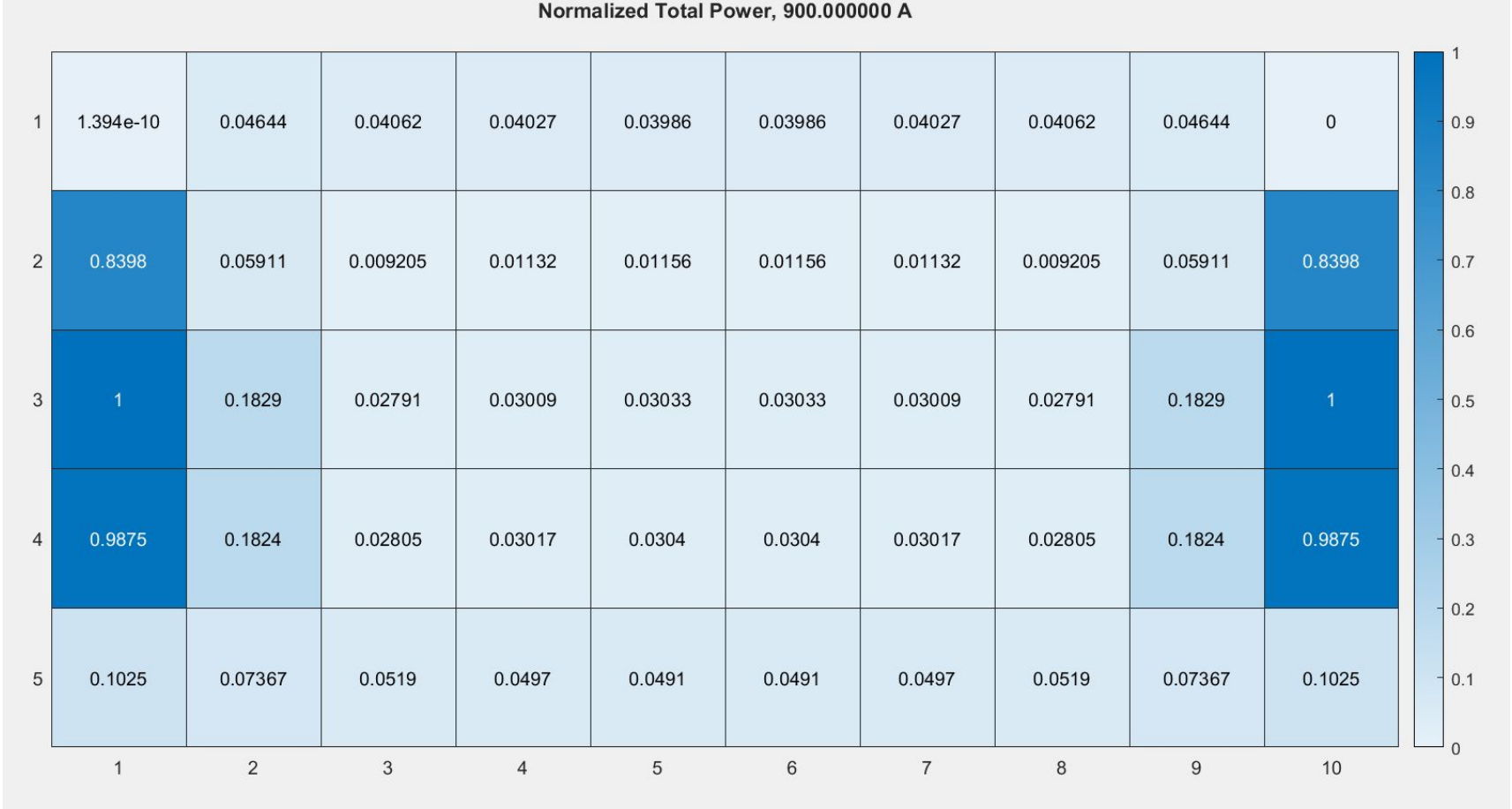

```
I_total = 800 converged
Total Power = 9.815357e+05
```

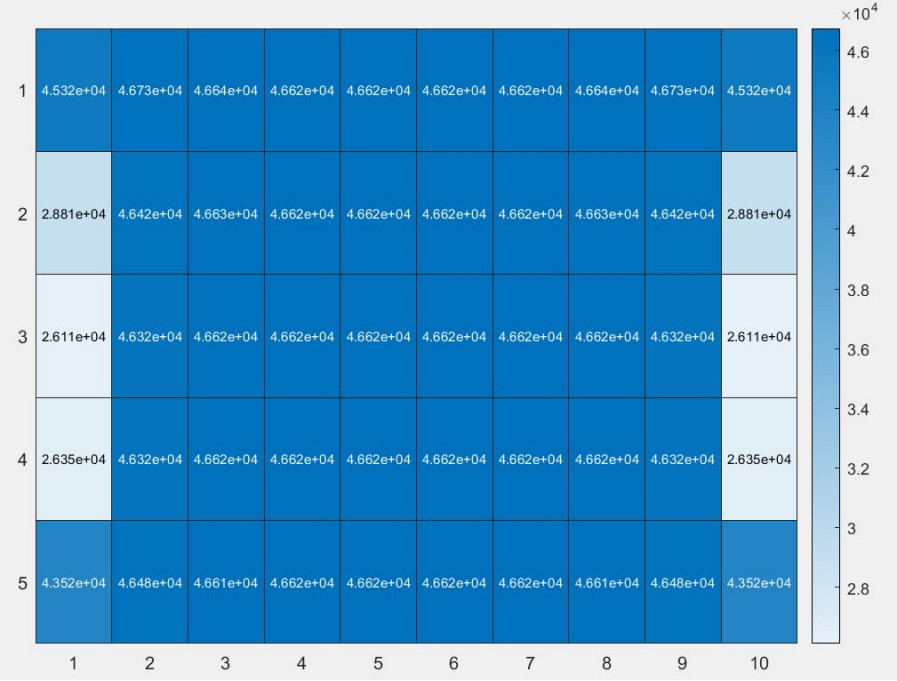
900A

μW


1 2.307e+06 2.309e+06 2.309e+06 2.309e+06 2.309e+06 2.309e+06 2.309e+06 2.309e+06 2.309e+06 2.307e+06
2 2.336e+06 2.309e+06 2.308e+06 2.308e+06 2.308e+06 2.308e+06 2.308e+06 2.308e+06 2.309e+06 2.336e+06
3 2.342e+06 2.314e+06 2.308e+06 2.308e+06 2.308e+06 2.308e+06 2.308e+06 2.308e+06 2.314e+06 2.342e+06
4 2.341e+06 2.314e+06 2.308e+06 2.308e+06 2.308e+06 2.308e+06 2.308e+06 2.308e+06 2.314e+06 2.341e+06
5 2.311e+06 2.31e+06 2.309e+06 2.309e+06 2.309e+06 2.309e+06 2.309e+06 2.309e+06 2.31e+06 2.311e+06
1 2 3 4 5 6 7 8 9 10
×10^6
2.34
2.335
2.33
2.325
2.32
2.315
2.31

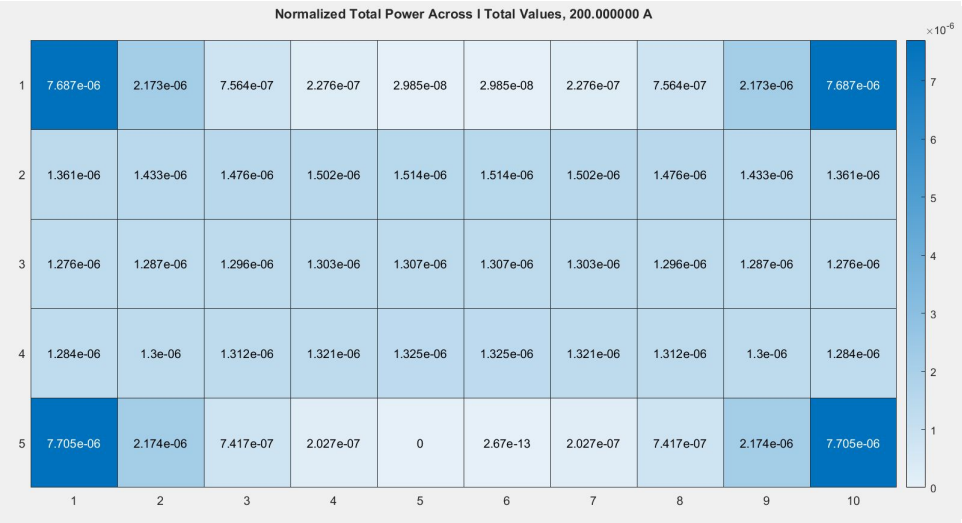

Proportion of Nominal Total Power, 900.000000 A
1 1.047 1.048 1.048 1.048 1.048 1.048 1.048 1.048 1.048 1.047
2 1.06 1.048 1.047 1.047 1.047 1.047 1.047 1.047 1.048 1.06
3 1.063 1.05 1.048 1.048 1.048 1.048 1.048 1.048 1.05 1.063
4 1.063 1.05 1.048 1.048 1.048 1.048 1.048 1.048 1.05 1.063
5 1.049 1.048 1.048 1.048 1.048 1.048 1.048 1.048 1.048 1.049
1 2 3 4 5 6 7 8 9 10
1.062
1.06
1.058
1.056
1.054
1.052
1.05
1.048

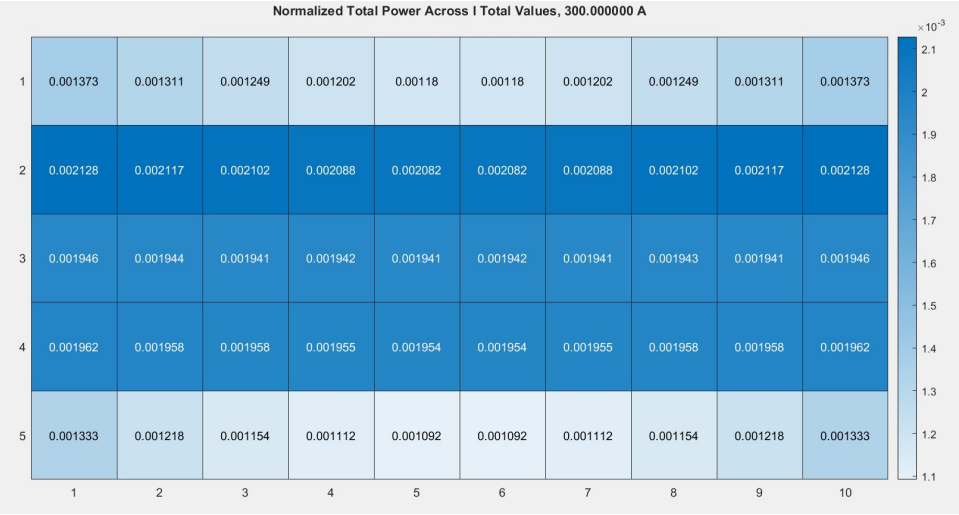

Normalized Total Power, 900.000000 A
1 1.394e-10 0.04644 0.04062 0.04027 0.03986 0.03986 0.04027 0.04062 0.04644 0
2 0.8398 0.05911 0.009205 0.01132 0.01156 0.01156 0.01132 0.009205 0.05911 0.8398
3 1 0.1829 0.02791 0.03009 0.03033 0.03033 0.03009 0.02791 0.1829 1
4 0.9875 0.1824 0.02805 0.03017 0.0304 0.0304 0.03017 0.02805 0.1824 0.9875
5 0.1025 0.07367 0.0519 0.0497 0.0491 0.0491 0.0497 0.0519 0.07367 0.1025
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

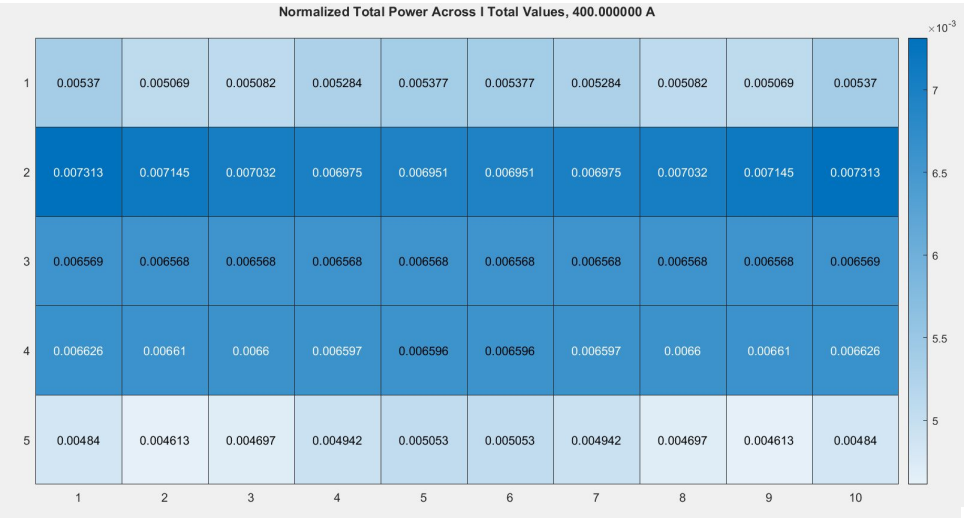


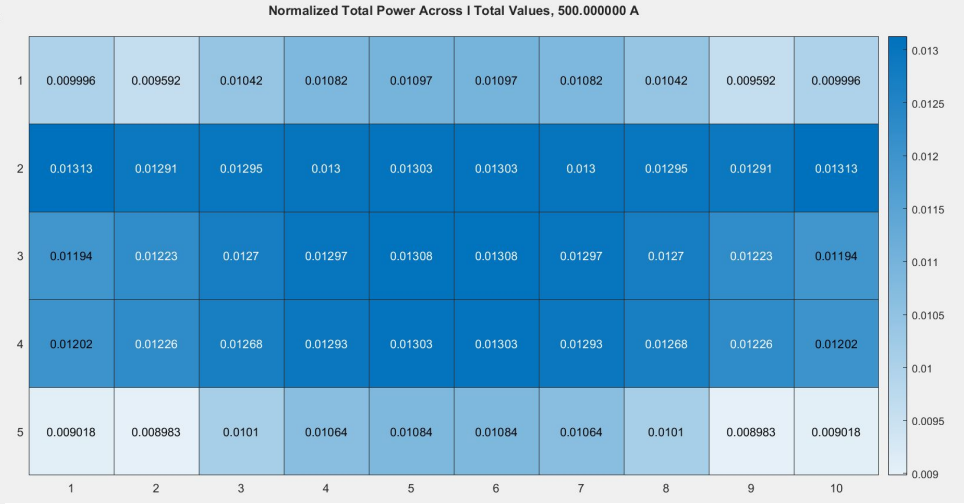

```
I_total = 900 converged
Total Power = 2.203406e+06
```

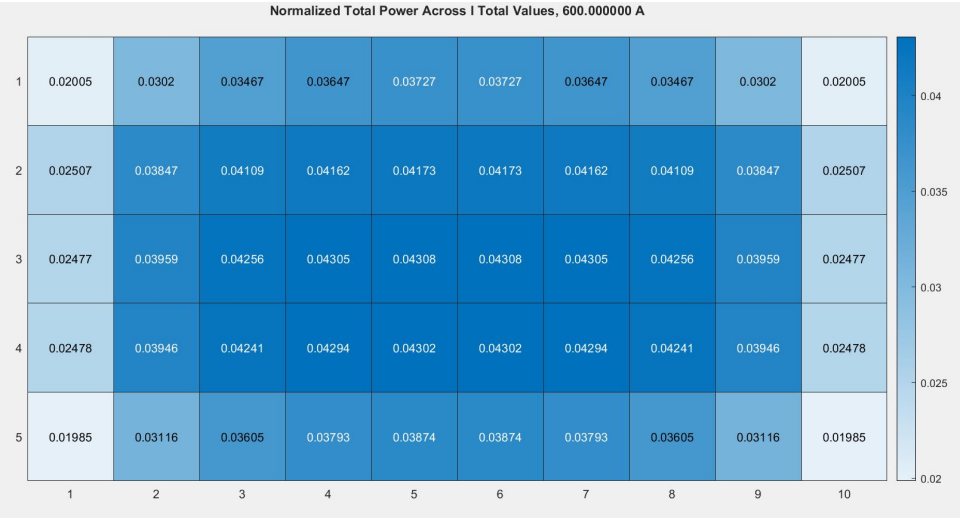
Normalized across I_total

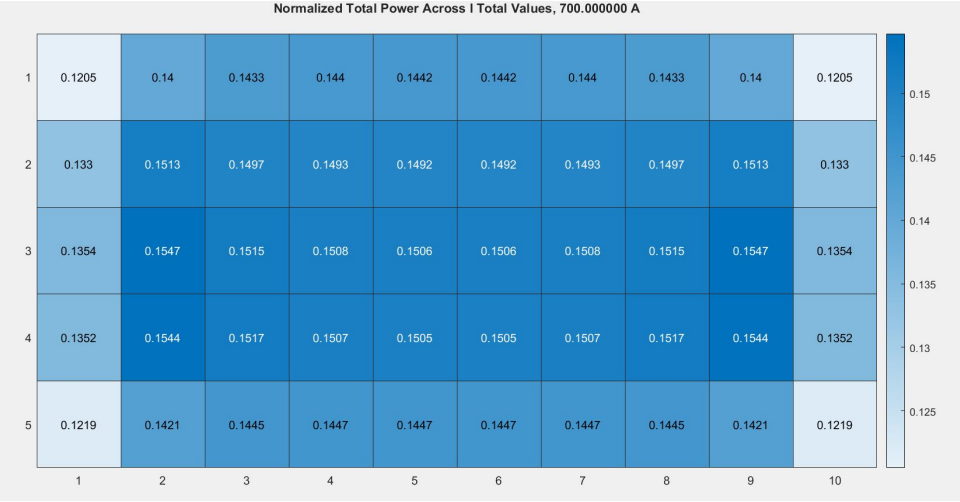


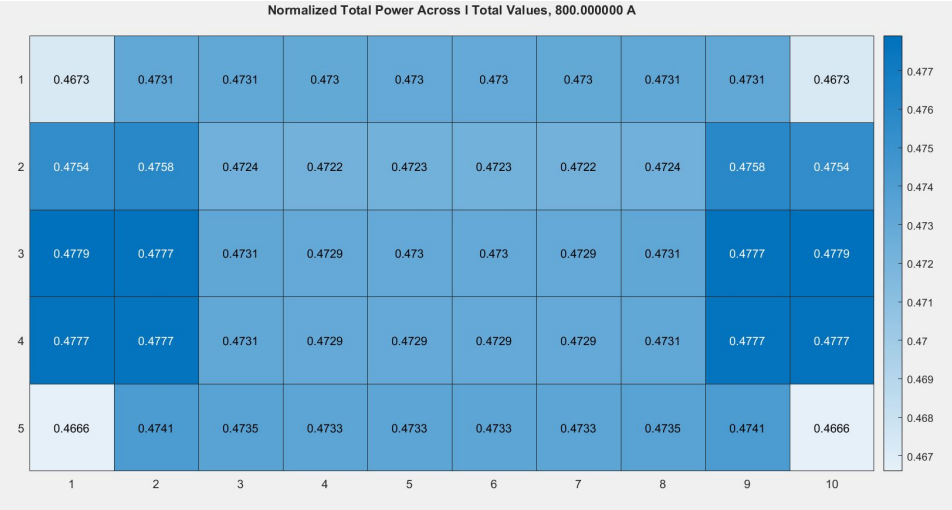


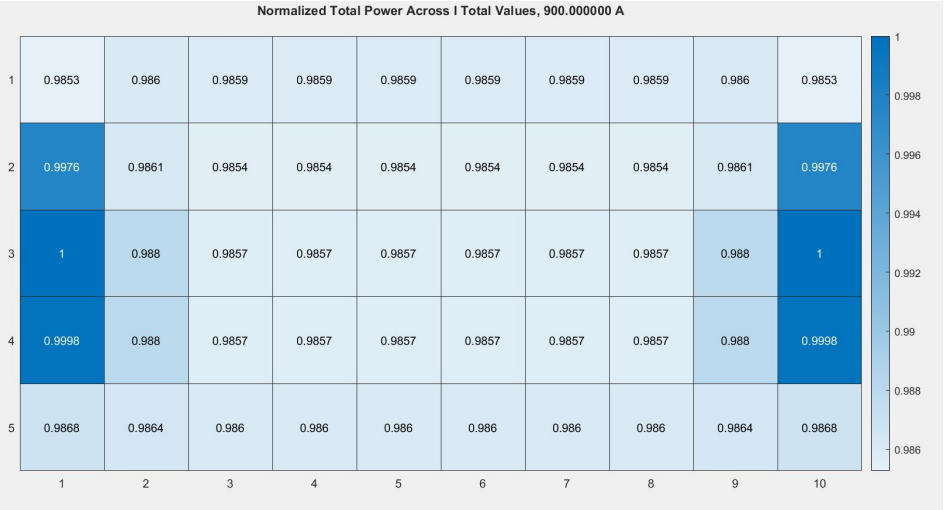

Normalized Total Power Across I Total Values, 400.000000 A
×10^-3
7
6.5
6
5.5
5
1 0.00537 0.005069 0.005082 0.005284 0.005377 0.005377 0.005284 0.005082 0.005069 0.00537
2 0.007313 0.007145 0.007032 0.006975 0.006951 0.006951 0.006975 0.007032 0.007145 0.007313
3 0.006569 0.006568 0.006568 0.006568 0.006568 0.006568 0.006568 0.006568 0.006568 0.006569
4 0.006626 0.00661 0.0066 0.006597 0.006596 0.006596 0.006597 0.0066 0.00661 0.006626
5 0.00484 0.004613 0.004697 0.004942 0.005053 0.005053 0.004942 0.004697 0.004613 0.00484
1 2 3 4 5 6 7 8 9 10


Normalized Total Power Across I Total Values, 500.000000 A
0.013
0.0125
0.012
0.0115
0.011
0.0105
0.01
0.0095
0.009
1 0.009996 0.009592 0.01042 0.01082 0.01097 0.01097 0.01082 0.01042 0.009592 0.009996
2 0.01313 0.01291 0.01295 0.013 0.01303 0.01303 0.013 0.01295 0.01291 0.01313
3 0.01194 0.01223 0.0127 0.01297 0.01308 0.01308 0.01297 0.0127 0.01223 0.01194
4 0.01202 0.01226 0.01268 0.01293 0.01303 0.01303 0.01293 0.01268 0.01226 0.01202
5 0.009018 0.008983 0.0101 0.01064 0.01084 0.01084 0.01064 0.0101 0.008983 0.009018
1 2 3 4 5 6 7 8 9 10

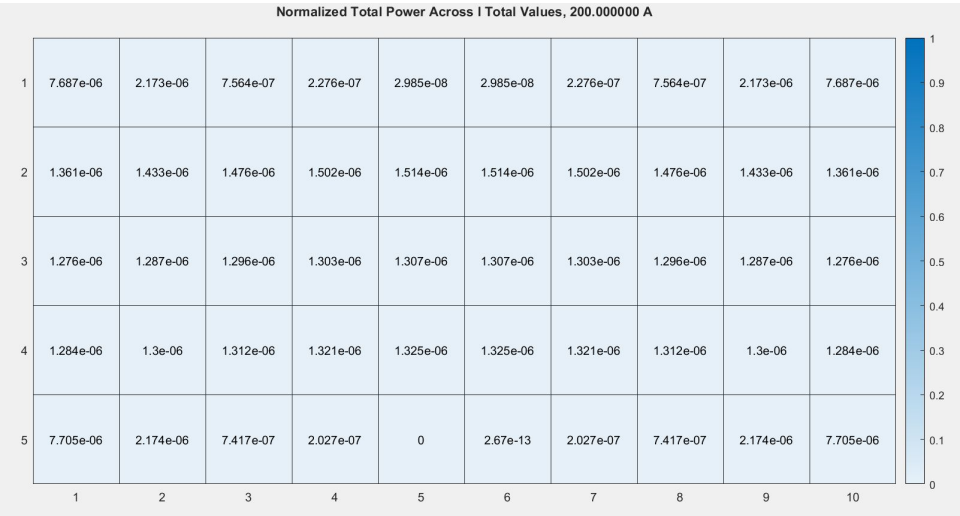

Normalized Total Power Across I Total Values, 600.000000 A
1 0.02005 0.0302 0.03467 0.03647 0.03727 0.03727 0.03647 0.03467 0.0302 0.02005
2 0.02507 0.03847 0.04109 0.04162 0.04173 0.04173 0.04162 0.04109 0.03847 0.02507
3 0.02477 0.03959 0.04256 0.04305 0.04308 0.04308 0.04305 0.04256 0.03959 0.02477
4 0.02478 0.03946 0.04241 0.04294 0.04302 0.04302 0.04294 0.04241 0.03946 0.02478
5 0.01985 0.03116 0.03605 0.03793 0.03874 0.03874 0.03793 0.03605 0.03116 0.01985
1 2 3 4 5 6 7 8 9 10
0.04 0.035 0.03 0.025 0.02

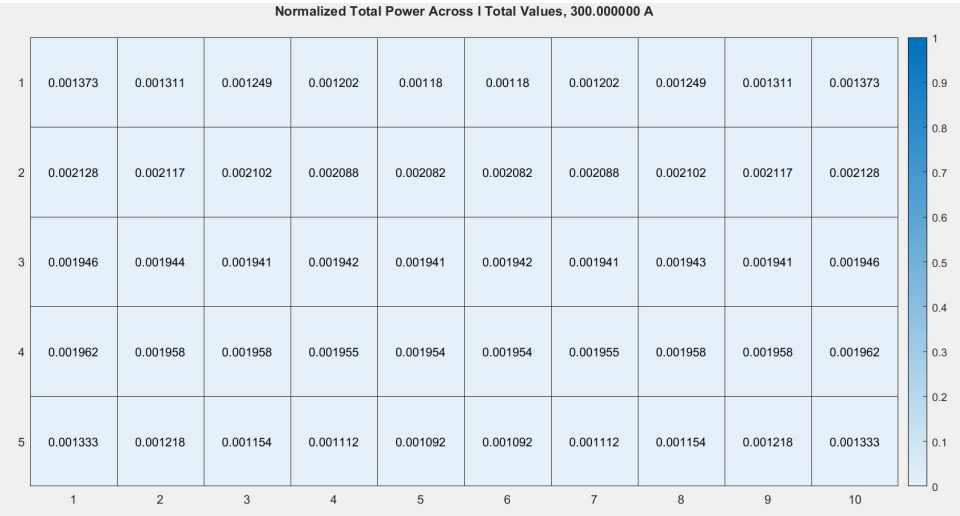

Normalized Total Power Across I Total Values, 700.000000 A
1 0.1205 0.14 0.1433 0.144 0.1442 0.1442 0.144 0.1433 0.14 0.1205
2 0.133 0.1513 0.1497 0.1493 0.1492 0.1492 0.1493 0.1497 0.1513 0.133
3 0.1354 0.1547 0.1515 0.1508 0.1506 0.1506 0.1508 0.1515 0.1547 0.1354
4 0.1352 0.1544 0.1517 0.1507 0.1505 0.1505 0.1507 0.1517 0.1544 0.1352
5 0.1219 0.1421 0.1445 0.1447 0.1447 0.1447 0.1447 0.1445 0.1421 0.1219
1 2 3 4 5 6 7 8 9 10
0.15 0.145 0.14 0.135 0.13 0.125

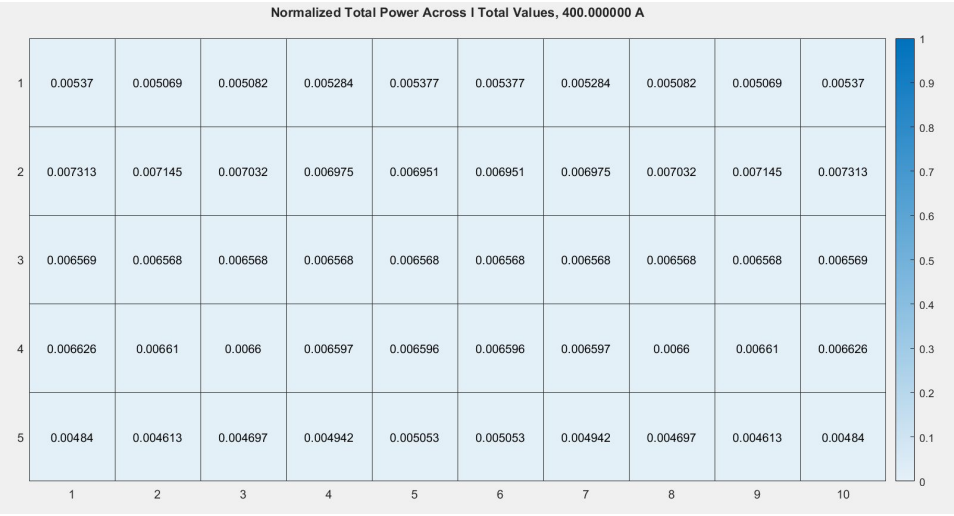

Normalized Total Power Across I Total Values, 800.000000 A
1 0.4673 0.4731 0.4731 0.473 0.473 0.473 0.473 0.4731 0.4731 0.4673
2 0.4754 0.4758 0.4724 0.4722 0.4723 0.4723 0.4722 0.4724 0.4758 0.4754
3 0.4779 0.4777 0.4731 0.4729 0.473 0.473 0.4729 0.4731 0.4777 0.4779
4 0.4777 0.4777 0.4731 0.4729 0.4729 0.4729 0.4729 0.4731 0.4777 0.4777
5 0.4666 0.4741 0.4735 0.4733 0.4733 0.4733 0.4733 0.4735 0.4741 0.4666
1 2 3 4 5 6 7 8 9 10
0.477 0.476 0.475 0.474 0.473 0.472 0.471 0.47 0.469 0.468 0.467

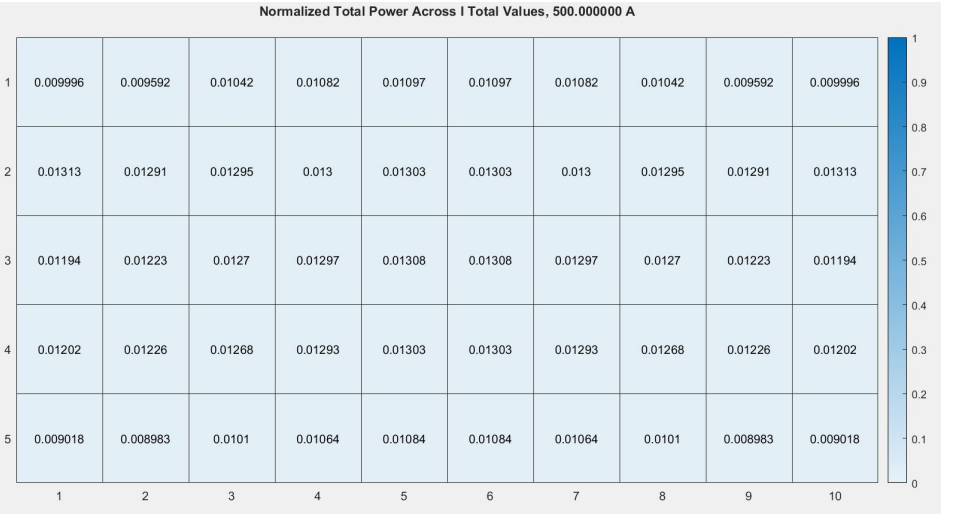

Normalized Total Power Across I Total Values, 900.000000 A
1 0.9853 0.986 0.9859 0.9859 0.9859 0.9859 0.9859 0.9859 0.986 0.9853
2 0.9976 0.9861 0.9854 0.9854 0.9854 0.9854 0.9854 0.9854 0.9861 0.9976
3 1 0.988 0.9857 0.9857 0.9857 0.9857 0.9857 0.9857 0.988 1
4 0.9998 0.988 0.9857 0.9857 0.9857 0.9857 0.9857 0.9857 0.988 0.9998
5 0.9868 0.9864 0.986 0.986 0.986 0.986 0.986 0.986 0.9864 0.9868
1 2 3 4 5 6 7 8 9 10
1 0.998 0.996 0.994 0.992 0.99 0.988 0.986

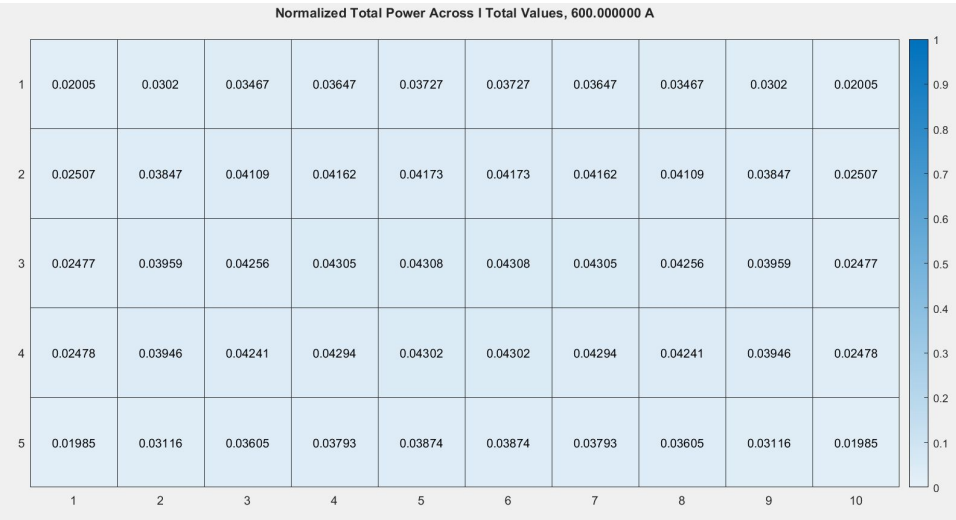
Fixed Color Scale

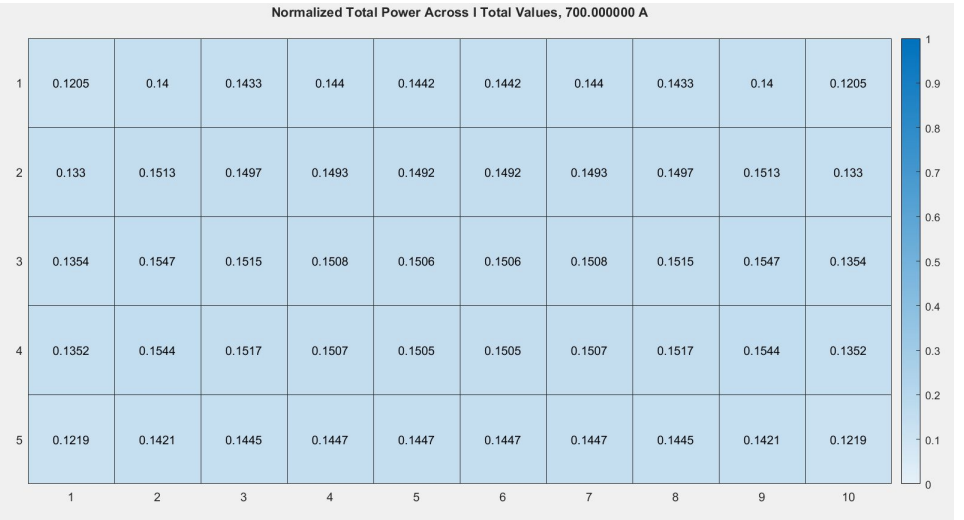


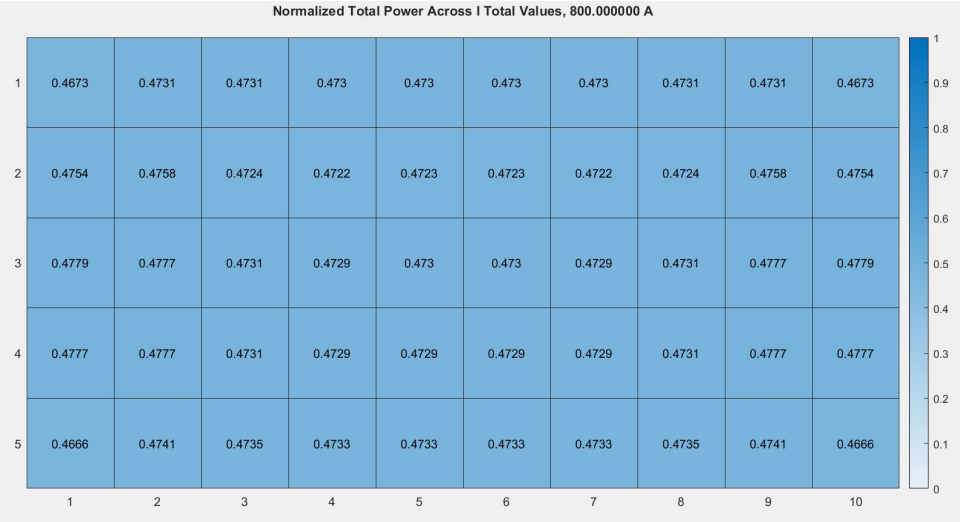


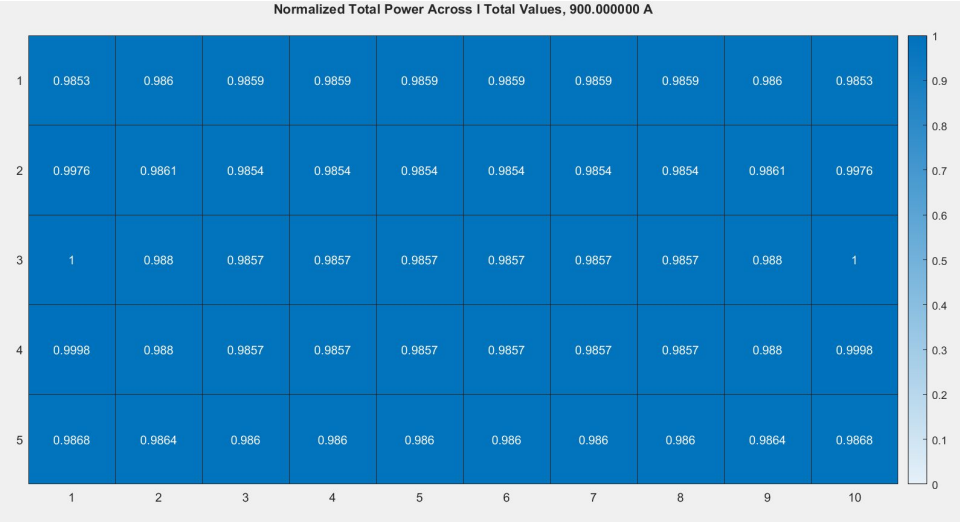

Normalized Total Power Across I Total Values, 400.000000 A
1 0.00537 0.005069 0.005082 0.005284 0.005377 0.005377 0.005284 0.005082 0.005069 0.00537
2 0.007313 0.007145 0.007032 0.006975 0.006951 0.006951 0.006975 0.007032 0.007145 0.007313
3 0.006569 0.006568 0.006568 0.006568 0.006568 0.006568 0.006568 0.006568 0.006568 0.006569
4 0.006626 0.00661 0.0066 0.006597 0.006596 0.006596 0.006597 0.0066 0.00661 0.006626
5 0.00484 0.004613 0.004697 0.004942 0.005053 0.005053 0.004942 0.004697 0.004613 0.00484
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0


Normalized Total Power Across I Total Values, 500.000000 A
1 0.009996 0.009592 0.01042 0.01082 0.01097 0.01097 0.01082 0.01042 0.009592 0.009996
2 0.01313 0.01291 0.01295 0.013 0.01303 0.01303 0.013 0.01295 0.01291 0.01313
3 0.01194 0.01223 0.0127 0.01297 0.01308 0.01308 0.01297 0.0127 0.01223 0.01194
4 0.01202 0.01226 0.01268 0.01293 0.01303 0.01303 0.01293 0.01268 0.01226 0.01202
5 0.009018 0.008983 0.0101 0.01064 0.01084 0.01084 0.01064 0.0101 0.008983 0.009018
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

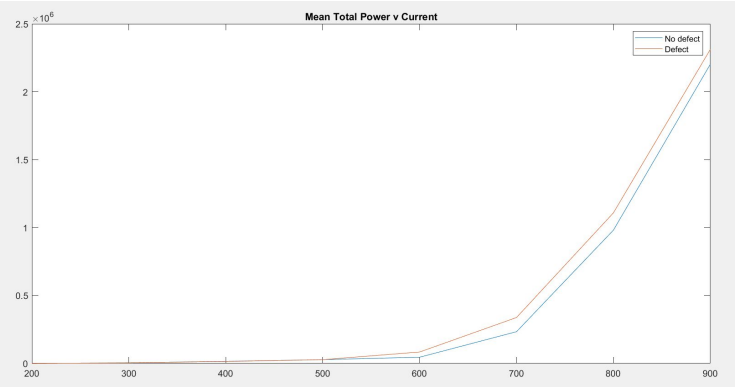

Normalized Total Power Across I Total Values, 600.000000 A
1 0.02005 0.0302 0.03467 0.03647 0.03727 0.03727 0.03647 0.03467 0.0302 0.02005
2 0.02507 0.03847 0.04109 0.04162 0.04173 0.04173 0.04162 0.04109 0.03847 0.02507
3 0.02477 0.03959 0.04256 0.04305 0.04308 0.04308 0.04305 0.04256 0.03959 0.02477
4 0.02478 0.03946 0.04241 0.04294 0.04302 0.04302 0.04294 0.04241 0.03946 0.02478
5 0.01985 0.03116 0.03605 0.03793 0.03874 0.03874 0.03793 0.03605 0.03116 0.01985
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

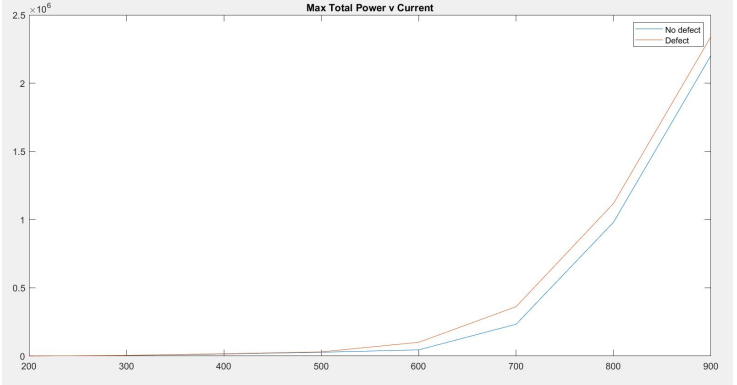

Normalized Total Power Across I Total Values, 700.000000 A
1 0.1205 0.14 0.1433 0.144 0.1442 0.1442 0.144 0.1433 0.14 0.1205
2 0.133 0.1513 0.1497 0.1493 0.1492 0.1492 0.1493 0.1497 0.1513 0.133
3 0.1354 0.1547 0.1515 0.1508 0.1506 0.1506 0.1508 0.1515 0.1547 0.1354
4 0.1352 0.1544 0.1517 0.1507 0.1505 0.1505 0.1507 0.1517 0.1544 0.1352
5 0.1219 0.1421 0.1445 0.1447 0.1447 0.1447 0.1447 0.1445 0.1421 0.1219
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

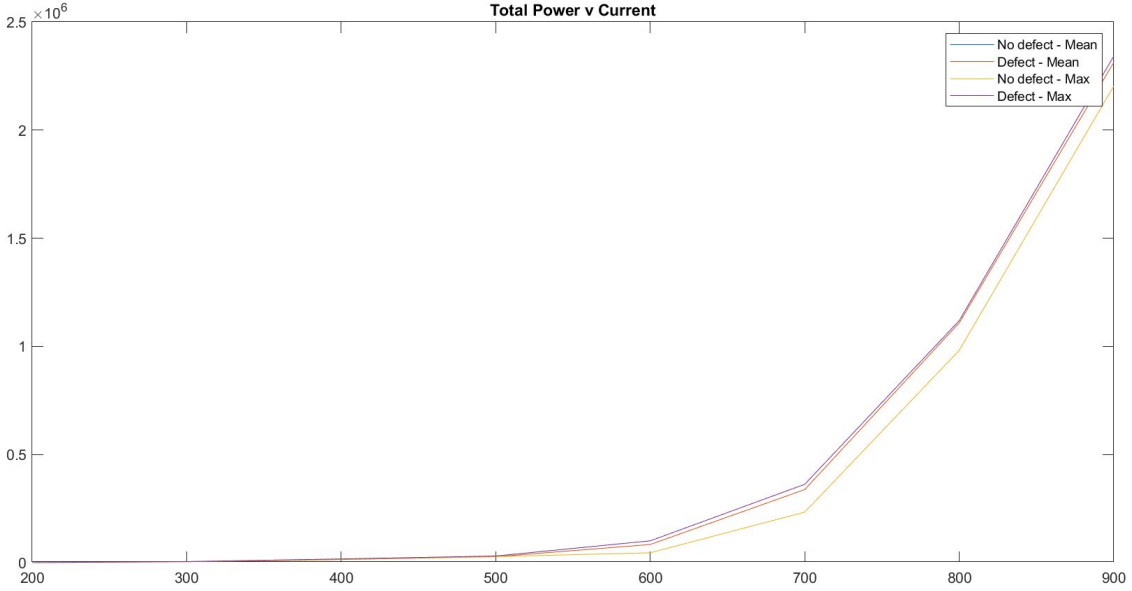

Normalized Total Power Across I Total Values, 800.000000 A
1 0.4673 0.4731 0.4731 0.473 0.473 0.473 0.473 0.4731 0.4731 0.4673
2 0.4754 0.4758 0.4724 0.4722 0.4723 0.4723 0.4722 0.4724 0.4758 0.4754
3 0.4779 0.4777 0.4731 0.4729 0.473 0.473 0.4729 0.4731 0.4777 0.4779
4 0.4777 0.4777 0.4731 0.4729 0.4729 0.4729 0.4729 0.4731 0.4777 0.4777
5 0.4666 0.4741 0.4735 0.4733 0.4733 0.4733 0.4733 0.4735 0.4741 0.4666
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0


Normalized Total Power Across I Total Values, 900.000000 A
1 0.9853 0.986 0.9859 0.9859 0.9859 0.9859 0.9859 0.9859 0.986 0.9853
2 0.9976 0.9861 0.9854 0.9854 0.9854 0.9854 0.9854 0.9854 0.9861 0.9976
3 1 0.988 0.9857 0.9857 0.9857 0.9857 0.9857 0.9857 0.988 1
4 0.9998 0.988 0.9857 0.9857 0.9857 0.9857 0.9857 0.9857 0.988 0.9998
5 0.9868 0.9864 0.986 0.986 0.986 0.986 0.986 0.986 0.9864 0.9868
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

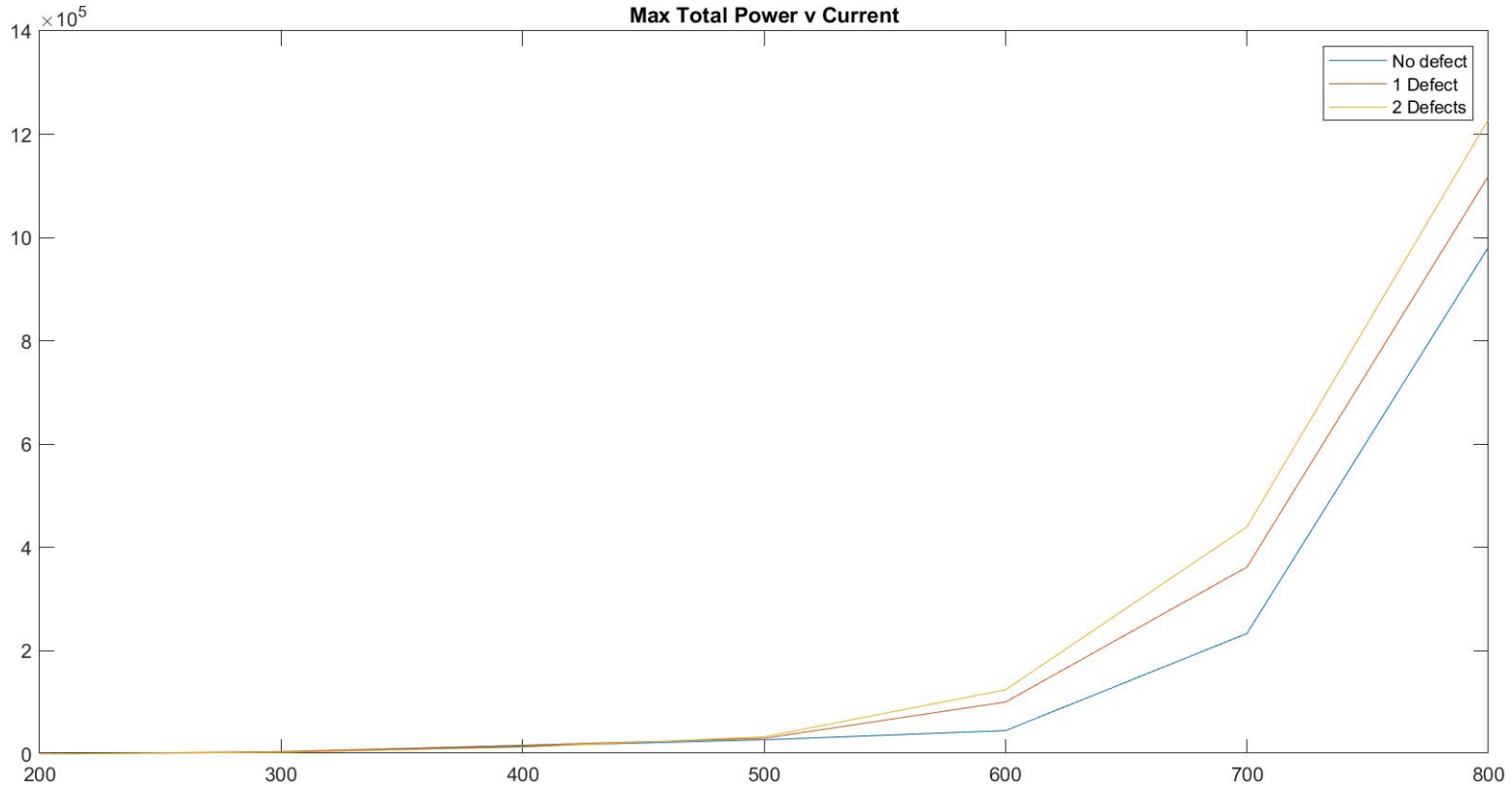
Power vs Current



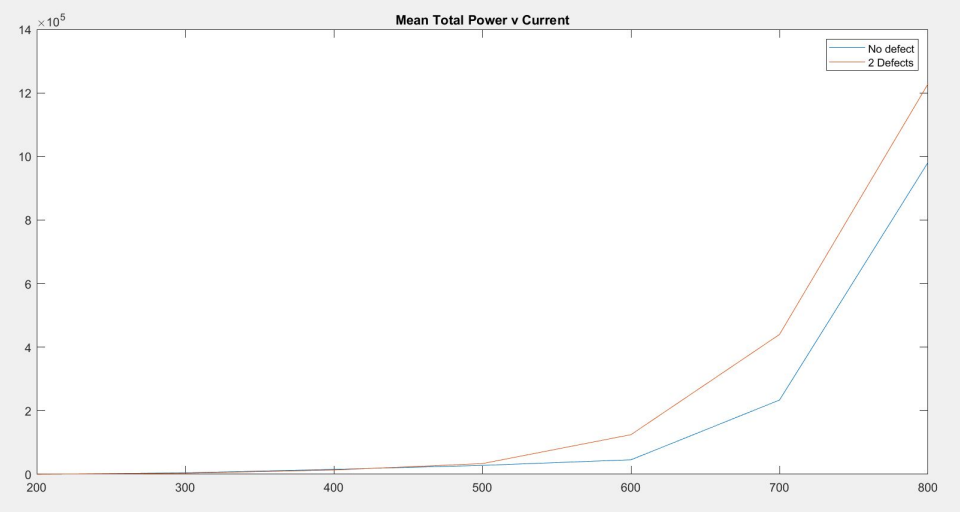


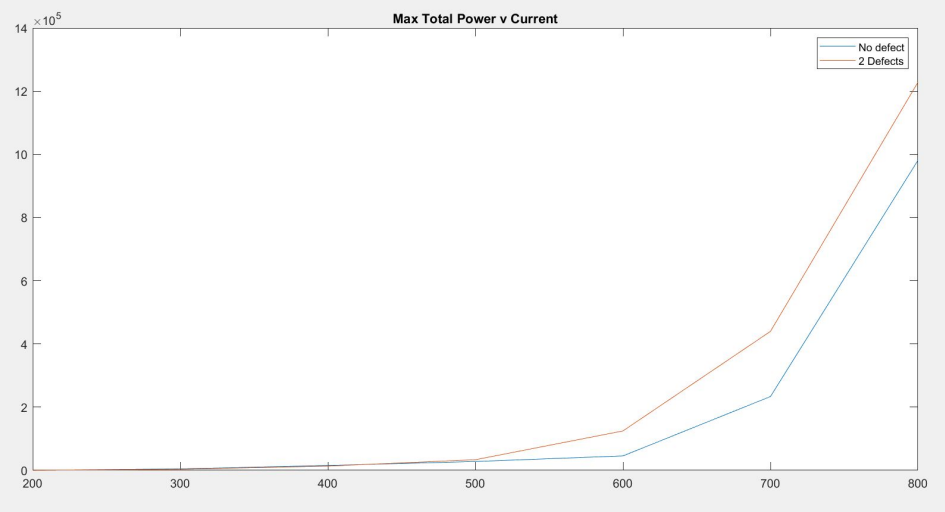


Power vs Current - 2 defects



Power vs Current - 2 defects

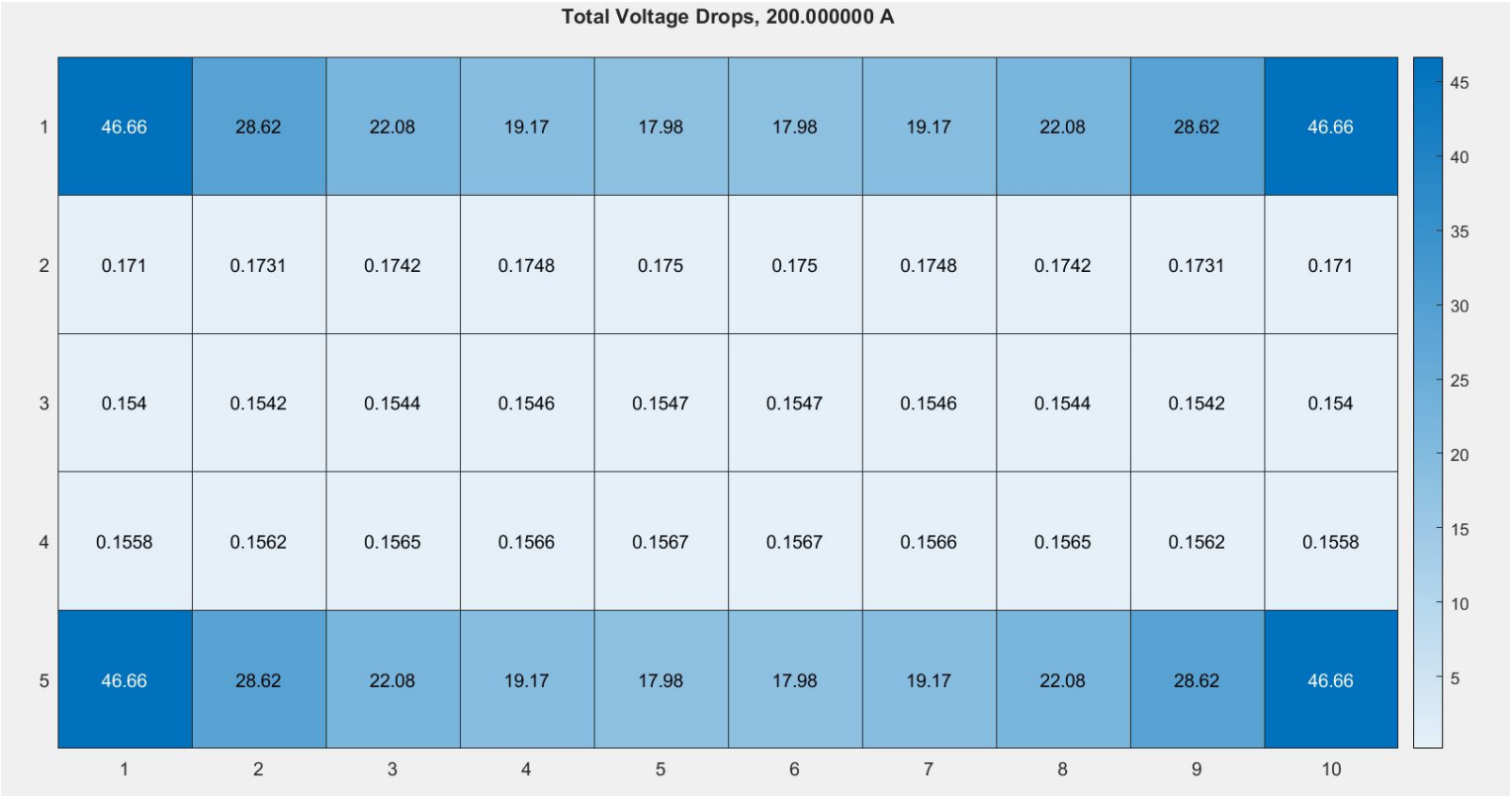


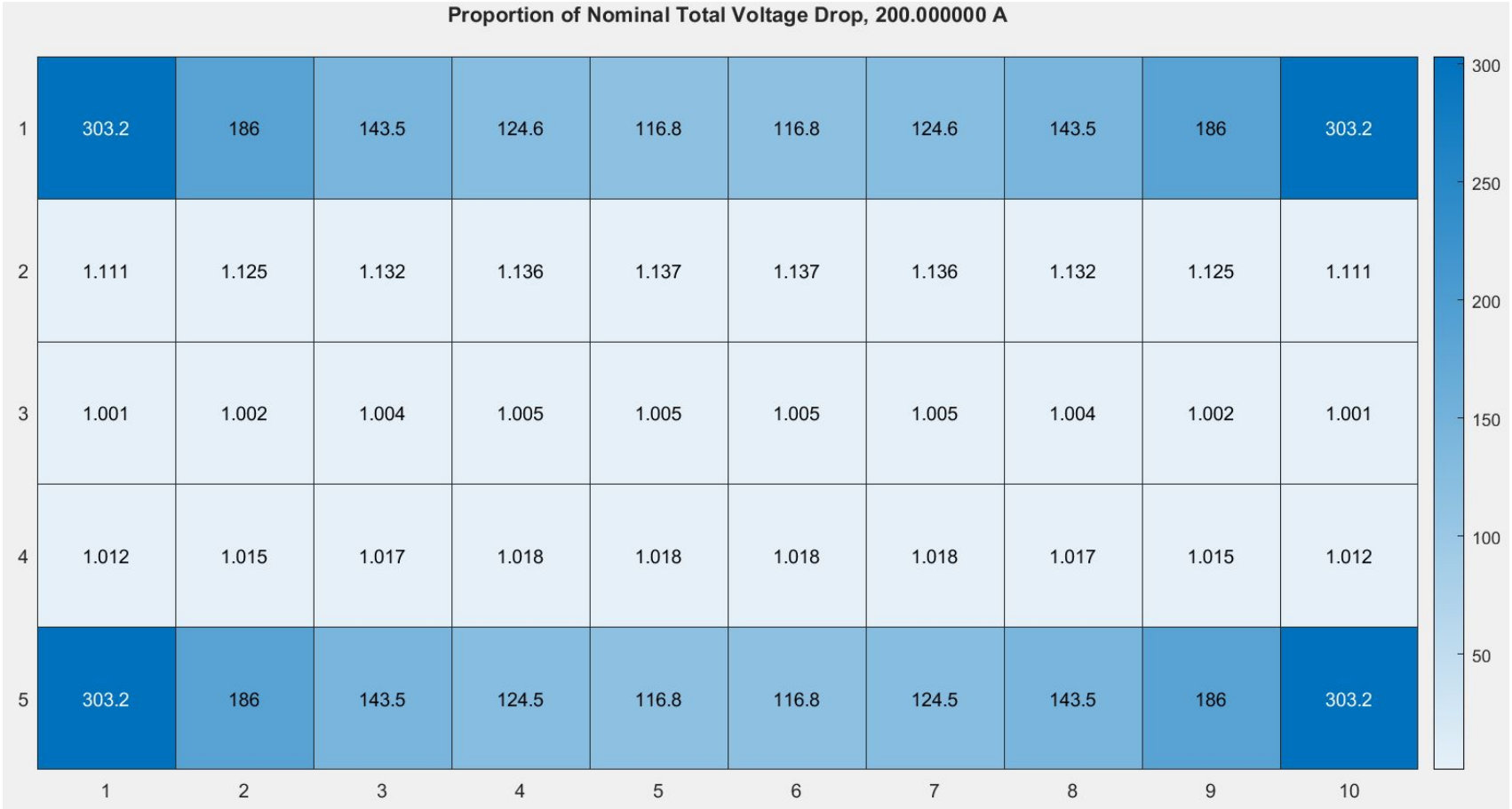


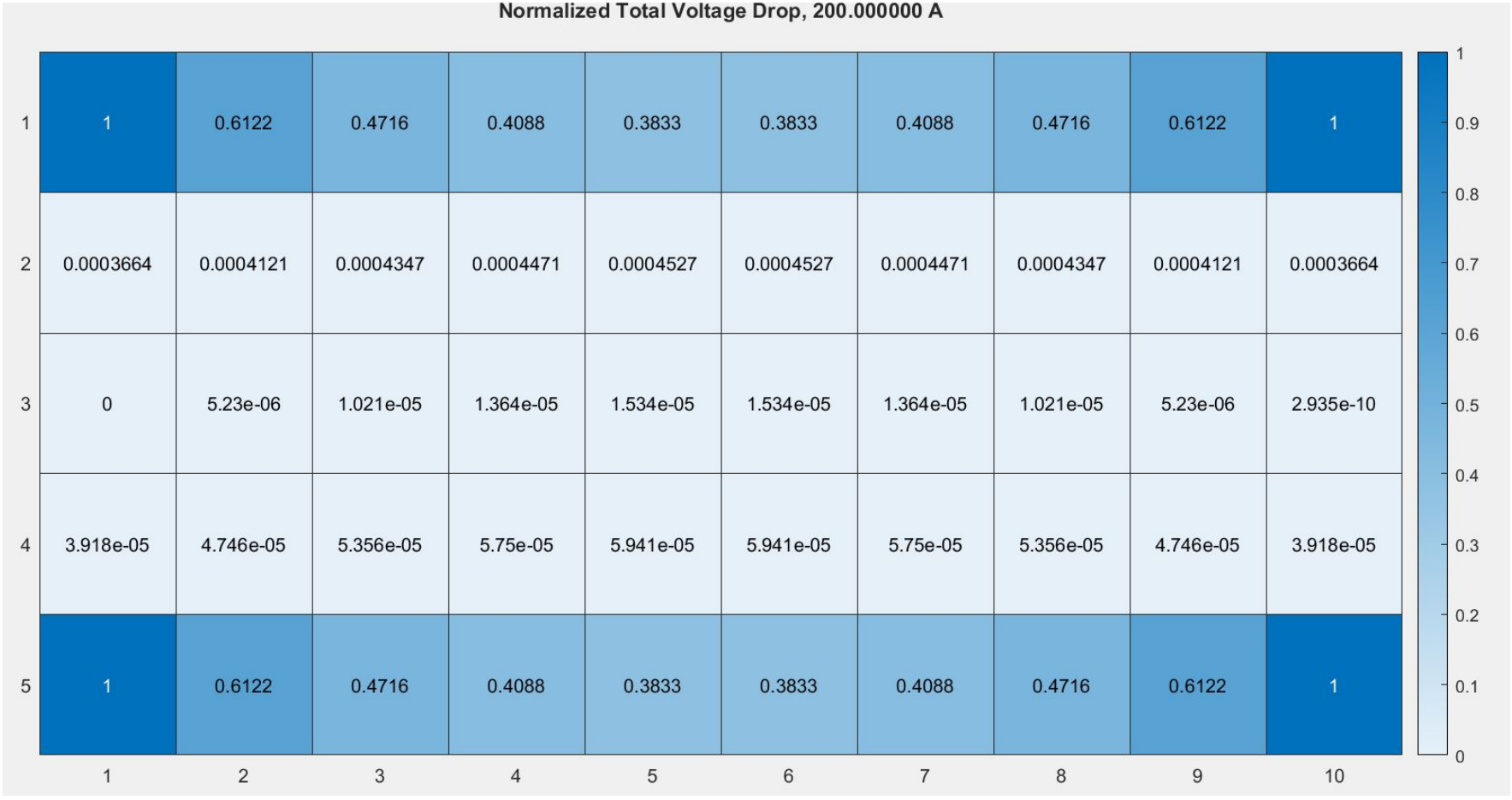
Voltage Analysis

200A

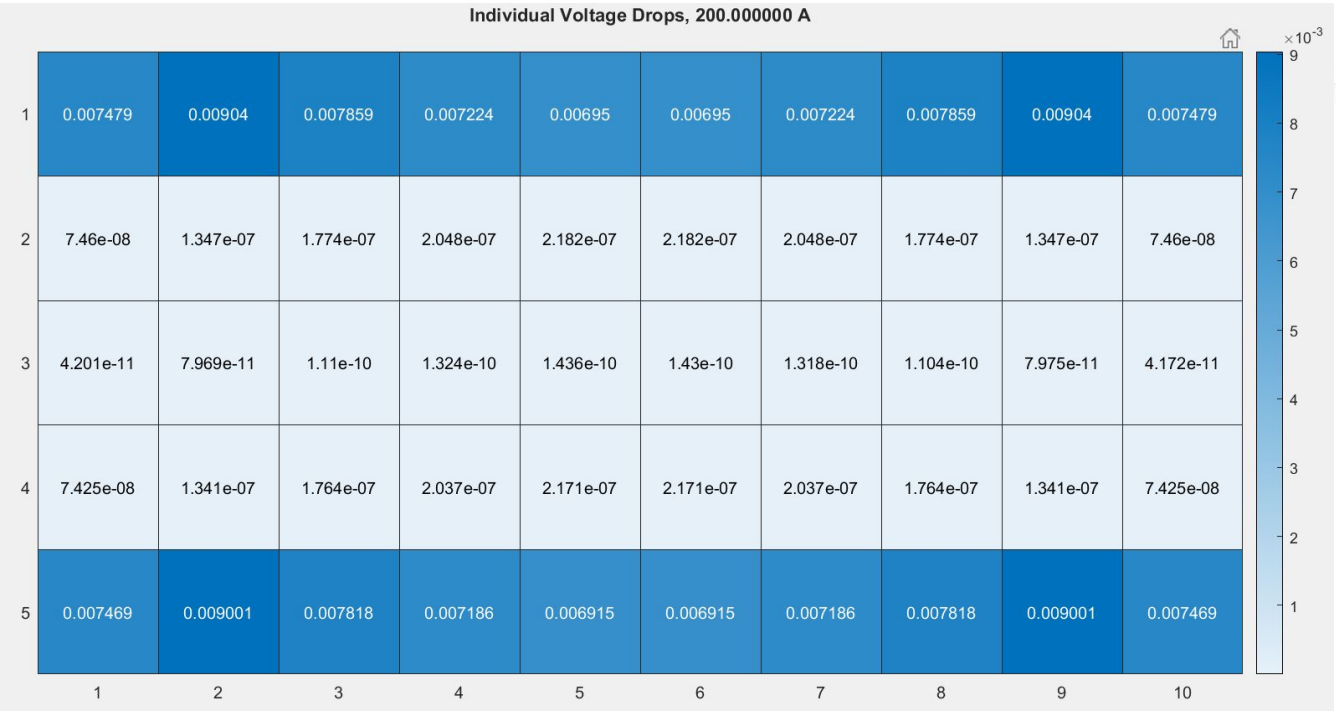
μV


Total Voltage Drops, 200.000000 A
1 46.66 28.62 22.08 19.17 17.98 17.98 19.17 22.08 28.62 46.66
2 0.171 0.1731 0.1742 0.1748 0.175 0.175 0.1748 0.1742 0.1731 0.171
3 0.154 0.1542 0.1544 0.1546 0.1547 0.1547 0.1546 0.1544 0.1542 0.154
4 0.1558 0.1562 0.1565 0.1566 0.1567 0.1567 0.1566 0.1565 0.1562 0.1558
5 46.66 28.62 22.08 19.17 17.98 17.98 19.17 22.08 28.62 46.66
1 2 3 4 5 6 7 8 9 10
45 40 35 30 25 20 15 10 5


Proportion of Nominal Total Voltage Drop, 200.000000 A
1
2
3
4
5
303.2
186
143.5
124.6
116.8
116.8
124.6
143.5
186
303.2
1.111
1.125
1.132
1.136
1.137
1.137
1.136
1.132
1.125
1.111
1.001
1.002
1.004
1.005
1.005
1.005
1.005
1.004
1.002
1.001
1.012
1.015
1.017
1.018
1.018
1.018
1.018
1.017
1.015
1.012
303.2
186
143.5
124.5
116.8
116.8
124.5
143.5
186
303.2
1
2
3
4
5
6
7
8
9
10
300
250
200
150
100
50


Normalized Total Voltage Drop, 200.000000 A
1 1 0.6122 0.4716 0.4088 0.3833 0.3833 0.4088 0.4716 0.6122 1
2 0.0003664 0.0004121 0.0004347 0.0004471 0.0004527 0.0004527 0.0004471 0.0004347 0.0004121 0.0003664
3 0 5.23e-06 1.021e-05 1.364e-05 1.534e-05 1.534e-05 1.364e-05 1.021e-05 5.23e-06 2.935e-10
4 3.918e-05 4.746e-05 5.356e-05 5.75e-05 5.941e-05 5.941e-05 5.75e-05 5.356e-05 4.746e-05 3.918e-05
5 1 0.6122 0.4716 0.4088 0.3833 0.3833 0.4088 0.4716 0.6122 1
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

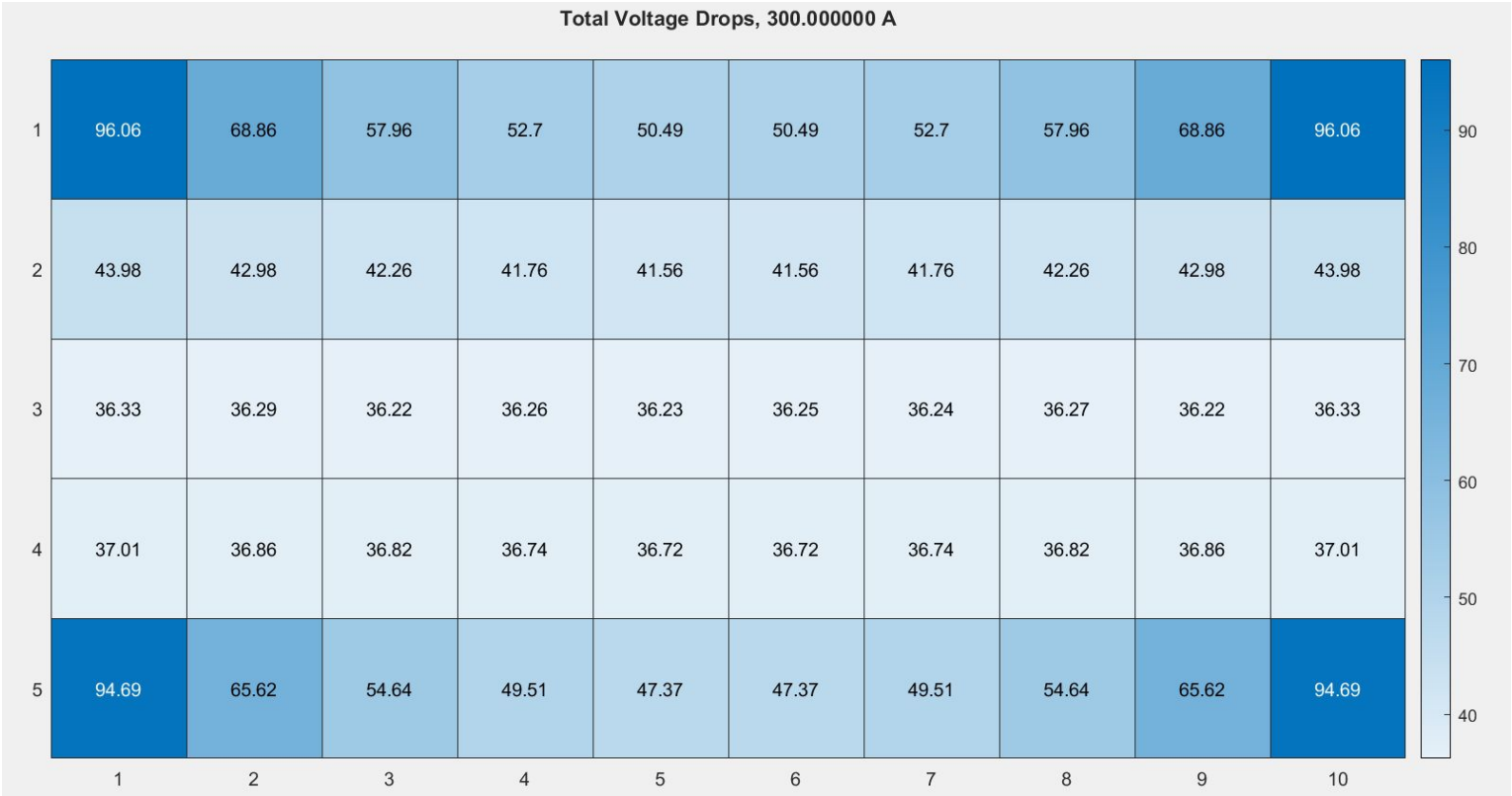
No Defect Data

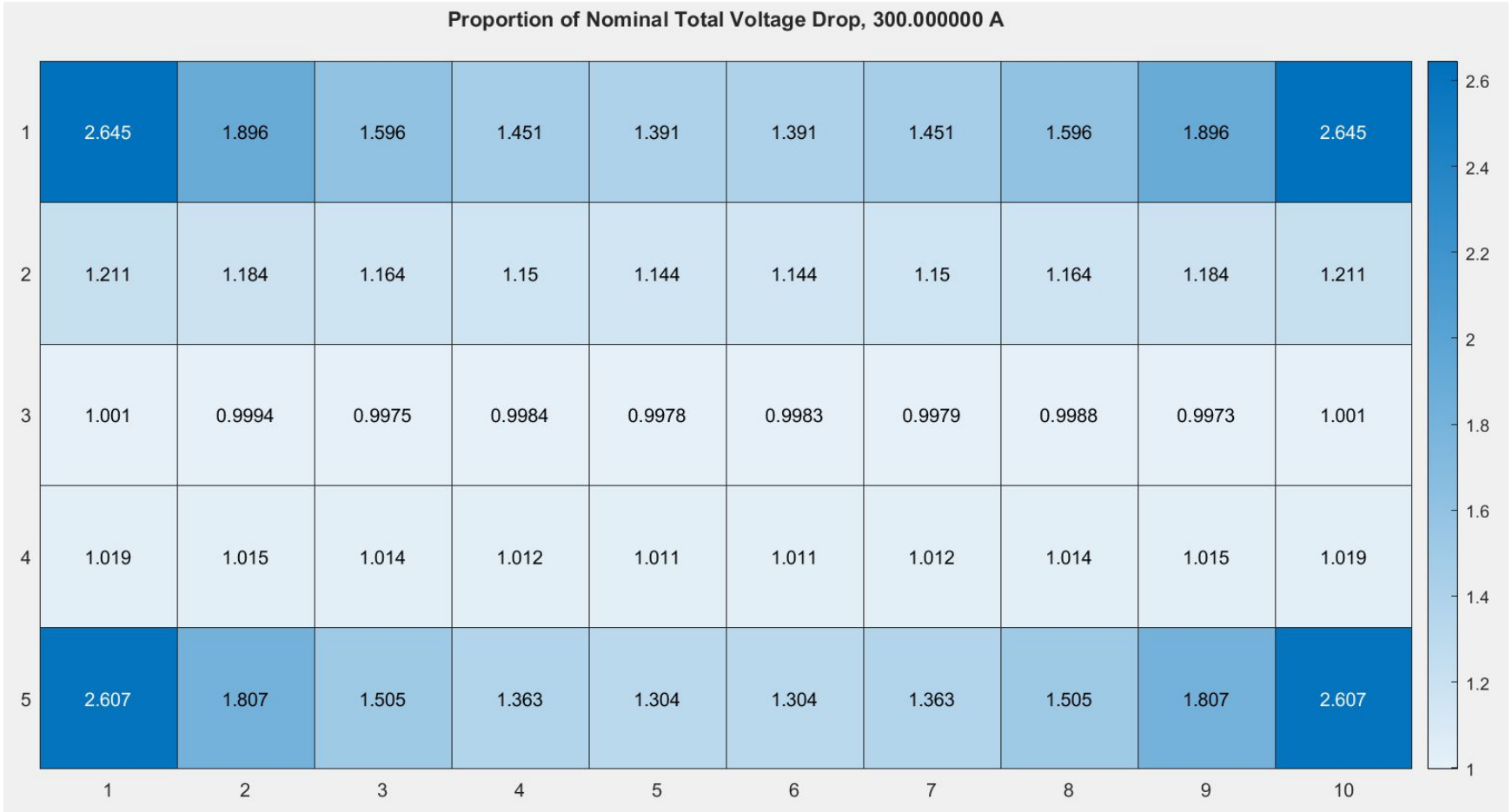


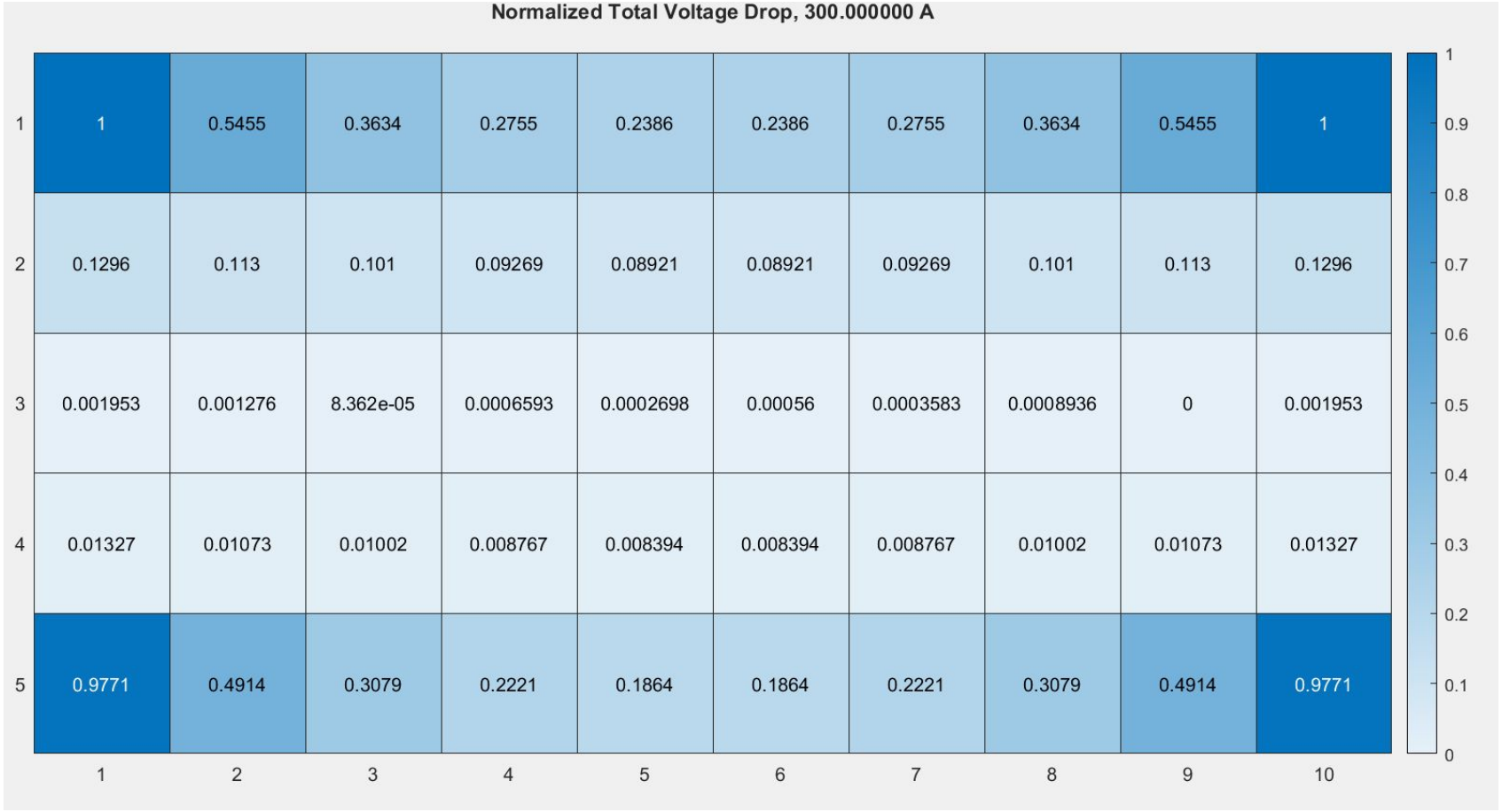
Total Voltage Drop = 1.538847e-01

300A

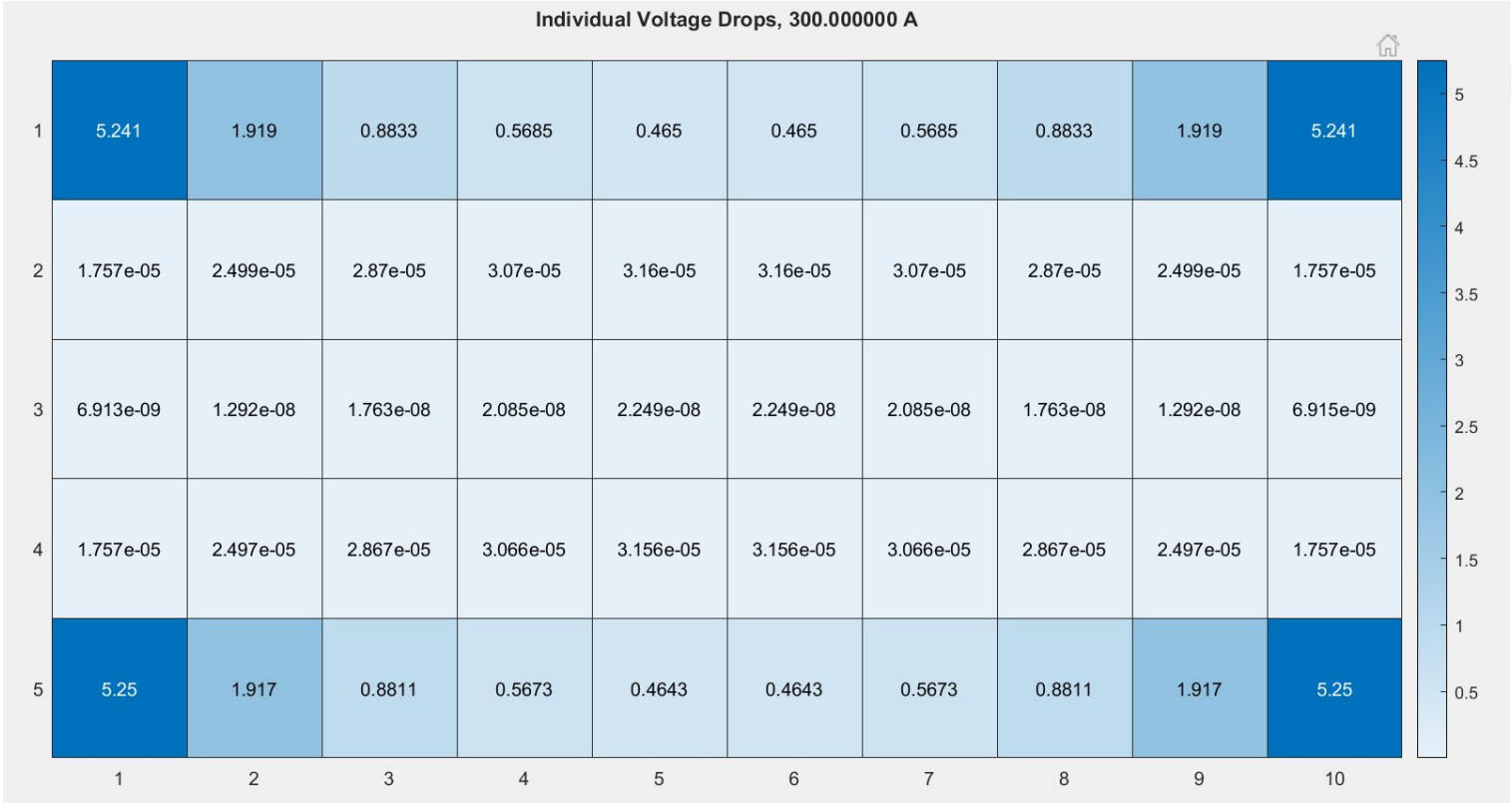
μV


Total Voltage Drops, 300.000000 A
1 96.06 68.86 57.96 52.7 50.49 50.49 52.7 57.96 68.86 96.06
2 43.98 42.98 42.26 41.76 41.56 41.56 41.76 42.26 42.98 43.98
3 36.33 36.29 36.22 36.26 36.23 36.25 36.24 36.27 36.22 36.33
4 37.01 36.86 36.82 36.74 36.72 36.72 36.74 36.82 36.86 37.01
5 94.69 65.62 54.64 49.51 47.37 47.37 49.51 54.64 65.62 94.69
1 2 3 4 5 6 7 8 9 10
90 80 70 60 50 40


Proportion of Nominal Total Voltage Drop, 300.000000 A
1 2.645 1.896 1.596 1.451 1.391 1.391 1.451 1.596 1.896 2.645
2 1.211 1.184 1.164 1.15 1.144 1.144 1.15 1.164 1.184 1.211
3 1.001 0.9994 0.9975 0.9984 0.9978 0.9983 0.9979 0.9988 0.9973 1.001
4 1.019 1.015 1.014 1.012 1.011 1.011 1.012 1.014 1.015 1.019
5 2.607 1.807 1.505 1.363 1.304 1.304 1.363 1.505 1.807 2.607
1 2 3 4 5 6 7 8 9 10
2.6 2.4 2.2 2 1.8 1.6 1.4 1.2 1

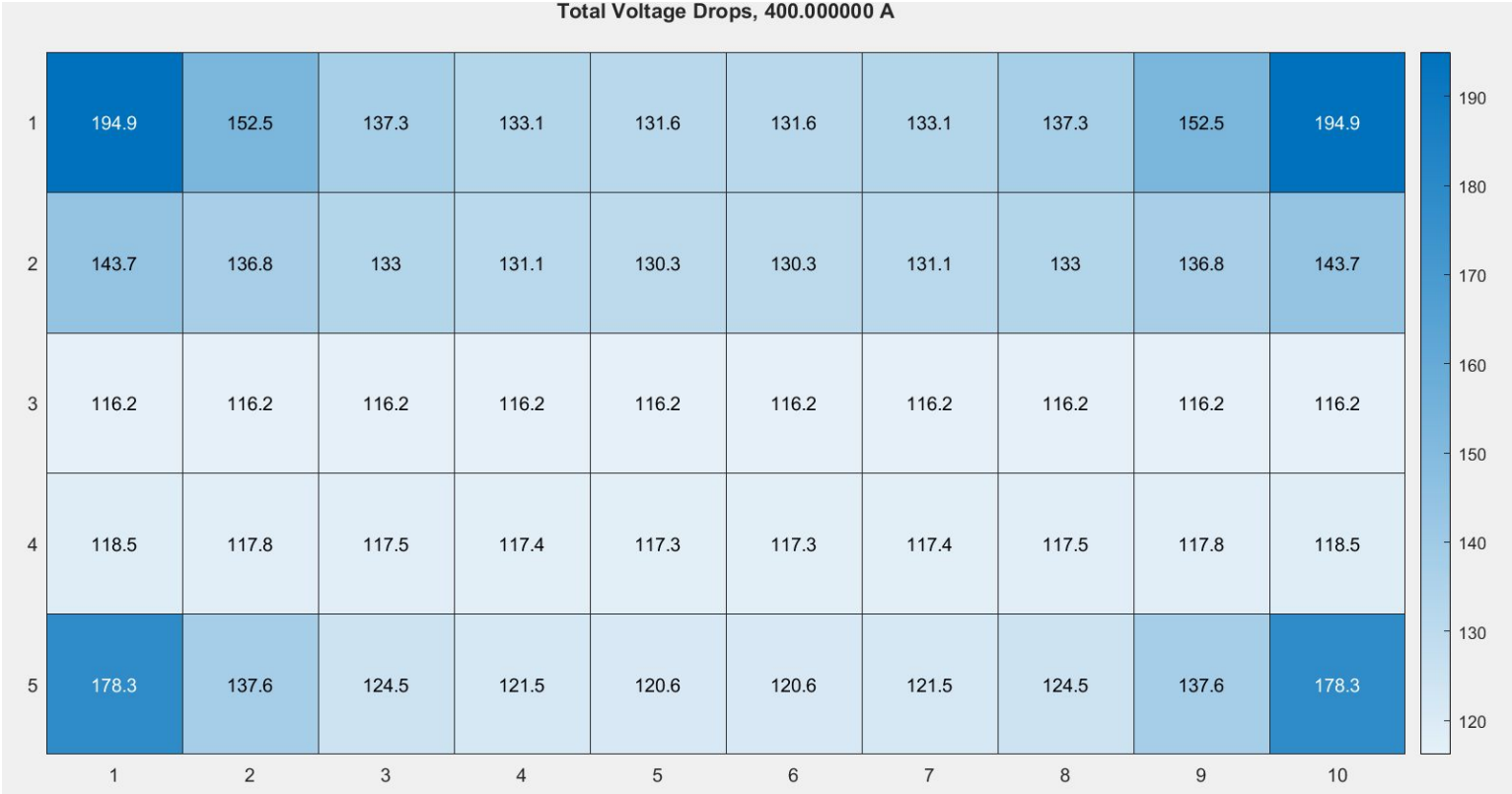

Normalized Total Voltage Drop, 300.000000 A
1 1 0.5455 0.3634 0.2755 0.2386 0.2386 0.2755 0.3634 0.5455 1
2 0.1296 0.113 0.101 0.09269 0.08921 0.08921 0.09269 0.101 0.113 0.1296
3 0.001953 0.001276 8.362e-05 0.0006593 0.0002698 0.00056 0.0003583 0.0008936 0 0.001953
4 0.01327 0.01073 0.01002 0.008767 0.008394 0.008394 0.008767 0.01002 0.01073 0.01327
5 0.9771 0.4914 0.3079 0.2221 0.1864 0.1864 0.2221 0.3079 0.4914 0.9771
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

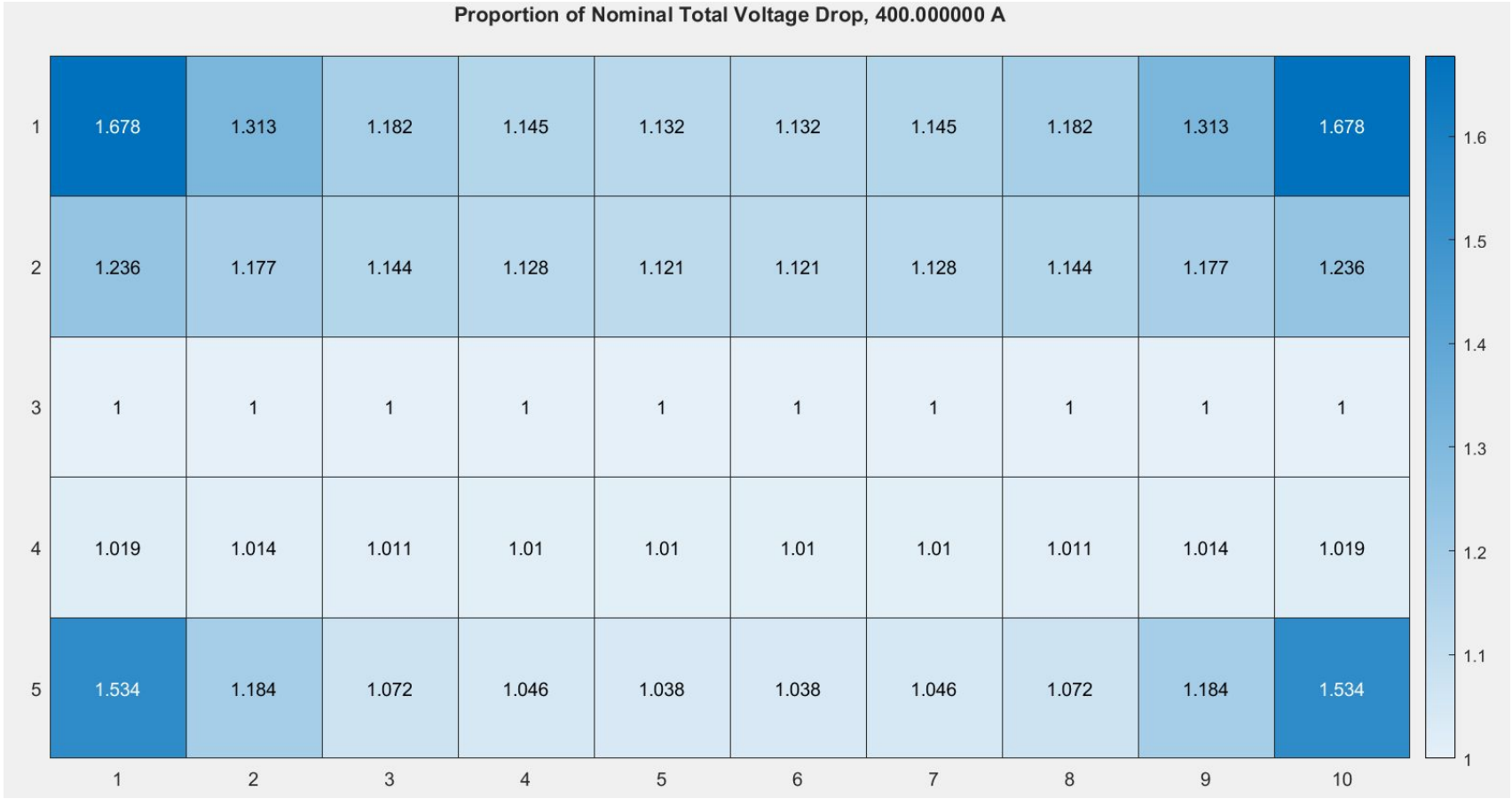
No Defect Data

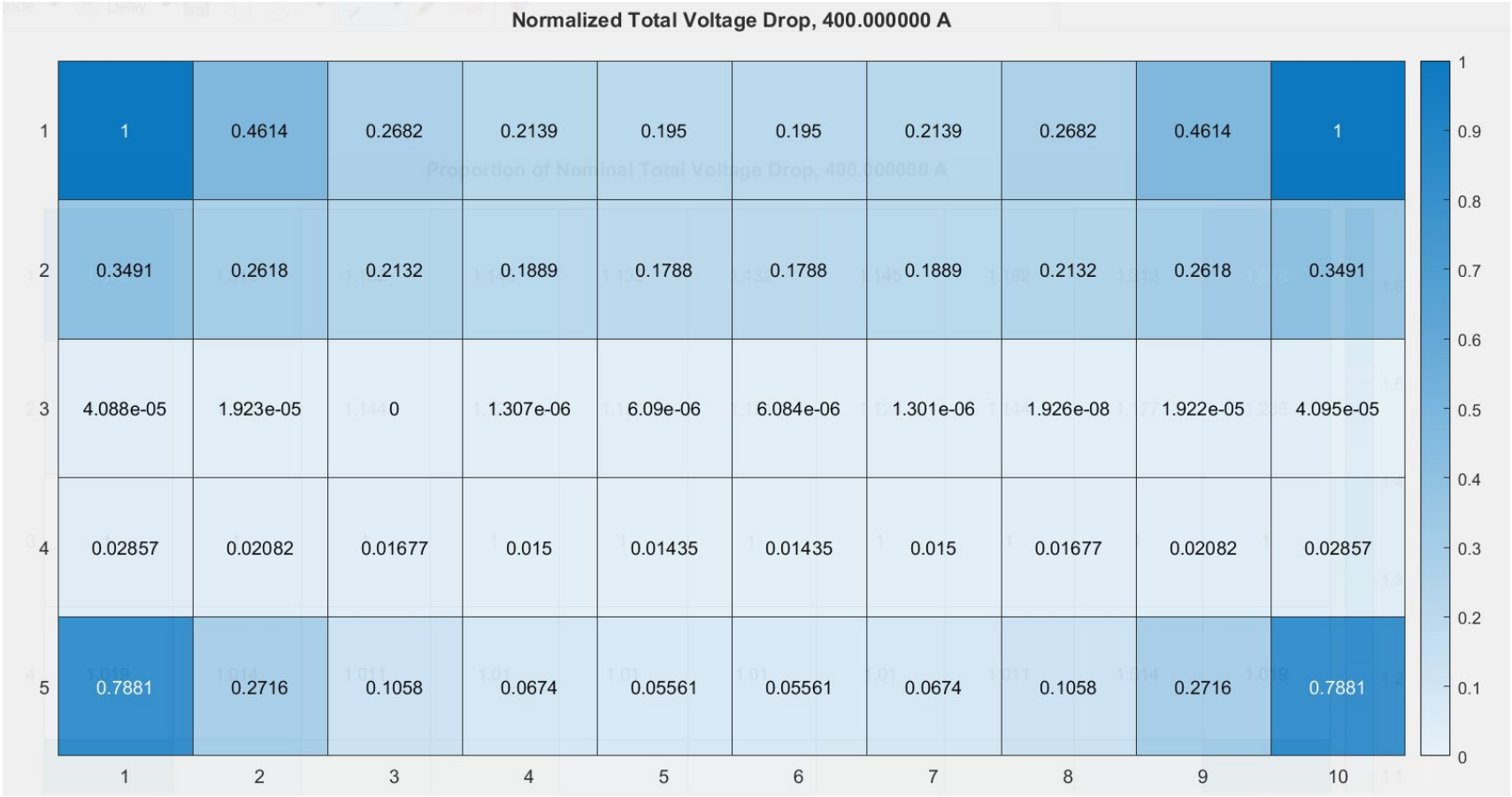


400A

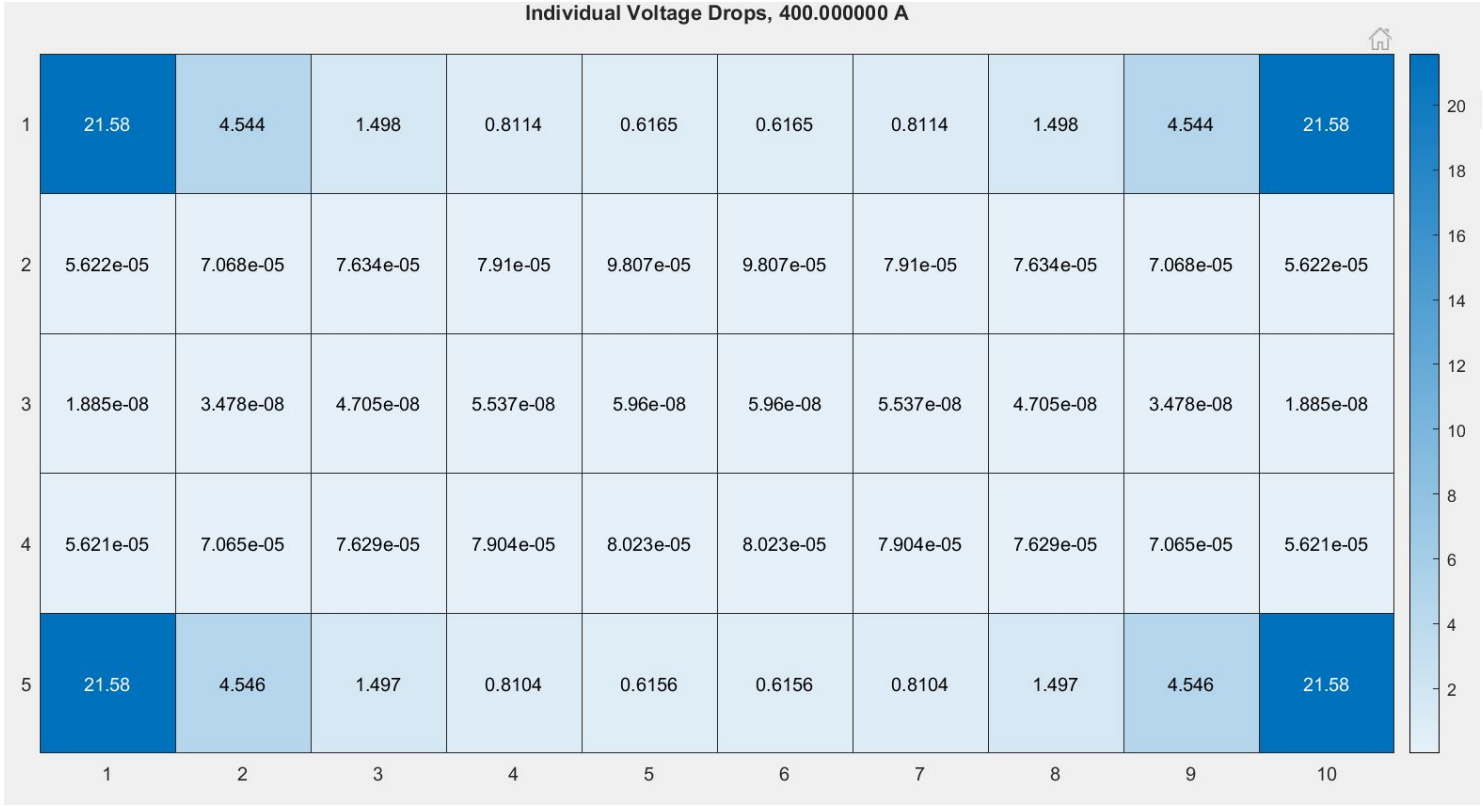
μV


Total Voltage Drops, 400.000000 A
1 194.9 152.5 137.3 133.1 131.6 131.6 133.1 137.3 152.5 194.9
2 143.7 136.8 133 131.1 130.3 130.3 131.1 133 136.8 143.7
3 116.2 116.2 116.2 116.2 116.2 116.2 116.2 116.2 116.2 116.2
4 118.5 117.8 117.5 117.4 117.3 117.3 117.4 117.5 117.8 118.5
5 178.3 137.6 124.5 121.5 120.6 120.6 121.5 124.5 137.6 178.3
1 2 3 4 5 6 7 8 9 10
190 180 170 160 150 140 130 120


Proportion of Nominal Total Voltage Drop, 400.000000 A
1 1.678 1.313 1.182 1.145 1.132 1.132 1.145 1.182 1.313 1.678
2 1.236 1.177 1.144 1.128 1.121 1.121 1.128 1.144 1.177 1.236
3 1 1 1 1 1 1 1 1 1 1
4 1.019 1.014 1.011 1.01 1.01 1.01 1.01 1.011 1.014 1.019
5 1.534 1.184 1.072 1.046 1.038 1.038 1.046 1.072 1.184 1.534
1 2 3 4 5 6 7 8 9 10
1.6
1.5
1.4
1.3
1.2
1.1
1

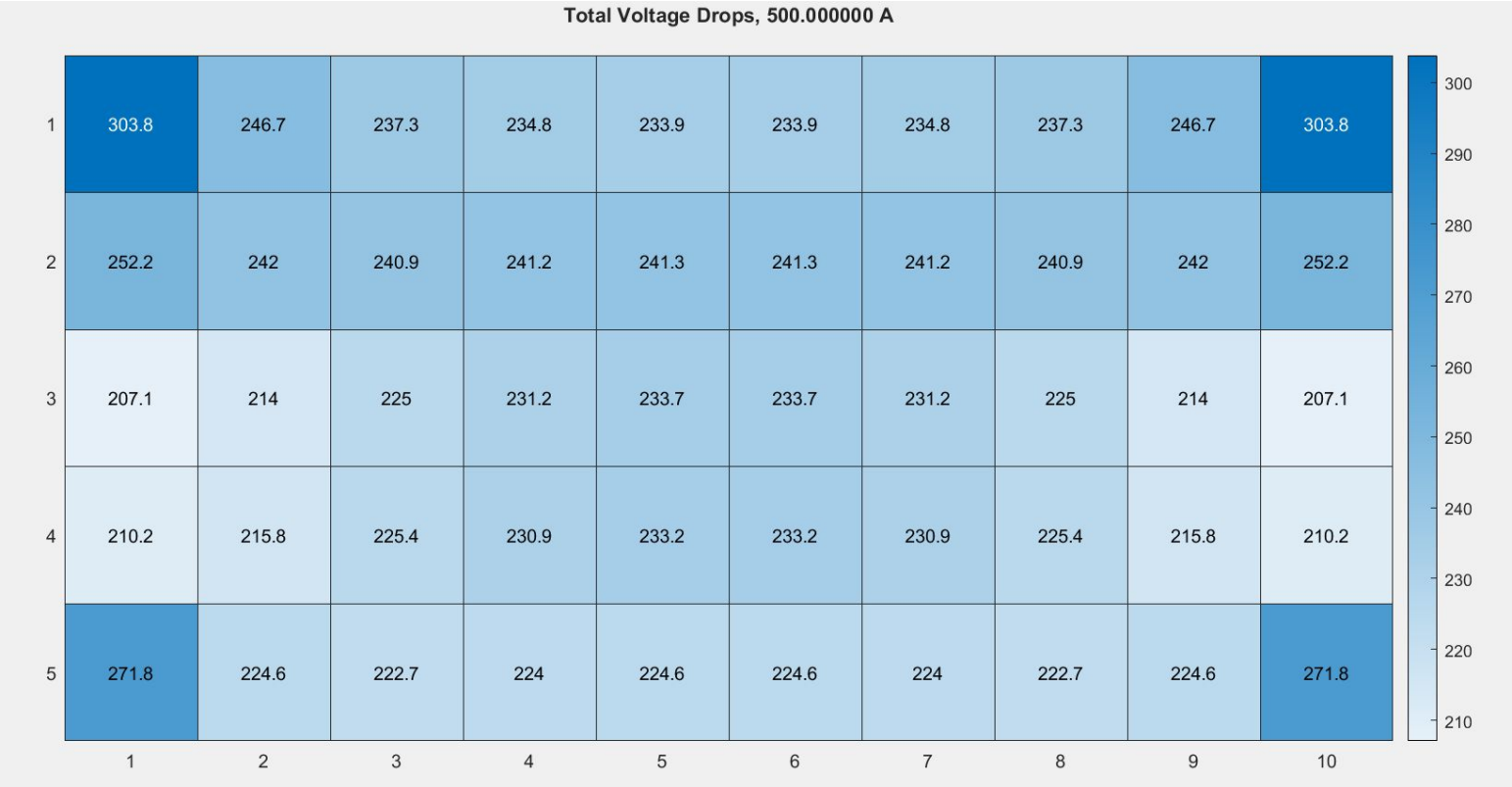

Normalized Total Voltage Drop, 400.000000 A
1 1 0.4614 0.2682 0.2139 0.195 0.195 0.2139 0.2682 0.4614 1
2 0.3491 0.2618 0.2132 0.1889 0.1788 0.1788 0.1889 0.2132 0.2618 0.3491
3 4.088e-05 1.923e-05 0 1.307e-06 6.09e-06 6.084e-06 1.301e-06 1.926e-08 1.922e-05 4.095e-05
4 0.02857 0.02082 0.01677 0.015 0.01435 0.01435 0.015 0.01677 0.02082 0.02857
5 0.7881 0.2716 0.1058 0.0674 0.05561 0.05561 0.0674 0.1058 0.2716 0.7881
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

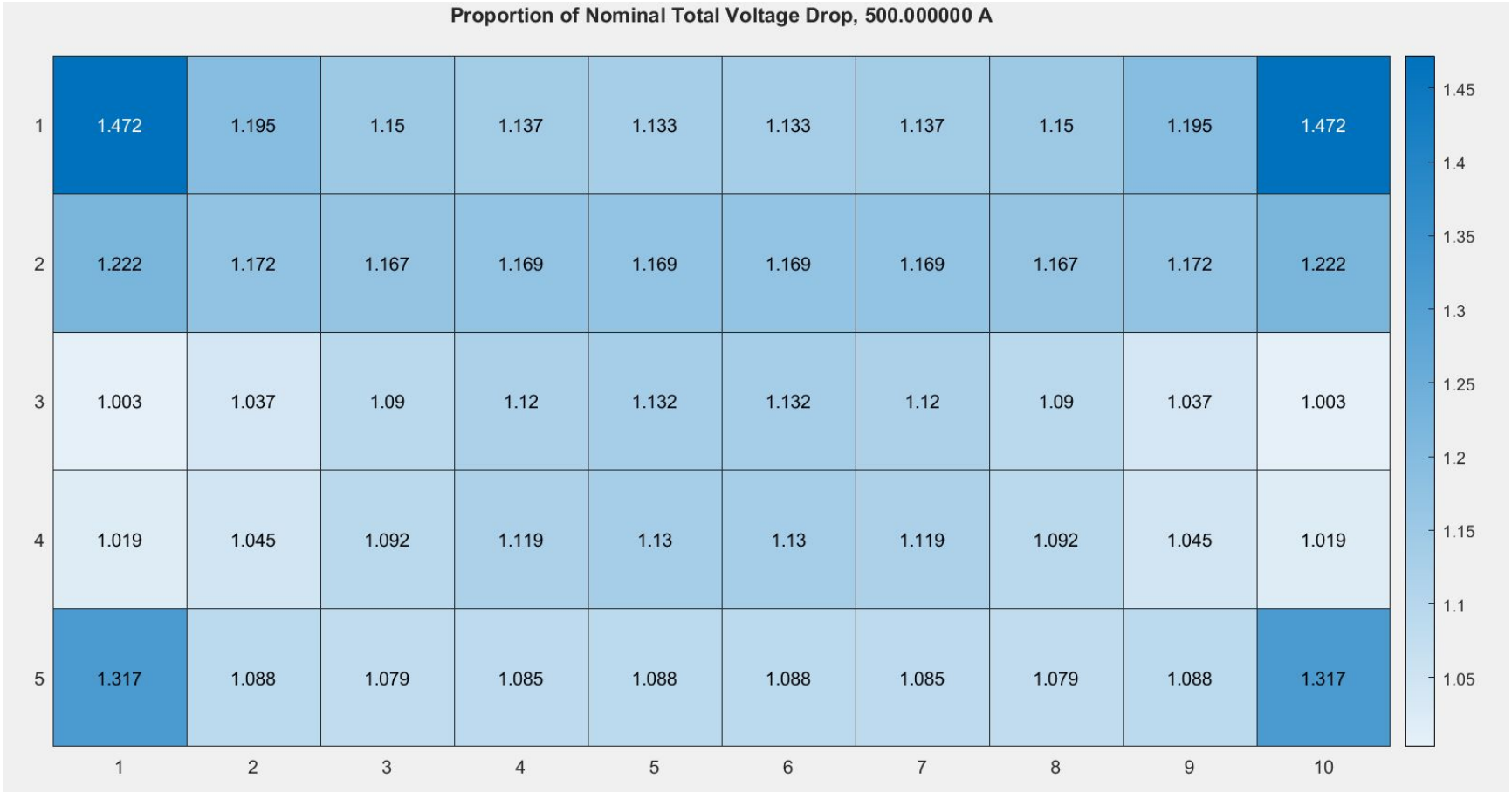
No Defect Data

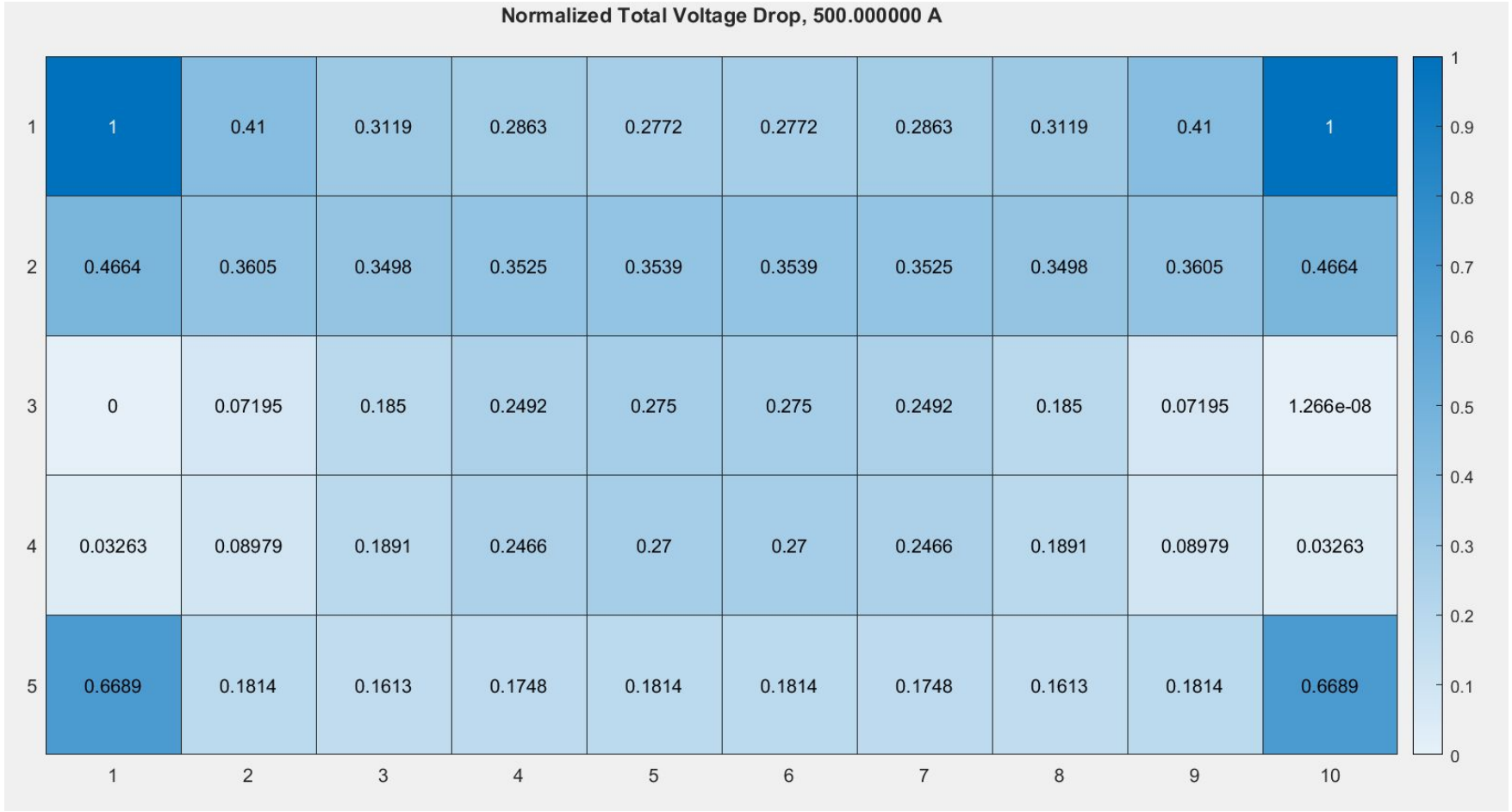


500A

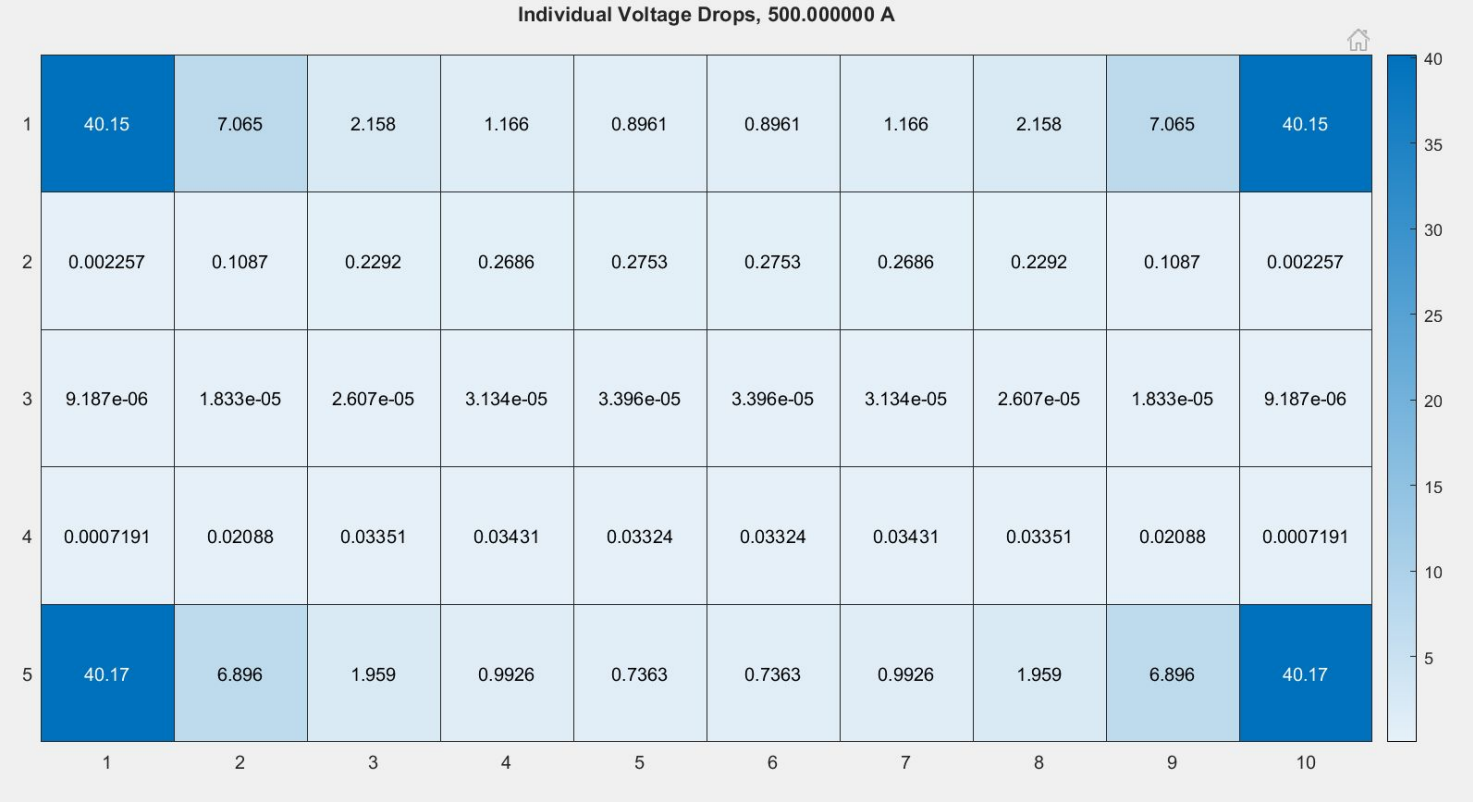
μV


Total Voltage Drops, 500.000000 A
1 303.8 246.7 237.3 234.8 233.9 233.9 234.8 237.3 246.7 303.8
2 252.2 242 240.9 241.2 241.3 241.3 241.2 240.9 242 252.2
3 207.1 214 225 231.2 233.7 233.7 231.2 225 214 207.1
4 210.2 215.8 225.4 230.9 233.2 233.2 230.9 225.4 215.8 210.2
5 271.8 224.6 222.7 224 224.6 224.6 224 222.7 224.6 271.8
1 2 3 4 5 6 7 8 9 10
300 290 280 270 260 250 240 230 220 210


Proportion of Nominal Total Voltage Drop, 500.000000 A
1 1.472 1.195 1.15 1.137 1.133 1.133 1.137 1.15 1.195 1.472
2 1.222 1.172 1.167 1.169 1.169 1.169 1.169 1.167 1.172 1.222
3 1.003 1.037 1.09 1.12 1.132 1.132 1.12 1.09 1.037 1.003
4 1.019 1.045 1.092 1.119 1.13 1.13 1.119 1.092 1.045 1.019
5 1.317 1.088 1.079 1.085 1.088 1.088 1.085 1.079 1.088 1.317
1 2 3 4 5 6 7 8 9 10
1.45
1.4
1.35
1.3
1.25
1.2
1.15
1.1
1.05


Normalized Total Voltage Drop, 500.000000 A
1 1 0.41 0.3119 0.2863 0.2772 0.2772 0.2863 0.3119 0.41 1
2 0.4664 0.3605 0.3498 0.3525 0.3539 0.3539 0.3525 0.3498 0.3605 0.4664
3 0 0.07195 0.185 0.2492 0.275 0.275 0.2492 0.185 0.07195 1.266e-08
4 0.03263 0.08979 0.1891 0.2466 0.27 0.27 0.2466 0.1891 0.08979 0.03263
5 0.6689 0.1814 0.1613 0.1748 0.1814 0.1814 0.1748 0.1613 0.1814 0.6689
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

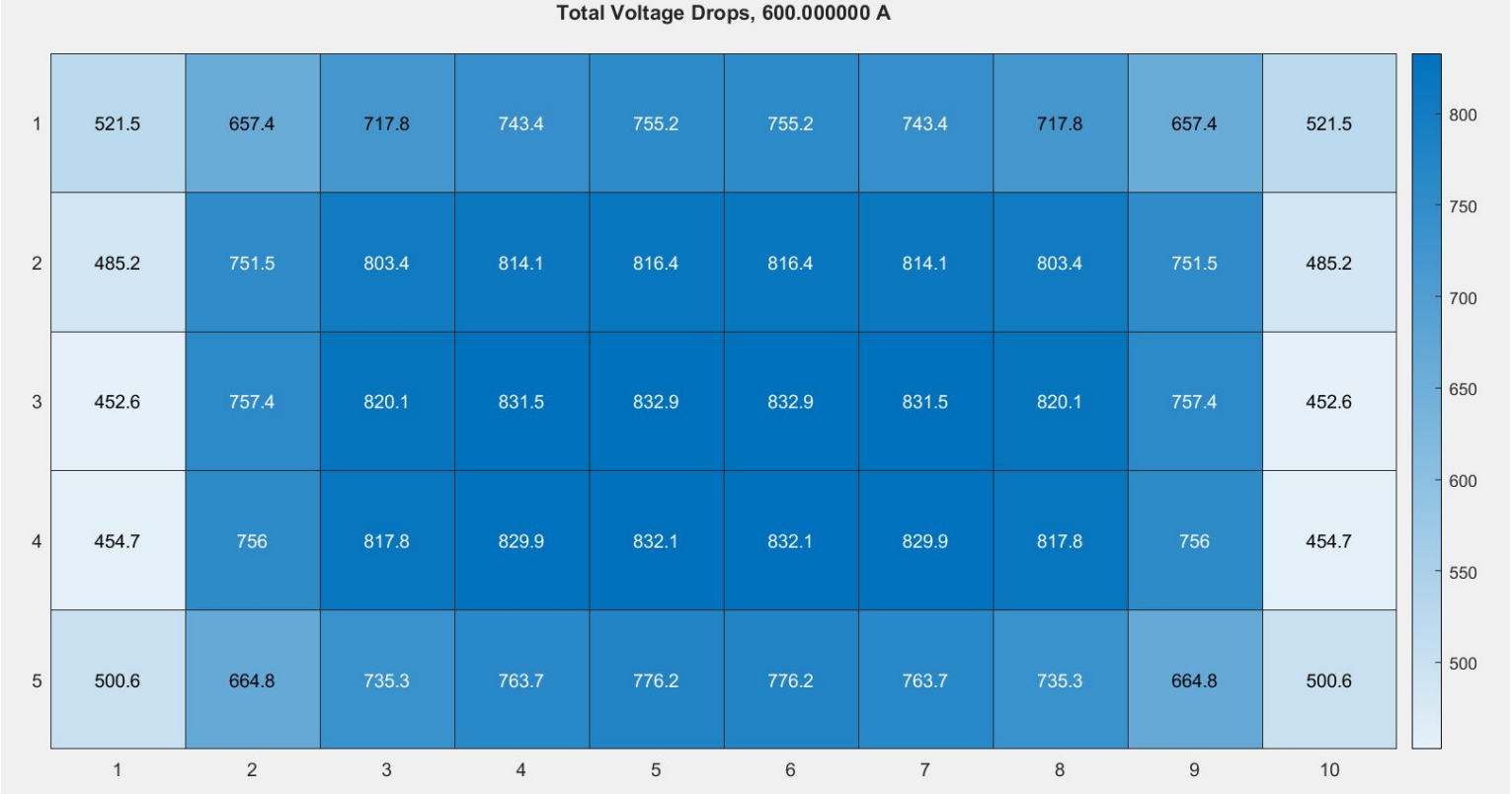
No Defect Data

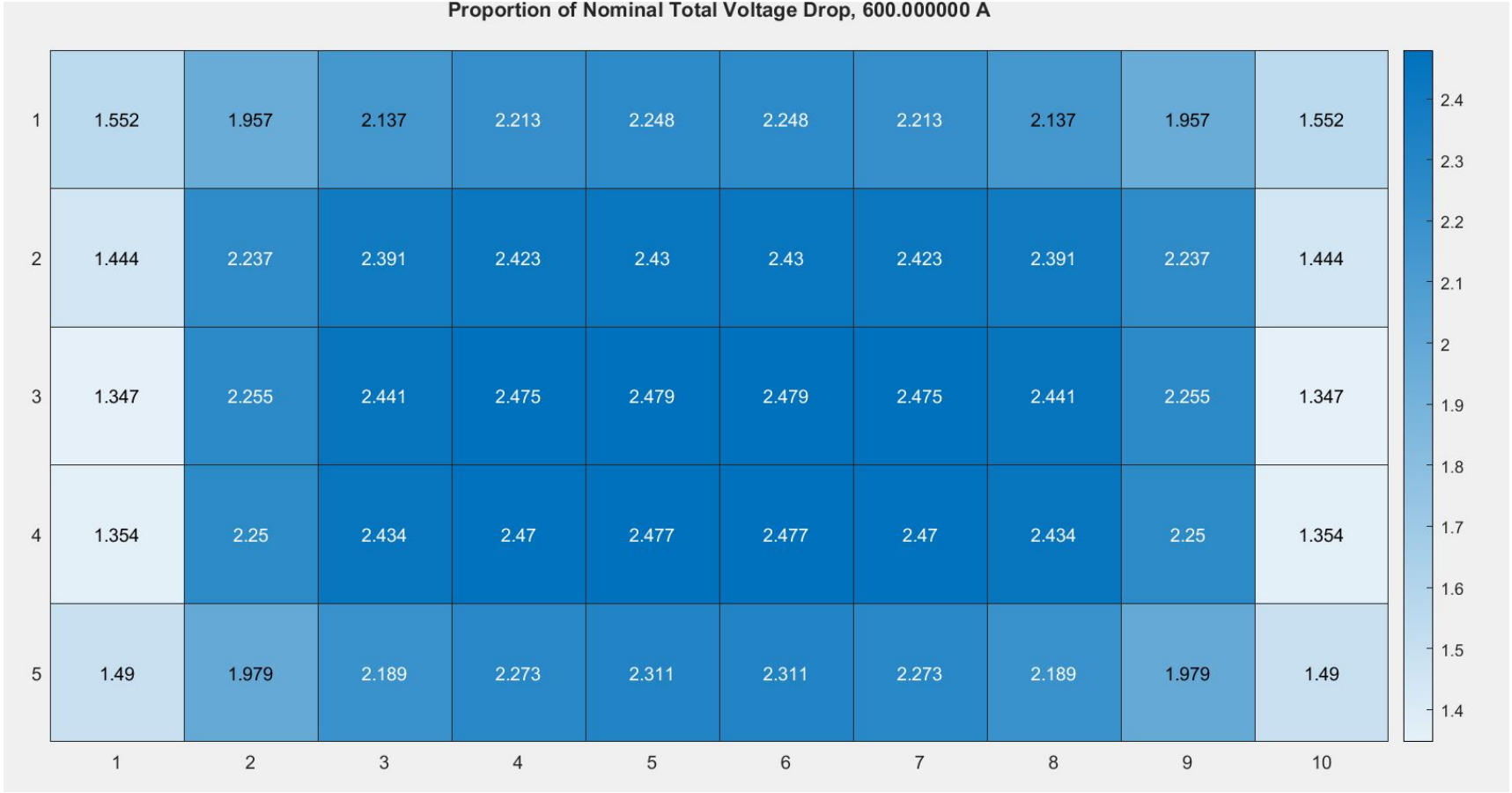


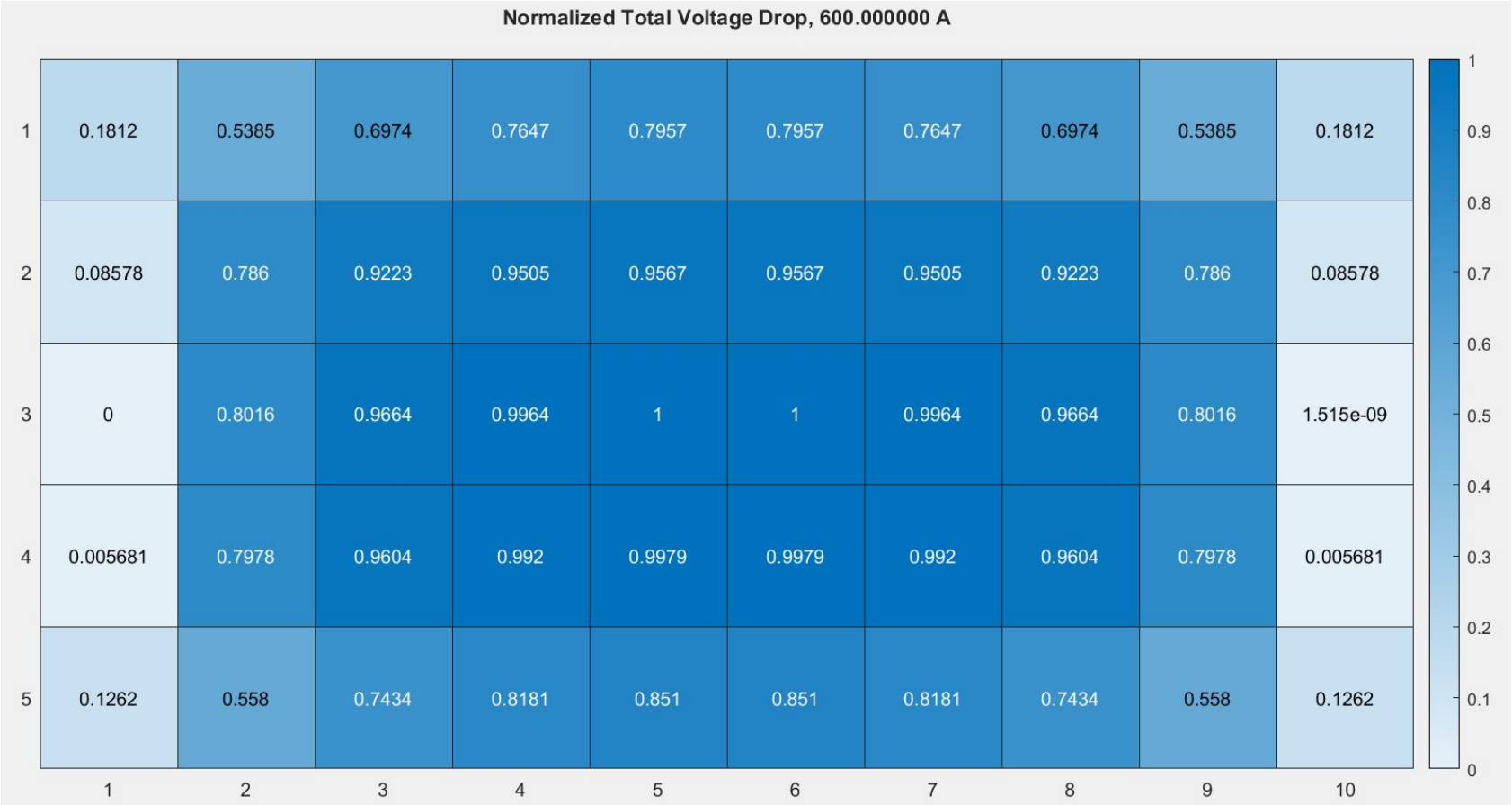

```
Total Voltage Drop = 2.063977e+02
```

600A

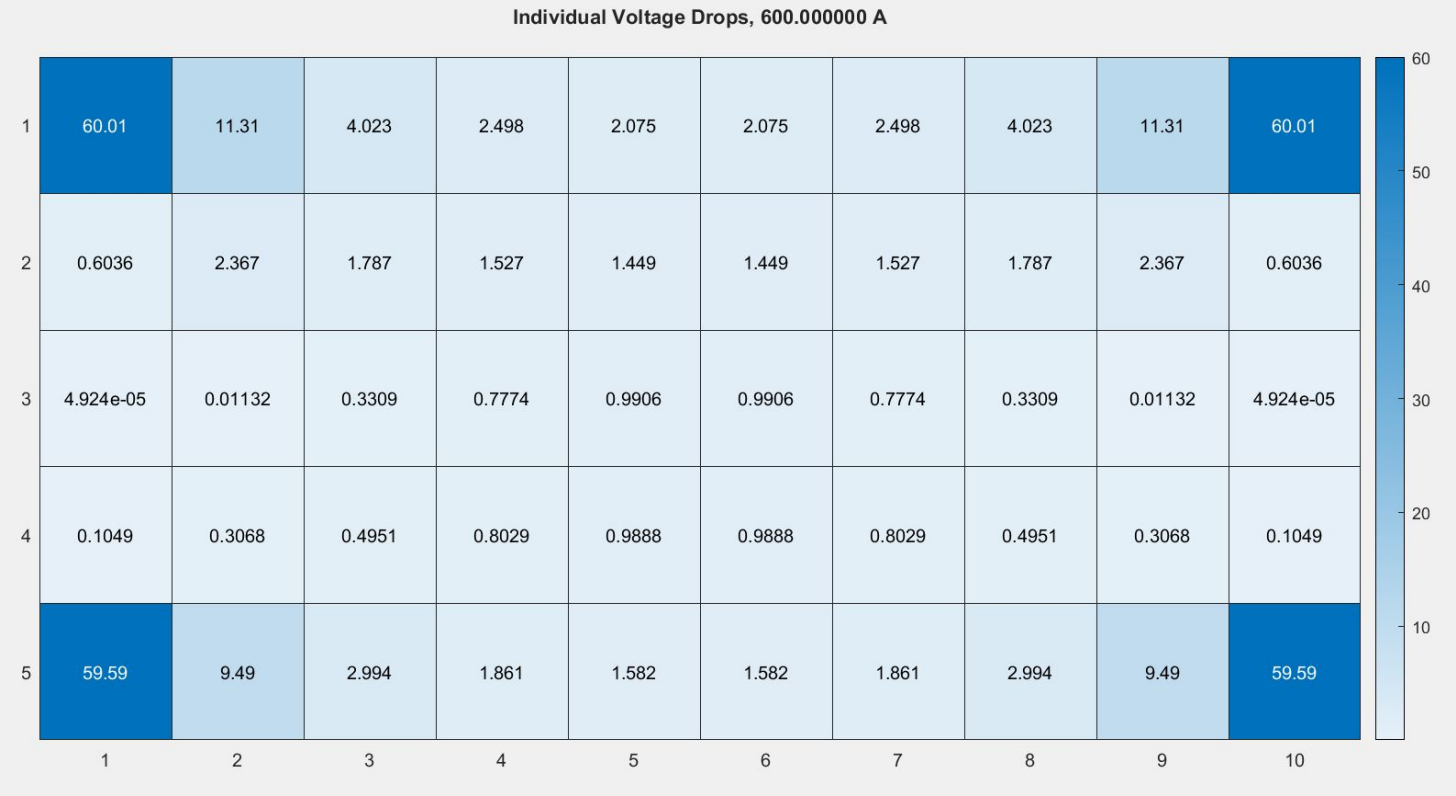
μV


Total Voltage Drops, 600.000000 A
1 521.5 657.4 717.8 743.4 755.2 755.2 743.4 717.8 657.4 521.5
2 485.2 751.5 803.4 814.1 816.4 816.4 814.1 803.4 751.5 485.2
3 452.6 757.4 820.1 831.5 832.9 832.9 831.5 820.1 757.4 452.6
4 454.7 756 817.8 829.9 832.1 832.1 829.9 817.8 756 454.7
5 500.6 664.8 735.3 763.7 776.2 776.2 763.7 735.3 664.8 500.6
1 2 3 4 5 6 7 8 9 10
800
750
700
650
600
550
500


Proportion of Nominal Total Voltage Drop, 600.000000 A
1 1.552 1.957 2.137 2.213 2.248 2.248 2.213 2.137 1.957 1.552
2 1.444 2.237 2.391 2.423 2.43 2.43 2.423 2.391 2.237 1.444
3 1.347 2.255 2.441 2.475 2.479 2.479 2.475 2.441 2.255 1.347
4 1.354 2.25 2.434 2.47 2.477 2.477 2.47 2.434 2.25 1.354
5 1.49 1.979 2.189 2.273 2.311 2.311 2.273 2.189 1.979 1.49
1 2 3 4 5 6 7 8 9 10
2.4 2.3 2.2 2.1 2 1.9 1.8 1.7 1.6 1.5 1.4


Normalized Total Voltage Drop, 600.000000 A
1 0.1812 0.5385 0.6974 0.7647 0.7957 0.7957 0.7647 0.6974 0.5385 0.1812
2 0.08578 0.786 0.9223 0.9505 0.9567 0.9567 0.9505 0.9223 0.786 0.08578
3 0 0.8016 0.9664 0.9964 1 1 0.9964 0.9664 0.8016 1.515e-09
4 0.005681 0.7978 0.9604 0.992 0.9979 0.9979 0.992 0.9604 0.7978 0.005681
5 0.1262 0.558 0.7434 0.8181 0.851 0.851 0.8181 0.7434 0.558 0.1262
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

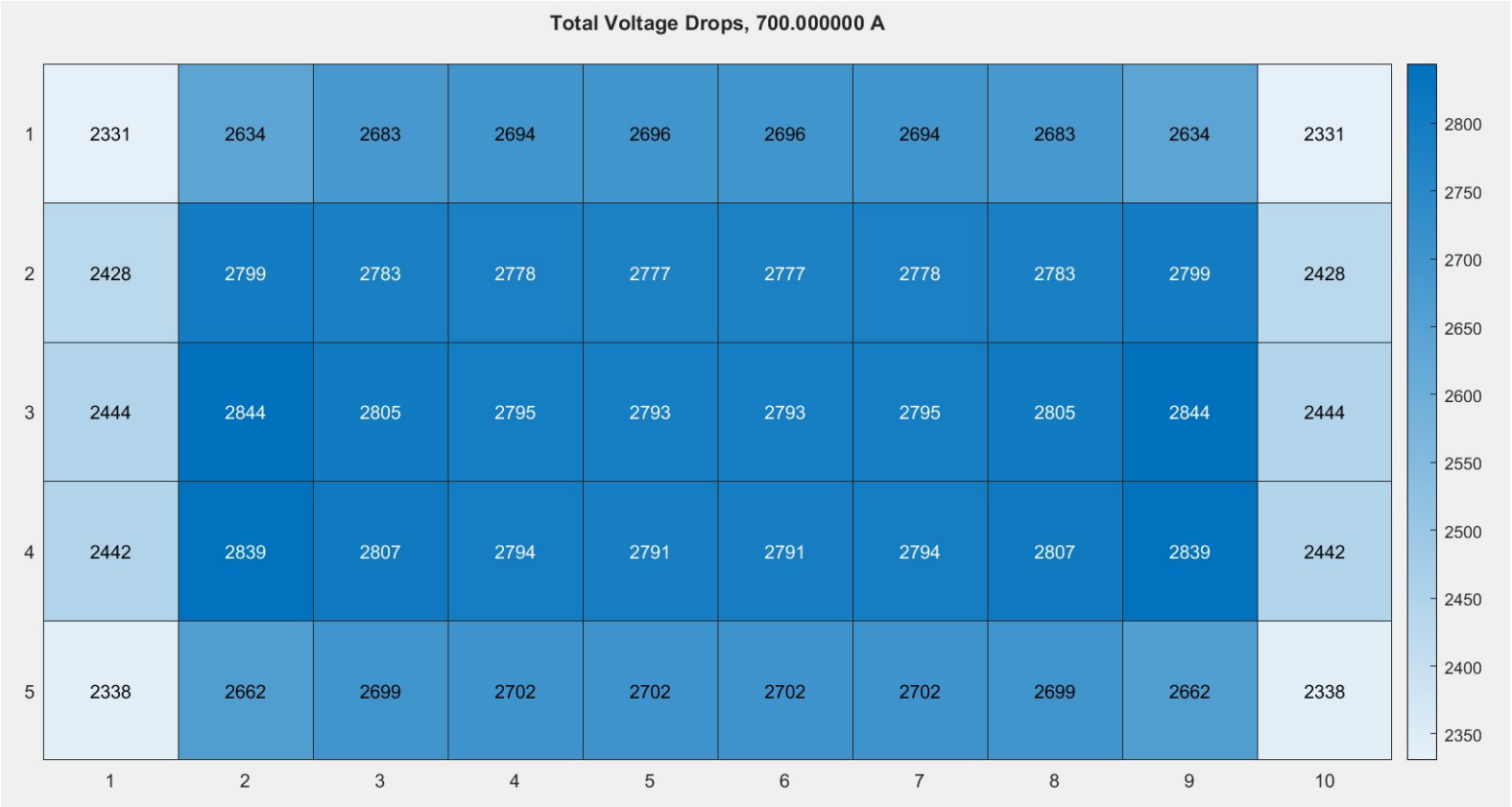
No Defect Data

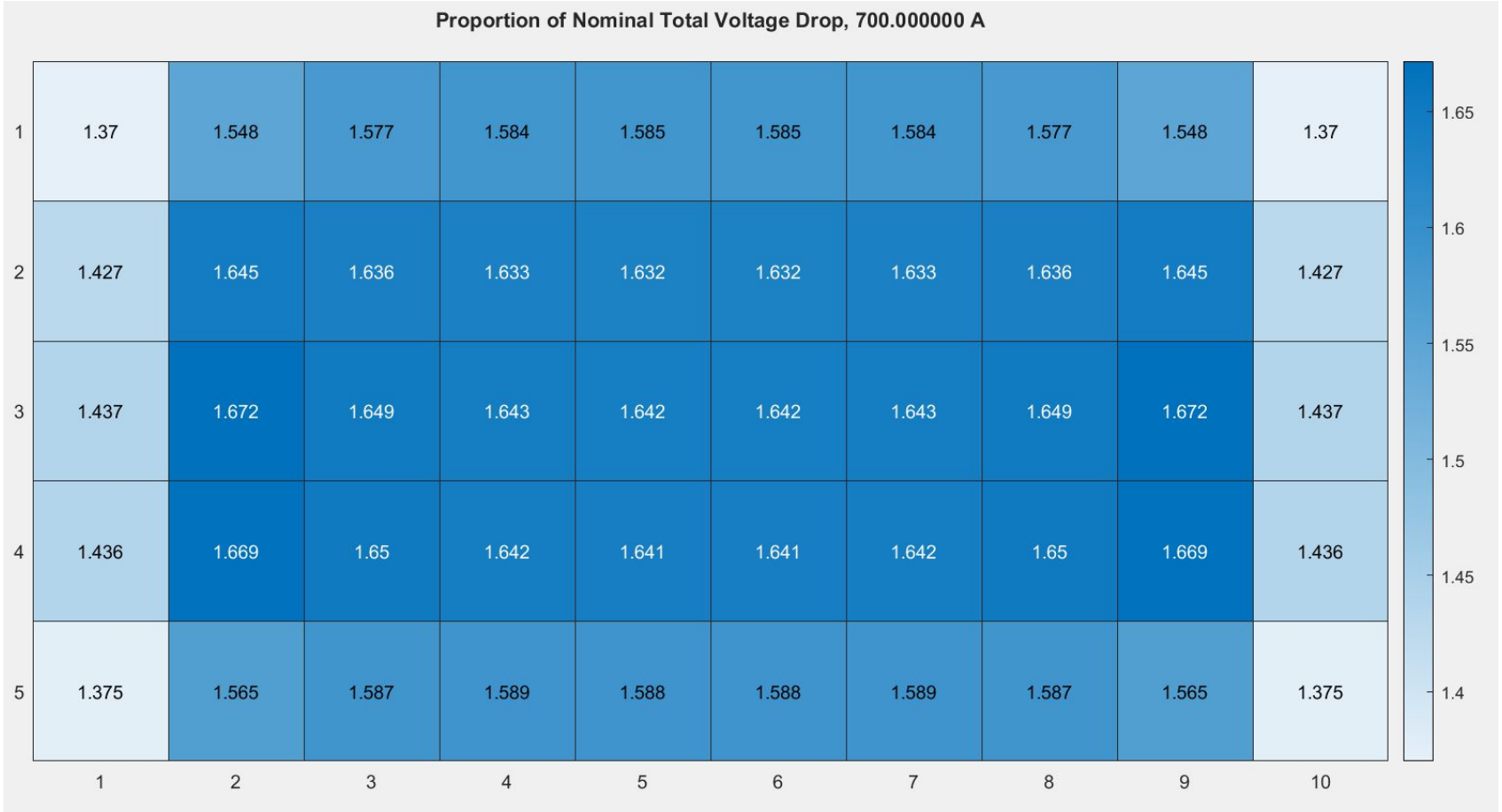


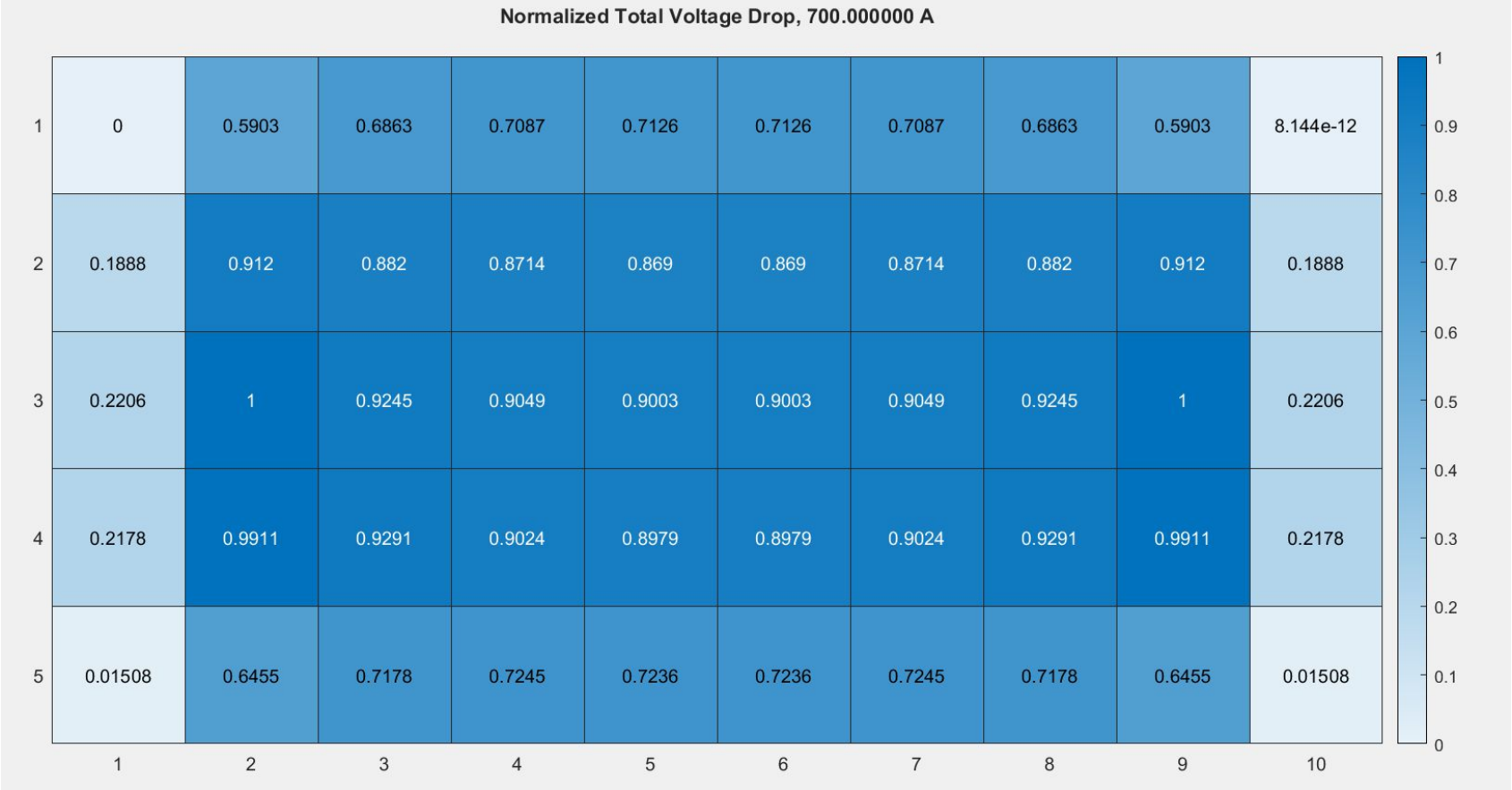
Total Voltage Drop = 3.359489e+02

700A

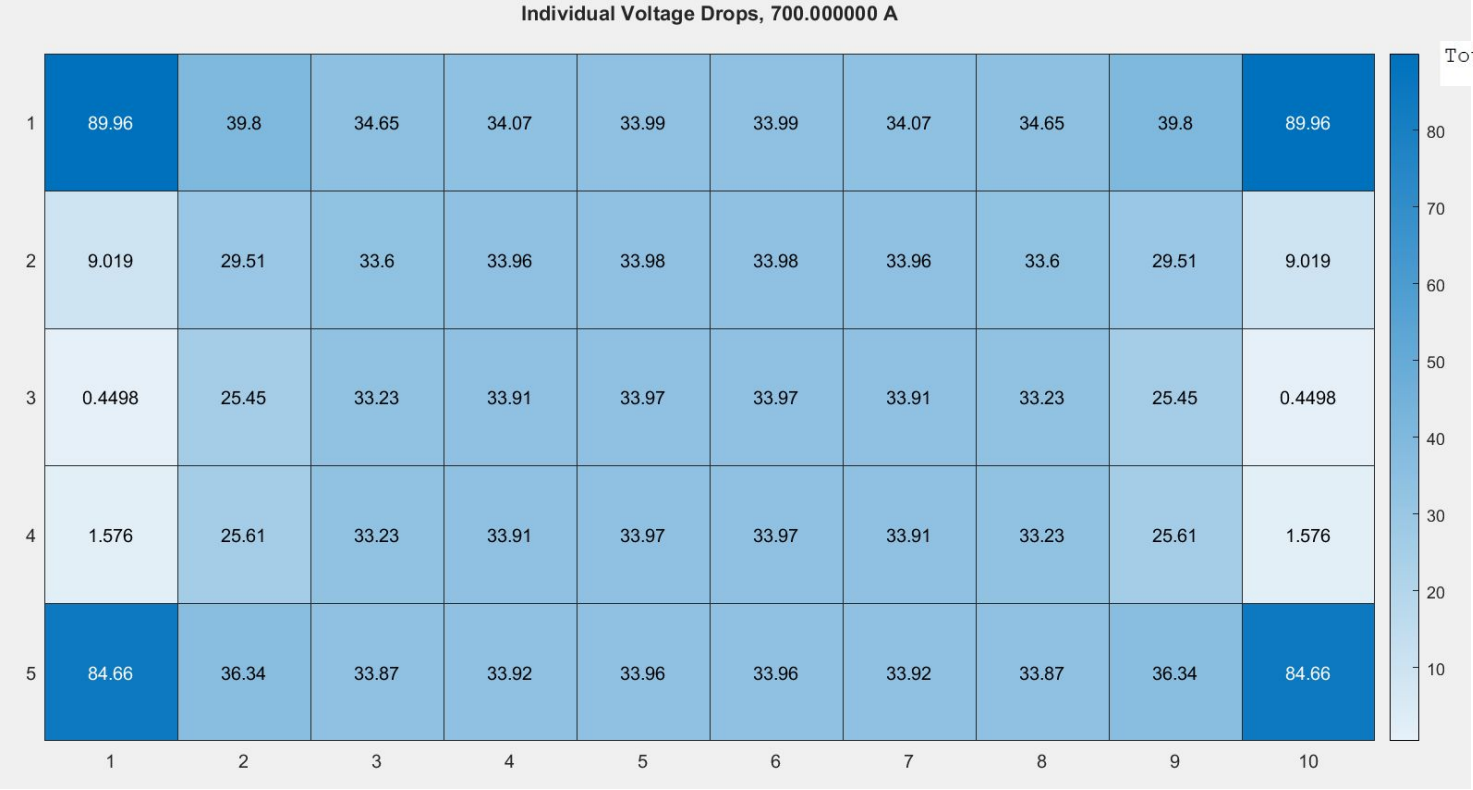
μV


Total Voltage Drops, 700.000000 A
1 2331 2634 2683 2694 2696 2696 2694 2683 2634 2331
2 2428 2799 2783 2778 2777 2777 2778 2783 2799 2428
3 2444 2844 2805 2795 2793 2793 2795 2805 2844 2444
4 2442 2839 2807 2794 2791 2791 2794 2807 2839 2442
5 2338 2662 2699 2702 2702 2702 2702 2699 2662 2338
1 2 3 4 5 6 7 8 9 10
2800 2750 2700 2650 2600 2550 2500 2450 2400 2350


Proportion of Nominal Total Voltage Drop, 700.000000 A
1 1.37 1.548 1.577 1.584 1.585 1.585 1.584 1.577 1.548 1.37
2 1.427 1.645 1.636 1.633 1.632 1.632 1.633 1.636 1.645 1.427
3 1.437 1.672 1.649 1.643 1.642 1.642 1.643 1.649 1.672 1.437
4 1.436 1.669 1.65 1.642 1.641 1.641 1.642 1.65 1.669 1.436
5 1.375 1.565 1.587 1.589 1.588 1.588 1.589 1.587 1.565 1.375
1 2 3 4 5 6 7 8 9 10
1.65
1.6
1.55
1.5
1.45
1.4

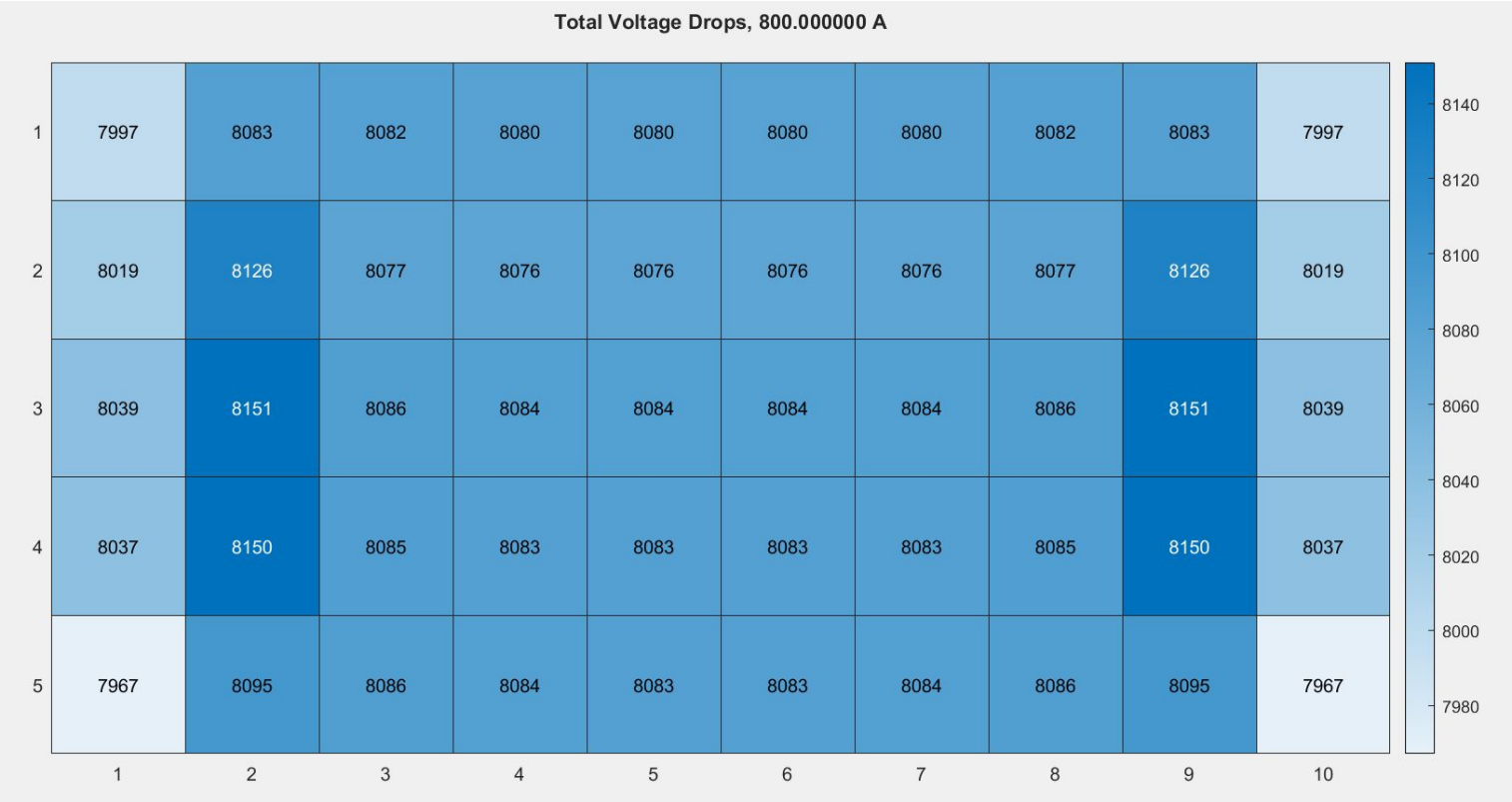

Normalized Total Voltage Drop, 700.000000 A
1 0 0.5903 0.6863 0.7087 0.7126 0.7126 0.7087 0.6863 0.5903 8.144e-12
2 0.1888 0.912 0.882 0.8714 0.869 0.869 0.8714 0.882 0.912 0.1888
3 0.2206 1 0.9245 0.9049 0.9003 0.9003 0.9049 0.9245 1 0.2206
4 0.2178 0.9911 0.9291 0.9024 0.8979 0.8979 0.9024 0.9291 0.9911 0.2178
5 0.01508 0.6455 0.7178 0.7245 0.7236 0.7236 0.7245 0.7178 0.6455 0.01508
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

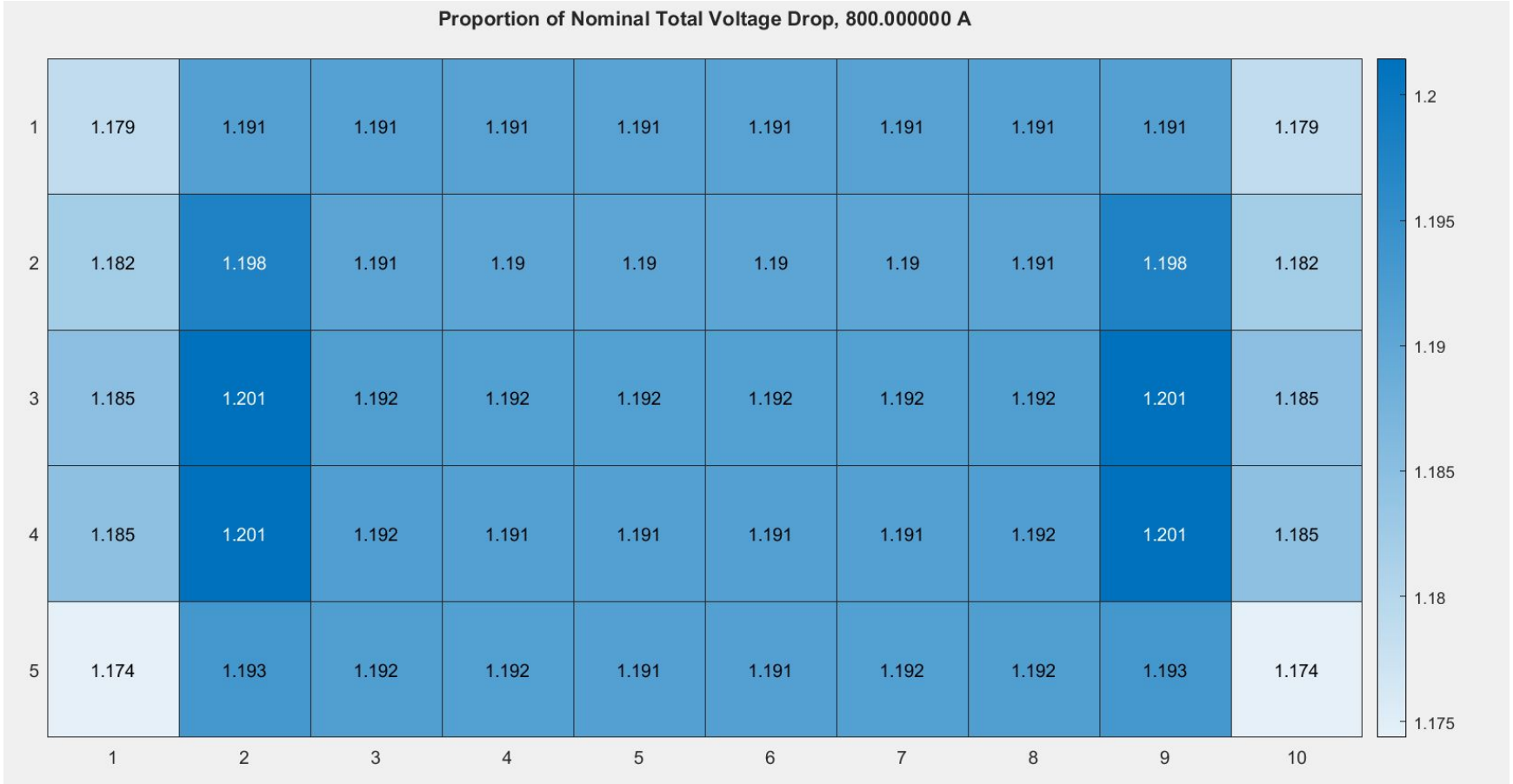
No Defect Data

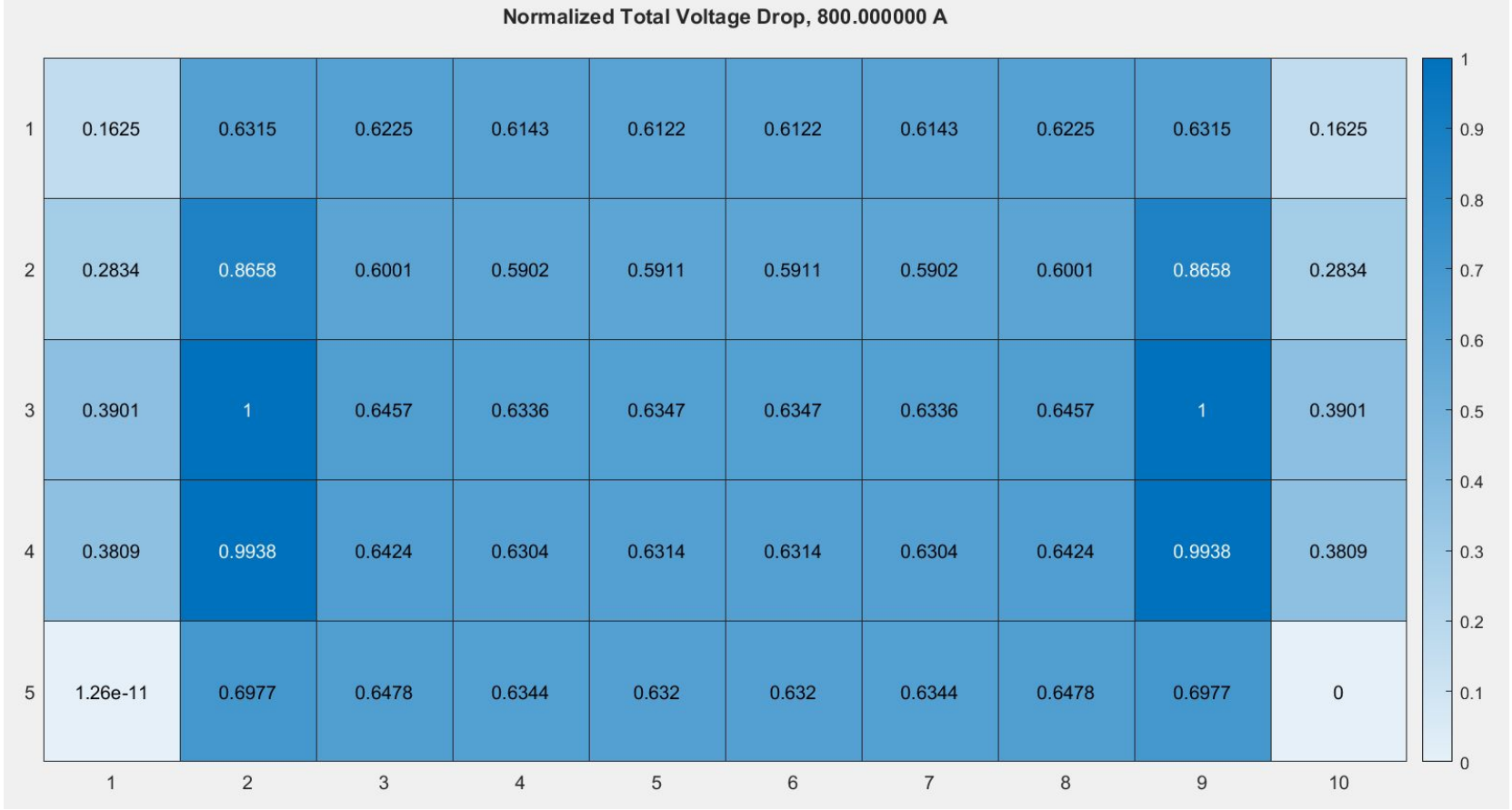


800A

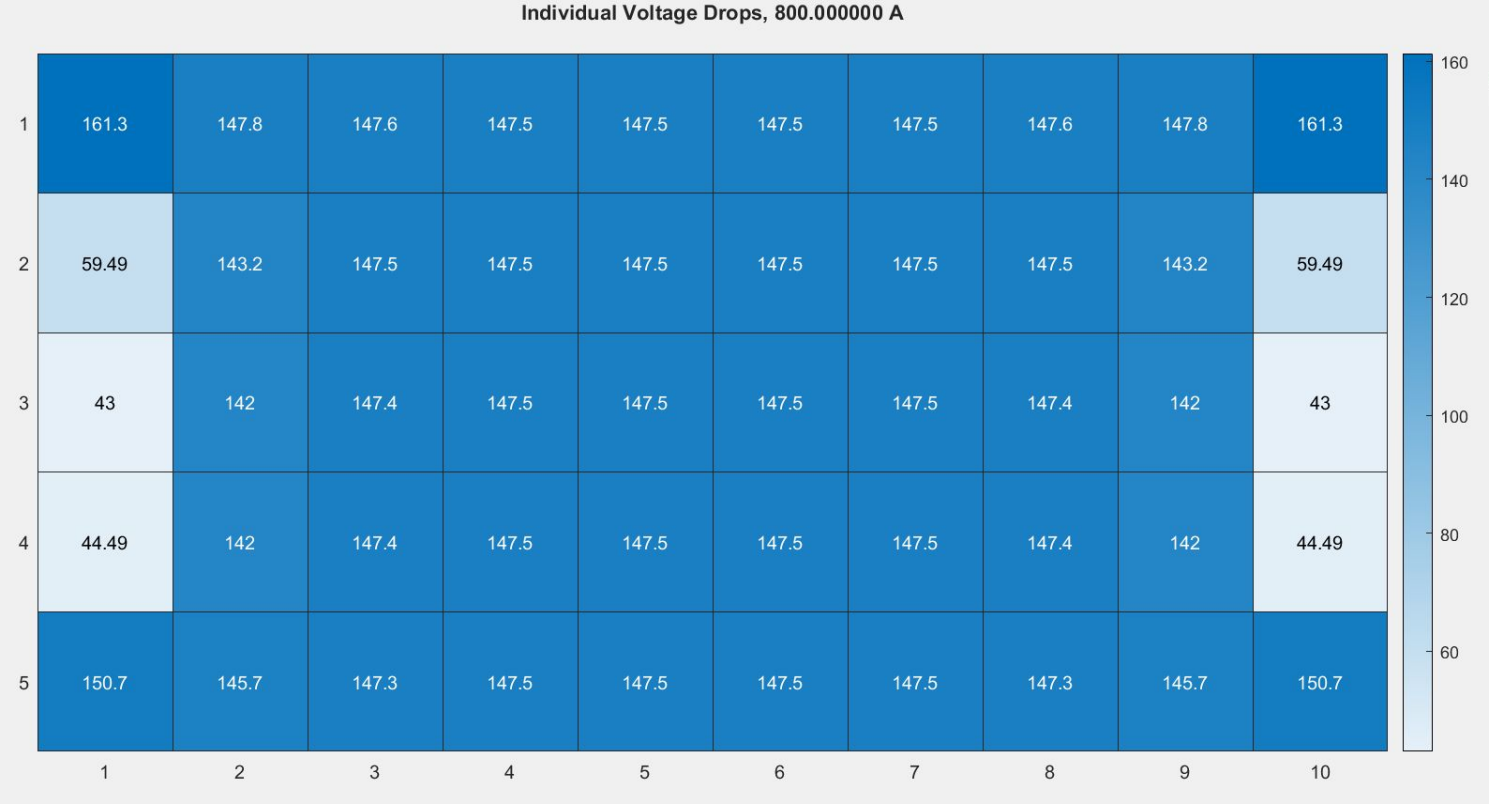
μV


Total Voltage Drops, 800.000000 A
1 7997 8083 8082 8080 8080 8080 8080 8082 8083 7997
2 8019 8126 8077 8076 8076 8076 8076 8077 8126 8019
3 8039 8151 8086 8084 8084 8084 8084 8086 8151 8039
4 8037 8150 8085 8083 8083 8083 8083 8085 8150 8037
5 7967 8095 8086 8084 8083 8083 8084 8086 8095 7967
1 2 3 4 5 6 7 8 9 10
8140
8120
8100
8080
8060
8040
8020
8000
7980


Proportion of Nominal Total Voltage Drop, 800.000000 A
1
2
3
4
5
1.179 1.191 1.191 1.191 1.191 1.191 1.191 1.191 1.191 1.179
1.182 1.198 1.191 1.19 1.19 1.19 1.19 1.191 1.198 1.182
1.185 1.201 1.192 1.192 1.192 1.192 1.192 1.192 1.201 1.185
1.185 1.201 1.192 1.191 1.191 1.191 1.191 1.192 1.201 1.185
1.174 1.193 1.192 1.192 1.191 1.191 1.192 1.192 1.193 1.174
1 2 3 4 5 6 7 8 9 10
1.2
1.195
1.19
1.185
1.18
1.175

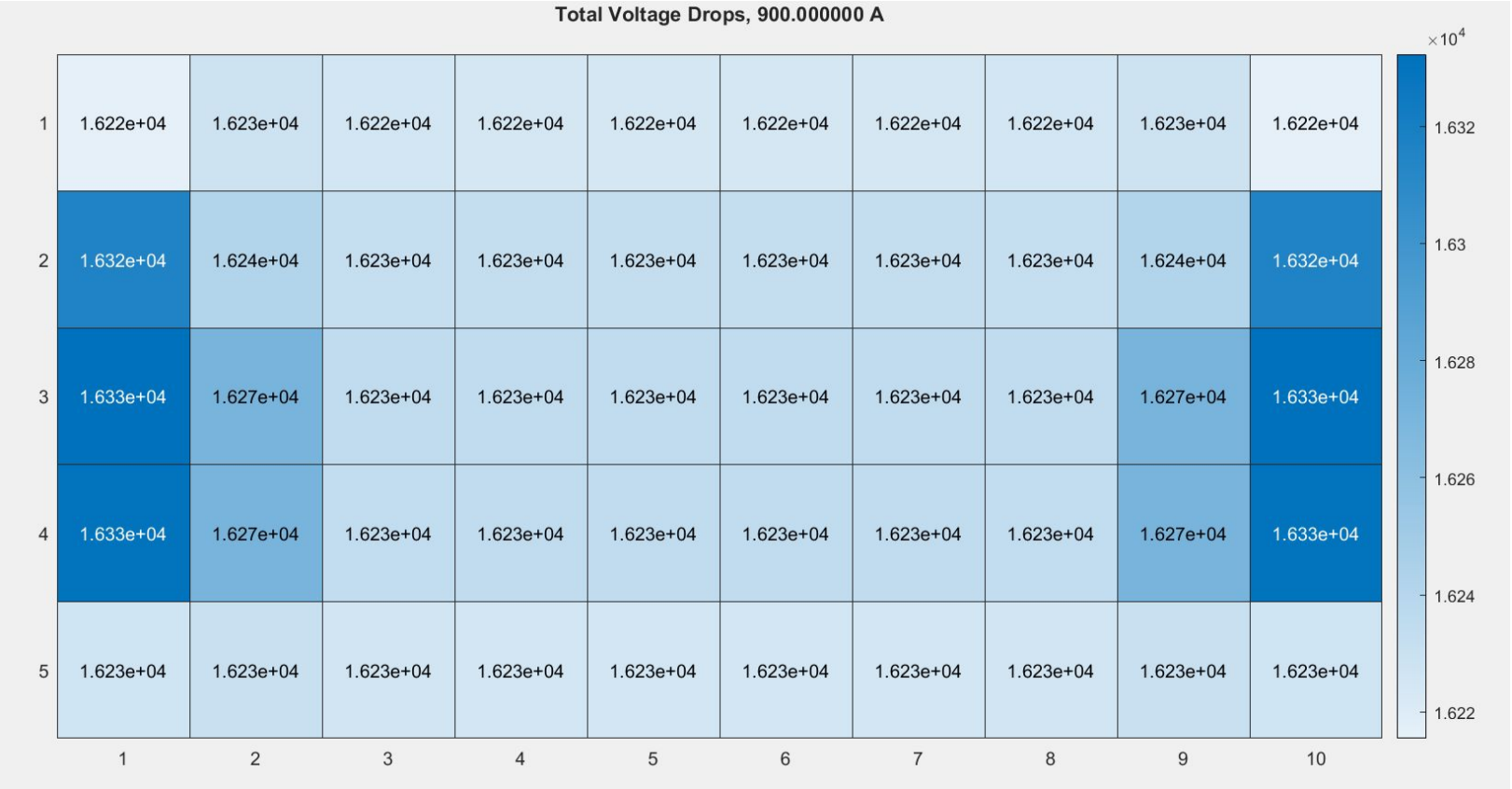

Normalized Total Voltage Drop, 800.000000 A
1 0.1625 0.6315 0.6225 0.6143 0.6122 0.6122 0.6143 0.6225 0.6315 0.1625
2 0.2834 0.8658 0.6001 0.5902 0.5911 0.5911 0.5902 0.6001 0.8658 0.2834
3 0.3901 1 0.6457 0.6336 0.6347 0.6347 0.6336 0.6457 1 0.3901
4 0.3809 0.9938 0.6424 0.6304 0.6314 0.6314 0.6304 0.6424 0.9938 0.3809
5 1.26e-11 0.6977 0.6478 0.6344 0.632 0.632 0.6344 0.6478 0.6977 0
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

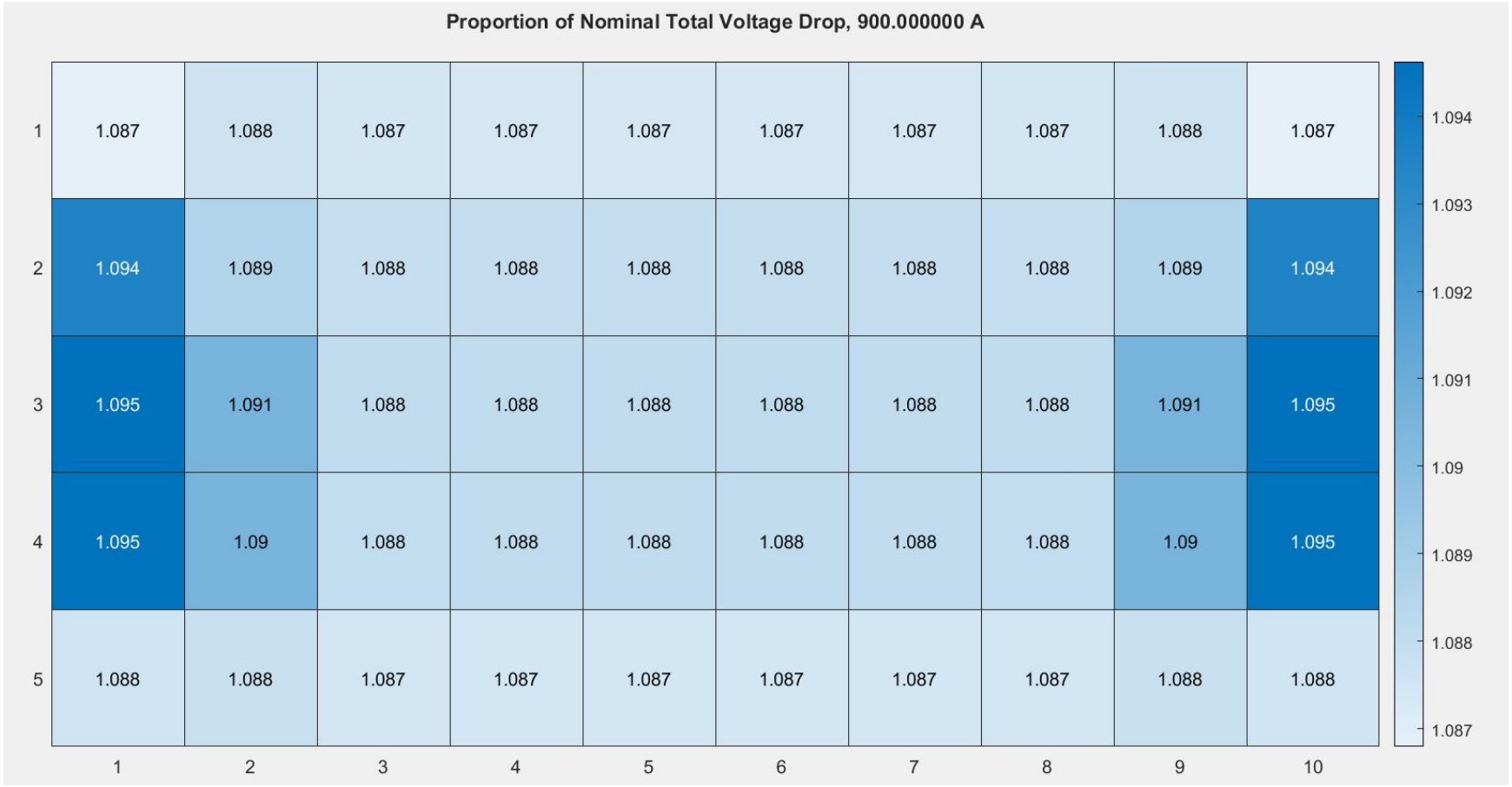
No Defect data

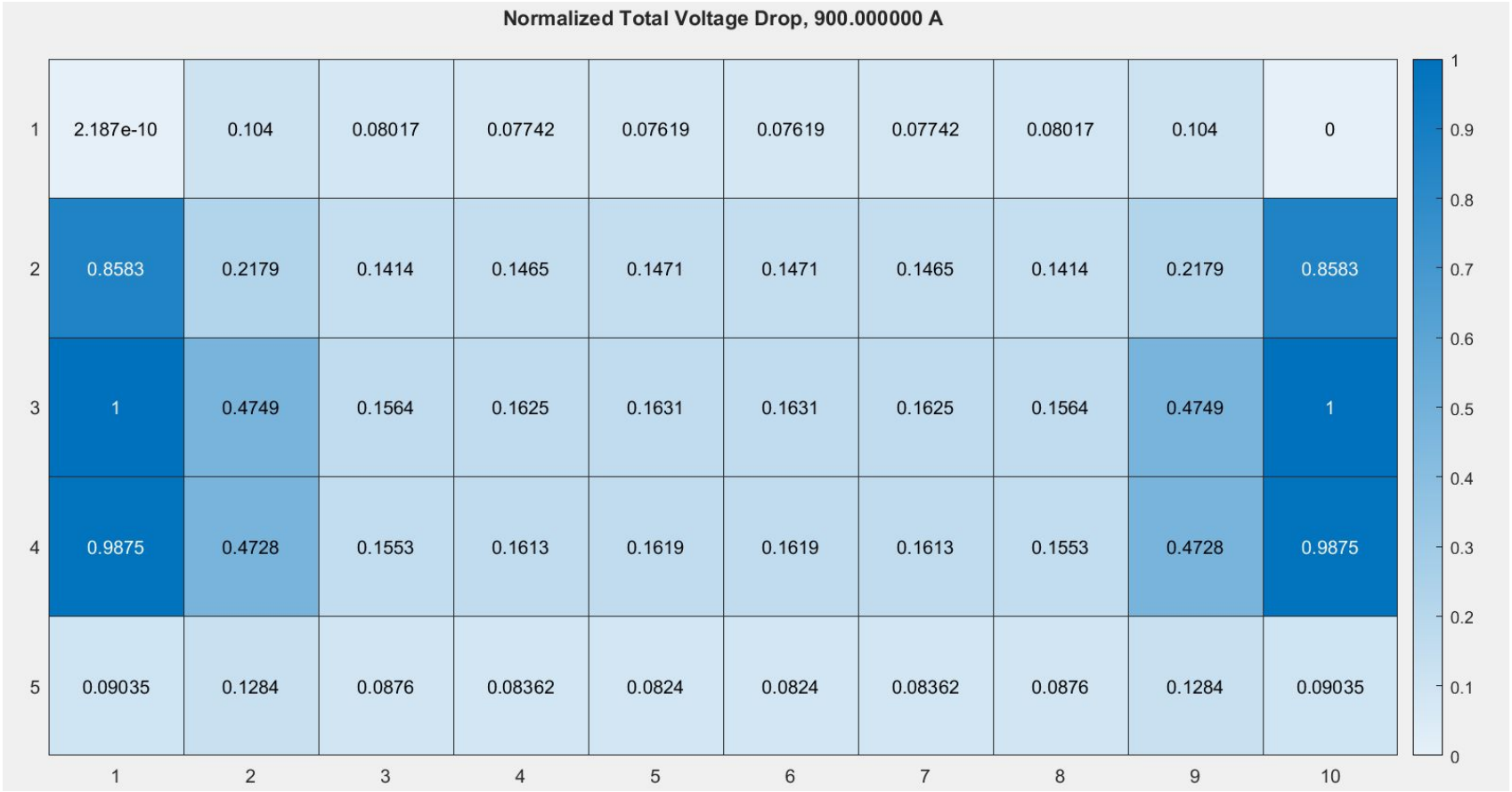


900A

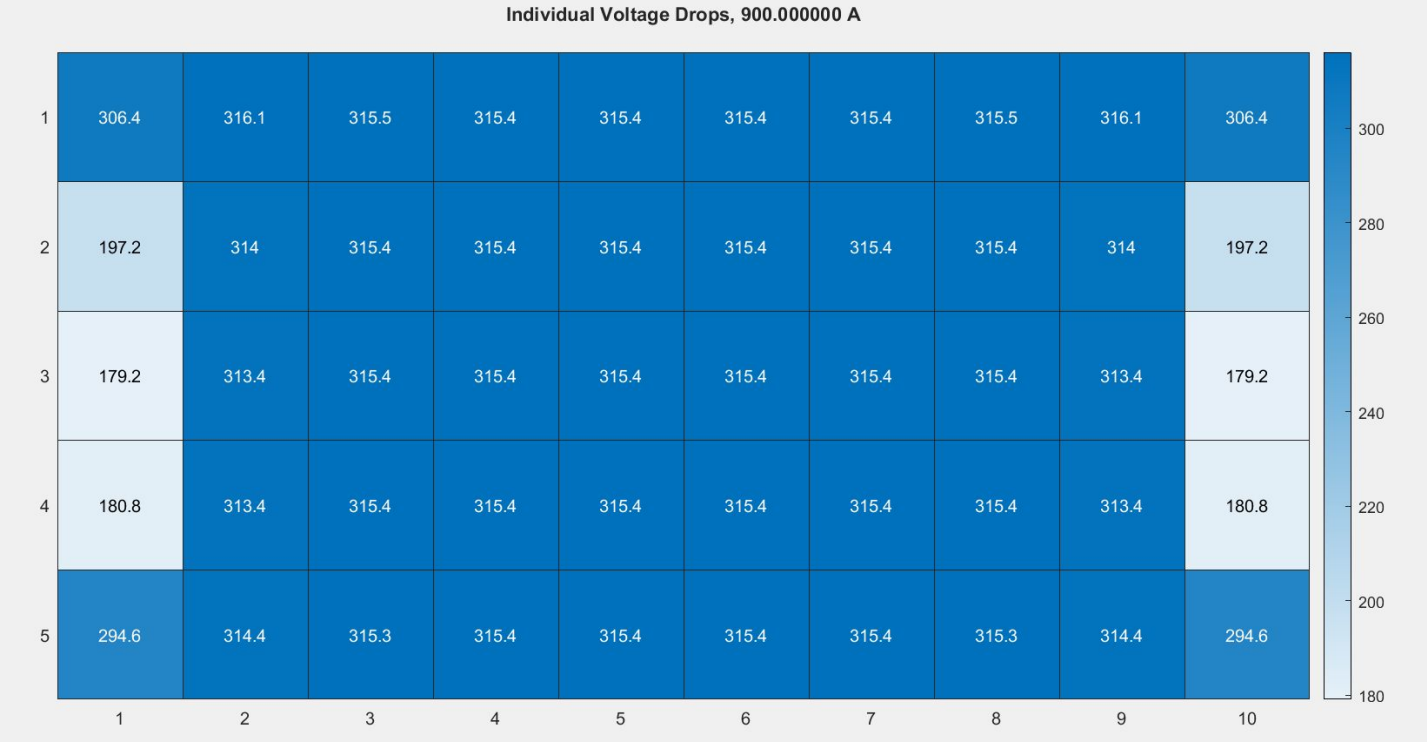
μV


Total Voltage Drops, 900.000000 A
×10^4
1.632
1.63
1.628
1.626
1.624
1.622
1 1.622e+04 1.623e+04 1.622e+04 1.622e+04 1.622e+04 1.622e+04 1.622e+04 1.622e+04 1.623e+04 1.622e+04
2 1.632e+04 1.624e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.624e+04 1.632e+04
3 1.633e+04 1.627e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.627e+04 1.633e+04
4 1.633e+04 1.627e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.627e+04 1.633e+04
5 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04 1.623e+04
1 2 3 4 5 6 7 8 9 10


Proportion of Nominal Total Voltage Drop, 900.000000 A
1 1.087 1.088 1.087 1.087 1.087 1.087 1.087 1.087 1.088 1.087
2 1.094 1.089 1.088 1.088 1.088 1.088 1.088 1.088 1.089 1.094
3 1.095 1.091 1.088 1.088 1.088 1.088 1.088 1.088 1.091 1.095
4 1.095 1.09 1.088 1.088 1.088 1.088 1.088 1.088 1.09 1.095
5 1.088 1.088 1.087 1.087 1.087 1.087 1.087 1.087 1.088 1.088
1 2 3 4 5 6 7 8 9 10
1.094
1.093
1.092
1.091
1.09
1.089
1.088
1.087

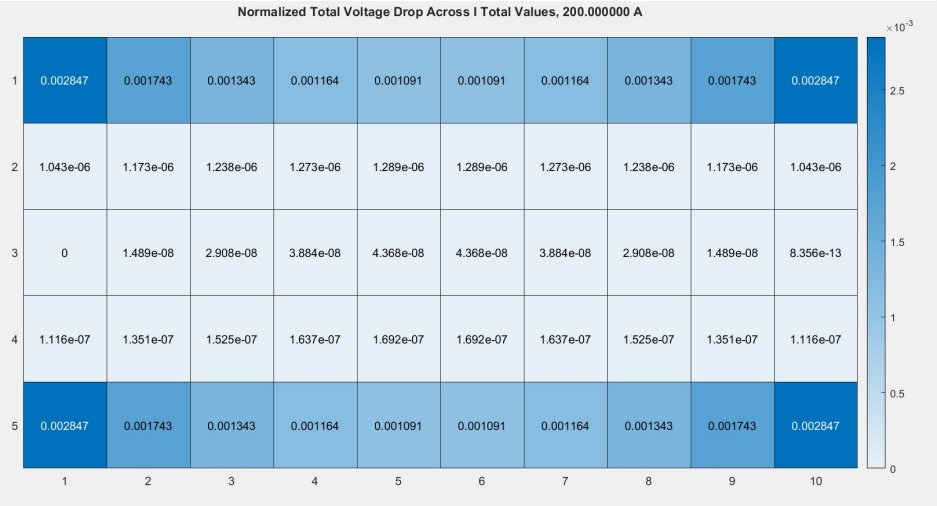

Normalized Total Voltage Drop, 900.000000 A
1 2.187e-10 0.104 0.08017 0.07742 0.07619 0.07619 0.07742 0.08017 0.104 0
2 0.8583 0.2179 0.1414 0.1465 0.1471 0.1471 0.1465 0.1414 0.2179 0.8583
3 1 0.4749 0.1564 0.1625 0.1631 0.1631 0.1625 0.1564 0.4749 1
4 0.9875 0.4728 0.1553 0.1613 0.1619 0.1619 0.1613 0.1553 0.4728 0.9875
5 0.09035 0.1284 0.0876 0.08362 0.0824 0.0824 0.08362 0.0876 0.1284 0.09035
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

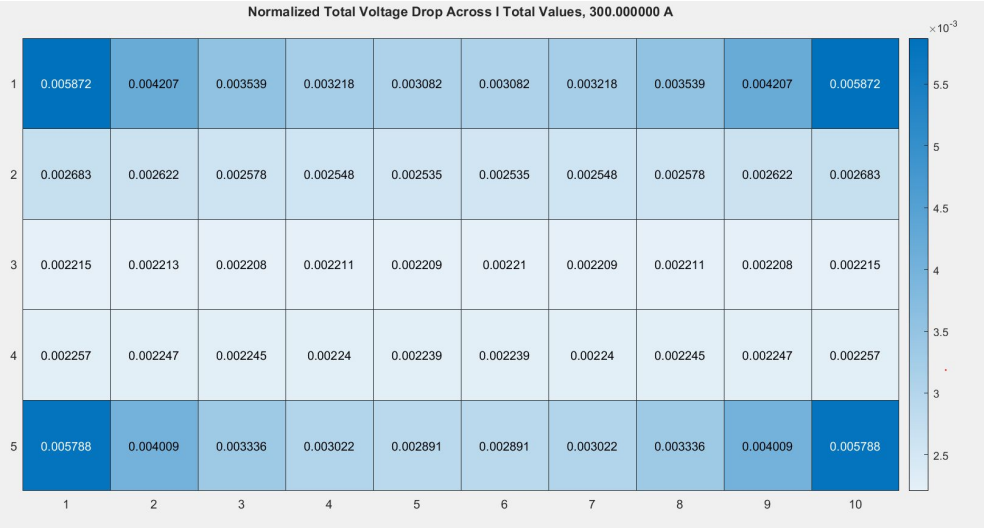
No defect data

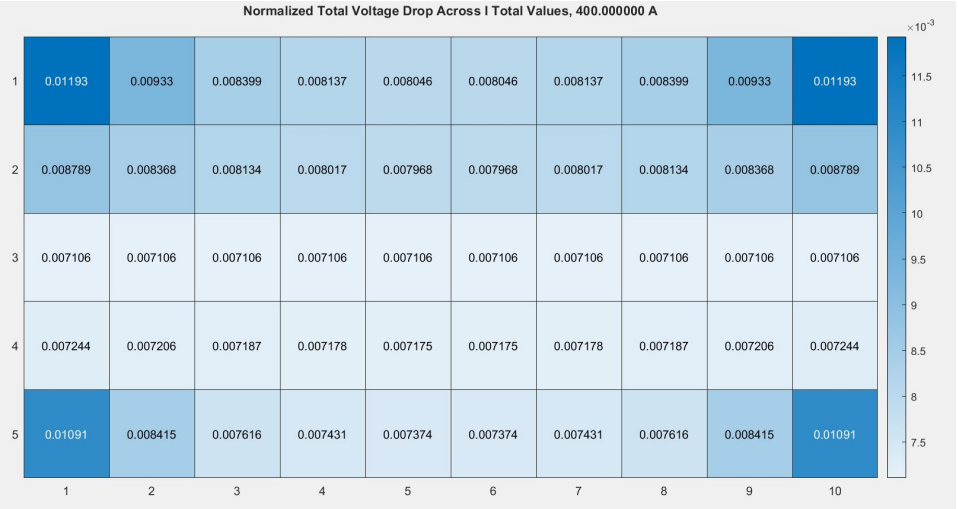


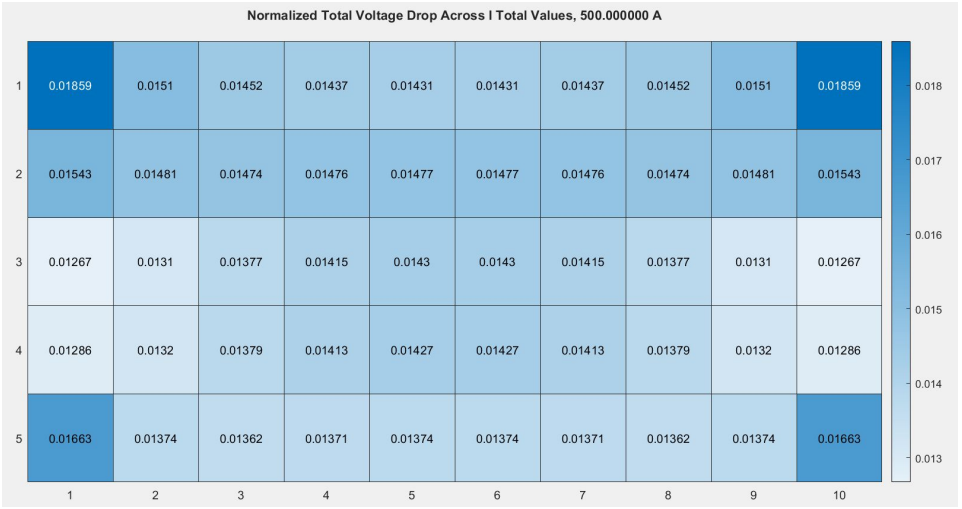

```
Total Voltage Drop = 1.492045e+04
```

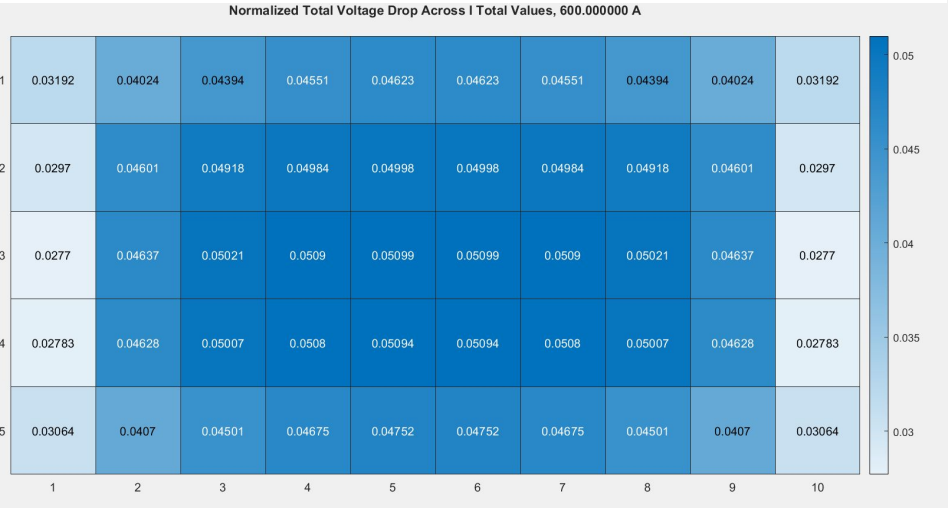
Normalized Across I_total

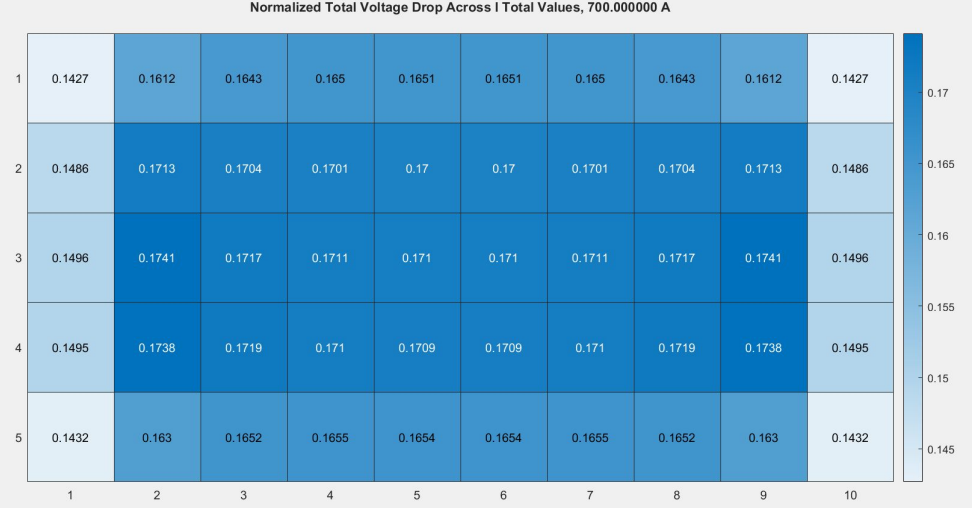


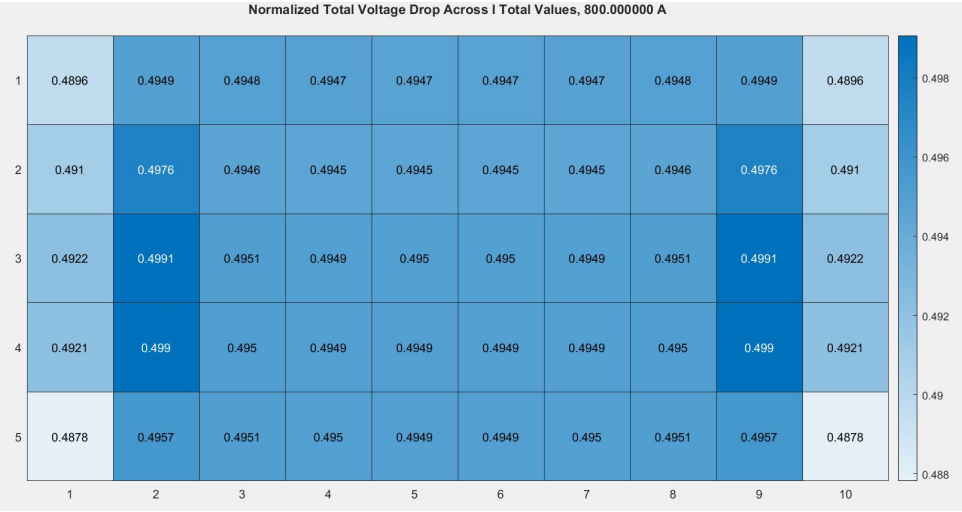


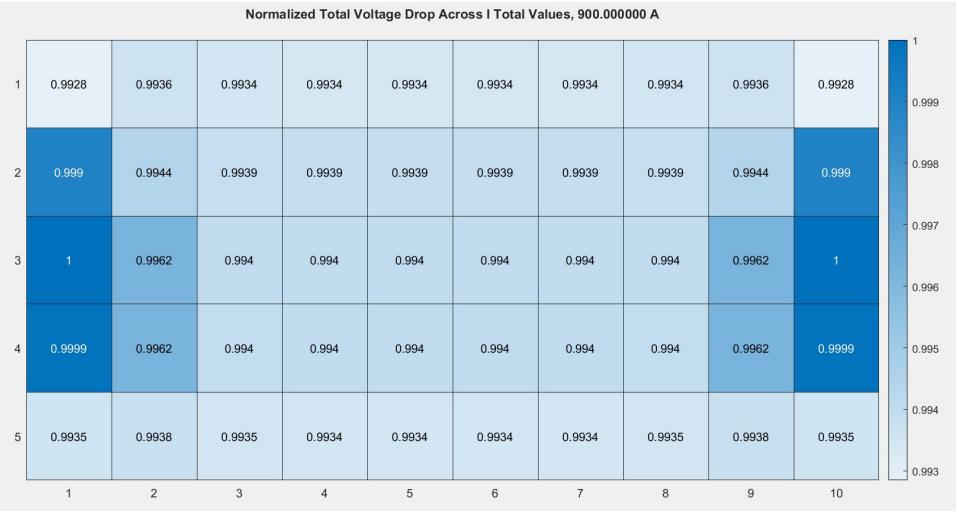

Normalized Total Voltage Drop Across I Total Values, 400.000000 A
×10^-3
11.5
11
10.5
10
9.5
9
8.5
8
7.5
1 0.01193 0.00933 0.008399 0.008137 0.008046 0.008046 0.008137 0.008399 0.00933 0.01193
2 0.008789 0.008368 0.008134 0.008017 0.007968 0.007968 0.008017 0.008134 0.008368 0.008789
3 0.007106 0.007106 0.007106 0.007106 0.007106 0.007106 0.007106 0.007106 0.007106 0.007106
4 0.007244 0.007206 0.007187 0.007178 0.007175 0.007175 0.007178 0.007187 0.007206 0.007244
5 0.01091 0.008415 0.007616 0.007431 0.007374 0.007374 0.007431 0.007616 0.008415 0.01091
1 2 3 4 5 6 7 8 9 10


Normalized Total Voltage Drop Across I Total Values, 500.000000 A
0.018
0.017
0.016
0.015
0.014
0.013
1 0.01859 0.0151 0.01452 0.01437 0.01431 0.01431 0.01437 0.01452 0.0151 0.01859
2 0.01543 0.01481 0.01474 0.01476 0.01477 0.01477 0.01476 0.01474 0.01481 0.01543
3 0.01267 0.0131 0.01377 0.01415 0.0143 0.0143 0.01415 0.01377 0.0131 0.01267
4 0.01286 0.0132 0.01379 0.01413 0.01427 0.01427 0.01413 0.01379 0.0132 0.01286
5 0.01663 0.01374 0.01362 0.01371 0.01374 0.01374 0.01371 0.01362 0.01374 0.01663
1 2 3 4 5 6 7 8 9 10

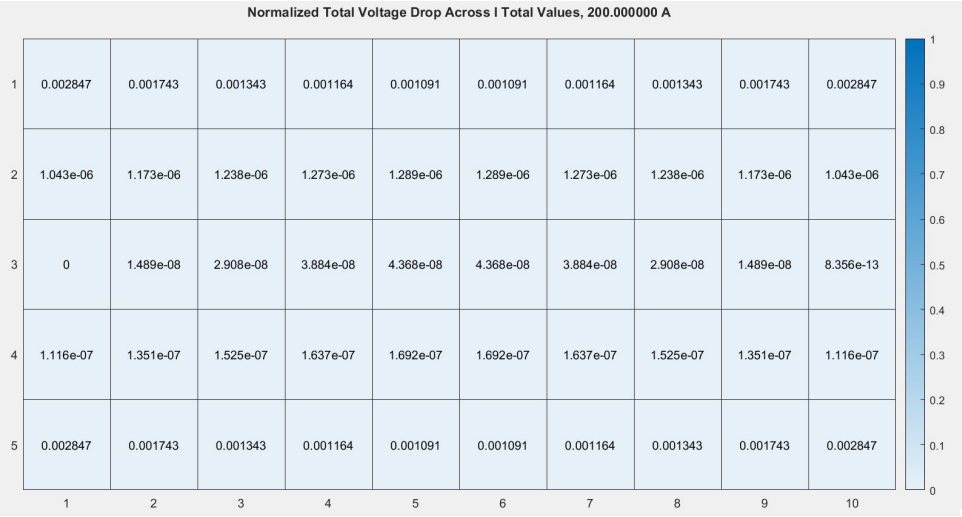

Normalized Total Voltage Drop Across I Total Values, 600.000000 A
1 0.03192 0.04024 0.04394 0.04551 0.04623 0.04623 0.04551 0.04394 0.04024 0.03192
2 0.0297 0.04601 0.04918 0.04984 0.04998 0.04998 0.04984 0.04918 0.04601 0.0297
3 0.0277 0.04637 0.05021 0.0509 0.05099 0.05099 0.0509 0.05021 0.04637 0.0277
4 0.02783 0.04628 0.05007 0.0508 0.05094 0.05094 0.0508 0.05007 0.04628 0.02783
5 0.03064 0.0407 0.04501 0.04675 0.04752 0.04752 0.04675 0.04501 0.0407 0.03064
1 2 3 4 5 6 7 8 9 10
0.05 0.045 0.04 0.035 0.03

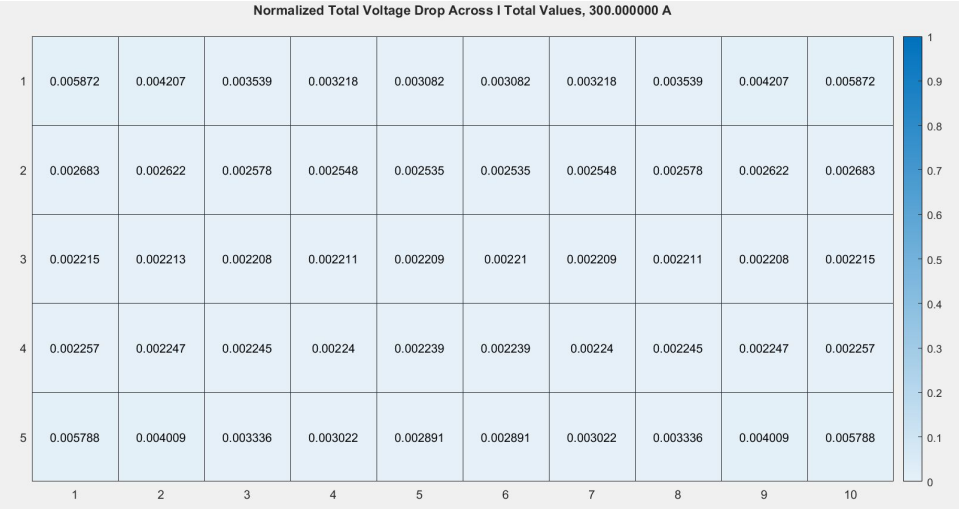

Normalized Total Voltage Drop Across I Total Values, 700.000000 A
1 0.1427 0.1612 0.1643 0.165 0.1651 0.1651 0.165 0.1643 0.1612 0.1427
2 0.1486 0.1713 0.1704 0.1701 0.17 0.17 0.1701 0.1704 0.1713 0.1486
3 0.1496 0.1741 0.1717 0.1711 0.171 0.171 0.1711 0.1717 0.1741 0.1496
4 0.1495 0.1738 0.1719 0.171 0.1709 0.1709 0.171 0.1719 0.1738 0.1495
5 0.1432 0.163 0.1652 0.1655 0.1654 0.1654 0.1655 0.1652 0.163 0.1432
1 2 3 4 5 6 7 8 9 10
0.17 0.165 0.16 0.155 0.15 0.145

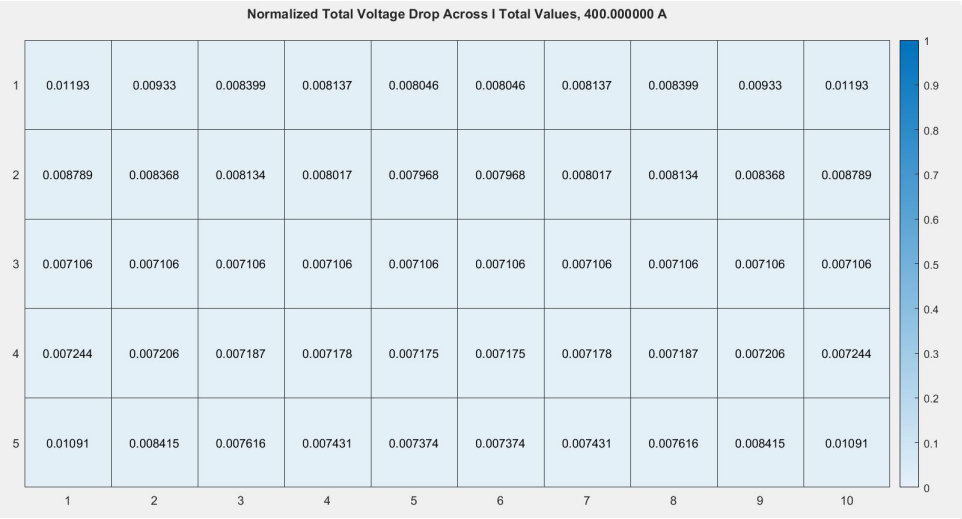

Normalized Total Voltage Drop Across I Total Values, 800.000000 A
1 0.4896 0.4949 0.4948 0.4947 0.4947 0.4947 0.4947 0.4948 0.4949 0.4896
2 0.491 0.4976 0.4946 0.4945 0.4945 0.4945 0.4945 0.4946 0.4976 0.491
3 0.4922 0.4991 0.4951 0.4949 0.495 0.495 0.4949 0.4951 0.4991 0.4922
4 0.4921 0.499 0.495 0.4949 0.4949 0.4949 0.4949 0.495 0.499 0.4921
5 0.4878 0.4957 0.4951 0.495 0.4949 0.4949 0.495 0.4951 0.4957 0.4878
1 2 3 4 5 6 7 8 9 10
0.498 0.496 0.494 0.492 0.49 0.488

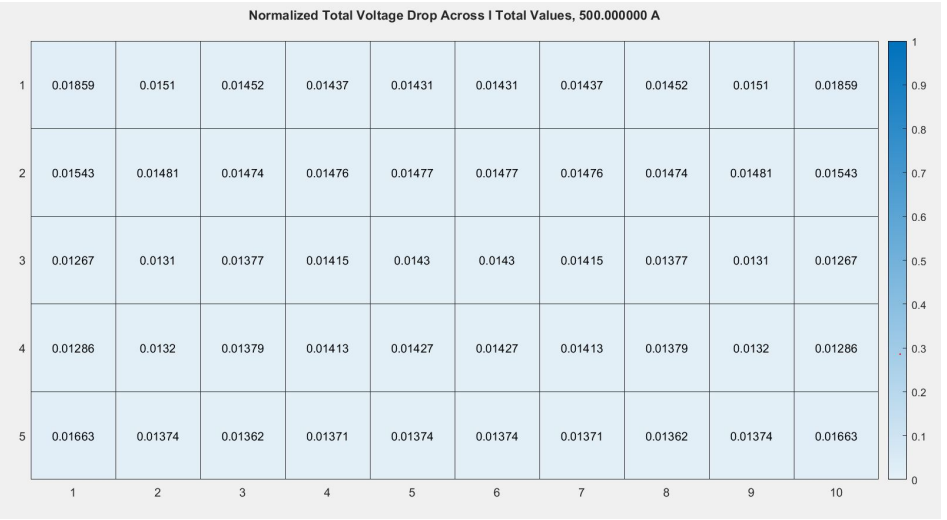

Normalized Total Voltage Drop Across I Total Values, 900.000000 A
1 0.9928 0.9936 0.9934 0.9934 0.9934 0.9934 0.9934 0.9934 0.9936 0.9928
2 0.999 0.9944 0.9939 0.9939 0.9939 0.9939 0.9939 0.9939 0.9944 0.999
3 1 0.9962 0.994 0.994 0.994 0.994 0.994 0.994 0.9962 1
4 0.9999 0.9962 0.994 0.994 0.994 0.994 0.994 0.994 0.9962 0.9999
5 0.9935 0.9938 0.9935 0.9934 0.9934 0.9934 0.9934 0.9935 0.9938 0.9935
1 2 3 4 5 6 7 8 9 10
1 0.999 0.998 0.997 0.996 0.995 0.994 0.993

Uniform Scale



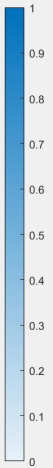



Normalized Total Voltage Drop Across I Total Values, 400.000000 A
1 0.01193 0.00933 0.008399 0.008137 0.008046 0.008046 0.008137 0.008399 0.00933 0.01193
2 0.008789 0.008368 0.008134 0.008017 0.007968 0.007968 0.008017 0.008134 0.008368 0.008789
3 0.007106 0.007106 0.007106 0.007106 0.007106 0.007106 0.007106 0.007106 0.007106 0.007106
4 0.007244 0.007206 0.007187 0.007178 0.007175 0.007175 0.007178 0.007187 0.007206 0.007244
5 0.01091 0.008415 0.007616 0.007431 0.007374 0.007374 0.007431 0.007616 0.008415 0.01091
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0


Normalized Total Voltage Drop Across I Total Values, 500.000000 A
1 0.01859 0.0151 0.01452 0.01437 0.01431 0.01431 0.01437 0.01452 0.0151 0.01859
2 0.01543 0.01481 0.01474 0.01476 0.01477 0.01477 0.01476 0.01474 0.01481 0.01543
3 0.01267 0.0131 0.01377 0.01415 0.0143 0.0143 0.01415 0.01377 0.0131 0.01267
4 0.01286 0.0132 0.01379 0.01413 0.01427 0.01427 0.01413 0.01379 0.0132 0.01286
5 0.01663 0.01374 0.01362 0.01371 0.01374 0.01374 0.01371 0.01362 0.01374 0.01663
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

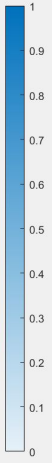
Normalized Total Voltage Drop Across I Total Values, 600.000000 A

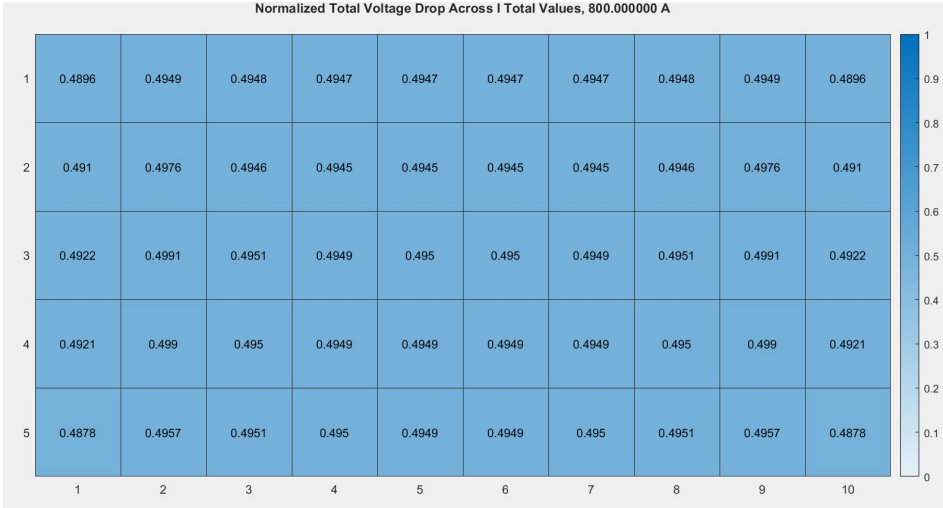
	1	2	3	4	5	6	7	8	9	10
1	0.03192	0.04024	0.04394	0.04551	0.04623	0.04623	0.04551	0.04394	0.04024	0.03192
2	0.0297	0.04601	0.04918	0.04984	0.04998	0.04998	0.04984	0.04918	0.04601	0.0297
3	0.0277	0.04637	0.05021	0.0509	0.05099	0.05099	0.0509	0.05021	0.04637	0.0277
4	0.02783	0.04628	0.05007	0.0508	0.05094	0.05094	0.0508	0.05007	0.04628	0.02783
5	0.03064	0.0407	0.04501	0.04675	0.04752	0.04752	0.04675	0.04501	0.0407	0.03064

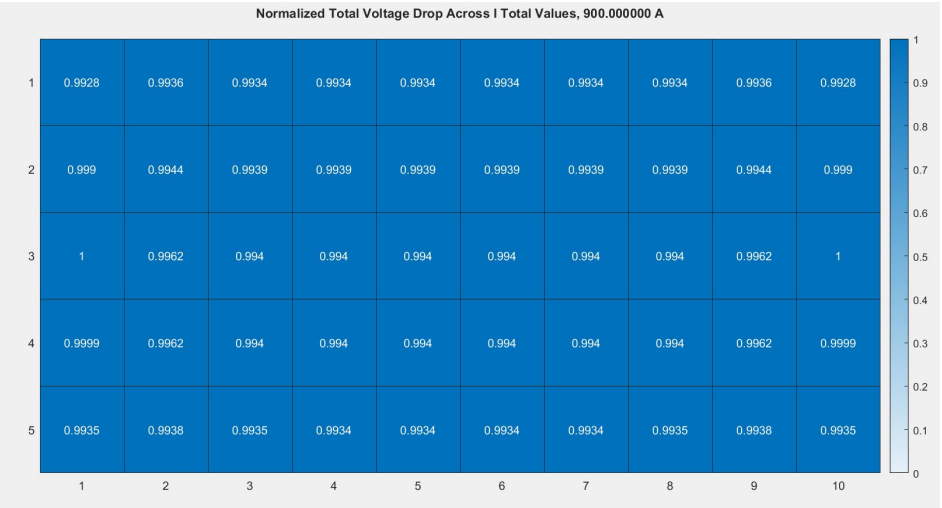


Normalized Total Voltage Drop Across I Total Values, 700.000000 A

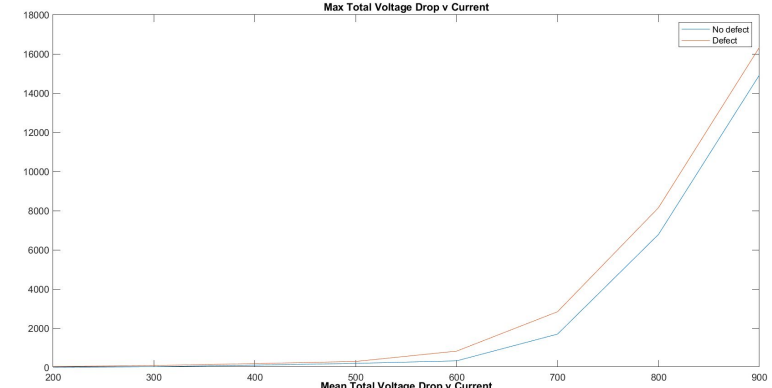
	1	2	3	4	5	6	7	8	9	10
1	0.1427	0.1612	0.1643	0.165	0.1651	0.1651	0.165	0.1643	0.1612	0.1427
2	0.1486	0.1713	0.1704	0.1701	0.17	0.17	0.1701	0.1704	0.1713	0.1486
3	0.1496	0.1741	0.1717	0.1711	0.171	0.171	0.1711	0.1717	0.1741	0.1496
4	0.1495	0.1738	0.1719	0.171	0.1709	0.1709	0.171	0.1719	0.1738	0.1495
5	0.1432	0.163	0.1652	0.1655	0.1654	0.1654	0.1655	0.1652	0.163	0.1432

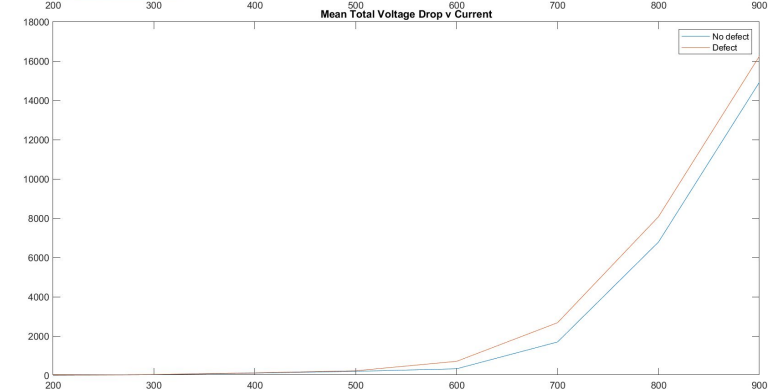


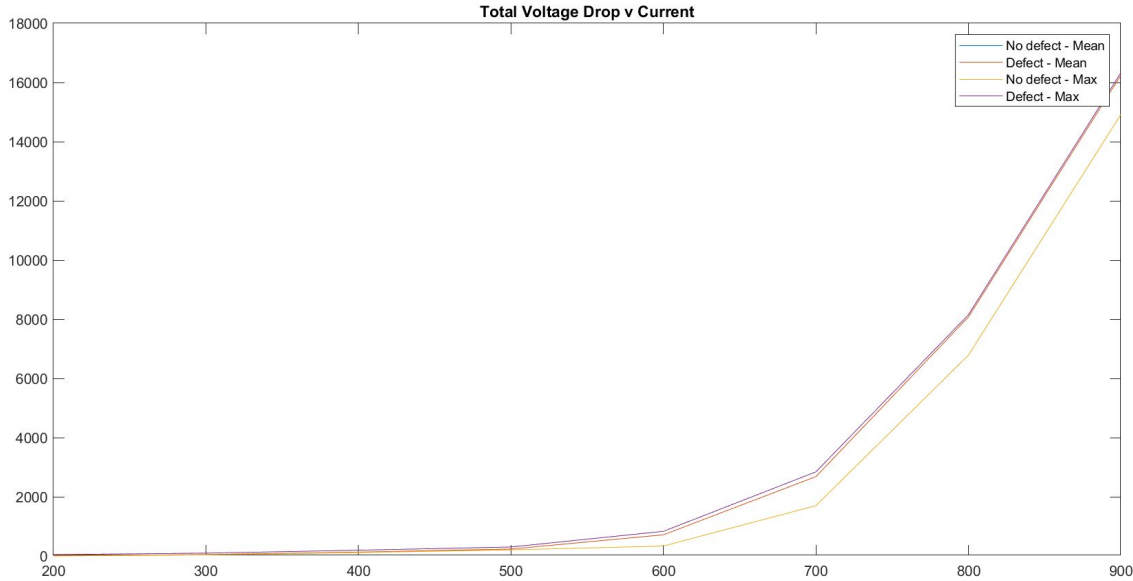

Normalized Total Voltage Drop Across I Total Values, 800.000000 A
1 0.4896 0.4949 0.4948 0.4947 0.4947 0.4947 0.4947 0.4948 0.4949 0.4896
2 0.491 0.4976 0.4946 0.4945 0.4945 0.4945 0.4945 0.4946 0.4976 0.491
3 0.4922 0.4991 0.4951 0.4949 0.495 0.495 0.4949 0.4951 0.4991 0.4922
4 0.4921 0.499 0.495 0.4949 0.4949 0.4949 0.4949 0.495 0.499 0.4921
5 0.4878 0.4957 0.4951 0.495 0.4949 0.4949 0.495 0.4951 0.4957 0.4878
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0


Normalized Total Voltage Drop Across I Total Values, 900.000000 A
1 0.9928 0.9936 0.9934 0.9934 0.9934 0.9934 0.9934 0.9934 0.9936 0.9928
2 0.999 0.9944 0.9939 0.9939 0.9939 0.9939 0.9939 0.9939 0.9944 0.999
3 1 0.9962 0.994 0.994 0.994 0.994 0.994 0.994 0.9962 1
4 0.9999 0.9962 0.994 0.994 0.994 0.994 0.994 0.994 0.9962 0.9999
5 0.9935 0.9938 0.9935 0.9934 0.9934 0.9934 0.9934 0.9935 0.9938 0.9935
1 2 3 4 5 6 7 8 9 10
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0

Voltage vs Current - 1 defect

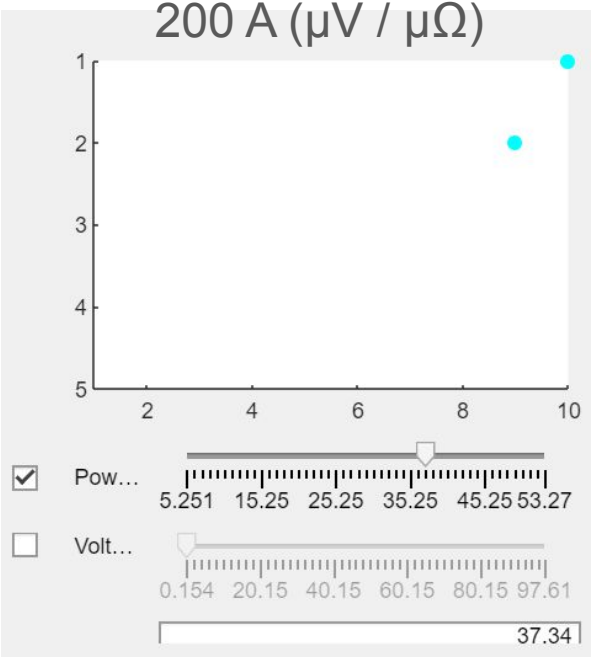






GUI

Sometimes we want to look at voltage and power, so for certain values plot the best defect placement



For a list of total currents ranging from 200A to 800A, you can constrain either the power or voltage. The axes will show the placement of the two defect placements that produce that value. This is good for seeing mins and maxes!