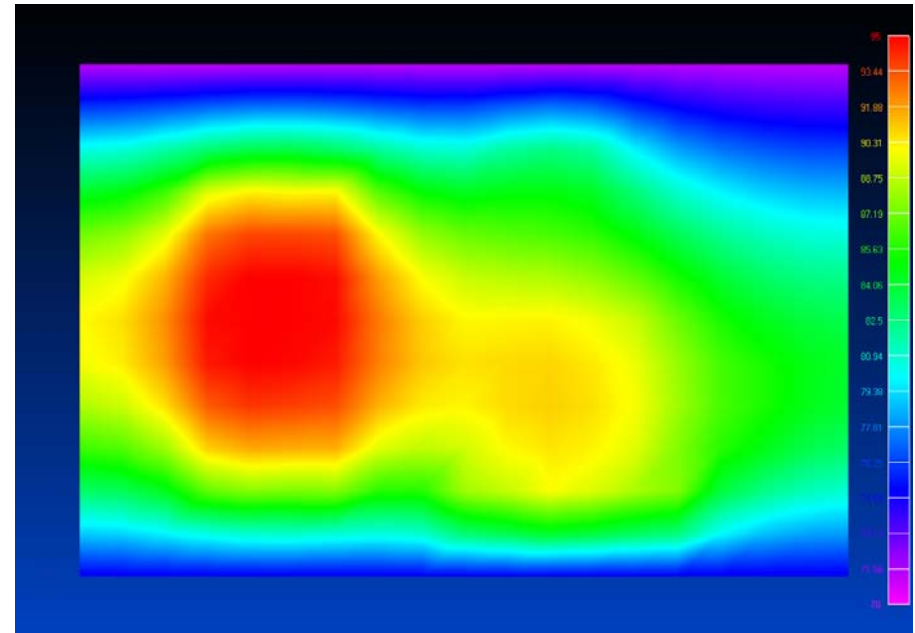
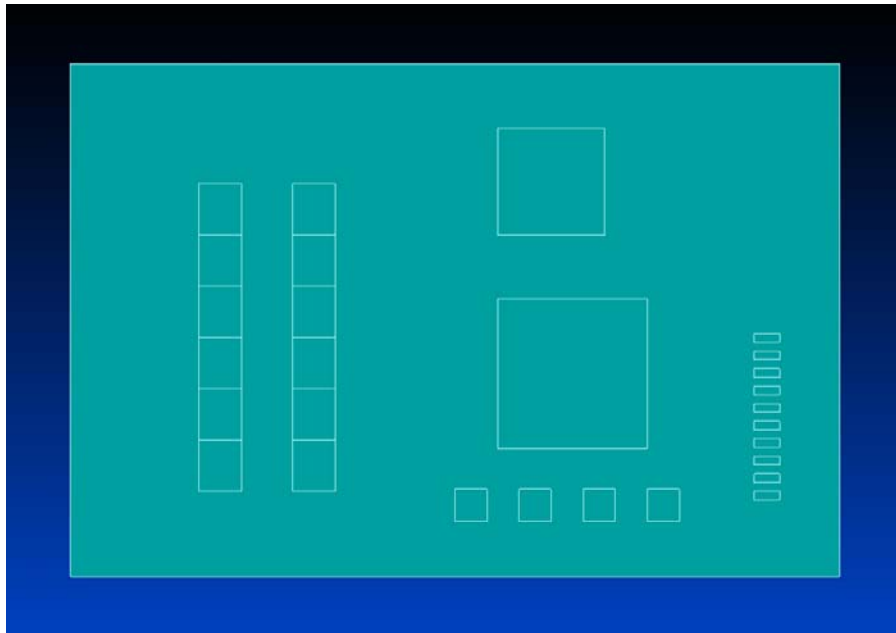


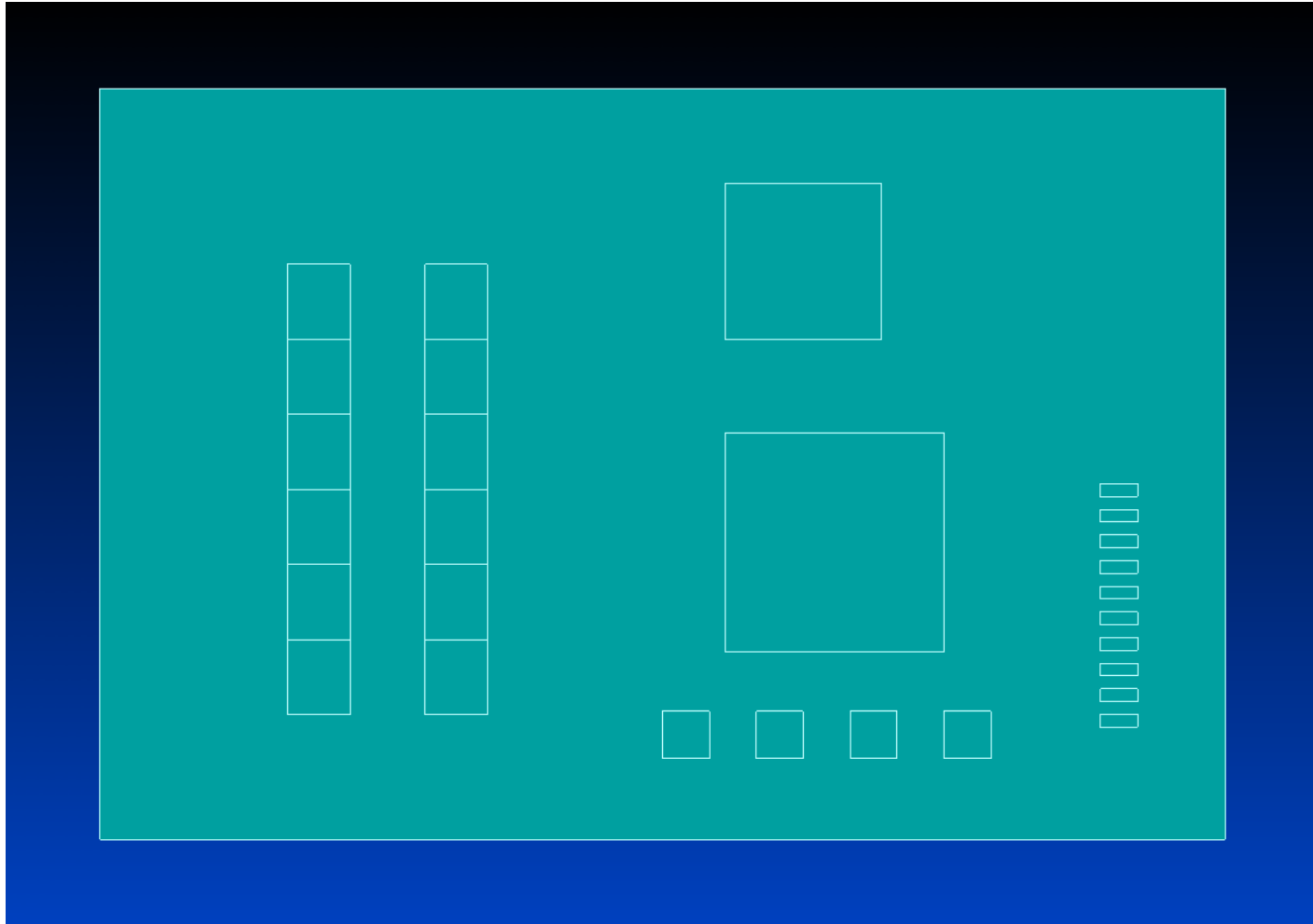
Thermal Analysis of Electronics Board



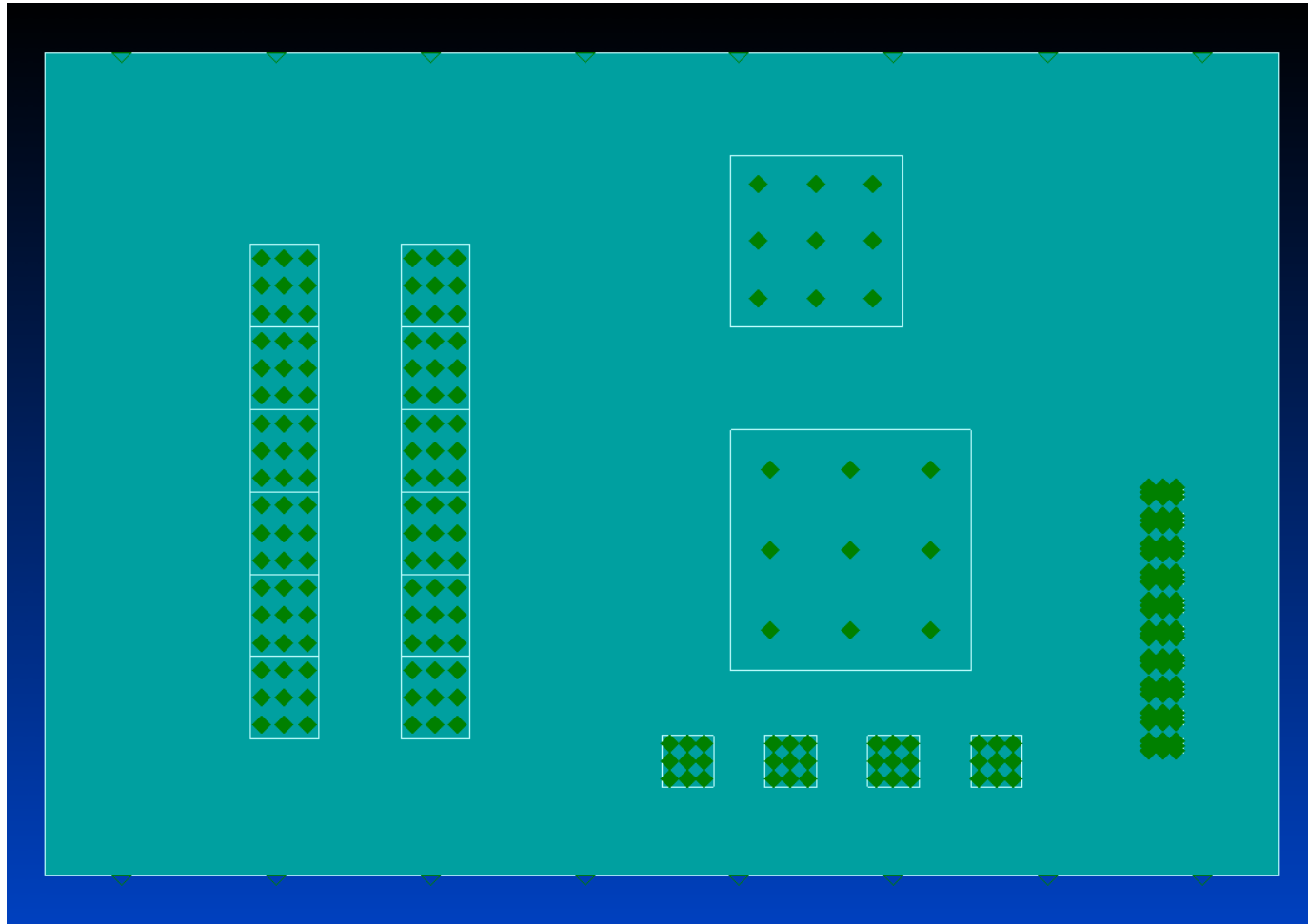
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Surfaces for component footprints are placed on the board surface.

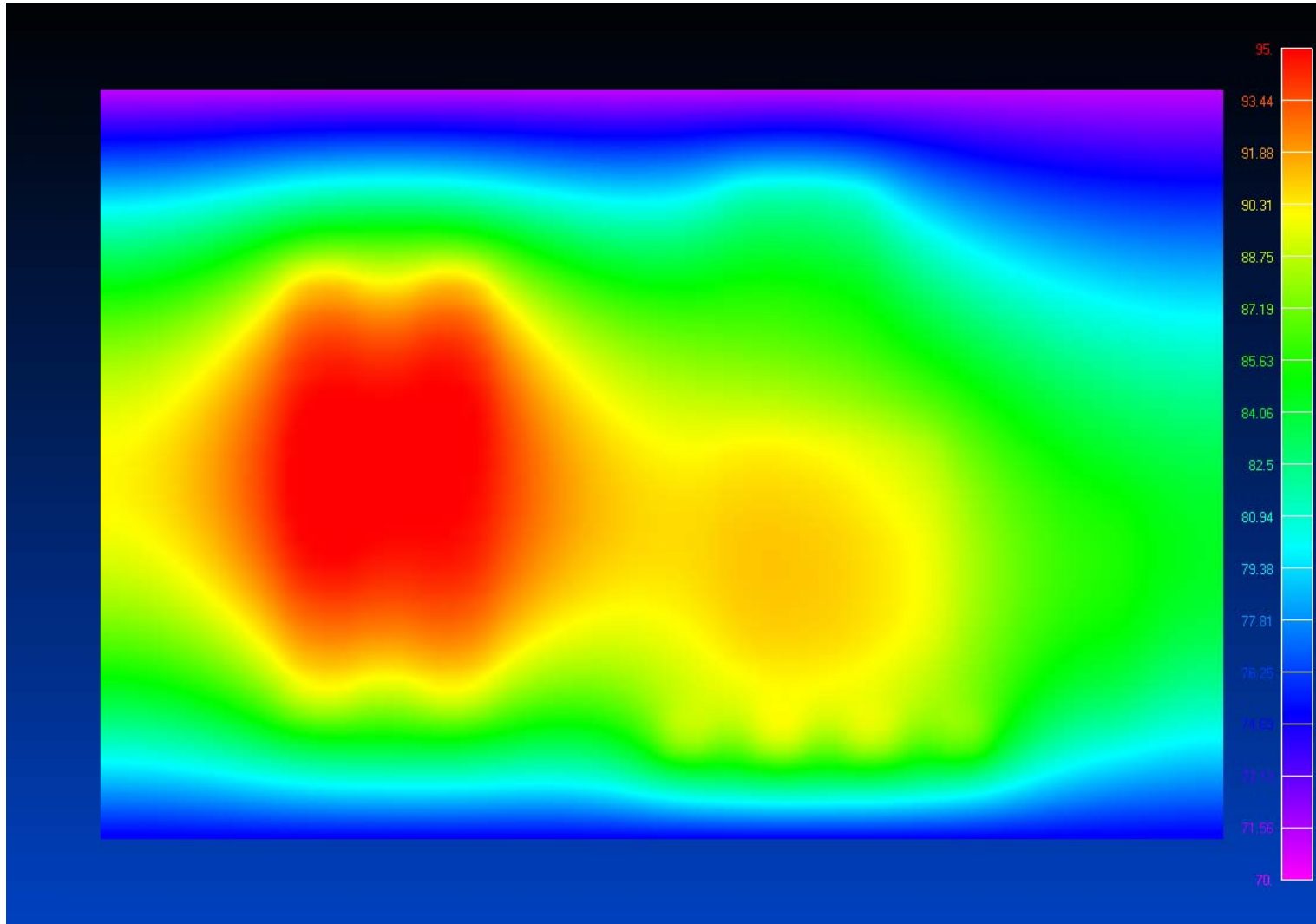


Powers are assigned to components on the board.



Top and bottom of board set to card guide temperatures of chassis obtained from previous analysis, 71.2 °C and 74.7 °C, respectively.

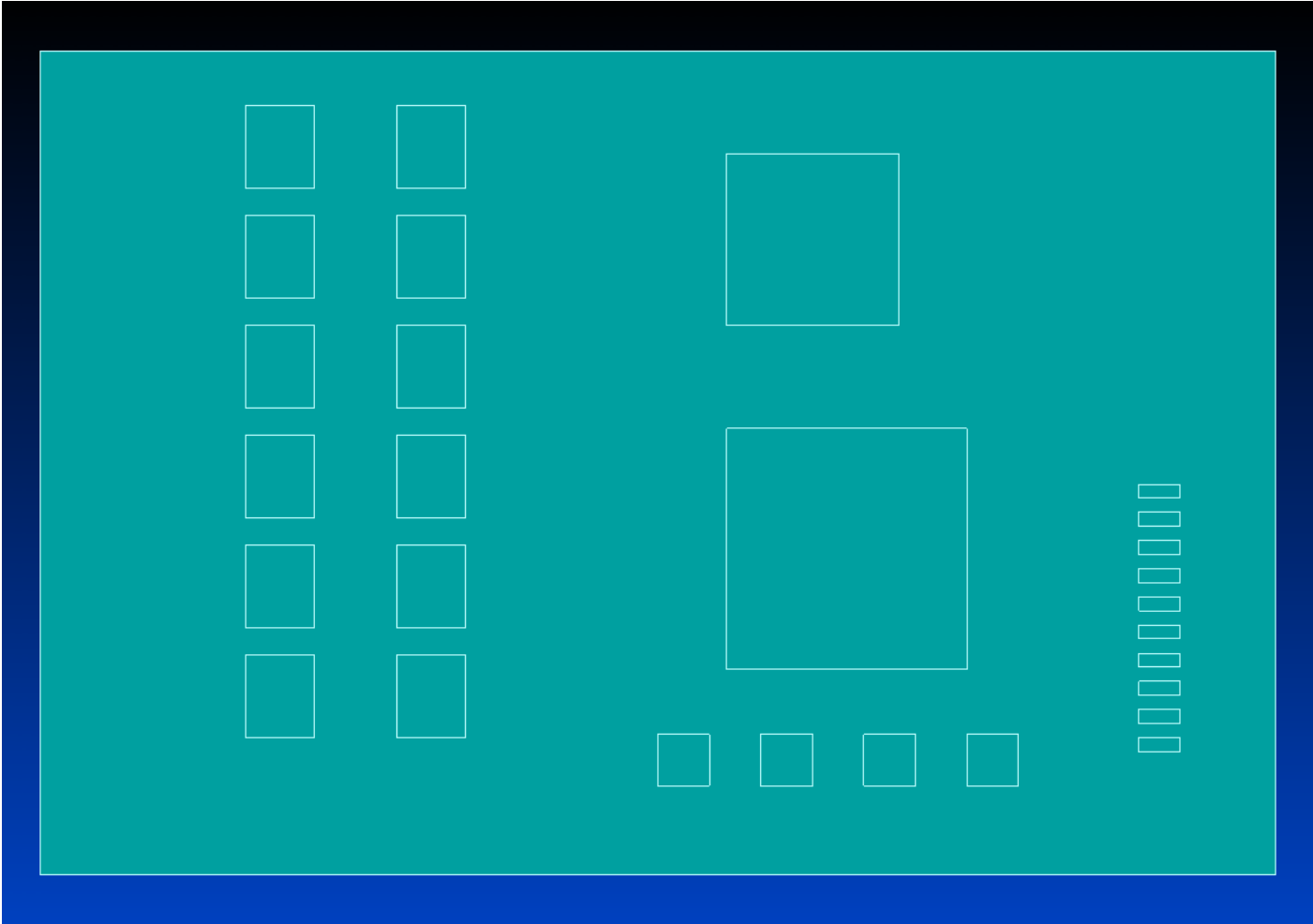
The Model is analyzed and temperatures plotted.



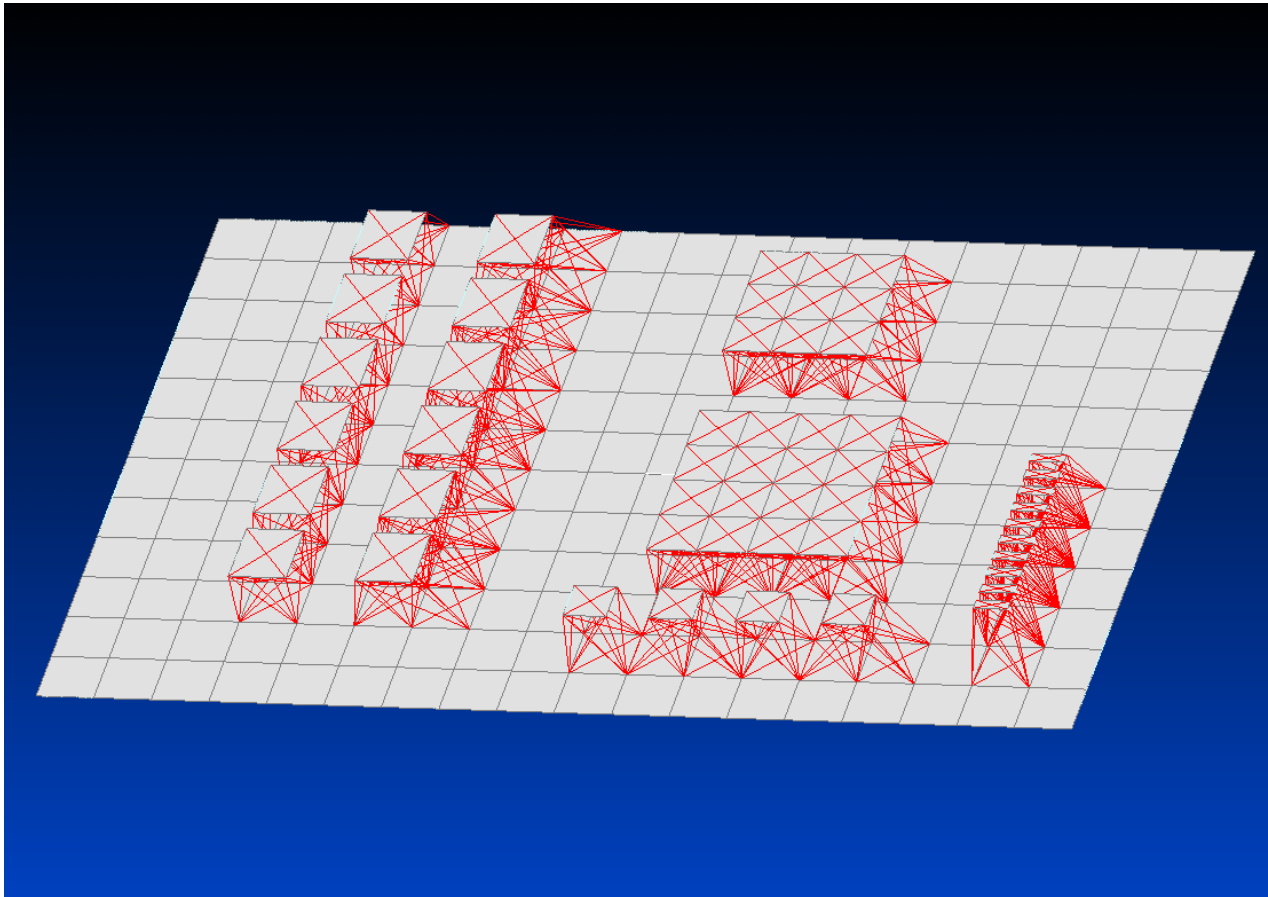
A Component Report is generated.

Part #	Location	Power	Theta _{CB}	Theta _{JC}	T _{board}	T _{junction}	T _{jMax}	SMargin
LM1336	C1	0.65	9.6	20	95.1	114.34	125	10.66
LM1336	C2	0.65	9.6	20	94.1	113.34	125	11.66
LM1336	C3	0.65	9.6	20	96.9	116.14	125	8.86
LM1398	C4	0.56	11.2	30	90.6	113.672	125	11.328
LMC140A	C6	0.22	11.2	30	93.4	102.464	125	22.536
LMC140A	C8	0.22	11.2	30	98.3	107.364	125	17.636
LMC140A	C10	0.22	11.2	30	96.6	105.664	125	19.336

A slightly different board layout is considered.

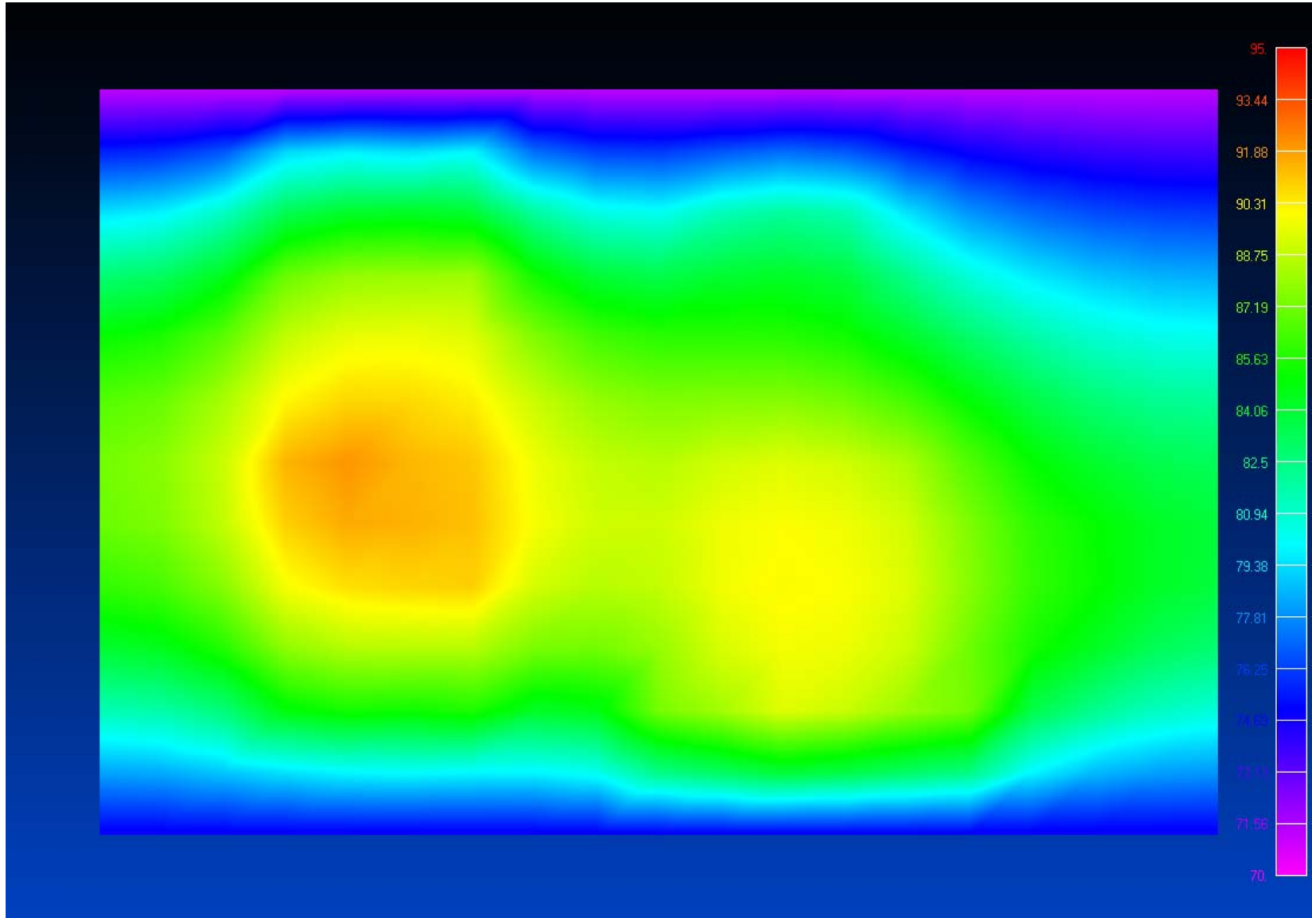


Components are easily moved on the board since they are represented by independent surfaces. Contact between components and the board are made by contact conductors in *SINDA/G for Femap*.



Red lines represent contact conductors.

The new layout is analyzed.



A New Component Report is generated.

Part #	Location	Power	Theta _{CB}	Theta _{JC}	T _{board}	T _{junction}	T _{jMax}	SMargin
LM1336	C1	0.65	9.6	20	88.7	107.94	125	17.06
LM1336	C2	0.65	9.6	20	87.9	107.14	125	17.86
LM1336	C3	0.65	9.6	20	90.7	109.94	125	15.06
LM1398	C4	0.56	11.2	30	84.7	107.772	125	17.228
LMC140A	C6	0.22	11.2	30	87.2	96.264	125	28.736
LMC140A	C8	0.22	11.2	30	92.1	101.164	125	23.836
LMC140A	C10	0.22	11.2	30	90.6	99.664	125	25.336

The average value of SMargin is increased by 40% with new board layout.