Sample Results from previous design transformers

1. EI 60 design specification

Parameters	Values
V1	24V
V2	12V
N1	213
N2	138
D1	0.7064mm
D2	0.55mm
B_peak (measeured)	1.405T
R1	$1.6\Omega\ at\ 20\ ℃$
J (used in the design)	5.5A/m^2
I_rated	1.713A

Test results

Parameters	No load	short- circuit	load test
V1	24.06	7.315	23.9V
V2	15.57	0	11.7V
I1	0.139A	1.71	1.667A
I2	0	-	1.363A
P	0.416W	12.00W	40.06W
S	3.33VA	12.29VA	40.14VA

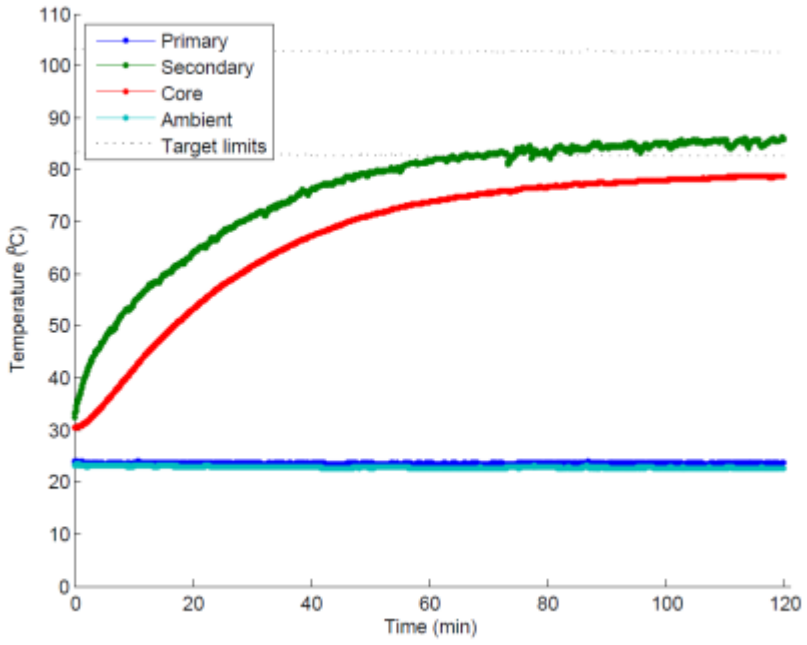

Figure 1: Temperature rise for EI60 Transformer

2. EI 54

Parameters	Values
V1	24V
V2	12V
N1	253
N2	170
D1	0.45mm
D2	0.45mm
B_peak (measeured)	1.402T
R1	$2.01\Omega\ at\ 20\ ℃$
J (used in the design)	5.5A/m^2
I_rated	0.875A

Parameters	open circuit	short- circuit	load test
V1	24.08	4.41	24.02V
V2	15.95	0	12.93V
I1	0.263	0.878	0.881A
I2	0	-	0.696A
P	0.51W	3.863W	20.88W
S	6.25VA	3.86VA	21.14VA

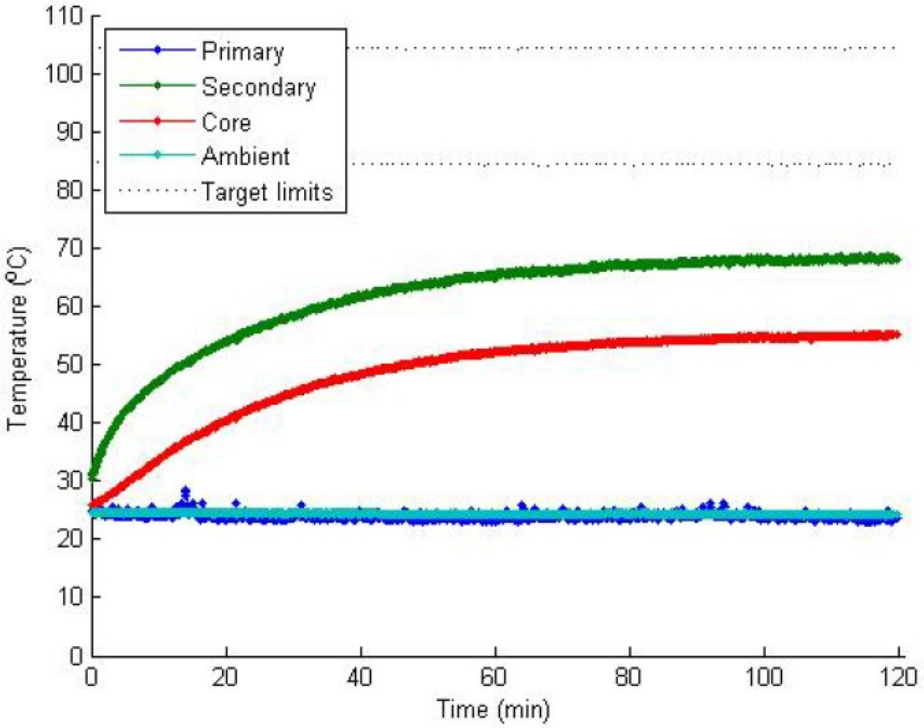

Figure 2: Temperature rise for EI54 Transformer

3. EI 48

Parameters	Values
V1	24V
V2	12V
N1	310
N2	193
D1	0.37mm
D2	0.37mm
B_peak (measeured)	1.4T
R1	$4.7\Omega\ at\ 20\ ℃$
J (used in the design)	5.5A/m^2
I_rated	0.428A

Parameters	open circuit	short- circuit	load test
V1	24.03	3.825	24.07V
V2	14.69	0	12.26V
I1	0.179	0.44	0.478A
I2	0	-	-
P	0.455W	1.664W	11.21W
S	4.26	-	11.46VA

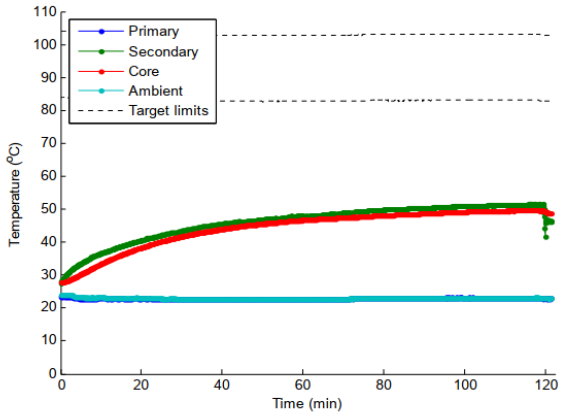

Figure 4:Temperature rise for EI48 Transformer

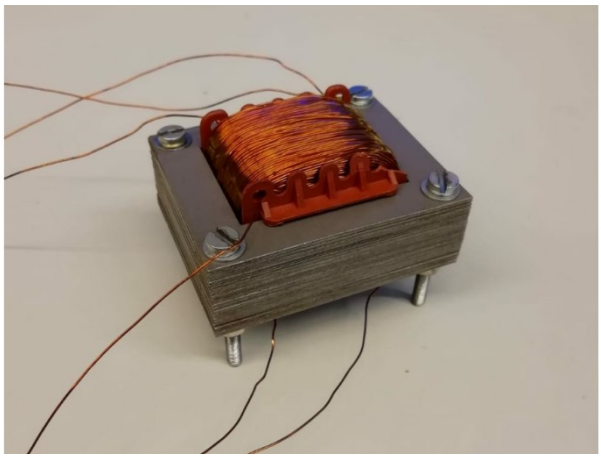

Figure 3: Sample of the manufacture transformer