

200W LOAD, 395Vdc INPUT				
		ORIGINAL	itacoil®	
Vdc IN		394,67	394,69	V
Adc IN		0,5368	0,5345	A
Vdc OUT		23,961	23,975	V
Adc OUT		8,314	8,325	A
Power IN		211,9	211,0	W
Power OUT		199,2	199,6	W
Switching frequency		95	110	kHz
200W Efficiency		94,0	94,6 (+0,6)	%
20-50-100-200W Average Efficiency		91,5	93,0 (+1,5)	%
Saved power @200W			-1,3	W
Temperatures				
Ambient		22,4	20,8	°C
Pri		78,3	69,2	°C
Sec		80,8	66,2	°C

Dimensions				
	ORIGINAL	itacoil®		
L x W x H	4,92x4,31x2,59	3,53x3,47x2,47		cm
overall footprint	21,2	12,2 (-42%)		cm ²
overall volume	54,9	30,3 (-45%)		cm ³
power density	3,64	7,59 (+108%)		W/cm ³

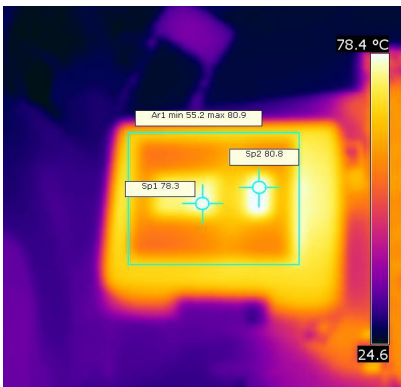
TEST CONDITIONS, for both transformers

- Test performed on the Fairchild® FEB212-003 demo-board, LLC resonant converter based on FSFR2100. ([demo-board user guide](#))
- replaced FSFR2100 with FLS2100XS
- Vdc input voltage applied directly on rectifier bridge out, in order to measure the actual converter efficiency (bypassed fuse, bridge, etc.).
- Output voltage trimmed by a 500Ω trimmer connected in series to R205.
- PCB horizontal, with no airflow. Transformer assembled slightly raised from PCB.

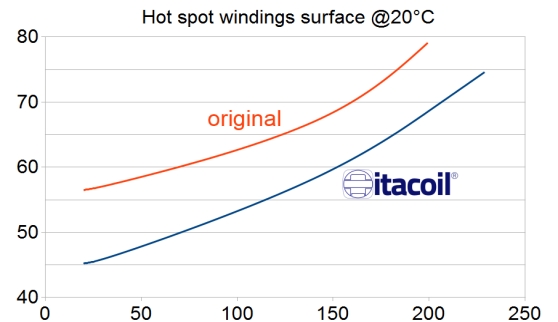
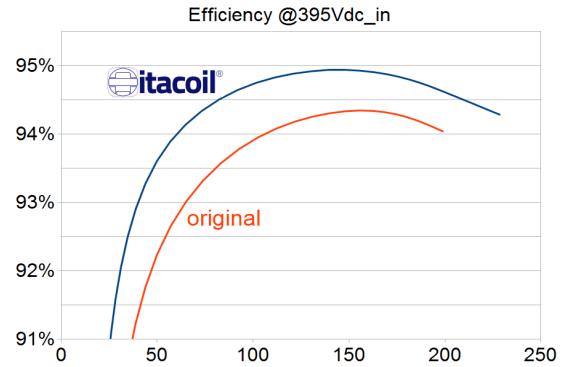
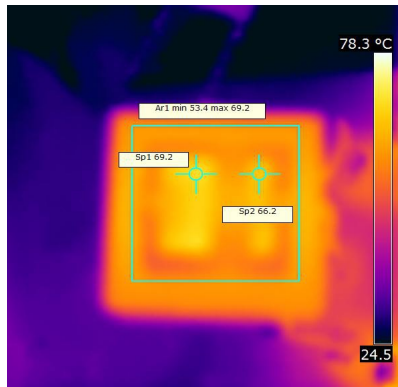
TEST RESULTS

The Itacoil transformer results much better in efficiency, temperature, dimensions and output power (220W continuous, 420W peak power). Unlike the original transformer the Itacoil tank is full ZVS compliant, this improve the reliability of the converter.

ORIGINAL TRANSFORMER (@200W, t_a=22,4°C)



ITACOIL 034.024.420.01 (@200W, t_a=20,8°C)



BENEFITS OF TRANSFORMER DESIGN BY ITACOIL® PROPRIETARY SOFTWARE

- smaller and lighter components
- optimized power loss
- best LLC stage efficiency
- converter reliability improvement
- cost optimization
- **first time success of your project**

Every effort has been made to maximize the accuracy of the contents of this report. However no responsibility will be accepted for any inaccuracy. Each product must be analyzed and tested in the final equipment in order to verify that it meets all technical and safety requirements. Also consider normal tolerances before using.

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