FRENETIC

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Company partner of:

FERROXCUBE

FRENETIC
APPLICATION EXAMPLE

TRANSFORMER DESIGN OF THE APPLICATION NOTE AN3106 FROM ST

Magnetic components are the actual bottel neck for improving the power density in power conversion. For that reason in SPC we have created Frenetic. Frenetic is able to provide a working design without iterations needed in less than a week .
In this document, a transformer used in the application note AN3106 of ST is introduced with the aim of show the optimized result provided by Frenetic in less than 10 hours.

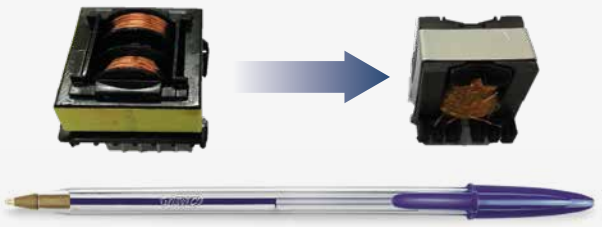
COMPARATIVE RESULTS WITH THE ST APP NOTE TRANFORMER

	Volume	Weight	Cost	Less
“10 machine labor hours	↓ 15%	↓ 10%	↓ €	losses
	From 7640 mm³ to 6530 mm³	From 40 g to 36 g	Designed in less than 1 week	At all operating points

TRANSFORMER DESIGN COMPARISON

ST APP Note Design

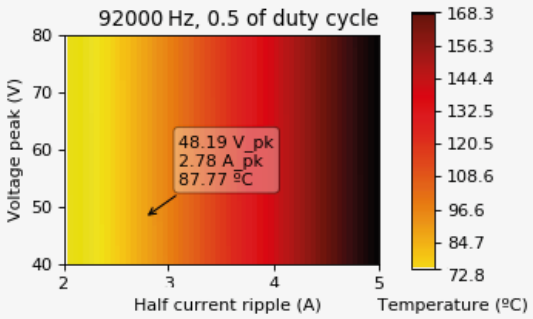
FRENETIC Design



Core: **ETD34**
Material: **PC44**

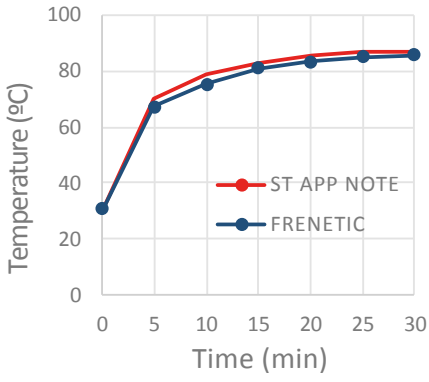
Core: **PQ26/25**
Material: **3C97**

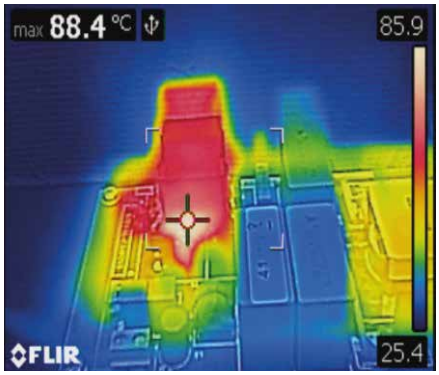
FRENETIC temperature prediction



EXPERIMENTAL RESULTS

Both transformers were tested during 30 minutes at 100% of load, to study the evolution of the temperature. As it is shown in the pictures, the Frenetic solution has better thermal response with smaller size. This design can decrease up to 25% the cost of each piece. The design time of the Frenetic solution was less than 10 hours.





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