

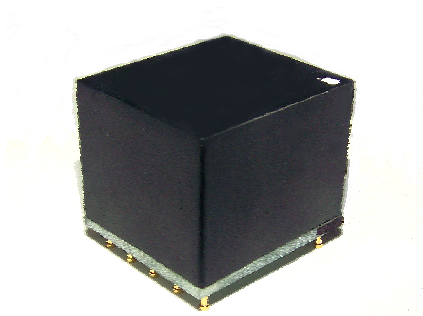


In Volume 1 of Renco Electronics' Engineering Success Story it was illustrated how Renco Electronics' Design Engineering team was able to assist a customer with the modification of a standard product utilizing a completely custom toroid cup. In this installment of the *Engineering Success Story* a different customer need and the Renco Electronics' solution is discussed.

As was mentioned in Volume 1, Renco Electronics' experienced design engineers specialize in designing custom magnetics based on a few specifications possibly written on a napkin to very detailed customer specifications. Renco Electronics will work with the customer to design a cup, bobbin, and/or core if necessary in order to complete a custom design. The following is another custom magnetics design success story.

A customer contacted Renco Electronics' manufacturer's representative on February 5 looking for an equivalent drop in replacement for a flyback transformer that had a 10 week lead time from Renco Electronics' competitor. The customer needed parts in the first week of March in order to prevent a production line down situation.

This flyback transformer is a standard product for this competitor and it has special terminal features that at first appeared to be a challenge, but Renco Electronics' Design Engineering Team was able to come up with a solution. The customer provided a competitor sample and the datasheet for review. A conference call was held on February 9<sup>th</sup> between the customer and Renco Electronics. On February 12<sup>th</sup> a sample of the part in Figure 1 was provided to the customer.



**Fig. 1** Custom Flyback transformer

At first glance the flyback transformer in Figure 1 appears to be a simple box with pins, but quite a bit of research and work by Renco Electronics Design Engineering team and Purchasing Department had to be done to complete the flyback transformer. During the design of the flyback transformer, the competitor

sample was electrically tested and compared to the competitor datasheet.

A few days after the customer received the first Renco sample the customer informed Renco Electronics that the part was not performing as expected. At that point Renco Electronics' Design Engineering Team dissected the competitor sample and found slight differences in turns that were not found during the electrical testing of the competitor sample. A new sample was built and shipped to the customer on February 19<sup>th</sup>. A few days later approval of the sample was provided by the customer.

On March 2<sup>nd</sup> Renco Electronics provided 25 First Article samples and formal approval was provided by the customer on March 9<sup>th</sup>. That same week Renco Electronics started shipping production parts to fulfill the 1,000 piece order being built in the Renco Electronics Florida facility. In order to be able to start shipping production parts the week of March 9<sup>th</sup> Renco Electronics' Manufacturing team worked diligently with the Design Engineering Team and the Purchasing Department in order to provide the flyback transformers when they were needed.



**Fig. 2** Flyback Transformer Bottom View

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# Renco Electronics, Inc.

## *Engineering Success Story*

*Nelson Garcia – Engineering Manager*

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Once again this whole process was not completed in a few months, but instead happened in 35 days and the customer's immediate needs were met. Renco Electronics will soon start larger volume production of this custom product in China.

The above success story occurs more often than some of Renco Electronics' customers realize. More than 50% of Renco Electronics' Design Engineering Team's time is spent working on custom magnetics.

If you have a requirement for a Renco Electronics' or competitor's modified standard product and if you have some custom magnetic specifications jotted down on a napkin/paper, or if you need to discuss tooling a bobbin or core for your design, contact Renco Electronics' highly skilled Design Engineering team to discuss your custom options. Renco Electronics will work with you to develop the custom magnetics that will meet your mechanical and electrical requirements.

**Engineering Hotline: 1-800-645-5828**

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