

Re: SMPS controller – how does it get its own start up power??

Source: <http://sci.tech–archive.net/Archive/sci.electronics.misc/2005–12/msg00058.html>

- *From:* "petrus bitbyter" <pieterkraltlaatditweg@xxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Tue, 6 Dec 2005 00:36:48 +0100
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"siliconmike" <siliconmike@xxxxxxxxx> schreef in bericht
news:1133817165.992718.287250@xx
>I figured that an SMPS controller IC receives power from one of the
> windings on the transformer core. The controller then uses PWM to
> switch the primary winding.
>
> But then how does the controller IC receive a kick startup power in the
> first place (since the PWM switching has not yet begun and the FET
> switch is off yet) ?
>
> Please explain.
>
> Mike
>

Mike,

Initial power is provided by a boot circuit, usually an R from the unregulated input and a C between Vcc and GND. The PMW starts using little power. Once it has started, the transformer coil has to take over as the chip rapidly switches to full operation and needs much more power. When the take over failes, the chip switches off but, unless precautions are taken, it tries to start again almost immediately. Thats the wellknown tic.. tic.. tic.. you hear from defective equipment. Try to find datasheets of the UC3842 and his family. At least one of them describes the boot proces. Some other information also can be found in Philips Application Note AN1274.

petrus bitbyter

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- *Follow-Ups:*
 - ◆ [Re: SMPS controller – how does it get its own start up power??](#)

Re: SMPS controller – how does it get its own start up power??

◇ *From: Zak*

• **References:**

◆ **[SMPS controller – how does it get its own start up power??](#)**

◇ *From: siliconmike*

• Prev by Date: **[Re: Power – brainteaser](#)**

• Next by Date: **[Re: Power – brainteaser](#)**

• Previous by thread: **[SMPS controller – how does it get its own start up power??](#)**

• Next by thread: **[Re: SMPS controller – how does it get its own start up power??](#)**

• Index(es):

◆ **[Date](#)**

◆ **[Thread](#)**