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CC2541: CC2541 Low voltage supply issue



[sadasivam arumu...](#) *Intellectual 940 points*
Community Member

Part Number: [CC2541](#)

Other Parts Discussed in Thread: [TPS62730](#)

Hi Sir,

I am working on CC2541 keyfob. Interfacing with sensors for data collection.

With reference to Datasheet(page 1)-

TPS62730 Compatible Low Power in Active mode:

RX Down to: 14.7 mA (3-V supply)

RX Down to: 14.7 mA (3-V supply)

if data transfer have to work properly, is 3-V supply provide constantly?

Currently, I am not using Regulator for CC2541 supply. Only giving direct supply from coin cell battery. Will constant supply had an impact in the above scenario.

Is there any disconnection happens with this scenario.

[over 5 years ago](#)



Simon J *over 5 years ago*

[TL_Genius](#) 11810 points

Hi,

Data transfer will work properly over the full operating range from 2 V up to 3.6 V. The benefit of using TPS62730 is that you'll have lower current consumption when you battery is new and has a high voltage. This will increase the battery life with up to 20 %.

-Simon



[sadasivam arumugam](#) *over 5 years ago in reply to Simon J*

[Intellectual](#) 940 points

Thank you for your valuable note.

Now, we using the regulator(TPS62730) for our design. We configured DC-DC mode in Regulator for testing. When I check regulator output without connecting other components, we get proper output voltage(2.1v).

But, when I connect CC2541 with regulator output. The Regulator output voltage got increased to 3v. We expect 2.1v. What will be the major causes.



Simon J *over 5 years ago in reply to sadasivam arumugam*

[TI_Genius](#) 11810 points

Have you set the ON/BYP pin to correct state?

-Simon



[sadasivam arumugam](#) *over 5 years ago in reply to Simon J*

[Intellectual](#) 940 points

I have set this as HIGH.



Simon J *over 5 years ago in reply to sadasivam arumugam*

[TI_Genius](#) 11810 points

Hi,

Can you share design files (schematics and layout) over PM for review?

Thanks,
Simon



sadasivam arumugam *over 5 years ago in reply to Simon J*

[Intellectual](#) 940 points

Thanks. We have verified our design schematic. We have made a mistake before posting this query. When we verifying the schematic its cleared.

- The change is, we provided a voltage source from another SoC for input pin in CC2541(for enabling battery service). This causing our CC2541 chip to give voltage source even without regulator.

This affects the regulator output as well.

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