

## **TPS6031x Evaluation Using the TPS6030x EVM**

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Power Management Products/Low Power DC-DC Applications

### **ABSTRACT**

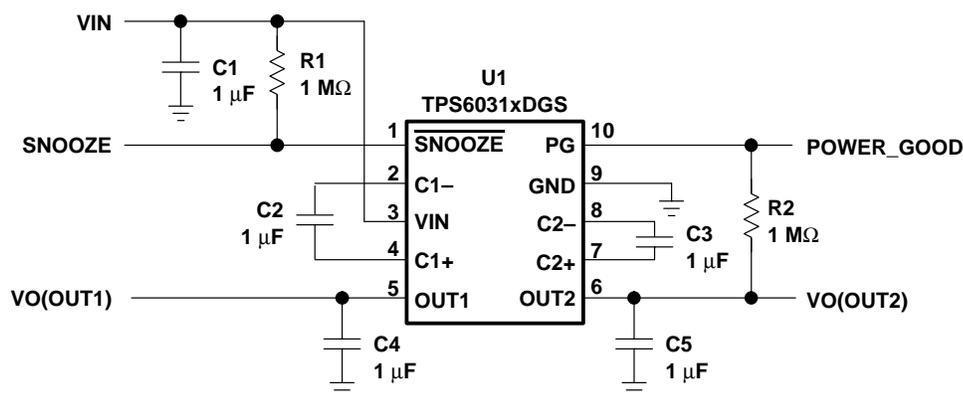
This application report describes how to evaluate a TPS6031x device using the TPS6030x EVM.

The TPS60310/1/2/3 devices are step-up charge pumps that generate a regulated 3-V or 3.3-V output voltage from one alkaline, NiCd, or NiMH battery. Although an evaluation board (EVM) for these devices is not available from Texas Instruments, an alternative EVM can be used to easily evaluate these devices.

Since a TPS6030x device is almost identical to a TPS6031x device, the TPS6030x EVM (TPS60302EVM-170) can also be used to evaluate a TPS6031x device. The pinout is identical except for pin 1 on the devices. Pin 1 on a TPS6030x device is EN while pin 1 on a TPS6031x device is SNOOZE.

Both devices have snooze mode. The TPS6030x enters snooze mode automatically when the load current is lower than 2 mA. If the load current increases above 2 mA, the device automatically exits snooze mode and operates in normal mode to regulate the output voltage with higher output currents. Snooze mode of the TPS6030x is not selective, but TPS6031x snooze mode is selective. This is the only difference between the two devices; all other functions are identical.

In order to evaluate a TPS6031x device, replace the TPS60302 on the EVM (TPS60302EVM-170) with a TPS6031x device. Note that the EN pin on the EVM should be regarded as the SNOOZE pin. Figure 1 shows the schematic for the TPS6031x EVM. Refer to the TPS60302 EVM User's Guide (SLVU034) for the PCB layouts.



**Figure 1. Schematic for TPS6031x Evaluation**

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