

## TPS6755 Evaluation Using the TPS6735EVM

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Power Management Products/  
Low Power DC-DC Applications

### ABSTRACT

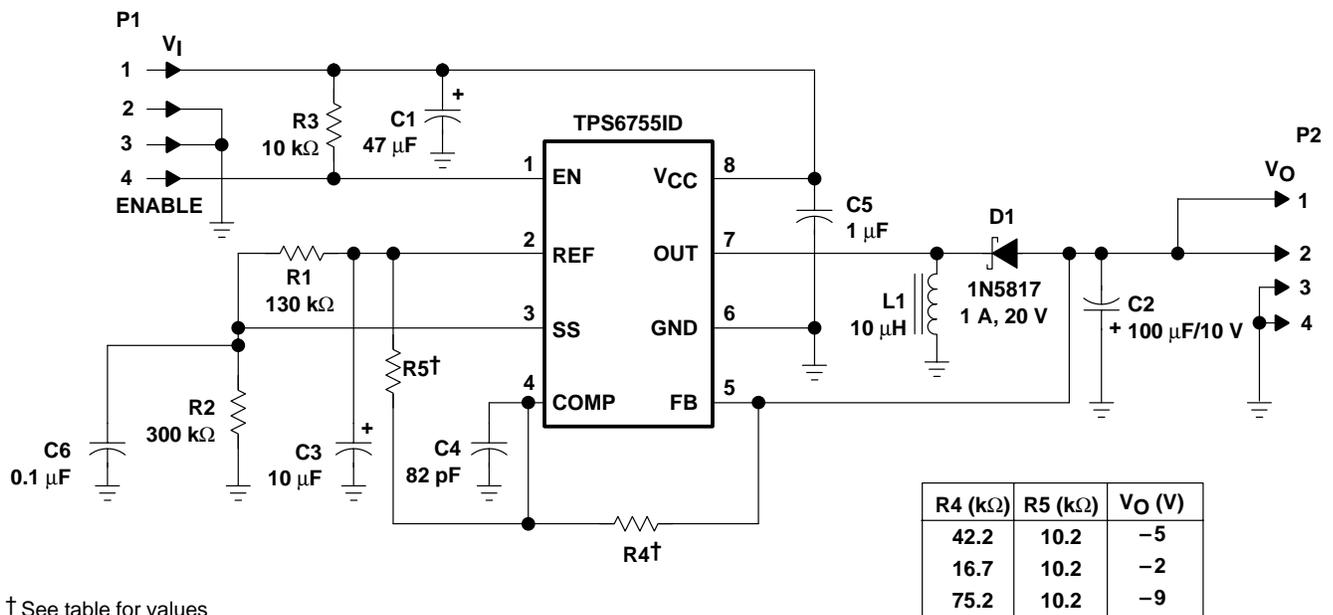
This application note describes how the TPS6755 can be evaluated using the TPS6735EVM.

The TPS6755 is an adjustable inverting dc/dc converter capable of operating from inputs as low as 2.7 V. 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 the TPS6735 is almost identical to the TPS6755, the TPS6735EVM (SLVP095) can be used to evaluate the TPS6755. The pinout is identical. The TPS6755 is an adjustable version, while TPS6735 generates a fixed negative 5-V output. In addition, the input voltage operating range of TPS6755 is wider than that of TPS6735. All other functions between the two parts are identical.

In order to evaluate the TPS6755, replace the TPS6735 on the EVM (TPS6735EVM) with the TPS6755 device—then add R4 and R5, as shown in the schematic. Since the TPS6755 is an adjustable version, adding this voltage divider is required.

Figure 1 shows the schematic for the TPS6755. Refer to the TPS6735 data sheet (literature number SLVS141) for the PCB layouts.



† See table for values

Figure 1. Application Circuit

**Table 1. Bill of Materials**

QTY	DESCRIPTION				REF DES	MANUFACTURER PART NO.	MANUFACTURER
1	IC	Power supply			U1	TPS6755ID	Texas Instruments
1	Diode	Schottky			D1	1N5817GI	General Instrument
1	Inductor	10 $\mu$ H			L1	DO1608C-103 CD54-100	Coilcraft, Sumida
1	Capacitor	47 $\mu$ F tantalum	16 V	7343	C1	593D476X9016D2W TPSD476K016R0100	Sprague, AVX
1	Capacitor	100 $\mu$ F tantalum	10 V	7343	C2	593D107X9010D2W TPSD107D016R0100	Sprague, AVX
1	Capacitor	10 $\mu$ F tantalum	10 V	3528	C3	293D106X0010B2W 267E 1002 106	Sprague, MATSUO
1	Capacitor	82 pF ceramic	50 V	0805	C4		
1	Capacitor	1 $\mu$ F ceramic	16 V	1206	C5		
1	Capacitor	0.1 $\mu$ F ceramic	50 V	0805	C6		
1	Resistor	130 k $\Omega$		0805	R1		
1	Resistor	300 k $\Omega$		0805	R2		
1	Resistor	10 k $\Omega$		0805	R3		
1	Resistor	42.2 k $\Omega$	1%	0805	R4		
1	Resistor	10.2 k $\Omega$	1%	0805	R5		

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