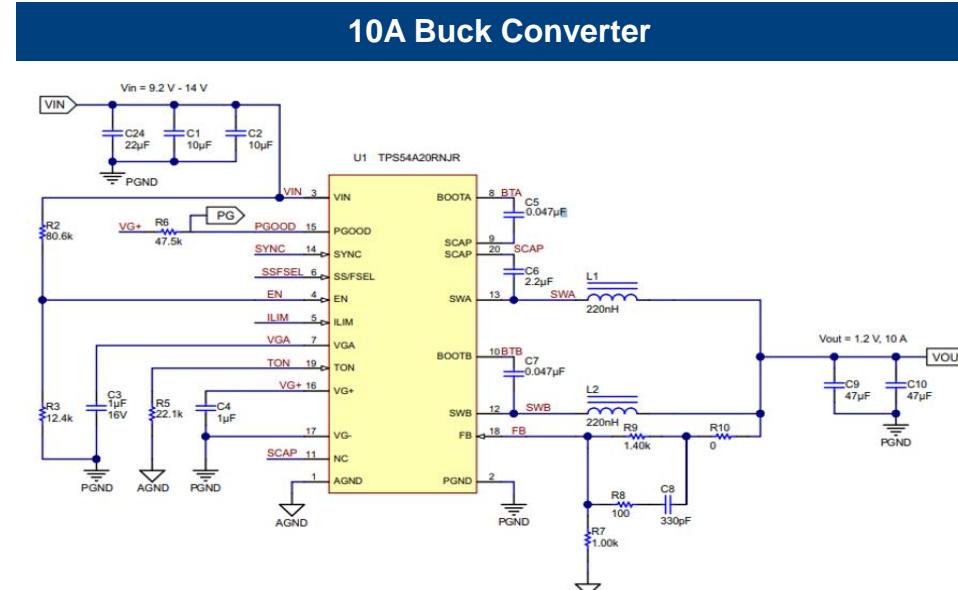
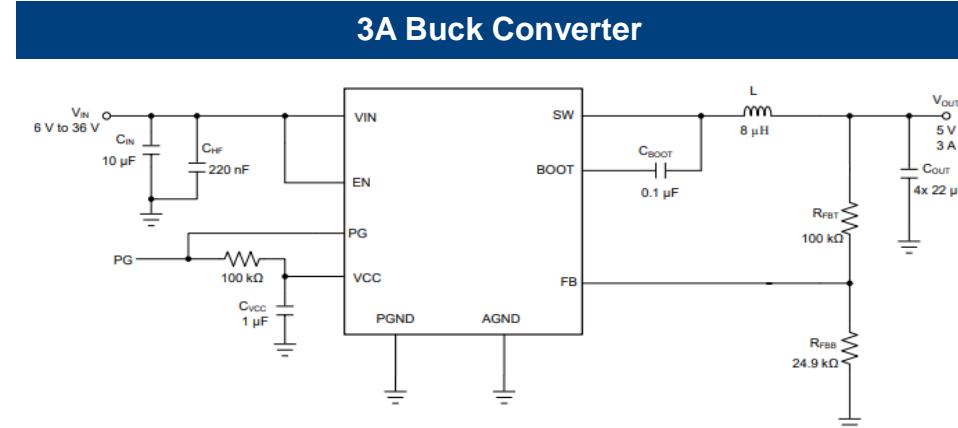


Buck Converter

The buck converter is used in switch mode power supply (SMPS) circuits where the DC output voltage needs to be lower than the DC input voltage. The DC input can be derived from rectified AC or from any DC supply. The switching transistor between the input and output of the buck converter continually switches on and off at high frequency. To maintain a continuous output, the circuit uses the energy stored in the inductor, during the on periods of the switching transistor, to continue supplying the load of the off periods. The capacitors used in a buck converter filters ripple current of inductor so it can minimize ripple presence at the output of the converter. The output capacitor is required to minimize the voltage overshoot because voltage can overshoot above regulated value when a full load is suddenly removed. A buck converter is a form of DC to DC converter that can take an input directly from a DC source, such as a battery. The input could also be DC derived from an AC source via a rectifier circuit.



Reference	KEMET Part Number
C _{IN}	<ul style="list-style-type: none"> C1210C106K5RACTU MMC16.5106K50C31TR24
C _{HF}	<ul style="list-style-type: none"> C1812C224K5GACTU MMC7.3224K50K33TR12
C _{VCC}	<ul style="list-style-type: none"> C0805C105K5RACTU ESH105M050AC3LA
C _{BOOT}	<ul style="list-style-type: none"> C1210C104K5GACTU MMK5104M50J01L16.5TR18
C _{OUT}	<ul style="list-style-type: none"> C1210C226K3RACTU JSNDK5220MB6M0
L	<ul style="list-style-type: none"> PLC-0745-8R2S
Reference	KEMET Part Number
C ₁ , C ₂	<ul style="list-style-type: none"> C1210C106K6PACTU MMC16.5106K50C31TR24
C ₃ , C ₄	<ul style="list-style-type: none"> C0805C105K6RACTU ESH105M050AC3LA
C ₅ , C ₇	<ul style="list-style-type: none"> C0805C473K3GACTU MMC10.2473K50A31TR16
C ₆	<ul style="list-style-type: none"> C0805C225K3RACTU EDK225M035A9BAA
C ₈	<ul style="list-style-type: none"> C0402C331K3GACTU PFR5331J63J11L16.5TR18
C ₉ , C ₁₀	<ul style="list-style-type: none"> C1210C476M4PACTU JSNDJ5470MB6M0
C ₂₄	<ul style="list-style-type: none"> C1210C226M3RACTU JSNDK5220MB6M0
L ₁ , L ₂	<ul style="list-style-type: none"> MPCH1040LR22G