

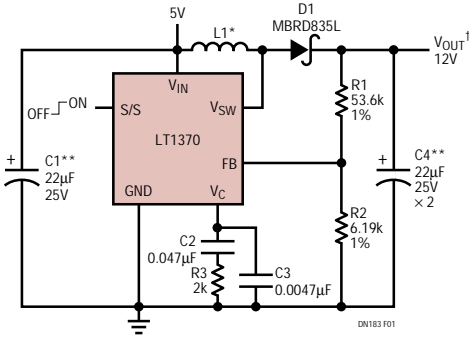
High Efficiency 5V to 12V Boost Converter

The **LT1370** high efficiency boost converter combines the convenience and low parts count of a monolithic solution with the switching capabilities of a discrete power device and controller. At 0.065Ω on-resistance, 42V maximum switch voltage and 500kHz switching frequency, the **LT1370** can be used in a wide range of output voltage and current applications. Only a few surface mount components are needed to complete a small, high efficiency DC/DC converter. **LT1370** features include current mode operation, external synchronization and low current shutdown mode ($12\mu\text{A}$ typical).

Unique error amplifier circuitry allows the **LT1370** to directly regulate both positive and negative output voltages. The NFB pin regulates at -2.48V , while

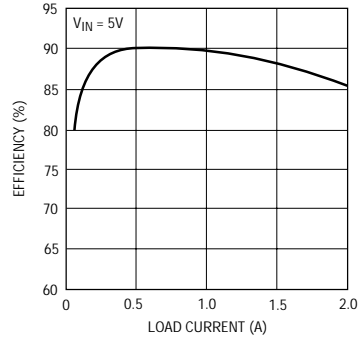
the amplifier's output internally drives the FB pin to 1.245V . A capacitor-coupled external clamp across the V_C pin provides soft start.

The internal oscillator can be synchronized to a higher frequency by applying a TTL square wave to the S/S pin. If the S/S pin is held low, the **LT1370** will enter shutdown mode, reducing supply current to $12\mu\text{A}$. An internal pull-up ensures start-up when the S/S pin is left open circuit. The high 6A switch rating permits the circuit to deliver up to 24W with a peak efficiency of 90%.



*COILTRONICS		I_{OUT}^{MAX}	
	(561) 241-7876	L1	I_{OUT}
	UP2-4R7 (4.7 μH)	4.7 μH	1.8A
	UP4-100 (10 μH)	10 μH	2.0A

**AVX TPSD226M025R0200



Source: Design Note 183
www.linear-tech.com/distrib.html