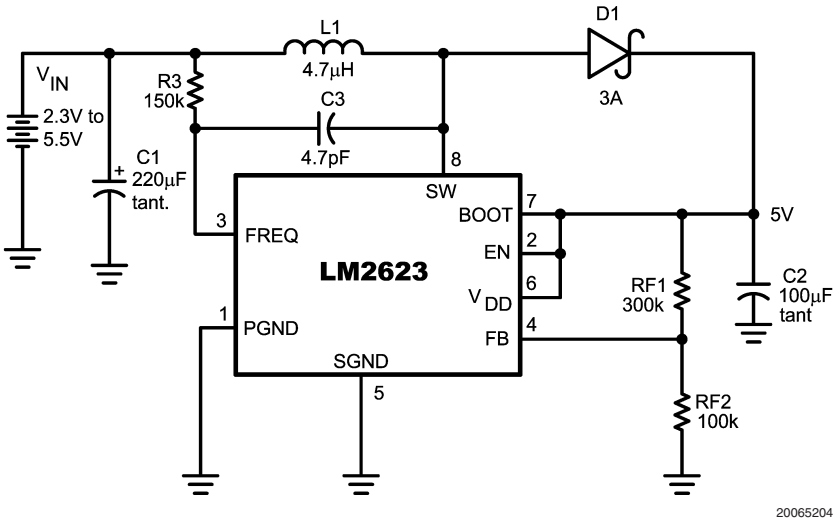
LM2623 Evaluation Board

National Semiconductor
Application Note 1274
September 2005

The LM2623 is a general purpose, gated oscillator based, DC/DC boost converter that can run from low input voltage and produce a regulated output voltage with low ripple. The LM2623 evaluation board is programmed for a 5V output running off a two-cell power supply. For more information regarding the LM2623, please refer to the data sheet, Application Note AN-1258, as well as the cookbook (AN-1221) for more application configurations. A bill of material and a schematic follow:

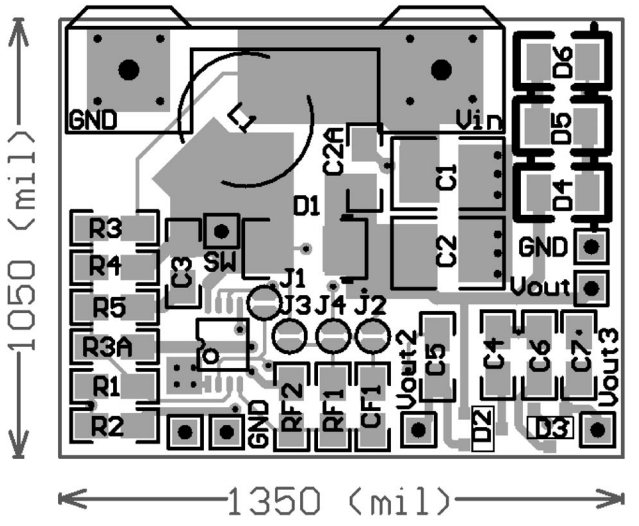
TABLE 1. Bill of Materials

Designator	Description	Manufacturer	Model Number
U1	LM2623 DC-DC Converter MSOP-8	National Semiconductor	LM2623
L1	Inductor (4.7µH 20% 2A)	Coilcraft	DO1813P-472HC
C1	Input Capacitor (220µF Tantalum Capacitor (20% 6.3V))	Vishay - Sprague	595D227X06R3C2
C2	Output Capacitor (100µF Tantalum Capacitor (10%, 6.3V))	Vishay - Sprague	293D107X96R3C2T
D1	Output Diode (40V 3A Schottky)	OnSemi	MBRS340T3
RF2	100 kΩ Feedback Resistor	Vishay - Dale	CRCW06031003F
RF1	300 kΩ Feedback Resistor	Vishay - Dale	CRCW06033003F
R3	150 kΩ Frequency Set Resistor	Vishay - Dale	CRCW06031503F
R5	0Ω Resistor	Vishay - Dale	CRCW0603000F
C3	4.7pF Ceramic Capacitor	TDK	C1608C0G1H4R7C



Evaluation Board Application Circuit

Within the Application Board Circuit Diagram there are many components shown that are not populated on the 5V output evaluation board. These component footprints are used in numerous other applications found in application note AN-1221. In addition, jumpers J1, J2, and J4 are closed on the two-cell input to 5V output application board.



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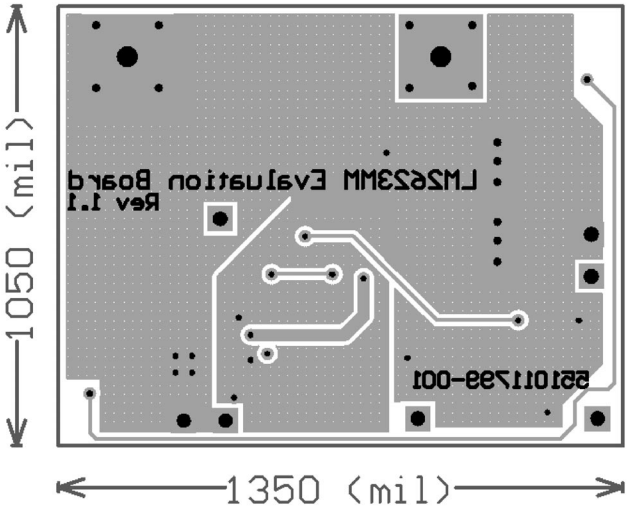
Typical Layout, Top View



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Bottom View Unmirrored

Notes

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