

Device Features

- Operation from 3.0V to 40V Input
- Low Standby Current
- Current Limiting Output
- Switch Current up to 1.6A
- Output Voltage Adjustable
- Operating Frequency up to 100kHz
- Precision 2% Reference
- 8-pin SOP, PDIP packages
- Lead-Free Finish/RoHS Compliant for Lead-Free and "Green" Products
- SOP-8L: Available in "Green" Molding Compound (No Br, Sb)

Description

The AP34063 series of devices are monolithic control circuit containing the primary functions required for DC-to-DC converters. These devices consist of an internal temperature-compensated reference, a comparator, a controlled duty cycle oscillator with an active current limit circuit, driver and a high current output switch. This series is specifically designed for being incorporated in step-down, step-up and voltage-inverting applications with a minimum number of external components.

EVM Features

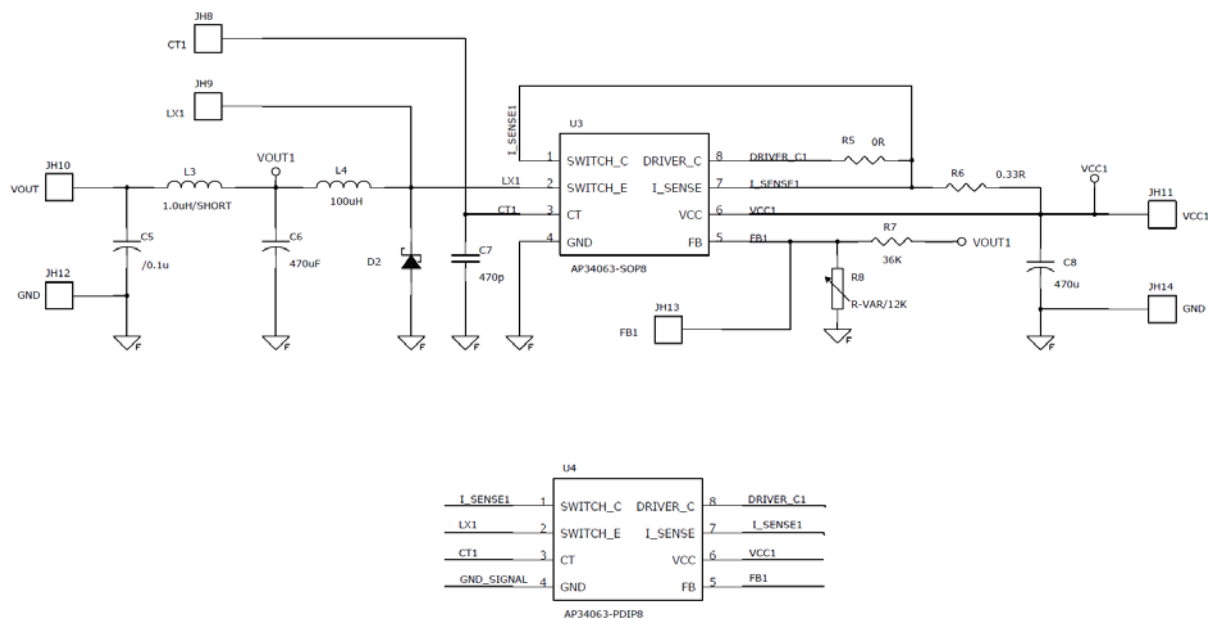
- Step-down (Buck) mode
- Input voltage : 10V to 16V
- Output voltage : 5V or adjustable
- Output current: 0.5A

Ordering Information

Device	Package Code	Packaging	EVM Part Number
AP34063S8	S8	SOP-8L	
AP34063N8	N8	PDIP-8L	

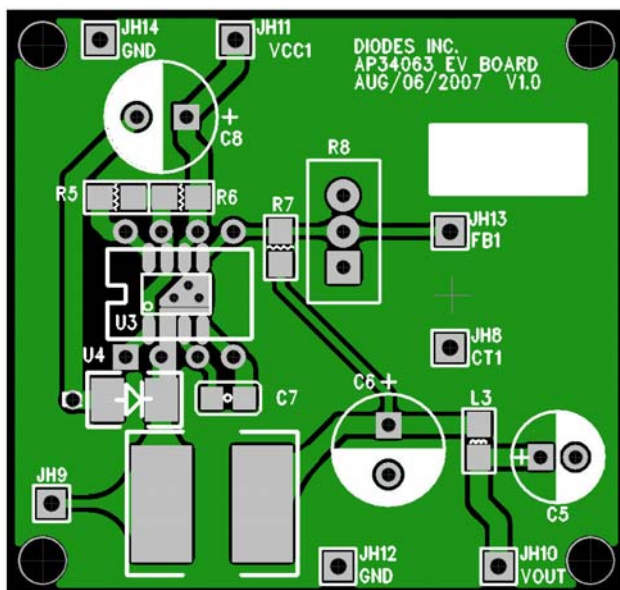


Schematic

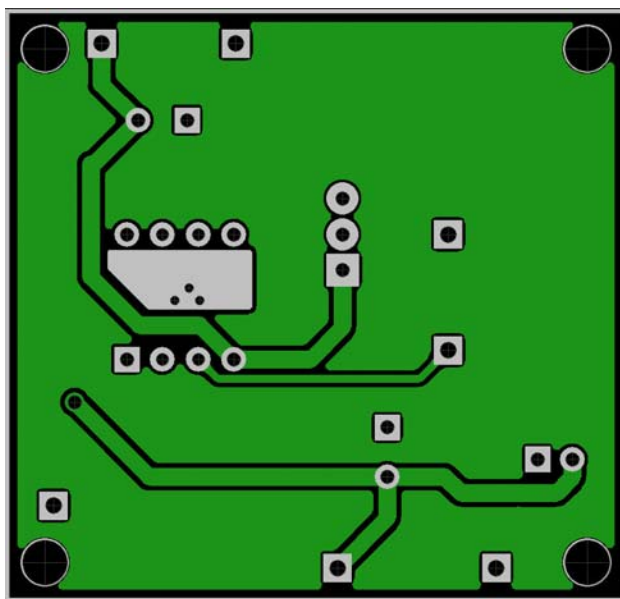


AP34063-EVM Buck Mode Schematic

PCB Layout



Top Layer Layout of AP34063-EVM



Bottom Layer Layout of AP34063-EVM

Bill of Material

Bill of Material for AP34063 EVM

Ref	Count	Size	Mfr	Part Number	Description
C5	1	0805	STD	STD	0.1 μ F ceramic capacitor
C6	1		STD	STD	470 μ F electrolytic capacitor
C7	1	0805	STD	STD	470 pF ceramic capacitor
C8	1		STD	STD	470 μ F electrolytic capacitor
R5	1	0805	STD	STD	0 Ω resistor (jumper)
R6	1	0805	STD	STD	0.33 Ω resistor
R7	1	0805	STD	STD	36 k Ω resistor
R8	1	0805	STD	STD	12 k Ω resistor or potentiometer
L3	1	0805			Shorted with a jumper
L4	1	10x12mm			100 μ H inductor
D2	1	SMA	Diodes	B230A	2A/30V Schottky diode
U3	1	SOP8	Diodes	AP34063	Universal DC/DC converter
U4	1	PDIP8	Diodes	AP34063	Universal DC/DC converter

I/O Terminals and Test Points

Terminals and Jumpers for AP34063 EVM

I/O and Test Points	Description	Comments
JH11, JH14	Input and Ground	Connect to the input power supply
JH10, JH12	Output and Ground	Connect to the load
JH8	CT1	Test point for the CT pin
JH9	LX1	Output terminal of the integrated switch
JH13	FB1	Test point for the FB pin

Quick Start Guide

1. Connect a +12V power supply between the VCC1 (JH11) and GND (JH14) terminals. Make sure the power supply is turned off.
2. Connect an adjustable current or resistive load to the VOUT (JH10) and GND (JH12) terminals (up to 0.5A).
3. Turn on the power supply. Measure the output voltage. Vout should be about 5V (for the Vout=5V EVM).
4. Increase the load current and monitor the output voltage.
5. Vary the input voltage between 10V and 16V and monitor the output voltage.