EVAL Kit Quick Start Guide

KTB2140

Active Clamp Current-Mode PWM Controller

EVAL Kit Physical Contents KTB2140GUAP-MMEV01

Item #	Description	Included
1	KTB2140 Evaluation board fully assembled PCB	1
2	Anti-static bag	1
3	KTB2140 Quick Start Guide, printed 1 page (A4 or US Letter)	1
4	EVAL Kit box	1

Links for Documents

IC Datasheet	EVAL Kit Landing Page
https://www.kinet-ic.com/ktb2140/	https://www.kinet-ic.com/ktb2140guap-mmev01/

User-Supplied Equipment

Required Equipment

1. Power Sourcing Equipment Such a supply should provide 37V-57V up to 3A as needed for intended application.
2. Digital Multimeters, two required – used to measure input/output voltages and currents.
3. Load – any of the following may be used:
    a. Electronic load capable of sinking 12V at 6A (72W)
    b. Power Resistor - 2Ω / 72W or greater value is required
    c. Actual system load that does not exceed 72W at 12V
4. Test leads:
    a. One pair of banana-to-clip test leads to connect a voltmeter to the eval board VIN and GND
    b. Two pairs of banana-jack test leads to connect VO+/VO- to an electronic load and voltmeter

Quick Start Procedures

The output voltage of this board is set to 12V by the Kinetic Technologies KTB2140 controller. Below is the method to power KTB2140 evaluation board:

Method: Connect to VIN Power Supply

1. Connect one pair of power cables to the Test pins (VIN and GND) of EVAL Kit.
2. Before connecting the EVAL Kit to the bench power supply, turn on the supply and adjust the voltage as close to 0V as possible. Then disable the power supply output or turn the supply off. While disabled or off, connect the VIN / GND power cables' ends to the bench supply.
3. Connect a voltage meter to the VO+ and VO- output jacks.
4. Connect the load to the output VO+ and VO- output jacks.
5. Turn on the bench supply and very slowly ramp its voltage to an appropriate voltage, such as 48V (37V ~ 57V). While ramping bench supply slowly, use the bench supply's output current indication (or a digital multimeter) to monitor the bench supply current. If the current becomes high, reduce the bench supply voltage quickly to prevent damage. Then inspect the setup for any wiring errors.
6. Verify 12 Volts on the VO+ / VO- output jacks.