

Integrated Dual MOSFET Bridge Rectifier

EVAL Kit Physical Contents

Item #	Description	Quantity
1	KTA1170 EVAL fully assembled PCB	1
2	Anti-static bag	1
3	Quick Start Guide, printed 1 page (A4 or US Letter)	1
4	EVAL Kit box	1

QR Links for Documents

IC Datasheet	EVAL Kit Landing Page
 https://www.kinet-ic.com/kta1170	 https://www.kinet-ic.com/kta1170gvaemmev01/

Note: The full EVAL Kit Manual is available for download on the EVAL Kit Landing Page.

User-Supplied Equipment

1. Bench Power Supply for IN1/IN2/IN3/IN4 inputs – 60V up to 1A capable, as needed for the intended application.
2. Digital Multimeters – one or more, used to measure input/output voltages and currents.
3. Load – Electronic Load, power resistors, or an actual system load.
4. Oscilloscope (Optional) – for testing of input and output voltages (and input or load currents with a current probe, if available).

Quick Start Procedures

KTA1107 includes two diode bridges. First, the diode bridge with inputs IN1-IN2 is checked. Then the procedure is repeated for the other diode bridge IN3-IN4.

1. Connect one pair of Banana-to-Banana power cables to the banana connectors at IN1 and IN2 (either polarity is fine).
2. Before connecting the EVAL Kit to the VIN1-VIN2 input bench supply, turn on the supply and adjust the voltage as close to 0V as possible. Then turn off or disable the supply output. While off, connect the banana ends of the Banana-to-Banana power cables to the input bench supply.
3. Turn on the bench supply and very slowly ramp the output voltage to an appropriate level, such as 48V. While ramping VIN slowly, use the bench supply's output current indication (or a digital multimeter) to monitor the VIN current. If the current becomes high, reduce the supply voltage quickly to prevent damage. Then inspect the setup for any wiring errors.
4. With valid VIN voltage of 48V, use a digital multimeter to check the output voltage between the K_VCC and K_GND terminals on the evaluation board. It should be nearly the same as the input voltage.
5. Use a digital multimeter to check the no-load supply current to IN1. Consult the KTA1170 datasheet for the expected current range at the IN1 voltage condition in use. For conditions of VIN1-VIN2 = 48V, and no-load, the input supply current should be around 55 μ A.
6. Repeat steps 1 to 5 for the other diode bridge with inputs IN3-IN4.