

D306A IC Designer's Kit Guide

Introduction:

Rogers DUREL® D306A Designer's Kit is intended to aid you in developing an EL lamp driver configuration using the DUREL D306A IC that meets your power draw budget while achieving your brightness requirements from the EL lamp. A list of components contained in the kit is in Table 1.

Table 1: List of Components	
Description	Qty
D306A IC unit samples	5
D306A IC Designer's Kit Board	1
Kit Board Power Connector	1
EL Lamp sample with connector	1
Leaded Capacitors – Various Values	>2
Leaded CHF Capacitors – various values	>2
SMT adapter boards	2
Assorted SMT Inductors	>2

The D306A Designer's Kit Board:

The D306A Designer's Kit Board (see Figure 1), which is preconfigured with a D306A IC, is a useful tool for optimizing a powerful electroluminescent (EL) lamp driver circuit for any application. Refer to the D306A datasheet for example reference circuits to use as a starting point for your particular design. Simply insert an appropriate value of inductor (L) between the socket labeled as VBAT and the pre-soldered surface-mount diode (SMD) to complete the preconfigured driving circuit.

On the Designer's Kit Board a jumper header is normally attached to connect E to Vcc or GND. This jumper header can be removed to control the enable pin (E) with an externally supplied signal. Make sure that an appropriate load is connected between Va and Vb before applying power to the chip through the Kit Board power connections. A sample Durel 3 PROTOLIGHT® EL lamp is provided in the Designer's Kit. This lamp may be cut to your required lit area.

The user can easily replace all the external components with different values on the Designer's Kit Board in order to achieve design goals. A selection of standard values of resistors, capacitors and inductors are included in the D306A Designer's Kit for your use. The value of timing components (CLF, CHF, and Rf) may be replaced in the labeled sockets, as shown in Figure 1. The high voltage storage capacitor (Cs), stabilizing capacitor (CRf), and wave-shaping resistor (Rd) may be changed at the designer's discretion as well. In addition, sockets for optional components can be found on the kit board for different design options. A bypass capacitor between Vcc and ground (GND) should be connected to absorb electrical noise in the DC input. To maintain peak voltage output within maximum ratings, a 200V Zener diode is connected in parallel to Cs as a voltage clamp. A fast-recovery SMD is already attached to the board, but the designer has the option to remove this component and replace it with a different fast-recovery diode connected to the labeled sockets shown in Figure 1. Additional specific design support is also available through Durel's global sales engineering team upon request.

The information contained in this data sheet is intended to assist you in designing with Rogers EL systems. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose or that the results shown on the data sheet will be achieved by a user for a particular purpose. The user should determine the suitability of Rogers EL drivers for each application.

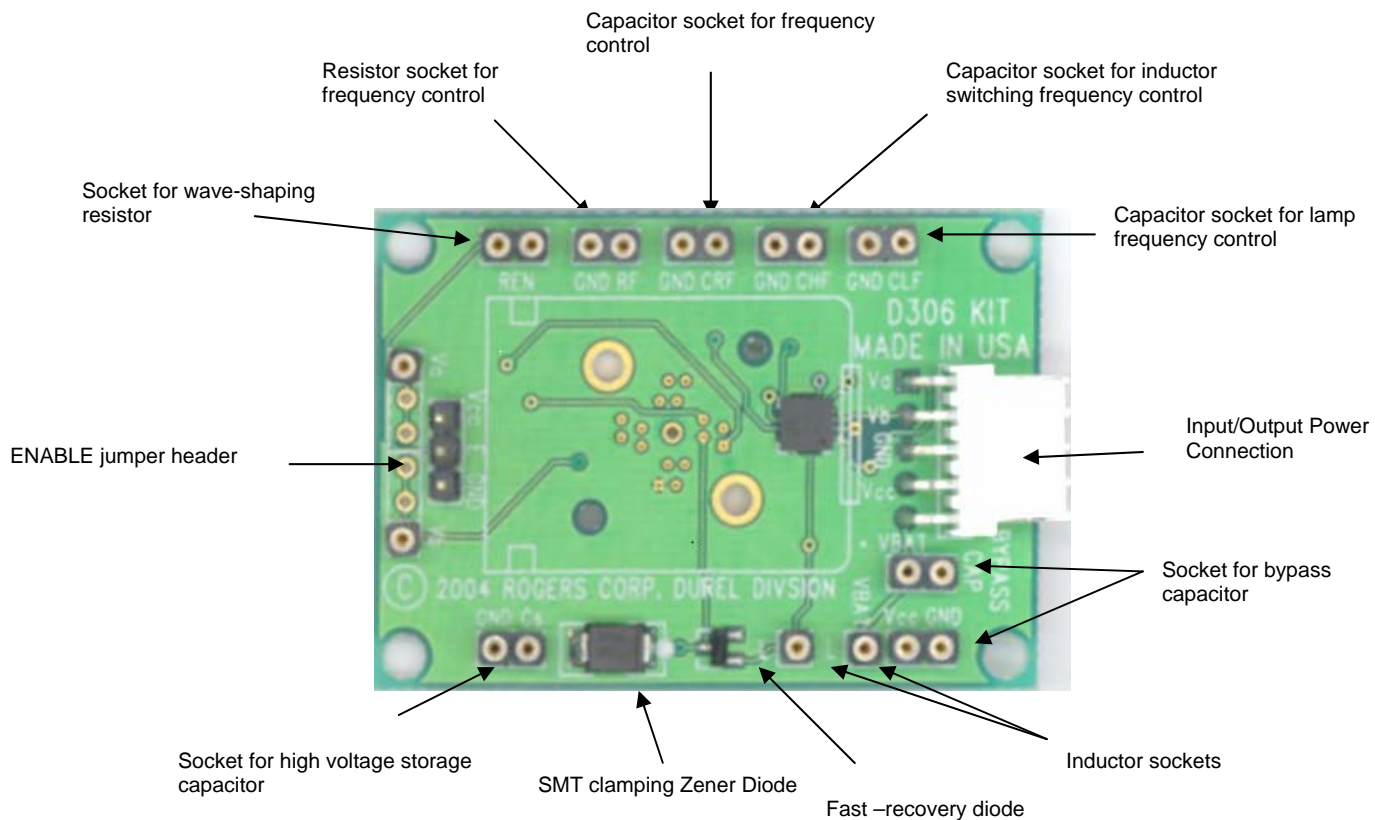


Figure 1: The D306A IC Designer's Kit Board

ISO 9001:2000, ISO/TS 16949:2002, and ISO 14001:2004 Certified

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Rogers EL drivers are covered by one or more of the following U.S. patents #5,313,141; #5,789,870; #5,677,599; #6,043,610. Corresponding foreign patents are issued or pending.
