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D365A IC Designer's Kit Guide

Introduction:

Rogers DUREL® D365A IC Designer's Kit is intended to aid you in developing an EL lamp driver configuration using the DUREL D365A IC chip 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
D365A IC unit samples	5
D365A IC Designer's Kit Board	1
D365A IC Mini-Module Board	1
Kit Board Power Connector	1
EL Lamp sample with connector	1
Assorted SMT Inductors	>2
SMT adapter boards	2
Leaded CHF Capacitors – various values	>2
MPSA56 PNP Transistor	1
MMBTA56 SMT PNP Transistor	1
Bypass cap: 1.0μF	1

The D365A IC Designer's Kit Board:

The Designer's Kit Board (see Figure 1), which comes with a D365A IC already soldered to the board, is a useful tool for optimizing a D365A IC driver circuit for any application. Refer to the D365A IC datasheet as a guideline with sample circuits as a starting point of your design. Simply insert an appropriate value of inductor (L) and timing capacitor (CHF) into the labeled sockets, as shown in Figure 1, and insert the transistor (MPSA56) to complete your driving circuit. Additional sockets are provided in the Kit Board for a bypass capacitor between V+ and ground (GND) to absorb electrical noise in the DC input.

A jumper header On the Designer's Kit Board is normally attached to connect E to V+ 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 the output (Vout) and GND 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 capacitors and inductors are included in the D365A IC Designer's Kit for your use.

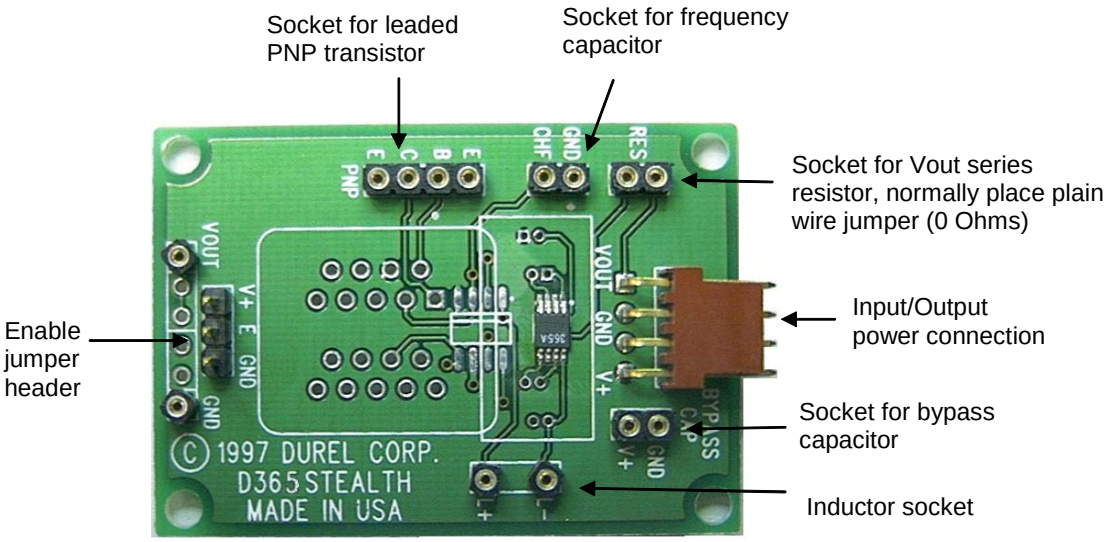

Figure 1: The D365A IC Designer's Kit Board

The D365A IC Mini-Module Board:

The D365A IC Mini-Module Board (see Figure 2) is an example of a finished circuit based on the D365A IC. It is meant as a representation of the board area requirement for the EL lamp driver circuit in the application. Except for the surface mount inductor most of the external components have been selected and pre-soldered onto the module board. The mini-module board can be configured to fit into finished product for demos. The enable is connected to V+ via a 0ohm resistor which can be removed for independent enable control.

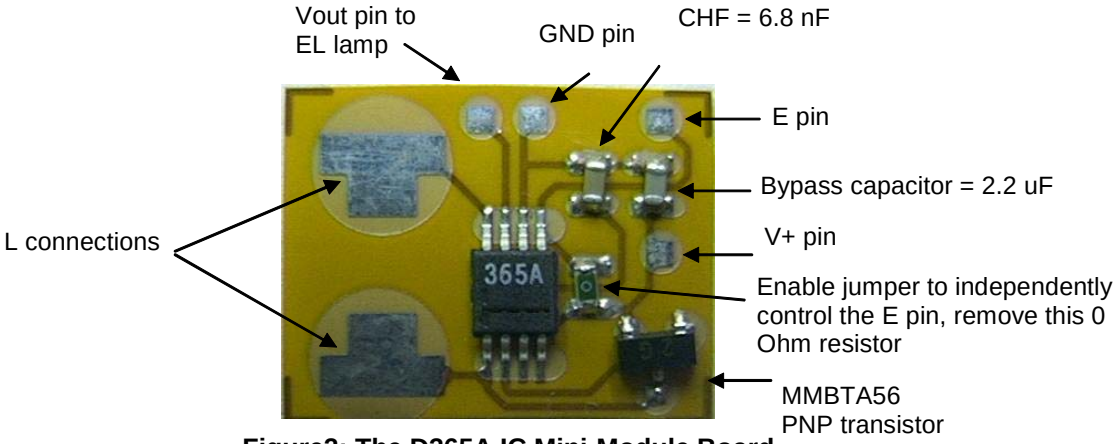

Figure2: The D365A IC Mini-Module Board

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

Revised 6/06 **Publication # LIT-I9037A04**