Supertex inc.

EL Driver Demo Board HV809DB1

HV809DB1 Demo Board

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Introduction

The HV809DB1 EL Driver demo board contains all the circuitry necessary to drive an EL (Electroluminescent) lamp. Simply connect it to the AC line and a lamp as shown below.

For additional assistance in designing EL driver circuits, please refer to application note AN-H36 (EL Lamp Driver Circuits).

Specifications

Supply Voltage	120V AC
Supply Current	~60mA
Lamp Size Range	Up to 100in ²
Lamp Frequency	~400Hz



12/04/98

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Typical Performance

The specific external components used in the above circuit are: Diode Bridge, C_{IN} =22µF 200V, C_{DD} =0.1µF 16V, R_{EL-OSC} =1M Ω , R_{LIMIT} =51 Ω (to limit the inrush current during power up), a 375mA Pico Fuse, and a 15W heat sink. The following typical performance was observed in the lab for HV_{IN}=170V DC to simulate a rectified 120V AC.

Lamp Size (in ²)	I _{IN} (mA)	f _{EL} (Hz)	Brightness (ft-Im)
10	6.4	385	29.5
20	11.3	385	22.8
35	22.4	385	21.4
55	33.1	385	20.6
70	41.9	385	19.8
90	52.3	385	15.5
100	56.5	385	14.0

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