Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

DESCRIPTION

Microsemi's LX6512 is a cost effective, Direct Drive CCFL (Cold Cathode Fluorescent Lamp) controller. The integrated controller is optimized to drive CCFL's (Cold Cathode Fluorescent Lamps) using either resonant full bridge inverter topology or push-pull Direct Drive configurations.

Resonant full bridge topology provides near sinusoidal waveforms over a wide supply voltage range in order to maximize the life of CCFL lamps, control EMI emissions, and maximize efficiency. This new architecture is also coupled with a wide dimming range capability.

For fixed input supply applications the LX6512 uses Direct Drive topology to supply fixed frequency PWM signals connected directly to the high voltage transformer primary via a single pair of N-FET drivers, providing a simple, low cost inverter solution.

The LX6512 contains safety features that limit the transformer secondary voltage and protect against fault conditions which include open lamp, broken lamp and short-circuit faults. The over voltage fault shutdown is disabled during a user programmable interval to allow lamp strike.

The controller can accept a brightness control signal that is either an analog voltage level, or a direct low frequency PWM. Utilizing this signal it provides CCFL brightness dimming control using digital dimming, to achieve a wide dimming range (> 60 to 1).

An integrated 4V LDO (Low Dropout Regulator) powers all internal control circuitry and up to 5mA for external circuitry greatly simplifying supply voltage requirements.

The LX6512 is available in a 16-Pin SOIC, TSSOP and 3x3 mm 16pin QFN.

IMPORTANT: For the most current data, consult *MICROSEMI*'s website: **http://www.microsemi.com**
Protected by U.S. Patents: 5,615,093; 5,923,129; 5,930,121; 6,198,234; 7,112,929; Patents Pending
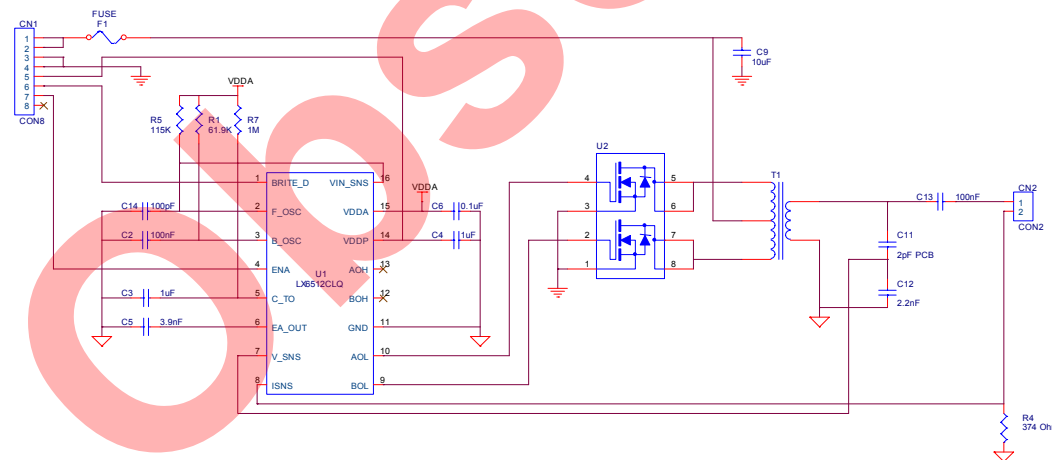
KEY FEATURES

- Full Bridge or Direct Drive Push Pull Configurable
- Patented Striking Topology
- Low Stress to Transformers
- Wide Dimming Range
- Programmable Operating Dimming Frequency
- Programmable Time Out Protection
- Fixed Operating Frequency
- Open Lamp Voltage Protection, Short Lamp Protection, Over Voltage Protection
- Compatible with Existing Transformers

APPLICATIONS

- Note Book LCD displays
- Transportable Computers
- Web Tablet LCD displays
- Digital Picture Frame
- Monitor / TV Portable DVD Player

LOW COMPONENT COUNT REQUIREMENT FOR TOTAL SYSTEM SOLUTION

PACKAGE ORDER INFO			THERMAL DATA
TA (°C)	D	Plastic SOIC 16-pin	θ_{JA} = 82.2 °C/W
	LQ	Plastic 3x3 mm QFN 16-pin	θ_{JA} = 33.3°C/W
	PW	Plastic TSSOP 16-pin	θ_{JA} = 99 °C/W
		RoHS Compliant / Pb-free	THERMAL RESISTANCE-JUNCTION TO AMBIENT
-20 to 85		**LX6512CD, LX6512CLQ or LX6512CPW**	Junction Temperature Calculation: $T_J = T_A + (P_D \times \theta_{JA})$. The θ_{JA} numbers are guidelines for the thermal performance of the device/pc-board system. All of the above assume no ambient airflow.
		Note: Available in Tape & Reel. Append the letters "TR" to the part number. (i.e. LX6512CD-TR)	

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Rev. 1.3, 10/22/2009

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Microsemi ®

Thank you for your interest in Microsemi® Analog Mixed Signal products.

The full data sheet for this device contains proprietary information.

To obtain a copy, please contact your local Microsemi sales representative. The name of your local representative can be obtained at the following link
http://www.microsemi.com/contact/contactfind.asp

or

Contact us directly by sending an email to:
IPGdatasheets@microsemi.com
Be sure to specify the data sheet you are requesting and include your company name and contact information and or vcard.

We look forward to hearing from you.

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