LX6523

HIGH PERFORMANCE CCFL CONTROLLER

PRODUCTION DATASHEET

DESCRIPTION

The LX6523 is a high performance CCFL controller optimized for LCD-TV and other multi-lamp LCD display systems. It particularly provides a cost competitive solution for off-PFC inverter applications.

The controller provides a pair of push-pull PWM drive signals with adequate capacity to drive a push-pull, half bridge, or full bridge CCFL inverter configuration with the addition of simple external circuitry.

An on-chip regulator supplies both the operating voltage for the output gate drive and bias to the internal control circuitry. This allows a direct connection of the controller to the system supply extending the voltage up to 27V without external regulators.

The lamp current regulation circuit comprises a simple and robust control loop design with good regulation accuracy and dynamic response at transient conditions. Furthermore a soft start feature provides more reliable lamp strike and allows effective control of the possible inverter start up surge current.

Lamp dimming operation is also well considered to facilitate convenient and flexible dimming control design with synchronization capability.

In addition, reliable fault detection and protection functions are facilitated including open lamp, over voltage, short circuit, and over current protection. Furthermore, programmable striking frequency, programmable strike and protection timing, and fault indication are all built-in with the very compact chip design.

The device is available in a SOIC narrow body surface mount packages in the industrial temperature range.

IMPORTANT: For the most current data, consult *MICROSEMI*'s website: http://www.microsemi.com

KEY FEATURES

- Push-Pull Output to Provide Low Cost Solution for Multiple Topology Configuration
- 0.6A Peak Source and Sink Drive Current
- 6V to 27V Power Rail operation (36V Absolute Maximum)
- On Chip Regulator with Under Voltage Lock Out Protection
- Soft Start Control
- Programmable Strike Time, Fault Time, Strike Frequency, and Burst Dimming Frequency
- Burst Dimming Brightness Control
- Provide Optimized Solution for Off PFC Inverter Applications

APPLICATIONS

- LCD-TV
- Multi-Lamp LCD Monitors
- CCFL, EEFL, FFL Backlight Systems

PACKAGE ORDER INFO

T_A (°C)	D	Plastic SOIC 14 Pin
	RoHS Compliant / Pb-free	
-40 to 85	LX6523ID	

Note: Available in Tape & Reel. Append the letters "TR" to the part number. (i.e. LX6523ID-TR)

THERMAL DATA

θ_{JA} = 86 °C/W

THERMAL RESISTANCE-JUNCTION TO AMBIENT

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.

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INFORMATION

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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