

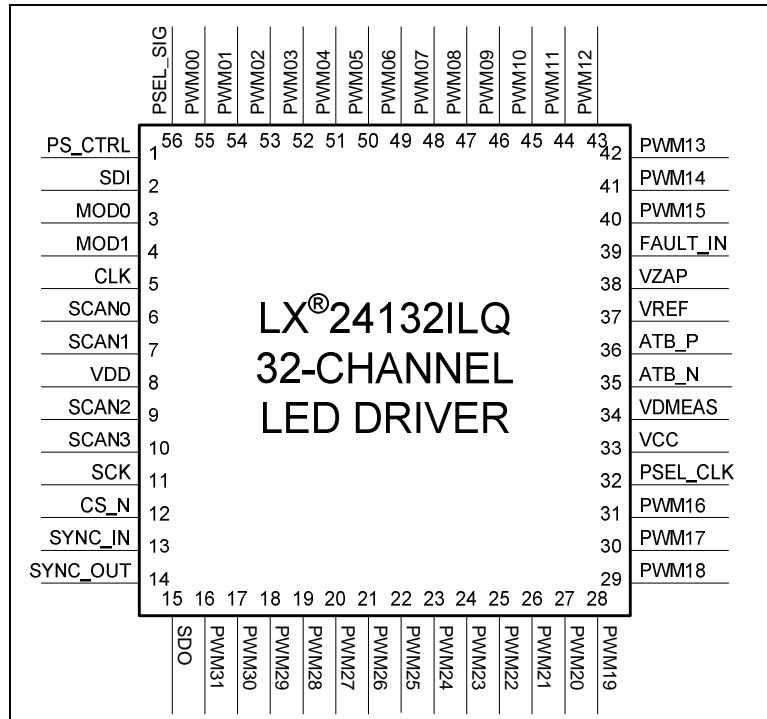


LX24132 - 32 Channels BackLight LED Driver

DESCRIPTION	APPLICABLE DOCUMENTS	KEY FEATURES
<p>The LX[®]24132ILQ is a 32 channel LED current driver. The device is part of a chipset and each LX[®]24132ILQ is capable of controlling four FET Arrays. They contain eight FETs driving and controlling up to 32 LED channels, where each channel is capable of driving a current of up to 200mA.</p> <p>The internal power supply control circuitry adjusts the voltage level of an external LED Power Source. It is done by regulating the LED supply voltage to the optimum level, thus, minimizing the system power loss. At the same time, accurate current regulation for each of the 32 LED strings is maintained.</p> <p>An SPI interface allows for fast communication with the Host system. A "Daisy Chain" concept and very fast baud rate facilitate the multiple connections of the LED drivers for small or large panels.</p> <p>The LX[®]24132ILQ can detect three types of system faults on each of its 32 channels (over-temperature, open LEDs and short LEDs) and practices protection measures accordingly.</p> <p>Over-temperature and LED short-circuit protections prevent the device from over-heating by shutting down its operation before the junction temperature reaches the "unsafe" operating limit. It resumes its operation when the chip cools down.</p>	<ul style="list-style-type: none"> ◆ LX[®]23108LILQ Datasheet, 8 Channel FET Array Cat. No. 06-0074-058 ◆ LX[®]24132ILQ / LX[®]23108LILQ AN-182, Designing a Low Current LED BackLight Driver System, Cat No. 06-0077-080 	<ul style="list-style-type: none"> ◆ White LED or RGB BackLight driver for large size display panels ◆ Up to 32 LED strings with ±1.5% precision current matching ◆ Wide dimming ratio with PWM and LED current amplitude control ◆ 12-bit PWM duty-cycle resolution and 8-bit resolution for LED current setting ◆ LED power supply voltage control ◆ SPI communication interface ◆ Open string, short LED and over-temperature protection for each individual channel ◆ On-chip thermal monitoring
<p>IMPORTANT: For the most current data, consult MICROSEMI's website: http://www.microsemi.com</p>		

PACKAGE ORDER INFO	
T _A (°C)	Plastic 8x8mm QFN 56 pin
	RoHS Compliant/Pb free
-40 to +85°C	LX24132ILQ
Note: Available in Tape & Reel. Append the letters "TR" to the part number. (i.e. LX24132ILQ-TR)	

Pin Configuration



ABSOLUTE MAXIMUM RATINGS

Supply Input Voltage (V_{CC} , V_{DD}) -0.5V to 4.5V
 All other pins..... -0.5V to $V_{CC}+0.3$ up to 4.5V
 Operating Ambient Temperature Range..... -40 to 85°C
 Maximum Operating Junction Temperature..... 150°C
 ESD Protection at all I/O pins..... +/- 2KV HBM
 Storage Temperature Range..... -65°C to 150°C
 Package Peak Temperature for Solder Reflow (40 seconds maximum exposure)..... 260°C (+0/-5°C)

Notes: Exceeding these ratings could result in damage to the device. All voltages are with respect to Ground.

THERMAL DATA (POWER CONSUMPTION)

21°C/W – according to JESD51-7.
 THERMAL RESISTANCE-JUNCTION TO AMBIENT
 Junction Temperature Calculation: $T_J = T_A + (P_D \times \theta_{JA})$.

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