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

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Description

IS31IO7326 is a 64 key, key-scan controller. It offloads the burden of keyboard scanning from the host processor. The IS31IO7326 supports keypad matrix of up to 8×8. Key press and release events are encoded into a byte format and loaded into a key event register for retrieval by the host processor.

To minimize power, the IS31IO7326 automatically enters a low power standby mode when there is no keypad, I/O, or host activity.

Features

- Supply voltage range from 3.0V to 5.5V
- 400kHz I^2C serial interface
- Available for multi-key press detect
- Low 0.3μA (typ.) standby current
- Operate in -40°C to +125°C
- Pb-free 4mm × 4mm QFN-24 package

Quick Start

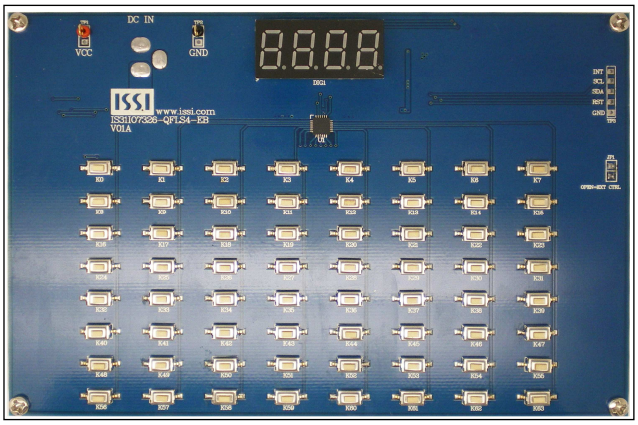

Figure 1: Photo of IS31IO7326 Evaluation Board

Recommended Equipment

- 5.0V, 2A power supply

Absolute Maximum Ratings

- ≤ 5.5V power supply

Caution: Do not exceed the conditions listed above, otherwise the board will be damaged.

Procedure

The IS31FL7326 evaluation board is fully assembled and tested. Follow the steps listed below to verify board operation.

Caution: Do not turn on the power supply until all connections are completed.

1) Connect the ground terminal of the power supply to the GND and the positive terminal to the VCC. Or connect the DC power to the connector (DC IN).

2) Turn on the power supply and pay attention to the supply current. If the current exceeds 200mA, please check for circuit fault.

Evaluation Board Ordering Information

Part No.	IC Package
IS31IO7326-QFLS4-EB	QFN-24, Lead-free

Table1: Ordering Information

For pricing, delivery, and ordering information, please contacts ISSI's analog marketing team at analog_mkt@issi.com or (408) 969-6600.

Evaluation Board Operation

K0 to K63 are push buttons on the demo board. When each of the button is pressed briefly, a number corresponding to the key will be displayed. When the button is pressed and held for a few seconds, the period dot will also be displayed. If two buttons are pressed at the same time, the corresponding key numbers will be displayed.

Note:

IS31IO7326 solely controls the Key-Scan function on the evaluation board.

Software support

Note:

JP1 is set to close circuit by default. If it is set to open, the on-board MCU will stop working. The pins driving the I2C pin from MCU will be set to High Impedance. External control signals can be connected to TP3 port to control the IS31IO7326.

Refer to the datasheet to get more information about IS31IO7326.

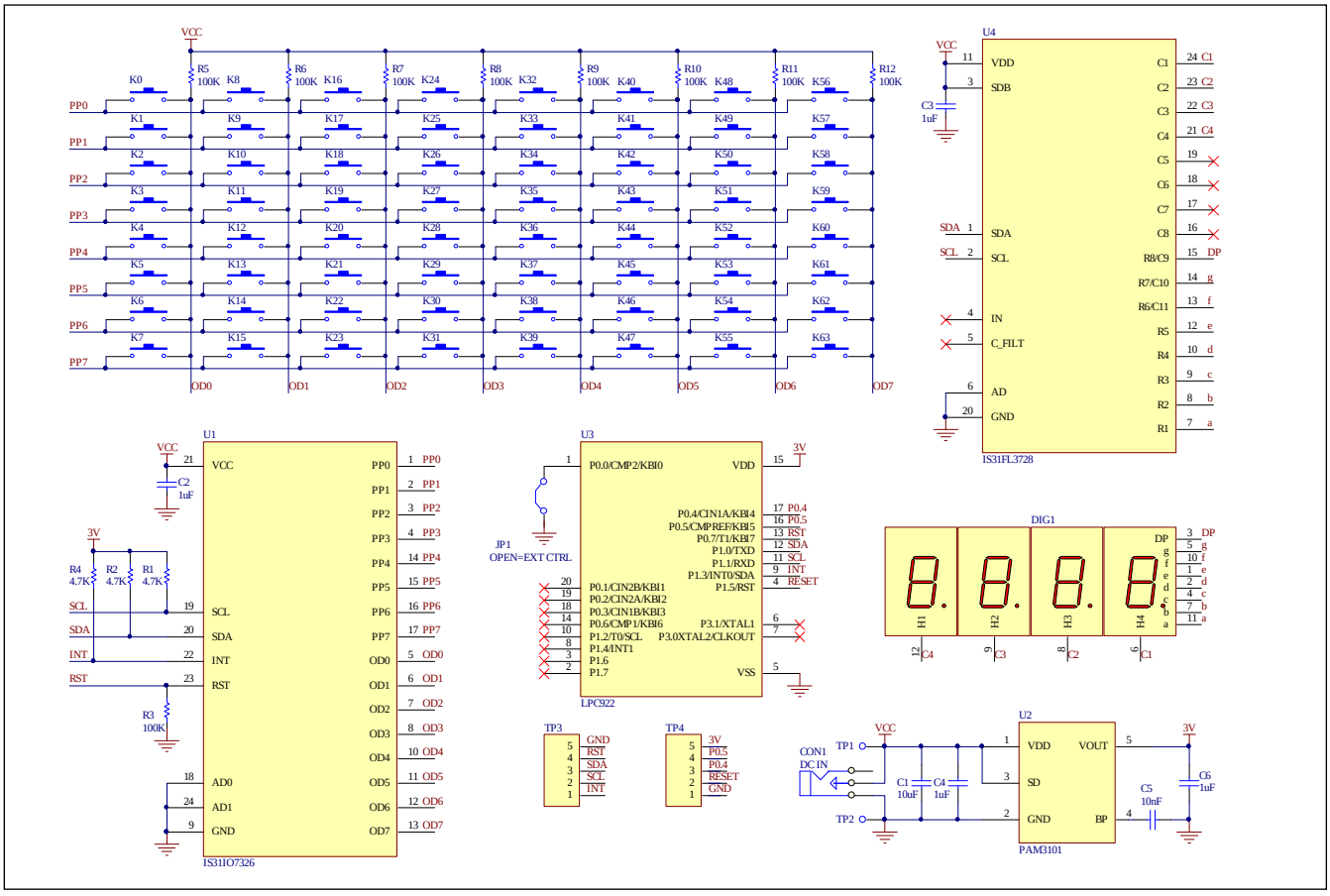

Figure 2:IS31IO7326 Application Schematic

Bill of Materials

Name	Symbol	Description	Qty	Supplier	Part No.
I/O IC	U1	16 I/O ports.Expander	1	ISSI	IS31IO7326
LDO	U2	Low-dropout Regulator	1	PAM	PAM3101
MCU	U3	Microcontroller	1	NXP	LPC922
LED Driver	U4	Array FxLED Driver	1	ISSI	IS31FL3728
Displayer	DIG1	4 Digit Display, Common Kathode	1	ZSO	3461AS
Resistors	R1,R2,R4	RES,4.7k,1/16W,±5%,SMD	3		
Resistor	R3	RES,100k,1/16W,±5%,SMD	1		
Resistors	R5~R12	RES,100k,1/16W,±5%,SMD	8		
Capacitor	C1	CAP,10μF,16V,±20%,SMD	1		
Capacitors	C2,C3,C4,C6	CAP, 1μF,16V,±20%,SMD	4		
Capacitor	C5	CAP,10nF,16V,±20%,SMD	1		
Buttons	K0~K63	Button SMD	64		

Table 2: Bill of Materials, refer to Figure 2 above.

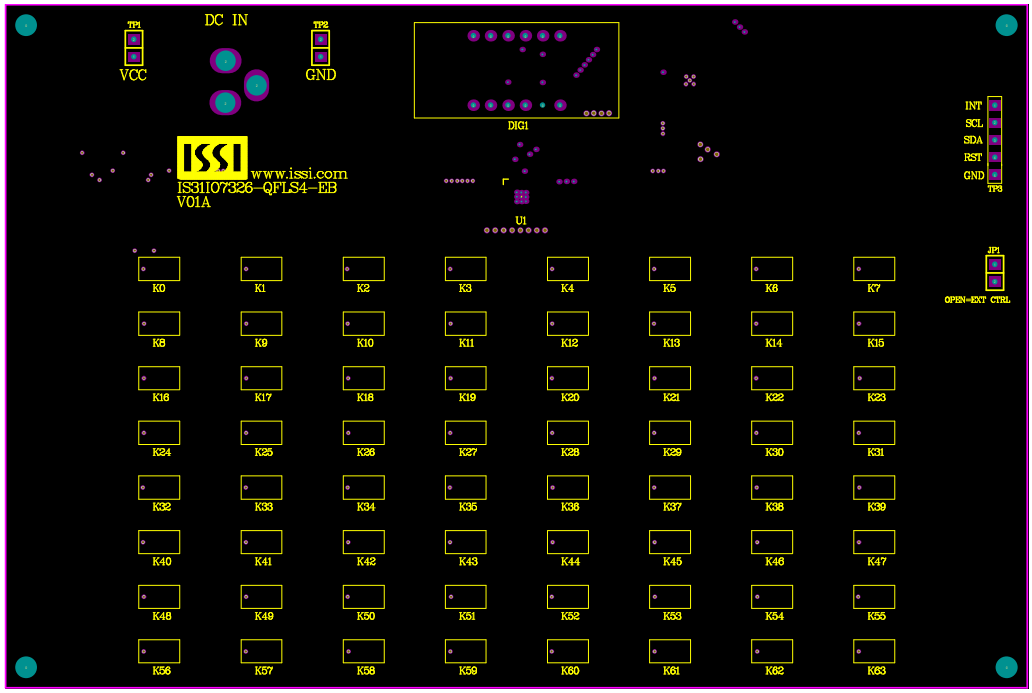

Figure 3: Board Component Placement Guide -Top Layer

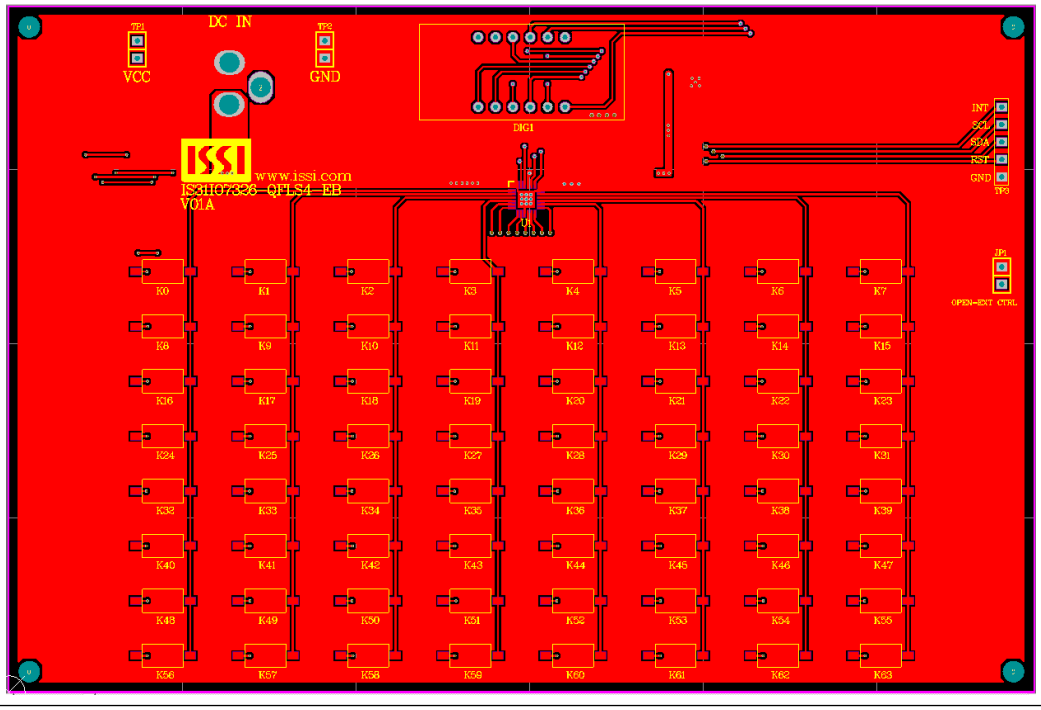

Figure 4: Board PCB Layout- Top Layer

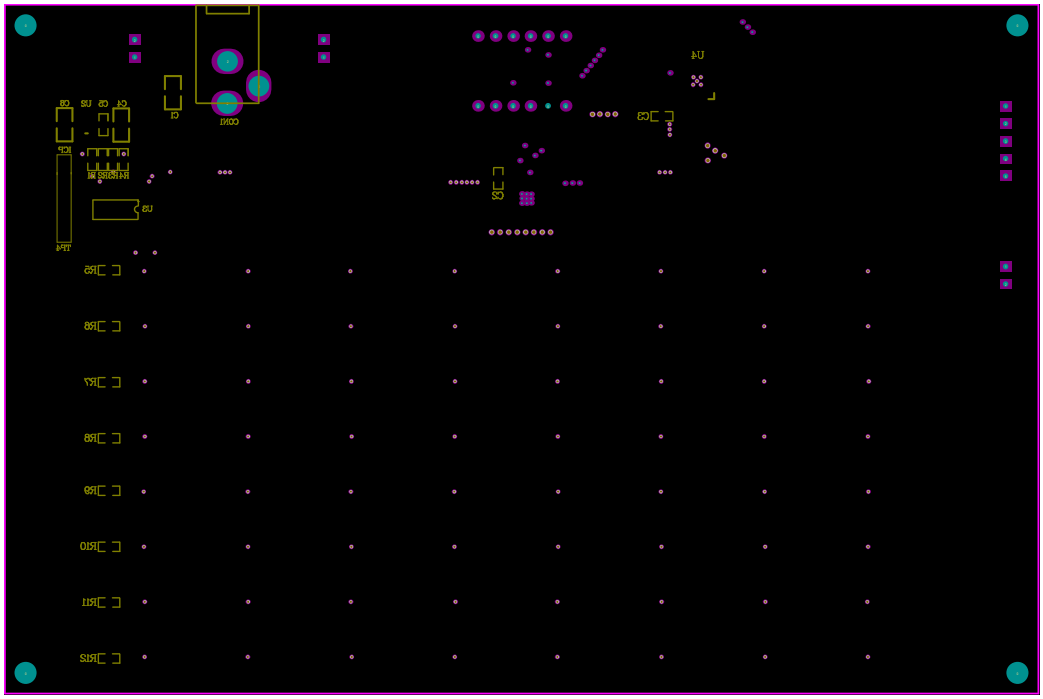

Figure 5: Board Component Placement Guide -Bottom Layer

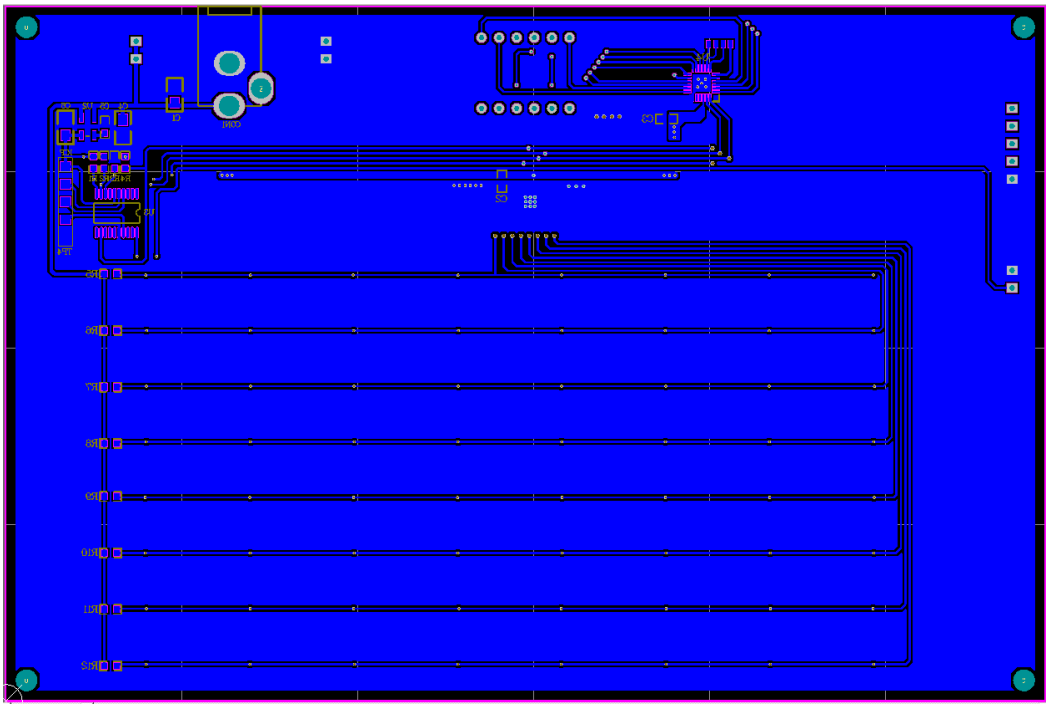

Figure 6: Board PCB Layout-Bottom Layer

Copyright © 2012 Integrated Silicon Solution, Inc. All rights reserved. ISSI reserves the right to make changes to this specification and its products at any time without notice. ISSI assumes no liability arising out of the application or use of any information, products or services described herein. Customers are advised to obtain the latest version of this device specification before relying on any published information and before placing orders for products.
Integrated Silicon Solution, Inc. does not recommend the use of any of its products in life support applications where the failure or malfunction of the product can reasonably be expected to cause failure of the life support system or to significantly affect its safety or effectiveness. Products are not authorized for use in such applications unless Integrated Silicon Solution, Inc. receives written assurance to its satisfaction, that:
a.) the risk of injury or damage has been minimized;
b.) the user assume all such risks; and
c.) potential liability of Integrated Silicon Solution, Inc is adequately protected under the circumstances