



Evaluation Board DB_SY6827DFC_1

Smart Bridge Preliminary Specification

Introduction

SY6827 develops a dual ultra-low $R_{DS(ON)}$ load switch for power distribution in the computer systems. Very low power loss and tiny DFN2x2-8 compatible package achieve small solution size.

Design Specifications

Input Voltage (V)	Bias Voltage (V)	Output Current (A)
0.6-5.5	$(V_{IN}+3\sim 28)$	0-6A

Schematic

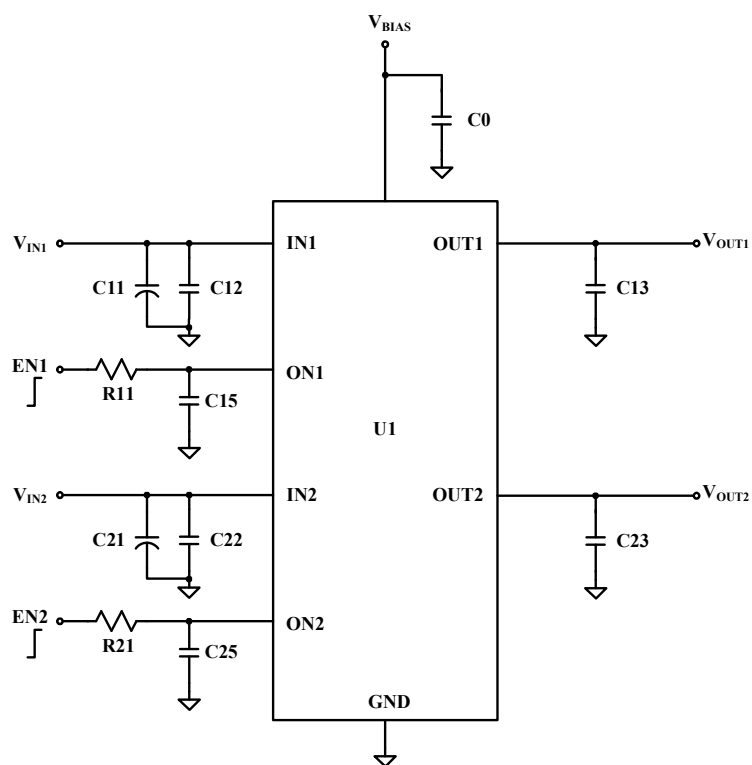


Figure1. Schematic Diagram



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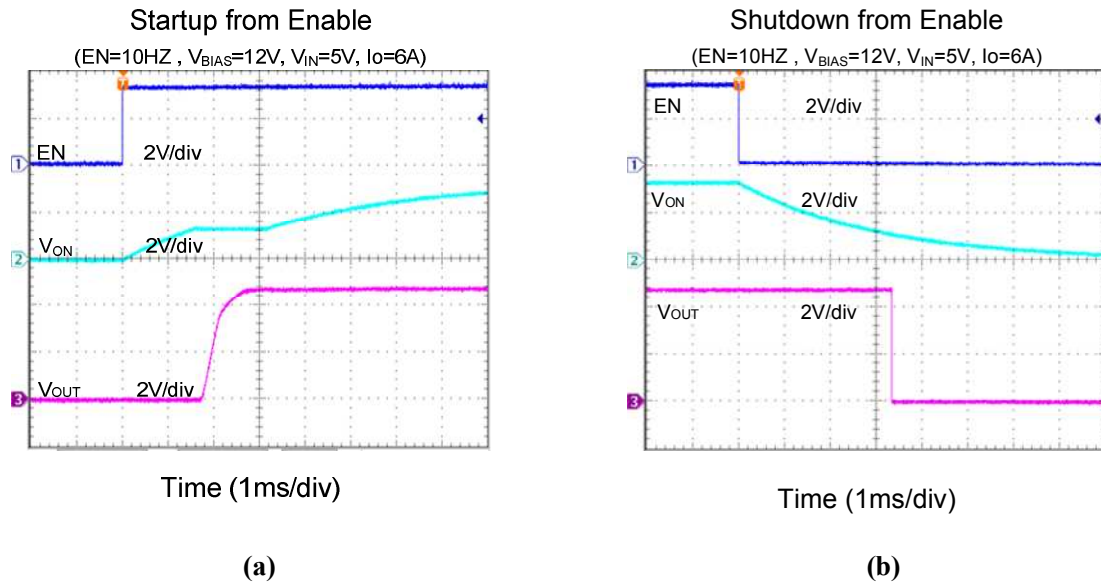


Figure 2. Test Results

(a) En on, Vin=5V, Rload=0.83Ω

(b) En off, Vin=5V, Rload=0.83Ω

Quick Start Guide (Refer to Figure 3)

1. Connect the output load to V_{OUT} and GND output connectors. Preset the load current to between 0A and 6A.
2. Preset the input supply to a voltage between 0.6V and 5.5V. Turn the supply off. Connect the input supply to V_{IN} and GND input connectors.
3. Preset the bias supply to a Voltage between V_{IN}+3V and 28V. Turn the supply off. Connect the bias supply to V_{BIAS} and GND input connectors.
4. Turn on the bias and input supply, then measure the output voltage.

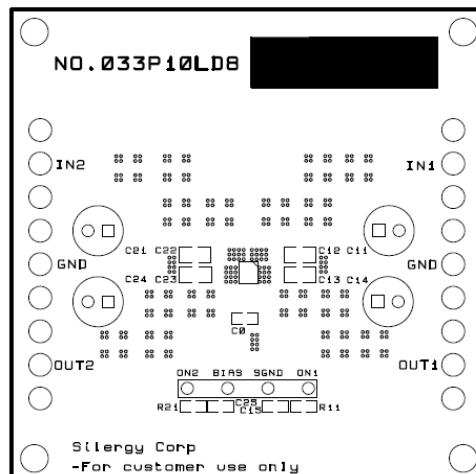


Figure 3. Top Silkscreen

PCB Layout

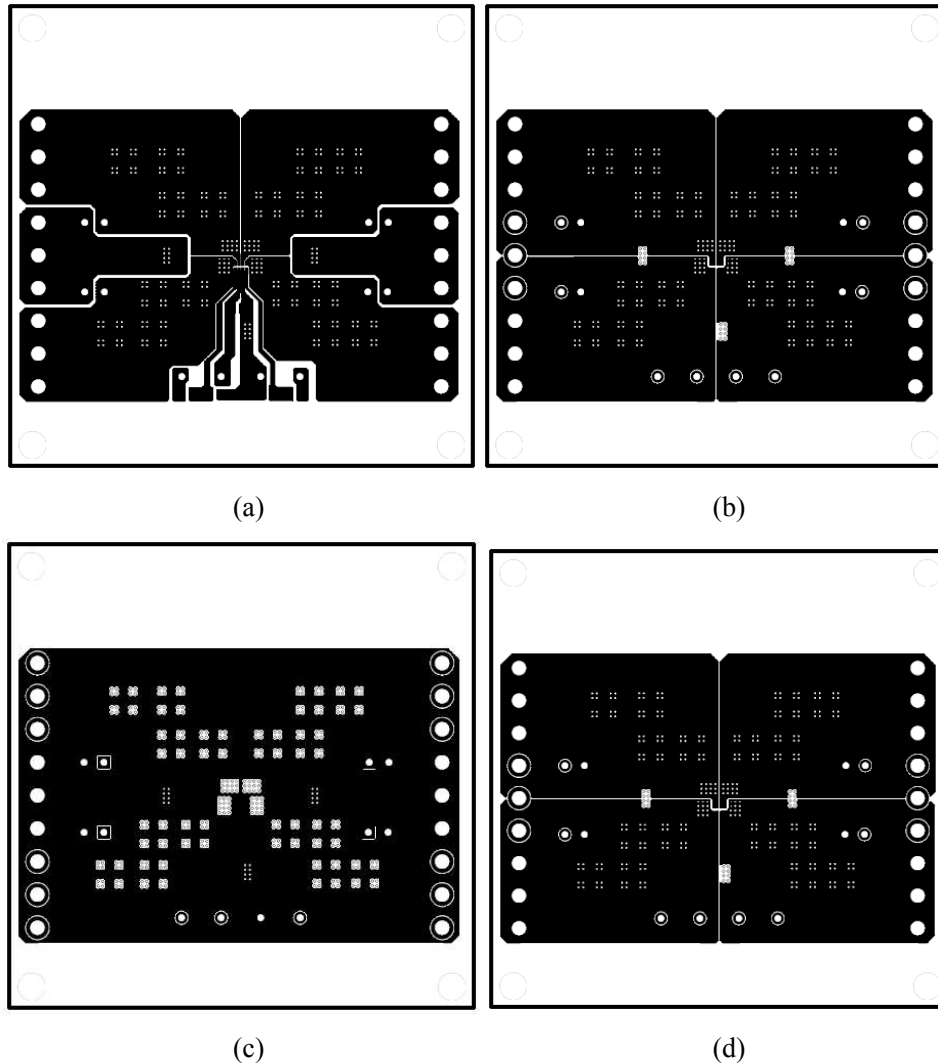


Figure 4. PCB Layout Plots: (a) top layer, (b) Middle layer 1 (c) Middle layer 2, (d) Bottom layer

BOM List

Reference Designator	Description	Part Number	Manufacturer
U1	Ultra-Low Loss Switch	SY6827DFC	Silergy
C0	0.1uF/50V, 0603, X7R	0.1uF/50V, 0603, X7R	TDK
C11, C21	470uF/10V(electrolytic capacitor)		
C12, C13, C22, C23	22uF/6.3V, 0805, X5R	C2012X5R0J226M	TDK
C15, C25	10nF/50V, 0603, X7R	C1608X7R1H103K	
R11, R21	300kΩ, 1%, 0603		