ITS42008-SB-D

Industrial 8-channel PROFET Application Board
User's Manual

ITS42008-SB-D Application Board User Guide

The **ITS42008-SB-D Application Board** allows a fast and simple evaluation of the ITS42008-SB-D 8-channel protected High Side Switch (PROFET) under application-like conditions.

The Application Board provides

Control Input Interface:

- Parallel 8-channel „Plug"-connector Input Interface (1kΩ protection series resistor on each input)
- Optional V_{CC} –plug connector for external control input voltages for all channels that can be manually controlled per channel via DIP-switch on PCB
- Optional 5V-voltage regulator supply (LDO) providing 5V logic levels for input pins (can be as well controlled channel resolved via DIP-switch on PCB)
- A switch to configure the IC between „full-rail V_S referenced input levels" or „5V logic input levels" (grounding)
- Test points for oscilloscope probes for each input

Two Output-pin interface connector types:

- Channel resolved for plugs and channel resolved for wire attach
- 1 LED per output that can be individually disabled via DIP-switch
- Test points for oscilloscope probes for each output

Switch to enable/disable LED and pulldown resistor at Status pin

Switch to control external V_S supply (on/off)

Additional test points for V_S, V_{OUT} (of onboard LDO), GND, etc.

ITS42008-SB-D Application Board
Board Overview

V_{EXT} Supply Voltage for LDO to create 5V logic levels

V_{CC} Joint ext. supply for control pins IN1-8. Controllable per channel via DIP switch J2

V_S Supply for Load - controlled by PROFET

IN1-8
Plugs for direct access of IN1-8

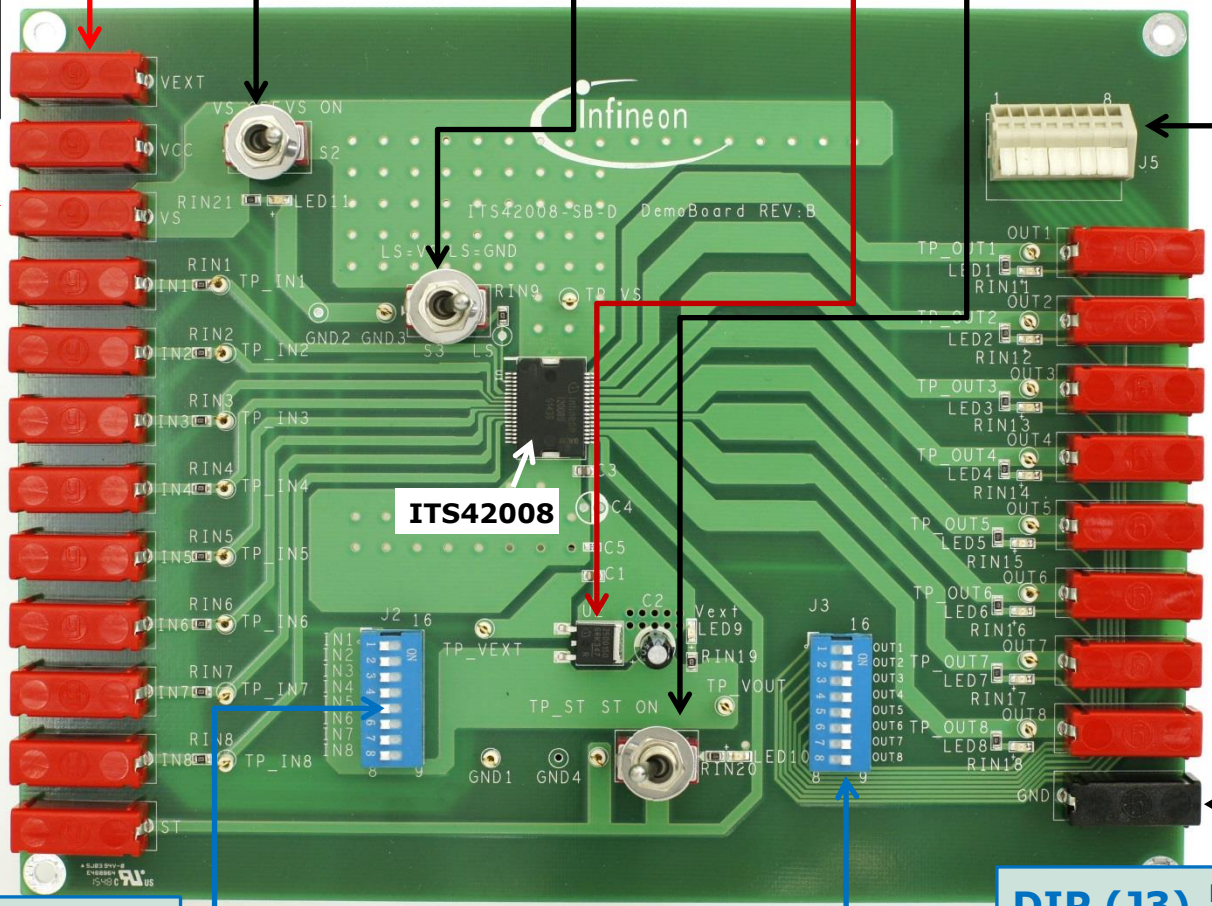
ST Output for Diag/Status information

PCB switch 1
V_S: on/off

PCB switch 2
Configures input levels IN1-8 of IC:
Full rail V_S based levels (via V_{CC}) vs 5V levels

LDO:
Onboard generation of 5V levels

PCB switch 3
Status Pin LED on/off



OUT1-8 (J5)
Plugs for direct access of OUT1-8. Optional to usage of Plugs OUT1-8

OUT1-8
Plugs for direct access of OUT1-8. Optional to usage of Plug J5

GND

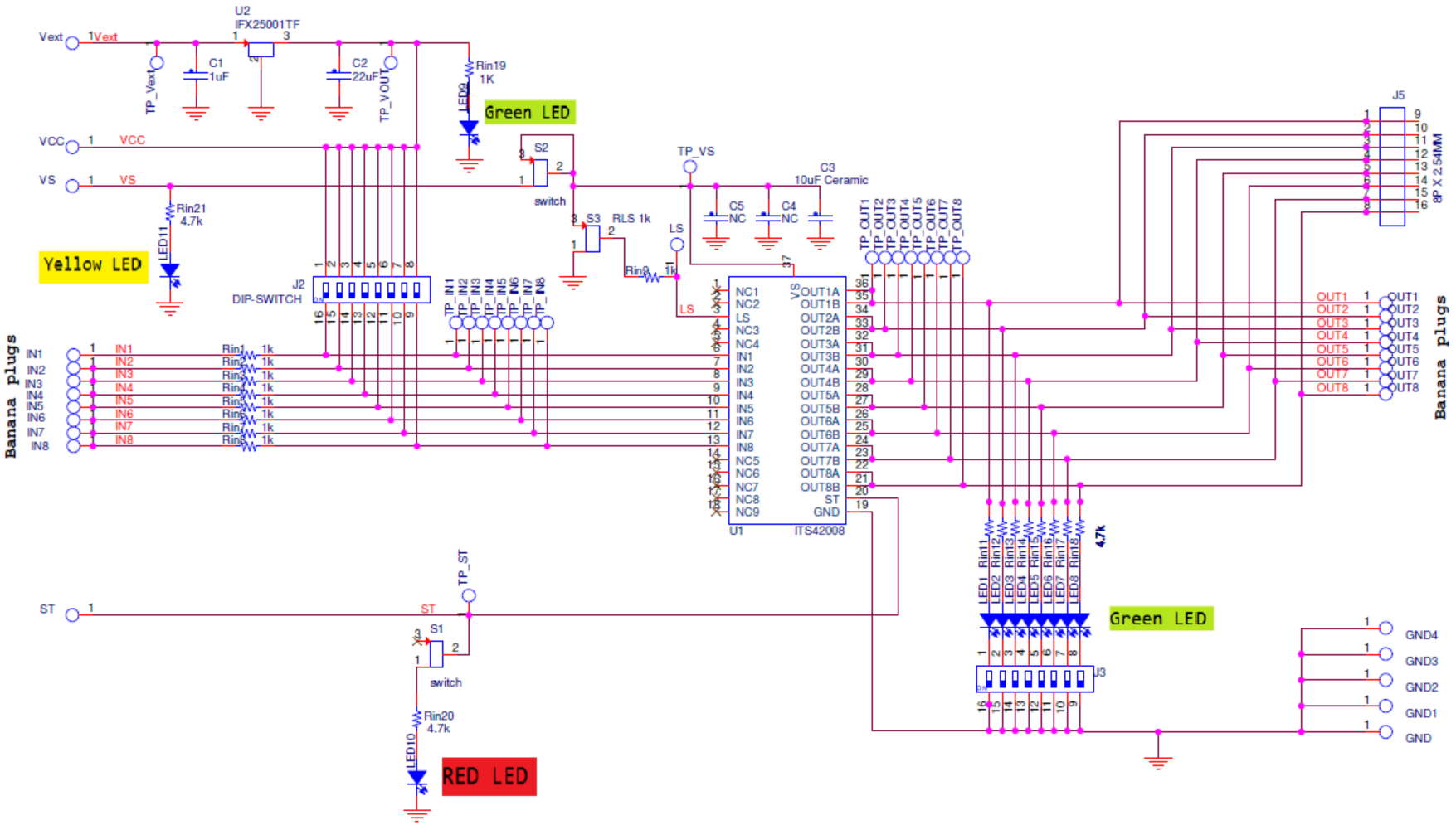
DIP (J2) Manual control CH1-8 when applying Vcc

DIP (J3) Enables/disables signal LED at OUT1-8 per channel

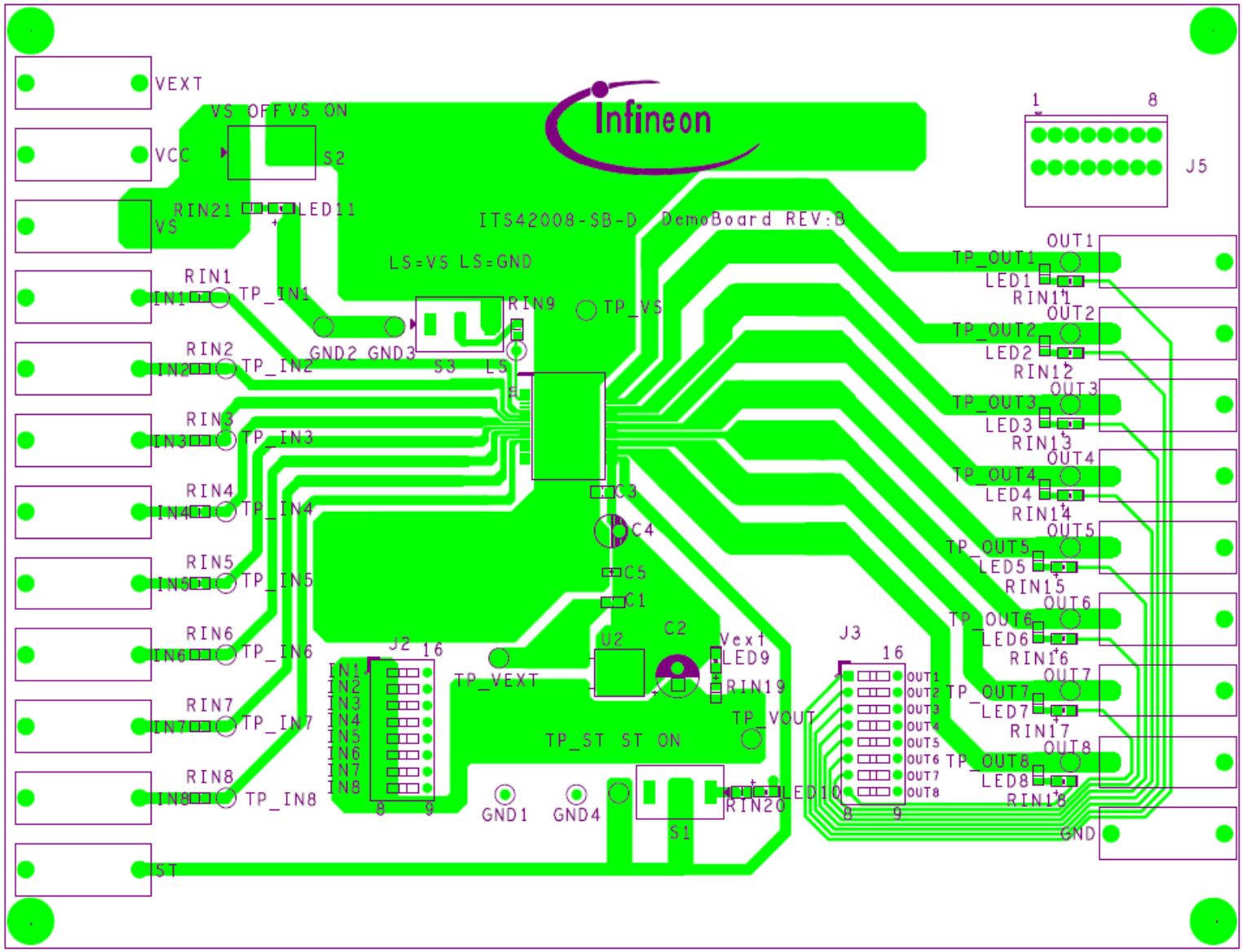
ITS42008-SB-D Application Board Quickstart Guide

1. Connect GND
2. Connect Input signals that control the PROFET channels (switch channels on/off):
   - For usage of 8 individual external input signals to control the PROFET channels:
     - connect the corresponding signals to the plugs of IN1-8.
     - Set PCB-switch Nr.2 according to whether full rail V_S level control logic of or 5V control logic is applied.
   - For usage of one common external input signal (V_{CC}) to control PROFET channels:
     - Connect external input signal to V_{CC}
     - Set PCB-switch Nr.2 according to whether full V_S level control logic of or 5V control logic is applied on V_{CC}.
     - Individual channels can now be switched manually with DIP-switch J2
   - For usage with on-board generated 5V levels by LDO:
     - Connect supply voltage for LDO to Vext. One may also use V_S for feeding the LDO – in this case connect V_S to Vext.
     - Set PCB-switch Nr.2 according to usage of 5V logic.
3. Configure PCB-Switch Nr.3 according to whether Status-pin LED should be enabled or not.
4. Configure via DIP-Switch J3 to whether the signal LEDs of output channel OUT1-8 shall be enabled or disabled.
5. Attach the desired load to the output OUT1-8 of channel 1-8. One may use either of the two provided connector types according the users convenience.
6. Connect supply voltage to V_S and start measurements. PCB-switch Nr.1 can be used to hard switch VS on board.

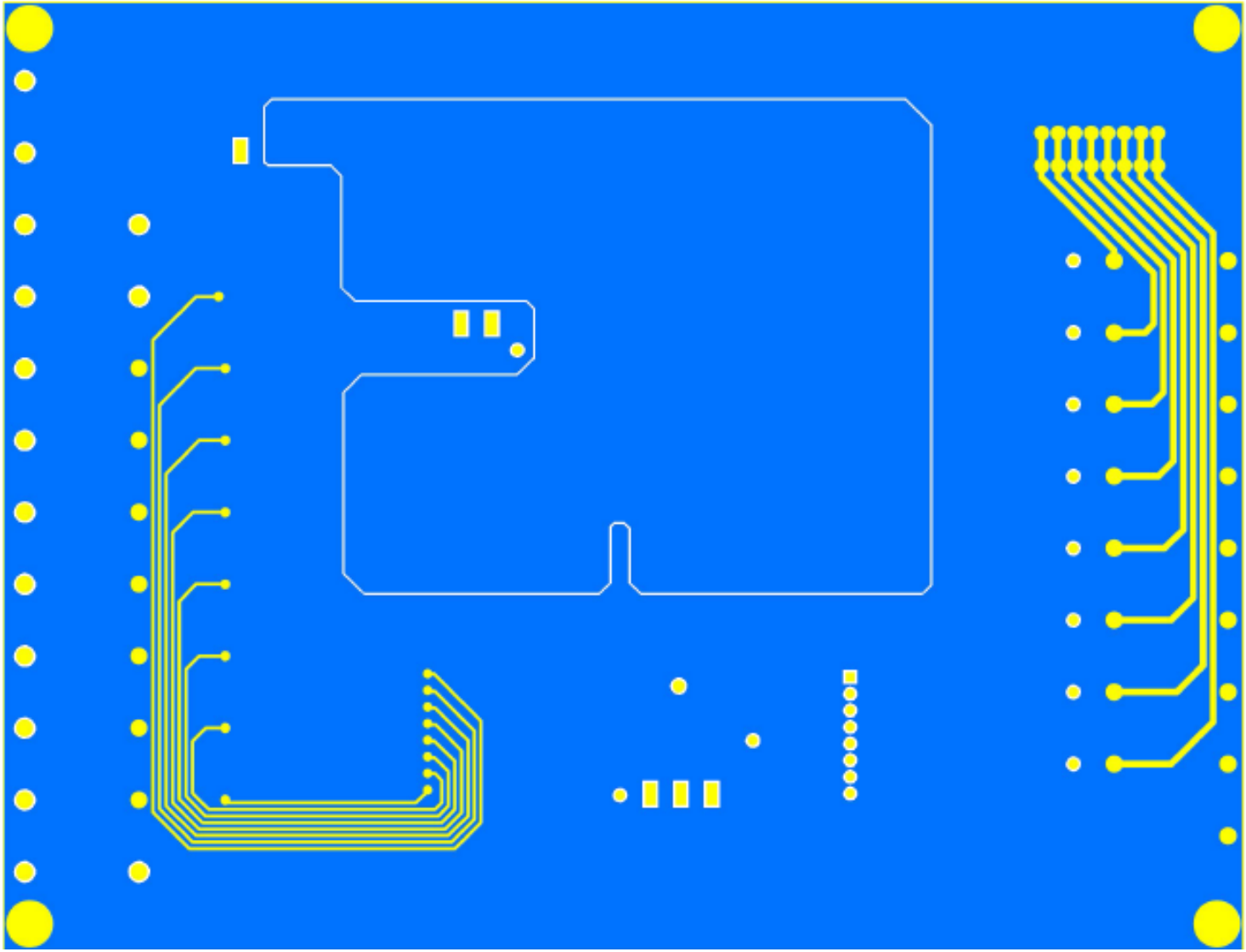
ITS42008-SB-D Application Board Schematics



ITS42008-SB-D Application Board
Top Layer



ITS42008-SB-D Application Board Bottom Layer



ITS42008-SB-D Application Board Order Information

Type	SP#	OPN
DEMOBOARD ITS42008	**SP001435398**	**DEMOBOARDITS42008TOBO1**

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