PROFET Demo Kit

BTS 5241L
BTS 5234G
BTS 5230GS
BTS 6143D

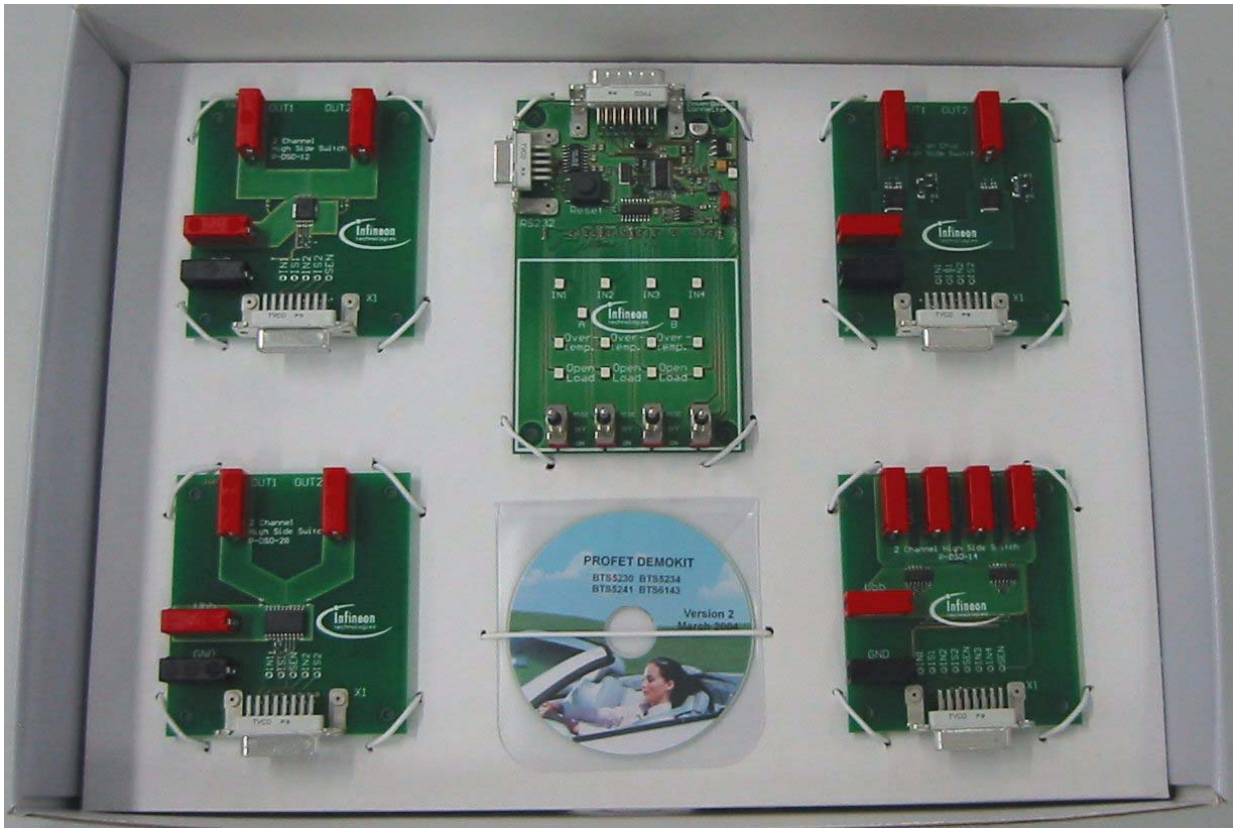
Automotive Power

Infineon technologies

Never stop thinking.

Preface

The PROFET Demo Kit is a versatile tool to demonstrate the functions of the BTS 5241L, BTS 5234G, BTS 5230GS and BTS 6143D. It is an ideal tool to become familiar with the performance of the devices.



The PROFET Demo Kit consists of five different boards devided in two types. The PROFET are mounted on the power boards which also contain 4 mm plug sockets for power supply and loads. The power boards are connected via a D-SUB-15 connector to the control board. The complete PROFET Demo Kit is reverse polarity protected.

There are four different power boards available. The P-DSO-12 board contains BTS 5241L, a dual channel PROFET in P-DSO-12 power package. The P-DSO-20 board is equipped with BTS 5234G, a dual channel PROFET in P-DSO-20 package. Two BTS 5230GS dual channel PROFET in P-DSO-14 package are mounted on the P-DSO-14 board. Two BTS 6143D high current PROFET are available on the Power HIC board.

1 Getting Started

This chapter is intended to describe a step by step procedure to get the system running the first time. For detailed information about the hardware and software of the PROFET Demo Kit, please refer to the “Tool Description” document.

1.1 Usage of Hardware

The hardware is intended to be used the following way:

1. select one of the power boards
2. connect the control board
3. connect 12 V bulbs to the OUTx plugs of the power boards according to following table:

Power Board	Chanel 1	Channel 2	Channel 3	Channel 4
P-DSO-12	21 W + 21 W + 5 W	21 W + 21 W + 5 W	-	-
P-DSO-20	21 W	21 W	-	-
P-DSO-14	10 W	10 W	10 W	10 W
Power HIC	55 W	60 W	-	-

4. connect a 12 V power supply, which is able to drive the loads’ current, to the VBB and GND plug of the power board. The control board is supplied via the power board.
5. check, if the jumper at the control board is placed in position “normal”
6. occasionally, the reset button has to be pressed to start-up the system after power up
7. use switches to switch on the loads

To see the performance and protection features of the device, following evaluation could be performed:

- Open Load: Remove the load of one channel completely
  The open load LED of that channel will be switched on.
- Low load: Reduce the load of one channel (e.g. P-DSO-12: Remove one 21 W bulb)
  The open load LED is enabled, when that channel is switched on.
- Short Circuit to GND: Short Circuit one channel
  The over temperature LED is enabled, when that channel is switched on.
- Reverse Polarity:[1)] Connect the power supply in reverse polarity.
  All loads will be switched on

Note: Please keep in mind that short circuit evaluation as well as normal power dissipation will heat up the power devices. Harmful temperatures can be reached at the device packages and the PCB!

[1)] the control board is reverse polarity protected

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