Document Number: KTPF0100SKTUG
Rev. 1.0, 6/2013

KITPF0100SKTEVBE Programming Socket

Configures PF Family Devices

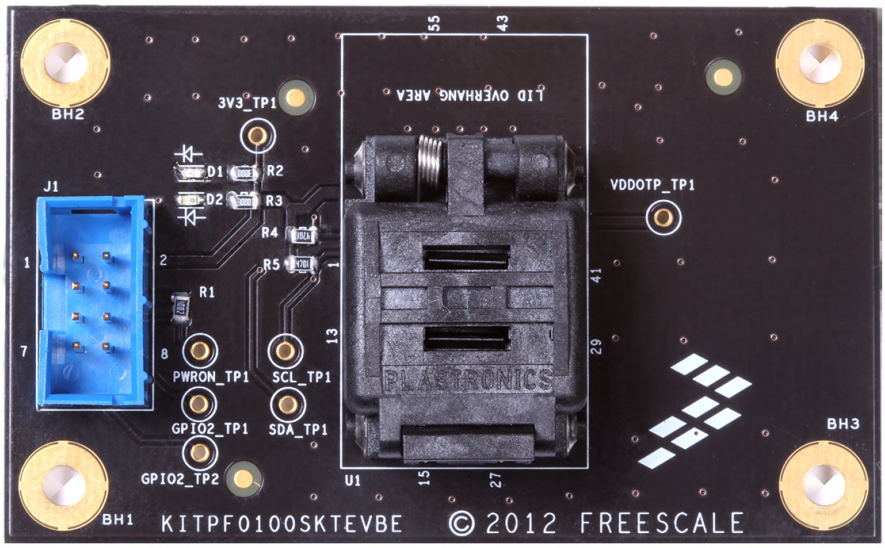

Figure 1. PF Programming Socket (KITPF0100SKTEVBE)

Table of Contents

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1 Kit Contents/Packing List

- KITPF0100SKTEVBE socket board
- Warranty card and technical support brochure

2 Jump Start

- Go to www.freescale.com/analogtools
- Locate your kit
- Review your Tool Summary Page
- Look for

- Download documents, software and other information

3 Important Notice

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This evaluation kit is intended for use of ENGINEERING DEVELOPMENT OR EVALUATION PURPOSES ONLY. It is provided as a sample IC pre-soldered to a printed circuit board to make it easier to access inputs, outputs, and supply terminals. This EVB may be used with any development system or other source of I/O signals by simply connecting it to the host MCU or computer board via off-the-shelf cables. This EVB is not a Reference Design and is not intended to represent a final design recommendation for any particular application. Final device in an application will be heavily dependent on proper printed circuit board layout and heat sinking design as well as attention to supply filtering, transient suppression, and I/O signal quality.

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4 Introduction

The KITPF0100SKTEVBE is an interface tool featuring a 56-pin QFN socket that is designed for programming the PF0x00 one-time programmable (OTP) registers in standalone PF0x00 parts by using the KITPFPGMEVME programmer.

5 PF Programmer

The PF Programmer (KITPFPGMEVME) is a development tool designed to provide easy configuration of the PF Series devices and to facilitate prototyping and programming the device's (OTP) one-time programmable fuses. The programmer kit comes with a PF series programmer, a flat ribbon cable (eight-conductor) and a mini-USB cable, as shown in Figure 2.

Figure 2. KITPFPGMEVME PF Series Programmer

6 Additional Required Equipment

- USB-enabled PC with Windows XP or higher
- PF Series Programmer
- Flat ribbon cable (8-conductor)
- Mini USB cable

7 Setting Up and Using the Hardware

1. Insert the PF0x00 chip into the socket U1. Make sure pin 1 is correctly located on the top-left corner of the socket as shown in Figure 3.

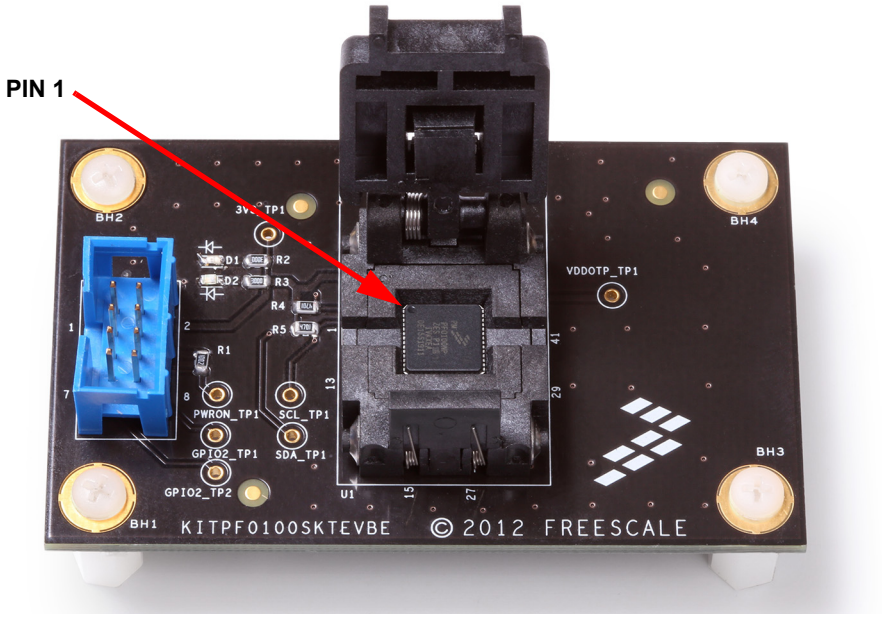


Figure 3. PF0x00 Pin 1 Location

2. Connect the communication ribbon cable (not included) on J1. Figure 4 shows the correct signal allocation from the PF Programmer (KITPFPGMEVME) to the KITPF0100SKTEVBE socket board.

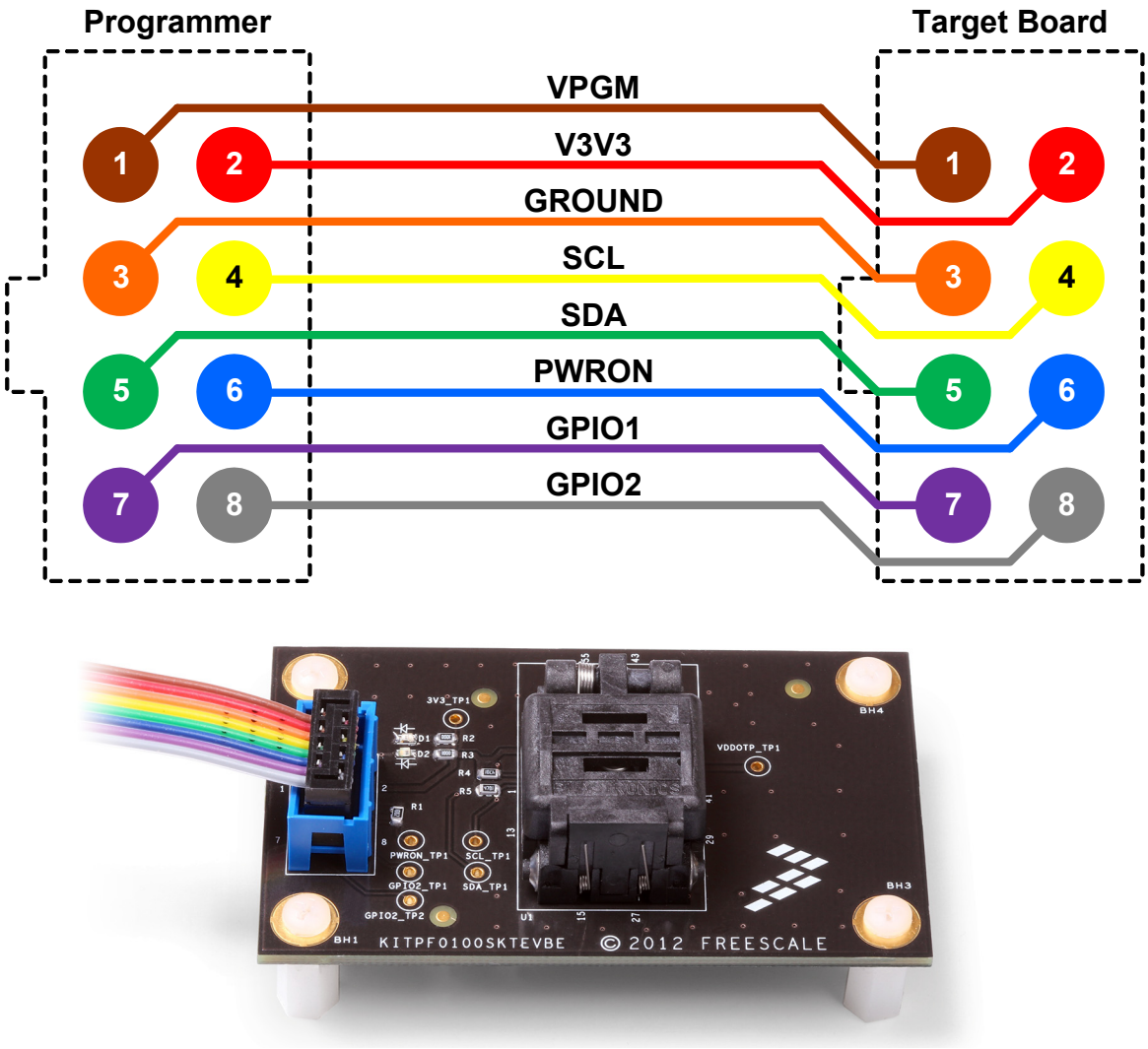
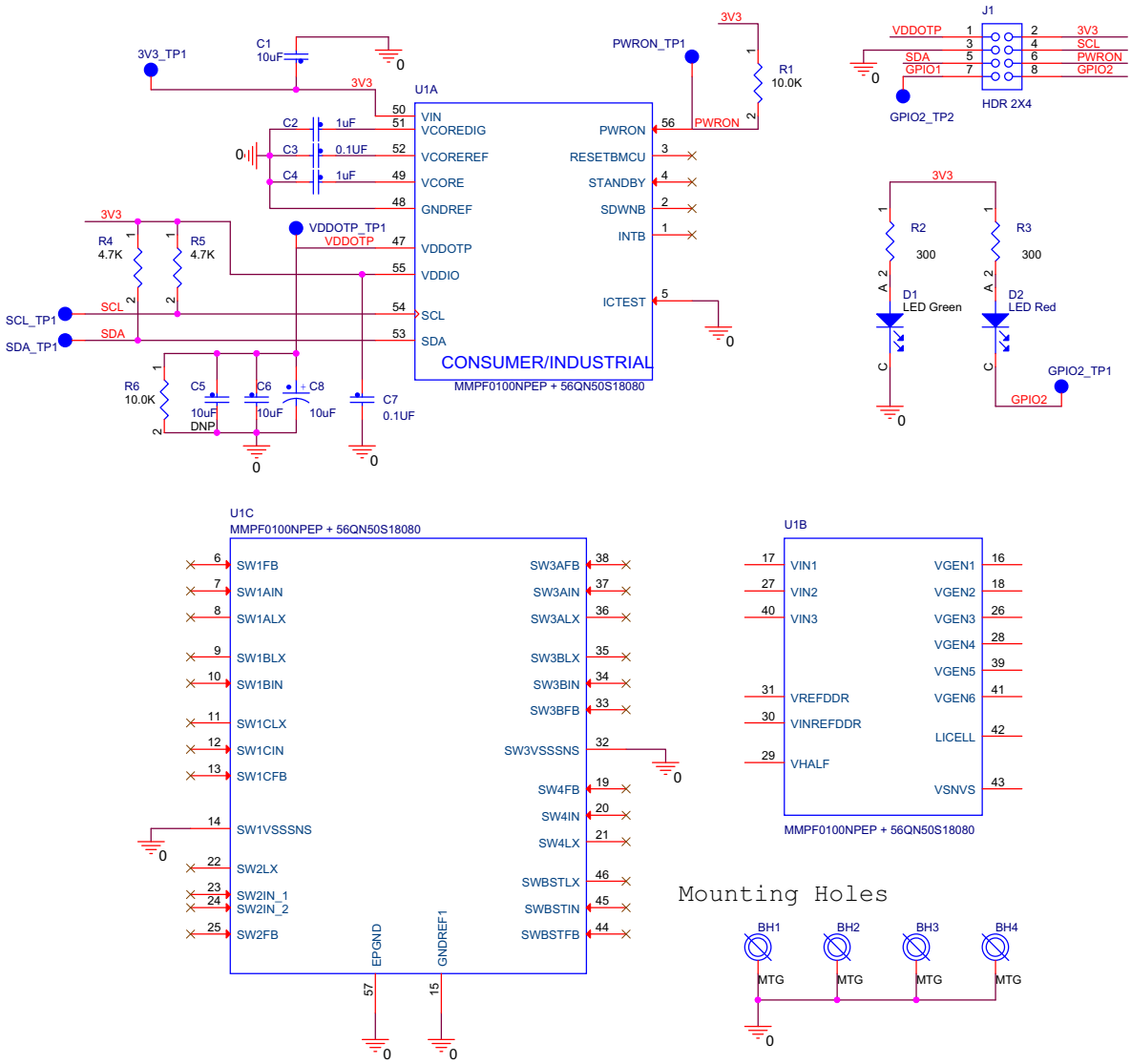


Figure 4. KITPF0100SKTEVBE Connection Diagram

3. Follow the programming procedure outlined in the user's guide "KITPFPGMEVME Programmer for PF Series Devices" (document number KTPFPGMEVMEUG). See the "References" section for details on this document as well as related resources.

8 Schematic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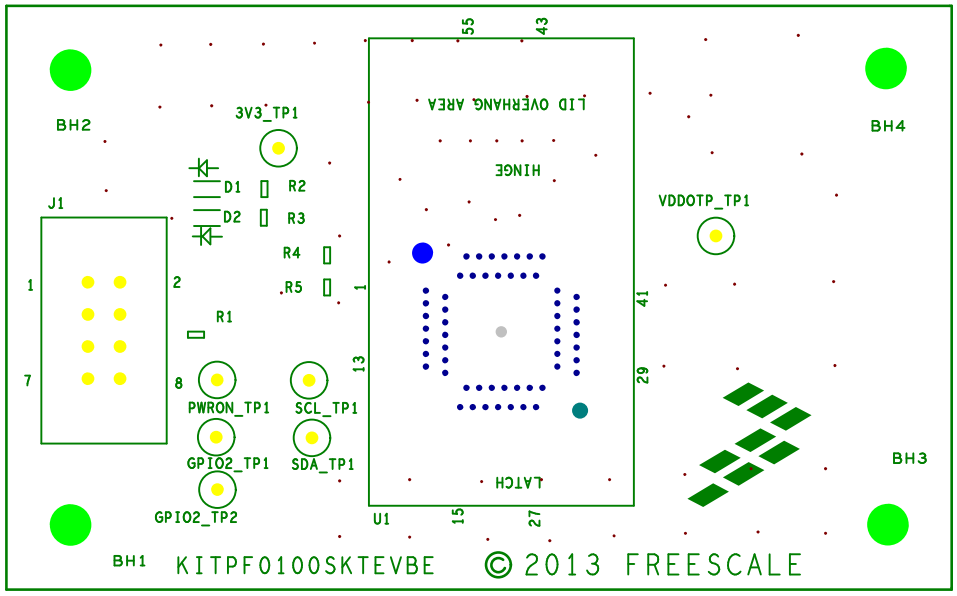
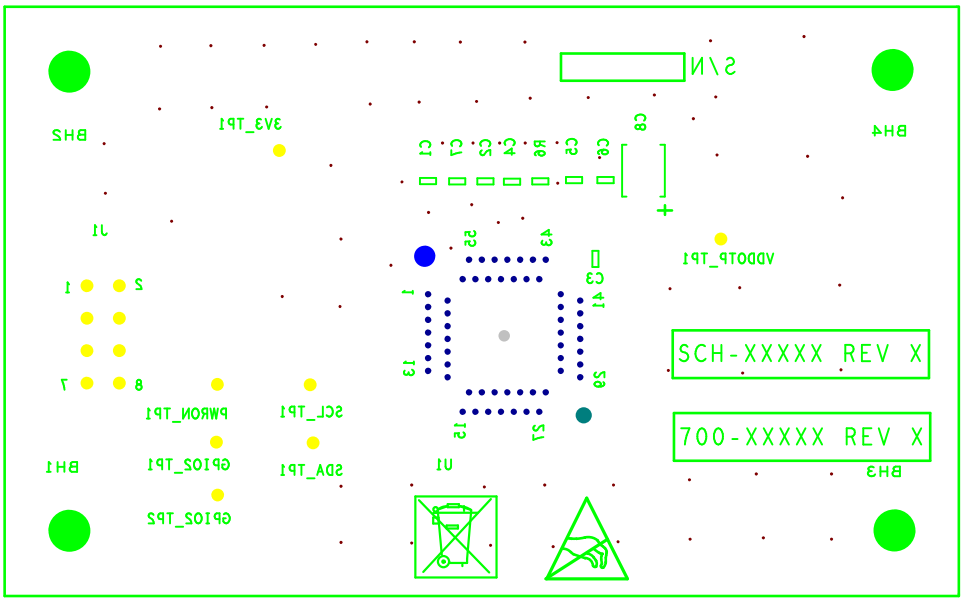
C1
10uF
3V3
U1A
VIN
VCOREDIG
VCOREREF
VCORE
GNDREF
VDDOTP
VDDIO
SCL
SDA
PWRON
RESETBMCU
STANDBY
SDWNB
INTB
ICTEST
CONSUMER/INDUSTRIAL
MMPF0100NPEP + 56QN50S18080
PWRON_TP1
R1
10.0K
C2 1uF
C3 0.1UF
C4 1uF
R4 4.7K
R5 4.7K
VDDOTP_TP1
SCL_TP1
SDA_TP1
R6 10.0K
C5 10uF DNP
C6 10uF
C8 10uF
C7 0.1UF
J1
VDDOTP
SDA
GPIO1
3V3
SCL
PWRON
GPIO2
HDR 2X4
GPIO2_TP2
R2 300
R3 300
D1 LED Green
D2 LED Red
GPIO2_TP1
U1C
MMPF0100NPEP + 56QN50S18080
SW1FB
SW1AIN
SW1ALX
SW1BLX
SW1BIN
SW1CLX
SW1CIN
SW1CFB
SW1VSSSNS
SW2LX
SW2IN_1
SW2IN_2
SW2FB
SW3AFB
SW3AIN
SW3ALX
SW3BLX
SW3BIN
SW3BFB
SW3VSSSNS
SW4FB
SW4IN
SW4LX
SWBSTLX
SWBSTIN
SWBSTFB
EPGND
GNDREF1
U1B
VIN1
VIN2
VIN3
VREFDDR
VINREFDDR
VHALF
VGEN1
VGEN2
VGEN3
VGEN4
VGEN5
VGEN6
LICELL
VSNVS
MMPF0100NPEP + 56QN50S18080
Mounting Holes
BH1
BH2
BH3
BH4
MTG

9 Board Layout

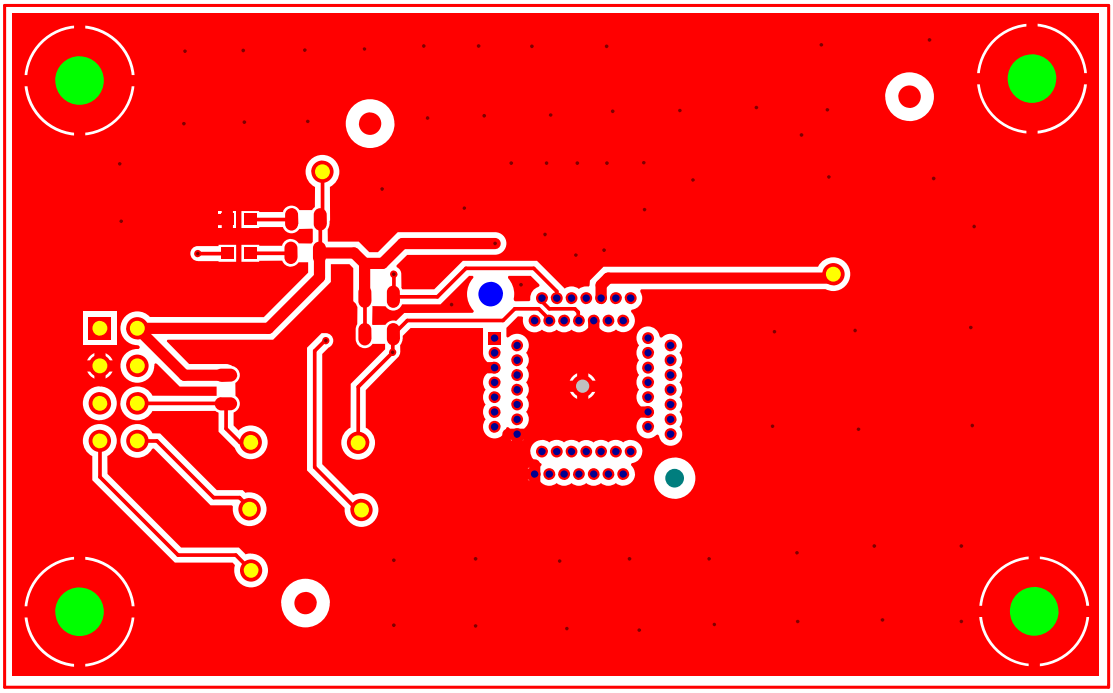
9.1 Assembly Layer Top



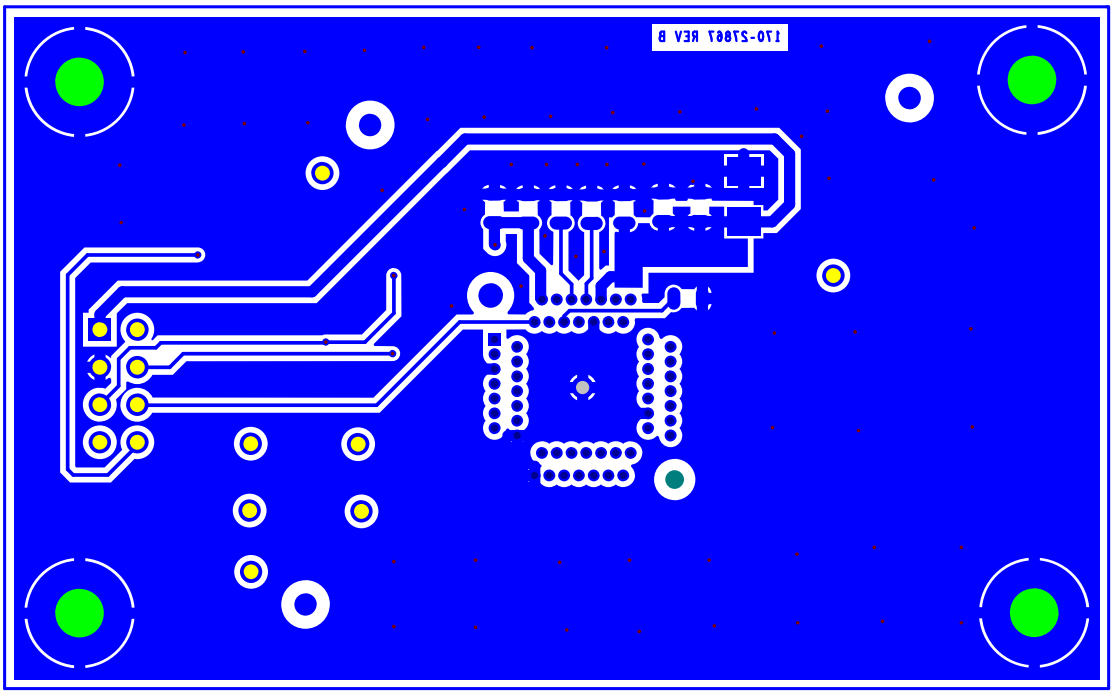
9.2 Assembly Layer Bottom



9.3 Top Layer Routing



9.4 Bottom Layer Routing



10 References

Document Number and Description		URL
MMPF0100	Data sheet	http://www.freescale.com/files/analog/doc/data_sheet/MMPF0100.pdf
MMPF0100ER	Errata	http://www.freescale.com/files/analog/doc/errata/MMPF0100ER.pdf
PFSERIESFS	Fact Sheet	http://www.freescale.com/files/analog/doc/fact_sheet/PFSeriesFS.pdf
KTPFPGMEVMEUG	User's Guide	http://www.freescale.com/files/analog/doc/user_guide/KTPFPGMEVMEUG.pdf
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Power Management Home Page		http://www.freescale.com/PMIC
Analog Home Page		http://www.freescale.com/analog

11 Revision History

Revision	Date	Description of Changes
1.0	6/2013	Initial Release

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