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Revisions

Rev	Description	Date	Approved
A	Release to A085 (Production)	30-Aug-11	
B	Release to A085 (Production) (Net Changes VDDA & VSSA) Replaced 344-01243 with 312-80253 Replaced 750-77266 with 750-77260	6-Sep-11	DK

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Microcontroller Solutions Group

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Austin, TX 78735-8598

ICAP Classification: FCP: FIUO: X PUBI:

Designer: J.Antony (L&T)	Drawing Title: **TWR-MC56F8400**	
Drawn by: J.Antony (L&T)	Page Title: **Table of Contents/Revisions**	
Approved: Hubbard Marilyn	Size C	Document Number SCH-27259 PDF: SPF-27259 — Rev B
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1. Unless Otherwise Specified:
   All resistors are in ohms
   All capacitors are in uF
   All voltages are DC
   All polarized capacitors are aluminum electrolytic

2. Interrupted lines coded with the same letter or letter combinations are electrically connected.

3. Device type number is for reference only. The number varies with the manufacturer.

4. Special signal usage:
   _B Denotes - Active-Low Signal
   <> or [] Denotes - Vectored Signals

5. Interpret diagram in accordance with American National Standards Institute specifications, current revision, with the exception of logic block symbology.

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ICAP Classification: FCP: ___ FIUO: X PUBI: ___

Drawing Title: **TWR-MC56F8400**

Page Title: **Notes**

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Sheet 7

OSBDM Circuit

USB Mini B Connector

MC9S08JM60

Voltage Translation

OSBDM/JTAG Header

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LEDs

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MIC

Sheet 6

IRQ

Sheet 6

Motor Control Board Connector

Auxiliary Connector

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MC56F8400

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UART

JM60 Translators

JM60 Source Selectors

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Thermistors

Headers & LP Filters

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Power Supply Circuits

VSSA/VDDA filter

Sheet 4

Crystal

Sheet 6

CAN

Transceiver

Header

Sheet 8

Elevator Connectors

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ICAP Classification: FCP: ___ FIUO: X PUBI: ___

Drawing Title: **TWR-MC56F8400**

Page Title: **Block Diagram**

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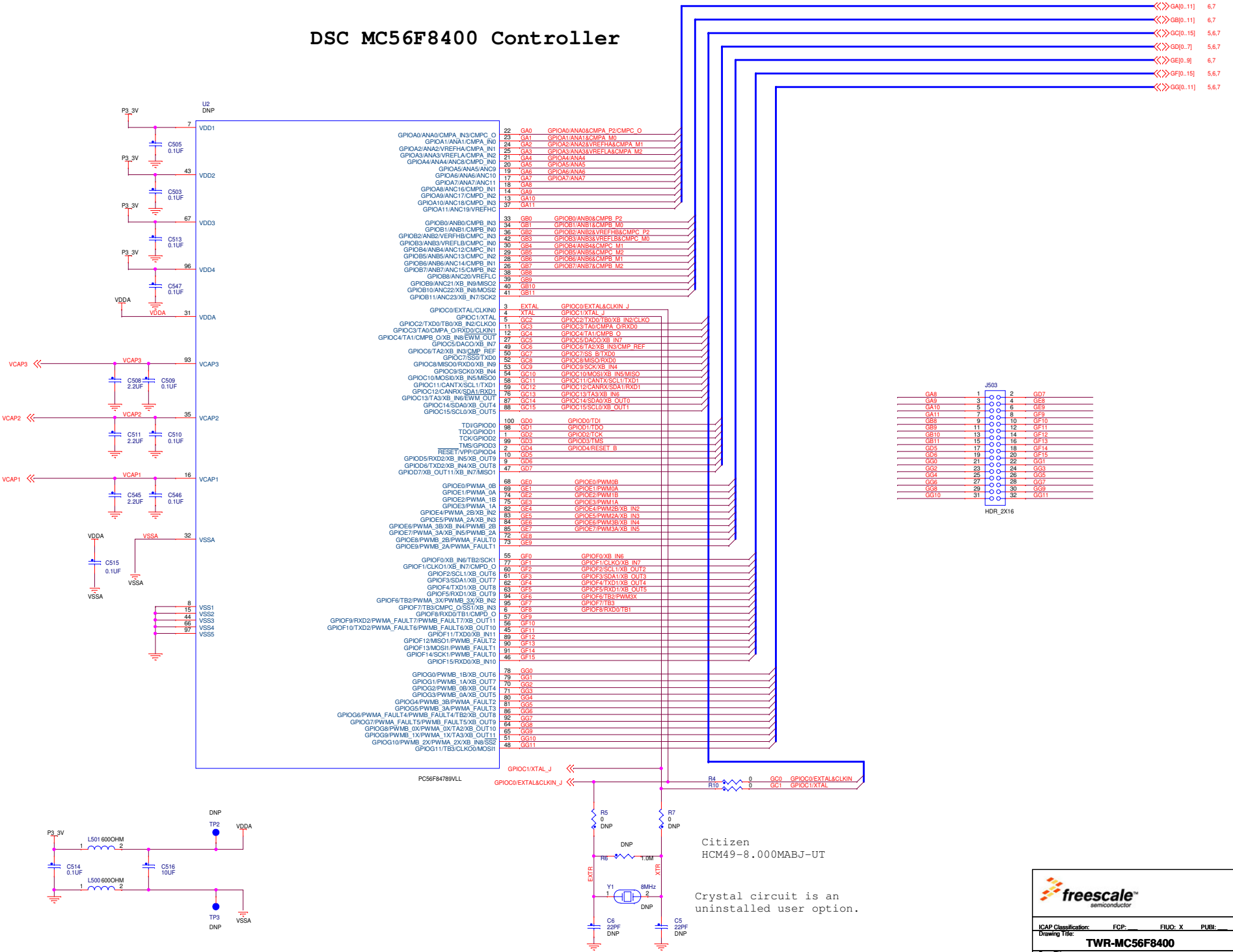
DSC MC56F8400 Controller



Citizen
HCM49-8.000MABJ-UT

Crystal circuit is an uninstalled user option.

The DSC footprint and the ZIF socket are concentric on the board. Boards are built with a surface mounted DCS or with the DSC in the socket - not both.

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ICAP Classification: FCP: ___ FIUO: X PUBI: ___

Drawing Title: **TWR-MC56F8400**

Page Title: **DSC MC56F8400 Controller**

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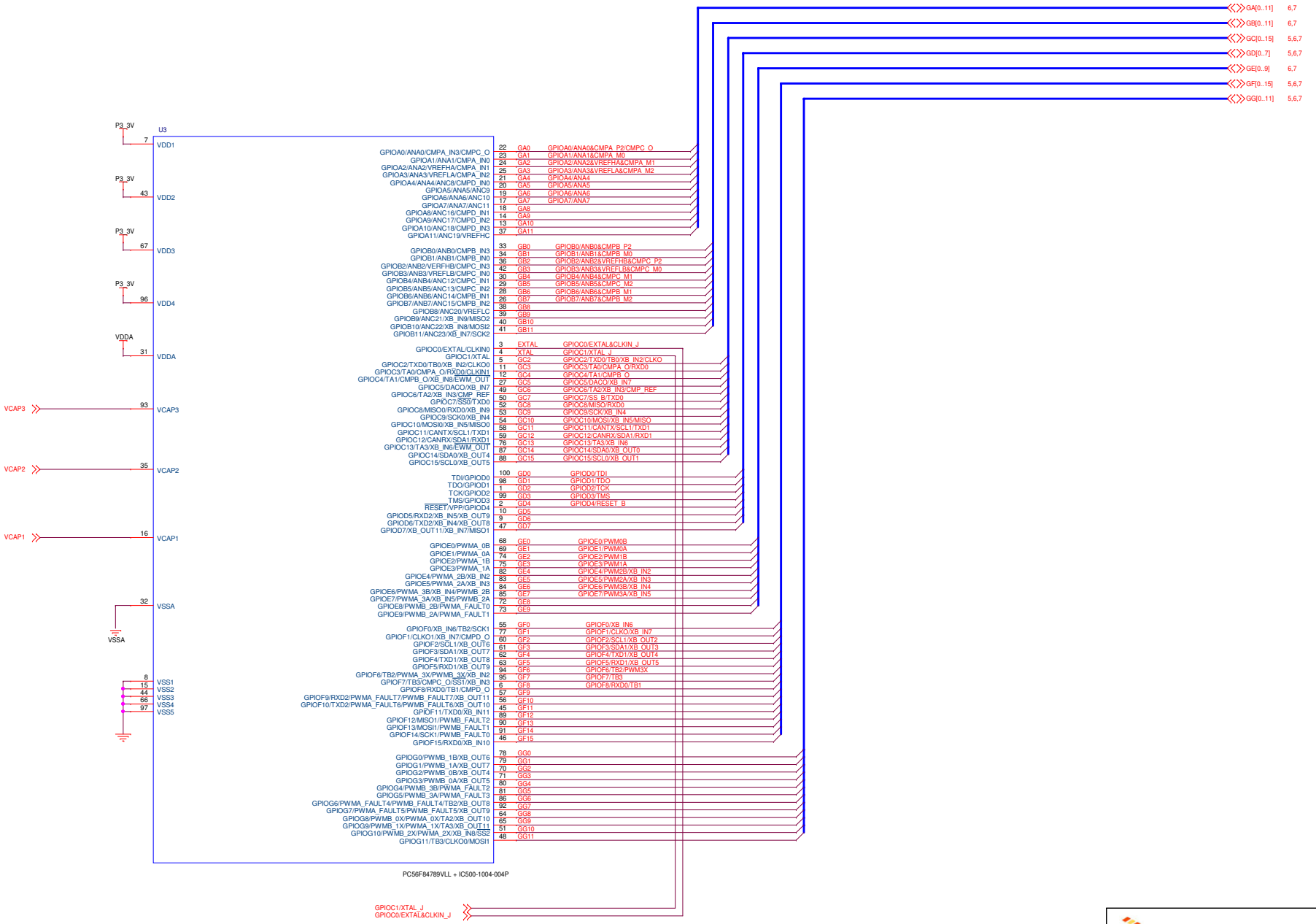
DSC MC56F8400 100 PIN LQFP ZIF SOCKET



This ZIF Socket is populated only on prototype boards

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ICAP Classification:	FCP: ___	FIUO: X	PUBI: ___
Drawing Title:	TWR-MC56F8400		
Page Title:	MC56F8400 100 PIN ZIF SKT		
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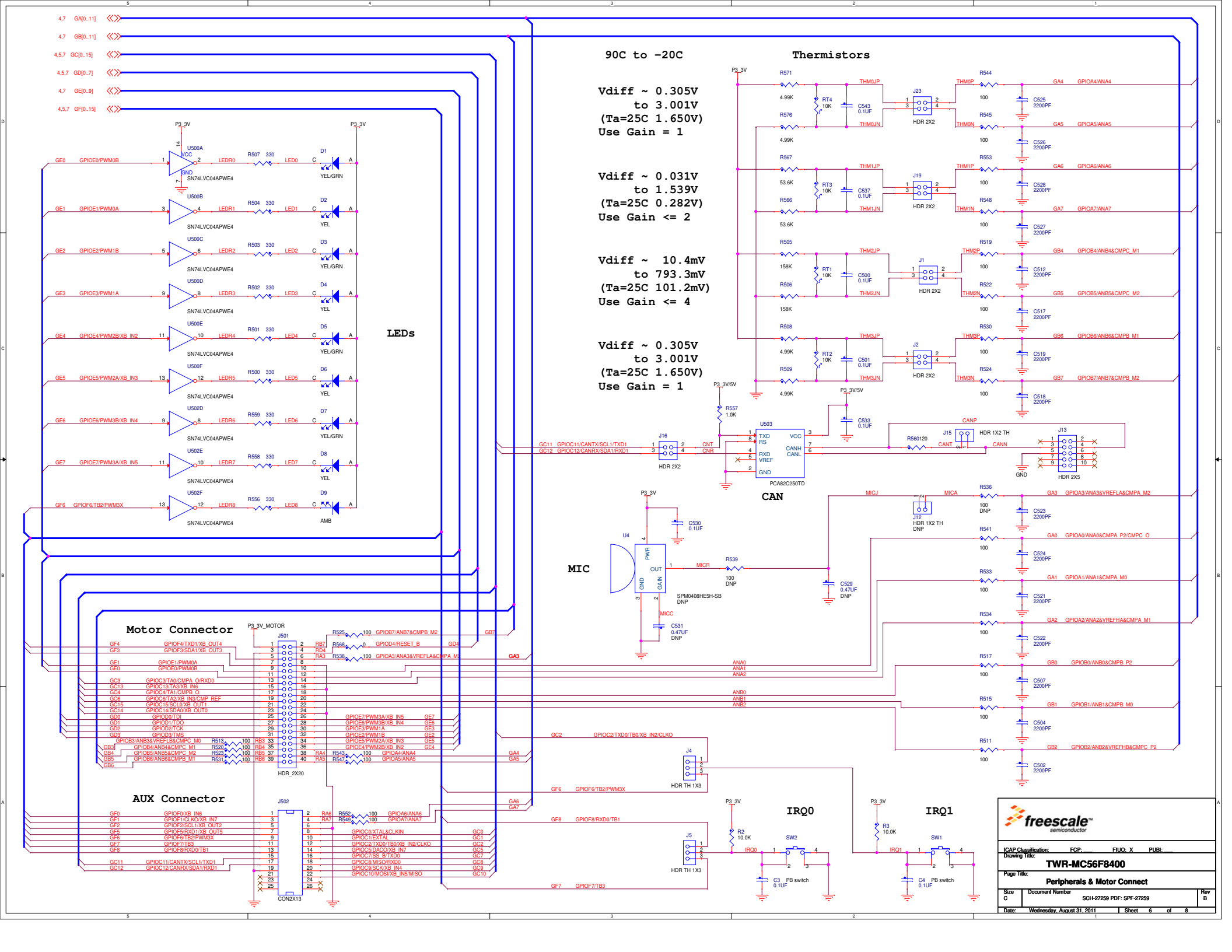
LEDs
Thermistors
90C to -20C
Vdiff ~ 0.305V
to 3.001V
(Ta=25C 1.650V)
Use Gain = 1
Vdiff ~ 0.031V
to 1.539V
(Ta=25C 0.282V)
Use Gain <= 2
Vdiff ~ 10.4mV
to 793.3mV
(Ta=25C 101.2mV)
Use Gain <= 4
Vdiff ~ 0.305V
to 3.001V
(Ta=25C 1.650V)
Use Gain = 1
CAN
MIC
Motor Connector
AUX Connector
IRQ0
IRQ1
SN74LVC04APWE4
PCA82C250TD
SPM0408HE5H-SB
HDR 2X2
HDR 2X20
HDR 1X2 TH
HDR 2X5
HDR TH 1X3
CON2X13
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ICAP Classification:
FCP:
FIUO: X
PUBI:
Drawing Title:
TWR-MC56F8400
Page Title:
Peripherals & Motor Connect
Size C
Document Number
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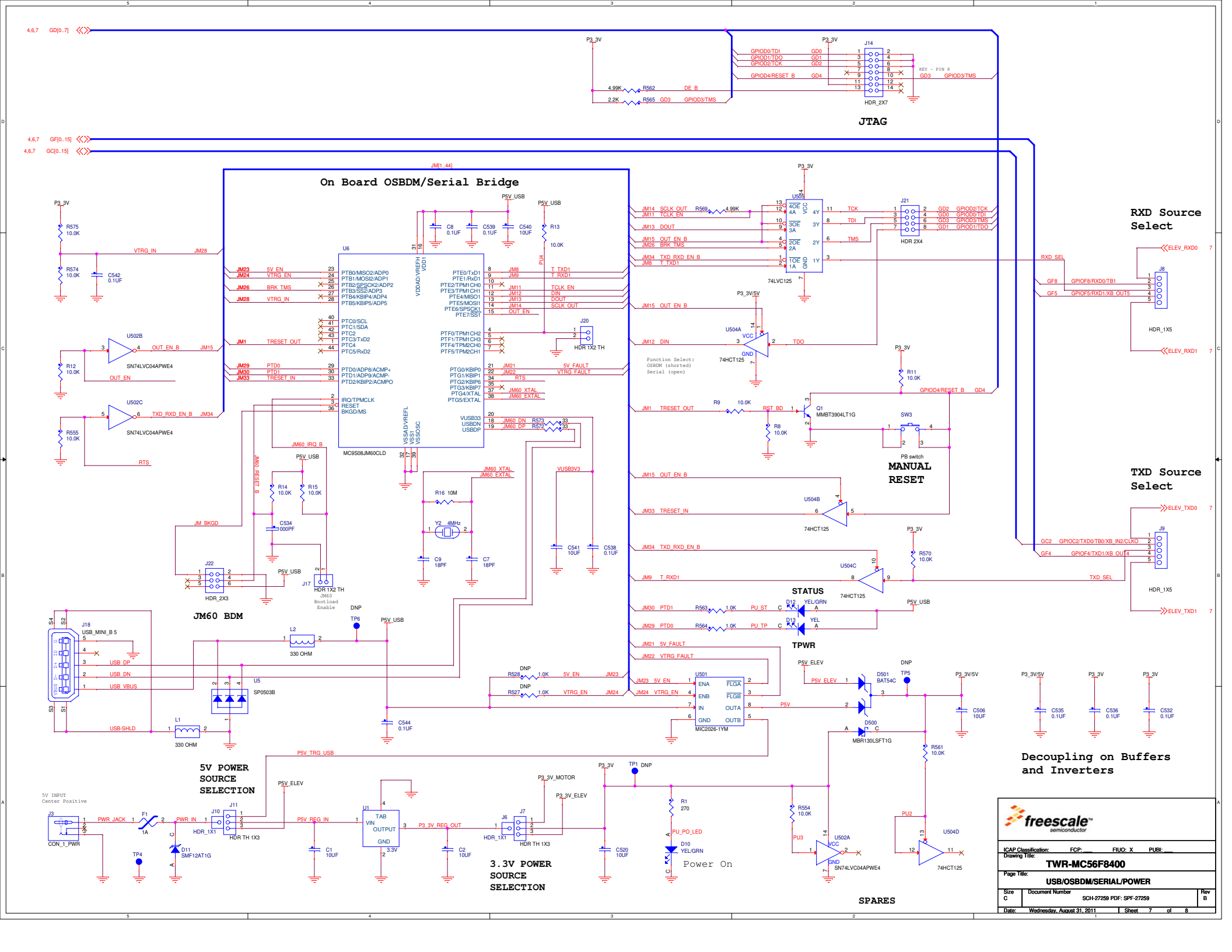
JTAG
On Board OSBDM/Serial Bridge
RXD Source Select
TXD Source Select
MANUAL RESET
STATUS
TPWR
JM60 BDM
5V POWER SOURCE SELECTION
3.3V POWER SOURCE SELECTION
SPARES
Decoupling on Buffers and Inverters
Power On
MC9S08JM60CLD
SN74LVC04APWE4
74LVC125
74HCT125
74HCT1G125
MIC2026-1YM
SP0503B
MBR130LSFT1G
MMBT3904LT1G
BAT54C
SMF12AT1G
HDR_2X7
HDR 2X4
HDR_1X5
HDR 1X2 TH
HDR_2X3
HDR TH 1X3
USB_MINI_B 5
CON_1_PWR
freescale semiconductor
ICAP Classification:
FCP:
FIUO: X
PUBI:
Drawing Title:
TWR-MC56F8400
Page Title:
USB/OSBDM/SERIAL/POWER
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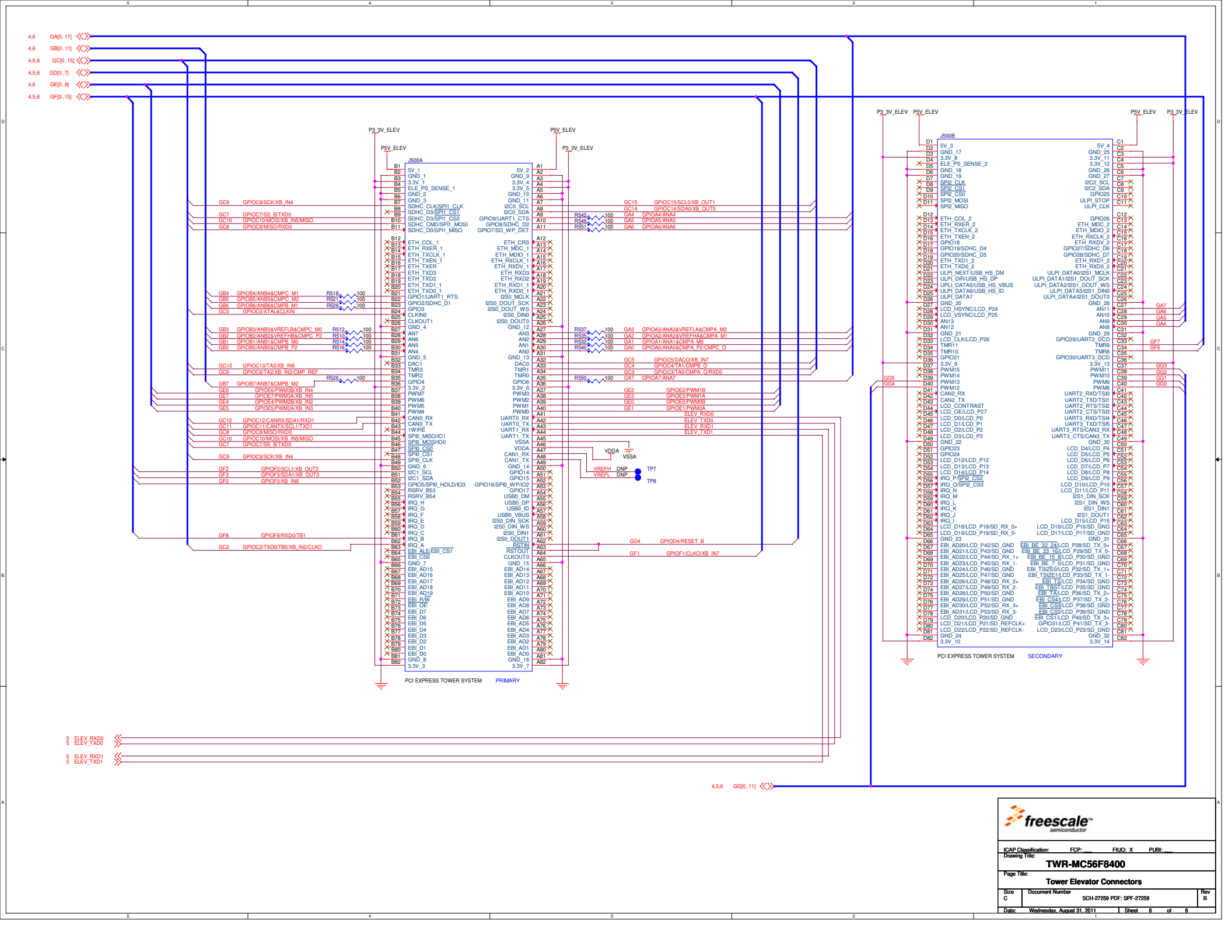
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4,6 GB[0..11]
4,5,6 GC[0..15]
4,5,6 GD[0..7]
4,6 GE[0..9]
4,5,6 GF[0..15]
P3_3V_ELEV
P5V_ELEV
J500A
PCI EXPRESS TOWER SYSTEM PRIMARY
J500B
PCI EXPRESS TOWER SYSTEM SECONDARY
VDDA
VSSA
TP7
TP8
5 ELEV_RXD0
5 ELEV_TXD0
5 ELEV_RXD1
5 ELEV_TXD1
4,5,6 GG[0..11]
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ICAP Classification: FCP: ___ FIUO: X PUBI: ___
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Tower Elevator Connectors
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