Revision History

Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A

Cannot open file D:\Sol-Del\CC31XX\R2\Boards\CC3120-BOOST\RevE2\Docs\BlockDiag.png

Orderable: CC3120BOOST
TID #: N/A
Number: WCS001   Rev: A
Svn Rev: Version control disabled
Drawn By:
Engineer: Prajay Madhavan

Designed for: Public Release
Project Title: CC3120BOOST
Sheet Title: Cover Sheet
Assembly Variant: [No Variations]
File: CoverSheet.SchDoc
Contact: http://www.ti.com/support

Mod. Date: 8/16/2016
Sheet: 1 of 4   Size: B

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Orderable: CC3120BOOST	Designed for: Public Release
TID #: N/A	Project Title: CC3120BOOST
Number: WCS001 Rev: A	Sheet Title: Engine
SVN Rev: Version control disabled	Assembly Variant: [No Variations]
Drawn By:	File: 1.Engine.SchDoc
Engineer: Prajay Madhavan	Contact: http://www.ti.com/support

Mod. Date: 1/24/2017
Sheet: 2 of 4   Size: C
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U2 — CC3120RNMARGKR

U1 — MX25R1635FM1IL0

FL1 — DEA202450BT-1294C1-H

Y1 — 32.768kHz
Y2 — 32.768kHz
Y3 — 40 MHz

Gang Programming Connector — J3

Pin labels (U2):
VDD_ANA1 48, VDD_ANA2 47, VDD_PA_IN 33, VDD_DIG1 9, VDD_DIG2 56, VDD_PLL 24, VDD_RAM 49
VIN_DCDC_ANA 37, VIN_DCDC_PA 39, VIN_DCDC_DIG 44, VIN_IO1 10, VIN_IO2 54
DCDC_ANA_SW 38, LDO_IN1 36, LDO_IN2 25
DCDC_PA_SW_P 40, DCDC_PA_SW_N 41, DCDC_PA_OUT 42
DCDC_DIG_SW 43, DCDC_ANA2_SW_P 45, DCDC_ANA2_SW_N 46
RTC_XTAL_N 52, RTC_XTAL_P 51
SOP0 35, SOP1 34, SOP2/TCXO_EN 21, RESET 32
RESERVED 3, RESERVED 19, RESERVED 29, RESERVED 30
RF_BG 31
FLASH_SPI_CLK 11, FLASH_SPI_CS 14, FLASH_SPI_MISO 13, FLASH_SPI_MOSI 12
UART1_CTS 61, UART1_RTS 50, UART1_TX 55, UART1_RX 57
TEST_58 58, TEST_59 59, TEST_60 60, TEST_62 62
NC 4
HOST_SPI_CLK 5, HOST_SPI_CS 8, HOST_SPI_MISO 7, HOST_SPI_MOSI 6, HOST_INTR 15, HIB 16
WLAN_XTAL_P 23, WLAN_XTAL_N 22
PAD 65

Signal nets:
VBAT_CC, VCC_LDO_3V3, VDD_FL, VDD_ANA, VDD_PA, VDD_DIG_CC, VDD_PLL, VIN_IO, VDD_DIG_CC
PA_SWP, PA_SWN, VDD_PA
CC_UART1_CTS, CC_UART1_RTS, CC_UART1_TX, CC_UART1_RX
CC_WLRS232_TX, CC_WLRS232_RX, CC_WL_UART_TX, CC_NWP_UART_TX
CC_SPI_CLK, CC_SPI_CS, CC_SPI_DOUT, CC_SPI_DIN, CC_IRQ, CC_nHIB
WLAN_XTAL_P, WLAN_XTAL_N
SFL_CLK, SFL_CS, SFL_MISO, SFL_MOSI
MCU_RESET_IN, VCC_MCU_5V
CC_nRESET, SOP_01, TEST_03, TEST_29, TEST_30
VCC_BRD

Component values:
C1 10pF, C2 0.5pF, C3 0.1µF, C4 10µF, C5 0.1µF, C6 1µF, C7 0.1µF, C8 0.1µF, C9 0.1µF, C10 0.1µF
C11 4.7µF, C12 4.7µF, C13 4.7µF, C14 0.1µF, C15 0.1µF, C16 10µF, C17 0.1µF, C18 0.1µF
C19 22pF, C20 22pF, C21 10pF, C22 10pF, C23 0.1µF, C24 10pF, C25 6.2pF, C26 6.2pF, C27 0.1µF
L1 3.3nH, L2 2.2uH, L3, L4 2.2uH
R1 0, R2 0, R3 10k, R4 0, R5 0, R6 0, R7 100k, R8 100k, R9 100k, R10, R11 100k
R12 0, R13 0, R14 100k, R15 100k, R16 100k, R17 0, R18 1.0k, R19 0, R20 100k
R21 0, R22 1.0k, R23 100k, R24 100k, R25 2.7k, R26 100k, R27 100k

Test points: TP1, TP2, TP3, TP4
Connectors: J1, J2, J4, J5
E1, E1

50 ohm markings on RF trace

Pin references: #37, #39, #44, #54, #10

LAUNCHPAD INTERFACE

VCC_BRD   VCC_MCU_3V3   VCC_MCU_5V

R28
100k

P3 P4

CC_UART1_TX   R33 0
CC_UART1_RX   R35 0
CC_nHIB   R38 1.0k
CC_SPI_CLK   R42 0
SOP_01   R44 1.0k

GND

P1 P2

TEST_29   R29 0   GND
TEST_30   R30 0   IRQ   R31 0   CC_IRQ
                       CS   R32 0   CC_SPI_CS
CC_UART1_CTS R34 0
CC_UART1_RTS R36 0   RESET   R37 0   MCU_RESET_IN
                       MOSI   R39 0   CC_SPI_DIN
CC_NWP_UART_TX R40 0 MISO   R41 0   CC_SPI_DOUT
CC_WL_UART_TX   R43 0 GPIO
CC_WLRS232_TX   R45 0 GPIO
CC_WLRS232_RX   R46 0 GPIO   R47 0   MCU_RESET_IN

GND

POWER MANAGEMENT

VCC_MCU_5V   VCC_BRD_5V   VCC_LDO_3V3

MICRO USB

D1
Auto Select 5V
From USB or LP

U3
IN   OUT
EN
NR/FB GND GND
TPS79601DCQR

R50 51k   C28 15pF   C29 10uF
R51 30.1k

J6
L5 30 ohm
L6 30 ohm

C32 10uF
C33 1000pF   R52 100k

GND

VCC_MCU_3V3   VCC_BRD   VBAT_CC   VCC_BRD

R48 0.1   R49 270
VCC_LDO_3V3
J7
J8
C30 100uF   C31 100uF   D3 Red

TP5

GND

FACTORY RESET

VCC_BRD
D4 Red
R54 270

VCC_BRD
R53 100
SW1
EVQ-PSD02K   R56 10k   Q1
SOP_01

GND

PUSH BUTTONS

CC_nHIB   CC_nRESET   D7   R55 0   MCU_RESET_IN

SW2   SW3

R61 100   R62 100

GND   GND

LEDs

VCC_BRD   VCC_BRD

D6 Yellow   D5 Green

R57 270   R58 220

CC_nRESET R60 10k Q3   CC_nHIB R59 10k Q2

GND   GND

Orderable: CC3120BOOST
TID #: N/A
Number: WCS001   Rev: A
SVN Rev: Version control disabled
Drawn By:
Engineer: Prajay Madhavan

Designed for: Public Release   Mod. Date: 11/30/2016
Project Title: CC3120BOOST
Sheet Title: Host Interface
Assembly Variant: [No Variations]
File: 2.HOST INTERFACE.SchDoc   Sheet: 3 of 4
Size: C

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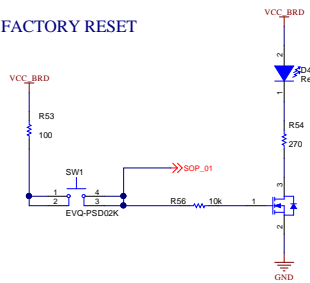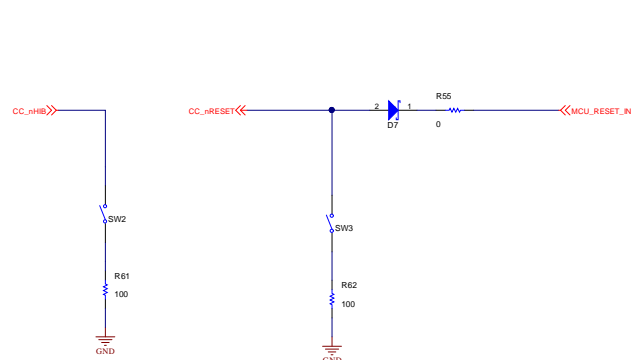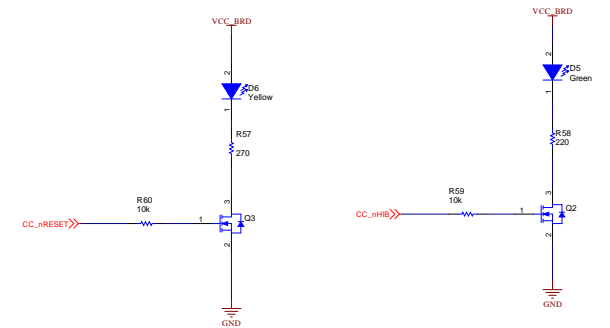© Texas Instruments 2015
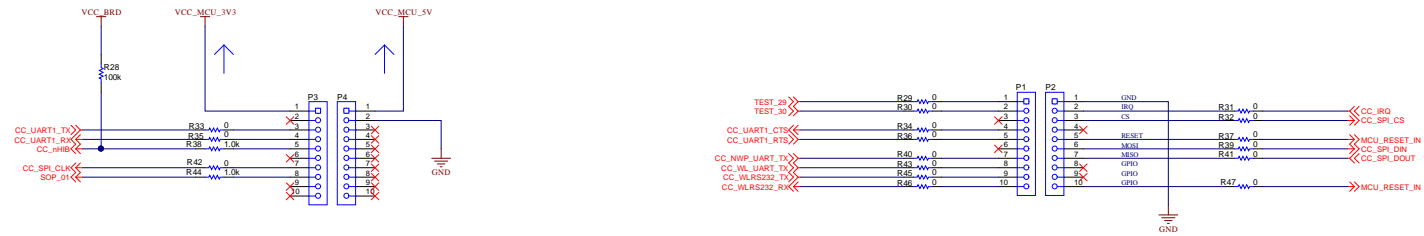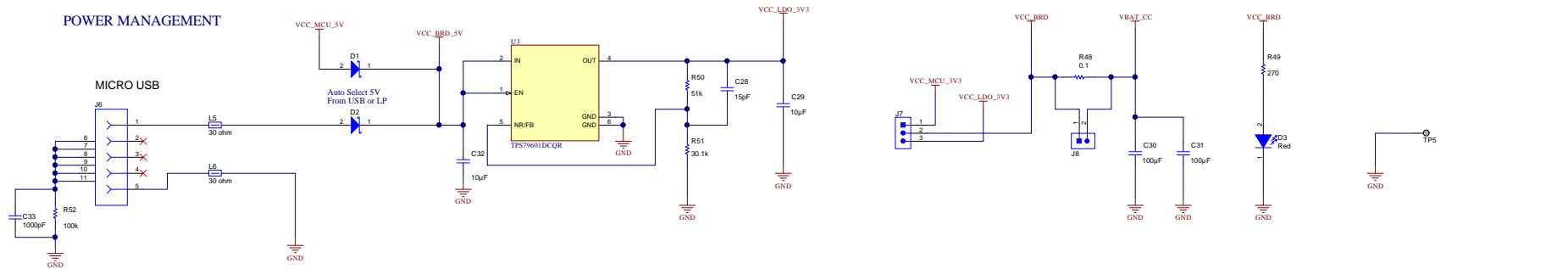
FID1 FID2 FID3

FID4 FID5 FID6

PCB Number: WCS001
PCB Rev: A

PCB
LOGO
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PCB
LOGO
Pb-Free Symbol

PCB
LOGO
FCC disclaimer

PCB
LOGO
ESD Susceptible

PCB
LOGO
ESD Susceptible

LBL1
PCB Label
Size: 0.65" x 0.20 "

CE
LOGO?

ZZ2
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ3
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ4
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

Orderable: CC3120BOOST	Designed for:Public Release	Mod. Date: 1/23/2017
TID #: N/A	Project Title:CC3120BOOST	
Number: WCS001 Rev: A	Sheet Title: EVM_Hardware	
SymbRev: Version control disabled	Assembly Variant:[No Variations]	
Drawn By:	File: EVM_Hardware.SchDoc	Sheet:4 of 4 Size: B
Engineer: Prajay Madhavan	Contact: http://www.ti.com/support	

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