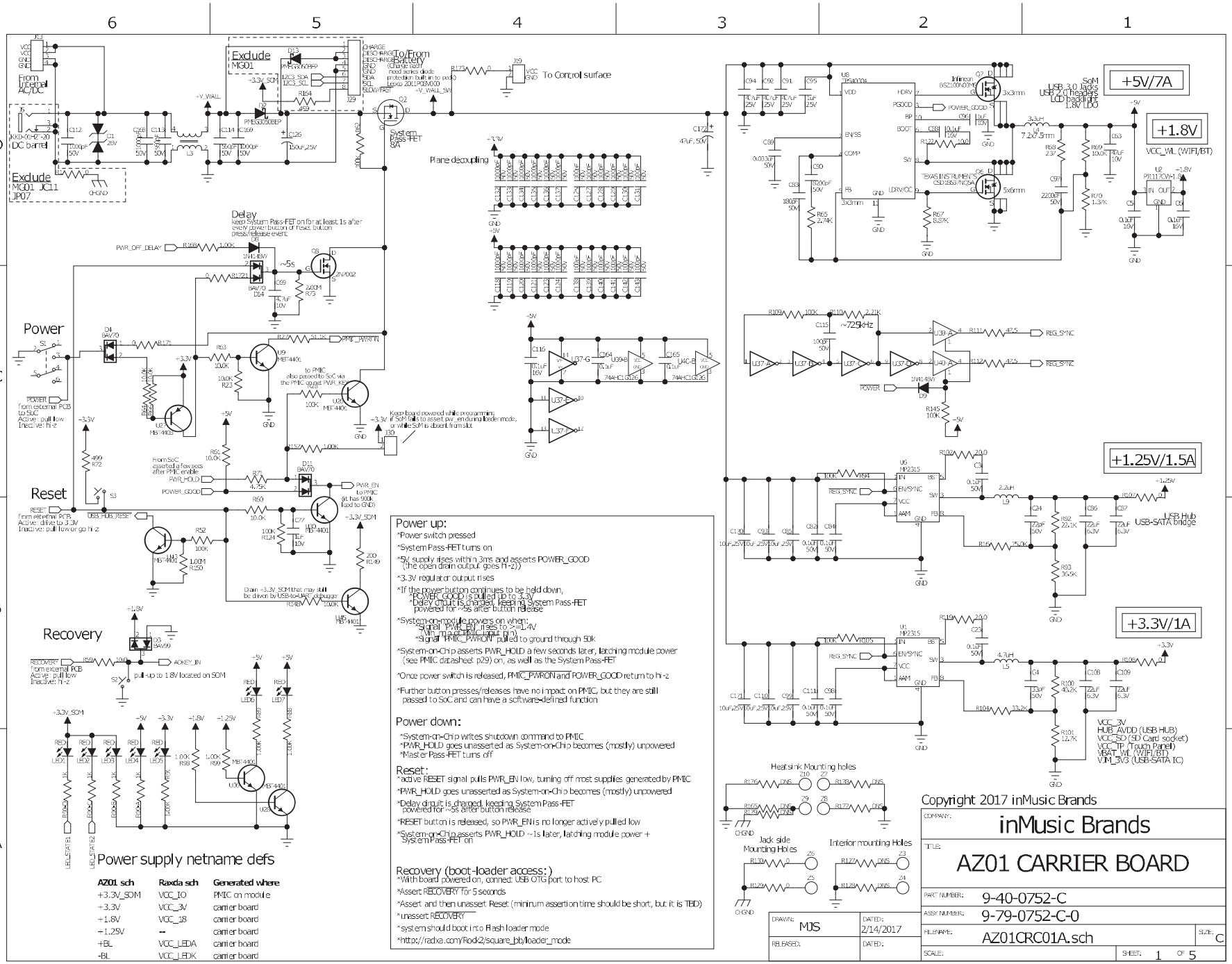
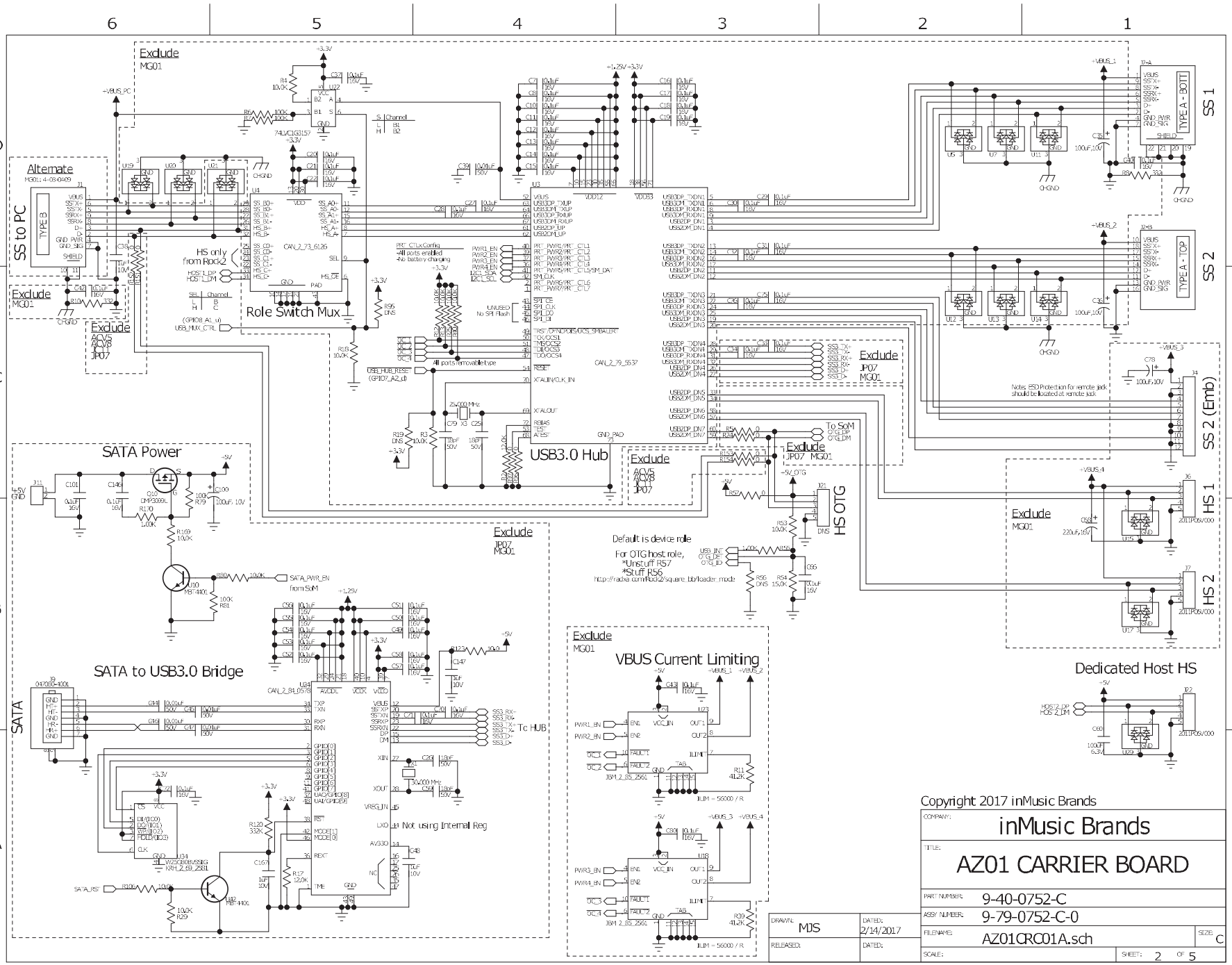
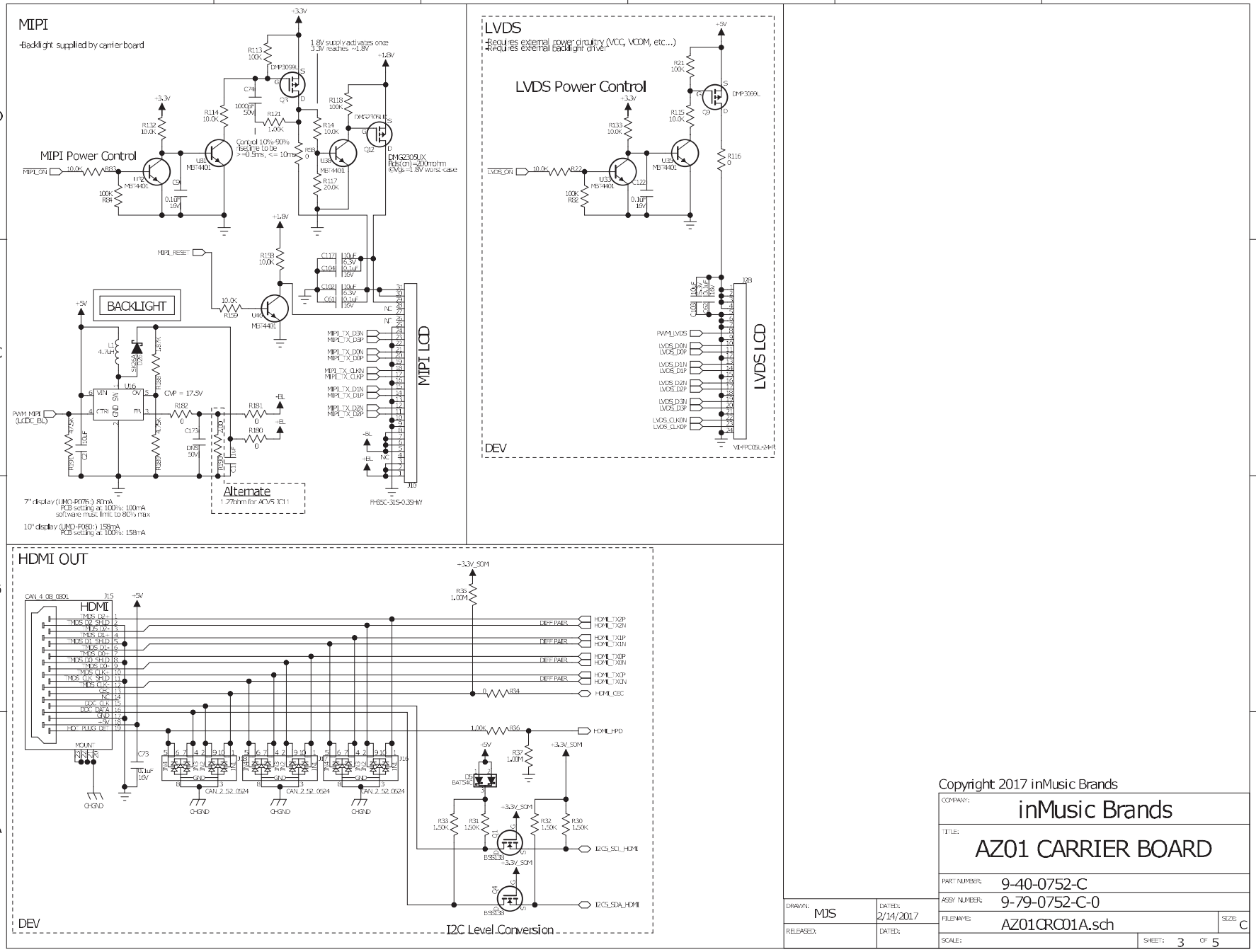

Power
Reset
Recovery
Delay
Keep System Pass-FET on for at least 1s after every power button off reset button press/release event.
~5s
Plane decoupling
~725kHz
+5V/7A
+1.8V
VCC_WL (WIFI/BT)
+1.25V/1.5A
USB Hub
USB-SATA bridge
+3.3V/1A
Heatsink Mounting holes
Jack side Mounting Holes
Interior mounting Holes
Power up:
*Power switch pressed
*System Pass-FET turns on
*5V supply rises within n.3ms and asserts POWER_GOOD (the open drain output goes hi-z))
*3.3V regulator output rises
*If the power button continues to be held down,
*POWER_GOOD is pulled up to 3.3V
*Delay circuit is charged, keeping System Pass-FET powered for ~5s after button release
*System-on-module powers on when:
*Signal PWR_EN rises to >=1.4V
(Vih_mp pmic in datasheet p11)
*Signal PMIC_PWRON pulled to ground through 50k
*System-on-Chip asserts PWR_HOLD a few seconds later, latching module power (see PMIC datasheet p29) on, as well as the System Pass-FET
*Once power switch is released, PMIC_PWRON and POWER_GOOD return to hi-z
*Further button presses/releases have no impact on PMIC, but they are still passed to SoC and can have a software-defined function
Power down:
*System-on-Chip writes shutdown command to PMIC
*PWR_HOLD goes unasserted as System-on-Chip becomes (mostly) unpowered
*Master Pass-FET turns off
Reset:
*active RESET signal pulls PWR_EN low, turning off most supplies generated by PMIC
*PWR_HOLD goes unasserted as System-on-Chip becomes (mostly) unpowered
*Delay circuit is charged, keeping System Pass-FET powered for ~5s after button release
*RESET button is released, so PWR_EN is no longer actively pulled low
*System-on-Chip asserts PWR_HOLD ~1s later, latching module power + System Pass-FET on
Recovery (boot-loader access:)
*With board powered on, connect USB OTG port to host PC
*Assert RECOVERY for 5 seconds
*Assert and then unassert Reset (minimum assertion time should be short, but it is TBD)
*unassert RECOVERY
*system should boot into Flash loader mode
*http://radxa.com/Rock2/square_bb/loader_mode
Power supply netname defs
AZ01 sch
Raxda sch
Generated where
+3.3V_SOM
VCC_IO
PMIC on module
+3.3V
VCC_3V
carrier board
+1.8V
VCC_18
carrier board
+1.25V
--
carrier board
+BL
VCC_LEDA
carrier board
-BL
VCC_LEDK
carrier board
Copyright 2017 inMusic Brands
COMPANY:
inMusic Brands
TITLE:
AZ01 CARRIER BOARD
PART NUMBER:
9-40-0752-C
ASSY NUMBER:
9-79-0752-C-0
FILENAME:
AZ01CRC01A.sch
SIZE:
C
SCALE:
SHEET:
1
OF
5
DRAWN:
MJS
DATED:
2/14/2017
RELEASED:
DATED:

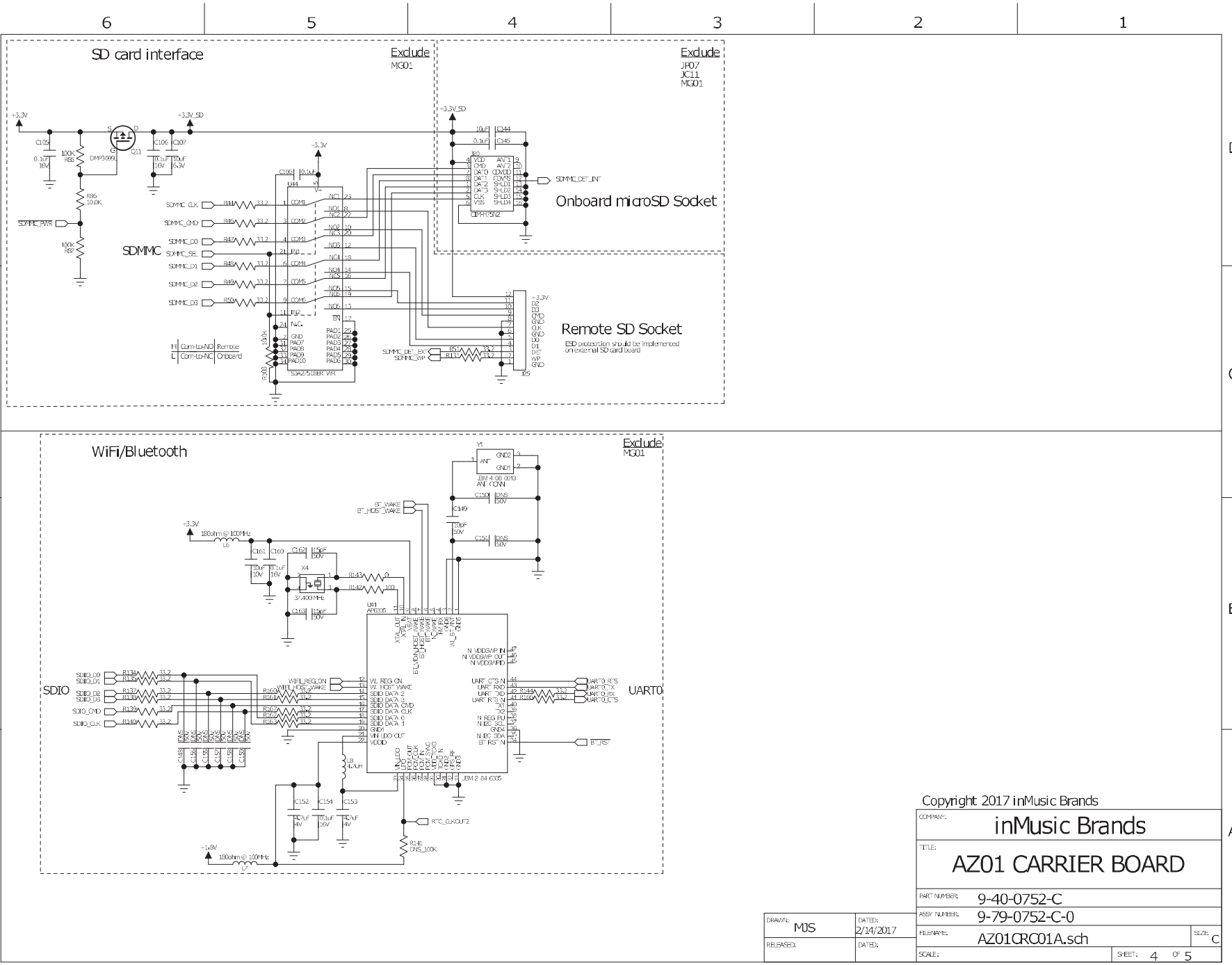

SS to PC
TYPE B
Alternate
MG01: 4-08-0409
Exclude
MG01
Exclude
ACV5
ACV8
JP07
HS only
from Rock2
Role Switch Mux
USB_MUX_CTRL
USB_HUB_RESET
(GPIO7_A2_u)
USB3.0 Hub
All ports removable type
CAN_2_79_5537
CAN_2_73_6126
PRT_CTLx Config
All ports enabled
No battery charging
Exclude
JP07
MG01
To SoM
OTG_DP
OTG_DM
HS OTG
Default is device role
For OTG host role,
*Unstuff R57
*Stuff R56
http://radxa.com/Rock2/square_bb/loader_mode
SATA Power
SATA_PWR_EN
from SoM
SATA to USB3.0 Bridge
SATA
To HUB
Not using Internal Reg
VBUS Current Limiting
ILIM = 56000 / R
SS 1
TYPE A - BOTT
SS 2
TYPE A - TOP
SS 2 (Emb)
HS 1
HS 2
Dedicated Host HS
Note: ESD Protection for remote jack should be located at remote jack
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TITLE: AZ01 CARRIER BOARD
PART NUMBER: 9-40-0752-C
ASSY NUMBER: 9-79-0752-C-0
FILENAME: AZ01CRC01A.sch
SIZE: C
SCALE:
SHEET: 2 OF 5
DRAWN: MJS
DATED: 2/14/2017
RELEASED:
DATED:

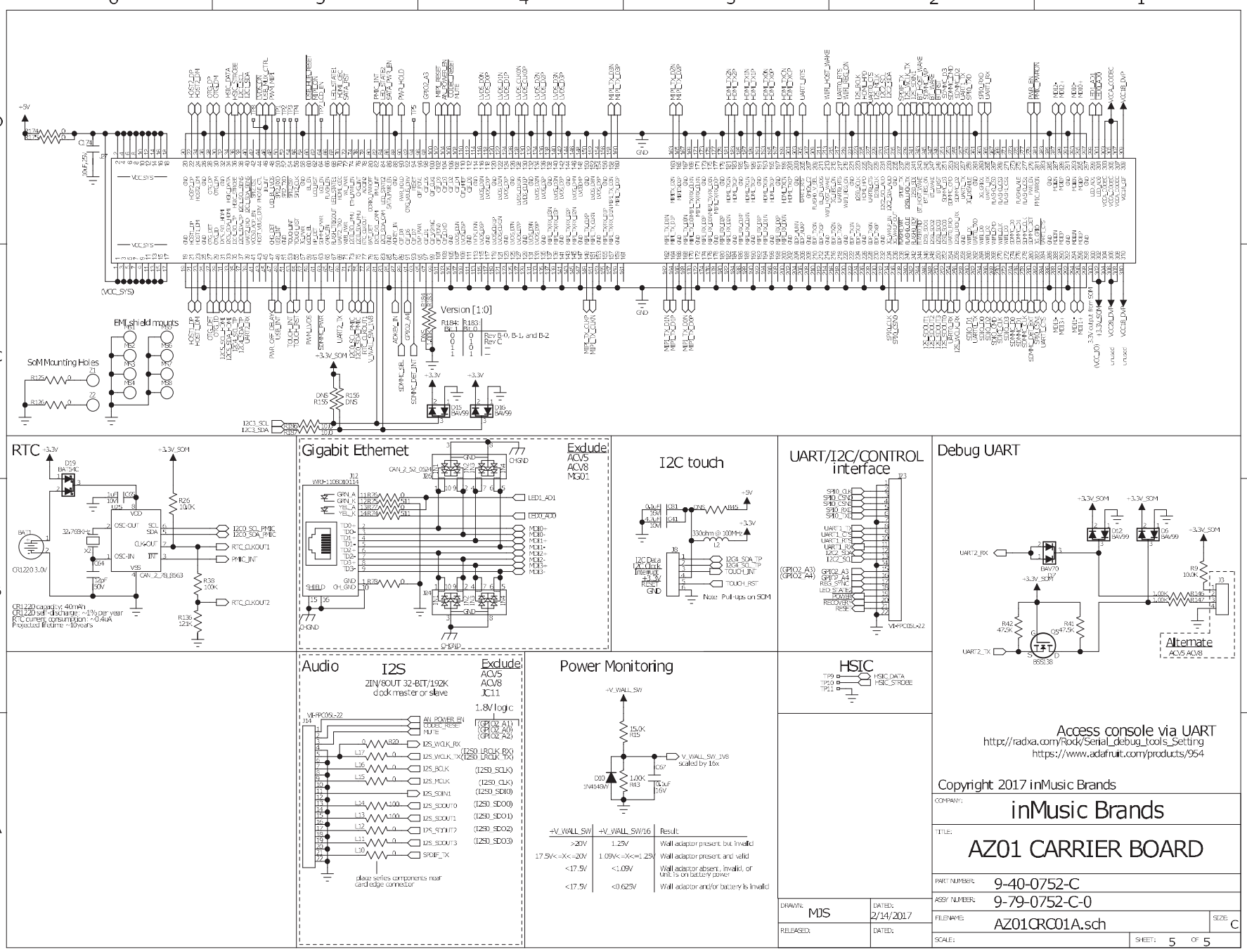


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COMPANY:	inMusic Brands
TITLE:	AZ01 CARRIER BOARD
PART NUMBER:	9-40-0752-C
ASSY NUMBER:	9-79-0752-C-0
FILENAME:	AZ01CRC01A.sch
SIZE:	C
SCALE:	
SHEET:	3 OF 5

DRAWN:	MJS	DATED:	2/14/2017
RELEASED:		DATED:	


SD card interface
Exclude
MG01
Exclude
JP07
JC11
MG01
Onboard microSD Socket
SDMMC
Remote SD Socket
ESD protection should be implemented on external SD card board
WiFi/Bluetooth
Exclude
MG01
SDIO
UART0
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COMPANY: inMusic Brands
TITLE: AZ01 CARRIER BOARD
PART NUMBER: 9-40-0752-C
ASSY NUMBER: 9-79-0752-C-0
FILENAME: AZ01CRC01A.sch
SIZE: C
DRAWN: MJS
DATED: 2/14/2017
RELEASED:
DATED:
SCALE:
SHEET: 4 OF 5


RTC
Gigabit Ethernet
Exclude
ACV5
ACV8
MG01
I2C touch
UART/I2C/CONTROL interface
Debug UART
Audio
I2S
2IN/8OUT 32-BIT/192K
clock master or slave
Exclude
ACV5
ACV8
JC11
1.8V logic
Power Monitoring
HSIC
Access console via UART
http://radxa.com/Rock/Serial_debug_tools_Setting
https://www.adafruit.com/products/954
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COMPANY:
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TITLE:
AZ01 CARRIER BOARD
PART NUMBER:
9-40-0752-C
ASSY NUMBER:
9-79-0752-C-0
FILENAME:
AZ01CRC01A.sch
SIZE:
C
SCALE:
SHEET:
5
OF
5
DRAWN:
MJS
DATED:
2/14/2017
RELEASED:
DATED: