VDD_SOC_IN 0.925 - 1.3V
Power for the core supply

VDD_HIGH_IN 3.0 - 3.6V
VDD_HIGH_IN supply voltage

DCDC_IN 3.0 - 3.6V
Power for the DCDC

VDD_SNVS_IN 2.4 = 3.6V
Power for the SNVS and RTC

USB_OTG1_VBUS 4.4 - 5.5V
Power for the USB VBUS

VDDA_ADC_3P3 3.0 - 3.6V
Power for the 12-bit ADC

NVCC_SD0
Power for the GPIO in the SDIO1 bank (3.3 V mode) 3.0 - 3.6V
Power for the GPIO in the SDIO1 bank (1.8 V mode) 1.65 - 1.95V

NVCC_GPIO 3.0 - 3.6V
IO power for the GPIO

Power Up Sequence Requirement
- VDD_SNVS_IN supply must be turned on before any other power supply or be connected (shorted) with VDD_HIGH_IN supply

- If a coin cell is used to power VDD_SNVS_IN, then ensure that it is connected before any other supply is switched on

- When internal DCDC is enabled, external delay circuit is required to delay the DCDC_PSWITCH signal at least 1 ms after DCDC_IN is stable

- POR_B must be held low during the entire power up sequence

U1A
IMXRT1021DAG5A
VddA_ADC_3P3
Vdd_High_In
Vdd_High_CAP
NVcc_PLL
Vdd_SNVS_IN
Vdd_SNVS_CAP
NGnd_KEL0
Vdd_SOC_IN
Vss
+3.3V
(Vdd_HIGH_IN: 3-3.6V)
(Vdd_SNVS_IN: 2.4-3.6V)
(See Note)
(Vdd_SOC_IN: 0.925 - 1.3V)
VddSOC
Vdda_2P5Cap
Vdda_1P1Cap
VddSNVSCap
C11 0.22uF
C12 1.0uF 10V
C13 0.22uF
C14 0.22uF
C15 0.22uF
C16 0.22uF
C17 0.22uF
C18 0.22uF
C19 0.22uF
C20 4.7uF 6.3V
C21 0.22uF
C22 4.7uF 6.3V
C23 0.22uF
C24 4.7uF 6.3V
C25 0.22uF
C26 DNP 4.7uF 6.3V
C27 0.22uF
C28 0.22uF
DGND

U3
STM6823RWY6F
Vcc
Reset
Vss
WDI
MR
Reset# (Push-Pull Output)
WatchDog
WDReset# (Int Pullup)
+3.3V
C29 0.1uF
Vthreshold: 2.63V
Reset Time: 200 mSec
WatchdogTimeOut: 1.6 Sec

WatchDog
RWDI1 10K
(DNP for Watchdog Disable)

S1
B3FS-1000P
WDReset#
SMT Reset Alternates
B3FS-1000P
B3FS-1002P
B3FS-1010P
B3FS-1012P
B3FS-1050P
B3FS-1052P

U1B
IMXRT1021DAG5A
(Trigger POR <= 2.63V)
OnOff
PoR_B
TestMode
PMIC_Stby_Req
PMIC_On_Req
Xtal_In
Xtal_Out
RTC_Xtal_In
RTC_Xtal_Out
GPANAIO
Wakeup
DCDC_IN
DCDC_IN_Q
DCDC_LP
DCDC_PSW
DCDC_GND
Reset#
(DCDC_IN)
DCDC_L
PSWDelay
L1
VLCF4020T-4R7N1R2?
4.7uH
C30 0.22uF
C31 4.7uF 6.3V
C32 0.22uF
C33 0.22uF
C34 33uF
1206 Package so can use 0805 Parts
X1
N/C
24 Mhz
X2
32 kHz
R6 2.2M
Osc Startup
C35 18PF
C36 18PF
C37 4.7pF
C38 4.7Pf
PSwitch Delay
R7 30K 1%
C39 0.22uF

Reset#
Reset#

| | | | |
|---|---|---|---|
| Title: | RT1021 Power Section | | |
| Rev: | 1.0 | Drawn by: | SSS |
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