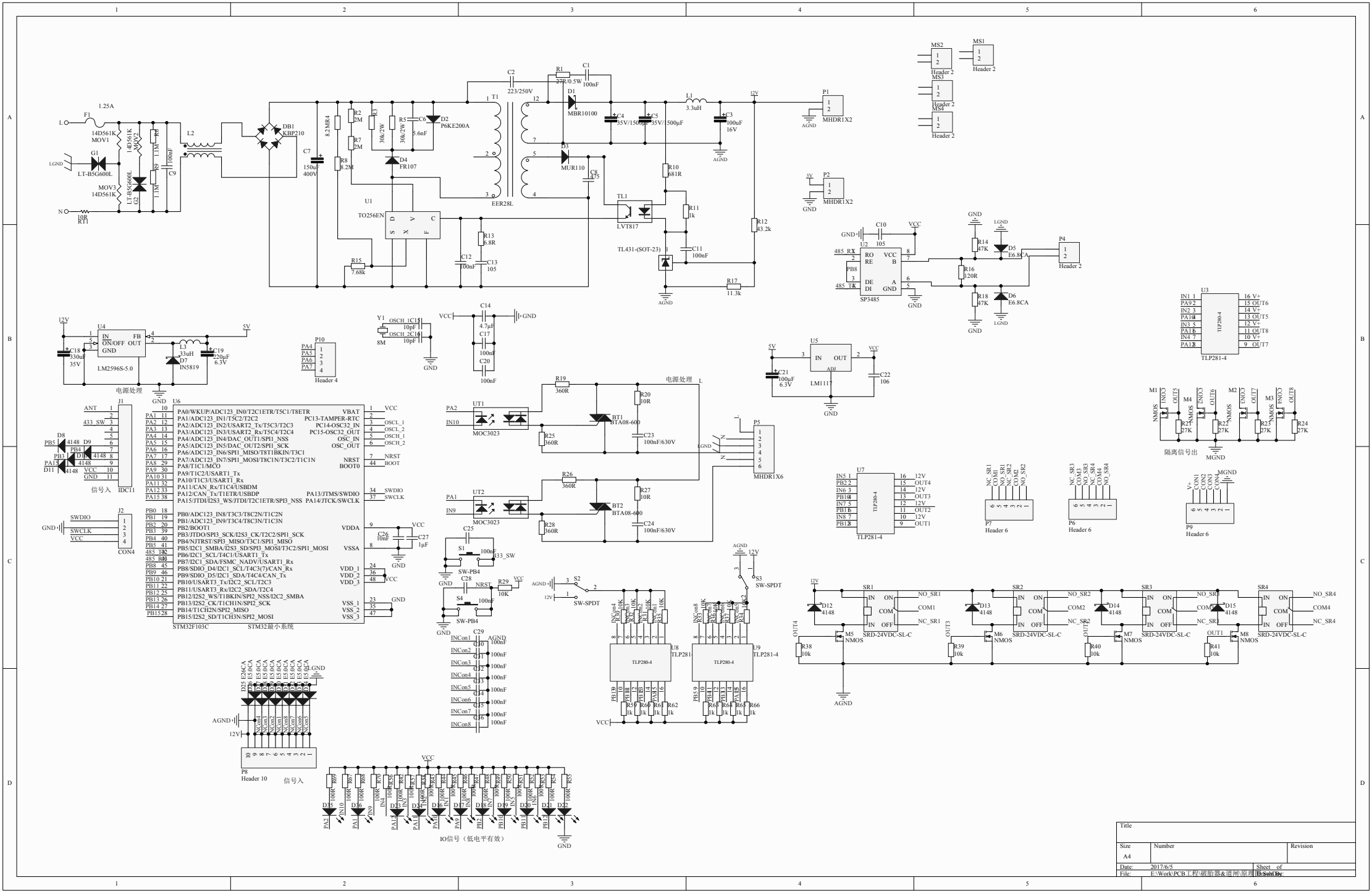
F1
1.25A
L
N
LGND
G1
LT-B5G600L
MOV1
14D561K
MOV2
14D561K
MOV3
14D561K
G2
LT-B5G600L
R1
10R
R4
1.1M
R9
1.1M
C9
100nF
L2
DB1
KBP210
C7
150uF
400V
8.2MR4
R8
8.2M
R2
2M
R7
2M
R3
300k/2W
R5
300k/2W
C6
5.6nF
D2
P6KE200A
D4
FR107
U1
TO256EN
S D V C
X F
R15
7.68k
R13
5.8R
C12
100nF
C13
105
C2
223/250V
T1
EER28L
R1
27R/0.5W
C1
100nF
D1
MBR10100
D3
MUR110
C8
4.75
C4
35V/1500μF
C5
35V/1500μF
L1
3.3uH
C3
100uF
16V
I2V
P1
MHDR1X2
AGND
R10
681R
R11
1k
TL1
LVT817
TL431-(SOT-23)
C11
100nF
R12
43.2k
R17
11.3k
MS2
Header 2
MS1
Header 2
MS3
Header 2
MS4
Header 2
5V
P2
MHDR1X2
GND
C10
105
VCC
U2
485_RX
PB8
485_TX
RO
RE
DE
DI
VCC
B
A
GND
SP3485
R14
47K
D5
E6.8CA
R16
120R
R18
47K
D6
E6.8CA
P4
Header 2
U3
TLP281-4
TLP280-4
IN1 1
PA9 2
IN2 3
PA10 4
IN3 5
PA11 6
IN4 7
PA12 8
16 V+
15 OUT6
14 V+
13 OUT5
12 V+
11 OUT8
10 V+
9 OUT7
12V
U4
IN
ON/OFF
GND
FB
OUT
LM2596S-5.0
C18
330uF
35V
L3
33uH
D7
IN5819
C19
220μF
6.3V
5V
电源处理
P10
PA4
PA5
PA6
PA7
Header 4
Y1
8M
OSCH_1C14
10pF
OSCH_2C16
10pF
C14
4.7μF
C17
100nF
C20
100nF
U5
IN
OUT
ADJ
LM1117
C21
100μF
6.3V
C22
106
M1
M2
M3
M4
NMOS
OUT5
OUT6
OUT7
OUT8
R21
27K
R22
27K
R23
27K
R24
27K
隔离信号出
MGND
J1
ANT
433_SW
D8
D9
D10
D11
4148
PB5
PB4
PB3
PA13
VCC
GND
IDC11
信号入
J2
SWDIO
SWCLK
VCC
CON4
U6
STM32F103C
STM32最小系统
PA0/WKUP/ADC123_IN0/T2C1ETR/T5C1/T8ETR
PA1/ADC123_IN1/T5C2/T2C2
PA2/ADC123_IN2/USART2_Tx/T5C3/T2C3
PA3/ADC123_IN3/USART2_Rx/T5C4/T2C4
PA4/ADC123_IN4/DAC_OUT1/SPI1_NSS
PA5/ADC123_IN5/DAC_OUT2/SPI1_SCK
PA6/ADC123_IN6/SPI1_MISO/T8T1BKIN/T3C1
PA7/ADC123_IN7/SPI1_MOSI/T8C1N/T3C2/T1C1N
PA8/T1C1/MCO
PA9/T1C2/USART1_Tx
PA10/T1C3/USART1_Rx
PA11/CAN_Rx/T1C4/USBDM
PA12/CAN_Tx/T1ETR/USBDP
PA15/JTDI/I2S3_WS/JTDI/T2C1ETR/SPI3_NSS
PB0/ADC123_IN8/T3C3/T8C2N/T1C2N
PB1/ADC123_IN9/T3C4/T8C3N/T1C3N
PB2/BOOT1
PB3/JTDO/SPI3_SCK/I2S3_CK/T2C2/SPI1_SCK
PB4/NJTRST/SPI3_MISO/T3C1/SPI1_MISO
PB5/I2C1_SMBA/I2S3_SD/SPI3_MOSI/T3C2/SPI1_MOSI
PB6/I2C1_SCL/T4C1/USART1_Tx
PB7/I2C1_SDA/FSMC_NADV/USART1_Rx
PB8/SDIO_D4/I2C1_SCL/T4C3(7)/CAN_Rx
PB9/SDIO_D5/I2C1_SDA/T4C4/CAN_Tx
PB10/USART3_Tx/I2C2_SCL/T2C3
PB11/USART3_Rx/I2C2_SDA/T2C4
PB12/I2S2_WS/T1BKIN/SPI2_NSS/I2C2_SMBA
PB13/I2S2_CK/T1CH1N/SPI2_SCK
PB14/T1CH2N/SPI2_MISO
PB15/I2S2_SD/T1CH3N/SPI2_MOSI
VBAT
PC13-TAMPER-RTC
PC14-OSC32_IN
PC15-OSC32_OUT
OSC_IN
OSC_OUT
NRST
BOOT0
SWDIO
SWCLK
VDDA
VSSA
VDD_1
VDD_2
VDD_3
VSS_1
VSS_2
VSS_3
OSCL_1
OSCL_2
OSCH_1
OSCH_2
BOOT
C26
10nF
C27
1μF
C25
100nF
S1
SW-PB4
C28
100nF
S4
SW-PB4
NRST
R29
10K
433_SW
U7
TLP280-4
TLP281-4
IN5 1
PB2 2
IN6 3
PB10 4
IN7 5
PB11 6
IN8 7
PB12 8
16 12V
15 OUT4
14 12V
13 OUT3
12 12V
11 OUT2
10 12V
9 OUT1
NC_SR1
COM1
NO_SR1
NC_SR2
COM2
NO_SR2
P7
Header 6
NC_SR3
COM3
NO_SR3
NC_SR4
COM4
NO_SR4
P6
Header 6
V+
CON1
CON2
CON3
CON4
MGND
P9
Header 6
U8
TLP281
U9
TLP281-4
TLP280-4
INCon1
INCon2
INCon3
INCon4
INCon5
INCon6
INCon7
INCon8
C29
100nF
R34
10K
R35
10K
R36
10K
R37
10K
R38
10K
R39
10K
R40
10K
R41
10K
R42
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R57
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R59
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R60
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R61
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R62
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R63
1k
R64
1k
R65
1k
R66
1k
PB13
PB12
PB14
PB15
PA3
PA4
PA5
PB9
PB11
PA6
PA7
PB10
S2
SW-SPDT
S3
SW-SPDT
SR1
SR2
SR3
SR4
IN
ON
COM
OFF
NO_SR1
COM1
NC_SR1
NO_SR2
COM2
NC_SR2
NO_SR3
COM3
NC_SR3
NO_SR4
COM4
NC_SR4
D12
4148
D13
4148
D14
4148
D15
4148
SRD-24VDC-SL-C
M5
M6
M7
M8
NMOS
OUT4
OUT3
OUT2
OUT1
R38
10k
R39
10k
R40
10k
R41
10k
D25
D26
D27
D28
D29
D30
E6.8CA
P8
Header 10
信号入
D35
D36
D37
D38
D39
D40
D41
D42
D43
D44
D45
D46
D47
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D50
D51
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D53
D54
D55
D56
D57
D58
D59
D60
D61
D62
D63
D64
100R
R67
R68
R69
R70
R71
R72
R73
R74
R75
R76
R77
R78
R79
R80
R81
R82
R83
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R95
R96
R97
R98
R99
R100
IN10
IN9
IN8
IN7
IN6
IN5
IN4
IN3
IN2
IN1
PA2
PA1
PA12
PA11
PA10
PA9
PA8
PB7
PB6
PB5
PB4
PB3
PB2
PB1
PB0
IO信号（低电平有效）
Title
Size
A4
Number
Revision
Date: 2017/6/5
File: E:\Work\PCB工程\破胎器&道闸\原理图.SchDoc
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