GK CV
JP2
CH7_GK_SW — CH7_MIDI_SW

GK CV
JP3
CH8_GK_SW — CH8_MIDI_SW

H2
CH1_GK  1
CH2_GK  2
CH3_GK  3
CH4_GK  4
CH5_GK  5
CH6_GK  6
MONO_GK 7
CH7_SW  8

H3
CH8_SW  1
CH9_SW  2
CH10_GK_VOL/CV  3
CH11_CV  4
CH12_CV  5
CH13_CV  6
CH14_CV  7
CH15_CV  8

CH9_SW
TP_1

BLM18KG700TN1D   BLM18KG700TN1D
FB1              FB2

H1
AVCC  1
AVCC  2
AGND  3
AGND  4
DVCC  5
DVCC  6
DGND  7
DGND  8

VIN
D_VIN

C1 100uF
C2 100uF

U1A TLV2170
C3 0.1uF   R1 100K
CH10_CV
TP_2
DGND

U1B TLV2170
C4 0.1uF   R2 100K
CH11_CV
TP_3
DGND

U2A TLV4170
C5 0.1uF   R3 100K
CH12_CV
TP_4
DGND

U2B TLV4170
C6 0.1uF   R4 100K
CH13_CV
TP_5
DGND

U2C TLV4170
C7 0.1uF   R5 100K
CH14_CV
TP_6
DGND

U2D TLV4170
C8 0.1uF   R6 100K
CH15_CV
TP_7
DGND

U2E TLV4170    U1C TLV2170
VIN
C9 10uF  C10 0.1uF   C11 10uF  C12 0.1uF
DGND   DGND

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TITLE:   GK and MIDI Analog Input Stage
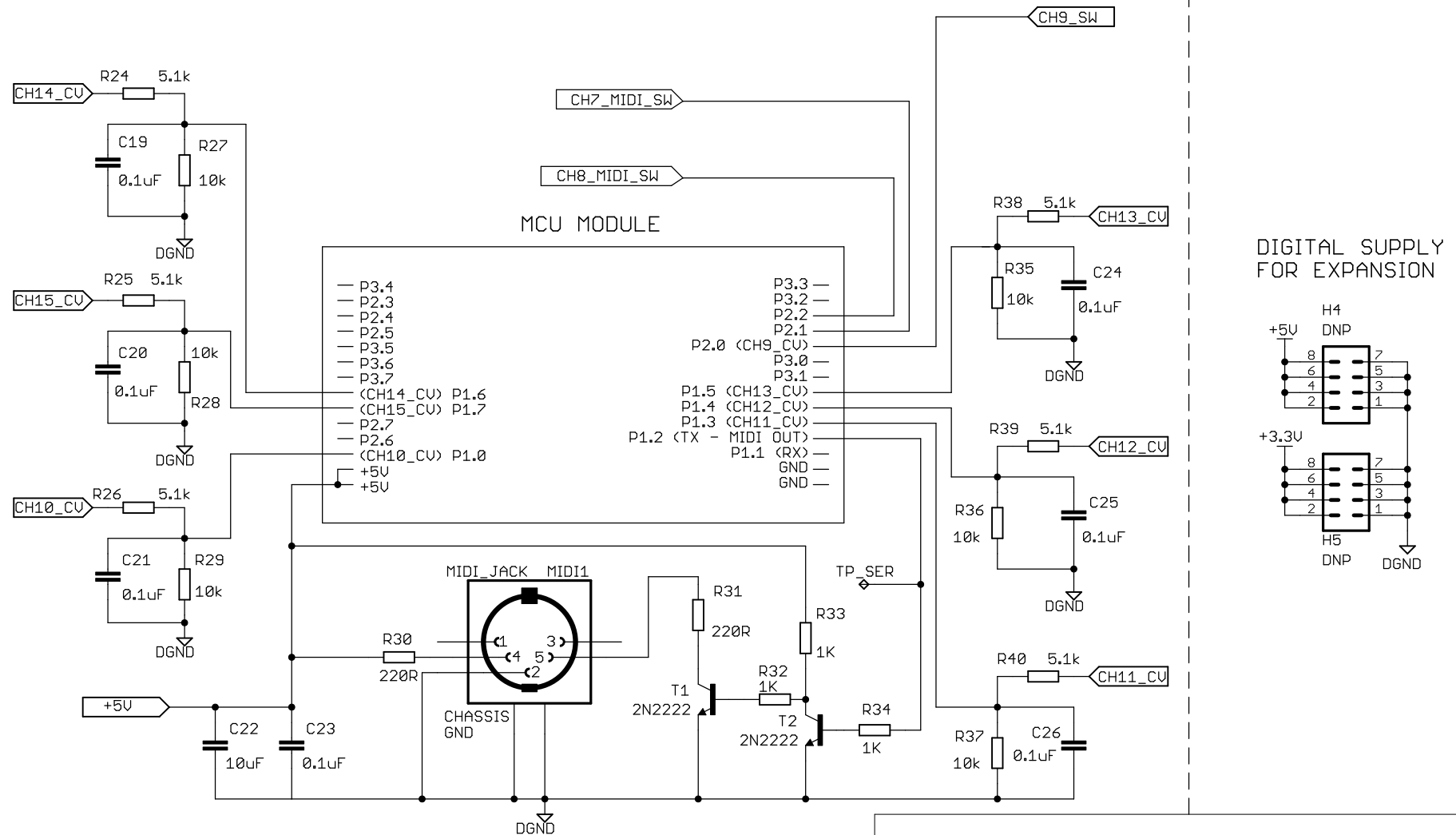Document Number:
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MONO_GK

R19 10K

C13 0.47uF

TP3

R21 470K

MONO

+VE

1SS302

D1

U3A TLV2170DGKT

R22 100R

U3C TLV2170DGKT

+VE

C15 4.7uF

C17 0.1uF

C16 4.7uF

C18 0.1uF

-VE

CH10_GK_VOL

R20 18K

TP2

C14 0.01uF

1SS302

D2

U3B TLV2170DGKT

GK_Vol

R23 100R

-VE

13 PIN CONNECTOR

CH1_GK
5.1k R7
R13 5.1k

CH2_GK
5.1k R8
R14 5.1k

CH3_GK
5.1k R9
R15 5.1k

CH4_GK
R10 5.1k
R16 5.1k

CH5_GK
R11 5.1k
R17 5.1k

CH6_GK
R12 5.1k
R18 5.1k

1    7
2    8
3    9
4    10   CH7_GK_SW
5    11   CH8_GK_SW
6    12   +VE
13
GND       GND

-VE

TITLE: GK Roland Circuit

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CH9_SW

CH7_MIDI_SW

CH8_MIDI_SW

R24  5.1k
CH14_CV

C19        R27
0.1uF      10k
           DGND

R25  5.1k
CH15_CV

C20    10k
0.1uF  R28
       DGND

R26  5.1k
CH10_CV

C21    R29
0.1uF  10k
       DGND

+5V

C22     C23
10uF    0.1uF

MCU MODULE

— P3.4
— P2.3
— P2.4
— P2.5
— P3.5
— P3.6
— P3.7
— (CH14_CV) P1.6
— (CH15_CV) P1.7
— P2.7
— P2.6
— (CH10_CV) P1.0
— +5V
— +5V

P3.3 —
P3.2 —
P2.2
P2.1
P2.0 (CH9_CV)
P3.0 —
P3.1 —
P1.5 (CH13_CV)
P1.4 (CH12_CV)
P1.3 (CH11_CV)
P1.2 (TX - MIDI OUT)
P1.1 (RX) —
GND —
GND —

R38  5.1k   CH13_CV
    R35    C24
    10k    0.1uF
           DGND

R39  5.1k   CH12_CV
    R36    C25
    10k    0.1uF
           DGND

R40  5.1k   CH11_CV
    R37    C26
    10k    0.1uF

MIDI_JACK  MIDI1

R30
220R

R31
220R

R33
1K

TP_SER

R32
1K
T1
2N2222

T2
2N2222

R34
1K

CHASSIS
GND

DGND

DIGITAL SUPPLY
FOR EXPANSION

+5V    H4
       DNP
8         7
6         5
4         3
2         1

+3.3V
8         7
6         5
4         3
2         1
       H5
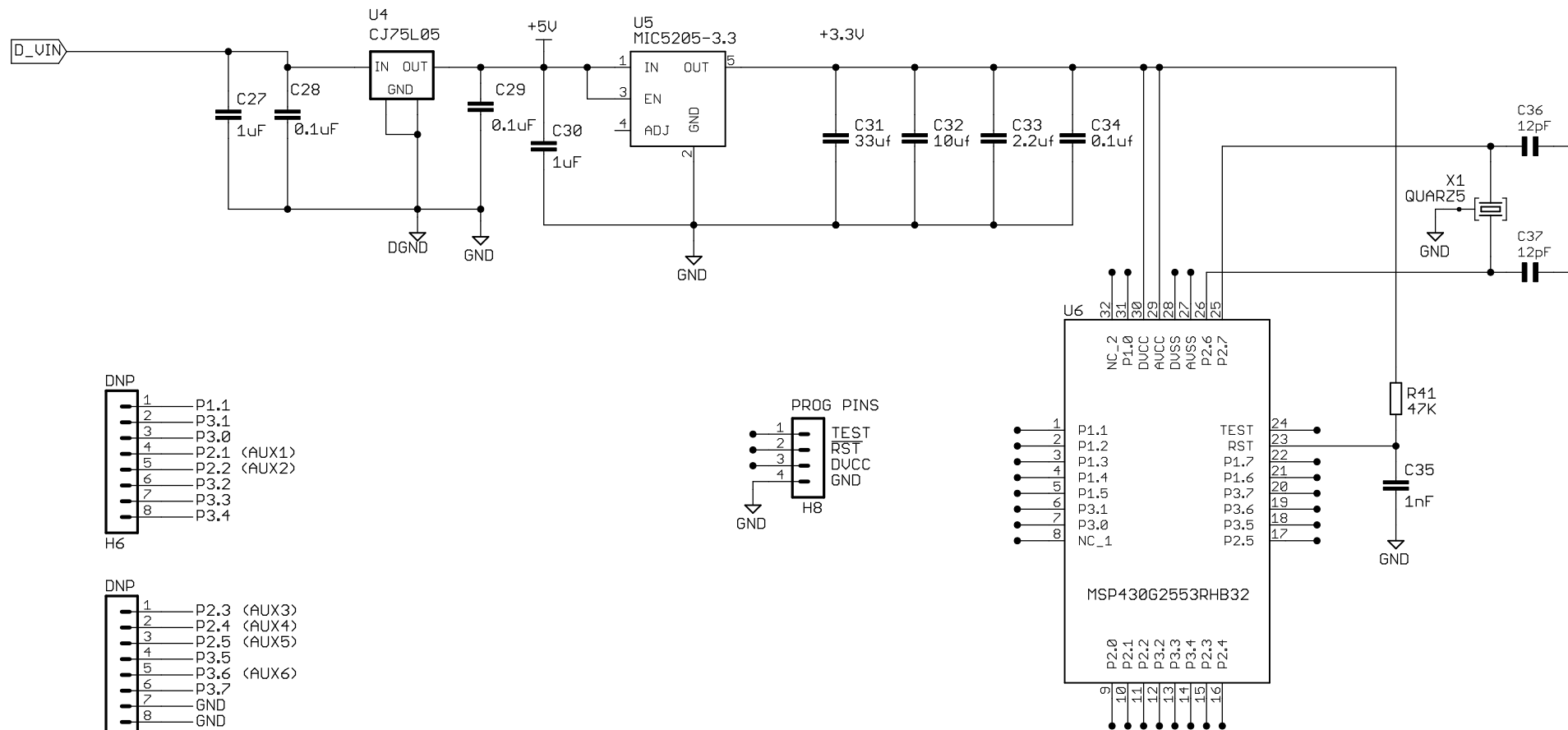       DNP      DGND

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TITLE:
MCU Input and MIDI Out

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D_VIN

C27 1uF
C28 0.1uF

U4 CJ75L05
IN OUT
GND

+5V
C29 0.1uF
C30 1uF

DGND
GND

U5 MIC5205-3.3
1 IN OUT 5
3 EN
4 ADJ GND 2

GND

+3.3V
C31 33uf
C32 10uf
C33 2.2uf
C34 0.1uf

C36 12pF
X1 QUARZ5
GND
C37 12pF

U6
32 NC_2
31 P1.0
30 DVCC
29 AVCC
28 DVSS
27 AVSS
26 P2.6
25 P2.7

1 P1.1          TEST 24
2 P1.2          RST 23
3 P1.3          P1.7 22
4 P1.4          P1.6 21
5 P1.5          P3.7 20
6 P3.1          P3.6 19
7 P3.0          P3.5 18
8 NC_1          P2.5 17

MSP430G2553RHB32

9 P2.0
10 P2.1
11 P2.2
12 P3.2
13 P3.3
14 P3.4
15 P2.3
16 P2.4

R41 47K
C35 1nF
GND

DNP
1 P1.1
2 P3.1
3 P3.0
4 P2.1 (AUX1)
5 P2.2 (AUX2)
6 P3.2
7 P3.3
8 P3.4
H6

PROG PINS
1 TEST
2 RST
3 DVCC
4 GND
H8
GND

DNP
1 P2.3 (AUX3)
2 P2.4 (AUX4)
3 P2.5 (AUX5)
4 P3.5
5 P3.6 (AUX6)
6 P3.7
7 GND
8 GND
H7

AUXILLIARY PINS

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TITLE: MCU Power/ Programming Pins/ Aux Pins

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