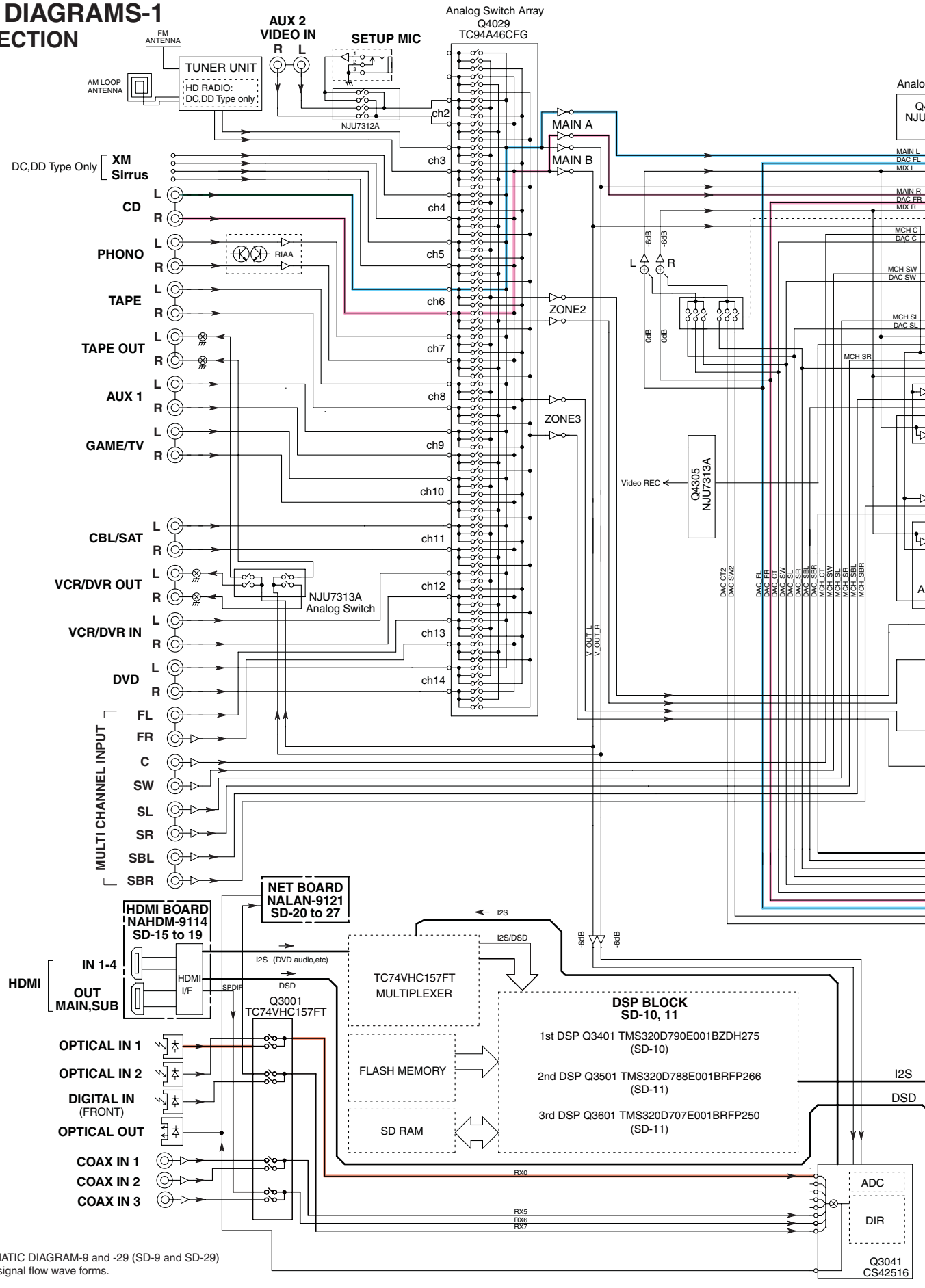
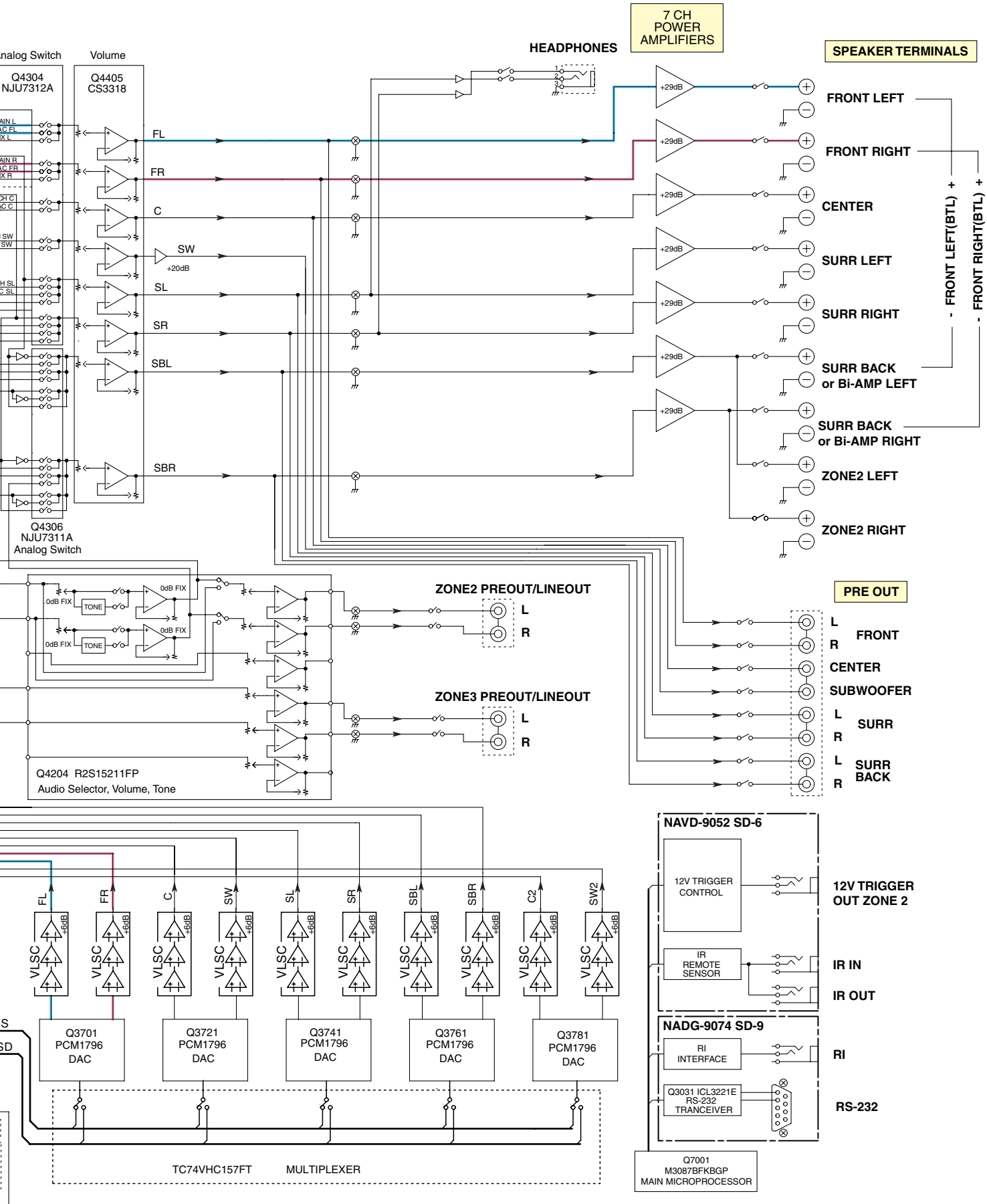
BLOCK DIAGRAMS-1
AUDIO SECTION

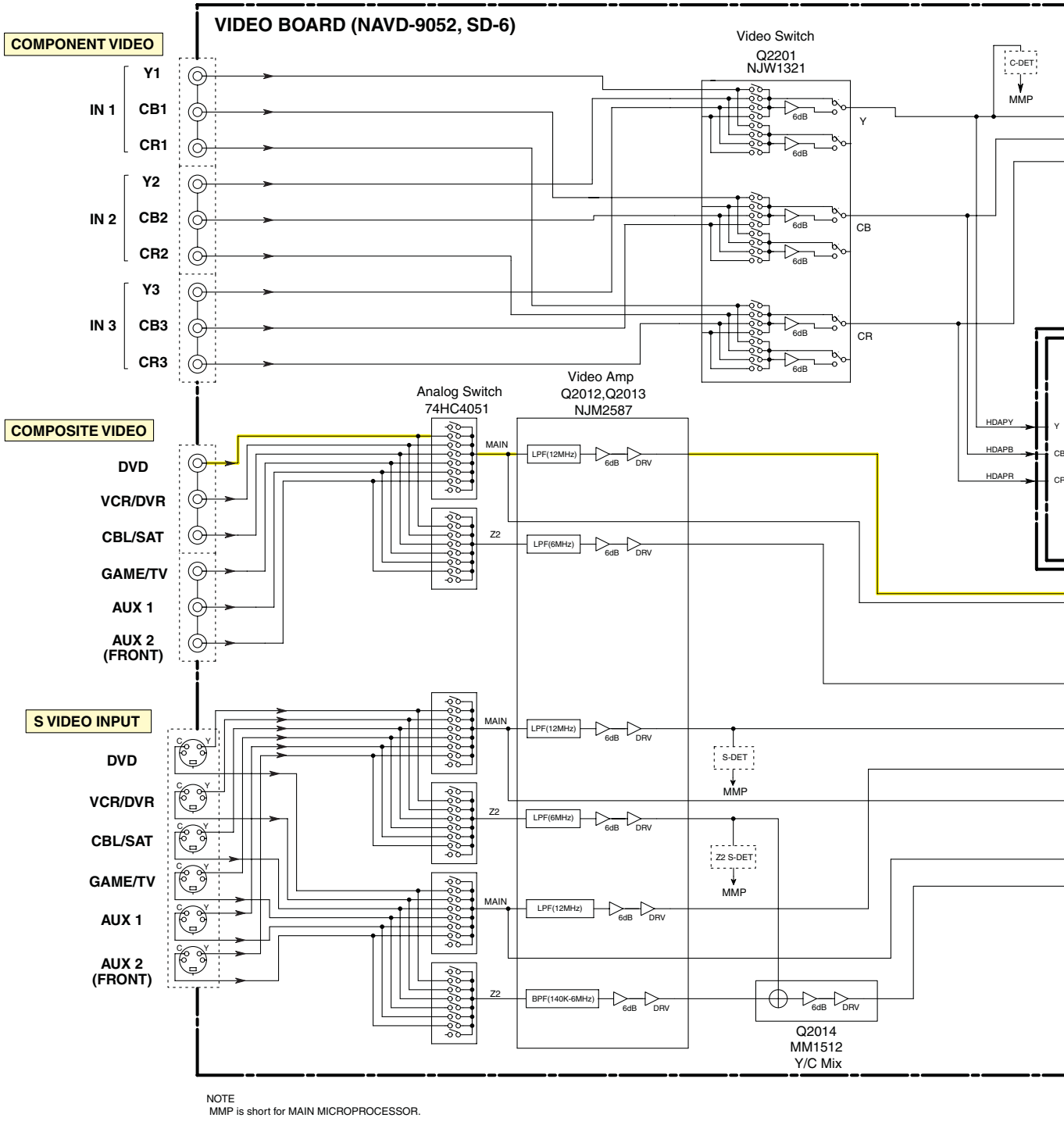


<Note>
Refer to SCHEMATIC DIAGRAM-9 and -29 (SD-9 and SD-29)
for digital audio signal flow wave forms.

E F G H


7 CH POWER AMPLIFIERS
HEADPHONES
SPEAKER TERMINALS
Analog Switch
Volume
Q4304 NJU7312A
Q4405 CS3318
FL
FR
C
SW
+20dB
SL
SR
SBL
SBR
+29dB
FRONT LEFT
FRONT RIGHT
CENTER
SURR LEFT
SURR RIGHT
SURR BACK or Bi-AMP LEFT
SURR BACK or Bi-AMP RIGHT
ZONE2 LEFT
ZONE2 RIGHT
- FRONT LEFT(BTL) +
- FRONT RIGHT(BTL) +
Q4306 NJU7311A Analog Switch
ZONE2 PREOUT/LINEOUT
ZONE3 PREOUT/LINEOUT
L
R
PRE OUT
FRONT
CENTER
SUBWOOFER
SURR
SURR BACK
0dB FIX
TONE
Q4204 R2S15211FP
Audio Selector, Volume, Tone
VLSC
+6dB
C2
SW2
Q3701 PCM1796 DAC
Q3721 PCM1796 DAC
Q3741 PCM1796 DAC
Q3761 PCM1796 DAC
Q3781 PCM1796 DAC
TC74VHC157FT MULTIPLEXER
NAVD-9052 SD-6
12V TRIGGER CONTROL
12V TRIGGER OUT ZONE 2
IR REMOTE SENSOR
IR IN
IR OUT
NADG-9074 SD-9
RI INTERFACE
RI
Q3031 ICL3221E RS-232 TRANCEIVER
RS-232
Q7001 M3087BFKBGP MAIN MICROPROCESSOR

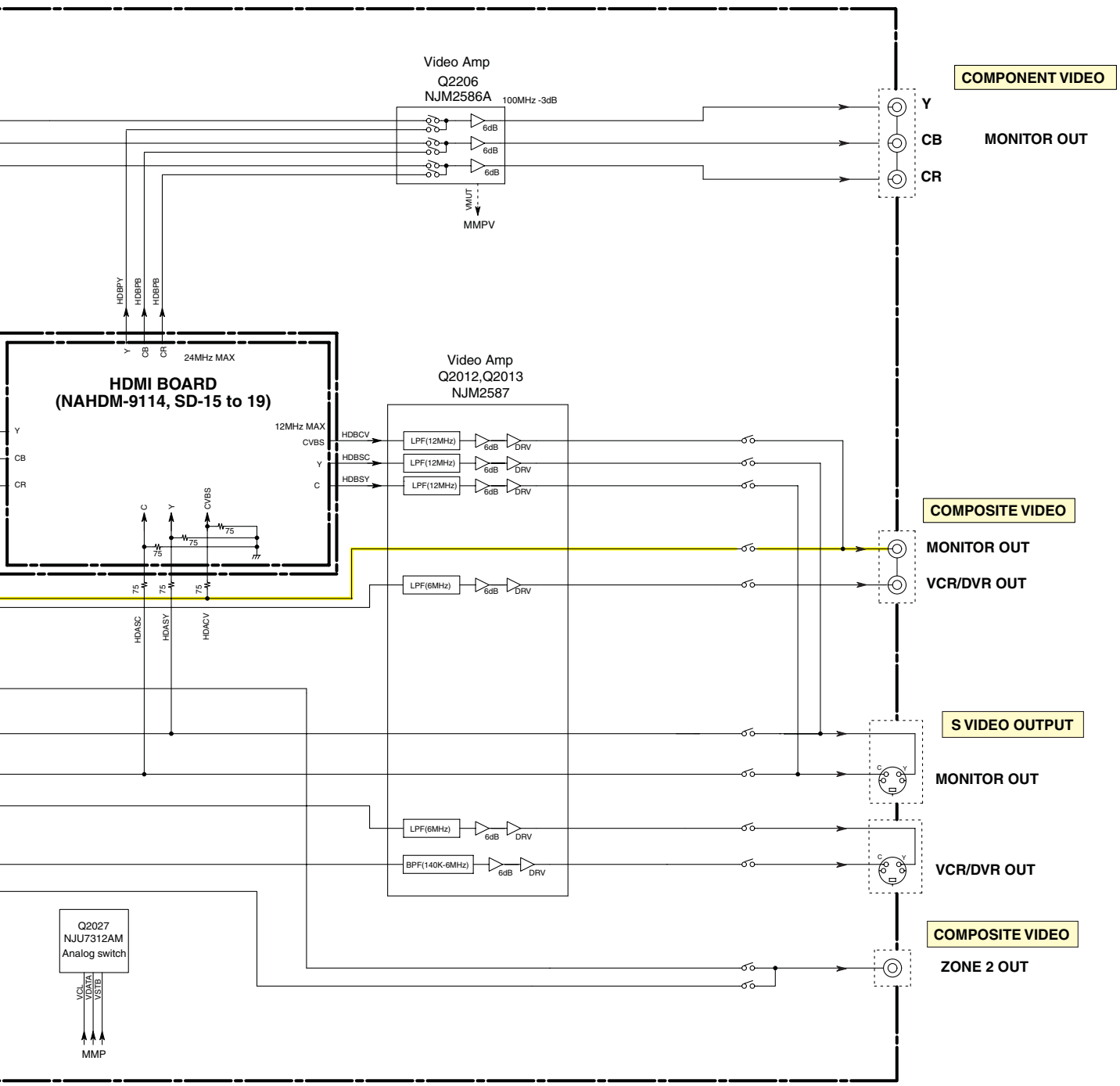
BLOCK DIAGRAMS-2
VIDEO SECTION



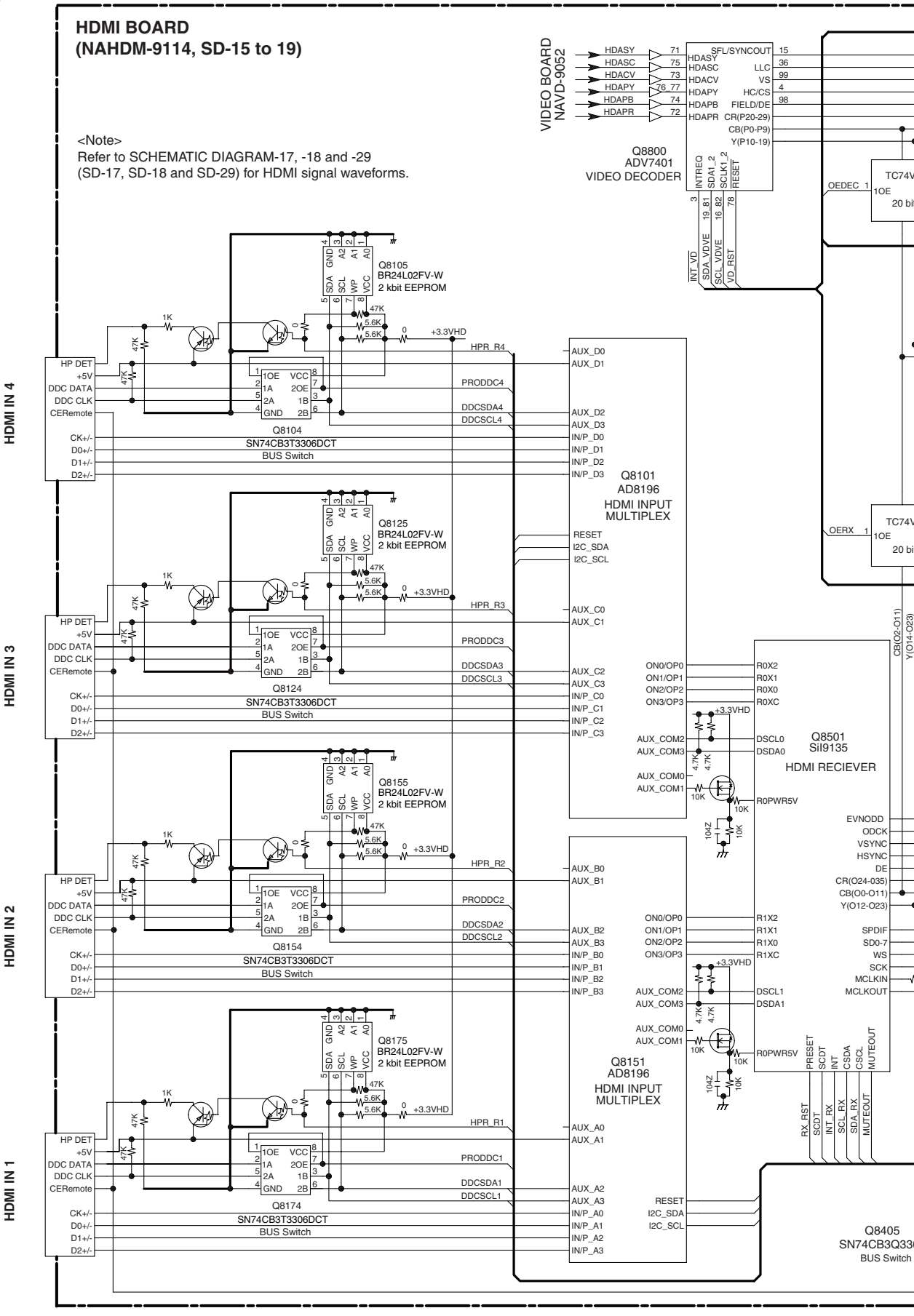
NOTE
MMP is short for MAIN MICROPROCESSOR.

<Note>
Refer to SCHEMATIC DIAGRAM-6, -17 and -29 (SD-6, SD-17 and SD-29)
for video and HDMI signal waveforms.

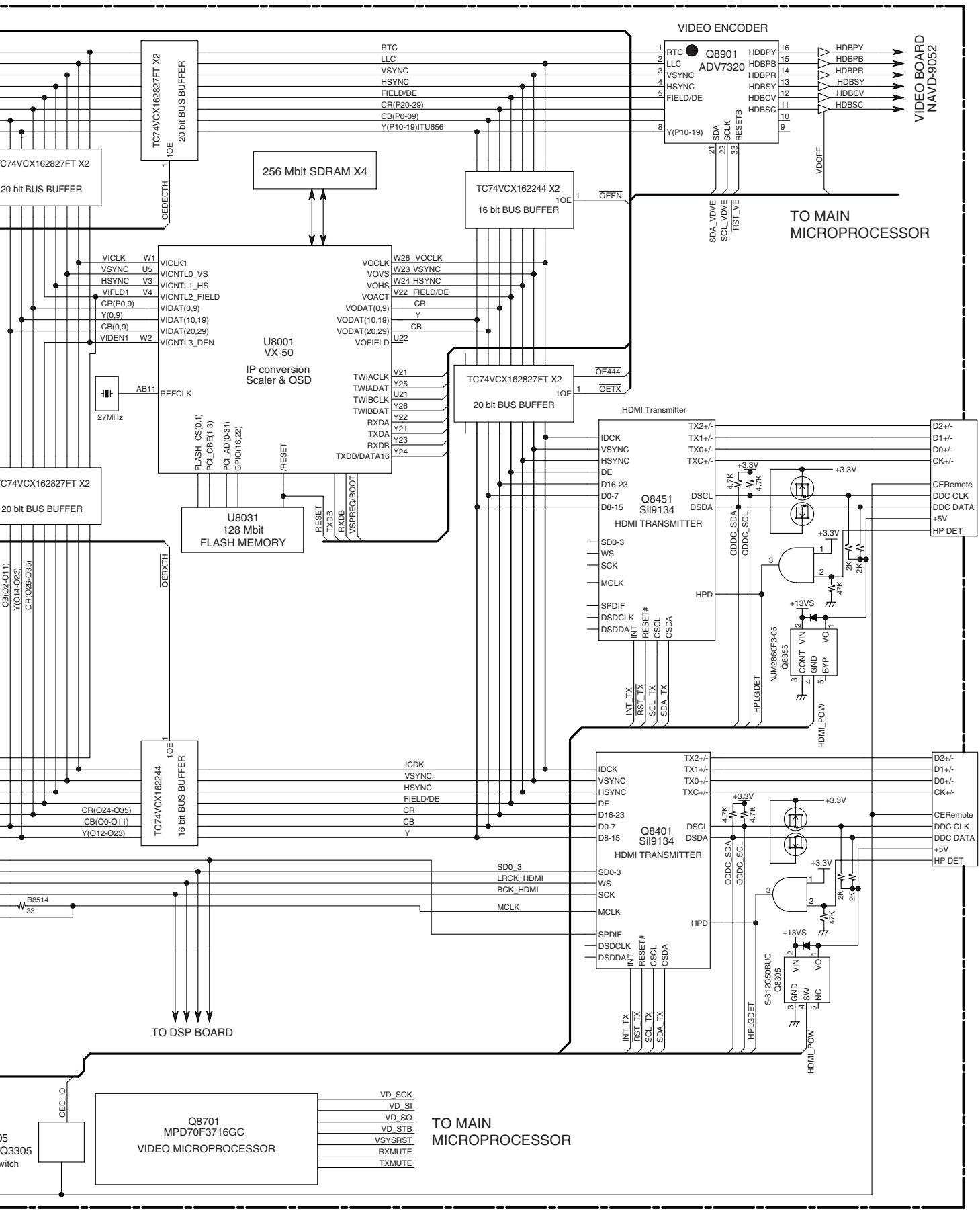
E F G H


Video Amp
Q2206
NJM2586A
100MHz -3dB
6dB
6dB
6dB
VMUT
MMPV
COMPONENT VIDEO
Y
CB
CR
MONITOR OUT
HDBPY
HDBPB
HDBPB
Y
CB
CR
24MHz MAX
HDMI BOARD
(NAHDM-9114, SD-15 to 19)
Y
CB
CR
12MHz MAX
CVBS
Y
C
Video Amp
Q2012,Q2013
NJM2587
HDBCV
HDBSC
HDBSY
LPF(12MHz)
LPF(12MHz)
LPF(12MHz)
6dB
6dB
6dB
DRV
DRV
DRV
C
Y
CVBS
75
75
75
75
75
75
LPF(6MHz)
6dB
DRV
COMPOSITE VIDEO
MONITOR OUT
VCR/DVR OUT
HDASC
HDASY
HDACV
S VIDEO OUTPUT
MONITOR OUT
LPF(6MHz)
BPF(140K-6MHz)
6dB
6dB
DRV
DRV
VCR/DVR OUT
Q2027
NJU7312AM
Analog switch
VCI
VDATA
VSTB
MMP
COMPOSITE VIDEO
ZONE 2 OUT

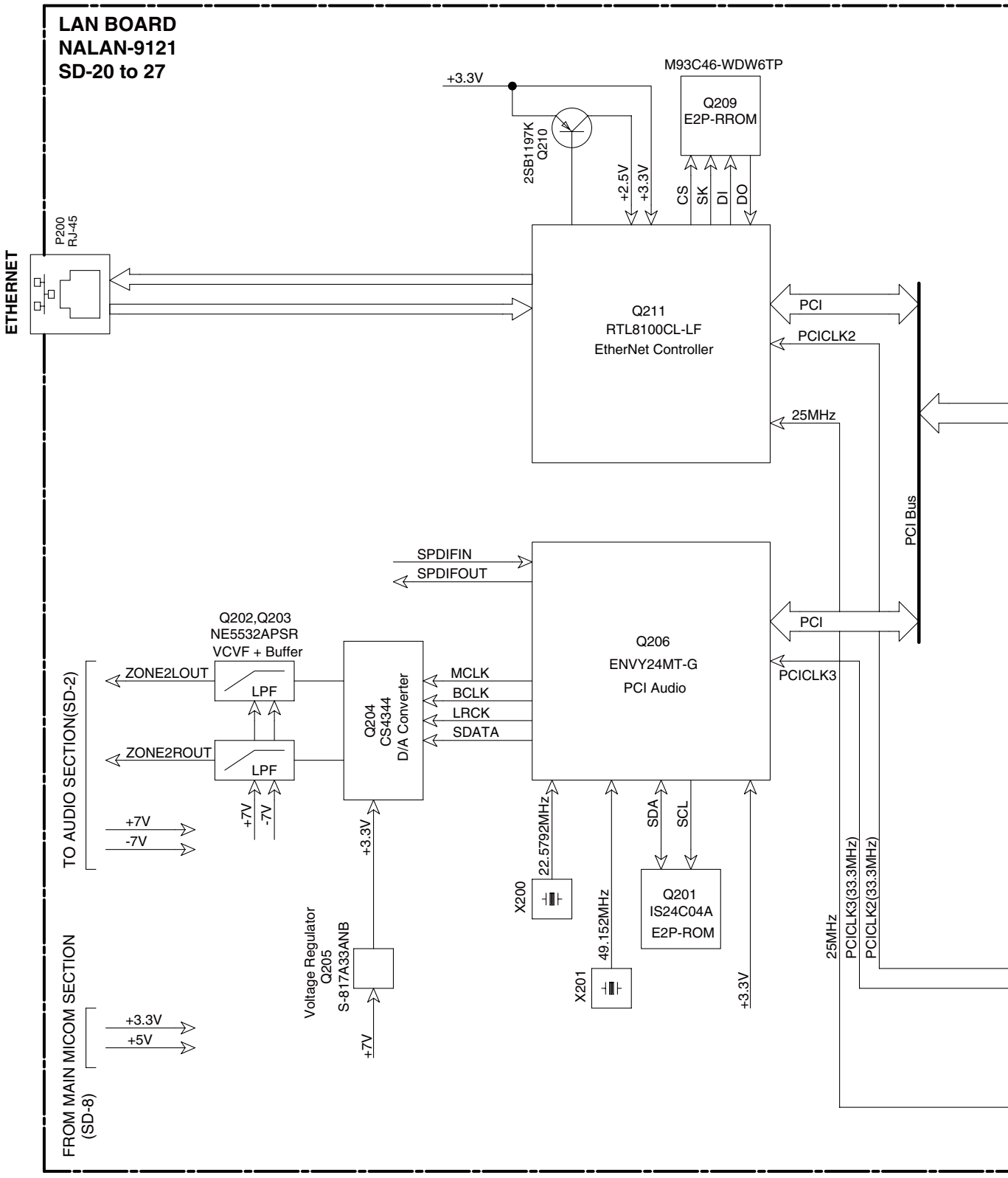
BLOCK DIAGRAMS-3
HDMI SECTION



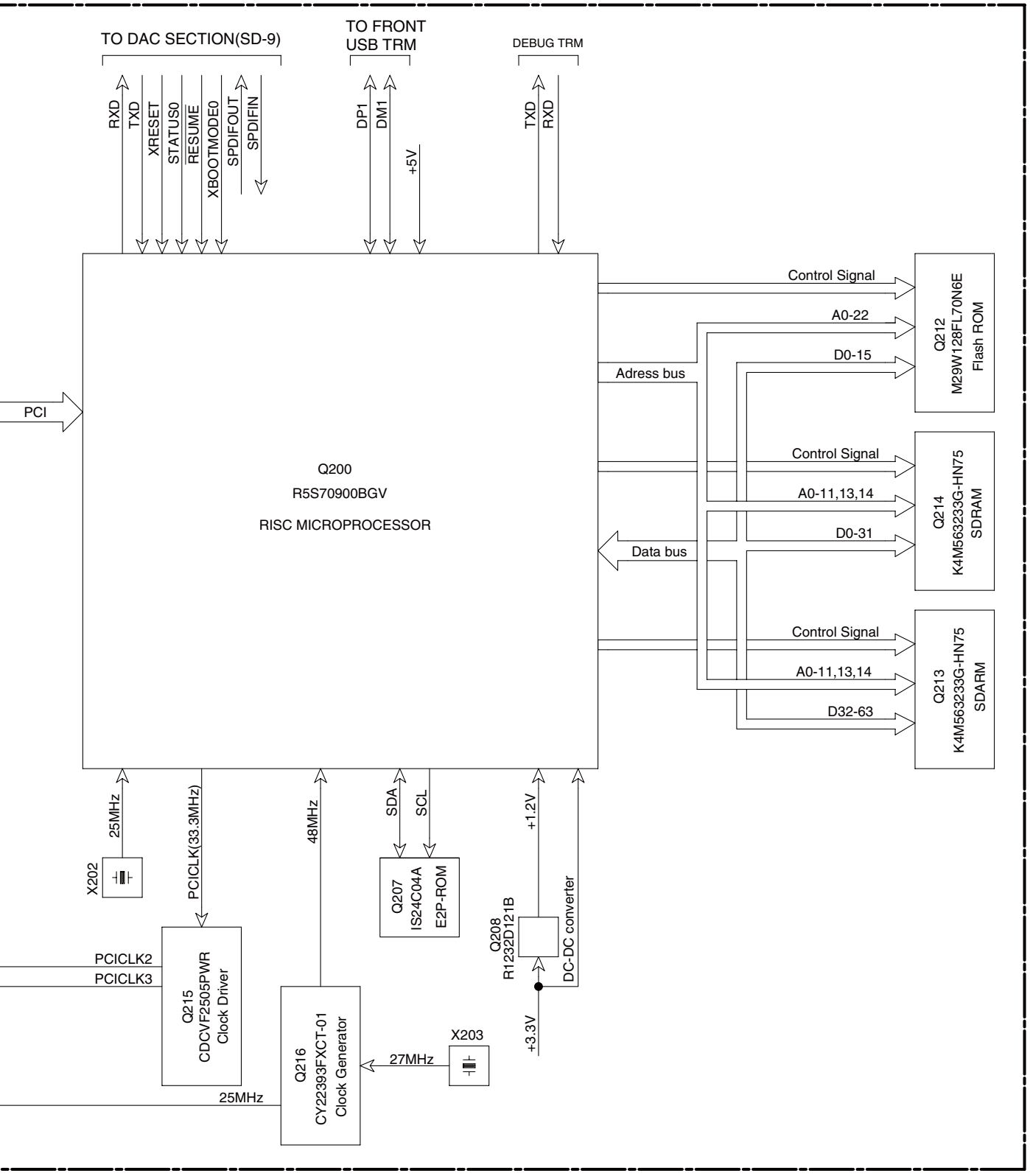
E F G H


VIDEO ENCODER
Q8901
ADV7320
RTC
LLC
VSYNC
HSYNC
FIELD/DE
Y(P10-19)
HDBPY
HDBPB
HDBPR
HDBSY
HDBCV
HDBSC
SDA
SCLK
RESETB
VDOFF
VIDEO BOARD
NAVD-9052
TC74VCX162827FT X2
20 bit BUS BUFFER
TC74VCX162827FT X2
1OE
OEDECTH
256 Mbit SDRAM X4
TC74VCX162244 X2
16 bit BUS BUFFER
OEEN
SDA_VDVE
SCL_VDVE
RST_VE
TO MAIN
MICROPROCESSOR
U8001
VX-50
IP conversion
Scaler & OSD
VICLK
VSYNC
HSYNC
VIFLD1
CR(P0,9)
Y(0,9)
CB(0,9)
VIDEN1
VICNTL3_DEN
VOCLK
VOVS
VOHS
VOACT
VODAT(0,9)
VODAT(10,19)
VODAT(20,29)
VOFIELD
TWIACLK
TWIADAT
TWIBCLK
TWIBDAT
RXDA
TXDA
RXDB
TXDB/DATA16
REFCLK
27MHz
FLASH_CS(0,1)
PCI_CBE(1,3)
PCI_AD(0-31)
GPIO(16,22)
/RESET
U8031
128 Mbit
FLASH MEMORY
RESET
TXDB
RXDB
VSPREQ/BOOT
TC74VCX162827FT X2
1OE
20 bit BUS BUFFER
OE444
OETX
HDMI Transmitter
Q8451
Sil9134
HDMI TRANSMITTER
IDCK
VSYNC
HSYNC
DE
D16-23
D0-7
D8-15
SD0-3
WS
SCK
MCLK
SPDIF
DSDCLK
DSDDA
TX2+/-
TX1+/-
TX0+/-
TXC+/-
DSCL
DSDA
HPD
INT
RESET#
CSCL
CSDA
ODDC_SDA
ODDC_SCL
+3.3V
4.7K
2K
47K
+13VS
NJM2860F3-05
Q8355
CONT
GND
BYP
VIN
VO
INT_TX
RST_TX
SCL_TX
SDA_TX
HPLGDET
HDMI_POW
D2+/-
D1+/-
D0+/-
CK+/-
CERemote
DDC CLK
DDC DATA
+5V
HP DET
HDMI OUT
SUB
HDMI OUT
MAIN
OERXTH
CB(O2-O11)
Y(O14-O23)
CR(O26-O35)
TC74VCX162244
16 bit BUS BUFFER
CR(O24-O35)
CB(O0-O11)
Y(O12-O23)
ICDK
VSYNC
HSYNC
FIELD/DE
CR
CB
Y
SD0_3
LRCK_HDMI
BCK_HDMI
MCLK
R8514
33
TO DSP BOARD
S-812C50BUC
Q8305
GND
SW
NC
CEC_IO
Q8701
MPD70F3716GC
VIDEO MICROPROCESSOR
VD_SCK
VD_SI
VD_SO
VD_STB
VSYSRST
RXMUTE
TXMUTE
TO MAIN
MICROPROCESSOR

BLOCK DIAGRAMS-4
NETWORK SECTION

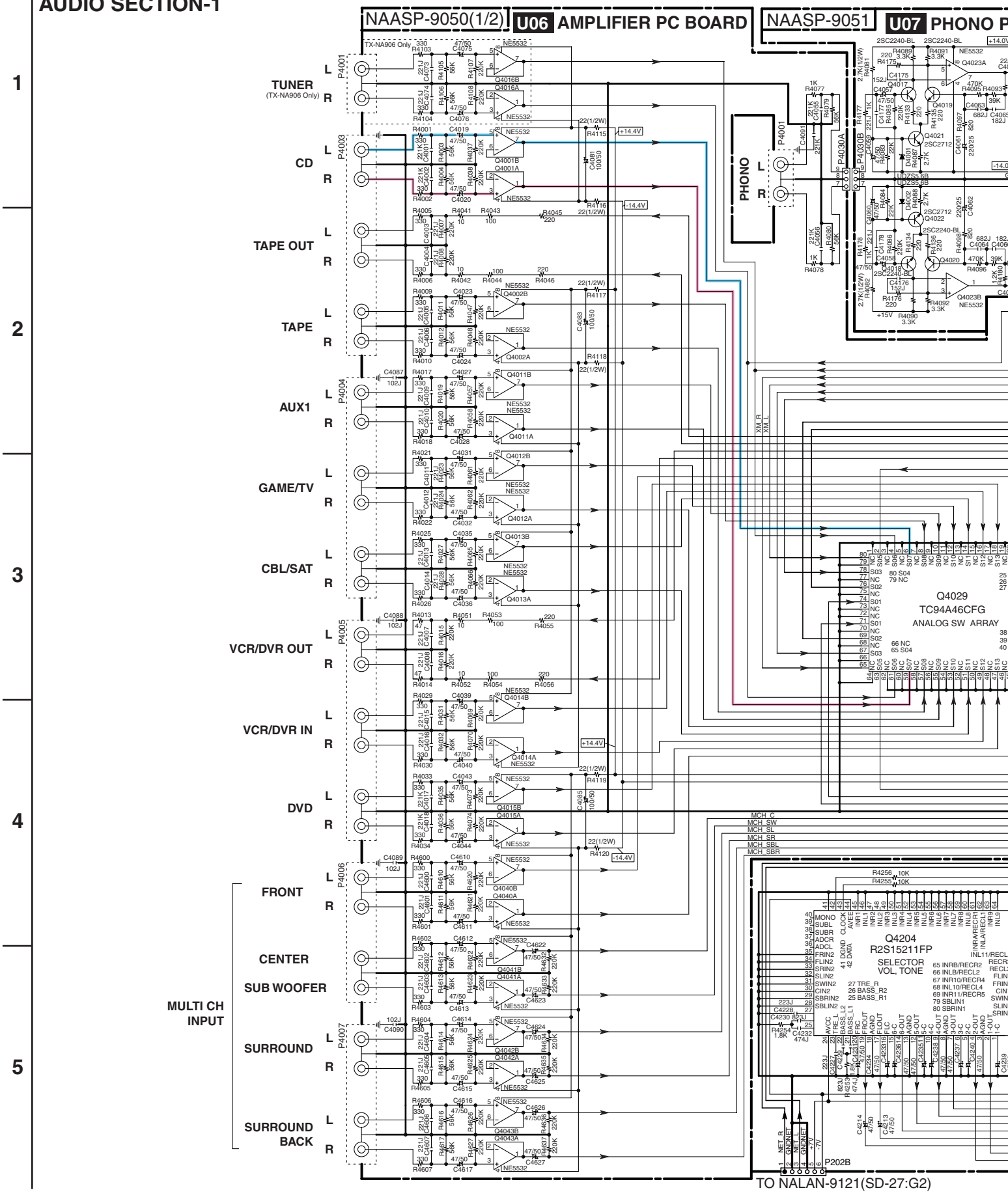


E F G H


TO DAC SECTION(SD-9)
TO FRONT USB TRM
DEBUG TRM
RXD
TXD
XRESET
STATUS0
RESUME
XBOOTMODE0
SPDIFOUT
SPDIFIN
DP1
DM1
+5V
TXD
RXD
PCI
Q200
R5S70900BGV
RISC MICROPROCESSOR
Control Signal
A0-22
D0-15
Adress bus
Q212
M29W128FL70N6E
Flash ROM
Control Signal
A0-11,13,14
D0-31
Data bus
Q214
K4M563233G-HN75
SDRAM
Control Signal
A0-11,13,14
D32-63
Q213
K4M563233G-HN75
SDARM
25MHz
X202
PCICLK(33.3MHz)
48MHz
SDA
SCL
Q207
IS24C04A
E2P-ROM
+1.2V
Q208
R1232D121B
DC-DC converter
PCICLK2
PCICLK3
Q215
CDCVF2505PWR
Clock Driver
Q216
CY22393FXCT-01
Clock Generator
27MHz
X203
+3.3V
25MHz

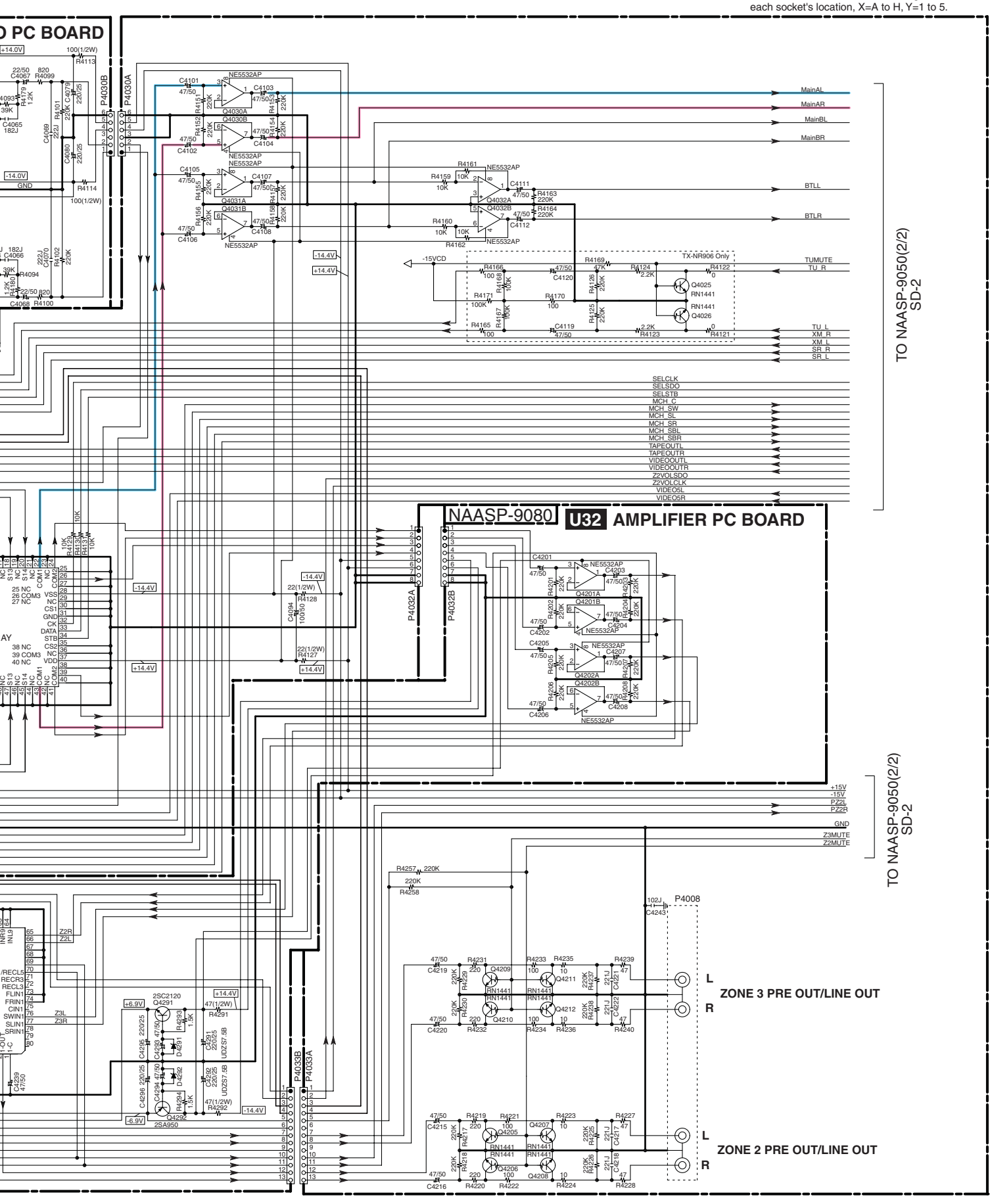
SCHEMATIC DIAGRAMS-1 (SD-1)

AUDIO SECTION-1



E F G H

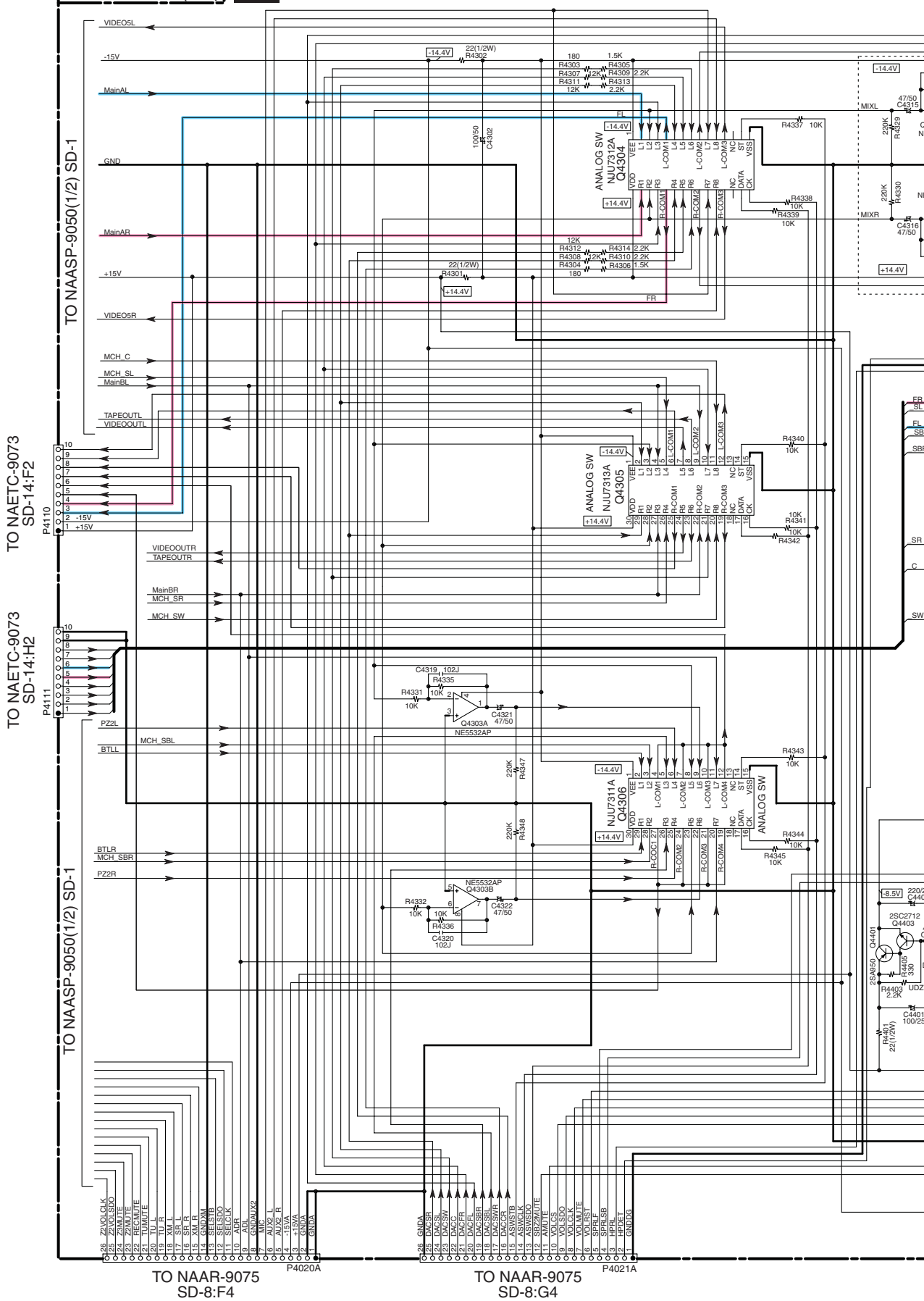
<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.



SCHEMATIC DIAGRAMS-2 (SD-2)

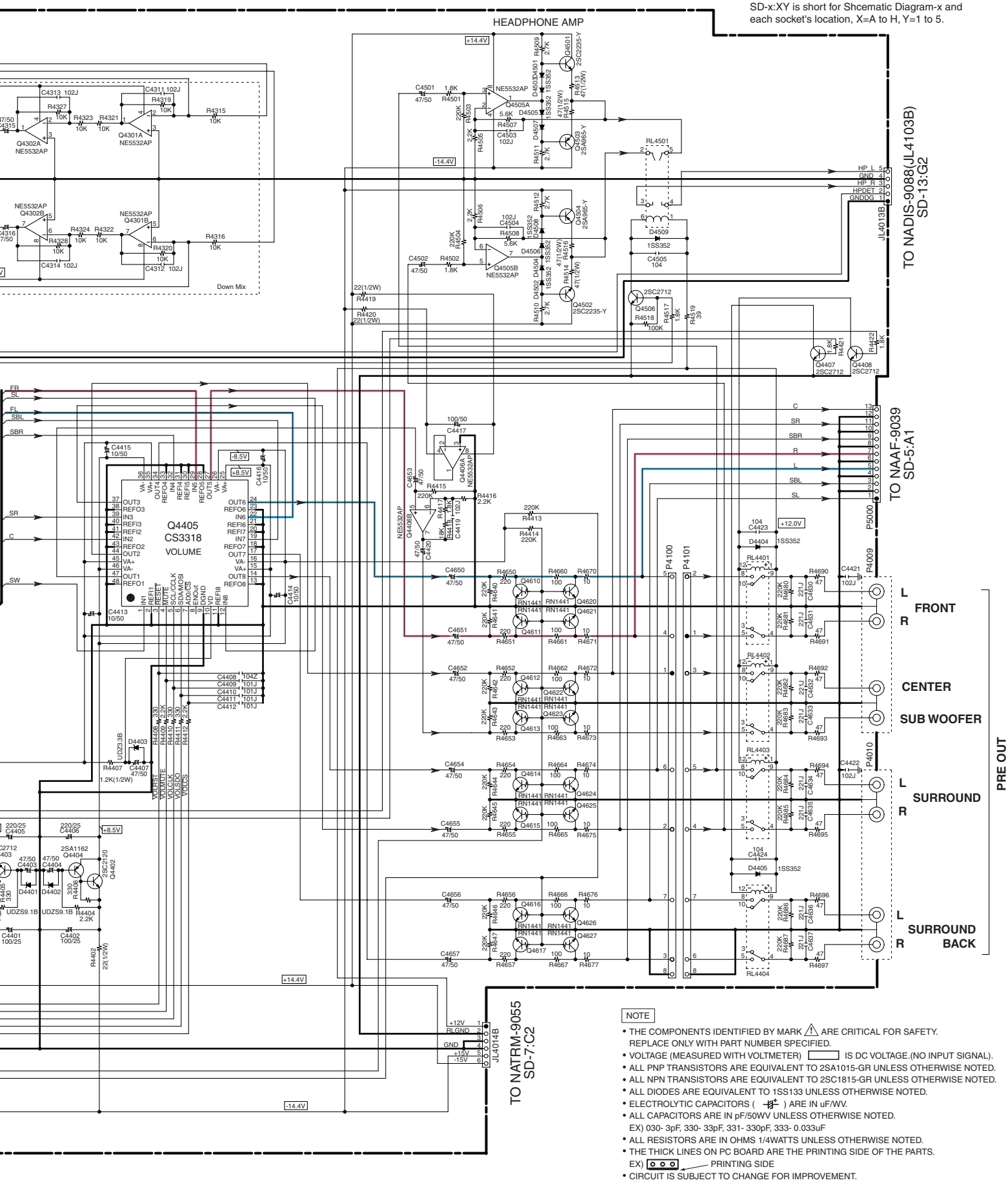
AUDIO SECTION-2

NAASP-9050(2/2) **U06 AMPLIFIER PC BOARD**



E F G H

<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.



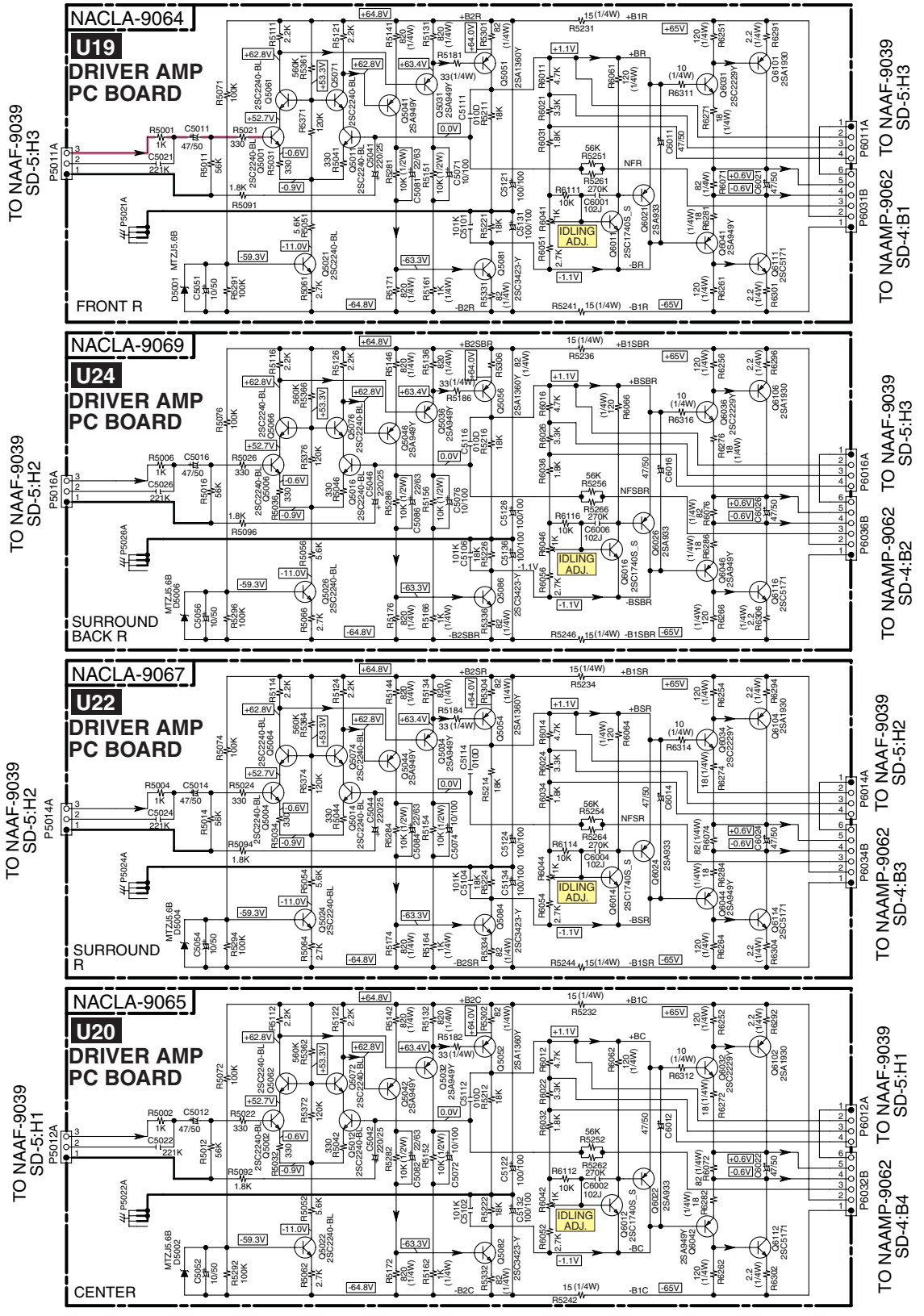
NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) [ ] IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ○○○ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

A B C D

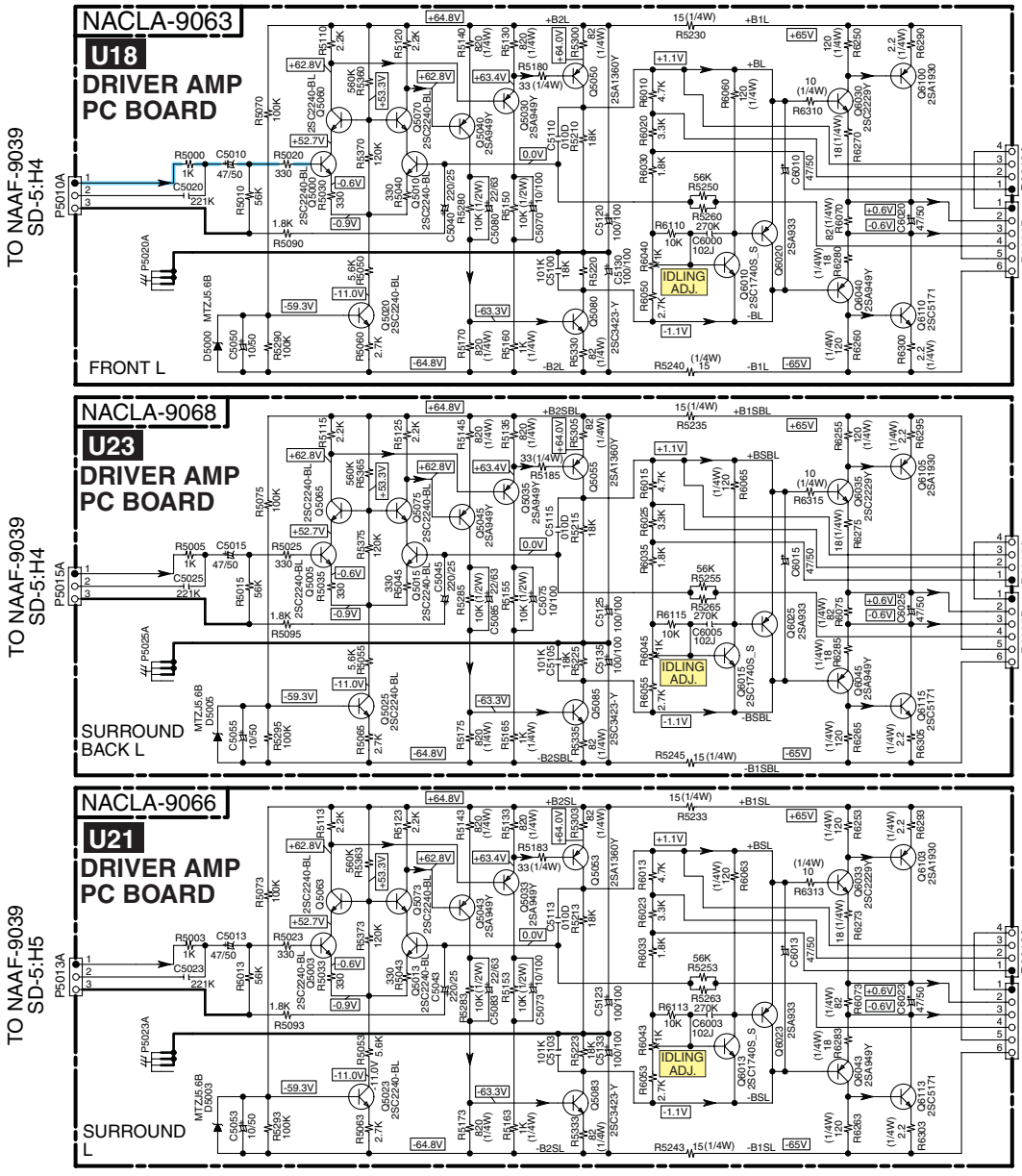
SCHEMATIC DIAGRAMS-3 (SD-3)

POWER AMPLIFIER SECTION-1



NACLA-9064,65,67,69
are fully compatible with each other.

E F G H



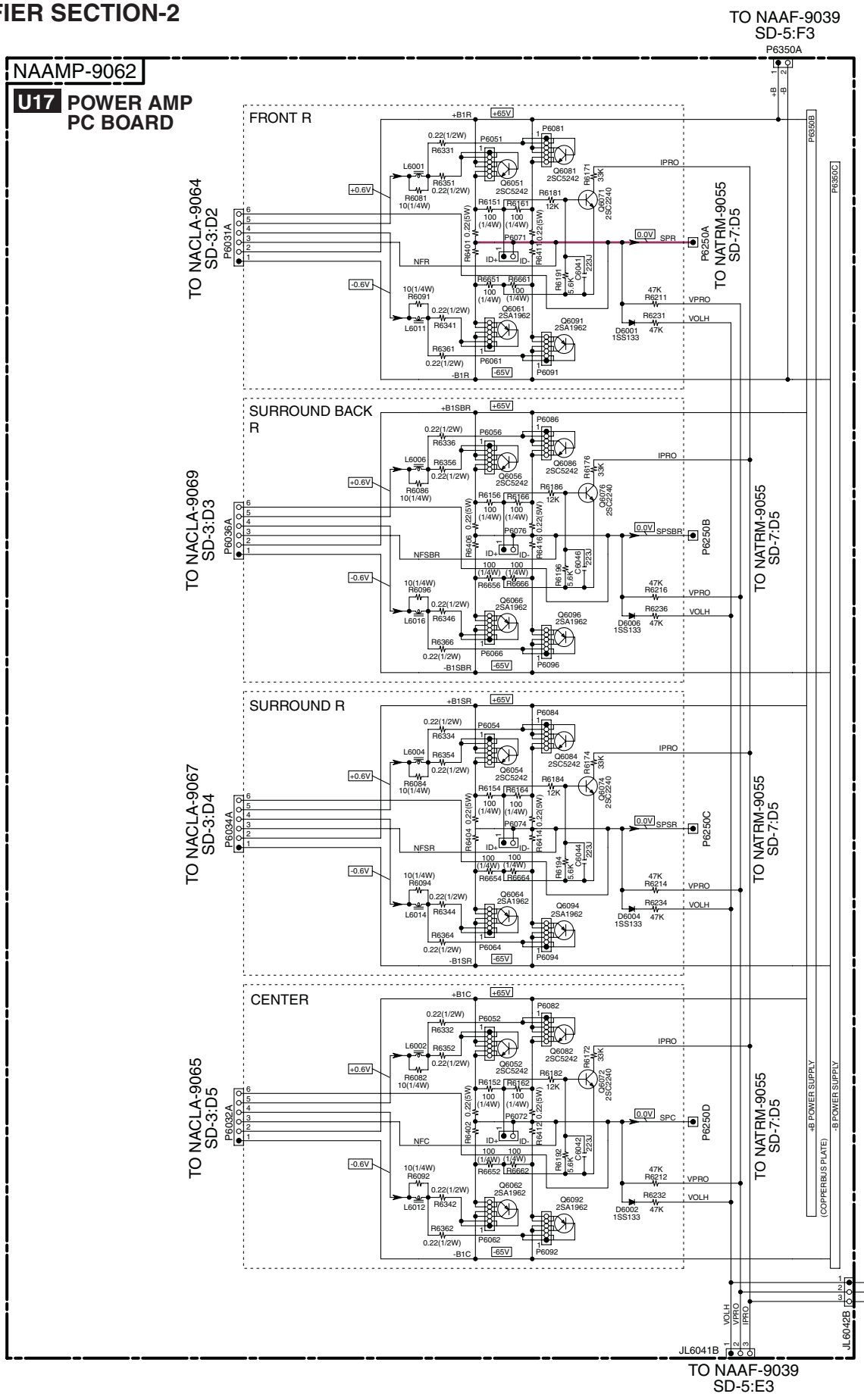
NACLA-9063,66,68
are fully compatible with each other.

<Note>
SD-x:XY is short for Shcematic Diagram-x and
each socket's location, X=A to H, Y=1 to 5.

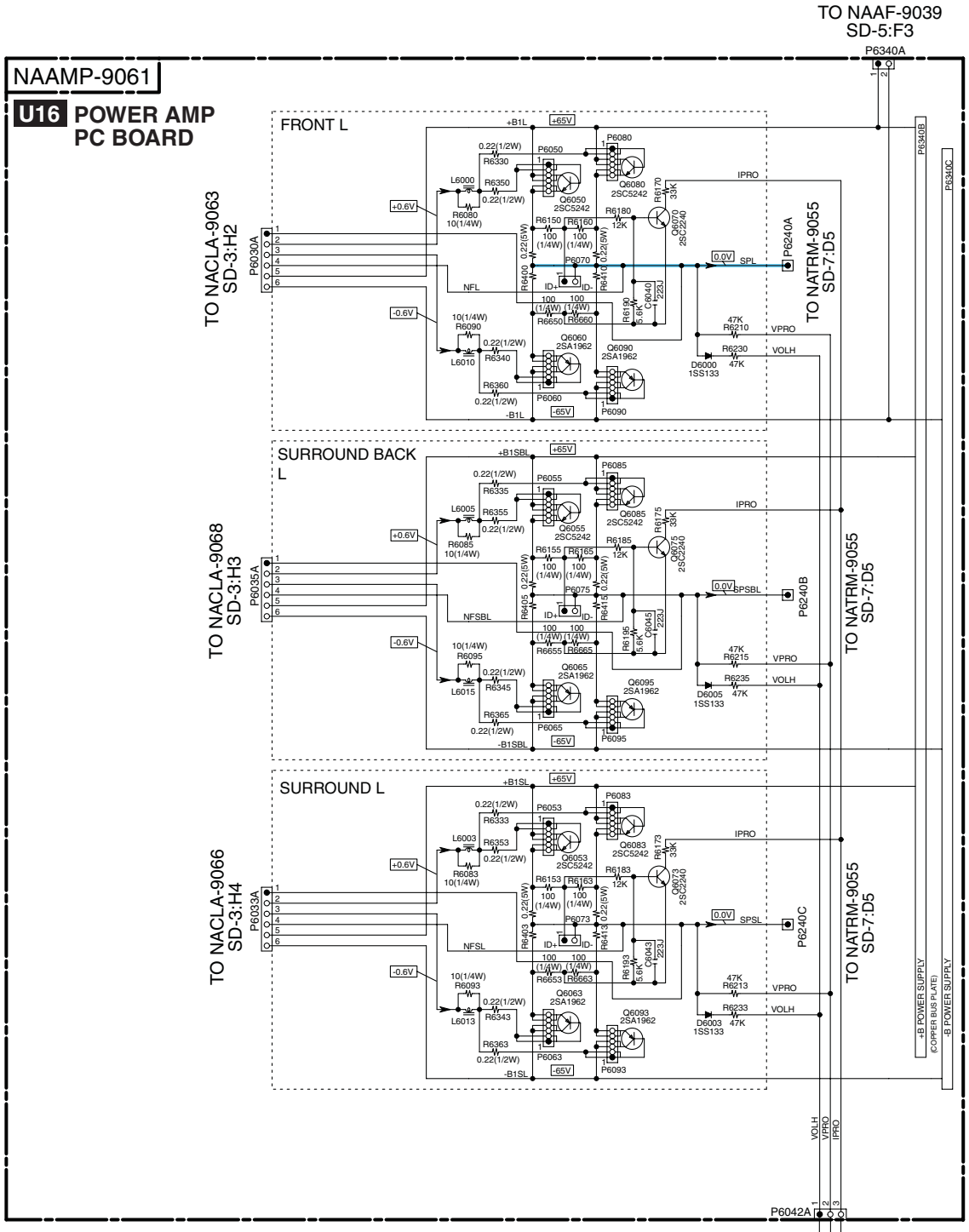
NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ▭▭▭ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

SCHEMATIC DIAGRAMS-4 (SD-4)
POWER AMPLIFIER SECTION-2



E F G H

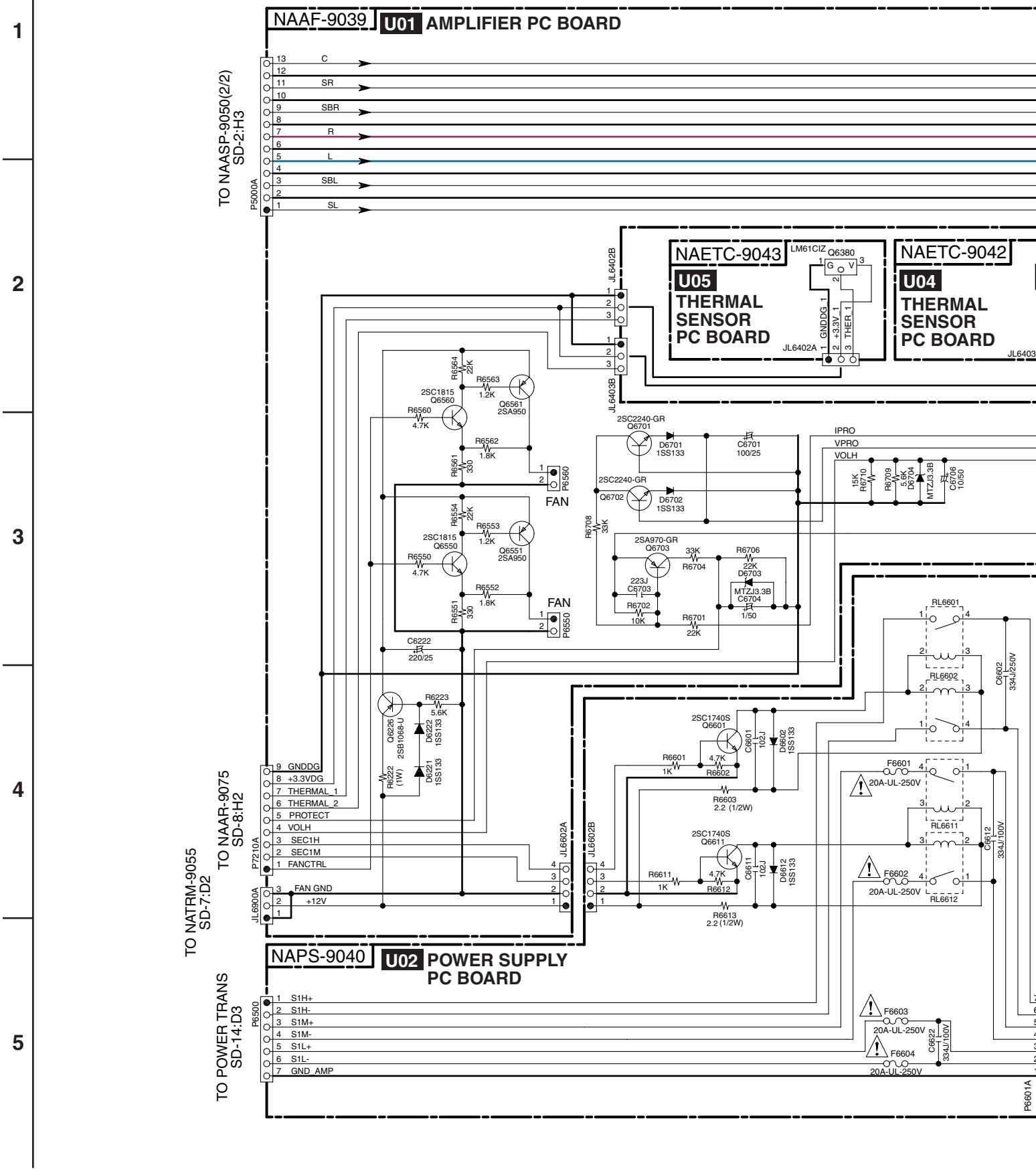


<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

NOTE

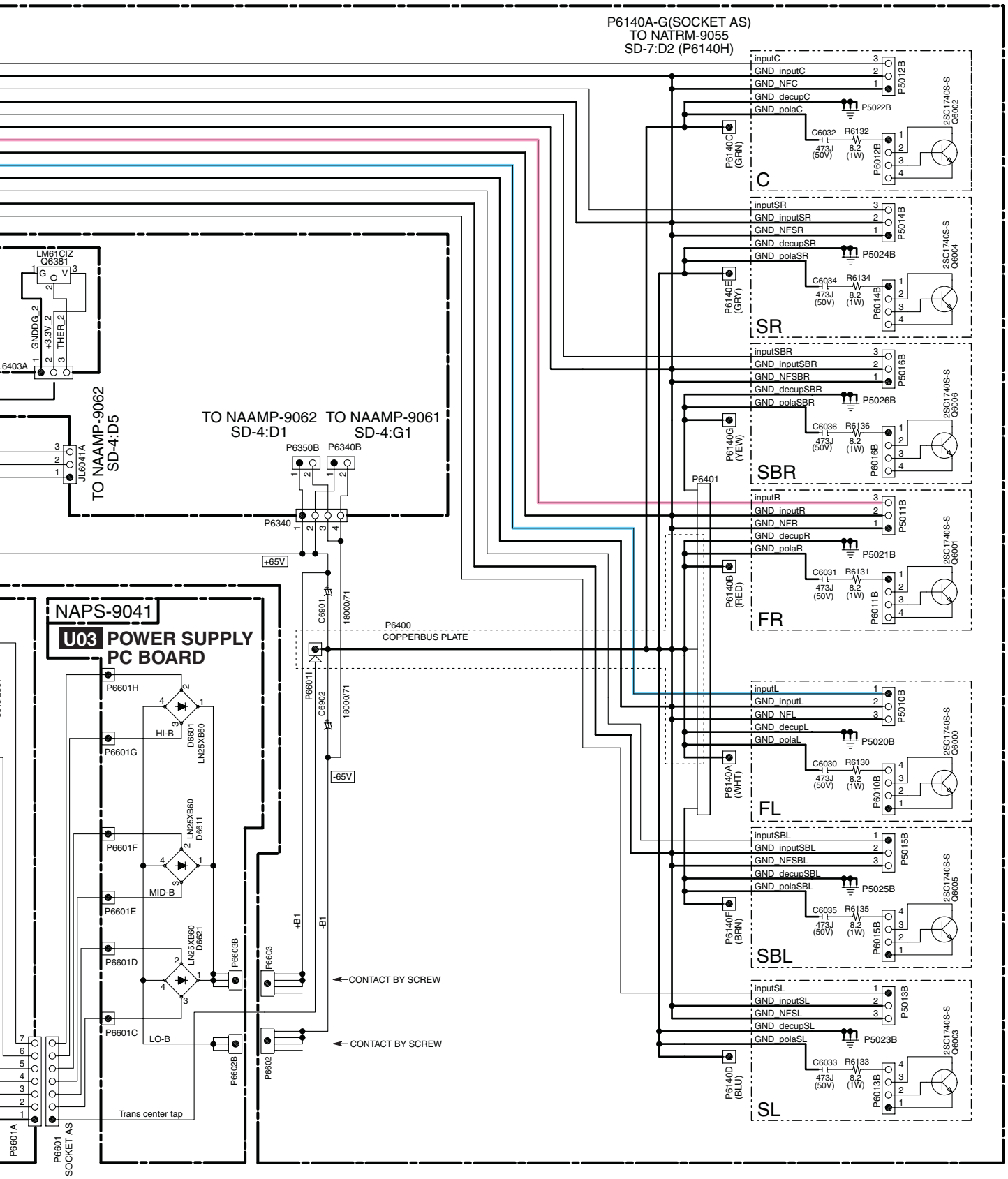
- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ▭ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

SCHEMATIC DIAGRAMS-5 (SD-5)
POWER SUPPLY SECTION-1



E F G H

<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.



SCHEMATIC DIAGRAMS-6 (SD-6)
VIDEO SECTION

NAVD-9052

U08 VIDEO PC BOARD

COMPONENT VIDEO

IN 3: Cr/Pr, Cb/Pb, Y — P2201

IN 2: Cr/Pr, Cb/Pb, Y — P2202

IN 1: Cr/Pr, Cb/Pb, Y

MONITOR OUT: Cr/Pr, Cb/Pb, Y

Q2201 NJW1321 VIDEO SW

Q2204 2SK3019, Q2205 2SK3019

Q2206 NJM2586A VIDEO AMP

WF24, WF25, WF26

<Note>
Refer to SCHEMATIC DIAGRAM-29 (SD-29)
for video signal waveforms.

S VIDEO

AUX1 — P2001

GAME/TV — P2001

CBL/SAT — P2002

OUT — P2002

VCR/DVR IN — P2003

DVD — P2003

MONITOR OUT — P2004

Q2006 74HC4051 8 CH MULTIPLEXER MAIN V

Q2007 74HC4051 8 CH MULTIPLEXER Z2 V

Q2008 74HC4051 8 CH MULTIPLEXER MAIN Y

Q2009 74HC4051 8 CH MULTIPLEXER Z2 Y

Q2010 74HC4051 8 CH MULTIPLEXER MAIN C

Q2011 74HC4051 8 CH MULTIPLEXER Z2 C

VIDEO AMP NJM2587 Q2012

Q2013 NJM2587 VIDEO AMP

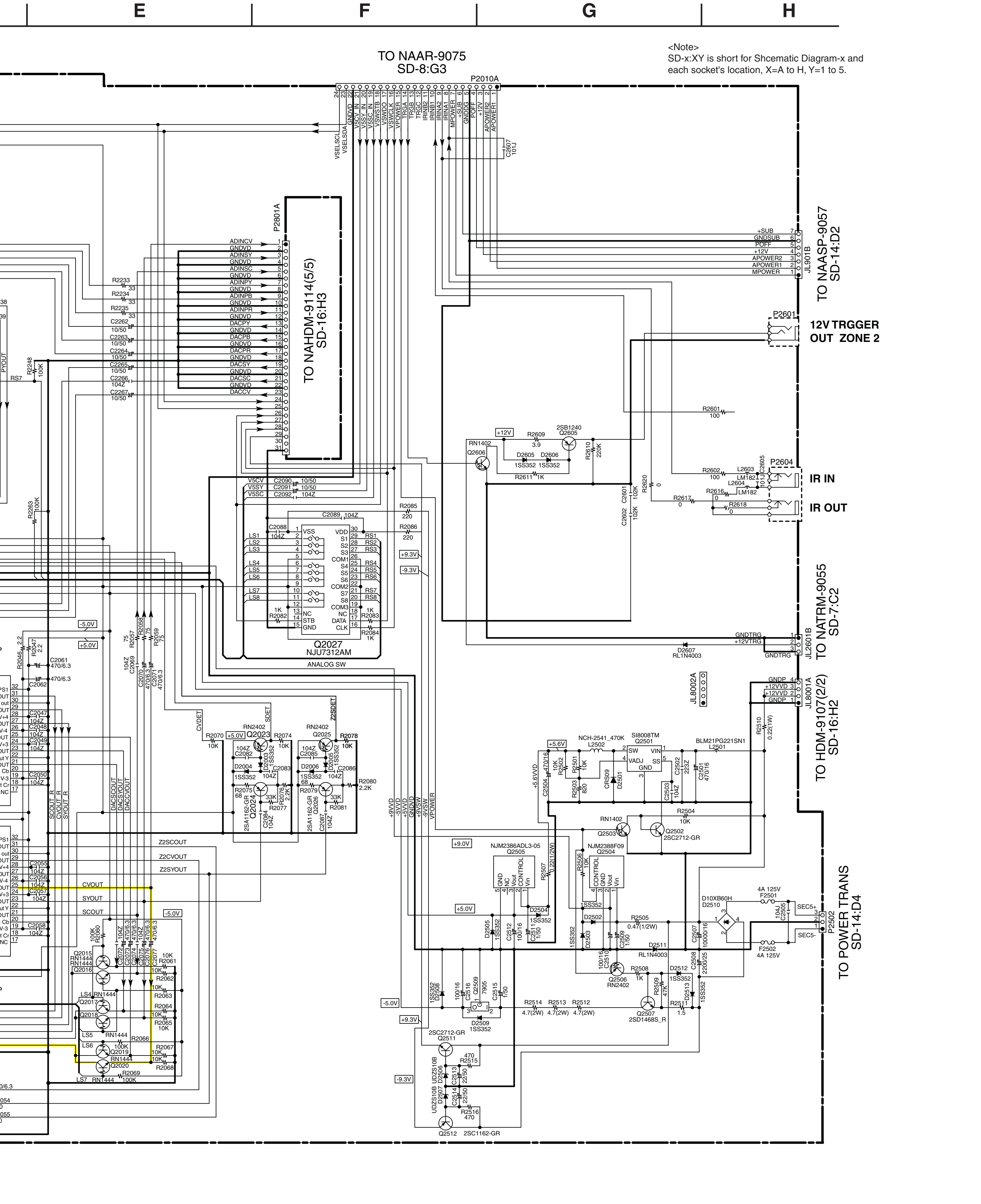
WF21, WF22, WF23

COMPOSITE VIDEO

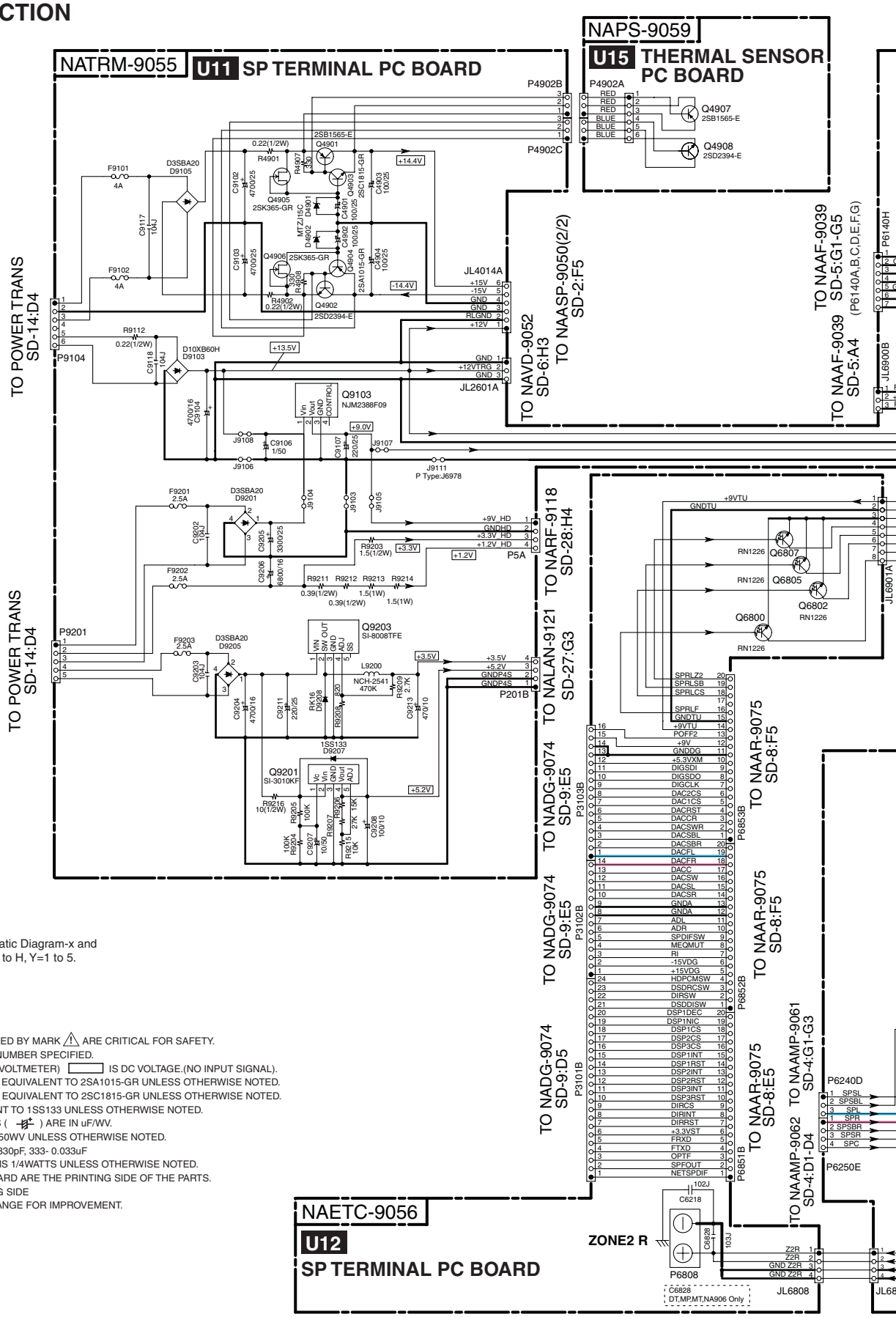
ZONE 2 OUT — P2005

Q2014 MM1512 Y/C Mix

<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.



SCHEMATIC DIAGRAMS-7 (SD-7)
SP TERMINAL SECTION

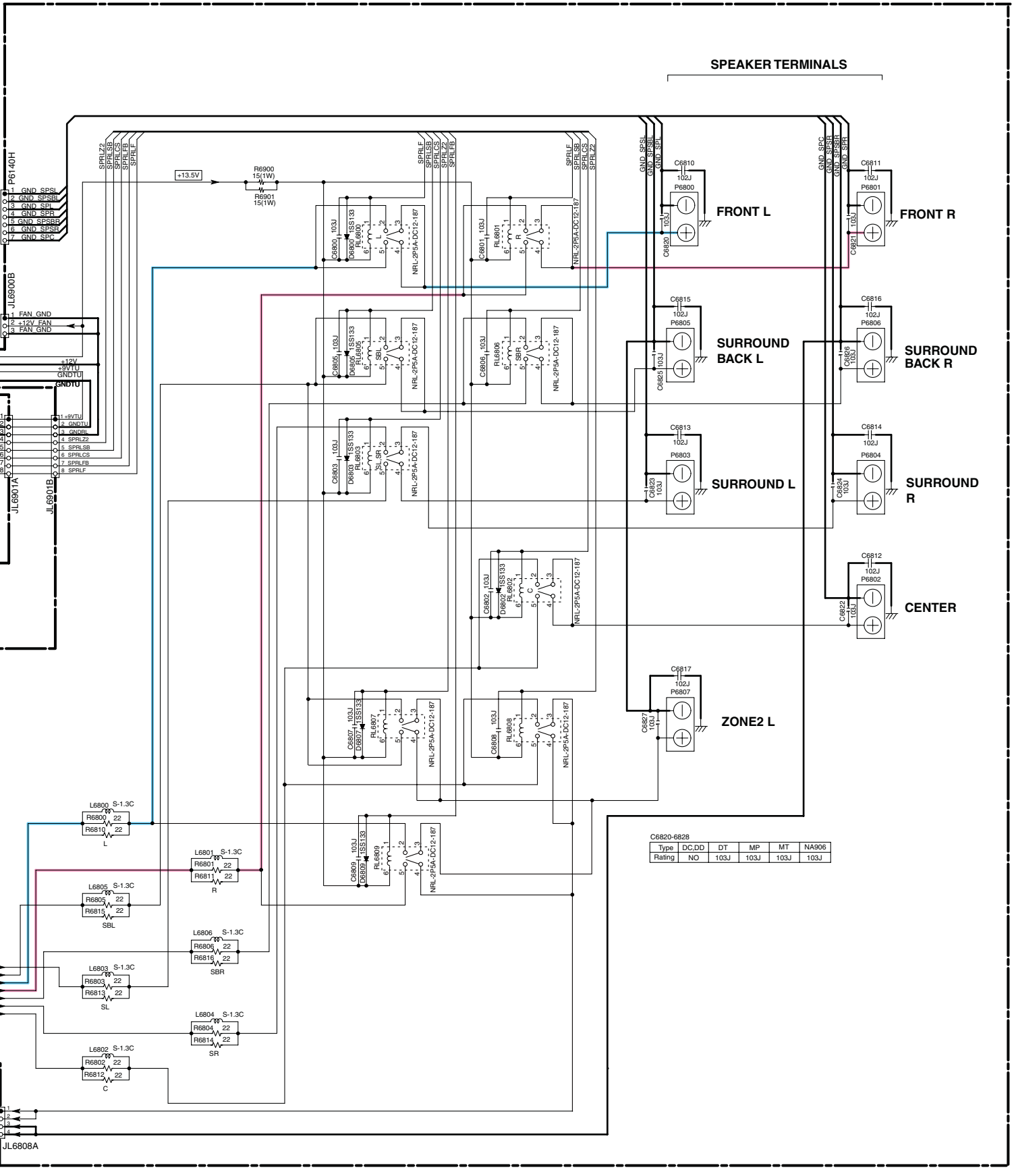


<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

NOTE

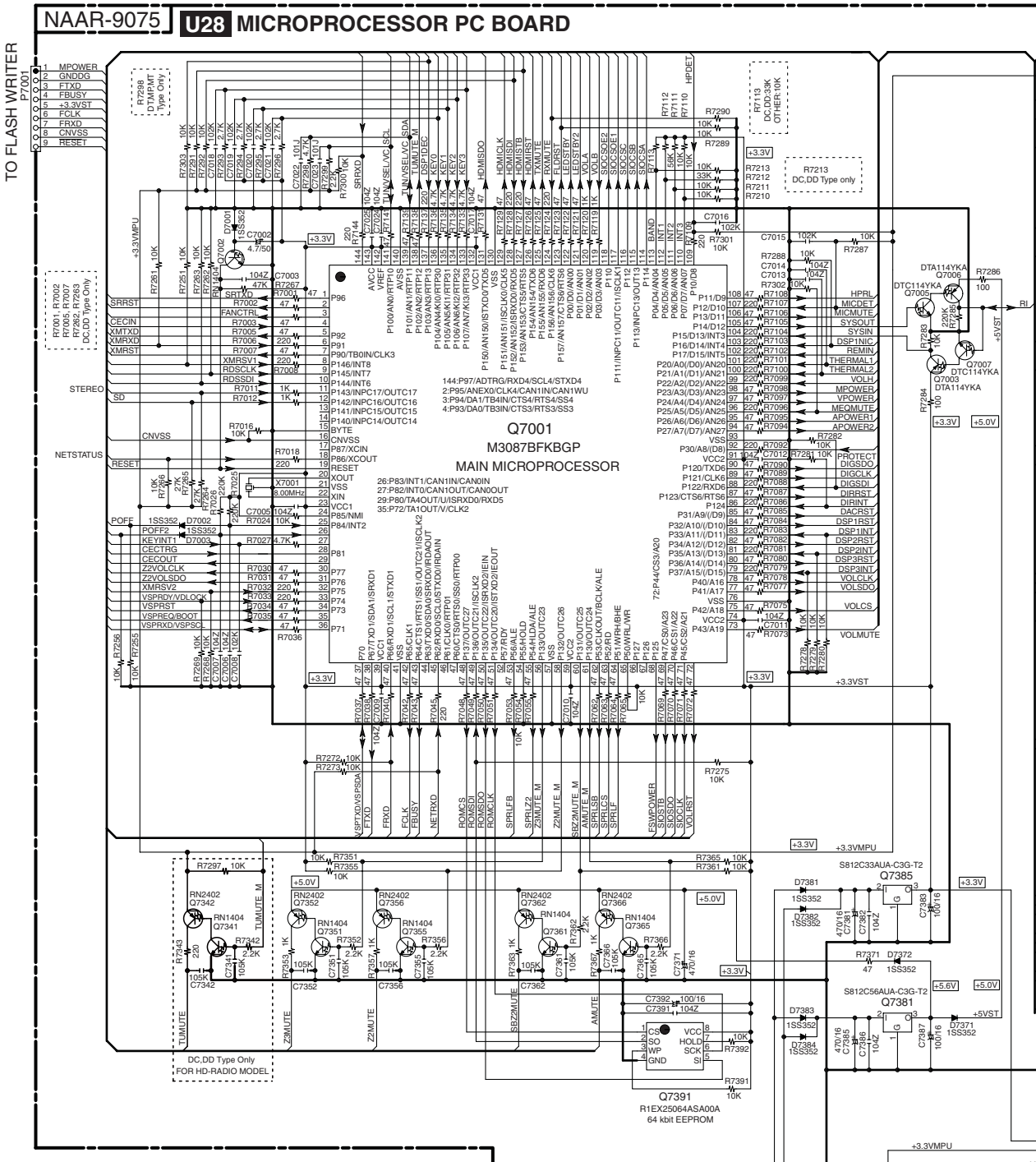
- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⏚) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ▭ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

E F G H


SPEAKER TERMINALS
FRONT L
FRONT R
SURROUND BACK L
SURROUND BACK R
SURROUND L
SURROUND R
CENTER
ZONE2 L
P6140H
JL6900B
JL6901A
JL6901B
JL6808A
+13.5V
R6900 15(1W)
R6901 15(1W)
NRL-2P5A-DC12-187
L
R
SBL
SBR
SL
SR
C
C6820-6828
Type DC,DD DT MP MT NA906
Rating NO 103J 103J 103J 103J

SCHEMATIC DIAGRAMS-8 (SD-8)
MICROPROCESSOR SECTION

NAAR-9075 **U28** MICROPROCESSOR PC BOARD

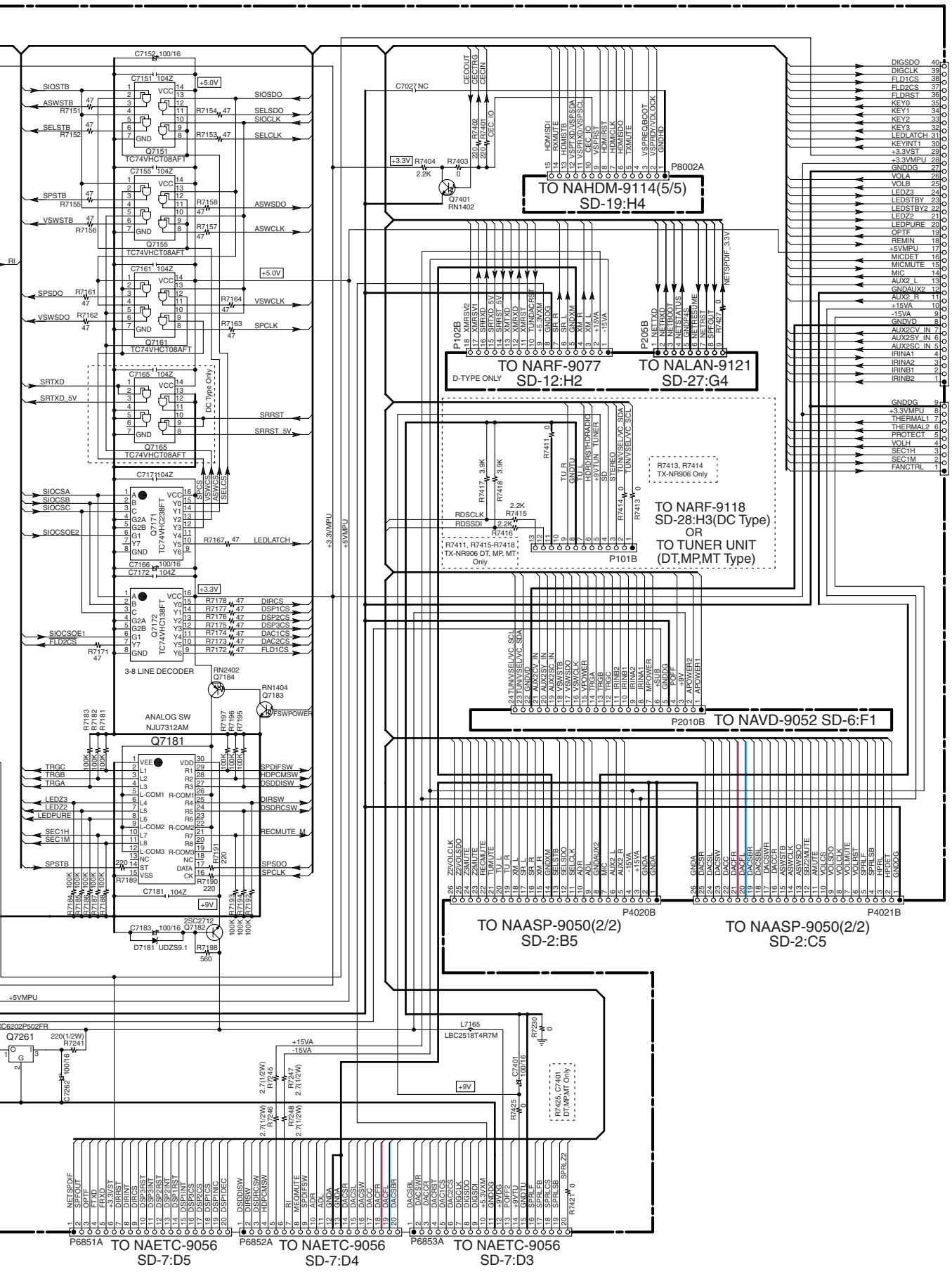


<Note>
SD-x:XY is short for Shcematic Diagram-x and
each socket's location, X=A to H, Y=1 to 5.

NOTE

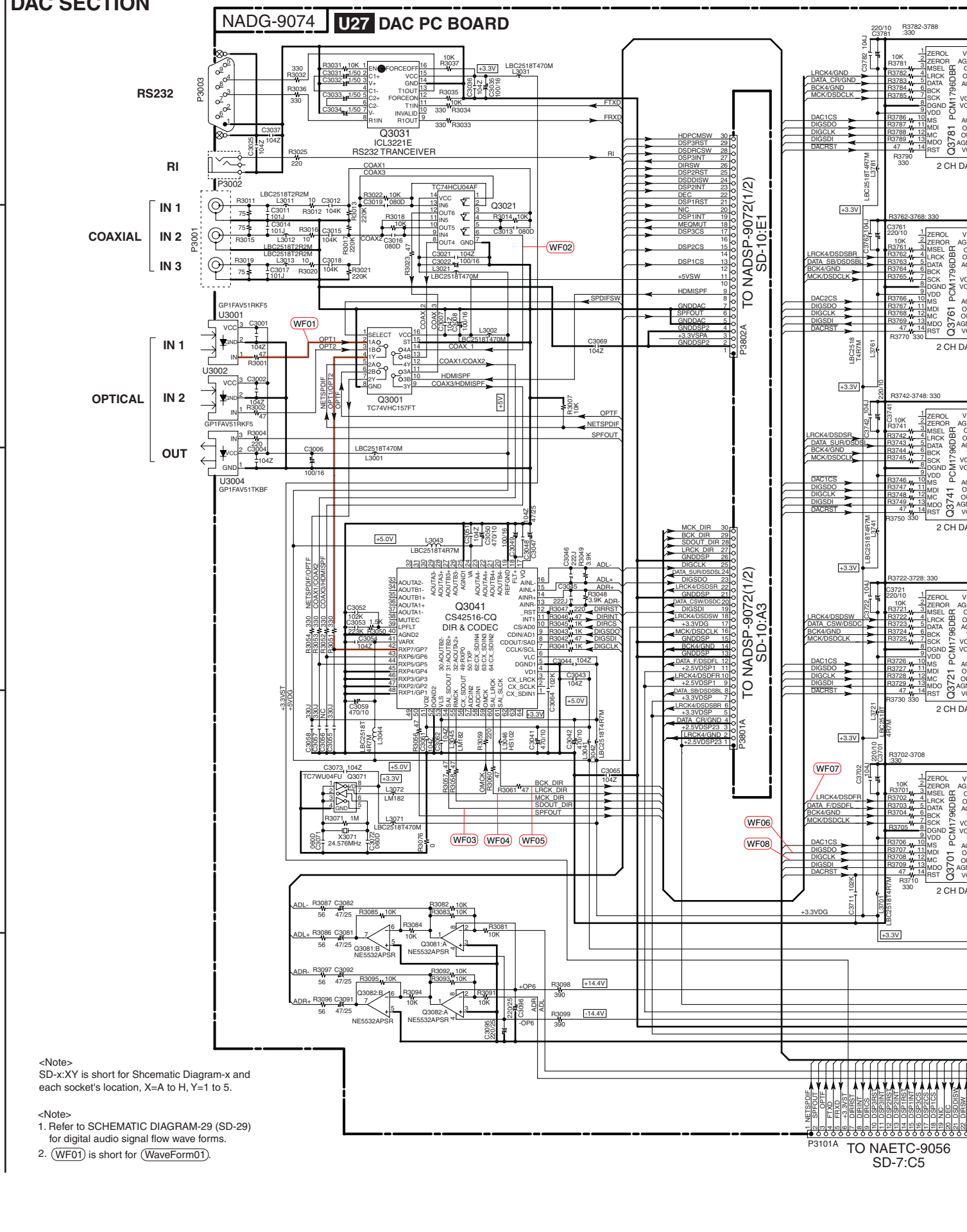
- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) ▭ ← PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

E F G H


TO NADIS-9085
SD-13:B2
TO NAADF-9039
SD-5:A4
TO NARF-9077
D-TYPE ONLY
SD-12:H2
TO NALAN-9121
SD-27:G4
TO NAHDM-9114(5/5)
SD-19:H4
TO NARF-9118
SD-28:H3(DC Type)
OR
TO TUNER UNIT
(DT,MP,MT Type)
TO NAVD-9052 SD-6:F1
TO NAASP-9050(2/2)
SD-2:B5
TO NAASP-9050(2/2)
SD-2:C5
TO NAETC-9056
SD-7:D5
TO NAETC-9056
SD-7:D4
TO NAETC-9056
SD-7:D3
3-8 LINE DECODER
ANALOG SW
NJU7312AM
R7411, R7415-R7418
TX-NR906 DT, MP, MT
Only
R7413, R7414
TX-NR906 Only
R7425, C7401
DT,MP,MT Only
DC Type Only

SCHEMATIC DIAGRAMS-9 (SD-9)

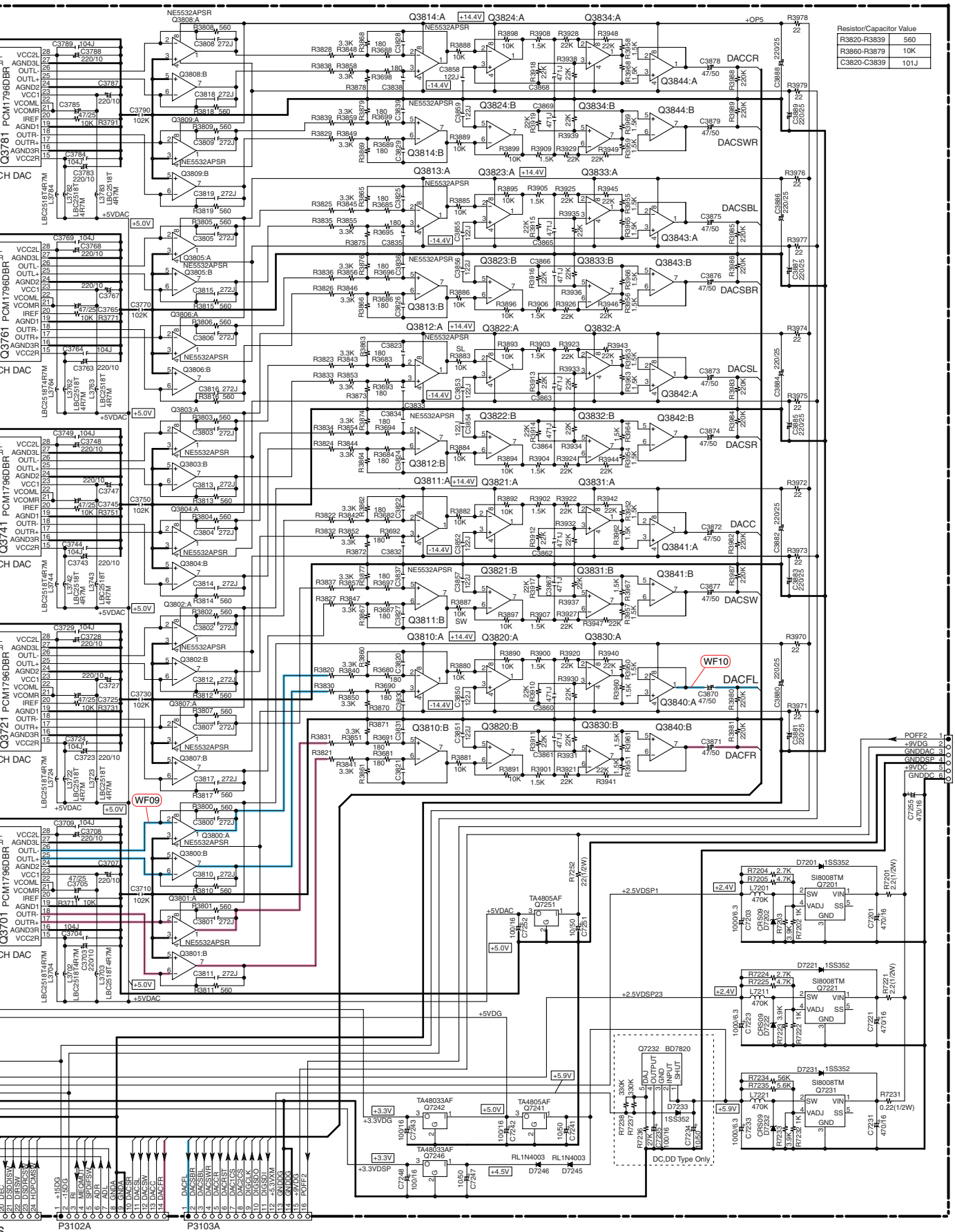
DAC SECTION



<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

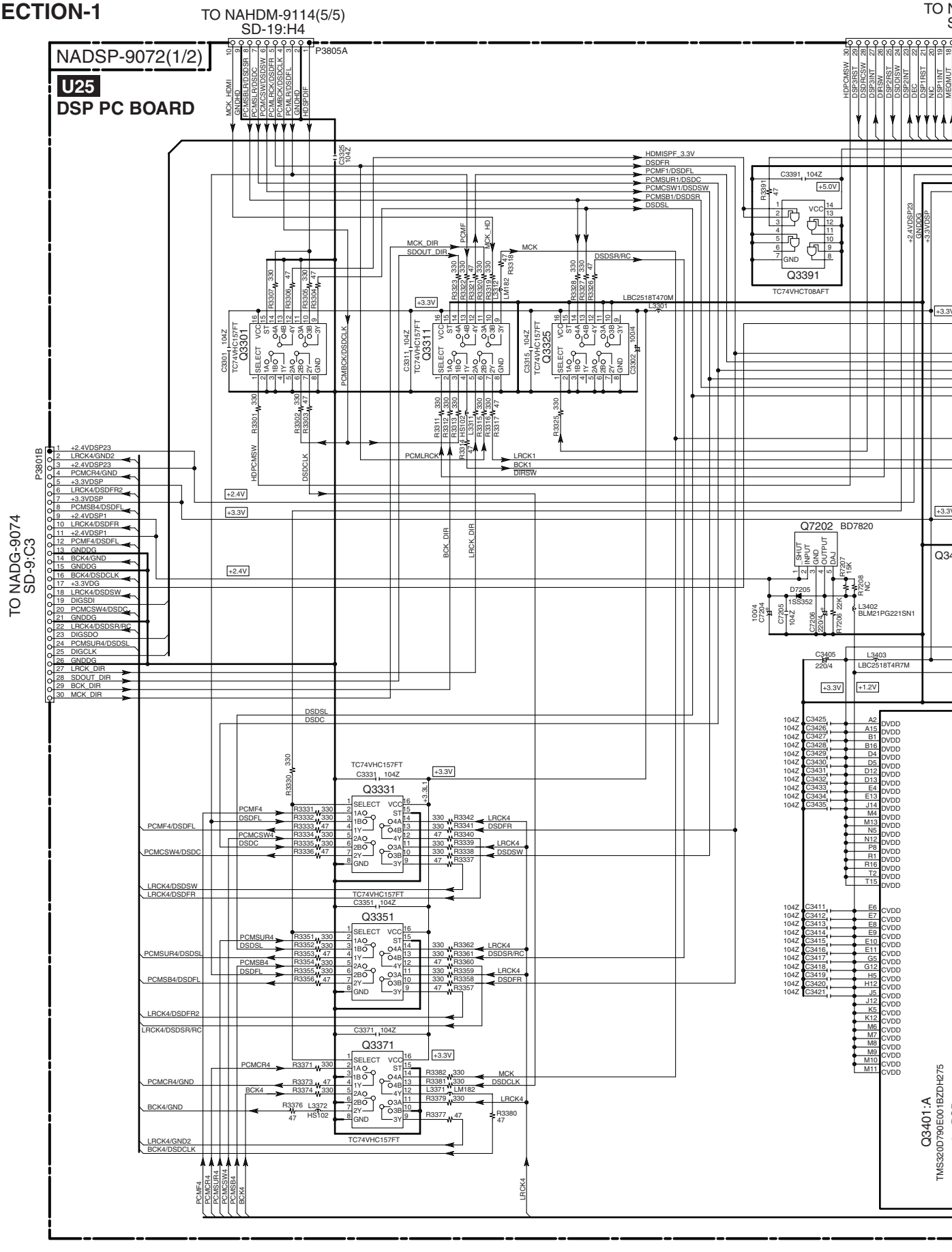
<Note>
1. Refer to SCHEMATIC DIAGRAM-29 (SD-29) for digital audio signal flow wave forms.
2. (WF01) is short for (WaveForm01).

E F G H


Resistor/Capacitor Value
R3820-R3839 560
R3860-R3879 10K
C3820-C3839 101J
Q3814:A
Q3824:A
Q3834:A
Q3844:A
DACCR
Q3824:B
Q3834:B
Q3844:B
DACSWR
Q3813:A
Q3823:A
Q3833:A
Q3843:A
DACSBL
Q3823:B
Q3833:B
Q3843:B
DACSBR
Q3812:A
Q3822:A
Q3832:A
Q3842:A
DACSL
Q3822:B
Q3832:B
Q3842:B
DACSR
Q3811:A
Q3821:A
Q3831:A
Q3841:A
DACC
Q3821:B
Q3831:B
Q3841:B
DACSW
Q3810:A
Q3820:A
Q3830:A
Q3840:A
DACFL
Q3820:B
Q3830:B
Q3840:B
DACFR
WF10
WF09
PCM1796DBR
Q3781
Q3761
Q3741
Q3721
Q3701
+5VDAC
+5.0V
+2.5VDSP1
+2.5VDSP23
+5VDG
+5.9V
+3.3VDG
+3.3VDSP
+4.5V
TA4805AF Q7251
TA4805AF Q7241
TA4805AF Q7242
TA48033AF Q7246
Q7232 BD7820
DC,DD Type Only
D7201 1SS352
D7221 1SS352
D7231 1SS352
SI8008TM Q7201
SI8008TM Q7221
SI8008TM Q7231
POFF2
+9VDG
GNDDAC
GNDDSP
+9VDC
GNDDC
JL9501A
TO NAPS-9089
SD-14:H4
P3102A
TO NAETC-9056
SD-7:C4
P3103A
TO NAETC-9056
SD-7:C3

SCHEMATIC DIAGRAMS-10 (SD-10)

DSP SECTION-1



E F G H

<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

TO NADG-9074
SD-9:C2

P3802B

TO NADSP-9072(2/2)
SD-11:A4

+2.4V
+2.4VDSP23
GNDDG
+3.3VDSP
+3.3V
CPU_CONTROL

DIGSDI R3401 47 B14 SPIO_SOMI/I2C0_SDA
DIGSDO R3402 1K B15 SPIO_SIMO
DIGCLK R3403 1K C16 SPIO_CLK/I2C0_SCL
DSP1CS R3404 2.2K C15 SPIO_SCS/I2C1_SCL
DSP1INT R3405 47 D16 SPIO_ENA/I2C1_SDA
DSP1RST R3406 1K G2 RESET
C3401 101J

PCMF2 R3407 47 A14 AXR0[0]
PCMSUR2 R3408 47 B13 AXR0[1]
PCMCSW2 R3409 47 A13 AXR0[2]
PCMSB2 R3410 47 B12 AXR0[3]
R3411 10K A12 AXR0[4]
NIC R3412 330 B11 AXR0[5]/SPI1_SCS
DEC R3413 330 A11 AXR0[6]/SPI1_ENA]
R3414 10K B10 AXR0[7]/SPI1_CLK
R3415 10K B9 AXR0[8]/AXR1[5]/SPI1_SOMI
R3416 10K A9 AXR0[9]/AXR1[4]/SPI1_SIMO
DSDFR R3417 330 B8 AXR0[10]/AXR1[3]
PCMF1/DSDFL R3418 330 A8 AXR0[11]/AXR1[2]
PCMSUR1/DSDC R3419 330 B7 AXR0[12]/AXR1[1]
PCMCSW1/DSDSW R3420 330 B6 AXR0[13]/AXR1[0]
PCMSB1/DSDSR R3421 330 A6 AXR0[14]/AXR2[1]
DSDSL R3422 330 B5 AXR0[15]/AXR2[0]

R3423 10K B3 AHCLKR0/AHCLKR1
BCK1 R3424 330 A5 ACLKR0
LRCK1 R3425 330 B4 AFSR0
MCK R3426 330 C2 AHCLKX0/AHCLKX2
BCK2 R3427 47 A4 ACLKX0
LRCK2 R3428 47 A3 AFSX0
MCK

OSCIN J2
OSCOUT J3
OSCVDD J4
OSCVSS J1
R3429 330 CLKIN H2
PLLHV K2

UHPI_HD[0] K13
UHPI_HD[1] K14
UHPI_HD[2] M14
UHPI_HD[3] L13
UHPI_HD[4] L14
UHPI_HD[5] N13
UHPI_HD[6] N14
UHPI_HD[7] P14
UHPI_HD[8] E14
UHPI_HD[9] F14
UHPI_HD[10] F13
UHPI_HD[11] G14
UHPI_HD[12] G13
UHPI_HD[13] H14
UHPI_HD[14] H13
UHPI_HD[15] J13
UHPI_HD[16]/HHWIL H1
UHPI_HD[17] G3
UHPI_HD[18] G4
UHPI_HD[19] F3
UHPI_HD[20] F4
UHPI_HD[21] E3
UHPI_HD[22] D3
UHPI_HD[23] C3
UHPI_HD[24] P2
UHPI_HD[25] N2
UHPI_HD[26] N3
UHPI_HD[27] M3
UHPI_HD[28] L3
UHPI_HD[29] L4
UHPI_HD[30] L2
UHPI_HD[31] H4
UHPI_HBE[0] C6
UHPI_HBE[1] C5
UHPI_HBE[2] C4
UHPI_HBE[3] B2
UHPI_HCNTL[0] D9
UHPI_HCNTL[1] C10
UHPI_HAS C9
UHPI_HRW D8
UHPI_HDS[1] D7
UHPI_HDS[2] C7
UHPI_HCS C8
UHPI_HRDY D6
R3431 10K

EM_A[0] J16 A0A
EM_A[1] J15 A1A
EM_A[2] L16 A3A
EM_A[3] L15 A4A
EM_A[4] M16 A5A
EM_A[5] M15 A6A
EM_A[6] N16 A7A
EM_A[7] N15 A8A
EM_A[8] P16 A9A
EM_A[9] H15 A10A
EM_A[10] P15 A11A
EM_A[11] P12 A12A
EM_A[12]

AFSR1 F1 R3430 10K
AFSX1 F2 GPIO2A
ACLKR1 E1 GPIO3A
ACLKX1 E2 GPIO4A
AHCLKX1 D1 GPIO5A
AMUTE1 D2 GPIO6A
AMUTE0 C1 GPIO7A

EM_D[0] T8 D0A
EM_D[1] R8 D1A
EM_D[2] R7 D2A
EM_D[3] T6 D3A
EM_D[4] R6 D4A
EM_D[5] T5 D5A
EM_D[6] R5 D6A
EM_D[7] T4 D7A
EM_D[8] R13 D8A
EM_D[9] T12 D9A
EM_D[10] R12 D10A
EM_D[11] T11 D11A
EM_D[12] R11 D12A
EM_D[13] R10 D13A
EM_D[14] T9 D14A
EM_D[15] R9 D15A

EM_D[16]/UHPI_HA[0] N7 D16A
EM_D[17]/UHPI_HA[1] P6 D17A
EM_D[18]/UHPI_HA[2] N6 D18A
EM_D[19]/UHPI_HA[3] P5 D19A
EM_D[20]/UHPI_HA[4] P4 D20A
EM_D[21]/UHPI_HA[5] N4 D21A
EM_D[22]/UHPI_HA[6] R2 D22A
EM_D[23]/UHPI_HA[7] N2 D23A
EM_D[24]/UHPI_HA[8] P11 D24A
EM_D[25]/UHPI_HA[9] P10 D25A
EM_D[26]/UHPI_HA[10] P10 D26A
EM_D[27]/UHPI_HA[11] N10 D27A
EM_D[28]/UHPI_HA[12] P9 D28A
EM_D[29]/UHPI_HA[13] N9 D29A
EM_D[30]/UHPI_HA[14] N8 D30A
EM_D[31]/UHPI_HA[15] F7 D31A

EM_BA[0] G15 BA0A
EM_BA[1] H16 BA1A
EM_CS[0] F15 SDCS_A
EM_CS[2] E15 FLCS_A
EM_CAS R3 CAS_A
EM_RAS F16 RAS_A
EM_WE T3 WE_A
EM_CKE T14 CKE_A
EM_CLK R14 CLK_A
EM_WE_DQM[0] R4 DQM0_A
EM_WE_DQM[1] T13 DQM1_A
EM_WE_DQM[2] P13 DQM2_A
EM_WE_DQM[3] R15 DQM3_A
EM_OE D15 OE_A
EM_RW E16
EM_WAIT D14

TCK P1 TCK_DSP
TMS K3 TMS_DSP
TDI L1 TDI_1
TDO M2 TDI_2
TRST K4 TRST
EMU[0] M1 EMU0_DSP
EMU[1] N1 EMU1_DSP

AHCLKR2 C14
ACLKR2 C13
AFSR2 C12
ACLKX2 D11
AFSX2 C11
AMUTE2/HINT D10

Q3401:B
TMS320D790E001BZDH275
1st DSP

+3.3V
TC7WU04FU
Q3481
L3483 LBC2518T470M
C3483 104Z
C3484 100/4
LM182 L3481
L3482 R3482 LM182 220 CLKIN3
R3483 1M
X3481 25.00MHz
C3481 060D
C3482 060D
100/4 C3402
C3403 104Z
ACF451832-333 L3401

GPIO3A GPIO4A
GPIO2A D15A
A12A D7A
A11A D14A
A10A D6A
A9A D13A
A8A D5A
A7A D12A
GPIO7A D4A
WE_A
R3454 1K DSP1RST
C3451 101J
GPIO6A D11A
GPIO5A D3A
A6A D10A
A5A D2A
A4A D9A
A3A D1A
A2A D8A
A1A D0A
A0A OE_A
FLCS_A
BA1A

Q3451 16 Mbit FLASH MEMORY
S29ALV160ET-70TG
or ES29LV160ET-70TG

R3453 10K
R3456 10K
R3455 10K
R3457 10K
C3452 104Z
C3453 220/4

Q3461 16 Mbit SDRAM
M12L16161A-7TG
or IC42S16100
or RMS116T(LF)

D0A D15A
D1A D14A
D2A D13A
D3A D12A
D4A D11A
D5A D10A
D6A D9A
D7A D8A
DQM0_A
WE_A
CAS_A
RAS_A
SDCS_A
BA0A
A10A
A0A
A1A
A2A
A3A
C3461 104Z
C3462 104Z
C3463 104Z
C3464 104Z
C3465 104Z
C3466 104Z
C3467 220/4

Q3471 16 Mbit SDRAM
M12L16161A-7TG
or IC42S16100
or RMS116T(LF)

D16A D31A
D17A D30A
D18A D29A
D19A D28A
D20A D27A
D21A D26A
D22A D25A
D23A D24A
DQM2_A
DQM3_A
WE_A
CAS_A
RAS_A
SDCS_A
BA0A
A10A
A0A
A1A
A2A
A3A
C3471 104Z
C3472 104Z
C3473 104Z
C3474 104Z
C3475 104Z
C3476 104Z
C3477 220/4

BLM21PG221SN1
L3451
+3.3VS1

P3491
TRST
TMS
TDI
PD
TDO
TCK_RET
TCK
EMU0
EMU1
JTAG
R3496 10K
R3491 4.7K
R3492 4.7K
R3493 4.7K
R3494 4.7K
R3495 4.7K
C3491 104Z
Q3491 TC74VHC541FT
L3491 LBC2518T 470M

TDI_4
EMU0_DSP
EMU1_DSP
TCK_DSP
TMS_DSP
TDI_1
TRST

TO NADSP-9072(2/2)
SD-11:A1,A4

JTAG
I2S_SIGNAL

A B C D

SCHEMATIC DIAGRAMS-11 (SD-11)
DSP SECTION-2

1 2 3 4 5

NADSP-9072(2/2)

U25 DSP PC BOARD

TO NADSP-9072(1/2)
SD-10:H1

CPU_CONTROL

Q3501
TMS320D788E001BRFP266
2nd DSP

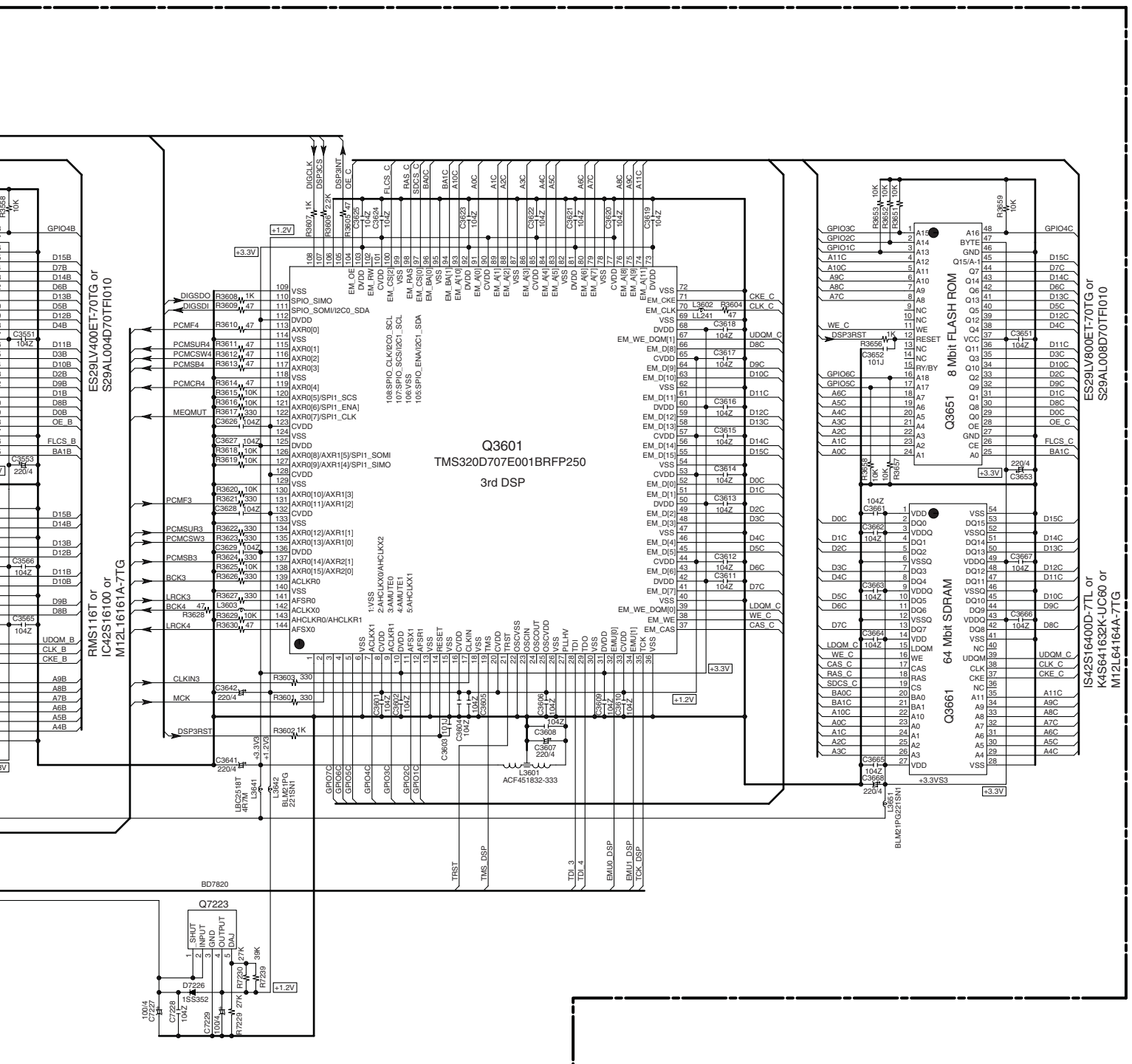
Q3551
4 Mbit FLASH ROM

Q3561
16 Mbit SDRAM

TO NADSP-9072(1/2)
SD-10:H1,H5

I2S_SIGNAL

JTAG



<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) [ ] IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ⊙⊙⊙ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.
</Note>

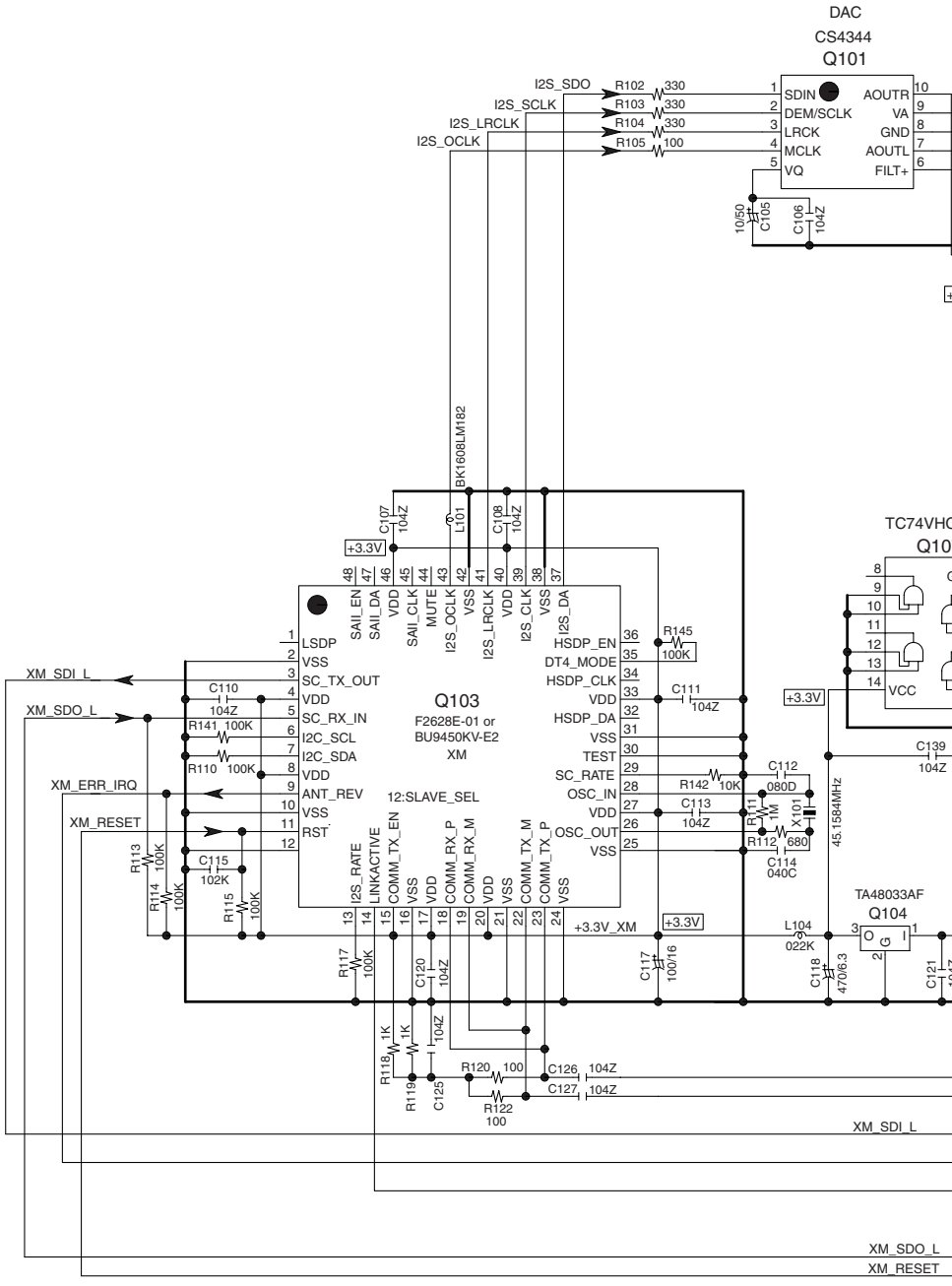
A B C D

SCHEMATIC DIAGRAMS-12 (SD-12)
XM/SIRIUS SECTION

1 2 3 4 5

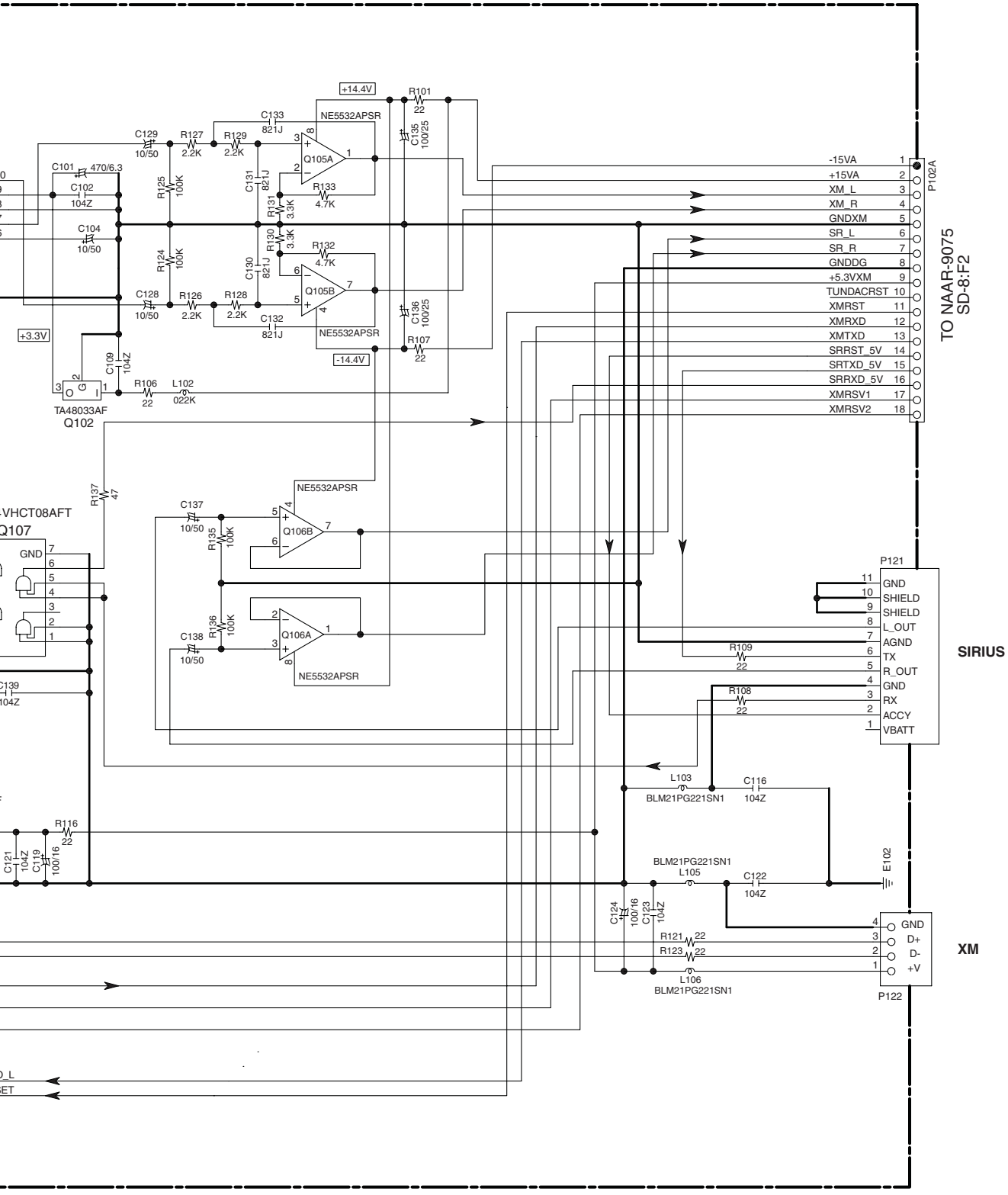
NARF-9077

U30 XM PC BOARD



<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

E F G H


+14.4V
-14.4V
+3.3V
NE5532APSR
Q105A
Q105B
Q106A
Q106B
R101 22
C133 821J
C129 10/50
R127 2.2K
R129 2.2K
C135 100/25
C101 470/6.3
C102 104Z
C104 10/50
R125 100K
C131 821J
R131 3.3K
R133 4.7K
R130 3.3K
R132 4.7K
R124 100K
C130 821J
C128 10/50
R126 2.2K
R128 2.2K
C132 821J
C136 100/25
R107 22
C109 104Z
R106 22
L102 022K
TA48033AF
Q102
R137 47
C137 10/50
R135 100K
C138 10/50
R136 100K
-VHCT08AFT
Q107
GND
C139 104Z
R116 22
C121 104Z
C119 100/16
-15VA 1
+15VA 2
XM_L 3
XM_R 4
GNDXM 5
SR_L 6
SR_R 7
GNDDG 8
+5.3VXM 9
TUNDACRST 10
XMRST 11
XMRXD 12
XMTXD 13
SRRST_5V 14
SRTXD_5V 15
SRRXD_5V 16
XMRSV1 17
XMRSV2 18
P102A
TO NAAR-9075
SD-8:F2
P121
GND 11
SHIELD 10
SHIELD 9
L_OUT 8
AGND 7
TX 6
R_OUT 5
GND 4
RX 3
ACCY 2
VBATT 1
SIRIUS
R109 22
R108 22
L103
BLM21PG221SN1
C116 104Z
BLM21PG221SN1
L105
C122 104Z
E102
C124 100/16
C123 104Z
R121 22
R123 22
L106
BLM21PG221SN1
GND 4
D+ 3
D- 2
+V 1
P122
XM

SCHEMATIC DIAGRAMS-13 (SD-13)

DISPLAY SECTION

<Note>
SD-x:XY is short for Shcematic Diagram-x and
each socket's location, X=A to H, Y=1 to 5.

NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ⊡⊡⊡ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

<Note>
Refer to SCHEMATIC DIAGRAM-29 (SD-29)
for FL driver IC control waveforms.

NADIS-9085 **U33** DISPLAY PC BOARD

TO NAPS-9089 SD-14:H5

TO NAAR-9075 SD-8:H2

NAETC-9090 **U38** FRONT OPT PC BOARD

DIGITAL

AUDIO

VIDEO

S VIDEO

SETUP MIC

AUX 2 INPUT (FRONT)

USB

TO NALAN-9121 SD-27:G3

P204 SOCKET AS

Q7502 M66005-001 FL DRIVER (SLAVE)

64:DIG4

WF63

WF62

CBL/SAT

GAME/TV

ENTER

RETURN

SETUP

TUNING MODE

E F G H

Q7500
HNA-16SL04T FL TUBE

Q7501
M66005-0001AHP
FL DRIVER
(MASTER)

TO NAASP-9050(2/2)
(JL4013B)
SD-2:H1

NAETC-9088
U36 HEADPHONE PC BOARD
HEADPHONE

NAETC-9091
U39 VOLUME PC BOARD
VOLUME
MASTER VOLUME

NADIS-9086 U34 DISPLAY PC BOARD
PURE AUDIO
ZONE3
ZONE2
READY
STANDBY

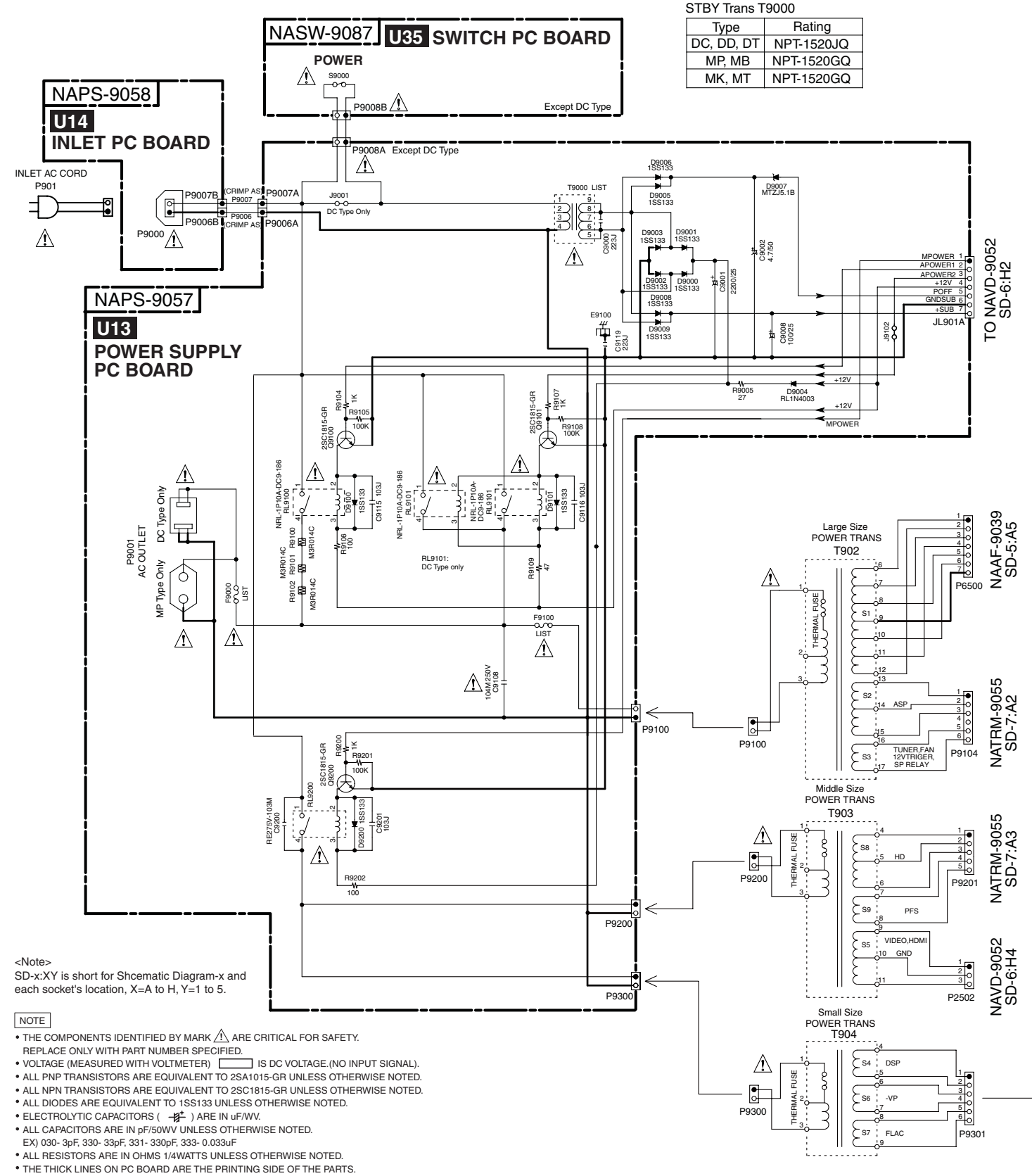
	Q7594	R7598	R7599	J7592	J7593	J7594	J7595	D7595
DC, DD	NO	150	NO	NO	NO	YES	YES	NO
DT, MK, MT NA905	YES	220	150	YES	YES	NO	NO	YES

SELECTOR KEYS

AUDIO SEL, ZONE2, ZONE3, ZONE OFF, TONE (JAPAN), DVD, VCR/DVR
AUX1, AUX2, TAPE, TUNER, CD, PHONO, NET/USB, DISPLAY
PRESET R, PRESET UP, PRESET DOWN, PRESET L, MEMORY, DIMMER, LISTENING MODE R, LISTENING MODE L
THX, STEREO, HDMI OUT, DIGITAL IN, ZONE RIGHT, TONE, ZONE LEFT, LEVEL

Q7611
TC74VHC08F

SCHEMATIC DIAGRAMS-14 (SD-14)
POWER SUPPLY SECTION-2



STBY Trans T9000

Type	Rating
DC, DD, DT	NPT-1520JQ
MP, MB	NPT-1520GQ
MK, MT	NPT-1520GQ

<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⏚) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ▭ ← PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

CAUTION

FOR CONTINUED PROTECTION
AGAINST FIRE HAZARD, REPLACE
ONLY WITH FUSE OF SAME TYPE
AND RATING INDICATED.

ATTENTION

CAUTIONF AFIN D'ASSURER UNE PROTECTION
PERMANENTE CONTRE LES RISQUES
D'INCENDIE, REMPLACER UNIQUEMENT
PAR UN FUSIBLE DE MEME TYPE
ET CALIBRATION COMME INDIQUE.

THIS SYMBOL LOCATED NEAR THE FUSE INDICATES
THAT THE FUSE USED IS SLOW OPERATING TYPE
FOR CONTINUED PROTECTION AGAINST FIRE FUSE
HAZARD,REPLACE WITH SAME TYPE FUSE. FOR FUSE
RATING REFER TO THE MAKING ADJACENT TO THE SYMBOL.

CE SYMBOLE INDIQUE QUE LE FUSIBLE UTLISE EST
A LENT, E POUR UNE PROTECTION PERMANENTE,N'UTILISER
QUE DES FUSIBLES DE MEME TYPE. CE DARNIER EST
INDIQUE LA QU LE PRESENT SYMBOL EST APPOSE.

AC Volt / Freq.

Type	Volt / Freq.
DC, DD, DT	120V 60HZ
MP, MB	220-240V 50HZ
MK, MT	220-240V 50/60HZ

Fuse Rating

Type	F9100	F9000
DC, DD	12A 125V	5A 125V
DT	12A 125V	NO
MP	6.3A 250V	2.5A 250V
MT,NA906	6.3A 250V	NO

Power Trans T902

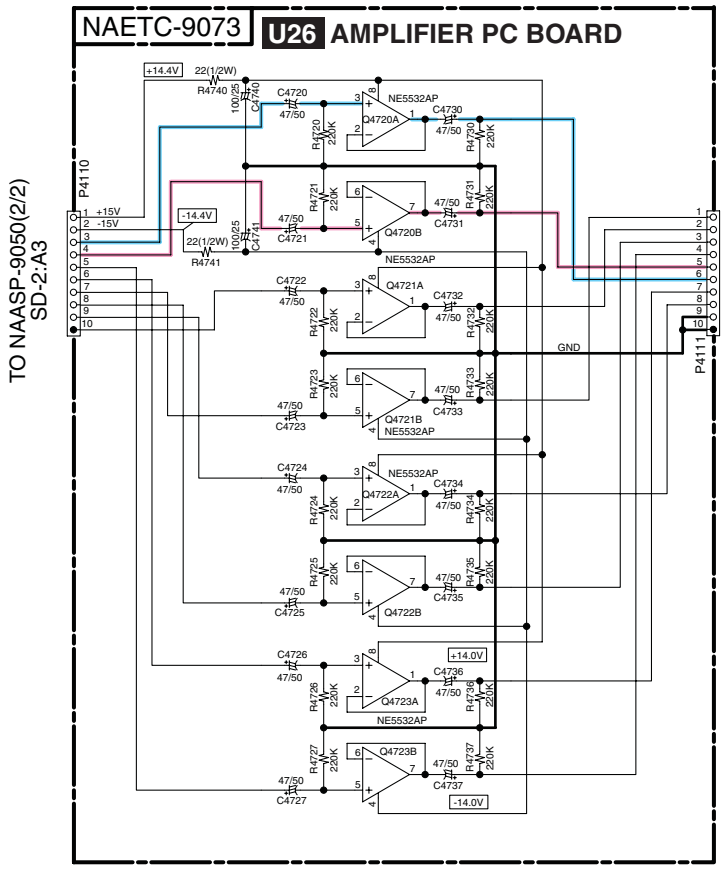
Type	Rating
DC, DD, DT	NPT-1554D
MP	NPT-1554M
MT, NA906	NPT-1554M

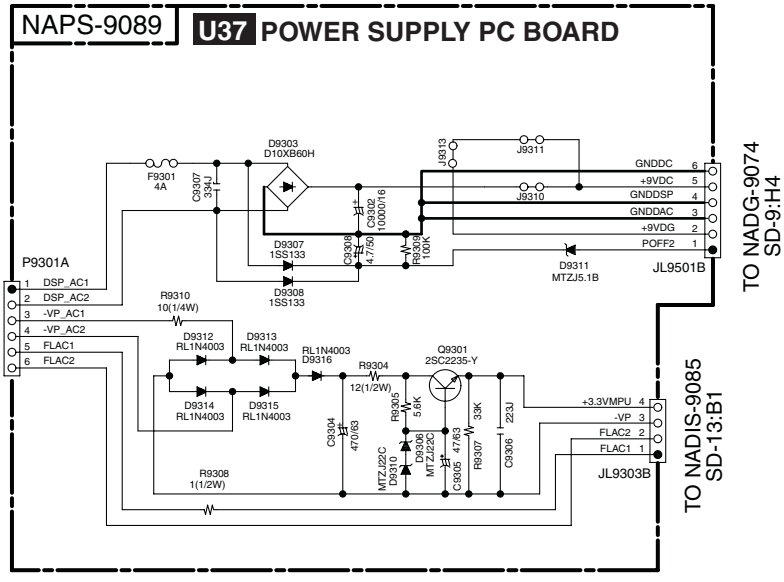
Power Trans T903

Type	Rating
DC, DD, DT	NPT-1555D
MP	NPT-1555M
MT, NA906	NPT-1555M

Power Trans T904

Type	Rating
DC, DD, DT	NPT-1556D
MP	NPT-1556M
MT, NA906	NPT-1556M



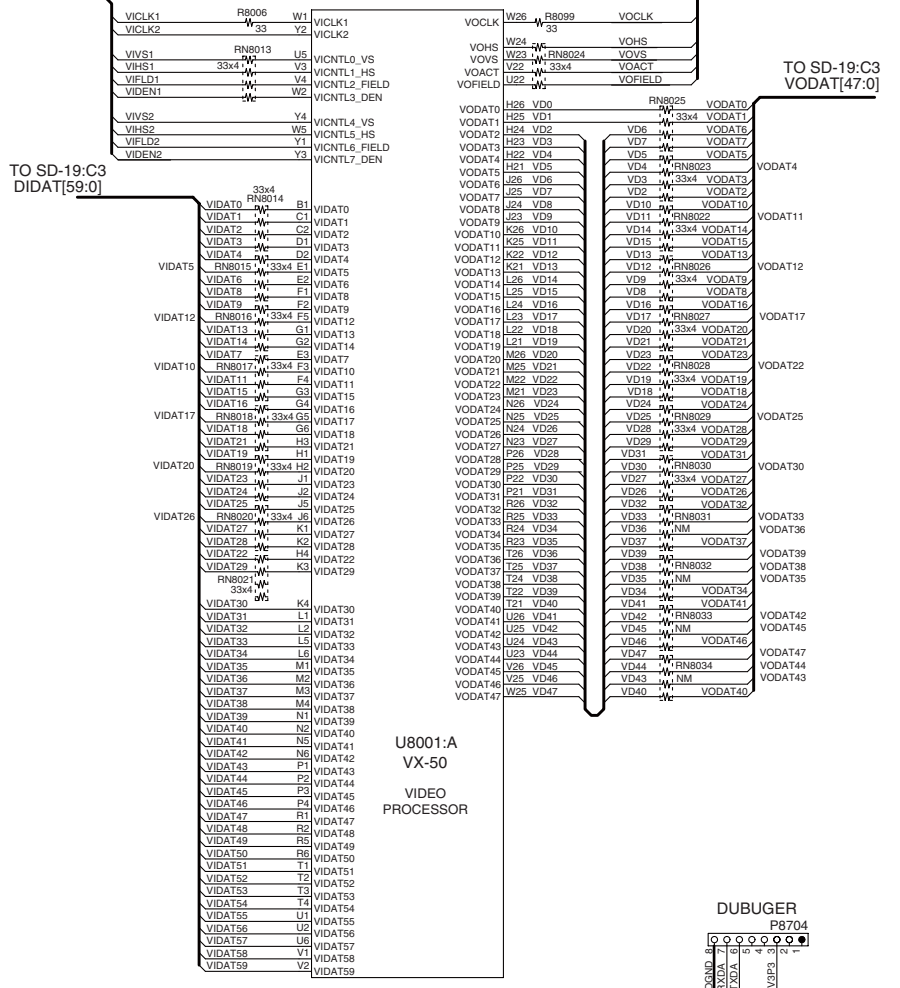


SCHEMATIC DIAGRAMS-15 (SD-15)

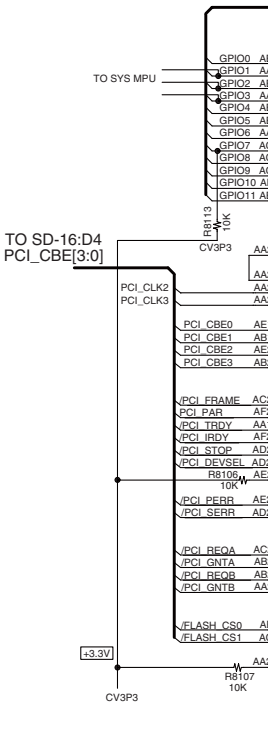
HDMI SECTION-1

NAHDM-9114(1/5) **U42 HDMI PC BOARD**

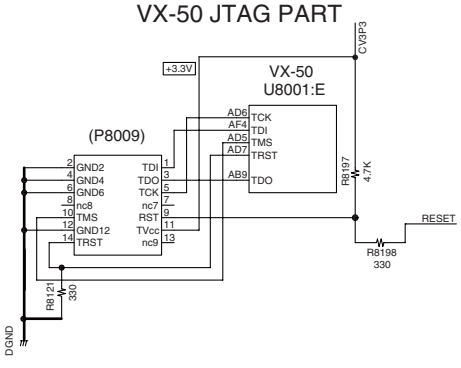
VX-50 VIDEO SIGNAL I/O PART



VX-50 FLASH

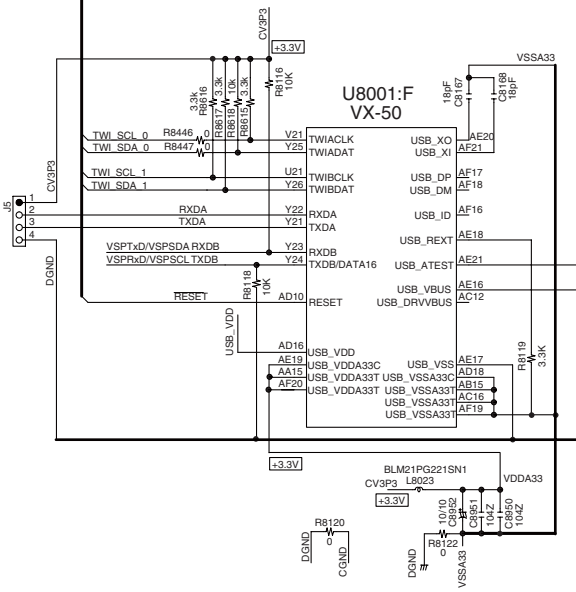


VX-50 JTAG PART



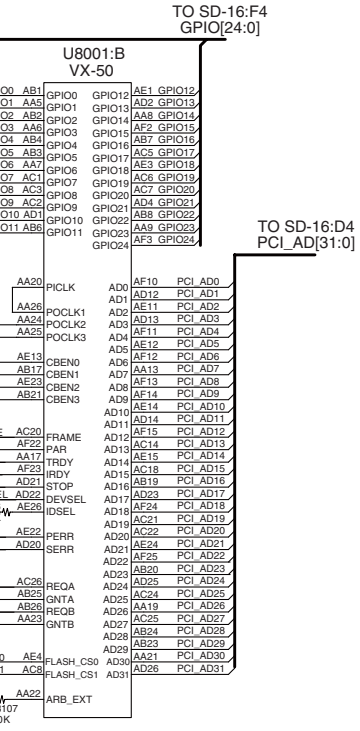
DUBUGER

VX-50 MPU I/O PART

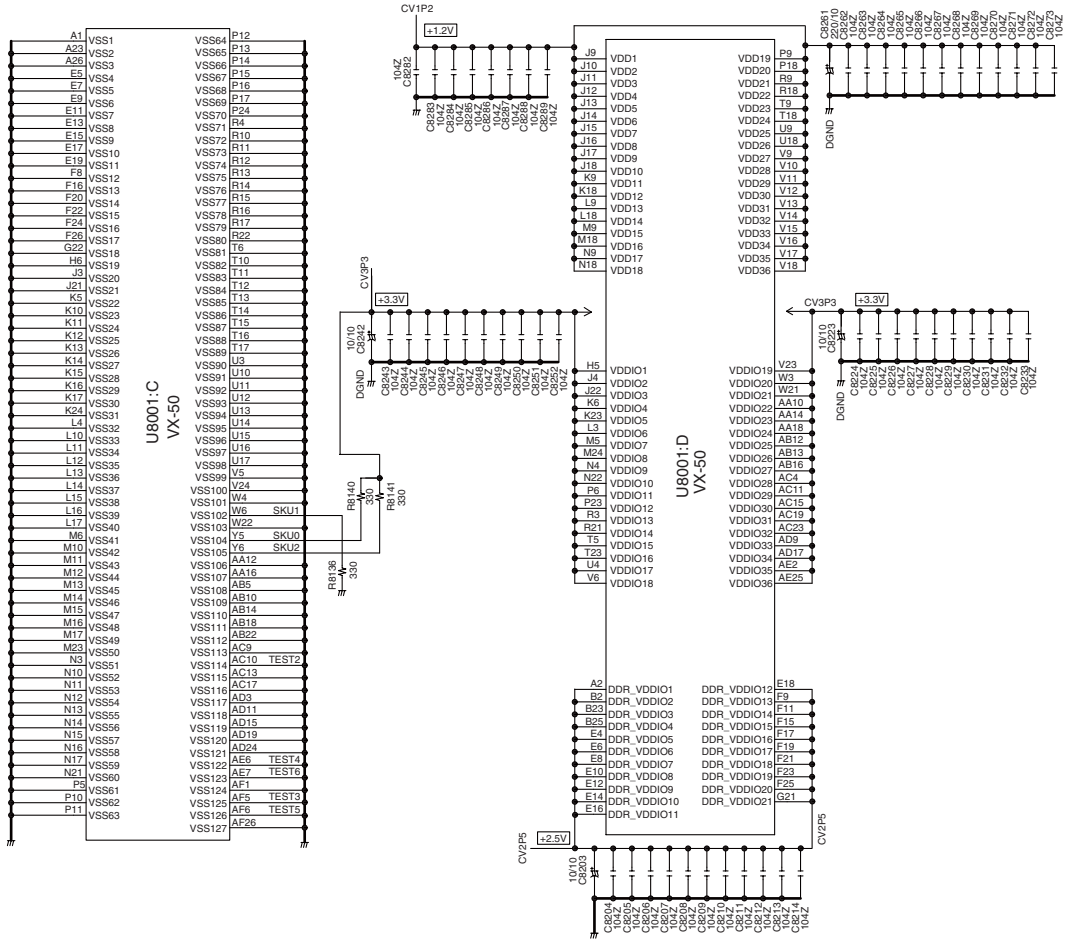


E F G H

ASH MEMORY I/O PART

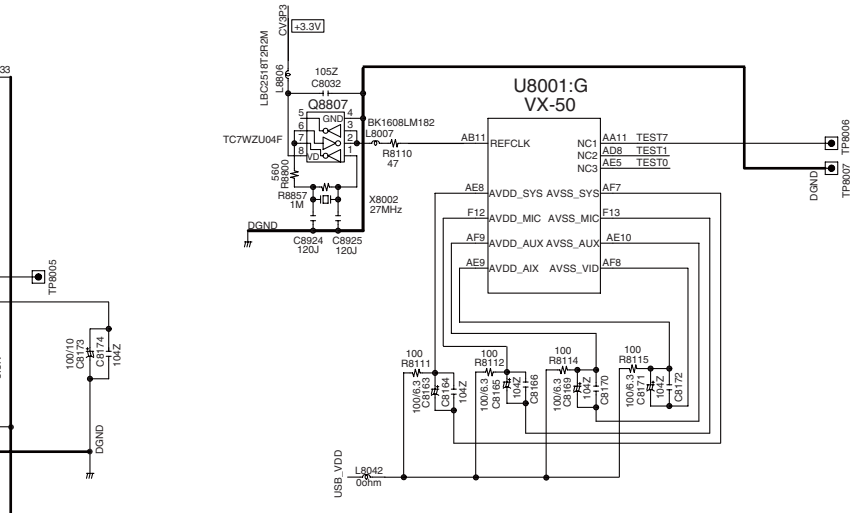


VX-50 POWER SUPPLY & GROUND PART



T

VX-50 OSC&PLL PART



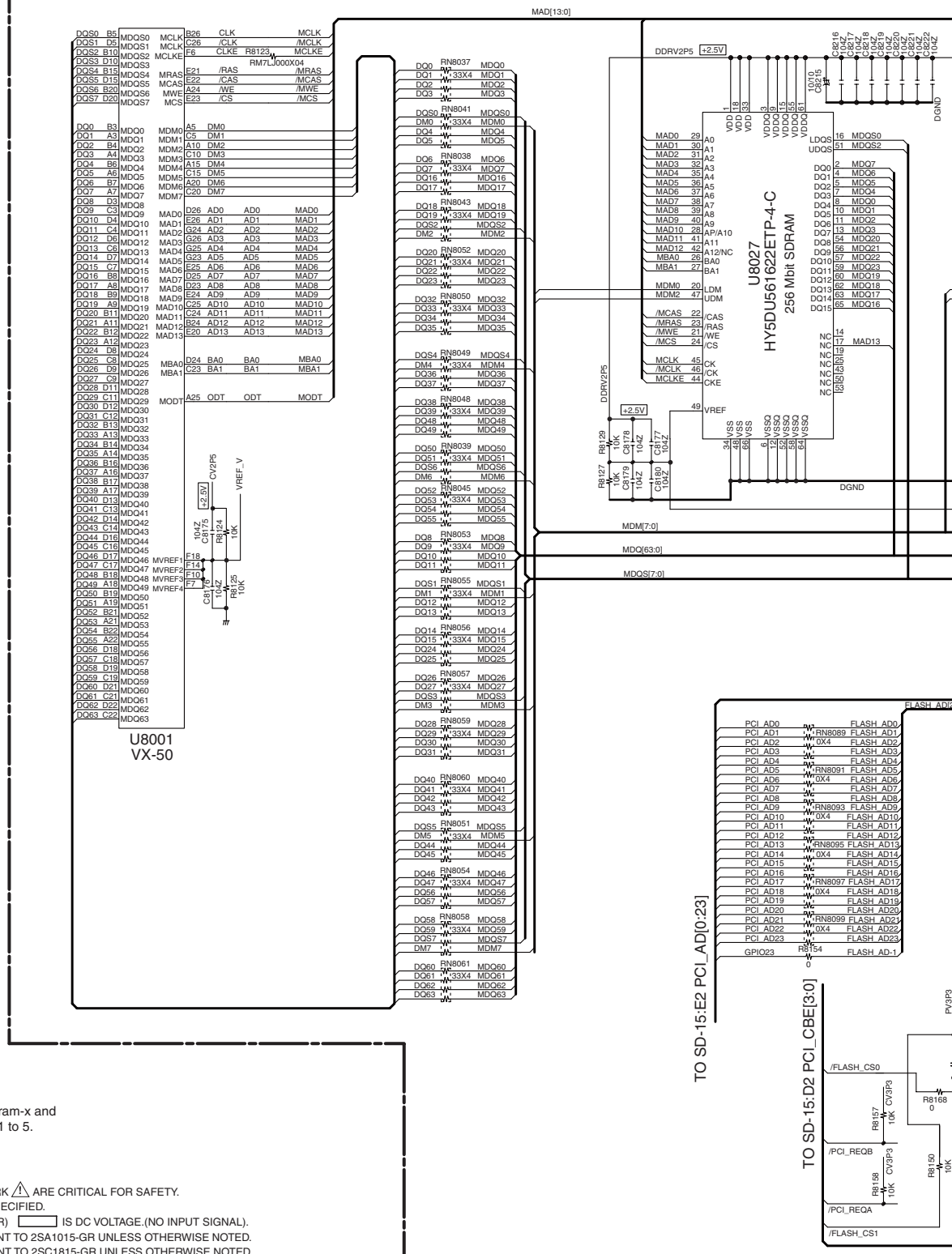
<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ▭ ___ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

SCHEMATIC DIAGRAMS-16 (SD-16)
HDMI SECTION-2

NAHDM-9114(2/5) **U42 HDMI PC BOARD**

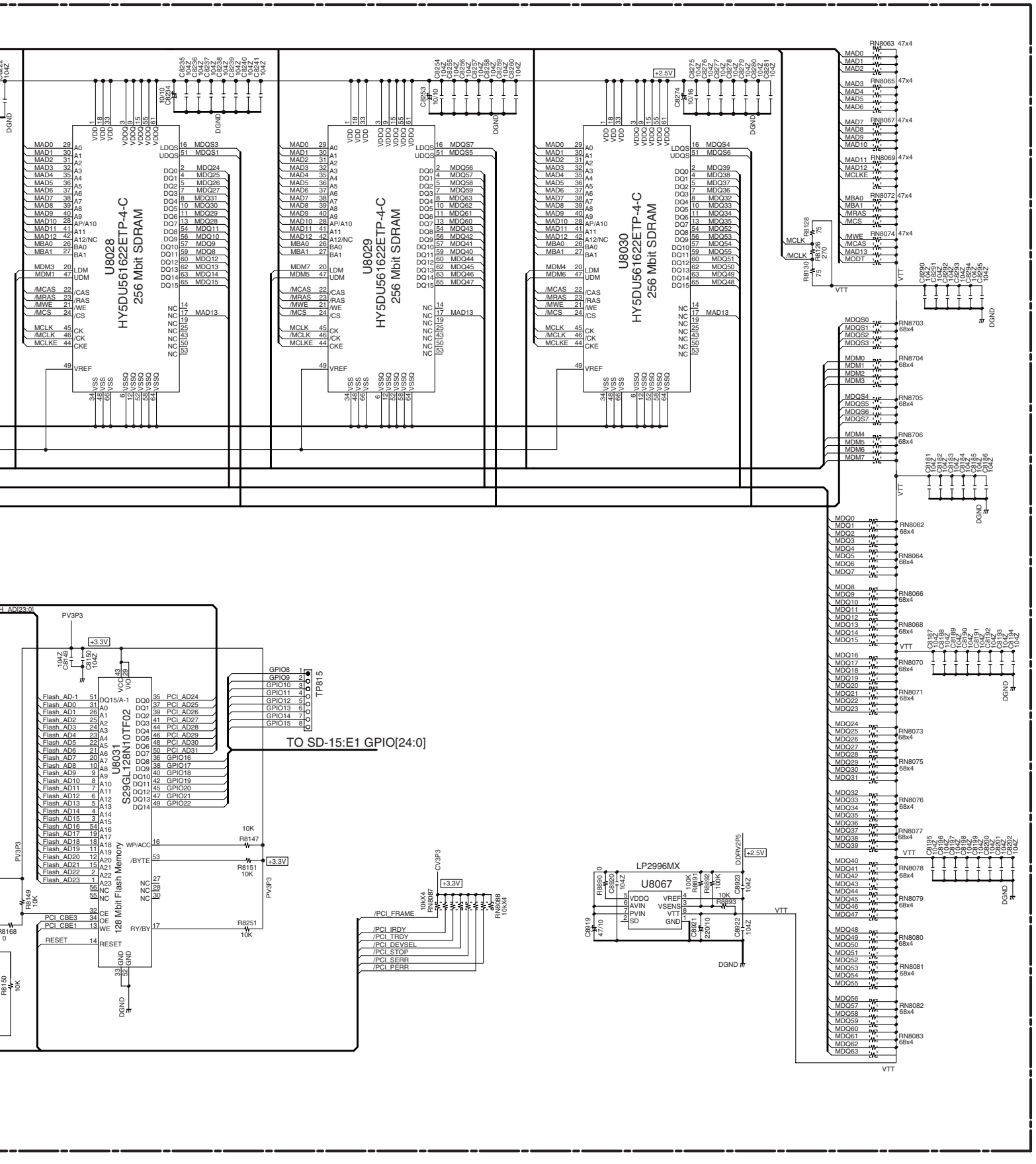


<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

NOTE

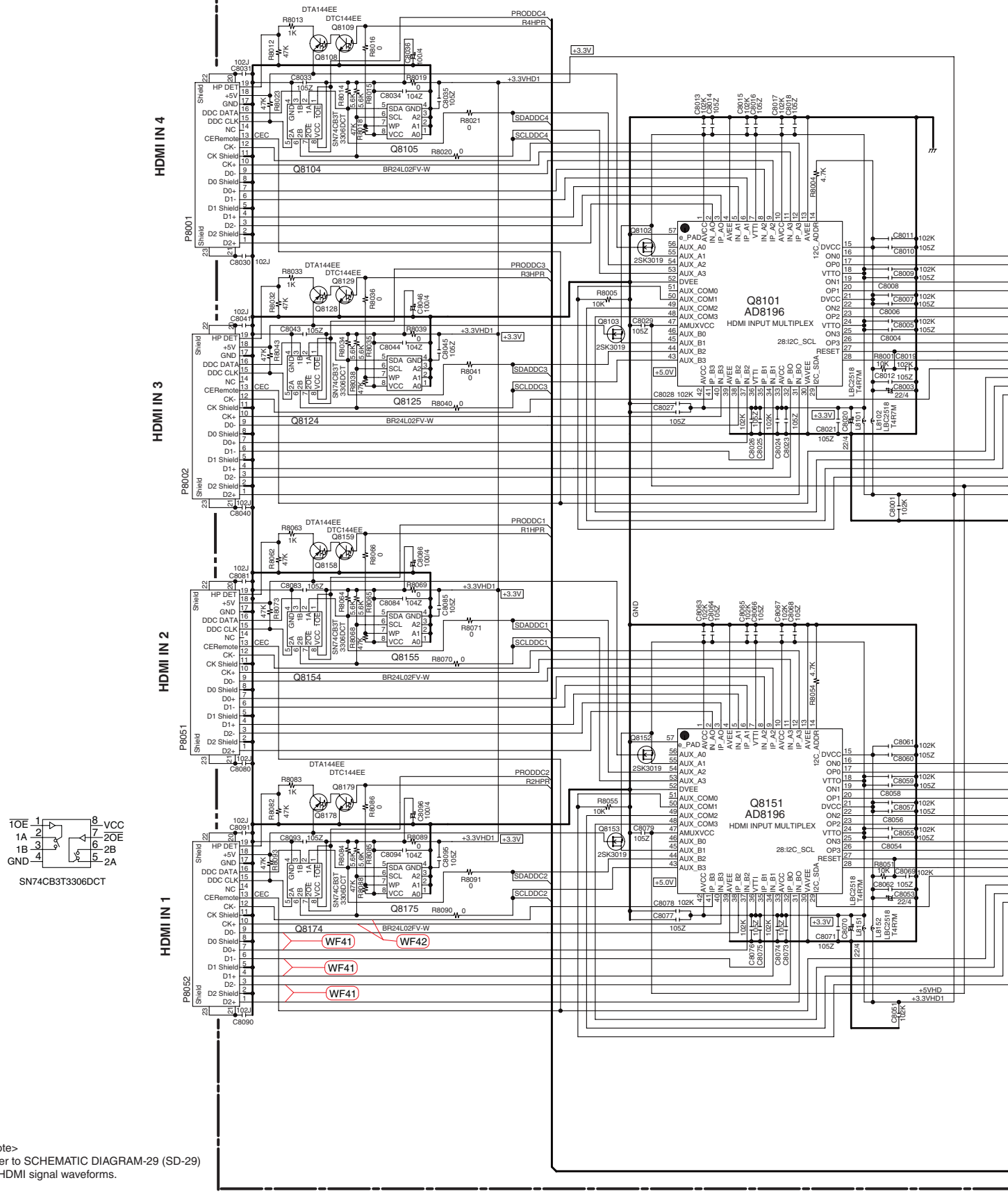
- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) [ ] IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) ooo ——— PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

E F G H


U8028
HY5DU561622ETP-4-C
256 Mbit SDRAM
U8029
HY5DU561622ETP-4-C
256 Mbit SDRAM
U8030
HY5DU561622ETP-4-C
256 Mbit SDRAM
U8031
S29GL128N10TF02
128 Mbit Flash Memory
U8067
LP2996MX
TP815
TO SD-15:E1 GPIO[24:0]
/PCI_FRAME
/PCI_IRDY
/PCI_TRDY
/PCI_DEVSEL
/PCI_STOP
/PCI_SERR
/PCI_PERR
PV3P3
CV3P3
DDRV2P5
VTT
DGND
+3.3V
+2.5V

SCHEMATIC DIAGRAMS-17 (SD-17)
HDMI SECTION-3

NAHDM-9114(3/5) **U42 HDMI PC BOARD**



SN74CB3T3306DCT

<Note>
Refer to SCHEMATIC DIAGRAM-29 (SD-29)
for HDMI signal waveforms.

E F G H

<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) [ ] IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) [o o o] ← PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

R0X2P R0X2N R0X1P R0X1N R0X0P R0X0N R0XCP R0XCN RST_RXSW0 HDMSCL HDMSDA CEC DSCL0 DSDA0 R0PWR5V +5VHD +3.3VHD1 GND

R1X2P R1X2N R1X1P R1X1N R1X0P R1X0N R1XCP R1XCN RST_RXSW1 HDMSCL HDMSDA CEC DSCL1 DSDA1 R1PWR5V

TO SD-18:B2 TMDS/DDC DATA

Q8451 Sil9134 HDMI TX OUT2

Q8454 XC6213B182M

Q8359 UM6K1N

Q8356 TC7SZ08FU

Q8355 S-812C50BUC

Q8646 BA18BC0FP

P8352 HDMI OUT SUB

WF41 WF41 WF41 WF42

TO SD-18:H3 VIDEO MPU

TO SD-19:E4 DIGITAL_VIDEO_DATA TX[Y,CB,CR0:11]

TO SD-19:H5 DIGITAL_AUDIO_DATA

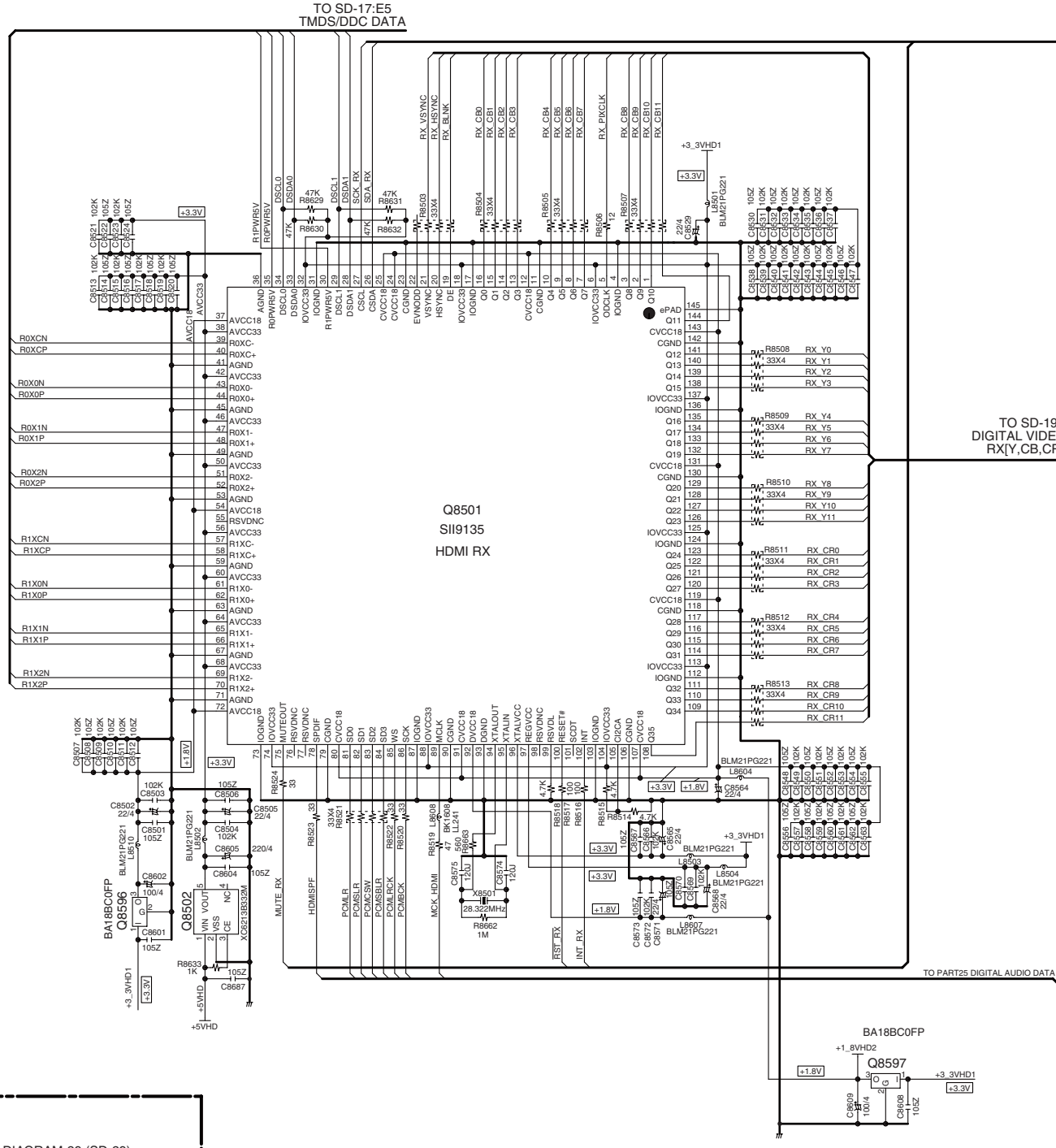
A B C D

SCHEMATIC DIAGRAMS-18 (SD-18)

HDMI SECTION-4

NAHDM-9114(4/5)

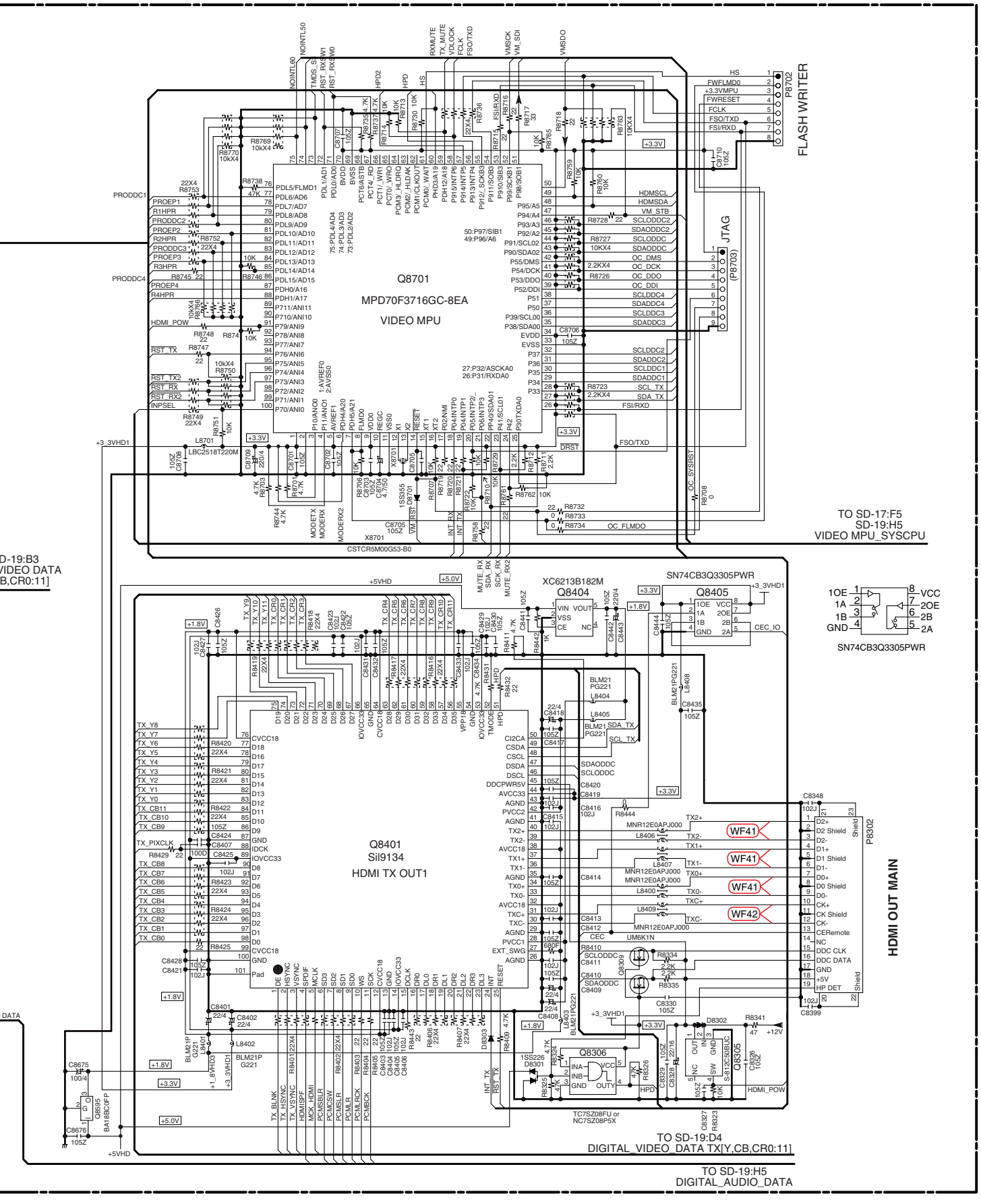
U42 HDMI PC BOARD



<Note>
Refer to SCHEMATIC DIAGRAM-29 (SD-29)
for HDMI signal waveforms.

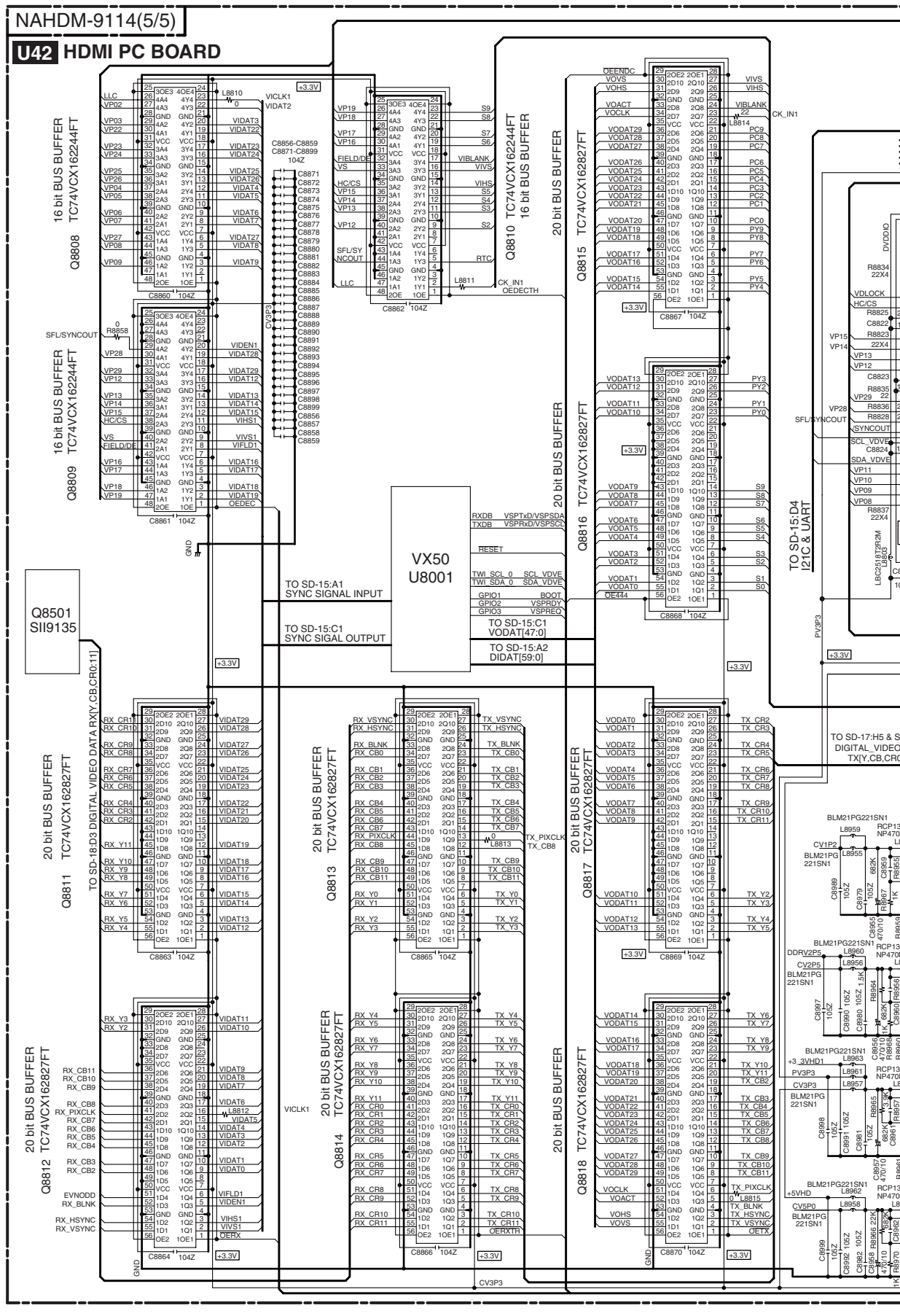
E F G H

<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.



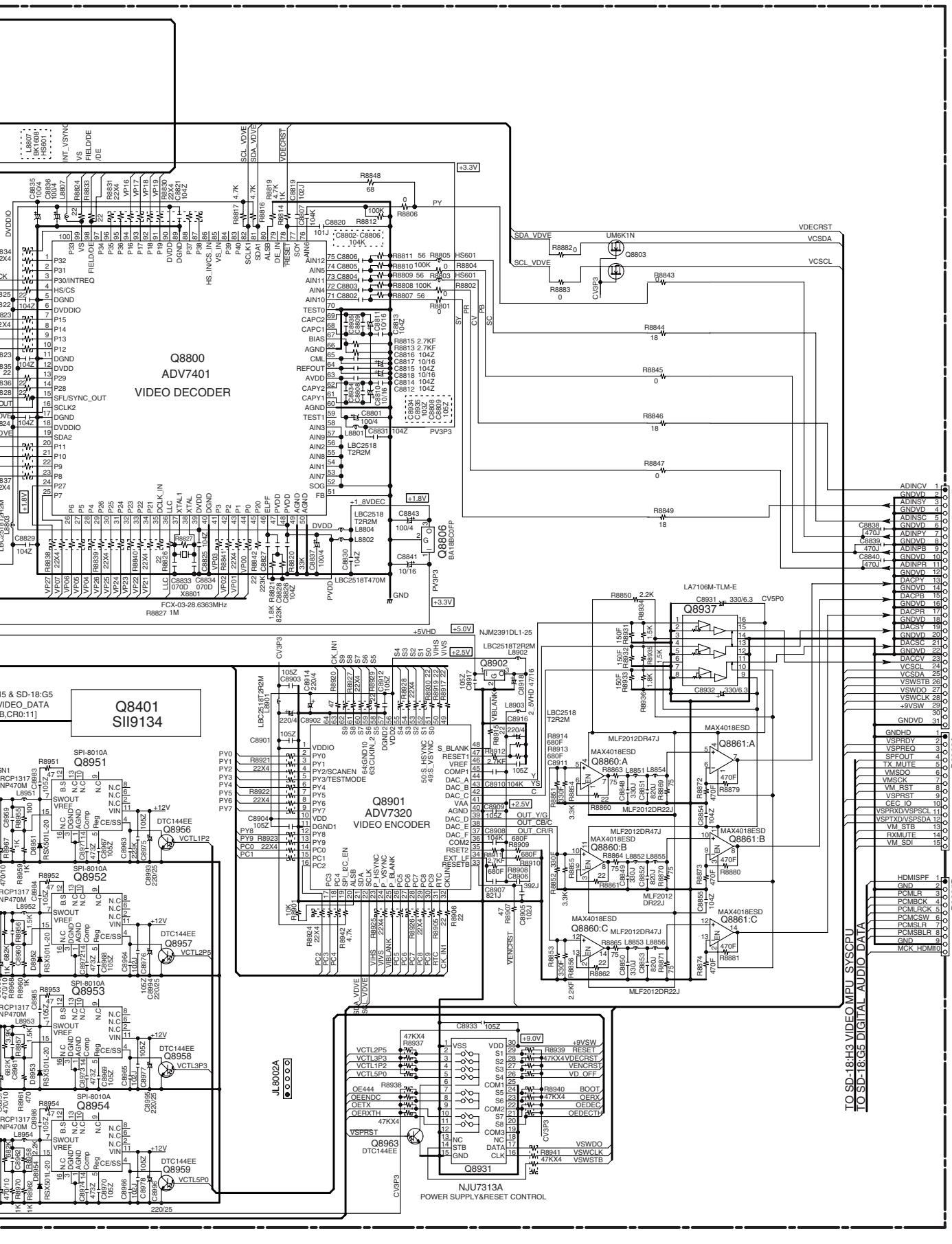
SCHEMATIC DIAGRAMS-19 (SD-19)

HDMI SECTION-5

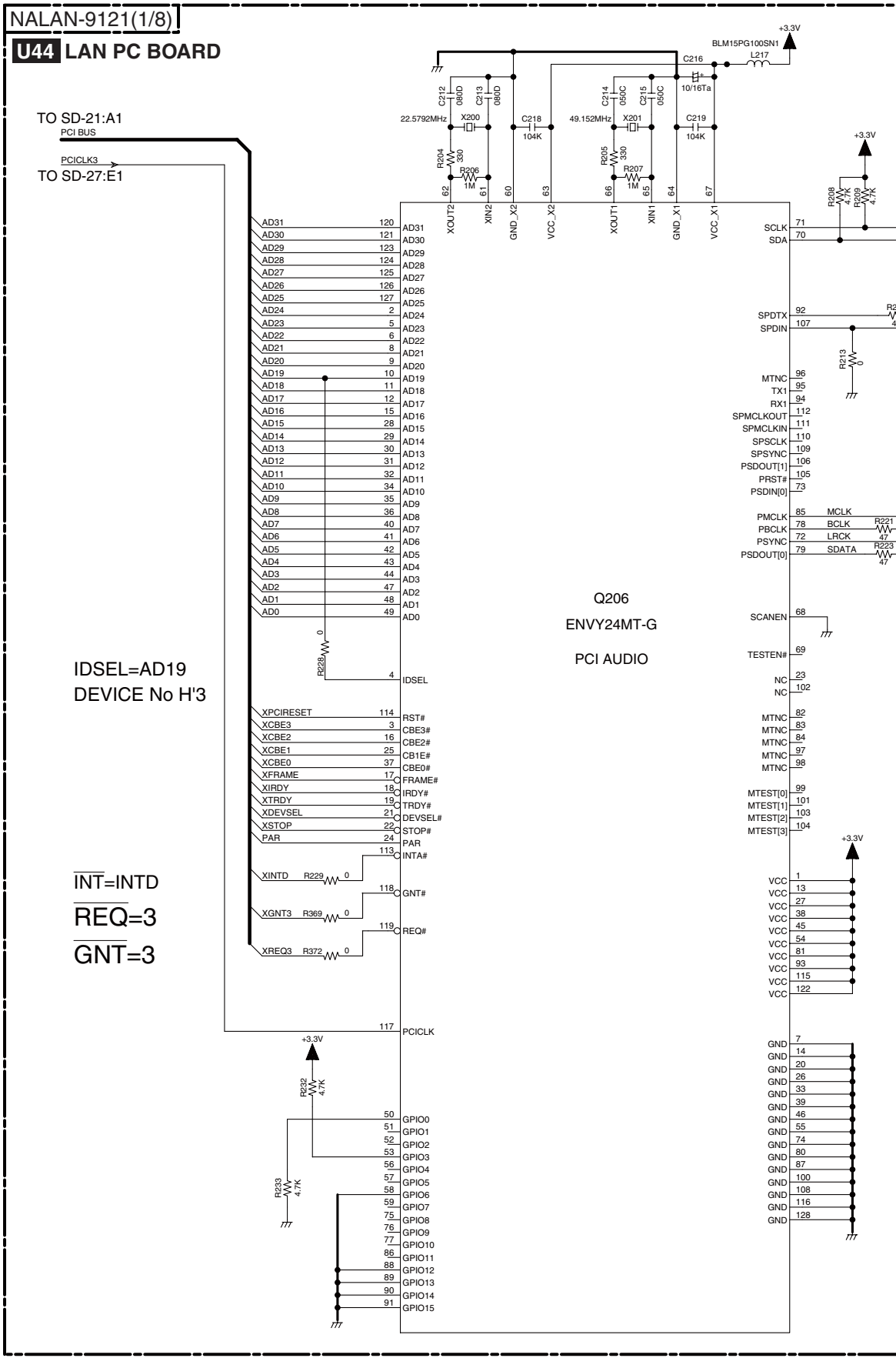


E F G H

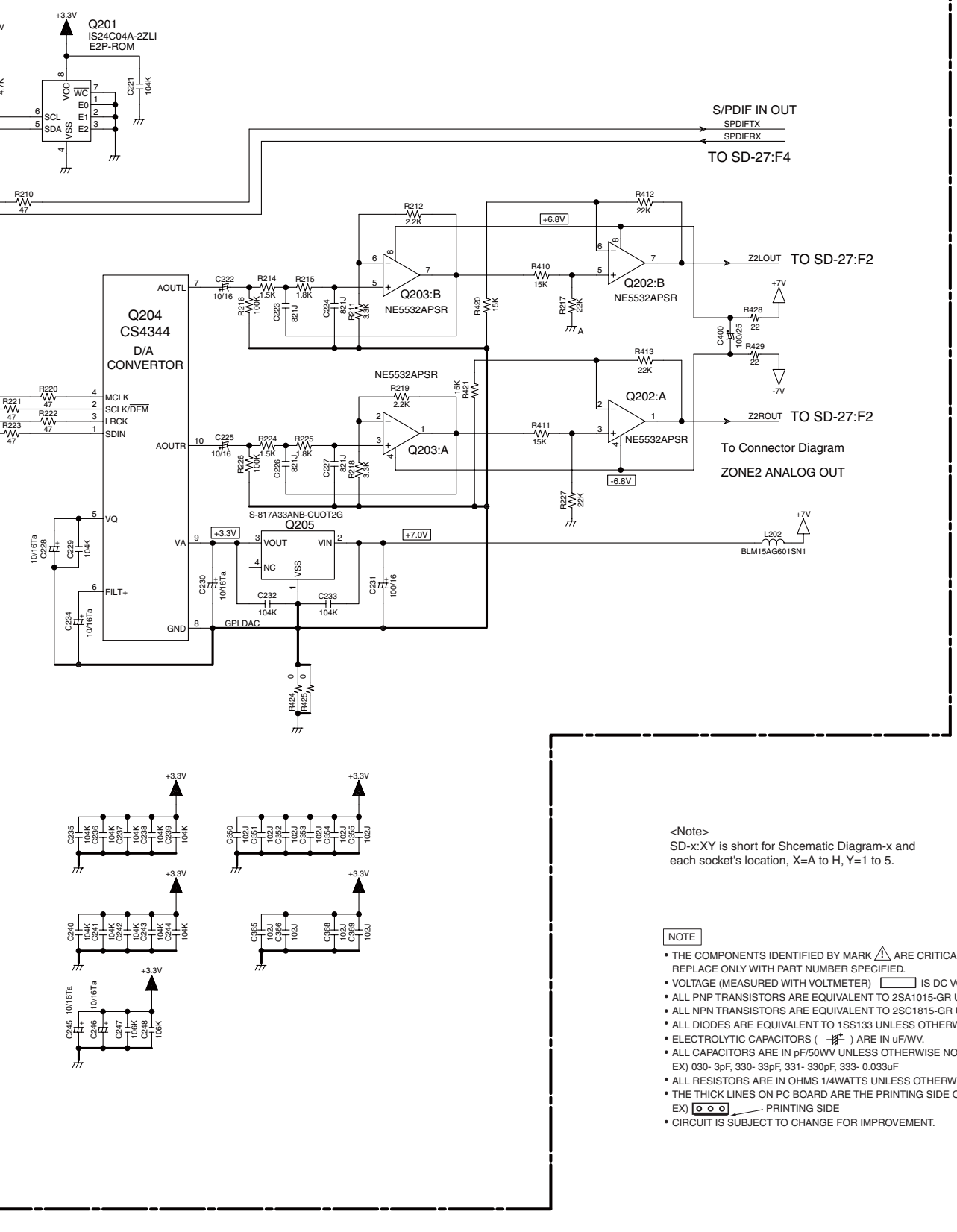
<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.



SCHEMATIC DIAGRAMS-20(SD-20)
NETWORK SECTION-1



E F G H



<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

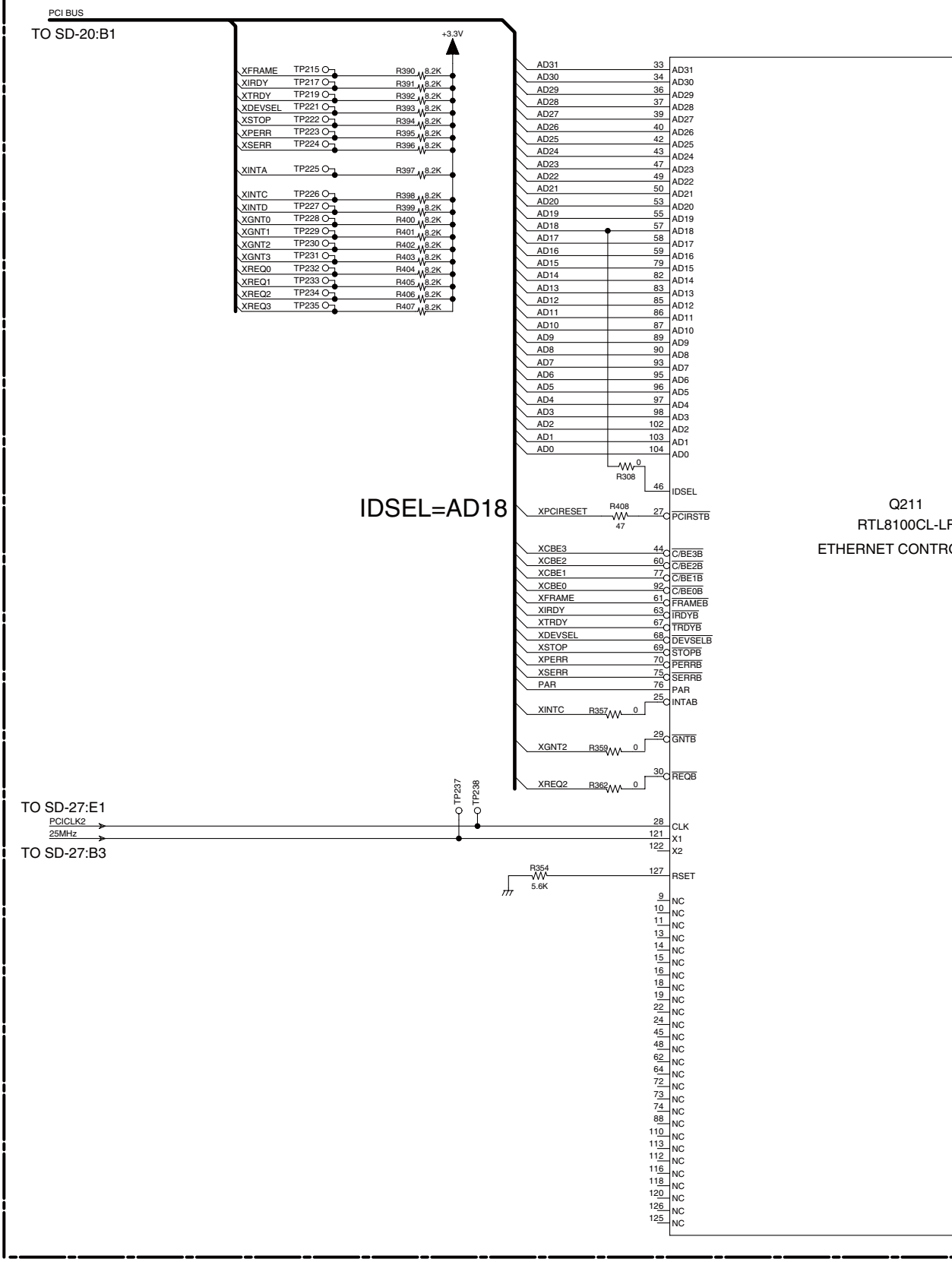
NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ▭ ← PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

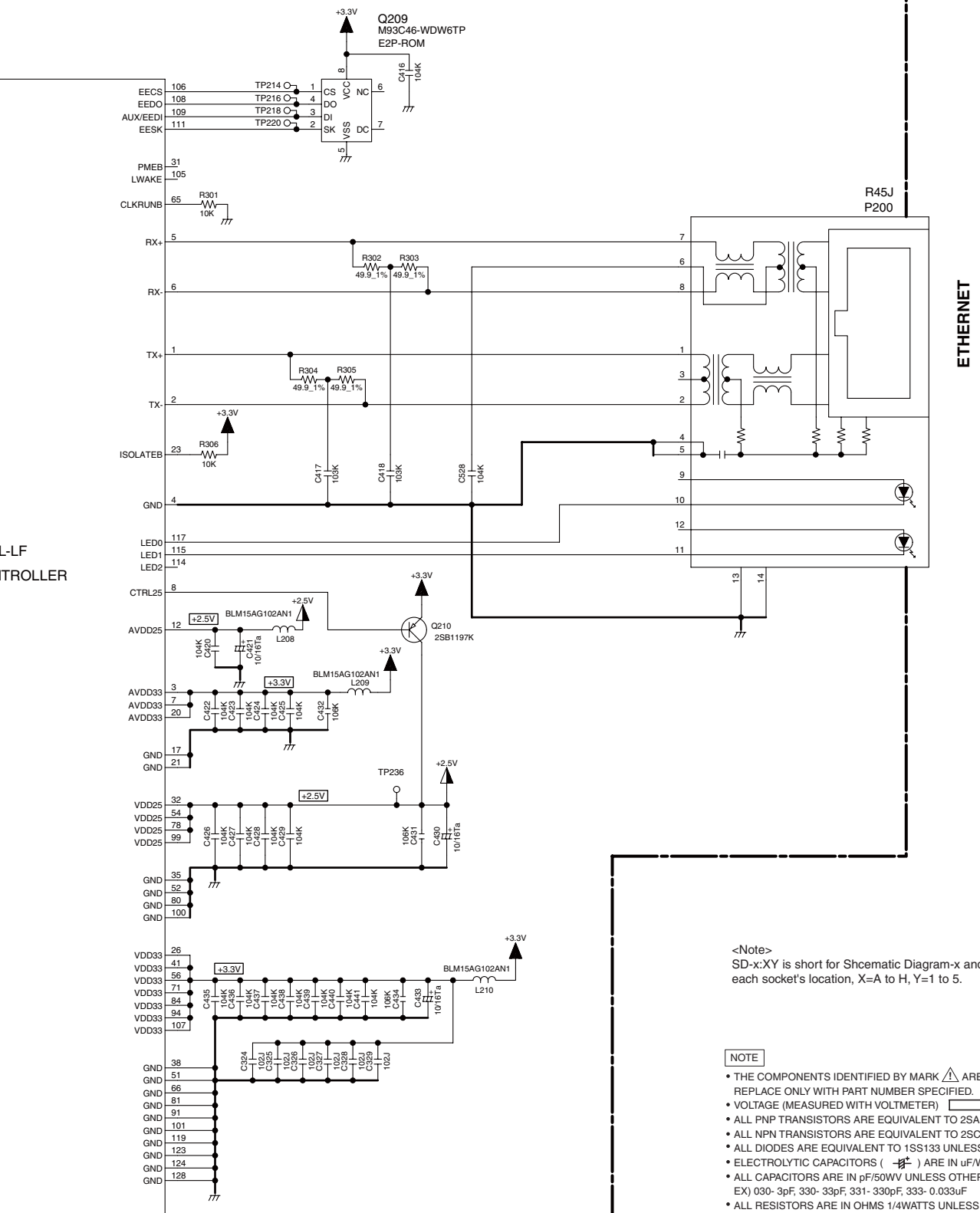
SCHEMATIC DIAGRAMS-21(SD-21)
NETWORK SECTION-2

NALAN-9121(2/8)

U44 LAN PC BOARD



E F G H



<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

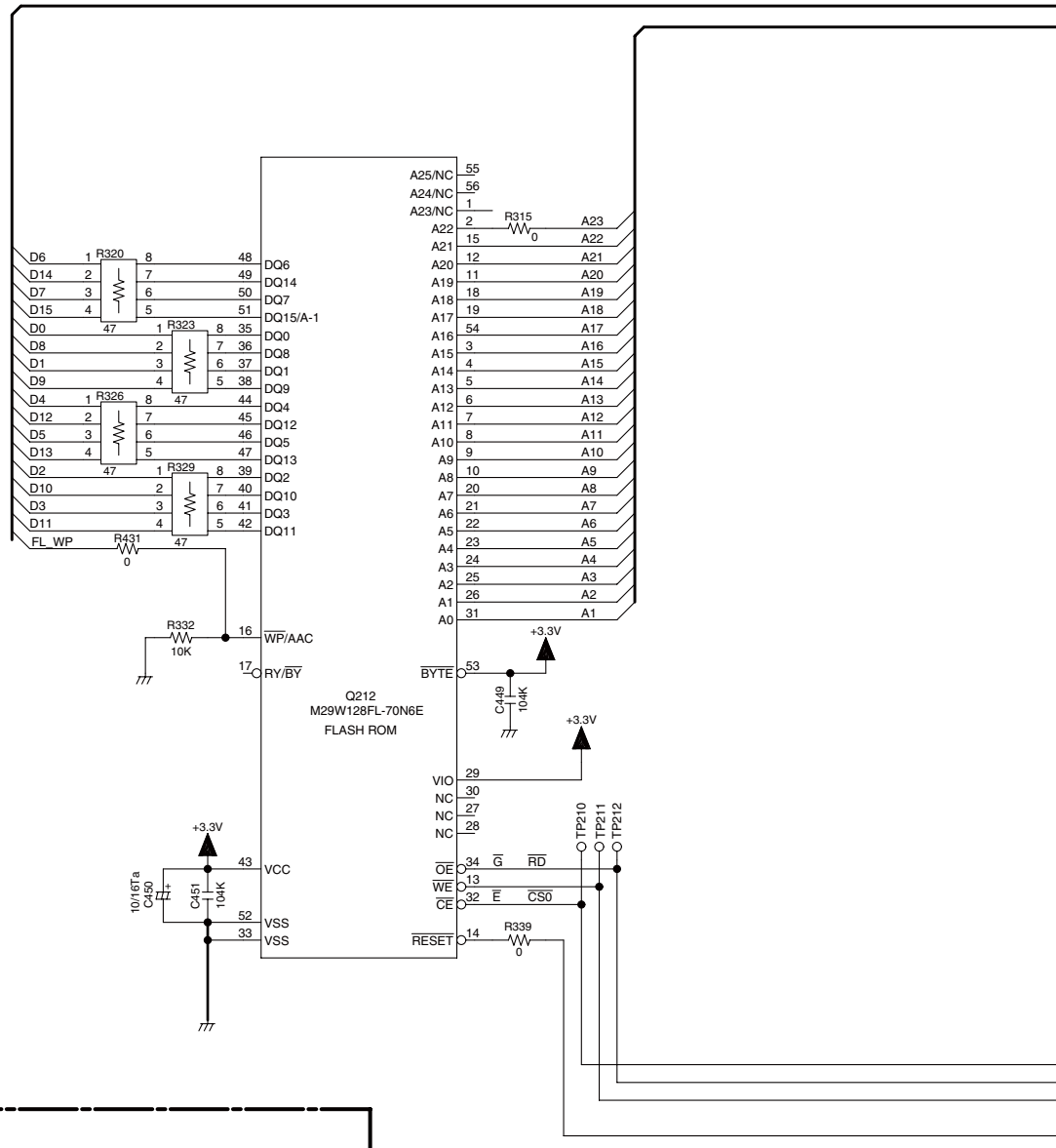
NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ⊡⊡⊡ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

SCHEMATIC DIAGRAMS-22(SD-22)
NETWORK SECTION-3

NALAN-9121(3/8)

U44 LAN PC BOARD



<Note>
SD-x:XY is short for Shcematic Diagram-x and
each socket's location, X=A to H, Y=1 to 5.

NOTE

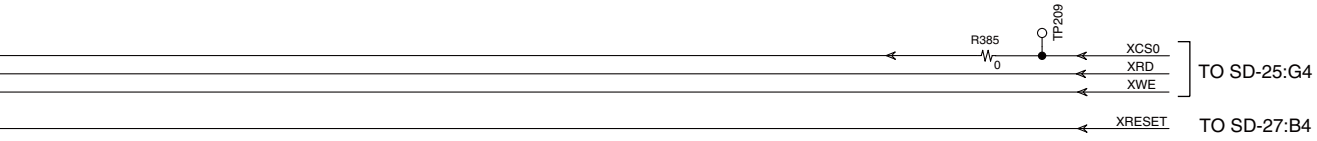
- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) ⊙⊙⊙ ← PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

E F G H

DATA BUS [0:63]

ADDRESS BUS [0:23]

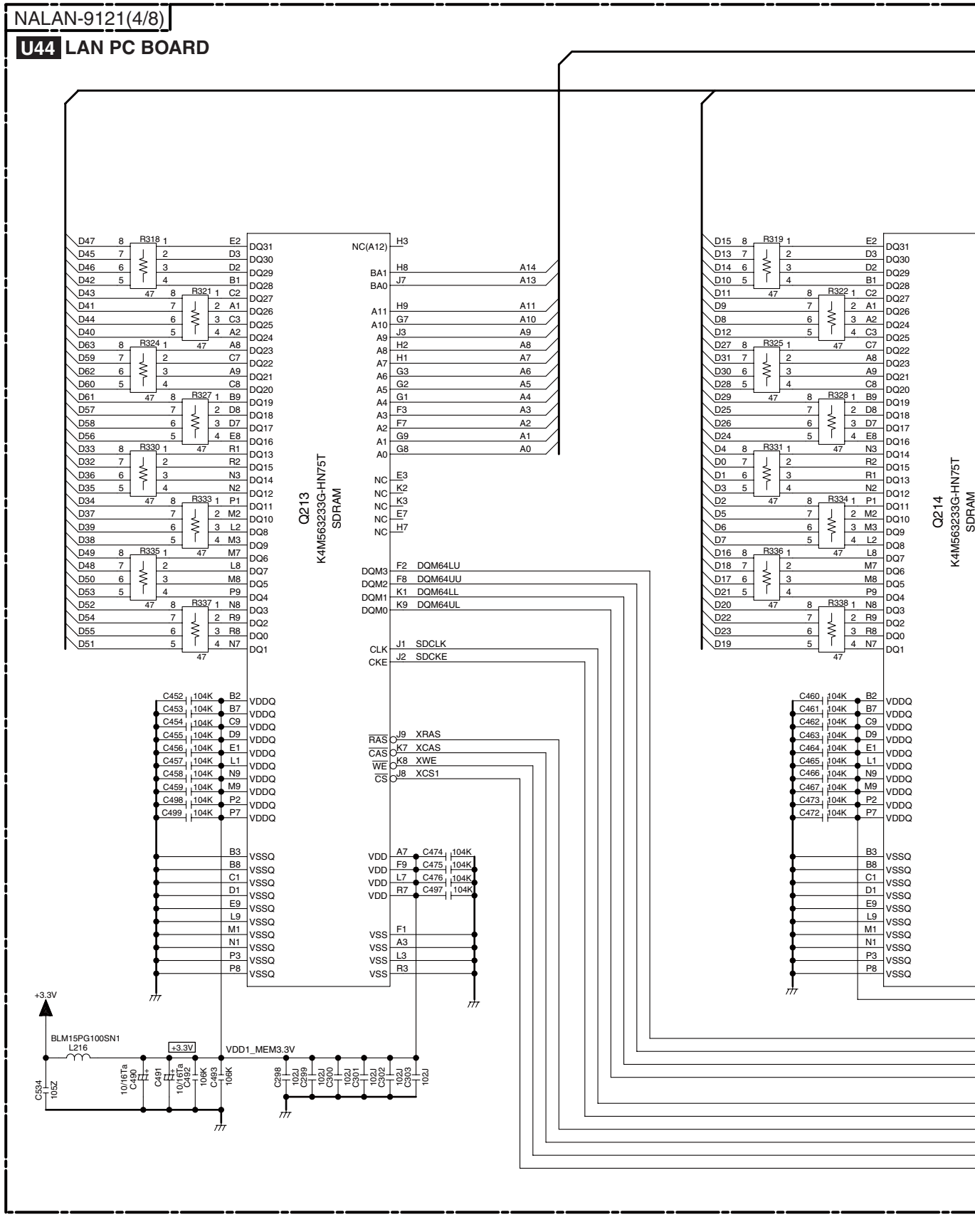
TO SD-25:B1



SCHEMATIC DIAGRAMS-23(SD-23)
NETWORK SECTION-4

NALAN-9121(4/8)

U44 LAN PC BOARD



E F G H

<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ▭ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

ADDRESS BUS A[0:22]

DATA BUS D[0:64]

TO SD-25:B1

K4M563233G-HN75
SDRAM

NC(A12) H3
BA1 H8 A14
BA0 J7 A13
A11 H9 A11
A10 G7 A10
A9 J3 A9
A8 H2 A8
A7 H1 A7
A6 G3 A6
A5 G2 A5
A4 G1 A4
A3 F3 A3
A2 F7 A2
A1 G9 A1
A0 G8 A0

NC E3
NC K2
NC K3
NC E7
NC H7

DQM3 F2 DQMLU
DQM2 F8 DQMUU
DQM1 K1 DQMLL
DQM0 K9 DQMUL

CLK J1 100MHz SDCLK
CKE J2 SDCKE

RAS J9 XRAS
CAS K7 XCAS
WE K8 XWE
CS J8 XCS1

+3.3V
BLM15PG100SN1
L215
VDD2_MEM3.3V
+3.3V

VDD A7 C468 104K
VDD F9 C469 104K
VDD L7 C470 104K
VDD R7 C471 104K

C477 10/16Ta
C478 10/16Ta
C479 106K
C480 106K
C535 105Z

VSS F1
VSS A3
VSS L3
VSS R3

C314 102J
C315 102J
C316 102J
C317 102J
C318 102J
C319 102J

TO SD-25:G4-G5

DQMLU
DQMUU
DQMLL
DQMUL
DQM64LU
DQM64UU
DQM64LL
DQM64UL

SDCLK
SDCKE
XRAS
XCAS
XWE
XCS1

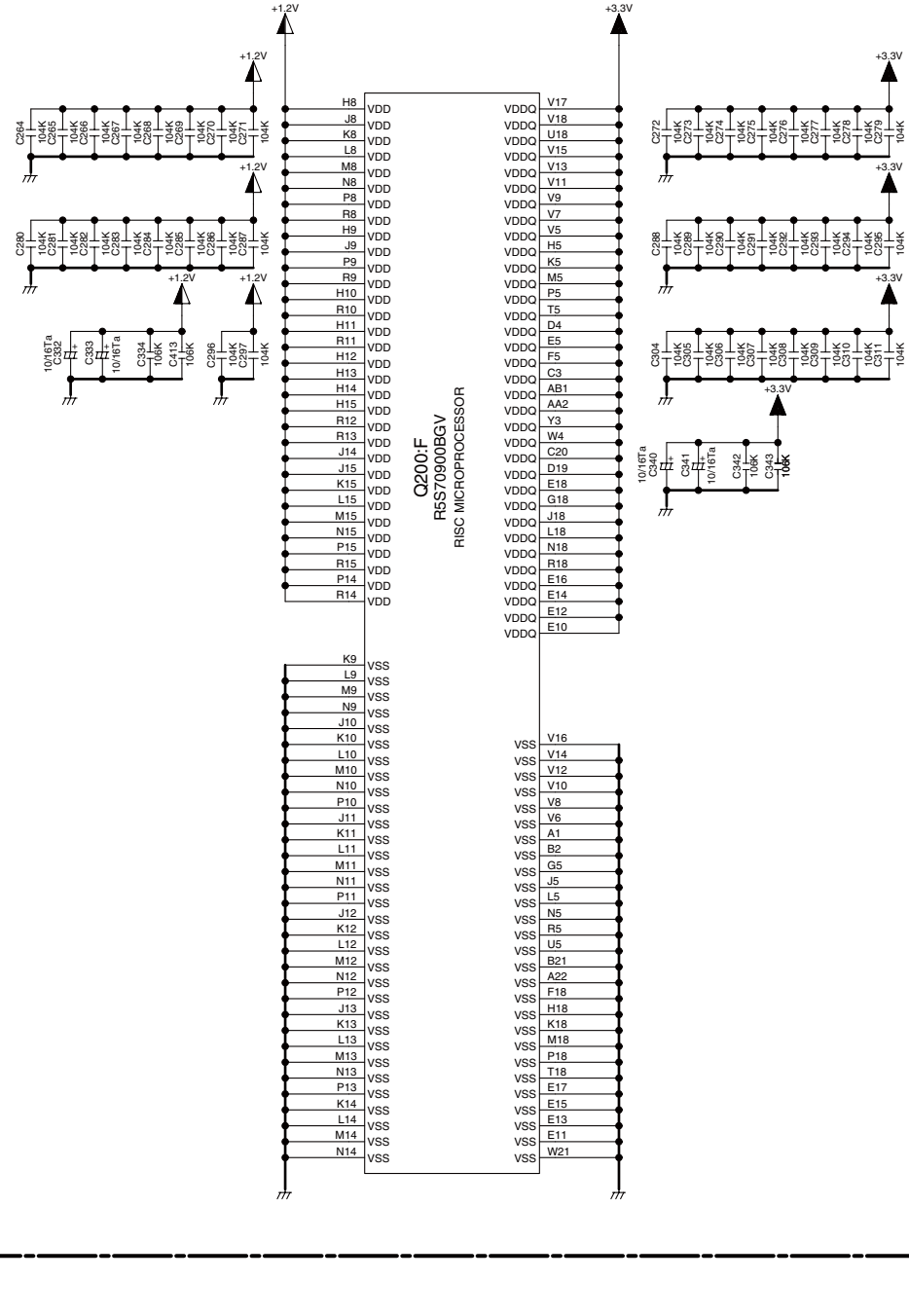
SCHEMATIC DIAGRAMS-24(SD-24)
NETWORK SECTION-5

NALAN-9121(5/8) **U44 LAN PC BOARD**

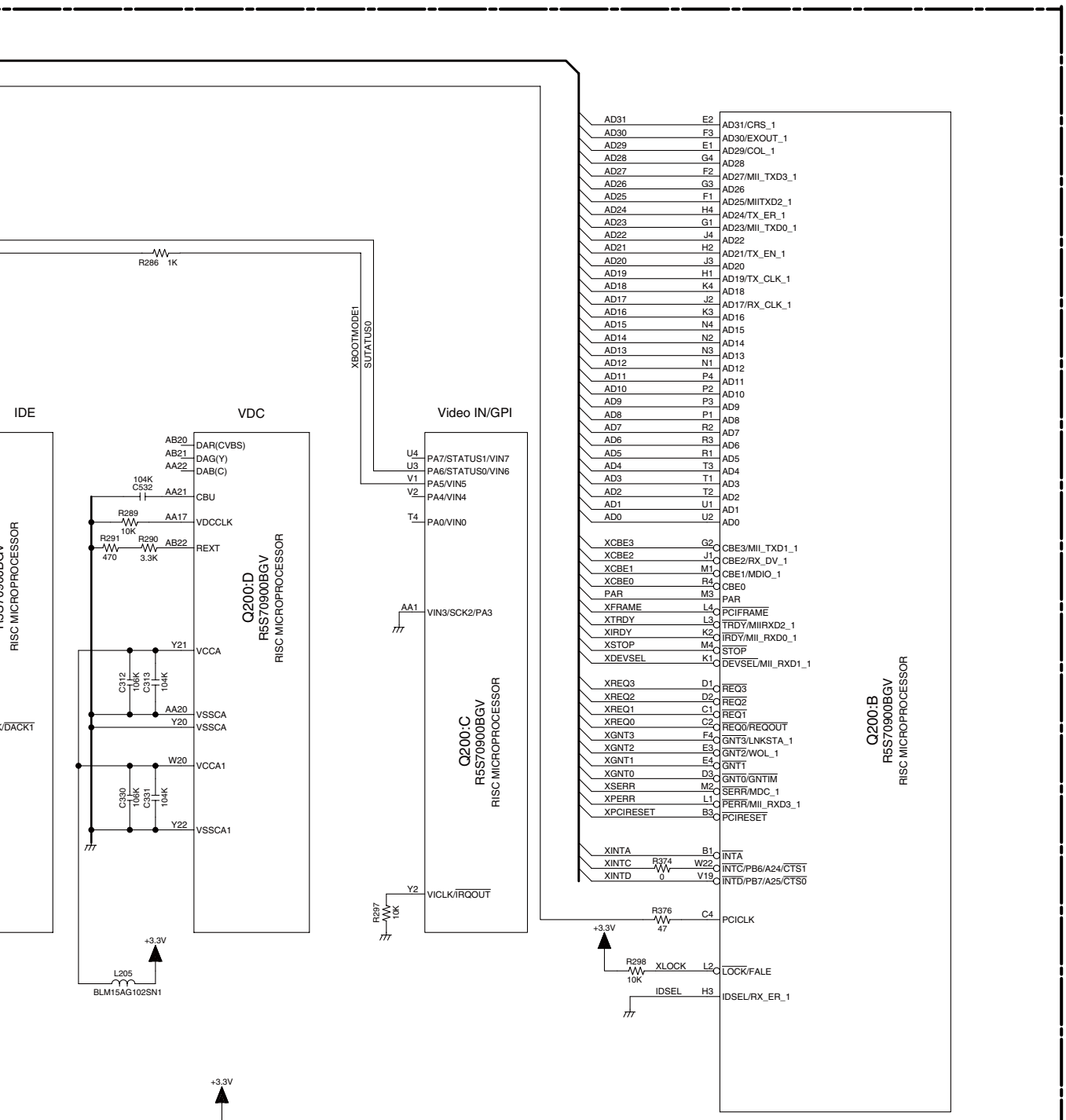
TO SD-21:A1 — PCI BUS

TO SD-27:B1 — PCICLK

TO SD-27:F4 — SUTATUS0, XBOOTMODE0



E F G H



<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ▭ — PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.
</Note>

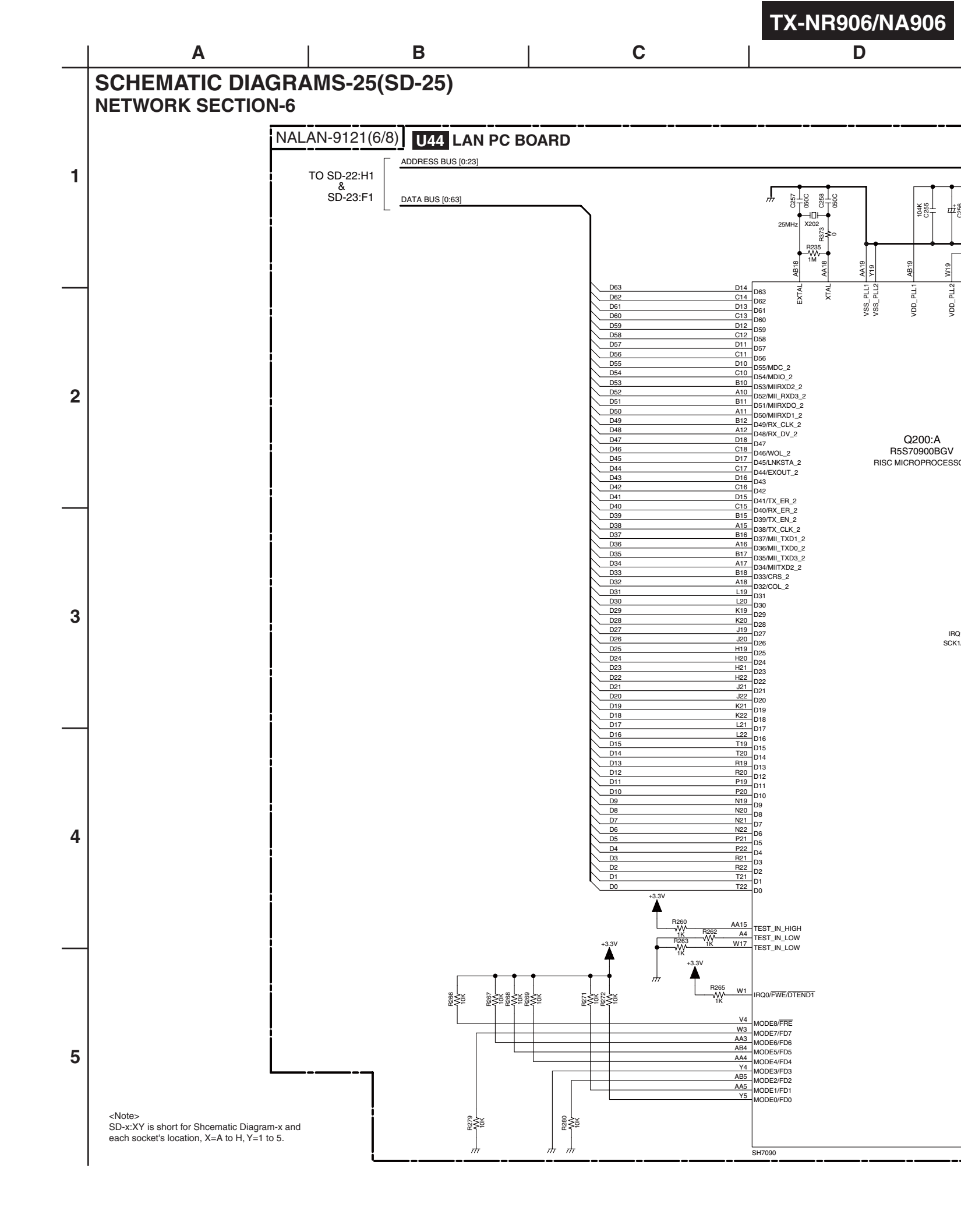
SCHEMATIC DIAGRAMS-25(SD-25)
NETWORK SECTION-6

NALAN-9121(6/8) **U44 LAN PC BOARD**

TO SD-22:H1 & SD-23:F1

ADDRESS BUS [0:23]

DATA BUS [0:63]

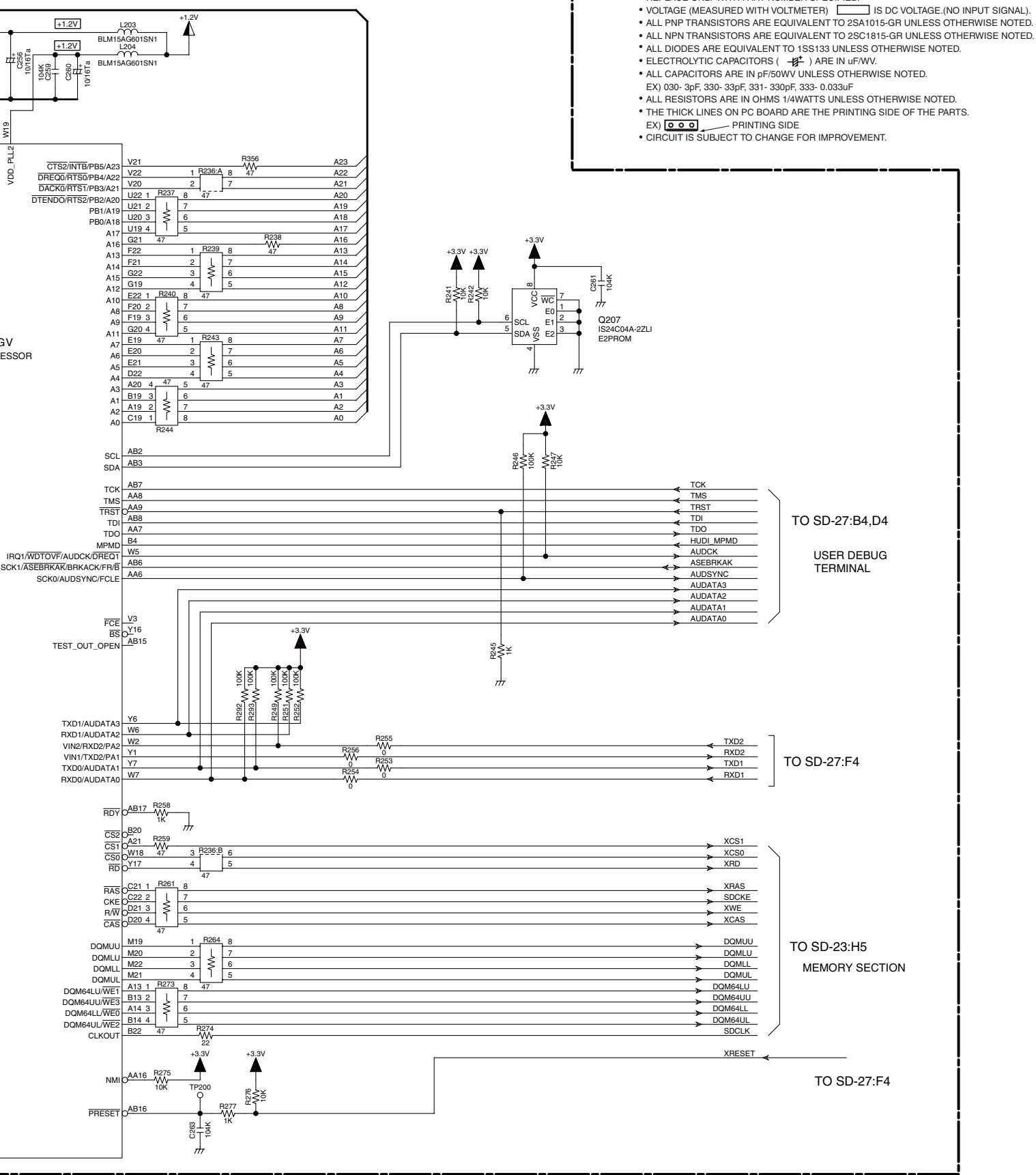


<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

E F G H

NOTE

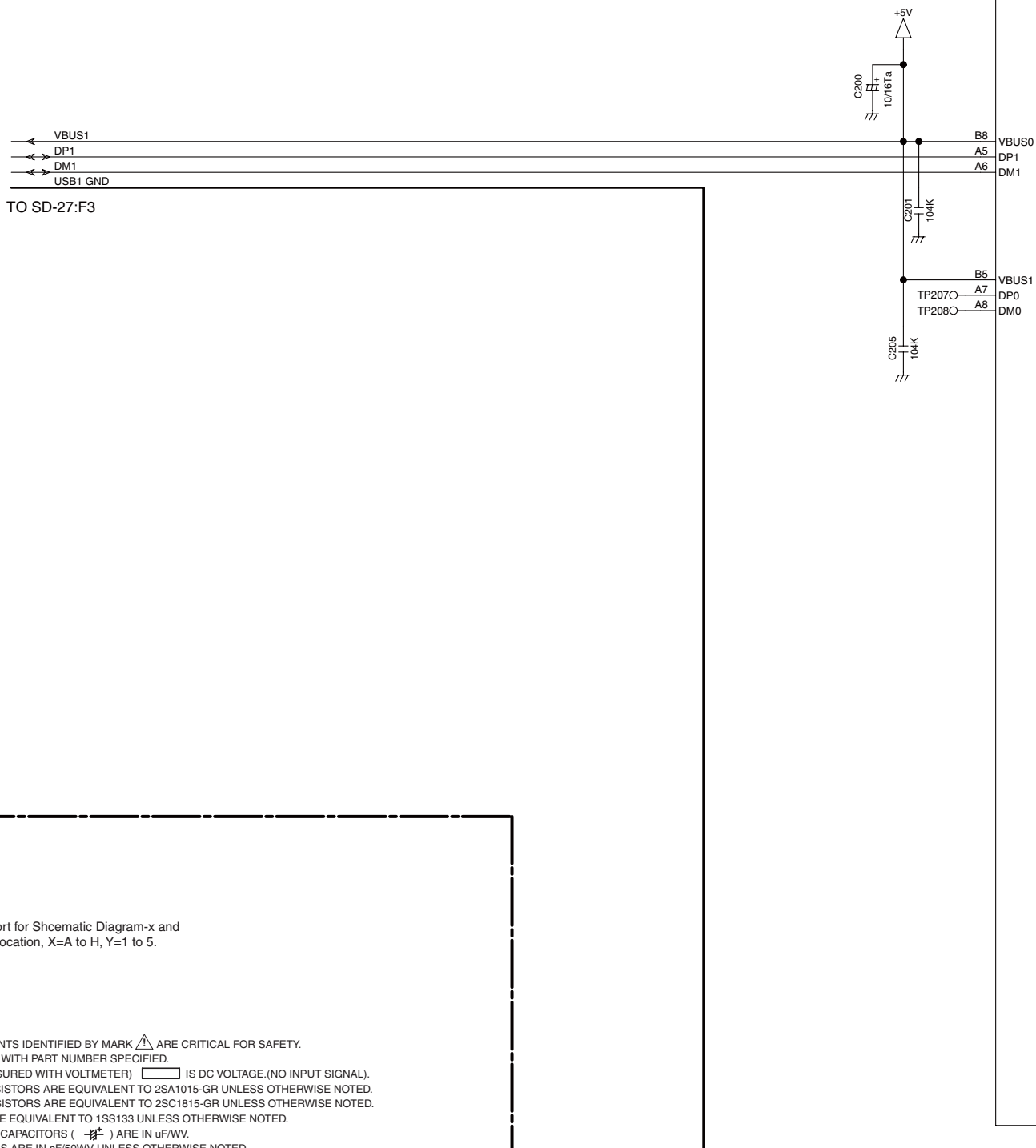
- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) [ ] IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ○○○ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.



SCHEMATIC DIAGRAMS-26(SD-26)
NETWORK SECTION-7

NALAN-9121(7/8)

U44 LAN PC BOARD

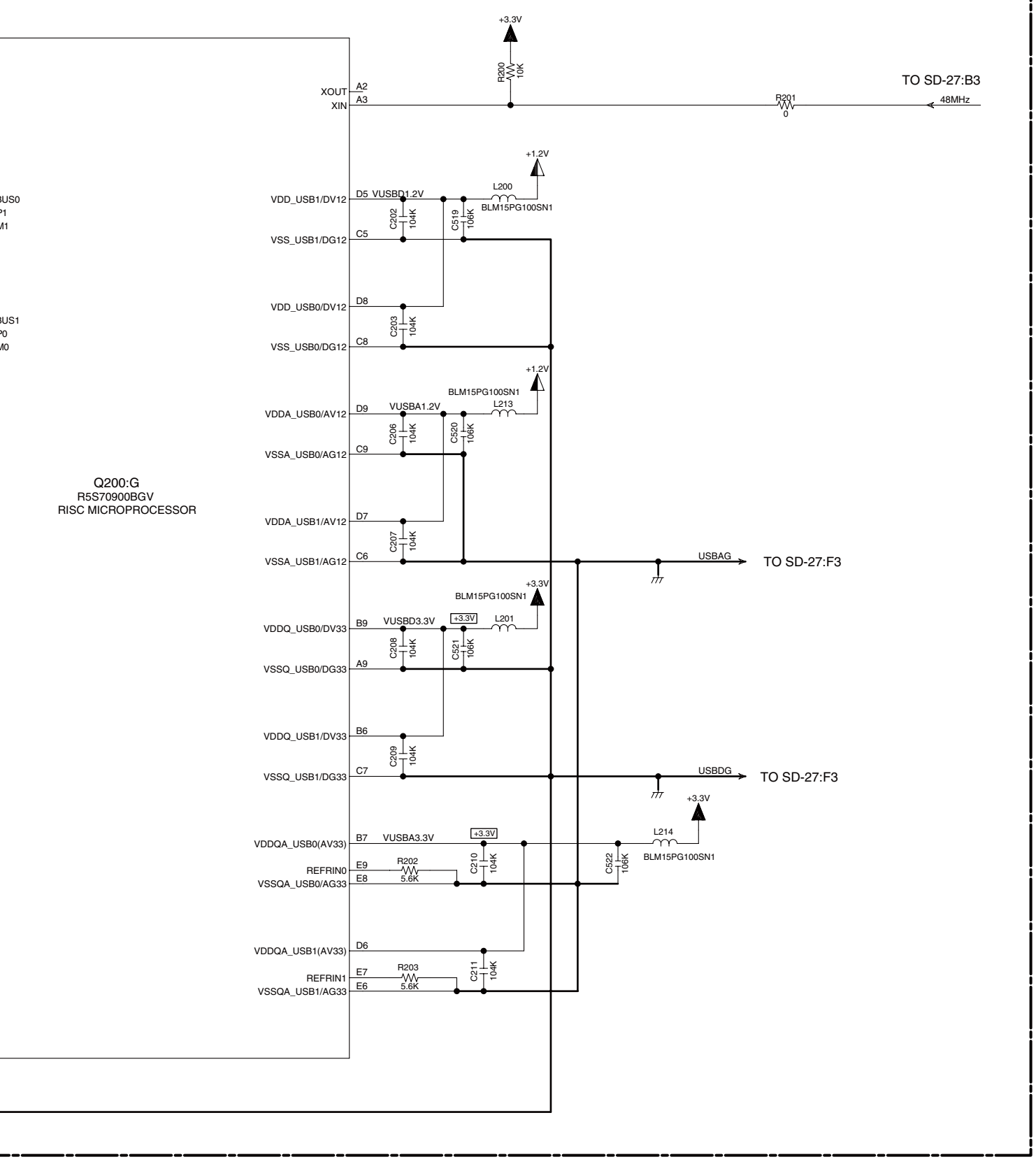


<Note>
SD-x:XY is short for Shcematic Diagram-x and
each socket's location, X=A to H, Y=1 to 5.

NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) ▭ ← PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

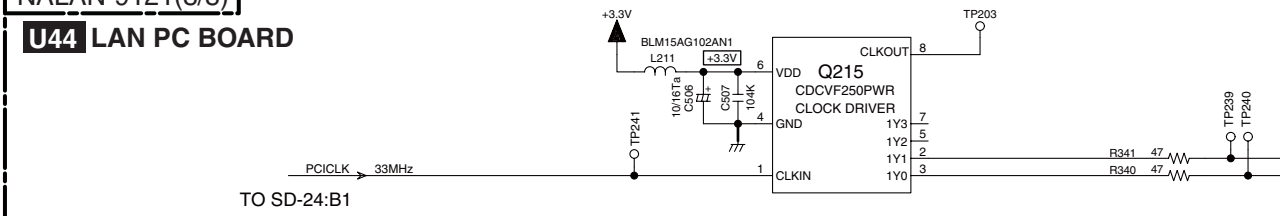
E F G H

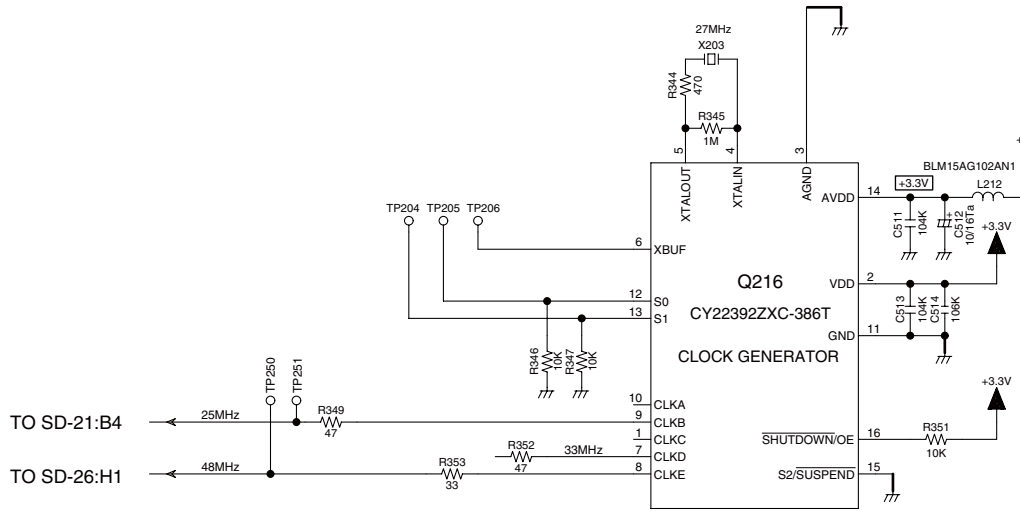

+3.3V
R200
10K
XOUT
XIN
A2
A3
TO SD-27:B3
R201
0
48MHz
+1.2V
L200
BLM15PG100SN1
VDD_USB1/DV12
D5
VUSBD1.2V
C202
104K
C519
106K
VSS_USB1/DG12
C5
VDD_USB0/DV12
D8
C203
104K
VSS_USB0/DG12
C8
+1.2V
BLM15PG100SN1
L213
VDDA_USB0/AV12
D9
VUSBA1.2V
C206
104K
C520
106K
VSSA_USB0/AG12
C9
Q200:G
R5S70900BGV
RISC MICROPROCESSOR
VDDA_USB1/AV12
D7
C207
104K
VSSA_USB1/AG12
C6
USBAG
TO SD-27:F3
+3.3V
BLM15PG100SN1
L201
VDDQ_USB0/DV33
B9
VUSBD3.3V
+3.3V
C208
104K
C521
106K
VSSQ_USB0/DG33
A9
VDDQ_USB1/DV33
B6
C209
104K
VSSQ_USB1/DG33
C7
USBDG
TO SD-27:F3
+3.3V
L214
BLM15PG100SN1
VDDQA_USB0(AV33)
B7
VUSBA3.3V
+3.3V
C210
104K
C522
106K
REFRIN0
E9
R202
5.6K
VSSQA_USB0/AG33
E8
VDDQA_USB1(AV33)
D6
REFRIN1
E7
R203
5.6K
C211
104K
VSSQA_USB1/AG33
E6

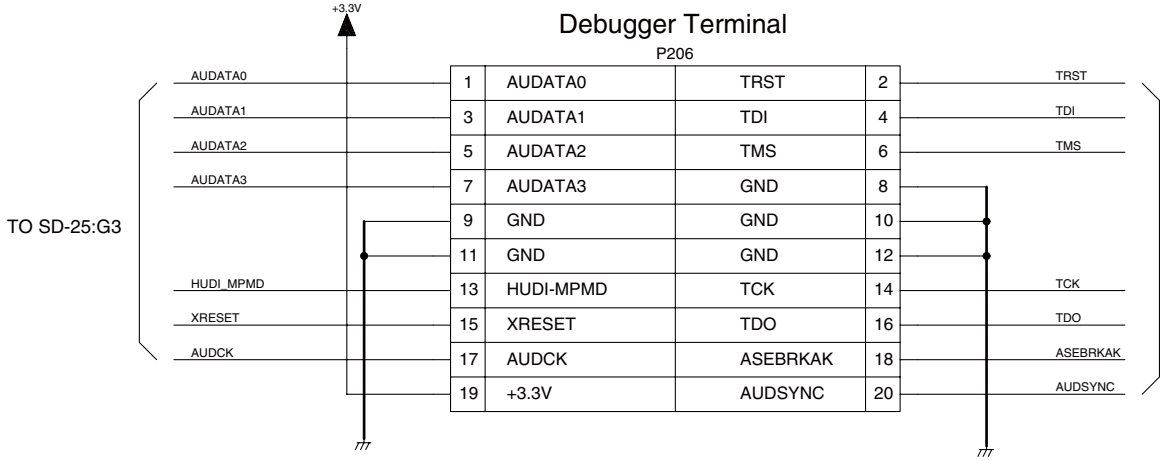
SCHEMATIC DIAGRAMS-27(SD-27)
NETWORK SECTION-8

NALAN-9121(8/8)

U44 LAN PC BOARD







E F G H

<Note>
SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ▭ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

PCICLK2 → TO SD-21:A4
PCICLK3 → TO SD-20:B1

TO SD-20:G2 Z2ROUT
TO SD-20:G3 Z2LOUT
AG
AG
+7V
-7V
TP242 TP243 TP244 TP245 TP246
P202A NAASP-9080 SD-1:D5

+7V
-7V
C517 100/16
C518 100/16

+5V +3.3V
47/16Ta C510
C533 220/16Ta
C515 47/10Ta
C516 100/6.3
TP247 TP248 TP249
P201A NATRM-9055 SD-7:C3

TO SD-26:G3 USBAG
TO SD-26:G4 USBDG

+5V
TO SD-26:A2
VBUS1
DM1
DP1
USB1 GND
TP252 TP253 TP254 TP255
R414 0
P204A NADIS-9085 SD-13:B5

TO SD-20:G2
TO SD-24:B2
TXD2
RXD2
XBOOTMODE0
SUTATUS0
TP256 TP257 TP258 TP259

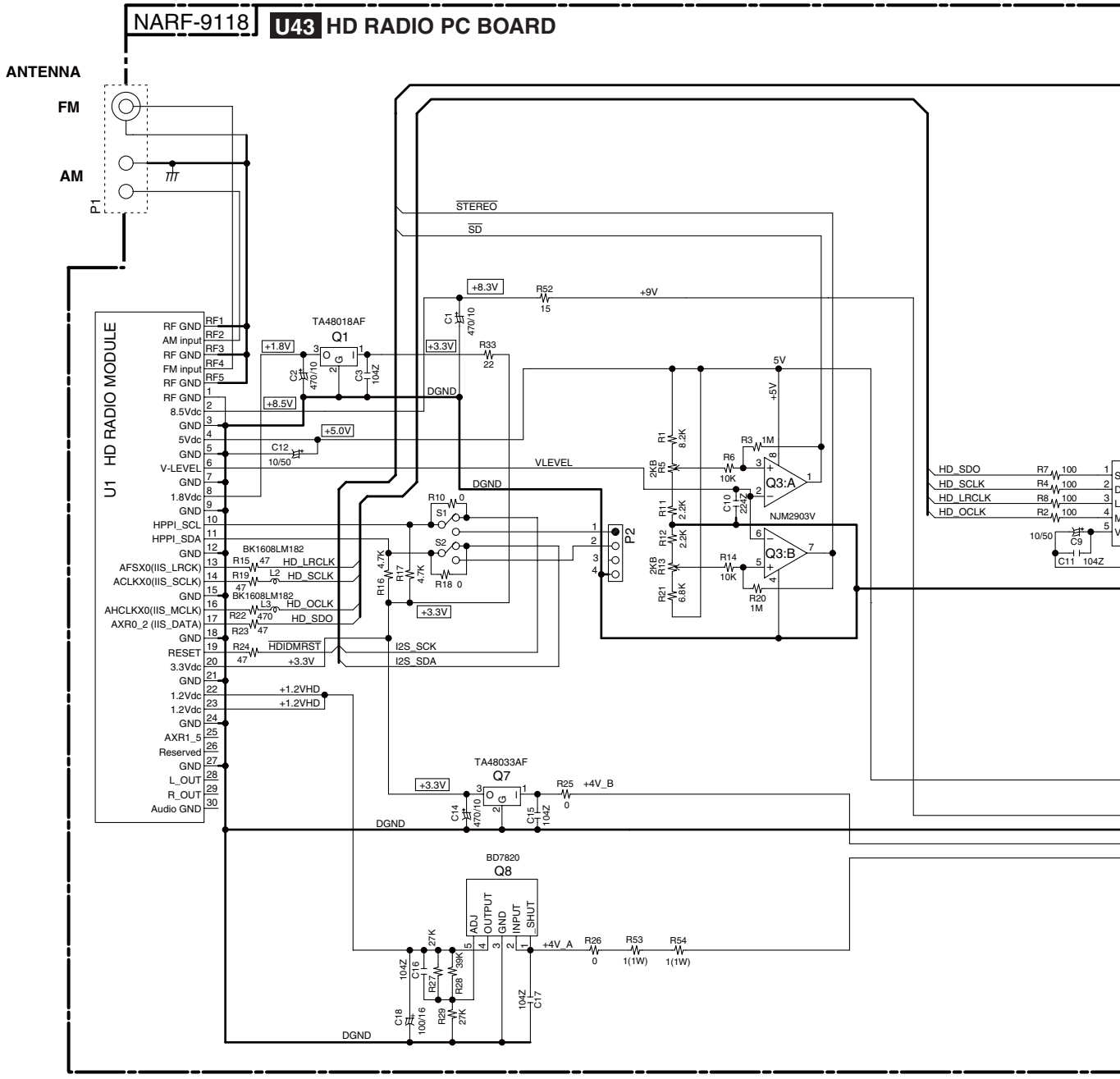
TO SD-20:G2
FL_WP
XRESET
SPDIFRX
SPDIFTX
TP260 TP261 TP262 TP263
P205A NAAR-9074 SD-8:G2

TO SD-25:G3

+3.3V
R415 0
TO SD-25:G4
TXD1
RXD1
TP264 TP265 TP266 TP267

GNDD
TXD1
TP268 TP269
RXD1
TP270
R416 0
RESET
TP271
P207

SCHEMATIC DIAGRAMS-28(SD-28)
HD RADIO SECTION

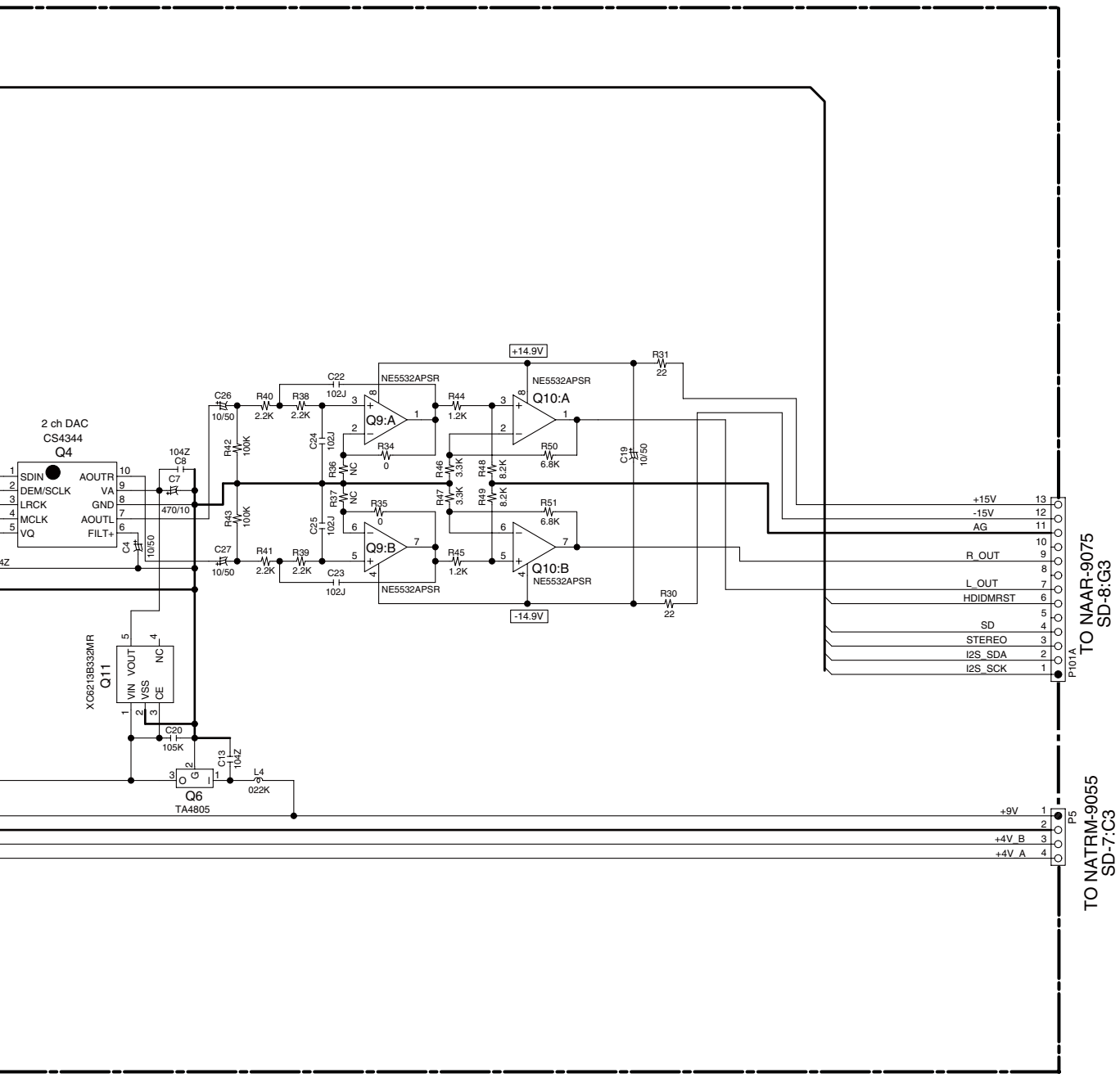


<Note>
SD-x:XY is short for Shcematic Diagram-x and
each socket's location, X=A to H, Y=1 to 5.

NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⧺) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030- 3pF, 330- 33pF, 331- 330pF, 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) ▭ ← PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

E F G H


2 ch DAC
CS4344
Q4
SDIN
DEM/SCLK
LRCK
MCLK
VQ
AOUTR
VA
GND
AOUTL
FILT+
C8
104Z
C7
470/10
C4
10/50
C26
10/50
C27
10/50
R40
2.2K
R38
2.2K
R41
2.2K
R39
2.2K
R42
100K
R43
100K
C22
102J
C24
102J
C25
102J
C23
102J
R36
NC
R37
NC
R34
0
R35
0
Q9:A
Q9:B
NE5532APSR
R44
1.2K
R45
1.2K
R46
3.3K
R47
3.3K
R48
8.2K
R49
8.2K
R50
6.8K
R51
6.8K
Q10:A
Q10:B
NE5532APSR
C19
10/50
+14.9V
-14.9V
R31
22
R30
22
XC6213B332MR
Q11
VIN
VOUT
VSS
CE
NC
C20
105K
C13
104Z
L4
022K
Q6
TA4805
+15V
-15V
AG
R_OUT
L_OUT
HDIDMRST
SD
STEREO
I2S_SDA
I2S_SCK
P101A
TO NAAR-9075
SD-8:G3
+9V
+4V_B
+4V_A
P5
TO NATRM-9055
SD-7:C3