

SLT-A33/A33L/A33Y/A55/A55V/A55L/A55VL/A55VY

Revision History

SERVICE MANUAL

Ver. 1.0 2010.08

LEVEL 3



Photo: SLT-A55V

- US Model
- Canadian Model
- AEP Model
- UK Model
- E Model
- Australian Model
- Chinese Model
- Korea Model
- Japanese Model
- Tourist Model

Check the SERVICE NOTE (LEVEL 2) before the service.

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2010.08	Official Release	—	—

[About the service of this model]

SLT-A33L/A55L/A55VL is a commodity that packed the Interchangeable Lens Digital Camera (SLT-A33/A55/A55V) and Zoom Lens Kit (DT 18-55mm F3.5-5.6 SAM).

SLT-A33Y/A55VY is a commodity that packed the Interchangeable Lens Digital Camera (SLT-A33/A55V) and W Zoom Lens Kit (DT 18-55mm F3.5-5.6 SAM/DT 55-200mm F4-5.6 SAM).

Refer to each following service manual of the Zoom lens kit, when you repair.

- Zoom Lens Kit
 - SAL1855 (DT 3.5-5.6/18-55 SAM) (DT 18-55mm F3.5-5.6 SAM) Service Manual (9-852-691-1□)
 - SAL55200-2 (DT 4-5.6/55-200 SAM) (DT 55-200mm F4-5.6 SAM) Service Manual (9-852-692-1□)

INTERCHANGEABLE LENS DIGITAL CAMERA/ZOOM LENS KIT

The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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CHEMICALS

Some chemicals used for servicing are highly volatile. Their evaporation caused by improper management affects your health and environment, and wastes resources. Manage the chemicals carefully as follows.

- Store chemicals sealed in a specific place to prevent from exposure to high temperature or direct sunlight.
- Avoid dividing chemicals into excessive numbers of small containers to reduce natural evaporation.
- Keep containers sealed to avoid natural evaporation when chemicals are not in use.
- Avoid using chemicals as much as possible. When using chemicals, divide only required amount to a small plate from the container and use up it.

Caution

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type. Dispose of used batteries according to the instructions.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are “pinched” or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.
6. Flexible Circuit Board Repairing
 - Keep the temperature of the soldering iron around 270 °C during repairing.
 - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
 - Be careful not to apply force on the conductor when soldering or unsoldering.

EXTERIOR PARTS

Be careful to the following points for plastic parts used in this unit.

- Use a piece of cleaning paper or cleaning cloth for cleaning plastic parts. Avoid using chemicals. Even if you have to use chemicals to clean heavy dirt, don't use paint thinner, ketone, nor alcohol.
- Insert the specific screws vertically to the part when installing a plastic part. Be careful not to tighten screws too much.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE \triangle SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

UNLEADED SOLDER

This unit uses unleaded solder. Boards requiring use of unleaded solder are printed with the lead free mark (LF) indicating the solder contains no lead. (**Caution:** Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

: LEAD FREE MARK

Be careful to the following points to solder or unsolder.

- Set the soldering iron tip temperature to 350 °C approximately. If cannot control temperature, solder/unsolder at high temperature for a short time. **Caution:** The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful! Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Be sure to control soldering iron tips used for unleaded solder and those for leaded solder so they are managed separately. Mixing unleaded solder and leaded solder will cause detachment phenomenon.

各種薬品の取り扱いについて

現在使用されている薬品の中には揮発性の高い薬品もあります。それらを不用意に取り扱い蒸発させてしまうと、環境や健康へ影響を与えたり、資源の無駄使いになります。各種薬品は、下記の点に注意して取り扱ってください。

- 保管場所を定め、高温になったり直射日光の当たらない場所に密閉して保管してください。
- 小分け(ハンドラップ等)する数は必要最小限に留め、容器による自然蒸発を防いでください。
- 作業に使用しない時は、必ずキャップ等をして自然蒸発を防いでください。
- 薬品を使用する回数を極力少なくし、使用する場合は使用する量だけ容器より出して受け皿に残さないようにしてください。

Caution

電池の交換は、正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。使用済み電池は、取扱指示に従って処分してください。

サービス、点検時には次のことにご注意ください。

1. 注意事項をお守りください。サービスのとき特に注意を要する個所については、キャビネット、シャーシ、部品などにラベルや捺印で注意事項を表示しています。これらの注意書き及び取扱説明書等の注意事項を必ずお守りください。
2. 指定部品のご使用を
セットの部品は難燃性や耐電圧など安全上の特性を持ったものとなっています。従って交換部品は、使用されていたものと同じ特性の部品を使用してください。特に回路図、部品表に \triangle 印で指定されている安全上重要な部品は必ず指定のものをご使用ください。
3. 部品の取付けや配線の引きまわしはもとどおりに安全上、チューブやテープなどの絶縁材料を使用したり、プリント基板から浮かして取付けた部品があります。また内部配線は引きまわしやクランプによって発熱部品や高圧部品に接近しないよう配慮されていますので、これらは必ずもとどおりにしてください。
4. サービス後は安全点検を
サービスのために取外したネジ、部品、配線がもとどおりになっているか、またサービスした個所の周辺を劣化させてしまったところがないかなどを点検し、安全性が確保されていることを確認してください。
5. チップ部品交換時の注意
 - 取り外した部品は再使用しないでください。
 - タンタルコンデンサのマイナス側は熱に弱いため交換時は注意してください。
6. フレキシブルプリント基板の取扱いについて
 - こて先温度を270°C前後にして行なってください。
 - 同一パターンに何度もコテ先を当てないでください。(3回以内)
 - パターンに力が加わらないよう注意してください。


樹脂系部品の取り扱いについて

本機に使用されている樹脂系の部品は、下記の点に注意して取り扱ってください。

- 清掃には薬品を使用せず、清掃紙や清掃布を使用してください。やむを得ず汚れがひどくて薬品を使用する場合は、シンナー、ケトン、エーテルは使用しないでください。
- 各部品の取り付けには指定されたねじを使用し、部品に対して垂直に取り付けてください。また、ねじを締め付ける時は、無理な力を加えないでください。

無鉛半田について

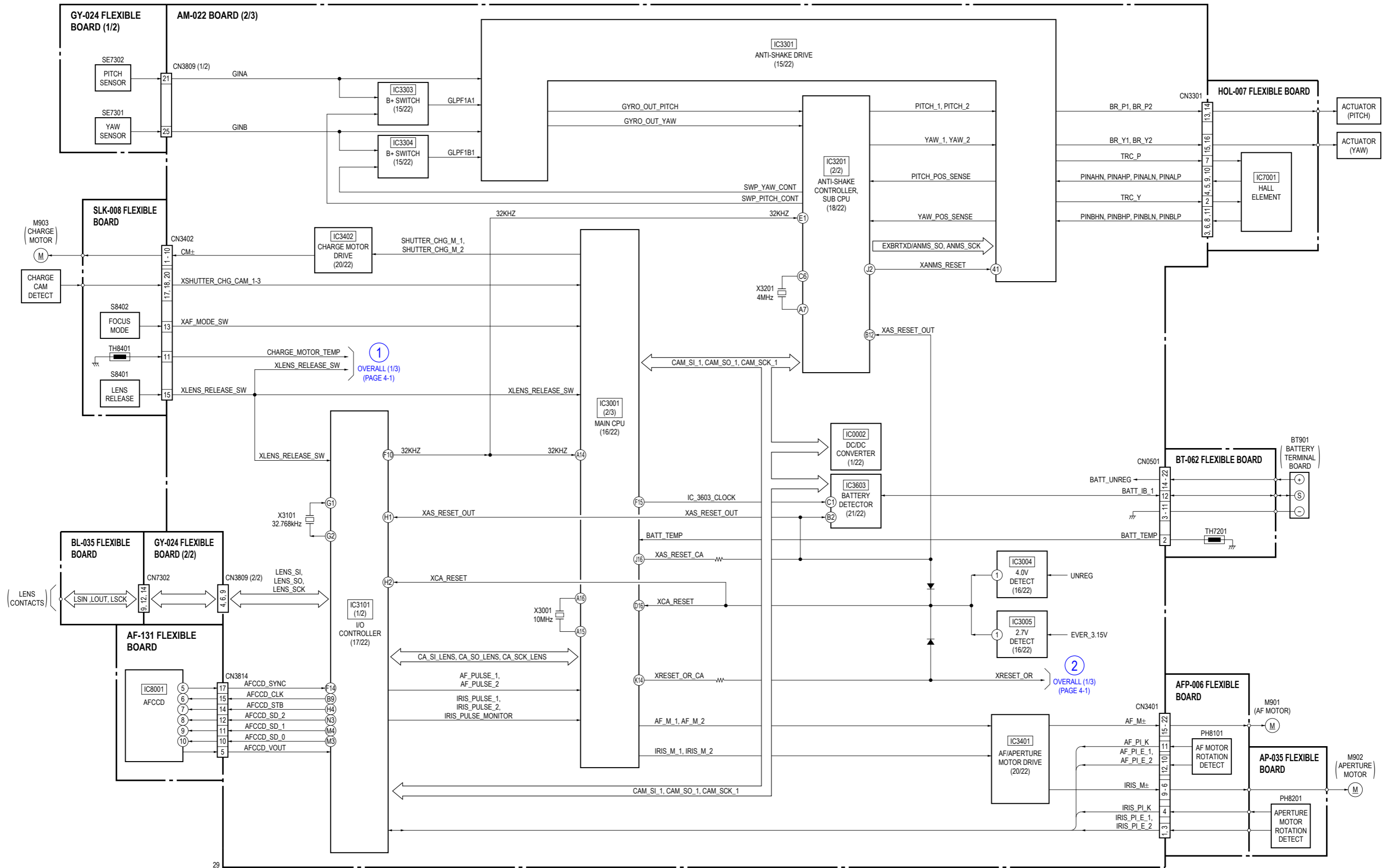
本機には無鉛半田が使用されています。無鉛半田を使用している基板には、無鉛(Lead Free)を意味するレッドフリーマークがプリントされています。(注意：基板サイズによっては、無鉛半田を使用していてもレッドフリーマークがプリントされていないものがあります)

 : レッドフリーマーク

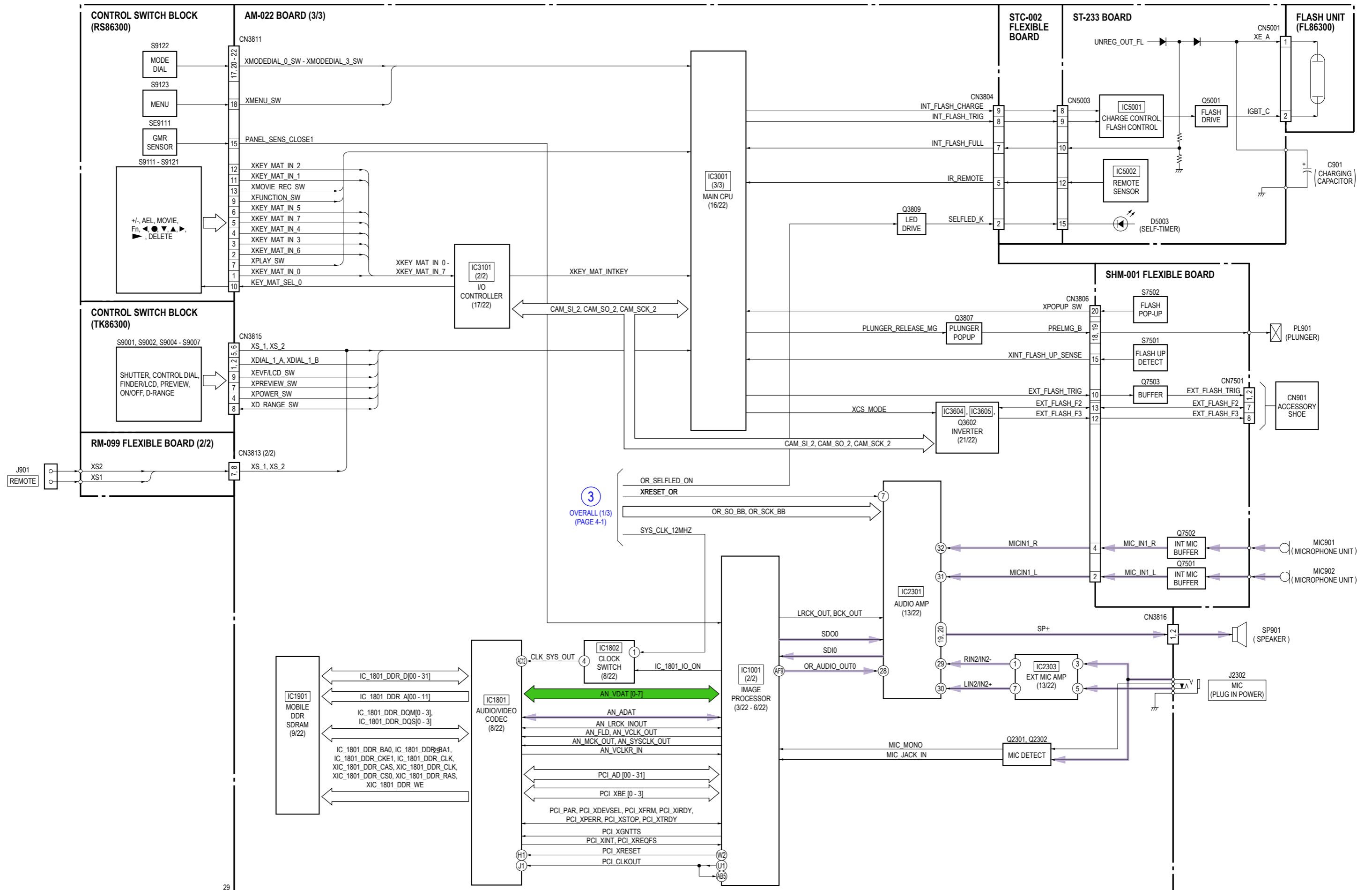
無鉛半田は、下記の点に注意して使用してください。

- 半田こてのこて先温度は約350°Cに設定してください。温度調節が無理な場合は、高温短時間で作業を行ってください。 **注意:** 半田こてを長く当てすぎると、基板のパターン(銅箔)がはがれてしまうことがありますので、注意してください。また、従来の半田よりも粘性が強いため、IC端子などが半田ブリッジしないように注意してください。
- 半田こてのこて先は、必ず無鉛半田用と有鉛半田用に分けて管理してください。無鉛半田と有鉛半田が混在すると剥離現象が発生してしまいます。

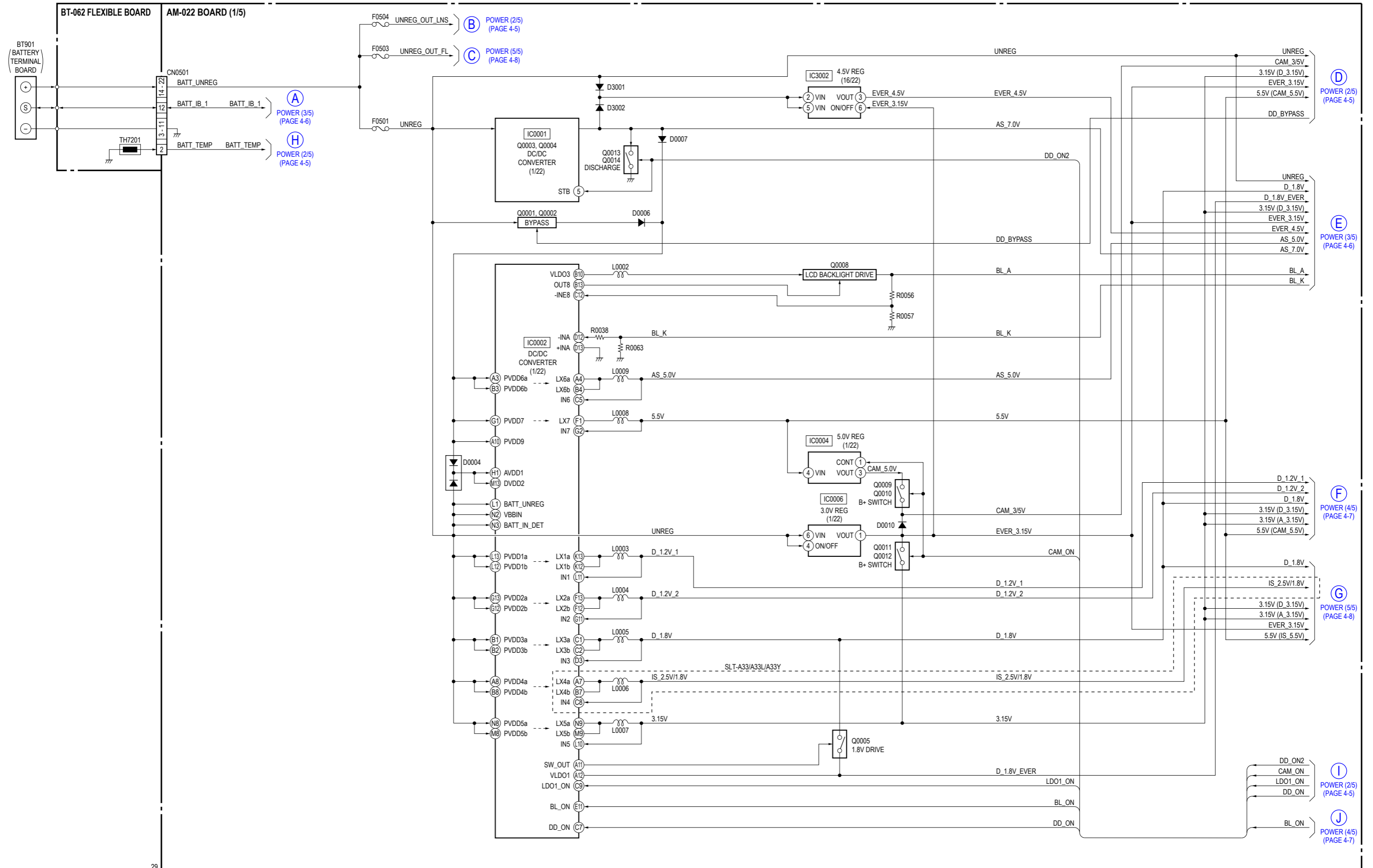
4-2. OVERALL BLOCK DIAGRAM (2/3) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



4-3. OVERALL BLOCK DIAGRAM (3/3) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.

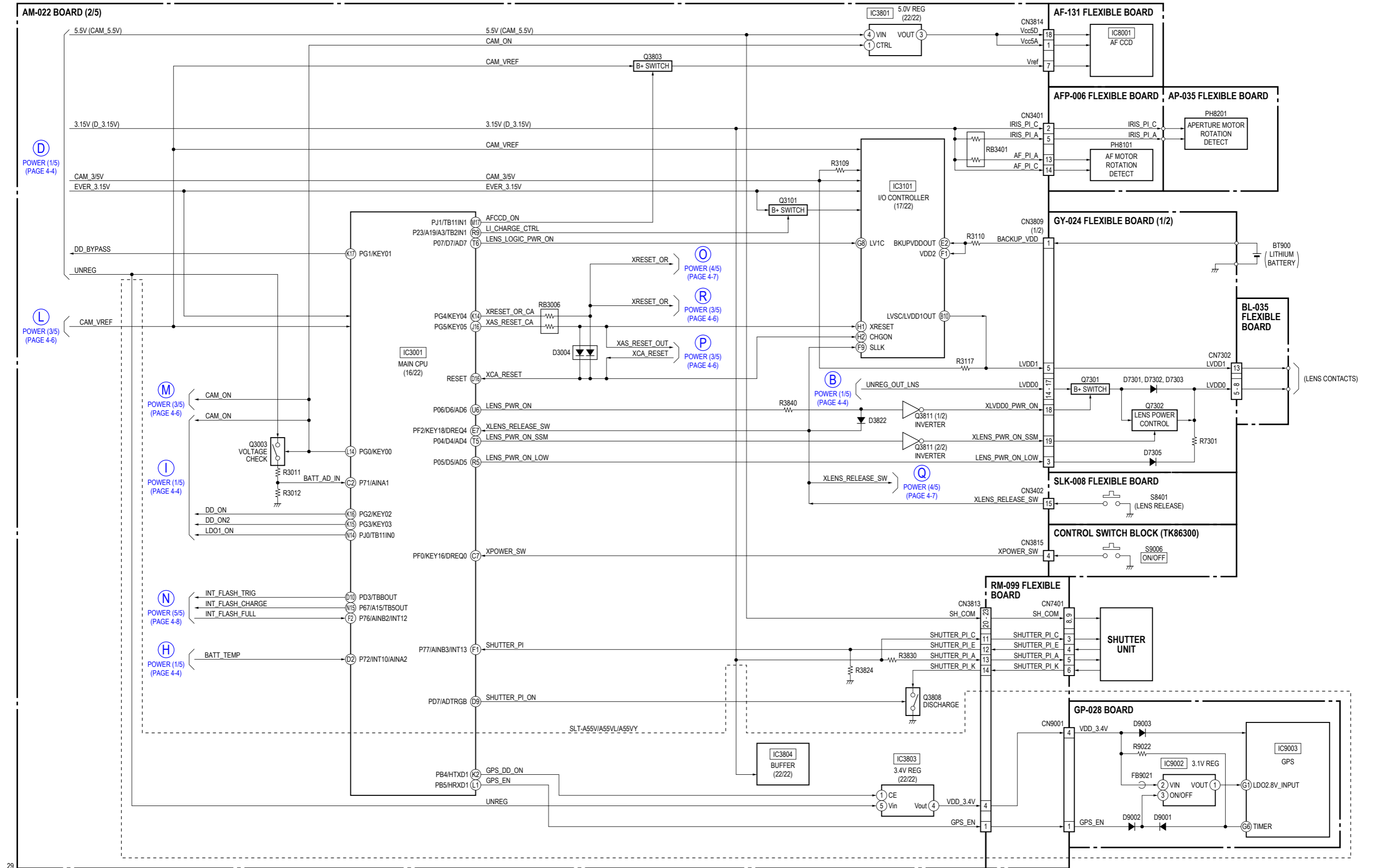


4-4. POWER BLOCK DIAGRAM (1/5) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.

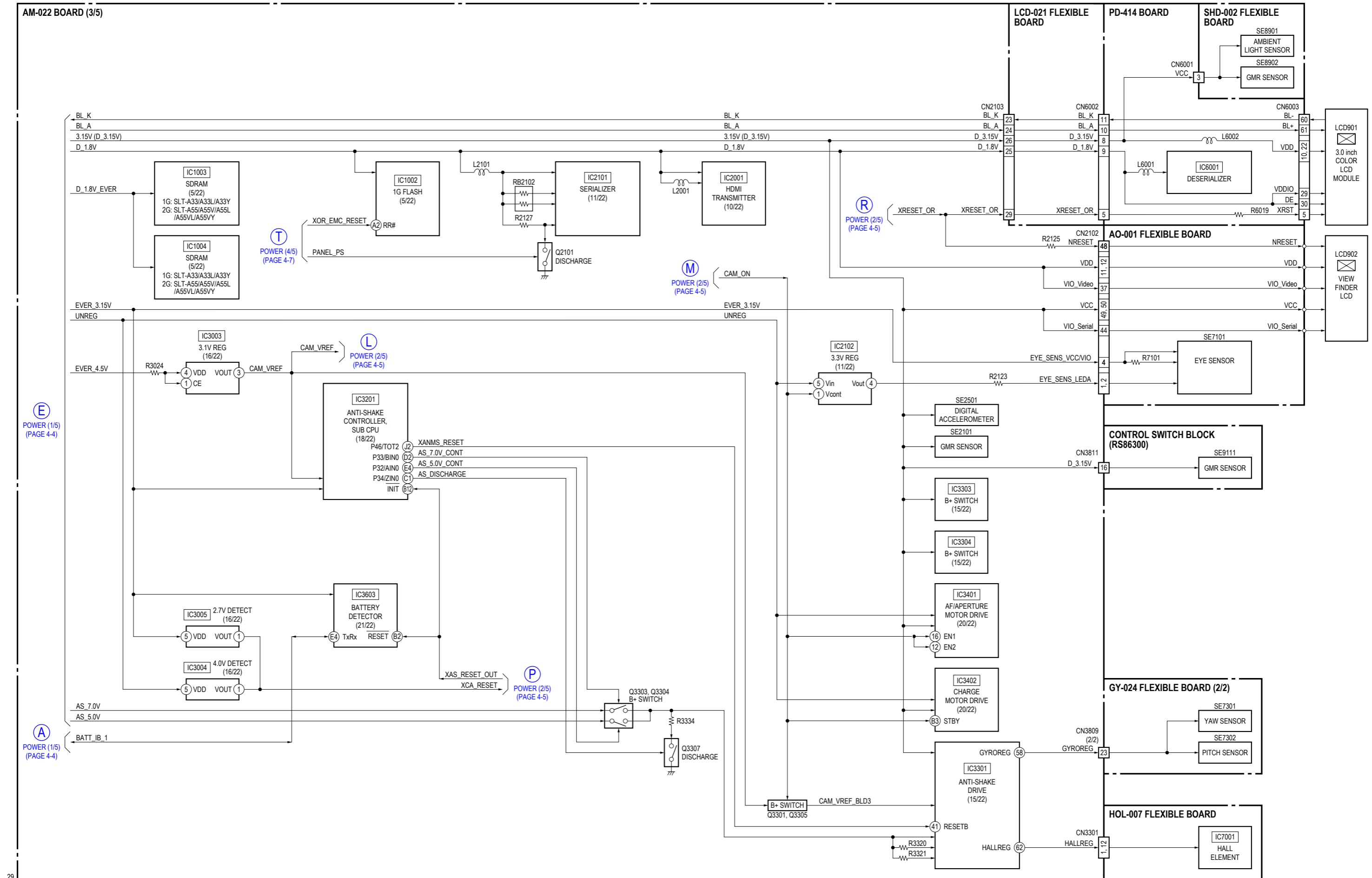


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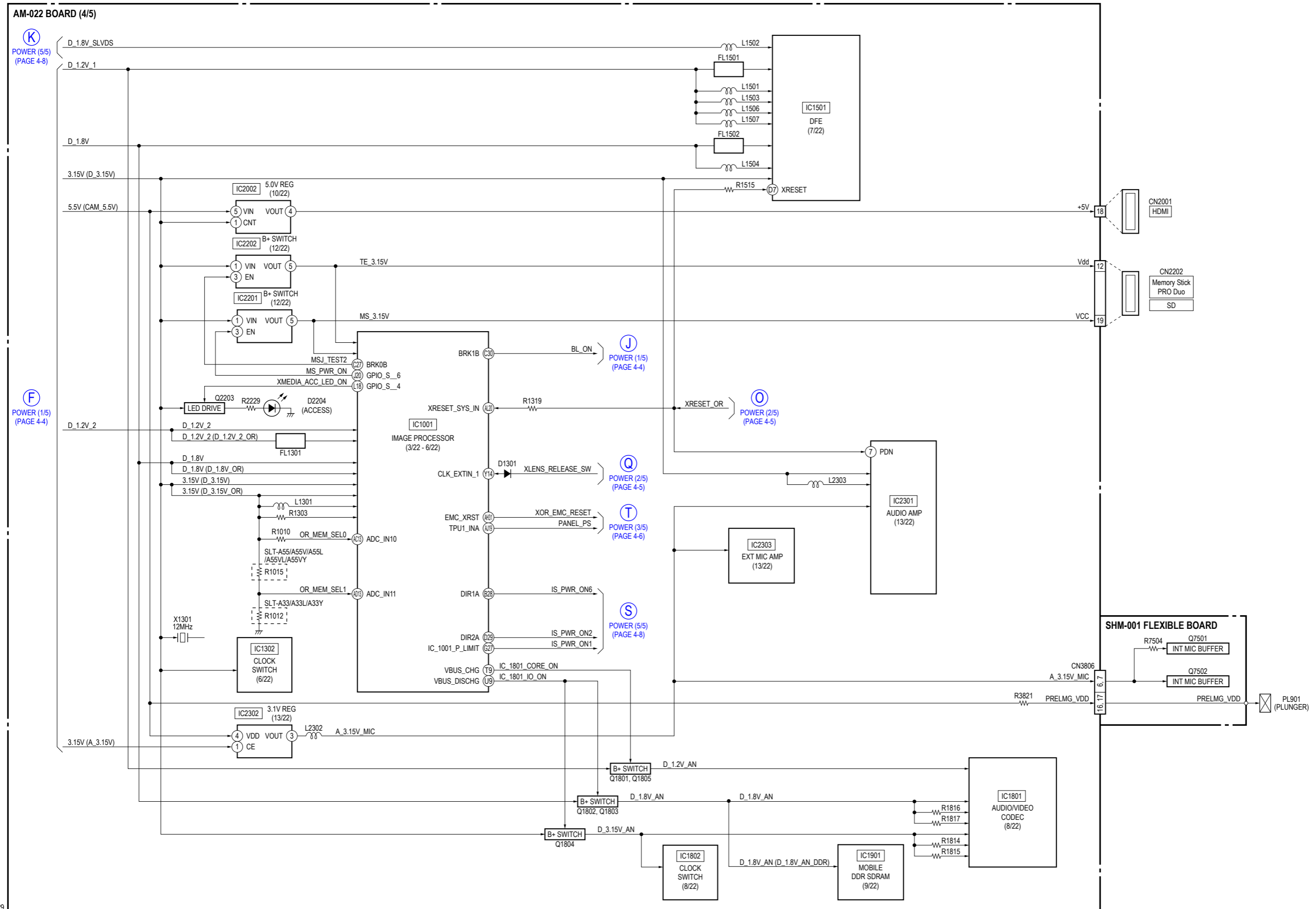
4-5. POWER BLOCK DIAGRAM (2/5) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



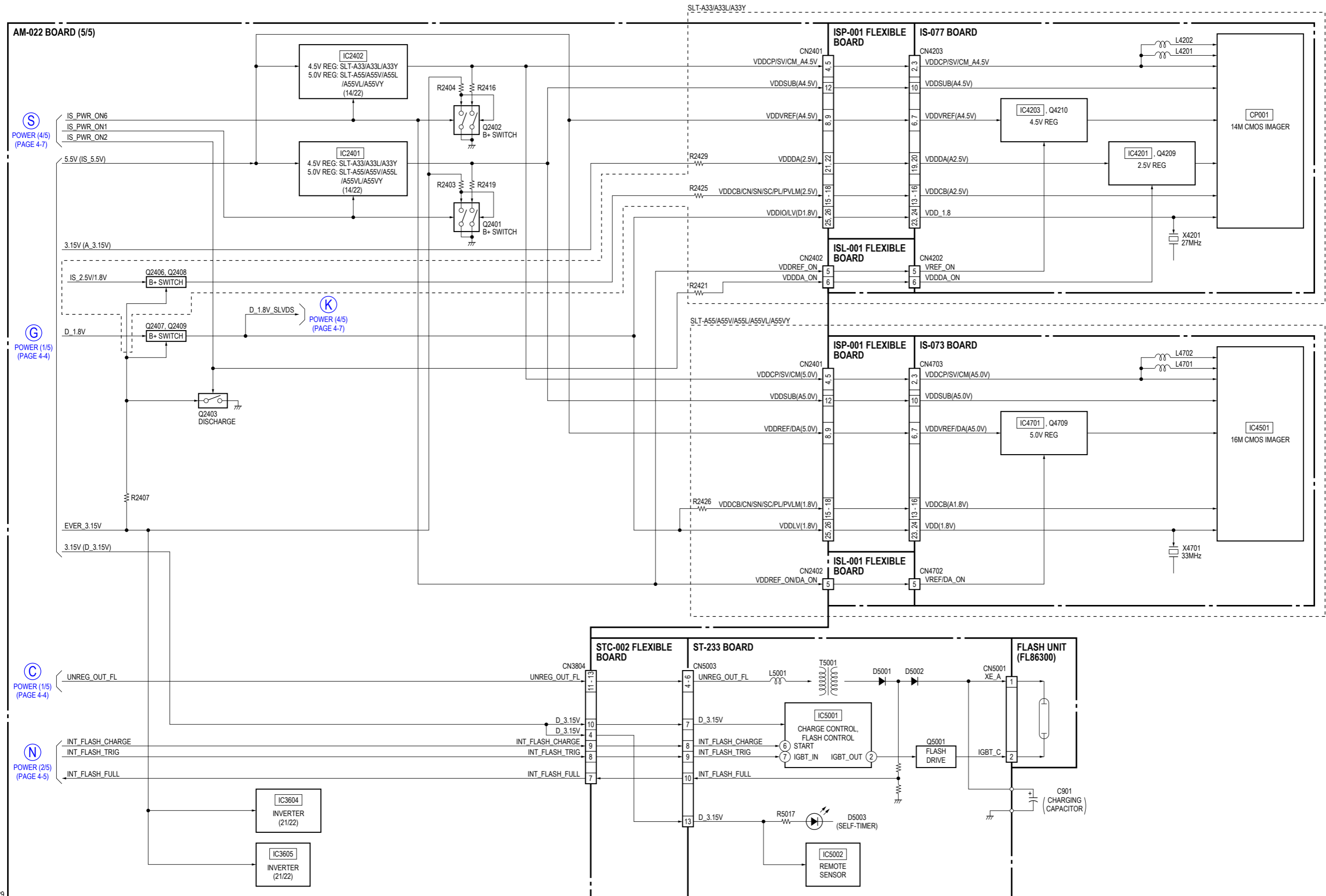
4-6. POWER BLOCK DIAGRAM (3/5) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



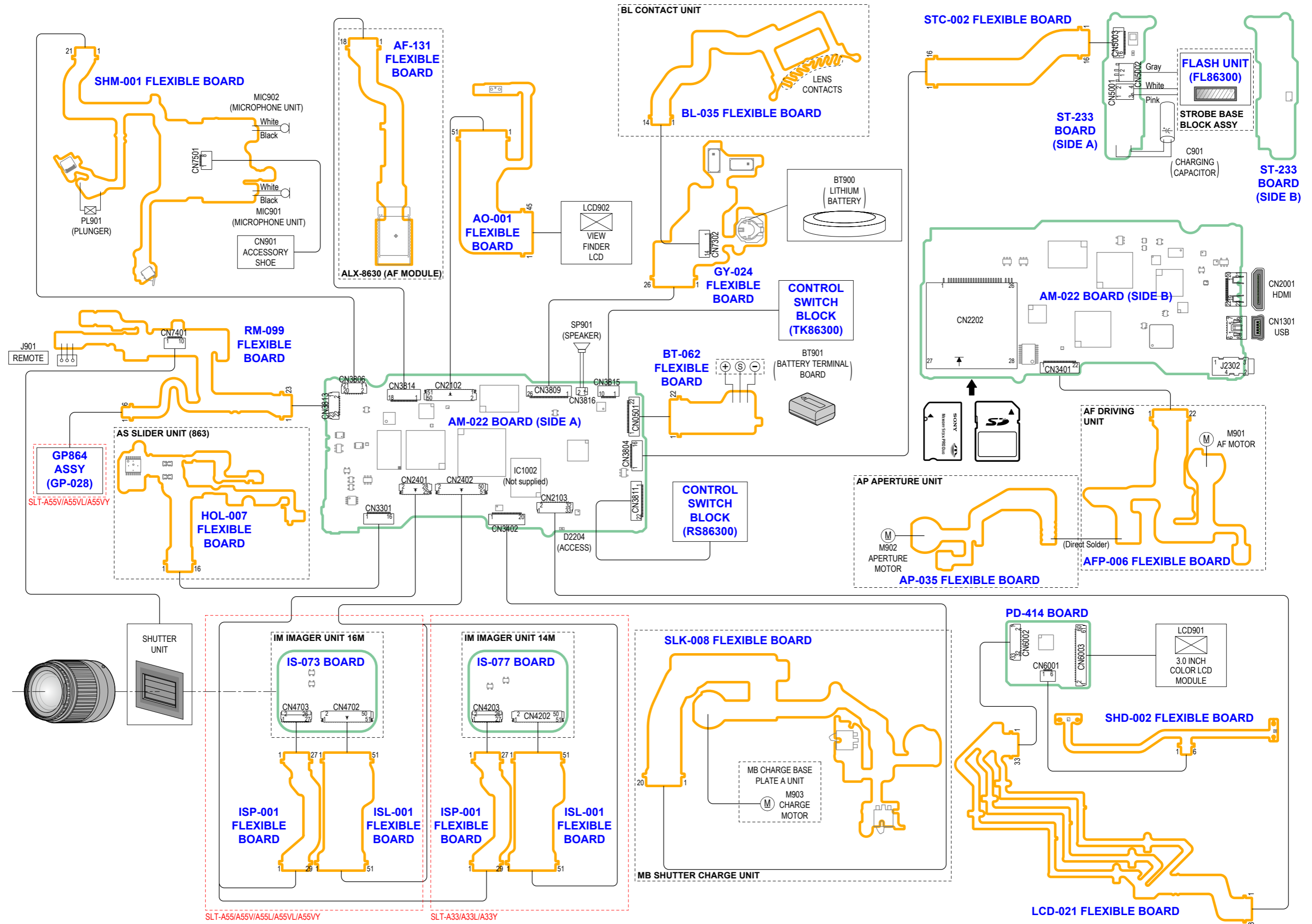
4-7. POWER BLOCK DIAGRAM (4/5) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



4-8. POWER BLOCK DIAGRAM (5/5) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



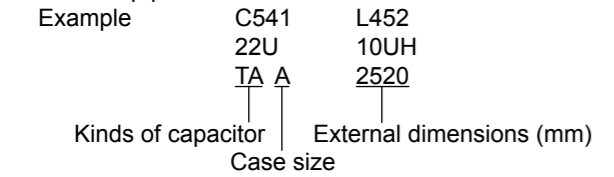
5. FRAME SCHEMATIC DIAGRAM



THIS NOTE IS COMMON FOR SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS
(In addition to this, the necessary note is printed in each block)

For Schematic Diagrams

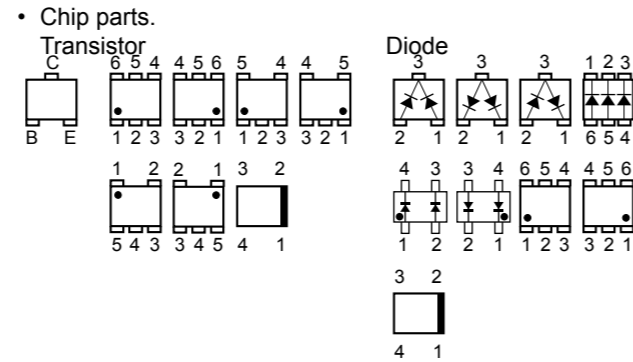
- All capacitors are in μF unless otherwise noted. $\text{pF} : \mu\text{F}$. 50 V or less are not indicated except for electrolytics and tantalums.
- Chip resistors are 1/10 W unless otherwise noted. $\text{k}\Omega=1000 \Omega$, $\text{M}\Omega=1000 \text{k}\Omega$.
- Caution when replacing chip parts. New parts must be attached after removal of chip. Be careful not to heat the minus side of tantalum capacitor, Because it is damaged by the heat.
- Some chip part will be indicated as follows.



- Constants of resistors, capacitors, ICs and etc with XX indicate that they are not used. In such cases, the unused circuits may be indicated.
- Parts with ★ differ according to the model/destination. Refer to the mount table for each function.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Signal name
XEDIT → $\overline{\text{EDIT}}$ PB/XREC → $\overline{\text{PB/REC}}$
- : non flammable resistor
- : fusible resistor
- : panel designation
- : B+ Line
- : B- Line
- : IN/OUT direction of (+, -) B LINE.
- : adjustment for repair.

For Printed Wiring Boards

- : Uses unleaded solder.
- : Circuit board
- : Flexible board
- : Pattern from the side which enables seeing.
- : pattern of the rear side
(The other layers' patterns are not indicated)
- Through hole is omitted.
- There are a few cases that the part printed on diagram isn't mounted in this model.
- : panel designation



Precautions for Replacement of Imager

- If the imager has been replaced, carry out all the adjustments for the camera section.
- As the imager may be damaged by static electricity from its structure, handle it carefully like for the MOS IC. In addition, ensure that the receiver is not covered with dusts nor exposed to strong light.

When indicating parts by reference number, please include the board name.

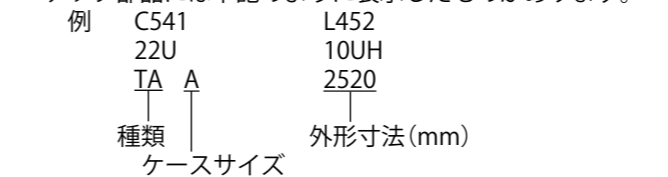
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

回路図, プリント図共通ノート
(他に必要なノートは各セクションに記載しています)

回路図ノート

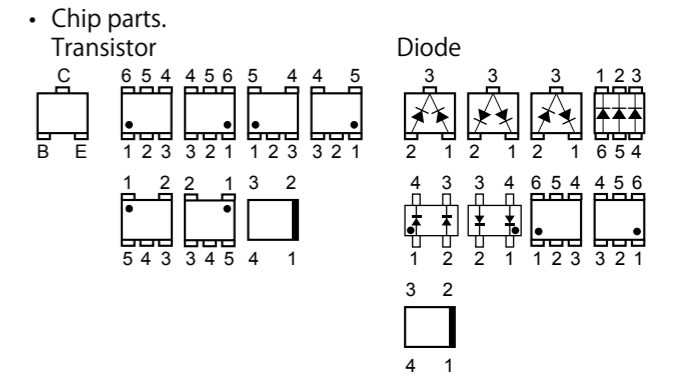
- ケミコン, タンタルを除くコンデンサで, 耐圧50V以下のものはその耐圧を省略。単位はすべて μF (pはpF)。
- チップ抵抗で指示のないものは, 1/10W以下。
 $\text{k}\Omega=1000\Omega$, $\text{M}\Omega=1000\text{k}\Omega$
- チップ部品交換時の注意
取り外した部品は再使用せず, 未使用の部品をご使用ください。
タンタルコンデンサのマイナス側は熱に弱いため注意してください。
- チップ部品には下記のように表示したものがあります。



- 抵抗, コンデンサ, ICなど定数にXXがあるものは, 使用していない事を示しています。このため, 使用していない回路が記載されている事があります。
- ★印のある部品は, 機種などにより異なりますので機能別マウント一覧表を参照してください。
- 可変抵抗と半固定抵抗で, B特性の表示を省略。
- 信号名表記について, 下記のような場合があります。
XEDIT → $\overline{\text{EDIT}}$ PB/XREC → $\overline{\text{PB/REC}}$
- は不燃性抵抗。
- はヒューズ抵抗。
- はパネル表示名称。
- はB+ライン。
- はB-ライン。
- はBライン(+, -)の入出力方向を示す。
- は調整名称。

プリント図ノート

- : 無鉛半田を使用しています。
- : 基板
- : フレキシブル配線板
見ている面側のパターン。
- : 裏側のパターン
(他のパターンについては表示されていません)
- スルーホールは省略。
- プリント図には, 本機で使用していない部品が記載されている場合があります。
- はパネル表示名称。



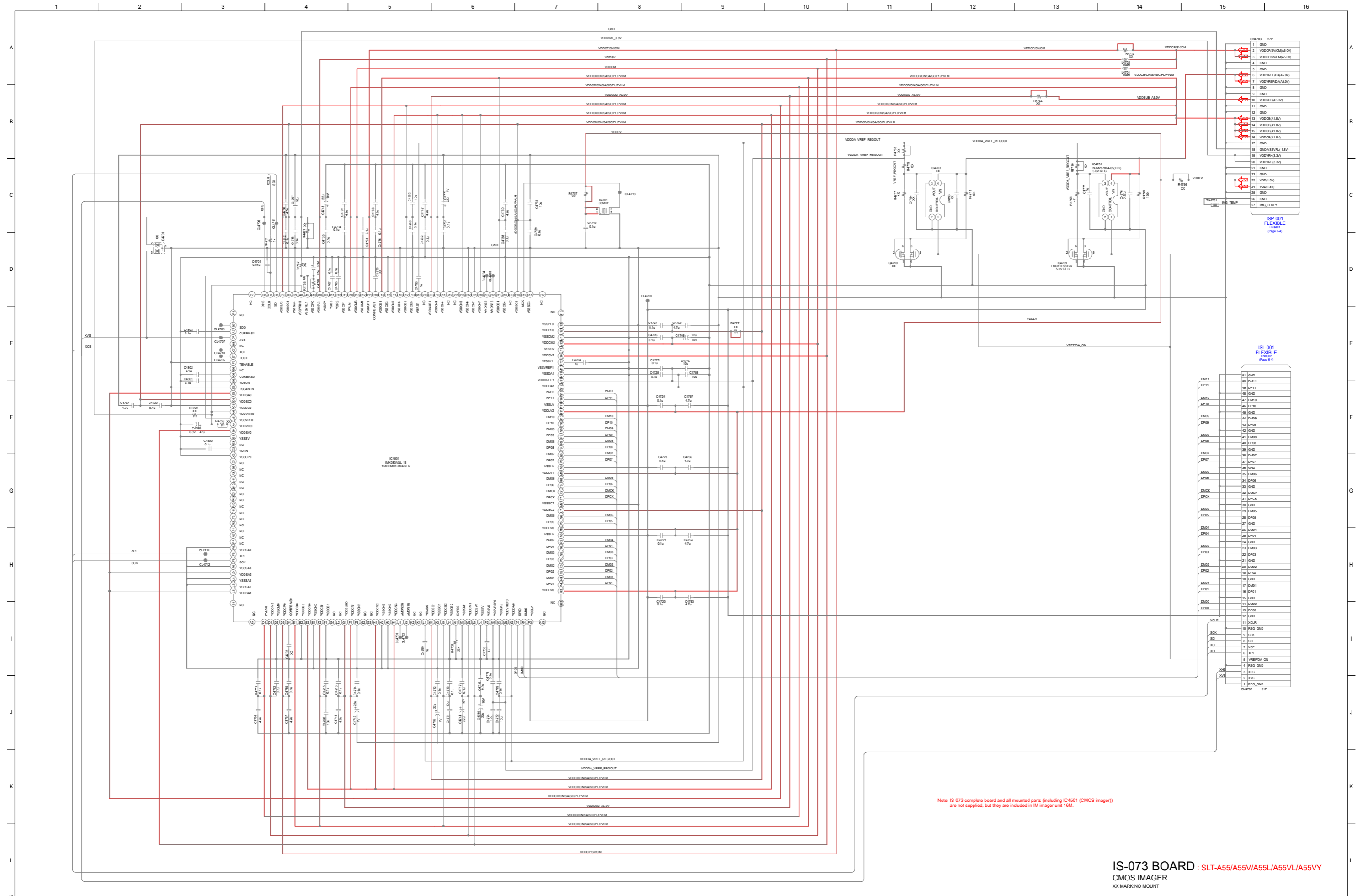
イメージ交換時の注意

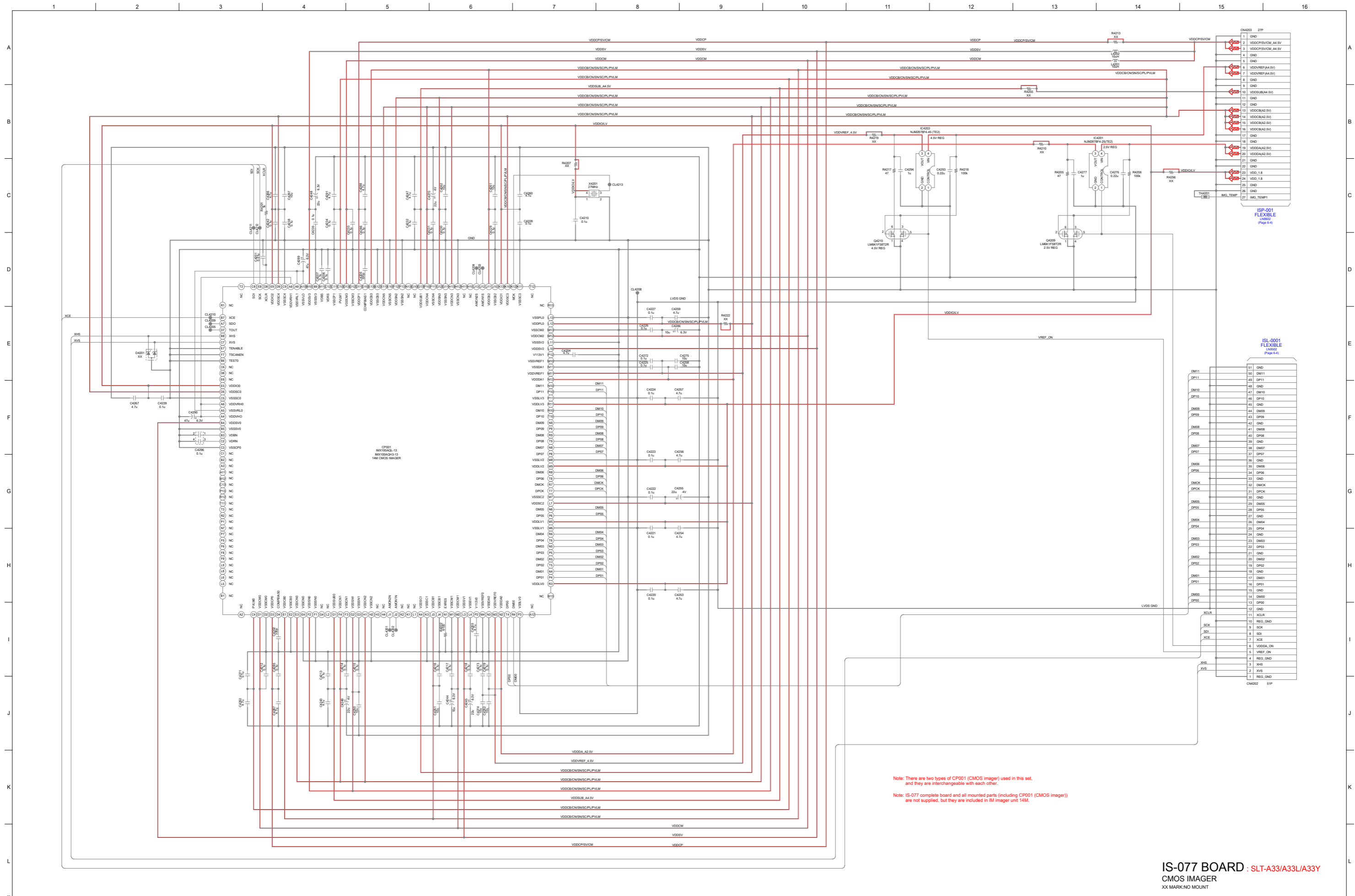
- イメージを交換した場合は, カメラ部の全調整を行ってください。
- イメージは構造上, 静電気により破壊される恐れがあるため, MOS ICと同様に注意して取り扱ってください。また, 受光部にはゴミの付着, および強い光がはいることのないように注意してください。

—お願い—
図面番号で部品を指定するときは基板名又はブロックを併せて指定してください。

Δ 印の部品, または Δ 印付の点線で囲まれた部品は, 安全性を維持するために, 重要な部品です。従って交換時は, 必ず指定の部品を使用してください。

6-1. SCHEMATIC DIAGRAMS





ISP-001 FLEXIBLE LMS22 Page 4-4

1	GNDA2
2	GNDA2
3	GNDA2
4	GNDA2
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49	GNDA2
50	GNDA2
51	GNDA2

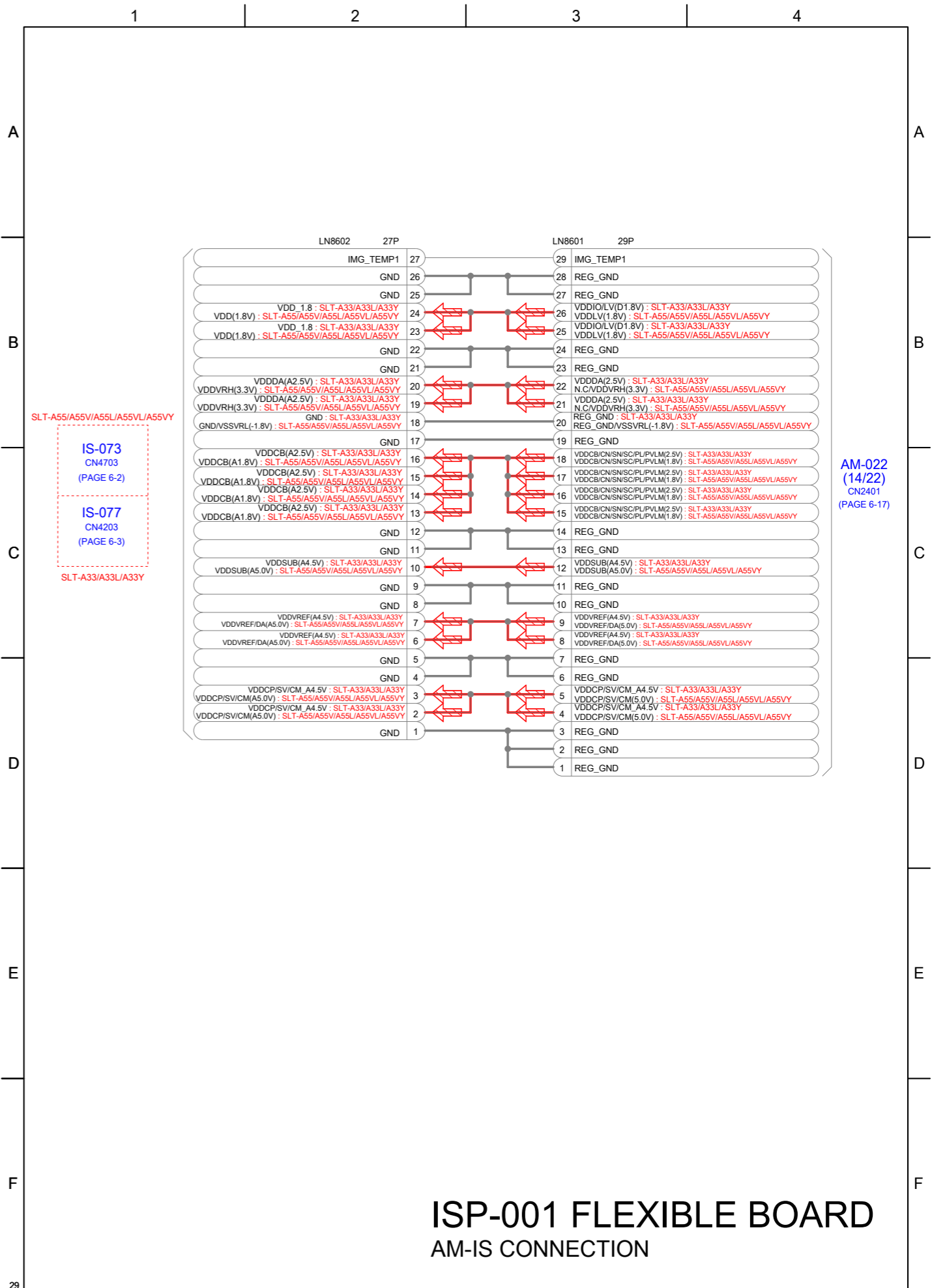
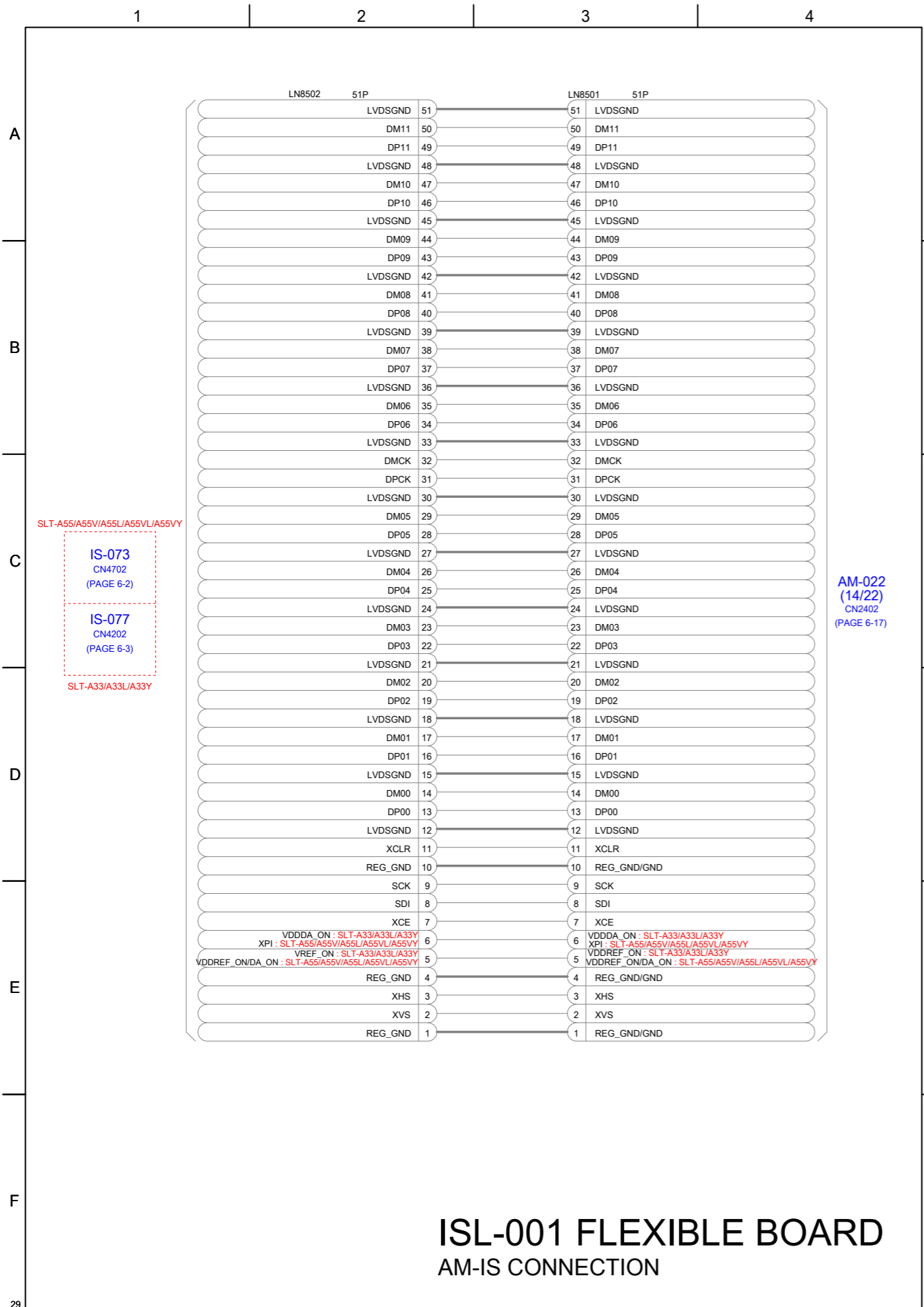
ISL-001 FLEXIBLE LMS22 Page 4-4

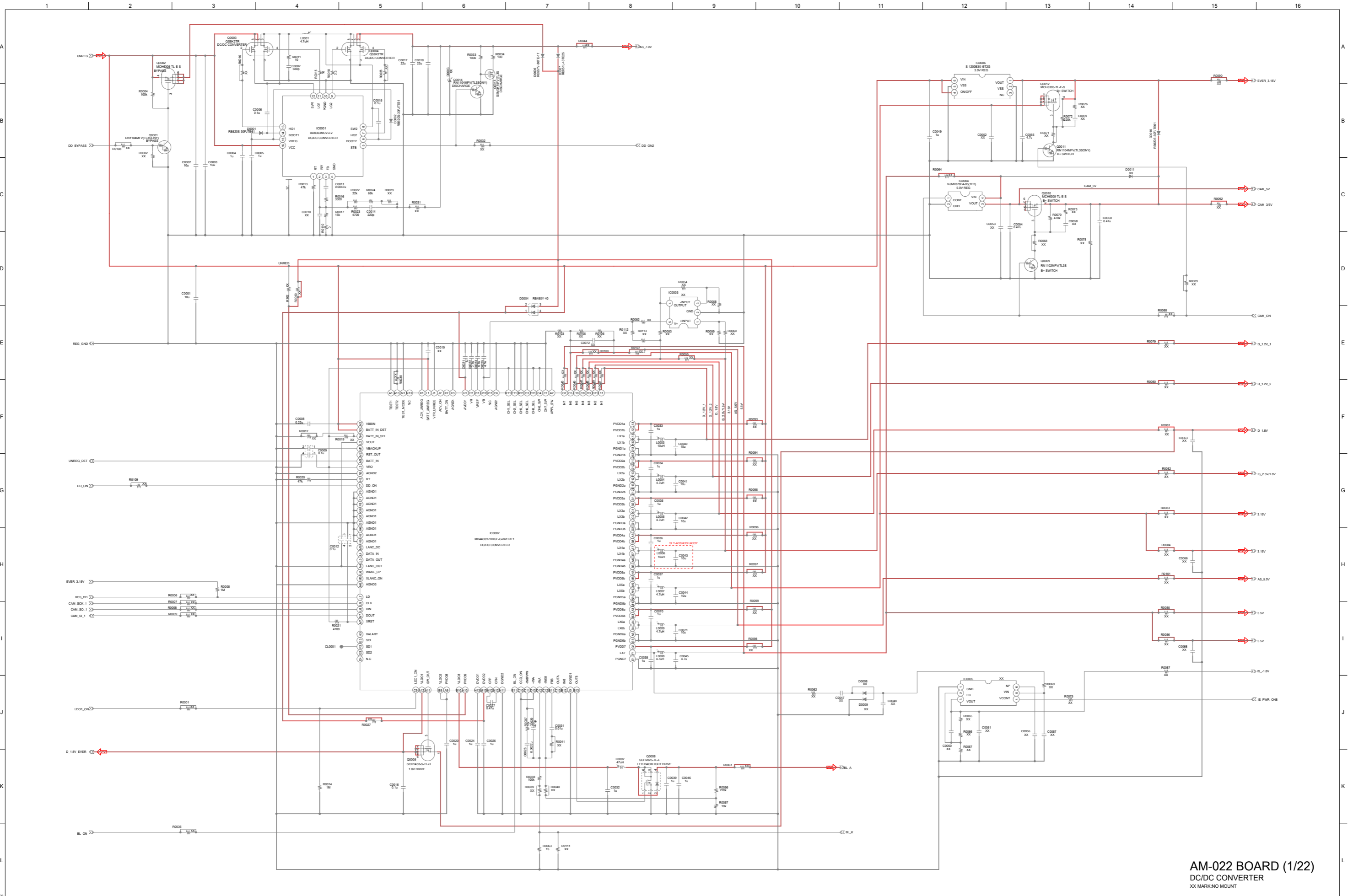
DM11	DM11
DM10	DM10
DM09	DM09
DM08	DM08
DM07	DM07
DM06	DM06
DM05	DM05
DM04	DM04
DM03	DM03
DM02	DM02
DM01	DM01
DP11	DP11
DP10	DP10
DP09	DP09
DP08	DP08
DP07	DP07
DP06	DP06
DP05	DP05
DP04	DP04
DP03	DP03
DP02	DP02
DP01	DP01
DP00	DP00
DM11	DM11
DM10	DM10
DM09	DM09
DM08	DM08
DM07	DM07
DM06	DM06
DM05	DM05
DM04	DM04
DM03	DM03
DM02	DM02
DM01	DM01
DP11	DP11
DP10	DP10
DP09	DP09
DP08	DP08
DP07	DP07
DP06	DP06
DP05	DP05
DP04	DP04
DP03	DP03
DP02	DP02
DP01	DP01
DP00	DP00

Note: There are two types of CP001 (CMOS imager) used in this set, and they are interchangeable with each other.

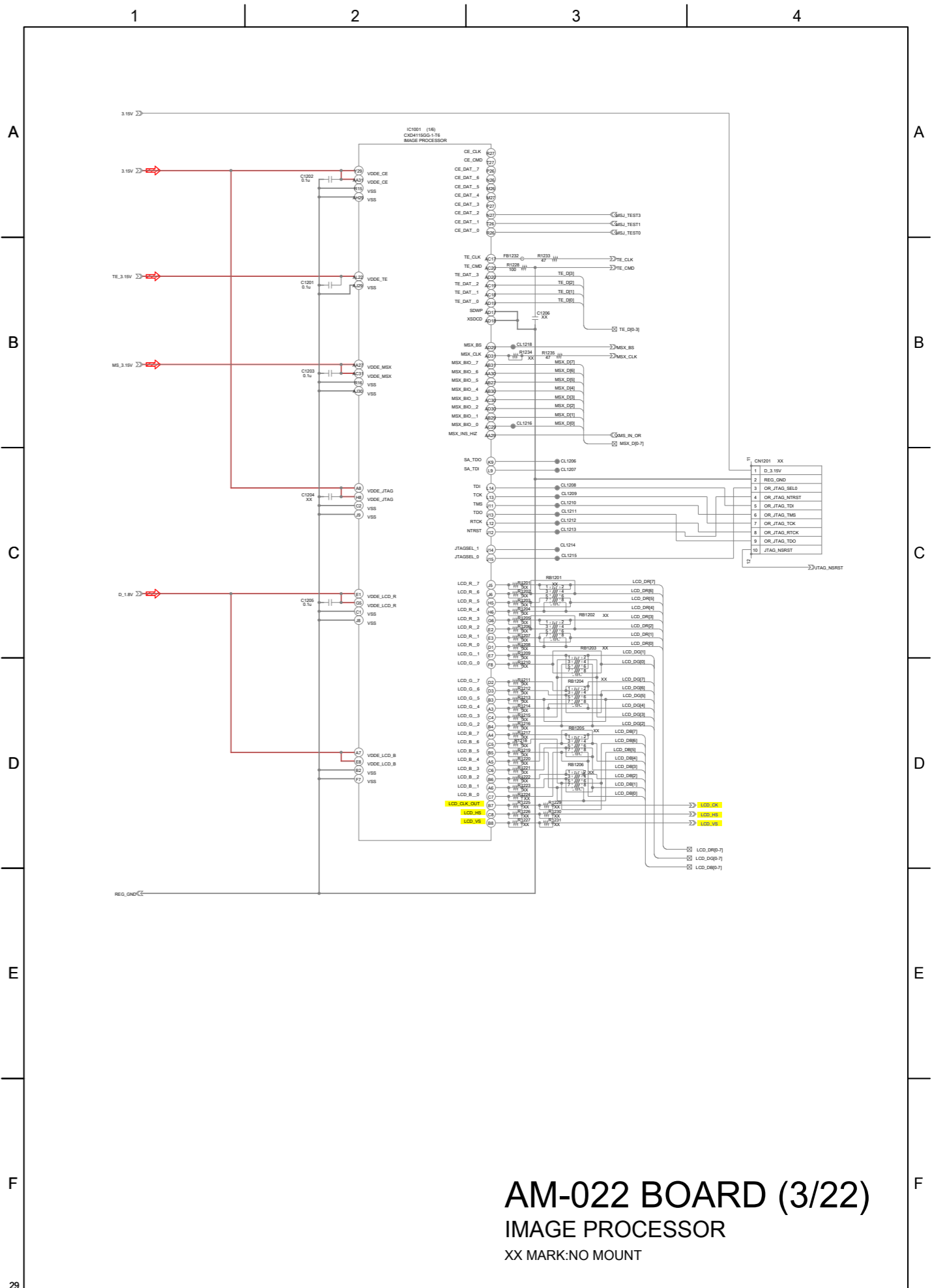
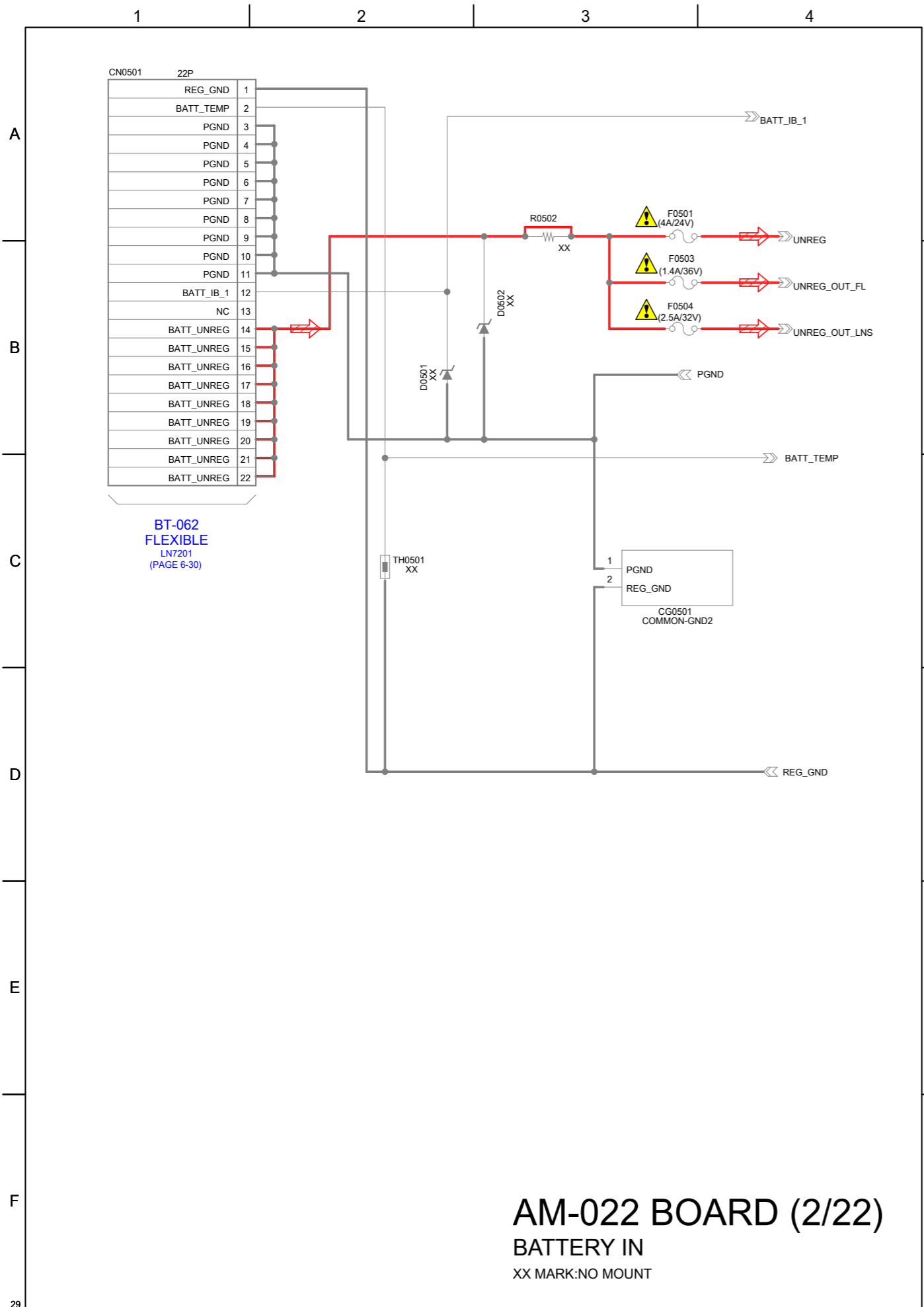
Note: IS-077 complete board and all mounted parts (including CP001 (CMOS imager)) are not supplied, but they are included in IM imager unit 14M.

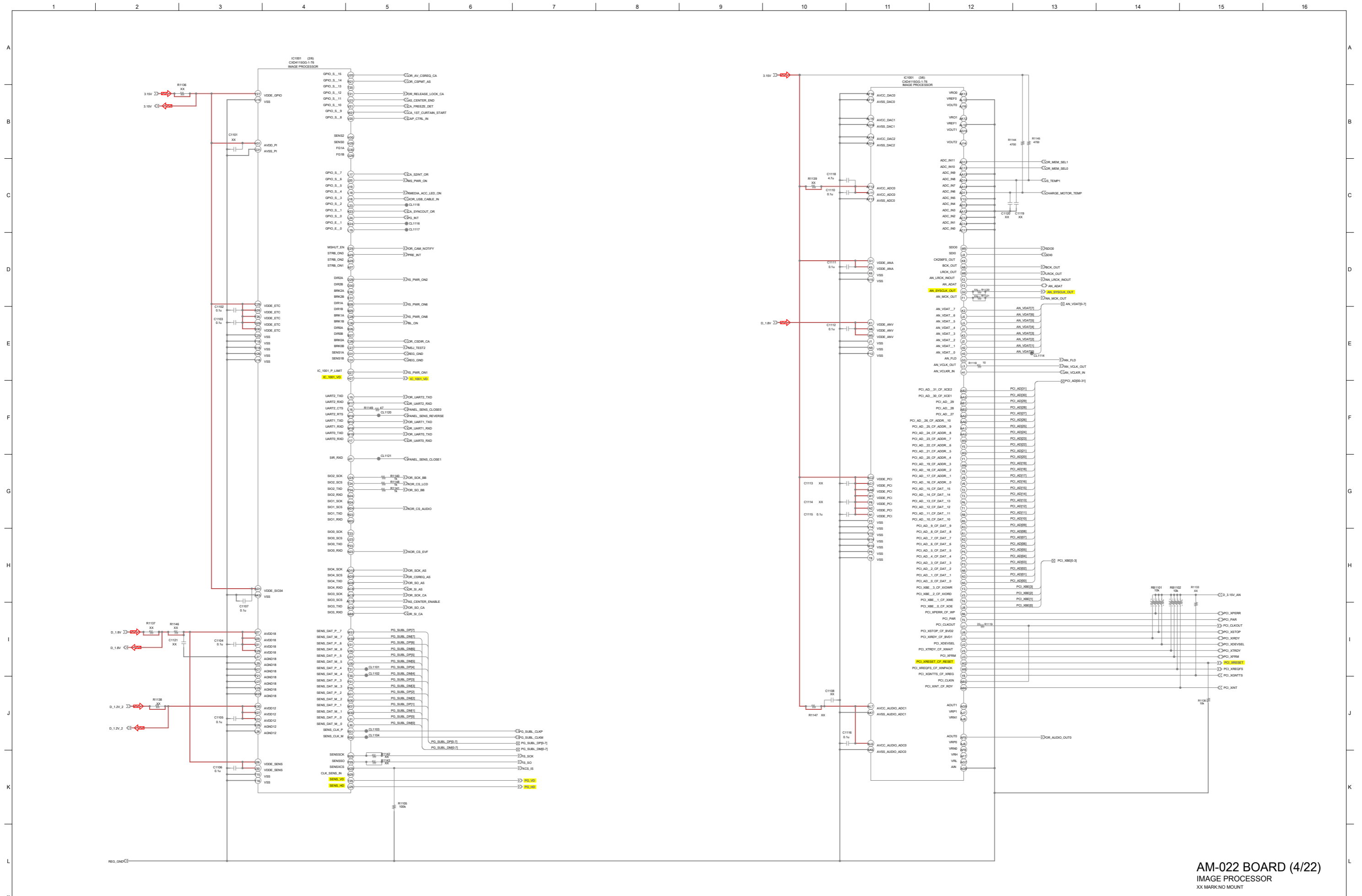
IS-077 BOARD : SLT-A33/A33L/A33Y CMOS IMAGER XX MARK:NO MOUNT



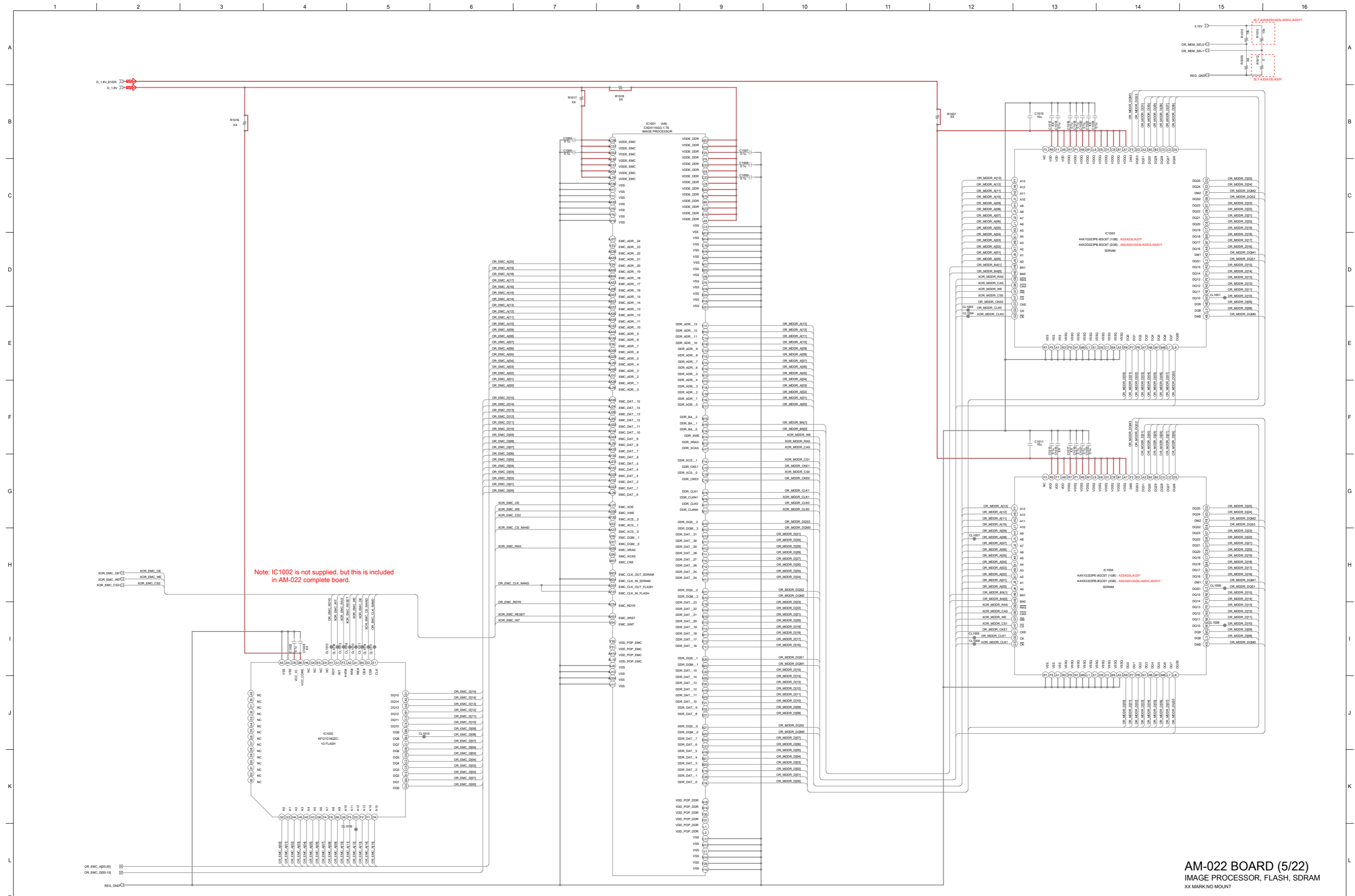


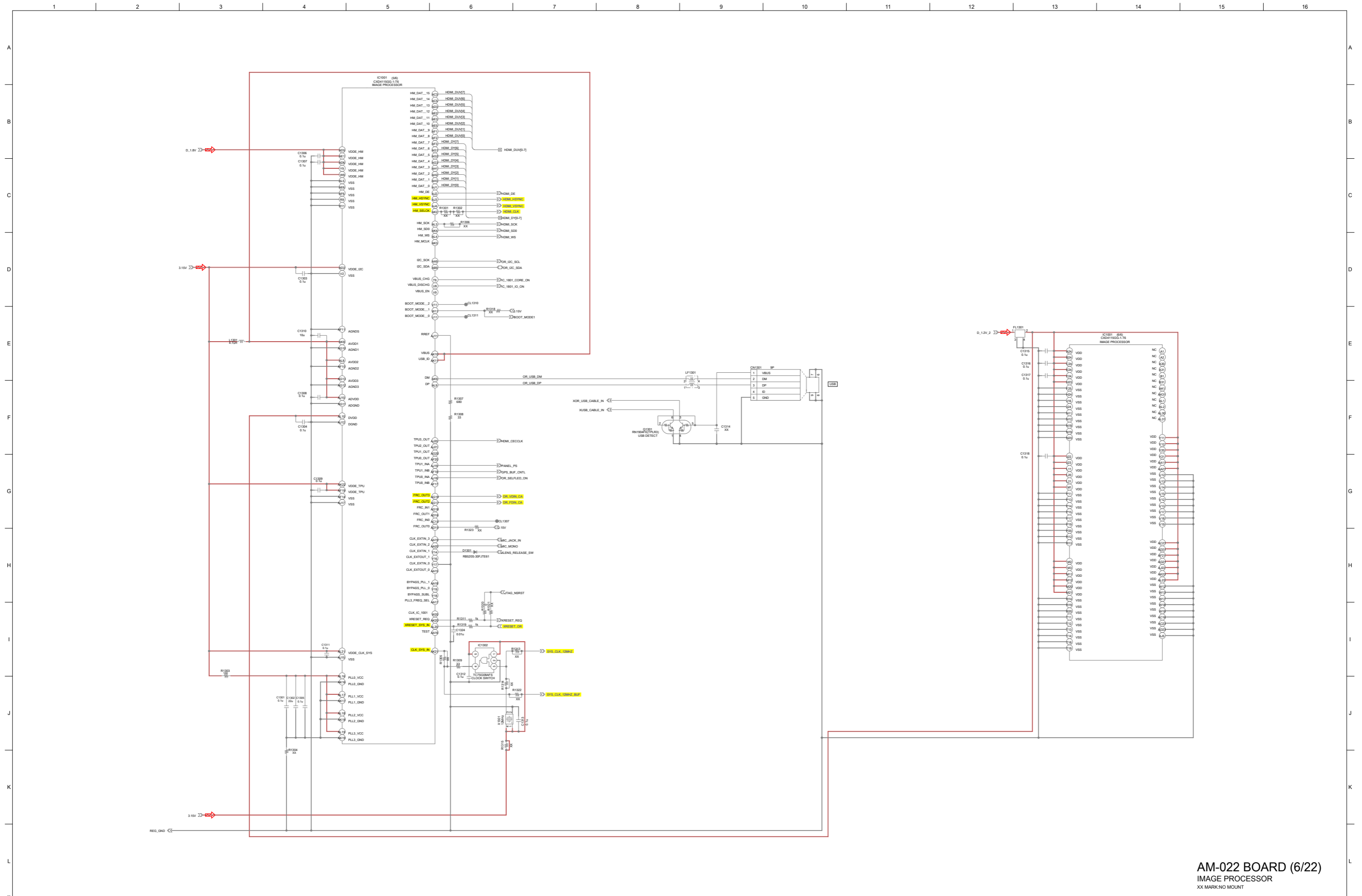
AM-022 BOARD (1/22)
DC/DC CONVERTER
XX MARK NO MOUNT



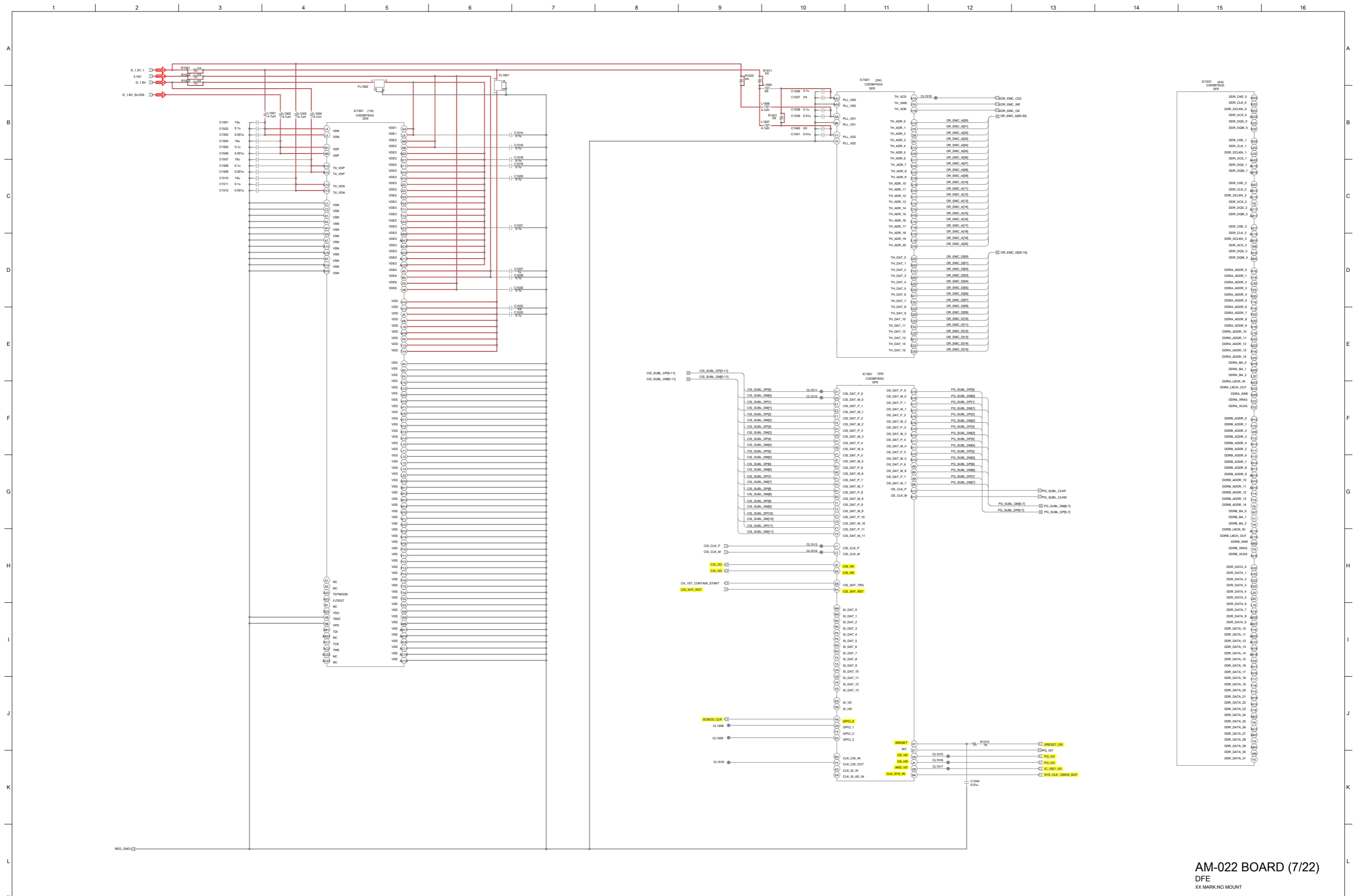


AM-022 BOARD (4/22)
IMAGE PROCESSOR
XX MARKNO MOUNT

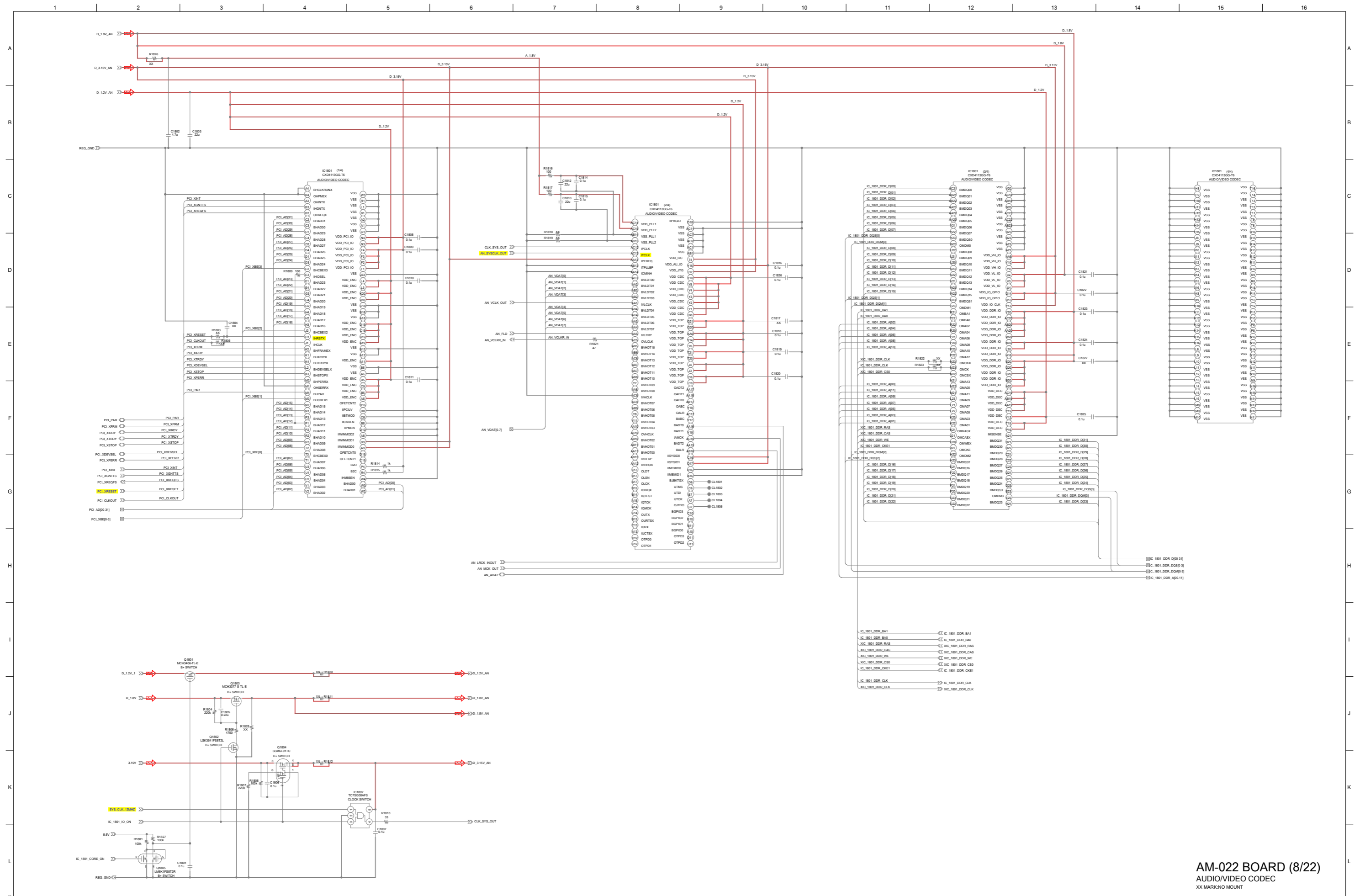




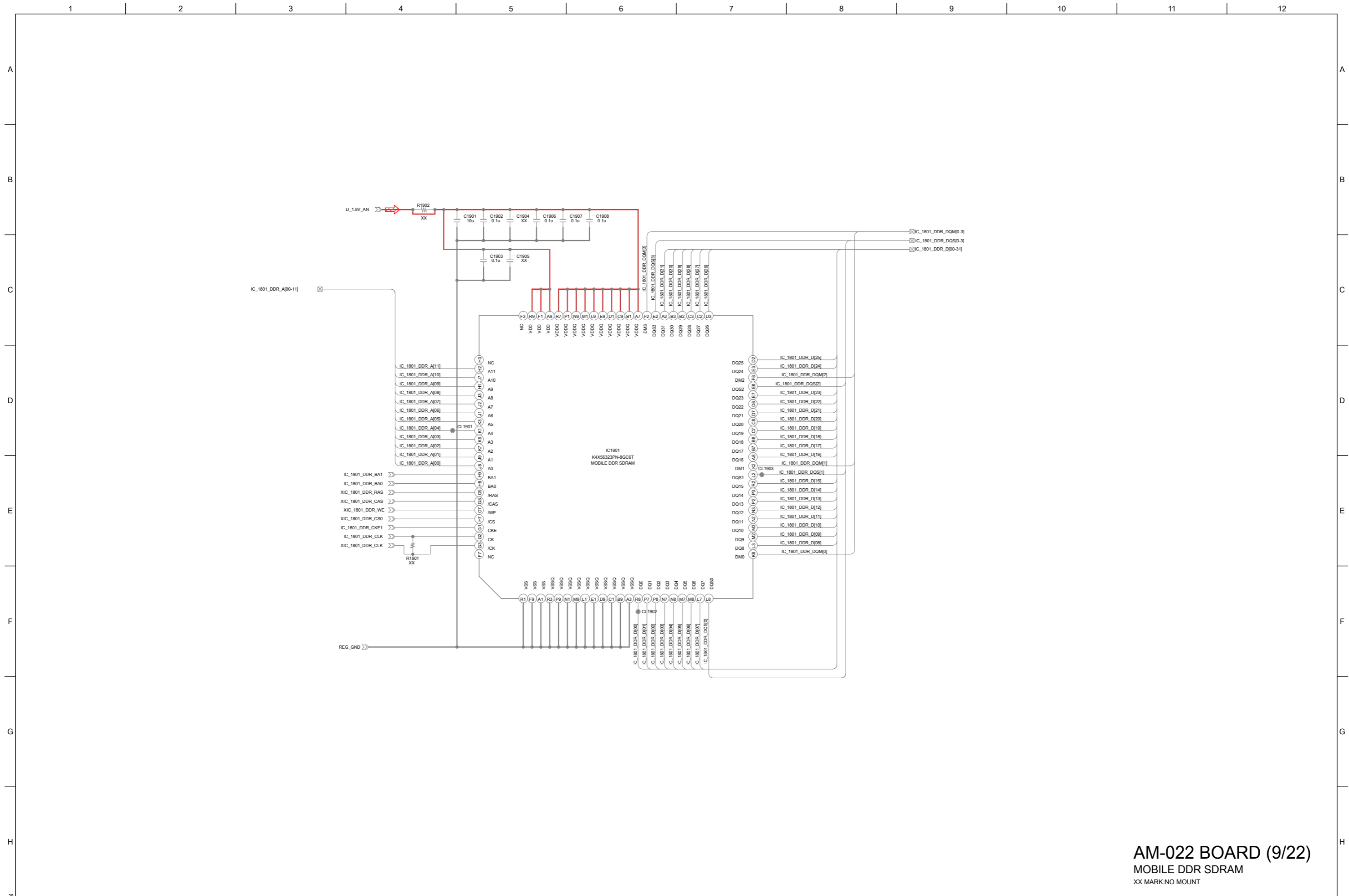
AM-022 BOARD (6/22)
IMAGE PROCESSOR
XX MARKNO MOUNT



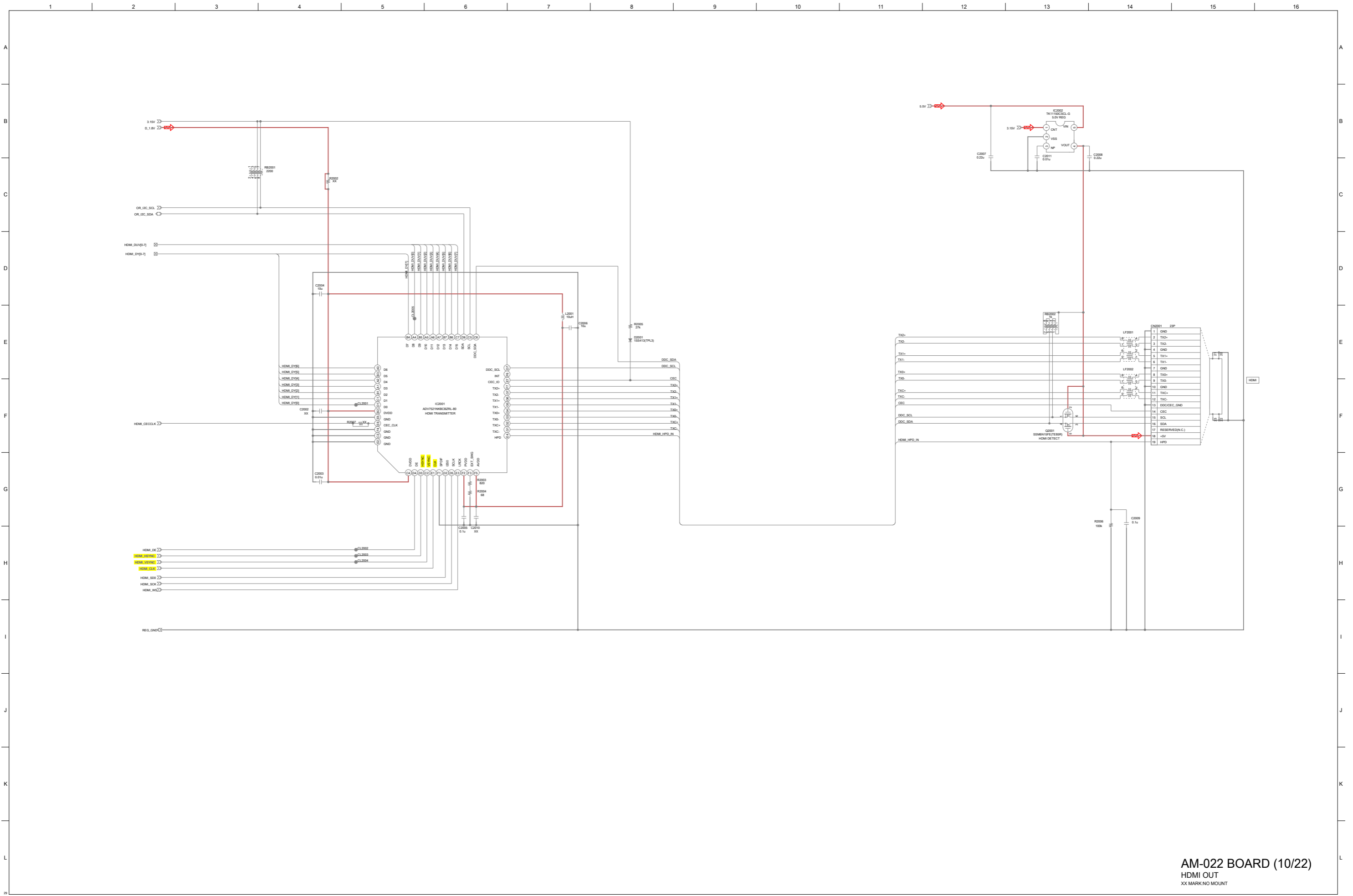
AM-022 BOARD (7/22)
DFE
XX MARKNO MOUNT



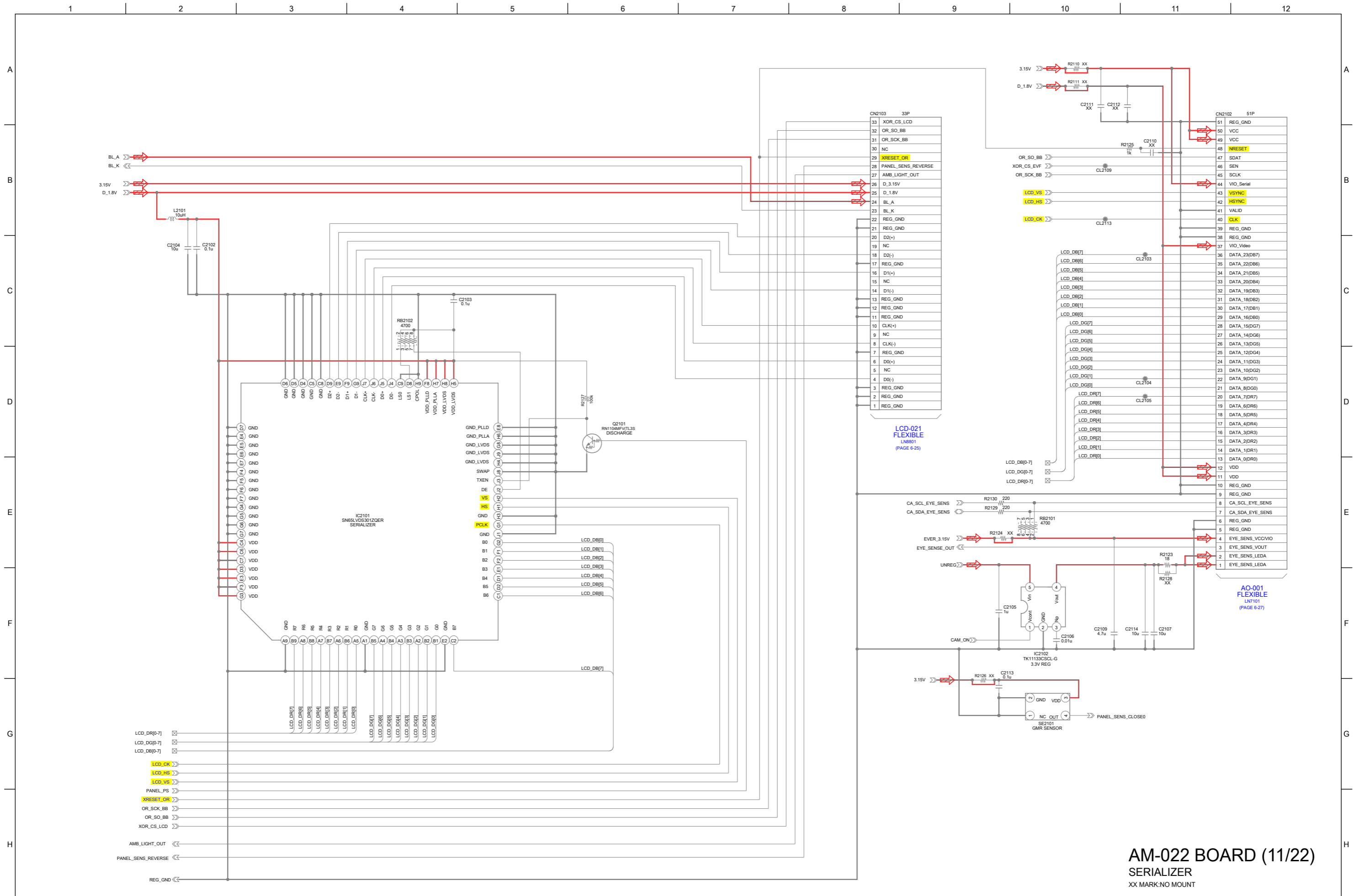
AM-022 BOARD (8/22)
AUDIO/VIDEO CODEC
XX MARK-NOT MOUNT

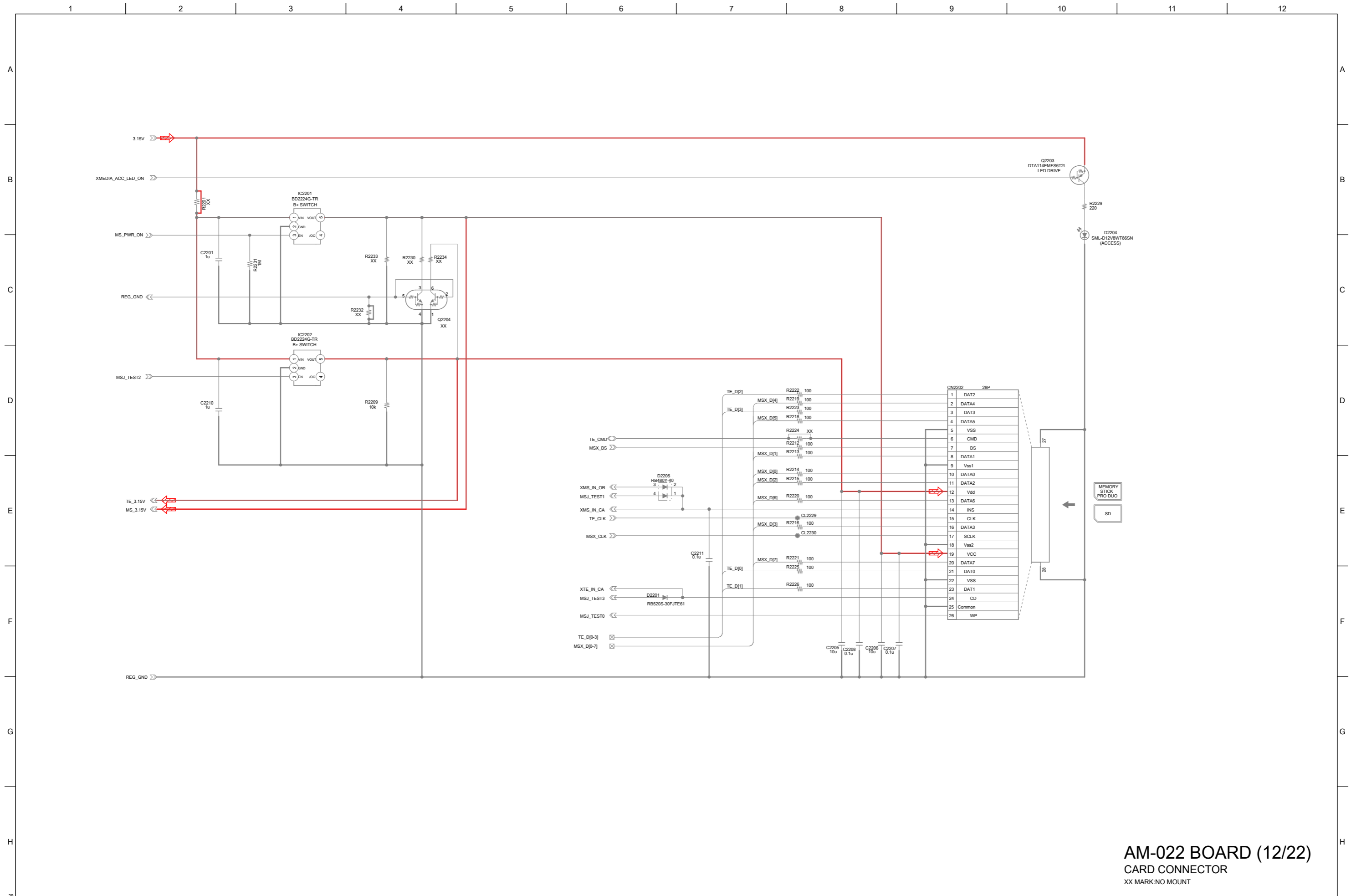


AM-022 BOARD (9/22)
MOBILE DDR SDRAM
XX MARK:NO MOUNT

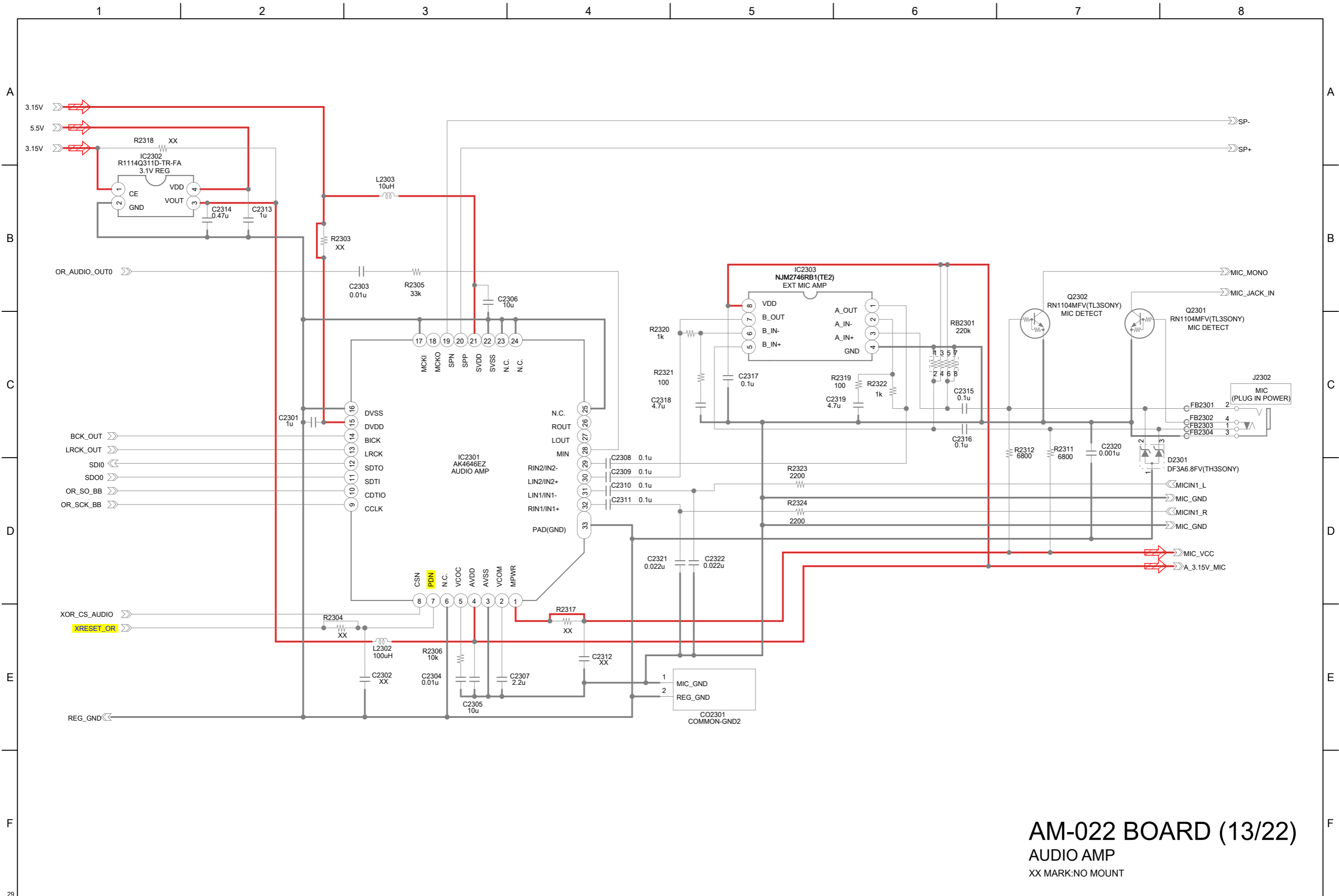


AM-022 BOARD (10/22)
HDMI OUT
XX MARK NO MOUNT

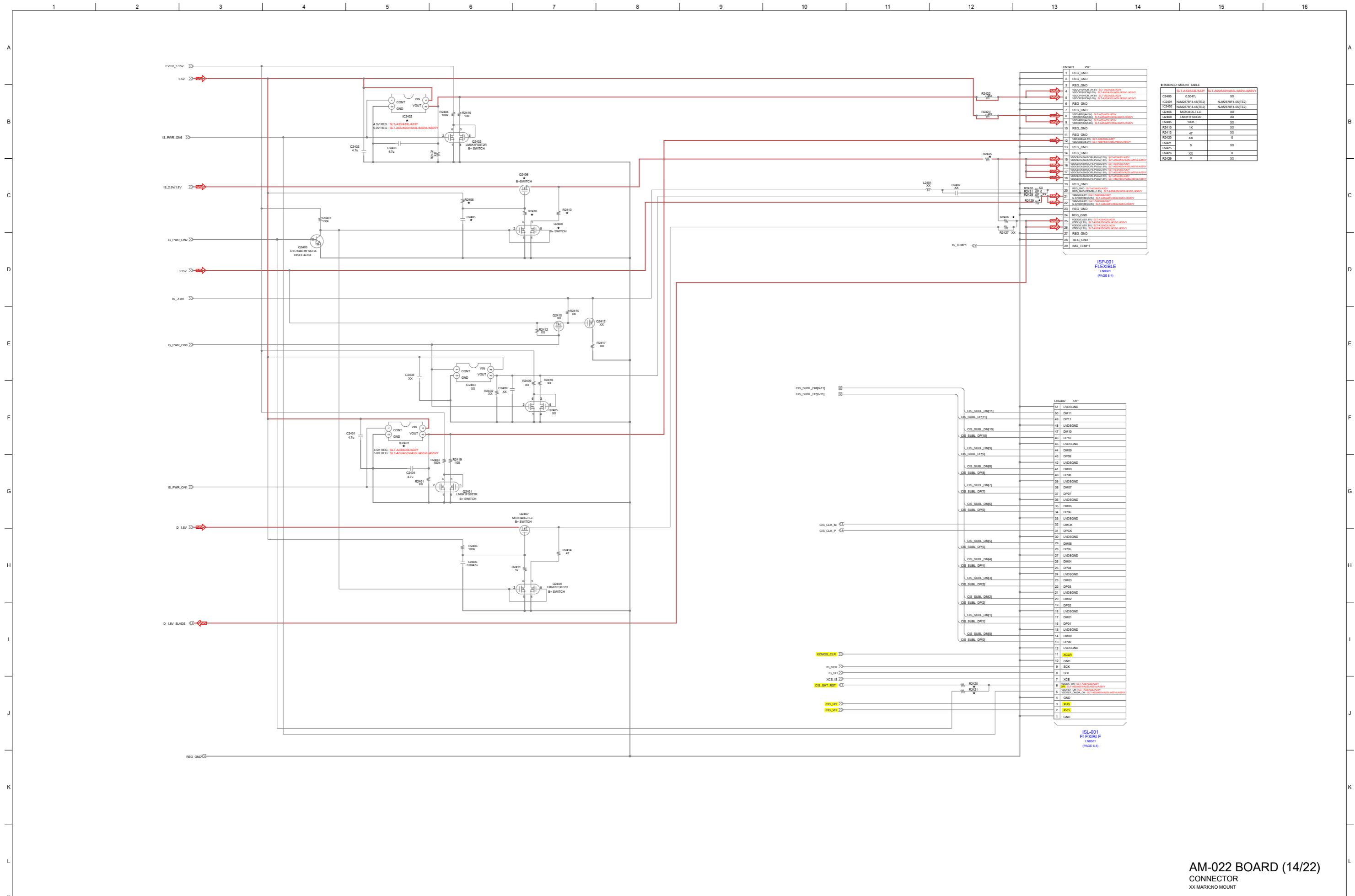




AM-022 BOARD (12/22)
 CARD CONNECTOR
 XX MARK:NO MOUNT



AM-022 BOARD (13/22)
AUDIO AMP
 XX MARK:NO MOUNT



MARKED MOUNT TABLE

COMPONENT	SLT-A33/A33L/A33Y	SLT-A55/A55L/A55V/A55VL/A55VY
C2402	Q2402	XX
IC2401	NAN20P4-05TE2	XX
IC2402	NAN20P4-05TE2	XX
IC2403	NAN20P4-05TE2	XX
Q2405	MICRO-SWITCH	XX
Q2407	LMK1F8T2R	XX
Q2409	LMK1F8T2R	XX
R2401	10K	XX
R2402	1K	XX
R2403	47	XX
R2404	XX	0
R2405	0	XX
R2406	XX	0
R2407	0	XX

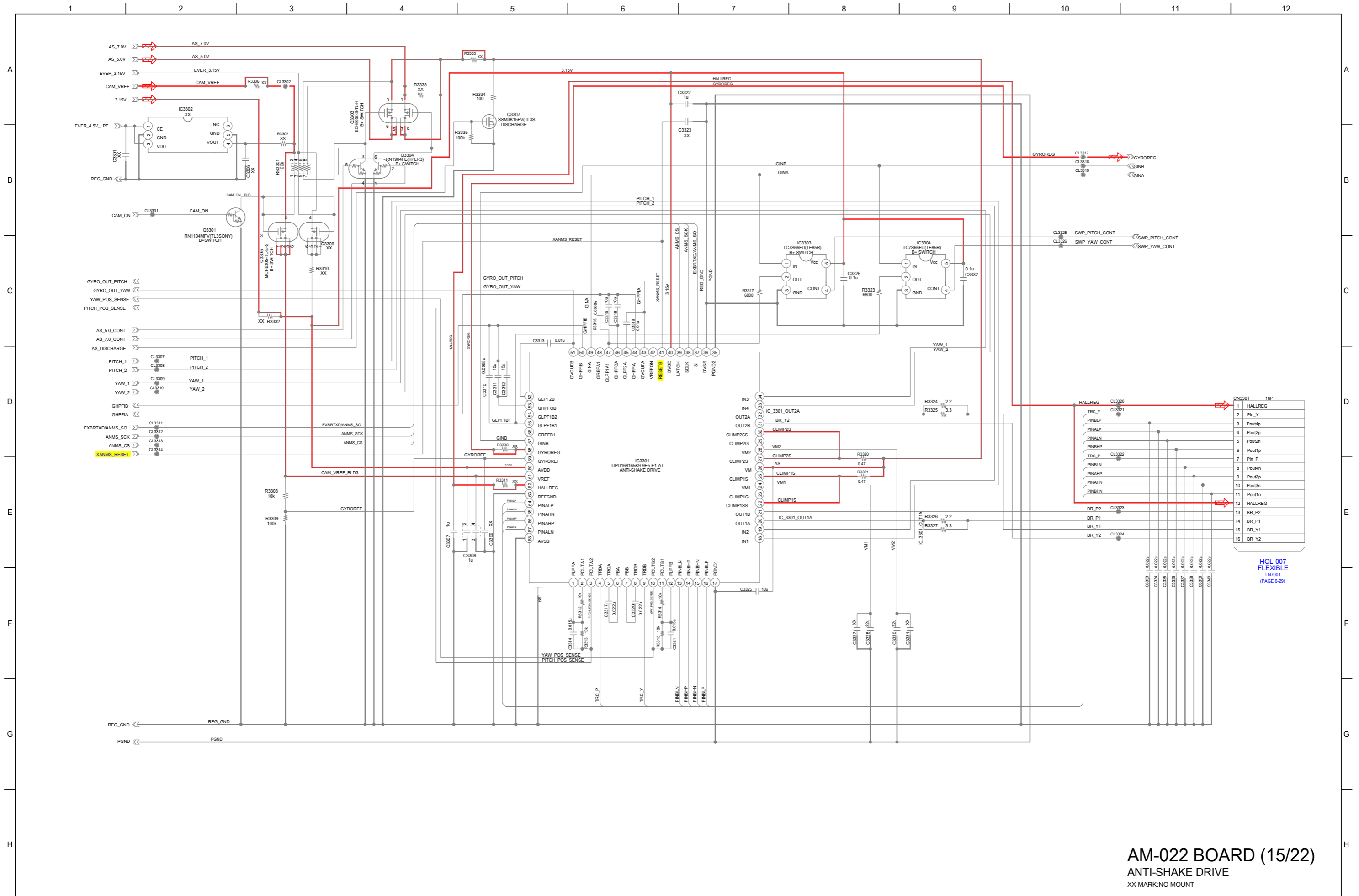
ISP-001 FLEXIBLE LNB01 (PAGE 6-4)

PIN	FUNCTION	MARKING
1	REG_GND	
2	REG_GND	
3	REG_GND	
4	REG_GND	
5	REG_GND	
6	REG_GND	
7	REG_GND	
8	REG_GND	
9	REG_GND	
10	REG_GND	
11	REG_GND	
12	REG_GND	
13	REG_GND	
14	REG_GND	
15	REG_GND	
16	REG_GND	
17	REG_GND	
18	REG_GND	
19	REG_GND	
20	REG_GND	
21	REG_GND	
22	REG_GND	
23	REG_GND	
24	REG_GND	
25	REG_GND	
26	REG_GND	
27	REG_GND	
28	REG_GND	
29	REG_GND	

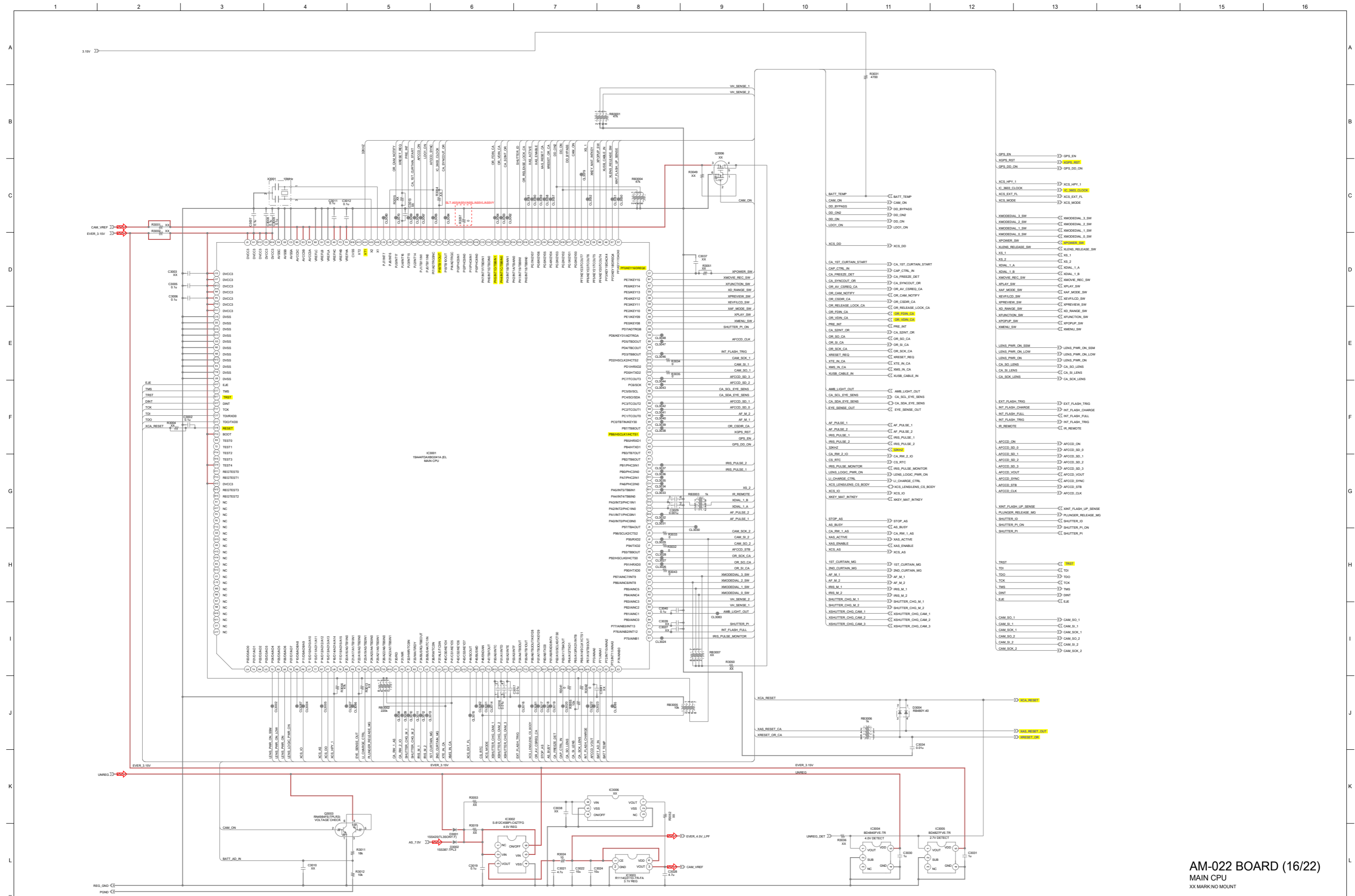
ISL-001 FLEXIBLE LNB01 (PAGE 6-4)

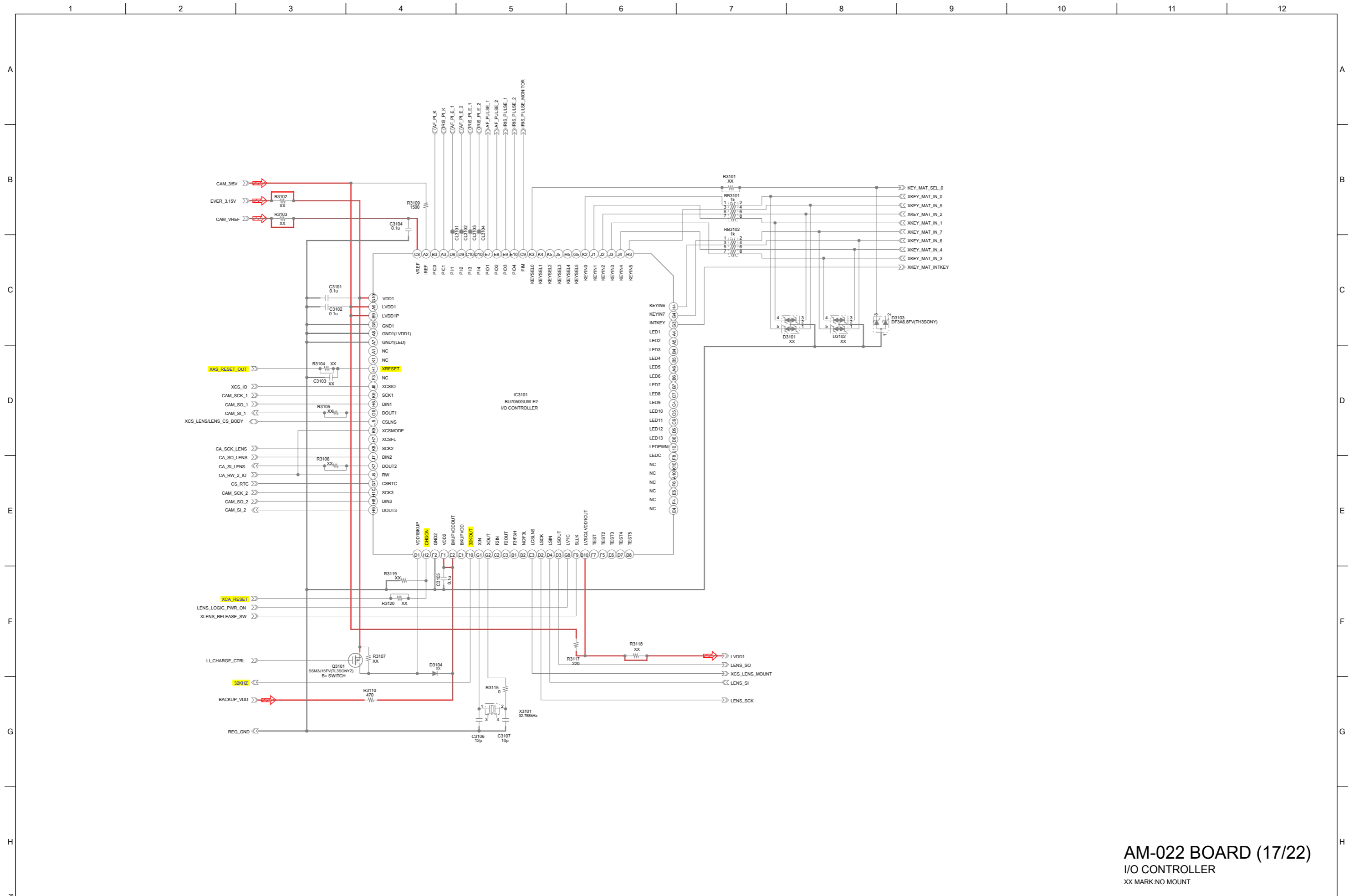
PIN	FUNCTION	MARKING
1	DM0	
2	DM1	
3	DM2	
4	DM3	
5	DM4	
6	DM5	
7	DM6	
8	DM7	
9	DM8	
10	DM9	
11	DM10	
12	DM11	
13	DM12	
14	DM13	
15	DM14	
16	DM15	
17	DM16	
18	DM17	
19	DM18	
20	DM19	
21	DM20	
22	DM21	
23	DM22	
24	DM23	
25	DM24	
26	DM25	
27	DM26	
28	DM27	
29	DM28	
30	DM29	
31	DM30	
32	DM31	
33	DM32	
34	DM33	
35	DM34	
36	DM35	
37	DM36	
38	DM37	
39	DM38	
40	DM39	
41	DM40	
42	DM41	
43	DM42	
44	DM43	
45	DM44	
46	DM45	
47	DM46	
48	DM47	
49	DM48	
50	DM49	
51	DM50	

AM-022 BOARD (14/22) CONNECTOR
XX MARK NO MOUNT

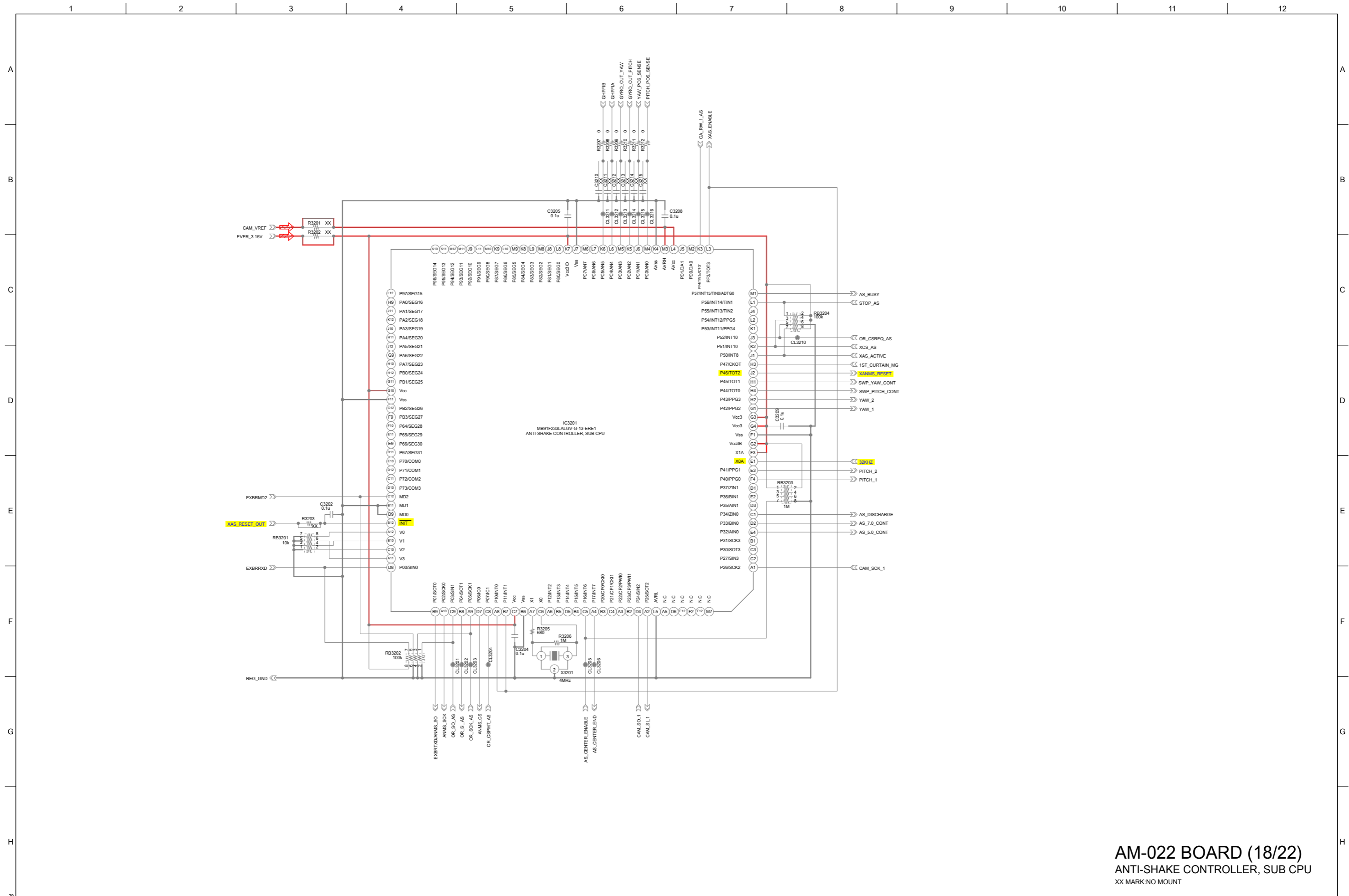


AM-022 BOARD (15/22)
 ANTI-SHAKE DRIVE
 XX MARK:NO MOUNT

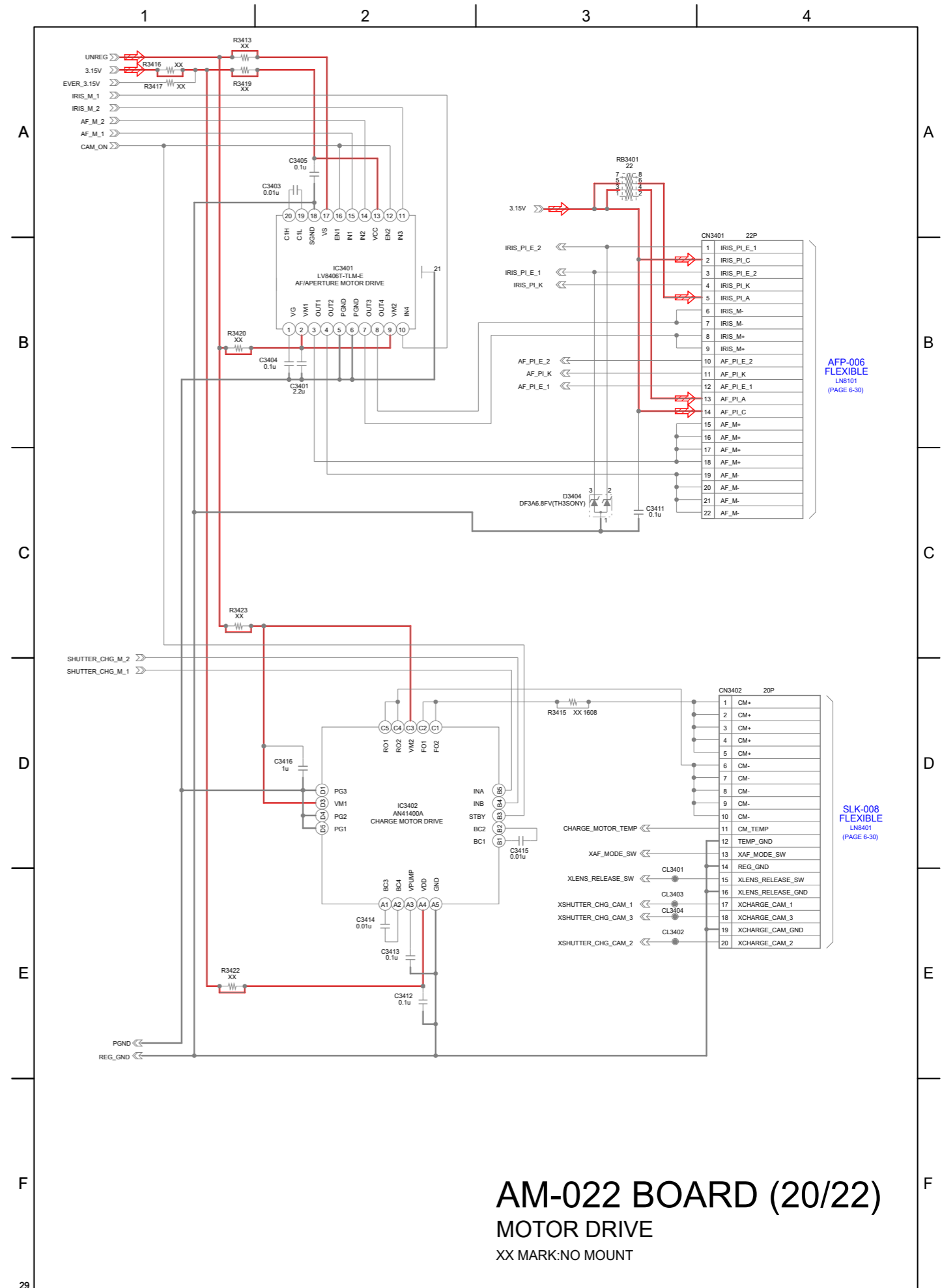
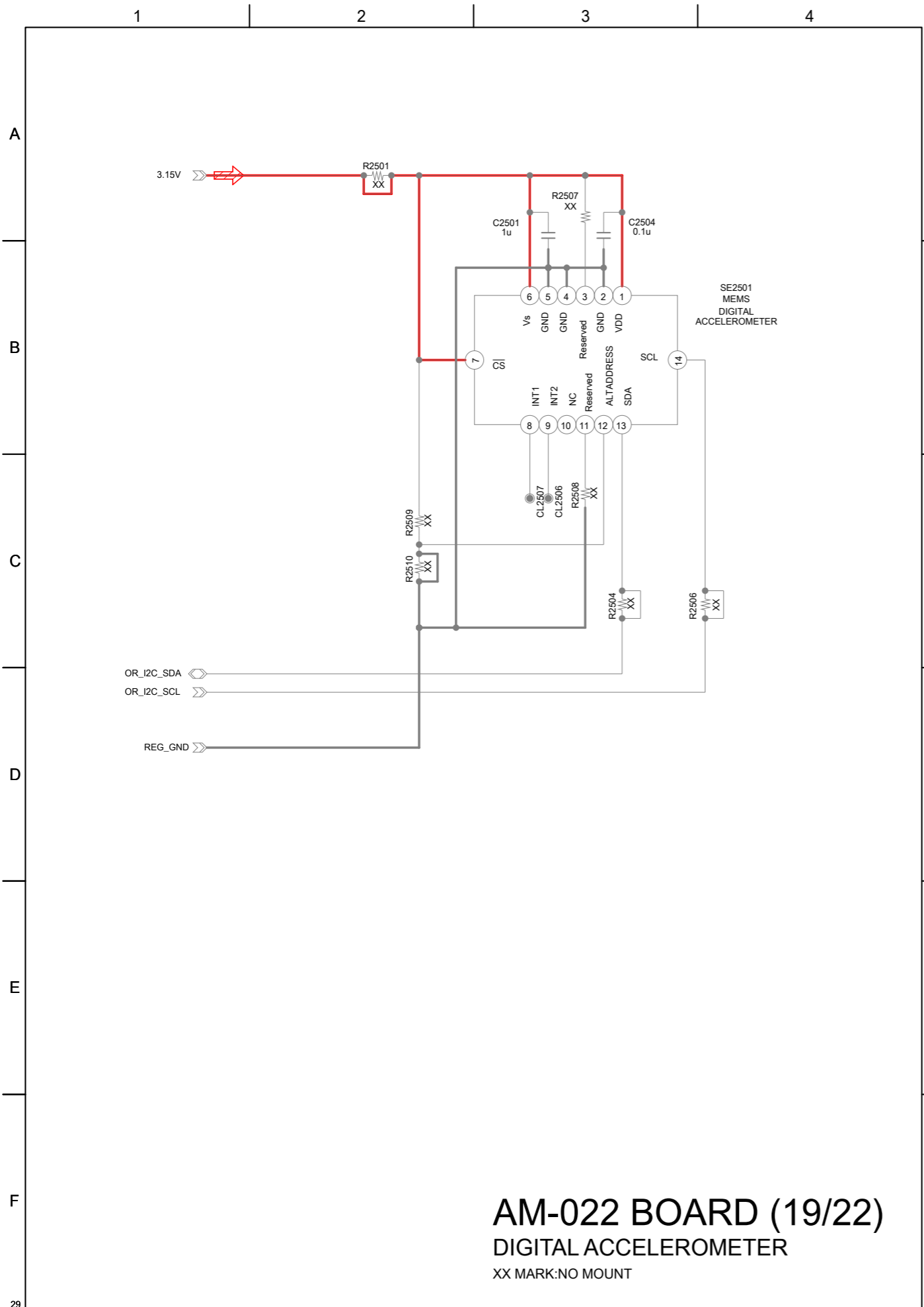


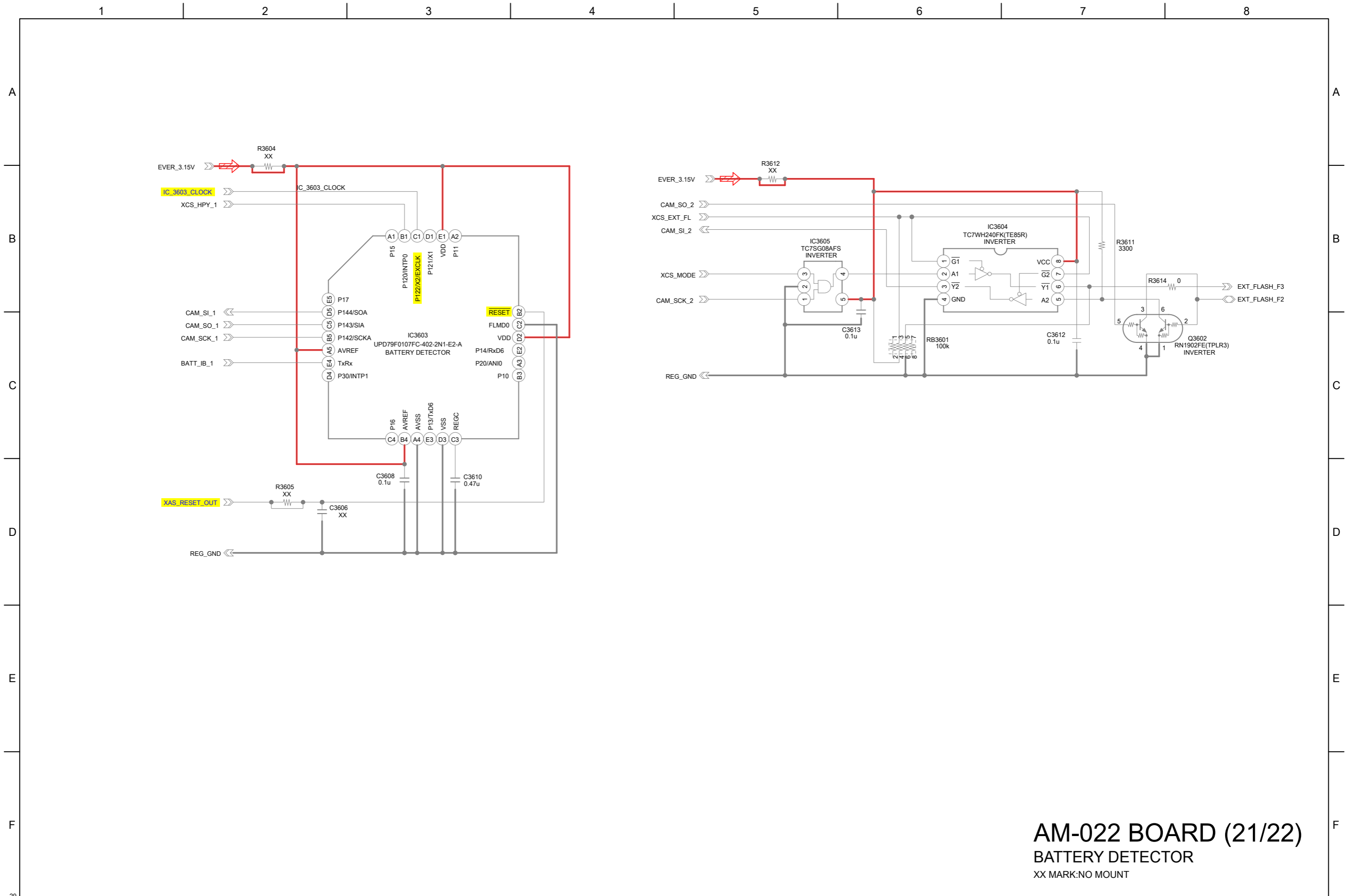


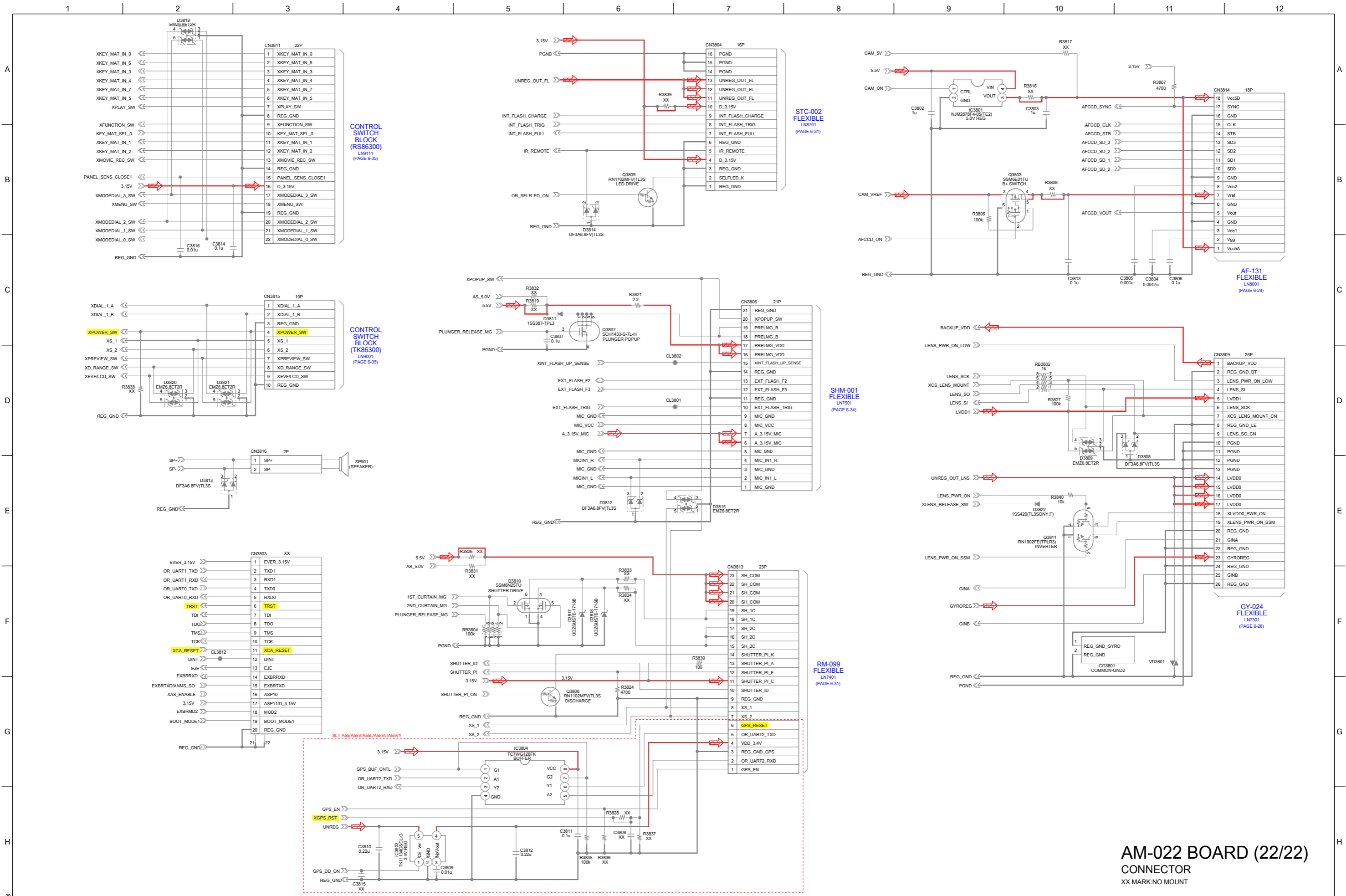
AM-022 BOARD (17/22)
 I/O CONTROLLER
 XX MARK:NO MOUNT



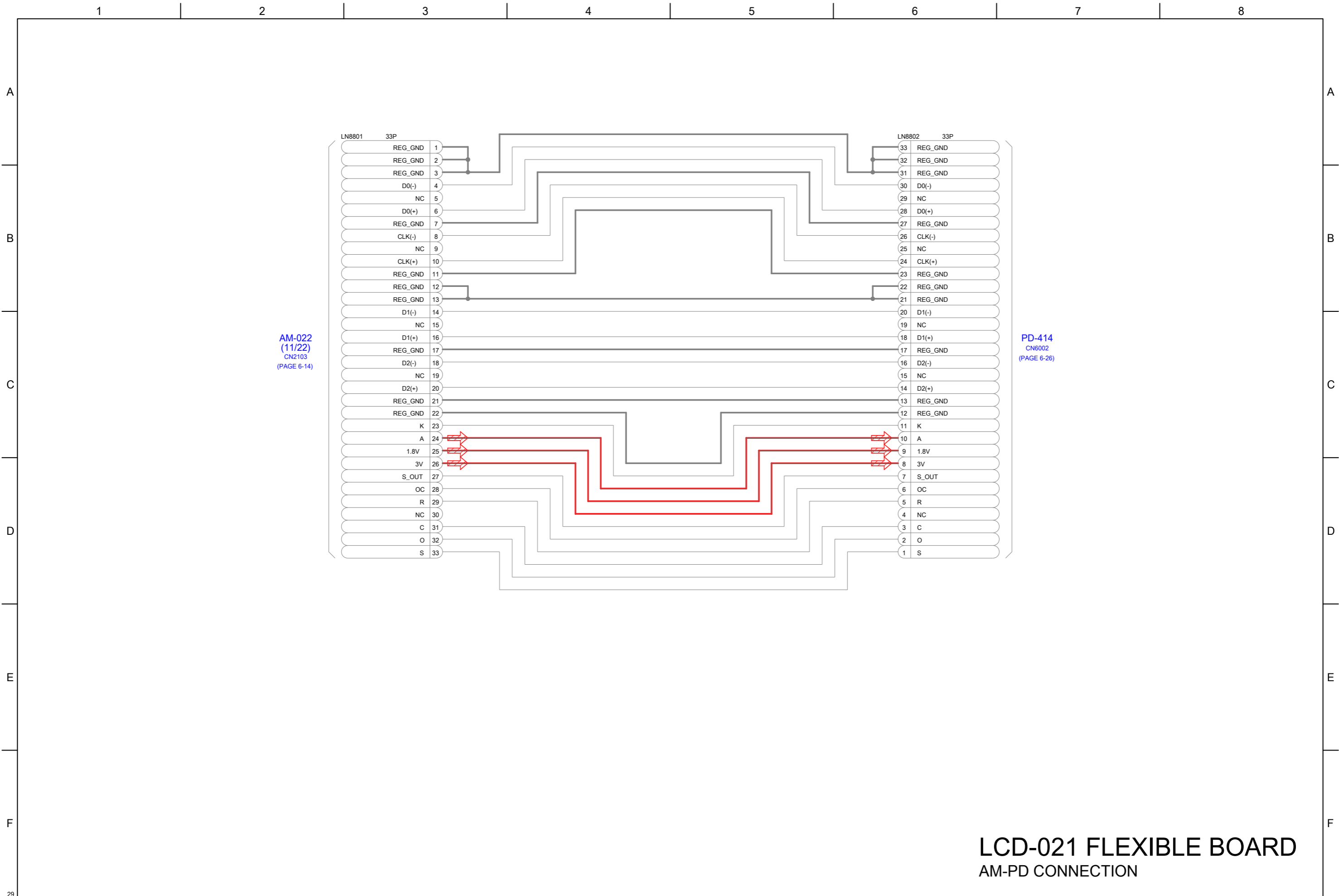
AM-022 BOARD (18/22)
 ANTI-SHAKE CONTROLLER, SUB CPU
 XX MARK:NO MOUNT



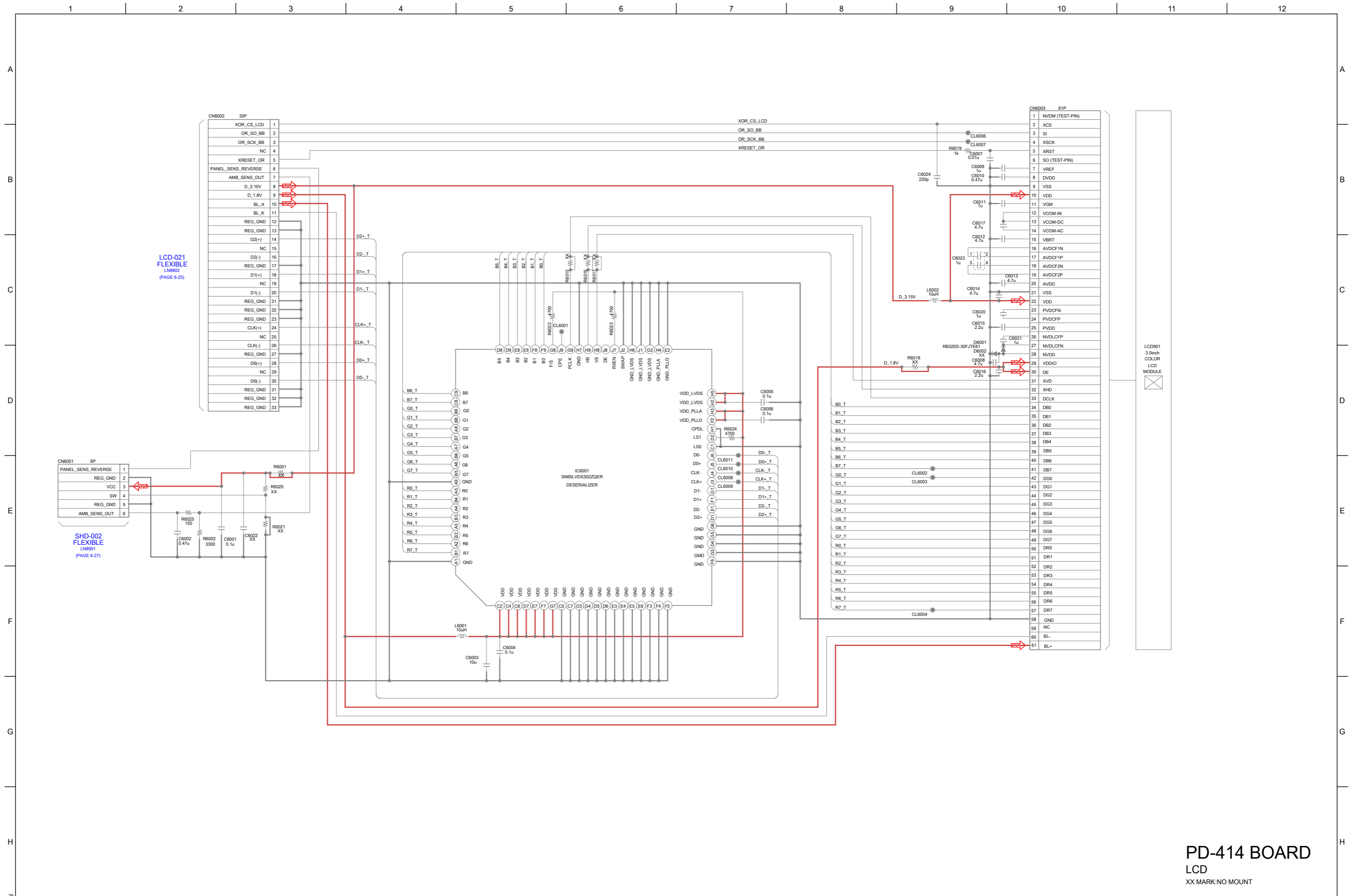




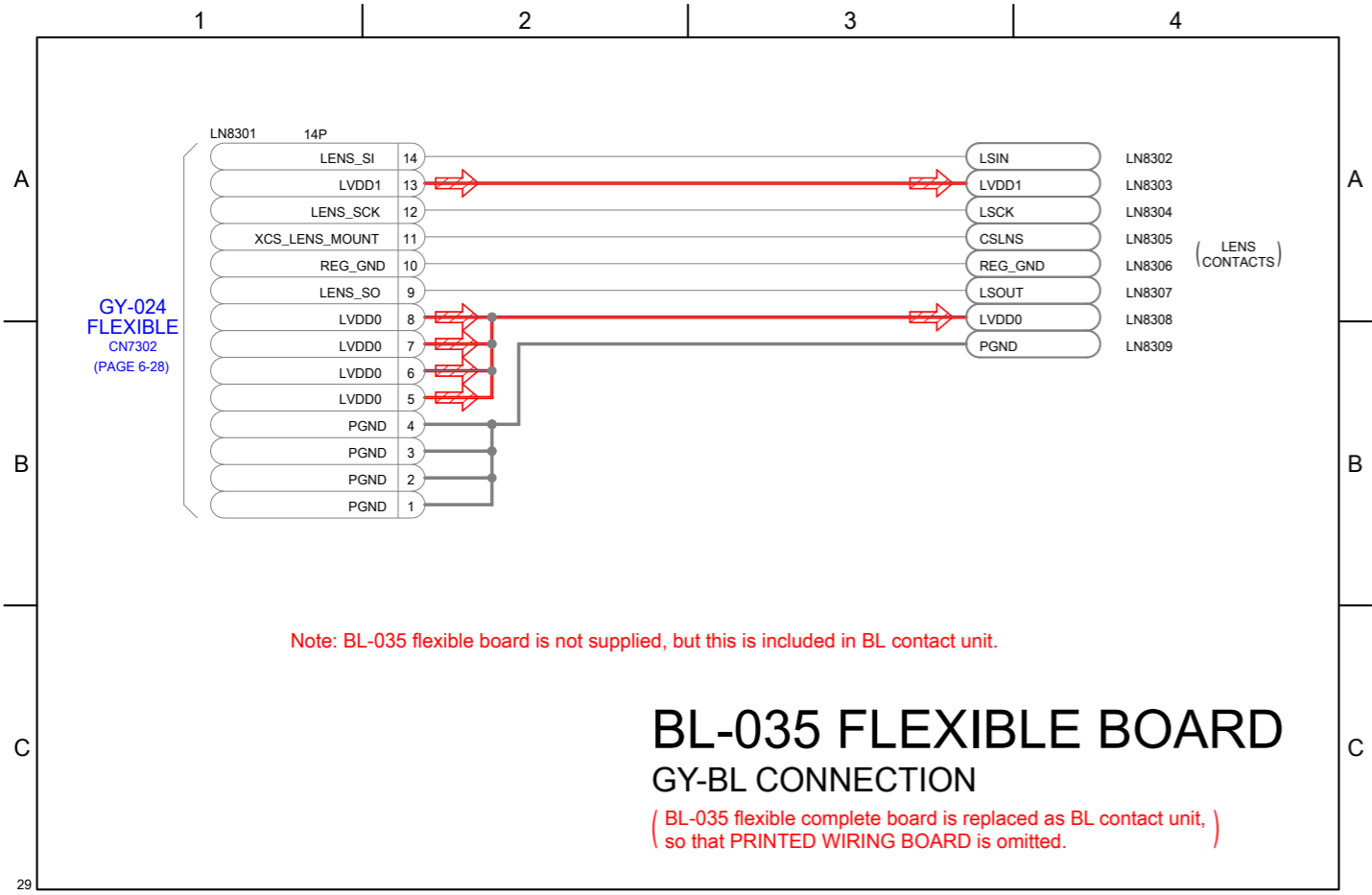
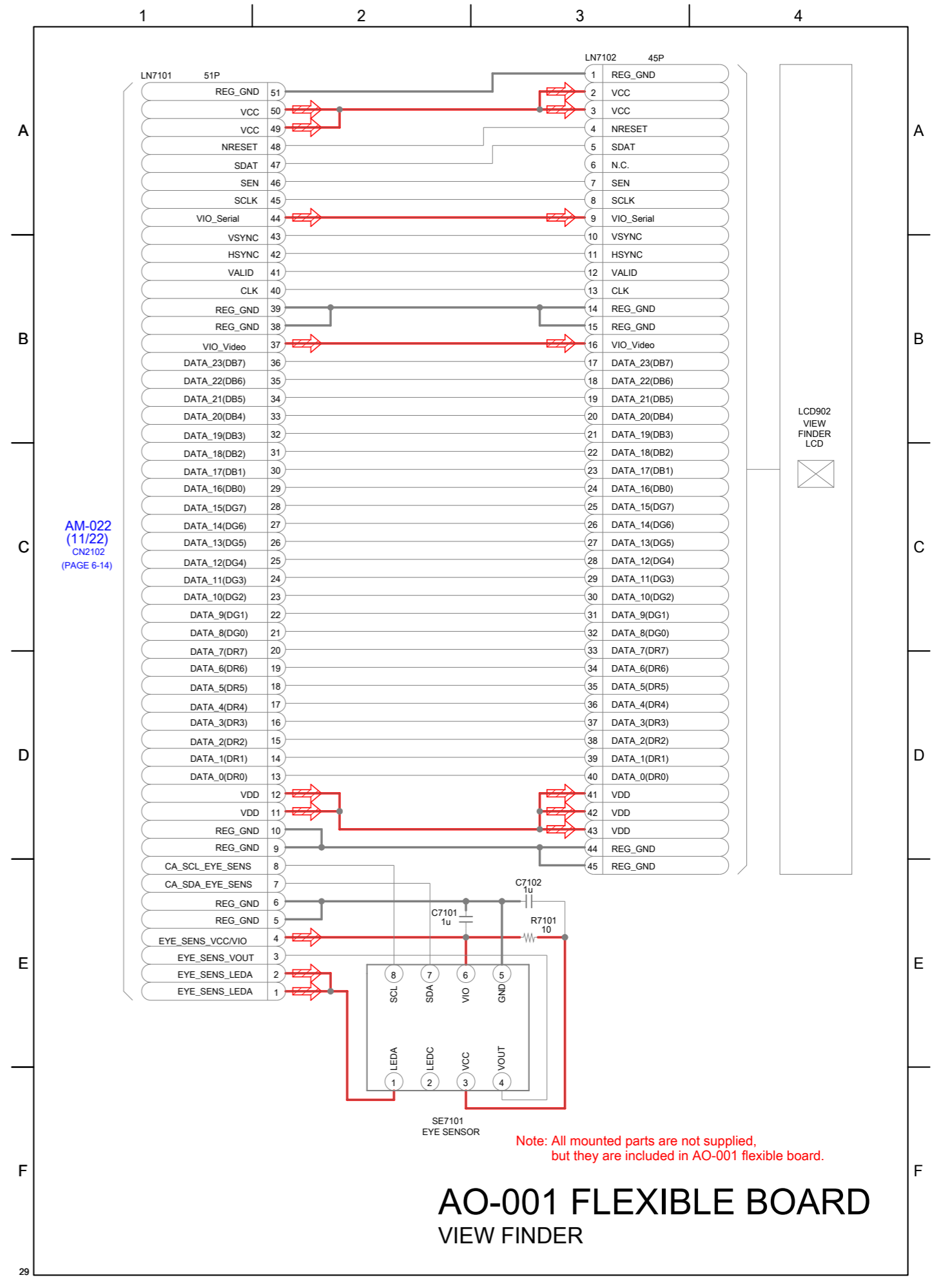
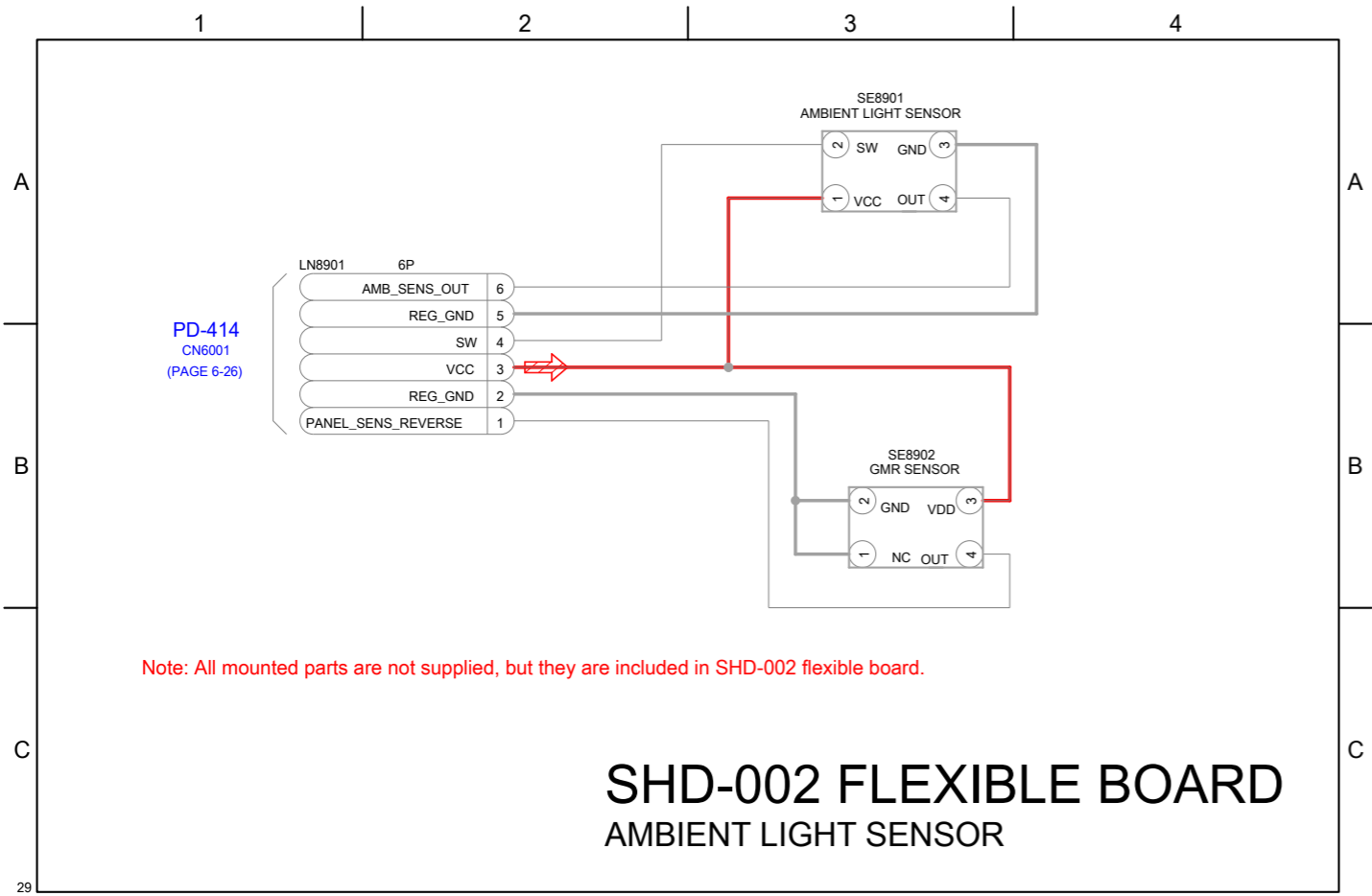
AM-022 BOARD (22/22)
CONNECTOR
 XX MARK:NO MOUNT

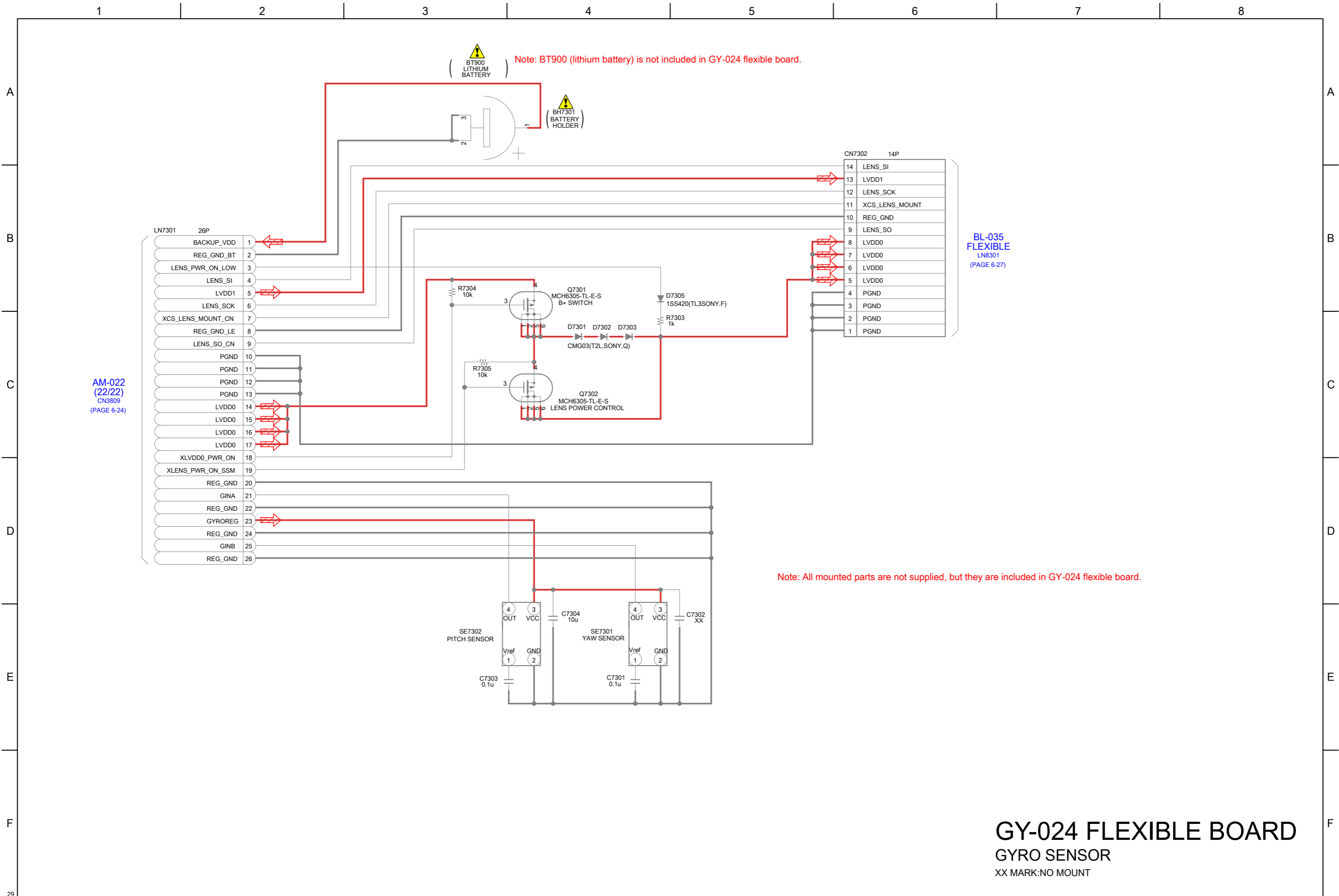


LCD-021 FLEXIBLE BOARD
AM-PD CONNECTION



PD-414 BOARD
 LCD
 XX MARK:NO MOUNT





Note: BT900 (lithium battery) is not included in GY-024 flexible board.

BL-035
FLEXIBLE
LN8301
(PAGE 6-27)

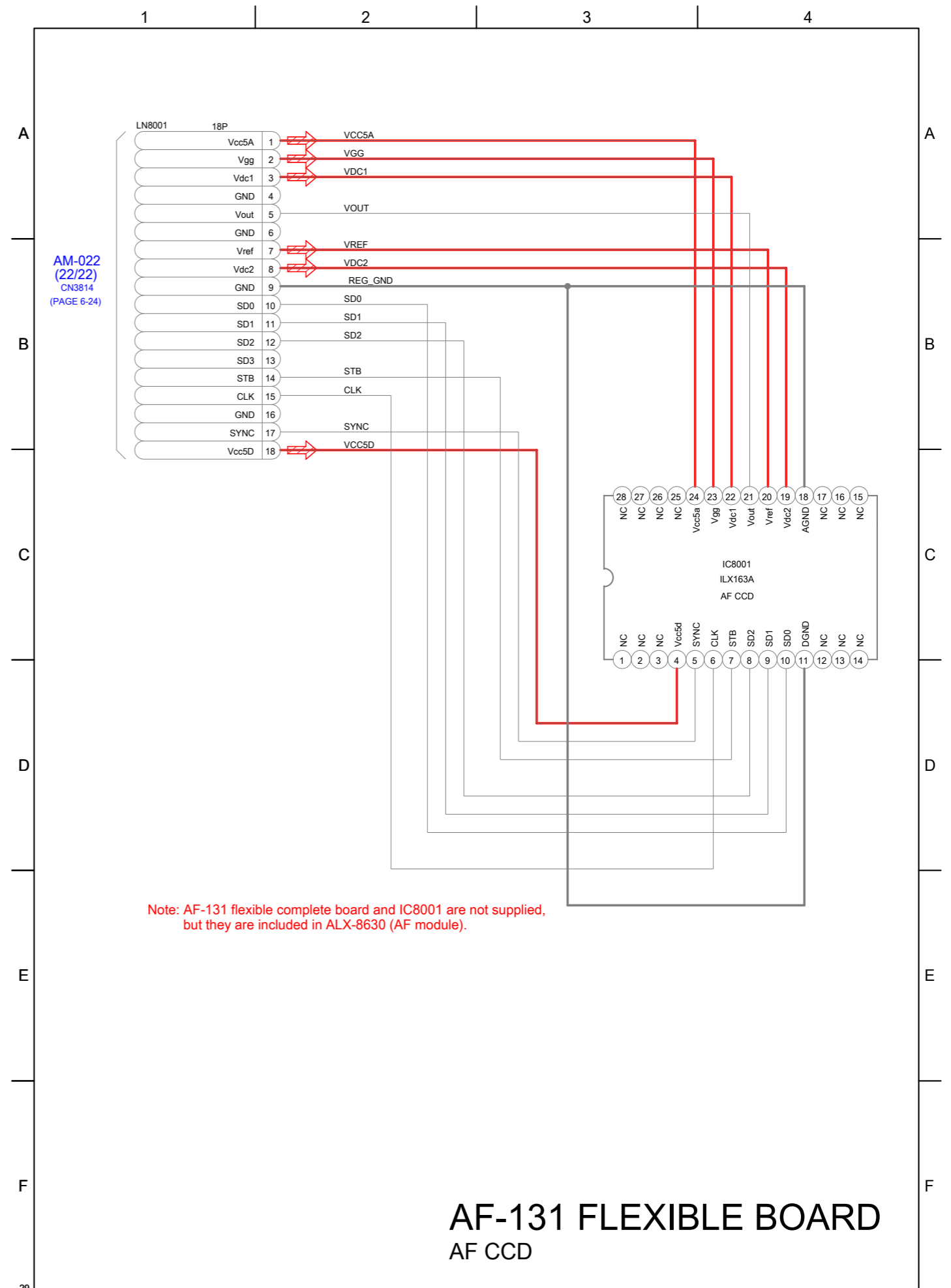
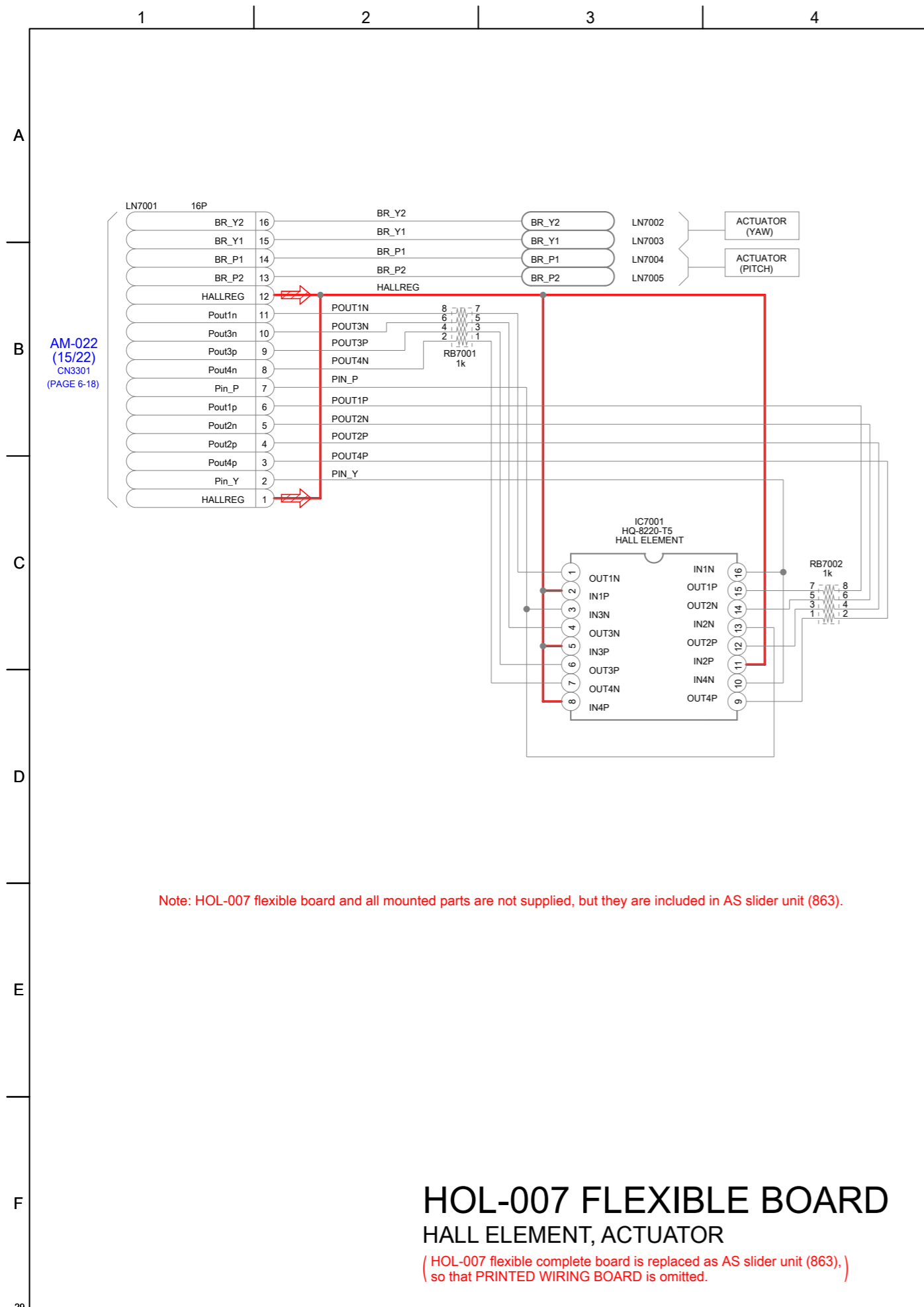
AM-022
(22/22)
CN3809
(PAGE 6-24)

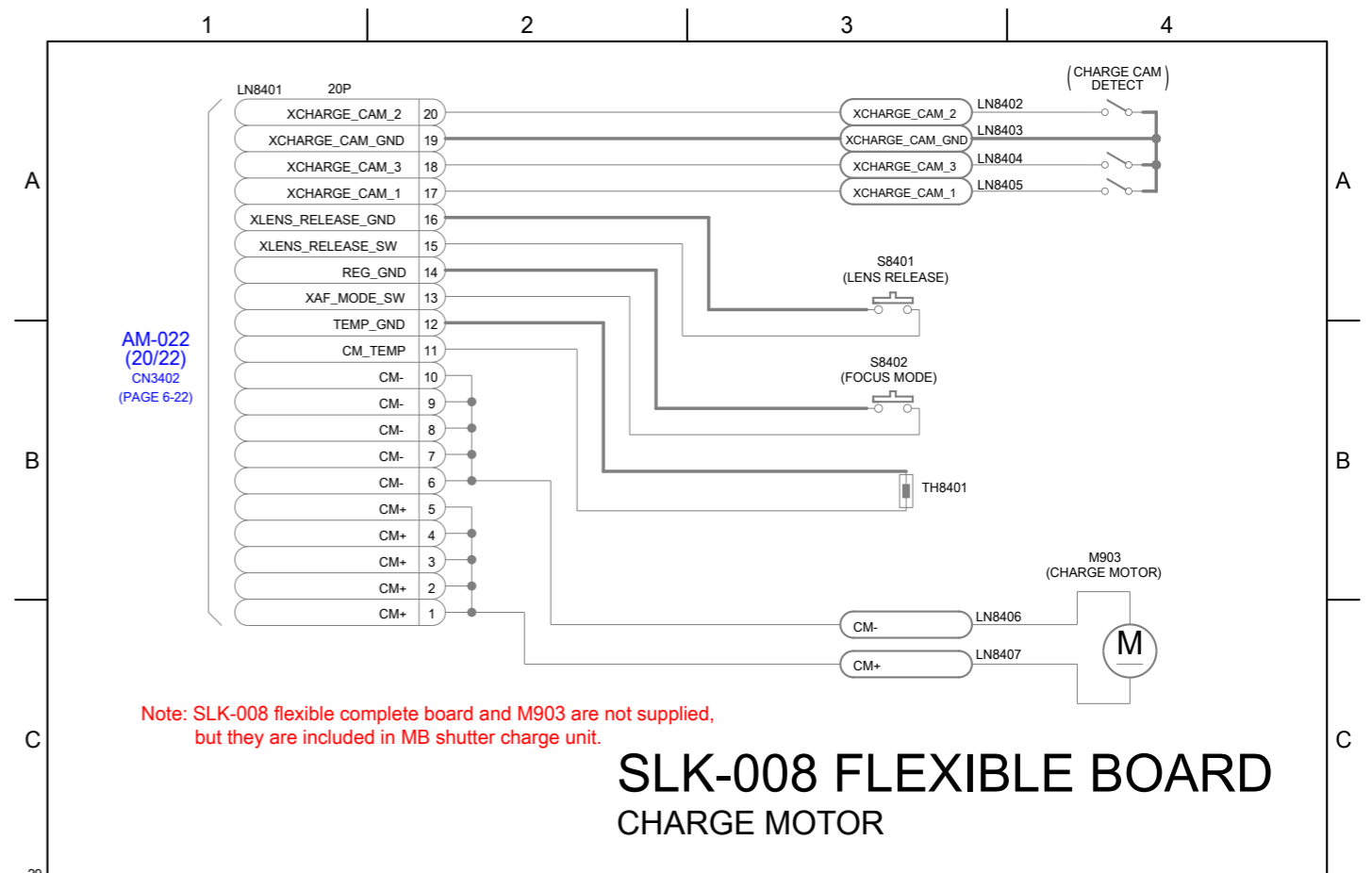
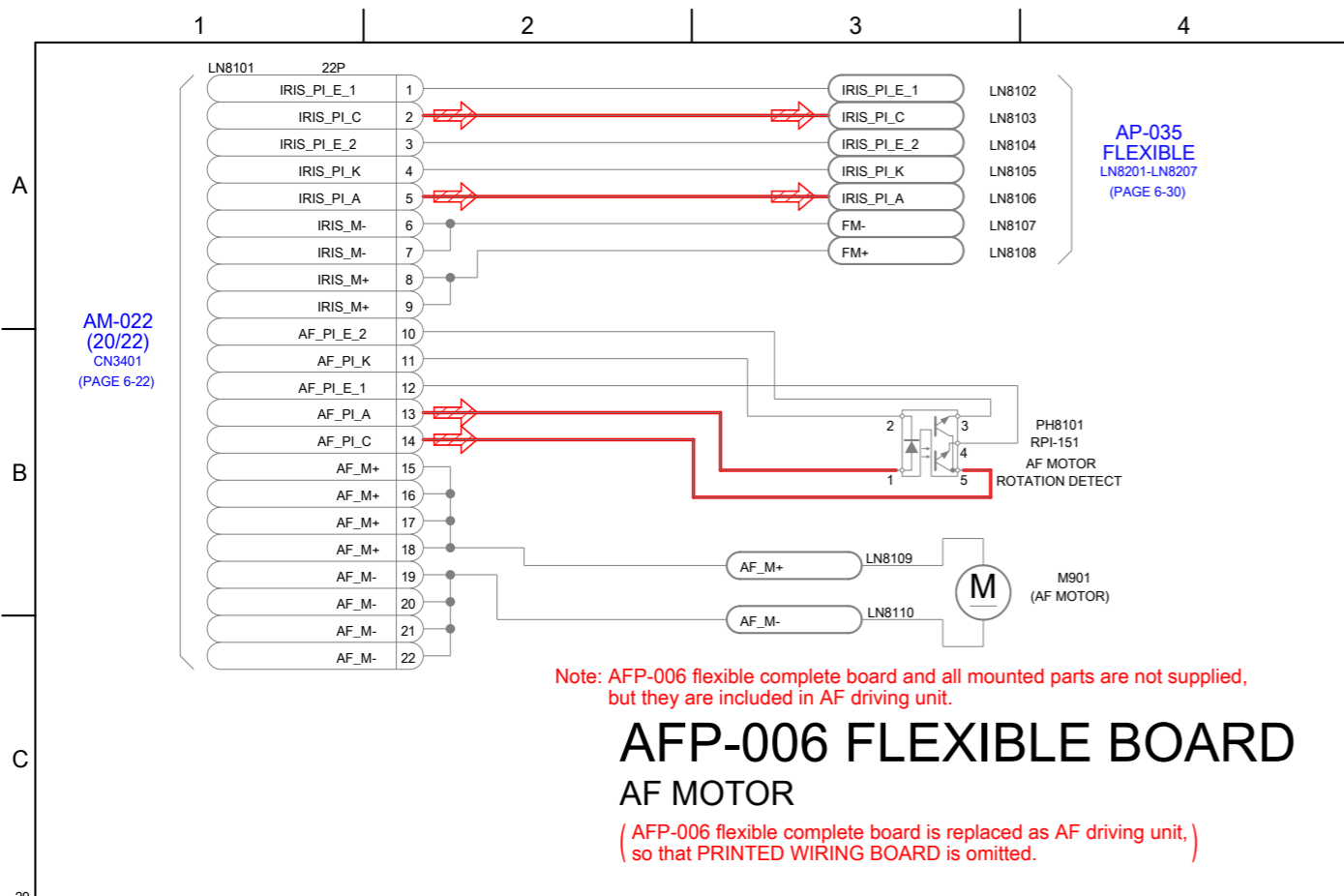
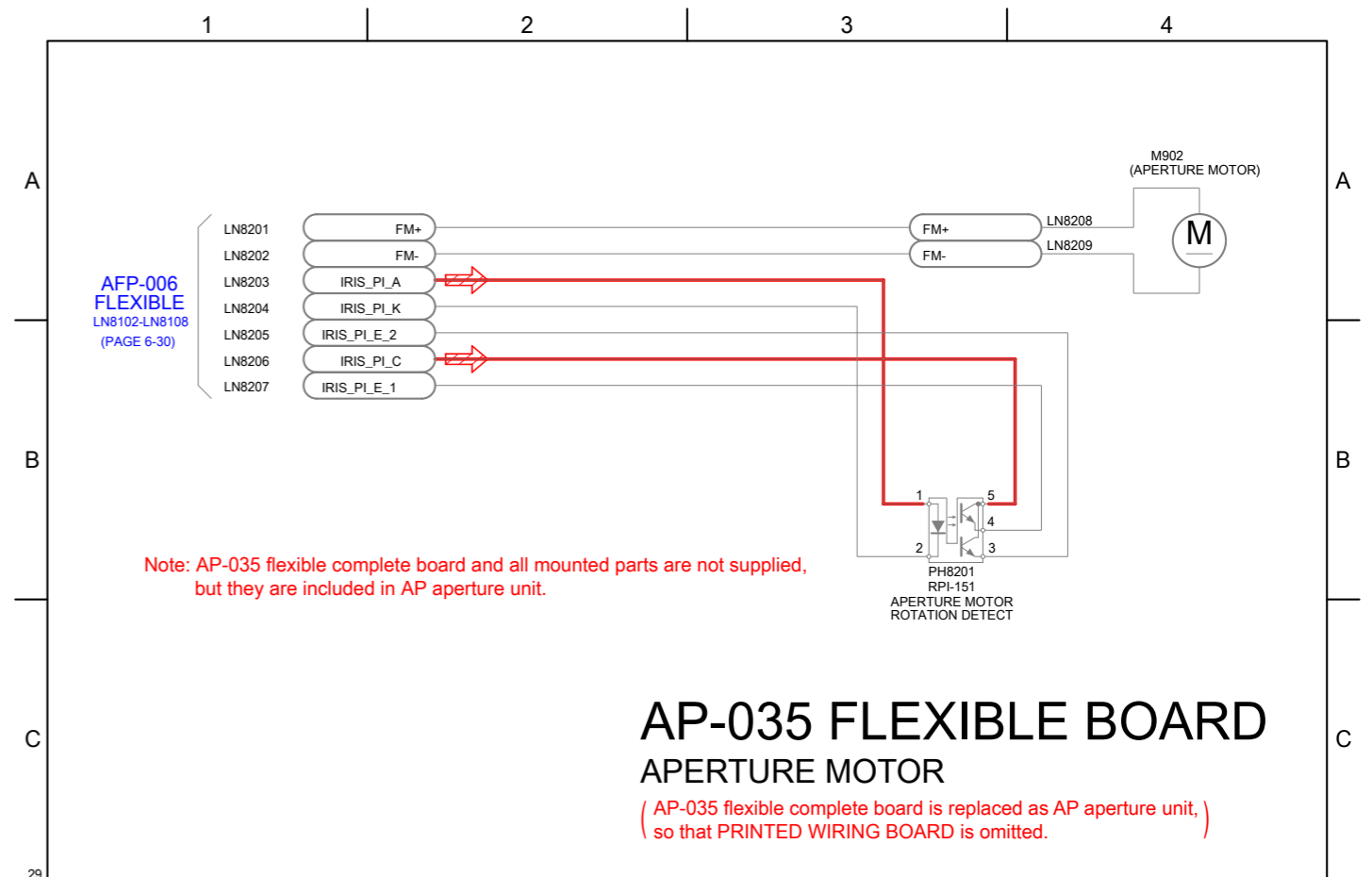
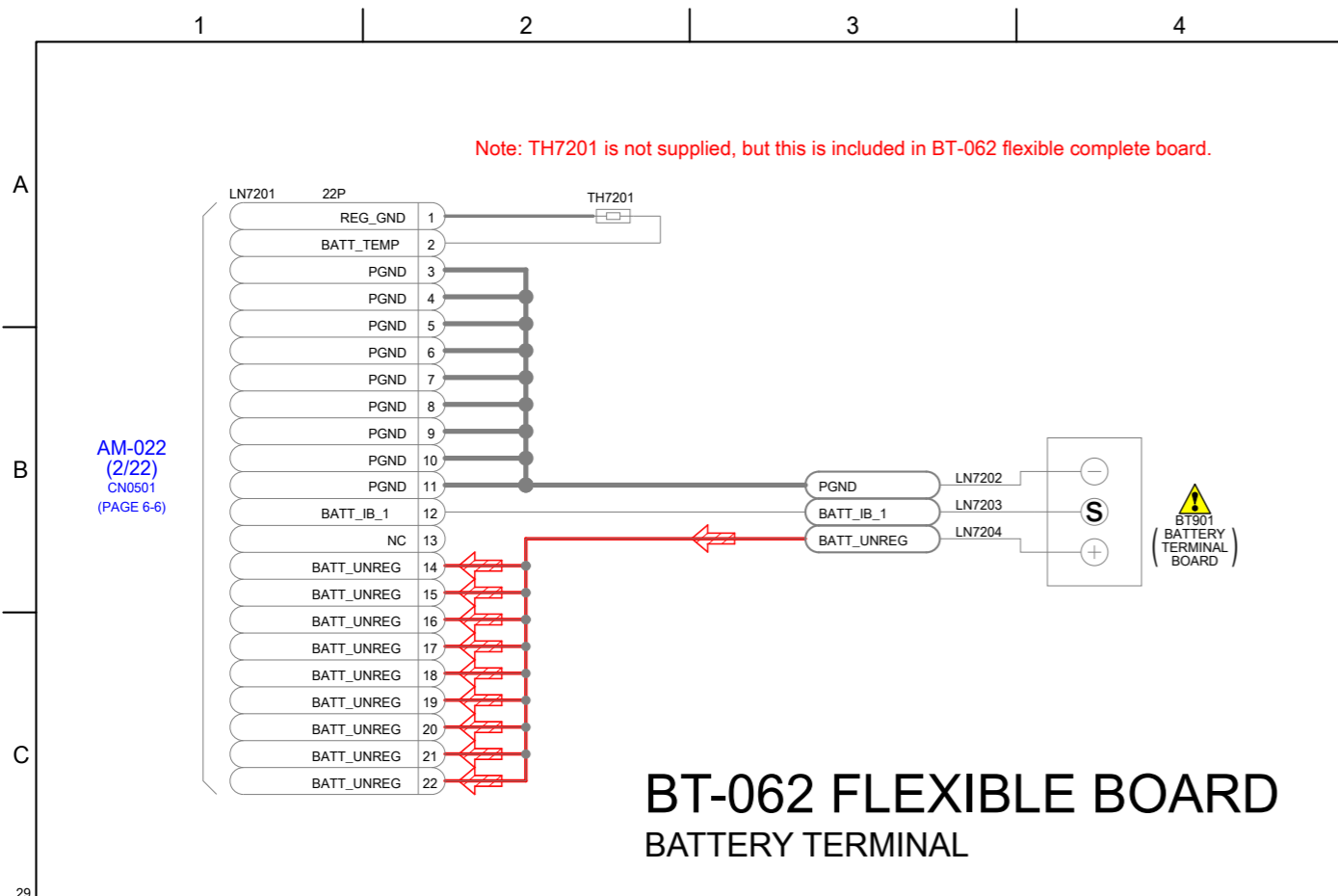
Note: All mounted parts are not supplied, but they are included in GY-024 flexible board.

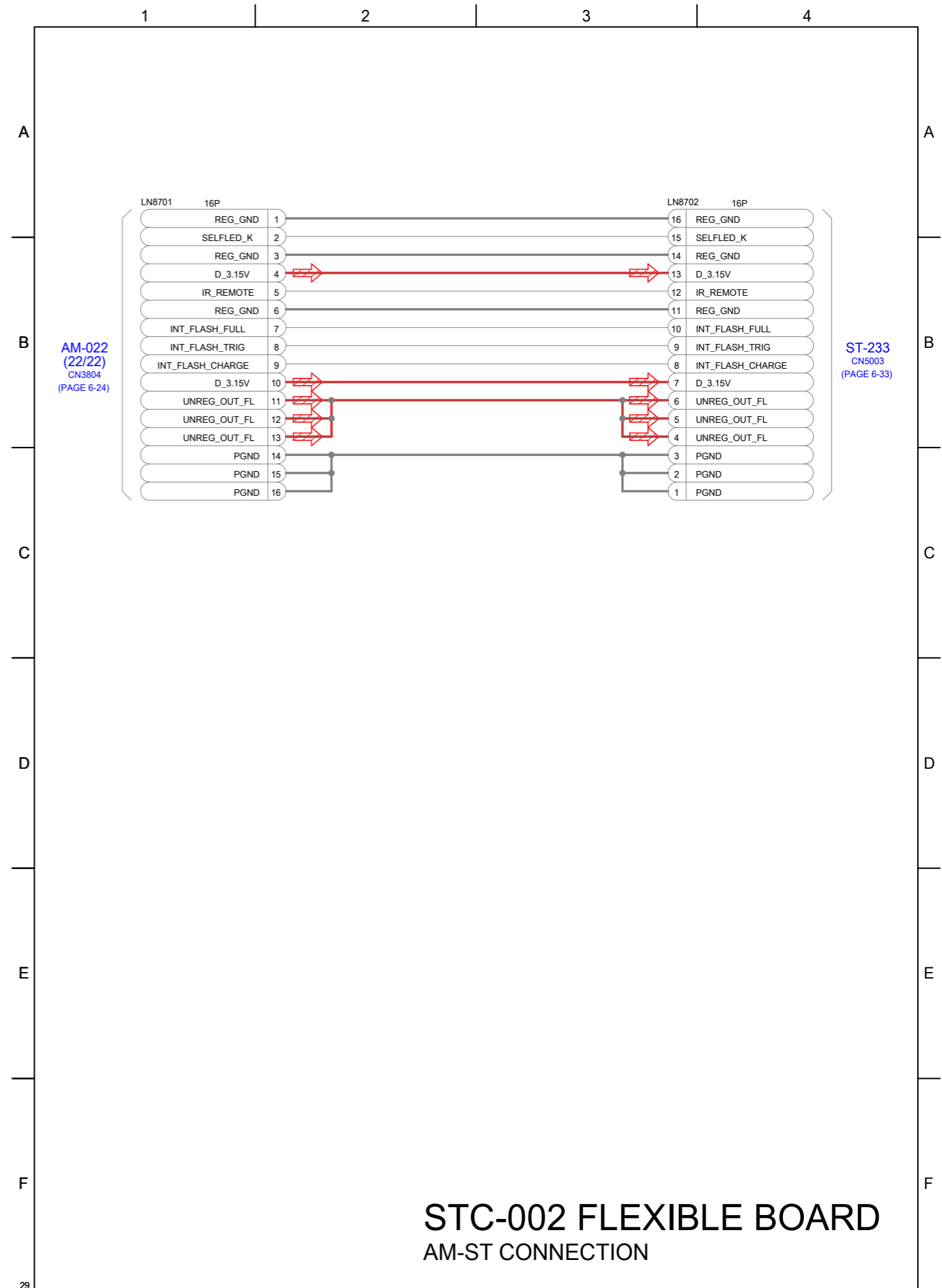
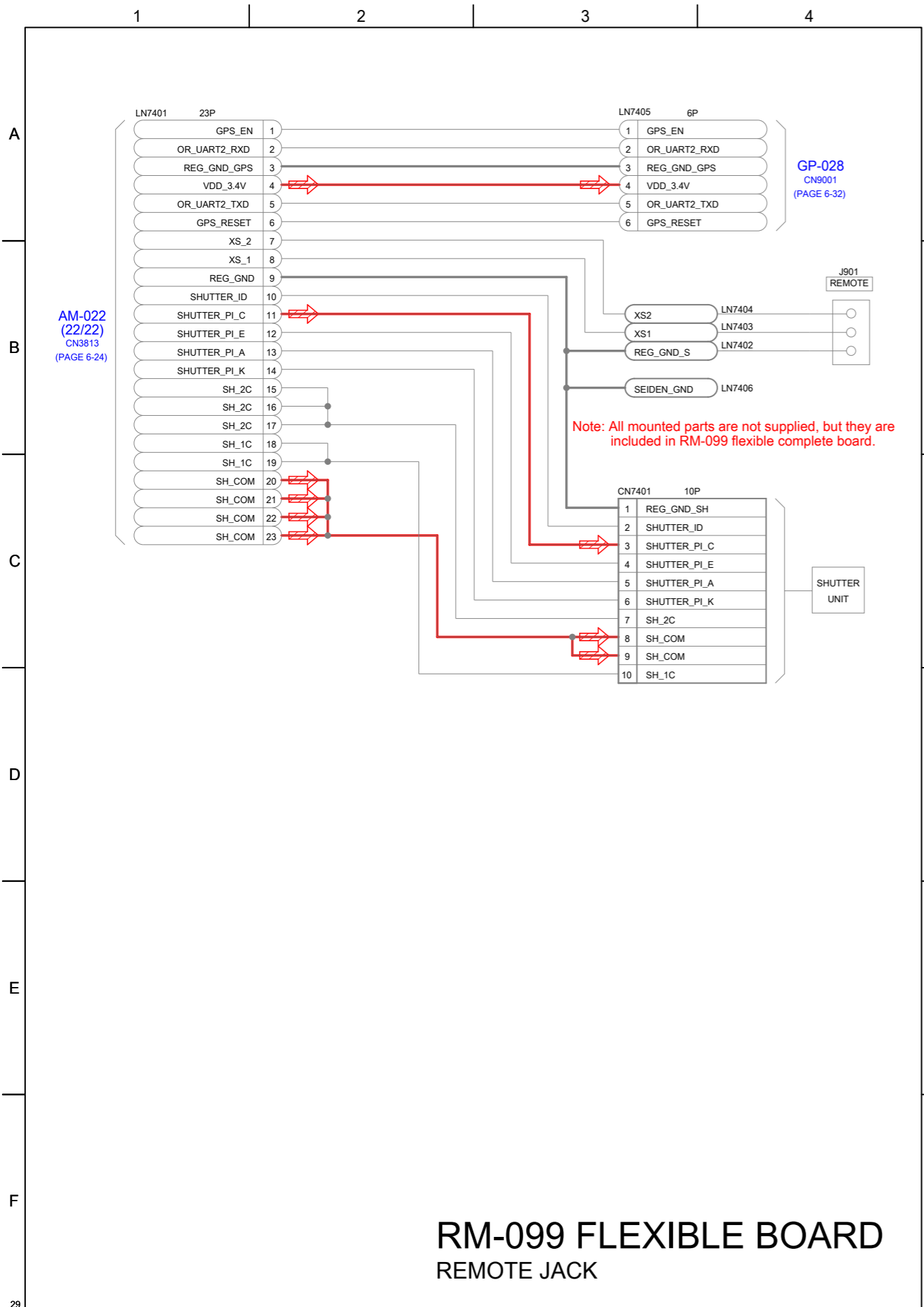
GY-024 FLEXIBLE BOARD

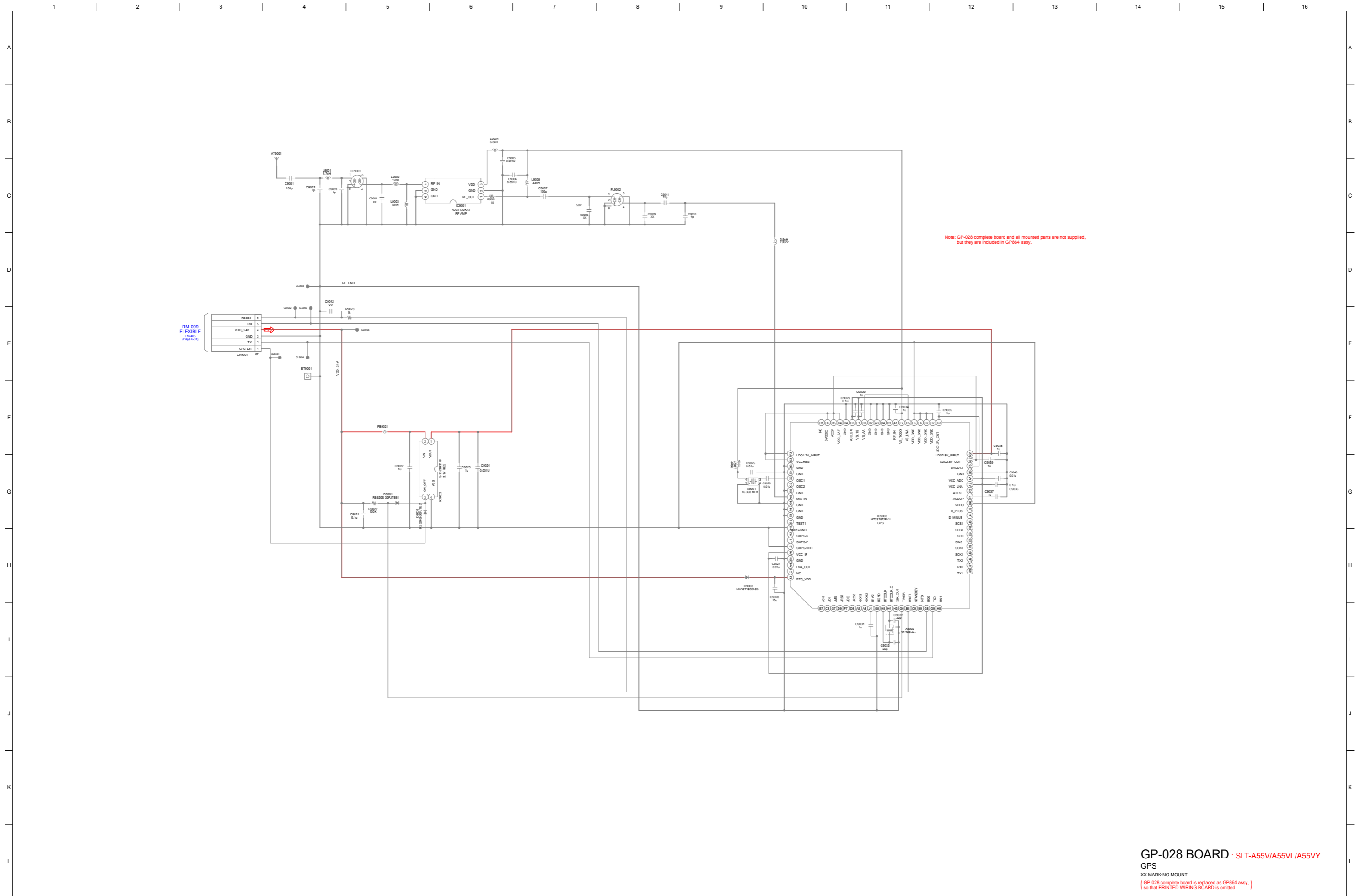
GYRO SENSOR

XX MARK:NO MOUNT

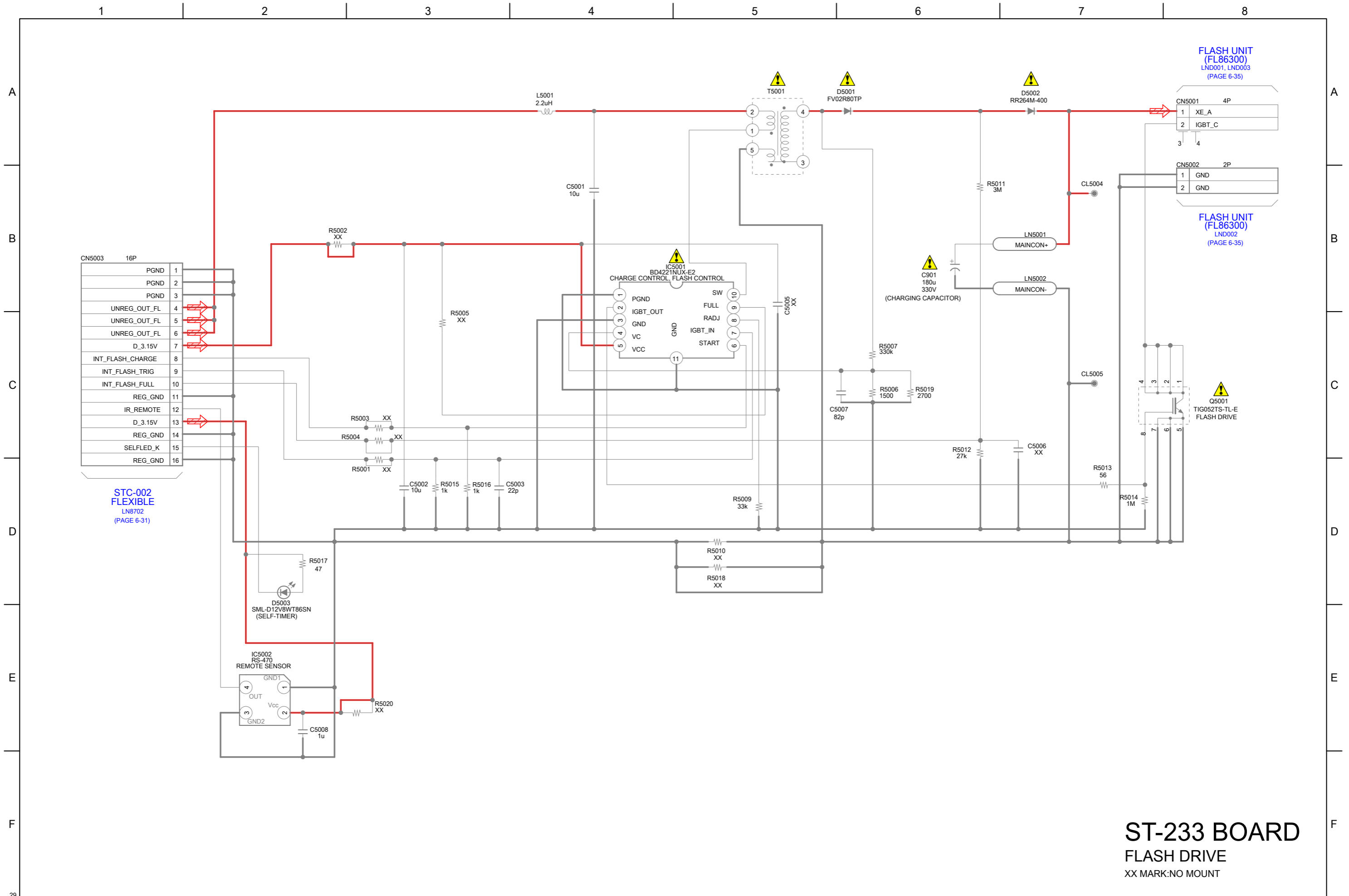


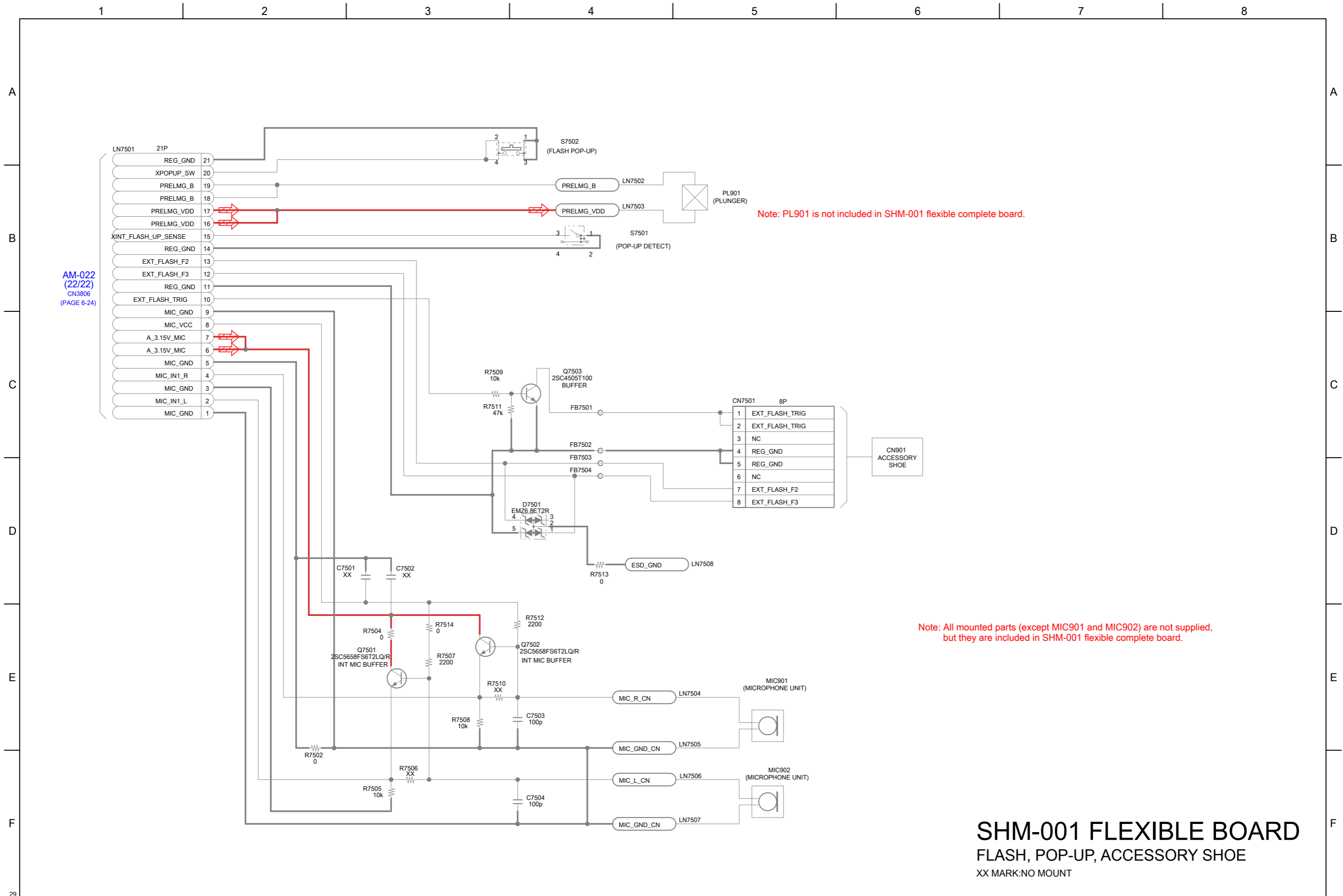






GP-028 BOARD : SLT-A55V/A55VL/A55VY
 GPS
 XX MARKNO MOUNT
 (GP-028 complete board is replaced as GP84 assy.)
 so that PRINTED WIRING BOARD is omitted.





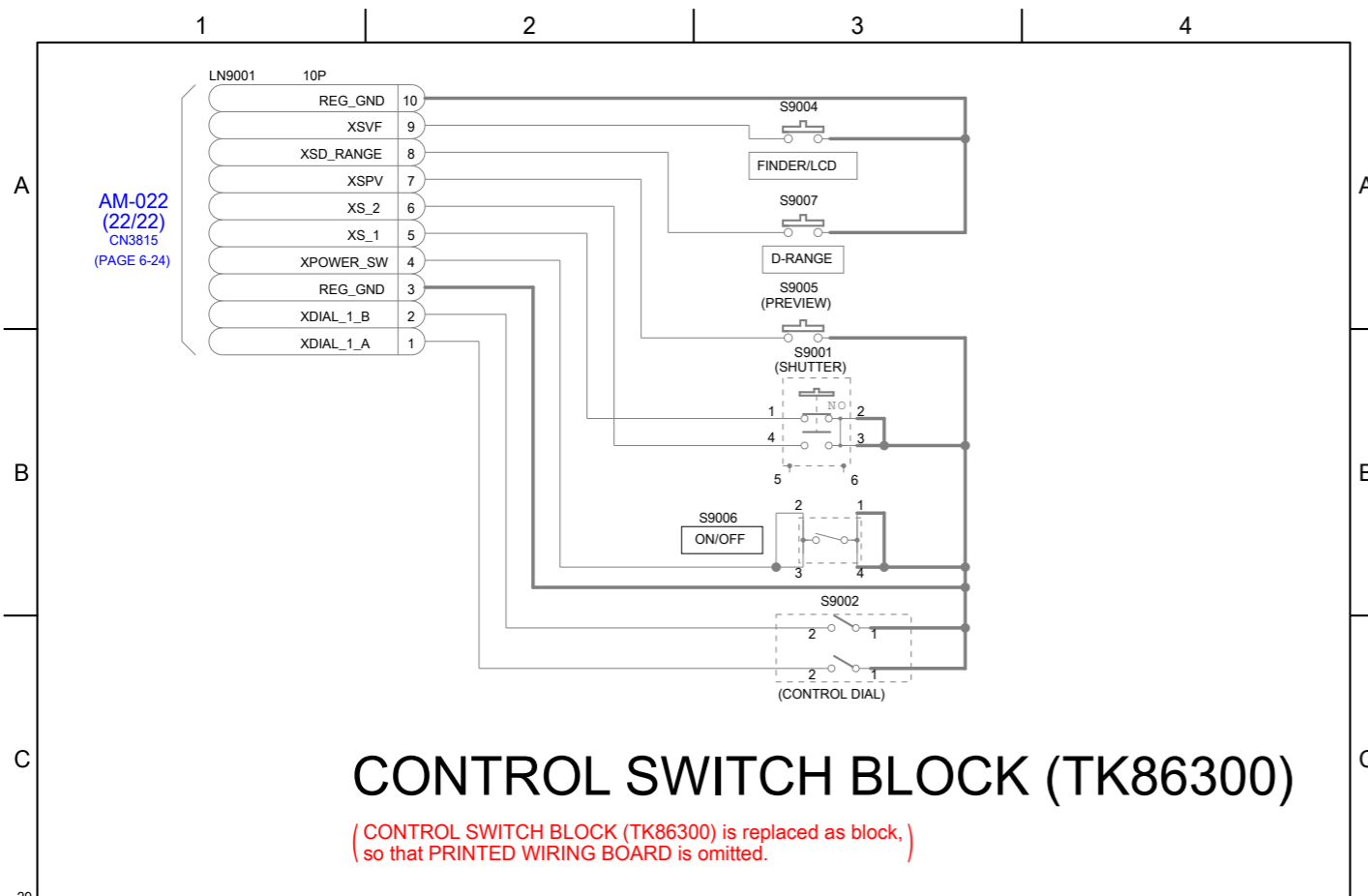
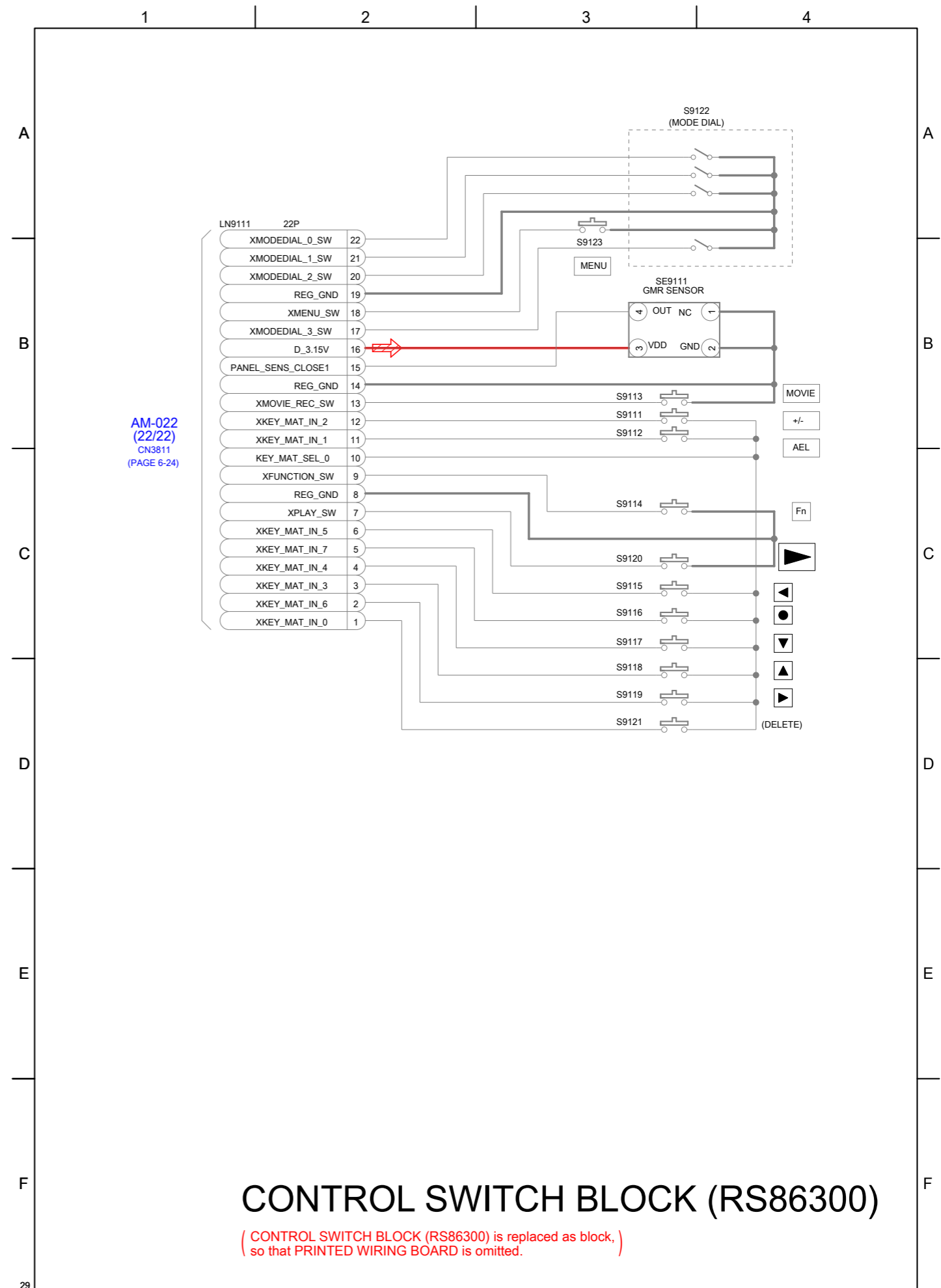
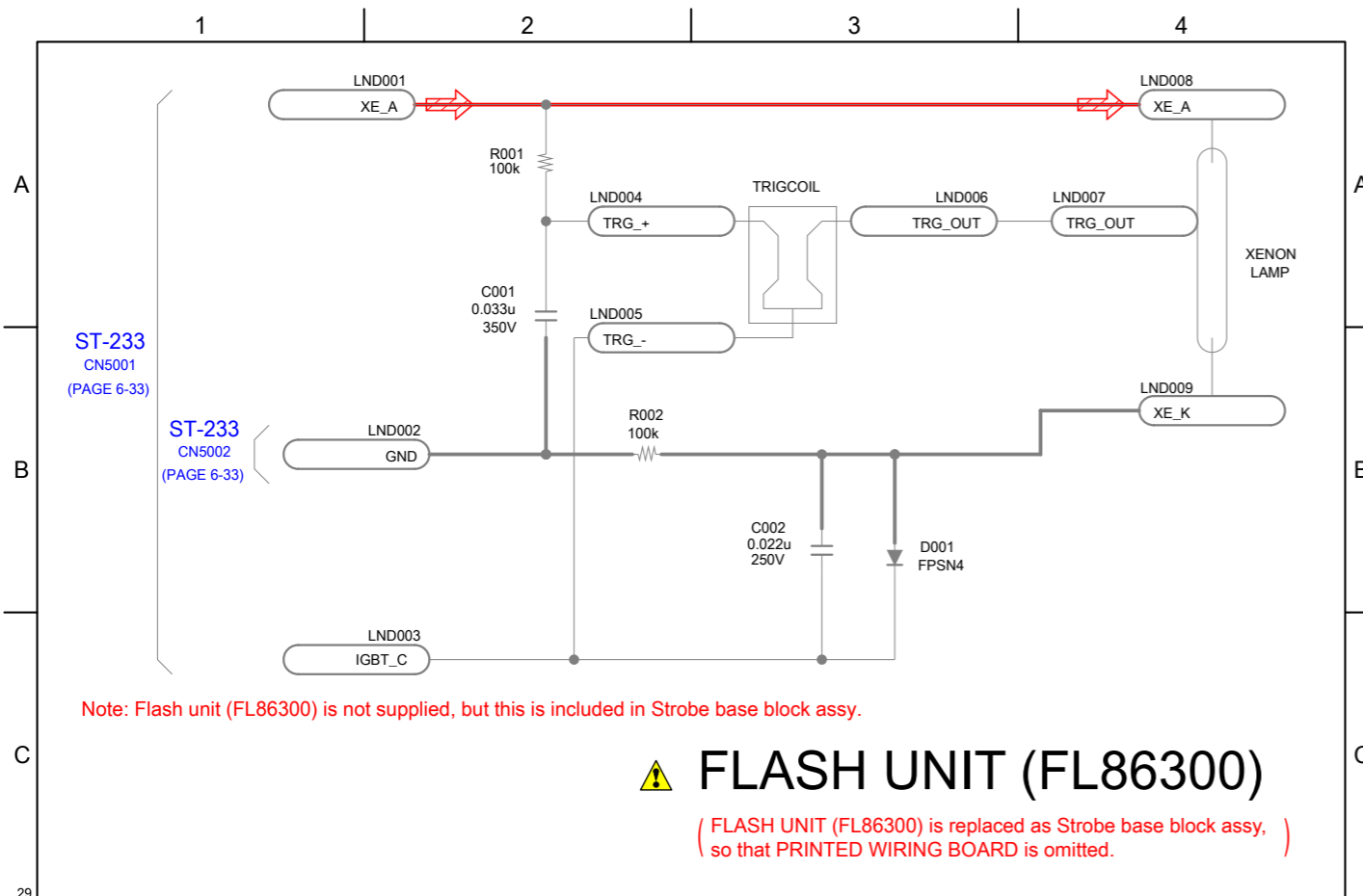
AM-022
(22/22)
CN3806
(PAGE 6-24)

Note: PL901 is not included in SHM-001 flexible complete board.

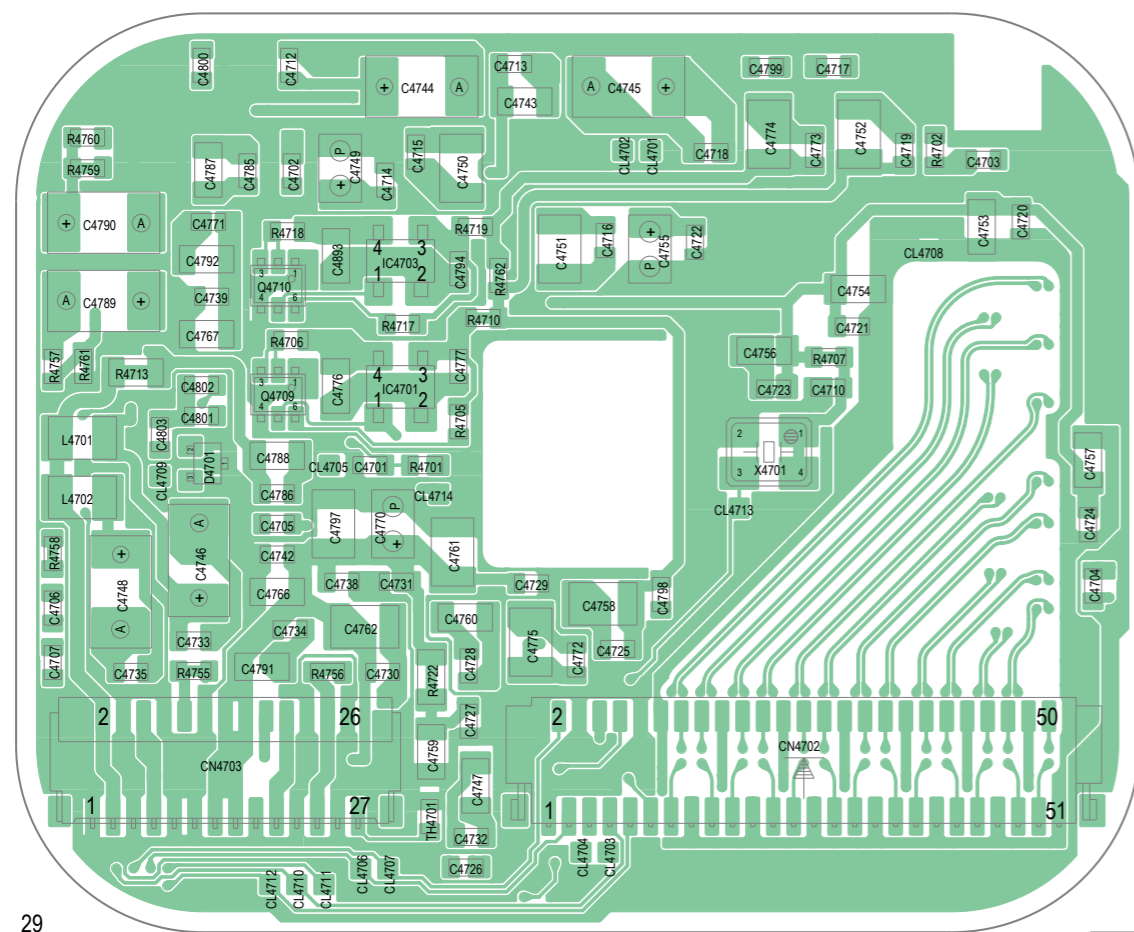
Note: All mounted parts (except MIC901 and MIC902) are not supplied, but they are included in SHM-001 flexible complete board.

SHM-001 FLEXIBLE BOARD

FLASH, POP-UP, ACCESSORY SHOE
XX MARK:NO MOUNT



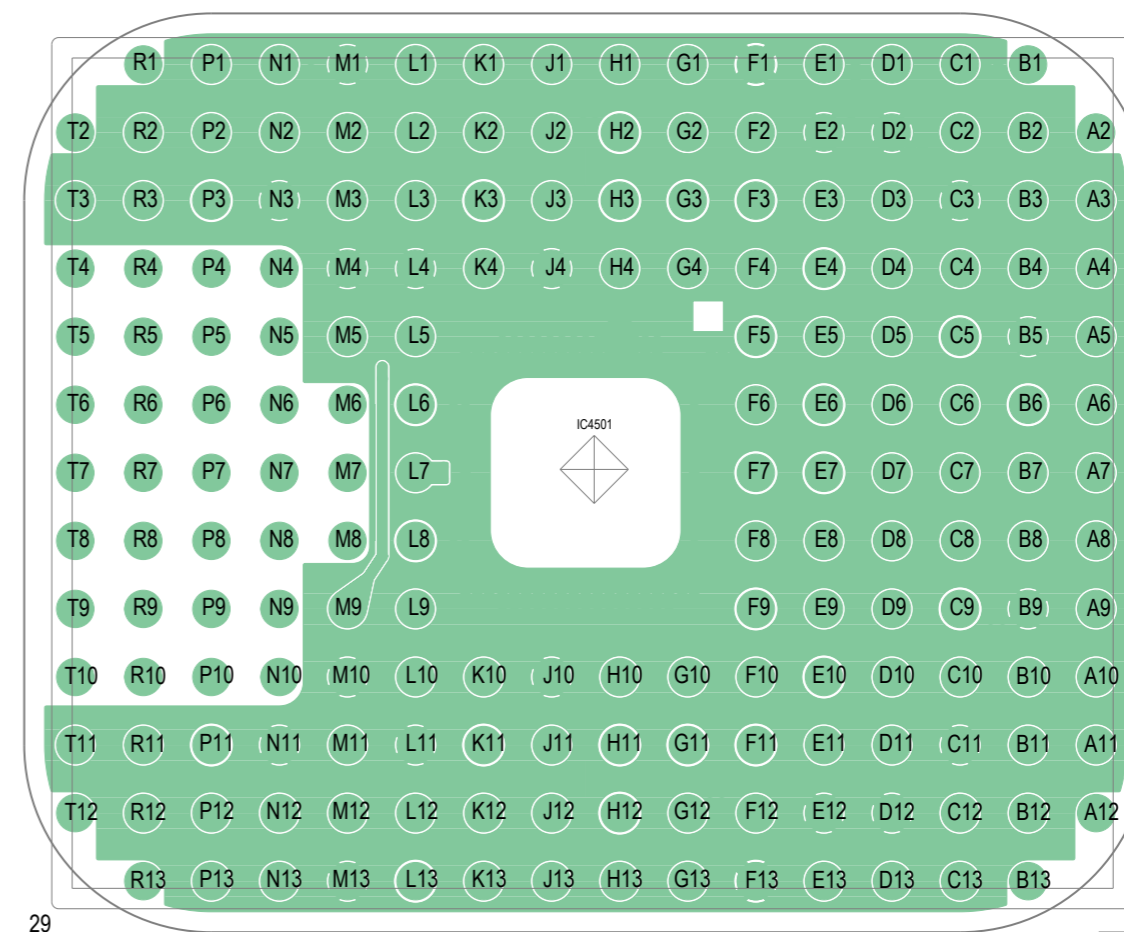
IS-073 BOARD (SIDE A) (SLT-A55/A55V/A55L/A55VL/A55VY)



29

1-880-875- 11

IS-073 BOARD (SIDE B) (SLT-A55/A55V/A55L/A55VL/A55VY)

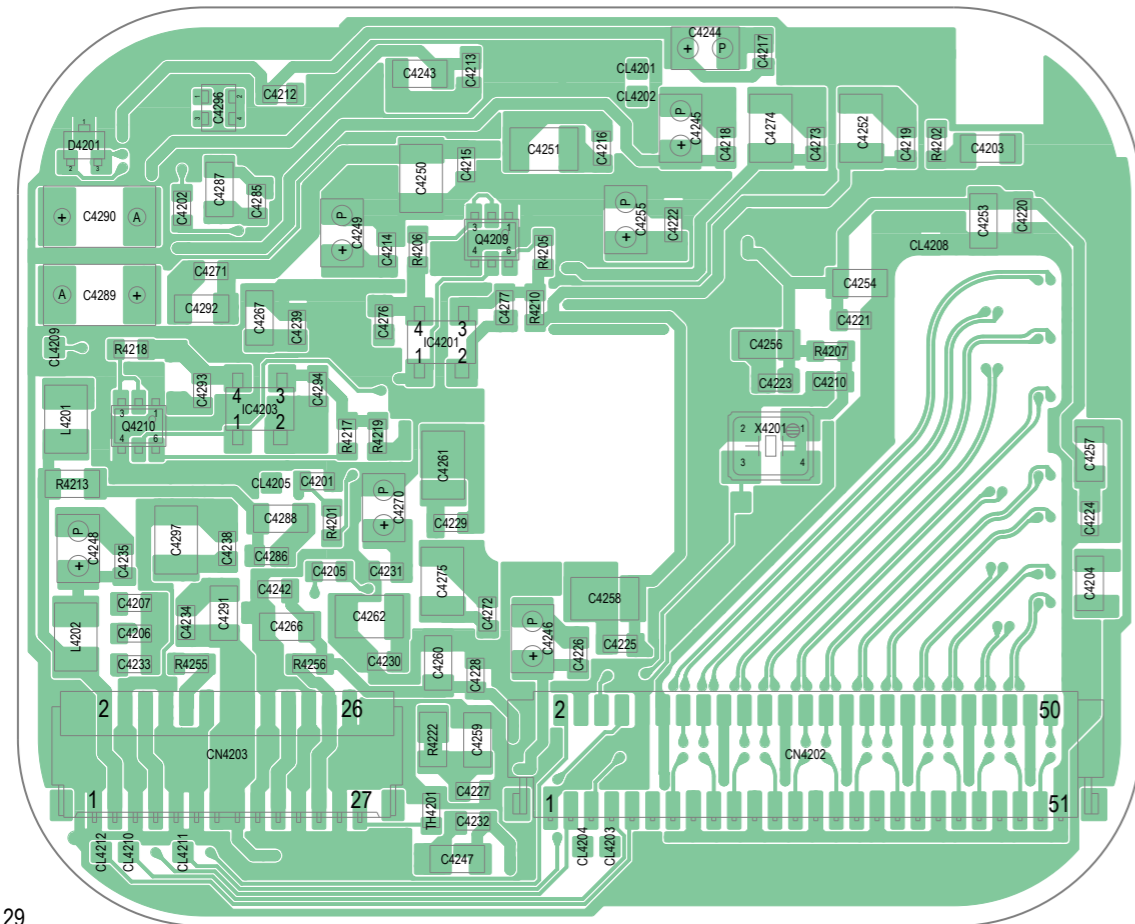


29

1-880-875- 11

Note: IS-073 complete board and all mounted parts (including IC4501 (CMOS imager)) are not supplied, but they are included in IM imager unit 16M.

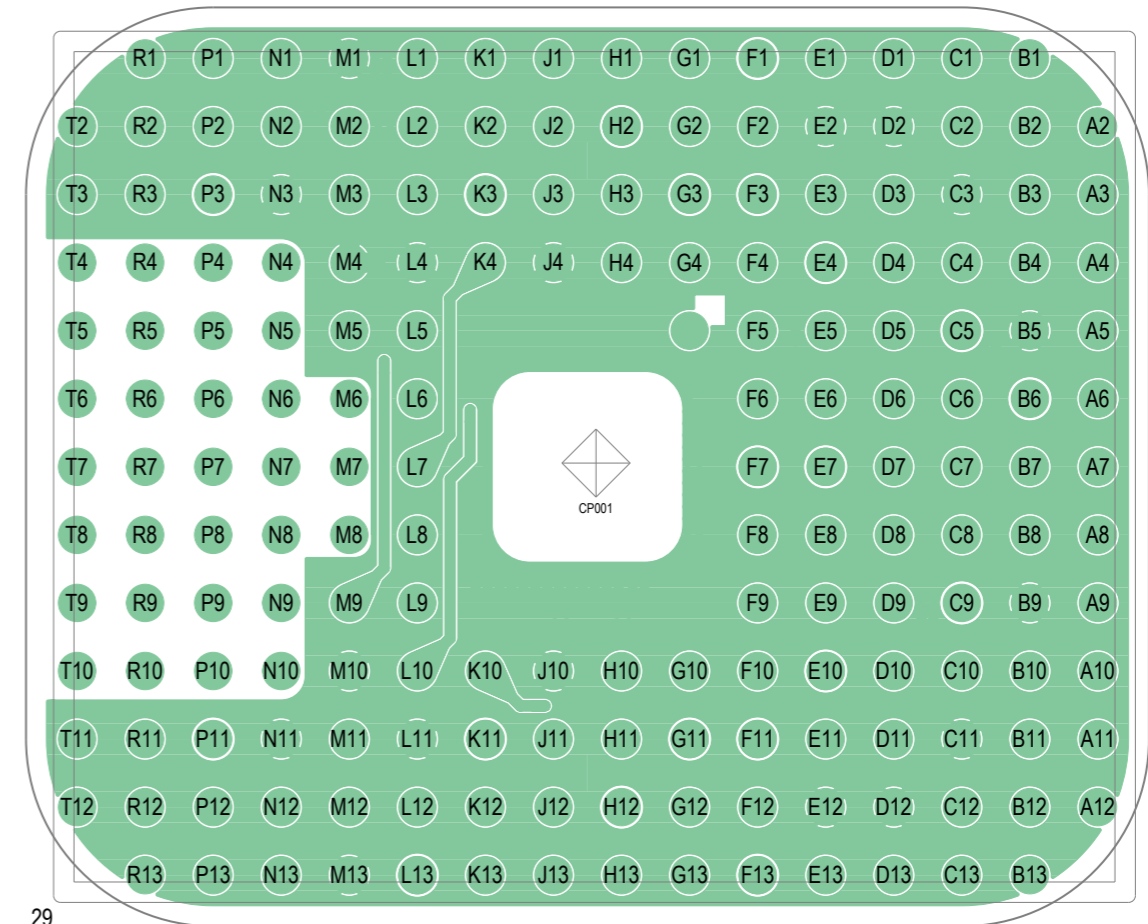
IS-077 BOARD (SIDE A) (SLT-A33/A33L/A33Y)



29

1-882-052- 11

IS-077 BOARD (SIDE B) (SLT-A33/A33L/A33Y)



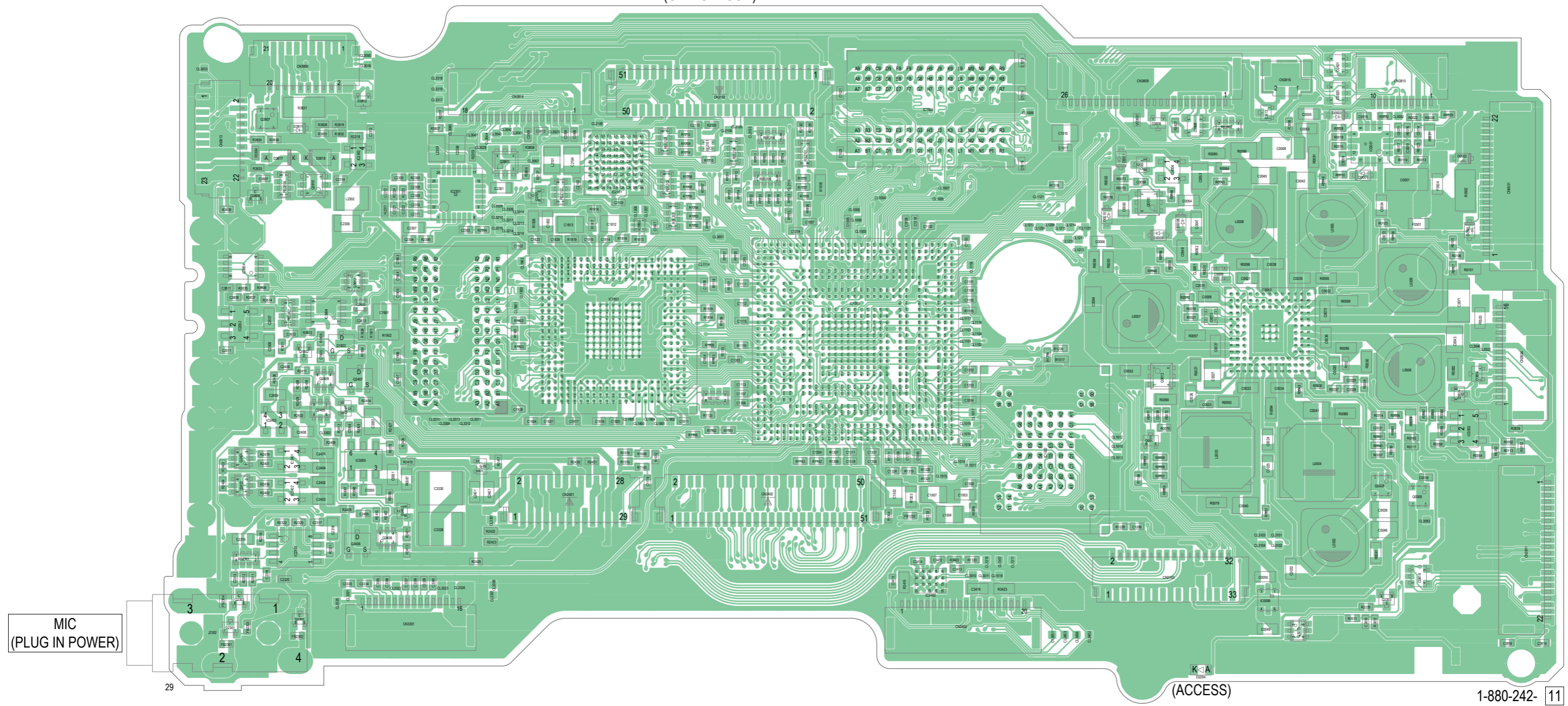
29

1-882-052- 11

Note: IS-077 complete board and all mounted parts (including CP001 (CMOS imager)) are not supplied, but they are included in IM imager unit 14M.

AM-022 BOARD (SIDE A)

SE2101
(GMR SENSOR)



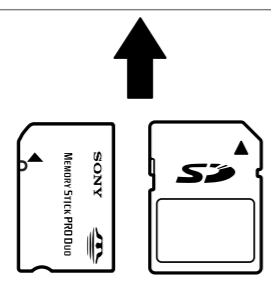
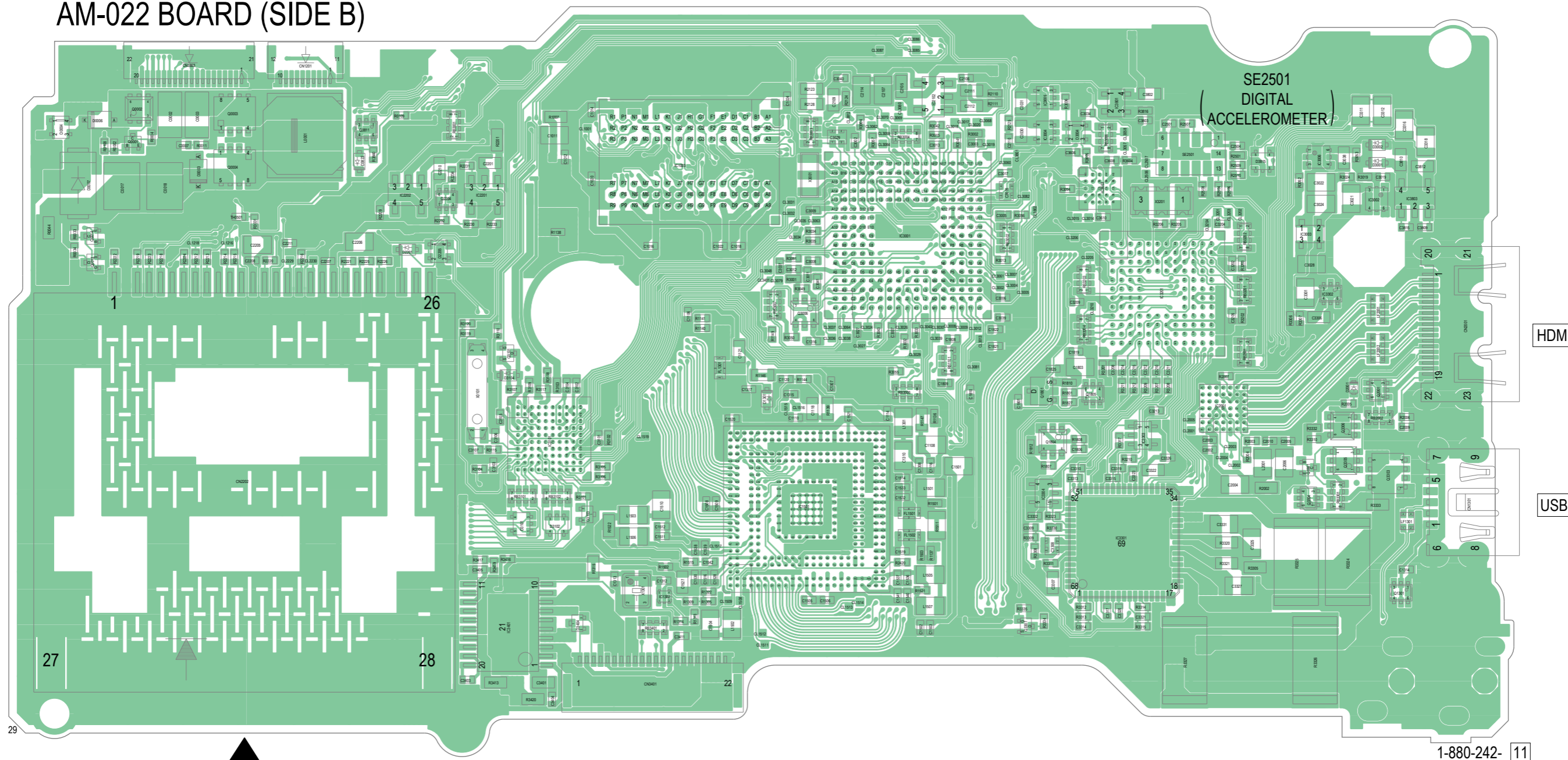
MIC
(PLUG IN POWER)

(ACCESS)

1-880-242- 11

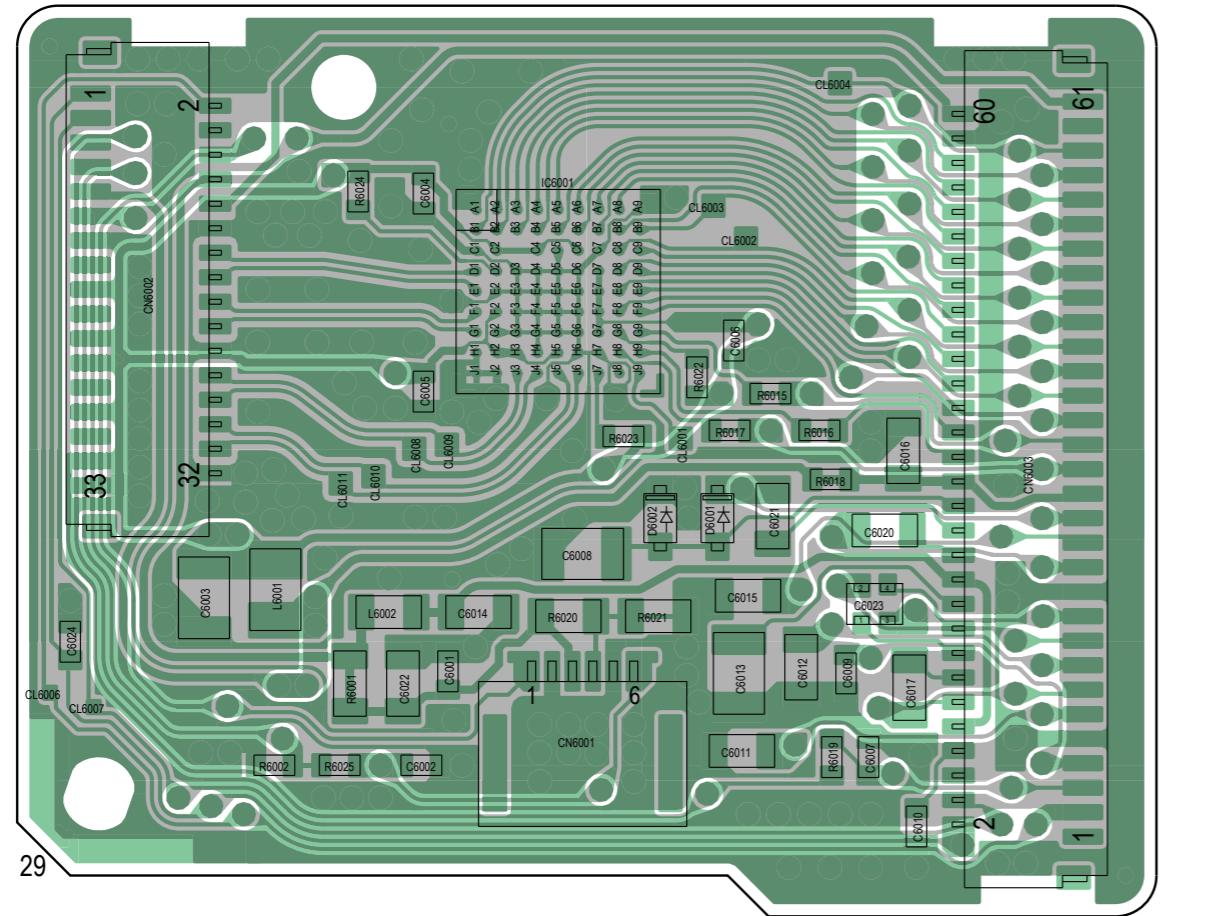
Note: IC1002 is not supplied, but this is included in AM-022 complete board.

AM-022 BOARD (SIDE B)



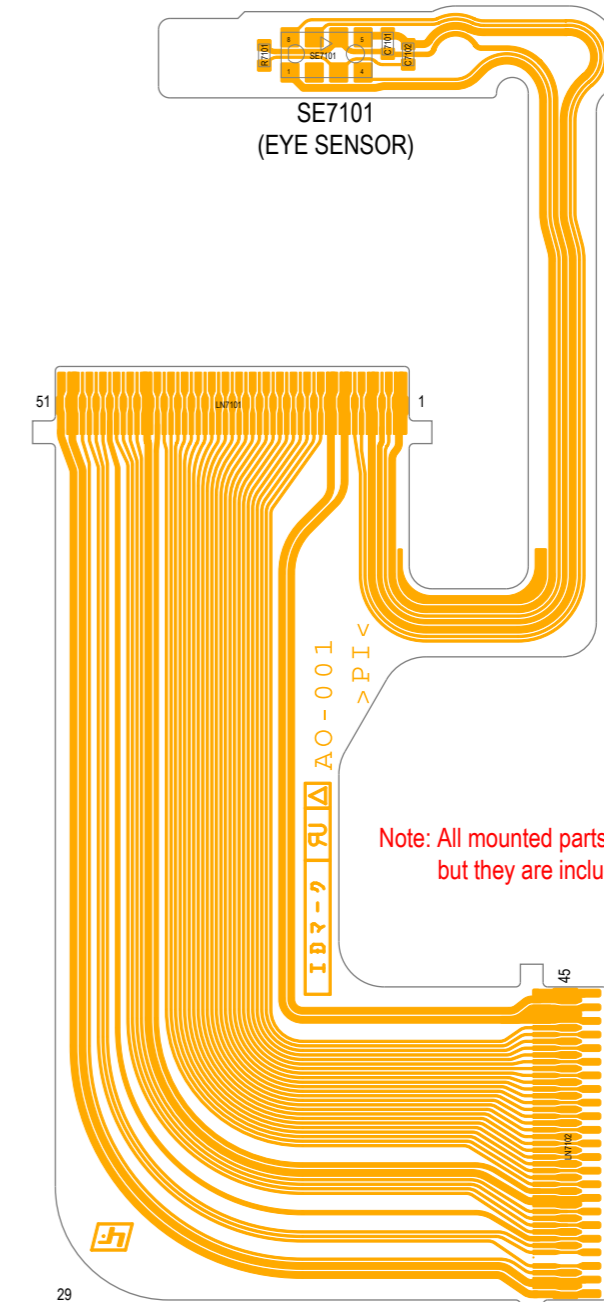
1-880-242-11

PD-414 BOARD



1-881-028- 11

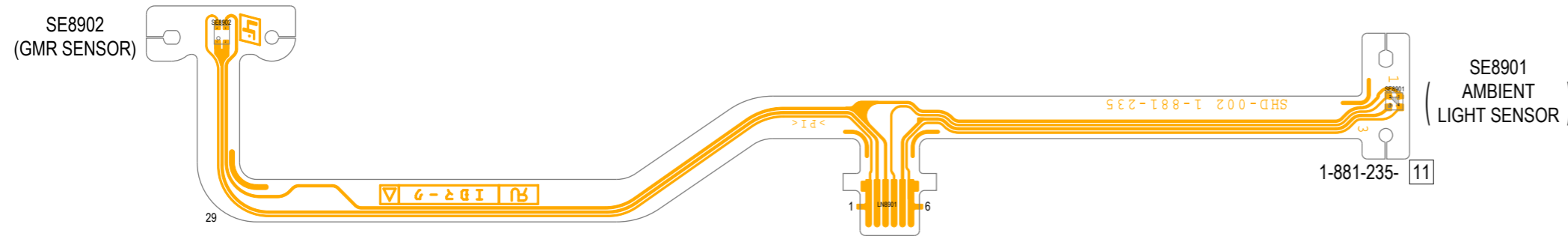
AO-001 FLEXIBLE BOARD



Note: All mounted parts are not supplied, but they are included in AO-001 flexible board.

1-881-219- 11

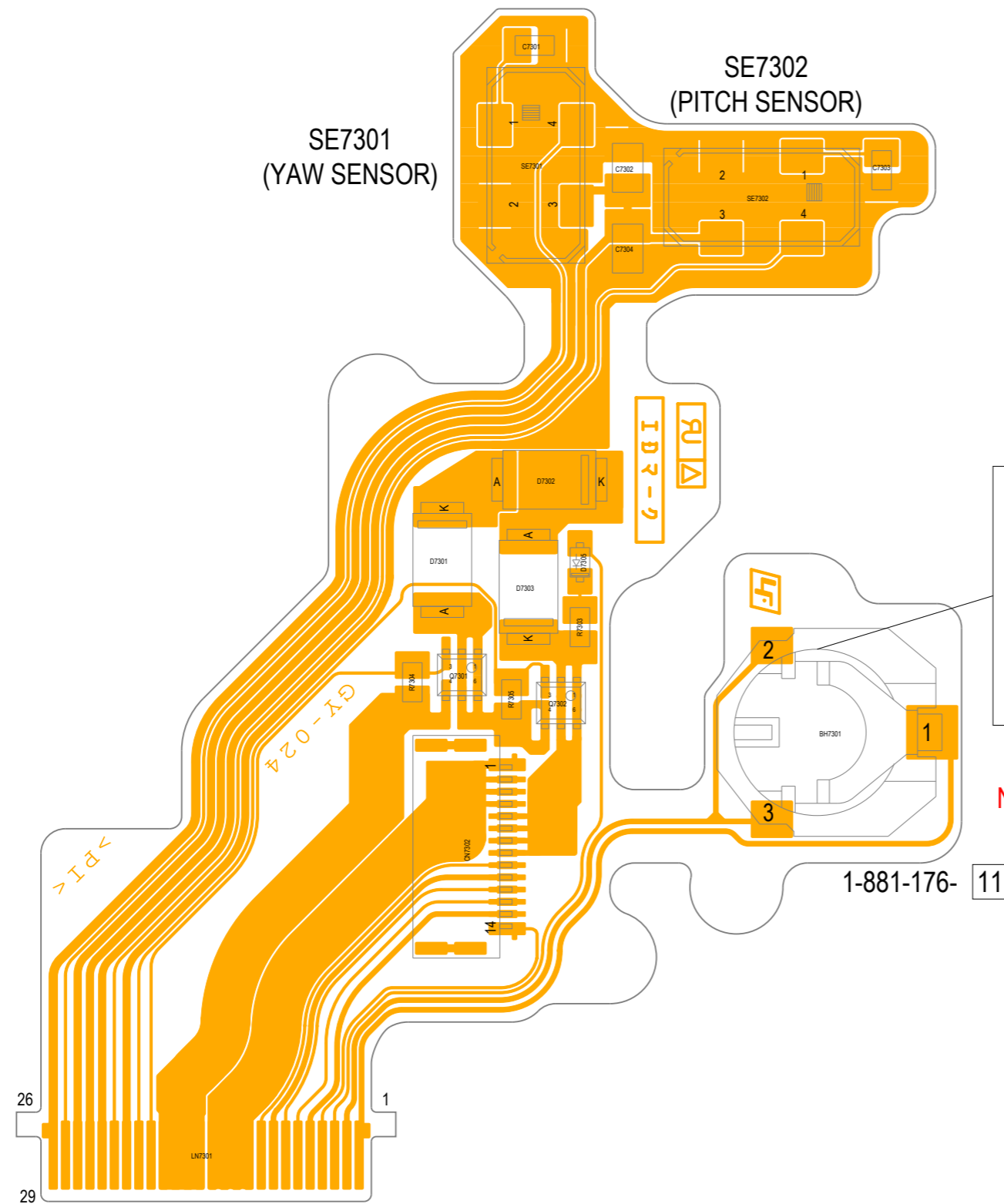
SHD-002 FLEXIBLE BOARD



Note: All mounted parts are not supplied, but they are included in SHD-002 flexible board.

1-881-235- 11

GY-024 FLEXIBLE BOARD

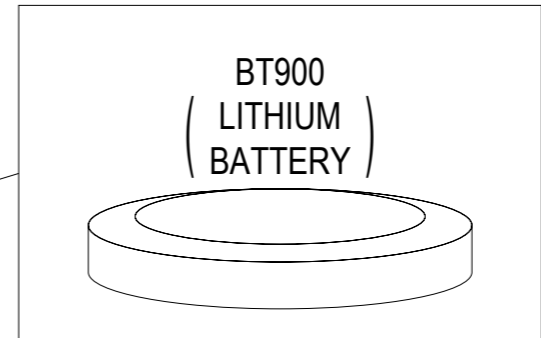


Caution
 Danger of explosion if battery is incorrectly replaced.
 Replace only with the same or equivalent type.
 Dispose of used batteries according to the instructions.

注意
 電池の交換は、正しく行わないと破裂する恐れがあります。
 電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。
 使用済み電池は、取扱指示に従って処分してください。

Note: When replacing the lithium battery (BT900) for the GY-024 flexible board, be sure to replace with a new GY-024 flexible board including the battery holder (BH7301). (The battery holder removed once cannot be used again.)

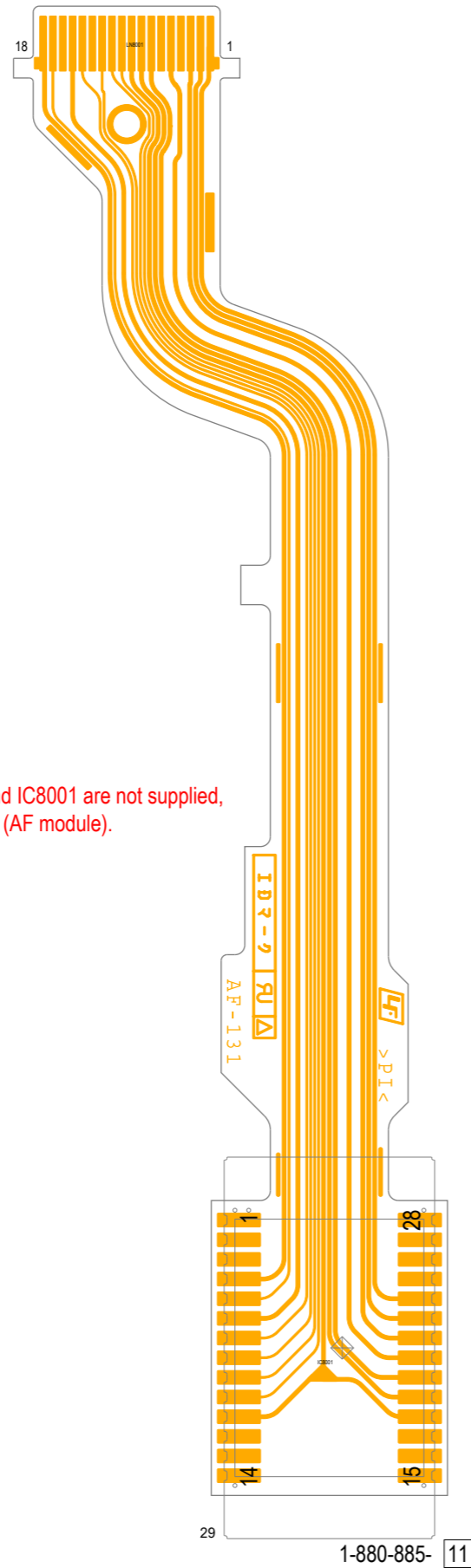
Note: GY-024フレキシブル基板のリチウム蓄電池 (BT900) を交換する場合はバッテリーホルダ (BH7301) を含むGY-024フレキシブル基板を同時に新品に交換してください。(一度使用したバッテリーホルダは再使用できません。)



Note: BT900 (lithium battery) is not included in GY-024 flexible board.

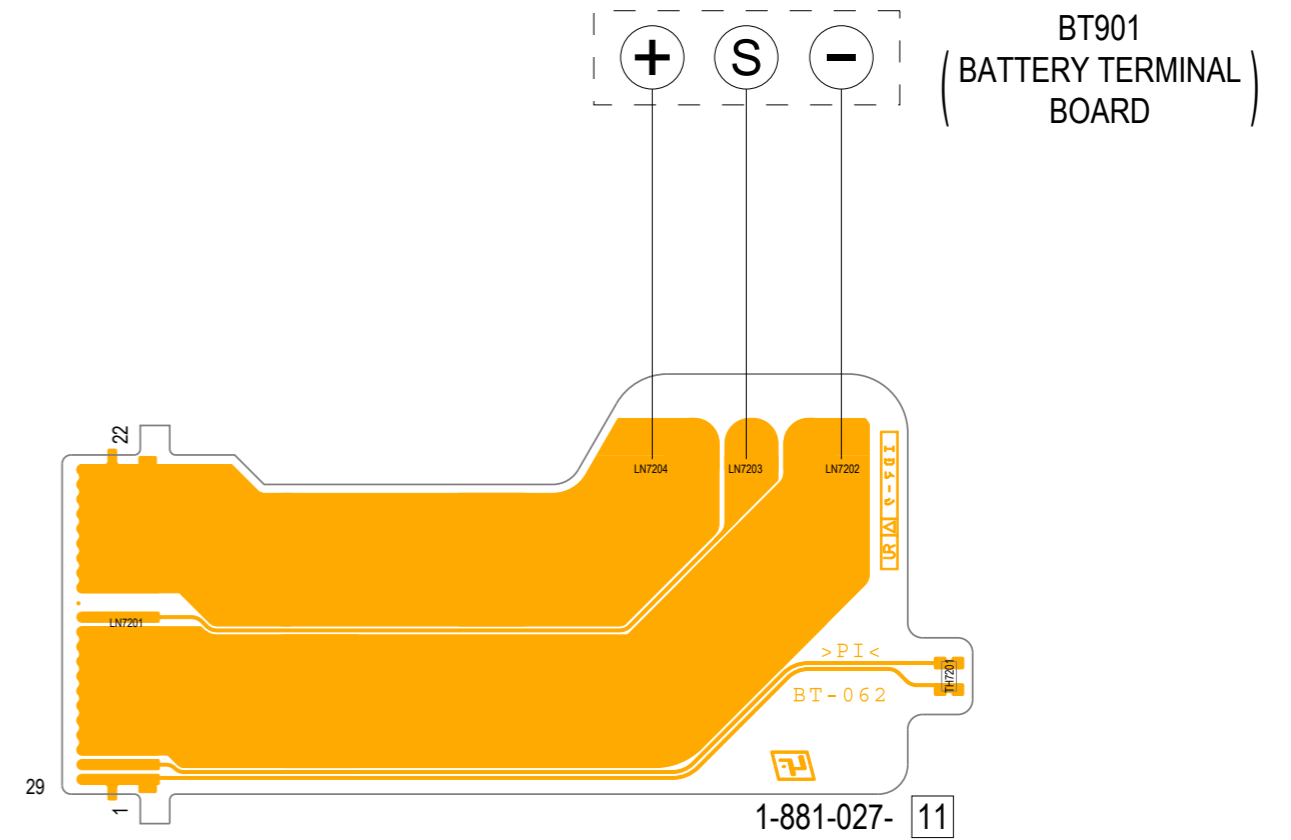
Note: All mounted parts are not supplied, but they are included in GY-024 flexible board.

AF-131 FLEXIBLE BOARD



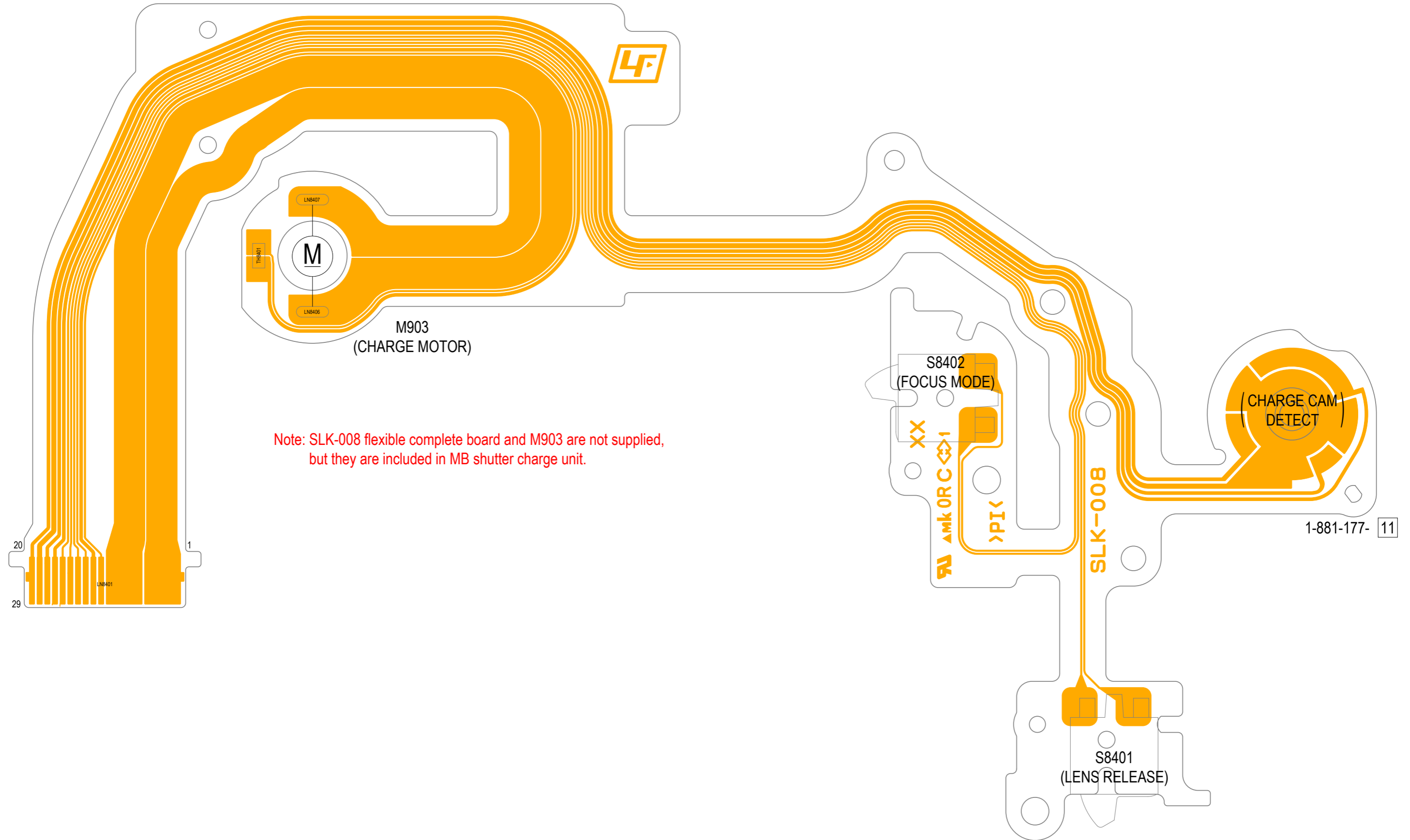
Note: AF-131 flexible complete board and IC8001 are not supplied, but they are included in ALX-8630 (AF module).

BT-062 FLEXIBLE BOARD

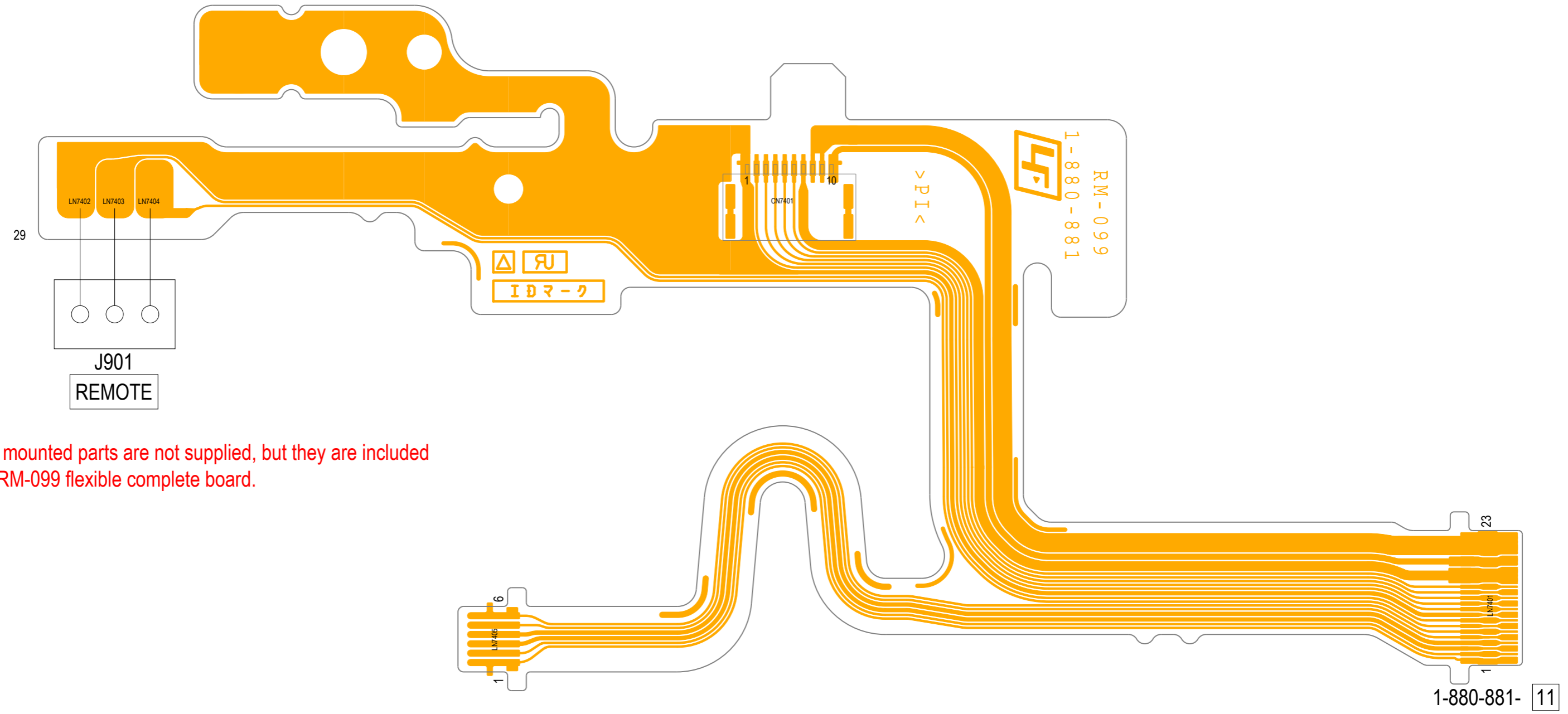


Note: TH7201 is not supplied, but this is included in BT-062 flexible complete board.

SLK-008 FLEXIBLE BOARD

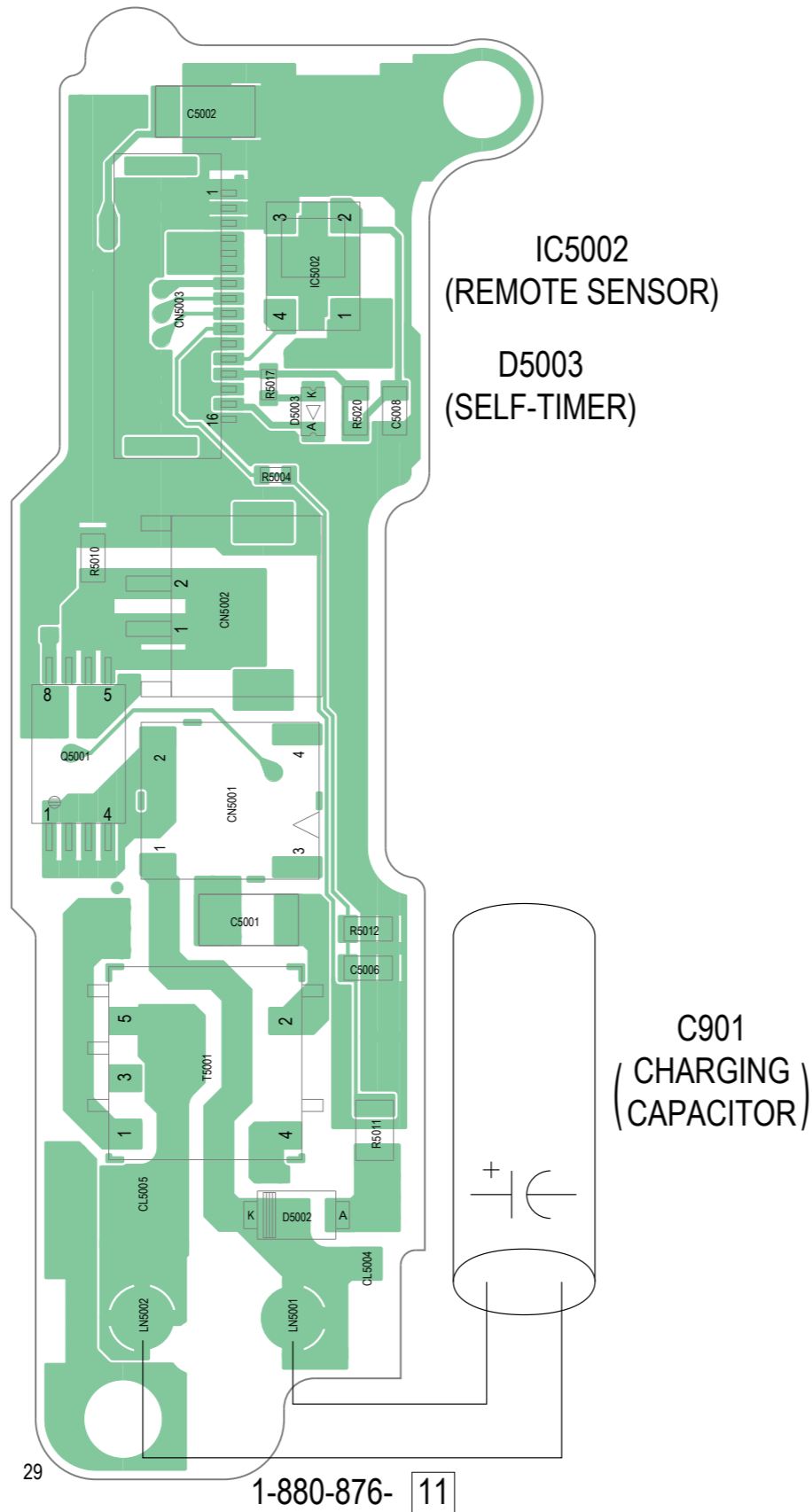


RM-099 FLEXIBLE BOARD

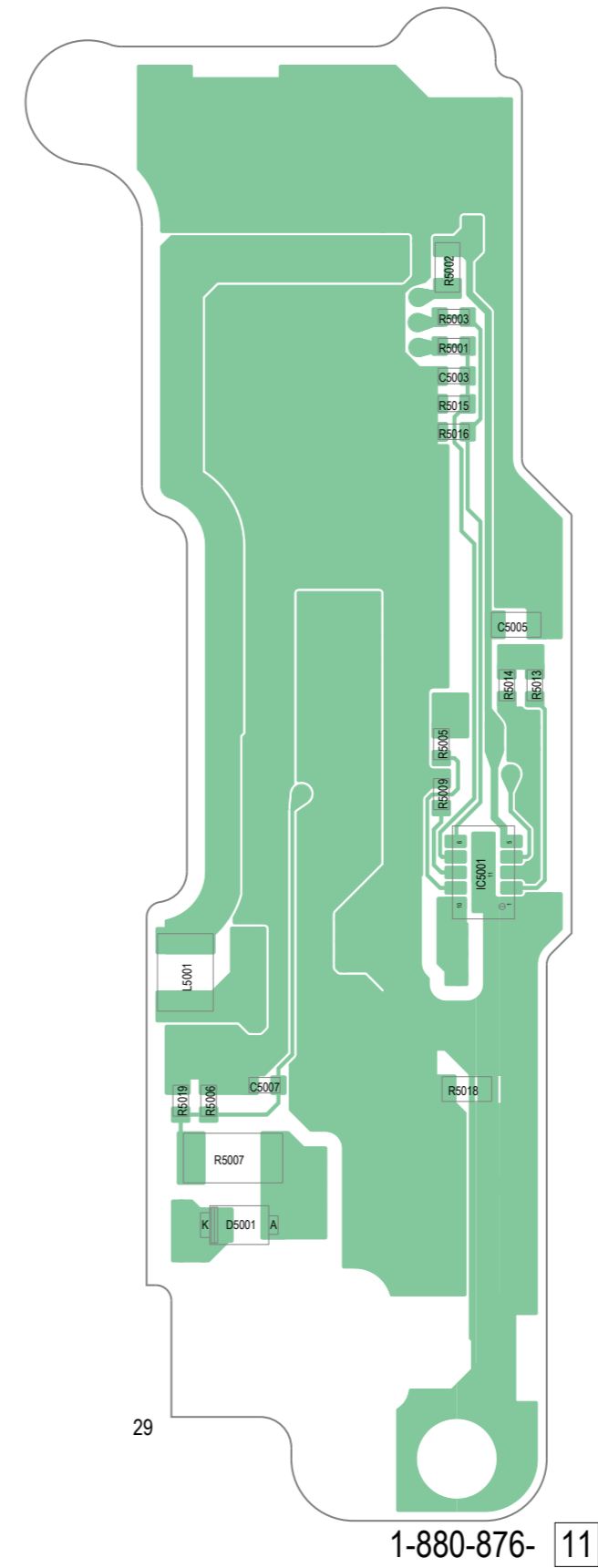


Note: All mounted parts are not supplied, but they are included in RM-099 flexible complete board.

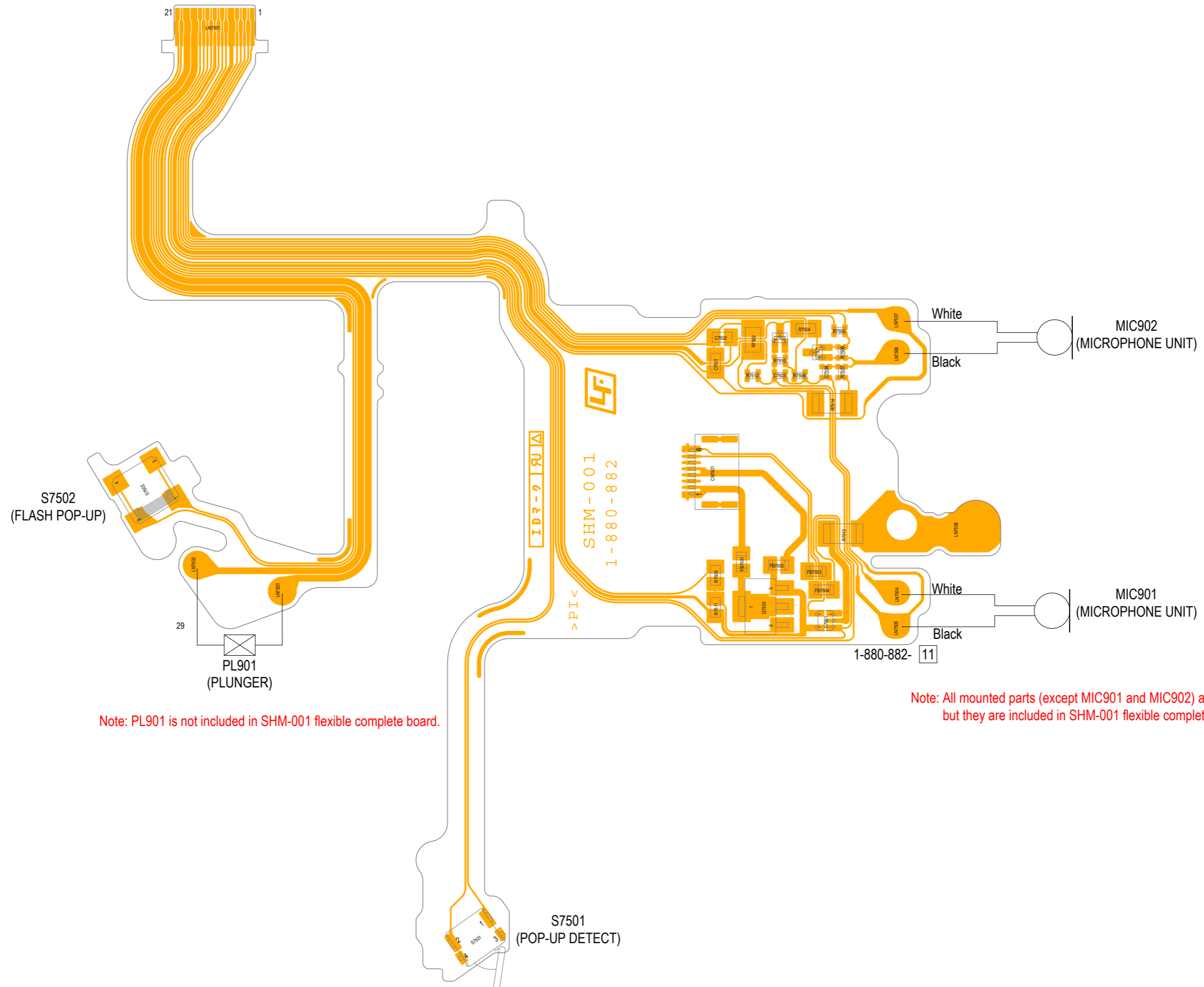
ST-233 BOARD (SIDE A)



ST-233 BOARD (SIDE B)



SHM-001 FLEXIBLE BOARD



Note: PL901 is not included in SHM-001 flexible complete board.

Note: All mounted parts (except MIC901 and MIC902) are not supplied, but they are included in SHM-001 flexible complete board.

7. ELECTRICAL PARTS LIST

(ENGLISH)

- NOTE:
- XX, -X mean standardized parts, so they may have some differences from the original one.
 - Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
 - The mechanical parts with no reference number in the exploded views are not supplied.
 - Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
 - CAPACITORS:
uF: μ F
 - COILS
uH: μ H
 - RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
 - SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA..., μ PA...,
uPB..., μ PB..., μ PC..., μ PC...,
uPD..., μ PD...

When indicating parts by reference number, please include the board name.

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Caution

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type. Dispose of used batteries according to the instructions.

Note1: When replacing the lithium battery (BT900) for the GY-024 flexible board, be sure to replace with a new GY-024 flexible board including the battery holder (BH7301). (The battery holder removed once cannot be used again.)

Note2: Be sure to read "Precautions for Replacement of Imager" on page 6-1 when changing the Imager.

(JAPANESE)

- 【使用上の注意】
- ここに記載されている部品は、補修用部品であるため、回路図及びセットに付いている部品と異なる場合があります。
 - XX, -Xは標準化部品のため、セットに付いている部品と異なる場合があります。
 - *印の部品は常備在庫しておりません。
 - コンデンサの単位でuFは μ Fを示します。
 - 抵抗の単位 Ω は省略してあります。
金 被：金属被膜抵抗。
サンキン：酸化金属被膜抵抗。
 - インダクタの単位でuHは μ Hを示します。
 - 半導体の名称でuA..., uPA..., uPB..., uPC..., uPD...等はそれぞれ μ A..., μ PA..., μ PB..., μ PC..., μ PD...を示します。

— お願い —
図面番号で部品を指定するときは基板名又はブロックを併せて指定してください。

Δ 印の部品、または Δ 印付の点線で囲まれた部品は、安全性を維持するために、重要な部品です。従って交換時は、必ず指定の部品を使用してください。

注意

電池の交換は、正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。使用済み電池は、取扱指示に従って処分してください。

Note1: GY-024フレキシブル基板のリチウム蓄電池 (BT900) を交換する場合はバッテリーホルダ (BH7301) を含むGY-024フレキシブル基板を同時に新品に交換してください。(一度使用したバッテリーホルダは再使用できません。)

Note2: イメージャの交換時は、6-1ページの"イメージャ交換時の注意"を必ずお読みください。

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
	1-881-219-21	AO-001 FLEXIBLE BOARD *****	C1002	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
		(All mounted parts are not supplied, but they are included in AO-001 flexible board.)	C1004	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
	A-1789-527-A	AM-022 BOARD, COMPLETE (SERVICE) (SLT-A33/A33L/A33Y)	C1005	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
	A-1790-073-A	AM-022 BOARD, COMPLETE (SERVICE) (SLT-A55/A55V/A55L/A55VL/A55VY) *****	C1007	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
		(IC1002 is not supplied, but this is included in AM-022 complete board.)	C1008	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
		< CAPACITOR >	C1009	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0001	1-165-875-11	CERAMIC CHIP 10uF 10% 10V	C1010	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C0002	1-165-875-11	CERAMIC CHIP 10uF 10% 10V	C1011	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C0003	1-165-875-11	CERAMIC CHIP 10uF 10% 10V	C1013	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0004	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	C1014	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0005	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	C1016	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0006	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C1018	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0007	1-164-936-11	CERAMIC CHIP 680PF 10% 50V	C1019	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0008	1-127-715-11	CERAMIC CHIP 0.22uF 10% 16V	C1020	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0009	1-100-252-11	CERAMIC CHIP 0.1uF 10% 6.3V	C1021	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0011	1-100-581-81	CERAMIC CHIP 0.0047uF 10% 50V	C1023	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0012	1-100-252-11	CERAMIC CHIP 0.1uF 10% 6.3V	C1024	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0014	1-164-933-11	CERAMIC CHIP 220PF 10% 50V	C1102	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0015	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C1103	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0016	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C1104	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0017	1-100-055-21	CERAMIC CHIP 22uF 20% 16V	C1105	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0018	1-100-055-21	CERAMIC CHIP 22uF 20% 16V	C1106	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
* C0020	1-112-298-91	CERAMIC CHIP 1uF 10% 16V	C1107	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0021	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	C1110	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0022	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C1111	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0023	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C1112	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
* C0024	1-112-298-91	CERAMIC CHIP 1uF 10% 16V	C1115	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
* C0025	1-112-746-11	CERAMIC CHIP 4.7uF 10% 6.3V	C1116	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0026	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	* C1118	1-112-746-11	CERAMIC CHIP 4.7uF 10% 6.3V
C0027	1-107-823-11	CERAMIC CHIP 0.47uF 10% 16V	C1201	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0028	1-164-939-11	CERAMIC CHIP 0.0022uF 10% 50V	C1202	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0029	1-164-935-11	CERAMIC CHIP 470PF 10% 50V	C1203	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0031	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V	C1205	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0032	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	C1301	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0033	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	C1302	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V
C0034	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	C1303	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0035	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	C1304	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0036	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	C1305	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0037	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	C1306	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0038	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	C1307	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0039	1-100-591-91	CERAMIC CHIP 1uF 10% 25V	C1308	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0040	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V	C1309	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0041	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V	C1310	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C0042	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V	C1311	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0043	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V (SLT-A33/A33L/A33Y)	C1312	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0044	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V	C1313	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0045	1-112-300-91	CERAMIC CHIP 4.7uF 10% 10V	C1315	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0046	1-100-591-91	CERAMIC CHIP 1uF 10% 25V	C1316	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0049	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	C1317	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0054	1-125-891-11	CERAMIC CHIP 0.47uF 10% 10V	C1318	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
* C0055	1-112-746-11	CERAMIC CHIP 4.7uF 10% 6.3V	C1324	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V
C0060	1-125-891-11	CERAMIC CHIP 0.47uF 10% 10V	C1501	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C0070	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	C1502	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C0071	1-165-875-11	CERAMIC CHIP 10uF 10% 10V	C1503	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
			C1504	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
			C1505	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
			C1506	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
			C1507	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
			C1508	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V

Table with columns: Ref. No., Part No., Description, and values for various components like METAL CHIP, SHORT CHIP, and RES. NETWORK.

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Table with columns: Ref. No., Part No., Description, and values for various components like GMR SENSOR, DIGITAL ACCELEROMETER, and various boards.

Table with columns: Ref. No., Part No., Description, and values for various components like CERAMIC CHIP, FFC/FPC CONNECTOR, DIODE, and MICROPHONE.

Ref. No.	Part No.	Description
		< SWITCH >
S8401	1-786-149-21	SWITCH, PUSH (1 KEY)
S8402	1-786-149-21	SWITCH, PUSH (1 KEY)
		< THERMISTOR >
TH8401	1-804-045-11	THERMISTOR
	A-1783-995-A	ST-233 BOARD, COMPLETE *****
	4-192-221-01	BD CONDENSER TAPE
	4-196-592-01	BD ST SHIELD SHEET
		< CAPACITOR >
C5001	1-165-875-11	CERAMIC CHIP 10uF 10% 10V
C5002	1-165-875-11	CERAMIC CHIP 10uF 10% 10V
C5003	1-164-858-11	CERAMIC CHIP 22PF 5% 50V
C5007	1-164-872-11	CERAMIC CHIP 82PF 5% 50V
C5008	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
△C901	1-116-522-11	ELECT 180uF 99% 330V
		< CONNECTOR >
* CN5001	1-821-666-21	PIN, CONNECTOR
* CN5002	1-580-055-21	PIN, CONNECTOR (SMD) 2P
CN5003	1-816-646-61	FFC/FPC CONNECTOR (LIF) 16P
		< DIODE >
△*D5001	6-502-219-01	DIODE FV02R80TP
△D5002	6-501-119-01	DIODE RR264M-400
D5003	6-502-193-01	DIODE SML-D12V8WT86SN
		< IC >
△*IC5001	6-716-174-01	IC BD4221NUX-E2
IC5002	6-600-629-01	IC RS-470
		< COIL >
* L5001	1-400-820-11	INDUCTOR 2.2uH
		< TRANSISTOR >
△*Q5001	6-552-144-01	TRANSISTOR TIG052TS-TL-E
		< RESISTOR >
R5006	1-208-687-11	METAL CHIP 1.5K 0.5% 1/16W
* R5007	1-257-074-11	METAL CHIP 330K 0.5% 1/4W
R5009	1-218-971-11	METAL CHIP 33K 5% 1/16W
* R5011	1-246-338-21	METAL CHIP 3M 1/8W
R5012	1-218-881-11	METAL CHIP 27K 0.5% 1/10W
R5013	1-218-938-11	METAL CHIP 56 5% 1/16W
R5014	1-218-989-11	METAL CHIP 1M 5% 1/16W
R5015	1-218-953-11	METAL CHIP 1K 5% 1/16W
R5016	1-218-953-11	METAL CHIP 1K 5% 1/16W
R5017	1-218-937-11	METAL CHIP 47 5% 1/16W
R5019	1-218-958-11	METAL CHIP 2.7K 5% 1/16W
		< TRANSFORMER >
△*T5001	1-445-931-21	TRANSFORMER, D.C.-D.C.CONVERTER

Ref. No.	Part No.	Description
	1-881-181-11	STC-002 FLEXIBLE BOARD *****