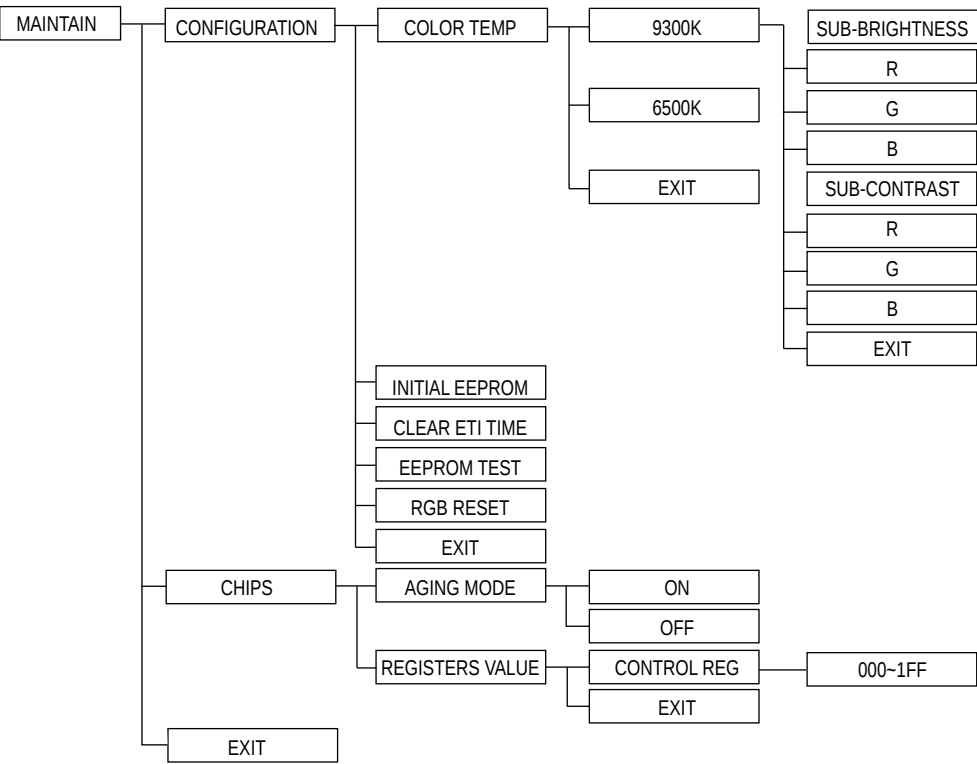


2-2. Uses of Service Mode

- 1. Turn off the power with the POWER button in the front panel. The red POWER LED lights on.
- 2. Press the POWER button in the front panel with pressing the UP (↑) and DOWN (↓) buttons, and the system enters the service mode.  
When no signal is input to the selected input terminal, the following functions are disabled.
- 3. Press the MENU button, and the main menu is displayed. Then go to page 2 of the main menu with the UP (↑) or DOWN (↓) button, then select the MAINTAIN icon on the bottom line, and then press the OK button.
- 4. In this menu screen, the version number and released date of the internal software can be checked.
- 5. The structure of the MAINTAIN menu is shown below.



The operation procedure is basically same as that of the ordinary user controls. The function of each menu is explained in next section.

## 2-3. Functions of Service Mode

1. **COLOR TEMP**  
This is used for the white balance adjustment at color temperature 9300 K and 6500 K. The adjustment requires to be done for every input (INPUT1: DVI-D, INPUT1: HD15, or INPUT2: HD15) by switching the input. The adjustment data is stored into the register for respective inputs.
2. **INITIAL EEPROM**  
This sets the data of the EEPROM to the default data. This operation is not required usually.
3. **CLEAR ETI TIME**  
This resets the ETI (Elapsed Time Indicator) counter to 00000 H.
4. **EEPROM TEST**  
This tests writing and reading of the EEPROM.
5. **RGB RESET**  
This adjust the offset and gain of the input AD converter for the analog inputs (INPUT1: HD15 and INPUT2:HD15). As these adjustments are common to both inputs, perform them for either input. It is unnecessary for another input. Execute the adjustments under the condition where the signal specified in "White Balance Adjustment" is input.
6. **AGING IN MODE**  
This sets and clears the NO SYNC AGING flag.  
AGING MODE = ON: Sets the NO SYNC AGING flag.  
AGING MODE = OFF: Clears the NO SYNC AGING flag.  
When the NO SYNC AGING flag is set and the input with no input signal is selected, the system goes into the BURN IN mode. The NO SYNC AGING flag is held until it is cleared. To clear the NO SYNC AGING flag, go into the service mode and then set the AGINGN MODE to OFF, or execute the all mode recall.
7. **CONTROL REG.**  
This can check the data of the internal registers. This operation is not required usually.

## 2-4. White Balance Adjustment

### < Preparation >

- (1) Measurement point : Center of screen
- (2) Measurement distance : 50 cm
- (3) Measurement angle : 90°
- (4) Color analyzer (Minolta CS-1000 or equivalent)
- (5) Signal generator (Astro Design VG-828D or equivalent)  
Be sure to calibrate the analog RGB output level with 75Ω termination.

1. **Service mode setting**  
Enter the service mode referring to step 1 and 2 of Section 2-2.
2. **Aging**  
Set the AGING MODE in the service mode to ON. Disconnect the signal input terminal or select the input with no signal input, and the system goes into the AGING MODE.  
Execute aging for 30 minutes or more.
3. **User control setting**  
Feed a signal to the selected input, and then execute reset in the menu screen. Then, move the menu display position to avoid the measurement point. Or, set the following for respective inputs.

BACKLIGHT (Brightness of backlight) = 100

CONTRAST = 70

BRIGHTNESS = 50

Menu display position = not center of screen (Avoid the measurement point.)

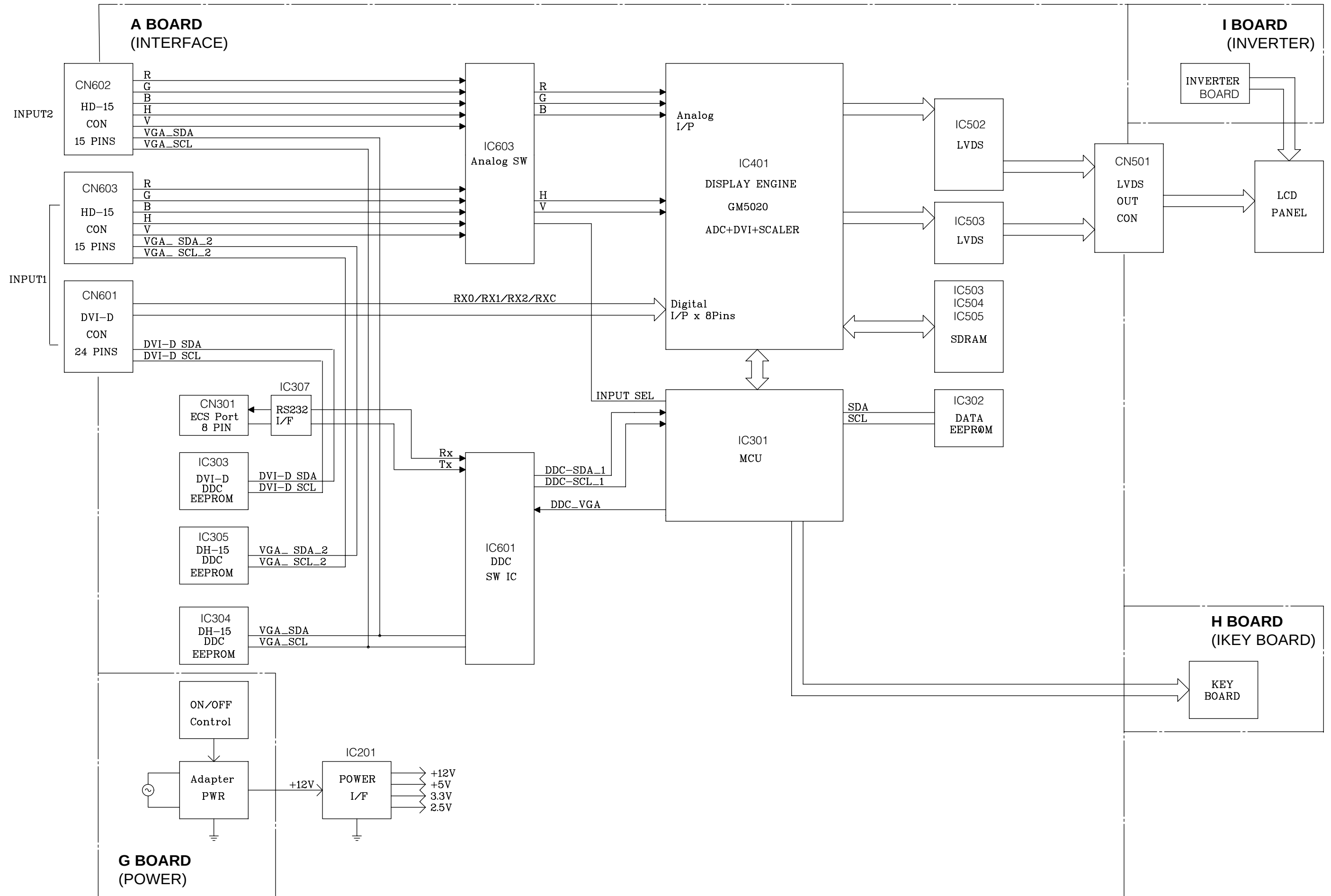
(The setting of the menu display position is common to respective inputs.)

ECO = OFF (The setting of ECO is common to respective inputs.)

Do not change the above setting until the white balance adjustment is completed.

## SECTION 3 DIAGRAMS

### 3-1. BLOCK DIAGRAMS





1 2 3 4 5 6 7 8 9 10 11 12 13 14

A

B

C

D

E

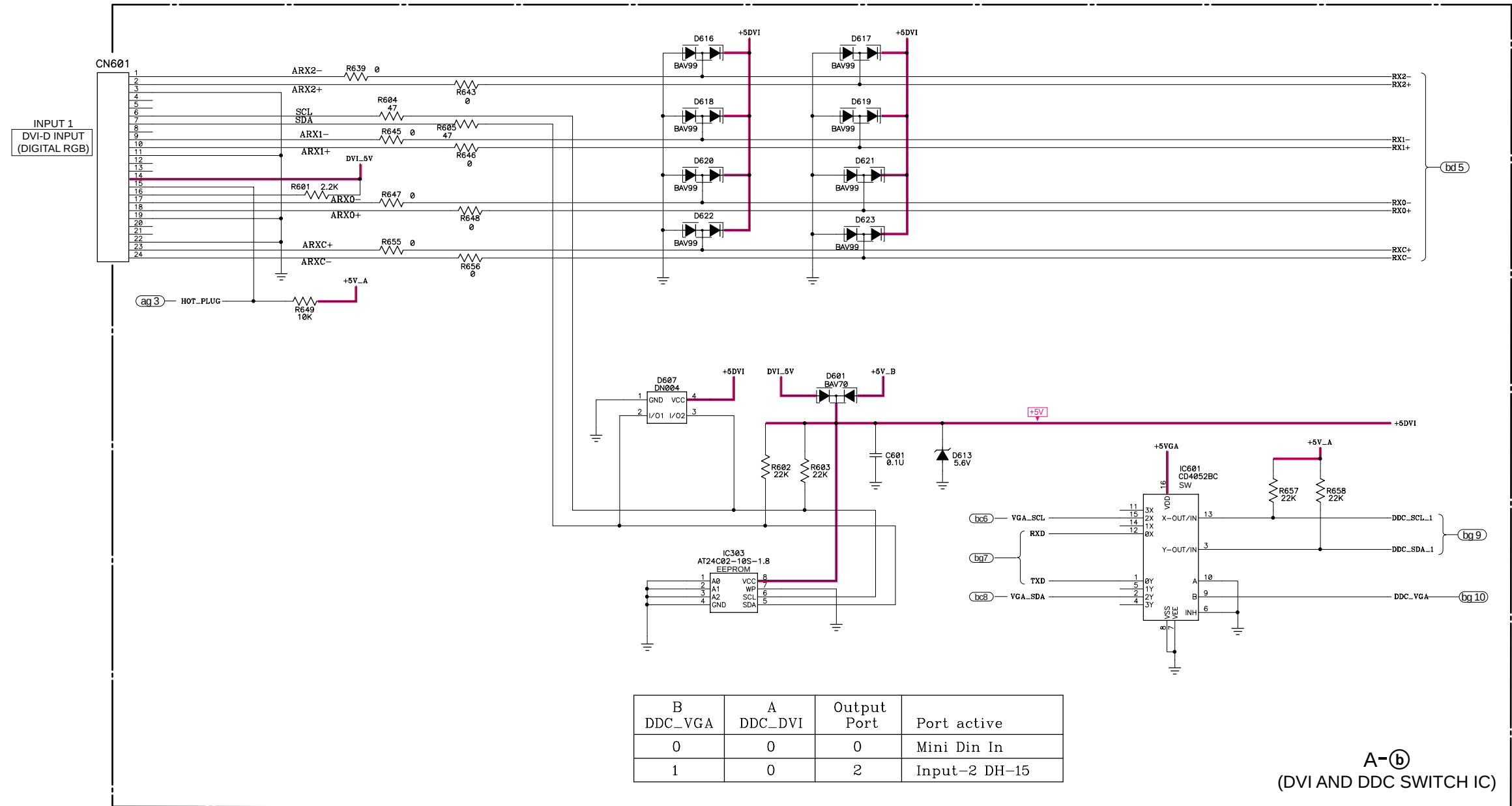
F

G

H

I

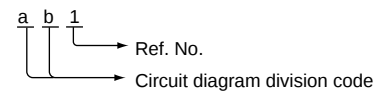
J

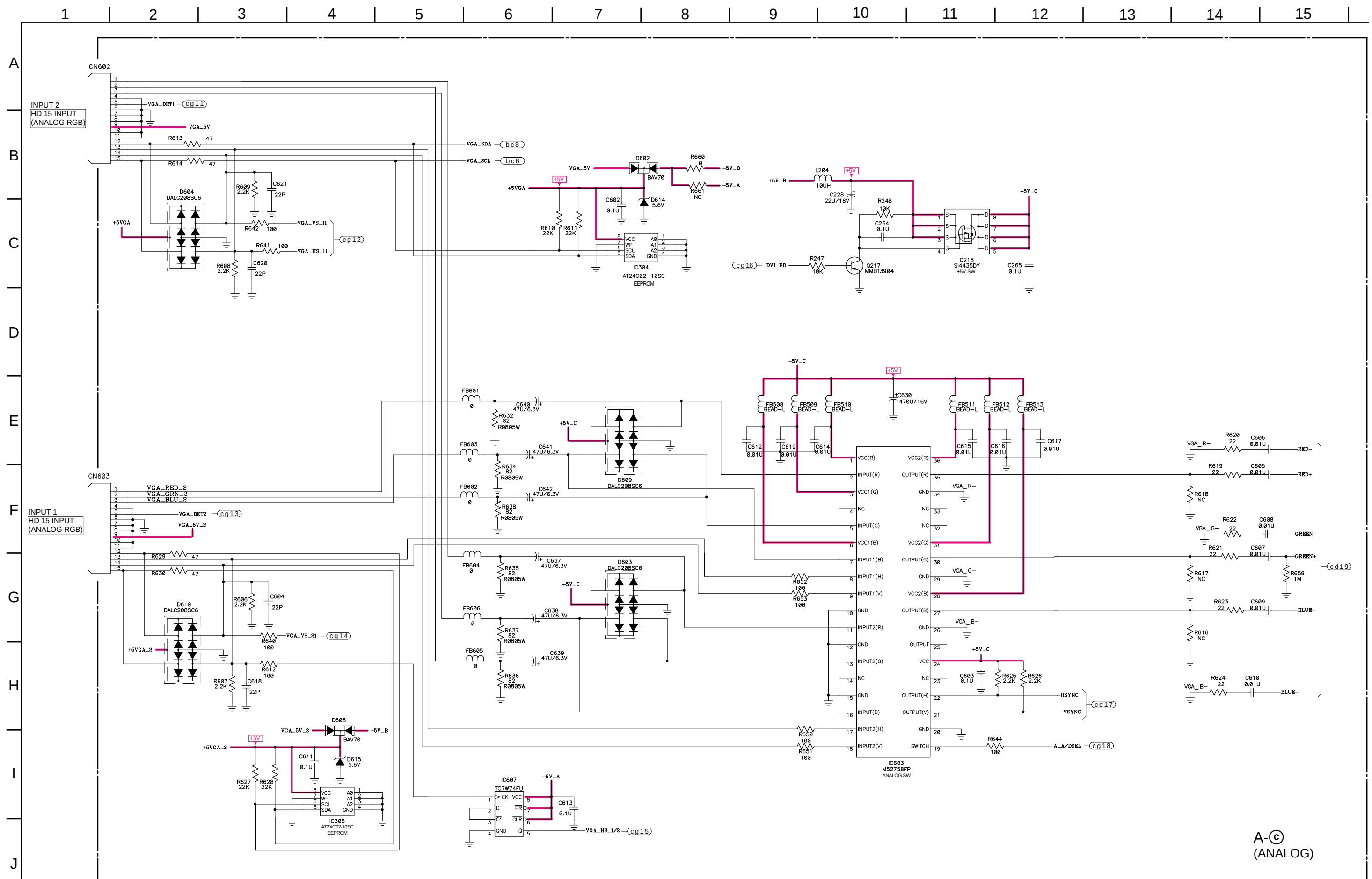


B-SS3627<J.>A.-P2

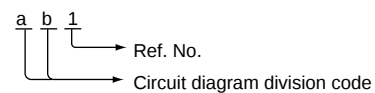
• Divided circuit diagram

One sheet of A board are circuit diagram is divided into eight sheets, each having the code A-① to A-⑧. For example, the destination (ab1) on the code A-① sheet is connected to (ab1) on the A-⑧ sheet.

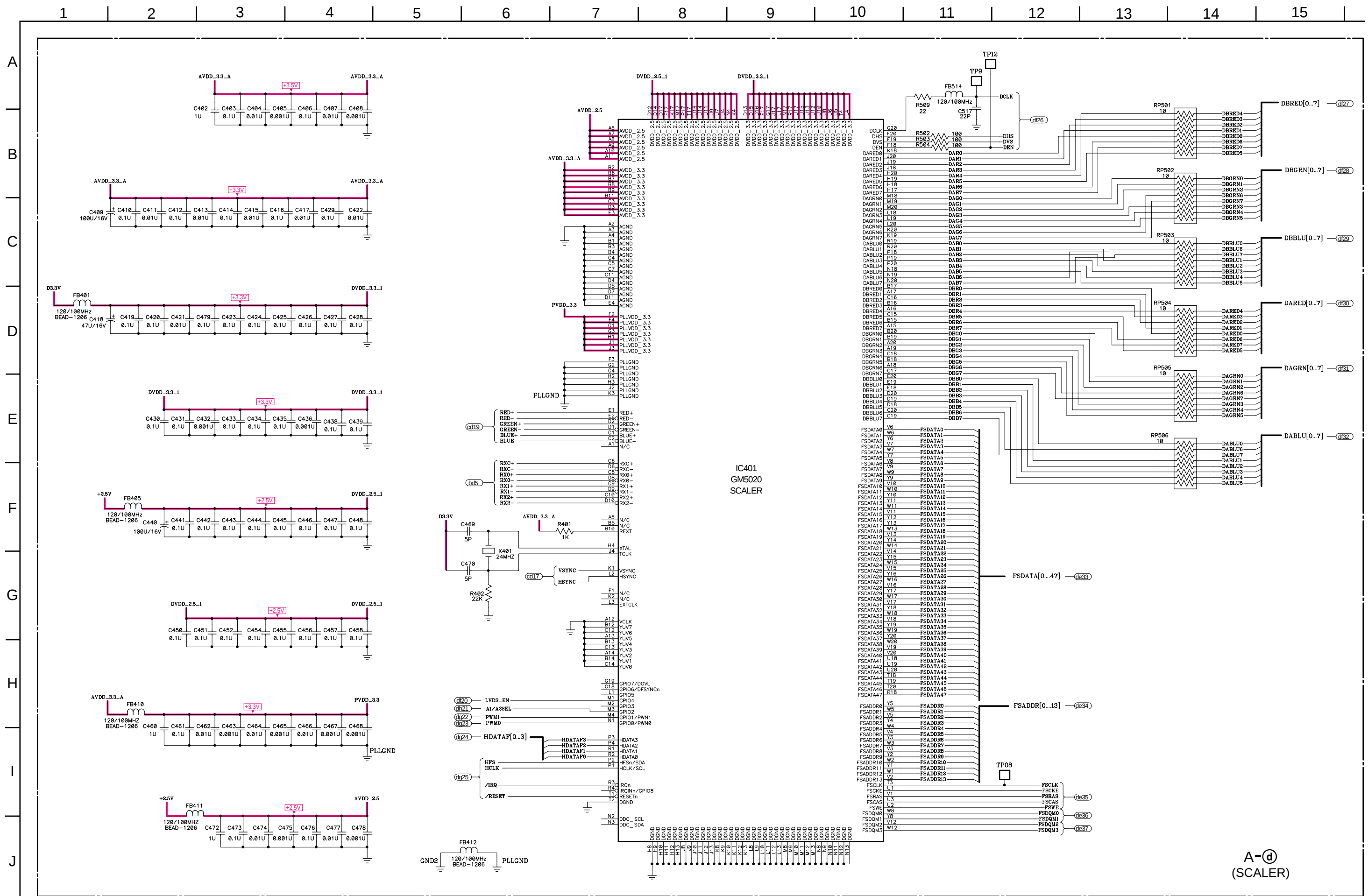




- Divided circuit diagram  
One sheet of A board are circuit diagram is divided into eight sheets, each having the code A-© to A-ℎ. For example, the destination (ab1) on the code A-© sheet is connected to (ab1) on the A-ℎ sheet.

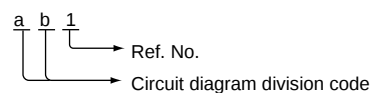


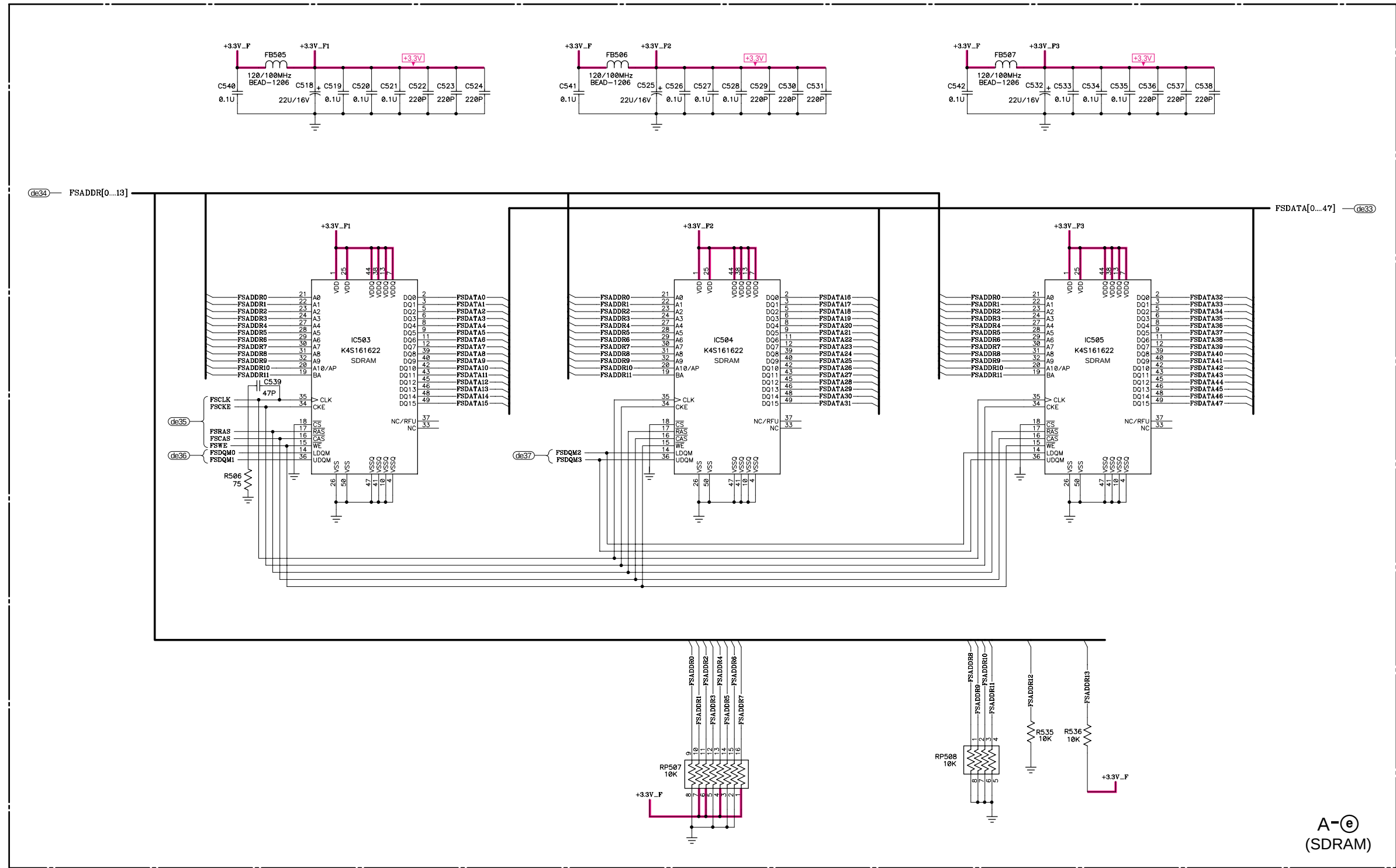
B-SS3627<J>A...P3



A-④  
(SCALER)

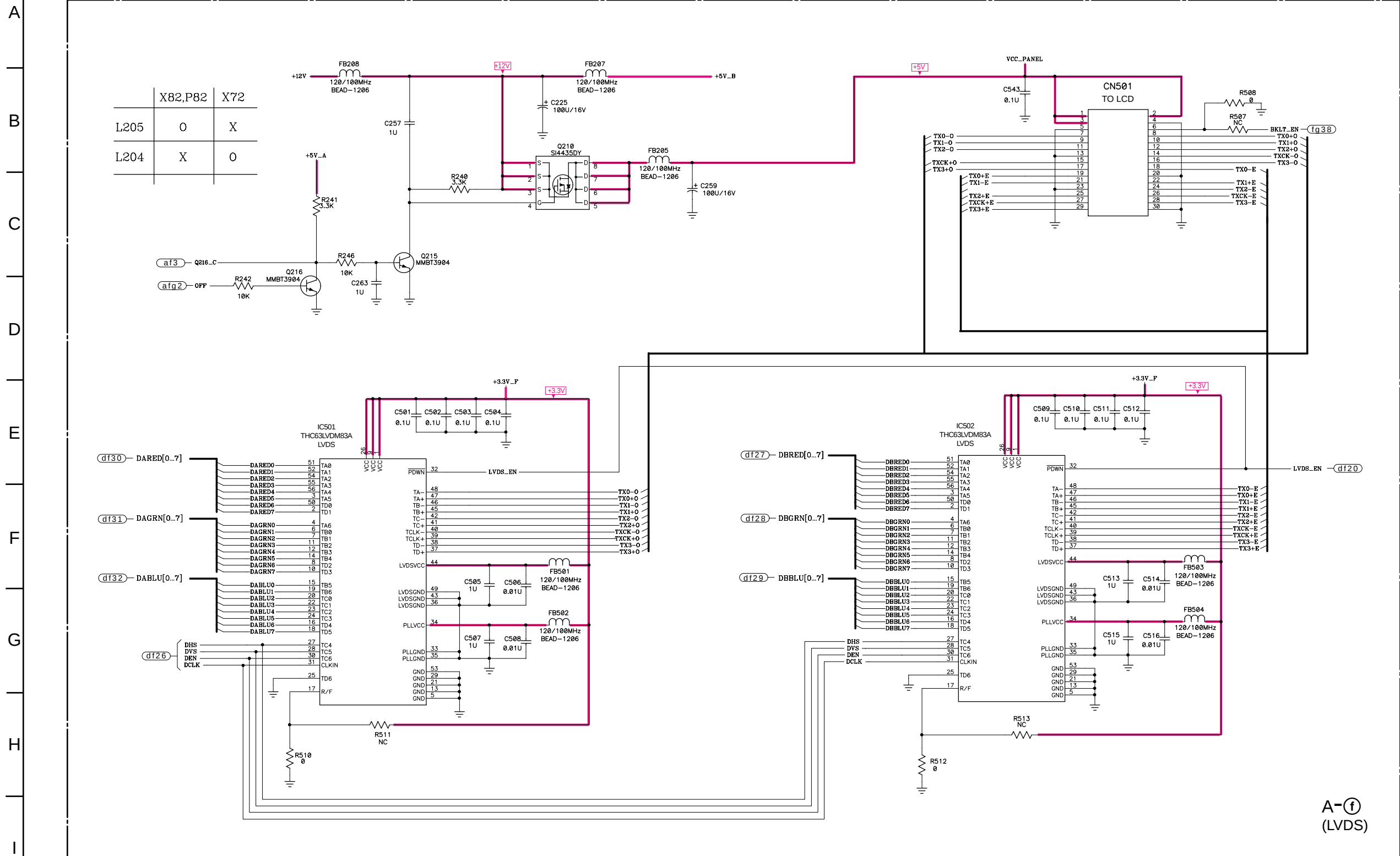
- Divided circuit diagram
- One sheet of A board circuit diagram is divided into eight sheets, each having the code A-① to A-⑧. For example, the destination (ab1) on the code A-① sheet is connected to (ab1) on the A-⑧ sheet.





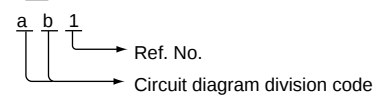
- Divided circuit diagram
- One sheet of A board are circuit diagram is divided into eight sheets, each having the code A-ⓐ to A-ⓗ. For example, the destination (ab1) on the code A-ⓐ sheet is connected to (ab1) on the A-ⓑ sheet.
- | a                             | b | 1 |
|-------------------------------|---|---|
| Ref. No.                      |   |   |
| Circuit diagram division code |   |   |

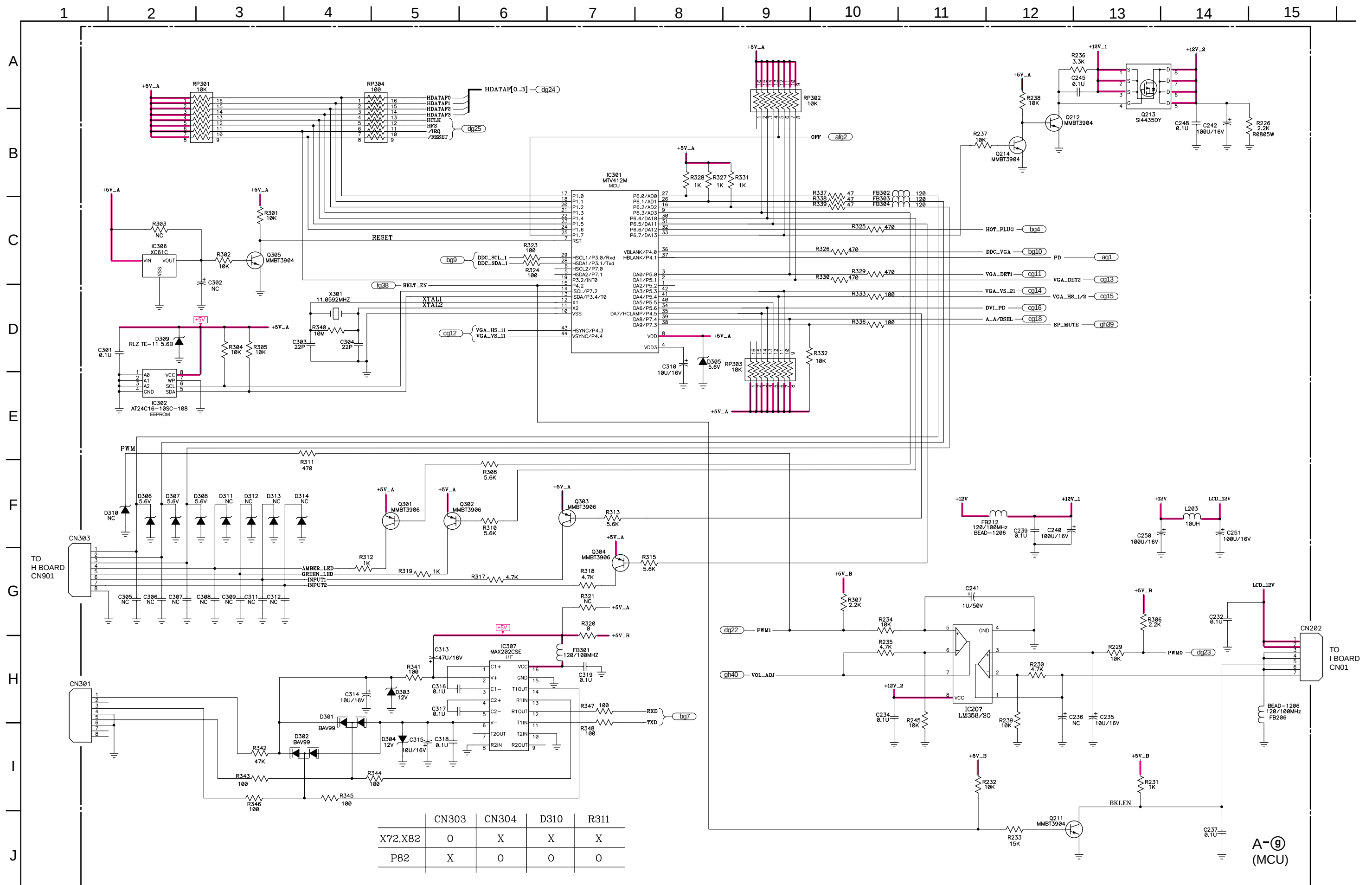
B-SS3627<J...>A...P5



B-SS3627<J>A...P6

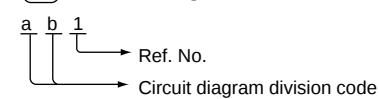
- Divided circuit diagram
- One sheet of A board circuit diagram is divided into eight sheets, each having the code A-1 to A-8. For example, the destination (ab1) on the code A-1 sheet is connected to (ab1) on the A-8 sheet.





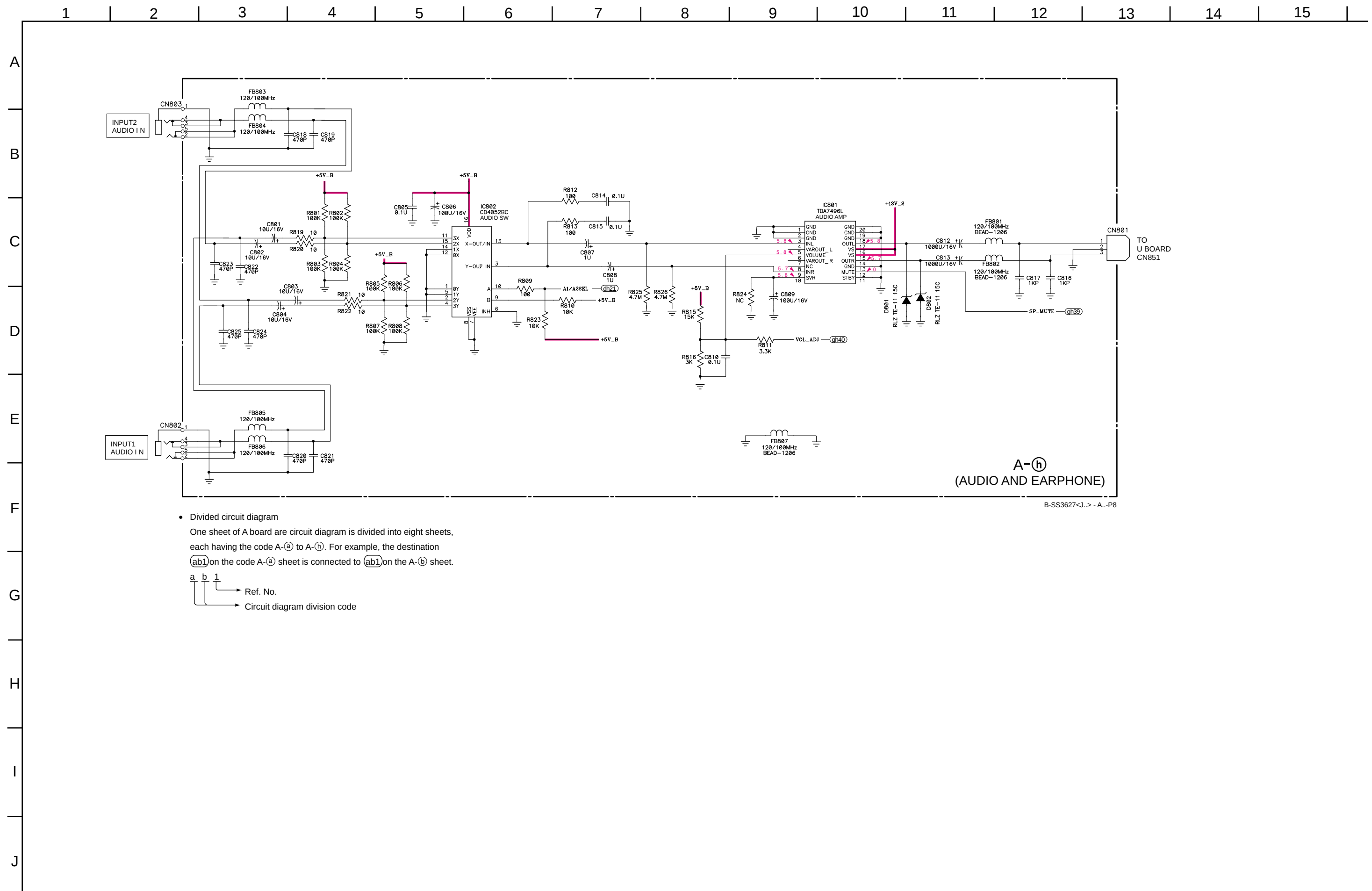
• Divided circuit diagram

One sheet of A board are circuit diagram is divided into eight sheets, each having the code A-③ to A-⑧. For example, the destination (ab1) on the code A-③ sheet is connected to (ab1) on the A-⑧ sheet.



A-9  
(MCU)

B-SS3627<J.> - A.-P7

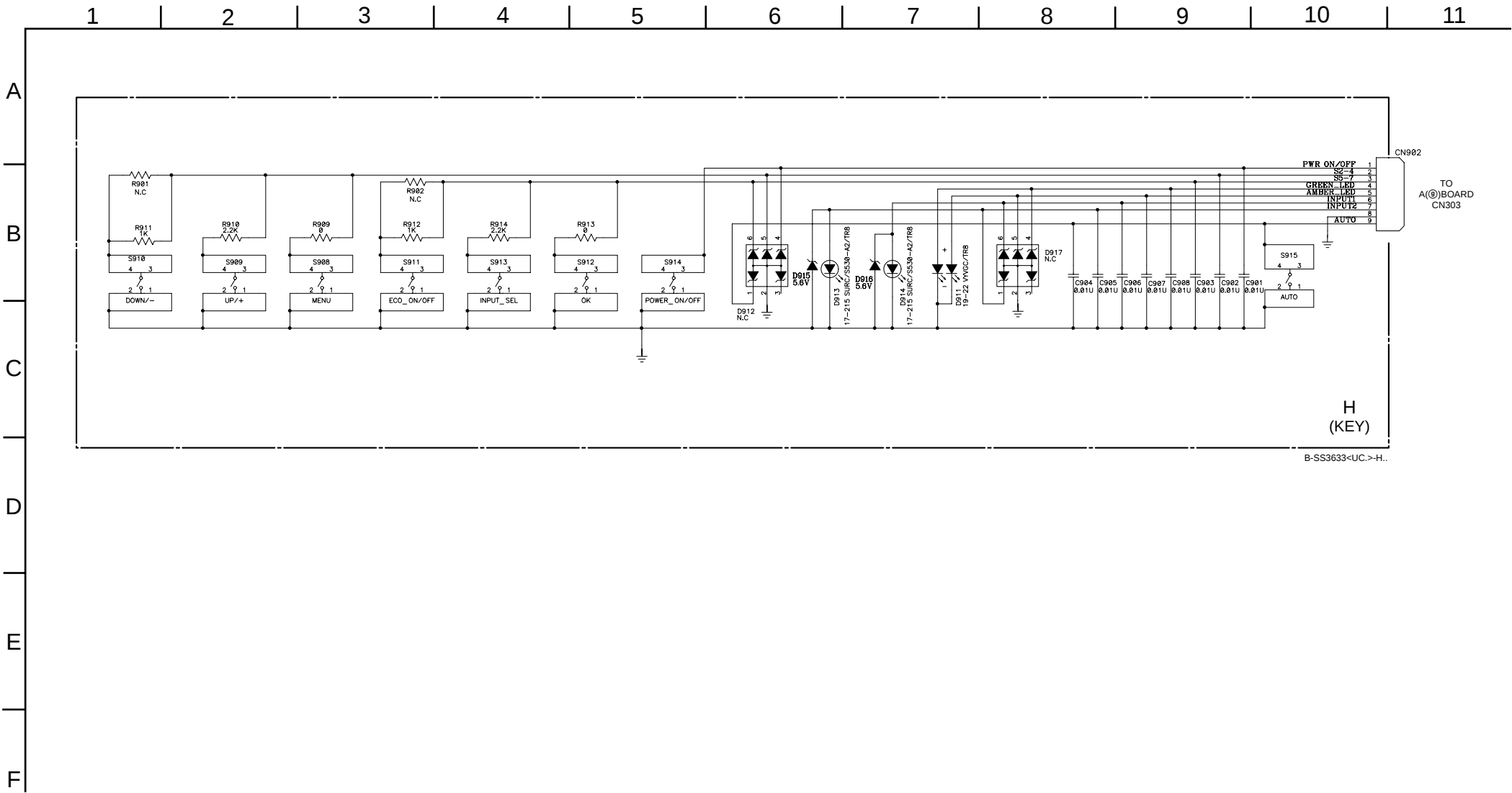


• Divided circuit diagram

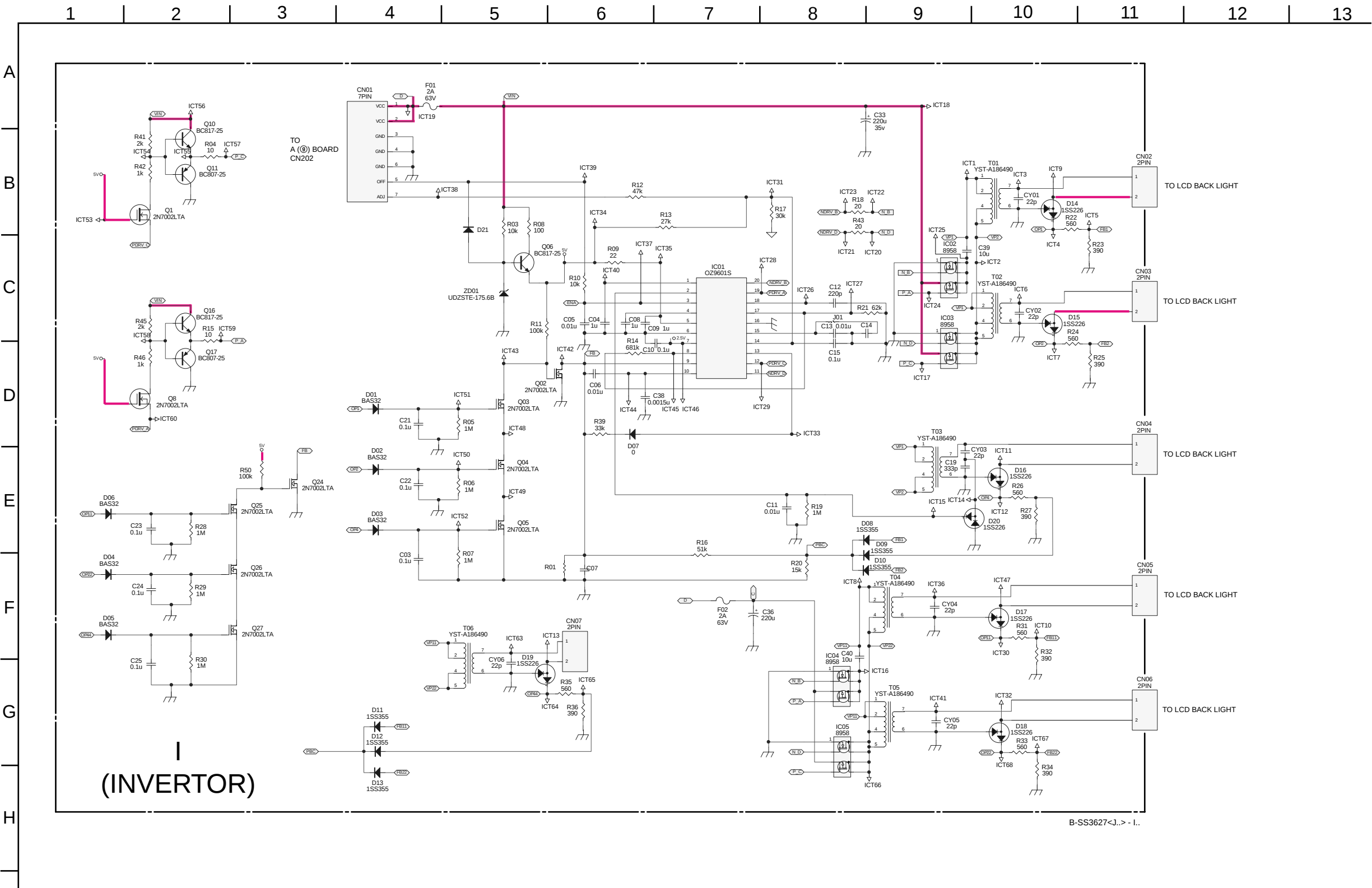
One sheet of A board are circuit diagram is divided into eight sheets, each having the code A-① to A-⑧. For example, the destination (ab1) on the code A-① sheet is connected to (ab1) on the A-⑧ sheet.

a b 1  
 Ref. No.  
 Circuit diagram division code

(2) Schematic Diagram of H Board



(3) Schematic Diagrams of I Board



The schematic diagram illustrates a power supply system for a medical device, organized into a grid with columns 1 through 15 and rows A through J. The circuit begins with an AC input (AC IN 100V 50/60Hz) at CN101, which passes through a fuse (F101) and thermal fuses (TH101, TH103). It then splits into two paths: one through a full-bridge rectifier (D130, C117, C118) and another through a series of resistors (R1011, R1012, R1013) and a diode (D101). The main power path goes through a transformer (T101) with multiple secondary windings. The primary winding is connected to the AC input. The secondary windings provide different voltage levels: 7V, 1V, 9V, 11V, and 10V. The 7V winding is connected to a full-bridge rectifier (D201, D202, D203, D204) and a filter capacitor (C251). The 1V winding is connected to a diode (D102) and a filter capacitor (C111). The 9V winding is connected to a diode (D103) and a filter capacitor (C108). The 11V winding is connected to a diode (D104) and a filter capacitor (C107). The 10V winding is connected to a diode (D105) and a filter capacitor (C106). The output of the 7V winding is connected to a +5V output terminal (CN203) through a series of resistors (R2511, R2512, R2513, R2514, R2515, R2516, R2517, R2518, R2519, R2520, R2521, R2522, R2523, R2524, R2525, R2526, R2527, R2528, R2529, R2530, R2531, R2532, R2533, R2534, R2535, R2536, R2537, R2538, R2539, R2540, R2541, R2542, R2543, R2544, R2545, R2546, R2547, R2548, R2549, R2550, R2551, R2552, R2553, R2554, R2555, R2556, R2557, R2558, R2559, R2560, R2561, R2562, R2563, R2564, R2565, R2566, R2567, R2568, R2569, R2570, R2571, R2572, R2573, R2574, R2575, R2576, R2577, R2578, R2579, R2580, R2581, R2582, R2583, R2584, R2585, R2586, R2587, R2588, R2589, R2590, R2591, R2592, R2593, R2594, R2595, R2596, R2597, R2598, R2599, R2600, R2601, R2602, R2603, R2604, R2605, R2606, R2607, R2608, R2609, R2610, R2611, R2612, R2613, R2614, R2615, R2616, R2617, R2618, R2619, R2620, R2621, R2622, R2623, R2624, R2625, R2626, R2627, R2628, R2629, R2630, R2631, R2632, R2633, R2634, R2635, R2636, R2637, R2638, R2639, R2640, R2641, R2642, R2643, R2644, R2645, R2646, R2647, R2648, R2649, R2650, R2651, R2652, R2653, R2654, R2655, R2656, R2657, R2658, R2659, R2660, R2661, R2662, R2663, R2664, R2665, R2666, R2667, R2668, R2669, R2670, R2671, R2672, R2673, R2674, R2675, R2676, R2677, R2678, R2679, R2680, R2681, R2682, R2683, R2684, R2685, R2686, R2687, R2688, R2689, R2690, R2691, R2692, R2693, R2694, R2695, R2696, R2697, R2698, R2699, R2700, R2701, R2702, R2703, R2704, R2705, R2706, R2707, R2708, R2709, R2710, R2711, R2712, R2713, R2714, R2715, R2716, R2717, R2718, R2719, R2720, R2721, R2722, R2723, R2724, R2725, R2726, R2727, R2728, R2729, R2730, R2731, R2732, R2733, R2734, R2735, R2736, R2737, R2738, R2739, R2740, R2741, R2742, R2743, R2744, R2745, R2746, R2747, R2748, R2749, R2750, R2751, R2752, R2753, R2754, R2755, R2756, R2757, R2758, R2759, R2760, R2761, R2762, R2763, R2764, R2765, R2766, R2767, R2768, R2769, R2770, R2771, R2772, R2773, R2774, R2775, R2776, R2777, R2778, R2779, R2780, R2781, R2782, R2783, R2784, R2785, R2786, R2787, R2788, R2789, R2790, R2791, R2792, R2793, R2794, R2795, R2796, R2797, R2798, R2799, R2800, R2801, R2802, R2803, R2804, R2805, R2806, R2807, R2808, R2809, R2810, R2811, R2812, R2813, R2814, R2815, R2816, R2817, R2818, R2819, R2820, R2821, R2822, R2823, R2824, R2825, R2826, R2827, R2828, R2829, R2830, R2831, R2832, R2833, R2834, R2835, R2836, R2837, R2838, R2839, R2840, R2841, R2842, R2843, R2844, R2845, R2846, R2847, R2848, R2849, R2850, R2851, R2852, R2853, R2854, R2855, R2856, R2857, R2858, R2859, R2860, R2861, R2862, R2863, R2864, R2865, R2866, R2867, R2868, R2869, R2870, R2871, R2872, R2873, R2874, R2875, R2876, R2877, R2878, R2879, R2880, R2881, R2882, R2883, R2884, R2885, R2886, R2887, R2888, R2889, R2890, R2891, R2892, R2893, R2894, R2895, R2896, R2897, R2898, R2899, R2900, R2901, R2902, R2903, R2904, R2905, R2906, R2907, R2908, R2909, R2910, R2911, R2912, R2913, R2914, R2915, R2916, R2917, R2918, R2919, R2920, R2921, R2922, R2923, R2924, R2925, R2926, R2927, R2928, R2929, R2930, R2931, R2932, R2933, R2934, R2935, R2936, R2937, R2938, R2939, R2940, R2941, R2942, R2943, R2944, R2945, R2946, R2947, R2948, R2949, R2950, R2951, R2952, R2953, R2954, R2955, R2956, R2957, R2958, R2959, R2960, R2961, R2962, R2963, R2964, R2965, R2966, R2967, R2968, R2969, R2970, R2971, R2972, R2973, R2974, R2975, R2976, R2977, R2978, R2979, R2980, R2981, R2982, R2983, R2984, R2985, R2986, R2987, R2988, R2989, R2990, R2991, R2992, R2993, R2994, R2995, R2996, R2997, R2998, R2999, R3000, R3001, R3002, R3003, R3004, R3005, R3006, R3007, R3008, R3009, R3010, R3011, R3012, R3013, R3014, R3015, R3016, R3017, R3018, R3019, R3020, R3021, R3022, R3023, R3024, R3025, R3026, R3027, R3028, R3029, R3030, R3031, R3032, R3033, R3034, R3035, R3036, R3037, R3038, R3039, R3040, R3041, R3042, R3043, R3044, R3045, R3046, R3047, R3048, R3049, R3050, R3051, R3052, R3053, R3054, R3055, R3056, R3057, R3058, R3059, R3060, R3061, R3062, R3063, R3064, R3065, R3066, R3067, R3068, R3069, R3070, R3071, R3072, R3073, R3074, R3075, R3076, R3077, R3078, R3079, R3080, R3081, R3082, R3083, R3084, R3085, R3086, R3087, R3088, R3089, R3090, R3091, R3092, R3093, R3094, R3095, R3096, R3097, R3098, R3099, R3100, R3101, R3102, R3103, R3104, R3105, R3106, R3107, R3108, R3109, R3110, R3111, R3112, R3113, R3114, R3115, R3116, R3117, R3118, R3119, R3120,

(5) Schematic Diagram of U Board

