

Figure 1 consists of two circuit diagrams illustrating noise reduction techniques for a 3V3 Level with Separate Ground Plane.

Left Diagram: Optimal USB Power

This diagram shows a USB PWR connector with pins V+, D-, D+, ID, and GND. The V+ pin is connected to a 100nF capacitor (C1) and a 4.75V regulator (U1). The D- and D+ pins are connected to a 100nF capacitor (C2) and a 4.75V regulator (U2). The ID pin is connected to a 100nF capacitor (C3) and a 4.75V regulator (U3). The GND pin is connected to a 100nF capacitor (C4) and a 4.75V regulator (U4). The output of the 4.75V regulator is connected to the 3V3 TP (Test Point).

Right Diagram: 3V3 Level with Separate Ground Plane

This diagram shows a 3.3V regulator (U1) with a 100nF capacitor (C1) and a 4.75V regulator (U2). The input of the 3.3V regulator is connected to a 100nF capacitor (C2) and a 4.75V regulator (U3). The output of the 3.3V regulator is connected to the 3V3 TP (Test Point). The 4.75V regulator (U2) is connected to the 3V3 TP (Test Point).

The diagram illustrates a stereo amplifier system with three main functional blocks:

- Audio Source Inputs:** This block shows two input channels, 'AudioIn_L_Line IN' and 'AudioIn_R_Line IN', connected to a 'Line In Stereo Jack'. It also includes a 'Mic In' section with a switch to select between 'MIC' and 'Mic Jack' inputs.
- Mic Pre-Amplifier:** This stage uses a MAX4466 microphone amplifier. It features a 'MIC_IN' input, a 'MAX_OUT' output, and a 'MAX_INs' input. The circuit includes a 5V supply, a 10k resistor (R1), a 0.01uF capacitor (C9), a 10k resistor (R2), a 10k resistor (R3), a 10k resistor (R4), a 10k resistor (R5), a 10k resistor (R6), a 10k resistor (R7), a 10k resistor (R8), a 10k resistor (R9), a 10k resistor (R10), a 10k resistor (R11), a 10k resistor (R12), a 10k resistor (R13), a 10k resistor (R14), a 10k resistor (R15), a 10k resistor (R16), a 10k resistor (R17), a 10k resistor (R18), a 10k resistor (R19), a 10k resistor (R20), a 10k resistor (R21), a 10k resistor (R22), a 10k resistor (R23), a 10k resistor (R24), a 10k resistor (R25), a 10k resistor (R26), a 10k resistor (R27), a 10k resistor (R28), a 10k resistor (R29), a 10k resistor (R30), a 10k resistor (R31), a 10k resistor (R32), a 10k resistor (R33), a 10k resistor (R34), a 10k resistor (R35), a 10k resistor (R36), a 10k resistor (R37), a 10k resistor (R38), a 10k resistor (R39), a 10k resistor (R40), a 10k resistor (R41), a 10k resistor (R42), a 10k resistor (R43), a 10k resistor (R44), a 10k resistor (R45), a 10k resistor (R46), a 10k resistor (R47), a 10k resistor (R48), a 10k resistor (R49), a 10k resistor (R50), a 10k resistor (R51), a 10k resistor (R52), a 10k resistor (R53), a 10k resistor (R54), a 10k resistor (R55), a 10k resistor (R56), a 10k resistor (R57), a 10k resistor (R58), a 10k resistor (R59), a 10k resistor (R60), a 10k resistor (R61), a 10k resistor (R62), a 10k resistor (R63), a 10k resistor (R64), a 10k resistor (R65), a 10k resistor (R66), a 10k resistor (R67), a 10k resistor (R68), a 10k resistor (R69), a 10k resistor (R70), a 10k resistor (R71), a 10k resistor (R72), a 10k resistor (R73), a 10k resistor (R74), a 10k resistor (R75), a 10k resistor (R76), a 10k resistor (R77), a 10k resistor (R78), a 10k resistor (R79), a 10k resistor (R80), a 10k resistor (R81), a 10k resistor (R82), a 10k resistor (R83), a 10k resistor (R84), a 10k resistor (R85), a 10k resistor (R86), a 10k resistor (R87), a 10k resistor (R88), a 10k resistor (R89), a 10k resistor (R90), a 10k resistor (R91), a 10k resistor (R92), a 10k resistor (R93), a 10k resistor (R94), a 10k resistor (R95), a 10k resistor (R96), a 10k resistor (R97), a 10k resistor (R98), a 10k resistor (R99), a 10k resistor (R100).

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