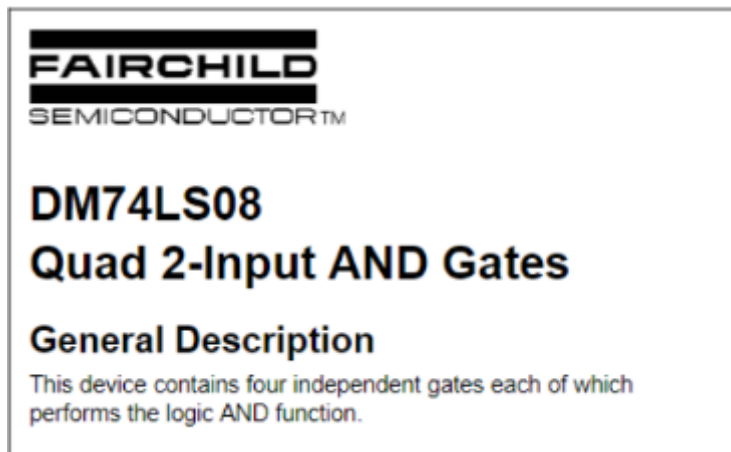


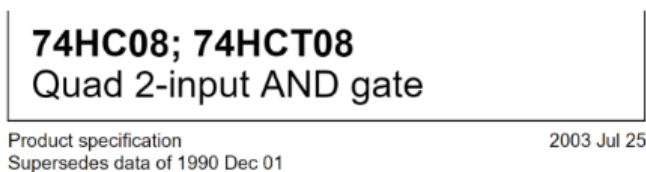
1.3 Datasheet

Datasheet is a piece of paper, in physical form or digital form, provided by the component or software manufacturer that consists of information about the product. In digital circuit design, datasheets provide information about electrical components such as IC. How to read a datasheet:

Code



From the picture above we know that the IC code is 74LS08, in order to know the main function of the IC we only have to see the number from the code, for example the number from code 74LS08 is 7408, the 7408 IC code indicates that the IC that described in the datasheet is a 2-Input AND Gates IC.



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Another example is the 74HC08 IC, despite having a different code from the 75LS08 IC the main function is still the same, both used as a 2-Input AND Gates IC. Another example that you can search for yourself is the 74LS11 IC that acts as 3-input AND gates.

Main Function

DM74LS08

Quad 2-Input AND Gates

General Description

This device contains four independent gates each of which performs the logic AND function.

The main function of an IC can be identified from the title of the datasheet, 2-Input AND gates means that every gate in the IC consists only of two inputs while Quad means that there are 4 gates in that IC.

Truth Table

Function Table

$$Y = AB$$

Inputs		Output
A	B	Y
L	L	L
L	H	L
H	L	L
H	H	H

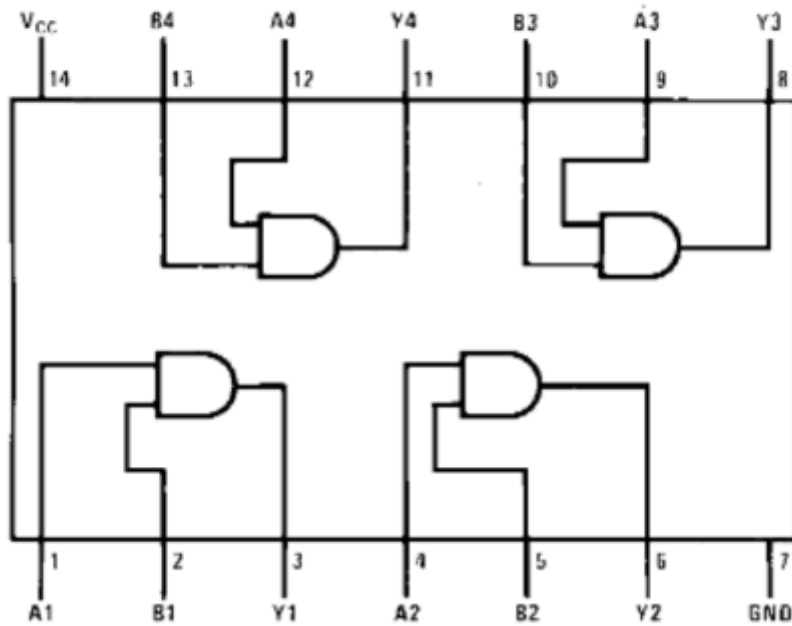
H = HIGH Logic Level

L = LOW Logic Level

From the IC truth table we can identify the boolean function about the gates in that particular IC. for example the IC 7408 consist of 2-input AND gates and the output will be H (High) only when both the input is H (High) otherwise the output will be L (Low) when at least one of the input is L (Low), the truth table of an IC corresponds to the logic function of the gates.

Connection Diagram

Connection Diagram



Connection diagram berguna untuk mengetahui fungsi dari suatu pin, berdasarkan contoh, terlihat bahwa pin 14 dan pin 7 berfungsi sebagai vcc dan ground. The connection diagram is used to identify the function of a particular pin. From the picture above we can tell that pins 14 and 7 are used for VCC and ground, respectively.

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