

F100370

Low Power Universal Demultiplexer/Decoder

General Description

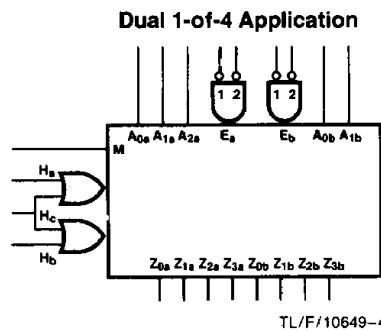
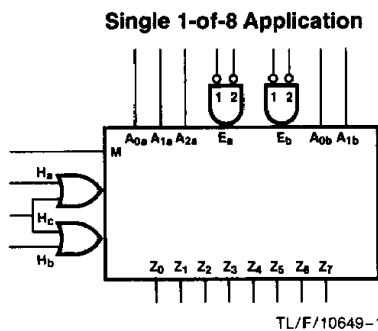
The F100370 universal demultiplexer/decoder functions as either a dual 1-of-4 decoder or as a single 1-of-8 decoder, depending on the signal applied to the Mode Control (M) input. In the dual mode, each half has a pair of active-LOW Enable (\bar{E}) inputs. Pin assignments for the \bar{E} inputs are such that in the 1-of-8 mode they can easily be tied together in pairs to provide two active-LOW enables (\bar{E}_{1a} to \bar{E}_{1b} , \bar{E}_{2a} to \bar{E}_{2b}). Signals applied to auxiliary inputs H_a , H_b and H_c determine whether the outputs are active HIGH or active LOW. In the dual 1-of-4 mode the Address inputs are A_{0a} , A_{1a} and A_{0b} , A_{1b} with A_{2a} unused (i.e., left open, tied to V_{EE} or with

LOW signal applied). In the 1-of-8 mode, the Address inputs are A_{0a} , A_{1a} , A_{2a} with A_{0b} and A_{1b} LOW or open. All inputs have 50 k Ω pulldown resistors.

Features

- 35% power reduction of the F100170
- 2000V ESD protection
- Pin/function compatible with F100170
- Voltage compensated operating range = -4.2V to -5.7V

Logic Symbols



| Pin Names | Description |
|---------------------------------|--|
| A_{na} , A_{nb} | Address Inputs |
| \bar{E}_{na} , \bar{E}_{nb} | Enable Inputs |
| M | Mode Control Input |
| H_a | Z_0-Z_3 ($\bar{Z}_{0a}-\bar{Z}_{3a}$) Polarity Select Input |
| H_b | Z_4-Z_7 ($\bar{Z}_{0b}-\bar{Z}_{3b}$) Polarity Select Input |
| H_c | Common Polarity Select Input |
| Z_0-Z_7 | Single 1-of-8 Data Outputs |
| Z_{na} , Z_{nb} | Dual 1-of-4 Data Outputs |

Connection Diagrams

