



Product Overview

Created on: 2/9/2010

MC14543B: BCD-to-7 Segment Latch/Decoder/Driver for Liquid Crystals

For complete documentation, see the [data sheet](#)

Product Description

The MC14543B BCD-to-seven segment latch/decoder/driver is designed for use with liquid crystal readouts, and is constructed with complementary MOS (CMOS) enhancement mode devices. The circuit provides the functions of a 4-bit storage latch and an 8421 BCD-to-seven segment decoder and driver. The device has the capability to invert the logic levels of the output combination. The phase (Ph), blanking (Bl), and latch disable (LD) inputs are used to reverse the truth table phase, blank the display, and store a BCD code, respectively. For liquid crystal (LC) readouts, a square wave is applied to the Ph input of the circuit and the electrically common backplane of the display. The outputs of the circuit are connected directly to the segments of the LC readout. For other types of readouts, such as light-emitting diode (LED), incandescent, gas discharge, and fluorescent readouts, connection diagrams are given on this data sheet.

Applications include instrument (e.g., counter, DVM etc.) display driver, computer/calculator display driver, cockpit display driver, and various clock, watch, and timer uses.

Features

- Latch Storage of Code
- Blanking Input
- Readout Blanking on All Illegal Input Combinations
- Direct LED (Common Anode or Cathode) Driving Capability
- Supply Voltage Range = 3.0 V to 18 V
- Capable of Driving Two Low-power TTL Loads, One Low-power Schottky TTL Load or Two HTL Loads Over the Rated Temperature Range
- Pin-for-Pin Replacement for CD4056A (with Pin 7 Tied to V_{SS}).
- Chip Complexity: 207 FETs or 52 Equivalent Gates
- Pb-Free Packages are Available

Selected Electrical Specifications

Symbol	Boundary	Value	Unit	Condition
V_{CC}	min	3	V	
V_{CC}	max	18	V	
t_{pd}	max	660	ns	Data to Output, $T_A = 25$ degrees C, $C_L = 50$ pF, $V_{DD} = 10$ Volts
I_O	max	10	mA	$V_{DD} = 10$ Volts
Channels		1		
Output		3-State		

Package Availability

Type	Pb-free	Standard
SOEIAJ-16	✓	
PDIP-16	✓	✓
SOIC 16 LEAD	✓	✓

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