Product Overview

MC14585B: 4-Bit Magnitude Comparator

For complete documentation, see the data sheet

Product Description

The MC14585B 4-Bit Magnitude Comparator is constructed with complementary MOS (CMOS) enhancement mode devices. The circuit has eight comparing inputs (A3, B3, A2, B2, A1, B1, A0, B0), three cascading inputs (A < B, A = B, and A > B), and three outputs (A < B, A = B, and A > B). This device compares two 4-bit words (A and B) and determines whether they are "less than", "equal to", or "greater than" by a high level on the appropriate output. For words greater than 4-bits, units can be cascaded by connecting outputs (A > B), (A < B), and (A = B) to the corresponding inputs of the next significant comparator. Inputs (A < B), (A = B), and (A > B) on the least significant (first) comparator are connected to a low, a high, and a low, respectively.

Applications include logic in CPU's, correction and/or detection of instrumentation conditions, comparator in testers, converters, and controls.

Features

- Diode Protection on All Inputs
- Expandable
- Applicable to Binary or 8421-BCD Code
- Supply Voltage Range = 3.0 Vdc to 18 Vdc
- Capable of Driving Two Low-power TTL Loads or One Low-power Schottky TTL Load over the Rated Temperature Range
- Can be Cascaded - See Fig. 3
- Pb-Free Packages are Available

Part Electrical Specifications

Product	Compliance	Status	Type	V_{CC} Min (V)	V_{CC} Max (V)	t_{pd} Max (ns)	P_D Max (W)	I_O Max (mA)	Package Type
MC14585BDG	Pb-free Halide free	Active	Magnitude Comparator	3	18	360	0.5	2.25	SOIC-16
MC14585BDR2G	Pb-free Halide free	Active	Magnitude Comparator	3	18	360	0.5	2.25	SOIC-16
NLV14585BDR2G	AEC Qualified PPAP Capable Pb-free Halide free	NEW	Magnitude Comparator	3	18	360	0.5	2.25	SOIC-16

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Created on: 12/1/2015