# **ADVANCE INFORMATION**



National Semiconductor
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# 54FCT/74FCT521A 8-Bit Identity Comparator

# **General Description**

**Logic Symbols** 

The 'FCT521A is an expandable 8-bit comparator. It compares two words of up to eight bits each and provides a LOW output when the two words match bit for bit. The expansion input  $\bar{I}_A$  =  $_B$  also serves as an active LOW enable input.

FACTTM FCTA utilizes NSC quiet series technology to provide improved quiet output switching and dynamic threshold performance.

FACT FCTA features undershoot correction and split ground bus for superior performance.

### Features

- NSC 54FCT/74FCT521A is pin and functionally equivalent to IDT 54FCT/74FCT521A
- Input clamp diodes to limit bus reflections
- TTL/CMOS input and output level compatible
- I<sub>OL</sub> = 48 mA (Com), 32 mA (Mil)
- CMOS power levels
- 4 kV minimum ESD immunity
- Military Product compliant to MIL-STD 883

#### Pin Assignment A4 B3 A3 B2 A2 for DIP, Flatpak and SOIC 8-7 A-7 Bĸ As ₿∡ B, A1 Bo Ac T<sub>A=B</sub> 20 -V<sub>cc</sub> A0 -OA=B 10 - 0<sub>A=B</sub> 2 Bo 18 -B7 A<sub>1</sub>· 17 A7 TL/F/10663-1 B1' B<sub>6</sub> IEEE/IEC A2-15 A COMP B<sub>2</sub> 85 Þ T<sub>A=B</sub> G1 A3 13 As A<sub>0</sub> B3 12 B, A, GND 10 11 A<sub>2</sub> TL/F/10663-2 A٦ A **Pin Assignment** As for LCC A<sub>6</sub> A3 B2 A2 B1 A1 B7654 - 0<sub>A=B</sub> 1P=Q A-7 Bo 3 B<sub>0</sub> 2 A<sub>0</sub> 1 T<sub>A=B</sub> 20 V<sub>CC</sub> 19 O<sub>A=B</sub> B3 9 B<sub>1</sub> 8<sub>2</sub> GND 10 B<sub>3</sub> 0 BA 12 84 A5 13 B5 B<sub>6</sub> 14 13 16 17 18 B-B5 A6 B6 A7 B7 TL/F/10663-3 TL/F/10663-4 **Pin Names** Description $A_0 - A_7$ Word A Inputs B0-B7 Word B Inputs $T_A = B$ Expansion or Enable Input $\overline{O}_A = B$ Identity Output

# **Connection Diagrams**