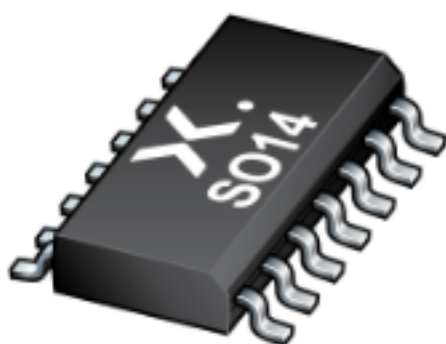




74HCS164D-Q100

8-bit serial-in, parallel-out shift register with Schmitt-trigger inputs



The 74HCS164-Q100 is an 8-bit serial-in/parallel-out shift register. The device features two serial data inputs (DSA and DSB), eight parallel data outputs (Q0 to Q7). Data is entered serially through DSA or DSB and either input can be used as an active HIGH enable for data entry through the other input. Data is shifted on the LOW-to-HIGH transitions of the clock (CP) input. A LOW on the master reset input (MR) clears the register and forces all outputs LOW, independently of other inputs. Inputs include clamp diodes. This enables the use of current limiting resistors to interface inputs to voltages in excess of V_{CC} .

All inputs are Schmitt-trigger inputs, capable of transforming slowly changing input signals into sharply defined, jitter-free output signals.

This product has been qualified to the Automotive Electronics Council (AEC) standard Q100 (Grade 1) and is suitable for use in automotive applications.

Order product

Product details

Documentation

Support

Ordering

Features and benefits

- Automotive product qualification in accordance with AEC-Q100 (Grade 1)
 - Specified from -40 °C to +85 °C and from -40 °C to +125 °C
- Wide supply voltage range from 2.0 V to 6.0 V
- Schmitt-trigger inputs
- Low power consumption
 - Typical supply current (I_{CC}) of 100 nA
 - Typical input leakage current (I_I) of ± 10 nA
- ± 7.8 mA output drive at 6 V
- 8-bit serial input and 8-bit serial or parallel output
- Storage register with 3-state outputs
- Shift register with direct clear
- Latch-up performance exceeds 100 mA per JESD 78 Class II Level B
- Complies with JEDEC standards:
 - JESD7A (2.0 V to 6.0 V)
- ESD protection:
 - HBM ANSI/ESDA/JEDEC JS-001 class 3A exceeds 4000 V
 - CDM ANSI/ESDA/JEDEC JS-002 class C3 exceeds 1500 V
- Multiple package options
- DHVQFN package with Side-Wettable Flanks enabling Automated Optical Inspection (AOI) of solder joints

Applications

- Serial-to-parallel data conversion
- Remote control holding register
- Output expansion
- LED matrix control
- 7-segment display control
- 8-bit data storage

Parametrics

Type number	V _{CC} (V)	Logic switching levels	Output drive capability (mA)	t _{pd} (ns)	f _{max} (MHz)	Power dissipation considerations	T _{amb} (°C)	Package name
74HCS164D-Q100	2.0 - 6.0	CMOS	± 7.8	7	97	low	-40~125	SO14

Package

Type number	Orderable part number, (Ordering code (12NC))	Status	Marking	Package	Package information	Reflow-/Wave soldering	Packing
74HCS164D-Q100	74HCS164D-Q100J (935691895118)	Active	74HCS164D	 SO14 (SOT108-1)	SOT108-1	SO-SOJ-REFLOW SO-SOJ-WAVE WAVE_BG-BD-1	SOT108-1_118

Environmental information

Type number	Orderable part number	Chemical content	RoHS	RHF-indicator
74HCS164D-Q100	74HCS164D-Q100J	74HCS164D-Q100		

[Quality and reliability disclaimer](#)

Series

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