

8-Bit Shift Register with Output Register

MC74VHC594

The MC74VHC594 is an 8-bit shift register designed for 2.0 V to 5.5 V V_{CC} operation. The device contains an 8-bit serial-in, parallel-out shift register that feeds an 8-bit D-type storage register. Separate clocks (RCLK, SRCLK) and direct overriding clear (\overline{RCLR} , \overline{SRCLR}) inputs are provided on the shift and storage registers. A serial output (Q_H') is provided for cascading purposes.

The shift-register (SRCLK) and storage-register (RCLK) clocks are positive-edge triggered. If the clocks are tied together, the shift register always is one clock pulse ahead of the storage register.

Features

- 2.0 V to 5.5 V V_{CC} Operation
- High Speed: $f_{max} = 185$ MHz (Typ) at $V_{CC} = 5$ V
- Low Power Dissipation: $I_{CC} = 4$ μ A (Max) at $T_A = 25^\circ$ C
- High Noise Immunity: $V_{NIH} = V_{NIL} = 28\%$ V_{CC}
- Power Down Protection Provided on Inputs
- Balanced Propagation Delays
- Low Noise: $V_{OLP} = 1.0$ V (Max)
- NLV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q100 Qualified and PPAP Capable
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

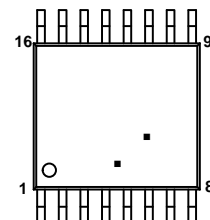


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MARKING DIAGRAM



TSSOP-16
DT SUFFIX
CASE 948F



PIN ASSIGNMENT

Q_B	1	16	V_{CC}
Q_C	2	15	Q_A
Q_D	3	14	SER
Q_E	4	13	\overline{RCLR}
Q_F	5	12	RCLK
Q_G	6	11	SRCLK
Q_H	7	10	\overline{SRCLR}
GND	8	9	Q_H'

ORDERING INFORMATION

Device	Package	Shipping
	-	
	-	

MC74VHC594

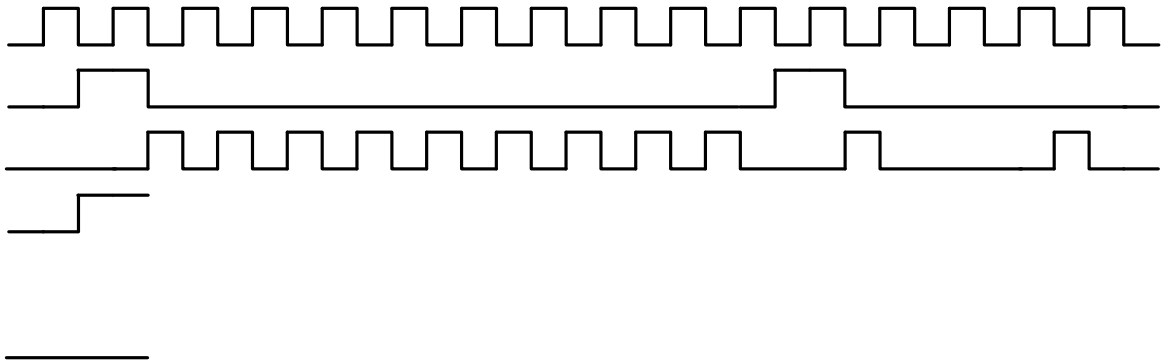


Figure 2. Timing Diagram

MC74VHC594

MAXIMUM RATINGS

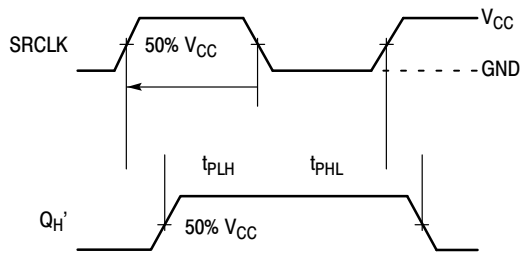
Symbol	Parameter	Value	Unit
		-	
		-	

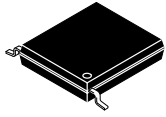
MC74VHC594

AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Conditions	V _{CC} (V)	T _A = 25°C			T _A = ≤ 85°C		T _A = ≤ 125°C		Unit
				Min	Typ	Max	Min	Max	Min	Max	
	-										

MC74VHC594





SCALE 2:1

TSSOP-16 WB
CASE 948F
ISSUE B

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