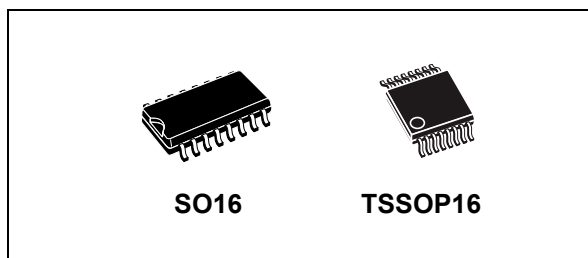


## 8-bit SIPO shift latch register (3-state)

Datasheet - production data



### Features

- High speed:  $f_{MAX} = 80 \text{ MHz}$  (typ.) at  $V_{CC} = 6 \text{ V}$
- Low power dissipation:  
 $I_{CC} = 4 \mu\text{A}$  (max.) at  $T_A = 25^\circ\text{C}$
- High noise immunity:  
 $V_{NIH} = V_{NIL} = 28\% V_{CC}$  (min.)
- Symmetrical output impedance:  
 $|I_{OH}| = I_{OL} = 4 \text{ mA}$  (min.)
- Balanced propagation delays:  $t_{PLH} \cong t_{PHL}$
- Wide operating voltage range:  
 $V_{CC}$  (opr.) = 2 V to 6 V
- Pin and function compatible with 74 series 4094
- ESD performance
  - CDM: 1 kV
  - HBM: 2 kV
  - MM: 200 V

### Applications

- Automotive
- Industrial
- Computer
- Consumer

### Description

The M74HC4094 device is a high speed CMOS 8-bit SIPO shift latch register fabricated with silicon gate C<sup>2</sup>MOS technology. It consists of an 8-bit shift register and an 8-bit latch with 3-state output buffer. Data is shifted serially through the shift register on the positive going transition of the clock input signal. The output of the last stage (QS) can be used to cascade several devices.

Data on the QS output is transferred to a second output (QS') on the following negative transition of the clock input signal. The data of each stage of the shift register is provided with a latch, which latches data on the negative going transition of the STROBE input signal. When the STROBE input is held high, data propagates through the latch to a 3-state output buffer. This buffer is enabled when OUTPUT ENABLE input is taken high. All inputs are equipped with protection circuits against static discharge and transient excess voltage.

Table 1. Device summary

| Order code                      | Temperature range | Package                    | Packaging     | Marking   |
|---------------------------------|-------------------|----------------------------|---------------|-----------|
| M74HC4094RM13TR                 | -55/+125 °C       | SO16                       | Tape and reel | 74HC4094  |
| M74HC4094YRM13TR <sup>(1)</sup> | -40/+125 °C       | SO16 (automotive grade)    |               | 74HC4094Y |
| M74HC4094TTR                    | -55/+125 °C       | TSSOP16                    |               | HC4094    |
| M74HC4094YTTR <sup>(1)</sup>    | -40/+125 °C       | TSSOP16 (automotive grade) |               | HC4094Y   |

1. Qualification and characterization according to AEC Q100 and Q003 or equivalent, advanced screening according to AEC Q001 and Q002 or equivalent.

## Contents

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# 1 Pin information

Figure 1. Pin connection and IEC logic symbols

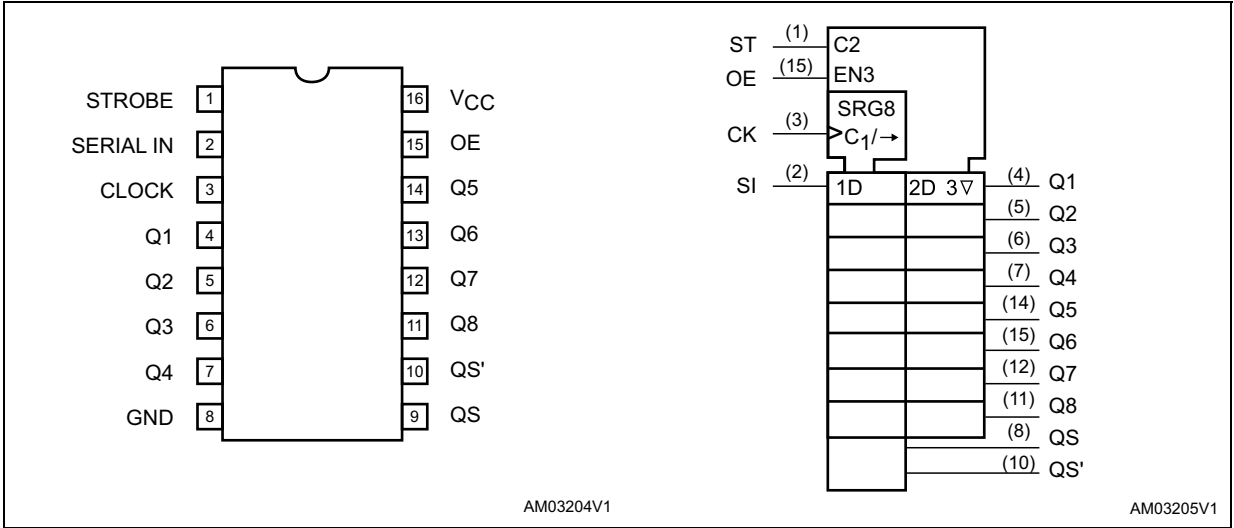
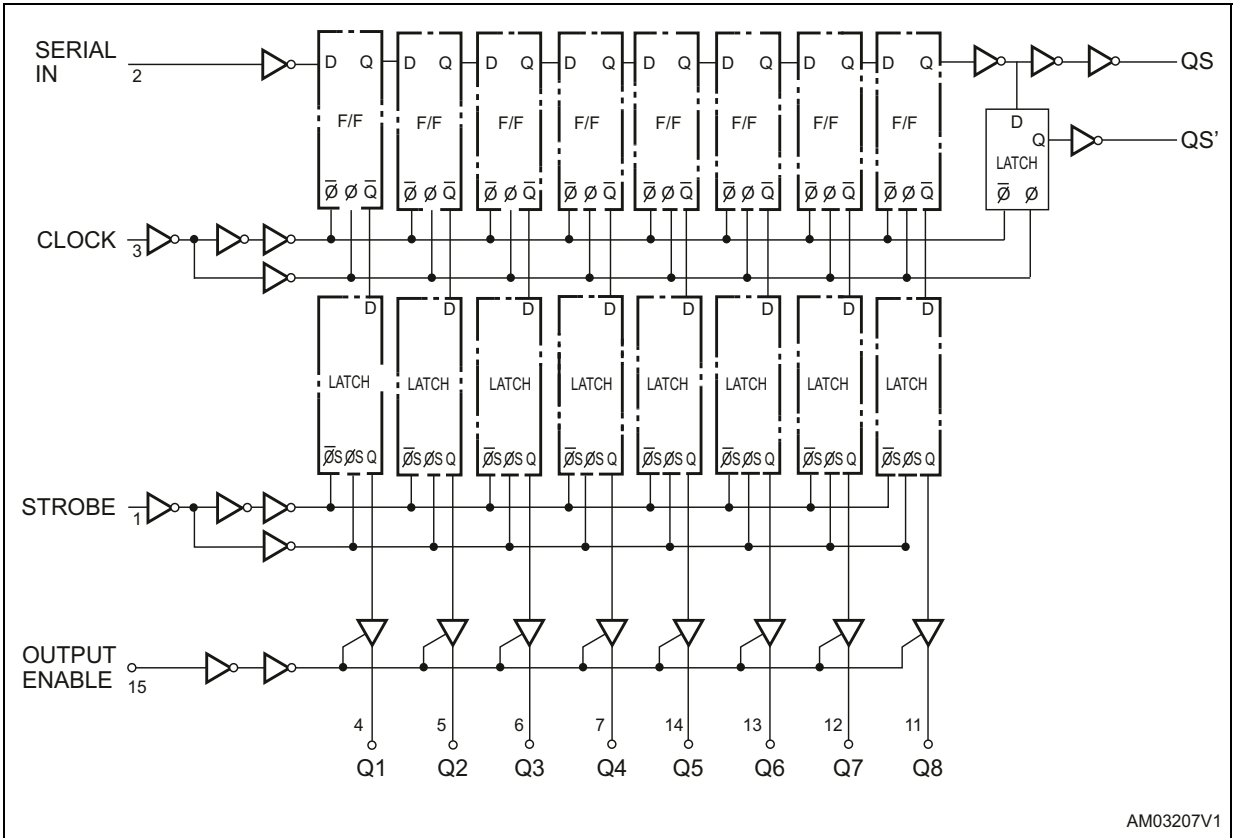


Table 2. Pin description

| Pin no                     | Symbol          | Name and function       |
|----------------------------|-----------------|-------------------------|
| 1                          | STROBE          | Strobe input            |
| 2                          | SERIAL IN       | Serial input            |
| 3                          | CLOCK           | Clock input             |
| 4, 5, 6, 7, 14, 13, 12, 11 | Q1 to Q7        | Parallel outputs        |
| 9, 10                      | QS, QS'         | Serial outputs          |
| 15                         | OE              | Output enable input     |
| 8                          | GND             | Ground (0 V)            |
| 16                         | V <sub>CC</sub> | Positive supply voltage |

# 2 Functional description

Figure 2. Logic diagram



AM03207V1

1. This logic diagram has not be used to estimate propagation delays.

Table 3. Truth table<sup>(1)</sup>

| CK | OE | ST | SI | Parallel outputs |      | Serial outputs |     |
|----|----|----|----|------------------|------|----------------|-----|
|    |    |    |    | Q1               | Qn   | QS             | QS' |
|    | H  | H  | L  | L                | Qn-1 | Q7             | NC  |
|    | H  | H  | H  | H                | Qn-1 | Q7             | NC  |
|    | H  | L  | X  | NC               | NC   | Q7             | NC  |
|    | L  | X  | X  | Z                | Z    | Q7             | NC  |
|    | H  | X  | X  | NC               | NC   | NC             | QS  |
|    | L  | X  | X  | Z                | Z    | NC             | QS  |

1. X: don't care  
Z: high impedance  
NC: no change.

Figure 3. Input and output equivalent circuit

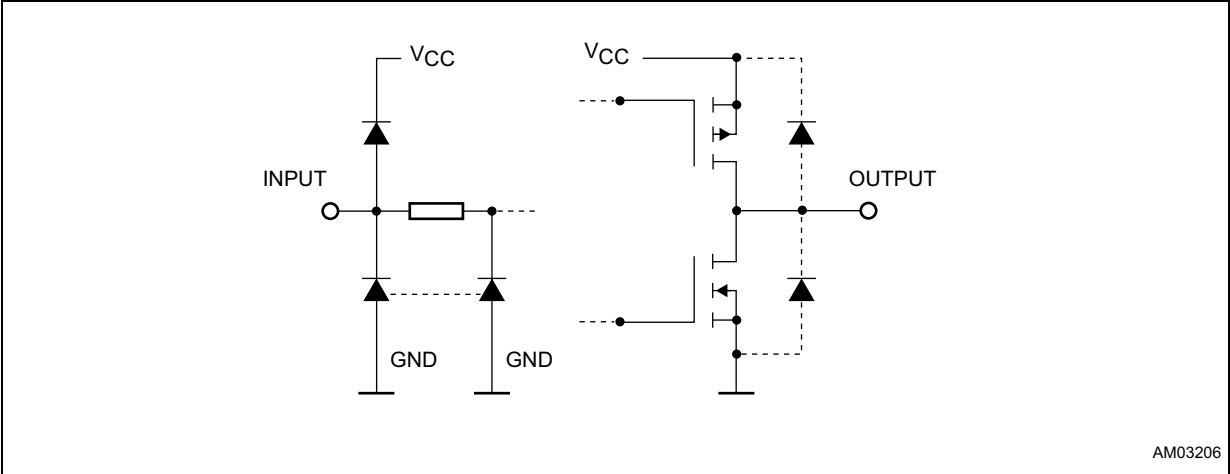
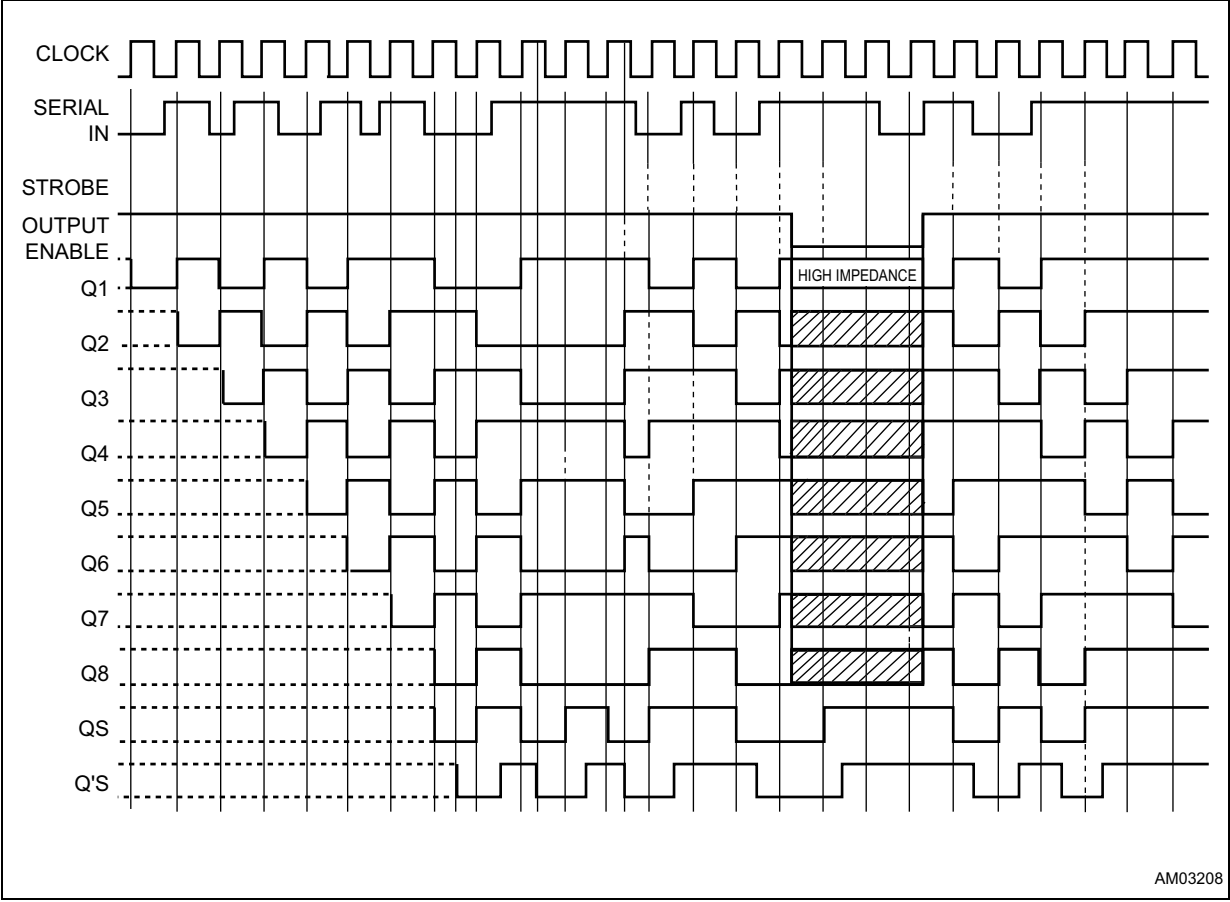


Figure 4. Timing chart



### 3 Electrical description

**Table 4. Absolute maximum ratings<sup>(1)</sup>**

| Symbol                | Parameter                     | Value                  | Unit |
|-----------------------|-------------------------------|------------------------|------|
| $V_{CC}$              | Supply voltage                | -0.5 to +7             | V    |
| $V_I$                 | DC input voltage              | -0.5 to $V_{CC} + 0.5$ | V    |
| $V_O$                 | DC output voltage             | -0.5 to $V_{CC} + 0.5$ | V    |
| $I_{IK}$              | DC input diode current        | $\pm 20$               | mA   |
| $I_{OK}$              | DC output diode current       | $\pm 20$               | mA   |
| $I_O$                 | DC output current             | $\pm 25$               | mA   |
| $I_{CC}$ or $I_{GND}$ | DC $V_{CC}$ or ground current | $\pm 50$               | mA   |
| $P_D$                 | Power dissipation             | 500 <sup>(2)</sup>     | mW   |
| $T_{stg}$             | Storage temperature           | -65 to +150            | °C   |
| $T_L$                 | Lead temperature (10 sec.)    | 300                    | °C   |

1. Absolute maximum ratings are those values beyond which damage to the device may occur. Functional operation under these conditions is not implied.
2. 500 mW at 65 °C; derate to 300 mW by 10 mW/°C from 65 °C to 85 °C.

**Table 5. Recommended operating conditions**

| Symbol     | Parameter                |                          | Value         | Unit |
|------------|--------------------------|--------------------------|---------------|------|
| $V_{CC}$   | Supply voltage           |                          | 2 to 6        | V    |
| $V_I$      | Input voltage            |                          | 0 to $V_{CC}$ | V    |
| $V_O$      | Output voltage           |                          | 0 to $V_{CC}$ | V    |
| $T_{op}$   | Operating temperature    |                          | -55 to 125    | °C   |
| $t_r, t_f$ | Input rise and fall time | $V_{CC} = 2.0 \text{ V}$ | 0 to 1000     | ns   |
|            |                          | $V_{CC} = 4.5 \text{ V}$ | 0 to 500      | ns   |
|            |                          | $V_{CC} = 6.0 \text{ V}$ | 0 to 400      | ns   |

Table 6. DC specifications

| Symbol          | Parameter                             | Test condition         |                                                                                                | Value                  |      |      |              |      |               |      | Unit |  |
|-----------------|---------------------------------------|------------------------|------------------------------------------------------------------------------------------------|------------------------|------|------|--------------|------|---------------|------|------|--|
|                 |                                       | V <sub>CC</sub><br>(V) |                                                                                                | T <sub>A</sub> = 25 °C |      |      | -40 to 85 °C |      | -55 to 125 °C |      |      |  |
|                 |                                       |                        |                                                                                                | Min.                   | Typ. | Max. | Min.         | Max. | Min.          | Max. |      |  |
| V <sub>IH</sub> | High level input voltage              | 2.0                    |                                                                                                | 1.5                    |      |      | 1.5          |      | 1.5           |      | V    |  |
|                 |                                       | 4.5                    |                                                                                                | 3.15                   |      |      | 3.15         |      | 3.15          |      |      |  |
|                 |                                       | 6.0                    |                                                                                                | 4.2                    |      |      | 4.2          |      | 4.2           |      |      |  |
| V <sub>IL</sub> | Low level input voltage               | 2.0                    |                                                                                                |                        |      | 0.5  |              | 0.5  |               | 0.5  | V    |  |
|                 |                                       | 4.5                    |                                                                                                |                        |      | 1.35 |              | 1.35 |               | 1.35 |      |  |
|                 |                                       | 6.0                    |                                                                                                |                        |      | 1.8  |              | 1.8  |               | 1.8  |      |  |
| V <sub>OH</sub> | High level output voltage             | 2.0                    | I <sub>O</sub> = -20 μA                                                                        | 1.9                    | 2.0  |      | 1.9          |      | 1.9           |      | V    |  |
|                 |                                       | 4.5                    | I <sub>O</sub> = -20 μA                                                                        | 4.4                    | 4.5  |      | 4.4          |      | 4.4           |      |      |  |
|                 |                                       | 6.0                    | I <sub>O</sub> = -20 μA                                                                        | 5.9                    | 6.0  |      | 5.9          |      | 5.9           |      |      |  |
|                 |                                       | 4.5                    | I <sub>O</sub> = -4.0 mA                                                                       | 4.18                   | 4.31 |      | 4.13         |      | 4.10          |      |      |  |
|                 |                                       | 6.0                    | I <sub>O</sub> = -5.2 mA                                                                       | 5.68                   | 5.8  |      | 5.63         |      | 5.60          |      |      |  |
| V <sub>OL</sub> | Low level output voltage              | 2.0                    | I <sub>O</sub> = 20 μA                                                                         |                        | 0.0  | 0.1  |              | 0.1  |               | 0.1  | V    |  |
|                 |                                       | 4.5                    | I <sub>O</sub> = 20 μA                                                                         |                        | 0.0  | 0.1  |              | 0.1  |               | 0.1  |      |  |
|                 |                                       | 6.0                    | I <sub>O</sub> = 20 μA                                                                         |                        | 0.0  | 0.1  |              | 0.1  |               | 0.1  |      |  |
|                 |                                       | 4.5                    | I <sub>O</sub> = 4.0 mA                                                                        |                        | 0.17 | 0.26 |              | 0.33 |               | 0.40 |      |  |
|                 |                                       | 6.0                    | I <sub>O</sub> = 5.2 mA                                                                        |                        | 0.18 | 0.26 |              | 0.33 |               | 0.40 |      |  |
| I <sub>I</sub>  | Input leakage current                 | 6.0                    | V <sub>I</sub> = V <sub>CC</sub> or GND                                                        |                        |      | ±0.1 |              | ±1   |               | ±1   | μA   |  |
| I <sub>OZ</sub> | High impedance output leakage current | 6.0                    | V <sub>I</sub> = V <sub>IH</sub> or V <sub>IL</sub><br>V <sub>O</sub> = V <sub>CC</sub> or GND |                        |      | ±0.5 |              | ±5   |               | ±10  | μA   |  |
| I <sub>CC</sub> | Quiescent supply current              | 6.0                    | V <sub>I</sub> = V <sub>CC</sub> or GND                                                        |                        |      | 4    |              | 40   |               | 80   | μA   |  |

Table 7. AC electrical characteristics ( $C_L = 50$  pF, input  $t_r = t_f = 6$  ns)

| Symbol                                | Parameter                                   | Test condition      |  | Value                  |      |      |              |      |               | Unit |      |
|---------------------------------------|---------------------------------------------|---------------------|--|------------------------|------|------|--------------|------|---------------|------|------|
|                                       |                                             | V <sub>CC</sub> (V) |  | T <sub>A</sub> = 25 °C |      |      | -40 to 85 °C |      | -55 to 125 °C |      |      |
|                                       |                                             |                     |  | Min.                   | Typ. | Max. | Min.         | Max. | Min.          |      | Max. |
| t <sub>TLH</sub> , t <sub>THL</sub>   | Output transition time                      | 2.0                 |  |                        | 30   | 75   |              | 95   |               | 115  | ns   |
|                                       |                                             | 4.5                 |  |                        | 8    | 15   |              | 19   |               | 23   |      |
|                                       |                                             | 6.0                 |  |                        | 7    | 13   |              | 16   |               | 20   |      |
| t <sub>PLH</sub> , t <sub>PHL</sub>   | Propagation delay time<br>(CLOCK - Qn)      | 2.0                 |  |                        | 92   | 200  |              | 250  |               | 300  | ns   |
|                                       |                                             | 4.5                 |  |                        | 26   | 40   |              | 50   |               | 60   |      |
|                                       |                                             | 6.0                 |  |                        | 20   | 34   |              | 43   |               | 51   |      |
| t <sub>PLH</sub> , t <sub>PHL</sub>   | Propagation delay time<br>(CLOCK - QS, QS') | 2.0                 |  |                        | 65   | 150  |              | 190  |               | 225  | ns   |
|                                       |                                             | 4.5                 |  |                        | 19   | 30   |              | 38   |               | 45   |      |
|                                       |                                             | 6.0                 |  |                        | 15   | 26   |              | 32   |               | 38   |      |
| t <sub>PLH</sub> , t <sub>PHL</sub>   | Propagation delay time<br>(STROBE - Qn)     | 2.0                 |  |                        | 75   | 160  |              | 200  |               | 240  | ns   |
|                                       |                                             | 4.5                 |  |                        | 20   | 32   |              | 40   |               | 48   |      |
|                                       |                                             | 6.0                 |  |                        | 16   | 27   |              | 34   |               | 41   |      |
| t <sub>PZL</sub> , t <sub>PZH</sub>   | High impedance output<br>enable time        | 2.0                 |  |                        | 58   | 150  |              | 190  |               | 225  | ns   |
|                                       |                                             | 4.5                 |  |                        | 16   | 30   |              | 38   |               | 45   |      |
|                                       |                                             | 6.0                 |  |                        | 13   | 26   |              | 32   |               | 38   |      |
| t <sub>PHZ</sub> , t <sub>PLZ</sub>   | High impedance output<br>disable time       | 2.0                 |  |                        | 35   | 150  |              | 190  |               | 225  | ns   |
|                                       |                                             | 4.5                 |  |                        | 16   | 30   |              | 38   |               | 45   |      |
|                                       |                                             | 6.0                 |  |                        | 13   | 26   |              | 32   |               | 38   |      |
| f <sub>MAX</sub>                      | Maximum clock frequency                     | 2.0                 |  | 6                      | 16   |      | 4.8          |      | 4             |      | MHz  |
|                                       |                                             | 4.5                 |  | 30                     | 66   |      | 24           |      | 20            |      |      |
|                                       |                                             | 6.0                 |  | 35                     | 80   |      | 28           |      | 24            |      |      |
| t <sub>W(H)</sub> , t <sub>W(L)</sub> | Minimum pulse width                         | 2.0                 |  |                        | 17   | 75   |              | 95   |               | 110  | ns   |
|                                       |                                             | 4.5                 |  |                        | 7    | 15   |              | 19   |               | 22   |      |
|                                       |                                             | 6.0                 |  |                        | 6    | 13   |              | 16   |               | 19   |      |
| t <sub>W(L)</sub>                     | Minimum pulse width                         | 2.0                 |  |                        | 28   | 75   |              | 95   |               | 110  | ns   |
|                                       |                                             | 4.5                 |  |                        | 6    | 15   |              | 19   |               | 22   |      |
|                                       |                                             | 6.0                 |  |                        | 6    | 13   |              | 16   |               | 19   |      |
| t <sub>s</sub>                        | Minimum set-up time<br>(SERIAL INPUT)       | 2.0                 |  |                        | 30   | 75   |              | 95   |               | 110  | ns   |
|                                       |                                             | 4.5                 |  |                        | 7    | 15   |              | 19   |               | 22   |      |
|                                       |                                             | 6.0                 |  |                        | 5    | 13   |              | 16   |               | 19   |      |

Table 7. AC electrical characteristics ( $C_L = 50$  pF, input  $t_r = t_f = 6$  ns) (continued)

| Symbol         | Parameter                    | Test condition      |  | Value                  |      |      |              |      |               | Unit |      |
|----------------|------------------------------|---------------------|--|------------------------|------|------|--------------|------|---------------|------|------|
|                |                              | V <sub>CC</sub> (V) |  | T <sub>A</sub> = 25 °C |      |      | -40 to 85 °C |      | -55 to 125 °C |      |      |
|                |                              |                     |  | Min.                   | Typ. | Max. | Min.         | Max. | Min.          |      | Max. |
| t <sub>s</sub> | Minimum set-up time (STROBE) | 2.0                 |  |                        | 45   | 100  |              | 125  |               | 145  | ns   |
|                |                              | 4.5                 |  |                        | 10   | 20   |              | 25   |               | 29   |      |
|                |                              | 6.0                 |  |                        | 8    | 17   |              | 21   |               | 25   |      |
| t <sub>h</sub> | Minimum hold time (SI, ST)   | 2.0                 |  |                        |      | 0    |              | 0    |               | 0    | ns   |
|                |                              | 4.5                 |  |                        |      | 0    |              | 0    |               | 0    |      |
|                |                              | 6.0                 |  |                        |      | 0    |              | 0    |               | 0    |      |

Table 8. Capacitive characteristics

| Symbol          | Parameter                                    | Test condition      |  | Value                  |      |      |              |      |               | Unit |      |
|-----------------|----------------------------------------------|---------------------|--|------------------------|------|------|--------------|------|---------------|------|------|
|                 |                                              | V <sub>CC</sub> (V) |  | T <sub>A</sub> = 25 °C |      |      | -40 to 85 °C |      | -55 to 125 °C |      |      |
|                 |                                              |                     |  | Min.                   | Typ. | Max. | Min.         | Max. | Min.          |      | Max. |
| C <sub>IN</sub> | Input capacitance                            | 5.0                 |  |                        | 5    | 10   |              | 10   |               | 10   | pF   |
| C <sub>PD</sub> | Power dissipation capacitance <sup>(1)</sup> | 5.0                 |  |                        | 140  |      |              |      |               |      | pF   |

1.  $C_{PD}$  is defined as the value of the IC's internal equivalent capacitance which is calculated from the operating current consumption without load. (Refer to [Figure 5: Test circuit](#)). Average operating current can be obtained by the following equation:  $I_{CC(opr)} = C_{PD} \times V_{CC} \times f_{IN} + I_{CC}/2$  (per flip-flop).

Figure 5. Test circuit

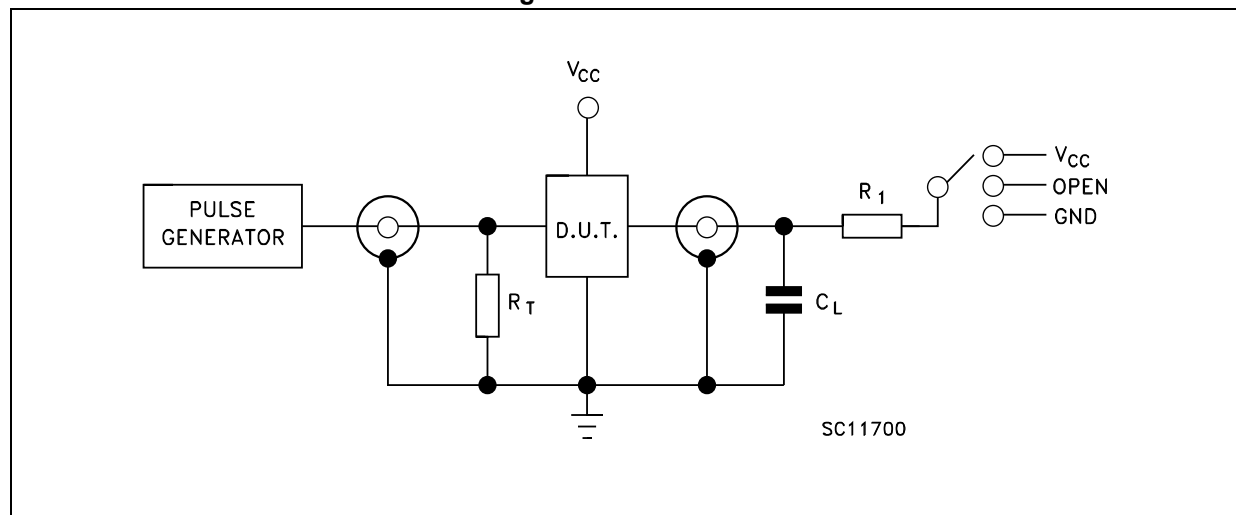
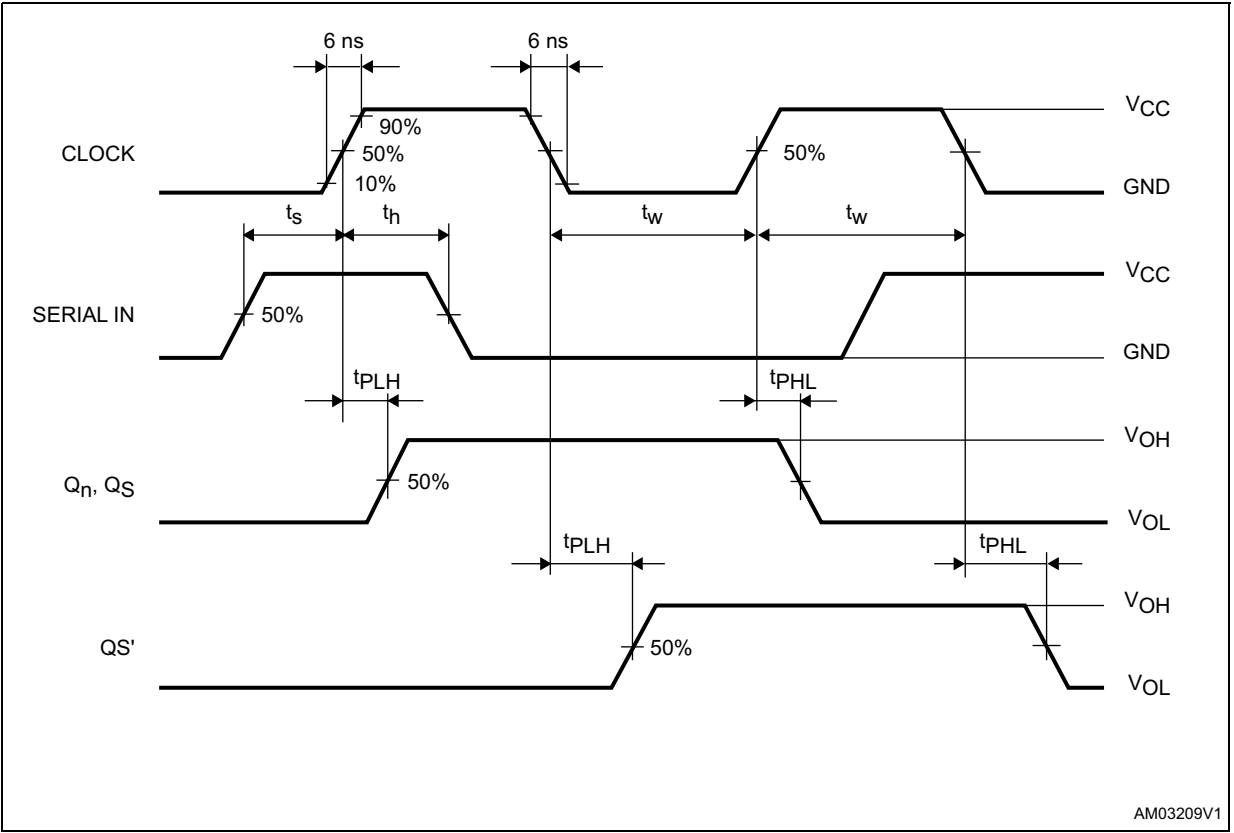


Table 9. Propagation delay time configuration

| Test                  | Switch   |
|-----------------------|----------|
| $t_{PLH}$ , $t_{PHL}$ | Open     |
| $t_{PZL}$ , $t_{PLZ}$ | $V_{CC}$ |
| $t_{PZH}$ , $t_{PHZ}$ | GND      |

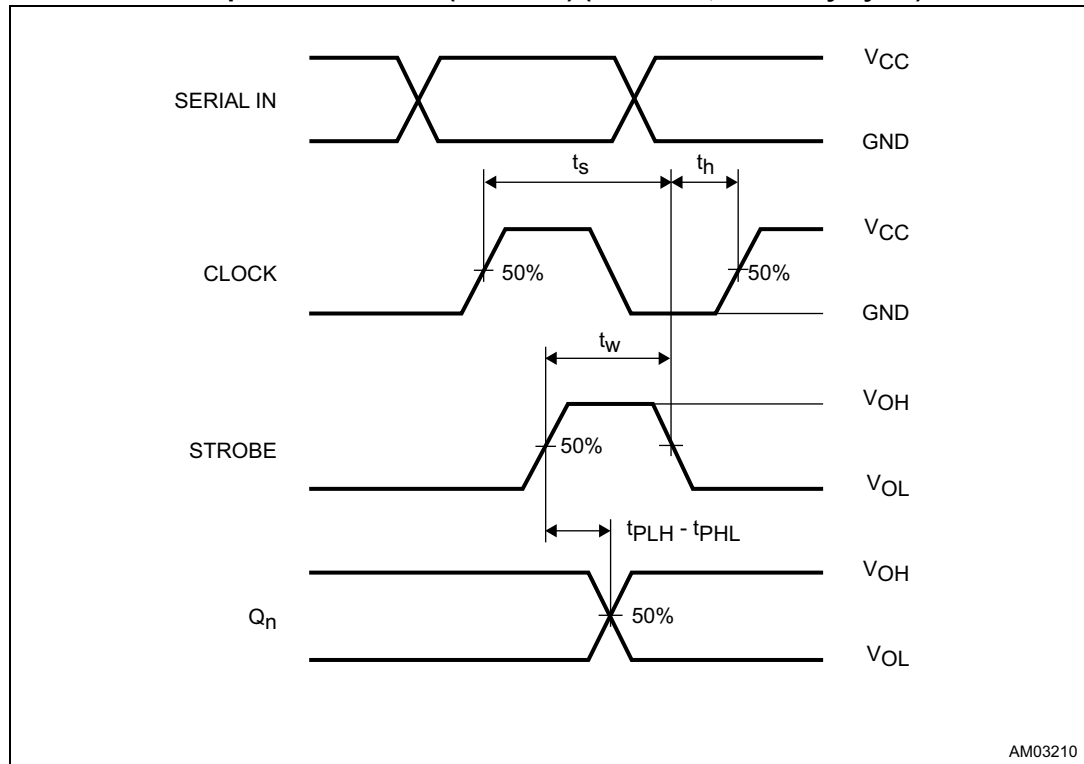
Note:  $C_L = 50\text{ pF}/150\text{ pF}$  or equivalent (includes jig and probe capacitance).  
 $R_1 = 1\text{ K}\Omega$  or equivalent.  
 $R_T = Z_{OUT}$  of pulse generator (typically  $50\ \Omega$ ).

Figure 6. Waveform 1 - propagation delay times, minimum pulse width (CLOCK), setup and hold times (CLOCK) (f = 1 MHz; 50% duty cycle)

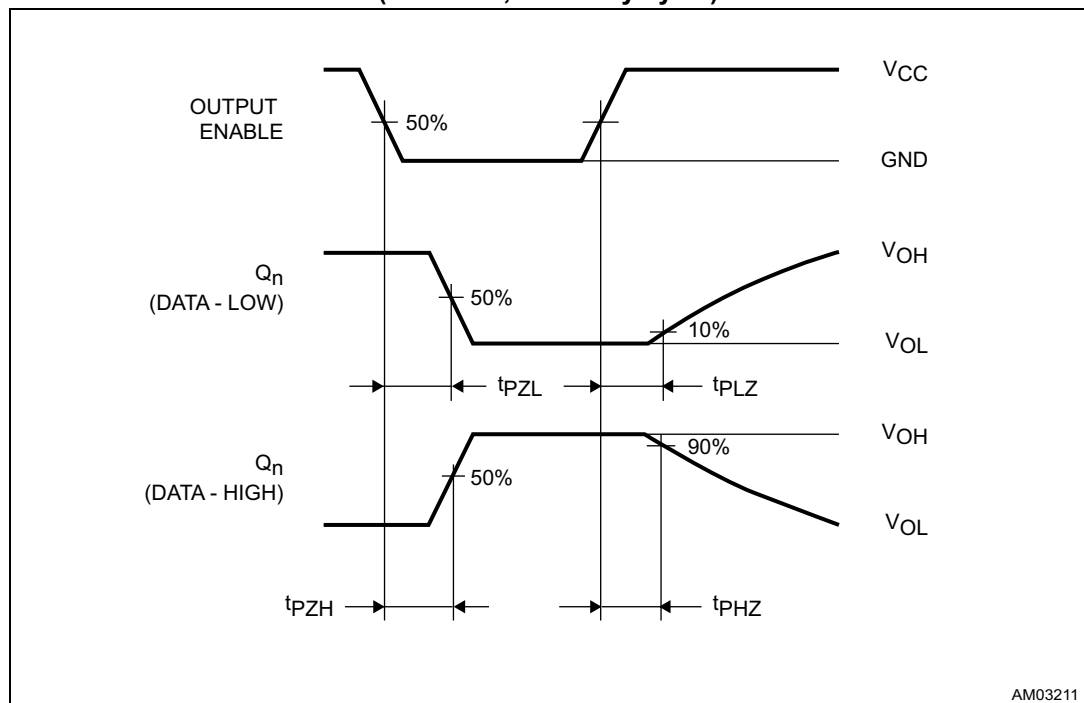


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**Figure 7. Waveform 2 - propagation delay times, minimum pulse width (STROBE), setup and hold times (STROBE) ( $f = 1\text{ MHz}$ ; 50% duty cycle)**



**Figure 8. Waveform 3 - OUTPUT ENABLE and DISABLE times ( $f = 1\text{ MHz}$ ; 50% duty cycle)**



## 4 Package information

In order to meet environmental requirements, ST offers these devices in different grades of ECOPACK® packages, depending on their level of environmental compliance. ECOPACK specifications, grade definitions and product status are available at: [www.st.com](http://www.st.com). ECOPACK is an ST trademark.

## 4.1 SO16 package information

Figure 9. SO16 package mechanical drawing

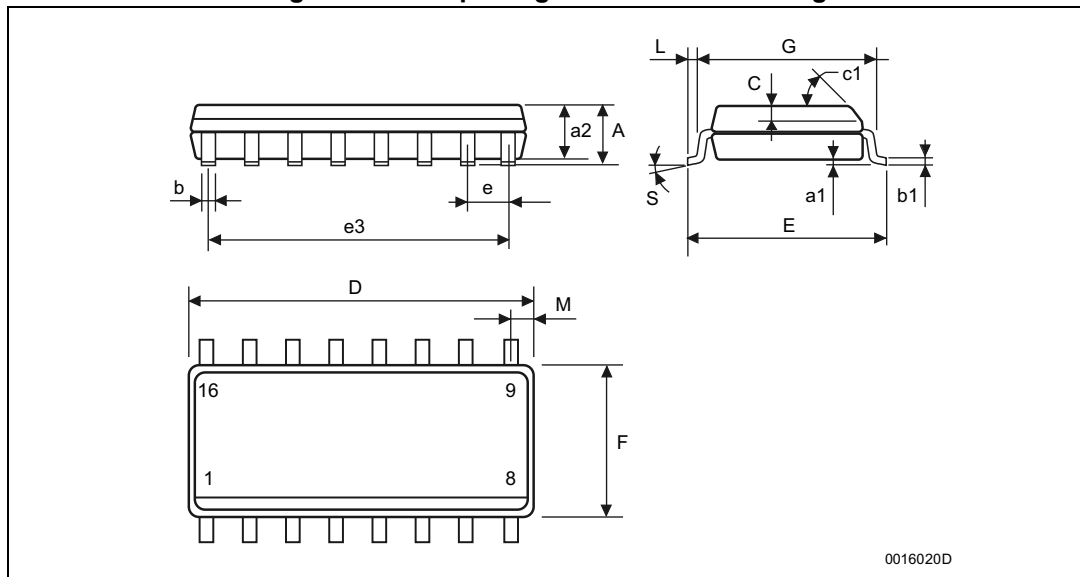


Table 10. SO16 package mechanical data

| Symbol | Dimensions |      |      |       |       |       |
|--------|------------|------|------|-------|-------|-------|
|        | mm         |      |      | inch  |       |       |
|        | Min.       | Typ. | Max. | Min.  | Typ.  | Max.  |
| A      |            |      | 1.75 |       |       | 0.068 |
| a1     | 0.1        |      | 0.2  | 0.004 |       | 0.008 |
| a2     |            |      | 1.65 |       |       | 0.064 |
| b      | 0.35       |      | 0.46 | 0.013 |       | 0.018 |
| b1     | 0.19       |      | 0.25 | 0.007 |       | 0.010 |
| C      |            | 0.5  |      |       | 0.019 |       |
| c1     | 45° (typ.) |      |      |       |       |       |
| D      | 9.8        |      | 10   | 0.385 |       | 0.393 |
| E      | 5.8        |      | 6.2  | 0.228 |       | 0.244 |
| e      |            | 1.27 |      |       | 0.050 |       |
| e3     |            | 8.89 |      |       | 0.350 |       |
| F      | 3.8        |      | 4.0  | 0.149 |       | 0.157 |
| G      | 4.6        |      | 5.3  | 0.181 |       | 0.208 |
| L      | 0.5        |      | 1.27 | 0.019 |       | 0.050 |
| M      |            |      | 0.62 |       |       | 0.024 |
| S      | 8° (max.)  |      |      |       |       |       |

## 4.2 TSSOP16 package information

Figure 10. TSSOP16 package mechanical drawing

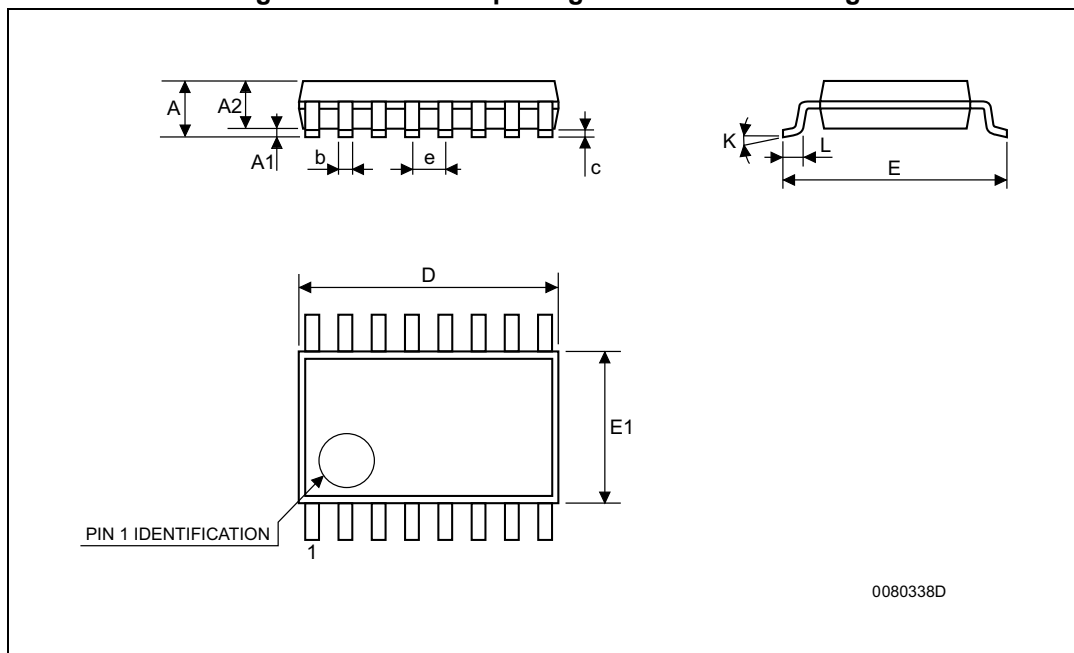


Table 11. TSSOP16 package mechanical data

| Symbol | Dimensions |          |      |       |            |        |
|--------|------------|----------|------|-------|------------|--------|
|        | mm         |          |      | inch  |            |        |
|        | Min.       | Typ.     | Max. | Min.  | Typ.       | Max.   |
| A      |            |          | 1.2  |       |            | 0.047  |
| A1     | 0.05       |          | 0.15 | 0.002 | 0.004      | 0.006  |
| A2     | 0.8        | 1        | 1.05 | 0.031 | 0.039      | 0.041  |
| b      | 0.19       |          | 0.30 | 0.007 |            | 0.012  |
| c      | 0.09       |          | 0.20 | 0.004 |            | 0.0079 |
| D      | 4.9        | 5.5      | .1   | 0.193 | 0.197      | 0.201  |
| E      | 6.2        | 6.4      | 6.6  | 0.244 | 0.252      | 0.260  |
| E1     | 4.3        | 4.4      | 4.48 | 0.169 | 0.173      | 0.176  |
| e      |            | 0.65 BSC |      |       | 0.0256 BSC |        |
| K      | 0°         |          | 8°   | 0°    |            | 8°     |
| L      | 0.45       | 0.60     | 0.75 | 0.018 | 0.024      | 0.030  |

## 5 Ordering information

Table 12. Order codes

| Order code                      | Temperature range | Package                    | Packaging     | Marking   |
|---------------------------------|-------------------|----------------------------|---------------|-----------|
| M74HC4094RM13TR                 | -55/+125 °C       | SO16                       | Tape and reel | 74HC4094  |
| M74HC4094YRM13TR <sup>(1)</sup> | -40/+125 °C       | SO16 (automotive grade)    |               | 74HC4094Y |
| M74HC4094TTR                    | -55/+125 °C       | TSSOP16                    |               | HC4094    |
| M74HC4094YTTR <sup>(1)</sup>    | -40/+125° °C      | TSSOP16 (automotive grade) |               | HC4094Y   |

1. Qualification and characterization according to AEC Q100 and Q003 or equivalent, advanced screening according to AEC Q001 and Q002 or equivalent are ongoing.

## 6 Revision history

**Table 13. Document revision history**

| Date        | Revision | Changes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15-Apr-2013 | 3        | <p>Added <a href="#">Applications</a> to page 1.</p> <p>Updated <a href="#">Table 1</a> (updated data, removed M74HC4094M1R order code, added M74HC4094RM13TR, M74HC4094YRM13TR, M74HC4094TTR, and M74HC4094YTTR order code, temperature range, marking, updated package and packaging).</p> <p>Redrawn <a href="#">Figure 1</a> to <a href="#">Figure 4</a> and <a href="#">Figure 6</a> to <a href="#">Figure 8</a>.</p> <p>Moved <a href="#">Figure 1</a> to page 3.</p> <p>Added <a href="#">Contents</a>.</p> <p>Added titles to <a href="#">Section 1</a> to <a href="#">Section 6</a> (reformatted <a href="#">Section 1</a> and <a href="#">Section 2</a>).</p> <p>Added title to <a href="#">Table 9</a>.</p> <p>Added cross-reference to note 1. below <a href="#">Table 8</a>.</p> <p>Added ECOPACK text to <a href="#">Section 4</a>, reformatted <a href="#">Section 4</a> (reversed order of figures and tables, added titles to <a href="#">Table 10</a> to <a href="#">Table 11</a> and <a href="#">Figure 9</a> to <a href="#">Figure 11</a>).</p> <p>Added <a href="#">Table 13</a>.</p> <p>Minor corrections throughout document.</p> |
| 12-Aug-2013 | 4        | <p><a href="#">Features</a>: added ESD data</p> <p><a href="#">Table 1</a>: updated marking of automotive order codes.</p> <p>Added <a href="#">Section 5: Ordering information</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 15-Oct-2013 | 5        | <p>Removed DIP package.</p> <p><a href="#">Table 1: Device summary</a>: removed “on going” from footnote 1.</p> <p><a href="#">Table 1: Device summary</a> and <a href="#">Table 12: Order codes</a>: added specific marking containing “Y” for all automotive products.</p> <p>Updated disclaimer.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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