

- Package Options Include Plastic "Small Outline" Packages, Ceramic Chip Carriers and Flat Packages, and Plastic and Ceramic DIPs

- Dependable Texas Instruments Quality and Reliability

description

These devices contain two independent J-K positive-edge-triggered flip-flops. A low level at the preset or clear inputs sets or resets the outputs regardless of the levels of the other inputs. When preset and clear are inactive (high), data at the J and K inputs meeting the setup time requirements are transferred to the outputs on the positive-going edge of the clock pulse. Clock triggering occurs at a voltage level and is not directly related to the rise time of the clock pulse. Following the hold time interval, data at the J and K inputs may be changed without affecting the levels at the outputs. These versatile flip-flops can perform as toggle flip-flops by grounding K and tying J high. They also can perform as D-type flip-flops if J and K are tied together.

The SN54109 and SN54LS109A are characterized for operation over the full military temperature range of -55°C to 125°C. The SN74109 and SN74LS109A are characterized for operation from 0°C to 70°C.

FUNCTION TABLE (each flip-flop)

| INPUTS | | | | | OUTPUTS | |
|--------|-----|-----|---|---|----------------|----------------|
| PRE | CLR | CLK | J | K | Q | \bar{Q} |
| L | H | X | X | X | H | L |
| H | L | X | X | X | L | H |
| L | L | X | X | X | H [†] | H [†] |
| H | H | ↑ | L | L | L | H |
| H | H | ↑ | H | L | TOGGLE | |
| H | H | ↑ | L | H | Q ₀ | \bar{Q}_0 |
| H | H | ↑ | H | H | H | L |
| H | H | L | X | X | Q ₀ | \bar{Q}_0 |

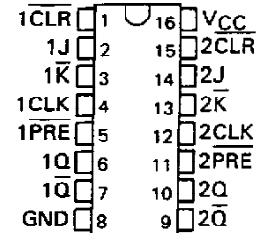
[†] The output levels in this configuration are not guaranteed to meet the minimum levels for V_{OH} if the lows at preset and clear are near V_{IL} maximum. Furthermore, this configuration is nonstable; that is, it will not persist when preset or clear return to their inactive (high) level.

SN54109, SN54LS109A . . . J OR W PACKAGE

SN74109 . . . N PACKAGE

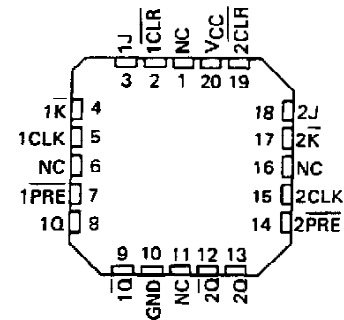
SN74LS109A . . . D OR N PACKAGE

(TOP VIEW)

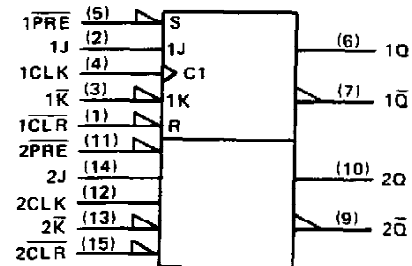


SN54LS109A . . . FK PACKAGE

(TOP VIEW)



logic symbol[‡]

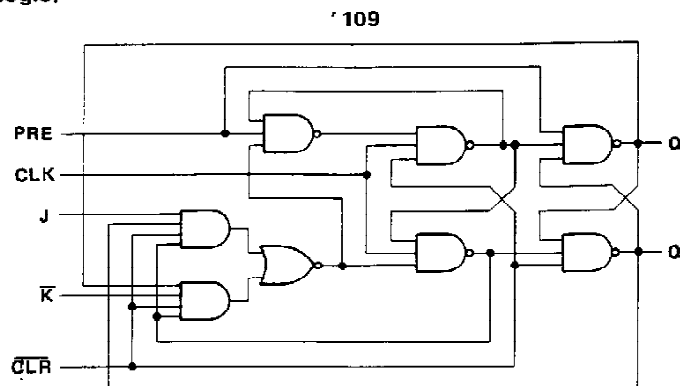


[‡]This symbol is in accordance with ANSI/IEEE Std 91-1984 and IEC Publication 617-12.

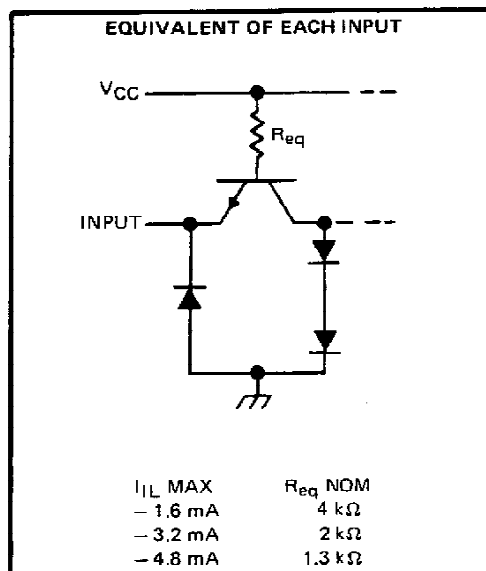
Pin numbers shown are for D, J, N, and W packages.

SN54109, SN74109 **DUAL J-K POSITIVE-EDGE-TRIGGERED FLIP-FLOPS WITH PRESET AND CLEAR**

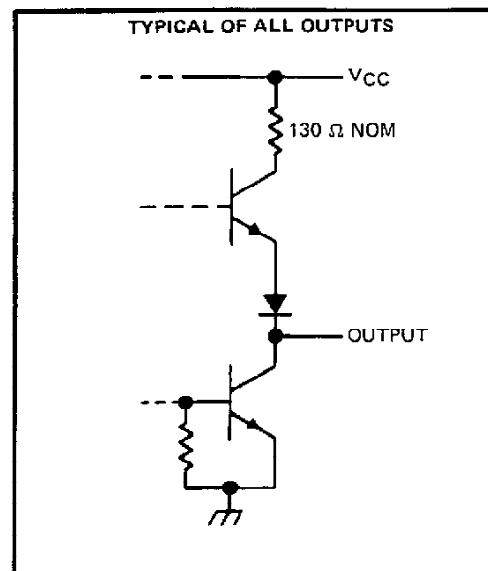
logic diagram (positive logic)



schematics of inputs and outputs



'109



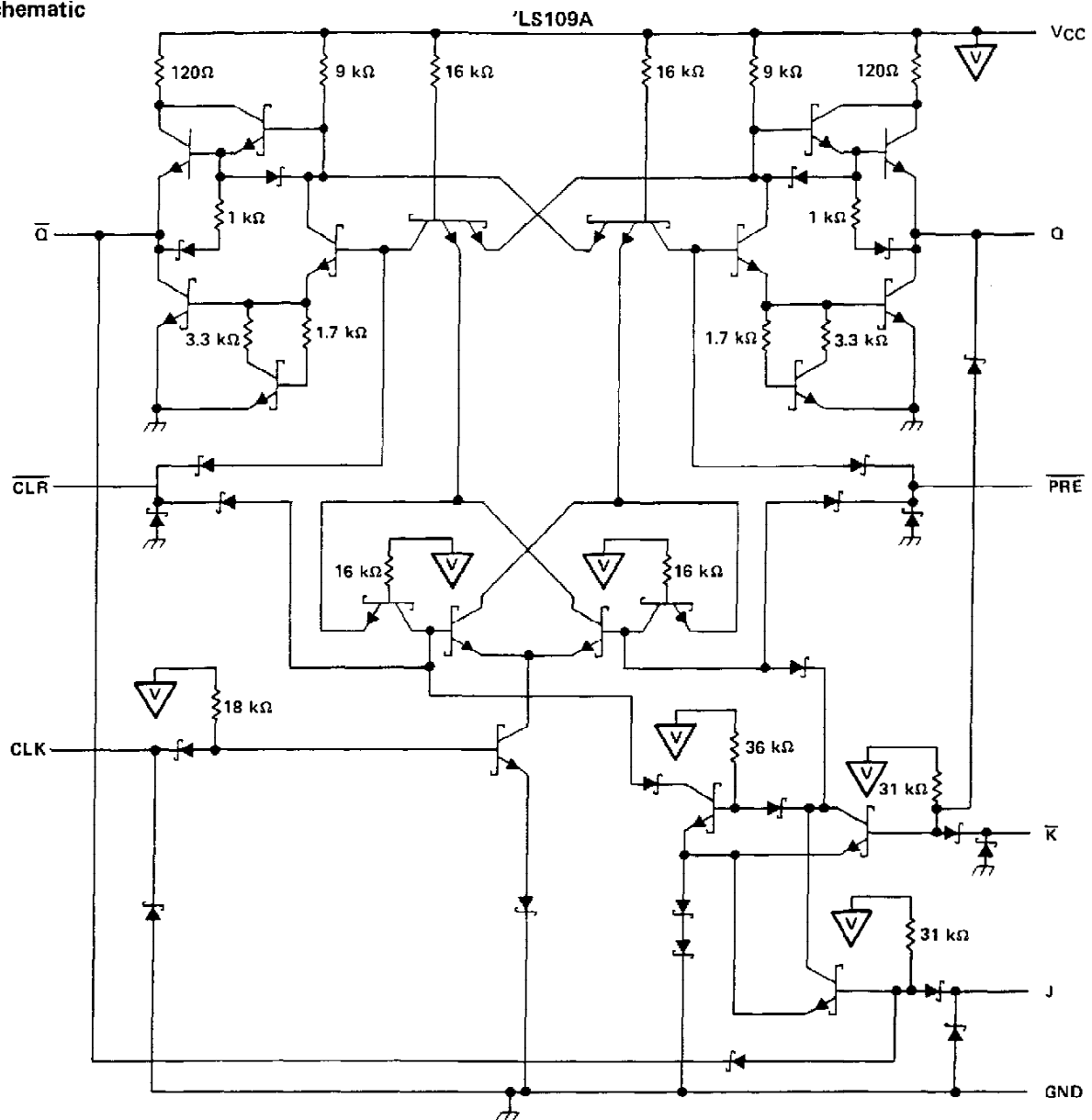

TEXAS
INSTRUMENTS

POST OFFICE BOX 655012 • DALLAS, TEXAS 75265

**SN54109, SN54LS109A,
SN74109, SN74LS109A**

DUAL J-K POSITIVE-EDGE-TRIGGERED FLIP-FLOPS WITH PRESET AND CLEAR

schematic



absolute maximum ratings over operating free-air temperature range (unless otherwise noted)

| | |
|---|----------------|
| Supply voltage, V_{CC} (see Note 1) | 7 V |
| Input voltage: '109 | 5.5 V |
| 'LS109A | 7 V |
| Operating free-air temperature range: SN54' | -55°C to 125°C |
| SN74' | 0°C to 70°C |
| Storage temperature range | -65°C to 150°C |

NOTE 1: Voltage values are with respect to network ground terminal.

**TEXAS
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SN54109, SN74109
DUAL J-K POSITIVE-EDGE-TRIGGERED FLIP-FLOPS WITH PRESET AND CLEAR
recommended operating conditions

| | | | SN54109 | | | SN74109 | | | UNIT |
|-----------------|----------------------------------|-----------------|---------|-----|-------|---------|-----|-------|------|
| | | | MIN | NOM | MAX | MIN | NOM | MAX | |
| V _{CC} | Supply voltage | | 4.5 | 5 | 5.5 | 4.75 | 5 | 5.25 | V |
| V _{IH} | High-level input voltage | | 2 | | | 2 | | | V |
| V _{IL} | Low-level input voltage | | | | 0.8 | | | 0.8 | V |
| I _{OH} | High-level output current | | | | − 0.8 | | | − 0.8 | mA |
| I _{OL} | Low-level output current | | | | 16 | | | 16 | mA |
| t _w | Pulse duration | CLK high or low | 20 | | | 20 | | | ns |
| | | PRE or CLR low | 20 | | | 20 | | | |
| t _{su} | Input setup time before CLK † | | 10 | | | 10 | | | ns |
| t _h | Input hold time-data after CLK † | | 6 | | | 6 | | | ns |
| T _A | Operating free-air temperature | | − 55 | | | 125 | | | °C |

electrical characteristics over recommended operating free-air temperature range (unless otherwise noted)

| PARAMETER | TEST CONDITIONS† | SN54109 | | | SN74109 | | | UNIT |
|------------|---|---------|------|------|---------|------|------|---------------|
| | | MIN | TYP‡ | MAX | MIN | TYP‡ | MAX | |
| V_{IK} | $V_{CC} = \text{MIN}, I_I = -12 \text{ mA}$ | | | -1.5 | | | -1.5 | V |
| V_{OH} | $V_{CC} = \text{MIN}, V_{IH} = 2 \text{ V}, V_{IL} = 0.8 \text{ V}, I_{OH} = -0.8 \text{ mA}$ | 2.4 | 3.4 | | 2.4 | 3.4 | | V |
| V_{OL} | $V_{CC} = \text{MIN}, V_{IH} = 2 \text{ V}, V_{IL} = 0.8 \text{ V}, I_{OL} = 16 \text{ mA}$ | | 0.2 | 0.4 | | 0.2 | 0.4 | V |
| I_I | $V_{CC} = \text{MAX}, V_I = 5.5 \text{ V}$ | | 1 | | | 1 | | mA |
| I_{IH} | J or K | | 40 | | | 40 | | μA |
| | CLR | | 160 | | | 160 | | |
| | PRE or CLK | | 80 | | | 80 | | |
| I_{IL} | J or K | | -1.6 | | | -1.6 | | mA |
| | CLR† | | -4.8 | | | -4.8 | | |
| | PRE† | | -3.2 | | | -3.2 | | |
| | CLK | | -3.2 | | | -3.2 | | |
| $I_{OS}\S$ | $V_{CC} = \text{MAX}$ | -30 | | -85 | -30 | | -85 | mA |
| $I_{CC}\#$ | $V_{CC} = \text{MAX},$ See Note 2 | | 9 | 15 | | 9 | 15 | mA |

† For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions.

‡ All typical values are at $V_{CC} = 5 \text{ V}, T_A = 25^\circ\text{C}$.

§ Not more than one output should be shorted at a time.

† Clear is tested with preset high and preset is tested with clear high.

Average per flip-flop.

NOTE 2: With all outputs open, I_{CC} is measured with the Q and \bar{Q} outputs high in turn. At the time of measurement, the clock input is grounded.

switching characteristics, $V_{CC} = 5 \text{ V}, T_A = 25^\circ\text{C}$ (see note 3)

| PARAMETER | FROM (INPUT) | TO (OUTPUT) | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|-----------|--------------|----------------|---|-----|-----|-----|------|
| f_{max} | | | $R_L = 400 \Omega, C_L = 15 \text{ pF}$ | 25 | 33 | | MHz |
| t_{PLH} | PRE | Q | | | 10 | 15 | ns |
| t_{PHL} | | \bar{Q} | | | 23 | 35 | ns |
| t_{PLH} | CLR | \bar{Q} | | | 10 | 15 | ns |
| t_{PHL} | | Q | | | 17 | 25 | ns |
| t_{PLH} | CLK | Q or \bar{Q} | | | 10 | 16 | ns |
| t_{PHL} | | Q or \bar{Q} | | | 18 | 28 | ns |

NOTE 3: Load circuits and voltage waveforms are shown in Section 1.

TEXAS
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POST OFFICE BOX 655012 • DALLAS, TEXAS 75265

SN54LS109A, SN74LS109A DUAL J-K POSITIVE-EDGE-TRIGGERED FLIP-FLOPS WITH PRESET AND CLEAR

recommended operating conditions

| | | | SN54LS109A | | | SN74LS109A | | | UNIT |
|--------------------|--------------------------------|-----------------|------------|-----|-------|------------|-----|-------|------|
| | | | MIN | NOM | MAX | MIN | NOM | MAX | |
| V _{CC} | Supply voltage | | 4.5 | 5 | 5.5 | 4.75 | 5 | 5.25 | V |
| V _{IH} | High-level input voltage | | 2 | | | 2 | | | V |
| V _{IL} | Low-level input voltage | | | | 0.7 | | | 0.8 | V |
| I _{OH} | High-level output current | | | | − 0.4 | | | − 0.4 | mA |
| I _{OL} | Low-level output current | | | | 4 | | | 8 | mA |
| f _{clock} | Clock frequency | | 0 | | 25 | 0 | | 25 | MHz |
| t _w | Pulse duration | CLK high | 25 | | | 25 | | | ns |
| | | PRE or CLR low | 25 | | | 25 | | | |
| t _{su} | Setup time before CLK † | High-level data | 35 | | | 35 | | | ns |
| | | Low-level data | 25 | | | 25 | | | |
| t _h | Hold time-data after CLK † | | 5 | | | 5 | | | ns |
| T _A | Operating free-air temperature | | − 55 | | 125 | 0 | | 70 | °C |

electrical characteristics over recommended operating free-air temperature range (unless otherwise noted)

| PARAMETER | | TEST CONDITIONS† | | SN54LS109A | | SN74LS109A | | UNIT |
|-------------------------|-------------|--|--|------------|-------|------------|-------|------|
| | | | | MIN | TYP‡ | MAX | MIN | |
| V _{IK} | | V _{CC} = MIN, I _I = - 18 mA | | - 1.5 | | - 1.5 | | V |
| V _{OH} | | V _{CC} = MIN, I _{OH} = - 0.4 mA | V _{IH} = 2 V, V _{IL} = MAX, | 2.5 | 3.4 | 2.7 | 3.4 | V |
| V _{OL} | | V _{CC} = MIN, I _{OL} = 4 mA | V _{IL} = MAX, V _{IH} = 2 V, | 0.25 | 0.4 | 0.25 | 0.4 | V |
| | | V _{CC} = MIN, I _{OL} = 8 mA | V _{IL} = MAX, V _{IH} = 2 V, | | | 0.35 | 0.5 | |
| I _I | J, K or CLK | V _{CC} = MAX, V _I = 7 V | | 0.1 | | 0.1 | | mA |
| | CLR or PRE | | | 0.2 | | 0.2 | | |
| I _{IH} | J, K or CLK | V _{CC} = MAX, V _I = 2.7 V | | 20 | | 20 | | µA |
| | CLR or PRE | | | 40 | | 40 | | |
| I _{IL} | J, K or CLK | V _{CC} = MAX, V _I = 0.4 V | | - 0.4 | | - 0.4 | | mA |
| | CLR or PRE | | | - 0.8 | | - 0.8 | | |
| I _{OS} § | | V _{CC} = MAX, See Note 4 | | - 20 | - 100 | - 20 | - 100 | mA |
| I _{CC} (Total) | | V _{CC} = MAX, See Note 2 | | 4 | 8 | 4 | 8 | mA |

† For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions.

‡ All typical values are at V_{CC} = 5 V, T_A = 25°C.

§ Not more than one output should be shorted at a time, and the duration of the short circuit should not exceed one second.

NOTE 2: With all outputs open, I_{CC} is measured with the Q and \bar{Q} outputs high in turn. At the time of measurement, the clock input is grounded.

NOTE 4: For certain devices where state commutation can be caused by shorting an output to ground, an equivalent test may be performed with V_O = 2.25 V and 2.125 V for the 54 family and the 74 family, respectively with the minimum and maximum limits reduced to one half of their stated values.

switching characteristics, V_{CC} = 5 V, T_A = 25°C (see note 3)

| PARAMETER | FROM (INPUT) | TO (OUTPUT) | TEST CONDITIONS | | MIN | TYP | MAX | UNIT |
|------------------|-----------------|---------------------|---|--|-----|-----|-----|------|
| f _{max} | | | R _L = 2 kΩ, C _L = 15 pF | | 25 | 33 | | MHz |
| t _{PLH} | CLR, PRE | Q or \overline{Q} | | | | 13 | 25 | ns |
| t _{PHL} | or CLK | | | | | 25 | 40 | ns |

NOTE 3: Load circuits and voltage waveforms are shown in Section 1.


**TEXAS
INSTRUMENTS**

POST OFFICE BOX 655012 • DALLAS, TEXAS 75265

PACKAGING INFORMATION

| Orderable part number | Status (1) | Material type (2) | Package Pins | Package qty Carrier | RoHS (3) | Lead finish/ Ball material (4) | MSL rating/ Peak reflow (5) | Op temp (°C) | Part marking (6) |
|----------------------------------|---------------|----------------------|----------------|-----------------------|-------------|--------------------------------------|-----------------------------------|--------------|----------------------|
| JM38510/30109BEA | Active | Production | CDIP (J) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | JM38510/ 30109BEA |
| JM38510/30109BEA.A | Active | Production | CDIP (J) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | JM38510/ 30109BEA |
| JM38510/30109BEA.A | Active | Production | CDIP (J) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | JM38510/ 30109BEA |
| JM38510/30109BFA | Active | Production | CFP (W) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | JM38510/ 30109BFA |
| JM38510/30109BFA | Active | Production | CFP (W) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | JM38510/ 30109BFA |
| JM38510/30109BFA.A | Active | Production | CFP (W) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | JM38510/ 30109BFA |
| JM38510/30109BFA.A | Active | Production | CFP (W) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | JM38510/ 30109BFA |
| M38510/30109BEA | Active | Production | CDIP (J) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | JM38510/ 30109BEA |
| M38510/30109BEA | Active | Production | CDIP (J) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | JM38510/ 30109BEA |
| M38510/30109BFA | Active | Production | CFP (W) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | JM38510/ 30109BFA |
| M38510/30109BFA | Active | Production | CFP (W) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | JM38510/ 30109BFA |
| SN54LS109AJ | Active | Production | CDIP (J) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | SN54LS109AJ |
| SN54LS109AJ | Active | Production | CDIP (J) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | SN54LS109AJ |
| SN54LS109AJ.A | Active | Production | CDIP (J) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | SN54LS109AJ |
| SN54LS109AJ.A | Active | Production | CDIP (J) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | SN54LS109AJ |
| SN74LS109AD | Obsolete | Production | SOIC (D) 16 | - | - | Call TI | Call TI | 0 to 70 | LS109A |
| SN74LS109AD | Obsolete | Production | SOIC (D) 16 | - | - | Call TI | Call TI | 0 to 70 | LS109A |
| SN74LS109ADR | Active | Production | SOIC (D) 16 | 2500 LARGE T&R | Yes | NIPDAU | Level-1-260C-UNLIM | 0 to 70 | LS109A |
| SN74LS109ADR | Active | Production | SOIC (D) 16 | 2500 LARGE T&R | Yes | NIPDAU | Level-1-260C-UNLIM | 0 to 70 | LS109A |
| SN74LS109ADR.A | Active | Production | SOIC (D) 16 | 2500 LARGE T&R | Yes | NIPDAU | Level-1-260C-UNLIM | 0 to 70 | LS109A |
| SN74LS109ADR.A | Active | Production | SOIC (D) 16 | 2500 LARGE T&R | Yes | NIPDAU | Level-1-260C-UNLIM | 0 to 70 | LS109A |

| Orderable part number | Status (1) | Material type (2) | Package Pins | Package qty Carrier | RoHS (3) | Lead finish/ Ball material (4) | MSL rating/ Peak reflow (5) | Op temp (°C) | Part marking (6) |
|-------------------------------|---------------|----------------------|----------------|-----------------------|-------------|--------------------------------------|-----------------------------------|--------------|---------------------|
| SN74LS109AN | Active | Production | PDIP (N) 16 | 25 TUBE | Yes | NIPDAU | N/A for Pkg Type | 0 to 70 | SN74LS109AN |
| SN74LS109AN | Active | Production | PDIP (N) 16 | 25 TUBE | Yes | NIPDAU | N/A for Pkg Type | 0 to 70 | SN74LS109AN |
| SN74LS109AN.A | Active | Production | PDIP (N) 16 | 25 TUBE | Yes | NIPDAU | N/A for Pkg Type | 0 to 70 | SN74LS109AN |
| SN74LS109AN.A | Active | Production | PDIP (N) 16 | 25 TUBE | Yes | NIPDAU | N/A for Pkg Type | 0 to 70 | SN74LS109AN |
| SN74LS109ANE4 | Active | Production | PDIP (N) 16 | 25 TUBE | Yes | NIPDAU | N/A for Pkg Type | 0 to 70 | SN74LS109AN |
| SN74LS109ANE4 | Active | Production | PDIP (N) 16 | 25 TUBE | Yes | NIPDAU | N/A for Pkg Type | 0 to 70 | SN74LS109AN |
| SN74LS109ANSR | Active | Production | SOP (NS) 16 | 2000 LARGE T&R | Yes | NIPDAU | Level-1-260C-UNLIM | 0 to 70 | 74LS109A |
| SN74LS109ANSR | Active | Production | SOP (NS) 16 | 2000 LARGE T&R | Yes | NIPDAU | Level-1-260C-UNLIM | 0 to 70 | 74LS109A |
| SN74LS109ANSR.A | Active | Production | SOP (NS) 16 | 2000 LARGE T&R | Yes | NIPDAU | Level-1-260C-UNLIM | 0 to 70 | 74LS109A |
| SN74LS109ANSR.A | Active | Production | SOP (NS) 16 | 2000 LARGE T&R | Yes | NIPDAU | Level-1-260C-UNLIM | 0 to 70 | 74LS109A |
| SNJ54LS109AJ | Active | Production | CDIP (J) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | SNJ54LS109AJ |
| SNJ54LS109AJ | Active | Production | CDIP (J) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | SNJ54LS109AJ |
| SNJ54LS109AJ.A | Active | Production | CDIP (J) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | SNJ54LS109AJ |
| SNJ54LS109AJ.A | Active | Production | CDIP (J) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | SNJ54LS109AJ |
| SNJ54LS109AW | Active | Production | CFP (W) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | SNJ54LS109AW |
| SNJ54LS109AW | Active | Production | CFP (W) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | SNJ54LS109AW |
| SNJ54LS109AW.A | Active | Production | CFP (W) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | SNJ54LS109AW |
| SNJ54LS109AW.A | Active | Production | CFP (W) 16 | 25 TUBE | No | SNPB | N/A for Pkg Type | -55 to 125 | SNJ54LS109AW |

⁽¹⁾ **Status:** For more details on status, see our [product life cycle](#).

⁽²⁾ **Material type:** When designated, preproduction parts are prototypes/experimental devices, and are not yet approved or released for full production. Testing and final process, including without limitation quality assurance, reliability performance testing, and/or process qualification, may not yet be complete, and this item is subject to further changes or possible discontinuation. If available for ordering, purchases will be subject to an additional waiver at checkout, and are intended for early internal evaluation purposes only. These items are sold without warranties of any kind.

⁽³⁾ **RoHS values:** Yes, No, RoHS Exempt. See the [TI RoHS Statement](#) for additional information and value definition.

⁽⁴⁾ **Lead finish/Ball material:** Parts may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead finish/Ball material values may wrap to two lines if the finish value exceeds the maximum column width.

⁽⁵⁾ **MSL rating/Peak reflow:** The moisture sensitivity level ratings and peak solder (reflow) temperatures. In the event that a part has multiple moisture sensitivity ratings, only the lowest level per JEDEC standards is shown. Refer to the shipping label for the actual reflow temperature that will be used to mount the part to the printed circuit board.

(6) Part marking: There may be an additional marking, which relates to the logo, the lot trace code information, or the environmental category of the part.

Multiple part markings will be inside parentheses. Only one part marking contained in parentheses and separated by a "~" will appear on a part. If a line is indented then it is a continuation of the previous line and the two combined represent the entire part marking for that device.

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OTHER QUALIFIED VERSIONS OF SN54LS109A, SN74LS109A :

- Catalog : [SN74LS109A](#)
- Military : [SN54LS109A](#)

NOTE: Qualified Version Definitions:

- Catalog - TI's standard catalog product
- Military - QML certified for Military and Defense Applications

TAPE AND REEL INFORMATION



*All dimensions are nominal

| Device | Package Type | Package Drawing | Pins | SPQ | Reel Diameter (mm) | Reel Width W1 (mm) | A0 (mm) | B0 (mm) | K0 (mm) | P1 (mm) | W (mm) | Pin1 Quadrant |
|---------------|--------------|-----------------|------|------|--------------------|--------------------|---------|---------|---------|---------|--------|---------------|
| SN74LS109ADR | SOIC | D | 16 | 2500 | 330.0 | 16.4 | 6.5 | 10.3 | 2.1 | 8.0 | 16.0 | Q1 |
| SN74LS109ANSR | SOP | NS | 16 | 2000 | 330.0 | 16.4 | 8.1 | 10.4 | 2.5 | 12.0 | 16.0 | Q1 |

TAPE AND REEL BOX DIMENSIONS



*All dimensions are nominal

| Device | Package Type | Package Drawing | Pins | SPQ | Length (mm) | Width (mm) | Height (mm) |
|---------------|--------------|-----------------|------|------|-------------|------------|-------------|
| SN74LS109ADR | SOIC | D | 16 | 2500 | 340.5 | 336.1 | 32.0 |
| SN74LS109ANSR | SOP | NS | 16 | 2000 | 353.0 | 353.0 | 32.0 |

TUBE



*All dimensions are nominal

| Device | Package Name | Package Type | Pins | SPQ | L (mm) | W (mm) | T (μm) | B (mm) |
|--------------------|--------------|--------------|------|-----|--------|--------|--------|--------|
| JM38510/30109BFA | W | CFP | 16 | 25 | 506.98 | 26.16 | 6220 | NA |
| JM38510/30109BFA.A | W | CFP | 16 | 25 | 506.98 | 26.16 | 6220 | NA |
| M38510/30109BFA | W | CFP | 16 | 25 | 506.98 | 26.16 | 6220 | NA |
| SN74LS109AN | N | PDIP | 16 | 25 | 506 | 13.97 | 11230 | 4.32 |
| SN74LS109AN | N | PDIP | 16 | 25 | 506 | 13.97 | 11230 | 4.32 |
| SN74LS109AN.A | N | PDIP | 16 | 25 | 506 | 13.97 | 11230 | 4.32 |
| SN74LS109AN.A | N | PDIP | 16 | 25 | 506 | 13.97 | 11230 | 4.32 |
| SN74LS109ANE4 | N | PDIP | 16 | 25 | 506 | 13.97 | 11230 | 4.32 |
| SN74LS109ANE4 | N | PDIP | 16 | 25 | 506 | 13.97 | 11230 | 4.32 |
| SNJ54LS109AW | W | CFP | 16 | 25 | 506.98 | 26.16 | 6220 | NA |
| SNJ54LS109AW.A | W | CFP | 16 | 25 | 506.98 | 26.16 | 6220 | NA |

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