



**THE DATASHEET OF
74AUP1G09GM,115**



74AUP1G09

Low-power 2-input AND gate with open-drain

Rev. 8.1 — 11 July 2023

Product data sheet

1. General description

The 74AUP1G09 is a single 2-input AND gate with open-drain output. Schmitt-trigger action at all inputs makes the circuit tolerant of slower input rise and fall times. This device ensures very low static and dynamic power consumption across the entire V_{CC} range from 0.8 V to 3.6 V. This device is fully specified for partial power down applications using I_{OFF} . The I_{OFF} circuitry disables the output, preventing the potentially damaging backflow current through the device when it is powered down.

2. Features and benefits

- Wide supply voltage range from 0.8 V to 3.6 V
- CMOS low power dissipation
- High noise immunity
- Overvoltage tolerant inputs to 3.6 V
- Low static power consumption; $I_{CC} = 0.9 \mu\text{A}$ (maximum)
- Latch-up performance exceeds 100 mA per JESD 78 Class II Level B
- Low noise overshoot and undershoot < 10 % of V_{CC}
- I_{OFF} circuitry provides partial Power-down mode operation
- Complies with JEDEC standards:
 - JESD8-12 (0.8 V to 1.3 V)
 - JESD8-11 (0.9 V to 1.65 V)
 - JESD8-7 (1.65 V to 1.95 V)
 - JESD8-5 (2.3 V to 2.7 V)
 - JESD8C (2.7 V to 3.6 V)
- ESD protection:
 - HBM: ANSI/ESDA/JEDEC JS-001 class 3A exceeds 5000 V
 - CDM: ANSI/ESDA/JEDEC JS-002 class C3 exceeds 1000 V
- Multiple package options
- Specified from -40 °C to +85 °C and -40 °C to +125 °C

3. Ordering information

Table 1. Ordering information

| Type number | Package | | | |
|-----------------------------|-------------------|--------|--|---------------------------|
| | Temperature range | Name | Description | Version |
| 74AUP1G09GW | -40 °C to +125 °C | TSSOP5 | plastic thin shrink small outline package; 5 leads; body width 1.25 mm | SOT353-1 |
| 74AUP1G09GM | -40 °C to +125 °C | XSON6 | plastic extremely thin small outline package; no leads; 6 terminals; body 1 × 1.45 × 0.5 mm | SOT886 |
| 74AUP1G09GN | -40 °C to +125 °C | XSON6 | extremely thin small outline package; no leads; 6 terminals; body 0.9 × 1.0 × 0.35 mm | SOT1115 |
| 74AUP1G09GS | -40 °C to +125 °C | XSON6 | extremely thin small outline package; no leads; 6 terminals; body 1.0 × 1.0 × 0.35 mm | SOT1202 |
| 74AUP1G09GX | -40 °C to +125 °C | X2SON5 | plastic thermal enhanced extremely thin small outline package; no leads; 5 terminals; body 0.8 × 0.8 × 0.32 mm | SOT1226-3 |

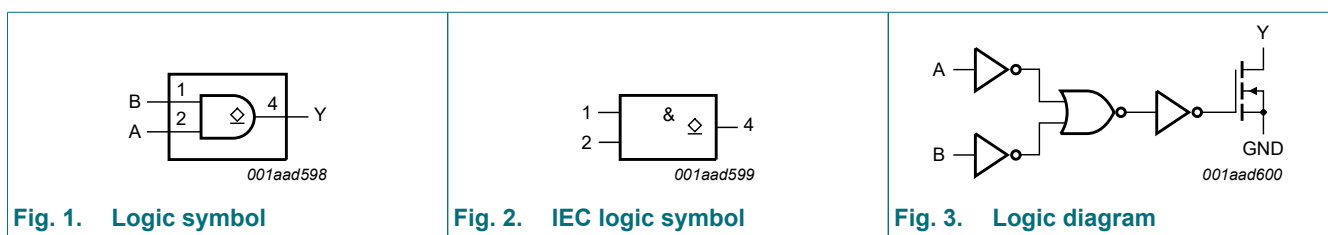
4. Marking

Table 2. Marking

| Type number | Marking code [1] |
|-------------|------------------|
| 74AUP1G09GW | p9 |
| 74AUP1G09GM | p9 |
| 74AUP1G09GN | p9 |
| 74AUP1G09GS | p9 |
| 74AUP1G09GX | p9 |

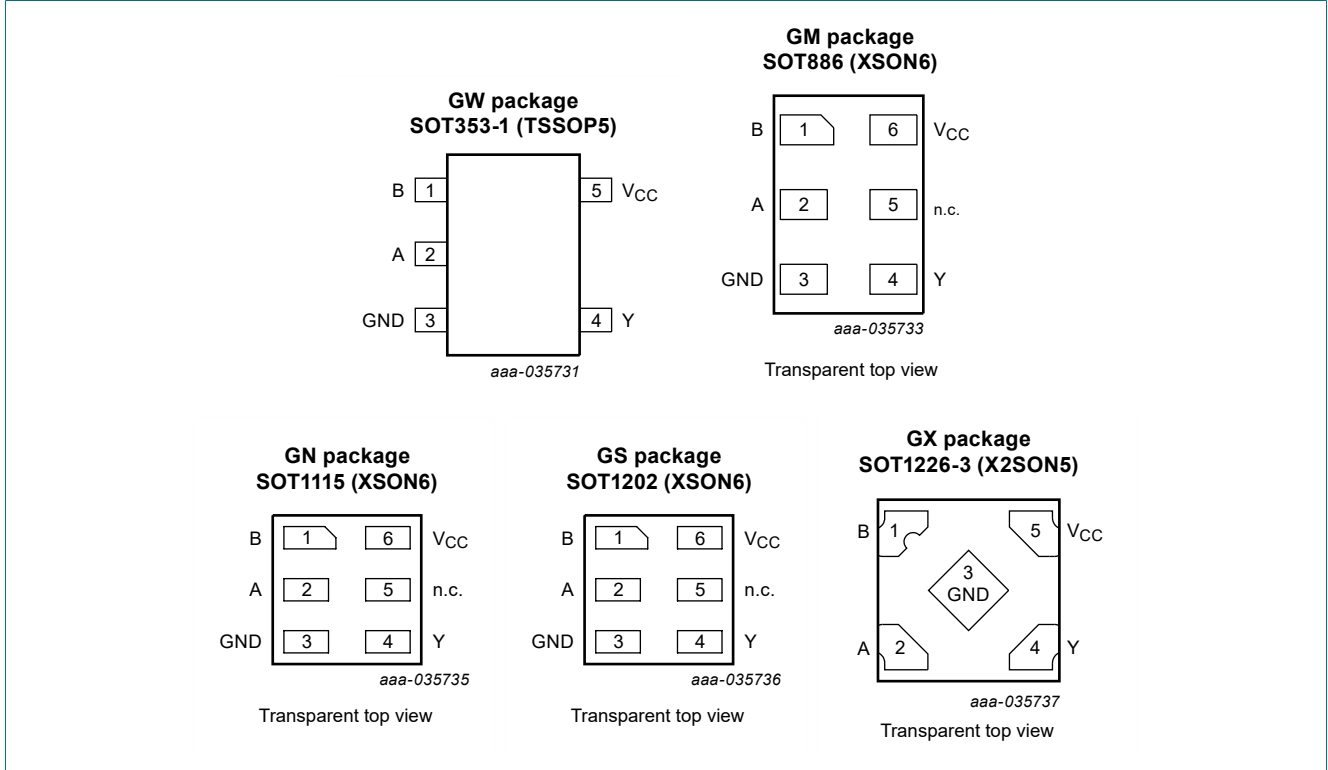
[1] The pin 1 indicator is located on the lower left corner of the device, below the marking code.

5. Functional diagram



6. Pinning information

6.1. Pinning



6.2. Pin description

Table 3. Pin description

| Symbol | Pin | | Description |
|-----------------|-------------------|-------|----------------|
| | TSSOP5 and X2SON5 | XSON6 | |
| B | 1 | 1 | data input |
| A | 2 | 2 | data input |
| GND | 3 | 3 | ground (0 V) |
| Y | 4 | 4 | data output |
| n.c. | - | 5 | not connected |
| V _{CC} | 5 | 6 | supply voltage |

7. Functional description

Table 4. Function table

H = HIGH voltage level; L = LOW voltage level; Z = high-impedance OFF state.

| Input | | Output |
|-------|---|--------|
| A | B | Y |
| L | L | L |
| L | H | L |
| H | L | L |
| H | H | Z |

8. Limiting values

Table 5. Limiting values

In accordance with the Absolute Maximum Rating System (IEC 60134). Voltages are referenced to GND (ground = 0 V).

| Symbol | Parameter | Conditions | Min | Max | Unit |
|-----------|-------------------------|---------------------------------|----------|------|------|
| V_{CC} | supply voltage | | -0.5 | +4.6 | V |
| I_{IK} | input clamping current | $V_I < 0$ V | -50 | - | mA |
| V_I | input voltage | | [1] -0.5 | +4.6 | V |
| I_{OK} | output clamping current | $V_O < 0$ V | -50 | - | mA |
| V_O | output voltage | Active mode and Power-down mode | [1] -0.5 | +4.6 | V |
| I_O | output current | $V_O = 0$ V to V_{CC} | - | +20 | mA |
| I_{CC} | supply current | | - | +50 | mA |
| I_{GND} | ground current | | -50 | - | mA |
| T_{stg} | storage temperature | | -65 | +150 | °C |
| P_{tot} | total power dissipation | $T_{amb} = -40$ °C to +125 °C | [2] - | 250 | mW |

[1] The minimum input and output voltage ratings may be exceeded if the input and output current ratings are observed.

[2] For SOT353-1 (TSSOP5) package: P_{tot} derates linearly with 3.3 mW/K above 74 °C.

For SOT886 (XSON6) package: P_{tot} derates linearly with 3.3 mW/K above 74 °C.

For SOT1115 (XSON6) package: P_{tot} derates linearly with 3.2 mW/K above 71 °C.

For SOT1202 (XSON6) package: P_{tot} derates linearly with 3.3 mW/K above 74 °C.

For SOT1226-3 (X2SON5) package: P_{tot} derates linearly with 3.0 mW/K above 67 °C.

9. Recommended operating conditions

Table 6. Recommended operating conditions

| Symbol | Parameter | Conditions | Min | Max | Unit |
|---------------------|-------------------------------------|---------------------------------|-----|------|------|
| V_{CC} | supply voltage | | 0.8 | 3.6 | V |
| V_I | input voltage | | 0 | 3.6 | V |
| V_O | output voltage | Active mode and Power-down mode | 0 | 3.6 | V |
| T_{amb} | ambient temperature | | -40 | +125 | °C |
| $\Delta t/\Delta V$ | input transition rise and fall rate | $V_{CC} = 0.8$ V to 3.6 V | 0 | 200 | ns/V |

10. Static characteristics

Table 7. Static characteristics

At recommended operating conditions; voltages are referenced to GND (ground = 0 V).

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|--|--------------------------------------|--|------------------------|-----|------------------------|------|
| T_{amb} = 25 °C | | | | | | |
| V _{IH} | HIGH-level input voltage | V _{CC} = 0.8 V | 0.7 × V _{CC} | - | - | V |
| | | V _{CC} = 0.9 V to 1.95 V | 0.65 × V _{CC} | - | - | V |
| | | V _{CC} = 2.3 V to 2.7 V | 1.6 | - | - | V |
| | | V _{CC} = 3.0 V to 3.6 V | 2.0 | - | - | V |
| V _{IL} | LOW-level input voltage | V _{CC} = 0.8 V | - | - | 0.3 × V _{CC} | V |
| | | V _{CC} = 0.9 V to 1.95 V | - | - | 0.35 × V _{CC} | V |
| | | V _{CC} = 2.3 V to 2.7 V | - | - | 0.7 | V |
| | | V _{CC} = 3.0 V to 3.6 V | - | - | 0.9 | V |
| V _{OL} | LOW-level output voltage | V _I = V _{IH} or V _{IL} | | | | |
| | | I _O = 20 μA; V _{CC} = 0.8 V to 3.6 V | - | - | 0.1 | V |
| | | I _O = 1.1 mA; V _{CC} = 1.1 V | - | - | 0.3 × V _{CC} | V |
| | | I _O = 1.7 mA; V _{CC} = 1.4 V | - | - | 0.31 | V |
| | | I _O = 1.9 mA; V _{CC} = 1.65 V | - | - | 0.31 | V |
| | | I _O = 2.3 mA; V _{CC} = 2.3 V | - | - | 0.31 | V |
| | | I _O = 3.1 mA; V _{CC} = 2.3 V | - | - | 0.44 | V |
| | | I _O = 2.7 mA; V _{CC} = 3.0 V | - | - | 0.31 | V |
| I _O = 4.0 mA; V _{CC} = 3.0 V | - | - | 0.44 | V | | |
| I _I | input leakage current | V _I = GND to 3.6 V; V _{CC} = 0 V to 3.6 V | - | - | ±0.1 | μA |
| I _{OZ} | OFF-state output current | V _I = V _{IH} or V _{IL} ; V _O = 0 V to 3.6 V; V _{CC} = 3.6 V | - | - | ±0.1 | μA |
| I _{OFF} | power-off leakage current | V _I or V _O = 0 V to 3.6 V; V _{CC} = 0 V | - | - | ±0.2 | μA |
| ΔI _{OFF} | additional power-off leakage current | V _I or V _O = 0 V to 3.6 V; V _{CC} = 0 V to 0.2 V | - | - | ±0.2 | μA |
| I _{CC} | supply current | V _I = GND or V _{CC} ; I _O = 0 A; V _{CC} = 0.8 V to 3.6 V | - | - | 0.5 | μA |
| ΔI _{CC} | additional supply current | V _I = V _{CC} - 0.6 V; I _O = 0 A; V _{CC} = 3.3 V | - | - | 40 | μA |
| C _I | input capacitance | V _{CC} = 0 V to 3.6 V; V _I = GND or V _{CC} | - | 0.8 | - | pF |
| C _O | output capacitance | output enabled; V _O = GND; V _{CC} = 0 V | - | 1.7 | - | pF |
| | | output disabled; V _O = GND; V _{CC} = 0 V | - | 1.1 | - | pF |
| T_{amb} = -40 °C to +85 °C | | | | | | |
| V _{IH} | HIGH-level input voltage | V _{CC} = 0.8 V | 0.7 × V _{CC} | - | - | V |
| | | V _{CC} = 0.9 V to 1.95 V | 0.65 × V _{CC} | - | - | V |
| | | V _{CC} = 2.3 V to 2.7 V | 1.6 | - | - | V |
| | | V _{CC} = 3.0 V to 3.6 V | 2.0 | - | - | V |
| V _{IL} | LOW-level input voltage | V _{CC} = 0.8 V | - | - | 0.3 × V _{CC} | V |
| | | V _{CC} = 0.9 V to 1.95 V | - | - | 0.35 × V _{CC} | V |
| | | V _{CC} = 2.3 V to 2.7 V | - | - | 0.7 | V |
| | | V _{CC} = 3.0 V to 3.6 V | - | - | 0.9 | V |

Low-power 2-input AND gate with open-drain

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|--|--------------------------------------|--|------------------------|-----|------------------------|------|
| V _{OL} | LOW-level output voltage | V _I = V _{IH} or V _{IL} | | | | |
| | | I _O = 20 μA; V _{CC} = 0.8 V to 3.6 V | - | - | 0.1 | V |
| | | I _O = 1.1 mA; V _{CC} = 1.1 V | - | - | 0.3 × V _{CC} | V |
| | | I _O = 1.7 mA; V _{CC} = 1.4 V | - | - | 0.37 | V |
| | | I _O = 1.9 mA; V _{CC} = 1.65 V | - | - | 0.35 | V |
| | | I _O = 2.3 mA; V _{CC} = 2.3 V | - | - | 0.33 | V |
| | | I _O = 3.1 mA; V _{CC} = 2.3 V | - | - | 0.45 | V |
| | | I _O = 2.7 mA; V _{CC} = 3.0 V | - | - | 0.33 | V |
| | | I _O = 4.0 mA; V _{CC} = 3.0 V | - | - | 0.45 | V |
| I _I | input leakage current | V _I = GND to 3.6 V; V _{CC} = 0 V to 3.6 V | - | - | ±0.5 | μA |
| I _{OZ} | OFF-state output current | V _I = V _{IH} or V _{IL} ; V _O = 0 V to 3.6 V; V _{CC} = 3.6 V | - | - | ±0.5 | μA |
| I _{OFF} | power-off leakage current | V _I or V _O = 0 V to 3.6 V; V _{CC} = 0 V | - | - | ±0.5 | μA |
| ΔI _{OFF} | additional power-off leakage current | V _I or V _O = 0 V to 3.6 V; V _{CC} = 0 V to 0.2 V | - | - | ±0.6 | μA |
| I _{CC} | supply current | V _I = GND or V _{CC} ; I _O = 0 A; V _{CC} = 0.8 V to 3.6 V | - | - | 0.9 | μA |
| ΔI _{CC} | additional supply current | V _I = V _{CC} - 0.6 V; I _O = 0 A; V _{CC} = 3.3 V | - | - | 50 | μA |
| T_{amb} = -40 °C to +125 °C | | | | | | |
| V _{IH} | HIGH-level input voltage | V _{CC} = 0.8 V | 0.75 × V _{CC} | - | - | V |
| | | V _{CC} = 0.9 V to 1.95 V | 0.7 × V _{CC} | - | - | V |
| | | V _{CC} = 2.3 V to 2.7 V | 1.6 | - | - | V |
| | | V _{CC} = 3.0 V to 3.6 V | 2.0 | - | - | V |
| V _{IL} | LOW-level input voltage | V _{CC} = 0.8 V | - | - | 0.25 × V _{CC} | V |
| | | V _{CC} = 0.9 V to 1.95 V | - | - | 0.3 × V _{CC} | V |
| | | V _{CC} = 2.3 V to 2.7 V | - | - | 0.7 | V |
| | | V _{CC} = 3.0 V to 3.6 V | - | - | 0.9 | V |
| V _{OL} | LOW-level output voltage | V _I = V _{IH} or V _{IL} | | | | |
| | | I _O = 20 μA; V _{CC} = 0.8 V to 3.6 V | - | - | 0.11 | V |
| | | I _O = 1.1 mA; V _{CC} = 1.1 V | - | - | 0.33 × V _{CC} | V |
| | | I _O = 1.7 mA; V _{CC} = 1.4 V | - | - | 0.41 | V |
| | | I _O = 1.9 mA; V _{CC} = 1.65 V | - | - | 0.39 | V |
| | | I _O = 2.3 mA; V _{CC} = 2.3 V | - | - | 0.36 | V |
| | | I _O = 3.1 mA; V _{CC} = 2.3 V | - | - | 0.50 | V |
| | | I _O = 2.7 mA; V _{CC} = 3.0 V | - | - | 0.36 | V |
| | | I _O = 4.0 mA; V _{CC} = 3.0 V | - | - | 0.50 | V |
| I _I | input leakage current | V _I = GND to 3.6 V; V _{CC} = 0 V to 3.6 V | - | - | ±0.75 | μA |
| I _{OZ} | OFF-state output current | V _I = V _{IH} or V _{IL} ; V _O = 0 V to 3.6 V; V _{CC} = 3.6 V | - | - | ±0.75 | μA |
| I _{OFF} | power-off leakage current | V _I or V _O = 0 V to 3.6 V; V _{CC} = 0 V | - | - | ±0.75 | μA |
| ΔI _{OFF} | additional power-off leakage current | V _I or V _O = 0 V to 3.6 V; V _{CC} = 0 V to 0.2 V | - | - | ±0.75 | μA |
| I _{CC} | supply current | V _I = GND or V _{CC} ; I _O = 0 A; V _{CC} = 0.8 V to 3.6 V | - | - | 1.4 | μA |
| ΔI _{CC} | additional supply current | V _I = V _{CC} - 0.6 V; I _O = 0 A; V _{CC} = 3.3 V | - | - | 75 | μA |

11. Dynamic characteristics

Table 8. Dynamic characteristics

Voltages are referenced to GND (ground = 0 V; for test circuit see Fig. 5).

| Symbol | Parameter | Conditions | 25 °C | | | -40 °C to +85 °C | | -40 °C to +125 °C | | Unit |
|------------------------------|-------------------|------------------------------------|-------|--------|------|------------------|------|-------------------|------|------|
| | | | Min | Typ[1] | Max | Min | Max | Min | Max | |
| C_L = 5 pF | | | | | | | | | | |
| t _{pd} | propagation delay | A or B to Y; see Fig. 4 [2] | | | | | | | | |
| | | V _{CC} = 0.8 V | - | 13.5 | - | - | - | - | - | ns |
| | | V _{CC} = 1.1 V to 1.3 V | 1.9 | 4.6 | 10.4 | 1.8 | 11.4 | 1.8 | 12.6 | ns |
| | | V _{CC} = 1.4 V to 1.6 V | 1.5 | 3.3 | 6.5 | 1.4 | 7.4 | 1.4 | 8.2 | ns |
| | | V _{CC} = 1.65 V to 1.95 V | 1.2 | 2.9 | 5.1 | 1.1 | 5.9 | 1.1 | 6.5 | ns |
| | | V _{CC} = 2.3 V to 2.7 V | 1.0 | 2.2 | 3.8 | 0.9 | 4.5 | 0.9 | 4.9 | ns |
| | | V _{CC} = 3.0 V to 3.6 V | 0.9 | 2.3 | 4.0 | 0.8 | 4.5 | 0.8 | 4.9 | ns |
| C_L = 10 pF | | | | | | | | | | |
| t _{pd} | propagation delay | A or B to Y; see Fig. 4 [2] | | | | | | | | |
| | | V _{CC} = 0.8 V | - | 16.3 | - | - | - | - | - | ns |
| | | V _{CC} = 1.1 V to 1.3 V | 2.3 | 5.6 | 12.3 | 2.1 | 13.7 | 2.1 | 15.1 | ns |
| | | V _{CC} = 1.4 V to 1.6 V | 1.8 | 4.1 | 7.6 | 1.7 | 8.8 | 1.7 | 9.7 | ns |
| | | V _{CC} = 1.65 V to 1.95 V | 1.6 | 3.8 | 6.1 | 1.4 | 7.1 | 1.4 | 7.8 | ns |
| | | V _{CC} = 2.3 V to 2.7 V | 1.4 | 2.9 | 4.6 | 1.2 | 5.4 | 1.2 | 5.9 | ns |
| | | V _{CC} = 3.0 V to 3.6 V | 1.3 | 3.2 | 5.7 | 1.1 | 6.4 | 1.1 | 7.0 | ns |
| C_L = 15 pF | | | | | | | | | | |
| t _{pd} | propagation delay | A or B to Y; see Fig. 4 [2] | | | | | | | | |
| | | V _{CC} = 0.8 V | - | 19.0 | - | - | - | - | - | ns |
| | | V _{CC} = 1.1 V to 1.3 V | 2.6 | 6.6 | 14.2 | 2.4 | 15.8 | 2.4 | 17.4 | ns |
| | | V _{CC} = 1.4 V to 1.6 V | 2.1 | 4.8 | 8.7 | 1.9 | 10.1 | 1.9 | 11.1 | ns |
| | | V _{CC} = 1.65 V to 1.95 V | 1.9 | 4.6 | 7.6 | 1.7 | 8.5 | 1.7 | 9.3 | ns |
| | | V _{CC} = 2.3 V to 2.7 V | 1.6 | 3.6 | 5.6 | 1.5 | 6.3 | 1.5 | 6.9 | ns |
| | | V _{CC} = 3.0 V to 3.6 V | 1.6 | 4.1 | 7.5 | 1.4 | 8.3 | 1.4 | 9.1 | ns |
| C_L = 30 pF | | | | | | | | | | |
| t _{pd} | propagation delay | A or B to Y; see Fig. 4 [2] | | | | | | | | |
| | | V _{CC} = 0.8 V | - | 27.0 | - | - | - | - | - | ns |
| | | V _{CC} = 1.1 V to 1.3 V | 3.6 | 9.5 | 19.5 | 3.2 | 21.8 | 3.2 | 24.0 | ns |
| | | V _{CC} = 1.4 V to 1.6 V | 2.9 | 7.0 | 11.5 | 2.6 | 13.6 | 2.6 | 15.0 | ns |
| | | V _{CC} = 1.65 V to 1.95 V | 2.6 | 7.0 | 12.1 | 2.3 | 13.3 | 2.3 | 14.6 | ns |
| | | V _{CC} = 2.3 V to 2.7 V | 2.4 | 5.4 | 8.9 | 2.1 | 9.9 | 2.1 | 10.9 | ns |
| | | V _{CC} = 3.0 V to 3.6 V | 2.3 | 6.5 | 12.7 | 2.1 | 13.9 | 2.1 | 15.3 | ns |

| Symbol | Parameter | Conditions | 25 °C | | | -40 °C to +85 °C | | -40 °C to +125 °C | | Unit |
|---|-------------------------------|---|-------|--------|-----|------------------|-----|-------------------|-----|------|
| | | | Min | Typ[1] | Max | Min | Max | Min | Max | |
| C_L = 5 pF, 10 pF, 15 pF and 30 pF | | | | | | | | | | |
| C _{PD} | power dissipation capacitance | f _i = 1 MHz; V _I = GND to V _{CC} [3] | | | | | | | | |
| | | V _{CC} = 0.8 V | - | 0.6 | - | - | - | - | - | pF |
| | | V _{CC} = 1.1 V to 1.3 V | - | 0.7 | - | - | - | - | - | pF |
| | | V _{CC} = 1.4 V to 1.6 V | - | 0.8 | - | - | - | - | - | pF |
| | | V _{CC} = 1.65 V to 1.95 V | - | 0.9 | - | - | - | - | - | pF |
| | | V _{CC} = 2.3 V to 2.7 V | - | 1.1 | - | - | - | - | - | pF |
| | | V _{CC} = 3.0 V to 3.6 V | - | 1.4 | - | - | - | - | pF | |

- [1] All typical values are measured at nominal V_{CC}.
- [2] t_{pd} is the same as t_{PZL} and t_{PLZ}.
- [3] C_{PD} is used to determine the dynamic power dissipation (P_D in μW).
 $P_D = C_{PD} \times V_{CC}^2 \times f_i \times N$ where:
 f_i = input frequency in MHz;
 V_{CC} = supply voltage in V;
 N = number of inputs switching.

11.1. Waveform and test circuit

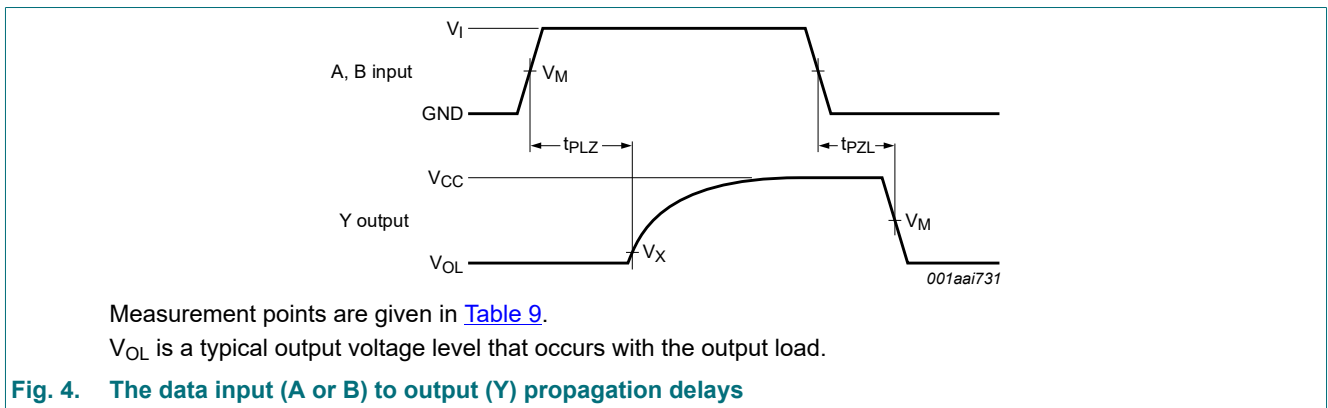


Table 9. Measurement points

| Supply voltage | Input | | | Output | |
|-----------------|-----------------------|-----------------|---------------------------------|-----------------------|--------------------------|
| V _{CC} | V _M | V _I | t _r = t _f | V _M | V _X |
| 0.8 V to 1.6 V | 0.5 × V _{CC} | V _{CC} | ≤ 3.0 ns | 0.5 × V _{CC} | V _{OL} + 0.1 V |
| 1.65 V to 2.7 V | 0.5 × V _{CC} | V _{CC} | ≤ 3.0 ns | 0.5 × V _{CC} | V _{OL} + 0.15 V |
| 3.0 V to 3.6 V | 0.5 × V _{CC} | V _{CC} | ≤ 3.0 ns | 0.5 × V _{CC} | V _{OL} + 0.3 V |

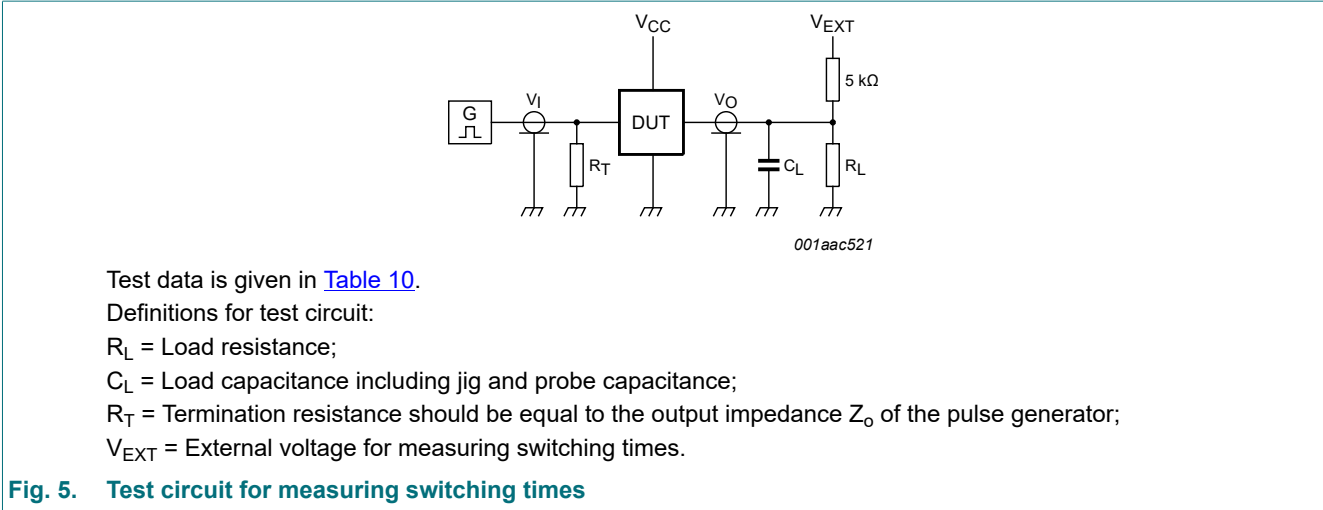


Table 10. Test data

| Supply voltage | Load | | V_{EXT} | | |
|----------------|------------------------------|--------------|-----------------------|-----------------------|-----------------------|
| V_{CC} | C_L | R_L [1] | t_{PLH} , t_{PHL} | t_{PZH} , t_{PHZ} | t_{PZL} , t_{PLZ} |
| 0.8 V to 3.6 V | 5 pF, 10 pF, 15 pF and 30 pF | 5 kΩ or 1 MΩ | open | GND | $2 \times V_{CC}$ |

[1] For measuring enable and disable times $R_L = 5 \text{ k}\Omega$.
 For measuring propagation delays, set-up and hold times, and pulse width, $R_L = 1 \text{ M}\Omega$.

12. Package outline

TSSOP5: plastic thin shrink small outline package; 5 leads; body width 1.25 mm

SOT353-1



Fig. 6. Package outline SOT353-1 (TSSOP5)

XSON6: plastic extremely thin small outline package; no leads; 6 terminals; body 1 x 1.45 x 0.5 mm

SOT886



Fig. 7. Package outline SOT886 (XSON6)

XSON6: extremely thin small outline package; no leads;
6 terminals; body 0.9 x 1.0 x 0.35 mm

SOT1115



Fig. 8. Package outline SOT1115 (XSON6)

XSON6: extremely thin small outline package; no leads;
6 terminals; body 1.0 x 1.0 x 0.35 mm

SOT1202



Fig. 9. Package outline SOT1202 (XSON6)

X2SON5: plastic thermal enhanced extremely thin small outline package; no leads; 5 terminals; body 0.8 x 0.8 x 0.32 mm

SOT1226-3

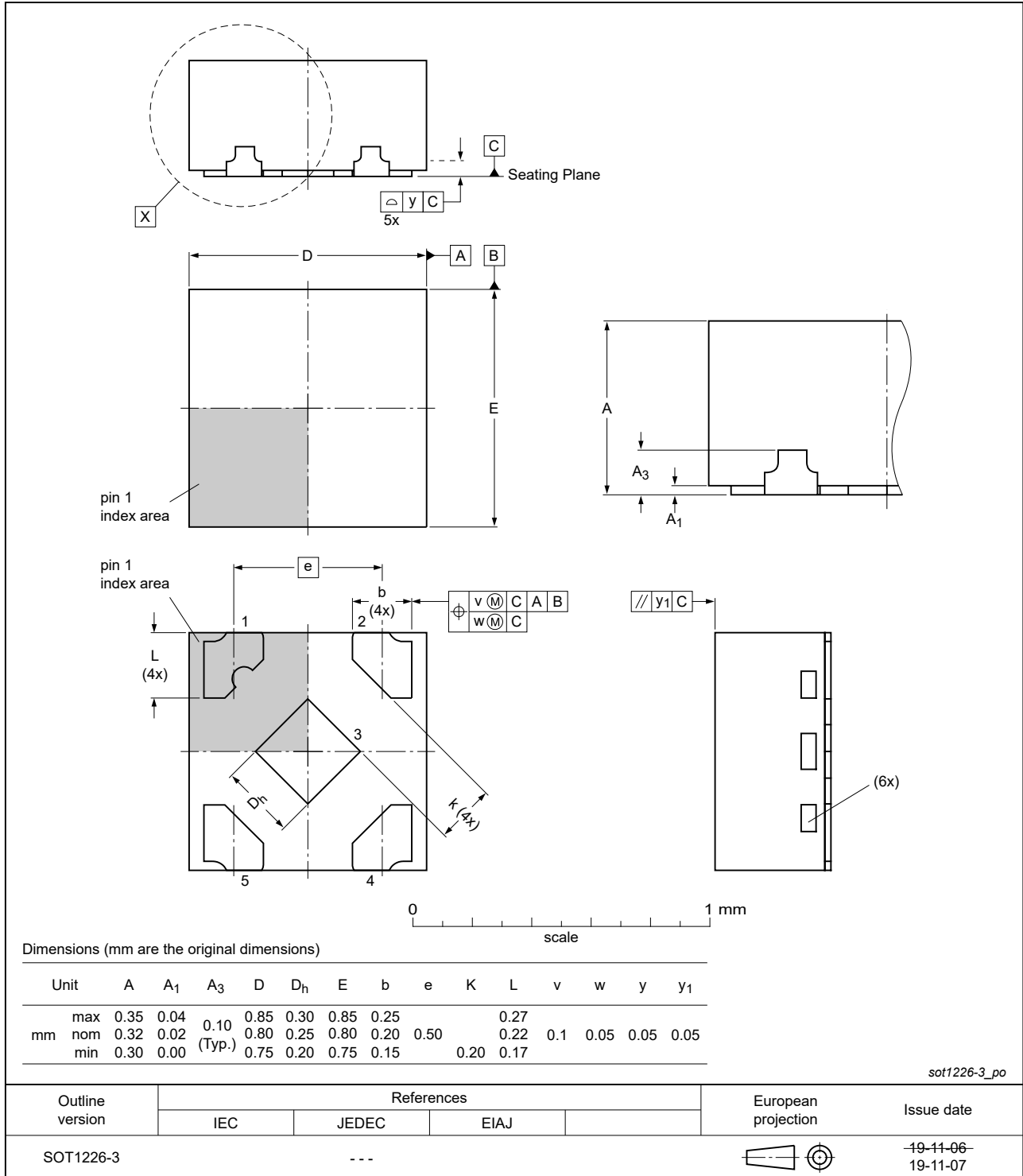


Fig. 10. Package outline SOT1226-3 (X2SON5)

13. Abbreviations

Table 11. Abbreviations

| Acronym | Description |
|---------|-------------------------|
| CDM | Charged Device Model |
| DUT | Device Under Test |
| ESD | ElectroStatic Discharge |
| HBM | Human Body Model |

14. Revision history

Table 12. Revision history

| Document ID | Release date | Data sheet status | Change notice | Supersedes |
|-----------------|---|--------------------|---------------|---------------|
| 74AUP1G09 v.8.1 | 20230711 | Product data sheet | - | 74AUP1G09 v.7 |
| Modifications: | <ul style="list-style-type: none"> Section 2: ESD specification updated according to the latest JEDEC standard. | | | |
| 74AUP1G09 v.7 | 20220114 | Product data sheet | - | 74AUP1G09 v.6 |
| Modifications: | <ul style="list-style-type: none"> Fig. 6: Package outline drawing for SOT353-1 (TSSOP5) has changed. | | | |
| 74AUP1G09 v.6 | 20210623 | Product data sheet | - | 74AUP1G09 v.5 |
| Modifications: | <ul style="list-style-type: none"> SOT1226 (X2SON5) package changed to SOT1226-3 (X2SON5) package. Type number 74AUP1G09GF (SOT891 / XSON6) removed. Section 1 and Section 2 updated. Table 5: Derating values for P_{tot} total power dissipation updated. Table 9: added V_I, t_r and t_f. | | | |
| 74AUP1G09 v.5 | 20170929 | Product data sheet | - | 74AUP1G09 v.4 |
| Modifications: | <ul style="list-style-type: none"> The format of this data sheet has been redesigned to comply with the identity guidelines of Nexperia. Legal texts have been adapted to the new company name where appropriate. | | | |
| 74AUP1G09 v.4 | 20120628 | Product data sheet | - | 74AUP1G09 v.3 |
| Modifications: | <ul style="list-style-type: none"> Added type number 74AUP1G09GX (SOT1226) Package outline drawing of SOT886 (Fig. 7) modified. | | | |
| 74AUP1G09 v.3 | 20111128 | Product data sheet | - | 74AUP1G09 v.2 |
| Modifications: | <ul style="list-style-type: none"> Legal pages updated. | | | |
| 74AUP1G09 v.2 | 20100709 | Product data sheet | - | 74AUP1G09 v.1 |
| 74AUP1G09 v.1 | 20090115 | Product data sheet | - | - |

15. Legal information

Data sheet status

| Document status [1][2] | Product status [3] | Definition |
|--------------------------------|--------------------|---|
| Objective [short] data sheet | Development | This document contains data from the objective specification for product development. |
| Preliminary [short] data sheet | Qualification | This document contains data from the preliminary specification. |
| Product [short] data sheet | Production | This document contains the product specification. |

- [1] Please consult the most recently issued document before initiating or completing a design.
- [2] The term 'short data sheet' is explained in section "Definitions".
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