# 74LVC1G07

**Buffer with open-drain output**

**Rev. 17 — 4 August 2023**                    **Product data sheet**

## 1. General description

The 74LVC1G07 is a single buffer with open-drain output. Inputs can be driven from either 3.3 V or 5 V devices. This feature allows the use of these devices as translators in mixed 3.3 V and 5 V environments. Schmitt-trigger action at all inputs makes the circuit tolerant of slower input rise and fall times. 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 1.65 V to 5.5 V
- Overvoltage tolerant inputs to 5.5 V
- High noise immunity
- CMOS low power consumption
- $I_{OFF}$ circuitry provides partial Power-down mode operation
- -24 mA output drive ($V_{CC}$ = 3.0 V)
- Latch-up performance exceeds 250 mA
- Direct interface with TTL levels
- Complies with JEDEC standard:
    - 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)
    - JESD36 (4.5 V to 5.5 V)
- ESD protection:
    - HBM: ANSI/ESDA/JEDEC JS-001 class 2 exceeds 2000 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

nexperia

## 3. Ordering information

**Table 1. Ordering information**

| Type number | Package | | | | Version |
|---|---|---|---|---|---|
| | **Temperature range** | **Name** | **Description** | | |
| 74LVC1G07GW | -40 °C to +125 °C | TSSOP5 | plastic thin shrink small outline package; 5 leads; body width 1.25 mm | | SOT353-1 |
| 74LVC1G07GV | -40 °C to +125 °C | SC-74A | plastic surface-mounted package; 5 leads | | SOT753 |
| 74LVC1G07GM | -40 °C to +125 °C | XSON6 | plastic extremely thin small outline package; no leads; 6 terminals; body 1 × 1.45 × 0.5 mm | | SOT886 |
| 74LVC1G07GN | -40 °C to +125 °C | XSON6 | extremely thin small outline package; no leads; 6 terminals; body 0.9 × 1.0 × 0.35 mm | | SOT1115 |
| 74LVC1G07GS | -40 °C to +125 °C | XSON6 | extremely thin small outline package; no leads; 6 terminals; body 1.0 × 1.0 × 0.35 mm | | SOT1202 |
| 74LVC1G07GX | -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 |
| 74LVC1G07GX4 | -40 °C to +125 °C | X2SON4 | plastic thermal enhanced extremely thin small outline package; no leads; 4 terminals; body 0.6 × 0.6 × 0.32 mm | | SOT1269-2 |

## 4. Marking

**Table 2. Marking**

| Type number | Marking code[1] |
|---|---|
| 74LVC1G07GW | VS |
| 74LVC1G07GV | V07 |
| 74LVC1G07GM | VS |
| 74LVC1G07GN | VS |
| 74LVC1G07GS | VS |
| 74LVC1G07GX | VS |
| 74LVC1G07GX4 | VS |

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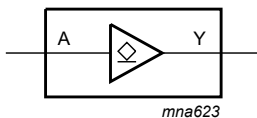
## 5. Functional diagram



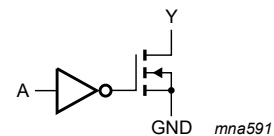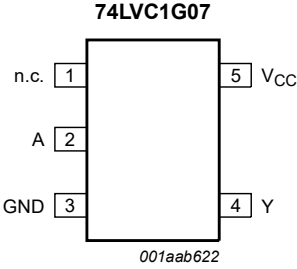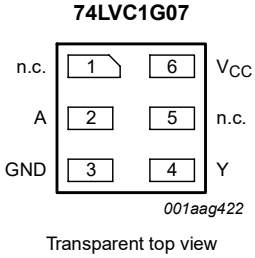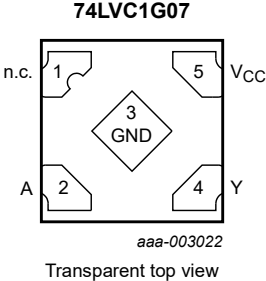**Fig. 1.  Logic symbol**

**Fig. 2.  IEC logic symbol**

**Fig. 3.  Logic diagram**

74LVC1G07

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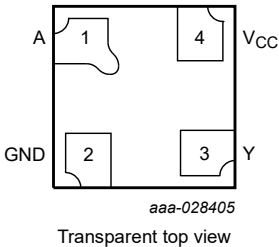
# 6. Pinning information

## 6.1. Pinning

**74LVC1G07**

n.c. 1     5 V_CC

A 2

GND 3     4 Y

*001aab622*

**Fig. 4. Pin configuration SOT353-1 (TSSOP5) and SOT753 (SC-74A)**

**74LVC1G07**

n.c. 1     6 V_CC

A 2     5 n.c.

GND 3     4 Y

*001aag422*

Transparent top view

**Fig. 5. Pin configuration SOT886, SOT1115 and SOT1202 (XSON6)**

**74LVC1G07**

n.c. 1     5 V_CC

3
GND

A 2     4 Y

*aaa-003022*

Transparent top view

**Fig. 6. Pin configuration SOT1226-3 (X2SON5)**

**74LVC1G07**

A 1     4 V_CC

GND 2     3 Y

*aaa-028405*

Transparent top view

**Fig. 7. Pin configuration SOT1269-2 (X2SON4)**

## 6.2. Pin description

Table 3. Pin description

| Symbol | Pin | | | Description |
|---|---|---|---|---|
| | TSSOP5, SC-74A and X2SON5 | XSON6 | X2SON4 | |
| n.c. | 1 | 1, 5 | - | not connected |
| A | 2 | 2 | 1 | data input |
| GND | 3 | 3 | 2 | ground (0 V) |
| Y | 4 | 4 | 3 | data output |
| V_CC | 5 | 6 | 4 | supply voltage |

# 7. Functional description

Table 4. Function table

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

| Input A | Output Y |
|---|---|
| L | L |
| 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 | +6.5 | V |
| $I_{IK}$ | input clamping current | $V_I$ < 0 V | | -50 | - | mA |
| $V_I$ | input voltage | | [1] | -0.5 | +6.5 | V |
| $I_{OK}$ | output clamping current | $V_O$ < 0 V | | -50 | - | mA |
| $V_O$ | output voltage | Active mode | [1] | -0.5 | +6.5 | V |
| | | Power-down mode; $V_{CC}$ = 0 V | [1] | -0.5 | +6.5 | V |
| $I_O$ | output current | $V_O$ = 0 V to 6.5 V | | - | 50 | mA |
| $I_{CC}$ | supply current | | | - | 100 | mA |
| $I_{GND}$ | ground current | | | -100 | - | mA |
| $T_{stg}$ | storage temperature | | | -65 | +150 | °C |
| $P_{tot}$ | total power dissipation | $T_{amb}$ = -40 °C to +125 °C | | | | |
| | | TSSOP5, SC-74A, XSON6 and X2SON5 package | [2] | - | 250 | mW |
| | | X2SON4 package | [3] | - | 150 | 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 SOT753 (SC-74A) package: $P_{tot}$ derates linearly with 3.8 mW/K above 85 °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.
[3] For SOT1269-2 (X2SON4) package: $P_{tot}$ derates linearly with 1.7 mW/K above 57 °C.

## 9. Recommended operating conditions

**Table 6. Recommended operating conditions**

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| $V_{CC}$ | supply voltage | | 1.65 | - | 5.5 | V |
| $V_I$ | input voltage | | 0 | - | 5.5 | V |
| $V_O$ | output voltage | Active mode | 0 | - | 5.5 | V |
| | | Power-down mode; $V_{CC}$ = 0 V | 0 | - | 5.5 | V |
| $T_{amb}$ | ambient temperature | | -40 | - | +125 | °C |
| $\Delta t/\Delta V$ | input transition rise and fall rate | $V_{CC}$ = 1.65 V to 2.7 V | - | - | 20 | ns/V |
| | | $V_{CC}$ = 2.7 V to 5.5 V | - | - | 10 | ns/V |

## 10. Static characteristics

**Table 7. Static characteristics**

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

| Symbol | Parameter | Conditions | -40 °C to +85 °C | | | -40 °C to +125 °C | | Unit |
|---|---|---|---|---|---|---|---|---|
| | | | Min | Typ[1] | Max | Min | Max | |
| $V_{IH}$ | HIGH-level input voltage | $V_{CC}$ = 1.65 V to 1.95 V | $0.65V_{CC}$ | - | - | $0.65V_{CC}$ | - | V |
| | | $V_{CC}$ = 2.3 V to 2.7 V | 1.7 | - | - | 1.7 | - | V |
| | | $V_{CC}$ = 2.7 V to 3.6 V | 2.0 | - | - | 2.0 | - | V |
| | | $V_{CC}$ = 4.5 V to 5.5 V | $0.7V_{CC}$ | - | - | $0.7V_{CC}$ | - | V |
| $V_{IL}$ | LOW-level input voltage | $V_{CC}$ = 1.65 V to 1.95 V | - | - | $0.35V_{CC}$ | - | $0.35V_{CC}$ | V |
| | | $V_{CC}$ = 2.3 V to 2.7 V | - | - | 0.7 | - | 0.7 | V |
| | | $V_{CC}$ = 2.7 V to 3.6 V | - | - | 0.8 | - | 0.8 | V |
| | | $V_{CC}$ = 4.5 V to 5.5 V | - | - | $0.3V_{CC}$ | - | $0.3V_{CC}$ | V |
| $V_{OL}$ | LOW-level output voltage | $V_I = V_{IH}$ or $V_{IL}$ | | | | | | |
| | | $I_O$ = 100 µA; $V_{CC}$ = 1.65 V to 5.5 V | - | - | 0.10 | - | 0.10 | V |
| | | $I_O$ = 4 mA; $V_{CC}$ = 1.65 V | - | - | 0.45 | - | 0.70 | V |
| | | $I_O$ = 8 mA; $V_{CC}$ = 2.3 V | - | - | 0.30 | - | 0.45 | V |
| | | $I_O$ = 12 mA; $V_{CC}$ = 2.7 V | - | - | 0.40 | - | 0.60 | V |
| | | $I_O$ = 24 mA; $V_{CC}$ = 3.0 V | - | - | 0.55 | - | 0.80 | V |
| | | $I_O$ = 32 mA; $V_{CC}$ = 4.5 V | - | - | 0.55 | - | 0.80 | V |
| $I_I$ | input leakage current | $V_I$ = 5.5 V or GND; $V_{CC}$ = 0 V to 5.5 V [2] | - | ±0.1 | ±1 | - | ±1 | µA |
| $I_{OZ}$ | OFF-state output current | $V_I = V_{IH}$ or $V_{IL}$; $V_O = V_{CC}$ or GND; $V_{CC}$ = 5.5 V | - | ±0.1 | ±2 | - | ±2 | µA |
| $I_{OFF}$ | power-off leakage current | $V_I$ or $V_O$ = 5.5 V; $V_{CC}$ = 0 V | - | ±0.1 | ±2 | - | ±2 | µA |
| $I_{CC}$ | supply current | $V_I$ = 5.5 V or GND; $I_O$ = 0 A; $V_{CC}$ = 1.65 V to 5.5 V | - | 0.1 | 4 | - | 4 | µA |
| $\Delta I_{CC}$ | additional supply current | per pin; $V_I = V_{CC}$ - 0.6 V; $I_O$ = 0 A; $V_{CC}$ = 2.3 V to 5.5 V [2] | - | 5 | 500 | - | 500 | µA |
| $C_I$ | input capacitance | $V_{CC}$ = 3.3 V; $V_I$ = GND to $V_{CC}$ | - | 5.0 | - | - | - | pF |

[1]   All typical values are measured at $T_{amb}$ = 25 °C.
[2]   These typical values are measured at $V_{CC}$ = 3.3 V.

## 11. Dynamic characteristics

**Table 8. Dynamic characteristics**

*Voltages are referenced to GND (ground = 0 V); for test circuit see Fig. 9.*

| Symbol | Parameter | Conditions | | -40 °C to +85 °C | | | -40 °C to +125 °C | | Unit |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Min | Typ[1] | Max | Min | Max | |
| $t_{pd}$ | propagation delay | A to Y; see Fig. 8 | [2] | | | | | | |
| | | $V_{CC}$ = 1.65 V to 1.95 V | | 1.0 | 2.6 | 6.7 | 1.0 | 8.4 | ns |
| | | $V_{CC}$ = 2.3 V to 2.7 V | | 0.5 | 1.7 | 5.5 | 0.5 | 7.0 | ns |
| | | $V_{CC}$ = 2.7 V | | 0.5 | 2.3 | 4.7 | 0.5 | 6.0 | ns |
| | | $V_{CC}$ = 3.0 V to 3.6 V | | 0.5 | 2.2 | 4.2 | 0.5 | 5.5 | ns |
| | | $V_{CC}$ = 4.5 V to 5.5 V | | 0.5 | 1.6 | 3.5 | 0.5 | 4.5 | ns |
| $C_{PD}$ | power dissipation capacitance | $V_I$ = GND to $V_{CC}$; $V_{CC}$ = 3.3 V | [3] | - | 7.0 | - | - | - | pF |

[1] Typical values are measured at $T_{amb}$ = 25 °C and $V_{CC}$ = 1.8 V, 2.5 V, 2.7 V, 3.3 V and 5.0 V respectively.

[2] $t_{pd}$ is the same as $t_{PLZ}$ and $t_{PZL}$.

[3] $C_{PD}$ is used to determine the dynamic power dissipation ($P_D$ in µW).

$P_D = C_{PD} \times V_{CC}{}^2 \times f_i \times N + \sum(C_L \times V_{CC}{}^2 \times f_o)$ where:

$f_i$ = input frequency in MHz;

$f_o$ = output frequency in MHz;

$C_L$ = output load capacitance in pF;

$V_{CC}$ = supply voltage in V;

N = number of inputs switching;

$\sum(C_L \times V_{CC}{}^2 \times f_o)$ = sum of outputs.

### 11.1. Waveforms and test circuit



Measurement points are given in Table 9.

$V_{OL}$ is the typical output voltage level that occurs with the output load.

**Fig. 8.** The input (A) to output (Y) propagation delays
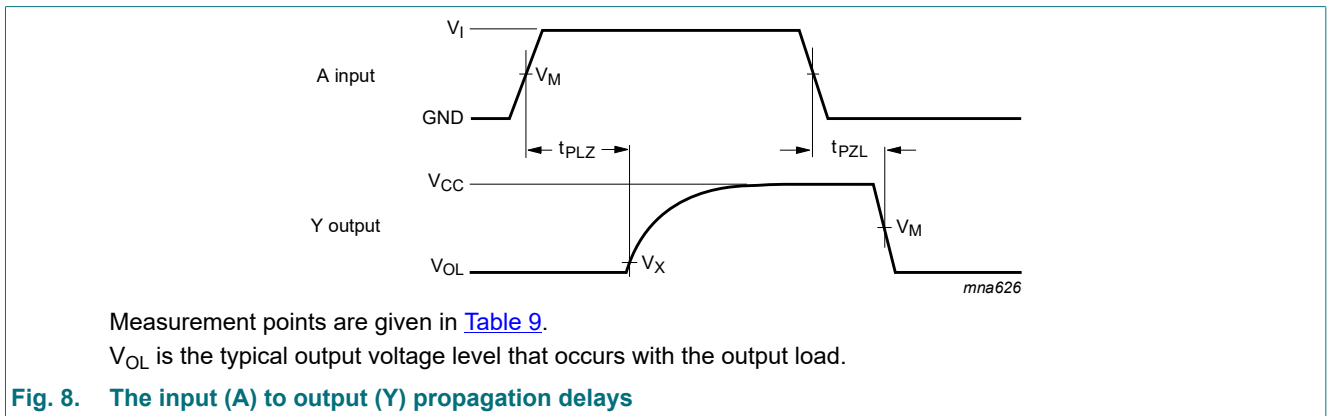
**Table 9. Measurement points**

| Supply voltage | Input | Output | |
|---|---|---|---|
| $V_{CC}$ | $V_M$ | $V_M$ | $V_X$ |
| 1.65 V to 1.95 V | $0.5V_{CC}$ | $0.5V_{CC}$ | $V_{OL}$ + 0.15 V |
| 2.3 V to 2.7 V | $0.5V_{CC}$ | $0.5V_{CC}$ | $V_{OL}$ + 0.15 V |
| 2.7 V | 1.5 V | 1.5 V | $V_{OL}$ + 0.3 V |
| 3.0 V to 3.6 V | 1.5 V | 1.5 V | $V_{OL}$ + 0.3 V |
| 4.5 V to 5.5 V | $0.5V_{CC}$ | $0.5V_{CC}$ | $V_{OL}$ + 0.3 V |
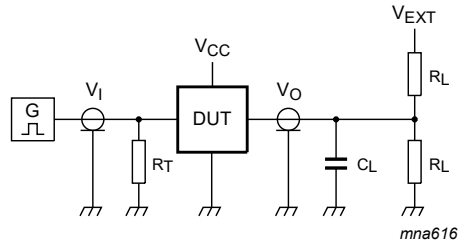
Test data is given in Table 10.

Definitions for test circuit:

$R_L$ = Load resistance.

$C_L$ = Load capacitance including jig and probe capacitance.

$R_T$ = Termination resistance should be equal to the output impedance $Z_o$ of the pulse generator.

$V_{EXT}$ = External voltage for measuring switching times.

**Fig. 9.  Test circuit for measuring switching times**

**Table 10. Test data**

| Supply voltage | Input | | Load | | | $V_{EXT}$ |
|---|---|---|---|---|---|---|
| $V_{CC}$ | $V_I$ | $t_r$, $t_f$ | $C_L$ | $R_L$ | | $t_{PZL}$, $t_{PLZ}$ |
| 1.65 V to 1.95 V | $V_{CC}$ | ≤ 2.0 ns | 30 pF | 1 kΩ | | $2V_{CC}$ |
| 2.3 V to 2.7 V | $V_{CC}$ | ≤ 2.0 ns | 30 pF | 500 Ω | | $2V_{CC}$ |
| 2.7 V | 2.7 V | ≤ 2.5 ns | 50 pF | 500 Ω | | 6 V |
| 3.0 V to 3.6 V | 2.7 V | ≤ 2.5 ns | 50 pF | 500 Ω | | 6 V |
| 4.5 V to 5.5 V | $V_{CC}$ | ≤ 2.5 ns | 50 pF | 500 Ω | | $2V_{CC}$ |

## 12. Package outline

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

SOT353-1

Dimensions (mm are the original dimensions)

| Unit | | A | $A_1$ | $A_2$ | $A_3$ | $b_p$ | c | $D^{(1)}$ | $E^{(1)}$ | e | $e_1$ | $H_E$ | $L_p$ | v | w | y | θ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | max | 1.1 | 0.1 | 1.0 | 0.15 | 0.30 | 0.25 | 2.2 | 1.35 | 0.65 | 1.3 | 2.4 | 0.46 | 0.3 | 0.1 | 0.1 | 8° |
| | min | 0.8 | 0 | 0.8 | | 0.15 | 0.08 | 1.8 | 1.15 | | | 1.8 | 0.26 | | | | 0° |

Note
1. Plastic or metal protrusions of 0.2 mm maximum per side are not included.

*sot353-1_po*

| Outline version | References | | | | European projection | Issue date |
|---|---|---|---|---|---|---|
| | IEC | JEDEC | JEITA | | | |
| SOT353-1 | | MO-203 | SC-88A | | | ~~21-12-15~~ 21-12-16 |
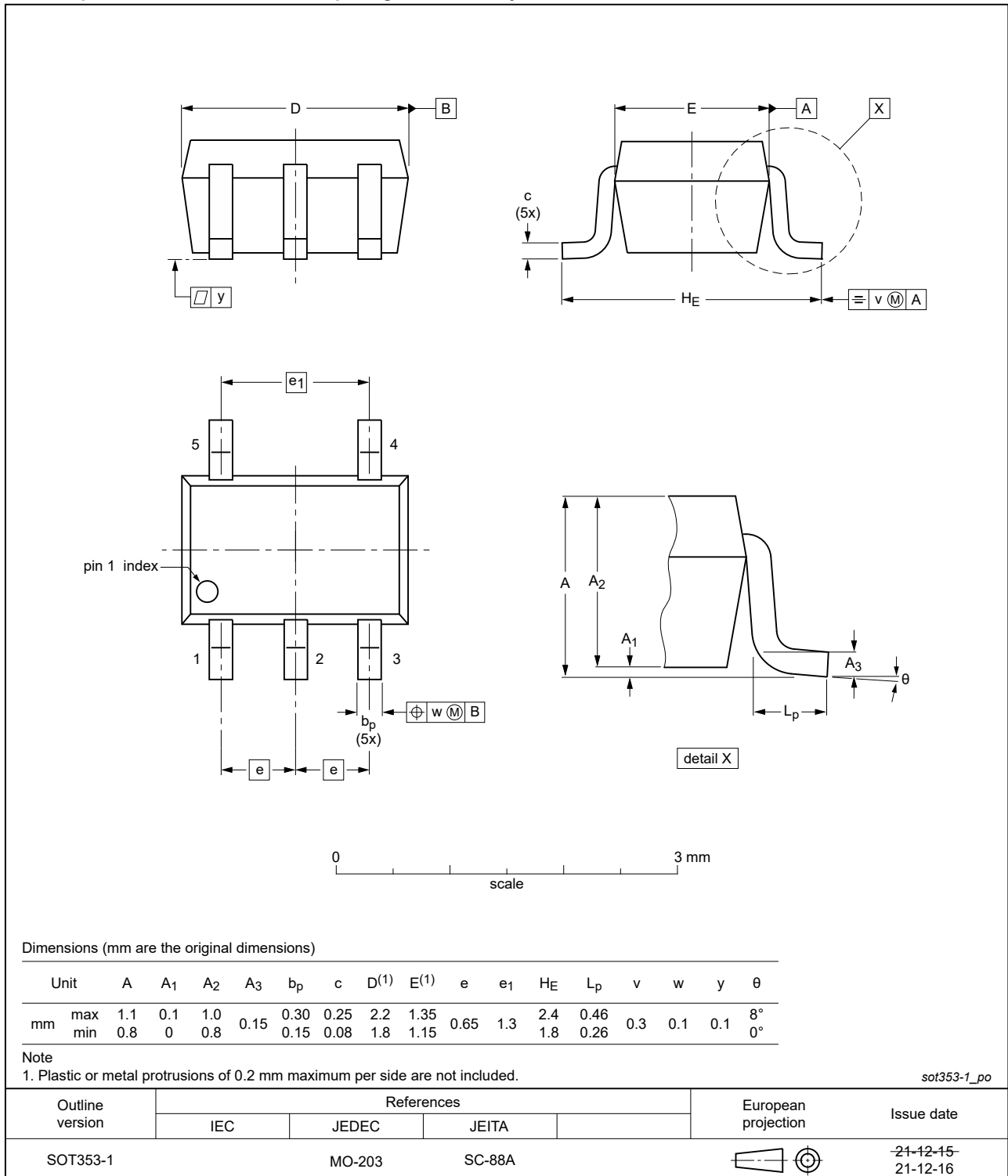
**Fig. 10. Package outline SOT353-1 (TSSOP5)**

**Plastic surface-mounted package; 5 leads** SOT753



**DIMENSIONS (mm are the original dimensions)**

| UNIT | A | A$_1$ | b$_p$ | c | D | E | e | H$_E$ | L$_p$ | Q | v | w | y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | 1.1<br>0.9 | 0.100<br>0.013 | 0.40<br>0.25 | 0.26<br>0.10 | 3.1<br>2.7 | 1.7<br>1.3 | 0.95 | 3.0<br>2.5 | 0.6<br>0.2 | 0.33<br>0.23 | 0.2 | 0.2 | 0.1 |

| OUTLINE VERSION | REFERENCES | | | | EUROPEAN PROJECTION | ISSUE DATE |
|---|---|---|---|---|---|---|
| | IEC | JEDEC | JEITA | | | |
| SOT753 | | | SC-74A | | | 02-04-16<br>06-03-16 |

**Fig. 11. Package outline SOT753 (SC-74A)**

XSON6: plastic extremely thin small outline package; no leads; 6 terminals; body 1 x 1.45 x 0.5 mm        SOT886



Dimensions (mm are the original dimensions)

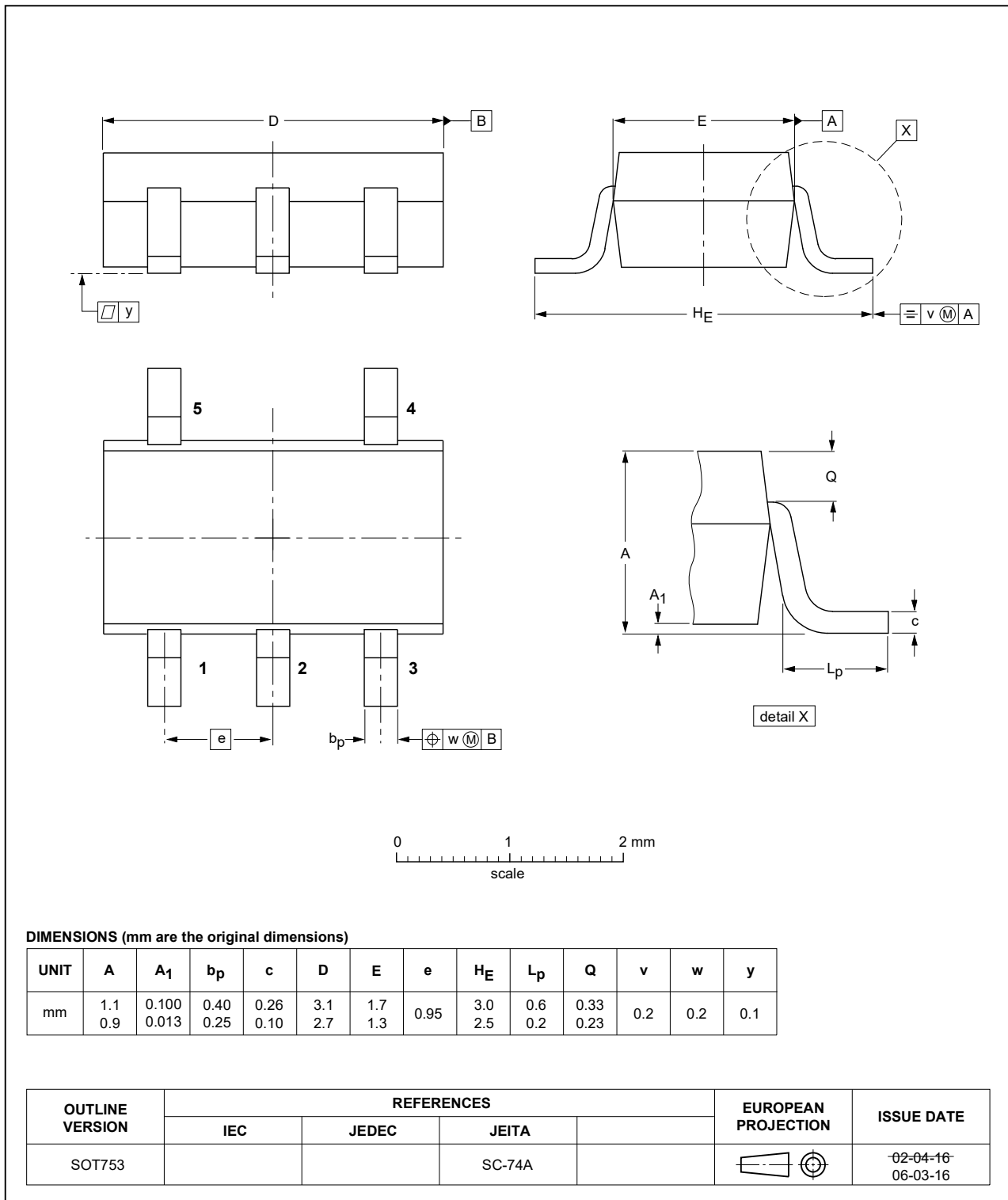| Unit | | A[(1)] | A_1 | b | D | E | e | e_1 | L | L_1 |
|------|-----|--------|------|------|------|------|-----|-----|------|------|
| mm | max | 0.5 | 0.04 | 0.25 | 1.50 | 1.05 | | | 0.35 | 0.40 |
| | nom | | | 0.20 | 1.45 | 1.00 | 0.6 | 0.5 | 0.30 | 0.35 |
| | min | | | 0.17 | 1.40 | 0.95 | | | 0.27 | 0.32 |

Notes
1. Including plating thickness.
2. Can be visible in some manufacturing processes.

*sot886_po*

| Outline version | References | | | | European projection | Issue date |
|-----------------|------------|--------|--------|---|---------------------|-------------|
| | IEC | JEDEC | JEITA | | | |
| SOT886 | | MO-252 | | | | ~~04-07-22~~ 12-01-05 |

**Fig. 12. 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



**Dimensions**

| Unit | | $A^{(1)}$ | $A_1$ | b | D | E | e | $e_1$ | L | $L_1$ |
|---|---|---|---|---|---|---|---|---|---|---|
| | max | 0.35 | 0.04 | 0.20 | 0.95 | 1.05 | | | 0.35 | 0.40 |
| mm | nom | | | 0.15 | 0.90 | 1.00 | 0.55 | 0.3 | 0.30 | 0.35 |
| | min | | | 0.12 | 0.85 | 0.95 | | | 0.27 | 0.32 |

Note
1. Including plating thickness.
2. Visible depending upon used manufacturing technology.

*sot1115_po*

| Outline version | References | | | | European projection | Issue date |
|---|---|---|---|---|---|---|
| | IEC | JEDEC | JEITA | | | |
| SOT1115 | | | | | | ~~10-04-02~~ 10-04-07 |

**Fig. 13. 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



Dimensions

| | Unit | $A^{(1)}$ | $A_1$ | b | D | E | e | $e_1$ | L | $L_1$ |
|---|---|---|---|---|---|---|---|---|---|---|
| | max | 0.35 | 0.04 | 0.20 | 1.05 | 1.05 | | | 0.35 | 0.40 |
| mm | nom | | | 0.15 | 1.00 | 1.00 | 0.55 | 0.35 | 0.30 | 0.35 |
| | min | | | 0.12 | 0.95 | 0.95 | | | 0.27 | 0.32 |

Note
1. Including plating thickness.
2. Visible depending upon used manufacturing technology.

*sot1202_po*

| Outline version | References | | | | European projection | Issue date |
|---|---|---|---|---|---|---|
| | IEC | JEDEC | JEITA | | | |
| SOT1202 | | | | | | ~~10-04-02~~ 10-04-06 |

**Fig. 14.  Package outline SOT1202 (XSON6)**

**X2SON5: plastic thermal enhanced extremely thin small outline package; no leads;
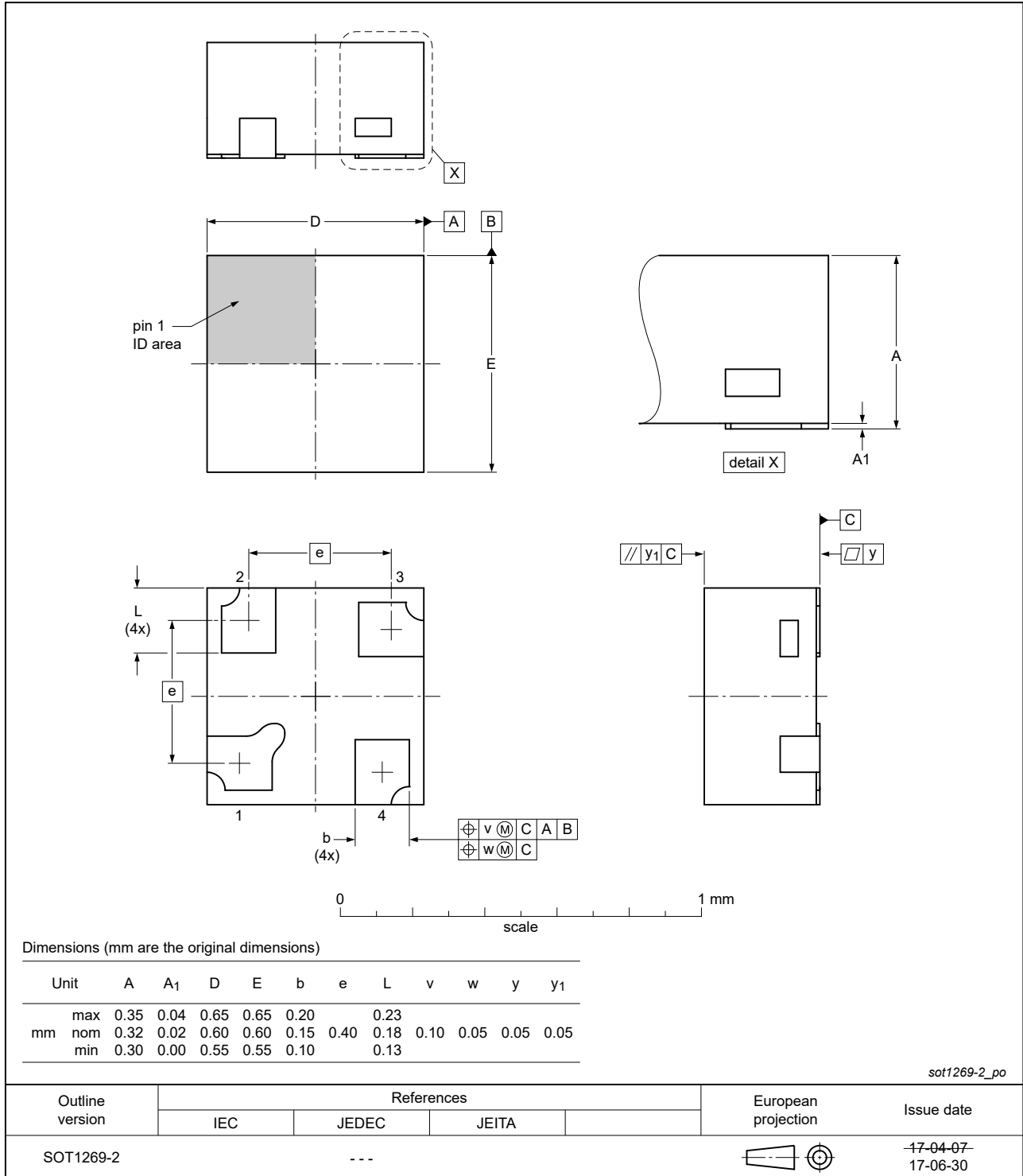5 terminals; body 0.8 x 0.8 x 0.32 mm** SOT1226-3



*sot1226-3_po*

Dimensions (mm are the original dimensions)

| Unit | | A | A$_1$ | A$_3$ | D | D$_h$ | E | b | e | K | L | v | w | y | y$_1$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | max | 0.35 | 0.04 | 0.10 (Typ.) | 0.85 | 0.30 | 0.85 | 0.25 | | | 0.27 | | | | |
| | nom | 0.32 | 0.02 | | 0.80 | 0.25 | 0.80 | 0.20 | 0.50 | | 0.22 | 0.1 | 0.05 | 0.05 | 0.05 |
| | min | 0.30 | 0.00 | | 0.75 | 0.20 | 0.75 | 0.15 | | 0.20 | 0.17 | | | | |

| Outline version | References | | | | European projection | Issue date |
|---|---|---|---|---|---|---|
| | IEC | JEDEC | EIAJ | | | |
| SOT1226-3 | | - - - | | | | ~~19-11-06~~ 19-11-07 |

**Fig. 15. Package outline SOT1226-3 (X2SON5)**

**X2SON4: plastic thermal enhanced extremely thin small outline package; no leads;**
**4 terminals; body 0.6 x 0.6 x 0.32 mm**                                              **SOT1269-2**

Dimensions (mm are the original dimensions)

| Unit | A | A₁ | D | E | b | e | L | v | w | y | y₁ |
|------|---|-----|---|---|---|---|---|---|---|---|----|
| | max | 0.35 | 0.04 | 0.65 | 0.65 | 0.20 | | 0.23 | | | | |
| mm | nom | 0.32 | 0.02 | 0.60 | 0.60 | 0.15 | 0.40 | 0.18 | 0.10 | 0.05 | 0.05 | 0.05 |
| | min | 0.30 | 0.00 | 0.55 | 0.55 | 0.10 | | 0.13 | | | | |

*sot1269-2_po*

| Outline version | References | | | | European projection | Issue date |
|-----------------|-----------|---|---|---|---------------------|------------|
| | IEC | JEDEC | JEITA | | | |
| SOT1269-2 | | - - - | | | | ~~17-04-07~~ 17-06-30 |

**Fig. 16. Package outline SOT1269-2 (X2SON4)**

## 13. Abbreviations

**Table 11. Abbreviations**

| Acronym | Description |
|---|---|
| CMOS | Complementary Metal Oxide Semiconductor |
| DUT | Device Under Test |
| ESD | ElectroStatic Discharge |
| HBM | Human Body Model |
| TTL | Transistor-Transistor Logic |

## 14. Revision history

**Table 12. Revision history**

| Document ID | Release date | Data sheet status | Change notice | Supersedes |
|---|---|---|---|---|
| 74LVC1G07 v.17 | 20230804 | Product data sheet | - | 74LVC1G07 v.16 |
| Modifications: | • Section 2: ESD specification updated according to the latest JEDEC standard. | | | |
| 74LVC1G07 v.16 | 20220203 | Product data sheet | - | 74LVC1G07 v.15 |
| Modifications: | • Fig. 10: Package outline drawing for SOT353-1 (TSSOP5) has changed. | | | |
| 74LVC1G07 v.15 | 20210803 | Product data sheet | - | 74LVC1G07 v.14 |
| Modifications: | • Type number 74LVC1G07GF (SOT891/XSON6) removed.<br>• SOT1226 (X2SON5) package changed to SOT1226-3 (X2SON5) package.<br>• Section 1 and Section 2 updated.<br>• Table 5: Derating values for $P_{tot}$ total power dissipation updated. | | | |
| 74LVC1G07 v.14 | 20180608 | Product data sheet | - | 74LVC1G07 v.13 |
| Modifications: | • Added type number 74LVC1G07GX4 (SOT1269-2) | | | |
| 74LVC1G07 v.13 | 20170511 | Product data sheet | - | 74LVC1G07 v.12 |
| Modifications: | • The format of this data sheet has been redesigned to comply with the identity guidelines of Nexperia.<br>• Legal texts have been adapted to the new company name where appropriate. | | | |
| 74LVC1G07 v.12 | 20161128 | Product data sheet | - | 74LVC1G07 v.11 |
| Modifications: | • Table 7: The maximum limits for leakage current and supply current have changed. | | | |
| 74LVC1G07 v.11 | 20120629 | Product data sheet | - | 74LVC1G07 v.10 |
| Modifications: | • Added type number 74LVC1G07GX (SOT1226)<br>• Package outline drawing of SOT886 (Fig. 12) modified. | | | |
| 74LVC1G07 v.10 | 20111207 | Product data sheet | - | 74LVC1G07 v.9 |
| Modifications: | • Legal pages updated. | | | |
| 74LVC1G07 v.9 | 20100824 | Product data sheet | - | 74LVC1G07 v.8 |
| 74LVC1G07 v.8 | 20070717 | Product data sheet | - | 74LVC1G07 v.7 |
| 74LVC1G07 v.7 | 20070515 | Product data sheet | - | 74LVC1G07 v.6 |
| 74LVC1G07 v.6 | 20040907 | Product specification | - | 74LVC1G07 v.5 |
| 74LVC1G07 v.5 | 20030307 | Product specification | - | 74LVC1G07 v.4 |
| 74LVC1G07 v.4 | 20021002 | Product specification | - | 74LVC1G07 v.3 |
| 74LVC1G07 v.3 | 20020528 | Product specification | - | 74LVC1G07 v.2 |

| Document ID | Release date | Data sheet status | Change notice | Supersedes |
|---|---|---|---|---|
| 74LVC1G07 v.2 | 20010406 | Product specification | - | 74LVC1G07 v.1 |
| 74LVC1G07 v.1 | 20001122 | Product specification | - | - |

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## 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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