

NX3L1G3157

Low-ohmic single-pole double-throw analog switch

Rev. 08 — 26 April 2010

Product data sheet

1. General description

The NX3L1G3157 is a low-ohmic single-pole double-throw analog switch suitable for use as an analog or digital 2:1 multiplexer/demultiplexer. It has a digital select input (S), two independent inputs/outputs (Y0 and Y1) and a common input/output (Z). Schmitt-trigger action at the digital input makes the circuit tolerant to slower input rise and fall times.

The NX3L1G3157 allows signals with amplitude up to V_{CC} to be transmitted from Z to Y0 or Y1; or from Y0 or Y1 to Z. Its low ON resistance ($0.5\ \Omega$) and flatness ($0.13\ \Omega$) ensures minimal attenuation and distortion of transmitted signals.

2. Features and benefits

- Wide supply voltage range from 1.4 V to 4.3 V
- Very low ON resistance:
 - ◆ $1.6\ \Omega$ (typical) at $V_{CC} = 1.4\ \text{V}$
 - ◆ $1.0\ \Omega$ (typical) at $V_{CC} = 1.65\ \text{V}$
 - ◆ $0.55\ \Omega$ (typical) at $V_{CC} = 2.3\ \text{V}$
 - ◆ $0.50\ \Omega$ (typical) at $V_{CC} = 2.7\ \text{V}$
 - ◆ $0.50\ \Omega$ (typical) at $V_{CC} = 4.3\ \text{V}$
- Break-before-make switching
- High noise immunity
- ESD protection:
 - ◆ HBM JESD22-A114F Class 3A exceeds 7500 V
 - ◆ MM JESD22-A115-A exceeds 200 V
 - ◆ CDM AEC-Q100-011 revision B exceeds 1000 V
 - ◆ IEC61000-4-2 contact discharge exceeds 8000 V for switch ports
- CMOS low-power consumption
- Latch-up performance exceeds 100 mA per JESD78 Class II Level A
- Direct interface with TTL levels at 3.0 V
- Control input accepts voltages above supply voltage
- High current handling capability (350 mA continuous current under 3.3 V supply)
- Specified from $-40\ ^\circ\text{C}$ to $+85\ ^\circ\text{C}$ and from $-40\ ^\circ\text{C}$ to $+125\ ^\circ\text{C}$



3. Applications

- Cell phone
- PDA
- Portable media player

4. Ordering information

Table 1. Ordering information

| Type number | Package | | | Version |
|--------------|-------------------|-------|---|---------|
| | Temperature range | Name | Description | |
| NX3L1G3157GW | -40 °C to +125 °C | SC-88 | plastic surface-mounted package; 6 leads | SOT363 |
| NX3L1G3157GM | -40 °C to +125 °C | XSON6 | plastic extremely thin small outline package; no leads; 6 terminals; body 1 × 1.45 × 0.5 mm | SOT886 |

5. Marking

Table 2. Marking codes^[1]

| Type number | Marking code |
|--------------|--------------|
| NX3L1G3157GW | MJ |
| NX3L1G3157GM | MJ |

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

6. Functional diagram

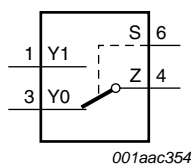


Fig 1. Logic symbol

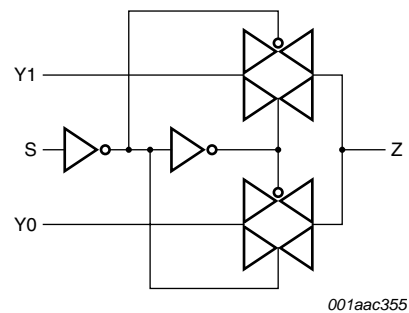
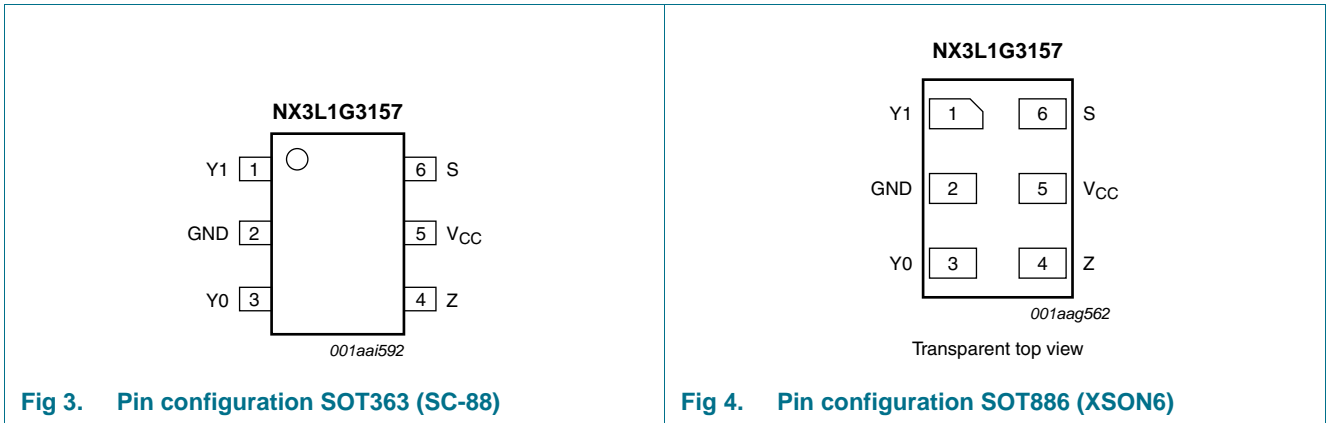


Fig 2. Logic diagram

7. Pinning information

7.1 Pinning



7.2 Pin description

Table 3. Pin description

| Symbol | Pin | Description |
|-----------------|-----|-----------------------------|
| Y1 | 1 | independent input or output |
| GND | 2 | ground (0 V) |
| Y0 | 3 | independent input or output |
| Z | 4 | common output or input |
| V _{CC} | 5 | supply voltage |
| S | 6 | select input |

8. Functional description

Table 4. Function table^[1]

| Input S | Channel on |
|---------|------------|
| L | Y0 |
| H | Y1 |

[1] H = HIGH voltage level; L = LOW voltage level.

9. 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 |
| V_I | input voltage | select input S | [1] -0.5 | +4.6 | V |
| V_{SW} | switch voltage | | [2] -0.5 | $V_{CC} + 0.5$ | V |
| I_{IK} | input clamping current | $V_I < -0.5$ V | -50 | - | mA |
| I_{SK} | switch clamping current | $V_I < -0.5$ V or $V_I > V_{CC} + 0.5$ V | - | ± 50 | mA |
| I_{SW} | switch current | $V_{SW} > -0.5$ V or $V_{SW} < V_{CC} + 0.5$ V; source or sink current | - | ± 350 | mA |
| | | $V_{SW} > -0.5$ V or $V_{SW} < V_{CC} + 0.5$ V; pulsed at 1 ms duration, < 10 % duty cycle; peak current | - | ± 500 | mA |
| T_{stg} | storage temperature | | -65 | +150 | °C |
| P_{tot} | total power dissipation | $T_{amb} = -40$ °C to +125 °C | [3] - | 250 | mW |

[1] The minimum input voltage rating may be exceeded if the input current rating is observed.

[2] The minimum and maximum switch voltage ratings may be exceeded if the switch clamping current rating is observed but may not exceed 4.6 V.

[3] For SC-88 package: above 87.5 °C the value of P_{tot} derates linearly with 4.0 mW/K.
For XSON6 package: above 118 °C the value of P_{tot} derates linearly with 7.8 mW/K.

10. Recommended operating conditions

Table 6. Recommended operating conditions

| Symbol | Parameter | Conditions | Min | Max | Unit |
|---------------------|-------------------------------------|---------------------------|-------|----------|------|
| V_{CC} | supply voltage | | 1.4 | 4.3 | V |
| V_I | input voltage | select input S | 0 | 4.3 | V |
| V_{SW} | switch voltage | | [1] 0 | V_{CC} | V |
| T_{amb} | ambient temperature | | -40 | +125 | °C |
| $\Delta t/\Delta V$ | input transition rise and fall rate | $V_{CC} = 1.4$ V to 4.3 V | [2] - | 200 | ns/V |

[1] To avoid sinking GND current from terminal Z when switch current flows in terminal Yn, the voltage drop across the bidirectional switch must not exceed 0.4 V. If the switch current flows into terminal Z, no GND current will flow from terminal Yn. In this case, there is no limit for the voltage drop across the switch.

[2] Applies to control signal levels.

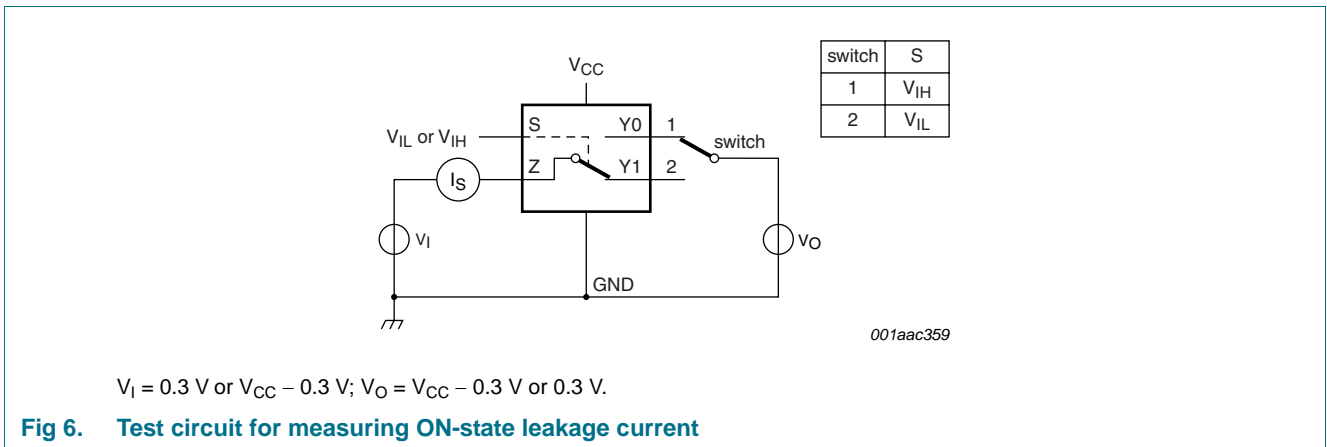
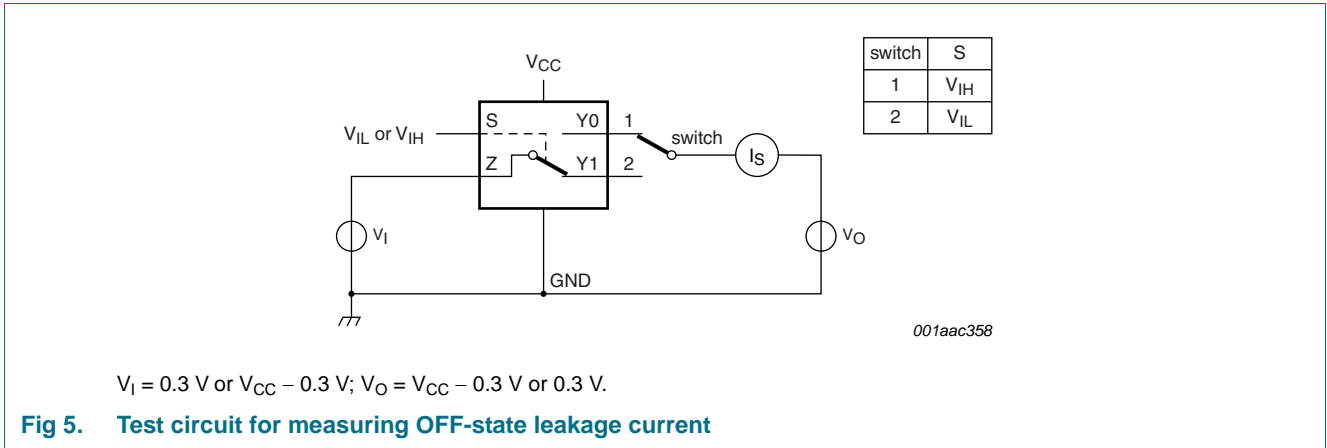
11. Static characteristics

Table 7. Static characteristics

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

| Symbol | Parameter | Conditions | T _{amb} = 25 °C | | | T _{amb} = -40 °C to +125 °C | | | Unit |
|---------------------|---------------------------|---|--------------------------|-----|---------------------|--------------------------------------|---------------------|---------------------|------|
| | | | Min | Typ | Max | Min | Max (85 °C) | Max (125 °C) | |
| V _{IH} | HIGH-level input voltage | V _{CC} = 1.4 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} = 3.6 V to 4.3 V | 0.7V _{CC} | - | - | 0.7V _{CC} | - | - | V |
| V _{IL} | LOW-level input voltage | V _{CC} = 1.4 V to 1.95 V | - | - | 0.35V _{CC} | - | 0.35V _{CC} | 0.35V _{CC} | V |
| | | V _{CC} = 2.3 V to 2.7 V | - | - | 0.7 | - | 0.7 | 0.7 | V |
| | | V _{CC} = 2.7 V to 3.6 V | - | - | 0.8 | - | 0.8 | 0.8 | V |
| | | V _{CC} = 3.6 V to 4.3 V | - | - | 0.3V _{CC} | - | 0.3V _{CC} | 0.3V _{CC} | V |
| I _I | input leakage current | select input S; V _I = GND to 4.3 V; V _{CC} = 1.4 V to 4.3 V | - | - | - | - | ±0.5 | ±1 | μA |
| I _{S(OFF)} | OFF-state leakage current | Y0 and Y1 port; see Figure 5 | | | | | | | |
| | | V _{CC} = 1.4 V to 3.6 V | - | - | ±5 | - | ±50 | ±500 | nA |
| | | V _{CC} = 3.6 V to 4.3 V | - | - | ±10 | - | ±50 | ±500 | nA |
| I _{S(ON)} | ON-state leakage current | Z port; see Figure 6 | | | | | | | |
| | | V _{CC} = 1.4 V to 3.6 V | - | - | ±5 | - | ±50 | ±500 | nA |
| | | V _{CC} = 3.6 V to 4.3 V | - | - | ±10 | - | ±50 | ±500 | nA |
| I _{CC} | supply current | V _I = V _{CC} or GND; V _{SW} = GND or V _{CC} | | | | | | | |
| | | V _{CC} = 3.6 V | - | - | 100 | - | 690 | 6000 | nA |
| | | V _{CC} = 4.3 V | - | - | 150 | - | 800 | 7000 | nA |
| C _I | input capacitance | | - | 1.0 | - | - | - | - | pF |
| C _{S(OFF)} | OFF-state capacitance | | - | 35 | - | - | - | - | pF |
| C _{S(ON)} | ON-state capacitance | | - | 130 | - | - | - | - | pF |

11.1 Test circuits



11.2 ON resistance

Table 8. ON resistance

At recommended operating conditions; voltages are referenced to GND (ground = 0 V); for graphs see [Figure 8](#) to [Figure 14](#).

| Symbol | Parameter | Conditions | T _{amb} = -40 °C to +85 °C | | | T _{amb} = -40 °C to +125 °C | | Unit | |
|-----------------------|---|--|-------------------------------------|--------------------|------|--------------------------------------|-----|------|---|
| | | | Min | Typ ^[1] | Max | Min | Max | | |
| R _{ON(peak)} | ON resistance (peak) | V _I = GND to V _{CC} ; I _{SW} = 100 mA; see Figure 7 | | | | | | | |
| | | | V _{CC} = 1.4 V | - | 1.6 | 3.7 | - | 4.1 | Ω |
| | | | V _{CC} = 1.65 V | - | 1.0 | 1.6 | - | 1.7 | Ω |
| | | | V _{CC} = 2.3 V | - | 0.55 | 0.8 | - | 0.9 | Ω |
| | | | V _{CC} = 2.7 V | - | 0.5 | 0.75 | - | 0.9 | Ω |
| | | | V _{CC} = 4.3 V | - | 0.5 | 0.75 | - | 0.9 | Ω |
| ΔR _{ON} | ON resistance mismatch between channels | V _I = GND to V _{CC} ; I _{SW} = 100 mA | | | | | | | |
| | | | V _{CC} = 1.4 V | - | 0.04 | 0.3 | - | 0.3 | Ω |
| | | | V _{CC} = 1.65 V | - | 0.04 | 0.2 | - | 0.3 | Ω |
| | | | V _{CC} = 2.3 V | - | 0.02 | 0.08 | - | 0.1 | Ω |
| | | | V _{CC} = 2.7 V | - | 0.02 | 0.075 | - | 0.1 | Ω |
| | | | V _{CC} = 4.3 V | - | 0.02 | 0.075 | - | 0.1 | Ω |
| R _{ON(flat)} | ON resistance (flatness) | V _I = GND to V _{CC} ; I _{SW} = 100 mA | | | | | | | |
| | | | V _{CC} = 1.4 V | - | 1.0 | 3.3 | - | 3.6 | Ω |
| | | | V _{CC} = 1.65 V | - | 0.5 | 1.2 | - | 1.3 | Ω |
| | | | V _{CC} = 2.3 V | - | 0.15 | 0.3 | - | 0.35 | Ω |
| | | | V _{CC} = 2.7 V | - | 0.13 | 0.3 | - | 0.35 | Ω |
| | | | V _{CC} = 4.3 V | - | 0.2 | 0.4 | - | 0.45 | Ω |

[1] Typical values are measured at T_{amb} = 25 °C.

[2] Measured at identical V_{CC}, temperature and input voltage.

[3] Flatness is defined as the difference between the maximum and minimum value of ON resistance measured at identical V_{CC} and temperature.

11.3 ON resistance test circuit and graphs

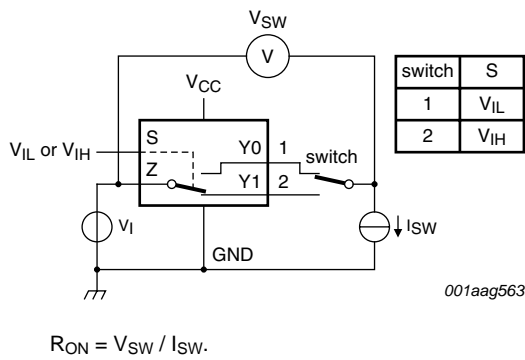
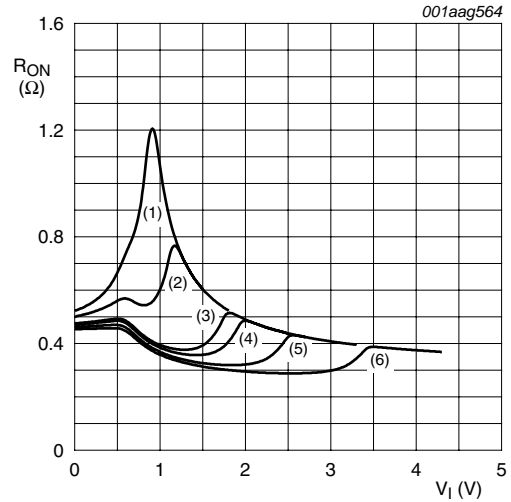


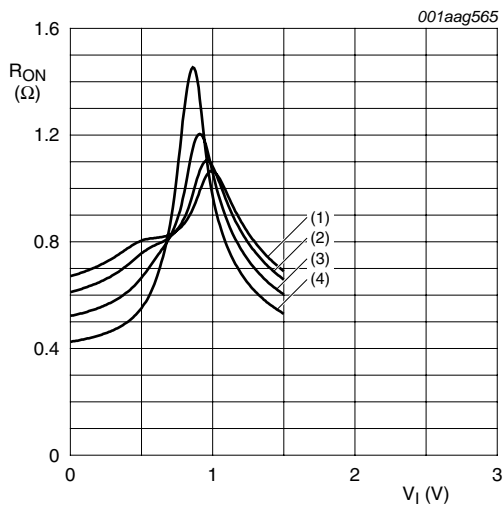
Fig 7. Test circuit for measuring ON resistance



- (1) V_{CC} = 1.5 V.
- (2) V_{CC} = 1.8 V.
- (3) V_{CC} = 2.5 V.
- (4) V_{CC} = 2.7 V.
- (5) V_{CC} = 3.3 V.
- (6) V_{CC} = 4.3 V.

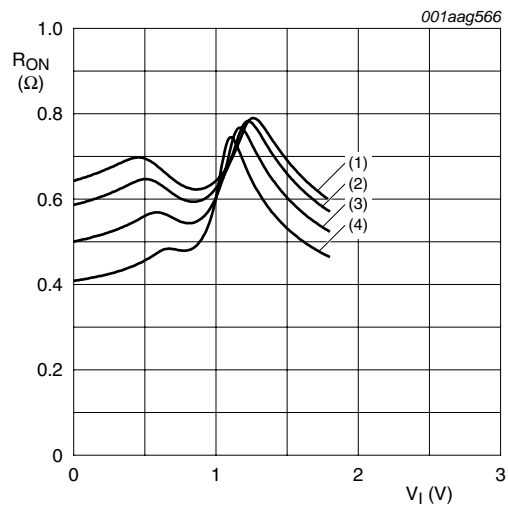
Measured at T_{amb} = 25 °C.

Fig 8. Typical ON resistance as a function of input voltage



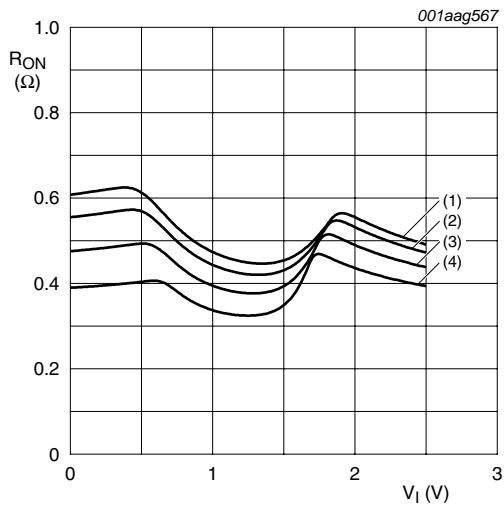
- (1) $T_{amb} = 125\text{ }^{\circ}\text{C}.$
- (2) $T_{amb} = 85\text{ }^{\circ}\text{C}.$
- (3) $T_{amb} = 25\text{ }^{\circ}\text{C}.$
- (4) $T_{amb} = -40\text{ }^{\circ}\text{C}.$

Fig 9. ON resistance as a function of input voltage;
 $V_{CC} = 1.5\text{ V}$



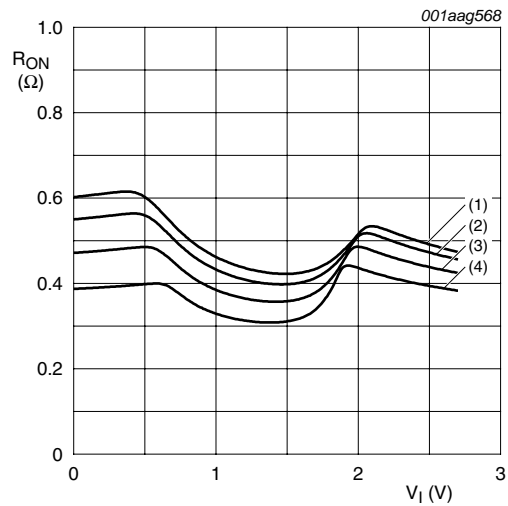
- (1) $T_{amb} = 125\text{ }^{\circ}\text{C}.$
- (2) $T_{amb} = 85\text{ }^{\circ}\text{C}.$
- (3) $T_{amb} = 25\text{ }^{\circ}\text{C}.$
- (4) $T_{amb} = -40\text{ }^{\circ}\text{C}.$

Fig 10. ON resistance as a function of input voltage;
 $V_{CC} = 1.8\text{ V}$



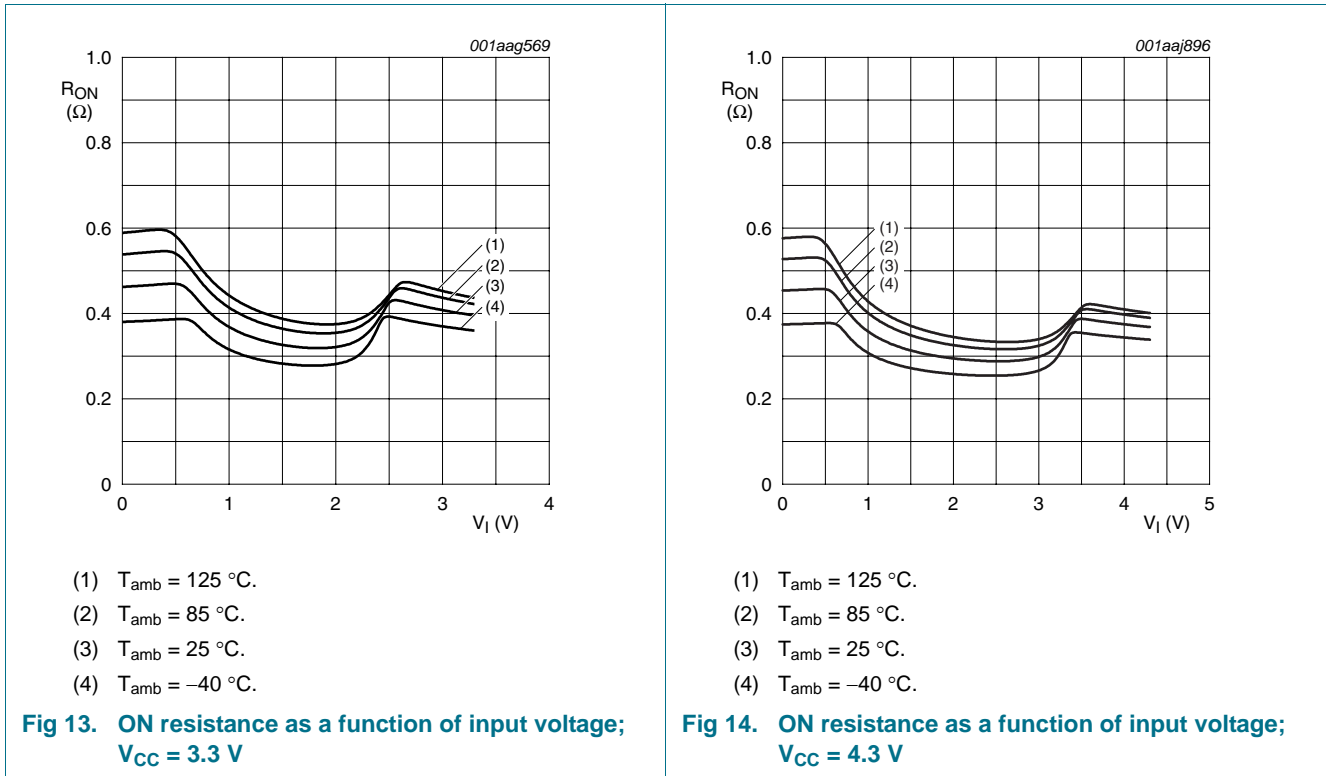
- (1) $T_{amb} = 125\text{ }^{\circ}\text{C}.$
- (2) $T_{amb} = 85\text{ }^{\circ}\text{C}.$
- (3) $T_{amb} = 25\text{ }^{\circ}\text{C}.$
- (4) $T_{amb} = -40\text{ }^{\circ}\text{C}.$

Fig 11. ON resistance as a function of input voltage;
 $V_{CC} = 2.5\text{ V}$



- (1) $T_{amb} = 125\text{ }^{\circ}\text{C}.$
- (2) $T_{amb} = 85\text{ }^{\circ}\text{C}.$
- (3) $T_{amb} = 25\text{ }^{\circ}\text{C}.$
- (4) $T_{amb} = -40\text{ }^{\circ}\text{C}.$

Fig 12. ON resistance as a function of input voltage;
 $V_{CC} = 2.7\text{ V}$



12. Dynamic characteristics

Table 9. Dynamic characteristics

At recommended operating conditions; voltages are referenced to GND (ground = 0 V); for load circuit see [Figure 17](#).

| Symbol | Parameter | Conditions | T _{amb} = 25 °C | | | T _{amb} = -40 °C to +125 °C | | | Unit |
|------------------|--------------|--|--------------------------|--------------------|-----|--------------------------------------|-------------|--------------|------|
| | | | Min | Typ ^[1] | Max | Min | Max (85 °C) | Max (125 °C) | |
| t _{en} | enable time | S to Z or Yn; see Figure 15 | | | | | | | |
| | | V _{CC} = 1.4 V to 1.6 V | - | 28 | 43 | - | 48 | 52 | ns |
| | | V _{CC} = 1.65 V to 1.95 V | - | 23 | 35 | - | 38 | 42 | ns |
| | | V _{CC} = 2.3 V to 2.7 V | - | 17 | 27 | - | 29 | 32 | ns |
| | | V _{CC} = 2.7 V to 3.6 V | - | 14 | 25 | - | 27 | 30 | ns |
| | | V _{CC} = 3.6 V to 4.3 V | - | 14 | 25 | - | 27 | 30 | ns |
| t _{dis} | disable time | S to Z or Yn; see Figure 15 | | | | | | | |
| | | V _{CC} = 1.4 V to 1.6 V | - | 9 | 20 | - | 25 | 30 | ns |
| | | V _{CC} = 1.65 V to 1.95 V | - | 6 | 15 | - | 20 | 23 | ns |
| | | V _{CC} = 2.3 V to 2.7 V | - | 5 | 11 | - | 14 | 16 | ns |
| | | V _{CC} = 2.7 V to 3.6 V | - | 4 | 10 | - | 12 | 14 | ns |
| | | V _{CC} = 3.6 V to 4.3 V | - | 4 | 10 | - | 12 | 14 | ns |

Table 9. Dynamic characteristics ...continued

At recommended operating conditions; voltages are referenced to GND (ground = 0 V); for load circuit see [Figure 17](#).

| Symbol | Parameter | Conditions | T _{amb} = 25 °C | | | T _{amb} = -40 °C to +125 °C | | | Unit |
|------------------|------------------------|--|--------------------------|--------------------|-----|--------------------------------------|-------------|--------------|------|
| | | | Min | Typ ^[1] | Max | Min | Max (85 °C) | Max (125 °C) | |
| t _{b-m} | break-before-make time | see Figure 16 ^[2] | | | | | | | |
| | | V _{CC} = 1.4 V to 1.6 V | - | 19 | - | 4 | - | - | ns |
| | | V _{CC} = 1.65 V to 1.95 V | - | 17 | - | 4 | - | - | ns |
| | | V _{CC} = 2.3 V to 2.7 V | - | 13 | - | 2 | - | - | ns |
| | | V _{CC} = 2.7 V to 3.6 V | - | 10 | - | 2 | - | - | ns |
| | | V _{CC} = 3.6 V to 4.3 V | - | 10 | - | 2 | - | - | ns |

[1] Typical values are measured at T_{amb} = 25 °C and V_{CC} = 1.5 V, 1.8 V, 2.5 V, 3.3 V and 4.3 V respectively.

[2] Break-before-make guaranteed by design.

12.1 Waveform and test circuits

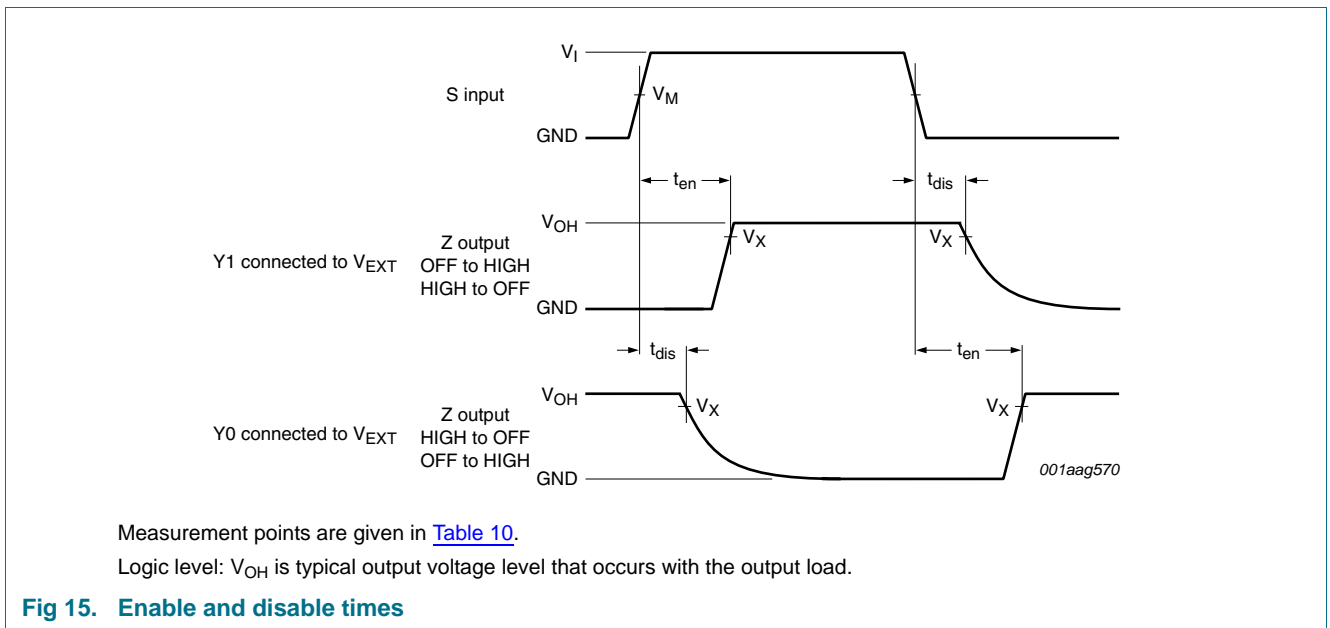
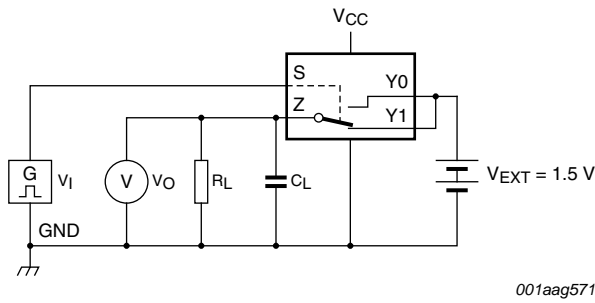


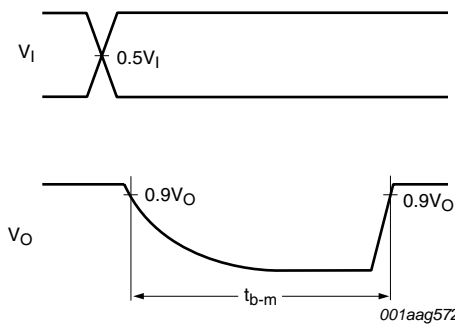
Fig 15. Enable and disable times

Table 10. Measurement points

| Supply voltage | Input | Output |
|-----------------|--------------------|--------------------|
| V _{CC} | V _M | V _X |
| 1.4 V to 4.3 V | 0.5V _{CC} | 0.9V _{OH} |

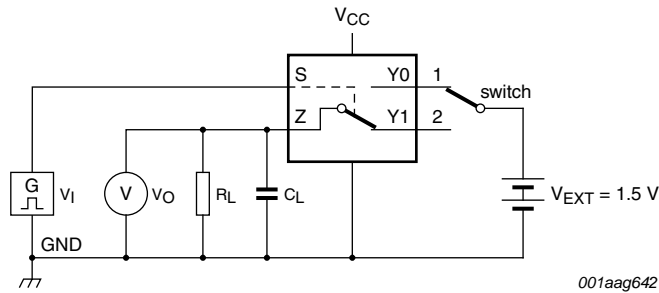


a. Test circuit



b. Input and output measurement points

Fig 16. Test circuit for measuring break-before-make timing



Test data is given in [Table 11](#).

Definitions test circuit:

R_L = Load resistance.

C_L = Load capacitance including jig and probe capacitance.

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

Fig 17. Load circuit for switching times

Table 11. Test data

| Supply voltage | Input | | Load | |
|----------------|----------|---------------|-------|-------------|
| V_{CC} | V_I | t_r, t_f | C_L | R_L |
| 1.4 V to 4.3 V | V_{CC} | ≤ 2.5 ns | 35 pF | 50 Ω |

12.2 Additional dynamic characteristics

Table 12. Additional dynamic characteristics

At recommended operating conditions; voltages are referenced to GND (ground = 0 V); $V_I = GND$ or V_{CC} (unless otherwise specified); $t_r = t_f \leq 2.5$ ns; $T_{amb} = 25$ °C.

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|----------------|---------------------------|--|-----|------|-----|------|
| THD | total harmonic distortion | $f_i = 20$ Hz to 20 kHz; $R_L = 32$ Ω ; see Figure 18 | [1] | | | |
| | | $V_{CC} = 1.4$ V; $V_I = 1$ V (p-p) | - | 0.15 | - | % |
| | | $V_{CC} = 1.65$ V; $V_I = 1.2$ V (p-p) | - | 0.10 | - | % |
| | | $V_{CC} = 2.3$ V; $V_I = 1.5$ V (p-p) | - | 0.02 | - | % |
| | | $V_{CC} = 2.7$ V; $V_I = 2$ V (p-p) | - | 0.02 | - | % |
| | | $V_{CC} = 4.3$ V; $V_I = 2$ V (p-p) | - | 0.02 | - | % |
| $f_{(-3dB)}$ | -3 dB frequency response | $R_L = 50$ Ω ; see Figure 19 | [1] | | | |
| | | $V_{CC} = 1.4$ V to 4.3 V | - | 60 | - | MHz |
| α_{iso} | isolation (OFF-state) | $f_i = 100$ kHz; $R_L = 50$ Ω ; see Figure 20 | [1] | | | |
| | | $V_{CC} = 1.4$ V to 4.3 V | - | -90 | - | dB |
| V_{ct} | crosstalk voltage | between digital inputs and switch; $f_i = 1$ MHz; $C_L = 50$ pF; $R_L = 50$ Ω ; see Figure 21 | | | | |
| | | $V_{CC} = 1.4$ V to 3.6 V | - | 0.2 | - | V |
| | | $V_{CC} = 3.6$ V to 4.3 V | - | 0.3 | - | V |
| Q_{inj} | charge injection | $f_i = 1$ MHz; $C_L = 0.1$ nF; $R_L = 1$ M Ω ; $V_{gen} = 0$ V; $R_{gen} = 0$ Ω ; see Figure 22 | | | | |
| | | $V_{CC} = 1.5$ V | - | 3 | - | pC |
| | | $V_{CC} = 1.8$ V | - | 4 | - | pC |
| | | $V_{CC} = 2.5$ V | - | 6 | - | pC |
| | | $V_{CC} = 3.3$ V | - | 9 | - | pC |
| | | $V_{CC} = 4.3$ V | - | 15 | - | pC |

[1] f_i is biased at $0.5V_{CC}$.

12.3 Test circuits

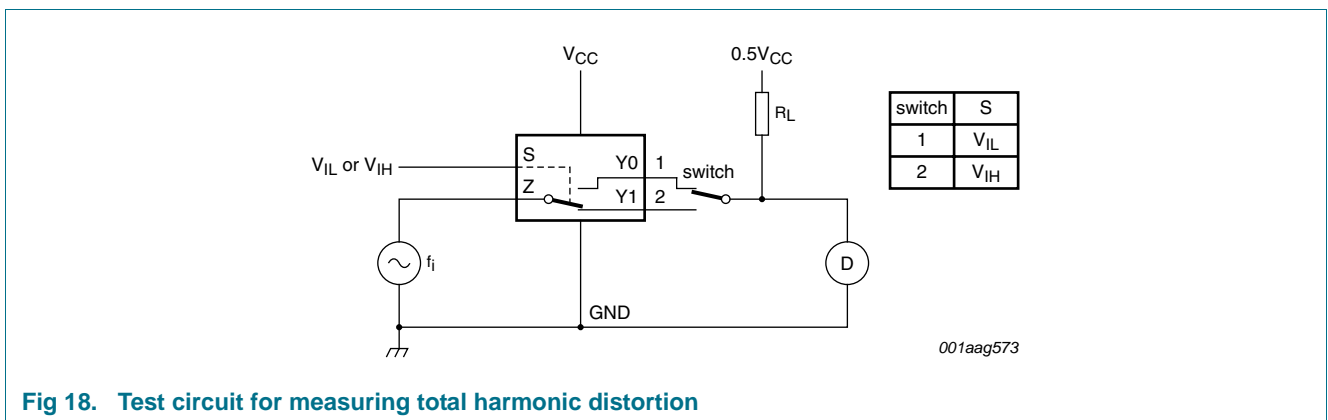
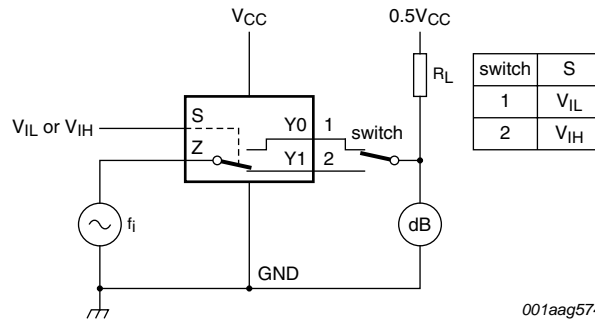


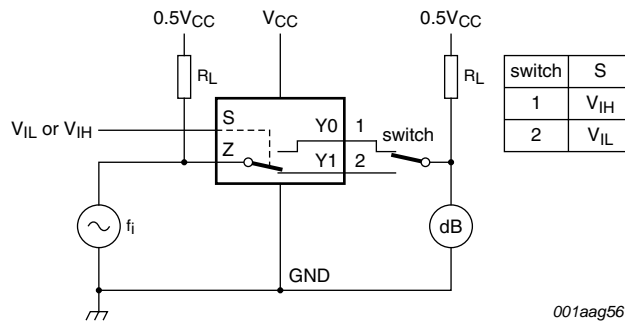
Fig 18. Test circuit for measuring total harmonic distortion



001aag574

Adjust f_i voltage to obtain 0 dBm level at output. Increase f_i frequency until dB meter reads -3 dB.

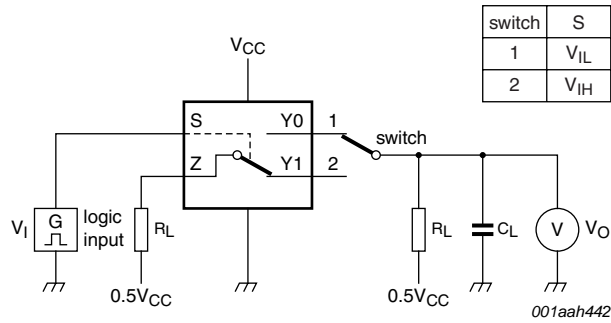
Fig 19. Test circuit for measuring the frequency response when channel is in ON-state



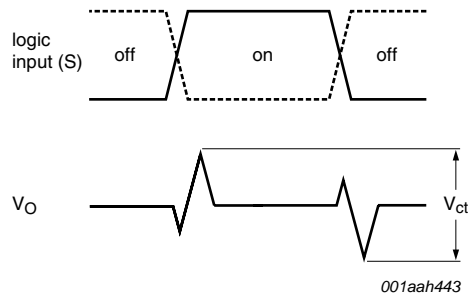
001aag561

Adjust f_i voltage to obtain 0 dBm level at input.

Fig 20. Test circuit for measuring isolation (OFF-state)

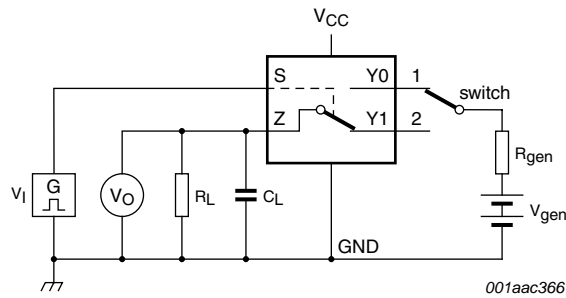


a. Test circuit

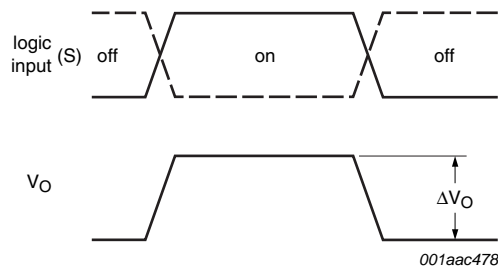


b. Input and output pulse definitions

Fig 21. Test circuit for measuring crosstalk voltage between digital inputs and switch



a. Test circuit



b. Input and output pulse definitions

Definition: $Q_{inj} = \Delta V_O \times C_L$.

ΔV_O = output voltage variation.

R_{gen} = generator resistance.

V_{gen} = generator voltage.

Fig 22. Test circuit for measuring charge injection

13. Package outline

Plastic surface-mounted package; 6 leads

SOT363

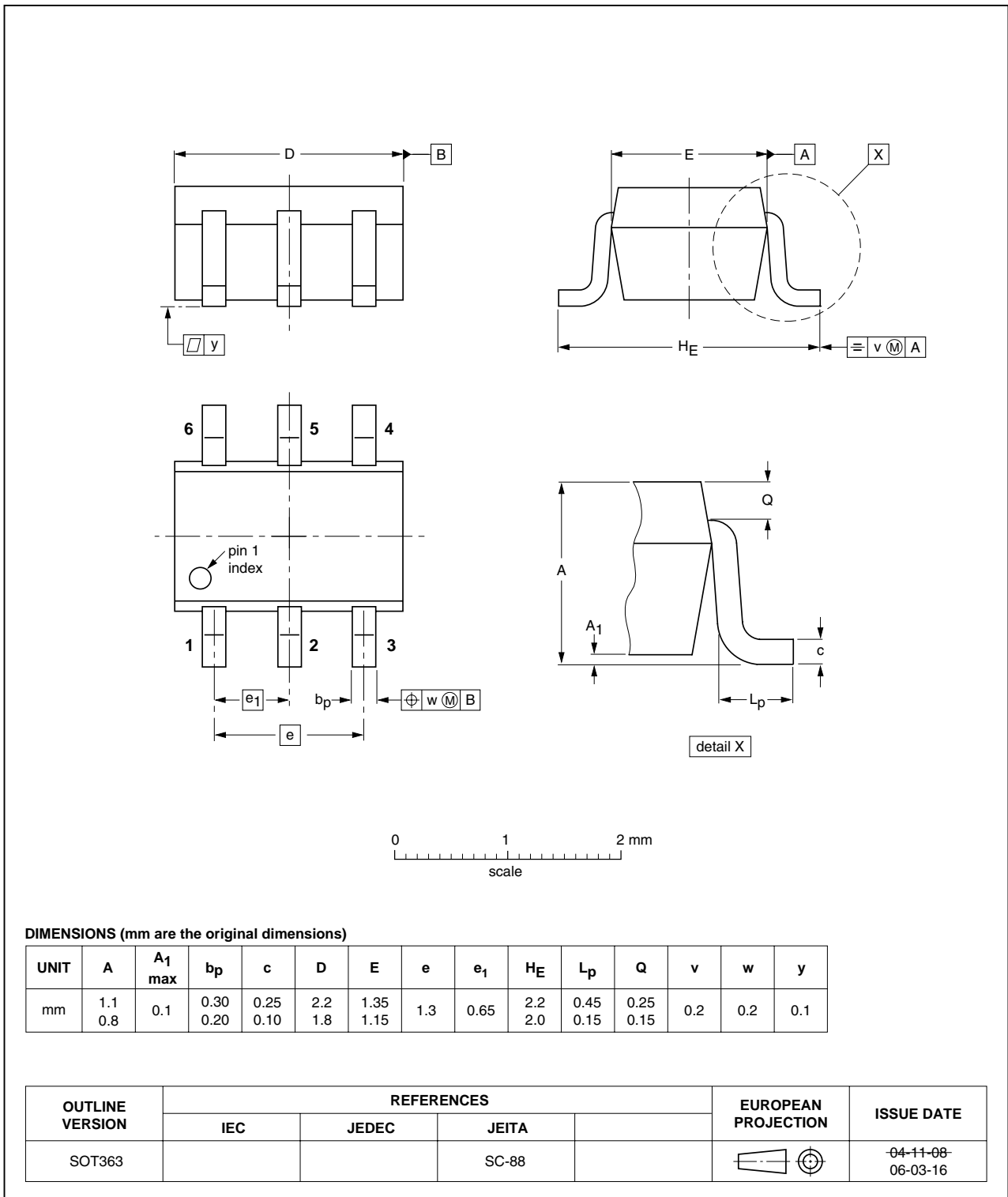


Fig 23. Package outline SOT363 (SC-88)

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

SOT886

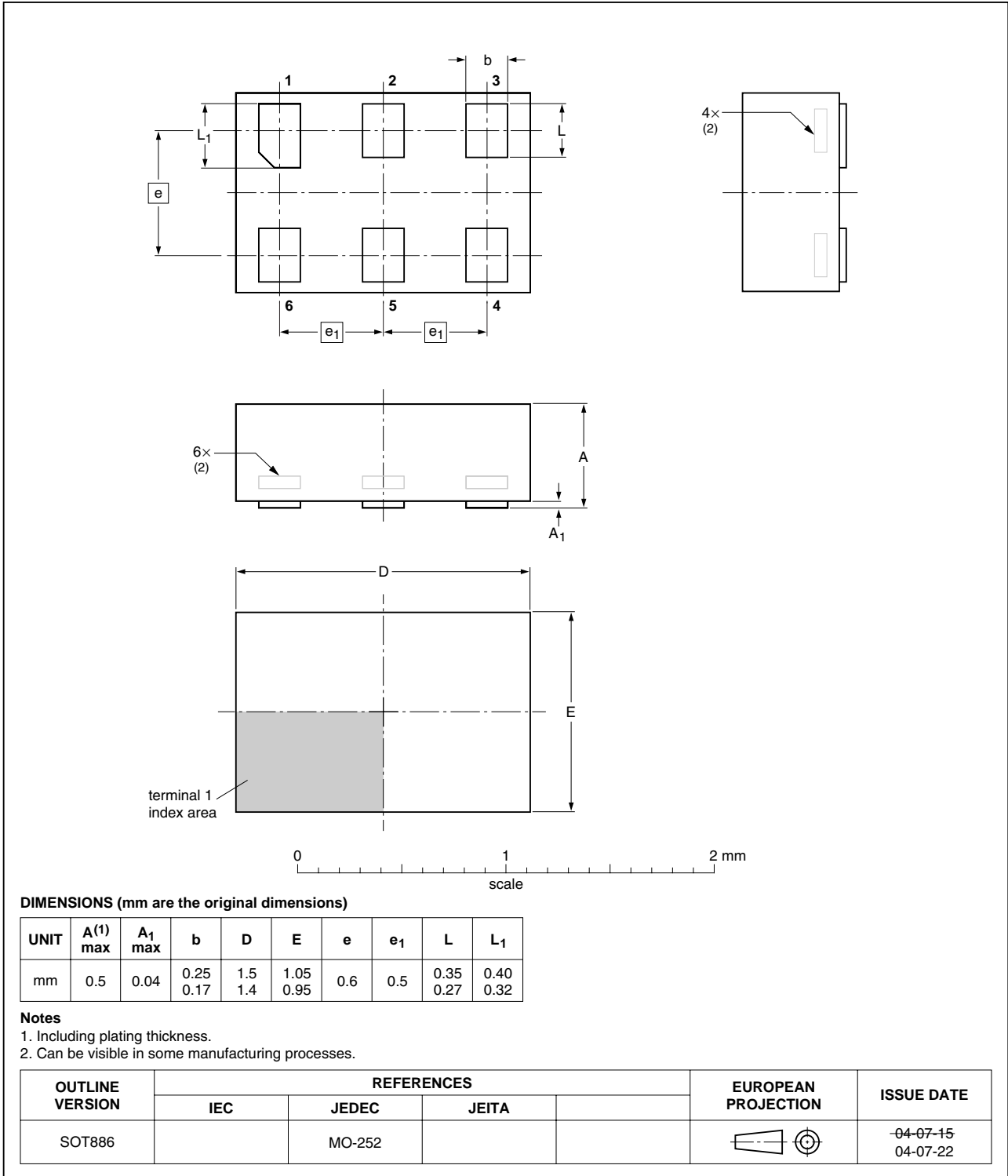


Fig 24. Package outline SOT886 (XSON6)

14. Abbreviations

Table 13. Abbreviations

| Acronym | Description |
|---------|---|
| CDM | Charged Device Model |
| CMOS | Complementary Metal-Oxide Semiconductor |
| ESD | ElectroStatic Discharge |
| HBM | Human Body Model |
| MM | Machine Model |
| PDA | Personal Digital Assistant |
| TTL | Transistor-Transistor Logic |

15. Revision history

Table 14. Revision history

| Document ID | Release date | Data sheet status | Change notice | Supersedes |
|----------------|--|--------------------|---------------|--------------|
| NX3L1G3157_8 | 20100426 | Product data sheet | - | NX3L1G3157_7 |
| Modifications: | <ul style="list-style-type: none"> • Table 8: ON resistance mismatch between channels changed at $V_{CC} = 4.3$ V. | | | |
| NX3L1G3157_7 | 20100324 | Product data sheet | - | NX3L1G3157_6 |
| NX3L1G3157_6 | 20100208 | Product data sheet | - | NX3L1G3157_5 |
| NX3L1G3157_5 | 20090407 | Product data sheet | - | NX3L1G3157_4 |
| NX3L1G3157_4 | 20080730 | Product data sheet | - | NX3L1G3157_3 |
| NX3L1G3157_3 | 20080721 | Product data sheet | - | NX3L1G3157_2 |
| NX3L1G3157_2 | 20080415 | Product data sheet | - | NX3L1G3157_1 |
| NX3L1G3157_1 | 20071008 | Product data sheet | - | - |

16. Legal information

16.1 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".

[3] The product status of device(s) described in this document may have changed since this document was published and may differ in case of multiple devices. The latest product status information is available on the Internet at URL <http://www.nxp.com>.

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