

# NX3L2267

## Low-ohmic dual single-pole double-throw analog switch

Rev. 2 — 13 July 2010

Product data sheet

### 1. General description

The NX3L2267 is a dual low-ohmic single-pole double-throw analog switch suitable for use as an analog or digital 2:1 multiplexer/demultiplexer. Each switch has a digital select input (nS), two independent inputs/outputs (nY0 and nY1) and a common input/output (nZ).

Schmitt trigger action at the digital inputs makes the circuit tolerant to slower input rise and fall times. Low threshold digital inputs allows this device to be driven by 1.8 V logic levels in 3.3 V applications without significant increase in supply current  $I_{CC}$ . The NX3L2267 allows signals with amplitude up to  $V_{CC}$  to be transmitted from nZ to nY0 or nY1, or from nY0 or nY1 to nZ. 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 (peak):
  - ◆ 1.65  $\Omega$  (typical) at  $V_{CC} = 1.4$  V
  - ◆ 0.95  $\Omega$  (typical) at  $V_{CC} = 1.65$  V
  - ◆ 0.55  $\Omega$  (typical) at  $V_{CC} = 2.3$  V
  - ◆ 0.50  $\Omega$  (typical) at  $V_{CC} = 2.7$  V
  - 0.50  $\Omega$  (typical) at  $V_{CC} = 4.3$  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
- CMOS low-power consumption
- Latch-up performance exceeds 100 mA per JESD 78B Class II Level A
- 1.8 V control logic at  $V_{CC} = 3.6$  V
- Control input accepts voltages above supply voltage
- Very low supply current, even when input is below  $V_{CC}$
- High current handling capability (350 mA continuous current under 3.3 V supply)
- Specified from  $-40$  °C to  $+85$  °C and from  $-40$  °C to  $+125$  °C



### 3. Applications

- Cell phone
- PDA
- Portable media player

### 4. Ordering information

**Table 1. Ordering information**

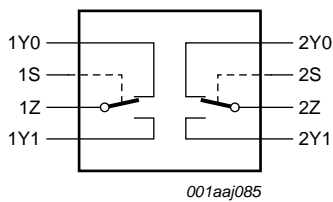
Type number	Package			Version
	Temperature range	Name	Description	
NX3L2267GM	-40 °C to +125 °C	XQFN10U	plastic extremely thin quad flat package; no leads; 10 terminals; UTLP based; body 2 × 1.55 × 0.5 mm	SOT1049-2
NX3L2267GU	-40 °C to +125 °C	XQFN10	plastic, extremely thin quad flat package; no leads; 10 terminals; body 1.40 × 1.80 × 0.50 mm	SOT1160-1

### 5. Marking

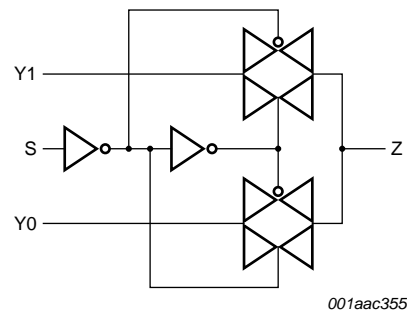
**Table 2. Marking**

Type number	Marking code
NX3L2267GM	M67
NX3L2267GU	M7

### 6. Functional diagram



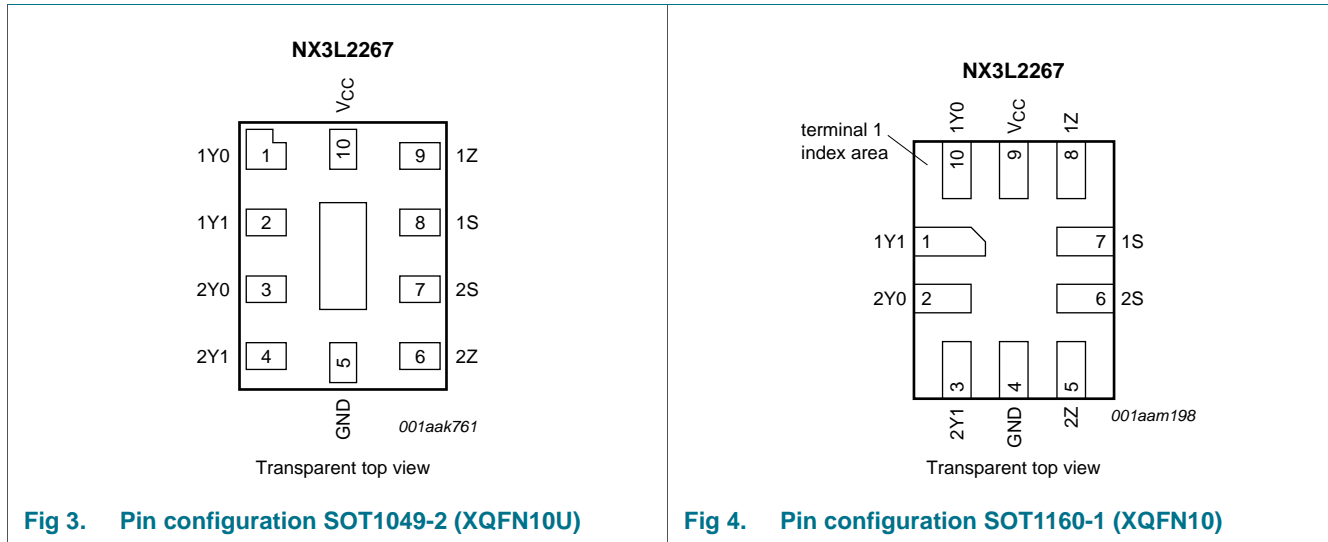
**Fig 1. Logic symbol**



**Fig 2. Logic diagram (one switch)**

## 7. Pinning information

### 7.1 Pinning



**Fig 3. Pin configuration SOT1049-2 (XQFN10U)**

**Fig 4. Pin configuration SOT1160-1 (XQFN10)**

### 7.2 Pin description

**Table 3. Pin description**

Symbol	Pin		Description
	SOT1049-2	SOT1160-1	
1Y0	1	10	independent input or output
1Y1	2	1	independent input or output
2Y0	3	2	independent input or output
2Y1	4	3	independent input or output
GND	5	4	ground (0 V)
2Z	6	5	common output or input
2S	7	6	select input
1S	8	7	select input
1Z	9	8	common output or input
V <sub>CC</sub>	10	9	supply voltage

## 8. Functional description

Table 4. Function table<sup>[1]</sup>

Input nS	Channel on
L	nY0 = nZ
H	nY1 = nZ

[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 nS	<sup>[1]</sup> -0.5	+4.6	V
$V_{SW}$	switch voltage		<sup>[2]</sup> -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	-	$\pm 50$	mA
$I_{SW}$	switch current	$V_{SW} > -0.5$ V or $V_{SW} < V_{CC} + 0.5$ V; source or sink current	-	$\pm 350$	mA
		$V_{SW} > -0.5$ V or $V_{SW} < V_{CC} + 0.5$ V; pulsed at 1 ms duration, < 10 % duty cycle; peak current	-	$\pm 500$	mA
$T_{stg}$	storage temperature		-65	+150	°C
$P_{tot}$	total power dissipation	$T_{amb} = -40$ °C to +125 °C	<sup>[3][4]</sup> -	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 XQFN10U package: above 132 °C the value of  $P_{tot}$  derates linearly with 14.1 mW/K.

[4] For XQFN10 package: above 128 °C the value of  $P_{tot}$  derates linearly with 11.5 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 nS	0	4.3	V
$V_{SW}$	switch voltage	switch input nY0 or nY1	<sup>[1]</sup> 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	<sup>[2]</sup> -	200	ns/V

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

[2] Applies to select input nS signal levels.

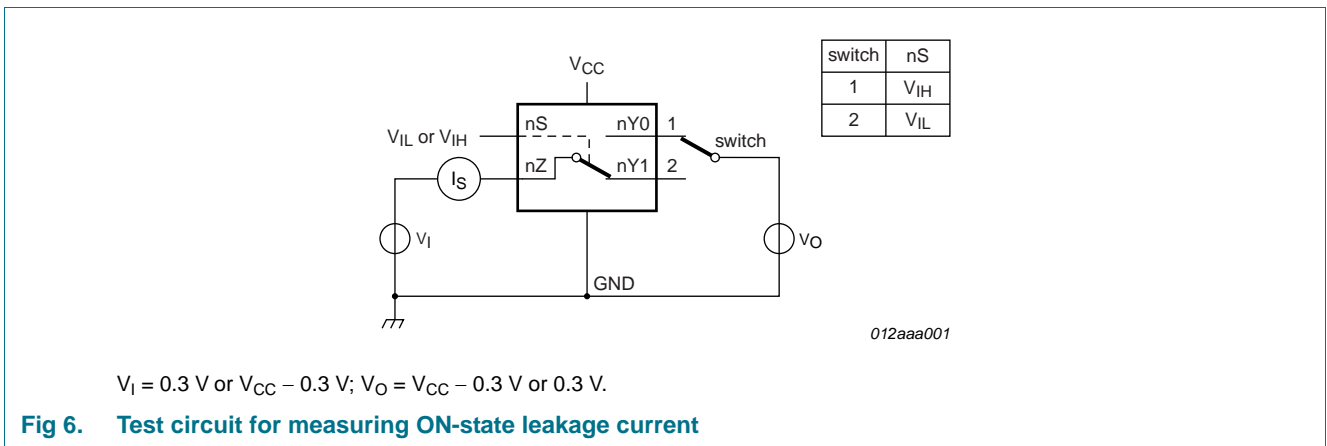
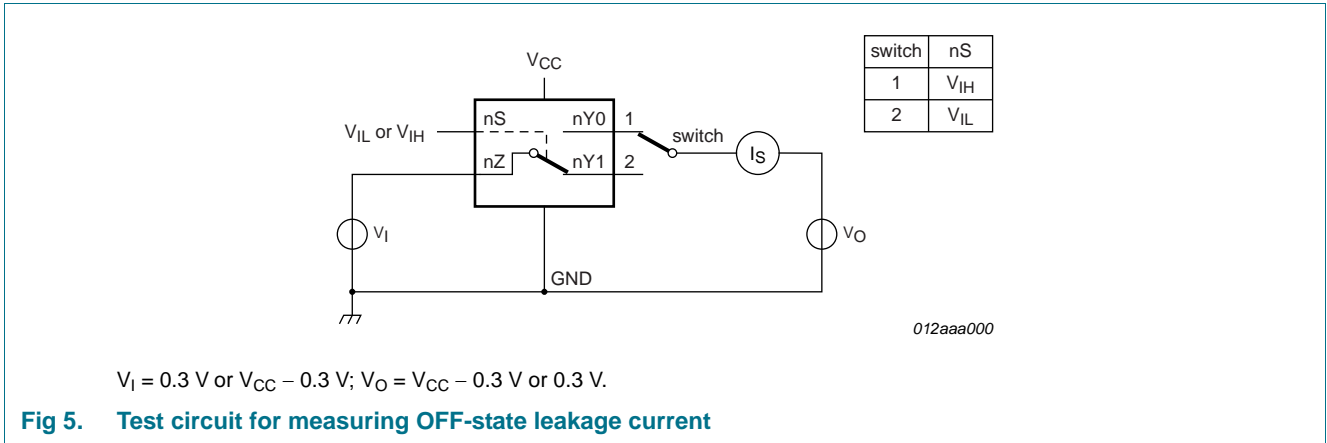
## 11. Static characteristics

**Table 7. Static characteristics**

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

Symbol	Parameter	Conditions	T <sub>amb</sub> = 25 °C			T <sub>amb</sub> = -40 °C to +125 °C			Unit
			Min	Typ	Max	Min	Max (85 °C)	Max (125 °C)	
V <sub>IH</sub>	HIGH-level input voltage	V <sub>CC</sub> = 1.4 V to 1.6 V	0.9	-	-	0.9	-	-	V
		V <sub>CC</sub> = 1.65 V to 1.95 V	0.9	-	-	0.9	-	-	V
		V <sub>CC</sub> = 2.3 V to 2.7 V	1.1	-	-	1.1	-	-	V
		V <sub>CC</sub> = 2.7 V to 3.6 V	1.3	-	-	1.3	-	-	V
		V <sub>CC</sub> = 3.6 V to 4.3 V	1.4	-	-	1.4	-	-	V
V <sub>IL</sub>	LOW-level input voltage	V <sub>CC</sub> = 1.4 V to 1.6 V	-	-	0.3	-	0.3	0.3	V
		V <sub>CC</sub> = 1.65 V to 1.95 V	-	-	0.4	-	0.4	0.3	V
		V <sub>CC</sub> = 2.3 V to 2.7 V	-	-	0.5	-	0.5	0.4	V
		V <sub>CC</sub> = 2.7 V to 3.6 V	-	-	0.5	-	0.5	0.5	V
		V <sub>CC</sub> = 3.6 V to 4.3 V	-	-	0.6	-	0.6	0.6	V
I <sub>I</sub>	input leakage current	select input nS; V <sub>I</sub> = GND to 4.3 V; V <sub>CC</sub> = 1.4 V to 4.3 V	-	-	-	-	±0.5	±1	µA
I <sub>S(OFF)</sub>	OFF-state leakage current	nYn port; see <a href="#">Figure 5</a>							
		V <sub>CC</sub> = 1.4 V to 3.6 V	-	-	±5	-	±10	±100	nA
		V <sub>CC</sub> = 3.6 V to 4.3 V	-	-	±10	-	±50	±200	nA
I <sub>S(ON)</sub>	ON-state leakage current	nZ port; see <a href="#">Figure 6</a>							
		V <sub>CC</sub> = 1.4 V to 3.6 V	-	-	±5	-	±20	±200	nA
		V <sub>CC</sub> = 3.6 V to 4.3 V	-	-	±10	-	±50	±400	nA
I <sub>CC</sub>	supply current	V <sub>I</sub> = V <sub>CC</sub> or GND; V <sub>SW</sub> = GND or V <sub>CC</sub>							
		V <sub>CC</sub> = 3.6 V	-	-	100	-	300	3000	nA
		V <sub>CC</sub> = 4.3 V	-	-	150	-	500	5000	nA
ΔI <sub>CC</sub>	additional supply current	V <sub>SW</sub> = GND or V <sub>CC</sub>							
		V <sub>I</sub> = 2.6 V; V <sub>CC</sub> = 4.3 V	-	2.0	4.0	-	7	7	µA
		V <sub>I</sub> = 2.6 V; V <sub>CC</sub> = 3.6 V	-	0.35	0.7	-	1	1	µA
		V <sub>I</sub> = 1.8 V; V <sub>CC</sub> = 4.3 V	-	7.0	10.0	-	15	15	µA
		V <sub>I</sub> = 1.8 V; V <sub>CC</sub> = 3.6 V	-	2.5	4.0	-	5	5	µA
C <sub>I</sub>	input capacitance	V <sub>I</sub> = 1.8 V; V <sub>CC</sub> = 2.5 V	-	50	200	-	300	500	nA
			-	1.0	-	-	-	-	pF
C <sub>S(OFF)</sub>	OFF-state capacitance	port nYn	-	35	-	-	-	-	pF
C <sub>S(ON)</sub>	ON-state capacitance	port nYn	-	135	-	-	-	-	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	-40 °C to +85 °C			-40 °C to +125 °C		Unit	
			Min	Typ <sup>[1]</sup>	Max	Min	Max		
R <sub>ON(peak)</sub>	ON resistance (peak)	port nYn; V <sub>I</sub> = GND to V <sub>CC</sub> ; I <sub>SW</sub> = 100 mA; see <a href="#">Figure 7</a>							
			V <sub>CC</sub> = 1.4 V	-	1.65	3.7	-	4.1	Ω
			V <sub>CC</sub> = 1.65 V	-	0.95	1.6	-	1.7	Ω
			V <sub>CC</sub> = 2.3 V	-	0.55	0.8	-	0.9	Ω
			V <sub>CC</sub> = 2.7 V	-	0.50	0.75	-	0.9	Ω
			V <sub>CC</sub> = 4.3 V	-	0.50	0.75	-	0.9	Ω
ΔR <sub>ON</sub>	ON resistance mismatch between channels	V <sub>I</sub> = GND to V <sub>CC</sub> ; I <sub>SW</sub> = 100 mA							
			V <sub>CC</sub> = 1.4 V	-	0.20	0.35	-	0.35	Ω
			V <sub>CC</sub> = 1.65 V	-	0.20	0.25	-	0.30	Ω
			V <sub>CC</sub> = 2.3 V	-	0.09	0.13	-	0.15	Ω
			V <sub>CC</sub> = 2.7 V	-	0.09	0.125	-	0.15	Ω
			V <sub>CC</sub> = 4.3 V	-	0.09	0.125	-	0.15	Ω
R <sub>ON(flat)</sub>	ON resistance (flatness)	port nYn; V <sub>I</sub> = GND to V <sub>CC</sub> ; I <sub>SW</sub> = 100 mA							
			V <sub>CC</sub> = 1.4 V	-	1.05	3.35	-	3.65	Ω
			V <sub>CC</sub> = 1.65 V	-	0.55	1.25	-	1.35	Ω
			V <sub>CC</sub> = 2.3 V	-	0.20	0.35	-	0.40	Ω
			V <sub>CC</sub> = 2.7 V	-	0.18	0.35	-	0.40	Ω
			V <sub>CC</sub> = 4.3 V	-	0.23	0.40	-	0.45	Ω

[1] Typical values are measured at T<sub>amb</sub> = 25 °C.

[2] Measured at identical V<sub>CC</sub>, temperature and input voltage.

[3] Flatness is defined as the difference between the maximum and minimum value of ON resistance measured at identical V<sub>CC</sub> and temperature.

11.3 ON resistance test circuit and graphs

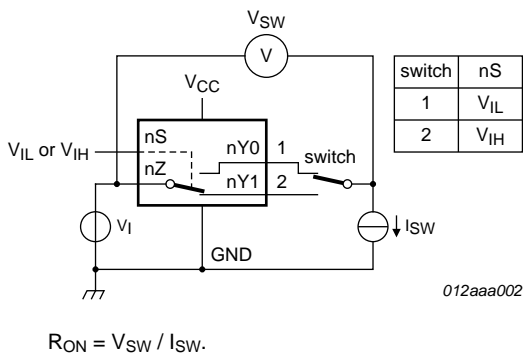
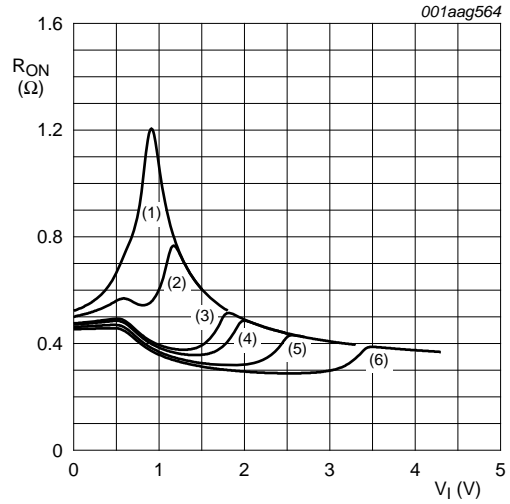


Fig 7. Test circuit for measuring ON resistance

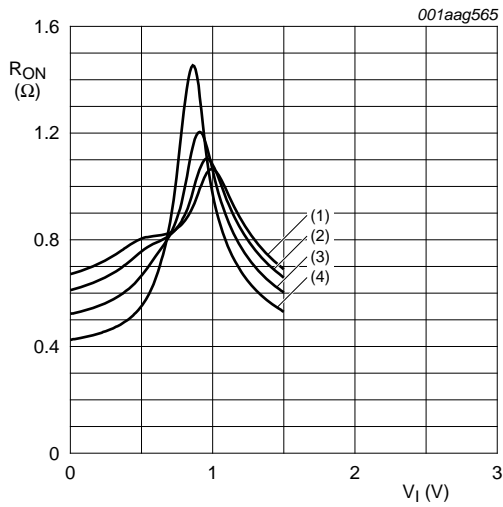


- (1) V<sub>CC</sub> = 1.5 V.
- (2) V<sub>CC</sub> = 1.8 V.
- (3) V<sub>CC</sub> = 2.5 V.
- (4) V<sub>CC</sub> = 2.7 V.
- (5) V<sub>CC</sub> = 3.3 V.
- (6) V<sub>CC</sub> = 4.3 V.

Measured at T<sub>amb</sub> = 25 °C.

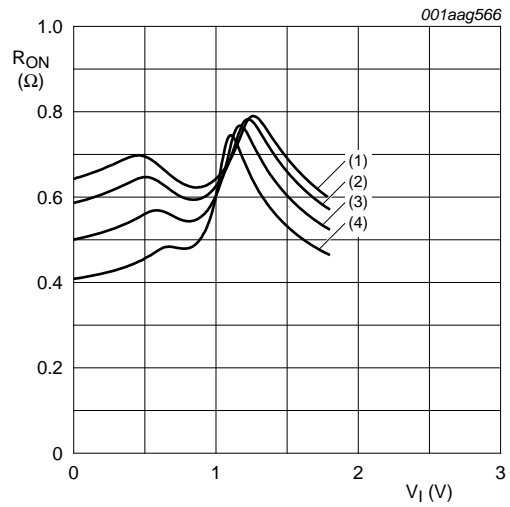
Fig 8. Typical ON resistance as a function of input voltage (Yn port)





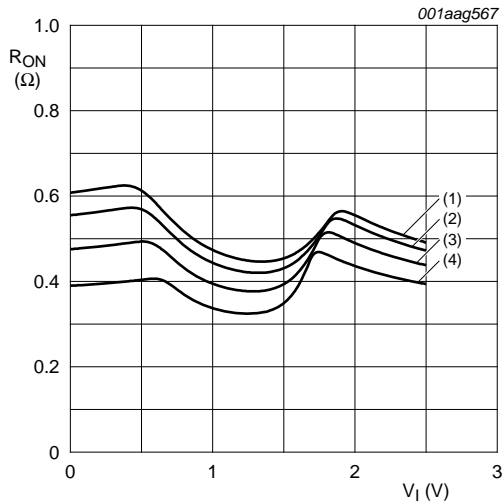
- (1)  $T_{amb} = 125\text{ °C.}$
- (2)  $T_{amb} = 85\text{ °C.}$
- (3)  $T_{amb} = 25\text{ °C.}$
- (4)  $T_{amb} = -40\text{ °C.}$

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



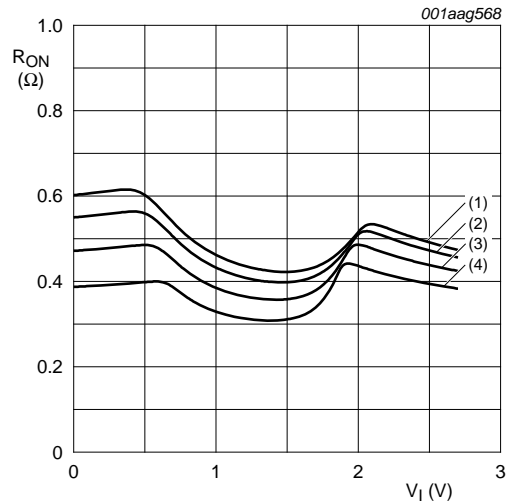
- (1)  $T_{amb} = 125\text{ °C.}$
- (2)  $T_{amb} = 85\text{ °C.}$
- (3)  $T_{amb} = 25\text{ °C.}$
- (4)  $T_{amb} = -40\text{ °C.}$

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



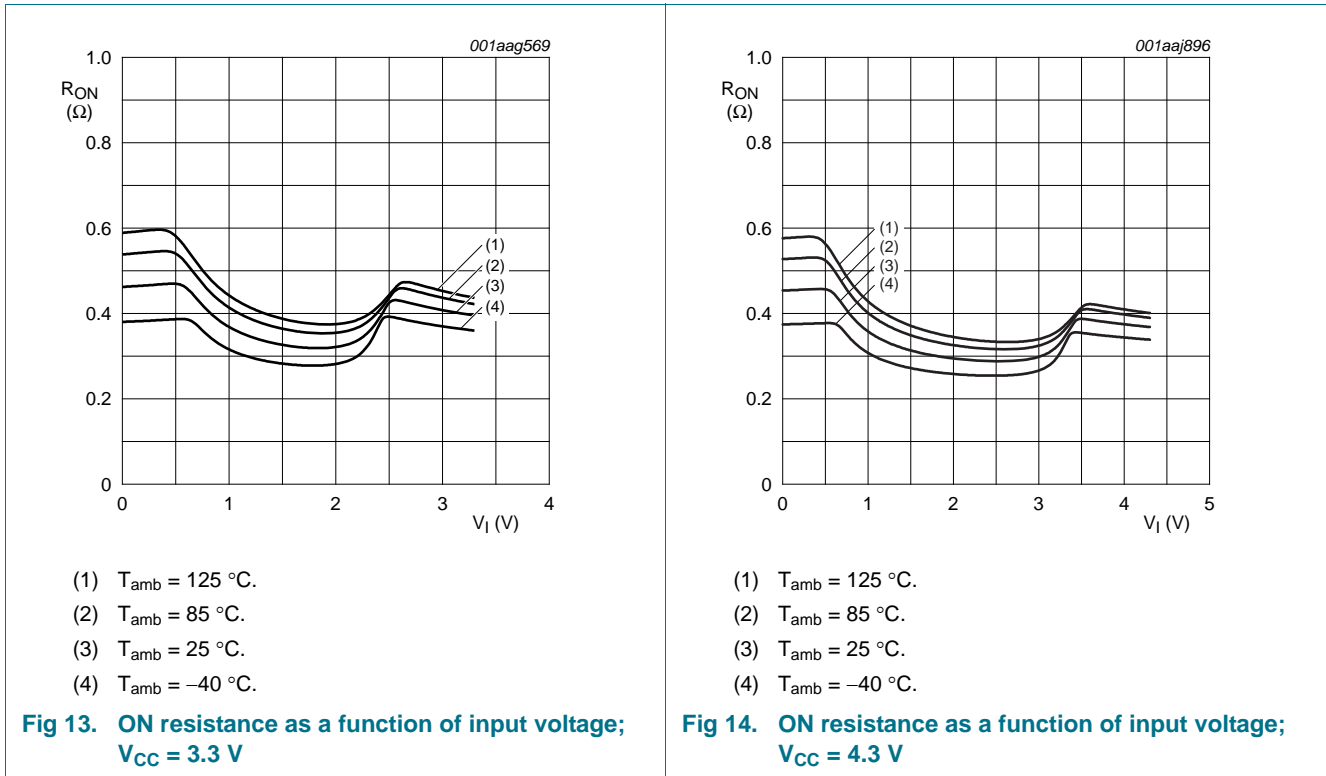
- (1)  $T_{amb} = 125\text{ °C.}$
- (2)  $T_{amb} = 85\text{ °C.}$
- (3)  $T_{amb} = 25\text{ °C.}$
- (4)  $T_{amb} = -40\text{ °C.}$

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



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

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



## 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 <sub>amb</sub> = 25 °C			T <sub>amb</sub> = -40 °C to +125 °C			Unit
			Min	Typ <sup>[1]</sup>	Max	Min	Max (85 °C)	Max (125 °C)	
t <sub>en</sub>	enable time	nS to nZ or nYn; see <a href="#">Figure 15</a>							
		V <sub>CC</sub> = 1.4 V to 1.6 V	-	50	90	-	120	120	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	-	36	70	-	80	90	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	-	24	45	-	50	55	ns
		V <sub>CC</sub> = 2.7 V to 3.6 V	-	22	40	-	45	50	ns
		V <sub>CC</sub> = 3.6 V to 4.3 V	-	22	40	-	45	50	ns
t <sub>dis</sub>	disable time	nS to nZ or nYn; see <a href="#">Figure 15</a>							
		V <sub>CC</sub> = 1.4 V to 1.6 V	-	32	70	-	80	90	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	-	20	55	-	60	65	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	-	12	25	-	30	35	ns
		V <sub>CC</sub> = 2.7 V to 3.6 V	-	10	20	-	25	30	ns
		V <sub>CC</sub> = 3.6 V to 4.3 V	-	10	20	-	25	30	ns

**Table 9. Dynamic characteristics ...continued**

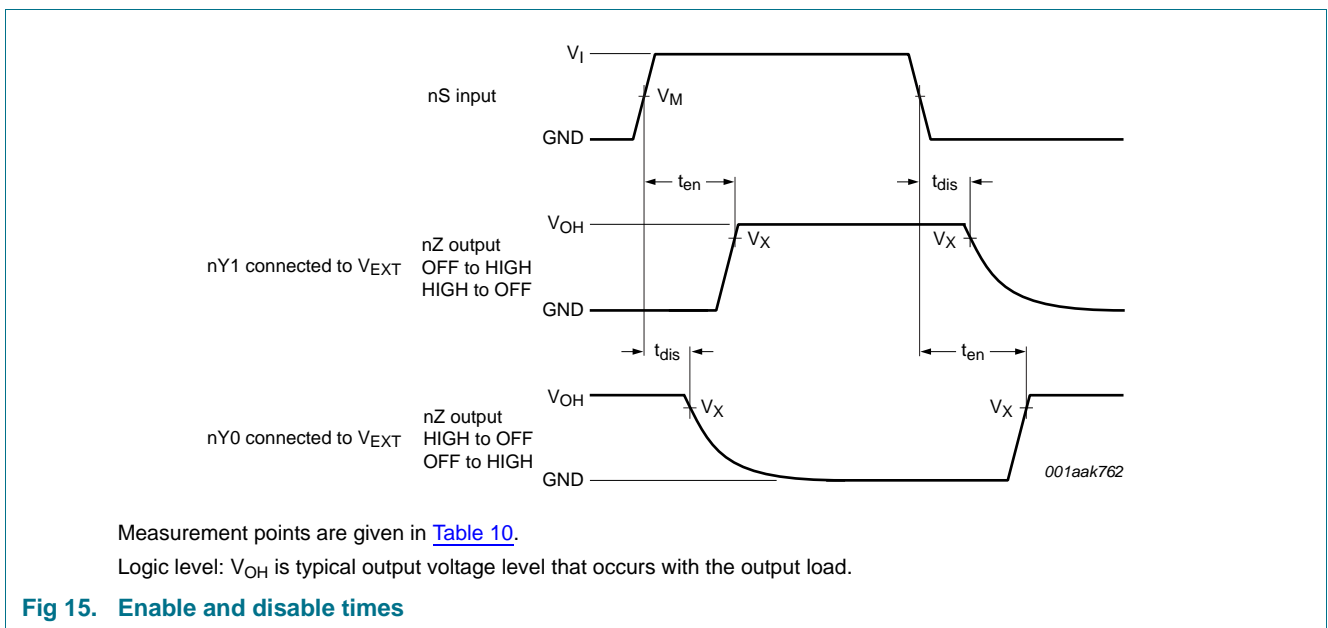
At recommended operating conditions; voltages are referenced to GND (ground = 0 V); for load circuit see [Figure 17](#).

Symbol	Parameter	Conditions	T <sub>amb</sub> = 25 °C			T <sub>amb</sub> = -40 °C to +125 °C			Unit
			Min	Typ <sup>[1]</sup>	Max	Min	Max (85 °C)	Max (125 °C)	
t <sub>b-m</sub>	break-before-make time	see <a href="#">Figure 16</a> <sup>[2]</sup>							
		V <sub>CC</sub> = 1.4 V to 1.6 V	-	19	-	9	-	-	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	-	17	-	7	-	-	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	-	13	-	4	-	-	ns
		V <sub>CC</sub> = 2.7 V to 3.6 V	-	10	-	3	-	-	ns
		V <sub>CC</sub> = 3.6 V to 4.3 V	-	10	-	2	-	-	ns

[1] Typical values are measured at T<sub>amb</sub> = 25 °C and V<sub>CC</sub> = 1.5 V, 1.8 V, 2.5 V, 3.3 V and 4.3 V respectively.

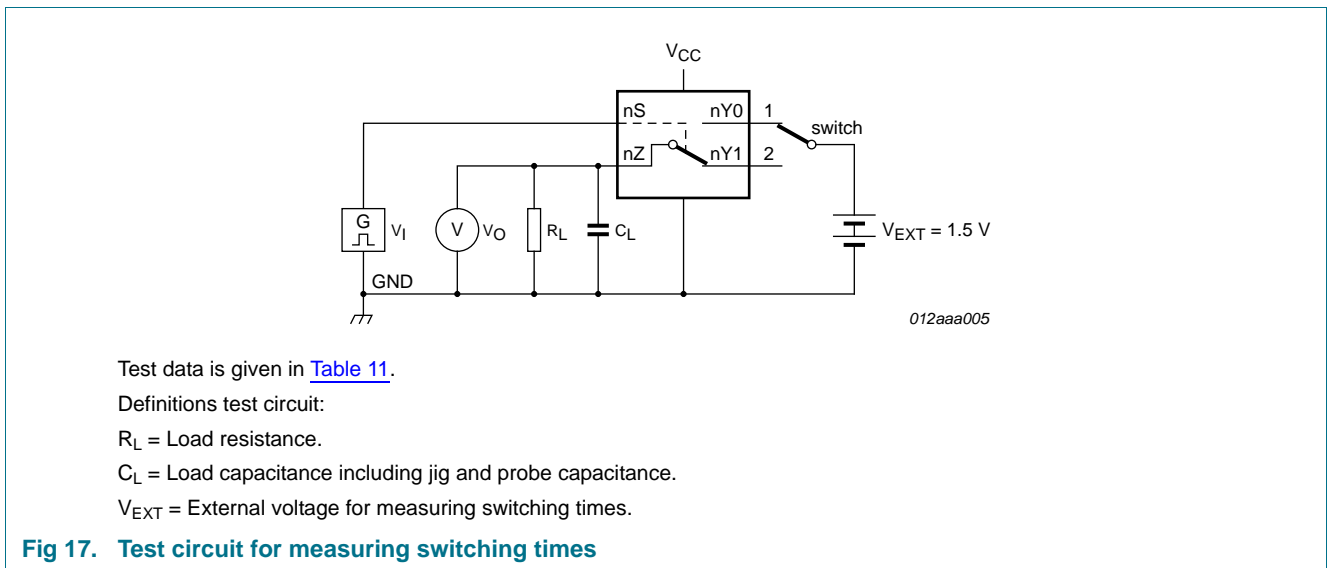
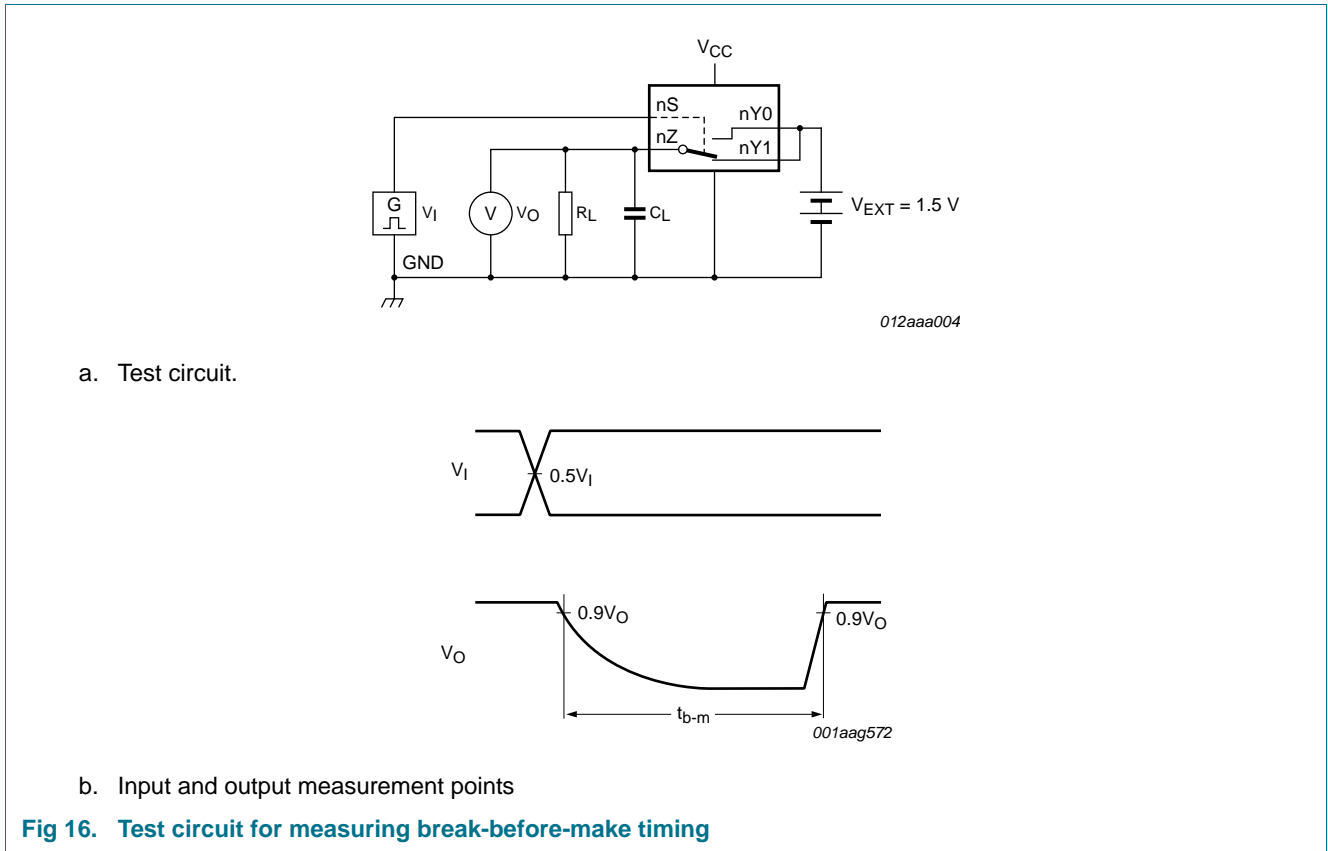
[2] Break-before-make guaranteed by design.

### 12.1 Waveform and test circuits



**Table 10. Measurement points**

Supply voltage	Input	Output
V <sub>CC</sub>	V <sub>M</sub>	V <sub>X</sub>
1.4 V to 4.3 V	0.5V <sub>CC</sub>	0.9V <sub>OH</sub>



**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	$V_{CC}$	$\leq 2.5$ ns	35 pF	50 $\Omega$

## 12.2 Additional dynamic characteristics

**Table 12. Additional dynamic characteristics**

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

Symbol	Parameter	Conditions	T <sub>amb</sub> = 25 °C			Unit
			Min	Typ	Max	
THD	total harmonic distortion	$f_i = 20 \text{ Hz to } 20 \text{ kHz}; R_L = 32 \text{ } \Omega$ ; see <a href="#">Figure 18</a> <sup>[1]</sup>				
		$V_{CC} = 1.4 \text{ V}; V_I = 1 \text{ V (p-p)}$	-	0.15	-	%
		$V_{CC} = 1.65 \text{ V}; V_I = 1.2 \text{ V (p-p)}$	-	0.10	-	%
		$V_{CC} = 2.3 \text{ V}; V_I = 1.5 \text{ V (p-p)}$	-	0.02	-	%
		$V_{CC} = 2.7 \text{ V}; V_I = 2 \text{ V (p-p)}$	-	0.02	-	%
		$V_{CC} = 4.3 \text{ V}; V_I = 2 \text{ V (p-p)}$	-	0.02	-	%
		$V_{CC} = 3.0 \text{ V}; V_I = 1 \text{ V (p-p)}; R_L = 600 \text{ } \Omega$	-	0.01	-	%
$f_{(-3\text{dB})}$	-3 dB frequency response	$R_L = 50 \text{ } \Omega$ ; see <a href="#">Figure 19</a> <sup>[1]</sup>				
		port nYn; $V_{CC} = 1.4 \text{ V to } 4.3 \text{ V}$	-	60	-	MHz
$\alpha_{\text{iso}}$	isolation (OFF-state)	$f_i = 100 \text{ kHz}; R_L = 50 \text{ } \Omega$ ; see <a href="#">Figure 20</a> <sup>[1]</sup>				
		$V_{CC} = 1.4 \text{ V to } 4.3 \text{ V}$	-	-90	-	dB
$V_{\text{ct}}$	crosstalk voltage	between digital inputs and switch; $f_i = 1 \text{ MHz}; C_L = 50 \text{ pF}; R_L = 50 \text{ } \Omega$ ; see <a href="#">Figure 21</a>				
		$V_{CC} = 1.4 \text{ V to } 3.6 \text{ V}$	-	0.21	-	V
		$V_{CC} = 3.6 \text{ V to } 4.3 \text{ V}$	-	0.30	-	V
Xtalk	crosstalk	between switches; <sup>[1]</sup> $f_i = 100 \text{ kHz}; R_L = 50 \text{ } \Omega$ ; see <a href="#">Figure 22</a>				
		$V_{CC} = 1.4 \text{ V to } 4.3 \text{ V}$	-	-90	-	dB
$Q_{\text{inj}}$	charge injection	$f_i = 1 \text{ MHz}; C_L = 0.1 \text{ nF}; R_L = 1 \text{ M}\Omega; V_{\text{gen}} = 0 \text{ V}; R_{\text{gen}} = 0 \text{ } \Omega$ ; see <a href="#">Figure 23</a>				
		$V_{CC} = 1.5 \text{ V}$	-	4	-	pC
		$V_{CC} = 1.8 \text{ V}$	-	6	-	pC
		$V_{CC} = 2.5 \text{ V}$	-	16	-	pC
		$V_{CC} = 3.3 \text{ V}$	-	24	-	pC
		$V_{CC} = 4.3 \text{ V}$	-	37	-	pC

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

12.3 Test circuits

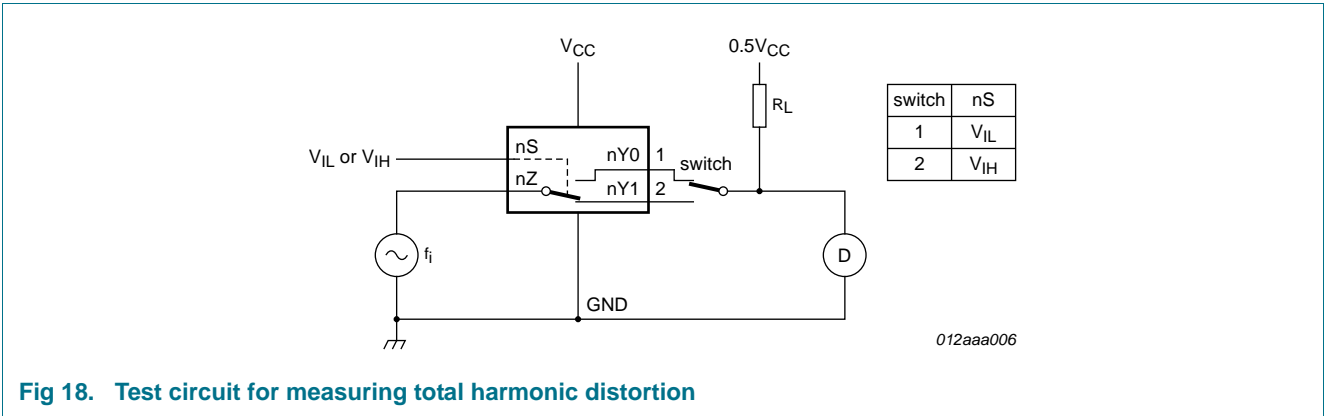


Fig 18. Test circuit for measuring total harmonic distortion

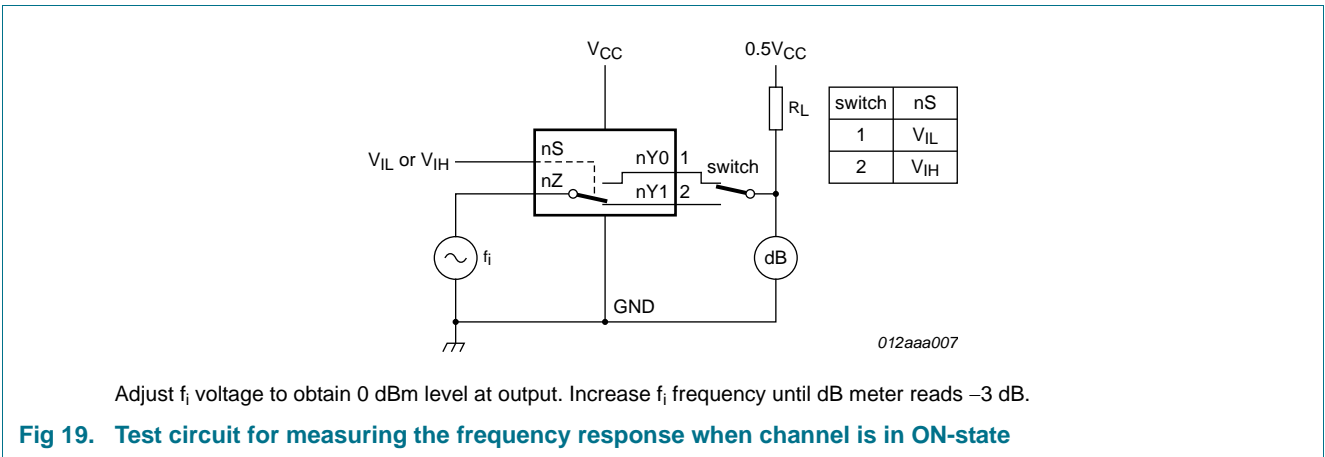


Fig 19. Test circuit for measuring the frequency response when channel is in ON-state

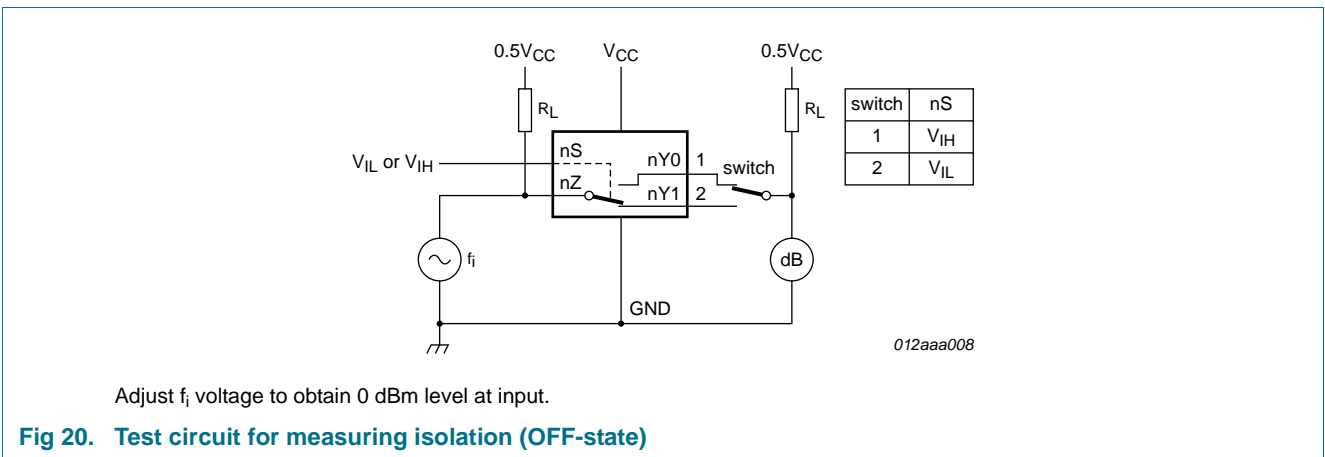
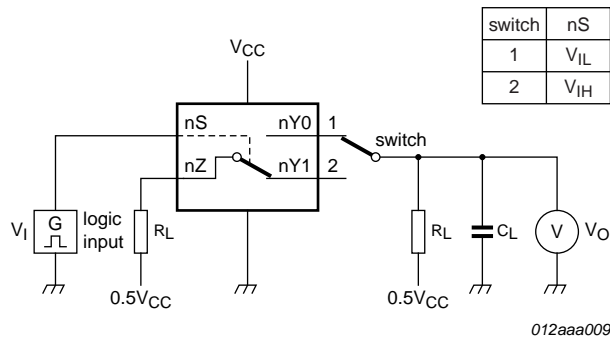
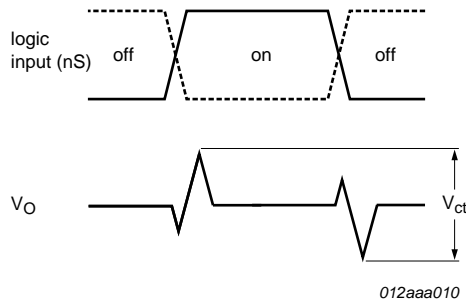


Fig 20. Test circuit for measuring isolation (OFF-state)

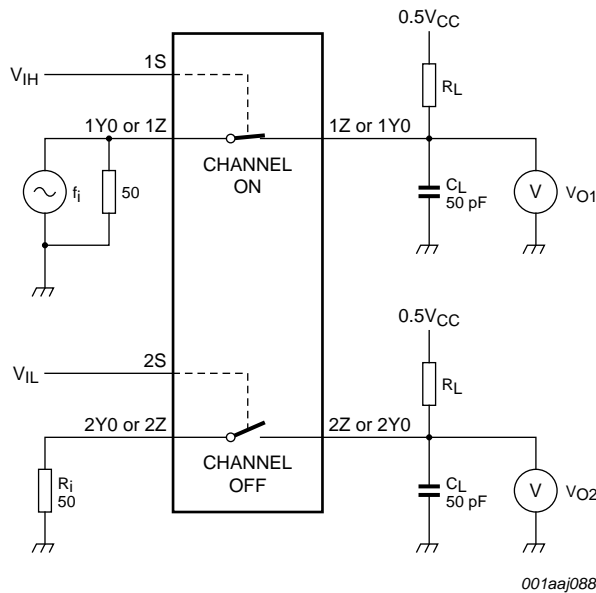


a. Test circuit



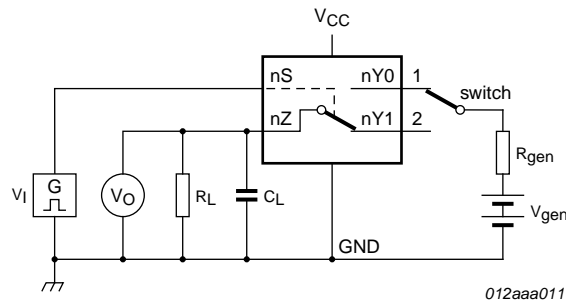
b. Input and output pulse definitions

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

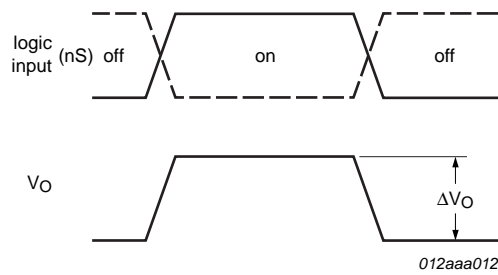


$$20 \log_{10} (V_{O2} / V_{O1}) \text{ or } 20 \log_{10} (V_{O1} / V_{O2}).$$

**Fig 22. Test circuit for measuring crosstalk between switches**



a. Test circuit.



b. Input and output pulse definitions

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

$\Delta V_O$  = output voltage variation.

$R_{gen}$  = generator resistance.

$V_{gen}$  = generator voltage.

**Fig 23. Test circuit for measuring charge injection**



### 13. Package outline

XQFN10U: plastic extremely thin quad flat package; no leads; 10 terminals;  
UTLP based; body 2 x 1.55 x 0.5 mm

SOT1049-2

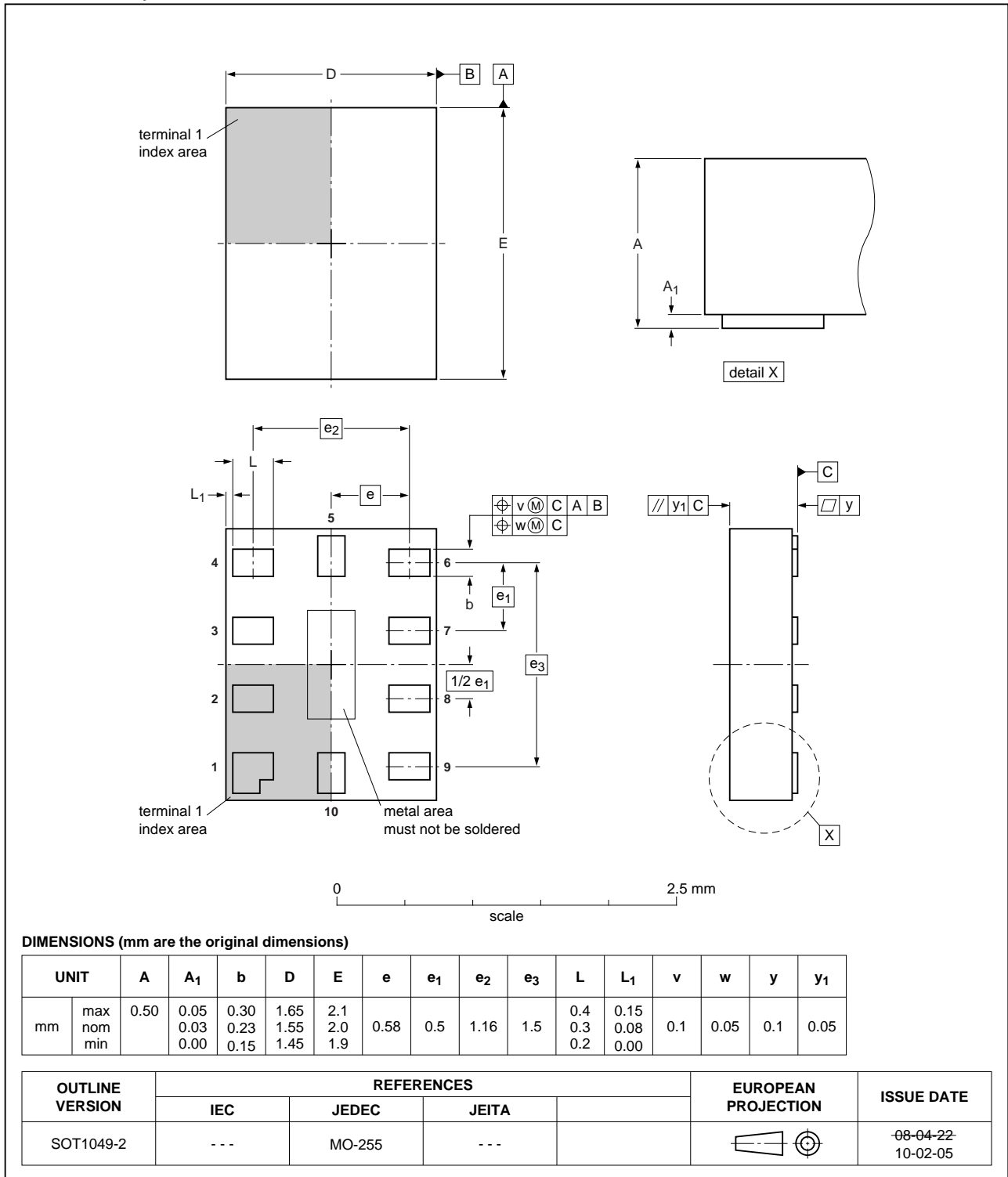


Fig 24. Package outline SOT1049-2 (XQFN10U)

XQFN10: plastic, extremely thin quad flat package; no leads; 10 terminals; body 1.40 x 1.80 x 0.50 mm

SOT1160-1

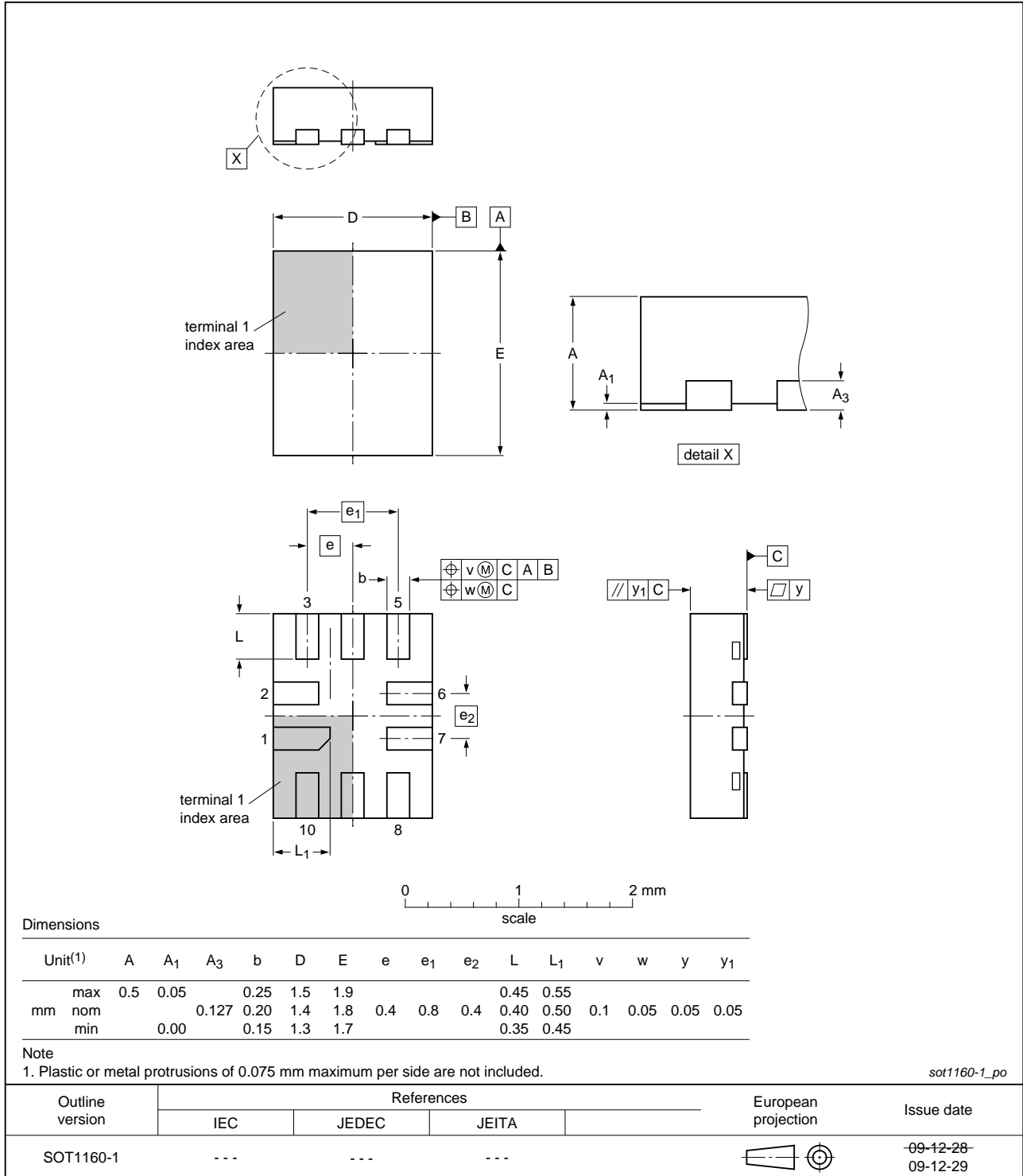


Fig 25. Package outline SOT1160-1 (XQFN10)

## 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
TTL	Transistor-Transistor Logic

## 15. Revision history

Table 14. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes
NX3L2267 v.2	20100713	Product data sheet	-	NX3L2267_1
Modifications:	• Added type number NX3L2267GU (XQFN10 / SOT1160-1 package).			
NX3L2267_1	20091109	Product data sheet	-	-

## 16. Legal information

### 16.1 Data sheet status

Document status <sup>[1][2]</sup>	Product status <sup>[3]</sup>	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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