NX3L2467

Dual low-ohmic double-pole double-throw analog switch

Rev. 3 — 29 December 2010

Product data sheet

1. General description

The NX3L2467 is a dual low-ohmic double-pole double-throw analog switch suitable for use as an analog or digital multiplexer/demultiplexer. It consists of four switches, each with two independent input/outputs (nY0 and nY1) and a common input/output (nZ). The two digital inputs (1S and 2S) are used to select the switch position. 1S is used in selecting the independent inputs/outputs switched to 1Z and 2Z, and 2S is used in selecting the independent inputs/outputs switched to 3Z and 4Z. 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 $I_{\rm CC}$. This makes it possible for the NX3L467 to switch 4.3 V signals with a 1.8 V digital controller, eliminating the need for logic level translation. The NX3L2467 allows signals with amplitude up to $V_{\rm CC}$ to be transmitted from nZ to nY0 or nY1; or from nY0 or nY1 to nZ. Its low ON resistance (0.5 Ω) and flatness (0.13 Ω) 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):
 - 1.7 Ω (typical) at $V_{CC} = 1.4 \text{ V}$
 - 1.0 Ω (typical) at $V_{CC} = 1.65 \text{ V}$
 - 0.6 Ω (typical) at $V_{CC} = 2.3 \text{ V}$
 - 0.5 Ω (typical) at $V_{CC} = 2.7 \text{ V}$
 - 0.5 Ω (typical) at $V_{CC} = 4.3 \text{ V}$
- Break-before-make switching
- High noise immunity
- ESD protection:
 - HBM JESD22-A114F Class 3A exceeds 4000 V
 - ♦ MM JESD22-A115-A exceeds 200 V
 - CDM AEC-Q100-011 revision B exceeds 1000 V
 - ◆ IEC61000-4-2 contact discharge exceeds 6000 V for switch ports
- 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



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3. Applications

- Cell phone
- PDA
- Portable media player

4. Ordering information

Table 1. Ordering information

Type number	Package			
	Temperature range	Name	Description	Version
NX3L2467PW	–40 °C to +125 °C	TSSOP16	plastic thin shrink small outline package; 16 leads; body width 4.4 mm	SOT403-1
NX3L2467HR	–40 °C to +125 °C	HXQFN16U	plastic thermal enhanced extremely thin quad flat package; no leads; 16 terminals; UTLP based; body $3\times3\times0.5~\text{mm}$	SOT1039-1
NX3L2467GU	–40 °C to +125 °C	XQFN16	plastic, extremely thin quad flat package; no leads; 16 terminals; body $1.80 \times 2.60 \times 0.50$ mm	SOT1161-1

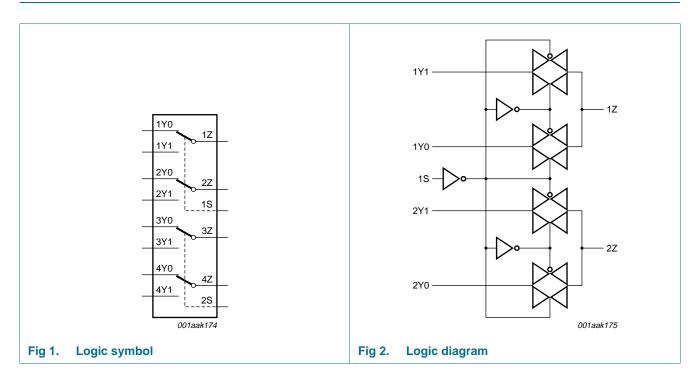
5. Marking

Table 2. Marking codes

Type number	Marking code
NX3L2467PW	X3L2467
NX3L2467HR	D67
NX3L2467GU	D67

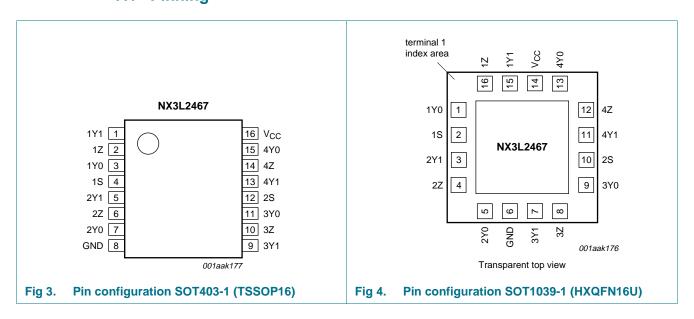
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6. Functional diagram

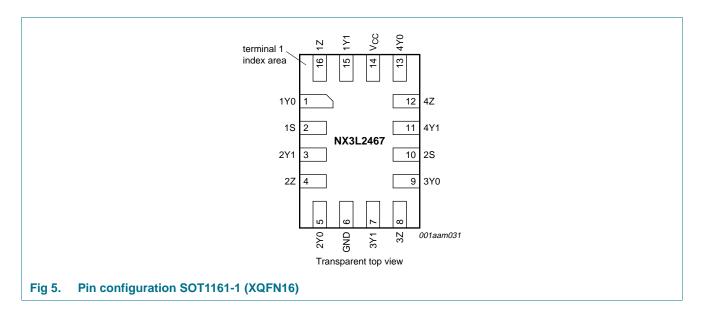


7. Pinning information

7.1 Pinning



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7.2 Pin description

Table 3. Pin description

Symbol	Pin		Description
	SOT1039-1 and SOT1161-1	SOT403-1	
1Y0, 2Y0, 3Y0, 4Y0	1, 5, 9, 13	3, 7, 11, 15	independent input or output
1S, 2S	2, 10	4, 12	select input
1Y1, 2Y1, 3Y1, 4Y1	15, 3, 7, 11	1, 5, 9, 13	independent input or output
1Z, 2Z, 3Z, 4Z	16, 4, 8, 12	2, 6, 10, 14	common output or input
GND	6	8	ground (0 V)
V _{CC}	14	16	supply voltage

8. Functional description

Table 4. Function table[1]

Input nS	Channel on
L	nY0
Н	nY1

^[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
VI	input voltage	select input nS	<u>[1]</u> –0.5	+4.6	V
V_{SW}	switch voltage		<u>[2]</u> –0.5	V _{CC} + 0	.5 V

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 Table 5.
 Limiting values ...continued

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

Parameter	Conditions	Min	Max	Unit
input clamping current	$V_1 < -0.5 \text{ V}$	-50	-	mA
switch clamping current	$V_I < -0.5 \text{ V or } V_I > V_{CC} + 0.5 \text{ V}$	-	±50	mA
switch current	$V_{SW} > -0.5 \text{ V or } V_{SW} < V_{CC} + 0.5 \text{ V};$ 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
storage temperature		-65	+150	°C
total power dissipation	$T_{amb} = -40 ^{\circ}\text{C} \text{ to } +125 ^{\circ}\text{C}$			
	TSSOP16	<u>[3]</u> _	500	mW
	HXQFN16U	<u>[4]</u> _	250	mW
	XQFN16	<u>[5]</u> _	250	mW
	input clamping current switch clamping current switch current storage temperature	$ \begin{array}{lll} \text{input clamping current} & V_{I} < -0.5 \text{ V} \\ \text{switch clamping current} & V_{I} < -0.5 \text{ V} \text{ or } V_{I} > V_{CC} + 0.5 \text{ V} \\ \text{switch current} & V_{SW} > -0.5 \text{ V} \text{ or } V_{SW} < V_{CC} + 0.5 \text{ V}; \\ \text{source or sink current} \\ \hline V_{SW} > -0.5 \text{ V} \text{ or } V_{SW} < V_{CC} + 0.5 \text{ V}; \\ \text{pulsed at 1 ms duration, < 10 \% duty cycle;} \\ \text{peak current} \\ \\ \text{storage temperature} \\ \\ \text{total power dissipation} & T_{amb} = -40 ^{\circ}\text{C to } +125 ^{\circ}\text{C} \\ \hline TSSOP16 \\ \hline \text{HXQFN16U} \\ \end{array} $	$ \begin{array}{llllllllllllllllllllllllllllllllllll$	$ \begin{array}{llllllllllllllllllllllllllllllllllll$

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

10. Recommended operating conditions

Table 6. Recommended operating conditions

Symbol	Parameter	Conditions	Min	Max	Unit
V_{CC}	supply voltage		1.4	4.3	V
VI	input voltage	select input nS	0	4.3	V
V_{SW}	switch voltage		<u>[1]</u> 0	V_{CC}	V
T _{amb}	ambient temperature		-40	+125	°C
Δt/ΔV	input transition rise and fall rate	$V_{CC} = 1.4 \text{ V to } 4.3 \text{ V}$	[2] _	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] 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 TSSOP16 package: above 60 $^{\circ}$ C the value of P_{tot} derates linearly with 5.5 mW/K above.

^[4] For HXQFN16U package: above 135 °C the value of Ptot derates linearly with 16.9 mW/K.

^[5] For XQFN16 package: above 133 °C the value of Ptot derates linearly with 14.5 mW/K.

^[2] Applies to control signal levels.

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11. Static characteristics

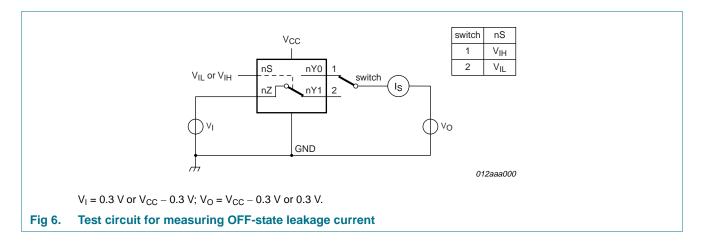
Table 7. Static characteristics

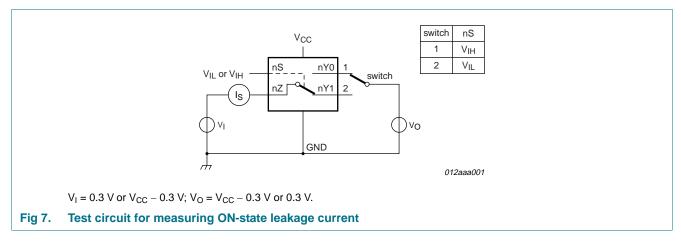
At recommended operating conditions; voltages are referenced to GND (ground 0 V).

Symbol	Parameter	Conditions	Ta	_{mb} = 25	°C	T _{amb} =	–40 °C to	+125 °C	Unit
			Min	Тур	Max	Min	Max (85 °C)	Max (125 °C)	
V _{IH}	HIGH-level	V _{CC} = 1.4 V to 1.6 V	0.9	-	-	0.9	-	-	V
	input voltage	V _{CC} = 1.65 V to 1.95 V	0.9	-	-	0.9	-	-	V
		V _{CC} = 2.3 V to 2.7 V	1.1	-	-	1.1	-	-	V
		V _{CC} = 2.7 V to 3.6 V	1.3	-	-	1.3	-	-	V V V V V V μA
		V _{CC} = 3.6 V to 4.3 V	1.4	-	-	1.4	-	-	V
V_{IL}	LOW-level	V _{CC} = 1.4 V to 1.6 V	-	-	0.3	-	0.3	0.3	V
	input voltage	V _{CC} = 1.65 V to 1.95 V	-	-	0.4	-	0.4	0.3	V
		V _{CC} = 2.3 V to 2.7 V	-	-	0.4	-	0.4	.4 0.4 V	V
		V _{CC} = 2.7 V to 3.6 V	-	-	0.5	-	0.5	0.5	V
		V _{CC} = 3.6 V to 4.3 V	-	-	0.6	-	0.6	0.6	V
I _I	input leakage current	select input nS; V _I = GND to 4.3 V; V _{CC} = 1.4 V to 4.3 V	-	-	-	-	±0.5	±1	μΑ
I _{S(OFF)}	OFF-state leakage	nY0 and nY1 port; see <u>Figure 6</u>							
	current	$V_{CC} = 1.4 \text{ V to } 3.6 \text{ V}$	-	-	±5	-	±50	±500	nΑ
		$V_{CC} = 3.6 \text{ V to } 4.3 \text{ V}$	-	-	±10	-	±50	±500	nΑ
I _{S(ON)}	ON-state leakage current	nZ port; $V_{CC} = 1.4 \text{ V to } 3.6 \text{ V};$ see Figure 7							
		V _{CC} = 1.4 V to 3.6 V	-	-	±5	-	±50	±500	nΑ
		V _{CC} = 3.6 V to 4.3 V	-	-	±10	-	±50	±500	nΑ
I _{CC}	supply current	$V_I = V_{CC}$ or GND; $V_{SW} = GND$ or V_{CC}							
		$V_{CC} = 3.6 \text{ V}$	-	-	100	-	500	5000	nΑ
		V _{CC} = 4.3 V	-	-	150	-	800	6000	nΑ
ΔI_{CC}	additional	$V_{SW} = GND \text{ or } V_{CC}$							
	supply current	$V_{I} = 2.6 \text{ V}; V_{CC} = 4.3 \text{ V}$	-	2.0	4.0	-	7	7	μΑ
		$V_{I} = 2.6 \text{ V}; V_{CC} = 3.6 \text{ V}$	-	0.35	0.7	-	1	1	μΑ
		$V_I = 1.8 \text{ V}; V_{CC} = 4.3 \text{ V}$	-	7.0	10.0	-	15	15	μΑ
		$V_I = 1.8 \text{ V}; V_{CC} = 3.6 \text{ V}$	-	2.5	4.0	-	5	5	μΑ
		$V_I = 1.8 \text{ V}; V_{CC} = 2.5 \text{ V}$	-	50	200	-	300	500	nA
Cı	input capacitance		-	1.0	-	-	-	-	pF
C _{S(OFF)}	OFF-state capacitance		-	35	-	-	-	-	pF
C _{S(ON)}	ON-state capacitance		-	130	-	-	-	-	pF

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11.1 Test circuits





11.2 ON resistance

Table 8. ON resistance^[1]

At recommended operating conditions; voltages are referenced to GND (ground = 0 V); for graphs see Figure 9 to Figure 15.

Symbol	Parameter	Conditions	T _{amb} =	-40 °C to	+85 °C	$T_{amb} = -40$ °	Unit	
			Min	Typ[2]	Max	Min	Max	
R _{ON(peak)} ON resistance (peak)	$V_I = GND \text{ to } V_{CC};$ $I_{SW} = 100 \text{ mA}; \text{ see } \underline{\text{Figure 8}}$							
		V _{CC} = 1.4 V	-	1.7	3.7	-	4.1	Ω
		$V_{CC} = 1.65 \text{ V}$	-	1.0	1.6	-	1.7	Ω
		$V_{CC} = 2.3 \text{ V}$	-	0.6	0.8	-	0.9	Ω
		$V_{CC} = 2.7 \text{ V}$	-	0.5	0.75	-	0.9	Ω
		$V_{CC} = 4.3 \text{ V}$	-	0.5	0.75	-	0.9	Ω

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Table 8. ON resistance At recommended operating conditions; voltages are referenced to GND (ground = 0 V); for graphs see Figure 9 to Figure 15.

Symbol	Parameter	Conditions		T _{amb} =	–40 °C to	+85 °C	T _{amb} = -40 °	C to +125 °C	$egin{array}{c c} \Omega & & & & & & \\ \hline \Omega & & & & & & \\ \Omega & & & & & \\ \Omega & & & &$
				Min	Typ[2]	Max	Min	Max	
ΔR_{ON}	ON resistance mismatch	$V_I = GND \text{ to } V_{CC};$ $I_{SW} = 100 \text{ mA}$	[3]	•					
	between channels	$V_{CC} = 1.4 \text{ V}; V_{SW} = 0.4 \text{ V}$		-	0.18	0.3	-	0.3	Ω
	Chamileis	$V_{CC} = 1.65 \text{ V}; V_{SW} = 0.5 \text{ V}$		-	0.18	0.2	-	0.3	Ω
		$V_{CC} = 2.3 \text{ V}; V_{SW} = 0.7 \text{ V}$		-	0.07	0.1	-	0.13	Ω
		$V_{CC} = 2.7 \text{ V}; V_{SW} = 0.8 \text{ V}$		-	0.07	0.1	-	0.13	Ω
		$V_{CC} = 4.3 \text{ V}; V_{SW} = 0.8 \text{ V}$		-	0.07	0.1	-	0.13	Ω
R _{ON(flat)}	ON resistance (flatness)	$V_I = GND \text{ to } V_{CC};$ $I_{SW} = 100 \text{ mA}$	[4]						
		$V_{CC} = 1.4 \text{ V}$		-	1.0	3.3	-	3.6	Ω
		$V_{CC} = 1.65 \text{ V}$		-	0.5	1.2	-	1.3	Ω Ω Ω Ω Ω
		$V_{CC} = 2.3 \text{ V}$		-	0.15	0.3	-	0.35	Ω
		$V_{CC} = 2.7 \text{ V}$		-	0.13	0.3	-	0.35	Ω
		$V_{CC} = 4.3 \text{ V}$		-	0.2	0.4	-	0.45	Ω

^[1] For NX3L2467PW (TSSOP16 package), all ON resistance values are up to 0.05 Ω higher.

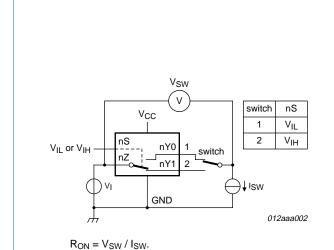
^[2] Typical values are measured at T_{amb} = 25 °C.

^[3] Measured at identical V_{CC}, temperature and input voltage.

^[4] Flatness is defined as the difference between the maximum and minimum value of ON resistance measured at identical V_{CC} and temperature.

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11.3 ON resistance test circuit and graphs



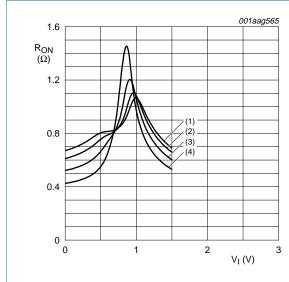
1.6 001aag564
RON (Ω)
1.2 0.8 0.4 (2) (3) (4) (5) (6) (6) V_I (V_I (V) 5

- (1) $V_{CC} = 1.5 \text{ V}.$
- (2) $V_{CC} = 1.8 \text{ V}.$
- (3) $V_{CC} = 2.5 \text{ V}.$
- (4) $V_{CC} = 2.7 \text{ V}.$
- (5) $V_{CC} = 3.3 \text{ V}.$
- (6) $V_{CC} = 4.3 \text{ V}$. Measured at $T_{amb} = 25 \,^{\circ}\text{C}$.

Fig 8. Test circuit for measuring ON resistance Fig 9. Type

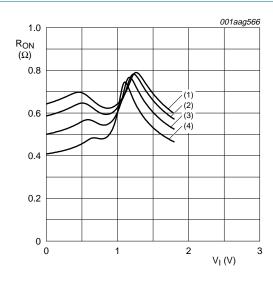
Fig 9. Typical ON resistance as a function of input voltage

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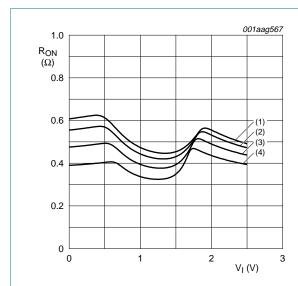
- (1) $T_{amb} = 125 \, ^{\circ}C$.
- (2) $T_{amb} = 85 \, ^{\circ}C$.
- (3) $T_{amb} = 25 \, ^{\circ}C$.
- (4) $T_{amb} = -40 \, ^{\circ}C$.

Fig 10. ON resistance as a function of input voltage; $V_{CC} = 1.5 \text{ V}$



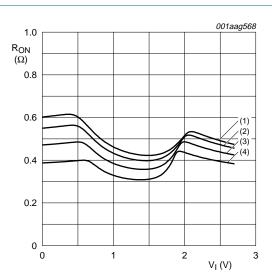
- (1) $T_{amb} = 125 \, ^{\circ}C$.
- (2) $T_{amb} = 85 \, ^{\circ}C$.
- (3) $T_{amb} = 25 \, ^{\circ}C$.
- (4) $T_{amb} = -40 \, ^{\circ}C$.

Fig 11. ON resistance as a function of input voltage; $V_{CC} = 1.8 \text{ V}$



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

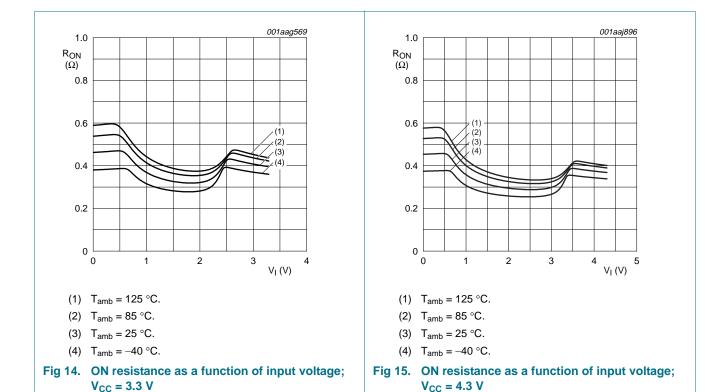
Fig 12. ON resistance as a function of input voltage; $V_{CC} = 2.5 \text{ V}$



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

Fig 13. ON resistance as a function of input voltage; $V_{CC} = 2.7 \text{ V}$

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12. Dynamic characteristics

Table 9. Dynamic characteristics

At recommended operating conditions; voltages are referenced to GND (ground = 0 V); for load circuit see Figure 18.

Symbol	Parameter	Conditions	Ta	_{mb} = 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	nS to nZ or nYn; see Figure 16							
		$V_{CC} = 1.4 \text{ V to } 1.6 \text{ V}$	-	41	90	-	120	120	ns
		V_{CC} = 1.65 V to 1.95 V	-	30	70	-	80	90	ns
		$V_{CC} = 2.3 \text{ V to } 2.7 \text{ V}$	-	20	45	-	50	55	ns
		$V_{CC} = 2.7 \text{ V to } 3.6 \text{ V}$	-	19	40	-	45	50	ns
		$V_{CC} = 3.6 \text{ V to } 4.3 \text{ V}$	-	19	40	-	45	50	ns
t _{dis}	disable time	nS to nZ or nYn; see <u>Figure 16</u>							
		$V_{CC} = 1.4 \text{ V to } 1.6 \text{ V}$	-	24	70	-	80	90	ns
		V_{CC} = 1.65 V to 1.95 V	-	15	55	-	60	65	ns
		$V_{CC} = 2.3 \text{ V to } 2.7 \text{ V}$	-	9	25	-	30	35	ns
		$V_{CC} = 2.7 \text{ V to } 3.6 \text{ V}$	-	8	20	-	25	30	ns
		$V_{CC} = 3.6 \text{ V to } 4.3 \text{ V}$	-	8	20	-	25	30	ns

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 Table 9.
 Dynamic characteristics ...continued

At recommended operating conditions; voltages are referenced to GND (ground = 0 V); for load circuit see Figure 18.

Symbol	Parameter	Conditions	Ta	_{mb} = 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	see Figure 17 [2]							
	time	$V_{CC} = 1.4 \text{ V to } 1.6 \text{ V}$	-	20	-	9	-	-	ns
		$V_{CC} = 1.65 \text{ V to } 1.95 \text{ V}$	-	17	-	7	-	-	ns
		$V_{CC} = 2.3 \text{ V to } 2.7 \text{ V}$	-	13	-	4	-	-	ns
		$V_{CC} = 2.7 \text{ V to } 3.6 \text{ V}$	-	11	-	3	-	-	ns
		$V_{CC} = 3.6 \text{ V to } 4.3 \text{ V}$	-	11	-	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.

12.1 Waveform and test circuits

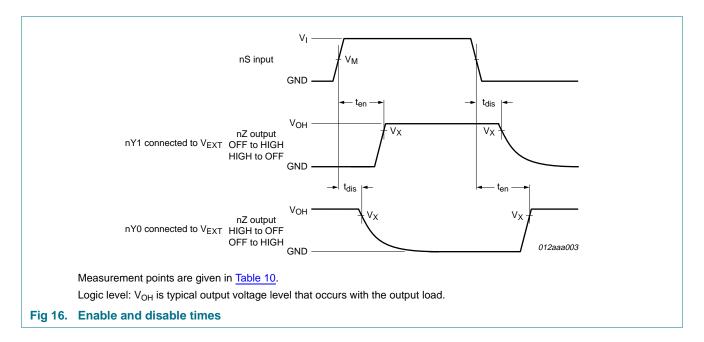
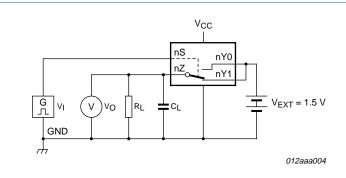


Table 10. Measurement points

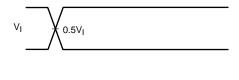
Supply voltage	Input	Output
V _{CC}	V _M	V _X
1.4 V to 4.3 V	0.5V _{CC}	0.9V _{OH}

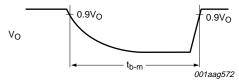
^[2] Break-before-make guaranteed by design.

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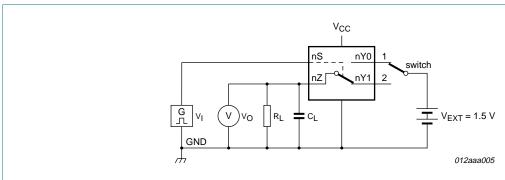
a. Test circuit





b. Input and output measurement points

Fig 17. 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 18. Test circuit for measuring switching times

Table 11. Test data

Supply voltage	Input		Load		
V _{CC}	VI	t _r , t _f	CL	R _L	
1.4 V to 4.3 V	V_{CC}	≤ 2.5 ns	35 pF	50 Ω	

NX3L2467

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12.2 Additional dynamic characteristics

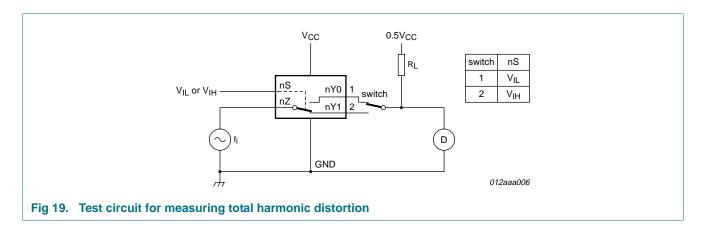
Table 12. Additional dynamic characteristics

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

Symbol	Parameter	Conditions	Min	Тур	Max	Unit
THD	total harmonic	f_i = 20 Hz to 20 kHz; R_L = 32 Ω ; see Figure 19	<u>[1]</u>			
	distortion	V _{CC} = 1.4 V; V _I = 1 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	-	%
		$V_{CC} = 2.7 \text{ V}; V_1 = 2 \text{ V (p-p)}$	-	0.02	-	%
		$V_{CC} = 4.3 \text{ V}; V_{I} = 2 \text{ V (p-p)}$	-	0.02	-	%
f _(-3dB)	-3 dB frequency	$R_L = 50 \Omega$; see Figure 20	<u>[1]</u>			
	response	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 21	<u>[1]</u>			
		V _{CC} = 1.4 V to 4.3 V	-	-90	-	dB
V _{ct}	crosstalk voltage	between digital inputs and switch; $f_i = 1 \text{ MHz}$; $C_L = 50 \text{ pF}$; $R_L = 50 \Omega$; see Figure 22				
		V _{CC} = 1.4 V to 3.6 V	-	0.2	-	V
		$V_{CC} = 3.6 \text{ V to } 4.3 \text{ V}$	-	0.3	-	V
Xtalk crosstalk		between switches; $f_i = 100 \text{ kHz}$; $R_L = 50 \Omega$; see Figure 23	[1]			
		V _{CC} = 1.4 V to 4.3 V	-	-90	-	dB
Q _{inj} c	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 <u>Figure 24</u>				
		V _{CC} = 1.5 V	-	3	-	рС
		V _{CC} = 1.8 V	-	4	-	рC
		V _{CC} = 2.5 V	-	6	-	рС
		V _{CC} = 3.3 V	-	9	-	рС
		V _{CC} = 4.3 V	-	15	-	рС

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

12.3 Test circuits



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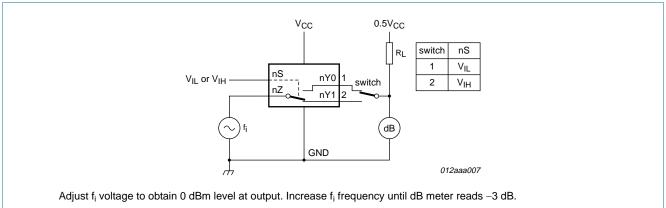


Fig 20. Test circuit for measuring the frequency response when channel is in ON-state

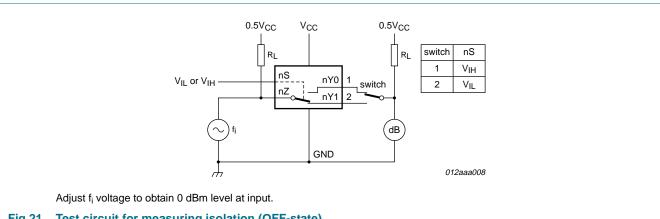
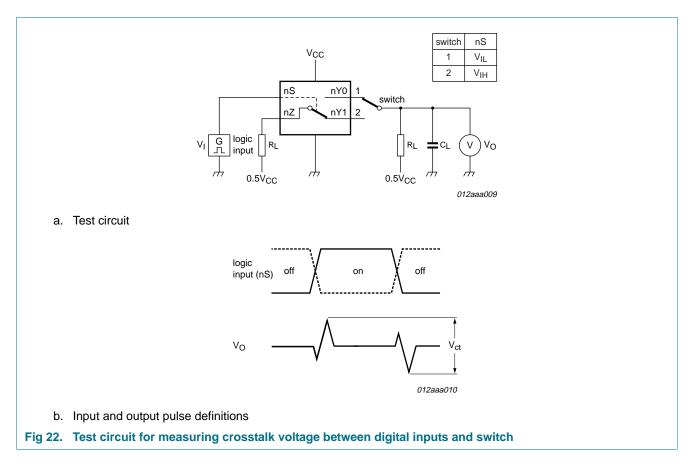
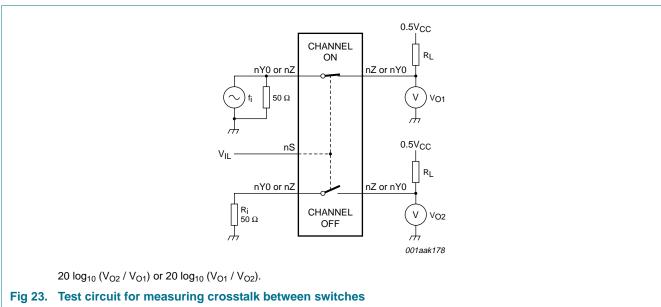


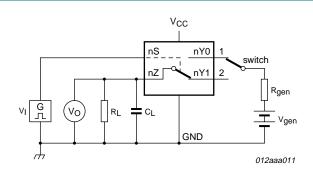
Fig 21. Test circuit for measuring isolation (OFF-state)

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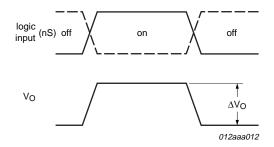




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a. Test circuit



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 24. Test circuit for measuring charge injection

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13. Package outline

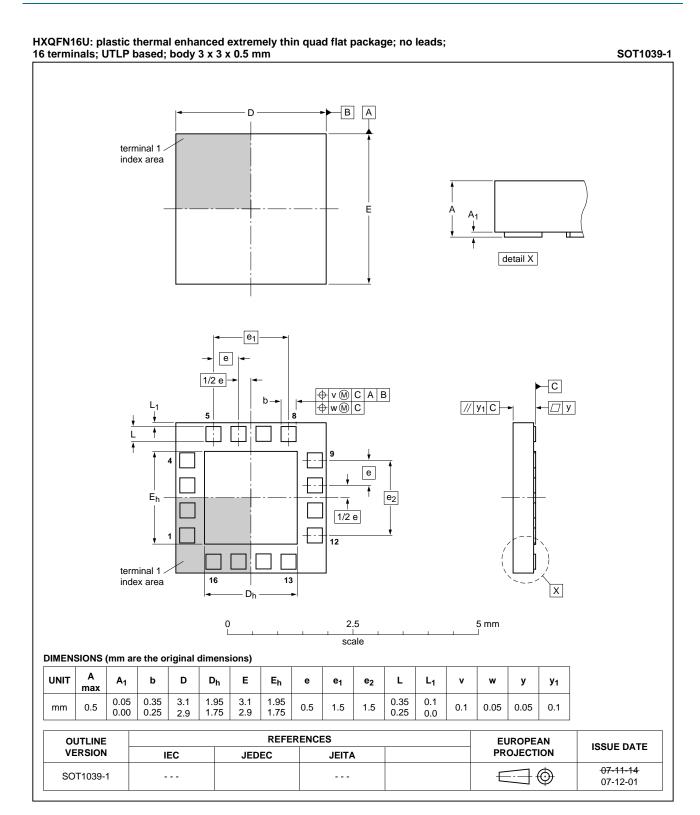


Fig 25. Package outline SOT1039-1 (HXQFN16U)

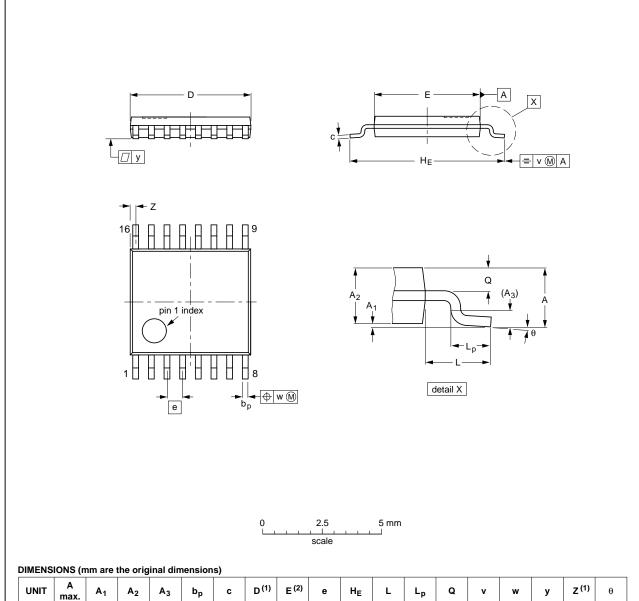
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TSSOP16: plastic thin shrink small outline package; 16 leads; body width 4.4 mm

SOT403-1



UNIT	A max.	A ₁	A ₂	A ₃	bp	С	D ⁽¹⁾	E (2)	е	HE	L	Lp	Q	v	w	у	Z ⁽¹⁾	θ
mm	1.1	0.15 0.05	0.95 0.80	0.25	0.30 0.19	0.2 0.1	5.1 4.9	4.5 4.3	0.65	6.6 6.2	1	0.75 0.50	0.4 0.3	0.2	0.13	0.1	0.40 0.06	8° 0°

Notes

- 1. Plastic or metal protrusions of 0.15 mm maximum per side are not included.
- 2. Plastic interlead protrusions of 0.25 mm maximum per side are not included.

OUTLINE		REFER	EUROPEAN	ISSUE DATE			
VERSION	IEC	JEDEC	JEITA		PROJECTION	1330E DATE	
SOT403-1		MO-153				99-12-27 03-02-18	
301403-1		IVIO-133				L	

Fig 26. Package outline SOT403-1 (TSSOP16)

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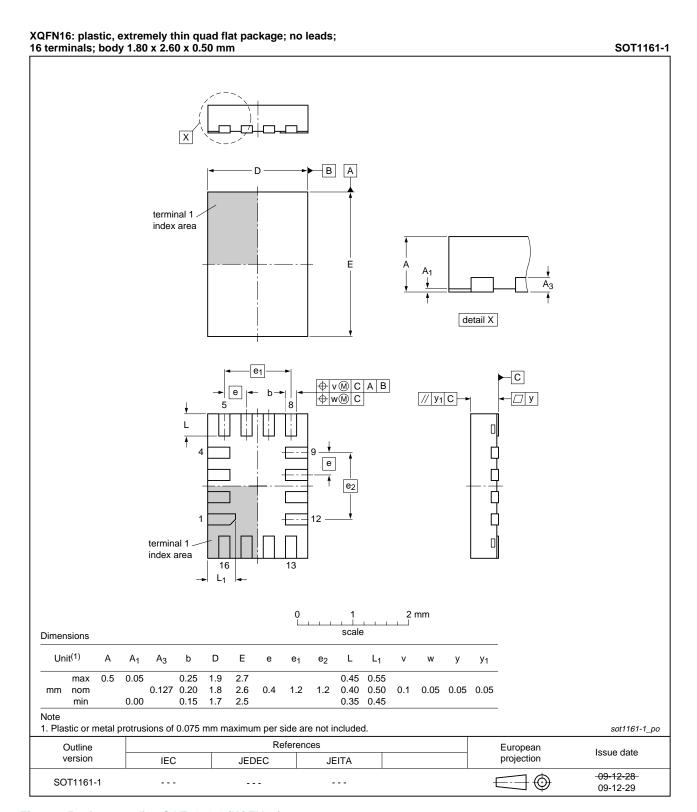


Fig 27. Package outline SOT1161-1 (XQFN16)

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14. Abbreviations

Table 13. Abbreviations

Acronym	Description
CDM	Charged Device Model
CMOS	Complementary Metal-Oxide Semiconductor
ESD	ElectroStatic Discharge
НВМ	Human Body Model
MM	Machine Model
PDA	Personal Digital Assistant

15. Revision history

Table 14. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes
NX3L2467 v.3	20101229	Product data sheet	-	NX3L2467 v.2
Modifications:	• Section 2: IE	C61000-4-2 added.		
NX3L2467 v.2	20100519	Product data sheet	-	NX3L2467 v.1
Modifications:	 Added type r 	number NX3L2467GU (XQFN	16 / SOT1161 package	e).
	 Figure 1 chair 	nged: pin numbers removed fi	rom logic symbol.	
NX3L2467 v.1	20090623	Product data sheet	-	-

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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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