Triple inverting Schmitt trigger

Rev. 3 — 16 September 2013

Product data sheet

1. General description

74AHC3G14-Q100 and 74AHCT3G14-Q100 are high-speed Si-gate CMOS devices. They provide three inverting buffers with Schmitt trigger action. These devices are capable of transforming slowly changing input signals into sharply defined, jitter-free output signals.

The AHC device has CMOS input switching levels and supply voltage range 2 V to 5.5 V.

The AHCT device has TTL input switching levels and supply voltage range 4.5 V to 5.5 V.

This product has been qualified to the Automotive Electronics Council (AEC) standard Q100 (Grade 1) and is suitable for use in automotive applications.

2. Features and benefits

- Automotive product qualification in accordance with AEC-Q100 (Grade 1)
 Specified from -40 °C to +85 °C and from -40 °C to +125 °C
- Symmetrical output impedance
- High noise immunity
- Low power dissipation
- Balanced propagation delays
- ESD protection:
 - MIL-STD-883, method 3015 exceeds 2000 V
 - HBM JESD22-A114F exceeds 2000 V
 - MM JESD22-A115-A exceeds 200 V (C = 200 pF, R = 0 Ω)
- Multiple package options

3. Applications

- Wave and pulse shaper for highly noisy environment
- Astable multivibrator
- Monostable multivibrator



Triple inverting Schmitt trigger

4. Ordering information

Type number	Package										
	Temperature range	Name	Description	Version							
74AHC3G14DP-Q100	–40 °C to +125 °C	TSSOP8	plastic thin shrink small outline package; 8 leads;	SOT505-2							
74AHCT3G14DP-Q100			body width 3 mm; lead length 0.5 mm								
74AHC3G14DC-Q100	–40 °C to +125 °C	VSSOP8	plastic very thin shrink small outline package; 8 leads; body width 2.3 mm	SOT765-1							
74AHCT3G14DC-Q100											
74AHC3G14GD-Q100	–40 °C to +125 °C	XSON8	plastic extremely thin small outline package; no	SOT996-2							
74AHCT3G14GD-Q100			leads; 8 terminals; body $3 \times 2 \times 0.5$ mm								

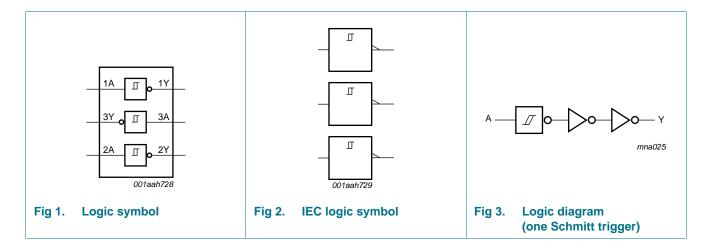
5. Marking

Table 4

Table 2. Marking codes	
Type number	Marking code ^[1]
74AHC3G14DP-Q100	A14
74AHCT3G14DP-Q100	C14
74AHC3G14DC-Q100	A14
74AHCT3G14DC-Q100	C14
74AHC3G14GD-Q100	A14
74AHCT3G14GD-Q100	C14

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

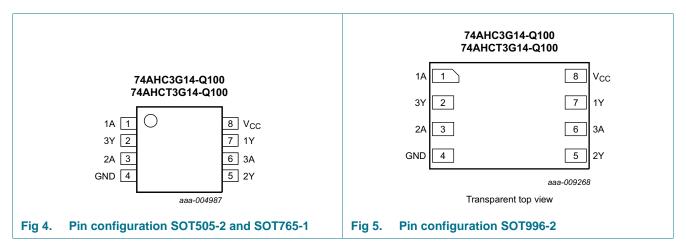
6. Functional diagram



Triple inverting Schmitt trigger

7. Pinning information

7.1 Pinning



7.2 Pin description

Table 3. P	Pin description	
Symbol	Pin	Description
1A, 2A, 3A	1, 3, 6	data input
GND	4	ground (0 V)
1Y, 2Y, 3Y	7, 5, 2	data output
V _{CC}	8	supply voltage

8. Functional description

Table 4.Function table [1]

Input nA	Output nY
L	н
Н	L

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

Triple inverting Schmitt trigger

9. Limiting values

Table 5. Limiting values

In accordance with the Absolute Maximum Rating System (IEC 60134).

Symbol	Parameter	Conditions	Min	Max	Unit
V _{CC}	supply voltage		-0.5	+7.0	V
VI	input voltage		-0.5	+7.0	V
I _{IK}	input clamping current	V _I < -0.5 V	-20	-	mA
I _{OK}	output clamping current	$V_{\rm O}$ < –0.5 V or $V_{\rm O}$ > $V_{\rm CC}$ + 0.5 V	<u>[1]</u> _	±20	mA
lo	output current	$-0.5 \text{ V} < \text{V}_{\text{O}} < \text{V}_{\text{CC}} + 0.5 \text{ V}$	-	±25	mA
I _{CC}	supply current		-	75	mA
I _{GND}	ground current		-75	-	mA
T _{stg}	storage temperature		-65	+150	°C
P _{tot}	total power dissipation	$T_{amb} = -40 \ ^{\circ}C$ to +125 $^{\circ}C$	[2] _	250	mW

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

[2] For TSSOP8 package: above 55 °C the value of P_{tot} derates linearly at 2.5 mW/K. For VSSOP8 package: above 110 °C the value of P_{tot} derates linearly at 8 mW/K. For XSON8 packages: above 118 °C the value of P_{tot} derates linearly with 7.8 mW/K.

10. Recommended operating conditions

Table 6. Recommended operating conditions

Voltages are referenced to GND (ground = 0 V).

Symbol	Parameter Conditions		74AF	IC3G14-0	Q100	74AHCT3G14-Q100			Unit
			Min	Тур	Max	Min	Тур	Max	
V _{CC}	supply voltage		2.0	5.0	5.5	4.5	5.0	5.5	V
VI	input voltage		0	-	5.5	0	-	5.5	V
Vo	output voltage		0	-	V _{CC}	0	-	V _{CC}	V
T _{amb}	ambient temperature		-40	+25	+125	-40	+25	+125	°C

Triple inverting Schmitt trigger

11. Static characteristics

Table 7. Static characteristics

Voltages are referenced to GND (ground = 0 V).

Symbol	Parameter	Conditions		25 °C		–40 °C	to +85 °C	–40 °C t	o +125 °C	Unit
			Min	Тур	Max	Min	Max	Min	Max	
74AHC3	G14-Q100	1	1							
V _{OH}	HIGH-level	$V_{I} = V_{T+} \text{ or } V_{T-}$								
	output voltage	I_{O} = -50 μ A; V_{CC} = 2.0 V	1.9	2.0	-	1.9	-	1.9	-	V
	$I_O = -50 \ \mu\text{A}; \ V_{CC} = 3.0 \ \text{V}$	2.9	3.0	-	2.9	-	2.9	-	V	
	$I_O = -50 \ \mu\text{A}; \ V_{CC} = 4.5 \ \text{V}$	4.4	4.5	-	4.4	-	4.4	-	V	
		$I_{O} = -4.0 \text{ mA}; V_{CC} = 3.0 \text{ V}$	2.58	-	-	2.48	-	2.40	-	V
		$I_0 = -8.0 \text{ mA}; V_{CC} = 4.5 \text{ V}$	3.94	-	-	3.8	-	3.70	-	V
V _{OL}	LOW-level	$V_{I} = V_{T+} \text{ or } V_{T-}$								
	output voltage	$I_0 = 50 \ \mu A; \ V_{CC} = 2.0 \ V$	-	0	0.1	-	0.1	-	0.1	V
		$I_0 = 50 \ \mu A; \ V_{CC} = 3.0 \ V$	-	0	0.1	-	0.1	-	0.1	V
		$I_0 = 50 \ \mu A; \ V_{CC} = 4.5 \ V$	-	0	0.1	-	0.1	-	0.1	V
		$I_0 = 4.0 \text{ mA}; V_{CC} = 3.0 \text{ V}$	-	-	0.36	-	0.44	-	0.55	V
		$I_{O} = 8.0 \text{ mA}; V_{CC} = 4.5 \text{ V}$	-	-	0.36	-	0.44	-	0.55	V
I	input leakage current	$V_1 = 5.5 V \text{ or GND};$ $V_{CC} = 0 V \text{ to } 5.5 V$	-	-	0.1	-	1.0	-	2.0	μA
I _{CC}	supply current		-	-	1.0	-	10	-	40	μA
Cı	input capacitance		-	1.5	10	-	10	-	10	pF
74AHCT	3G14-Q100									
V _{OH}	HIGH-level	$V_{I} = V_{T+} \text{ or } V_{T-}; V_{CC} = 4.5 \text{ V}$								
	output voltage	I _O = -50 μA	4.4	4.5	-	4.4	-	4.4	-	V
		I _O = -8.0 mA	3.94	-	-	3.8	-	3.70	-	V
V _{OL}	LOW-level	$V_{I} = V_{T+} \text{ or } V_{T-}; V_{CC} = 4.5 \text{ V}$								
	output voltage	I _O = 50 μA	-	0	0.1	-	0.1	-	0.1	V
		I _O = 8.0 mA	-	-	0.36	-	0.44	-	0.55	V
I	input leakage current	$V_1 = 5.5 V \text{ or GND};$ $V_{CC} = 0 V \text{ to } 5.5 V$	-	-	0.1	-	1.0	-	2.0	μA
I _{CC}	supply current		-	-	1.0	-	10	-	40	μA
Δl _{CC}	additional supply current	per input pin; $V_I = 3.4 V$; other inputs at V_{CC} or GND; $I_O = 0 A$; $V_{CC} = 5.5 V$	-	-	1.35	-	1.5	-	1.5	mA
CI	input capacitance		-	1.5	10	-	10	-	10	pF

Triple inverting Schmitt trigger

11.1 Transfer characteristics

Table 8.Transfer characteristics

At recommended operating conditions; voltages are referenced to GND (ground = 0 V). See Figure 8 and Figure 9.

Symbol	Parameter	Conditions		25 °C		–40 °C	to +85 °C	–40 °C to +125 °C		Unit
			Min	Тур	Max	Min	Max	Min	Max	
74AHC3	G14-Q100									
V _{T+} positive	positive-going	$V_{CC} = 3.0 V$	-	-	2.2	-	2.2	-	2.2	V
	threshold	$V_{CC} = 4.5 V$	-	-	3.15	-	3.15	-	3.15	V
	voltage	$V_{CC} = 5.5 V$	-	-	3.85	-	3.85	-	3.85	V
V _{T-}	negative-going	$V_{CC} = 3.0 V$	0.9	-	-	0.9	-	0.9	-	V
	threshold voltage	$V_{CC} = 4.5 V$	1.35	-	-	1.35	-	1.35	-	V
	voltage	$V_{CC} = 5.5 V$	1.65	-	-	1.65	-	1.65	-	V
V _H	hysteresis voltage	$V_{CC} = 3.0 V$	0.3	-	1.2	0.3	1.2	0.25	1.2	V
		$V_{CC} = 4.5 V$	0.4	-	1.4	0.4	1.4	0.35	1.4	V
		$V_{CC} = 5.5 V$	0.5	-	1.6	0.5	1.6	0.45	1.6	V
74AHCT	3G14-Q100									
V _{T+}	positive-going	$V_{CC} = 4.5 V$	-	-	2.0	-	2.0	-	2.0	V
threshold voltage		$V_{CC} = 5.5 V$	-	-	2.0	-	2.0	-	2.0	V
V _{T-}	negative-going	$V_{CC} = 4.5 V$	0.5	-	-	0.5	-	0.5	-	V
threshold voltage	threshold voltage	$V_{CC} = 5.5 V$	0.6	-	-	0.6	-	0.6	-	V
V _H	hysteresis	$V_{CC} = 4.5 V$	0.4	-	1.4	0.4	1.4	0.35	1.4	V
	voltage	V _{CC} = 5.5 V	0.4	-	1.6	0.4	1.6	0.35	1.6	V

12. Dynamic characteristics

Table 9. Dynamic characteristics

GND = 0 V; $t_r = t_f \le 3.0$ ns; for test circuit see Figure 7.

Symbol	Parameter	Conditions		25 °C		-40 °C	to +85 °C	–40 °C to +125 °C		Unit	
				Min	Тур	Max	Min	Max	Min	Max	
74AHC3	74AHC3G14-Q100										
Pu 1 1	propagation	nA to nY; see Figure 6	<u>[1]</u>								
	delay	V_{CC} = 3.0 V to 3.6 V	[2]								
		C _L = 15 pF		-	4.2	12.8	1.0	15.0	1.0	16.5	ns
		C _L = 50 pF		-	6.0	16.3	1.0	18.5	1.0	20.5	ns
		V_{CC} = 4.5 V to 5.5 V	[3]								
		C _L = 15 pF		-	3.2	8.6	1.0	10.0	1.0	11.0	ns
		C _L = 50 pF		-	4.6	10.6	1.0	12.0	1.0	13.5	ns
C _{PD}	power dissipation capacitance	per buffer; $C_L = 50 \text{ pF}; f_i = 1 \text{ MHz};$ $V_I = \text{GND to } V_{CC}$	<u>[4]</u>	-	10	-	-	-	-	-	pF

Triple inverting Schmitt trigger

Symbol	Parameter	Conditions		25 °C			_40 °C	–40 °C to +85 °C		o +125 °C	Unit
			Min	Тур	Max	Min	Max	Min	Max	1	
74AHCT	3G14-Q100						1				
t _{pd} propagati delay	propagation delay	nA to nY; V _{CC} = 4.5 V to 5.5 V	[1] [3]								
		C _L = 15 pF		-	4.1	7.0	1.0	8.0	1.0	9.0	ns
		C _L = 50 pF		-	5.9	8.5	1.0	10.0	1.0	11.0	ns
C _{PD}	power dissipation capacitance	per buffer; $C_L = 50 \text{ pF}; f_i = 1 \text{ MHz};$ $V_I = \text{GND to } V_{CC}$	<u>[4]</u>	-	12	-	-	-	-	-	pF

Table 9. Dynamic characteristics ...continued CND 0.16 fm + 6 < 2.0 mm for toot circuit constraints</td>

[1] t_{pd} is the same as t_{PLH} and t_{PHL} .

[2] Typical values are measured at V_{CC} = 3.3 V.

[3] Typical values are measured at V_{CC} = 5.0 V.

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

 $P_{D} = C_{PD} \times V_{CC}^{2} \times f_{i} + \Sigma (C_{L} \times V_{CC}^{2} \times f_{o}) \text{ where:}$

 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;

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

13. Waveforms

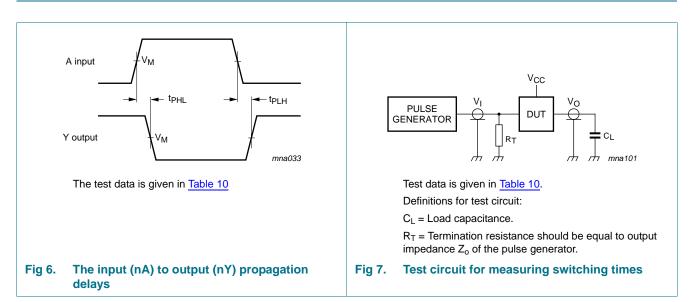


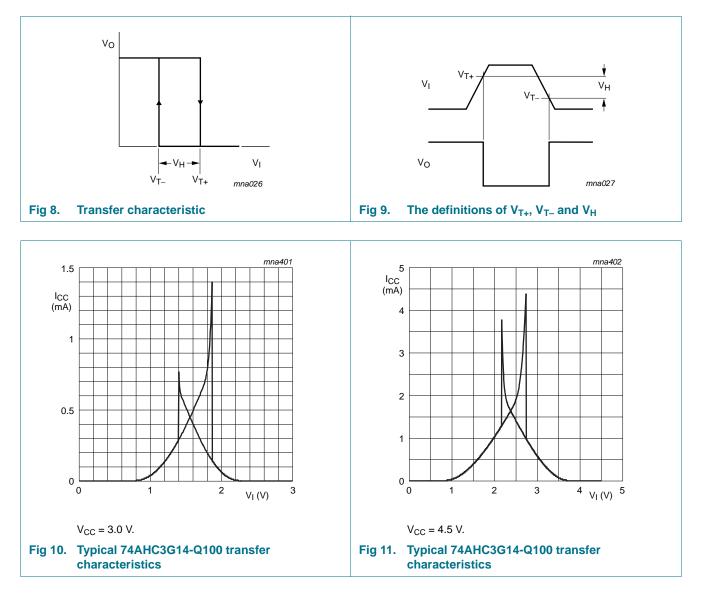
Table 10. Test data

Type number	Input	Output	
	VI	V _M	V _M
74AHC3G14-Q100	GND to V _{CC}	$0.5\times V_{CC}$	$0.5 imes V_{CC}$
74AHCT3G14-Q100	GND to 3.0 V	1.5 V	$0.5 imes V_{CC}$

74AHC_AHCT3G14_Q100

7 of 18

Triple inverting Schmitt trigger

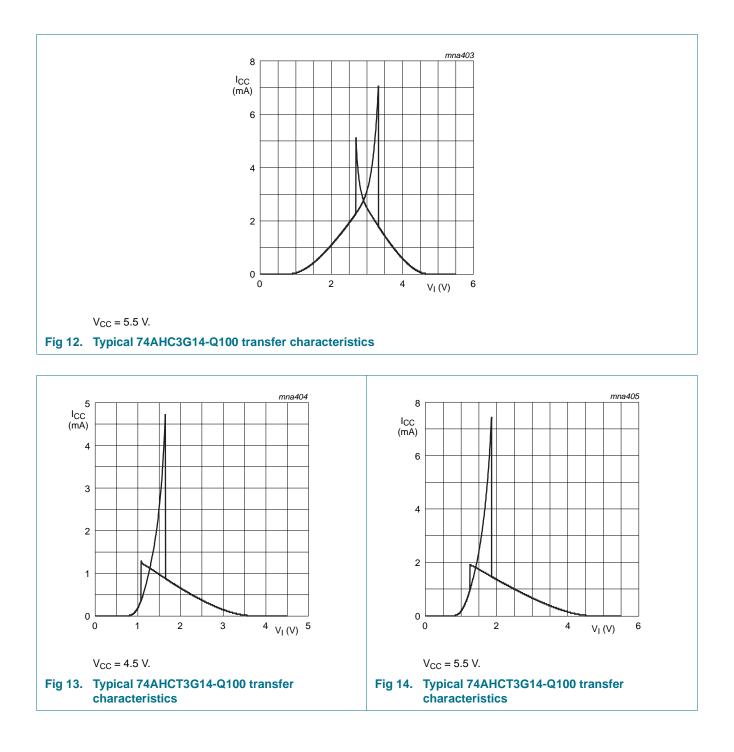


13.1 Transfer characteristic waveforms

NXP Semiconductors

74AHC3G14-Q100; 74AHCT3G14-Q100

Triple inverting Schmitt trigger



14. Application information

The slow input rise and fall times cause additional power dissipation, which can be calculated using the following formula:

 $P_{add} = f_i \times (t_r \times \Delta I_{CC(AV)} + t_f \times \Delta I_{CC(AV)}) \times V_{CC} \text{ where:}$

 P_{add} = additional power dissipation (μ W);

 $f_i = input frequency (MHz);$

 t_r = input rise time (ns); 10 % to 90 %;

 t_f = input fall time (ns); 90 % to 10 %;

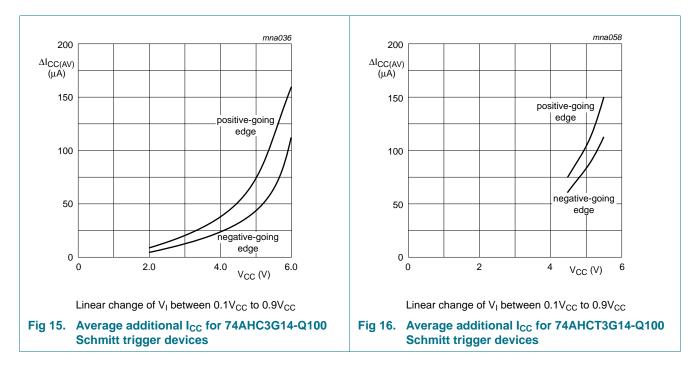
 $\Delta I_{CC(AV)}$ = average additional supply current (μA).

 $\Delta I_{CC(AV)}$ differs with positive or negative input transitions, as shown in Figure 15 and Figure 16.

For 74AHC3G14-Q100 and 74AHCT3G14-Q100 used in relaxation oscillator circuit, see Figure 17.

Note to the application information:

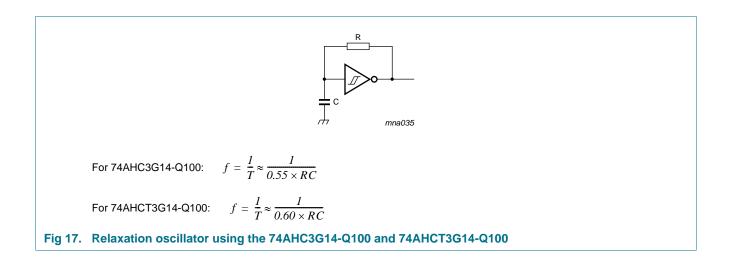
1. All values given are typical unless otherwise specified.



NXP Semiconductors

74AHC3G14-Q100; 74AHCT3G14-Q100

Triple inverting Schmitt trigger



Triple inverting Schmitt trigger

15. Package outline

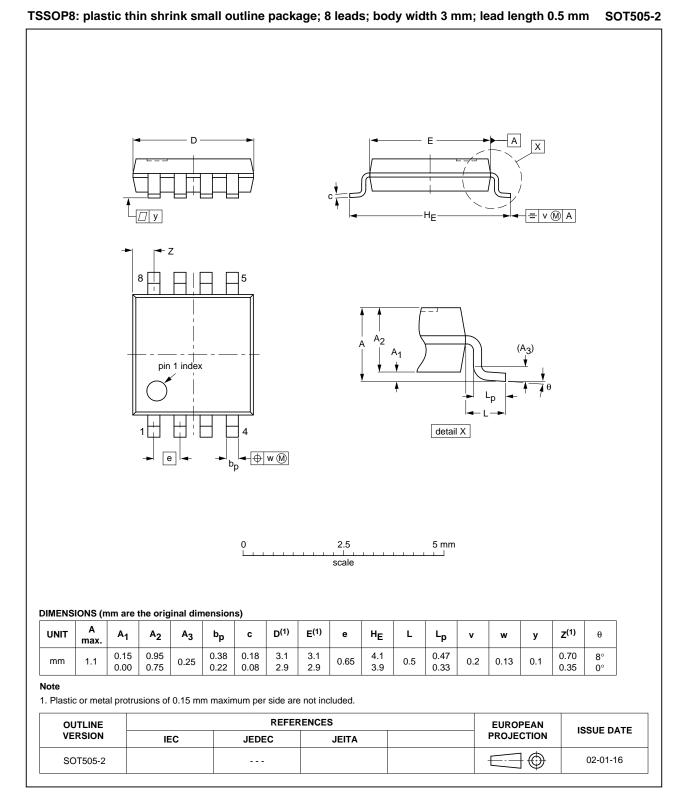


Fig 18. Package outline SOT505-2 (TSSOP8)

All information provided in this document is subject to legal disclaimers.

Triple inverting Schmitt trigger

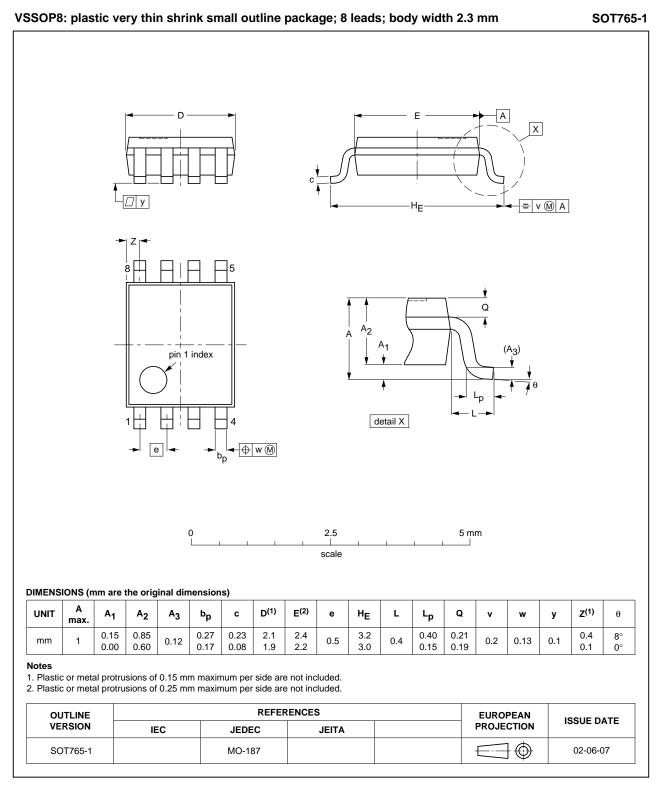
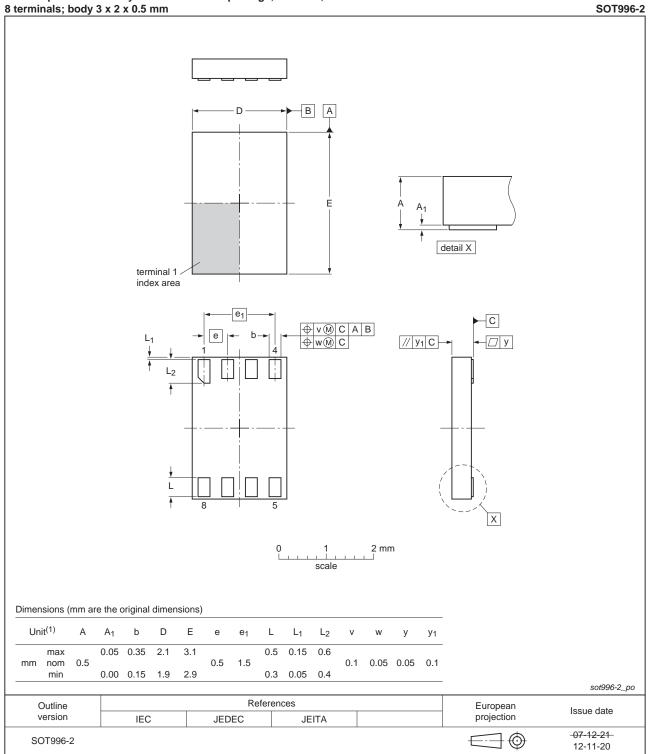


Fig 19. Package outline SOT765-1 (VSSOP8)

Triple inverting Schmitt trigger



XSON8: plastic extremely thin small outline package; no leads; 8 terminals: body 3 x 2 x 0.5 mm

Fig 20. Package outline SOT996-2 (XSON8)

All information provided in this document is subject to legal disclaimers.

Product data sheet

Triple inverting Schmitt trigger

16. Abbreviations

Table 11.	Abbreviations
Acronym	Description
CDM	Charged Device Model
CMOS	Complementary Metal-Oxide Semiconductor
DUT	Device Under Test
ESD	ElectroStatic Discharge
HBM	Human Body Model
MM	Machine Model
TTL	Transistor-Transistor Logic
MIL	Military

17. Revision history

Table 12. Revision history **Document ID Release date** Data sheet status Change notice Supersedes 74AHC_AHCT3G14_Q100 v.3 Product data sheet 74AHC_AHCT3G14_Q100 v.2 20130916 _ Modifications: Added type number 74AHC3G14GD-Q100 and 74AHCT3G14GD-Q100. 74AHC_AHCT3G14_Q100 v.2 20130128 Product data sheet 74AHC_AHCT3G14_Q100 v.1 -74AHC_AHCT3G14_Q100 v.1 20121001 Product data sheet --

18. Legal information

18.1 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"

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 [3] information is available on the Internet at URL http://www.nxp.com

18.2 Definitions

Draft — The document is a draft version only. The content is still under internal review and subject to formal approval, which may result in modifications or additions. NXP Semiconductors does not give any representations or warranties as to the accuracy or completeness of information included herein and shall have no liability for the consequences of use of such information.

Short data sheet — A short data sheet is an extract from a full data sheet with the same product type number(s) and title. A short data sheet is intended for quick reference only and should not be relied upon to contain detailed and full information. For detailed and full information see the relevant full data sheet, which is available on request via the local NXP Semiconductors sales office. In case of any inconsistency or conflict with the short data sheet, the full data sheet shall prevail.

Product specification - The information and data provided in a Product data sheet shall define the specification of the product as agreed between NXP Semiconductors and its customer. unless NXP Semiconductors and customer have explicitly agreed otherwise in writing. In no event however, shall an agreement be valid in which the NXP Semiconductors product is deemed to offer functions and qualities beyond those described in the Product data sheet.

18.3 **Disclaimers**

Limited warranty and liability - Information in this document is believed to be accurate and reliable. However, NXP Semiconductors does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information. NXP Semiconductors takes no responsibility for the content in this document if provided by an information source outside of NXP Semiconductors.

In no event shall NXP Semiconductors be liable for any indirect, incidental, punitive, special or consequential damages (including - without limitation - lost profits, lost savings, business interruption, costs related to the removal or replacement of any products or rework charges) whether or not such damages are based on tort (including negligence), warranty, breach of contract or any other legal theory.

Notwithstanding any damages that customer might incur for any reason whatsoever, NXP Semiconductors' aggregate and cumulative liability towards customer for the products described herein shall be limited in accordance with the Terms and conditions of commercial sale of NXP Semiconductors.

Right to make changes - NXP Semiconductors reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.

Suitability for use in automotive applications - This NXP

Semiconductors product has been qualified for use in automotive applications. Unless otherwise agreed in writing, the product is not designed, authorized or warranted to be suitable for use in life support, life-critical or safety-critical systems or equipment, nor in applications where failure or malfunction of an NXP Semiconductors product can reasonably be expected to result in personal injury, death or severe property or environmental damage. NXP Semiconductors and its suppliers accept no liability for inclusion and/or use of NXP Semiconductors products in such equipment or applications and therefore such inclusion and/or use is at the customer's own risk

Applications — Applications that are described herein for any of these products are for illustrative purposes only. NXP Semiconductors makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.

Customers are responsible for the design and operation of their applications and products using NXP Semiconductors products, and NXP Semiconductors accepts no liability for any assistance with applications or customer product design. It is customer's sole responsibility to determine whether the NXP Semiconductors product is suitable and fit for the customer's applications and products planned, as well as for the planned application and use of customer's third party customer(s). Customers should provide appropriate design and operating safeguards to minimize the risks associated with their applications and products.

NXP Semiconductors does not accept any liability related to any default, damage, costs or problem which is based on any weakness or default in the customer's applications or products, or the application or use by customer's third party customer(s). Customer is responsible for doing all necessary testing for the customer's applications and products using NXP Semiconductors products in order to avoid a default of the applications and the products or of the application or use by customer's third party customer(s). NXP does not accept any liability in this respect.

Limiting values - Stress above one or more limiting values (as defined in the Absolute Maximum Ratings System of IEC 60134) will cause permanent damage to the device. Limiting values are stress ratings only and (proper) operation of the device at these or any other conditions above those given in the Recommended operating conditions section (if present) or the Characteristics sections of this document is not warranted. Constant or repeated exposure to limiting values will permanently and irreversibly affect the quality and reliability of the device.

Terms and conditions of commercial sale - NXP Semiconductors products are sold subject to the general terms and conditions of commercial sale, as published at http://www.nxp.com/profile/terms, unless otherwise agreed in a valid written individual agreement. In case an individual agreement is concluded only the terms and conditions of the respective agreement shall apply. NXP Semiconductors hereby expressly objects to applying the customer's general terms and conditions with regard to the purchase of NXP Semiconductors products by customer.

Triple inverting Schmitt trigger

No offer to sell or license — Nothing in this document may be interpreted or construed as an offer to sell products that is open for acceptance or the grant, conveyance or implication of any license under any copyrights, patents or other industrial or intellectual property rights.

Export control — This document as well as the item(s) described herein may be subject to export control regulations. Export might require a prior authorization from competent authorities.

Translations — A non-English (translated) version of a document is for reference only. The English version shall prevail in case of any discrepancy between the translated and English versions.

18.4 Trademarks

Notice: All referenced brands, product names, service names and trademarks are the property of their respective owners.

19. Contact information

For more information, please visit: <u>http://www.nxp.com</u>

For sales office addresses, please send an email to: salesaddresses@nxp.com

Triple inverting Schmitt trigger

20. Contents

3Applications4Ordering information5Marking6Functional diagram7Pinning information7.1Pinning7.2Pin description8Functional description9Limiting values10Recommended operating conditions11Static characteristics12Dynamic characteristics13Waveforms14Application information15Package outline16Abbreviations17Revision history18Legal information18.1Data sheet status18.2Definitions18.4Trademarks19Contact information	1	General description 1
4Ordering information5Marking6Functional diagram7Pinning information7.1Pinning7.2Pin description8Functional description9Limiting values10Recommended operating conditions11Static characteristics12Dynamic characteristics13Waveforms13.1Transfer characteristic waveforms14Application information15Package outline16Abbreviations17Revision history18Legal information18.3Disclaimers18.4Trademarks19Contact information	2	Features and benefits 1
5Marking.6Functional diagram7Pinning information7.1Pinning7.2Pin description8Functional description9Limiting values.10Recommended operating conditions.11Static characteristics11.1Transfer characteristics12Dynamic characteristics13Waveforms14Application information.15Package outline16Abbreviations.17Revision history.18Legal information.18.1Data sheet status18.3Disclaimers.18.4Trademarks.19Contact information.	3	Applications 1
6Functional diagram7Pinning information7.1Pinning7.2Pin description8Functional description9Limiting values10Recommended operating conditions11Static characteristics11.1Transfer characteristics12Dynamic characteristics13Waveforms14Application information15Package outline16Abbreviations17Revision history18Legal information18.1Data sheet status18.3Disclaimers18.4Trademarks19Contact information	4	Ordering information 2
7Pinning information7.1Pinning7.2Pin description8Functional description9Limiting values10Recommended operating conditions11Static characteristics11Static characteristics12Dynamic characteristics13Waveforms13.1Transfer characteristic waveforms14Application information15Package outline16Abbreviations17Revision history18Legal information18.1Data sheet status18.3Disclaimers18.4Trademarks19Contact information	5	Marking 2
7.1Pinning7.2Pin description8Functional description9Limiting values10Recommended operating conditions11Static characteristics11Static characteristics12Dynamic characteristics13Waveforms14Application information15Package outline16Abbreviations17Revision history18Legal information18.1Data sheet status18.3Disclaimers18.4Trademarks19Contact information	6	Functional diagram 2
 7.2 Pin description 8 Functional description 9 Limiting values. 10 Recommended operating conditions. 11 Static characteristics. 11 Transfer characteristics 12 Dynamic characteristics 13 Waveforms 13.1 Transfer characteristic waveforms 14 Application information. 15 Package outline 16 Abbreviations. 17 Revision history. 18 Legal information. 18.1 Data sheet status 18.2 Definitions. 18.4 Trademarks. 19 Contact information. 	7	Pinning information 3
 7.2 Pin description 8 Functional description 9 Limiting values. 10 Recommended operating conditions. 11 Static characteristics. 11 Transfer characteristics 12 Dynamic characteristics 13 Waveforms 13.1 Transfer characteristic waveforms 14 Application information. 15 Package outline 16 Abbreviations. 17 Revision history. 18 Legal information. 18.1 Data sheet status 18.2 Definitions. 18.4 Trademarks. 19 Contact information. 	7.1	Pinning 3
9Limiting values.10Recommended operating conditions.11Static characteristics.11Transfer characteristics12Dynamic characteristics13Waveforms13.1Transfer characteristic waveforms14Application information.15Package outline16Abbreviations.17Revision history.18Legal information.18.1Data sheet status18.3Disclaimers.18.4Trademarks.19Contact information.	7.2	Pin description 3
10Recommended operating conditions.11Static characteristics.11.1Transfer characteristics12Dynamic characteristics13Waveforms13.1Transfer characteristic waveforms14Application information.15Package outline16Abbreviations.17Revision history.18Legal information.18.1Data sheet status18.2Definitions.18.3Disclaimers.18.4Trademarks.19Contact information.	8	Functional description 3
11Static characteristics11.1Transfer characteristics12Dynamic characteristics13Waveforms13.1Transfer characteristic waveforms14Application information15Package outline16Abbreviations17Revision history18Legal information18.1Data sheet status18.2Definitions18.3Disclaimers18.4Trademarks	9	Limiting values 4
11.1Transfer characteristics12Dynamic characteristics13Waveforms13.1Transfer characteristic waveforms14Application information15Package outline16Abbreviations17Revision history18Legal information18.1Data sheet status18.2Definitions18.3Disclaimers18.4Trademarks	10	Recommended operating conditions 4
12Dynamic characteristics13Waveforms13.1Transfer characteristic waveforms14Application information15Package outline16Abbreviations17Revision history18Legal information18.1Data sheet status18.2Definitions18.3Disclaimers18.4Trademarks	11	Static characteristics 5
13Waveforms13.1Transfer characteristic waveforms14Application information15Package outline16Abbreviations17Revision history18Legal information18.1Data sheet status18.2Definitions18.3Disclaimers18.4Trademarks	11.1	Transfer characteristics 6
13.1Transfer characteristic waveforms14Application information15Package outline16Abbreviations16Abbreviations17Revision history18Legal information18.1Data sheet status18.2Definitions18.3Disclaimers18.4Trademarks19Contact information	12	Dynamic characteristics 6
14Application information.15Package outline16Abbreviations.16Abbreviations.17Revision history.18Legal information.18.1Data sheet status18.2Definitions.18.3Disclaimers.18.4Trademarks.19Contact information.	13	Waveforms 7
 15 Package outline	13.1	Transfer characteristic waveforms 8
16Abbreviations.17Revision history.18Legal information.18.1Data sheet status18.2Definitions.18.3Disclaimers.18.4Trademarks.19Contact information.	14	Application information 10
17Revision history.18Legal information.18.1Data sheet status18.2Definitions.18.3Disclaimers.18.4Trademarks.19Contact information.	15	Package outline 12
18Legal information.18.1Data sheet status18.2Definitions.18.3Disclaimers.18.4Trademarks.19Contact information.	16	Abbreviations 15
18.1Data sheet status18.2Definitions18.3Disclaimers18.4Trademarks19Contact information	17	Revision history 15
18.1Data sheet status18.2Definitions18.3Disclaimers18.4Trademarks19Contact information	18	Legal information 16
18.3Disclaimers18.4Trademarks19Contact information	18.1	Data sheet status 16
18.4Trademarks.19Contact information.		Definitions 16
19 Contact information		Disclaimers 16
	18.4	Trademarks 17
20 Contents	19	Contact information 17
	20	Contents

Please be aware that important notices concerning this document and the product(s) described herein, have been included in section 'Legal information'.

© NXP B.V. 2013.

All rights reserved.

For more information, please visit: http://www.nxp.com For sales office addresses, please send an email to: salesaddresses@nxp.com

Date of release: 16 September 2013 Document identifier: 74AHC_AHCT3G14_Q100 This datasheet has been downloaded from:

www.DatasheetCatalog.com

Datasheets for electronic components.