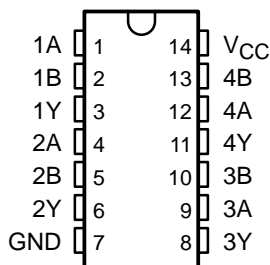


SN54AHC86, SN74AHC86 QUADRUPLE 2-INPUT EXCLUSIVE-OR GATES

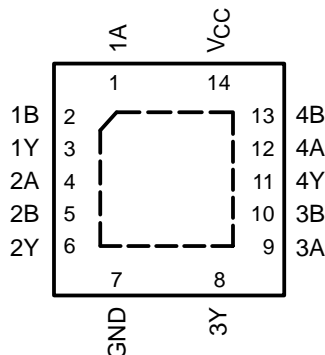
SCLS249I – OCTOBER 1995 – REVISED JULY 2003

- Operating Range 2-V to 5.5-V V_{CC}
- Latch-Up Performance Exceeds 250 mA Per JESD 17
- ESD Protection Exceeds JESD 22
 - 2000-V Human-Body Model (A114-A)
 - 200-V Machine Model (A115-A)
 - 1000-V Charged-Device Model (C101)

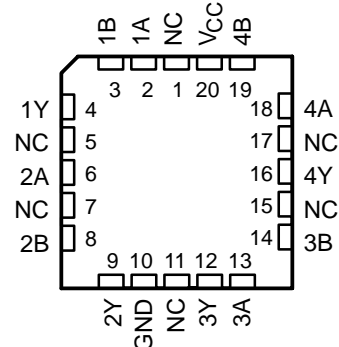
SN54AHC86 . . . J OR W PACKAGE
SN74AHC86 . . . D, DB, DGV, N, NS,
OR PW PACKAGE
(TOP VIEW)



SN74AHC86 . . . RGY PACKAGE
(TOP VIEW)



SN54AHC86 . . . FK PACKAGE
(TOP VIEW)



NC – No internal connection

description/ordering information

The 'AHC86 devices are quadruple 2-input exclusive-OR gates. These devices perform the Boolean function $Y = A \oplus B$ or $Y = \overline{A}B + A\overline{B}$ in positive logic.

A common application is as a true/complement element. If one of the inputs is low, the other input is reproduced in true form at the output. If one of the inputs is high, the signal on the other input is reproduced inverted at the output.

ORDERING INFORMATION

T_A	PACKAGE†		ORDERABLE PART NUMBER	TOP-SIDE MARKING
–40°C to 85°C	QFN – RGY	Tape and reel	SN74AHC86RGYR	HA86
	PDIP – N	Tube	SN74AHC86N	SN74AHC86N
	SOIC – D	Tube	SN74AHC86D	AHC86
		Tape and reel	SN74AHC86DR	
	SOP – NS	Tape and reel	SN74AHC86NSR	AHC86
	SSOP – DB	Tape and reel	SN74AHC86DBR	HA86
	TSSOP – PW	Tube	SN74AHC86PW	HA86
Tape and reel		SN74AHC86PWR		
–55°C to 125°C	TVSOP – DGV	Tape and reel	SN74AHC86DGV	HA86
	CDIP – J	Tube	SNJ54AHC86J	SNJ54AHC86J
	CFP – W	Tube	SNJ54AHC86W	SNJ54AHC86W
	LCCC – FK	Tube	SNJ54AHC86FK	SNJ54AHC86FK

† Package drawings, standard packing quantities, thermal data, symbolization, and PCB design guidelines are available at www.ti.com/sc/package.



Please be aware that an important notice concerning availability, standard warranty, and use in critical applications of Texas Instruments semiconductor products and disclaimers thereto appears at the end of this data sheet.

PRODUCTION DATA information is current as of publication date. Products conform to specifications per the terms of Texas Instruments standard warranty. Production processing does not necessarily include testing of all parameters.

 **TEXAS
INSTRUMENTS**

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On products compliant to MIL-PRF-38535, all parameters are tested unless otherwise noted. On all other products, production processing does not necessarily include testing of all parameters.

SN54AHC86, SN74AHC86 QUADRUPLE 2-INPUT EXCLUSIVE-OR GATES

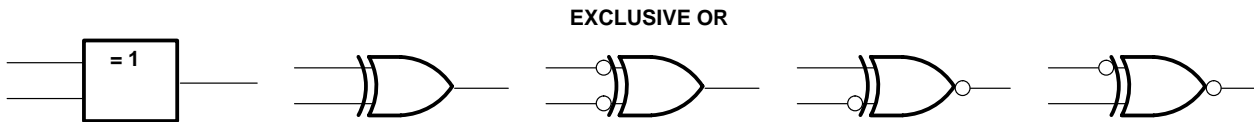
SCLS249I – OCTOBER 1995 – REVISED JULY 2003

FUNCTION TABLE
(each gate)

INPUTS		OUTPUT
A	B	Y
L	L	L
L	H	H
H	L	H
H	H	L

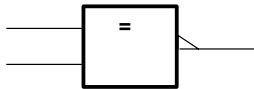
exclusive-OR logic

An exclusive-OR gate has many applications, some of which can be represented better by alternative logic symbols.



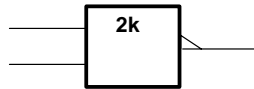
These are five equivalent exclusive-OR symbols valid for an SN74AHC86 gate in positive logic; negation may be shown at any two ports.

LOGIC-IDENTITY ELEMENT



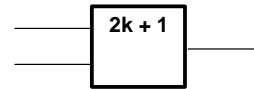
The output is active (low) if all inputs stand at the same logic level (i.e., $A = B$).

EVEN-PARITY ELEMENT



The output is active (low) if an even number of inputs (i.e., 0 or 2) are active.

ODD-PARITY ELEMENT



The output is active (high) if an odd number of inputs (i.e., only 1 of the 2) are active.

absolute maximum ratings over operating free-air temperature range (unless otherwise noted)[†]

Supply voltage range, V_{CC}	-0.5 V to 7 V
Input voltage range, V_I (see Note 1)	-0.5 V to 7 V
Output voltage range, V_O (see Note 1)	-0.5 V to $V_{CC} + 0.5$ V
Input clamp current, I_{IK} ($V_I < 0$)	-20 mA
Output clamp current, I_{OK} ($V_O < 0$ or $V_O > V_{CC}$)	± 20 mA
Continuous output current, I_O ($V_O = 0$ to V_{CC})	± 25 mA
Continuous current through V_{CC} or GND	± 50 mA
Package thermal impedance, θ_{JA} (see Note 2): D package	86°C/W
(see Note 2): DB package	96°C/W
(see Note 2): DGV package	127°C/W
(see Note 2): N package	80°C/W
(see Note 2): NS package	76°C/W
(see Note 2): PW package	113°C/W
(see Note 3): RGY package	47°C/W
Storage temperature range, T_{stg}	-65°C to 150°C

[†] Stresses beyond those listed under "absolute maximum ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under "recommended operating conditions" is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

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

2. The package thermal impedance is calculated in accordance with JESD 51-7.

3. The package thermal impedance is calculated in accordance with JESD 51-5.

SN54AHC86, SN74AHC86 QUADRUPLE 2-INPUT EXCLUSIVE-OR GATES

SCLS249I – OCTOBER 1995 – REVISED JULY 2003

recommended operating conditions (see Note 4)

		SN54AHC86		SN74AHC86		UNIT
		MIN	MAX	MIN	MAX	
V _{CC}	Supply voltage	2	5.5	2	5.5	V
V _{IH}	High-level input voltage	V _{CC} = 2 V		1.5		V
		V _{CC} = 3 V		2.1		
		V _{CC} = 5.5 V		3.85		
V _{IL}	Low-level input voltage	V _{CC} = 2 V		0.5		V
		V _{CC} = 3 V		0.9		
		V _{CC} = 5.5 V		1.65		
V _I	Input voltage	0	5.5	0	5.5	V
V _O	Output voltage	0	V _{CC}	0	V _{CC}	V
I _{OH}	High-level output current	V _{CC} = 2 V		-50		μA
		V _{CC} = 3.3 V ± 0.3 V		-4		
		V _{CC} = 5 V ± 0.5 V		-8		
I _{OL}	Low-level output current	V _{CC} = 2 V		50		μA
		V _{CC} = 3.3 V ± 0.3 V		4		
		V _{CC} = 5 V ± 0.5 V		8		
Δt/Δv	Input transition rise or fall rate	V _{CC} = 3.3 V ± 0.3 V		100		ns/V
		V _{CC} = 5 V ± 0.5 V		20		
T _A	Operating free-air temperature	-55	125	-40	85	°C

NOTE 4: All unused inputs of the device must be held at V_{CC} or GND to ensure proper device operation. Refer to the TI application report, *Implications of Slow or Floating CMOS Inputs*, literature number SCBA004.

electrical characteristics over recommended operating free-air temperature range (unless otherwise noted)

PARAMETER	TEST CONDITIONS	V _{CC}	T _A = 25°C			SN54AHC86		SN74AHC86		UNIT
			MIN	TYP	MAX	MIN	MAX	MIN	MAX	
V _{OH}	I _{OH} = -50 μA	2 V	1.9	2		1.9		1.9	V	
		3 V	2.9	3		2.9		2.9		
		4.5 V	4.4	4.5		4.4		4.4		
	I _{OH} = -4 mA	3 V	2.58			2.48		2.48		
	I _{OH} = -8 mA	4.5 V	3.94			3.8		3.8		
V _{OL}	I _{OL} = 50 μA	2 V			0.1		0.1	0.1	V	
		3 V			0.1		0.1	0.1		
		4.5 V			0.1		0.1	0.1		
	I _{OL} = 4 mA	3 V			0.36		0.5	0.44		
	I _{OL} = 8 mA	4.5 V			0.36		0.5	0.44		
I _I	V _I = 5.5 V or GND	0 V to 5.5 V			±0.1		±1*	±1	μA	
I _{CC}	V _I = V _{CC} or GND, I _O = 0	5.5 V			2		20	20	μA	
C _i	V _I = V _{CC} or GND	5 V		4	10			10	pF	

* On products compliant to MIL-PRF-38535, this parameter is not production tested at V_{CC} = 0 V.



SN54AHC86, SN74AHC86 QUADRUPLE 2-INPUT EXCLUSIVE-OR GATES

SCLS2491 – OCTOBER 1995 – REVISED JULY 2003

switching characteristics over recommended operating free-air temperature range,
 $V_{CC} = 3.3\text{ V} \pm 0.3\text{ V}$ (unless otherwise noted) (see Figure 1)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	LOAD CAPACITANCE	$T_A = 25^\circ\text{C}$			SN54AHC86		SN74AHC86		UNIT
				MIN	TYP	MAX	MIN	MAX	MIN	MAX	
t_{PLH}	A or B	Y	$C_L = 15\text{ pF}$	7*	11*	1*	13*	1	13	ns	
t_{PHL}				7*	11*	1*	13*	1	13		
t_{PLH}	A or B	Y	$C_L = 50\text{ pF}$	9.5	14.5	1	16.5	1	16.5	ns	
t_{PHL}				9.5	14.5	1	16.5	1	16.5		

* On products compliant to MIL-PRF-38535, this parameter is not production tested.

switching characteristics over recommended operating free-air temperature range,
 $V_{CC} = 5\text{ V} \pm 0.5\text{ V}$ (unless otherwise noted) (see Figure 1)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	LOAD CAPACITANCE	$T_A = 25^\circ\text{C}$			SN54AHC86		SN74AHC86		UNIT
				MIN	TYP	MAX	MIN	MAX	MIN	MAX	
t_{PLH}	A or B	Y	$C_L = 15\text{ pF}$	4.8*	6.8*	1*	8*	1	8	ns	
t_{PHL}				4.8*	6.8*	1*	8*	1	8		
t_{PLH}	A or B	Y	$C_L = 50\text{ pF}$	6.3	8.8	1	10	1	10	ns	
t_{PHL}				6.3	8.8	1	10	1	10		

* On products compliant to MIL-PRF-38535, this parameter is not production tested.

noise characteristics, $V_{CC} = 5\text{ V}$, $C_L = 50\text{ pF}$, $T_A = 25^\circ\text{C}$ (see Note 5)

PARAMETER		SN74AHC86			UNIT
		MIN	TYP	MAX	
$V_{OL(P)}$	Quiet output, maximum dynamic V_{OL}		0.3	0.8	V
$V_{OL(V)}$	Quiet output, minimum dynamic V_{OL}		-0.3	-0.8	V
$V_{OH(V)}$	Quiet output, minimum dynamic V_{OH}		4.4		V
$V_{IH(D)}$	High-level dynamic input voltage		3.5		V
$V_{IL(D)}$	Low-level dynamic input voltage			1.5	V

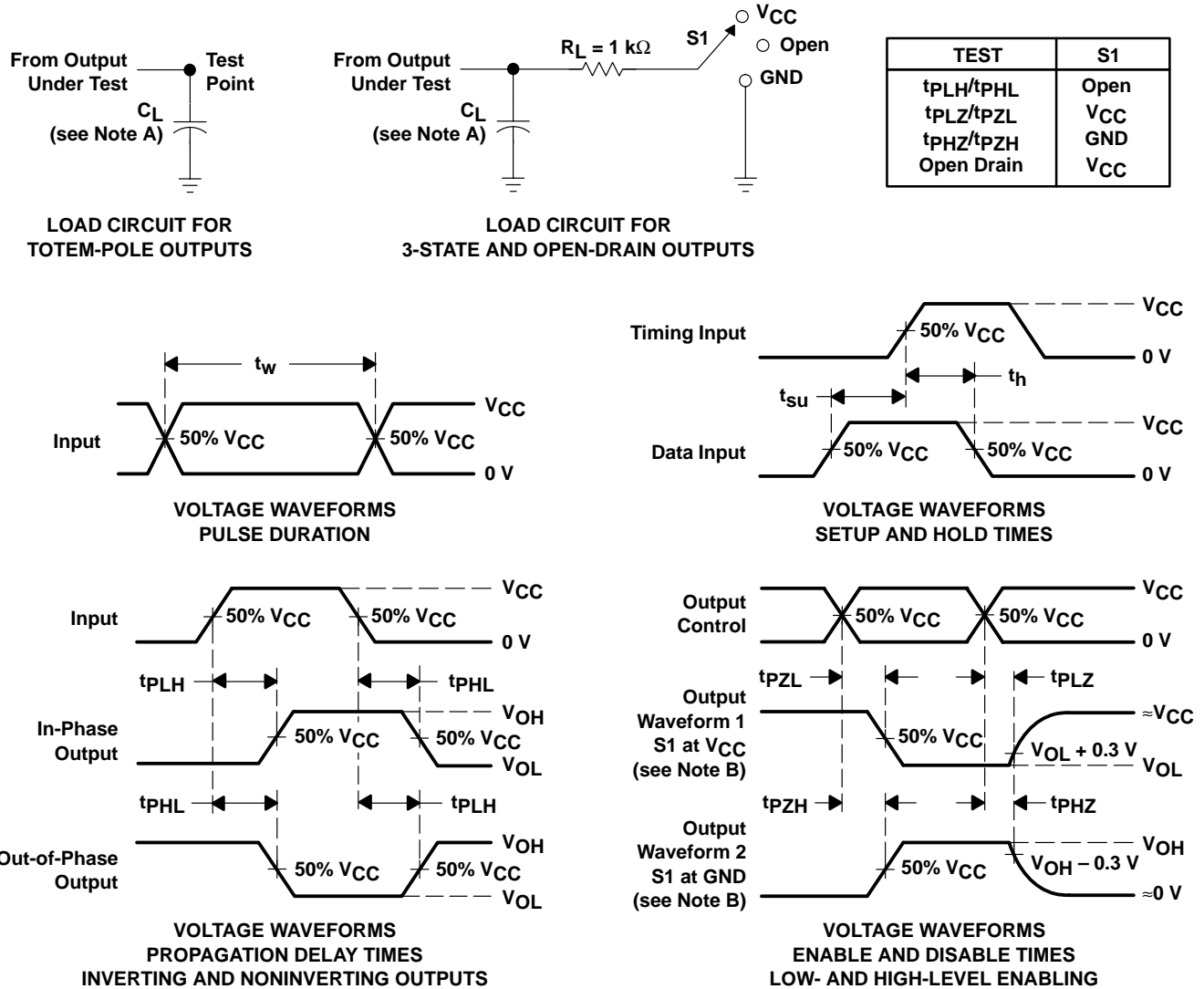
NOTE 5: Characteristics are for surface-mount packages only.

operating characteristics, $V_{CC} = 5\text{ V}$, $T_A = 25^\circ\text{C}$

PARAMETER		TEST CONDITIONS	TYP	UNIT
C_{pd}	Power dissipation capacitance	No load, $f = 1\text{ MHz}$	18	pF



PARAMETER MEASUREMENT INFORMATION



- NOTES: A. C_L includes probe and jig capacitance.
 B. Waveform 1 is for an output with internal conditions such that the output is low except when disabled by the output control. Waveform 2 is for an output with internal conditions such that the output is high except when disabled by the output control.
 C. All input pulses are supplied by generators having the following characteristics: $PRR \leq 1$ MHz, $Z_O = 50 \Omega$, $t_r \leq 3$ ns, $t_f \leq 3$ ns.
 D. The outputs are measured one at a time with one input transition per measurement.
 E. All parameters and waveforms are not applicable to all devices.

Figure 1. Load Circuit and Voltage Waveforms

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-9681601Q2A	ACTIVE	LCCC	FK	20	1	TBD	Call TI	Level-NC-NC-NC
5962-9681601QCA	ACTIVE	CDIP	J	14	1	TBD	Call TI	Level-NC-NC-NC
5962-9681601QDA	ACTIVE	CFP	W	14	1	TBD	Call TI	Level-NC-NC-NC
SN74AHC86D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC86DBLE	OBSOLETE	SSOP	DB	14		TBD	Call TI	Call TI
SN74AHC86DBR	ACTIVE	SSOP	DB	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC86DBRE4	ACTIVE	SSOP	DB	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC86DE4	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC86DGVR	ACTIVE	TVSOP	DGV	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC86DGVRE4	ACTIVE	TVSOP	DGV	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC86DR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC86DRE4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC86N	ACTIVE	PDIP	N	14	25	Pb-Free (RoHS)	CU NIPDAU	Level-NC-NC-NC
SN74AHC86NSR	ACTIVE	SO	NS	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC86NSRE4	ACTIVE	SO	NS	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC86PW	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC86PWE4	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC86PWLE	OBSOLETE	TSSOP	PW	14		TBD	Call TI	Call TI
SN74AHC86PWR	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC86PWRE4	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHC86RGYR	ACTIVE	QFN	RGY	14	1000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1YEAR
SNJ54AHC86FK	ACTIVE	LCCC	FK	20	1	TBD	Call TI	Level-NC-NC-NC
SNJ54AHC86J	ACTIVE	CDIP	J	14	1	TBD	Call TI	Level-NC-NC-NC
SNJ54AHC86W	ACTIVE	CFP	W	14	1	TBD	Call TI	Level-NC-NC-NC

⁽¹⁾ The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.

NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.

PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

OBSOLETE: TI has discontinued the production of the device.

(2) Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS) or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

(3) MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

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J (R-GDIP-T**)

14 LEADS SHOWN

CERAMIC DUAL IN-LINE PACKAGE



DIM \ PINS **	14	16	18	20
A	0.300 (7,62) BSC	0.300 (7,62) BSC	0.300 (7,62) BSC	0.300 (7,62) BSC
B MAX	0.785 (19,94)	.840 (21,34)	0.960 (24,38)	1.060 (26,92)
B MIN	—	—	—	—
C MAX	0.300 (7,62)	0.300 (7,62)	0.310 (7,87)	0.300 (7,62)
C MIN	0.245 (6,22)	0.245 (6,22)	0.220 (5,59)	0.245 (6,22)



4040083/F 03/03

- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package is hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification only on press ceramic glass frit seal only.
 - Falls within MIL STD 1835 GDIP1-T14, GDIP1-T16, GDIP1-T18 and GDIP1-T20.

W (R-GDFP-F14)

CERAMIC DUAL FLATPACK



- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a ceramic lid using glass frit.
 - D. Index point is provided on cap for terminal identification only.
 - E. Falls within MIL STD 1835 GDFP1-F14 and JEDEC MO-092AB

FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a metal lid.
 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004

N (R-PDIP-T**)

PLASTIC DUAL-IN-LINE PACKAGE

16 PINS SHOWN



- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - Falls within JEDEC MS-001, except 18 and 20 pin minimum body length (Dim A).
 - The 20 pin end lead shoulder width is a vendor option, either half or full width.

DGV (R-PDSO-G**)

PLASTIC SMALL-OUTLINE

24 PINS SHOWN



- NOTES: A. All linear dimensions are in millimeters.
 B. This drawing is subject to change without notice.
 C. Body dimensions do not include mold flash or protrusion, not to exceed 0,15 per side.
 D. Falls within JEDEC: 24/48 Pins – MO-153
 14/16/20/56 Pins – MO-194

D (R-PDSO-G14)

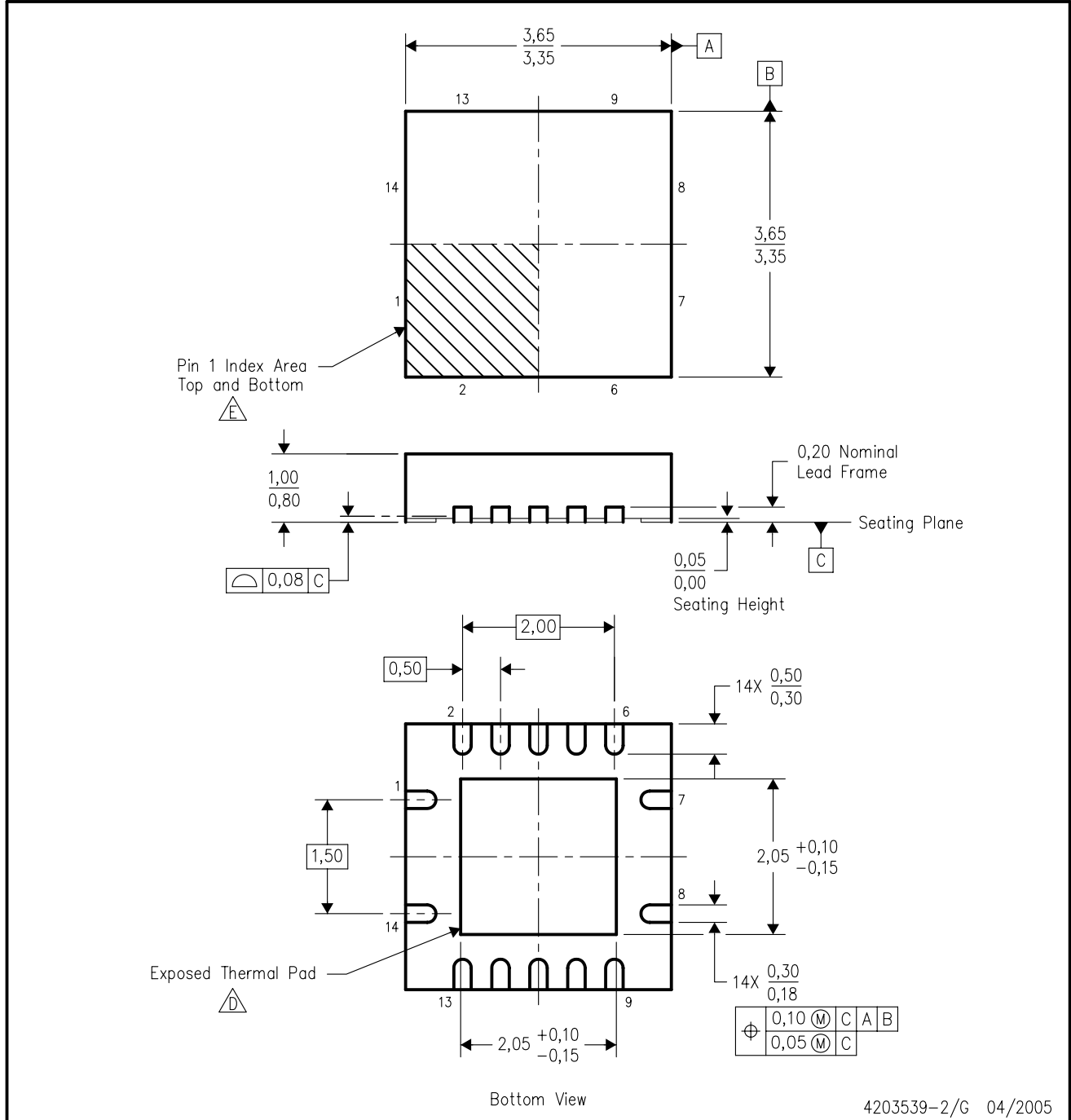
PLASTIC SMALL-OUTLINE PACKAGE



- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. Body dimensions do not include mold flash or protrusion not to exceed 0.006 (0,15).
 - D. Falls within JEDEC MS-012 variation AB.

RGY (S-PQFP-N14)

PLASTIC QUAD FLATPACK



4203539-2/G 04/2005

- NOTES:
- All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - This drawing is subject to change without notice.
 - QFN (Quad Flatpack No-Lead) package configuration.
 - The package thermal pad must be soldered to the board for thermal and mechanical performance.
 - Pin 1 identifiers are located on both top and bottom of the package and within the zone indicated. The Pin 1 identifiers are either a molded, marked, or metal feature.
 - Package complies to JEDEC MO-241 variation BA.

MECHANICAL DATA

NS (R-PDSO-G**)

PLASTIC SMALL-OUTLINE PACKAGE

14-PINS SHOWN



- NOTES:
- A. All linear dimensions are in millimeters.
 - B. This drawing is subject to change without notice.
 - C. Body dimensions do not include mold flash or protrusion, not to exceed 0,15.

DB (R-PDSO-G**)

PLASTIC SMALL-OUTLINE

28 PINS SHOWN



- NOTES: A. All linear dimensions are in millimeters.
 B. This drawing is subject to change without notice.
 C. Body dimensions do not include mold flash or protrusion not to exceed 0,15.
 D. Falls within JEDEC MO-150

PW (R-PDSO-G**)

PLASTIC SMALL-OUTLINE PACKAGE

14 PINS SHOWN



4040064/F 01/97

- NOTES: A. All linear dimensions are in millimeters.
 B. This drawing is subject to change without notice.
 C. Body dimensions do not include mold flash or protrusion not to exceed 0,15.
 D. Falls within JEDEC MO-153

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Power Mgmt	power.ti.com	Optical Networking	www.ti.com/opticalnetwork
Microcontrollers	microcontroller.ti.com	Security	www.ti.com/security
		Telephony	www.ti.com/telephony
		Video & Imaging	www.ti.com/video
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SN74AHC86, Status: ACTIVE

Quadruple 2-Input Exclusive-OR Gates



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<input type="checkbox"/> Features	<input type="checkbox"/> Samples	<input type="checkbox"/> Technical Documents
<input type="checkbox"/> Quality & Pb-Free Data	<input type="checkbox"/> Pricing/Packaging	<input type="checkbox"/> Applications Notes
<input type="checkbox"/> Related Products	<input type="checkbox"/> Inventory	<input type="checkbox"/> Simulation Models
<input type="checkbox"/> Tools & Software	<input type="checkbox"/> Symbols/Footprints	<input type="checkbox"/> Reference Designs



Refine Your Selection

- Logic: Exclusive OR Ga (XOR)

Support

- KnowledgeBase
- Contact Technical Supp
- TI Cross Reference
- Training
- Part Marking Lookup
- Part Number Nomenda

Datasheet



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SN54AHC86, SN74AHC86 (Rev. I) (sn74ahc86.pdf, 639 KB)
03 Jul 2003 [Download](#)

	SN54AHC86	SN74AHC86
Voltage Nodes(V)	5, 3.3	5, 3.3
Vcc range(V)	2.0 to 5.5	2.0 to 5.5
Input Level	CMOS	CMOS
Output Level	CMOS	CMOS
Output Drive(mA)	-8/8	-8/8
No. of Gates	4	4
Static Current	0.02	0.02
tpd max(ns)	10	10
	Samples	Samples
	Inventory	Inventory

Product Information

Features [Save this to your personal library](#)

Operating Range 2-V to 5.5-V V_{CC}
 Latch-Up Performance Exceeds 250 mA Per JESD 17
 ESD Protection Exceeds JESD 22
 - 2000-V Human-Body Model (A114-A)
 - 200-V Machine Model (A115-A)
 1000-V Charged-Device Model (C101)

Description

The 'AHC86 devices are quadruple 2-input exclusive-OR gates. These devices perform the Boolean function $Y = A \oplus B$ or $Y = A \oplus B$ in positive logic.

A common application is as a true/complement element. If one of the inputs is low, the other input is reproduced in true form at the output. If one of the inputs is high, the signal on the other input is reproduced inverted at the output.

Pricing/Packaging/CAD Design Tools/Samples

			Price	Packaging			CAD Design Tools	Samples
Device	Status	Temp (°C)	Budget Price (\$US) QTY	Industry Standard (TI Pkg) Pins	Top Side Marking	Standard Pack Quantity	Footprints	Samples
SN74AHC86D	ACTIVE	-40 to 85	0.15 1KU	SOIC (D) 14	View	50	<input type="checkbox"/>	Purchase Samples
SN74AHC86DBLE	OBSOLETE	-40 to 85		SSOP (DB) 14	View		<input type="checkbox"/>	Not Available
SN74AHC86DBR	ACTIVE	-40 to 85	0.15 1KU	SSOP (DB) 14	View	2000	<input type="checkbox"/>	Contact TI Distributor or Sales Office
SN74AHC86DBRE4	ACTIVE	-40 to 85	0.15 1KU	SSOP (DB) 14	View	2000	<input type="checkbox"/>	Purchase Samples
SN74AHC86DE4	ACTIVE	-40 to 85	0.15 1KU	SOIC (D) 14	View	50	<input type="checkbox"/>	Purchase Samples
SN74AHC86DGVR	ACTIVE	-40 to 85	0.19 1KU	TVSOP (DGV) 14		2000	<input type="checkbox"/>	Purchase Samples
SN74AHC86DGVRE4	ACTIVE	-40 to 85	0.19 1KU	TVSOP (DGV) 14		2000	<input type="checkbox"/>	Purchase Samples
SN74AHC86DR	ACTIVE	-40 to 85	0.15 1KU	SOIC (D) 14	View	2500	<input type="checkbox"/>	Contact TI Distributor or Sales Office
SN74AHC86DRE4	ACTIVE	-40 to 85	0.15 1KU	SOIC (D) 14	View	2500	<input type="checkbox"/>	Request Free Samples
SN74AHC86N	ACTIVE	-40 to 85	0.23 1KU	PDIP (N) 14	View	25	<input type="checkbox"/>	Contact TI Distributor or Sales Office
SN74AHC86NSR	ACTIVE	-40 to 85	0.15 1KU	SO (NS) 14	View	2000	<input type="checkbox"/>	Purchase Samples
SN74AHC86NSRE4	ACTIVE	-40 to 85	0.15 1KU	SO (NS) 14	View	2000	<input type="checkbox"/>	Purchase Samples
SN74AHC86PW	ACTIVE	-40 to 85	0.15 1KU	TSSOP (PW) 14	View	90	<input type="checkbox"/>	Purchase Samples
SN74AHC86PWE4	ACTIVE	-40 to 85	0.15 1KU	TSSOP (PW) 14	View	90	<input type="checkbox"/>	Purchase Samples
SN74AHC86PWLE	OBSOLETE	-40 to 85		TSSOP (PW) 14	View		<input type="checkbox"/>	Not Available
SN74AHC86PWR	ACTIVE	-40 to 85	0.15 1KU	TSSOP (PW) 14	View	2000	<input type="checkbox"/>	Contact TI Distributor or Sales Office
SN74AHC86PWRE4	ACTIVE	-40 to 85	0.15 1KU	TSSOP (PW) 14	View	2000	<input type="checkbox"/>	Request Free Samples
SN74AHC86RGYR	ACTIVE	-40 to 85	0.33 1KU	QFN (RGY) 14	View	1000		Request Free Samples

Inventory

	TI Inventory Status			Reported Distributor Inventory			
SN74AHC86D	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	0*	>10k 6 Mar	14 Weeks	Americas	Avnet	642	<input type="text"/>
					DigiKey	>1k	<input type="text"/>
				Asia	P&S	>1k	<input type="text"/>
				Europe	Arrow Northern Europe	350	<input type="text"/>
					Avnet-SILICA	350	<input type="text"/>
SN74AHC86DBR	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase

View all Distributors

Choose a Region



	0*	653 27 Dec	10 Weeks	Americas	DigiKey	872	<input type="text"/>
		555 3 Jan					
		692 10 Jan					
		838 7 Feb					
		>10k 14 Feb					
SN74AHC86DBRE4	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	0*	653 27 Dec	10 Weeks	None Reported View Distributors			
		555 3 Jan					
		692 10 Jan					
		838 7 Feb					
		>10k 14 Feb					
SN74AHC86DE4	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	0*	>10k 6 Mar	14 Weeks	None Reported View Distributors			
SN74AHC86DGVR	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	0*	898 29 Dec	10 Weeks	None Reported View Distributors			
		698 5 Jan					
		487 12 Jan					
		650 26 Jan					
		>10k 9 Feb					
SN74AHC86DGVRE4	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	0*	898 29 Dec	10 Weeks	None Reported View Distributors			
		698 5 Jan					
		487 12 Jan					
		650 26 Jan					
		>10k 9 Feb					
SN74AHC86DR	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	10k*	>10k 3 Mar	10 Weeks	Americas	DigiKey	>1k	<input type="text"/>
SN74AHC86DRE4	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	10k*	>10k 3 Mar	10 Weeks	None Reported View Distributors			
SN74AHC86N	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	75*	>10k 12 Dec	10 Weeks	Americas	DigiKey	4	<input type="text"/>
					Newark InOne	882	<input type="text"/>
				Asia	P&S	605	<input type="text"/>
				Europe	Spoerle	24	<input type="text"/>
SN74AHC86NSR	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase

	2000*	1589 30 Nov	10 Weeks	None Reported View Distributors			
		391 6 Jan					
		264 13 Jan					
		625 20 Jan					
		968 27 Jan					
SN74AHC86NSRE4	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	2000*	1589 30 Nov	10 Weeks	None Reported View Distributors			
		391 6 Jan					
		264 13 Jan					
		625 20 Jan					
		968 27 Jan					
SN74AHC86PW	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	0*	608 30 Nov	12 Weeks	Europe	Spoerle	592	<input type="text"/>
		>10k 3 Apr					
SN74AHC86PWE4	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	0*	608 30 Nov	12 Weeks	None Reported View Distributors			
		>10k 3 Apr					
SN74AHC86PWR	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	0*	6000 13 Mar	15 Weeks	Americas	DigiKey	>1k	<input type="text"/>
				Europe	Abacus Polar	>1k	<input type="text"/>
SN74AHC86PWRE4	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	0*	6000 13 Mar	15 Weeks	None Reported View Distributors			
SN74AHC86RGYR	As of 9:20 AM GMT, 29 Nov 2005			As of 9:20 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	0*	>10k 9 Jan	8 Weeks	Americas	DigiKey	28	<input type="text"/>

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Quality & Lead (Pb)-Free Data

Device	Product Content			MTBF/FIT Rate	
	Eco Plan*	Lead/Ball Finish	MSL Rating/Peak Reflow	Details	Details
SN74AHC86D <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	View	View
SN74AHC86DBR <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	View	View
SN74AHC86DBRE4 <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	View	View
SN74AHC86DE4 <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	View	View
SN74AHC86DGVR <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	View	View
SN74AHC86DGVRE4 <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	View	View
SN74AHC86DR <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	View	View
SN74AHC86DRE4 <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	View	View
SN74AHC86N <input type="checkbox"/>	Pb-Free (RoHS)	CU NIPDAU	Level-NC-NC-NC	View	View
SN74AHC86NSR <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	View	View
SN74AHC86NSRE4 <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	View	View
SN74AHC86PW <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	View	View
SN74AHC86PWE4 <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	View	View
SN74AHC86PWR <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	View	View
SN74AHC86PWRE4 <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	View	View
SN74AHC86RGYR <input type="checkbox"/>	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1YEAR	View	View

* The planned eco-friendly classification: Pb-Free (RoHS) or Green (RoHS & no Sb/Br) - please click on the Product Content Details "View" link in the table above for the latest availability information and additional product content details.

If the information you are requesting is not available online at this time, contact one of our [Product Information Centers](#) regarding the availability of this information.

Technical Documents

Datasheets	Keep track of what's new
SN54AHC86, SN74AHC86 (Rev. I) (sn74ahc86.pdf, 639 KB) 03 Jul 2003 Download	
Application Notes	
Semiconductor Packing Material Electrostatic Discharge (ESD) Protection (szza047.htm, 9 KB) 08 Jul 2004 Abstract	
Selecting the Right Level Translation Solution (Rev. A) (scea035a.htm, 9 KB) 22 Jun 2004 Abstract	
Shelf-Life Evaluation of Lead-Free Component Finishes (szza046.htm, 9 KB) 24 May 2004 Abstract	
Understanding and Interpreting Standard-Logic Data Sheets (Rev. B) (szza036b.htm, 8 KB) 28 May 2003 Abstract	
Advanced High-Speed CMOS (AHC) Logic Family (Rev. C) (scaa034c.htm, 9 KB) 02 Dec 2002 Abstract	
Texas Instruments Little Logic Application Report (scea029.htm, 9 KB) 01 Nov 2002 Abstract	
TI IBIS File Creation, Validation, and Distribution Processes (szza034.htm, 9 KB) 29 Aug 2002 Abstract	
Benefits & Issues of Migrating 5-V and 3.3-V Logic to Lower-Voltage Supplies (Rev. A) (sdaa011a.htm, 10 KB) 08 Sep 1999 Abstract	
Implications of Slow or Floating CMOS Inputs (Rev. C) (scba004c.htm, 9 KB) 01 Feb 1998 Abstract	
Bus-Interface Devices With Output-Damping Resistors Or Reduced-Drive Outputs (Rev. A) (scba012a.htm, 9 KB) 01 Aug 1997 Abstract	
CMOS Power Consumption and CPD Calculation (Rev. B) (scaa035b.htm, 9 KB) 01 Jun 1997 Abstract	
Live Insertion (sdya012.htm, 9 KB) 01 Oct 1996 Abstract	
View Application Notes for EXCLUSIVE OR GATES (XOR)	
User Guides	
LOGIC Pocket Data Book (scyd013.pdf, 4835 KB) 05 Dec 2002 Download	
Simulation Models	

IBIS Model

IBIS Model of SN74AHC86 (sclm060.ibs, 179 KB)

02 Nov 2000 [ibis](#) / [zip](#)

More Literature

Logic Selection Guide 2005 (Rev. X) (sdyu001x.pdf, 6909 KB)

15 Mar 2005 [Download](#)

Design Summary for WCSP Little Logic (Rev. B) (scet007b.pdf, 295 KB)

04 Nov 2004 [Download](#)

Military Semiconductors Selection Guide 2004-2005 (Rev. D) (sgyc003d.pdf, 964 KB)

10 Aug 2004 [Download](#)

Logic Cross-Reference (Rev. A) (scyb017a.pdf, 2938 KB)

07 Oct 2003 [Download](#)

AHC/AHCT Designer's Guide February 2000 (Rev. D) (scla013d.htm, 9 KB)

24 Feb 2000 [Abstract](#)

Military Advanced High-Speed CMOS Logic (AHC/AHCT) (sgyn133.pdf, 85 KB)

01 Apr 1998 [Download](#)

Military Advanced High-Speed CMOS Logic (AHC/AHCT) (Rev. C) (sgyv014c.pdf, 30 KB)

01 Apr 1998 [Download](#)

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