捷多邦,专业PCB打柱SN54AH@TO&LSN74AHCT08 QUADRUPLE 2-INPUT POSITIVE-AND GATES

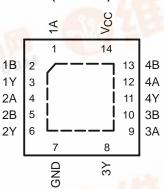
SCLS237L - OCTOBER 1995 - REVISED JULY 2003

- Inputs Are TTL-Voltage Compatible
- 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)

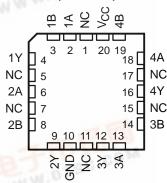
SN54AHCT08...J OR W PACKAGE SN74AHCT08 . . . D, DB, DGV, N, NS, **OR PW PACKAGE** (TOP VIEW)



SN74AHCT08...RGY PACKAGE (TOP VIEW)



SN54AHCT08 . . . FK PACKAGE (TOP VIEW)



NC - No internal connection

description/ordering information

The 'AHCT08 devices are quadruple 2-input positive-AND gates. These devices perform the Boolean function $Y = A \bullet B \text{ or } Y = \overline{A} + \overline{B} \text{ in positive logic.}$

ORDERING INFORMATION

TA	PACKA	∖GE†	ORDERABLE PART NUMBER	TOP-SIDE MARKING	
	QFN – RGY	Tape and reel	SN74AHCT08RGYR	HB08	
	PDIP – N	Tube	SN74AHCT08N	SN74AHCT08N	
	SOIC - D	Tube	SN74AHCT08D	AHCT08	
	30IC = D	Tape and reel	SN74AHCT08DR	Anctio	
–40°C to 85°C	SOP - NS	Tape and reel	SN74AHCT08NSR	AHCT08	
The Country Lie	SSOP – DB	Tape and reel	SN74AHCT08DBR	HB08	
THE W	TSSOP – PW	Tube	SN74AHCT08PW	HB08	
T. 1-	1330F - FW	Tape and reel	SN74AHCT08PWR	ПВОО	
	TVSOP – DGV	Tape and reel	SN74AHCT08DGVR	HB08	
	CDIP – J	Tube	SNJ54AHCT08J	SNJ54AHCT08J	
–55°C to 125°C	CFP – W	Tube	SNJ54AHCT08W	SNJ54AHCT08W	
	LCCC – FK	Tube	SNJ54AHCT08FK	SNJ54AHCT08FK	

[†]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.



SN54AHCT08, SN74AHCT08 QUADRUPLE 2-INPUT POSITIVE-AND GATES

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FUNCTION TABLE (each gate)

INP	UTS	OUTPUT
Α	В	Υ
Н	Н	Н
L	Χ	L
Х	L	L

logic diagram, each gate (positive logic)



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

Supply voltage range, V _{CC}	
Output voltage range, VO (see Note 1)	–0.5 V to V_{CC} + 0.5 V
Input clamp current, I _{IK} (V _I < 0)	
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	
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 _{stq}	–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.



SN54AHCT08, SN74AHCT08 QUADRUPLE 2-INPUT POSITIVE-AND GATES

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recommended operating conditions (see Note 4)

		SN54AH0		SN74AI	HCT08	UNIT
		MIN	MAX	MIN	MAX	UNII
Vcc	Supply voltage	4.5	5.5	4.5	5.5	V
VIH	High-level input voltage	2		2		V
V _{IL}	Low-level input voltage		0.8		0.8	V
٧ _I	Input voltage	0	5.5	0	5.5	V
٧o	Output voltage	0	VCC	0	VCC	V
ІОН	High-level output current		-8		-8	mA
lOL	Low-level output current		8		8	mA
Δt/Δν	Input transition rise or fall rate		20		20	ns/V
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	T,	Δ = 25°C	;	SN54A	НСТ08	SN74AI	HCT08	UNIT
PARAMETER	TEST CONDITIONS	vcc	MIN	TYP	MAX	MIN	MAX	MIN	MAX	UNII
Vou	I _{OH} = -50 μA	4.5 V	4.4	4.5		4.4		4.4		V
VOH	I _{OH} = -8 mA	4.5 V	3.94			3.8		3.8		V
Voi	I _{OL} = 50 μA	4.5 V			0.1		0.1		0.1	V
VOL	I _{OL} = 8 mA	4.5 V			0.36		0.44		0.44	V
lį	V _I = 5.5 V or GND	0 V to 5.5 V			±0.1		±1*		±1	μΑ
Icc	$V_I = V_{CC}$ or GND, $I_O = 0$	5.5 V			2		20		20	μΑ
ΔI _{CC} †	One input at 3.4 V, Other inputs at V _{CC} or GND	5.5 V			1.35		1.5		1.5	mA
Ci	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 $V_{CC} = 0 \text{ V}$.

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

PARAMETER	FROM	то	LOAD CAPACITANCE	T _A = 25°C			SN54AHCT08		SN74AHCT08		UNIT		
FARAMETER	(INPUT)	(OUTPUT)		MIN	TYP	MAX	MIN	MAX	MIN	MAX			
^t PLH	A or B	V	Cı = 15 pF		5**	6.9**	1**	8**	1	8	no		
^t PHL		1	CL = 15 pr		5**	6.9**	1**	8**	1	8	ns		
^t PLH	A or B	A == D	A == D	V	0. 50.55		5.5	7.9	1	9	1	9	20
^t PHL	AUID	Ĭ	C _L = 50 pF		5.5	7.9	1	9	1	9	ns		

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



[†] This is the increase in supply current for each input at one of the specified TTL voltage levels, rather than 0 V or VCC.

SN54AHCT08, SN74AHCT08 QUADRUPLE 2-INPUT POSITIVE-AND GATES

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noise characteristics, V_{CC} = 5 V, C_L = 50 pF, T_A = 25°C (see Note 5)

	PARAMETER	SN7	UNIT		
	PARAMETER	MIN	TYP	MAX	UNII
V _{OL(P)}	Quiet output, maximum dynamic VOL		0.4	0.8	V
V _{OL(V)}	Quiet output, minimum dynamic V _{OL}		-0.4	-0.8	V
V _{OH(V)}	Quiet output, minimum dynamic V _{OH}	4.4			V
V _{IH(D)}	High-level dynamic input voltage	2			V
V _{IL(D)}	Low-level dynamic input voltage			0.8	V

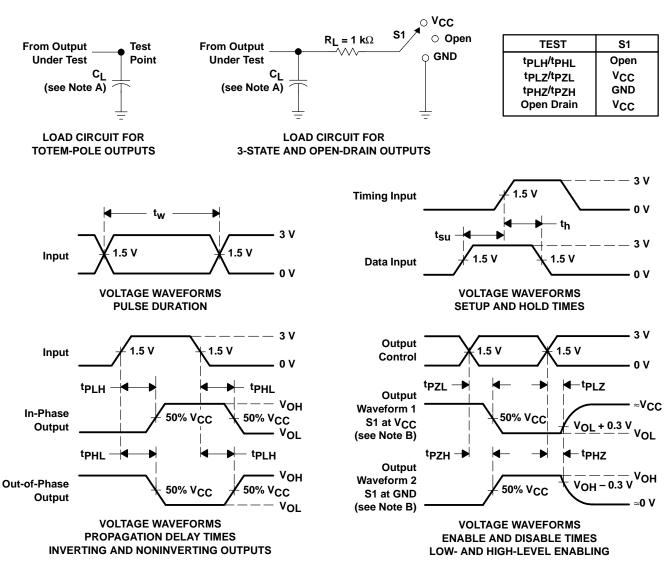
NOTE 5: Characteristics are for surface-mount packages only.

operating characteristics, V_{CC} = 5 V, T_A = 25°C

	PARAMETER	TEST CO	ONDITIONS	TYP	UNIT
C _{pd}	Power dissipation capacitance	No load,	f = 1 MHz	18	pF

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PARAMETER MEASUREMENT INFORMATION



NOTES: A. C_I 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, $Z_Q = 50 \Omega$, $t_f \leq$ 3 ns.
- $\label{eq:defD} \textbf{D.} \quad \text{The outputs are measured one at a time with one input transition per measurement.}$
- E. All parameters and waveforms are not applicable to all devices.

Figure 1. Load Circuit and Voltage Waveforms







6-Dec-2006

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	e Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp (3)
5962-9682101Q2A	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type
5962-9682101QCA	ACTIVE	CDIP	J	14	1	TBD	A42 SNPB	N / A for Pkg Type
5962-9682101QDA	ACTIVE	CFP	W	14	1	TBD	A42	N / A for Pkg Type
5962-9682101VCA	ACTIVE	CDIP	J	14	1	TBD	A42 SNPB	N / A for Pkg Type
5962-9682101VDA	ACTIVE	CFP	W	14	1	TBD	A42	N / A for Pkg Type
SN74AHCT08D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DBLE	OBSOLETE	SSOP	DB	14		TBD	Call TI	Call TI
SN74AHCT08DBR	ACTIVE	SSOP	DB	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DBRE4	ACTIVE	SSOP	DB	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DE4	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DG4	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DGVR	ACTIVE	TVSOP	DGV	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DGVRE4	ACTIVE	TVSOP	DGV	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DRE4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DRG4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08N	ACTIVE	PDIP	N	14	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type
SN74AHCT08NE4	ACTIVE	PDIP	N	14	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type
SN74AHCT08NSR	ACTIVE	SO	NS	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08NSRG4	ACTIVE	SO	NS	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08PW	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08PWE4	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08PWG4	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08PWLE	OBSOLETE	TSSOP	PW	14		TBD	Call TI	Call TI
SN74AHCT08PWR	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08PWRE4	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08PWRG4	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08RGYR	ACTIVE	QFN	RGY	14	1000	Green (RoHS &	CU NIPDAU	Level-2-260C-1YEAR



PACKAGE OPTION ADDENDUM

6-Dec-2006

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Packag Qty	e Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
						no Sb/Br)		
SN74AHCT08RGYRG4	ACTIVE	QFN	RGY	14	1000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1YEAR
SNJ54AHCT08FK	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type
SNJ54AHCT08J	ACTIVE	CDIP	J	14	1	TBD	A42 SNPB	N / A for Pkg Type
SNJ54AHCT08W	ACTIVE	CFP	W	14	1	TBD	A42	N / A for Pkg Type

⁽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.

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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), Pb-Free (RoHS Exempt), 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.

Pb-Free (RoHS Exempt): This component has a RoHS exemption for either 1) lead-based flip-chip solder bumps used between the die and package, or 2) lead-based die adhesive used between the die and leadframe. The component is otherwise considered Pb-Free (RoHS compatible) as defined above.

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.

Important Information and Disclaimer: The information provided on this page represents TI's knowledge and belief as of the date that it is provided. TI bases its knowledge and belief on information provided by third parties, and makes no representation or warranty as to the accuracy of such information. Efforts are underway to better integrate information from third parties. TI has taken and continues to take reasonable steps to provide representative and accurate information but may not have conducted destructive testing or chemical analysis on incoming materials and chemicals. TI and TI suppliers consider certain information to be proprietary, and thus CAS numbers and other limited information may not be available for release.

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14-Aug-2007

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	e Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp (3)
5962-9682101Q2A	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type
5962-9682101QCA	ACTIVE	CDIP	J	14	1	TBD	A42 SNPB	N / A for Pkg Type
5962-9682101QDA	ACTIVE	CFP	W	14	1	TBD	A42	N / A for Pkg Type
5962-9682101VCA	ACTIVE	CDIP	J	14	1	TBD	A42 SNPB	N / A for Pkg Type
5962-9682101VDA	ACTIVE	CFP	W	14	1	TBD	A42	N / A for Pkg Type
SN74AHCT08D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DBLE	OBSOLETE	SSOP	DB	14		TBD	Call TI	Call TI
SN74AHCT08DBR	ACTIVE	SSOP	DB	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DBRE4	ACTIVE	SSOP	DB	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DBRG4	ACTIVE	SSOP	DB	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DE4	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DG4	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DGVR	ACTIVE	TVSOP	DGV	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DGVRE4	ACTIVE	TVSOP	DGV	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DGVRG4	ACTIVE	TVSOP	DGV	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DRE4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08DRG4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08N	ACTIVE	PDIP	N	14	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type
SN74AHCT08NE4	ACTIVE	PDIP	N	14	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type
SN74AHCT08NSR	ACTIVE	SO	NS	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08NSRG4	ACTIVE	SO	NS	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08PW	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08PWE4	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08PWG4	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08PWLE	OBSOLETE	TSSOP	PW	14		TBD	Call TI	Call TI
SN74AHCT08PWR	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08PWRE4	ACTIVE	TSSOP	PW	14	2000	Green (RoHS &	CU NIPDAU	Level-1-260C-UNLIM



PACKAGE OPTION ADDENDUM

14-Aug-2007

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	e Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
						no Sb/Br)		
SN74AHCT08PWRG4	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74AHCT08RGYR	ACTIVE	QFN	RGY	14	1000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
SN74AHCT08RGYRG4	ACTIVE	QFN	RGY	14	1000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
SNJ54AHCT08FK	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type
SNJ54AHCT08J	ACTIVE	CDIP	J	14	1	TBD	A42 SNPB	N / A for Pkg Type
SNJ54AHCT08W	ACTIVE	CFP	W	14	1	TBD	A42	N / A for Pkg Type

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

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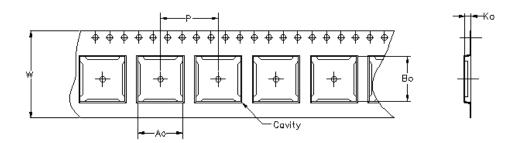
Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

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

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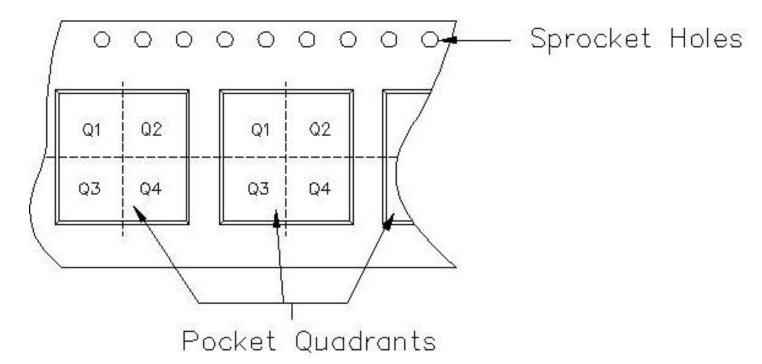
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16-Jul-2007



Carrier tape design is defined largely by the component lentgh, width, and thickness.

	E 4		_				
IAo :	= Dimension	desianed	to	accommodate	the	component	width.
Bo =	= Dimension	designed	to	accommodate	the	component	length.
Ko =	= Dimension	designed	to	accommodate	the	component	thickness.
W = Overall width of the carrier tape.							
D. BULLIA I. III.							
P = Pitch between successive cavity centers.							



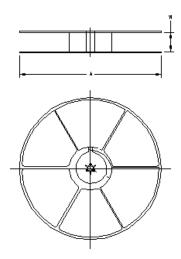
TAPE AND REEL INFORMATION



PACKAGE MATERIALS INFORMATION

16-Jul-2007

Device	Package	Pins		Reel Diameter (mm)	Reel Width (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
SN74AHCT08DBR	DB	14	MLA	330	16	8.2	6.6	2.5	12	16	Q1
SN74AHCT08DGVR	DGV	14	MLA	330	12	6.8	4.0	1.6	8	16	Q1
SN74AHCT08DR	D	14	MLA	330	16	6.5	9.0	2.1	8	16	Q1
SN74AHCT08NSR	NS	14	MLA	330	16	8.2	10.5	2.5	12	16	Q1
SN74AHCT08PWR	PW	14	MLA	330	12	7.0	5.6	1.6	8	12	Q1
SN74AHCT08RGYR	RGY	14	MLA	180	12	3.85	3.85	1.35	8	12	Q1



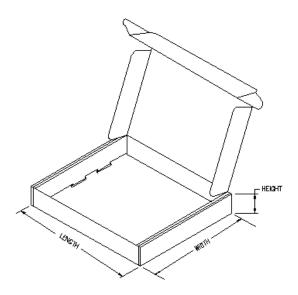
TAPE AND REEL BOX INFORMATION

Device	Package	Pins	Site	Length (mm)	Width (mm)	Height (mm)
SN74AHCT08DBR	DB	14	MLA	346.0	346.0	33.0
SN74AHCT08DGVR	DGV	14	MLA	346.0	346.0	29.0
SN74AHCT08DR	D	14	MLA	346.0	346.0	33.0
SN74AHCT08NSR	NS	14	MLA	346.0	346.0	33.0
SN74AHCT08PWR	PW	14	MLA	346.0	346.0	29.0
SN74AHCT08RGYR	RGY	14	MLA	190.0	212.7	31.75

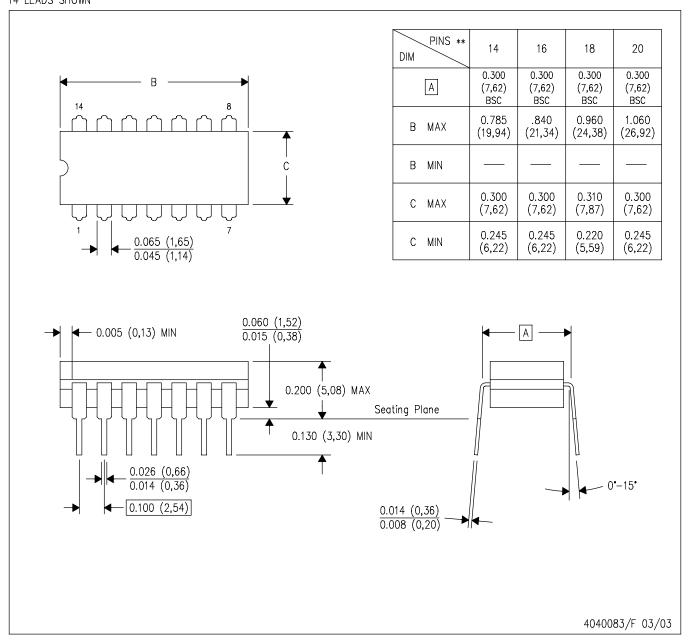


PACKAGE MATERIALS INFORMATION

16-Jul-2007



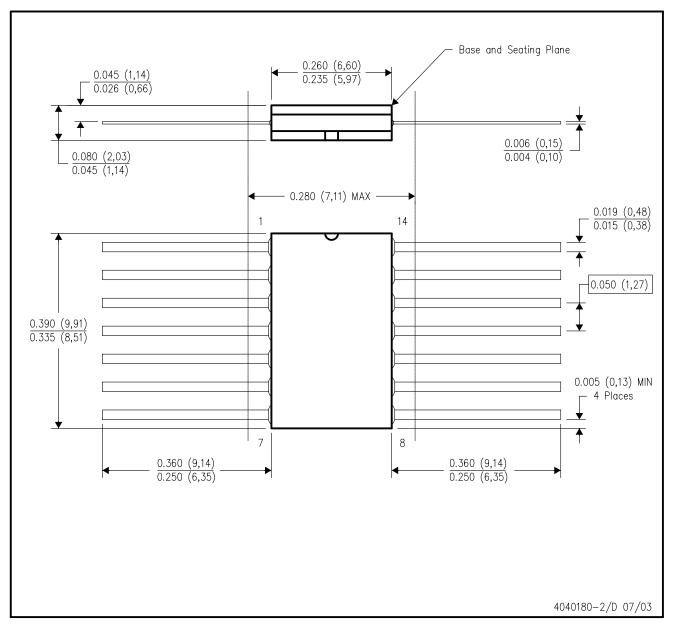
14 LEADS SHOWN



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

W (R-GDFP-F14)

CERAMIC DUAL FLATPACK



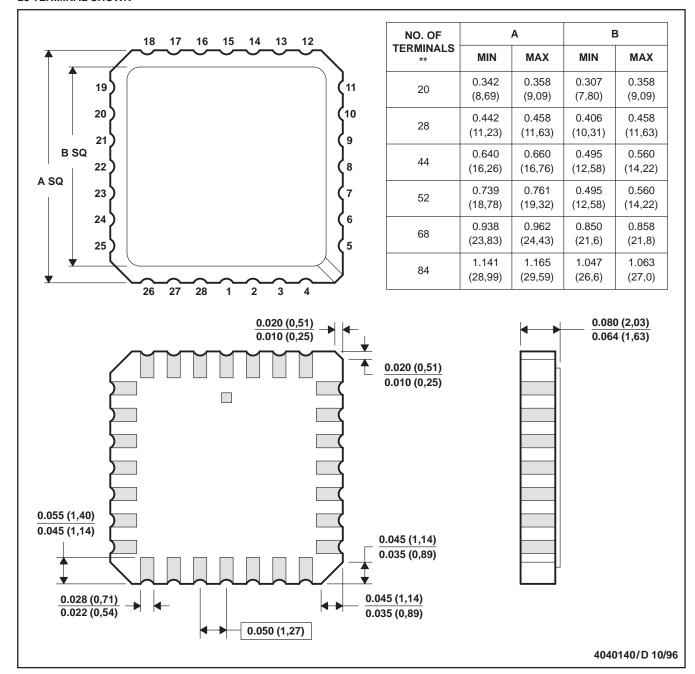
- A. All linear dimensions are in inches (millimeters).
- B. This drawing is subject to change without notice.
- C. This package can be hermetically sealed with a ceramic lid using glass frit.
- D. Index point is provided on cap for terminal identification only.
- E. Falls within MIL STD 1835 GDFP1-F14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



FK (S-CQCC-N**)

28 TERMINAL SHOWN

LEADLESS CERAMIC CHIP CARRIER



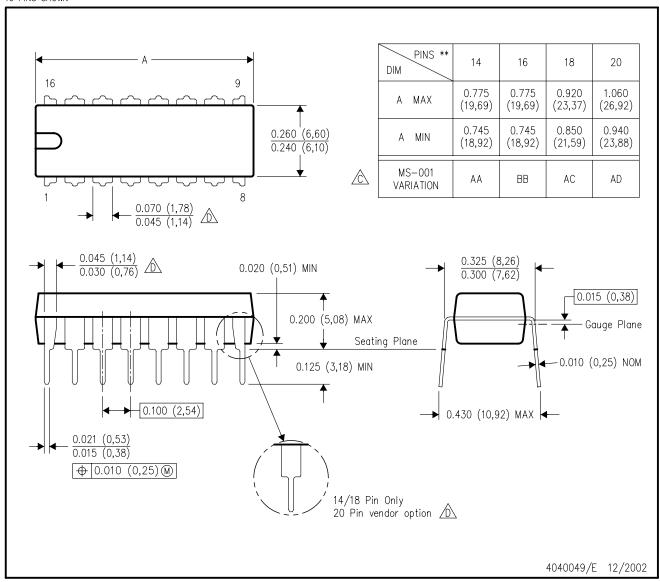
- NOTES: A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a metal lid.
 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004



N (R-PDIP-T**)

PLASTIC DUAL-IN-LINE PACKAGE

16 PINS SHOWN

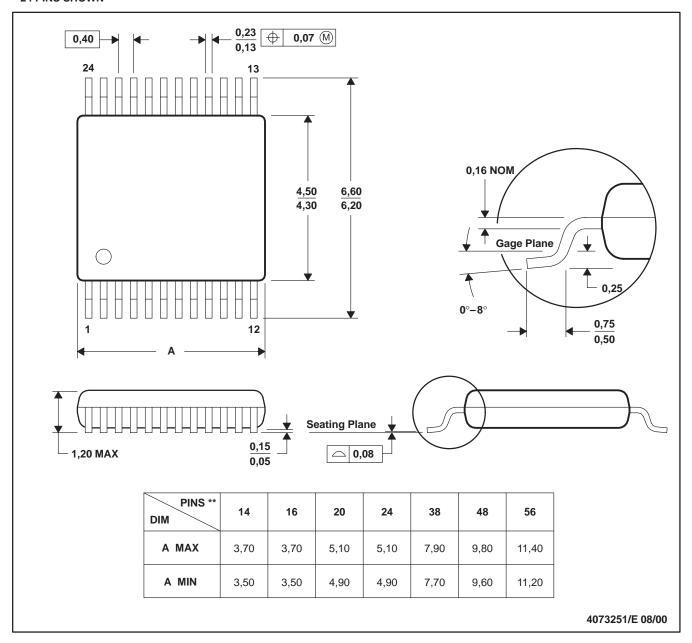


- A. All linear dimensions are in inches (millimeters).
- B. This drawing is subject to change without notice.
- Falls within JEDEC MS-001, except 18 and 20 pin minimum body length (Dim A).
- The 20 pin end lead shoulder width is a vendor option, either half or full width.

DGV (R-PDSO-G**)

24 PINS SHOWN

PLASTIC SMALL-OUTLINE



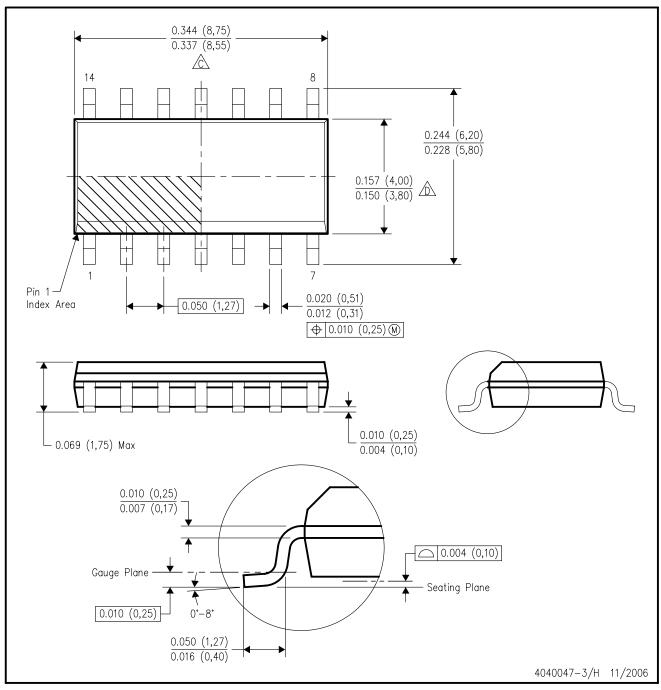
NOTES: A. All linear dimensions are in millimeters.

- 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



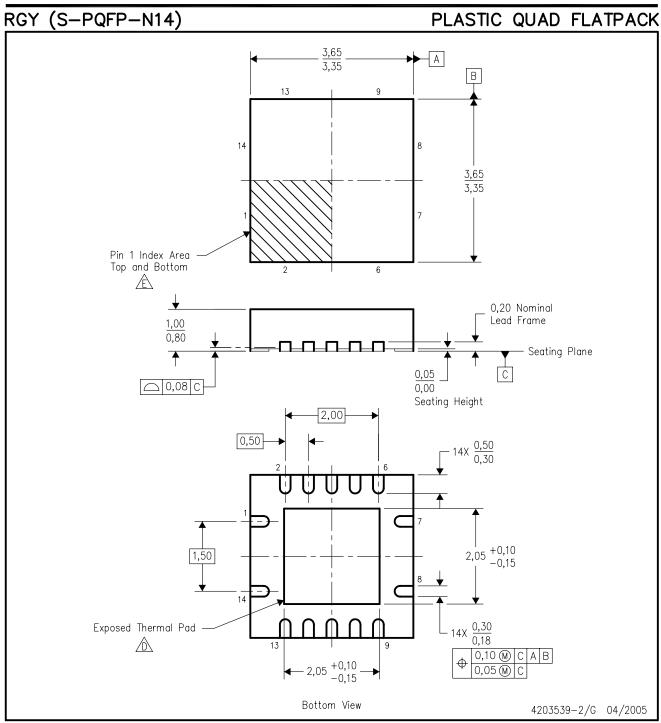
D (R-PDSO-G14)

PLASTIC SMALL-OUTLINE PACKAGE



- A. All linear dimensions are in inches (millimeters).
- B. This drawing is subject to change without notice.
- Body length does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed .006 (0,15) per end.
- Body width does not include interlead flash. Interlead flash shall not exceed .017 (0,43) per side.
- E. Reference JEDEC MS-012 variation AB.





NOTES: A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.

- B. This drawing is subject to change without notice.
- C. 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.
- F. Package complies to JEDEC MO-241 variation BA.





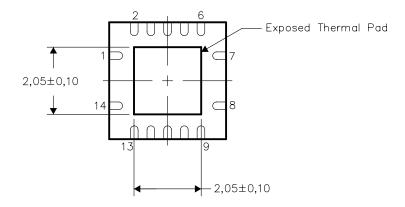
THERMAL PAD MECHANICAL DATA RGY (S-PQFP-N14)

THERMAL INFORMATION

This package incorporates an exposed thermal pad that is designed to be attached directly to an external heatsink. The thermal pad must be soldered directly to the printed circuit board (PCB). After soldering, the PCB can be used as a heatsink. In addition, through the use of thermal vias, the thermal pad can be attached directly to a ground or power plane (whichever is applicable), or alternatively, a special heatsink structure designed into the PCB. This design optimizes the heat transfer from the integrated circuit (IC).

For information on the Quad Flatpack No—Lead (QFN) package and its advantages, refer to Application Report, Quad Flatpack No—Lead Logic Packages, Texas Instruments Literature No. SCBA017. This document is available at www.ti.com.

The exposed thermal pad dimensions for this package are shown in the following illustration.

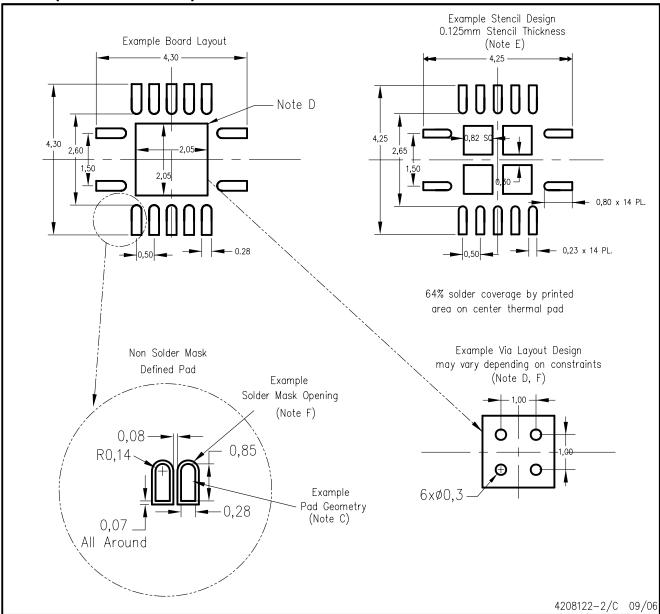


Bottom View

NOTE: All linear dimensions are in millimeters

Exposed Thermal Pad Dimensions

RGY (R-PQFP-N14)



NOTES: A.

- A. All linear dimensions are in millimeters.
- B. This drawing is subject to change without notice.
- C. Publication IPC-7351 is recommended for alternate designs.
- D. This package is designed to be soldered to a thermal pad on the board. Refer to Application Note, Quad Flat—Pack Packages, Texas Instruments Literature No. SCBA017, SLUA271, and also the Product Data Sheets for specific thermal information, via requirements, and recommended board layout. These documents are available at www.ti.com http://www.ti.com.
- E. Laser cutting apertures with trapezoidal walls and also rounding corners will offer better paste release. Customers should contact their board assembly site for stencil design recommendations. Refer to IPC 7525 for stencil design considerations.
- F. Customers should contact their board fabrication site for minimum solder mask web tolerances between signal pads.

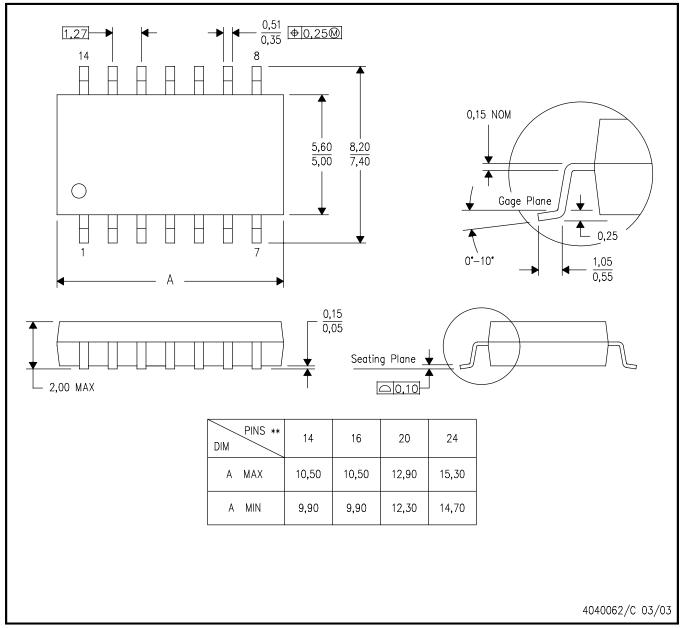


MECHANICAL DATA

NS (R-PDSO-G**)

14-PINS SHOWN

PLASTIC SMALL-OUTLINE PACKAGE



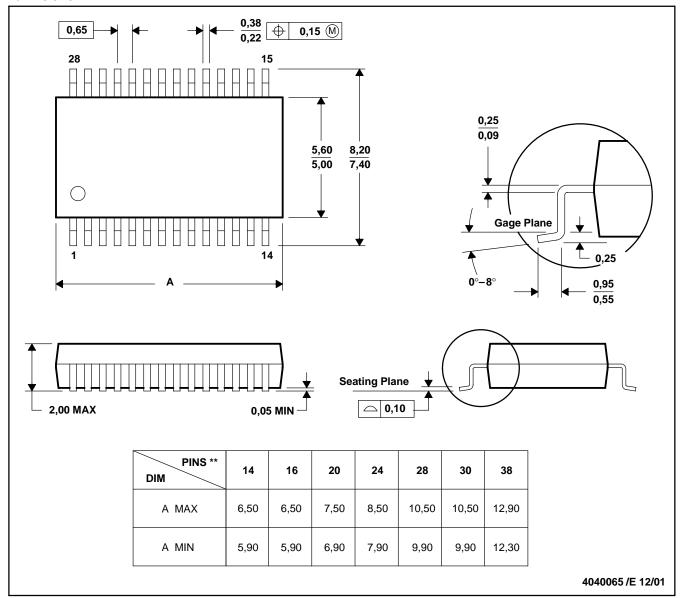
- . All linear dimensions are in millimeters.
- B. This drawing is subject to change without notice.
- C. Body dimensions do not include mold flash or protrusion, not to exceed 0,15.



DB (R-PDSO-G**)

PLASTIC SMALL-OUTLINE

28 PINS SHOWN



NOTES: A. All linear dimensions are in millimeters.

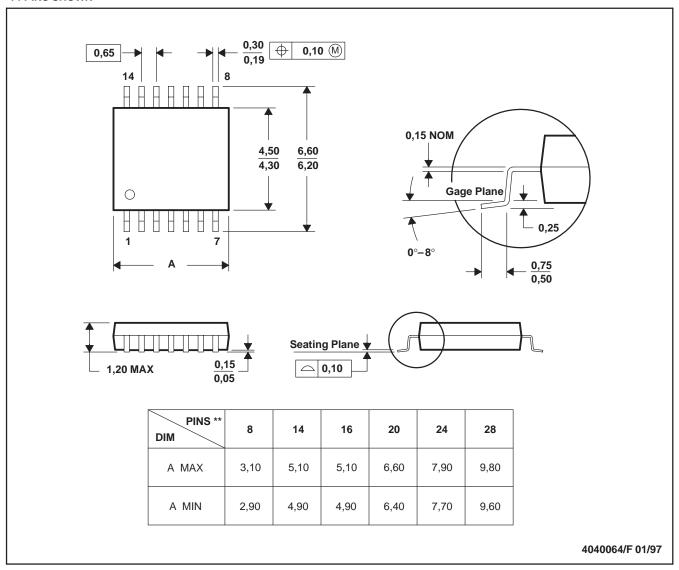
- B. This drawing is subject to change without notice.
- C. Body dimensions do not include mold flash or protrusion not to exceed 0,15.
- D. Falls within JEDEC MO-150



PW (R-PDSO-G**)

14 PINS SHOWN

PLASTIC SMALL-OUTLINE PACKAGE



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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