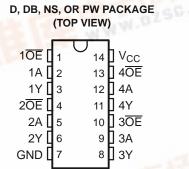
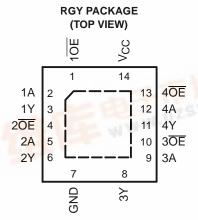
# WITH 3-STATE OUTPUTS

SCES629A-MAY 2005-REVISED AUGUST 2005

#### **FEATURES**

- Inputs Are TTL-Voltage Compatible
- 4.5-V to 5.5-V V<sub>CC</sub> Operation
- Typical t<sub>pd</sub> of 3.8 ns at 5 V
- Typical Volp (Output Ground Bounce) <0.8 V at  $V_{CC} = 5 \text{ V}, T_A = 25^{\circ}\text{C}$
- Typical  $V_{OHV}$  (Output  $V_{OH}$  Undershoot) >2.3 V at  $V_{CC}$  = 5 V,  $T_A$  = 25°C
- Support Mixed-Mode Voltage Operation on All **Ports**
- Ioff Supports Partial-Power-Down Mode Operation
- 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/ORDERING INFORMATION**

The SN74LV125AT is a quadruple bus buffer gate. This device features independent line drivers with 3-state outputs. Each output is disabled when the associated output-enable  $(\overline{OE})$  input is high.

To ensure the high-impedance state during power up or power down, OE should be tied to V<sub>CC</sub> through a pullup resistor; the minimum value of the resistor is determined by the current-sinking capability of the driver.

This device is fully specified for partial-power-down applications using loff. The loff circuitry disables the outputs, preventing damaging current backflow through the device when it is powered down.

#### ORDERING INFORMATION

T <sub>A</sub>	P	ACKAGE <sup>(1)</sup>	ORDERABLE PART NUMBER	TOP-SIDE MARKING			
	QFN – RGY	Reel of 1000	VV125				
	SOIC – D	Tube of 50	SN74LV125ATD	- 1-7 EB			
	30IC - D	Reel of 2500	SN74LV125ATDR	TIDIOM			
	SOP - NS	Tube of 50	SN74LV125ATNS	W. DZSC.COM			
–40°C to 85°C		Reel of 2000	101 40 -				
-40 C to 65 C	SSOP – DB	Tube of 80	SN74LV125ATDB	LV125AT			
	330F - DB	Reel of 2000	Reel of 2000 SN74LV125ATDBR				
	(10)	Tube of 90	SN74LV125ATPW				
	TSSOP - PW	Reel of 2000	SN74LV125ATPWR				
	W W	Reel of 250	SN74LV125ATPWT				

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



df.dzsc.com

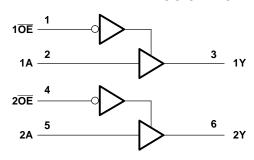
Please be aware that an important notice concerning availability, standard warranty, and use in critical applications of Texas Instruments semiconductor products and disclaimers thereto appears at the end of this data sheet.

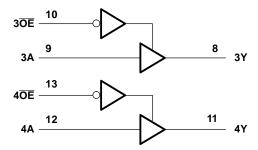


# FUNCTION TABLE (EACH BUFFER)

INP	INPUTS					
ŌĒ	Α	Υ				
L	Н	Н				
L	L	L				
Н	Χ	Z				

### **LOGIC DIAGRAM (POSITIVE LOGIC)**





### **Absolute Maximum Ratings**(1)

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

			MIN	MAX	UNIT	
$V_{CC}$	Supply voltage range		-0.5	7	V	
VI	Input voltage range <sup>(2)</sup>		-0.5	7	V	
Vo	Voltage range applied to any output in the high-impedar	nce or power-off state <sup>(2)</sup>	-0.5	7	V	
Vo	Output voltage range <sup>(2)(3)</sup>		-0.5	V <sub>CC</sub> + 0.5	V	
I <sub>IK</sub>	Input clamp current	V <sub>I</sub> < 0		-20	mA	
I <sub>OK</sub>	Output clamp current	$V_O < 0$ or $V_O > V_{CC}$		±50	mA	
Io	Continuous output current	$V_O = 0$ to $V_{CC}$		±35	mA	
	Continuous current through V <sub>CC</sub> or GND			±70	mA	
		D package <sup>(4)</sup>		86		
		DB package <sup>(4)</sup>		96		
$\theta_{JA}$	Package thermal impedance	NS package (4)		76	°C/W	
		PW package <sup>(4)</sup>		113		
		RGY package <sup>(5)</sup>		47		
T <sub>stg</sub>	Storage temperature range	·	-65	150	°C	

<sup>(1)</sup> 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.

<sup>(2)</sup> The input and output voltage ratings may be exceeded if the input and output current ratings are observed.

<sup>(3)</sup> This value is limited to 5.5 V maximum.

<sup>(4)</sup> The package thermal impedance is calculated in accordance with JESD 51-7.

<sup>(5)</sup> The package thermal impedance is calculated in accordance with JESD 51-5.



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Recommended Operating Conditions<sup>(1)</sup>

			MIN	MAX	UNIT
V <sub>CC</sub>	Supply voltage		4.5	5.5	V
V <sub>IH</sub>	High-level input voltage	V <sub>CC</sub> = 4.5 V to 5.5 V	2		V
V <sub>IL</sub>	Low-level input voltage	V <sub>CC</sub> = 4.5 V to 5.5 V		0.8	V
$V_{I}$	Input voltage		0	5.5	V
V	Output valtage	High or low state	0	$V_{CC}$	V
Vo	Output voltage	3-state	0	5.5	
I <sub>OH</sub>	High-level output current	V <sub>CC</sub> = 4.5 V to 5.5 V		-16	mA
I <sub>OL</sub>	Low-level output current	V <sub>CC</sub> = 4.5 V to 5.5 V		16	mA
Δt/Δν	Input transition rise or fall rate	$V_{CC} = 4.5 \text{ V to } 5.5 \text{ V}$		20	ns/V
T <sub>A</sub>	Operating free-air temperature		-40	125	°C

<sup>(1)</sup> 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 <sub>cc</sub>	T,	∖ = 25°C	;	T <sub>A</sub> = -		T <sub>A</sub> = -40°C to 125°C		UNIT
			MIN	TYP	MAX	MIN	MAX	MIN	MAX	
	$I_{OH} = -50 \mu A$	4.5 V	4.4	4.5		4.4		4.4		V
V <sub>OH</sub>	I <sub>OH</sub> = -16 mA	4.5 V	3.8			3.8		3.8		V
\/	$I_{OL} = 50 \mu A$	4.5 V		0	0.1		0.1		0.1	V
$V_{OL}$	I <sub>OL</sub> = 16 mA	4.5 V			0.55		0.55		0.55	V
I <sub>I</sub>	V <sub>I</sub> = 5.5 V or GND	0 to 5.5 V			±0.1		±1		±1	μΑ
I <sub>OZ</sub>	$V_O = V_{CC}$ or GND	5.5 V			±0.25		±2.5		±2.5	μΑ
I <sub>CC</sub>	$V_I = V_{CC}$ or GND, $I_O = 0$	5.5 V			2		20		20	μΑ
$\Delta I_{CC}^{(1)}$	One input at 3.4 V, Other inputs at V <sub>CC</sub> or GND	5.5 V			1.35		1.5		1.5	mA
I <sub>off</sub>	$V_I$ or $V_O = 0$ to 5.5 V	0			0.5		5		5	μΑ
C <sub>i</sub>	V <sub>I</sub> = V <sub>CC</sub> or GND			2						pF

<sup>(1)</sup> This is the increase in supply current for each input at one of the specified TTL voltage levels, rather than 0 V or V<sub>CC</sub>.

### **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	TO (OUTPUT)	LOAD CAPACITANCE	T <sub>A</sub> = 25°C			T <sub>A</sub> = -40°C to 85°C		T <sub>A</sub> = -40°C to 125°C		UNIT
	(INPUT)	(OUTPUT)		MIN	TYP	MAX	MIN	MAX	MIN	MAX	
t <sub>pd</sub>	А	Y	C <sub>L</sub> = 15 pF	1.9	3.8	5.5	1	6.5	1	8.5	ns
t <sub>en</sub>	ŌĒ	Υ	$C_L = 15 pF$	2	3.6	5.1	1	6	1	7.5	ns
t <sub>dis</sub>	ŌĒ	Υ	$C_L = 15 pF$	1.5	3.2	6.8	1	8	1	10	ns
t <sub>pd</sub>	Α	Y	$C_L = 50 pF$	2.9	5.3	7.5	1	8.5	1	10.5	ns
t <sub>en</sub>	ŌĒ	Y	$C_L = 50 pF$	2.8	5.1	7.1	1	8	1	9.5	ns
t <sub>dis</sub>	ŌĒ	Υ	$C_L = 50 pF$	2.8	6.1	8.8	1	10	1	10	ns
t <sub>sk(o)</sub>			$C_L = 50 pF$			1		1		1	ns

### SN74LV125AT QUADRUPLE BUS BUFFER GATE WITH 3-STATE OUTPUTS





### Noise Characteristics<sup>(1)</sup>

 $V_{CC}$  = 5 V,  $C_L$  = 50 pF,  $T_A$  = 25°C

		MIN	TYP	MAX	UNIT
$V_{OL(P)}$	Quiet output, maximum dynamic V <sub>OL</sub>		1.1	1.5	V
$V_{OL(V)}$	Quiet output, minimum dynamic V <sub>OL</sub>		-0.3	-0.8	V
$V_{OH(V)}$	Quiet output, minimum dynamic V <sub>OH</sub>		3		V
$V_{\text{IH}(D)}$	High-level dynamic input voltage	2			V
$V_{IL(D)}$	Low-level dynamic input voltage			0.8	V

<sup>(1)</sup> Characteristics are for surface-mount packages only.

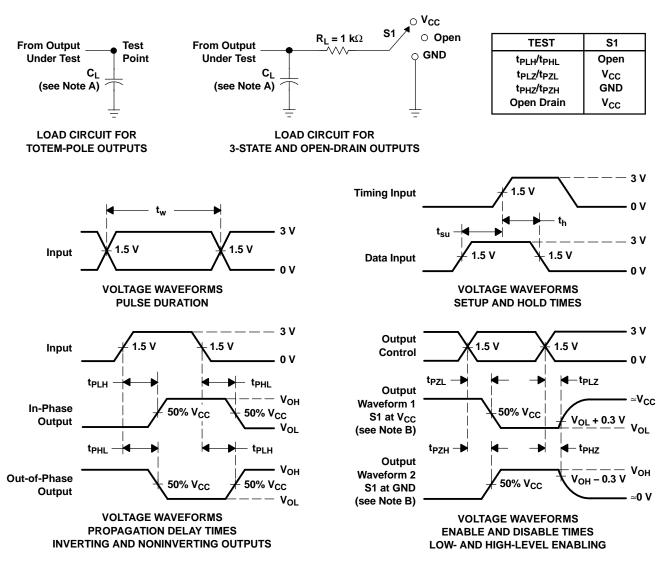
### **Operating Characteristics**

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

	PARAMETER	TEST CONDITIONS	TYP	UNIT	
$C_{pd}$	Power dissipation capacitance	Outputs enabled	$C_L = 50 \text{ pF},  f = 10 \text{ MHz}$	16	pF



#### PARAMETER MEASUREMENT INFORMATION



NOTES: A. C<sub>L</sub> 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.  $t_{PLZ}$  and  $t_{PHZ}$  are the same as  $t_{dis}$ .
- F. t<sub>PZL</sub> and t<sub>PZH</sub> are the same as t<sub>en</sub>.
- G.  $t_{PHL}$  and  $t_{PLH}$  are the same as  $t_{pd}$ .
- H. All parameters and waveforms are not applicable to all devices.

Figure 1. Load Circuits and Voltage Waveforms

### **查询"\$N74LV125AT"供应商**

8-Dec-2009

### **PACKAGING INFORMATION**

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	e Eco Plan <sup>(2)</sup>	Lead/Ball Finish	MSL Peak Temp <sup>(3)</sup>
SN74LV125ATD	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATDB	ACTIVE	SSOP	DB	14	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATDBE4	ACTIVE	SSOP	DB	14	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATDBG4	ACTIVE	SSOP	DB	14	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATDBR	ACTIVE	SSOP	DB	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATDBRE4	ACTIVE	SSOP	DB	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATDBRG4	ACTIVE	SSOP	DB	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATDE4	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATDG4	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATDR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATDRE4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATDRG4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATNS	ACTIVE	SO	NS	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATNSE4	ACTIVE	SO	NS	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATNSG4	ACTIVE	SO	NS	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATNSR	ACTIVE	SO	NS	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATNSRE4	ACTIVE	SO	NS	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATNSRG4	ACTIVE	SO	NS	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATPW	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATPWE4	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATPWG4	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATPWR	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATPWRE4	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATPWRG4	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATPWT	ACTIVE	TSSOP	PW	14	250	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM



#### PACKAGE OPTION ADDENDUM

查询"\$N74LV125AT"供应商

8-Dec-2009

Orderable Device	Status <sup>(1)</sup>	Package Type	Package Drawing	Pins	Package Qty	e Eco Plan <sup>(2)</sup>	Lead/Ball Finish	MSL Peak Temp <sup>(3)</sup>
SN74LV125ATPWTE4	ACTIVE	TSSOP	PW	14	250	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATPWTG4	ACTIVE	TSSOP	PW	14	250	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN74LV125ATRGYR	ACTIVE	VQFN	RGY	14	3000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
SN74LV125ATRGYRG4	ACTIVE	VQFN	RGY	14	3000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR

(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), 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.

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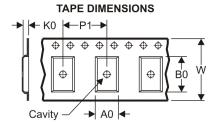
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6-Aug-2010

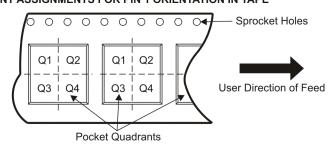
### TAPE AND REEL INFORMATION





	Dimension designed to accommodate the component width
	Dimension designed to accommodate the component length
	Dimension designed to accommodate the component thickness
W	Overall width of the carrier tape
P1	Pitch between successive cavity centers

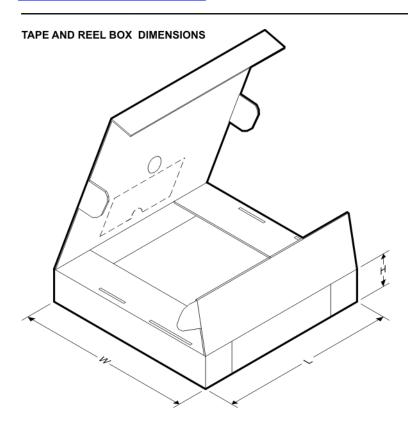
QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE



#### \*All dimensions are nominal

Device	Package Type	Package Drawing		SPQ	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
SN74LV125ATDBR	SSOP	DB	14	2000	330.0	16.4	8.2	6.6	2.5	12.0	16.0	Q1
SN74LV125ATDR	SOIC	D	14	2500	330.0	16.4	6.5	9.0	2.1	8.0	16.0	Q1
SN74LV125ATNSR	SO	NS	14	2000	330.0	16.4	8.2	10.5	2.5	12.0	16.0	Q1
SN74LV125ATPWR	TSSOP	PW	14	2000	330.0	12.4	6.9	5.6	1.6	8.0	12.0	Q1
SN74LV125ATPWT	TSSOP	PW	14	250	330.0	12.4	6.9	5.6	1.6	8.0	12.0	Q1
SN74LV125ATRGYR	VQFN	RGY	14	3000	330.0	12.4	3.75	3.75	1.15	8.0	12.0	Q1

6-Aug-2010

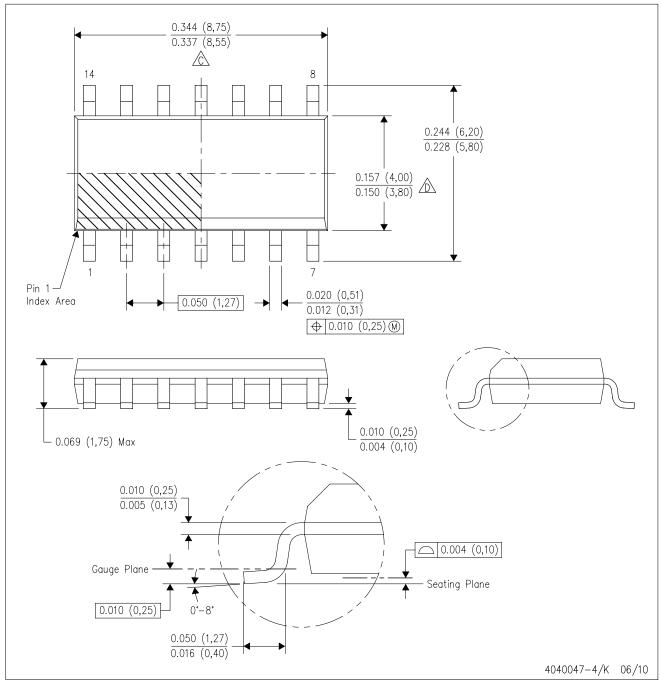


\*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
SN74LV125ATDBR	SSOP	DB	14	2000	346.0	346.0	33.0
SN74LV125ATDR	SOIC	D	14	2500	346.0	346.0	33.0
SN74LV125ATNSR	SO	NS	14	2000	346.0	346.0	33.0
SN74LV125ATPWR	TSSOP	PW	14	2000	346.0	346.0	29.0
SN74LV125ATPWT	TSSOP	PW	14	250	346.0	346.0	29.0
SN74LV125ATRGYR	VQFN	RGY	14	3000	346.0	346.0	29.0

### D (R-PDSO-G14)

### PLASTIC SMALL-OUTLINE PACKAGE

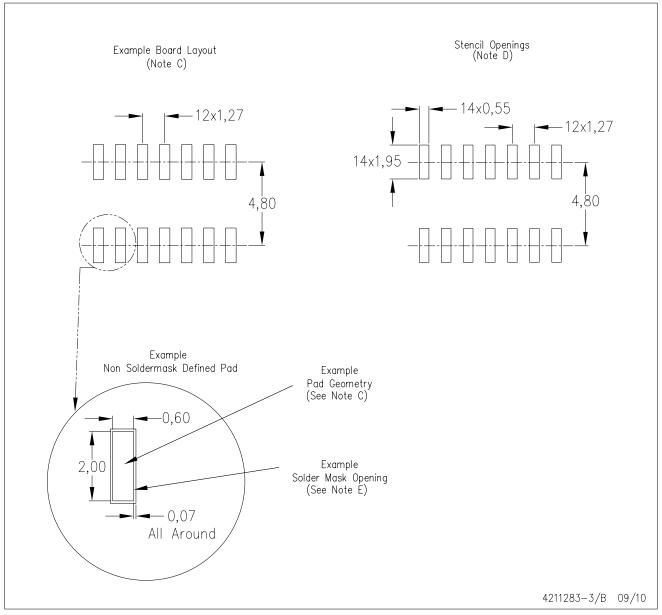


- A. All linear dimensions are in inches (millimeters).
- B. This drawing is subject to change without notice.
- Body length does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed .006 (0,15) per end.
- Body width does not include interlead flash.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



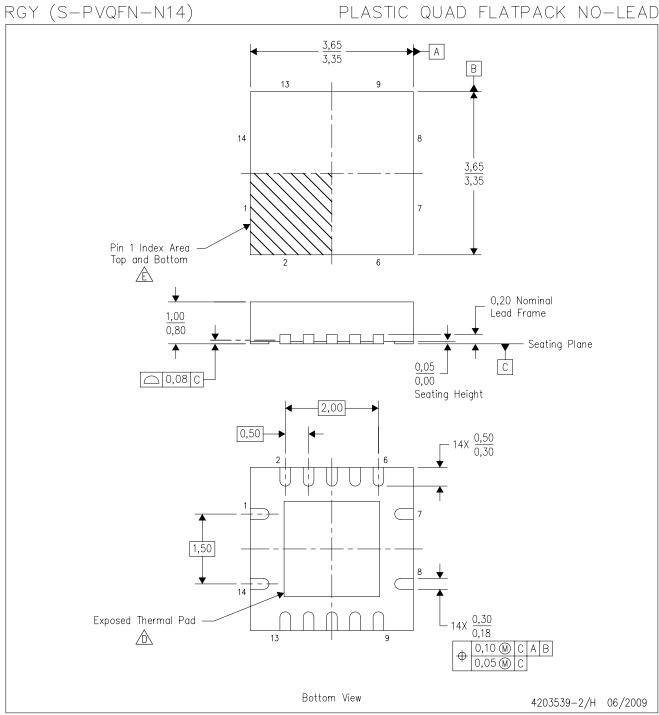
## D (R-PDSO-G14)

### PLASTIC SMALL OUTLINE



- 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. 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 other stencil recommendations.
- E. Customers should contact their board fabrication site for solder mask tolerances between and around signal pads.





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. See the Product Data Sheet for details regarding the exposed thermal pad dimensions.
- 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.



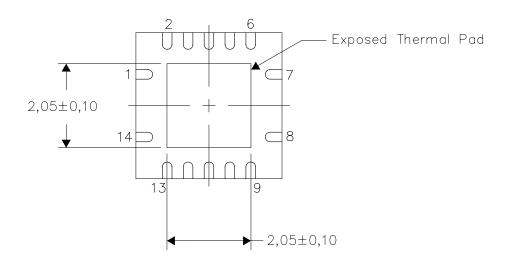


#### THERMAL INFORMATION

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 the appropriate copper plane shown in the electrical schematic for the device, or alternatively, can be attached to 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, QFN/SON PCB Attachment, Texas Instruments Literature No. SLUA271. This document is available at www.ti.com.

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



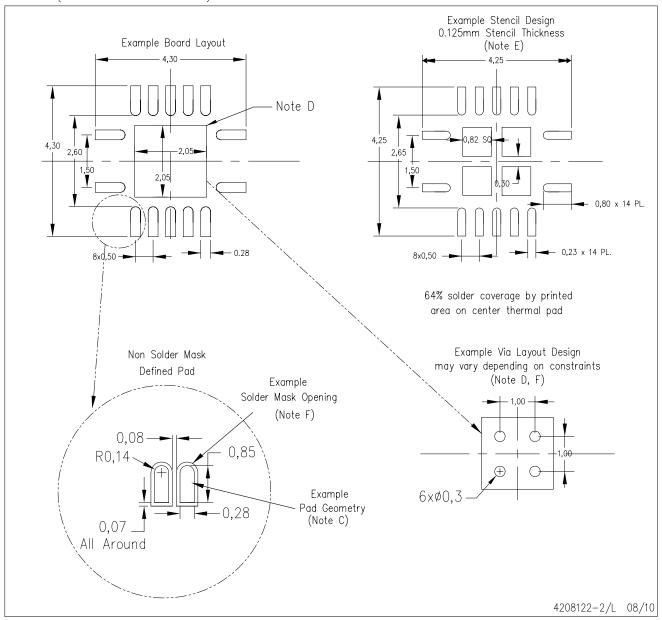
Bottom View

NOTES: All linear dimensions are in millimeters

Exposed Thermal Pad Dimensions

### RGY (S-PVQFN-N14)

### PLASTIC QUAD FLATPACK NO-LEAD



- 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 QFN/SON PCB Attachment, Texas Instruments Literature No. 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 <a href="https://www.ti.com">http://www.ti.com</a>.
- 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.

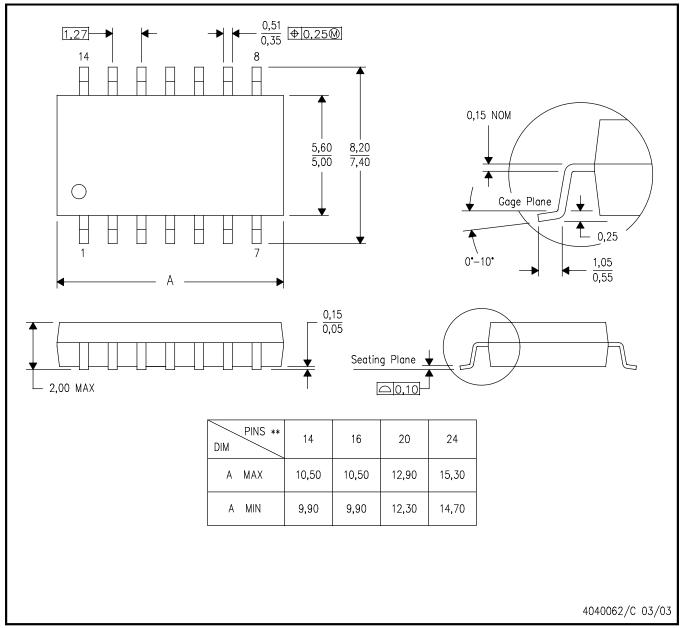


### **MECHANICAL DATA**

### NS (R-PDSO-G\*\*)

## 14-PINS SHOWN

### PLASTIC SMALL-OUTLINE PACKAGE



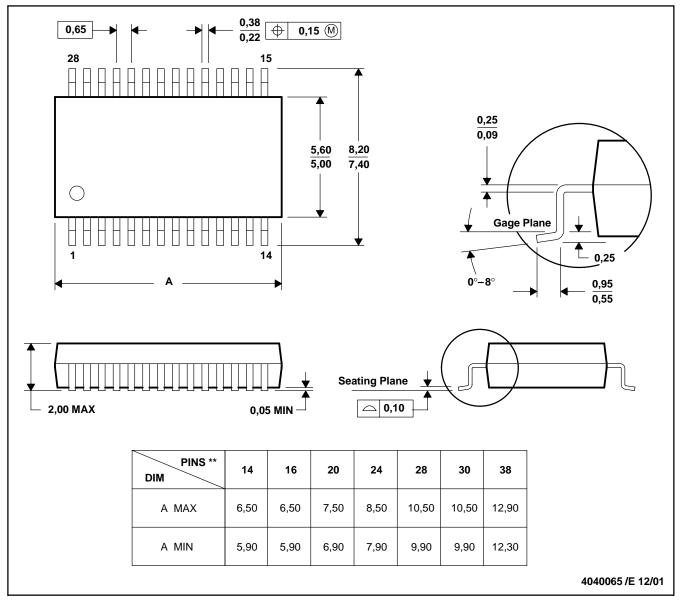
- A. All linear dimensions are in millimeters.
- B. This drawing is subject to change without notice.
- C. Body dimensions do not include mold flash or protrusion, not to exceed 0,15.



### 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.

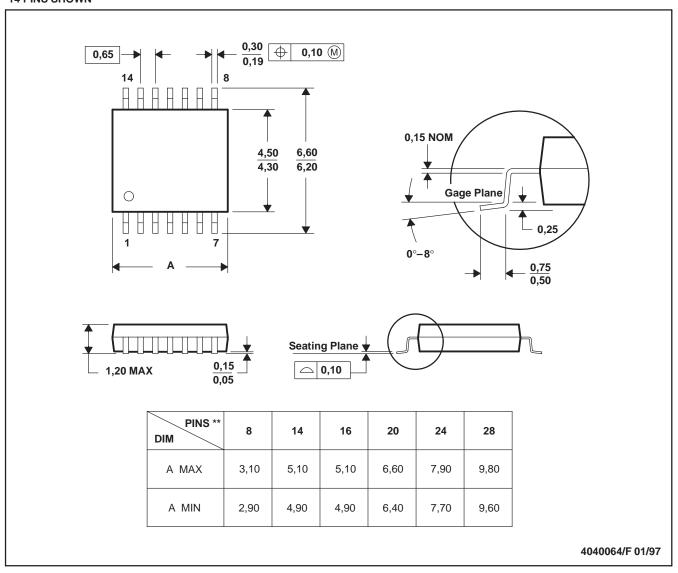
C. Body dimensions do not include mold flash or protrusion not to exceed 0,15.

D. Falls within JEDEC MO-150

### PW (R-PDSO-G\*\*)

#### 14 PINS SHOWN

#### PLASTIC SMALL-OUTLINE PACKAGE



NOTES: A. All linear dimensions are in millimeters.

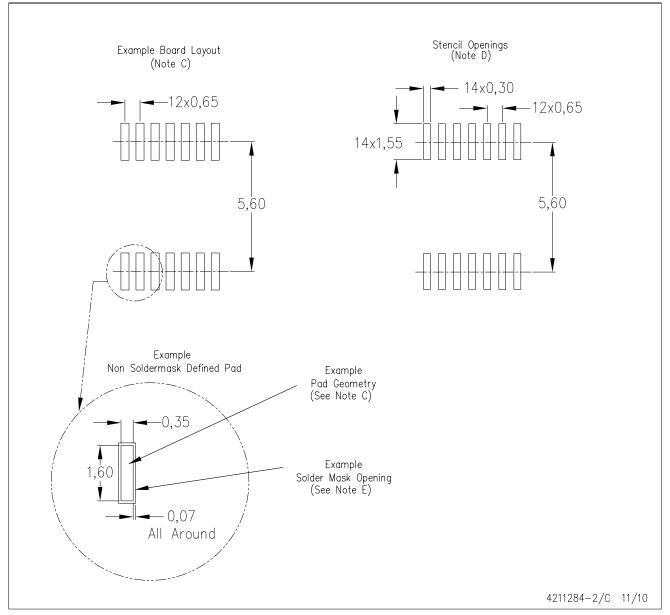
B. This drawing is subject to change without notice.

C. Body dimensions do not include mold flash or protrusion not to exceed 0,15.

D. Falls within JEDEC MO-153

PW (R-PDSO-G14)

### PLASTIC SMALL OUTLINE



- 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. 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 other stencil recommendations.
- E. Customers should contact their board fabrication site for solder mask tolerances between and around signal pads.



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