

SN74LV125AT 3 ステート出力、クワッド・バス・バッファ・ゲート

1 特長

- 入力は TTL 電圧互換
- 4.5V～5.5V の V_{CC} で動作
- 標準 t_{pd} 3.8ns (5V 時)
- 標準 V_{OLP} (出力グランド・バウンス) $< 0.8V$ ($V_{CC} = 5V$, $T_A = 25^\circ C$)
- 標準 V_{OHV} (出力 V_{OH} アンダーシュート) $> 2.3V$ ($V_{CC} = 5V$, $T_A = 25^\circ C$)
- すべてのポートで混在モード電圧動作をサポート
- I_{off} により部分的パワーダウン・モード動作をサポート
- JESD 17 準拠で 250mA 超のラッチアップ性能

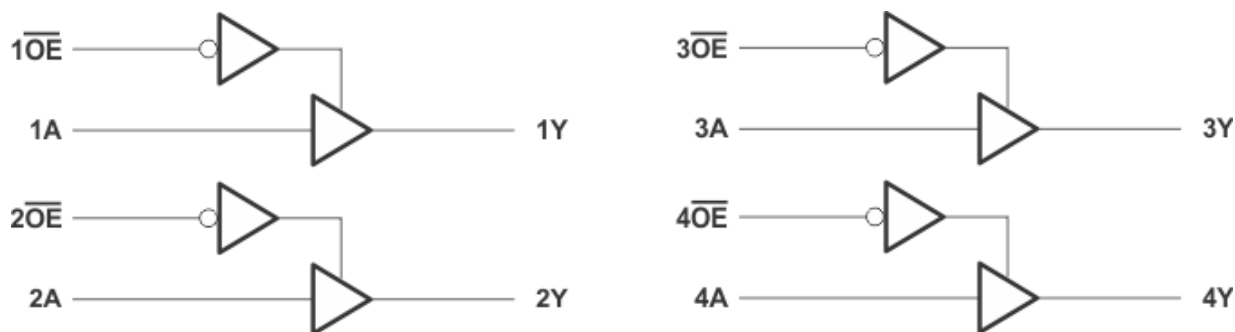
2 概要

SN74LV125AT はクワッド・バス・バッファ・ゲートです。このデバイスは、3 ステート出力の独立ライン・ドライバを備えています。各出力は、対応する出力イネーブル ($\overline{OE}$) 入力が High のときディセーブルになります。

パッケージ情報

部品番号	パッケージ ¹	パッケージ・サイズ ²
SN74LV125AT	RGY (VQFN, 14)	3.50mm × 3.50mm
	D (SOIC, 14)	8.65mm × 6mm
	NS (SO, 14)	10.20mm × 7.8mm
	DB (SSOP, 14)	6.20mm × 7.8mm
	PW (TSSOP, 14)	5.00mm × 6.4mm

- (1) 利用可能なすべてのパッケージについては、データシートの末尾にある注文情報を参照してください。
- (2) パッケージ・サイズ (長さ × 幅) は公称値であり、該当する場合はピンも含まれます。



概略回路図



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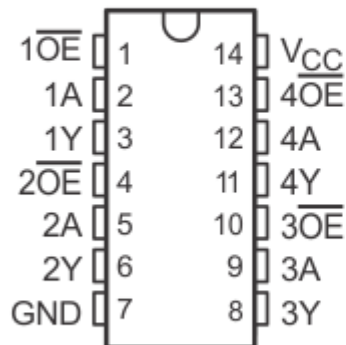
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3 Revision History

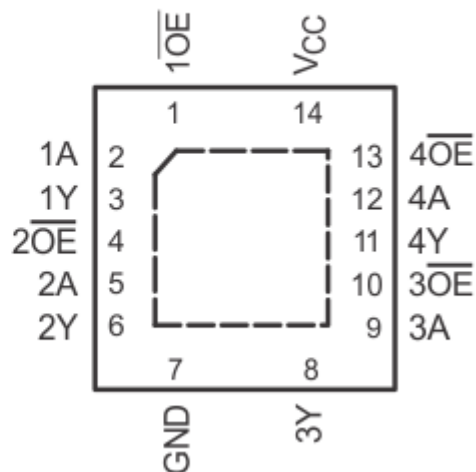
Changes from Revision A (May 2023) to Revision B (July 2023)	Page
「パッケージ情報」表、「ピンの機能」表、「ESD 定格」表、「熱に関する情報」表、「デバイスの機能モード」セクション、「デバイスおよびドキュメントのサポート」セクション、「メカニカル、パッケージ、および注文情報」セクションを追加 1	1

4 Pin Configuration and Functions

SN74LV125A . . . D, DB, DGV, N, NS,
OR PW PACKAGE
(TOP VIEW)



SN74LV125A . . . RGY PACKAGE
(TOP VIEW)



PIN		TYPE ⁽¹⁾	DESCRIPTION
NO.	NAME		
1	1OE	I	Output Enable 1, Active Low
2	1A	I	1A Input
3	1Y	O	1Y Output
4	2OE	I	Output Enable 2, Active Low
5	2A	I	2A Input
6	2Y	O	2Y Output
7	GND	—	Ground Pin
8	3Y	O	3Y Output
9	3A	I	3A Input
10	3OE	I	Output Enable 3, Active Low
11	4Y	O	4Y Output
12	4A	I	4A Input
13	4OE	I	Output Enable 4, Active Low
14	VCC	—	Power Pin

(1) Signal Types: I = Input, O = Output, I/O = Input or Output.

5 Specifications

5.1 Absolute Maximum Ratings

over operating free-air temperature range (unless otherwise noted)⁽¹⁾

			MIN	MAX	UNIT
V _{CC}	Supply voltage		–0.5	7	V
V _I	Input voltage range ⁽²⁾		–0.5	7	V
V _O	Voltage range applied to any output in the high-impedance or power-off state ⁽²⁾		–0.5	7	V
V _O	Output voltage range ^{(2) (3)}		–0.5	V _{CC} + 0.5	V
I _{IK}	Input clamp current	V _I < 0		–20	mA
I _{OK}	Output clamp current	V _O < 0		±50	mA
I _O	Continuous output current	V _O = 0 to V _{CC}		±35	mA
	Continuous current through V _{CC} or GND			±70	mA
T _{stg}	Storage temperature		–65	150	°C

- (1) 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 [セクション 5.3](#) is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.
- (2) The input and output negative-voltage ratings may be exceeded if the input and output current ratings are observed.
- (3) This value is limited to 5.5-V maximum.

5.2 ESD Ratings

		MAX	UNIT
V _(ESD)	Electrostatic discharge		
	Human body model (HBM), per ANSI/ESDA/JEDEC JS-001, all pins ⁽¹⁾	±2000	V
	Charged device model (CDM), per JEDEC specification JESD22-C101, all pins ⁽²⁾	±1000	

- (1) JEDEC document JEP155 states that 500-V HBM allows safe manufacturing with a standard ESD control process.
- (2) JEDEC document JEP157 states that 250-V CDM allows safe manufacturing with a standard ESD control process.

5.3 Recommended Operating Conditions

over operating free-air temperature range (unless otherwise noted)⁽¹⁾

			SN74LV125AT		UNIT
			MIN	MAX	
V _{CC}	Supply voltage		4.5	5.5	V
V _{IH}	High-level input voltage	V _{CC} = 4.5 V to 5.5 V	2		V
V _{IL}	Low-level input voltage	V _{CC} = 4.5 V to 5.5 V		0.8	V
V _I	Input voltage		0	5.5	V
V _O	Output voltage	High or low state	0	V _{CC}	V
		3-state	0	5.5	
I _{OH}	High-level output current	V _{CC} = 4.5 V to 5.5 V		–16	mA
I _{OL}	Low-level output current	V _{CC} = 4.5 V to 5.5 V		16	mA
Δt/Δv	Input transition rise or fall rate	V _{CC} = 4.5 V to 5.5 V		20	ns/V
T _A	Operating free-air temperature		–40	125	°C

(1) 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* (SCBA004).

5.4 Thermal Information

THERMAL METRIC ⁽¹⁾		SN74LV125AT					UNIT
		D	DB	NS	PW	RGY	
		14 PINS					
R _{θJA}	Junction-to-ambient thermal resistance	86	96	76	113	47	°C/W

(1) For more information about traditional and new thermal metrics, see the *IC Package Thermal Metrics* application report (SPRA953).

5.5 Electrical Characteristics

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

PARAMETER	TEST CONDITIONS	V _{CC}	T _A = 25°C			–40°C to 85°C		–40°C to 125°C		UNIT
			MIN	TYP	MAX	MIN	MAX	MIN	MAX	
V _{OH} High-level output voltage	I _{OH} = –50 µA	4.5 V	4.4	4.5		4.4		4.4		V
	I _{OH} = –16 mA	4.5 V	3.8			3.8		3.8		
V _{OL} Low-level output voltage	I _{OL} = 50 µA	4.5 V		0	0.1		0.1		0.1	V
	I _{OL} = 16 mA	4.5 V			0.55		0.55		0.55	
I _I Input leakage current	V _I = 5.5 V or GND	0 to 5.5 V			±1		±1		±1	µA
I _{OZ} Off-State (High-Impedance State) Output Current	V _O = V _{CC} or GND	5.5 V			±0.25		±2.5		±2.5	µA
I _{CC} Static supply current	V _I = V _{CC} or GND, I _O = 0	5.5 V			2		20		20	µA
ΔI _{CC} ⁽¹⁾ Additional static supply current	One input at 3.4 V, Other inputs at V _{CC} or GND	5.5 V			1.35		1.5		1.5	
I _{off} Input/Output Power-Off Leakage Current	V _I or V _O = 0 to 5.5 V	0			0.5		5		5	µA
C _i Input capacitance	V _I = V _{CC} or GND				2					pF

(1) This is the increase in supply current for each input at one of the specified TTL voltage levels, rather than 0 V or V_{CC}.

5.6 Switching Characteristics

over recommended operating free-air temperature range (unless otherwise noted) (see [Load Circuit And Voltage Waveforms](#))

PARAMETER	FROM (INPUT)	TO (OUTPUT)	LOAD CAPACITANCE	T _A = 25°C			–40°C to 85°C		–40°C to 125°C		UNIT
				MIN	TYP	MAX	MIN	MAX	MIN	MAX	
t _{pd}	A	Y	C _L = 15 pF	1.9	3.8	5.5	1	6.5	1	8.5	ns
t _{en}	OE	Y		2	3.6	5.1	1	6	1	7.5	
t _{dis}	OE	Y		1.5	3.2	6.8	1	8	1	10	
t _{pd}	A	Y	C _L = 50 pF	2.9	5.3	7.5	1	8.5	1	10.5	ns
t _{en}	OE	Y		2.8	5.1	7.1	1	8	1	9.5	
t _{dis}	OE	Y		2.8	6.1	8.8	1	10	1	10	
t _{sk(o)}						1		1		1	

5.7 Noise Characteristics

V_{CC} = 5 V, C_L = 50 pF, T_A = 25°C

PARAMETER ⁽¹⁾		SN74LV125AT			UNIT
		MIN	TYP	MAX	
V _{OL(P)}	Quiet output, maximum dynamic V _{OL}		1.1	1.5	V
V _{OL(V)}	Quiet output, minimum dynamic V _{OL}		–0.3	–0.8	V
V _{OH(V)}	Quiet output, minimum dynamic V _{OH}		3		V
V _{IH(D)}	High-level dynamic input voltage	2			V
V _{IL(D)}	Low-level dynamic input voltage			0.8	V

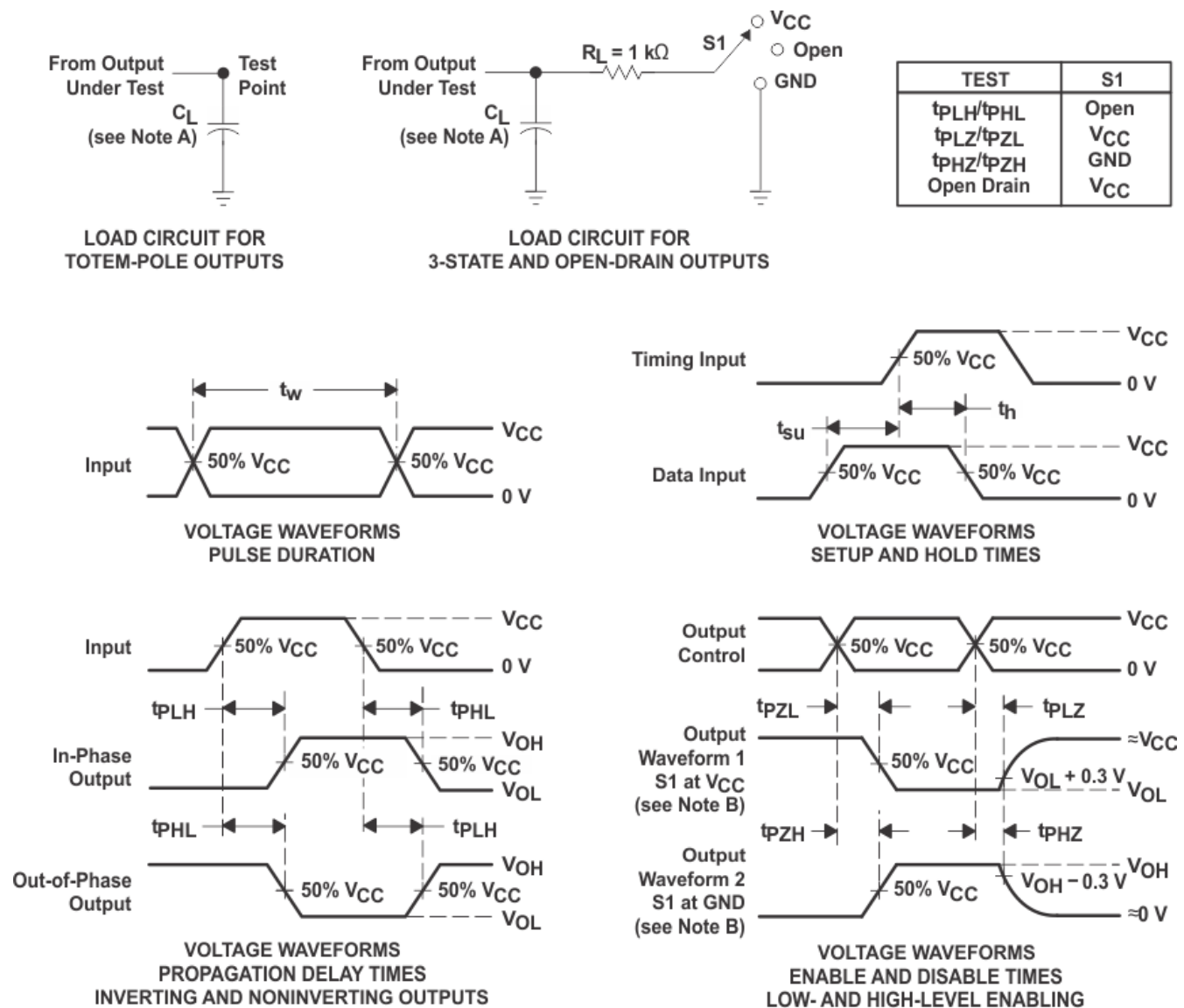
(1) Characteristics are for surface-mount packages only.

5.8 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

6 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: $PRR \leq 1\text{ MHz}$, $Z_O = 50\ \Omega$, $t_r \leq 3\text{ ns}$, $t_f \leq 3\text{ ns}$.
 - 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_{PZL} and t_{PZH} are the same as t_{en} .
 - G. t_{PHL} and t_{PLH} are the same as t_{pd} .
 - H. All parameters and waveforms are not applicable to all devices.

6-1. Load Circuit And Voltage Waveforms

7 Detailed Description

7.1 Overview

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, $\overline{OE}$ should be tied to V_{CC} 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 I_{off} . The I_{off} circuitry disables the outputs, preventing damaging current backflow through the device when it is powered down.

7.2 Functional Block Diagram

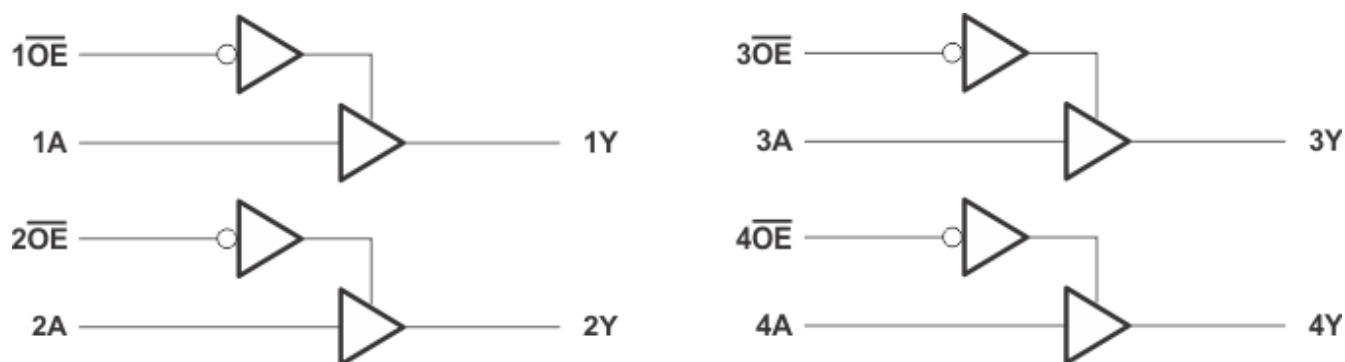


图 7-1. Logic Diagram (Positive Logic)

7.3 Device Functional Modes

表 7-1. Function Table
(Each Buffer)

INPUTS ⁽¹⁾		OUTPUT ⁽²⁾
$\overline{OE}$	A	Y
L	H	H
L	L	L
H	X	Z

(1) H = High Voltage Level, L = Low Voltage Level, X = Don't Care

(2) H = Driving High, L = Driving Low, Z = High Impedance State

8 Device and Documentation Support

8.1 Documentation Support

8.1.1 Related Documentation

The table below lists quick access links. Categories include technical documents, support and community resources, tools and software, and quick access to sample or buy.

表 8-1. Related Links

PARTS	PRODUCT FOLDER	SAMPLE & BUY	TECHNICAL DOCUMENTS	TOOLS & SOFTWARE	SUPPORT & COMMUNITY
SN74LV125AT	Click here	Click here	Click here	Click here	Click here

8.2 ドキュメントの更新通知を受け取る方法

ドキュメントの更新についての通知を受け取るには、ti.com のデバイス製品フォルダを開いてください。「更新の通知を受け取る」をクリックして登録すると、変更されたすべての製品情報に関するダイジェストを毎週受け取れます。変更の詳細については、修正されたドキュメントに含まれている改訂履歴をご覧ください。

8.3 サポート・リソース

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8.4 Trademarks

TI E2E™ is a trademark of Texas Instruments.

すべての商標は、それぞれの所有者に帰属します。

8.5 静電気放電に関する注意事項



この IC は、ESD によって破損する可能性があります。テキサス・インスツルメンツは、IC を取り扱う際には常に適切な注意を払うことを推奨します。正しい取り扱いおよび設置手順に従わない場合、デバイスを破損するおそれがあります。

ESD による破損は、わずかな性能低下からデバイスの完全な故障まで多岐にわたります。精密な IC の場合、パラメータがわずかに変化するだけで公表されている仕様から外れる可能性があるため、破損が発生しやすくなっています。

8.6 用語集

[テキサス・インスツルメンツ用語集](#) この用語集には、用語や略語の一覧および定義が記載されています。

9 Mechanical, Packaging, and Orderable Information

The following pages include mechanical, packaging, and orderable information. This information is the most current data available for the designated devices. This data is subject to change without notice and revision of this document. For browser-based versions of this data sheet, refer to the left-hand navigation.

PACKAGING INFORMATION

Orderable part number	Status (1)	Material type (2)	Package Pins	Package qty Carrier	RoHS (3)	Lead finish/ Ball material (4)	MSL rating/ Peak reflow (5)	Op temp (°C)	Part marking (6)
SN74LV125ATD	Obsolete	Production	SOIC (D) 14	-	-	Call TI	Call TI	-40 to 85	LV125AT
SN74LV125ATDBR	Active	Production	SSOP (DB) 14	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	LV125AT
SN74LV125ATDBR.A	Active	Production	SSOP (DB) 14	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	LV125AT
SN74LV125ATDR	Active	Production	SOIC (D) 14	2500 LARGE T&R	Yes	NIPDAU SN	Level-1-260C-UNLIM	-40 to 85	LV125AT
SN74LV125ATDR.A	Active	Production	SOIC (D) 14	2500 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	LV125AT
SN74LV125ATNSR	Active	Production	SOP (NS) 14	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	LV125AT
SN74LV125ATNSR.A	Active	Production	SOP (NS) 14	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	LV125AT
SN74LV125ATPWR	Active	Production	TSSOP (PW) 14	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	LV125AT
SN74LV125ATPWR.A	Active	Production	TSSOP (PW) 14	2000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	LV125AT
SN74LV125ATPWT	Obsolete	Production	TSSOP (PW) 14	-	-	Call TI	Call TI	-40 to 85	LV125AT
SN74LV125ATRGYR	Active	Production	VQFN (RGY) 14	3000 LARGE T&R	Yes	SN	Level-1-260C-UNLIM	-40 to 85	VV125
SN74LV125ATRGYR.A	Active	Production	VQFN (RGY) 14	3000 LARGE T&R	Yes	SN	Level-1-260C-UNLIM	-40 to 85	VV125
SN74LV125ATRGYRG4	Active	Production	VQFN (RGY) 14	3000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	VV125
SN74LV125ATRGYRG4.A	Active	Production	VQFN (RGY) 14	3000 LARGE T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-40 to 85	VV125

⁽¹⁾ **Status:** For more details on status, see our [product life cycle](#).

⁽²⁾ **Material type:** When designated, preproduction parts are prototypes/experimental devices, and are not yet approved or released for full production. Testing and final process, including without limitation quality assurance, reliability performance testing, and/or process qualification, may not yet be complete, and this item is subject to further changes or possible discontinuation. If available for ordering, purchases will be subject to an additional waiver at checkout, and are intended for early internal evaluation purposes only. These items are sold without warranties of any kind.

⁽³⁾ **RoHS values:** Yes, No, RoHS Exempt. See the [TI RoHS Statement](#) for additional information and value definition.

⁽⁴⁾ **Lead finish/Ball material:** Parts may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead finish/Ball material values may wrap to two lines if the finish value exceeds the maximum column width.

⁽⁵⁾ **MSL rating/Peak reflow:** The moisture sensitivity level ratings and peak solder (reflow) temperatures. In the event that a part has multiple moisture sensitivity ratings, only the lowest level per JEDEC standards is shown. Refer to the shipping label for the actual reflow temperature that will be used to mount the part to the printed circuit board.

⁽⁶⁾ **Part marking:** There may be an additional marking, which relates to the logo, the lot trace code information, or the environmental category of the part.

Multiple part markings will be inside parentheses. Only one part marking contained in parentheses and separated by a "~" will appear on a part. If a line is indented then it is a continuation of the previous line and the two combined represent the entire part marking for that device.

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In no event shall TI's liability arising out of such information exceed the total purchase price of the TI part(s) at issue in this document sold by TI to Customer on an annual basis.

TAPE AND REEL INFORMATION



*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	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	8.35	6.6	2.4	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	SOP	NS	14	2000	330.0	16.4	8.1	10.4	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
SN74LV125ATRGYR	VQFN	RGY	14	3000	330.0	12.4	3.75	3.75	1.15	8.0	12.0	Q1
SN74LV125ATRGYRG4	VQFN	RGY	14	3000	330.0	12.4	3.75	3.75	1.15	8.0	12.0	Q1

TAPE AND REEL BOX DIMENSIONS



*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
SN74LV125ATDBR	SSOP	DB	14	2000	353.0	353.0	32.0
SN74LV125ATDR	SOIC	D	14	2500	353.0	353.0	32.0
SN74LV125ATNSR	SOP	NS	14	2000	353.0	353.0	32.0
SN74LV125ATPWR	TSSOP	PW	14	2000	353.0	353.0	32.0
SN74LV125ATRGRYR	VQFN	RGY	14	3000	360.0	360.0	36.0
SN74LV125ATRGRYG4	VQFN	RGY	14	3000	360.0	360.0	36.0

GENERIC PACKAGE VIEW

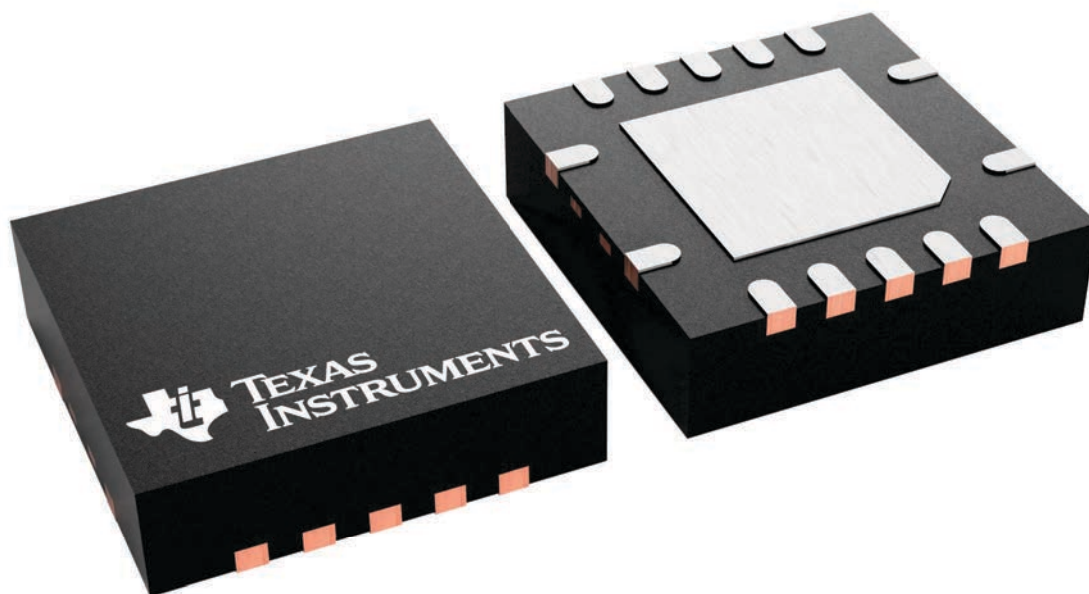
RGY 14

VQFN - 1 mm max height

3.5 x 3.5, 0.5 mm pitch

PLASTIC QUAD FLATPACK - NO LEAD

This image is a representation of the package family, actual package may vary.
Refer to the product data sheet for package details.

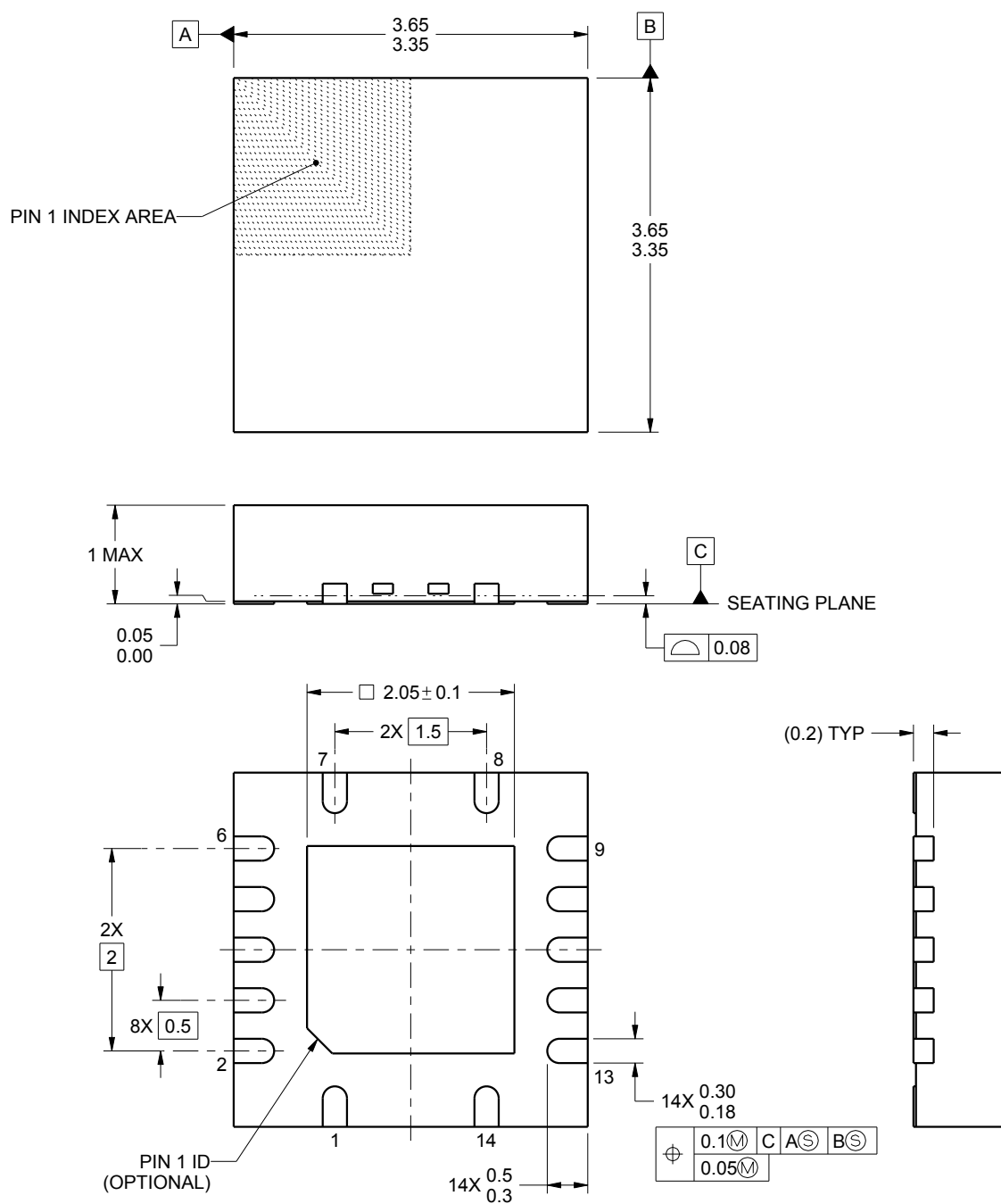


4231541/A



VQFN - 1 mm max height

PLASTIC QUAD FLATPACK - NO LEAD



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NOTES:

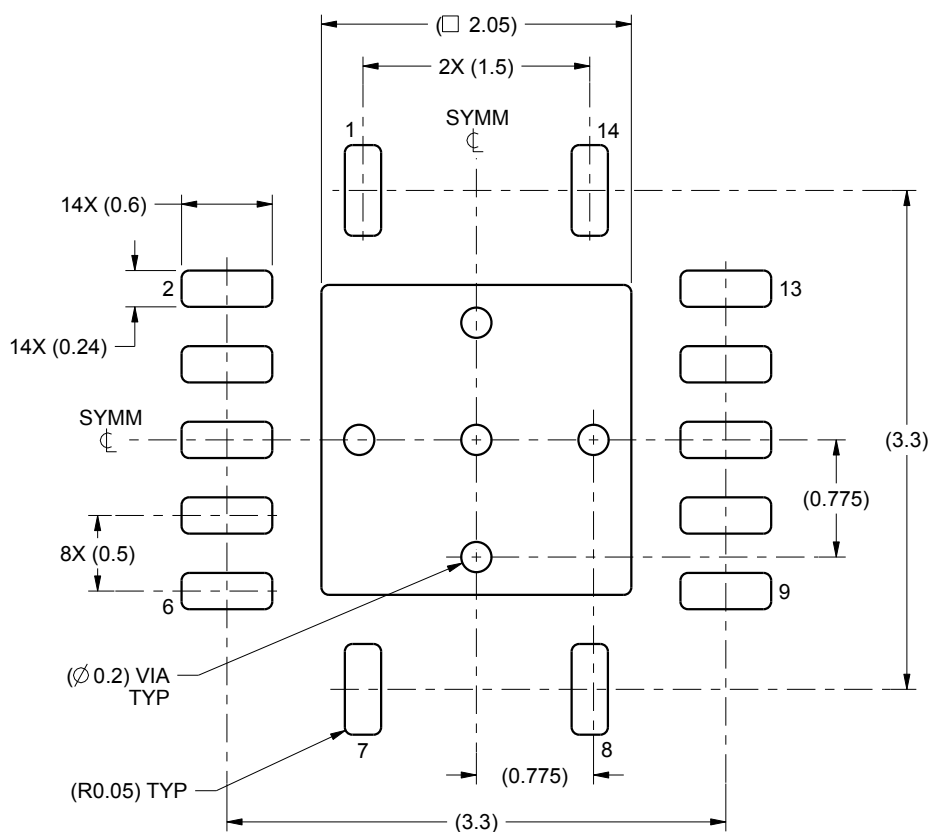
1. All linear dimensions are in millimeters. Any dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.
3. The package thermal pad must be soldered to the printed circuit board for thermal and mechanical performance.

EXAMPLE BOARD LAYOUT

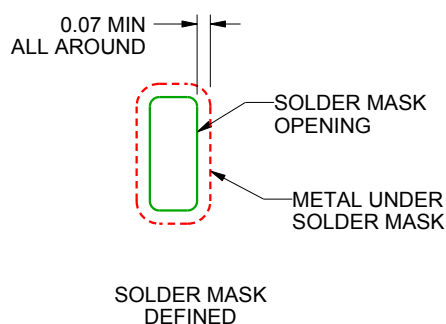
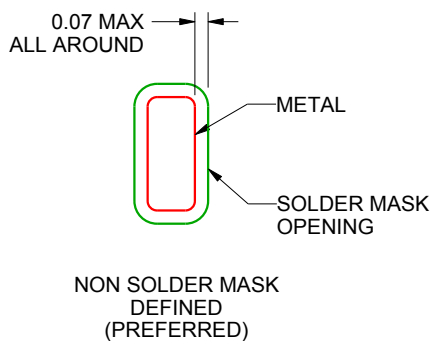
RGY0014A

VQFN - 1 mm max height

PLASTIC QUAD FLATPACK - NO LEAD



LAND PATTERN EXAMPLE
SCALE:20X



SOLDER MASK DETAILS

4219040/A 09/2015

NOTES: (continued)

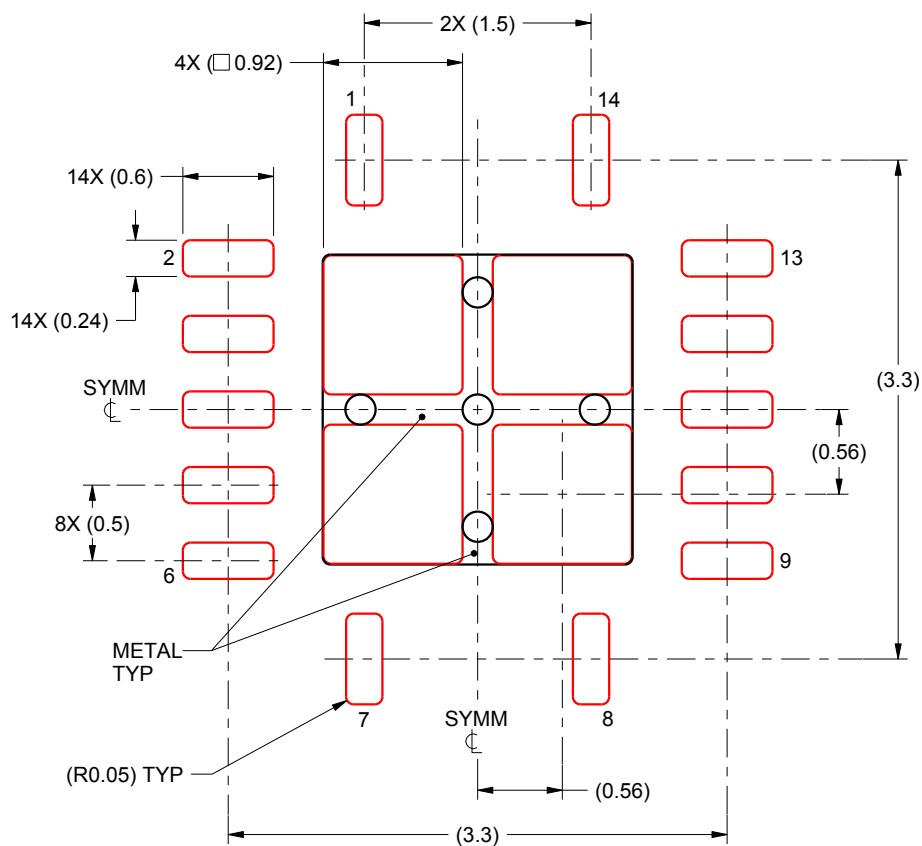
- This package is designed to be soldered to a thermal pad on the board. For more information, see Texas Instruments literature number SLUA271 (www.ti.com/lit/slue271).

EXAMPLE STENCIL DESIGN

RGY0014A

VQFN - 1 mm max height

PLASTIC QUAD FLATPACK - NO LEAD



SOLDER PASTE EXAMPLE
BASED ON 0.125 mm THICK STENCIL

EXPOSED PAD
80% PRINTED SOLDER COVERAGE BY AREA
SCALE:20X

4219040/A 09/2015

NOTES: (continued)

5. Laser cutting apertures with trapezoidal walls and rounded corners may offer better paste release. IPC-7525 may have alternate design recommendations.

D0014A**PACKAGE OUTLINE****SOIC - 1.75 mm max height**

SMALL OUTLINE INTEGRATED CIRCUIT



4220718/A 09/2016

NOTES:

1. All linear dimensions are in millimeters. Dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.
3. This dimension does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed 0.15 mm, per side.
4. This dimension does not include interlead flash. Interlead flash shall not exceed 0.43 mm, per side.
5. Reference JEDEC registration MS-012, variation AB.

EXAMPLE BOARD LAYOUT

D0014A

SOIC - 1.75 mm max height

SMALL OUTLINE INTEGRATED CIRCUIT



LAND PATTERN EXAMPLE
SCALE:8X



SOLDER MASK DETAILS

4220718/A 09/2016

NOTES: (continued)

6. Publication IPC-7351 may have alternate designs.

7. Solder mask tolerances between and around signal pads can vary based on board fabrication site.

EXAMPLE STENCIL DESIGN

D0014A

SOIC - 1.75 mm max height

SMALL OUTLINE INTEGRATED CIRCUIT



SOLDER PASTE EXAMPLE
BASED ON 0.125 mm THICK STENCIL
SCALE:8X

4220718/A 09/2016

NOTES: (continued)

8. Laser cutting apertures with trapezoidal walls and rounded corners may offer better paste release. IPC-7525 may have alternate design recommendations.
9. Board assembly site may have different recommendations for stencil design.

MECHANICAL DATA

NS (R-PDSO-G**)

PLASTIC SMALL-OUTLINE PACKAGE

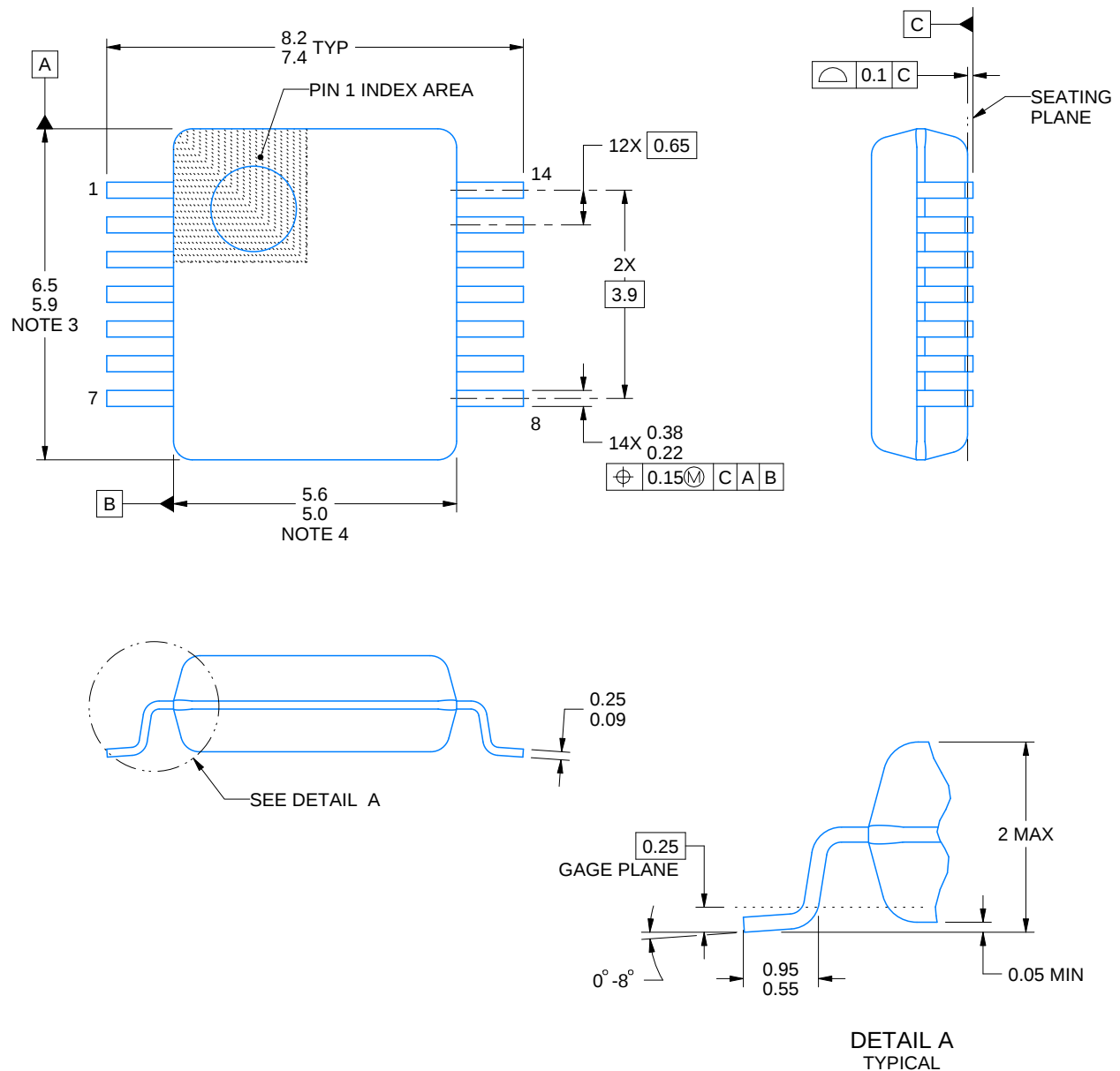
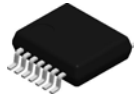
14-PINS SHOWN



DIM \ PINS **	14	16	20	24
A MAX	10,50	10,50	12,90	15,30
A MIN	9,90	9,90	12,30	14,70

4040062/C 03/03

- 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.



4220762/A 05/2024

NOTES:

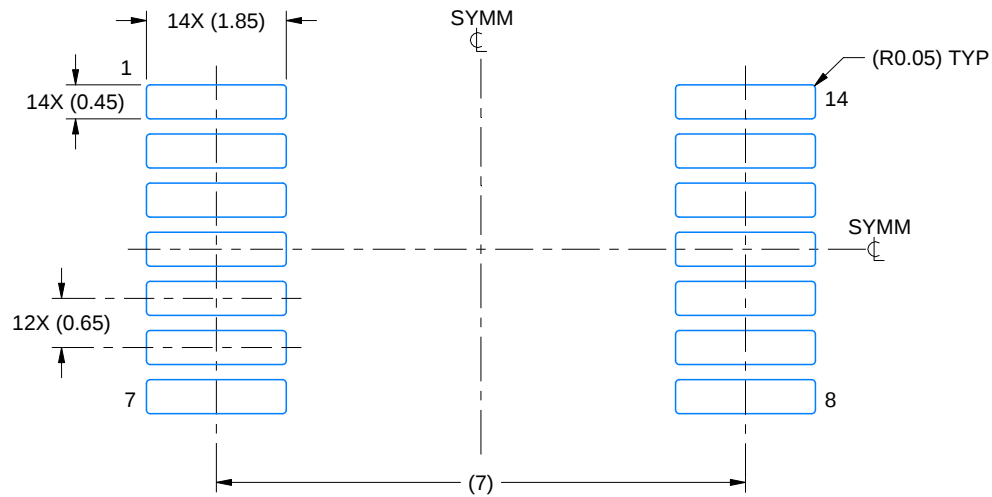
1. All linear dimensions are in millimeters. Any dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.
3. This dimension does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed 0.15 mm per side.
4. Reference JEDEC registration MO-150.

EXAMPLE BOARD LAYOUT

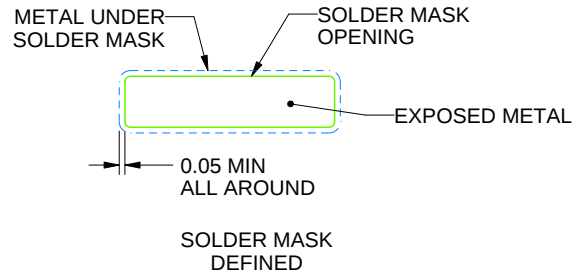
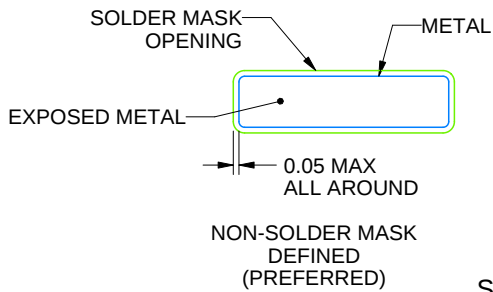
DB0014A

SSOP - 2 mm max height

SMALL OUTLINE PACKAGE



LAND PATTERN EXAMPLE
EXPOSED METAL SHOWN
SCALE: 10X



SOLDER MASK DETAILS

4220762/A 05/2024

NOTES: (continued)

5. Publication IPC-7351 may have alternate designs.
6. Solder mask tolerances between and around signal pads can vary based on board fabrication site.

EXAMPLE STENCIL DESIGN

DB0014A

SSOP - 2 mm max height

SMALL OUTLINE PACKAGE



SOLDER PASTE EXAMPLE
BASED ON 0.125 mm THICK STENCIL
SCALE: 10X

4220762/A 05/2024

NOTES: (continued)

7. Laser cutting apertures with trapezoidal walls and rounded corners may offer better paste release. IPC-7525 may have alternate design recommendations.
8. Board assembly site may have different recommendations for stencil design.

PW0014A

PACKAGE OUTLINE

TSSOP - 1.2 mm max height

SMALL OUTLINE PACKAGE



4220202/B 12/2023

NOTES:

1. All linear dimensions are in millimeters. Any dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.
3. This dimension does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed 0.15 mm per side.
4. This dimension does not include interlead flash. Interlead flash shall not exceed 0.25 mm per side.
5. Reference JEDEC registration MO-153.

EXAMPLE BOARD LAYOUT

PW0014A

TSSOP - 1.2 mm max height

SMALL OUTLINE PACKAGE



LAND PATTERN EXAMPLE
EXPOSED METAL SHOWN
SCALE: 10X



SOLDER MASK DETAILS

4220202/B 12/2023

NOTES: (continued)

6. Publication IPC-7351 may have alternate designs.

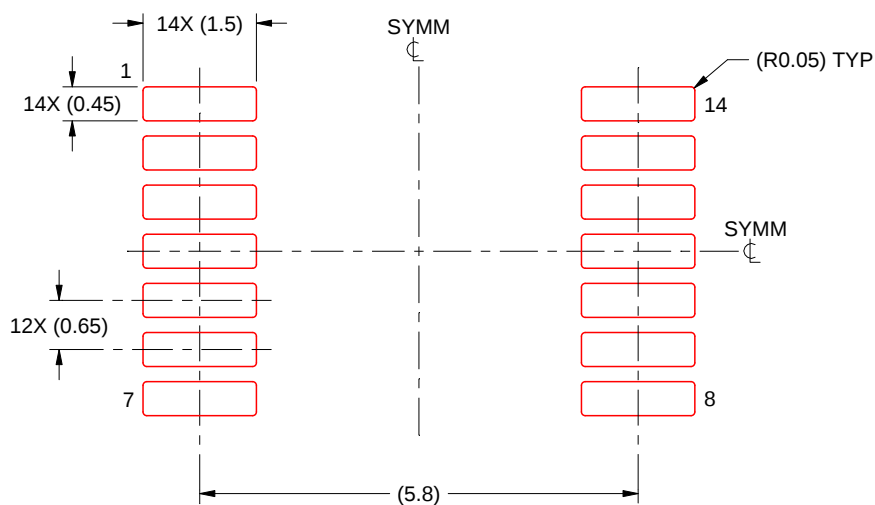
7. Solder mask tolerances between and around signal pads can vary based on board fabrication site.

EXAMPLE STENCIL DESIGN

PW0014A

TSSOP - 1.2 mm max height

SMALL OUTLINE PACKAGE



SOLDER PASTE EXAMPLE
BASED ON 0.125 mm THICK STENCIL
SCALE: 10X

4220202/B 12/2023

NOTES: (continued)

8. Laser cutting apertures with trapezoidal walls and rounded corners may offer better paste release. IPC-7525 may have alternate design recommendations.
9. Board assembly site may have different recommendations for stencil design.

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