

SN74LV125AT 具有三态输出的四路总线缓冲器

1 特性

- 输入兼容 TTL 电压
- 在 4.5V 至 5.5V V_{CC} 下运行
- 电压为 5V 时, t_{pd} 典型值为 3.8ns
- $V_{CC} = 5V$ 、 $T_A = 25^\circ C$ 时, V_{OLP} (输出接地反弹) 典型值小于 0.8V
- $V_{CC} = 5V$ 、 $T_A = 25^\circ C$ 时, V_{OHV} (输出 V_{OH} 下冲) 典型值大于 2.3V
- 所有端口上均支持以混合模式电压运行
- I_{off} 支持局部断电模式运行
- 闩锁性能超过 250mA, 符合 JESD 17 规范

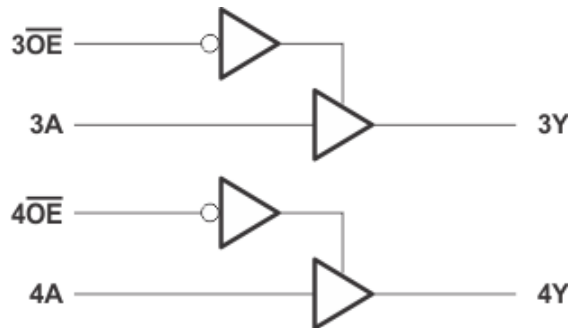
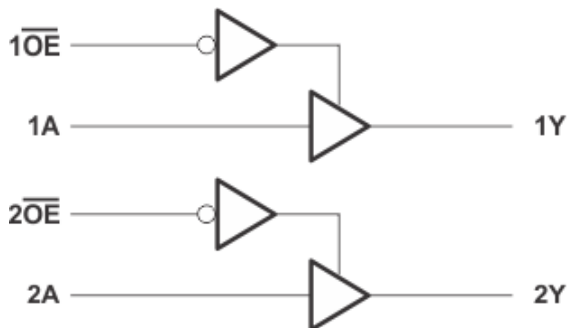
2 说明

SN74LV125AT 器件是一款四路总线缓冲器, 采用具有三态输出的独立线路驱动器。当每个输出的相关输出使能 ($\overline{OE}$) 输入为高电平时, 输出被禁用。

封装信息

器件型号	封装 ¹	封装尺寸 ²
SN74LV125AT	RGY (VQFN, 14)	3.50mm x 3.50mm
	D (SOIC, 14)	8.65mm x 6mm
	NS (SO, 14)	10.20 mm x 7.8 mm
	DB (SSOP, 14)	6.20 mm x 7.8 mm
	PW (TSSOP, 14)	5.00 mm x 6.4 mm

- (1) 如需了解所有可用封装, 请参阅数据表末尾的可订购产品附录。
- (2) 封装尺寸 (长 x 宽) 为标称值, 并包括引脚 (如适用)。



简化原理图



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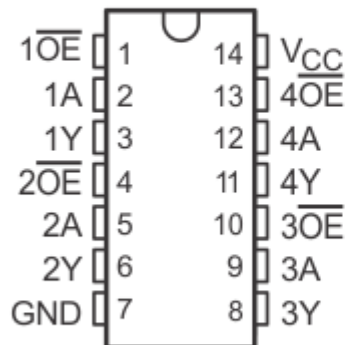
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3 Revision History

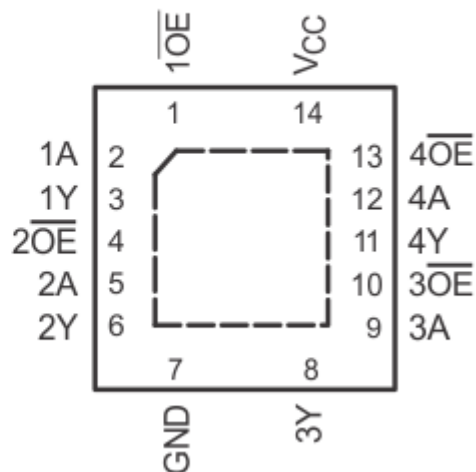
Changes from Revision A (May 2023) to Revision B (July 2023)	Page
• 添加了封装信息表、引脚功能表、ESD 等级表、热信息表、器件功能模式、器件和文档支持部分以及机械、封装和可订购信息部分.....	1

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 [§ 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 _{θ JA}	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

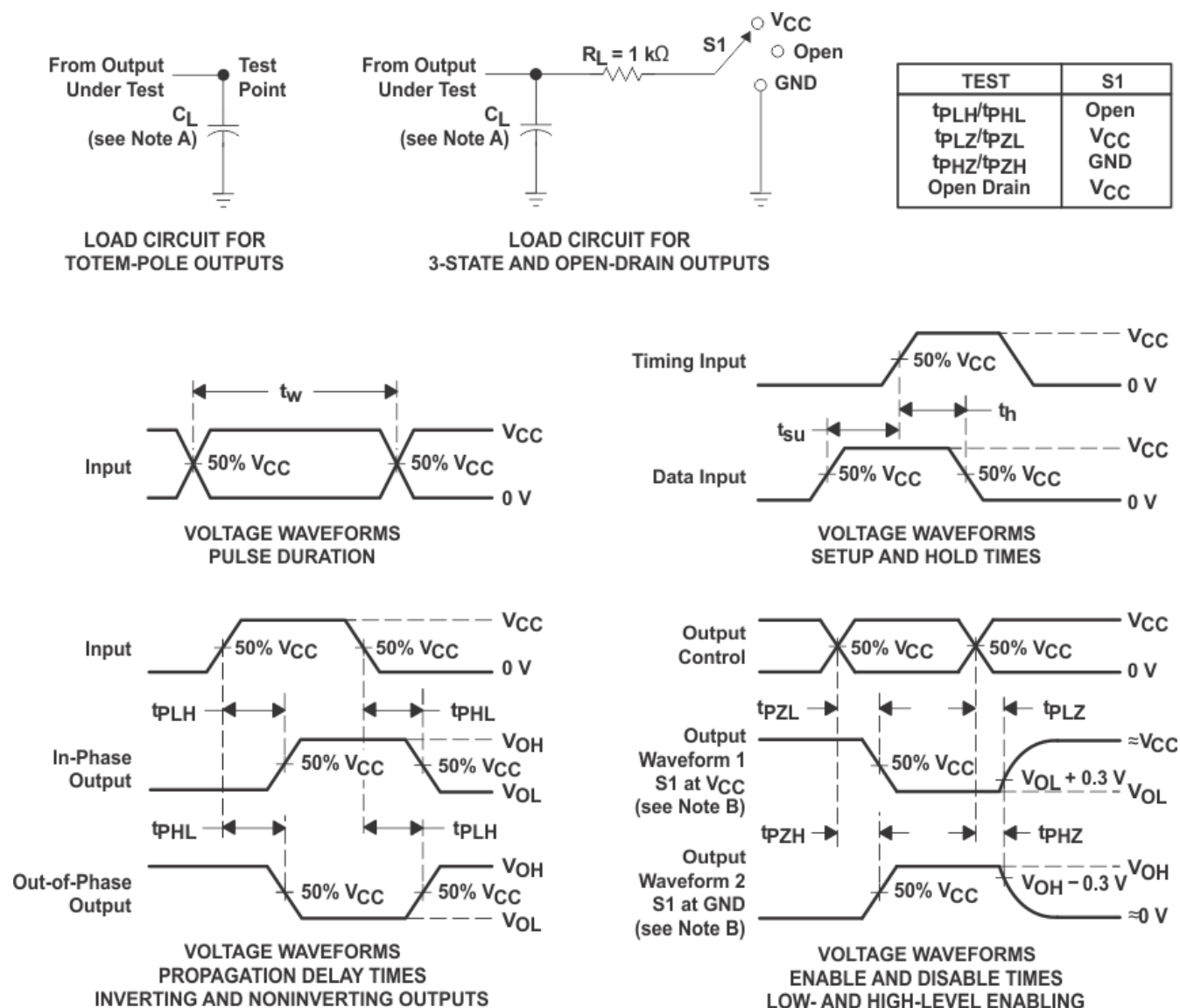
(1) Characteristics are for surface-mount packages only.

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.

图 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

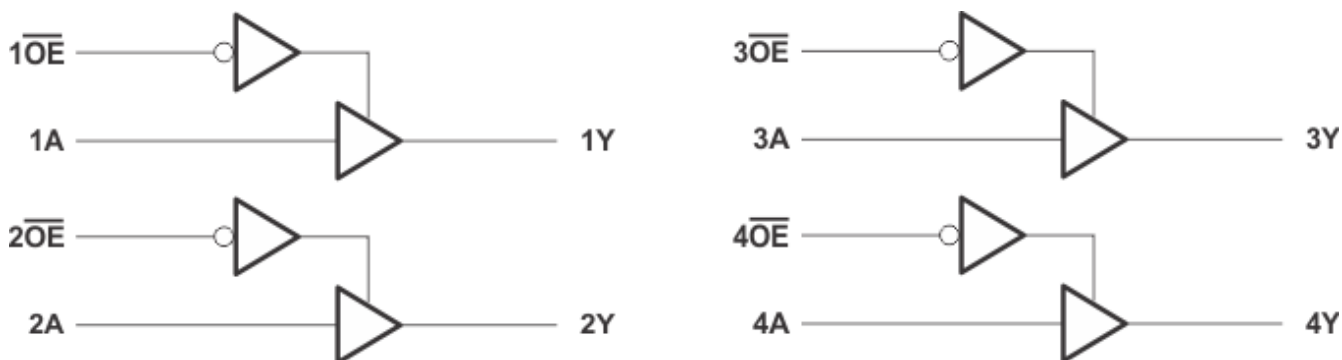


图 7-1. Logic Diagram (Positive Logic)

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 接收文档更新通知

要接收文档更新通知，请导航至 ti.com 上的器件产品文件夹。点击 [订阅更新](#) 进行注册，即可每周接收产品信息更改摘要。有关更改的详细信息，请查看任何已修订文档中包含的修订历史记录。

8.3 支持资源

TI E2E™ 支持论坛是工程师的重要参考资料，可直接从专家获得快速、经过验证的解答和设计帮助。搜索现有解答或提出自己的问题可获得所需的快速设计帮助。

链接的内容由各个贡献者“按原样”提供。这些内容并不构成 TI 技术规范，并且不一定反映 TI 的观点；请参阅 TI 的《使用条款》。

8.4 Trademarks

TI E2E™ is a trademark of Texas Instruments.

所有商标均为其各自所有者的财产。

8.5 静电放电警告



静电放电 (ESD) 会损坏这个集成电路。德州仪器 (TI) 建议通过适当的预防措施处理所有集成电路。如果不遵守正确的处理和安装程序，可能会损坏集成电路。

ESD 的损坏小至导致微小的性能降级，大至整个器件故障。精密的集成电路可能更容易受到损坏，这是因为非常细微的参数更改都可能会导致器件与其发布的规格不相符。

8.6 术语表

TI 术语表 本术语表列出并解释了术语、首字母缩略词和定义。

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.

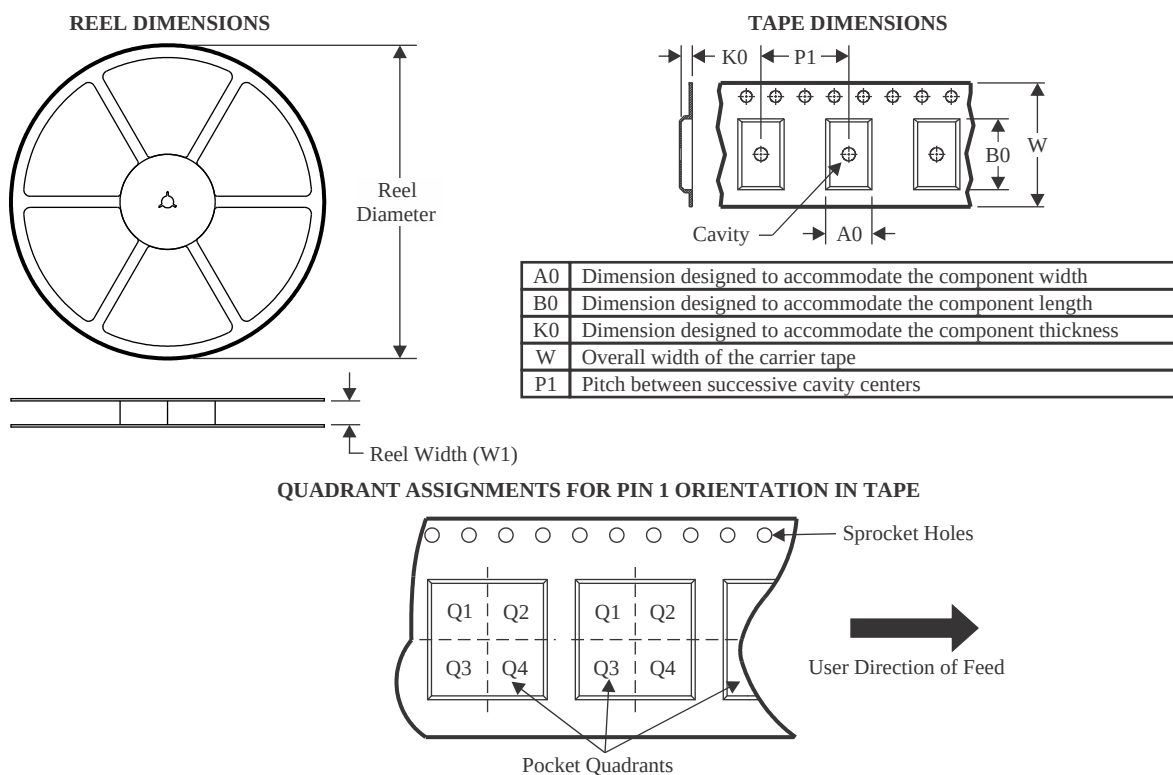
⁽⁶⁾ **Part marking:** There may be an additional marking, which relates to the logo, the lot trace code information, or the environmental category of the part.

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.

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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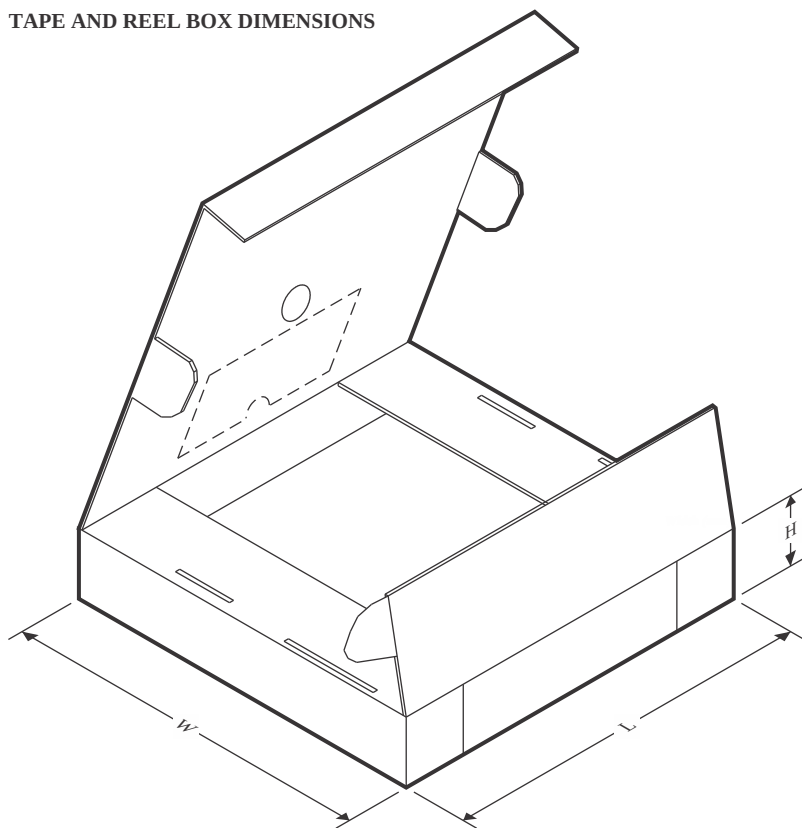
TAPE AND REEL INFORMATION



*All dimensions are nominal

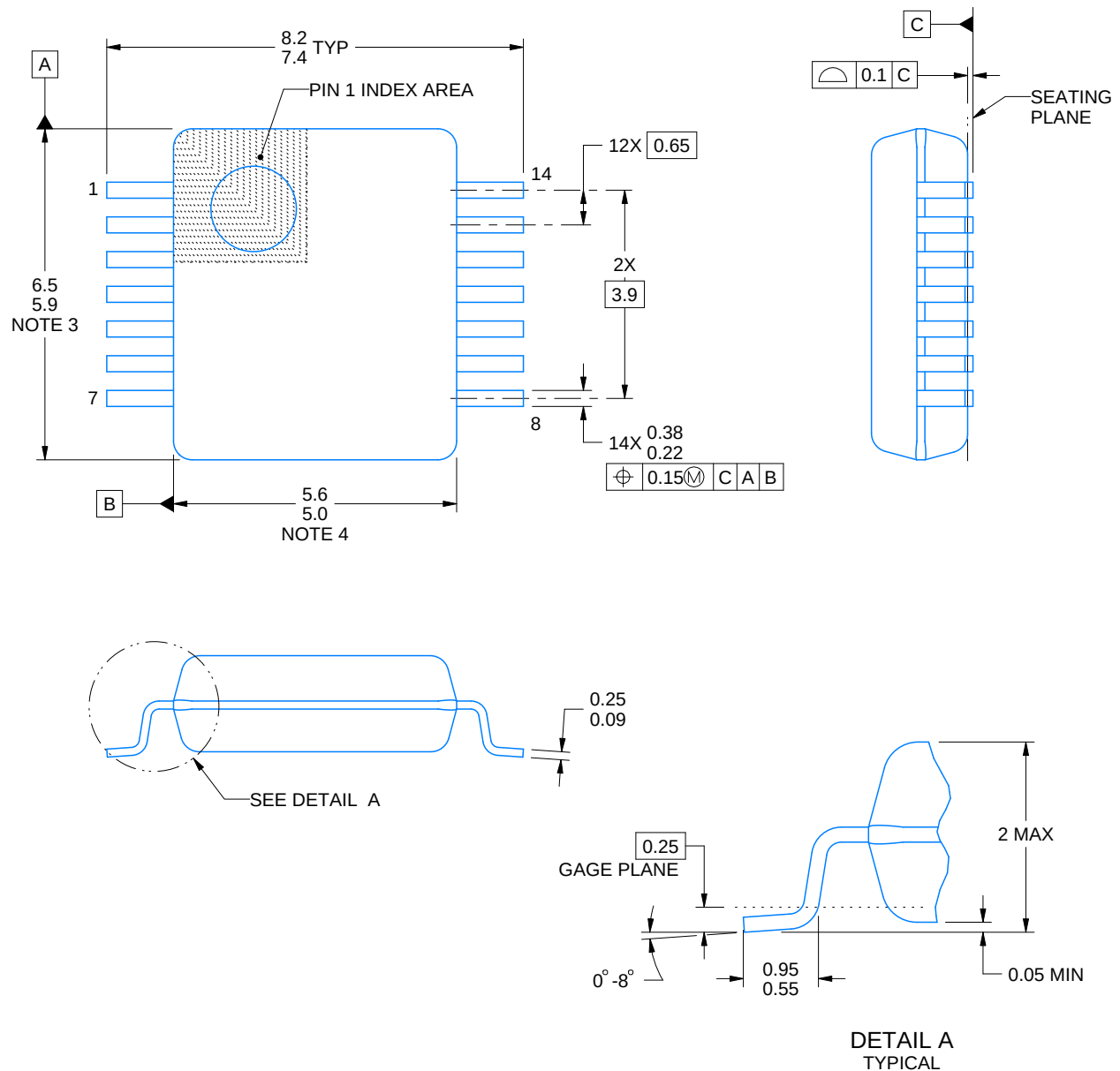
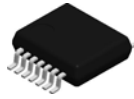
Device	Package Type	Package Drawing	Pins	SPQ	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
SN74LV125ATDBR	SSOP	DB	14	2000	330.0	16.4	8.35	6.6	2.4	12.0	16.0	Q1
SN74LV125ATDR	SOIC	D	14	2500	330.0	16.4	6.5	9.0	2.1	8.0	16.0	Q1
SN74LV125ATNSR	SOP	NS	14	2000	330.0	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



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NOTES:

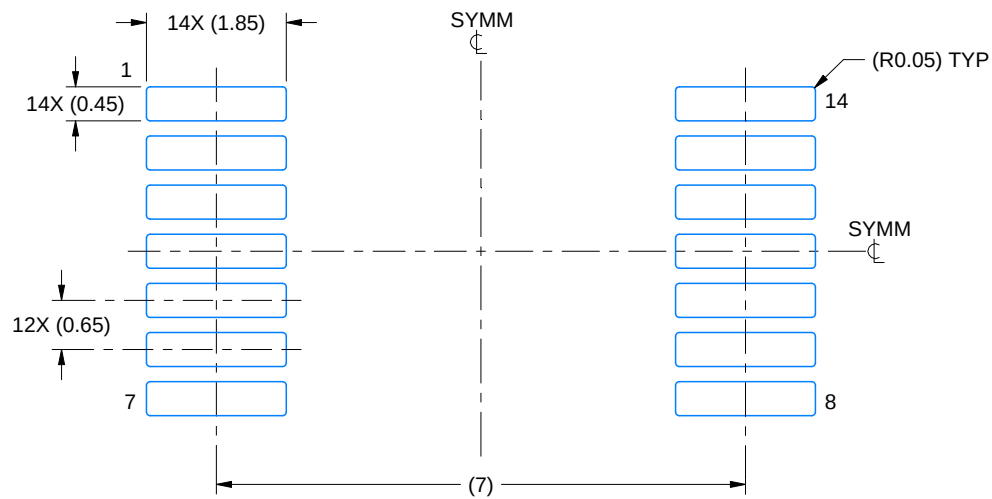
1. All linear dimensions are in millimeters. Any dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.
3. This dimension does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or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

EXAMPLE BOARD LAYOUT

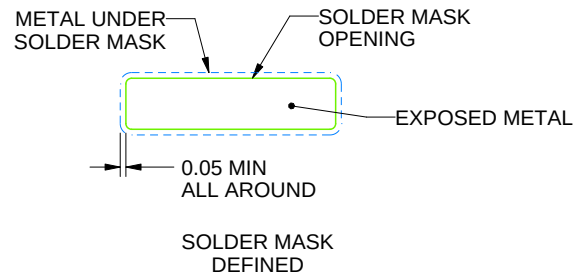
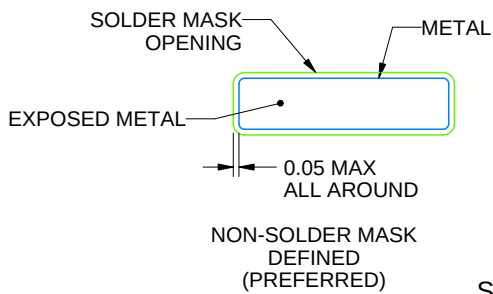
DB0014A

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)

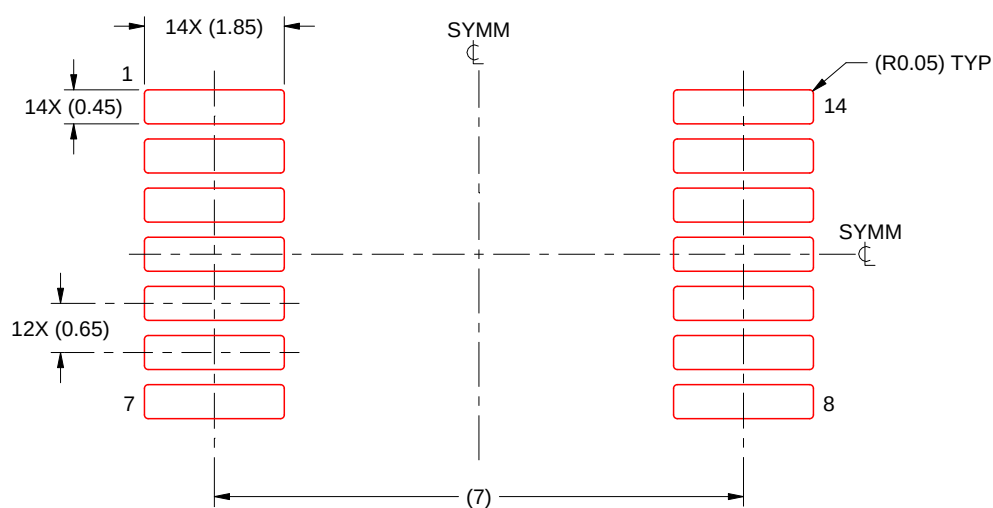
5. Publication IPC-7351 may have alternate designs.
6. Solder mask tolerances between and around signal pads can vary based on board fabrication site.

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)

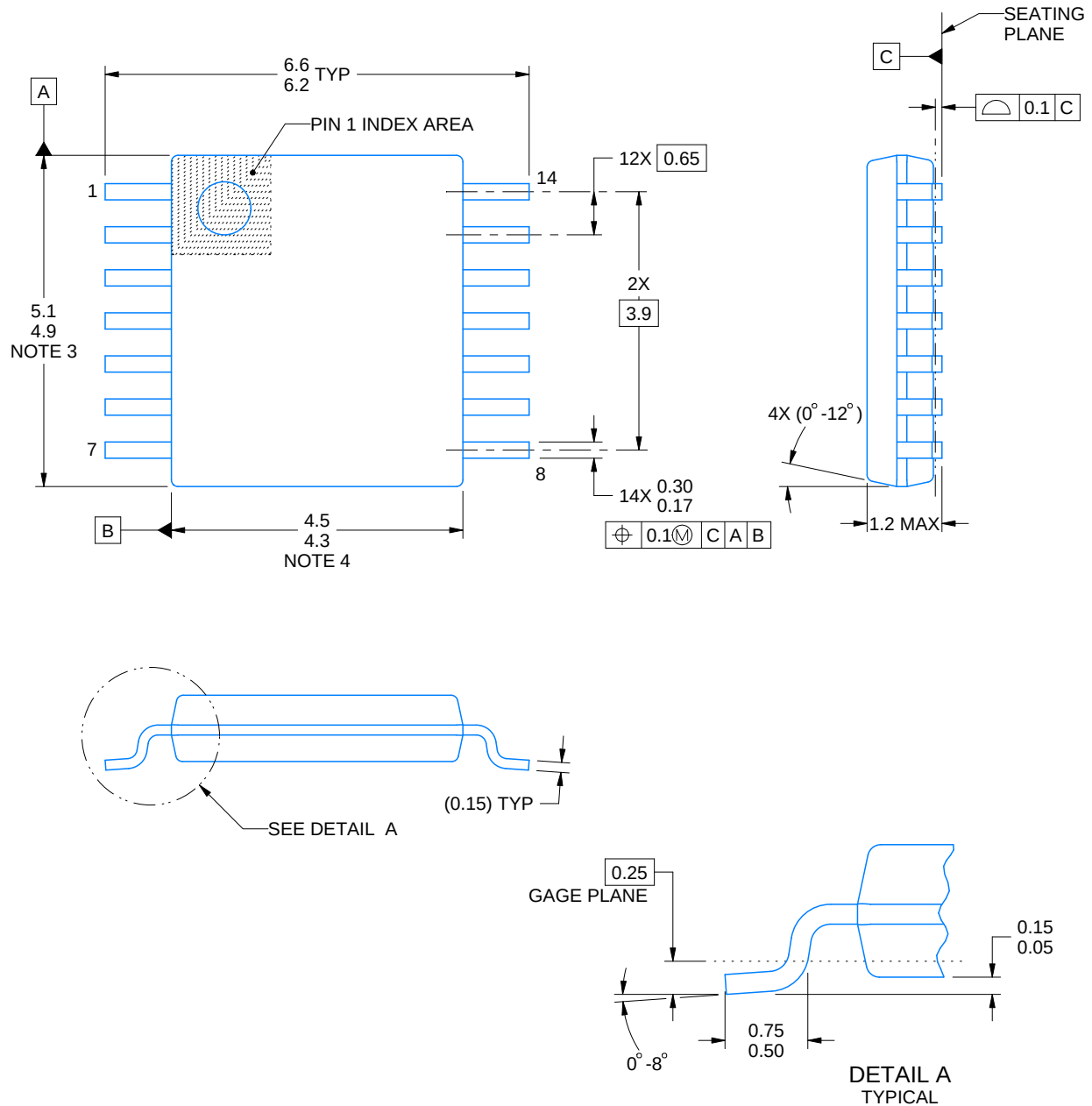
7. Laser cutting apertures with trapezoidal walls and rounded corners may offer better paste release. IPC-7525 may have alternate design recommendations.
8. Board assembly site may have different recommendations for stencil design.

PW0014A

PACKAGE OUTLINE

TSSOP - 1.2 mm max height

SMALL OUTLINE PACKAGE



4220202/B 12/2023

NOTES:

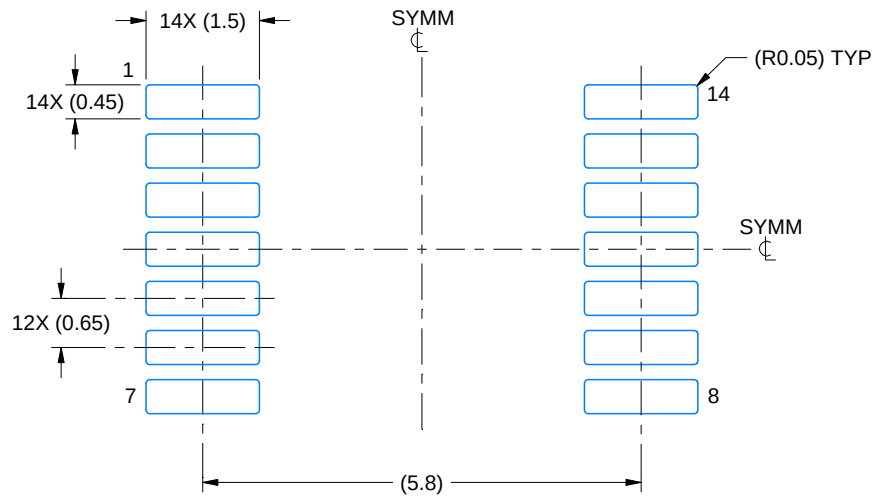
1. All linear dimensions are in millimeters. Any dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.
3. This dimension does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or 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

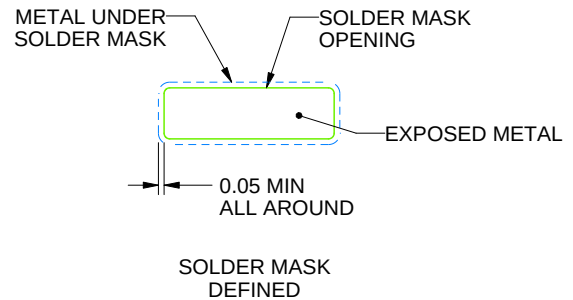
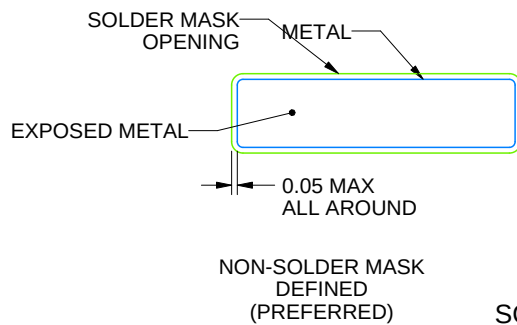
PW0014A

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.

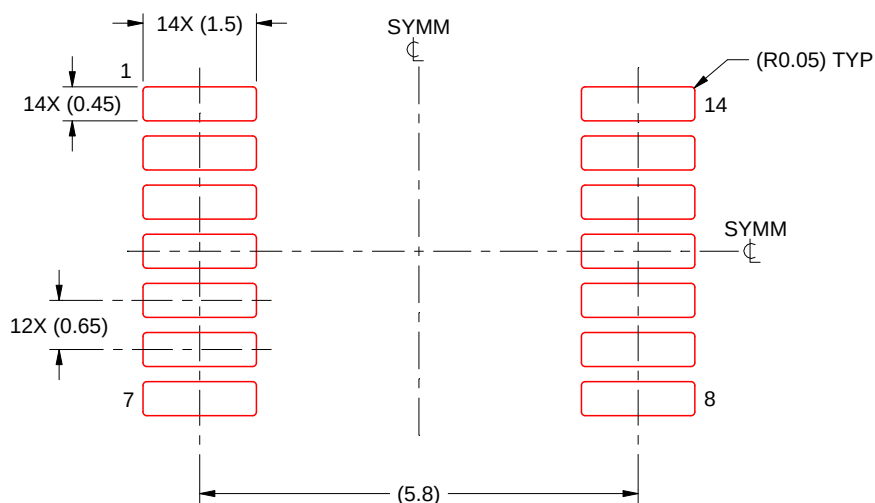
7. Solder mask tolerances between and around signal pads can vary based on board fabrication site.

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.

GENERIC PACKAGE VIEW

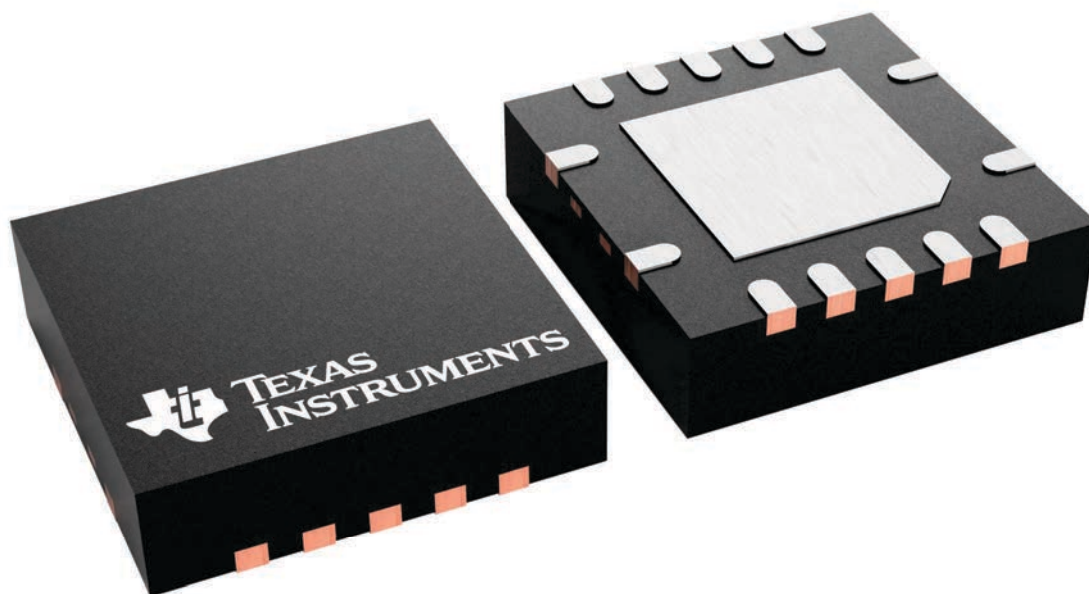
RGY 14

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.





VQFN - 1 mm max height

PLASTIC QUAD FLATPACK - NO LEAD



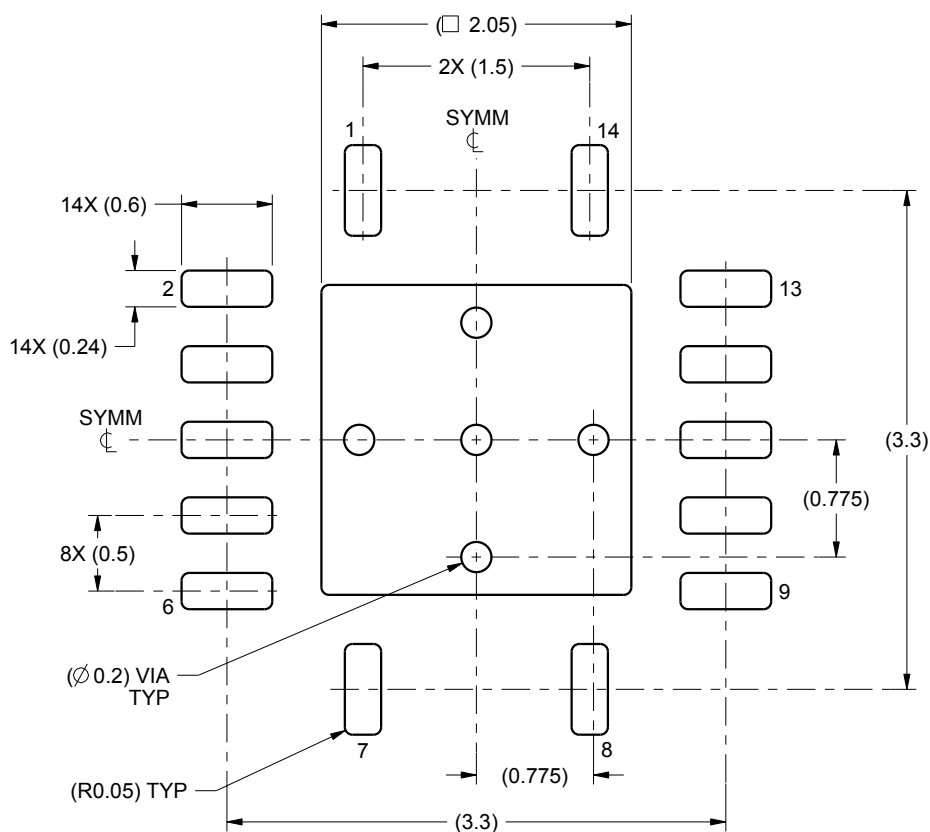
1. All linear dimensions are in millimeters. Any dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.
3. The package thermal pad must be soldered to the printed circuit board for thermal and mechanical performance.

EXAMPLE BOARD LAYOUT

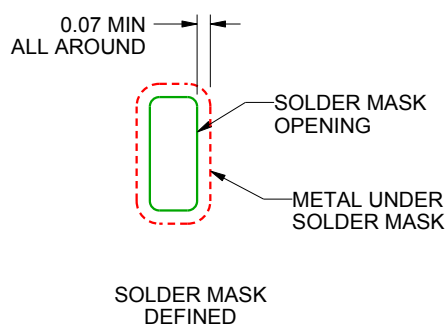
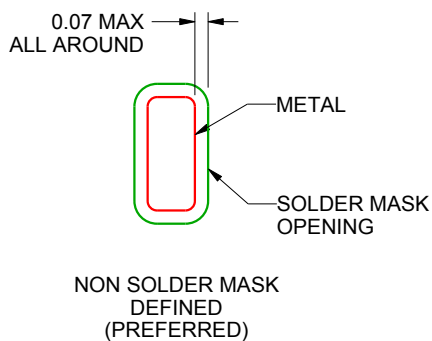
RGY0014A

VQFN - 1 mm max height

PLASTIC QUAD FLATPACK - NO LEAD



LAND PATTERN EXAMPLE
SCALE:20X



SOLDER MASK DETAILS

4219040/A 09/2015

NOTES: (continued)

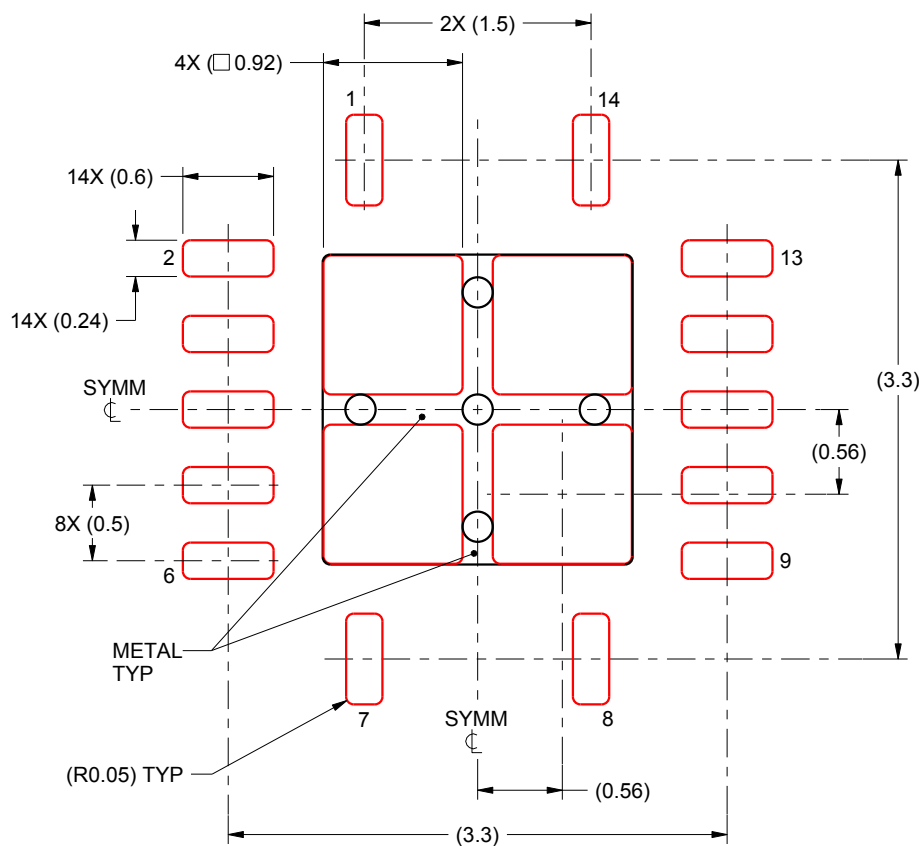
- This package is designed to be soldered to a thermal pad on the board. For more information, see Texas Instruments literature number SLUA271 (www.ti.com/lit/slue271).

EXAMPLE STENCIL DESIGN

RGY0014A

VQFN - 1 mm max height

PLASTIC QUAD FLATPACK - NO LEAD



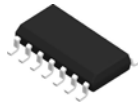
SOLDER PASTE EXAMPLE
BASED ON 0.125 mm THICK STENCIL

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

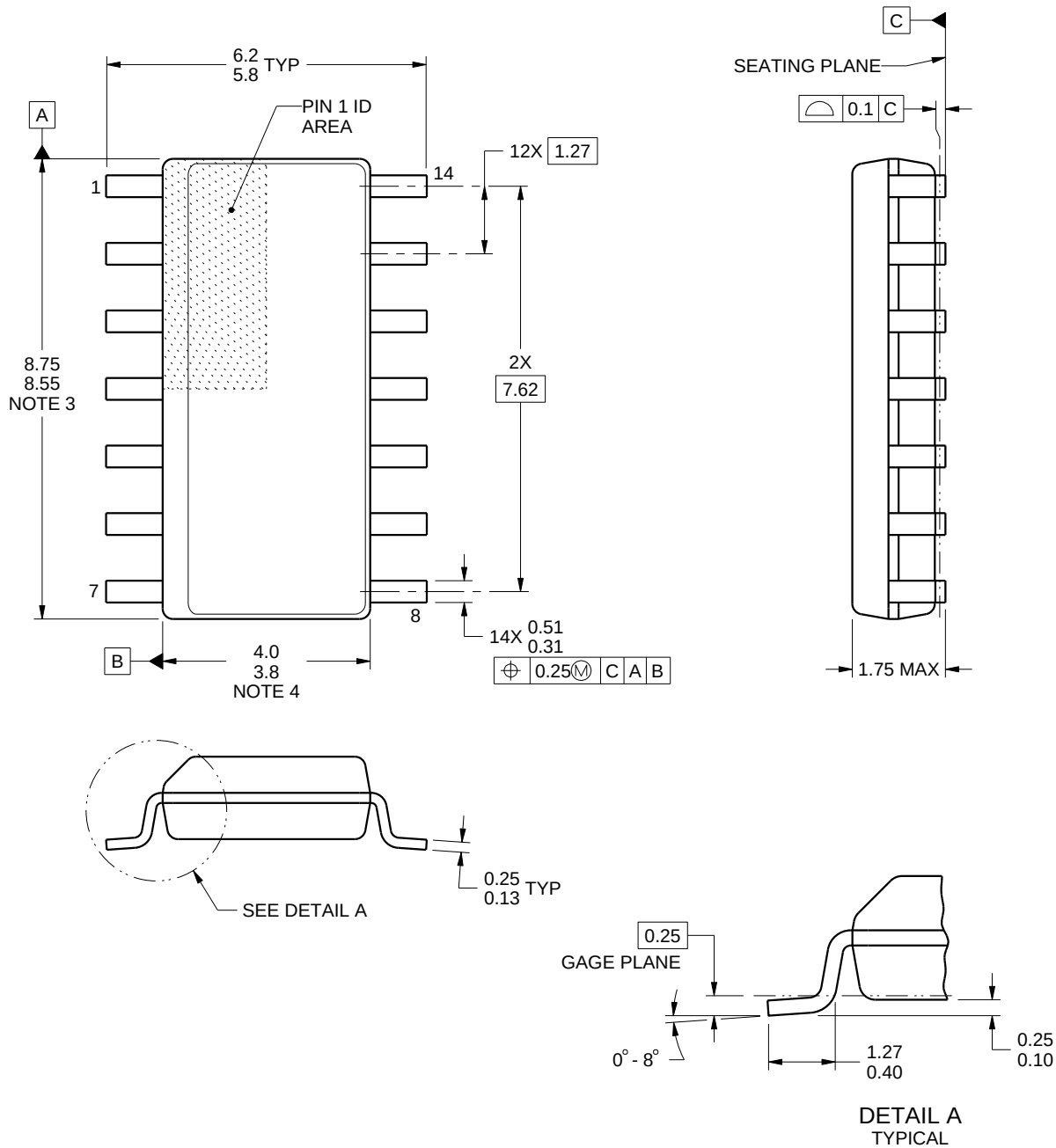
4219040/A 09/2015

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:

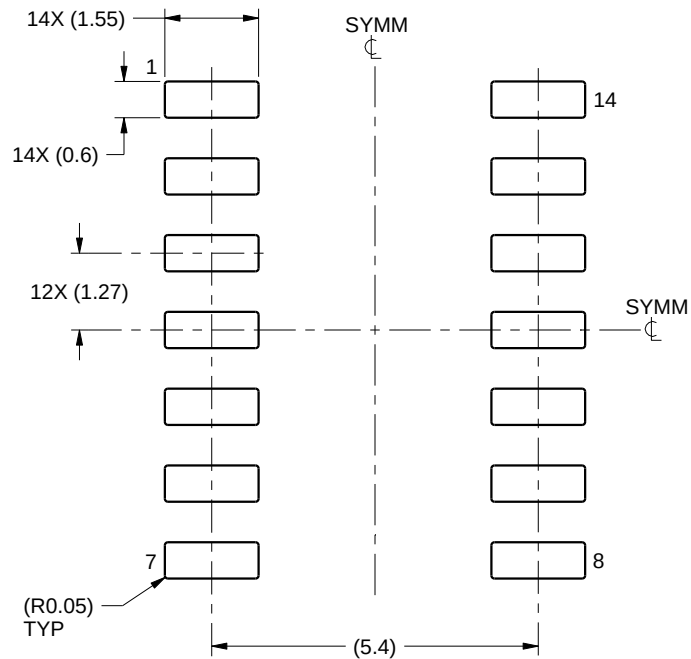
1. All linear dimensions are in millimeters. Dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.
3. This dimension does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate 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

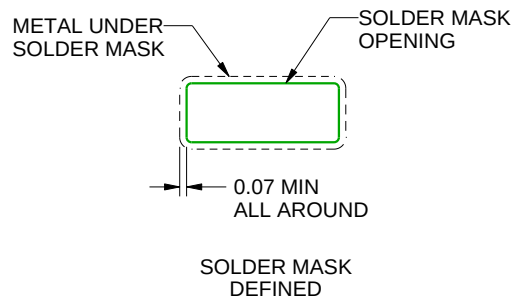
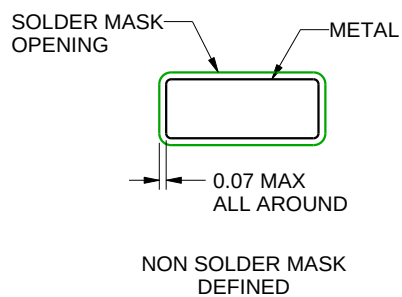
D0014A

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.

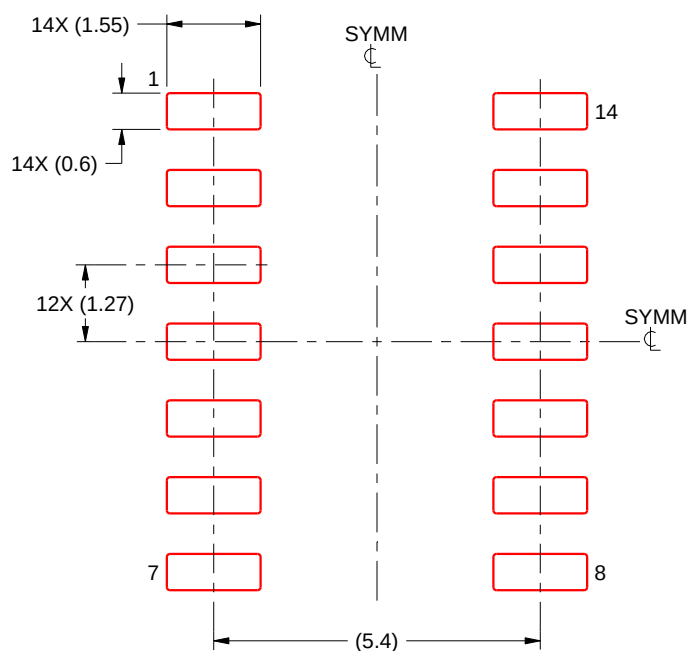
7. Solder mask tolerances between and around signal pads can vary based on board fabrication site.

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)

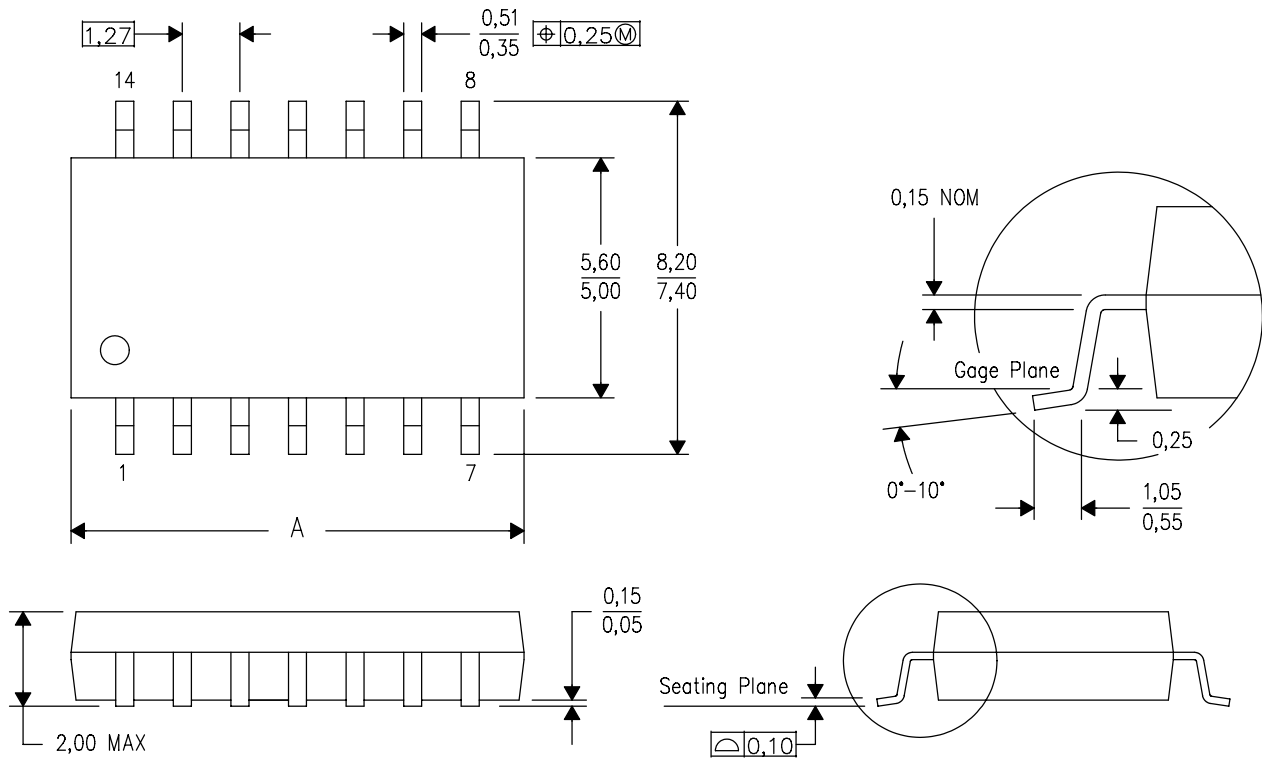
8. Laser cutting apertures with trapezoidal walls and rounded corners may offer better paste release. IPC-7525 may have alternate design recommendations.
9. Board assembly site may have different recommendations for stencil design.

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.

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