

Manual Update Sheet

# **TMS320C54CST MicroStar BGA Discontinued and Redesigned**



## **ABSTRACT**

This document should be used in conjunction with the device data sheet and describes the updated package designator for the indicated devices.

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### **Trademarks**

MicroStar BGA™ and MicroStar Junior™ are trademarks of Texas Instruments.  
All other trademarks are the property of their respective owners.

## 1 Package Redesign Details

### Explanation

The devices in the MicroStar BGA™ packaging were redesigned using a laminate nfBGA package. This nfBGA package offers datasheet-equivalent electrical performance. It is also footprint equivalent to the MicroStar BGA. For more details, please refer to this [nfBGA Packaging Application Report](#).

When referencing the device data sheet, use the new package designator in place of the discontinued package designator throughout the document.

The orderable addendum at the end of the device data sheet will reflect the new package designator.

See the following page or the end of the device data sheet for the updated nfBGA package drawing.

**Table 1-1. Package Designator**

Old Package Designator	New Package Designator
GGU	<b>GWS</b>
ZGU	<b>ZWS</b>

### Reason for Discontinuance

Due to an equipment End-Of-Life notice from our substrate supplier, we are phasing out certain MicroStar BGA and MicroStar Junior™ BGA packaging devices and offering a Last Time Buy.

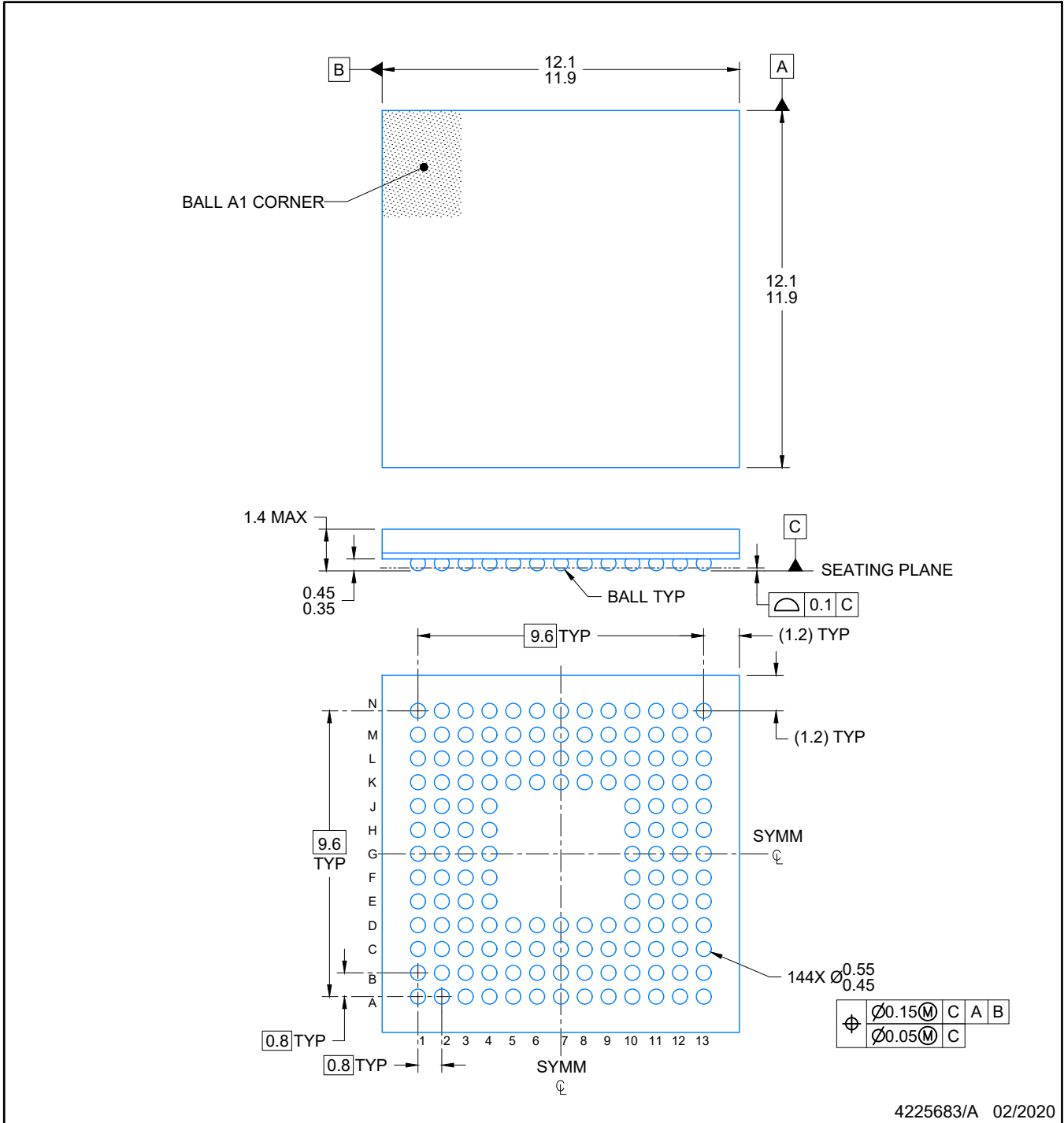
These devices have now been converted to an nfBGA package.

### Devices Affected

The following table describes the devices affected, the old and new package designators, and references to the device data sheet.

**Table 1-2. Devices and Nomenclature**

Device	Discontinued MicroStar BGA Device	Redesigned Laminate nfBGA Device	Device Data Sheet
TMS320C54CST	TMS320C54CSTGGU	TMS320C54CSTGWS	SPRS187
TMS320C54CST	TMS320C54CSTZGU	TMS320C54CSTZWS	SPRS187

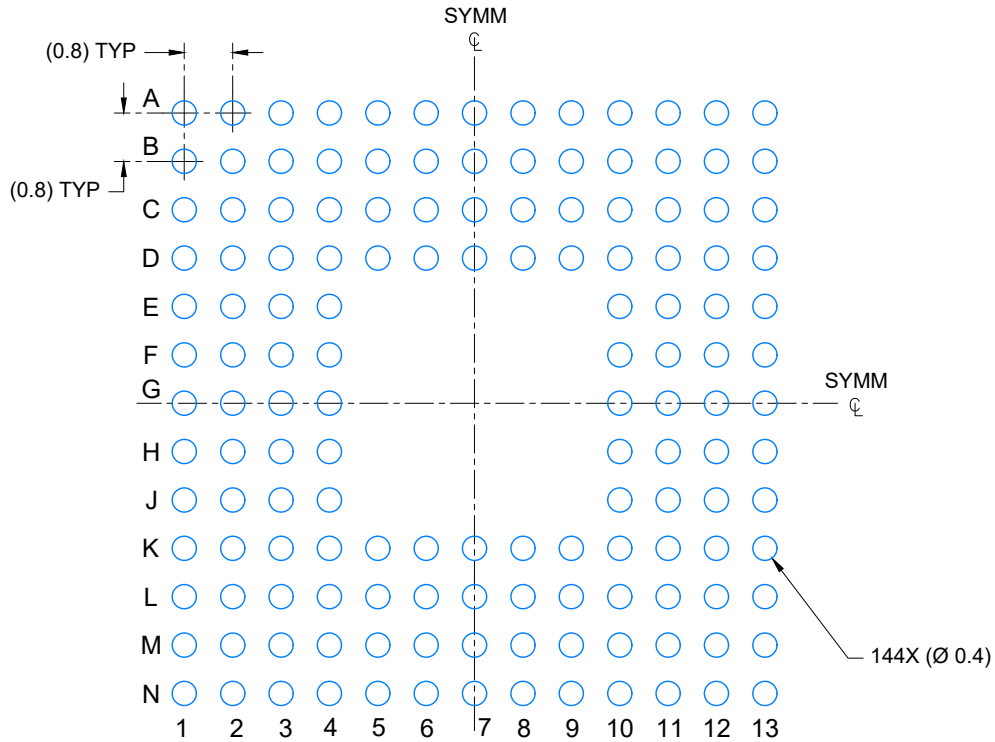


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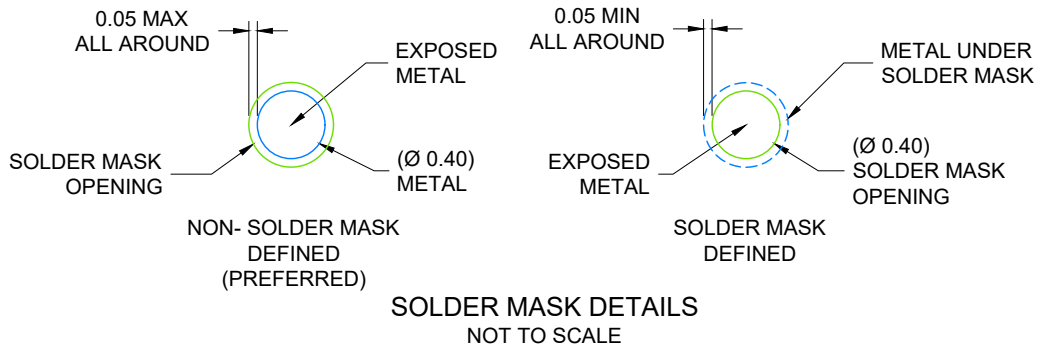
NOTES:

NanoFree is a trademark of Texas Instruments.

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.



LAND PATTERN EXAMPLE  
SCALE: 8X



SOLDER MASK DETAILS  
NOT TO SCALE

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NOTES: (continued)

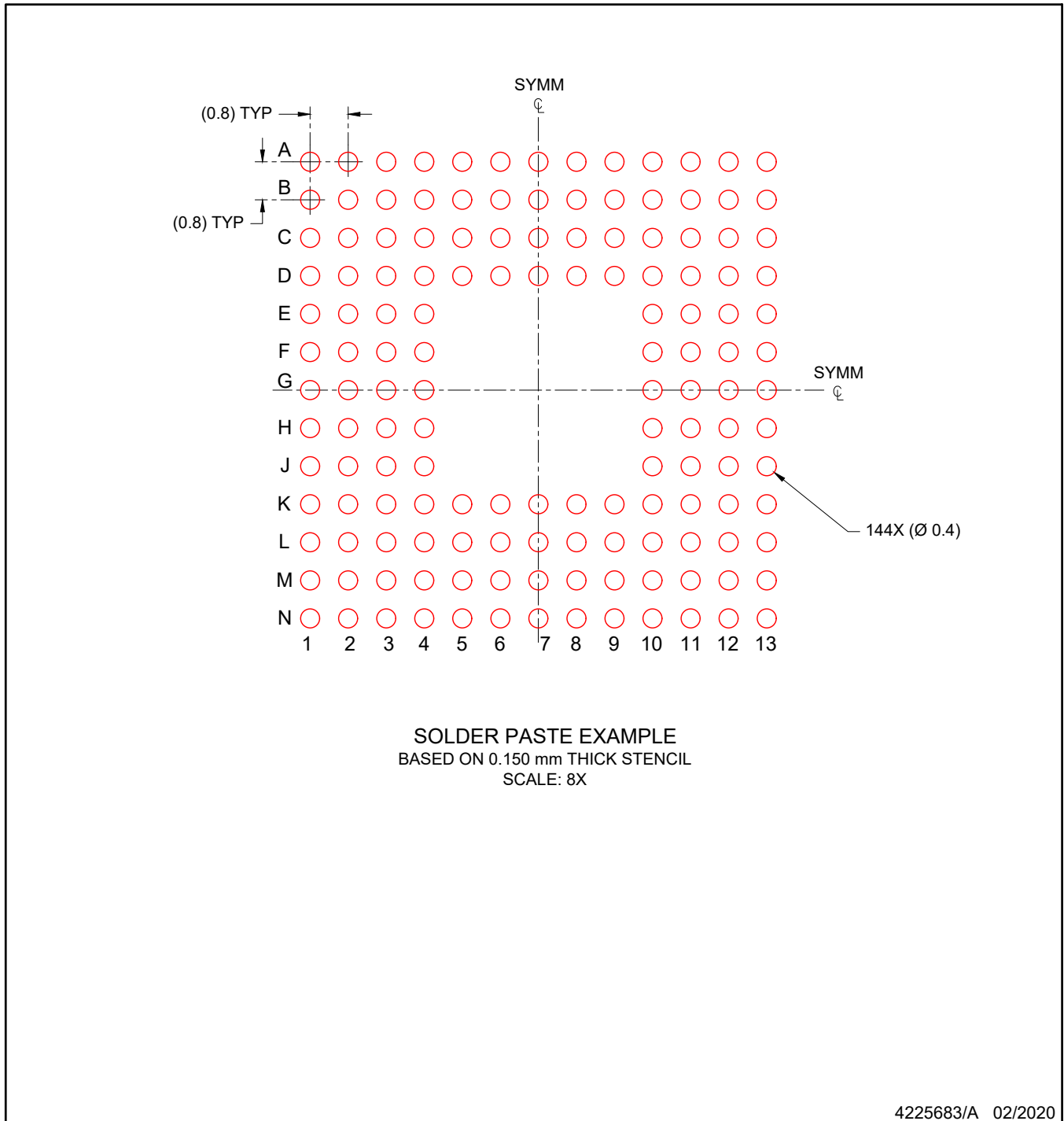
- Final dimensions may vary due to manufacturing tolerance considerations and also routing constraints. Refer to Texas Instruments Literature number SNVA009 ([www.ti.com/lit/snva009](http://www.ti.com/lit/snva009)).

# EXAMPLE STENCIL DESIGN

GWS0144A

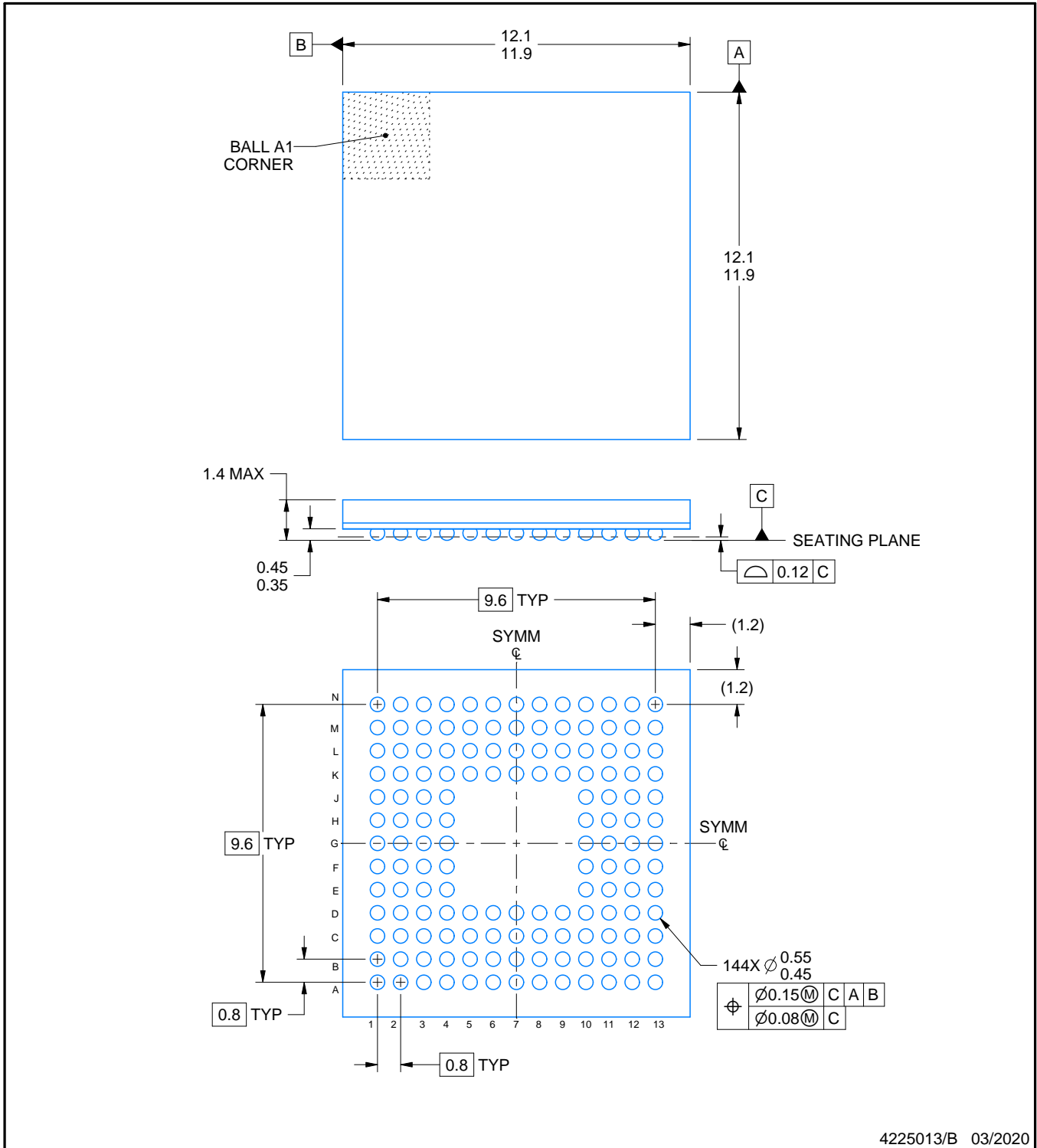
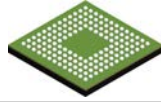
NFBGA - 1.4 mm max height

PLASTIC BALL GRID ARRAY



NOTES: (continued)

4. Laser cutting apertures with trapezoidal walls and rounded corners may offer better paste release.



NOTES:

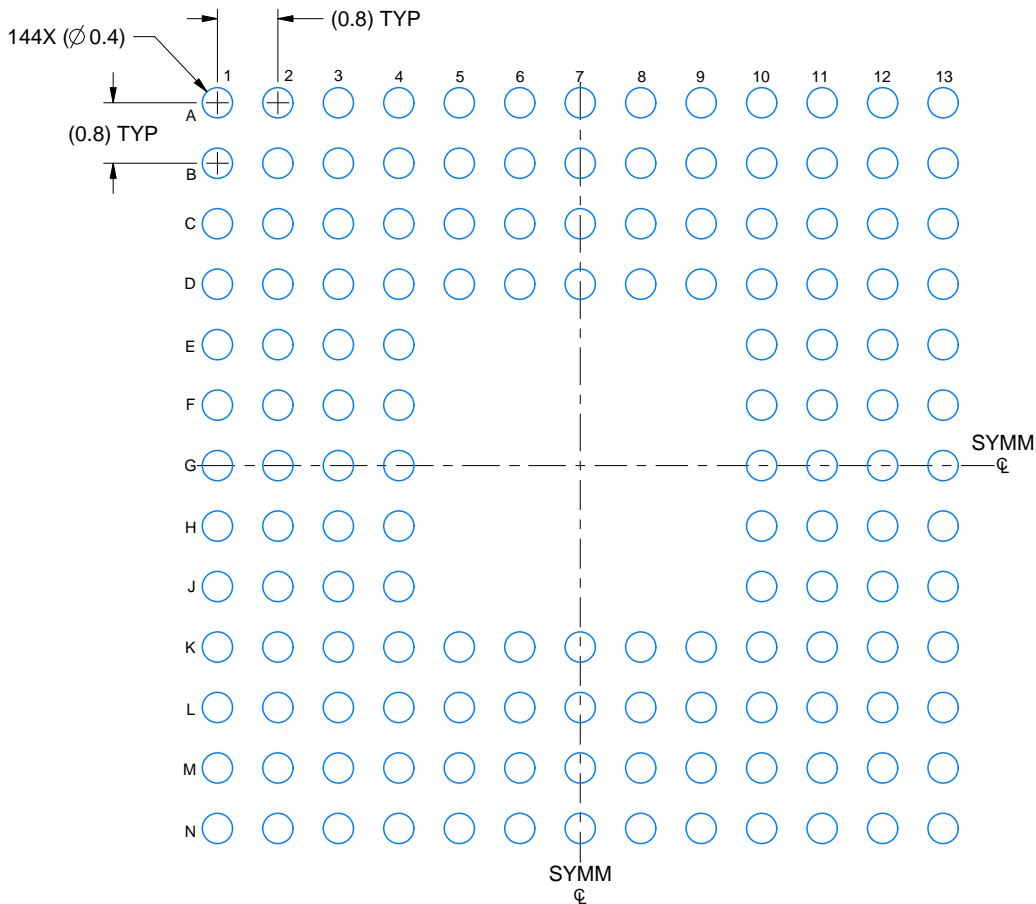
1. All linear dimensions are in millimeters. Any dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.

# EXAMPLE BOARD LAYOUT

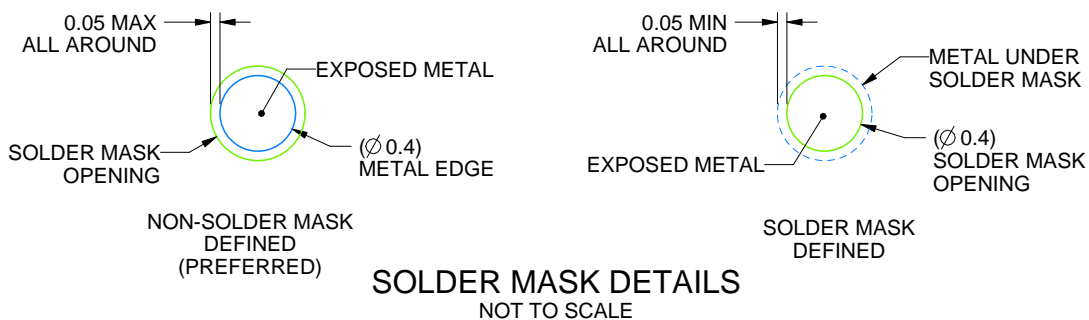
ZWS0144A

NFBGA - 1.4 mm max height

PLASTIC BALL GRID ARRAY



**LAND PATTERN EXAMPLE**  
EXPOSED METAL SHOWN  
SCALE: 10X



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NOTES: (continued)

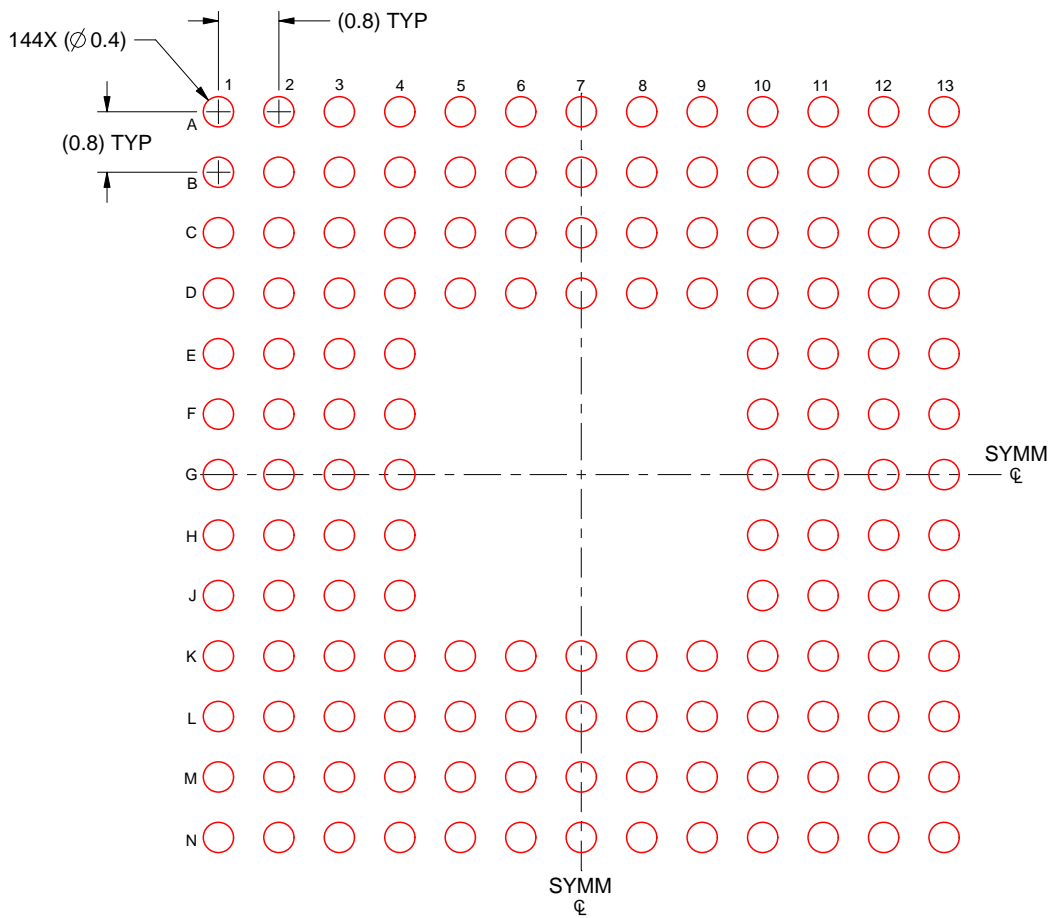
- Final dimensions may vary due to manufacturing tolerance considerations and also routing constraints. For information, see Texas Instruments literature number SPRAA99 ([www.ti.com/lit/spraa99](http://www.ti.com/lit/spraa99)).

# EXAMPLE STENCIL DESIGN

ZWS0144A

NFBGA - 1.4 mm max height

PLASTIC BALL GRID ARRAY



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

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NOTES: (continued)

4. Laser cutting apertures with trapezoidal walls and rounded corners may offer better paste release.



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