

TMS320VC5416 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

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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	GWS
ZGU	ZWS

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.

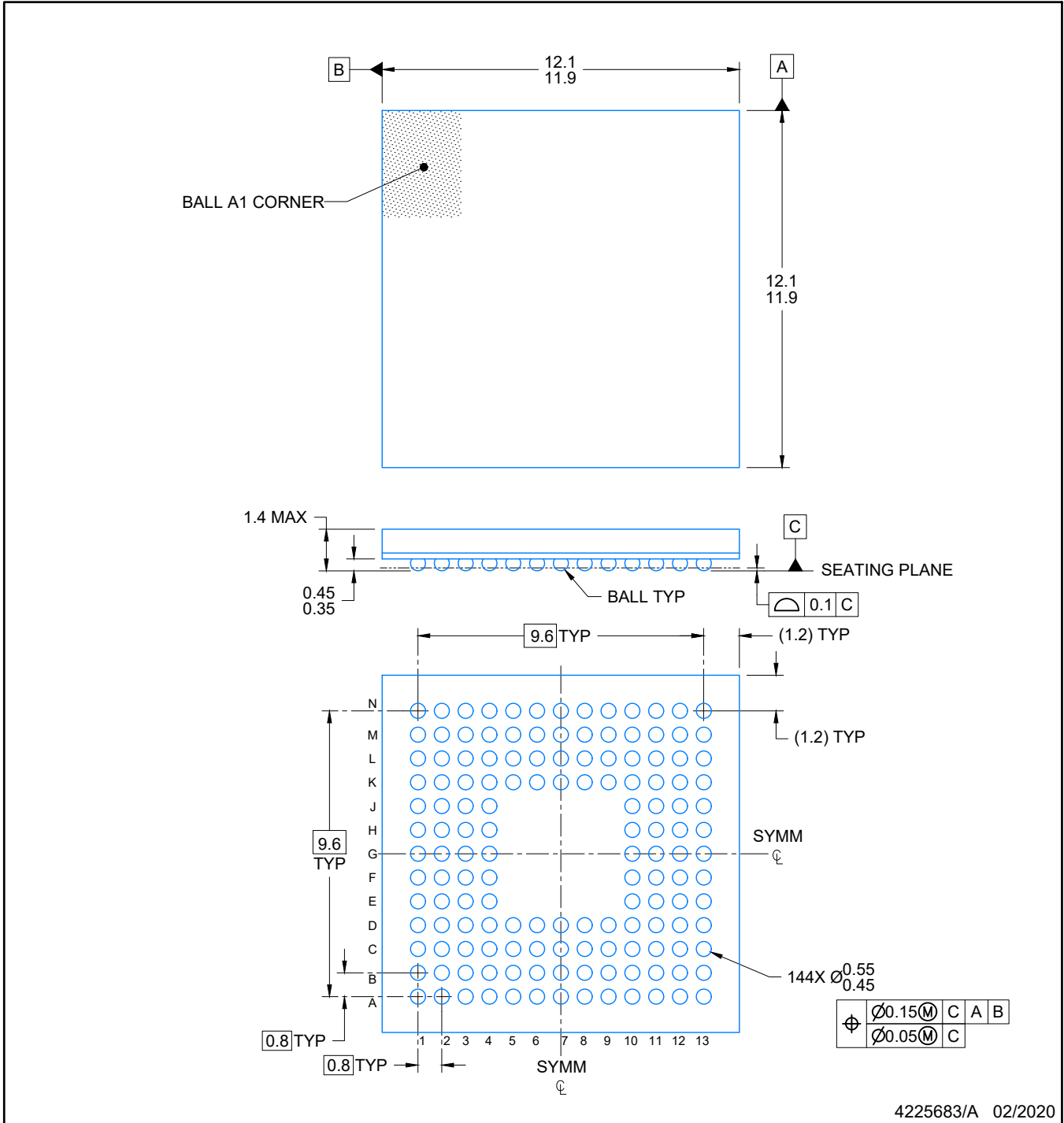
These devices have now been converted to an nfBGA package.

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
TMS320VC5416	TMS320VC5416GGU120	TMS320VC5416GWS120	SPRS095
TMS320VC5416	TMS320VC5416GGU160	TMS320VC5416GWS160	SPRS095
TMS320VC5416	TMS320VC5416ZGU120	TMS320VC5416ZWS120	SPRS095
TMS320VC5416	TMS320VC5416ZGU160	TMS320VC5416ZWS160	SPRS095

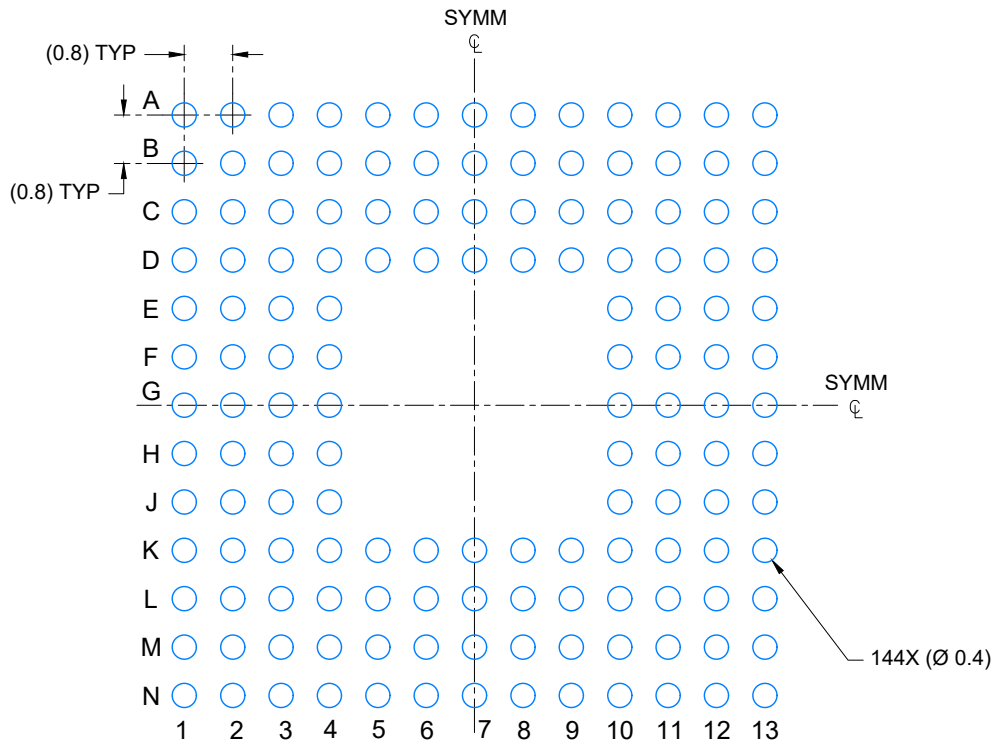


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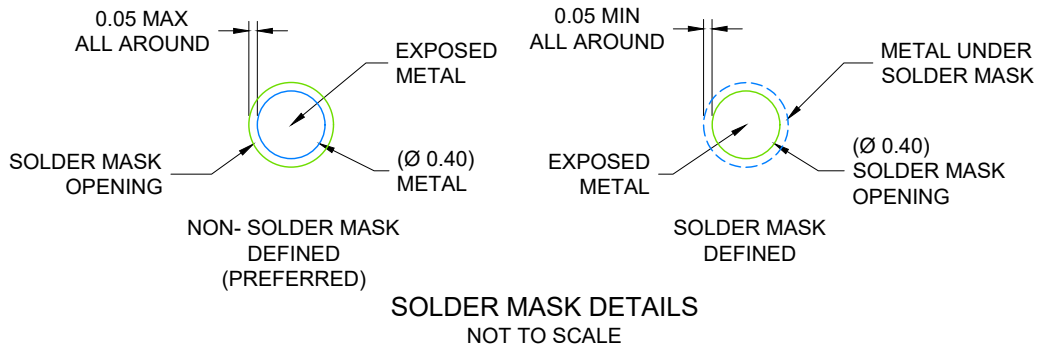
NOTES:

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)

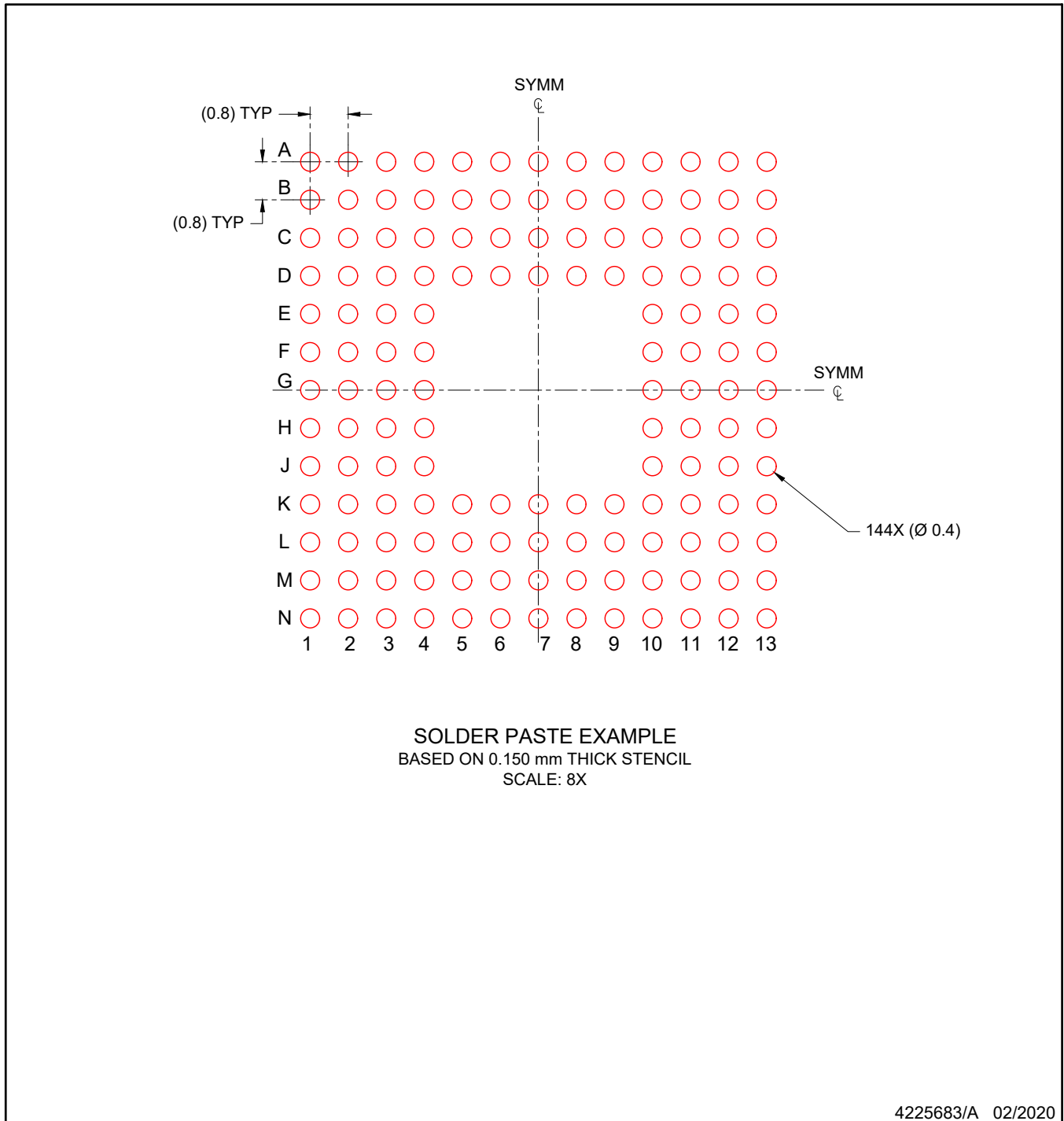
- Final dimensions may vary due to manufacturing tolerance considerations and also routing constraints. Refer to Texas Instruments Literature number SNVA009 (www.ti.com/lit/snva009).

EXAMPLE STENCIL DESIGN

GWS0144A

NFBGA - 1.4 mm max height

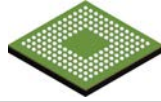
PLASTIC BALL GRID ARRAY



NOTES: (continued)

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

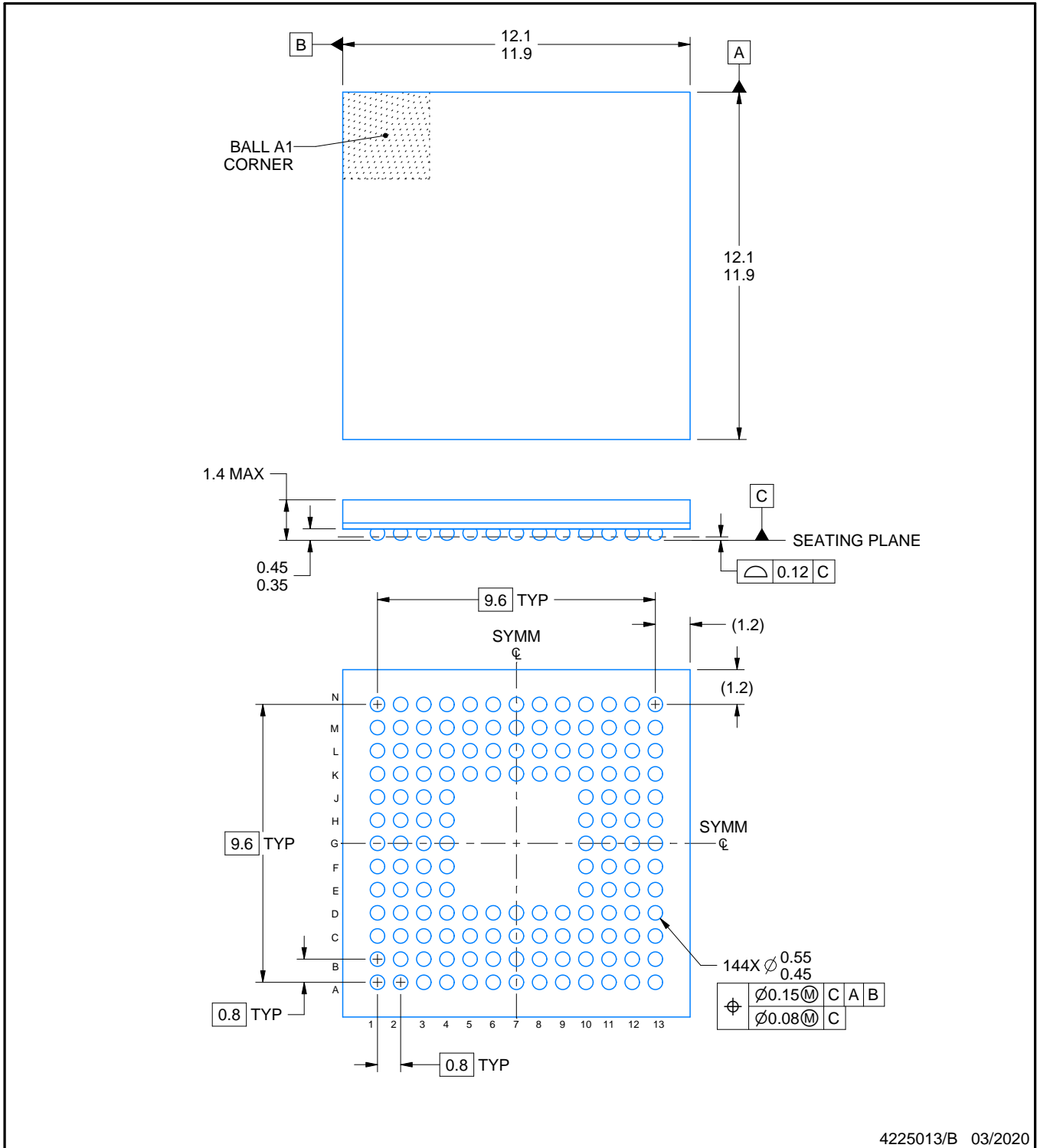
ZWS0144A



PACKAGE OUTLINE

NFBGA - 1.4 mm max height

PLASTIC BALL GRID ARRAY



NOTES:

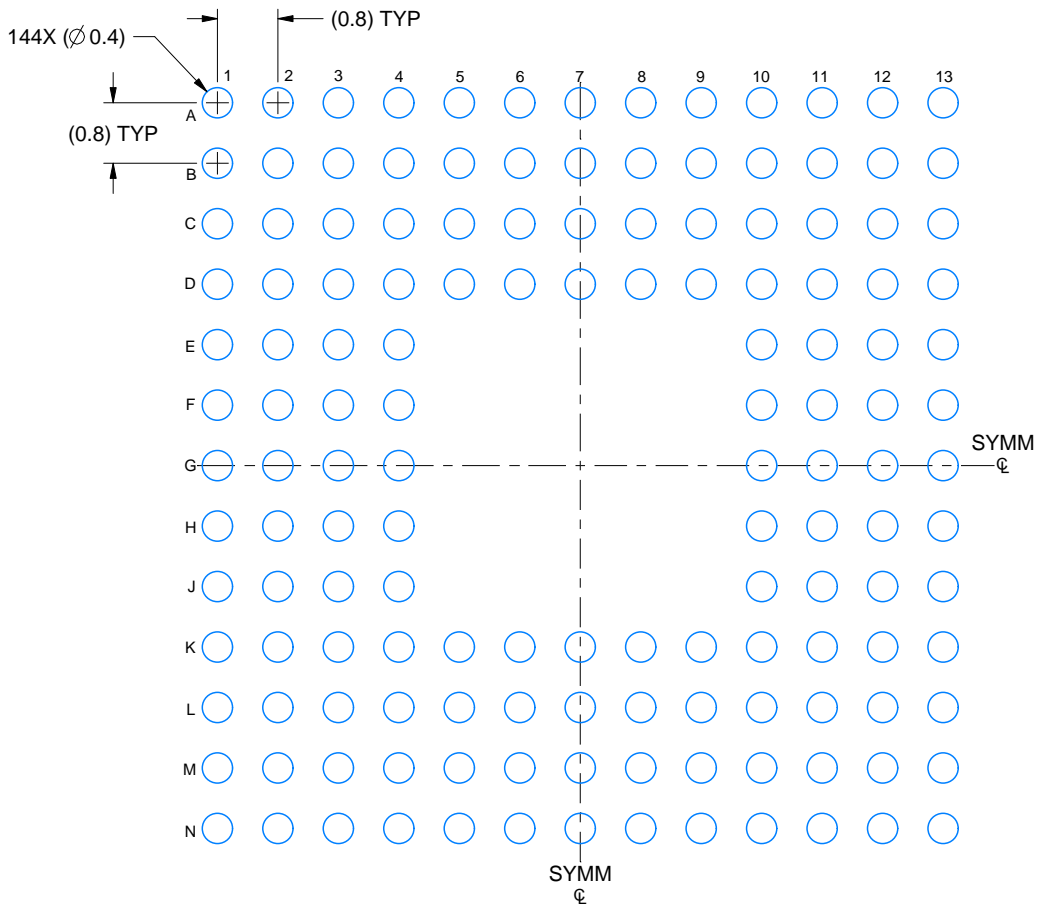
1. All linear dimensions are in millimeters. Any dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.

EXAMPLE BOARD LAYOUT

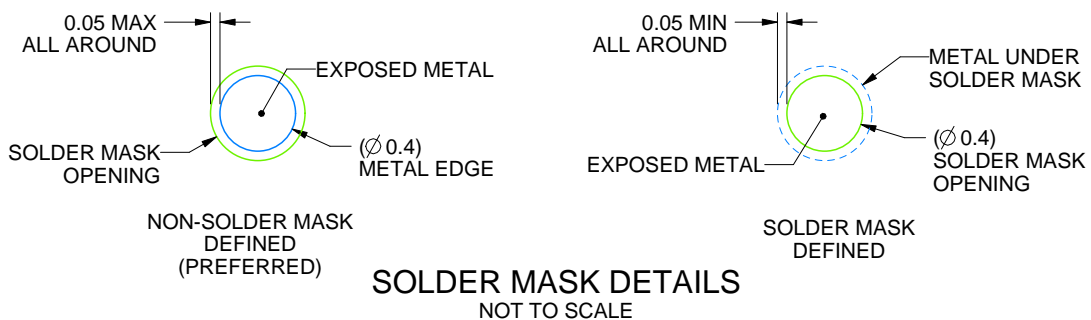
ZWS0144A

NFBGA - 1.4 mm max height

PLASTIC BALL GRID ARRAY



LAND PATTERN EXAMPLE
EXPOSED METAL SHOWN
SCALE: 10X



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NOTES: (continued)

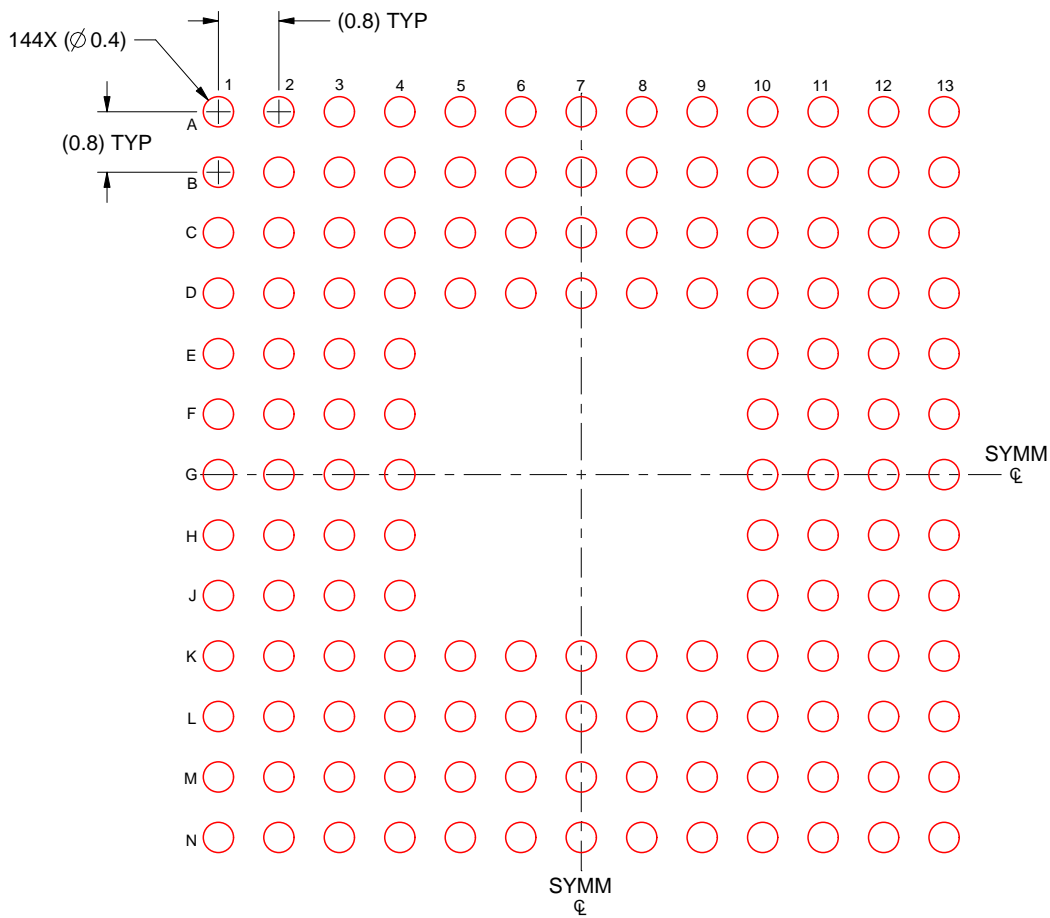
- Final dimensions may vary due to manufacturing tolerance considerations and also routing constraints. For information, see Texas Instruments literature number SPRAA99 (www.ti.com/lit/spraa99).

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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