

4 修订历史记录

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

Changes from Original (March 2013) to Revision A	Page
• 已添加 器件型号至标题，并已按照全新的数据表模板添加器件信息表	1

要获得完整数据表，请通过 [电子邮件](#) 与 TI 联系。

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)
BQ24715RGRR	Active	Production	VQFN (RGR) 20	3000 LARGE T&R	Yes	NIPDAU	Level-2-260C-1 YEAR	-20 to 125	BQ715
BQ24715RGRR.A	Active	Production	VQFN (RGR) 20	3000 LARGE T&R	Yes	NIPDAU	Level-2-260C-1 YEAR	-20 to 125	BQ715
BQ24715RGRR.B	Active	Production	VQFN (RGR) 20	3000 LARGE T&R	-	NIPDAU	Level-2-260C-1 YEAR	-20 to 125	BQ715
BQ24715RGRT	Active	Production	VQFN (RGR) 20	250 SMALL T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-20 to 125	BQ715
BQ24715RGRT.A	Active	Production	VQFN (RGR) 20	250 SMALL T&R	Yes	NIPDAU	Level-1-260C-UNLIM	-20 to 125	BQ715
BQ24715RGRT.B	Active	Production	VQFN (RGR) 20	250 SMALL T&R	-	NIPDAU	Level-1-260C-UNLIM	-20 to 125	BQ715

⁽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.

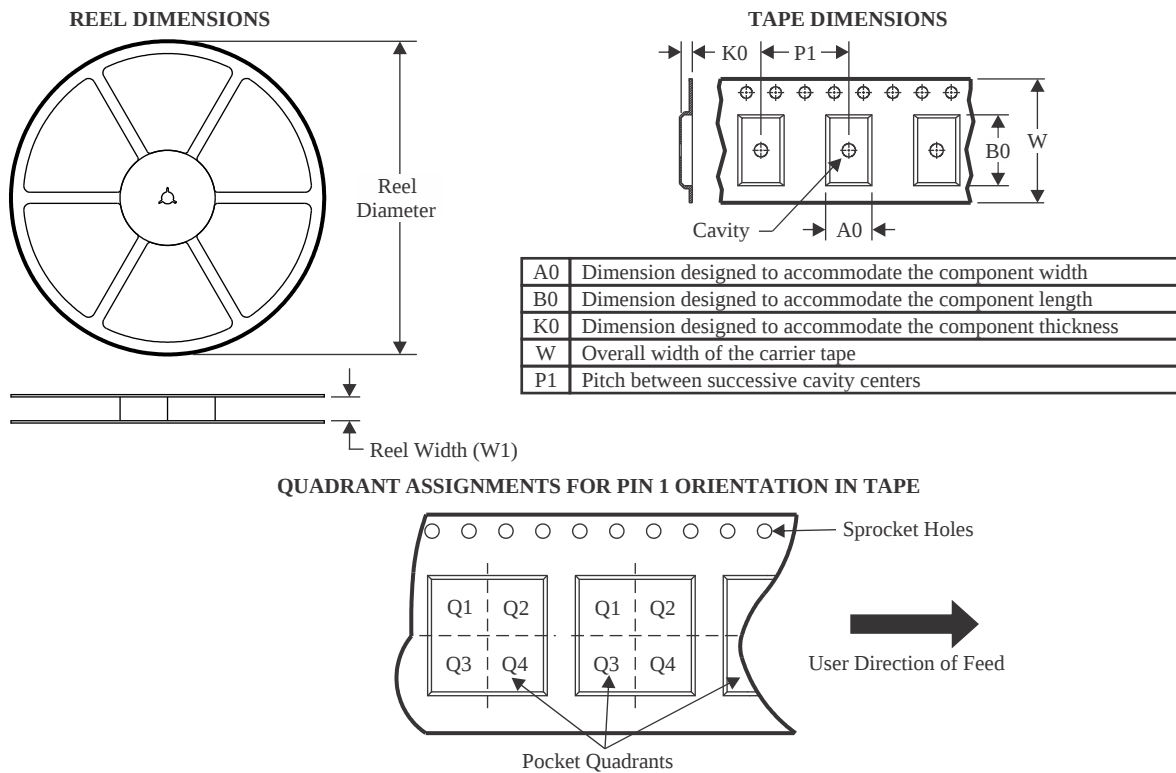
⁽⁶⁾ **Part marking:** There may be an additional marking, which relates to the logo, the lot trace code information, or the environmental category of the part.

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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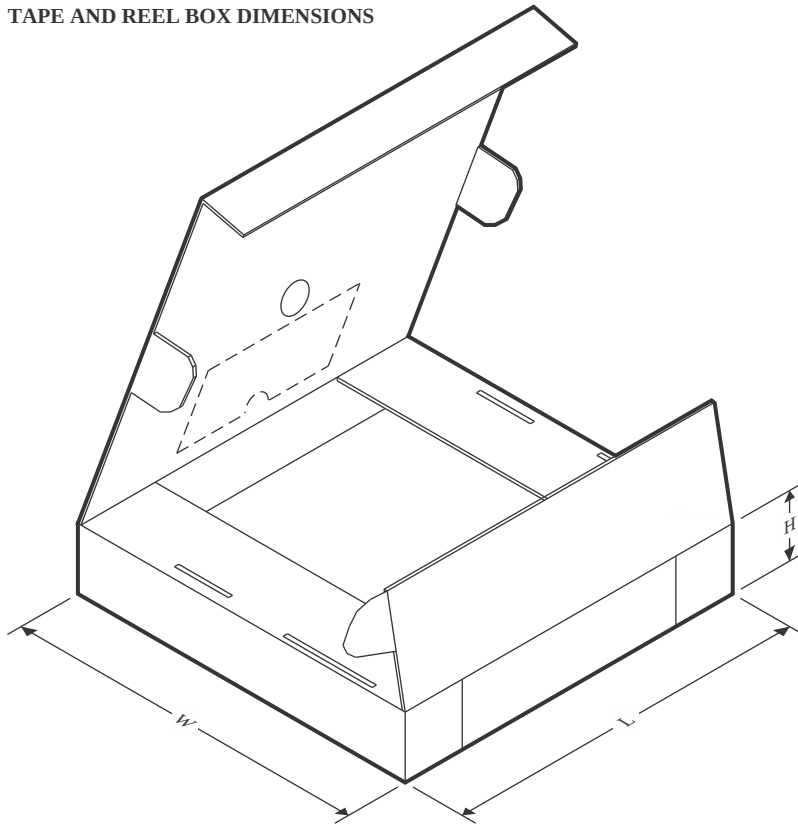
TAPE AND REEL INFORMATION



*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
BQ24715RGRR	VQFN	RGR	20	3000	330.0	12.4	3.75	3.75	1.15	8.0	12.0	Q2
BQ24715RGRT	VQFN	RGR	20	250	180.0	12.4	3.75	3.75	1.15	8.0	12.0	Q2

TAPE AND REEL BOX DIMENSIONS



*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
BQ24715RGRR	VQFN	RGR	20	3000	346.0	346.0	33.0
BQ24715RGRT	VQFN	RGR	20	250	182.0	182.0	20.0

GENERIC PACKAGE VIEW

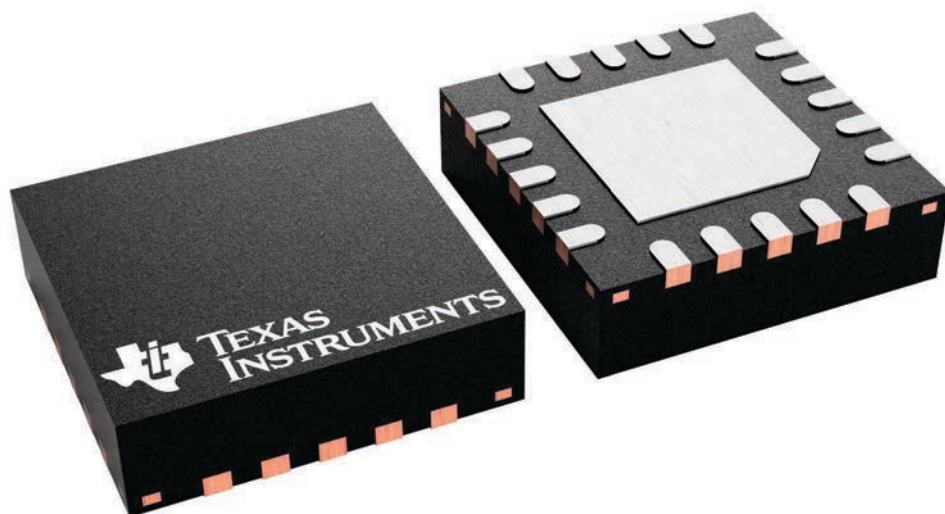
RGR 20

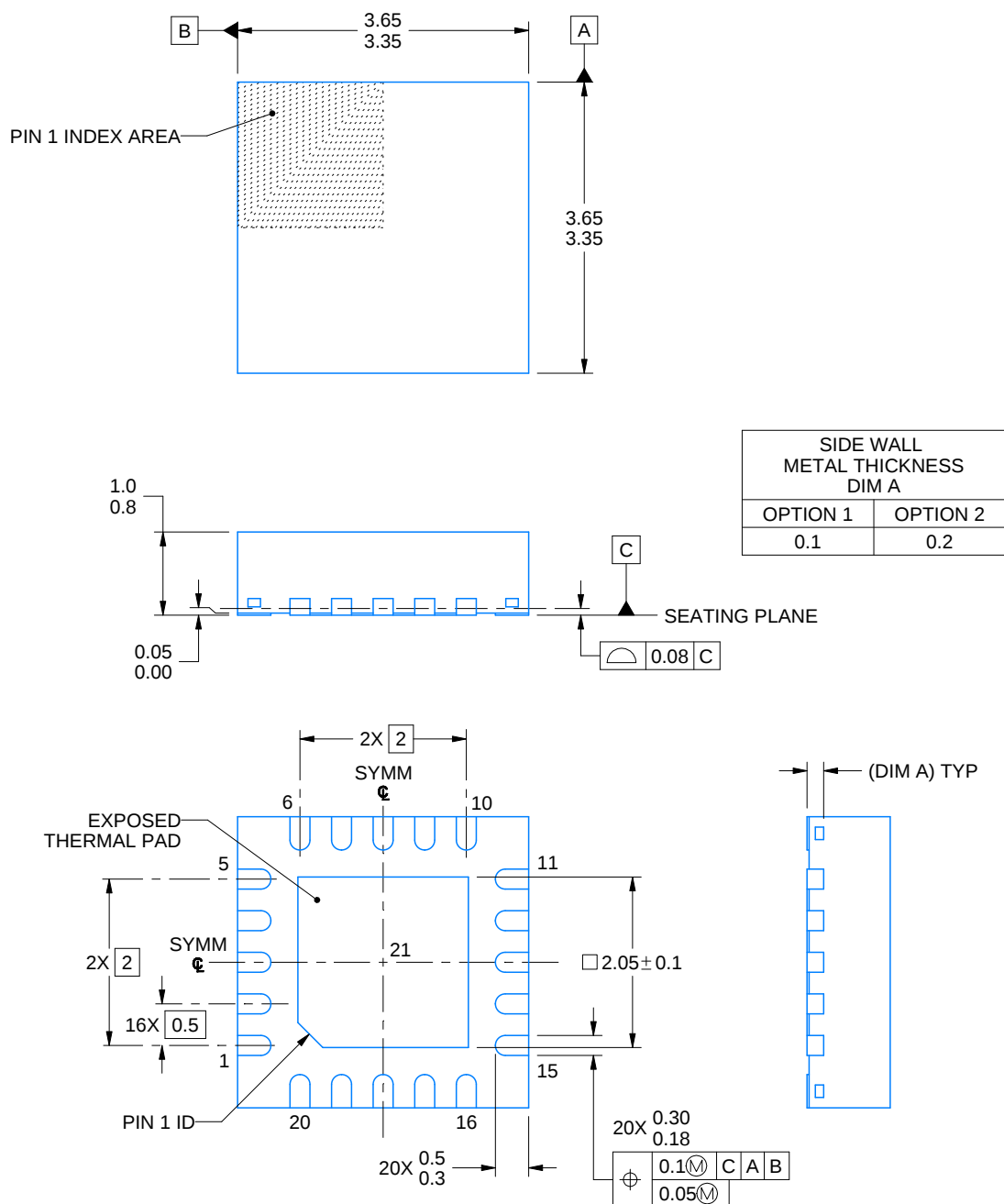
VQFN - 1 mm max height

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.





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NOTES:

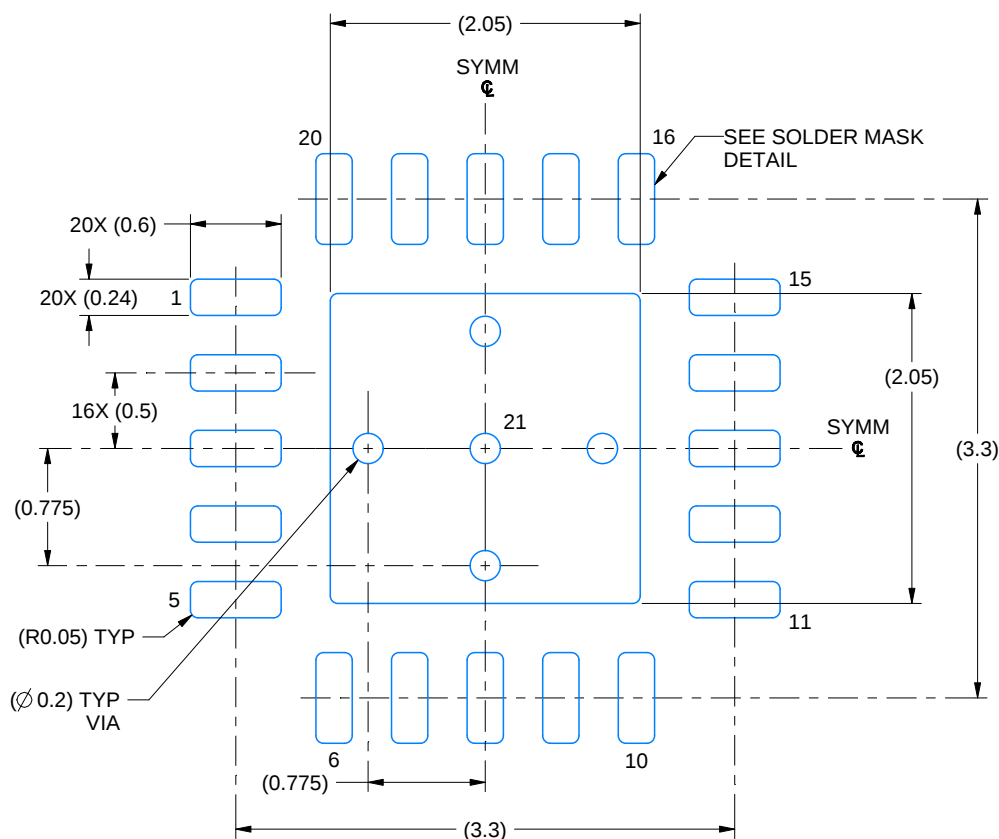
1. All linear dimensions are in millimeters. Any dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.
3. The package thermal pad must be soldered to the printed circuit board for thermal and mechanical performance.

EXAMPLE BOARD LAYOUT

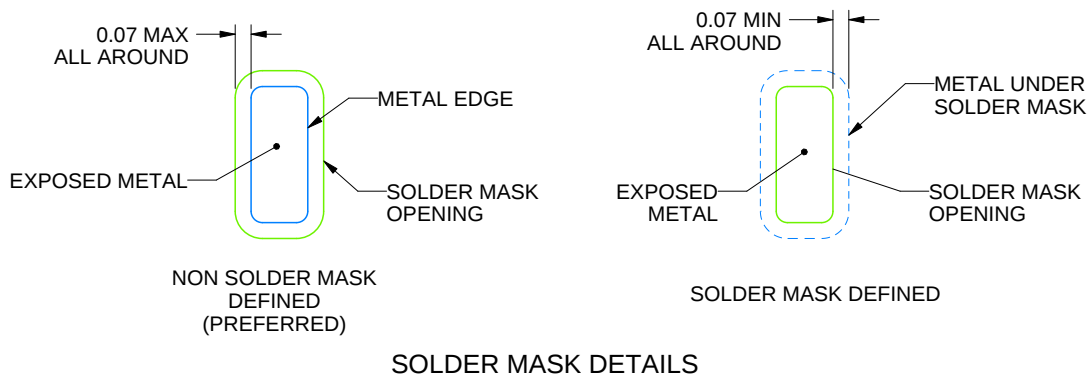
RGR0020A

VQFN - 1 mm max height

PLASTIC QUAD FLATPACK - NO LEAD



LAND PATTERN EXAMPLE
EXPOSED METAL SHOWN
SCALE: 20X



SOLDER MASK DETAILS

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NOTES: (continued)

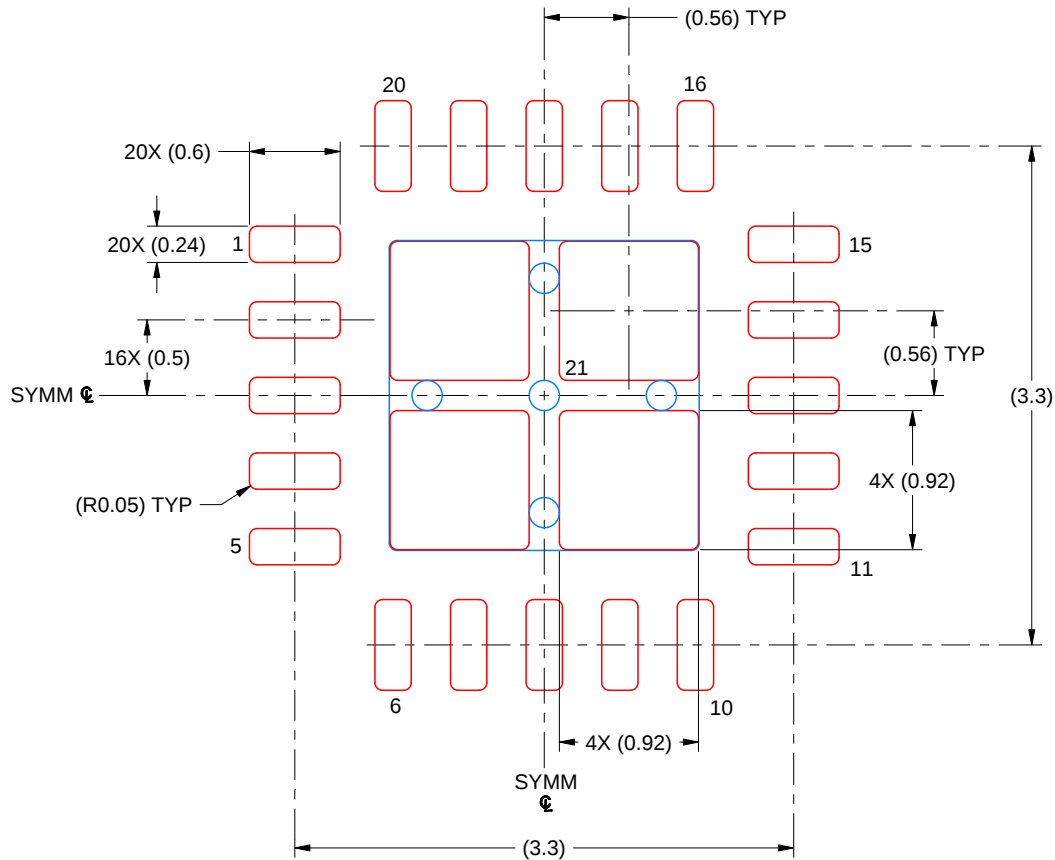
4. This package is designed to be soldered to a thermal pad on the board. For more information, see Texas Instruments literature number SLUA271 (www.ti.com/lit/sluea271).
5. Vias are optional depending on application, refer to device data sheet. If any vias are implemented, refer to their locations shown on this view. It is recommended that vias under paste be filled, plugged or tented.

EXAMPLE STENCIL DESIGN

RGR0020A

VQFN - 1 mm max height

PLASTIC QUAD FLATPACK - NO LEAD



SOLDER PASTE EXAMPLE
BASED ON 0.125 MM THICK STENCIL
SCALE: 20X

EXPOSED PAD 21
81% PRINTED SOLDER COVERAGE BY AREA UNDER PACKAGE

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NOTES: (continued)

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

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