

# SOT684-23

plastic thermal enhanced very thin quad flat package; no leads; wettable flank, 56 terminals; 0.5 mm pitch, 8 mm x 8 mm x 0.85 mm body

15 October 2021

Package information

## 1 Package summary

<b>Terminal position code</b>	Q (quad)
<b>Package type descriptive code</b>	HVQFN56
<b>Package style descriptive code</b>	HVQFN (thermal enhanced very thin quad flatpack; no leads)
<b>Package body material type</b>	P (plastic)
<b>Mounting method type</b>	S (surface mount)
<b>Issue date</b>	31-01-2019
<b>Manufacturer package code</b>	98ASA01098D

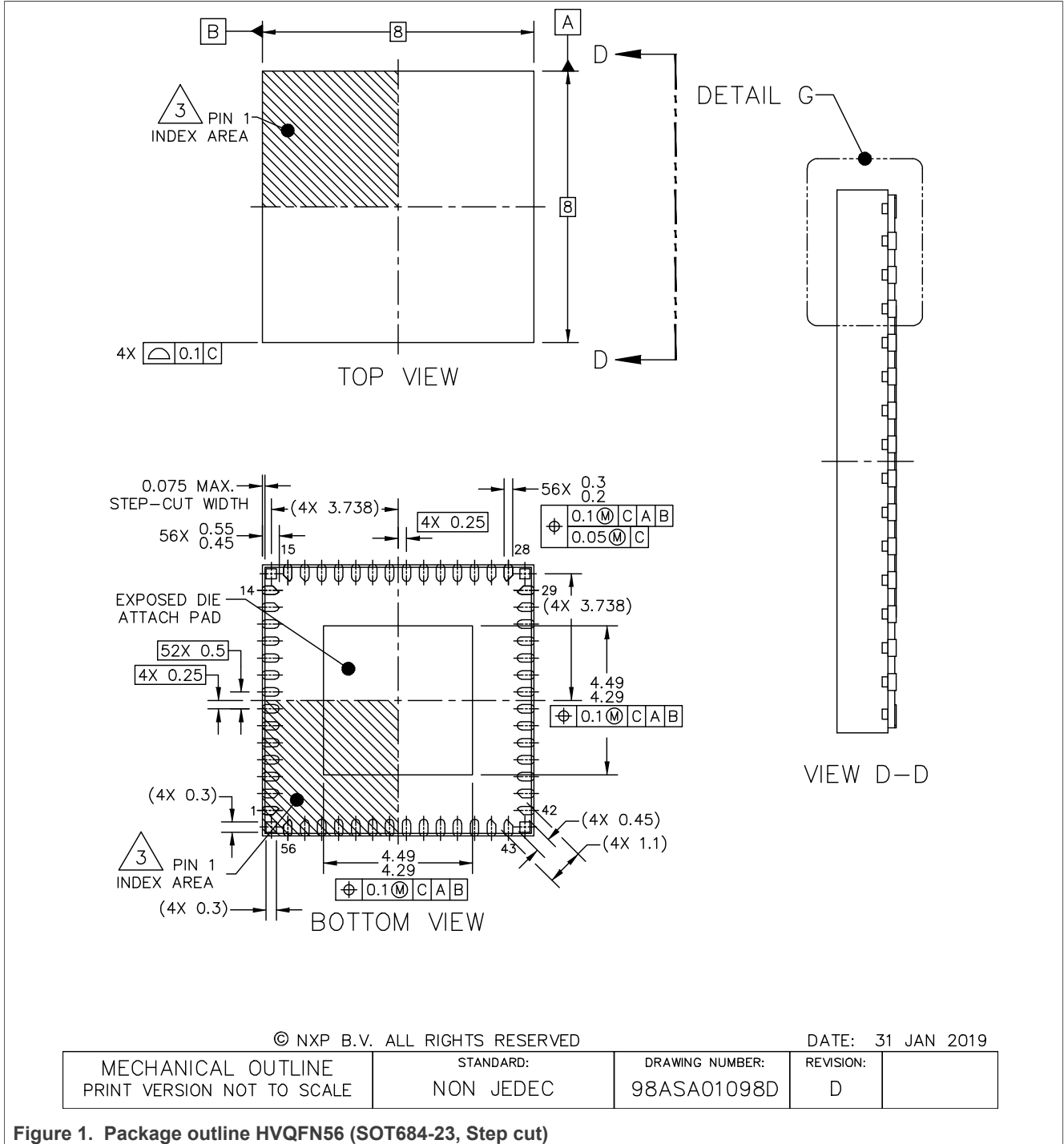
Table 1. Package summary

Parameter	Min	Nom	Max	Unit
package length	-	8	-	mm
package width	-	8	-	mm
seated height	-	0.85	-	mm
nominal pitch	-	0.5	-	mm
actual quantity of termination	-	56	-	



plastic thermal enhanced very thin quad flat package; no leads; wettable flank, 56 terminals; 0.5 mm pitch, 8 mm x 8 mm x 0.85 mm body

2 Package outline



plastic thermal enhanced very thin quad flat package; no leads; wettable flank, 56 terminals; 0.5 mm pitch, 8 mm x 8 mm x 0.85 mm body

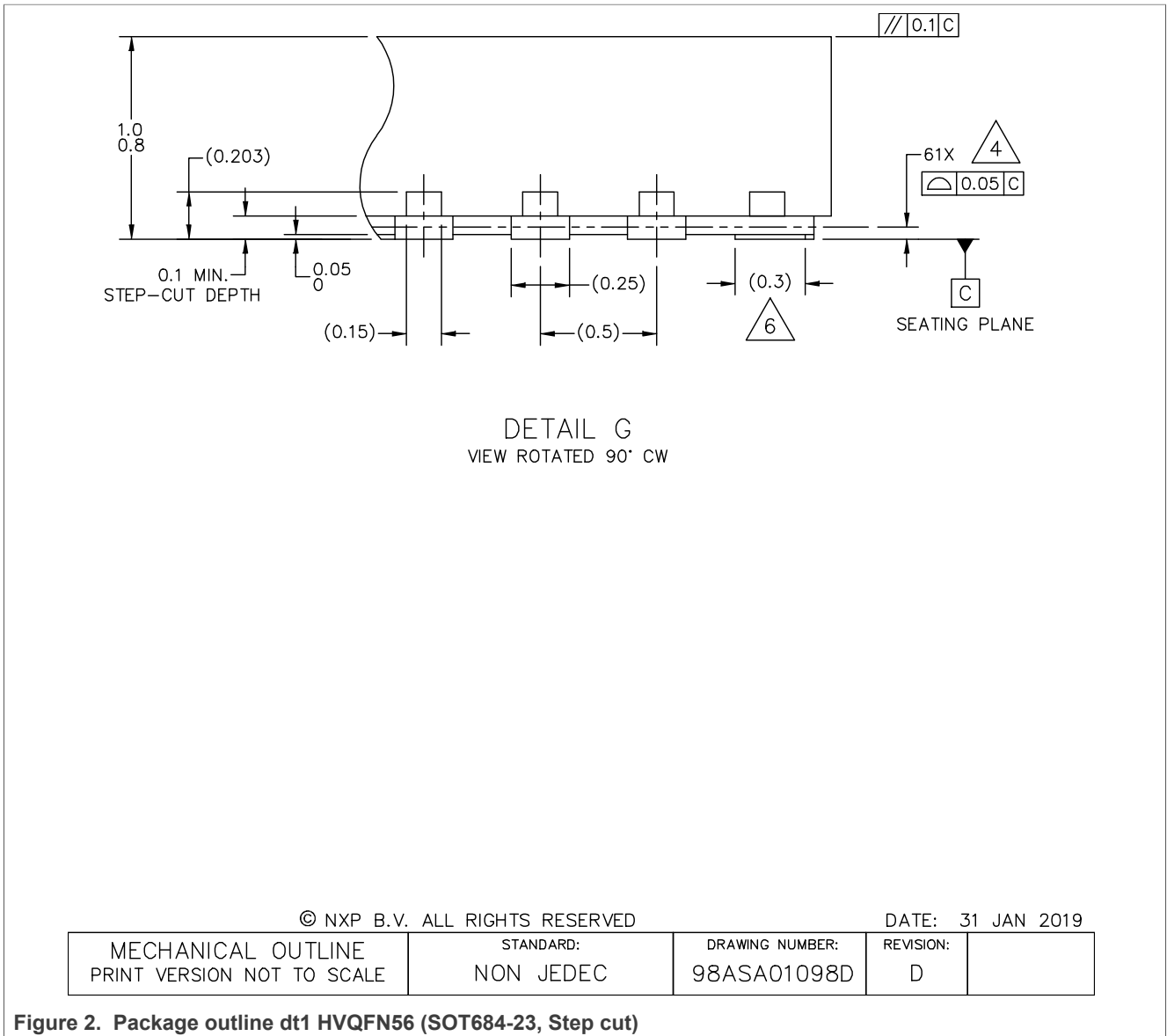


Figure 2. Package outline dt1 HVQFN56 (SOT684-23, Step cut)

plastic thermal enhanced very thin quad flat package; no leads; wettable flank, 56 terminals; 0.5 mm pitch, 8 mm x 8 mm x 0.85 mm body

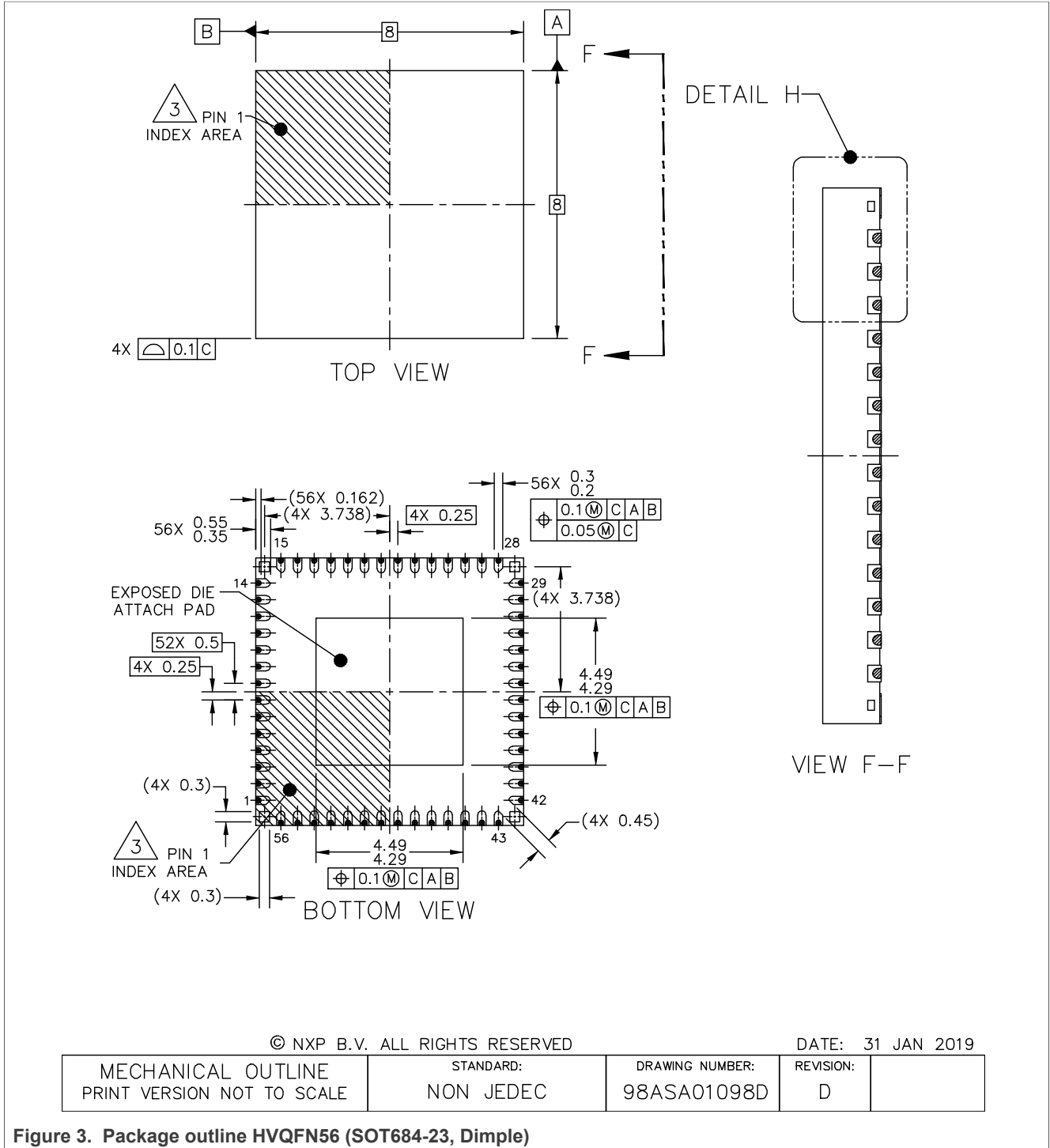


Figure 3. Package outline HVQFN56 (SOT684-23, Dimple)

plastic thermal enhanced very thin quad flat package; no leads; wettable flank, 56 terminals; 0.5 mm pitch, 8 mm x 8 mm x 0.85 mm body

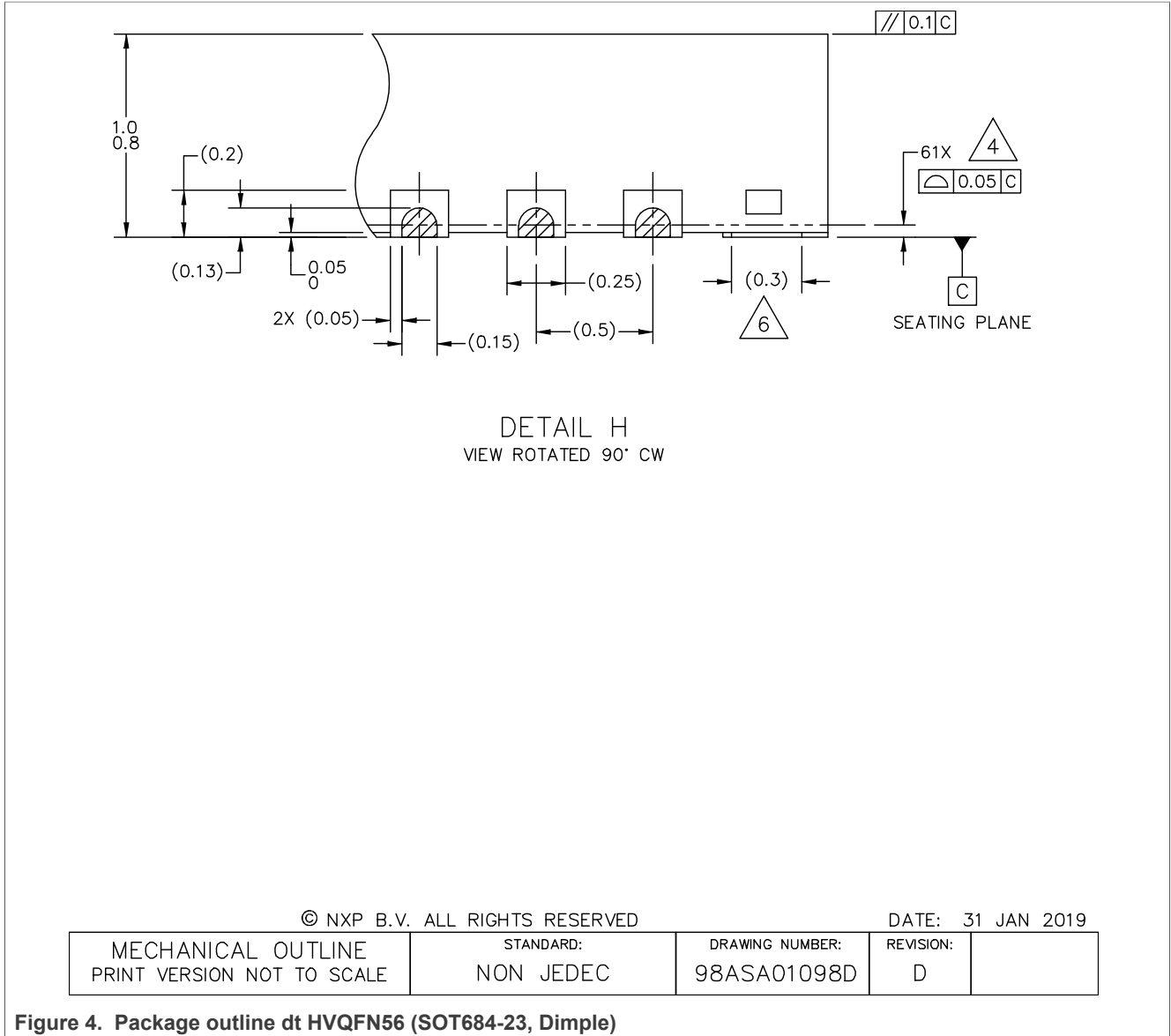


Figure 4. Package outline dt HVQFN56 (SOT684-23, Dimple)

plastic thermal enhanced very thin quad flat package; no leads; wettable flank, 56 terminals; 0.5 mm pitch, 8 mm x 8 mm x 0.85 mm body

3 Soldering

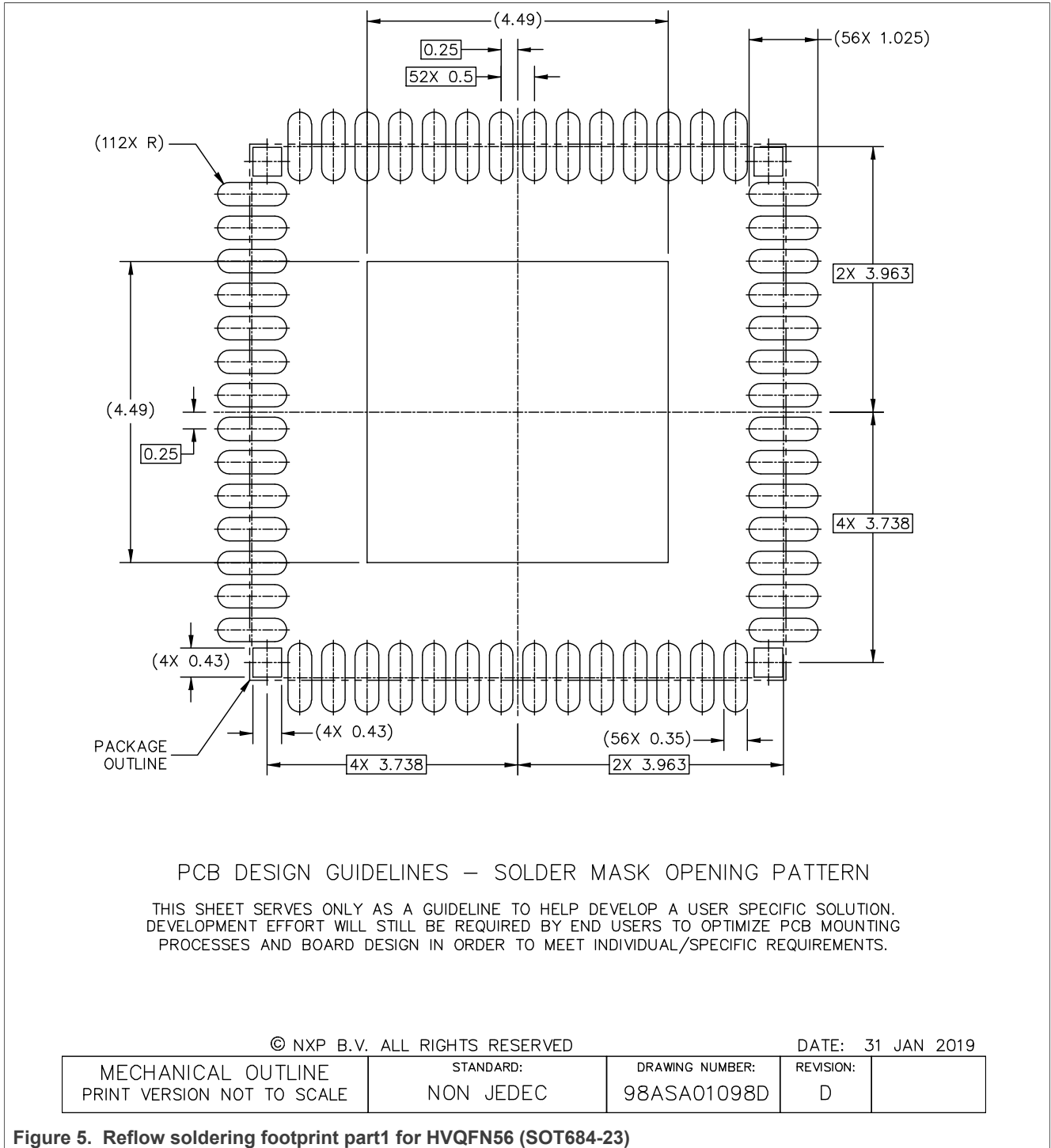


Figure 5. Reflow soldering footprint part1 for HVQFN56 (SOT684-23)

plastic thermal enhanced very thin quad flat package; no leads; wettable flank, 56 terminals; 0.5 mm pitch, 8 mm x 8 mm x 0.85 mm body

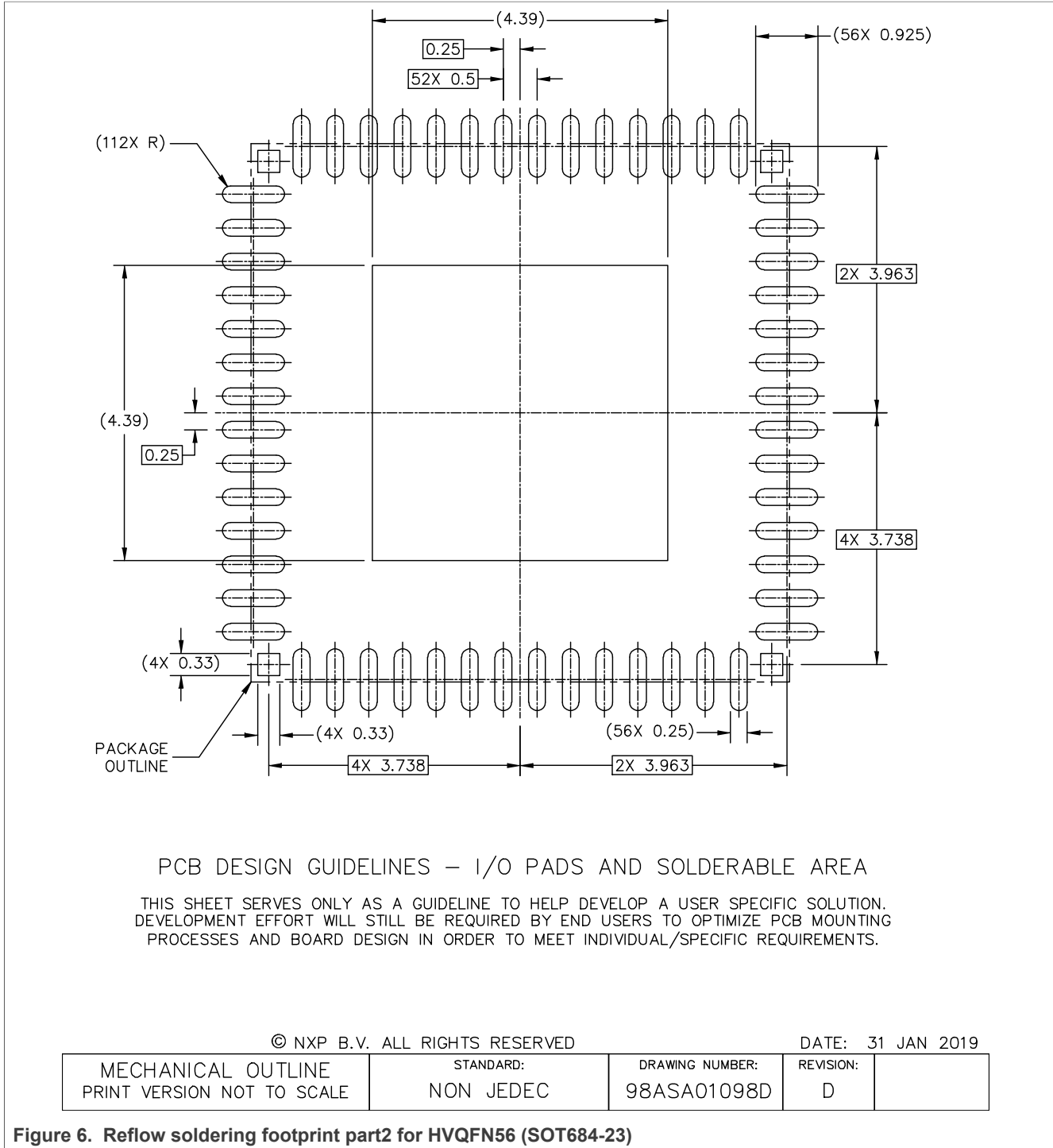


Figure 6. Reflow soldering footprint part2 for HVQFN56 (SOT684-23)

plastic thermal enhanced very thin quad flat package; no leads; wettable flank, 56 terminals; 0.5 mm pitch, 8 mm x 8 mm x 0.85 mm body

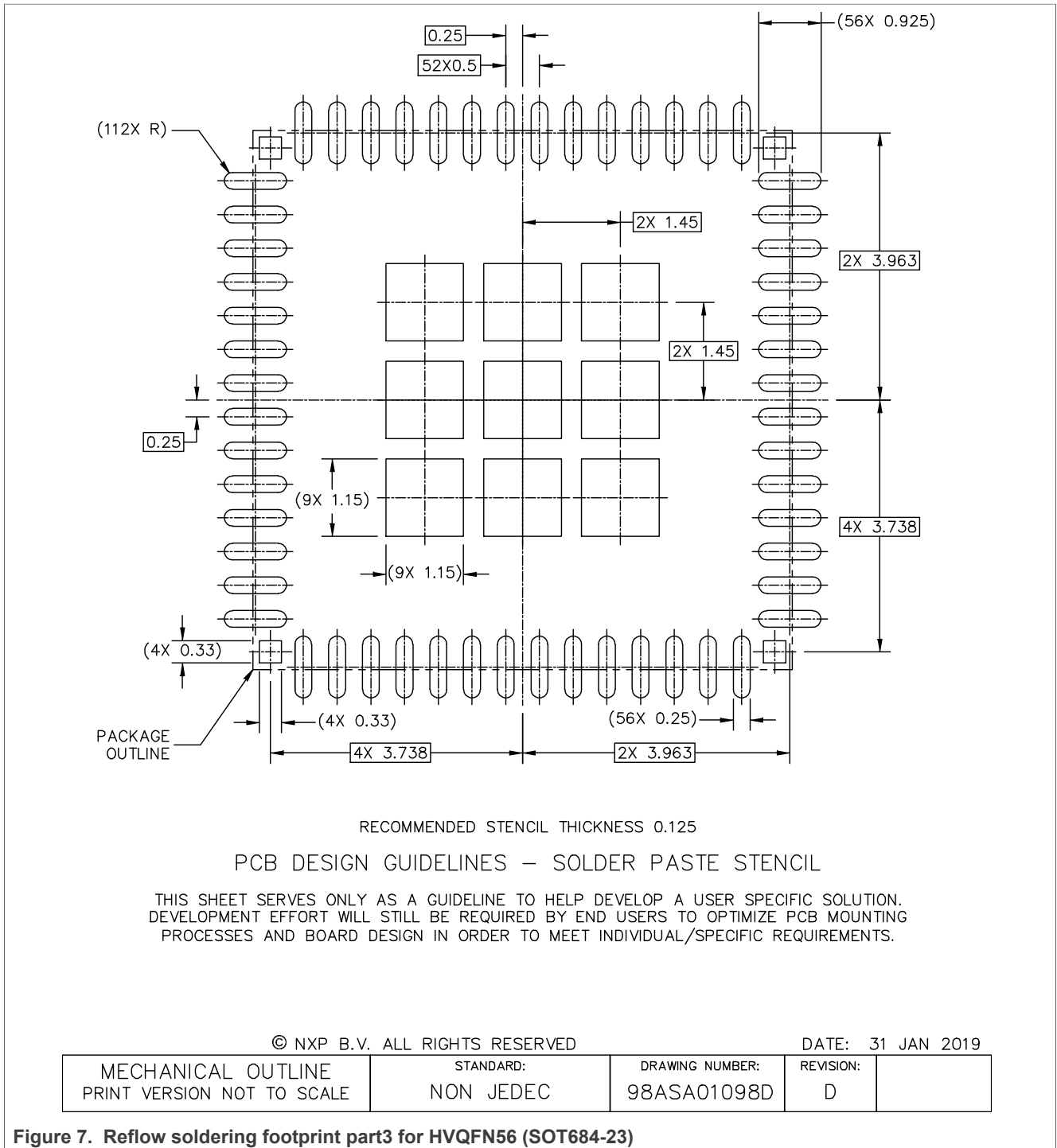


Figure 7. Reflow soldering footprint part3 for HVQFN56 (SOT684-23)



plastic thermal enhanced very thin quad flat package; no leads; wettable flank, 56 terminals; 0.5 mm pitch, 8 mm x 8 mm x 0.85 mm body

NOTES:

- 1. ALL DIMENSIONS ARE IN MILLIMETERS.
- 2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
- 3. PIN 1 FEATURE SHAPE, SIZE AND LOCATION MAY VARY.
- 4. COPLANARITY APPLIES TO LEADS, DIE ATTACH FLAG AND CORNER NON-FUNCTIONAL PADS.
- 5. MIN. METAL GAP SHOULD BE 0.25 MM.
- 6. ANCHORING PADS.

© NXP B.V. ALL RIGHTS RESERVED

DATE: 31 JAN 2019

MECHANICAL OUTLINE PRINT VERSION NOT TO SCALE	STANDARD: NON JEDEC	DRAWING NUMBER: 98ASA01098D	REVISION: D	
--------------------------------------------------	------------------------	--------------------------------	----------------	--

Figure 8. Package outline note HVQFN56 (SOT684-23)

---

plastic thermal enhanced very thin quad flat package; no leads; wettable flank, 56 terminals; 0.5 mm pitch, 8 mm x 8 mm x 0.85 mm body

## 4 Legal information

---

### Disclaimers

**Limited warranty and liability** — Information in this document is believed to be accurate and reliable. However, NXP Semiconductors does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information. NXP Semiconductors takes no responsibility for the content in this document if provided by an information source outside of NXP Semiconductors.

In no event shall NXP Semiconductors be liable for any indirect, incidental, punitive, special or consequential damages (including - without limitation - lost profits, lost savings, business interruption, costs related to the removal or replacement of any products or rework charges) whether or not such damages are based on tort (including negligence), warranty, breach of contract or any other legal theory.

Notwithstanding any damages that customer might incur for any reason whatsoever, NXP Semiconductors' aggregate and cumulative liability towards customer for the products described herein shall be limited in accordance with the Terms and conditions of commercial sale of NXP Semiconductors.

**Right to make changes** — NXP Semiconductors reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.

---

plastic thermal enhanced very thin quad flat package; no leads; wettable flank, 56 terminals; 0.5 mm pitch, 8 mm x 8 mm x 0.85 mm body

**Contents**

---

**1 Package summary .....1**  
**2 Package outline .....2**  
**3 Soldering .....6**  
**4 Legal information ..... 10**