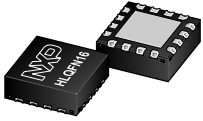


SOT1688-3(DD)

HLQFN16; plastic, thermal enhanced low profile quad flat non-leaded package, dimple wettable flank; 16 terminals; 0.8 mm pitch; 4 mm x 4 mm x 1.45 mm body

10 March 2025

Package information



1 Package summary

Terminal position code	Q (quad)
Package type descriptive code	HLQFN16
Package style descriptive code	HLQFN (thermal enhanced low profile quad flatpack; no leads)
Package body material type	P (plastic)
Mounting method type	S (surface mount)
Issue date	07-03-2025
Manufacturer package code	98ASA01725D

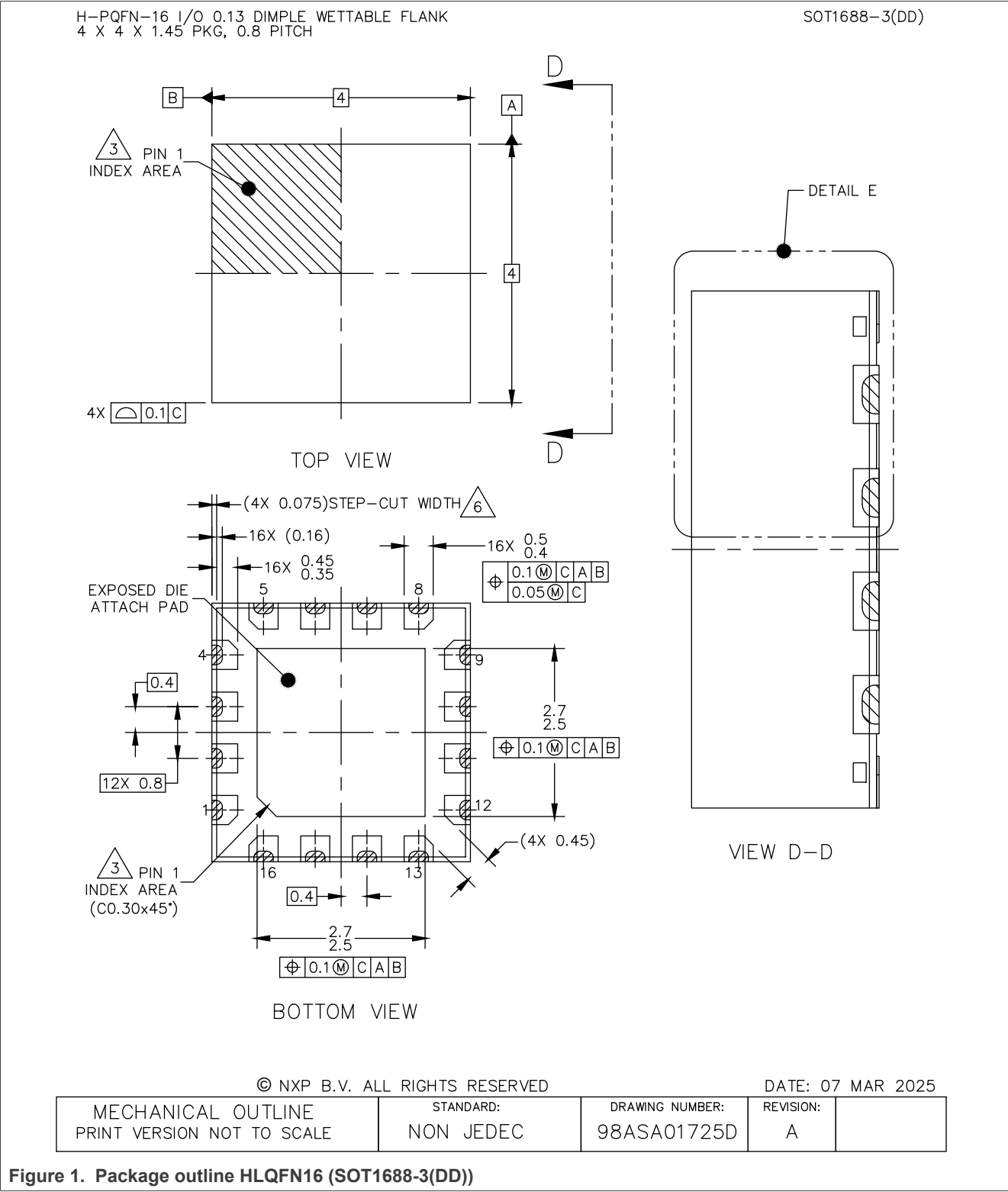
Table 1. Package summary

Parameter	Min	Nom	Max	Unit
package length	3.9	4	4.1	mm
package width	3.9	4	4.1	mm
seated height	1.4	1.45	1.5	mm
nominal pitch	-	0.8	-	mm
actual quantity of termination	-	16	-	



HLQFN16; plastic, thermal enhanced low profile quad flat non-leded package, dimple wettable flank; 16 terminals; 0.8 mm pitch; 4 mm x 4 mm x 1.45 mm body

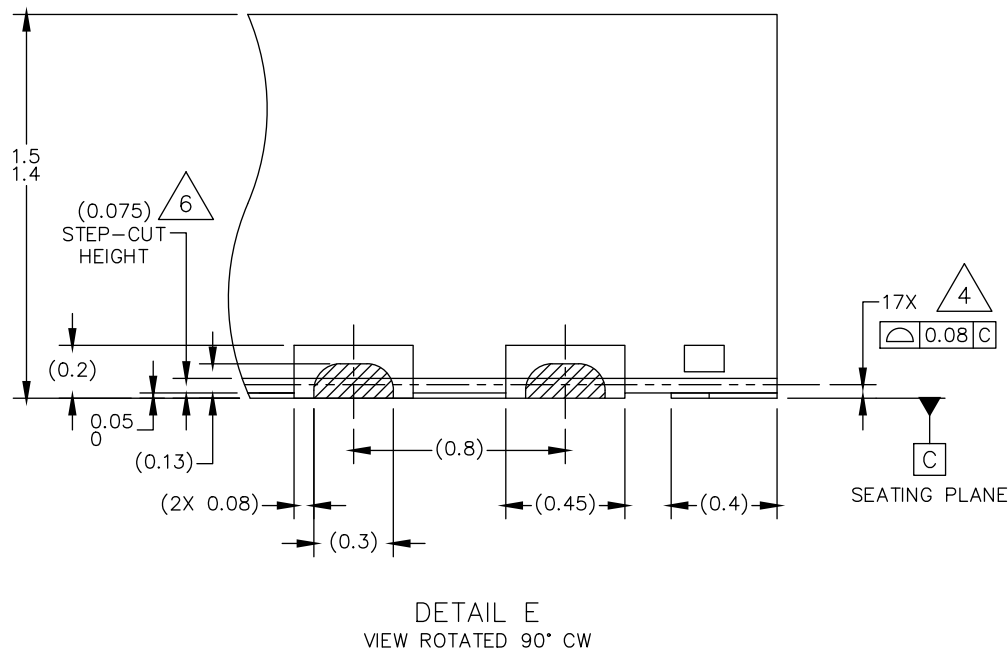
2 Package outline



HLQFN16; plastic, thermal enhanced low profile quad flat non-leded package, dimple wettable flank; 16 terminals; 0.8 mm pitch; 4 mm x 4 mm x 1.45 mm body

H-PQFN-16 I/O 0.13 DIMPLE WETTABLE FLANK
4 X 4 X 1.45 PKG, 0.8 PITCH

SOT1688-3(DD)



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DATE: 07 MAR 2025

MECHANICAL OUTLINE PRINT VERSION NOT TO SCALE	STANDARD: NON JEDEC	DRAWING NUMBER: 98ASA01725D	REVISION: A	
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Figure 2. Package outline detail E of HLQFN16 (SOT1688-3(DD))

HLQFN16; plastic, thermal enhanced low profile quad flat non-leded package, dimple wettable flank; 16 terminals; 0.8 mm pitch; 4 mm x 4 mm x 1.45 mm body

3 Soldering

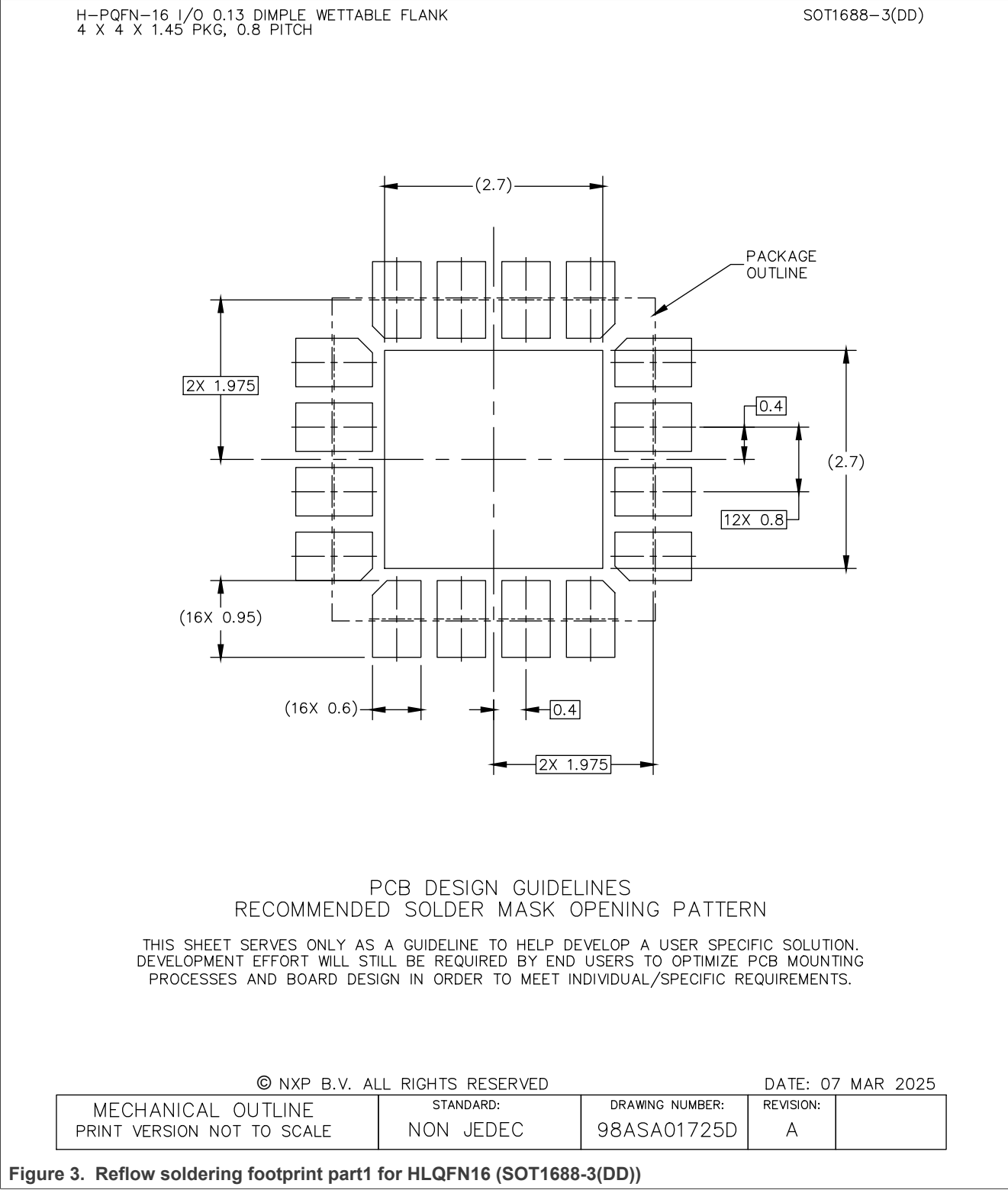
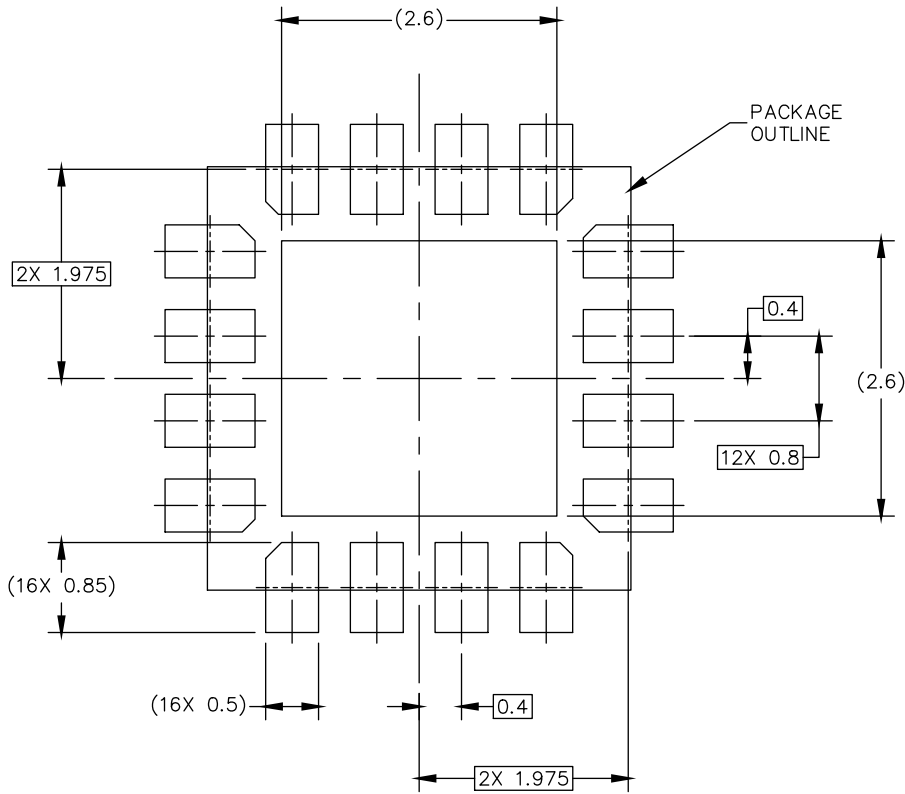


Figure 3. Reflow soldering footprint part1 for HLQFN16 (SOT1688-3(DD))

HLQFN16; plastic, thermal enhanced low profile quad flat non-leaded package, dimple wettable flank; 16 terminals; 0.8 mm pitch; 4 mm x 4 mm x 1.45 mm body

H-PQFN-16 I/O 0.13 DIMPLE WETTABLE FLANK
4 X 4 X 1.45 PKG, 0.8 PITCH

SOT1688-3(DD)



PCB DESIGN GUIDELINES
RECOMMENDED I/O PADS AND SOLDERABLE AREA

THIS SHEET SERVES ONLY AS A GUIDELINE TO HELP DEVELOP A USER SPECIFIC SOLUTION.
DEVELOPMENT EFFORT WILL STILL BE REQUIRED BY END USERS TO OPTIMIZE PCB MOUNTING
PROCESSES AND BOARD DESIGN IN ORDER TO MEET INDIVIDUAL/SPECIFIC REQUIREMENTS.

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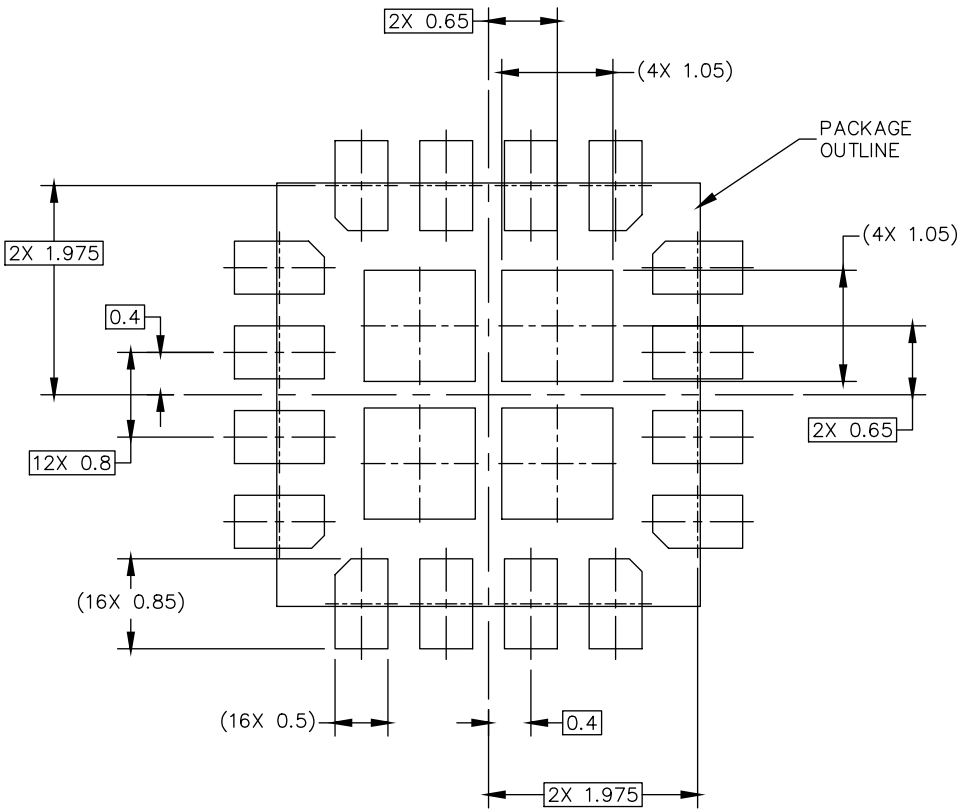
MECHANICAL OUTLINE PRINT VERSION NOT TO SCALE	STANDARD: NON JEDEC	DRAWING NUMBER: 98ASA01725D	REVISION: A	
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Figure 4. Reflow soldering footprint part2 for HLQFN16 (SOT1688-3(DD))

HLQFN16; plastic, thermal enhanced low profile quad flat non-leaded package, dimple wettable flank; 16 terminals; 0.8 mm pitch; 4 mm x 4 mm x 1.45 mm body

H-PQFN-16 I/O 0.13 DIMPLE WETTABLE FLANK
4 X 4 X 1.45 PKG, 0.8 PITCH

SOT1688-3(DD)



RECOMMENDED STENCIL THICKNESS 0.125 OR 0.150

PCB DESIGN GUIDELINES – RECOMMENDED SOLDER PASTE STENCIL

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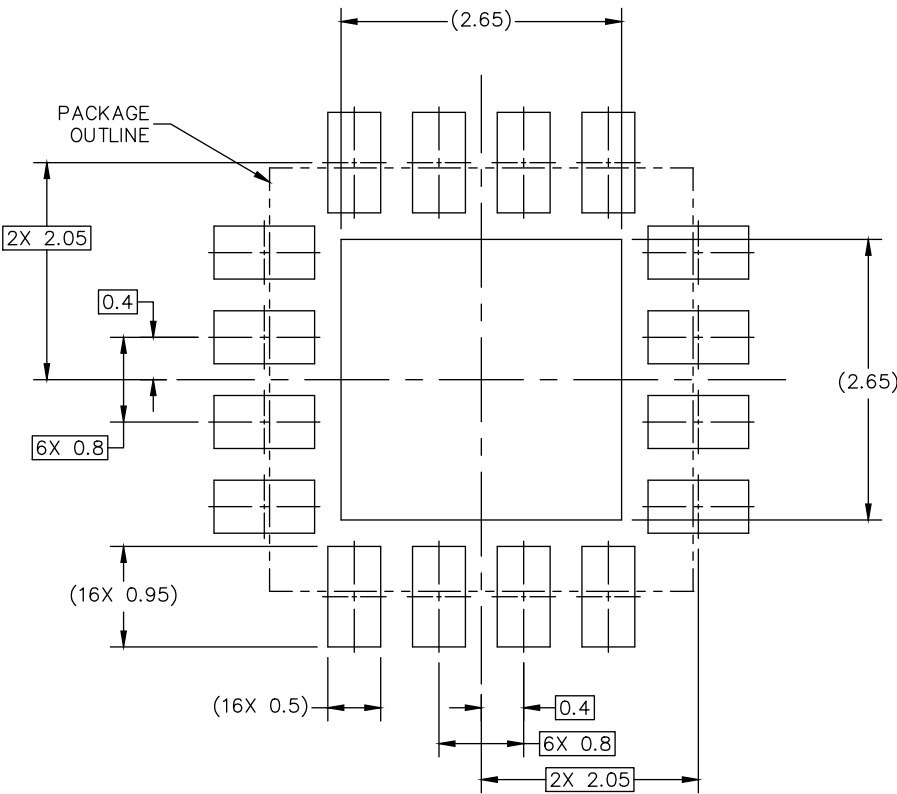
MECHANICAL OUTLINE PRINT VERSION NOT TO SCALE	STANDARD: NON JEDEC	DRAWING NUMBER: 98ASA01725D	REVISION: A	
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Figure 5. Reflow soldering footprint part3 for HLQFN16 (SOT1688-3(DD))

HLQFN16; plastic, thermal enhanced low profile quad flat non-leded package, dimple wettable flank; 16 terminals; 0.8 mm pitch; 4 mm x 4 mm x 1.45 mm body

H-PQFN-16 I/O 0.13 DIMPLE WETTABLE FLANK
4 X 4 X 1.45 PKG, 0.8 PITCH

SOT1688-3(DD)



PCB Cu GUIDELINES — ALTERNATE SOLDERABLE AREAS

THIS SHEET SERVES ONLY AS A GUIDELINE TO HELP DEVELOP A USER SPECIFIC SOLUTION. SHOWN IS AN EXAMPLE OF THE SOLDERABLE AREA. DEVELOPMENT EFFORT WILL STILL BE REQUIRED BY END USERS TO OPTIMIZE PCB MOUNTING PROCESSES AND BOARD DESIGN IN ORDER TO MEET INDIVIDUAL / SPECIFIC REQUIREMENTS.

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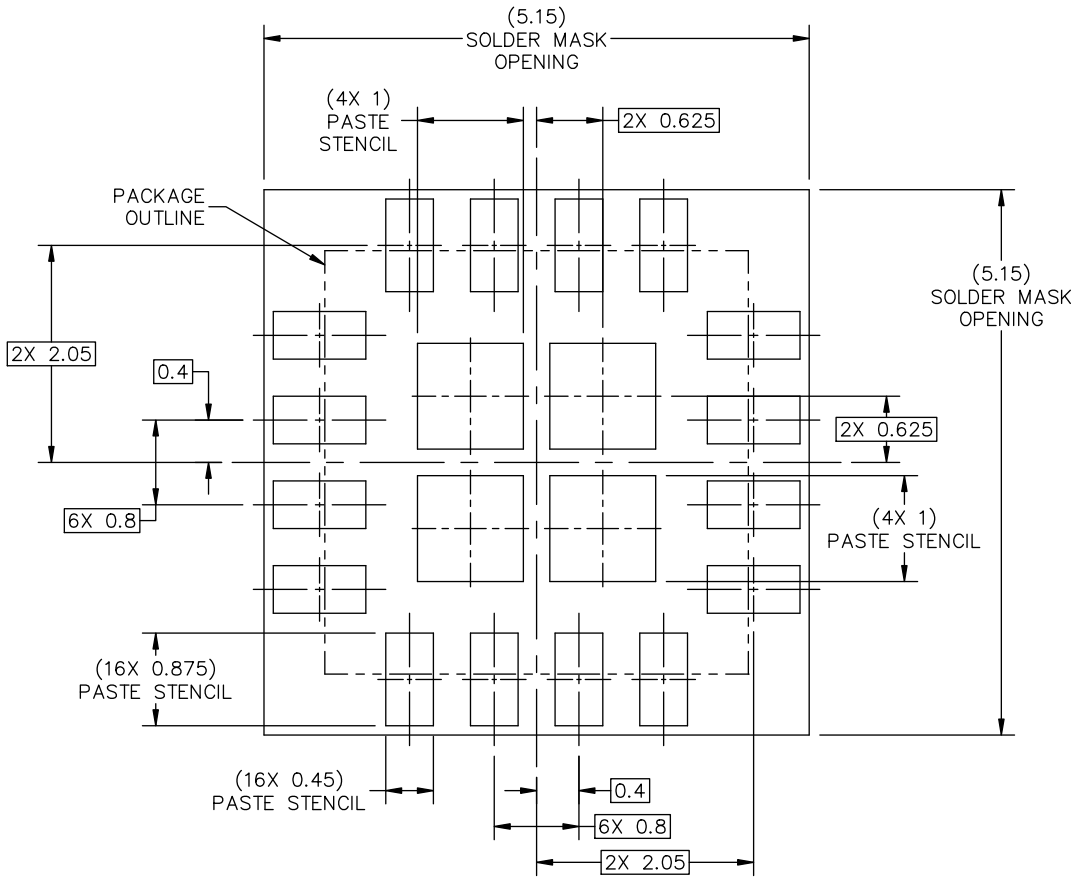
MECHANICAL OUTLINE PRINT VERSION NOT TO SCALE	STANDARD: NON JEDEC	DRAWING NUMBER: 98ASA01725D	REVISION: A	
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Figure 6. Reflow soldering footprint part4 for HLQFN16 (SOT1688-3(DD))

HLQFN16; plastic, thermal enhanced low profile quad flat non-leded package, dimple wettable flank; 16 terminals; 0.8 mm pitch; 4 mm x 4 mm x 1.45 mm body

H-PQFN-16 I/O 0.13 DIMPLE WETTABLE FLANK
4 X 4 X 1.45 PKG, 0.8 PITCH

SOT1688-3(DD)



RECOMMENDED STENCIL THICKNESS 0.125 OR 0.150

ALTERNATE SOLDER MASK OPENING AND PASTE STENCIL
DESIGN GUIDELINES

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Figure 7. Reflow soldering footprint part5 for HLQFN16 (SOT1688-3(DD))

HLQFN16; plastic, thermal enhanced low profile quad flat non-leaded package, dimple wettable flank; 16 terminals; 0.8 mm pitch; 4 mm x 4 mm x 1.45 mm body

H-PQFN-16 I/O 0.13 DIMPLE WETTABLE FLANK
4 X 4 X 1.45 PKG, 0.8 PITCH

SOT1688-3(DD)

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.
- 5. MIN. METAL GAP SHOULD BE 0.25 MM.
- 6. STEP-CUT IS APPLIED FOR BURR REMOVAL ONLY.

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Figure 8. Package outline note HLQFN16 (SOT1688-3(DD))

HLQFN16; plastic, thermal enhanced low profile quad flat non-leaded package, dimple wettable flank; 16 terminals; 0.8 mm pitch; 4 mm x 4 mm x 1.45 mm body

4 Legal information

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HLQFN16; plastic, thermal enhanced low profile quad flat non-leaded package, dimple wettable flank; 16 terminals; 0.8 mm pitch; 4 mm x 4 mm x 1.45 mm body

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