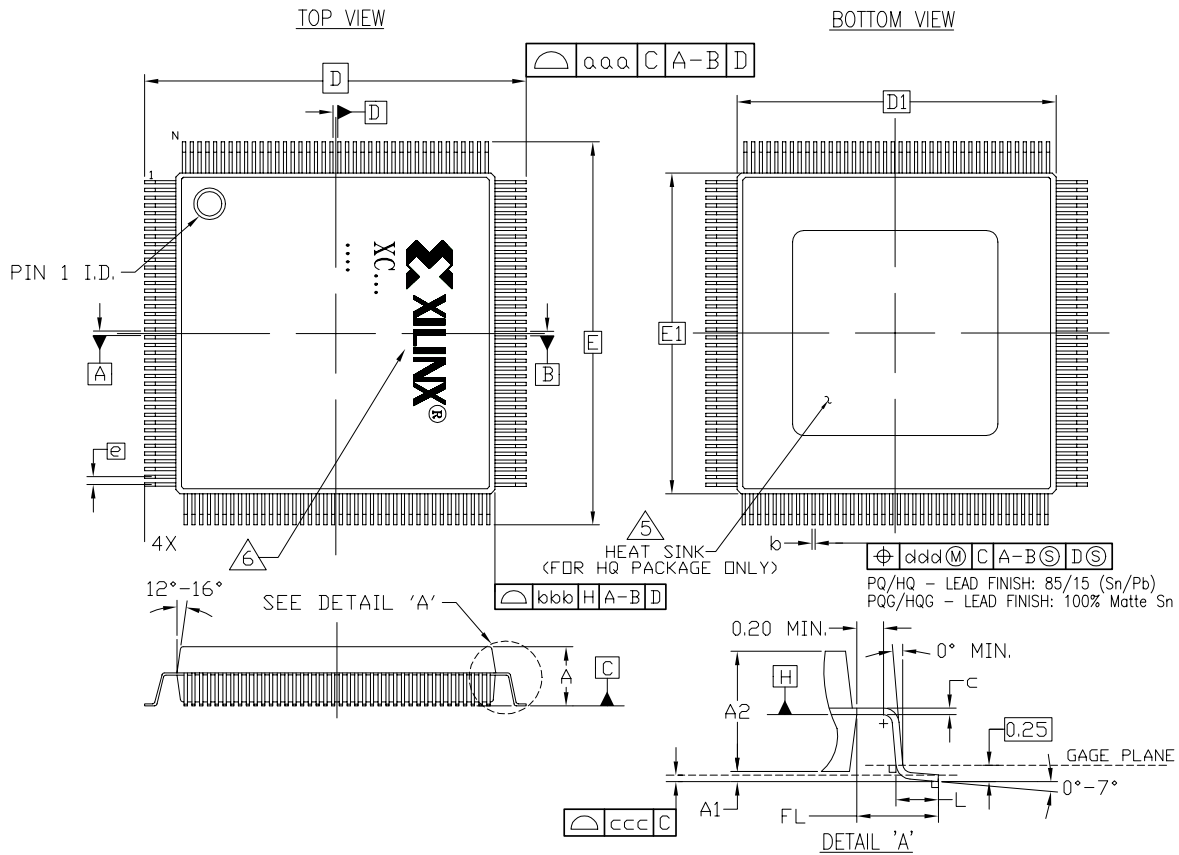


Heat Sink PQFP (HQ208/HQG208) Package



DIMENSIONS	PQ/PQG44			PQ/PQG/HQ/HQG160			PQ/PQG/HQ/HQG208			PQ/PQG/HQ/HQG240		
	MILLIMETERS			MILLIMETERS			MILLIMETERS			MILLIMETERS		
	MIN.	NDM.	MAX.	MIN.	NDM.	MAX.	MIN.	NDM.	MAX.	MIN.	NDM.	MAX.
A	\approx	2.15	2.35	\approx	3.70	4.10	\approx	3.70	4.10	\approx	3.78	4.10
A ₁	0.05	\approx	0.25	0.25	0.33	0.50	0.25	0.33	0.50	0.25	0.38	0.50
A ₂	1.95	2.00	2.10	3.20	3.40	3.60	3.20	3.40	3.60	3.20	3.40	3.60
D/E	13.20 BSC			31.20 BSC			30.60 BSC			34.60 BSC		
D ₁ /E ₁	10.00 BSC			28.00 BSC			28.00 BSC			32.00 BSC		
FL	1.60 REF.			1.60 REF.			1.30 REF.			1.30 REF.		
L	0.73	0.88	1.03	0.73	0.88	1.03	0.50	0.60	0.75	0.50	0.60	0.75
e	0.80 BSC.			0.65 BSC.			0.50 BSC.			0.50 BSC.		
b	0.30	\approx	0.45	0.22	\approx	0.40	0.17	0.22	0.27	0.17	\approx	0.27
c	0.13	\approx	0.23	0.13	\approx	0.23	0.09	\approx	0.20	0.09	\approx	0.20
a a a	\approx	\approx	0.25	\approx	\approx	0.25	\approx	\approx	0.25	\approx	\approx	0.25
b b b	\approx	\approx	0.20	\approx	\approx	0.20	\approx	\approx	0.20	\approx	\approx	0.20
c c c	\approx	\approx	0.10	\approx	\approx	0.10	\approx	\approx	0.08	\approx	\approx	0.08
d d d	\approx	\approx	0.20	\approx	\approx	0.13	\approx	\approx	0.08	\approx	\approx	0.08
N	44			160			208			240		
REF.	JEDEC MS-022-AB			JEDEC MS-022-DD1			JEDEC MS-029-FA-1			JEDEC MS-029-GA		

- NOTES:
- ALL DIMENSIONS AND TOLERANCES CONFORM TO ANSI Y14.5M-1994.
 - DIMENSIONS D₁ AND E₁ DO NOT INCLUDE MOLD PROTRUSION.
ALLOWABLE MOLD PROTRUSION SHALL NOT EXCEED 0.25mm PER SIDE.
 - PACKAGE TOP DIMENSIONS MAY BE SMALLER THAN THE BOTTOM DIMENSIONS BY 0.20mm.
 - THE SAME PACKAGE DIMENSIONS APPLY FOR THERMALLY ENHANCED PRODUCTS. HEAT SINK IS ADDED. THE PACKAGE CODE IS "HQ".
5. HEAT SINK DIMENSIONS: HQ160/HQ208=21mm SQ. REF.; HQ240=24mm SQ. REF.
6. MARK ORIENTATION WITH RESPECT TO PIN-1 I.D.
IF 2 OR MORE CIRCLES EXIST ON TOP OF THE PACKAGE, USE THE SMALLEST CIRCLE AS PIN-1 I.D.

44, 160, 208, and 240-PIN PQFP (PQ44/PQG44, PQ160/PQG160, PQ208/PQG208, and PQ240/PQG240)
and 160, 208, and 240-PIN HEAT SINK PQFP (HQ160/HQG160, HQ208/HQG208, and HQ240/HQG240)