Hermetic Package Mechanical Configuration

Package	Devices	Cavity	Weight (grams)	Lid (mils)	Heat Spreader (mm)
PG84	A1010B	Up	8.0	690x690	No
CQ84	A1020B	Up	2.2	520x520	No
PG84	A1020B	Up	8.0	690x690	No
PG100	A1225XL	Up	–	550x550	No
PG132	A1240A	Up	11.0	720x720	No
PG132	A1240XL	Up	11.0	720x720	No
CQ172	A1280A	Up	8.8	870x870	No
PG176	A1280A	Up	18.2	870x870	17.00x17.00 (inside of package)
CQ172	A1280XL	Up	8.8	870x870	No
PG176	A1280XL	Up	19	870x870	No
CQ256	A14100A	Up	13.0	860x860	No
PG257	A14100A	Down	27.3	860x860	No
CQ132	A1425A	Up	5.8	650x650	No
PG175	A1440A	Down	19	670x670	No
CQ196	A1460A	Up	11.1	770x770	No
PG207	A1460A	Down	24.5	770x770	No
CQ84	A32100DX	Up	2.2	550x550	No
CQ208	A32200DX	Up	18.5	900x900	22.85x22.85x0.50
CQ256	A32200DX	Down	-	900x900	22.86x22.86x0.50
CQ208	A42MX36	Up	8.8	770x770	No
CQ256	A42MX36	Down	13.0	770x770	No
CQ208	A54SX16	Up	8.8	520x520	No
CQ256	A54SX16	Up	15.0	520x520	18.29x18.29x0.50

1. Device weights are approximate values. There might be slight variations from lot to lot and device to device. For increased accuracy, Actel recommends weighing the parts that are being used. CQFP package weights do not include the ceramic lead frame, therefore they are the approximate weights after devices are trim-and-formed.
2. Dimensions for CQFPs are recorded as mean design dimensions (X,Y, and Z as thickness) and tolerance shall be applied. The overall package thickness is: ceramic thickness + lid thickness (typical ~0.60 mm) + HS (0.50mm if exist).
3. HS thickness is 0.50mm and brazed to the surface of the ceramic substrate.
4. Total HS thickness is 1.27mm with only 0.50mm extended outside of the ceramic surface.
5. Cavity down CQFPs have their lid on the bottom side when attached to PCBs. The trim-form mechanical samples for both 32200DX and MX36 are interchangeable, since the 32200DX HS is facing upward.
6. All CQFPs in the same group of configuration (for example, CQ208, cavity up, no HS) are interchangeable as trim-form **mechanical samples.**
7. All CQFPs and CPGAs have their lids and heat sinks grounded to the ground plane within the packages.

Package	Devices	Cavity	Weight (grams)	Lid (mils)	Heat Spreader (mm)
CQ208	A54SX32	Up	8.8	590x590	No
CQ256	A54SX32	Up	14.5	590x590	12.07x12.70x0.50q
CQ208	A54SX32A	Up	8.8	720x720	No
CQ256	A54SX32A	Up	13.0	720x720	No
CQ208	A54SX72A	Up	8.8	720x720	No
CQ256	A54SX72A	Up	13.0	720x720	No
CQ208	APA1000	Up	8.8	900x900	No
CQ352	APA1000	Up	27.4	900x900	No
CQ352	AX2000	Up	27.4	1000x1000	No
CG624	AX2000	Up	13.28	1000x1000	No
CQ84	RH1020	Up	2.2	520x520	No
CQ172	RH1280	Up	8.8	870x870	No
CQ84	RT1020	Up	2.2	520x520	No
CQ172	RT1280A	Up	8.8	870x870	No
CQ256	RT14100A	Up	13.0	860x860	No
CQ132	RT1425A	Up	5.8	650x650	No
CQ196	RT1460A	Up	11.1	770x770	No
CQ208	RT54SX16	Up	8.8	590x590	No
CQ256	RT54SX16	Up	14.5	860x860	12.07x12.70x0.50
CQ208	RT54SX32S	Up	8.8	720x720	No
CQ256	RT54SX32S	Up	13	720x720	No
CC256	RT54SX32S	Up	-	590x490	No
CQ208	RT54SX72S	Up	15.5	900x900	22.85x22.85x0.50
CQ256	RT54SX72S	Up	20.2	900x900	22.86x22.86x0.50
CQ352	RTAX1000S	Up	27.4	1000x1000	No
CG624	RTAX1000S	Up	13.28	1000x1000	No
CQ352	RTAX2000S	Up	27.4	1075x1075	No
CG624	RTAX2000S	Up	13.28	1160x1160	No

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7. All CQFPs and CPGAs have their lids and heat sinks grounded to the ground plane within the packages.

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