

EIA Standard Board Layout of Soldered Pad for QFP Devices

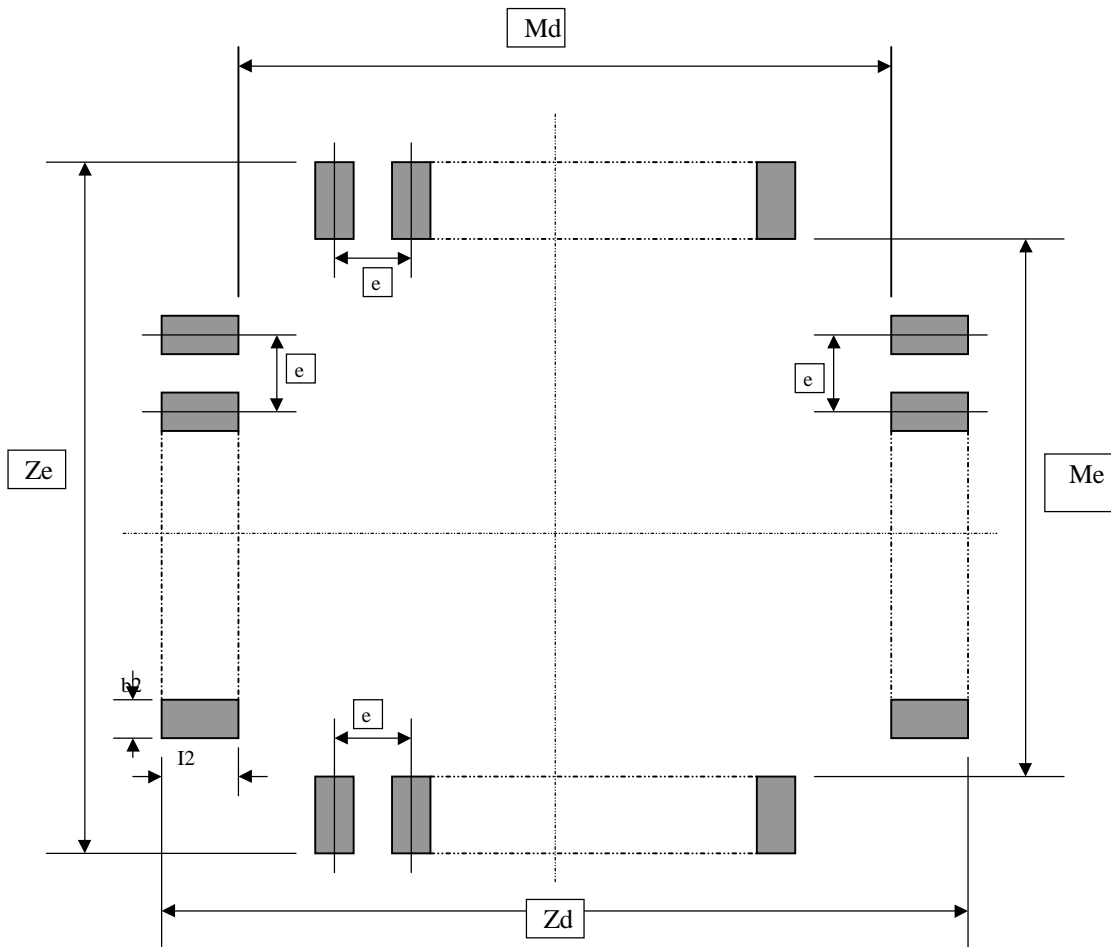


Table 1 contains the board layout soldered pad dimensions for Actel Quad Flat Packs only. If you are using surface mount sockets for prototyping, see table 2 for layout dimensions.

Table 1 — QFP Package Layout Dimensions

Dimension = millimeters

Dim.	PQ100	PQ144	PQ160- 3.2mm	PQ160- 3.9mm	PQ/RQ 208	PQ/RQ 240	VQ80	VQ/T Q100	TQ144	TQ176
M_d	20.4	28.4	28.4	29.2	28.2	32.2	13.8	13.8	19.8	23.8
M_e	14.4	28.4	28.4	29.2	28.2	32.2	13.8	13.8	19.8	23.8
e	0.65	0.65	0.65	0.65	0.5	0.5	0.65	0.5	0.5	0.5
b_2	0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.4	0.3-0.4	0.3-0.5	0.3-0.4	0.3-0.4	0.3-0.4
I_2	1.8	1.8	1.8	1.8	1.6	1.6	1.8	1.6	1.6	1.6

Table 2 contains board layout soldered pad dimensions to be used if you are using surface mount sockets for prototyping and Actel Quad Flat Packs for production. These dimensions will accept both surface mount sockets and actual QFP packages. Refer to the surface mount socket drawing above for alignment pin location layout and overall dimensions. However, it is recommended that different solder mask openings be used for prototype sockets and production QFP packages.

Table 2 — Combined QFP Package and Socket Layout Dimensions

Dimension = millimeters

Dim.	PQ100	PQ144	PQ160-3.2mm	PQ160-3.9mm	PQ/RQ 208	PQ/RQ 240	VQ80	VQ/T Q100	TQ144	TQ176
Md	20.4	28.4	28.4	29.2	28.2	32.2	13.8	13.8	19.8	23.8
Me	14.4	28.4	28.4	29.2	28.2	32.2	13.8	13.8	19.8	23.8
Zd	26.8	35.2	35.2	35.2	32.1	36.1	17.2	17.1	23.3	27.3
Ze	20.8	35.2	35.2	35.2	32.1	36.1	17.2	17.1	23.3	27.3
e	0.65	0.65	0.65	0.65	0.5	0.5	0.65	0.5	0.5	0.5
b2	0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.4	0.3-0.4	0.3-0.5	0.3-0.4	0.3-0.4	0.3-0.4
Socket Part #	SY-PQ100-1	SY-PQ144-1	SY-PQ160-1	SY-PQ160-1	SY-PQ208-2	SY-PQ240	SY-VQ80-2	SY-VQ100-1	SY-TQ144	SY-TQ176

Note: If sockets other than those specified in Table 2 are used, make sure to check the socket drawing before finalizing the mount pad layout.

Table 3 contains board layout soldered pad dimensions to be used if you are using a prototype socket and either a CQ208 or PQ208 package. These dimensions will accept CQ208, PQ208, and prototype sockets. However, it is recommended that different solder mask openings be used for prototype sockets and production QFP packages.

Table 3 — Combined CQ208, QFP 208 and Prototype Socket

Dimension = millimeters

Dim.	PQ/RQ208/CQ208**
Md	28.2
Me	28.2
Zd	35.1
Ze	35.1
e	0.5
b2	0.3-0.4
Socket Part #	SY-PQ208-2

** Note: Zd and Ze dimensions are based on trim and form data from Fancort Industries Inc. If you are using trim and form from another vendor, Zd and Ze could be different.