

EIA Standard Board Layout of Soldered Pad for QFP Devices and QFP Surface Mount Socket

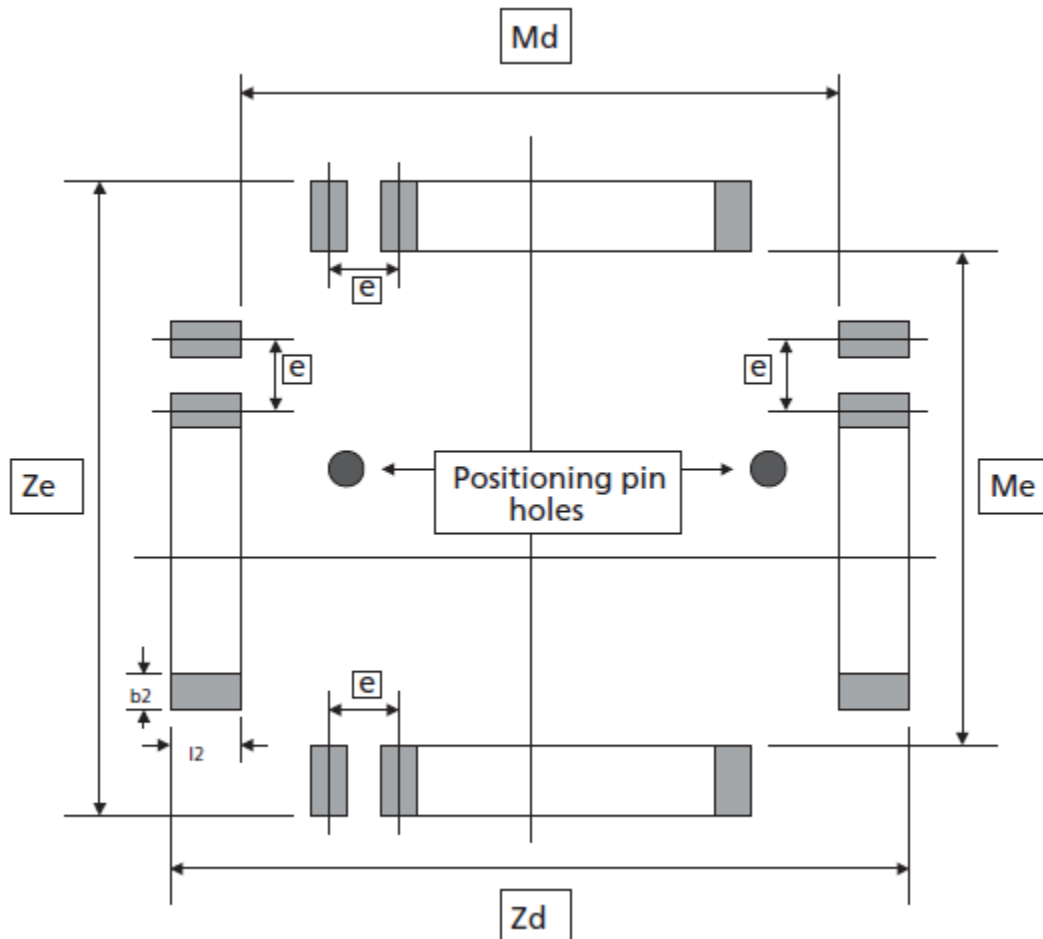


Figure 1 • Board Layout of Solder Pad Dimension

Table 1 contains the board layout soldered pad dimensions for Microsemi 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

Dim.	PQ100	PQ144	PQ160 3.2 mm	PQ160 3.9 mm	PQ/ RQ 208	PQ/ RQ 240	VQ 80	VQ/ TQ 100	VQ 128	VQ 176	TQ 64	TQ 144	TQ 176
Md	20.4	28.4	28.4	29.2	28.2	32.2	13.8	13.8	13.8	19.8	10.1	19.8	23.8
Me	14.4	28.4	28.4	29.2	28.2	32.2	13.8	13.8	13.8	19.8	10.1	19.8	23.8
e	0.65	0.65	0.65	0.65	0.5	0.5	0.65	0.5	0.4	0.4	0.5	0.5	0.5
b2	0.30-0.5	0.30-0.5	0.30-0.5	0.30-0.5	0.3-0.4	0.3-0.4	0.3-0.5	0.3-0.4	0.25- 0.30	0.25- 0.30	0.3- 0.4	0.3- 0.4	0.3- 0.4
l2	1.8	1.8	1.8	1.8	1.6	1.6	1.8	1.6	1.6	1.6	1.6	1.6	1.6

Note: Dimension = millimeters

Table 2 contains board layout soldered pad dimensions to be used if you are using surface mount sockets for prototyping and Microsemi Quad Flat Packs for production. These dimensions will accept both surface mount sockets and actual QFP packages. Refer to Figure 1 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

Dim.	PQ100	PQ144	PQ160 3.2 mm	PQ160 3.9 mm	PQ/ RQ 208	PQ/ RQ 240	VQ 80	VQ/ TQ 100	TQ 64	TQ 144	TQ 176
Md	20.4	28.4	28.4	29.2	28.2	32.2	13.8	13.8	10.1	19.8	23.8
Me	14.4	28.4	28.4	29.2	28.2	32.2	13.8	13.8	10.1	19.8	23.8
Zd	26.8	35.2	35.2	35.2	32.1	36.1	17.2	17.1	13.5	23.3	27.3
Ze	20.8	35.2	35.2	35.2	32.1	36.1	17.2	17.1	13.5	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	0.5
b2	0.30-0.5	0.30-0.5	0.30-0.5	0.30-0.5	0.3-0.4	0.3-0.4	0.3-0.5	0.3-0.4	0.3-0.4	0.3-0.4	0.3-0.4
Socket Part Number	SY-PQ100-1	SY-PQ144-1	SY-PQ160-1	SY-PQ160-1	SY-PQ208-2	SY-PQ240	SY-VQ80-2	SY-VQ100-1	SY-TQ64	SY-TQ144	SY-TQ176

Note:

1. If sockets other than those specified in Table 2 are used, make sure to check the socket drawing before finalizing the mount pad layout.
2. For positioning pin holes dimension, refer to each socket drawing at: www.microsemi.com/soc/documents/MechDrwngSocket.pdf.
3. Dimension = millimeters

Table 3 contains board layout soldered pad dimensions to be used if you are using a prototype socket and a packaged device. It is recommended that different solder mask openings be used for prototype sockets and production QFP packages.

Table 3 • Combined CQ208, QFP208 and Prototype Socket/ Combined CQ256 and CQ256 – FG484 Adapter Socket/Combined CQ352 and CQ352 – FG896 Adapter Socket

Dim.	PQ/RQ208/CQ208 ¹	CQ256 ¹ /CQ256-FG484 adapter socket	CQ352 ¹ /CQ352-FG896 adapter socket ¹
Md	28.2	40.5	51.50
Me	28.2	40.5	51.50
Zd	35.1	42.5	54.50
Ze	35.1	42.5	54.50
e	0.5	0.5	0.5
b2	0.3-0.4	0.3-0.4	0.3-0.4
Socket Part Number	SY-PQ208-2	1). SI-SX72-ACQ256SFG484 2). SI-SX32-ACQ256SFG484	1). SK-AX1000-CQ352RTFG896 2). SK-AX2000-CQ352RTFG896

Note: 1. Md, Me, 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, Md, Me, Zd, and Ze could be different. It is for PCB layout reference only.

2. Dimension = millimeters



Microsemi Corporate Headquarters
One Enterprise, Aliso Viejo CA 92656 USA
Within the USA: +1 (949) 380-6100
Sales: +1 (949) 380-6136
Fax: +1 (949) 215-4996

Microsemi Corporation (NASDAQ: MSCC) offers a comprehensive portfolio of semiconductor solutions for: aerospace, defense and security; enterprise and communications; and industrial and alternative energy markets. Products include high-performance, high-reliability analog and RF devices, mixed signal and RF integrated circuits, customizable SoCs, FPGAs, and complete subsystems. Microsemi is headquartered in Aliso Viejo, Calif. Learn more at www.microsemi.com.

© 2012 Microsemi Corporation. All rights reserved. Microsemi and the Microsemi logo are trademarks of Microsemi Corporation. All other trademarks and service marks are the property of their respective owners.