

Packaging and Thermal Characteristics

Package Drawings
Thermal Application Note

Package Information
Package Electrical
Characterization

**Component Mass by
Package Type**

Thermally Enhanced
Packaging

Moisture Sensitivity
Tape and Reel
Reflow Soldering Process
Sockets

▶ Component Mass (Weight) by Package Type NEW!

Package	Description	JEDEC Outline#	Xilinx #	Mass (g)
BF957	957 Ball-Flip Chip BGA 40x40 Body (1.27mm Pitch)	MS-034-BAU-1 (Depopulated)	OBG0036	18.49
BG225	Molded BGA 27mm Full Matrix	MO-151-CAL	OBG0001	2.2
BG256	Molded BGA 27mm SQ	MO-151-CAL	OBG0011	2.2
BG352	SuperBGA - 35 x 35mm Peripheral	MO-151-BAR	OBG0008	7.1
BG432	SuperBGA - 40 x 40mm Peripheral	MO-151-BAU	OBG0009	9.1
BG492	Molded BGA - 35mm - 1.27mm Pitch	MO-151-BAR	OBG0026	5.0
BG560	SuperBGA - 42.5 x 42.5mm SQ	MO-151-BAV	OBG0010	11.5
BG575	575 BGA 31 x 31mm Body (1.27mm Pitch)	MS-034-BAN-1 (Depopulated)	OBG0039	4.58
BG728	728 BGA 35 X 35mm BodyY (1.27mm Pitch)	MS-034-BAR-1	OBG0030	6.2
CB100	NCTB Top Braze 3K / 4K VER	MO-113-AD(3)	OCQ0008 / OCQ0006	10.8
CB164	NCTB Top Braze 3K / 4K VER	MO-113-AA-AD(3)	OCQ0003 / OCQ0007	11.5
CB196	NCTB Top Braze 4K VER	MO-113-AB-AD(3)	OCQ0005	15.3
CB228	NCTB Top Braze 4K VER	MO-113-AD(3)	OCQ0012	17.6
CG1156	Ceramic HiTCE BGA - 35sq. 1.0mm	MO-151	OBG0031	0.0
CP56	CSP 56 BGA - 6mm (0.5 pitch)	N/A	OBG0029	0.0
CS48	CSP 48 BGA - 7mm (0.8 pitch)	MO-195	OBG0012	0.2
CS144	CSP 144 BGA - 12mm (0.8 pitch)	MO-205-BE	OBG0015	0.3
CS280	CSP 280 BGA - 16mm (0.8 pitch)	MO-205-AH	OBG0024	0.0
DD8	.300 Cerdip Package	MO-03-AA	OPD0005	1.1
FF896	896 BallL - Flip Chip BGA 31 X 31mm Body (1.0mm Pitch)	MS-034-AAN-1	OBG0032	10.7
FF1152	1152 BallL - Flip Chip BGA 35 X 35mm Body (1.0mm Pitch)	MS-034-AAR-1 (depopulated)	OBG0033	14.24
FF1517	1517 BallL - Flip Chip BGA 40 X 40mm Body (1.0mm Pitch)	MS-034-AAU-1 (depopulated)	OBG0034	18.53
FG256	Fine Pitch BGA 17 x 17 mm, 1.0 mm ball pitch	MO-151-AAF-1	OBG0021	0.8
FG324	Molded BGA 23 mm - 1.0 mm Pitch	MO-151-AAJ	OBG0013	2.2
FG456	Fine Pitch BGA 23 x 23 mm, 1.0 mm ball pitch	MO-151-AAJ-1	OBG0019	2.1
FG556	Fine Pitch BGA 31 x 31 mm, 1.0	MO-151-AAJ-1	OBG0020	2.02

FG550	mm ball pitch	MO-151-AAU-1	OBG0020	3.92
FG676	Fine Pitch BGA 27 x 27 mm, 1.0 mm ball pitch	MO-151-AAL-1	OBG0018	3.3
FG680	Fine Pitch BGA 40 x 70 mm, 1.0 mm ball pitch	MO-151-AAU-1	OBG0022	10.3
FG860	Fine Pitch BGA 42.5 x 42.57 mm, 1.0 mm ball pitch	MS-034-AAV	OBG0025	13.8
FG900	Fine Pitch BGA 31 x 31 mm, 1.0 mm ball pitch	MO-151-AAN-1	OBG0027	4.0
FG1156	Fine Pitch BGA 35 x 35 mm, 1.0 mm ball pitch	MO-151-AAR-1	OBG0028	5.5
FT256	256 Thin PBGA 17 X 17mm Body (1.0mm Pitch)	MO-151	OBG0040	0.9
HQ160	Metric 28 x 28 - 0.65mm 1.6H/S Die Up	MO-108-DDI	OPQ0021	10.8
HQ208	Metric 28 x 28 - H/S Die Up	MO-143-FA1	OPQ0020	10.8
HQ240	Metric QFP 32 x 32 H/S Die Up	MO-143-GA	OPQ0019	15.0
HQ304	Metric QFP 40 x 40 - H/S Die Down	MO-143-JA	OPQ0014	26.2
MQ208	28 x 28 metal Quad EIAJ Outline	N/A	OPQ0006	6.1
MQ240	32 x 32 metal Quad EIAJ Outline	N/A	OPQ0011	8.0
PC20	PLCC Jedec MO-047	MO-047-AA	OPC0006	0.8
PC28	PLCC Jedec MO-047	MO-047-AB	OPC0001	1.1
PC44	PLCC Jedec MO-047	MO-047-AC	OPC0005	1.2
PC68	PLCC Jedec MO-047	MO-047-AE	OPC0001	4.8
PC84	PLCC Jedec MO-047	MO-047-AF	OPC0001	6.8
PD8	DIP .300 Standard	MO-001-AA	OPD0002	0.5
PD48	DIP .600 Standard	N/A	OPD0001	7.9
PG68	Ceramic PGA cavity Up 11 x 11	MO-067-AC	OPG0002	7.0
PG84	Ceramic PGA cavity Up 11 x 11	MO-067-AC	OPG0003	7.2
PG84	Windowed CPGA cavity Up 11 x 11	MO-067-AC	OPG0013	7.5
PG120	Ceramic PGA 13 x 13 Matrix	MO-067-AE	OPG0012	11.5
PG132	Ceramic PGA 14 x 14 Matrix	MO-067-AF	OPG0004	11.8
PG156	Ceramic PGA 16 x 16 Matrix	MO-067-AH	OPG0007	17.1
PG175	Ceramic PGA 16 x 16 Standard Version	MO-067-AH	OPG0009	17.7
PG191	Ceramic PGA 18 x 18 Standard - All	MO-067-AK	OPG0008	21.8
PG223	Ceramic PGA 18 x 18 Type	MO-067-AK	OPG0016	26.0
PG299	Ceramic PGA 20 x 20 Heatsink	MO-067-AK	OPG0022	37.5
PG299	Ceramic PGA 20 x 20 Type	MO-067-AK	OPG0015	29.8
PG411	Ceramic PGA 39 x 39 Stagger	MO-128-AM	OPG0019	36.7
PG475	Ceramic PGA 41 x 41 Stagger	MO-128-AM	OPG0023	39.5
PG559	Ceramic PGA 43 x 43	MO-128	OPG0025	44.5
PP132	Plastic PGA 14 x 14 Matrix	MO-83-AF	OPG0001	8.1

PP175	Plastic PGA 16 x 16 Buried	MO-83-AH	OPG0006	11.1
PQ44	EIAJ 10 x 10 x 2.0 QFP	MS-022-AB	OPQ0015	0.5
PQ100	EIAJ 14 x 20 QFP - 1.60 (default)	MO-108-CG1	OPQ0013	1.6
PQ100	EIAJ 14 x 20 QFP - 1.80 (not used)	EIAJ-Old	OPQ0016	1.6
PQ100	EIAJ 14 x 20 QFP - 1.95 (old version)	MO-108-CC2	OPQ0013	1.6
PQ160	EIAJ 28 x 28 0.65mm 1.60	MO-108-DD1	OPQ0002	5.8
PQ208	EIAJ 28 x 28 0.5mm 1.30	MO-143-FAI	OPQ0003	5.3
PQ240	EIAJ 32 x 32 0.5mm	MO-143-GA	OPQ0010	7.1
PQ304	Metric QFP 40 x 40 - H/S Die Down	MO-143-JA	OPQ0014	26.2
SO8	Version 1 - 0.150/50 mil	Mo-150	OPD0006	0.1
SO20	300 mil SOIC	MS-1-3	OPD0009	0.5
SO24	300 mil SOIC	MS-113	OPD0010	0.6
TQ100	Thin QFP 1.4mm thick	MS-026-BDE	OPQ0004	0.7
TQ128	Thin QFP 1.4mm thick - RECT	MS-026-BHB	OPQ0028	0.8
TQ144	Thin QFP 1.4mm thick	MS-026-BFB	OPQ0007	1.4
TQ176	Thin QFP 1.4mm thick	MS-026-BGA	OPQ0008	1.9
VO8	Thin SOIC - II	N/A	OPQ0007	0.1
VQ44	Thin QFP 1.0 thick	MS-026-AED	OPQ0017	0.4
VQ64	THIN QFP 1.0 thick	MS-026-ACD	OPQ0009	0.5
VQ100	Thin QFP 1.0 thick	MS-026-AED	OPQ0012	0.6
WC44	Jedec Windowed Cerquad	MO-087	QCQ0004	2.9
WC84	Windowed Cerquad	MO-087	QCQ0010	11

Notes:

1. Data represents average values for typical packages with typical devices. The accuracy is between 7% to 10%.
2. More precise numbers (below 5% accuracy) for specific devices may be obtained from Xilinx through a factory representative or by calling the Xilinx Hotline.
3. Tie-bar details are specific to Xilinx package. Lead width minimum is 0.056".