

Wakefield Engineering is recognized as a worldwide leader in innovative thermal management solutions. Their products range from board level heat sinks for both surface mount and thru-hole, to fan mounted heat sinks for microprocessors and CPUs. Wakefield Engineering offers a single source for all of your thermal requirements. DeltaPads are replacements to heat sink grease but without any mess. They are heat conducting, electrically isolating pads to go between the heat sink and your semiconductor device. TO-220 heatsinks will also fit TO-202 and TO-126 packages.

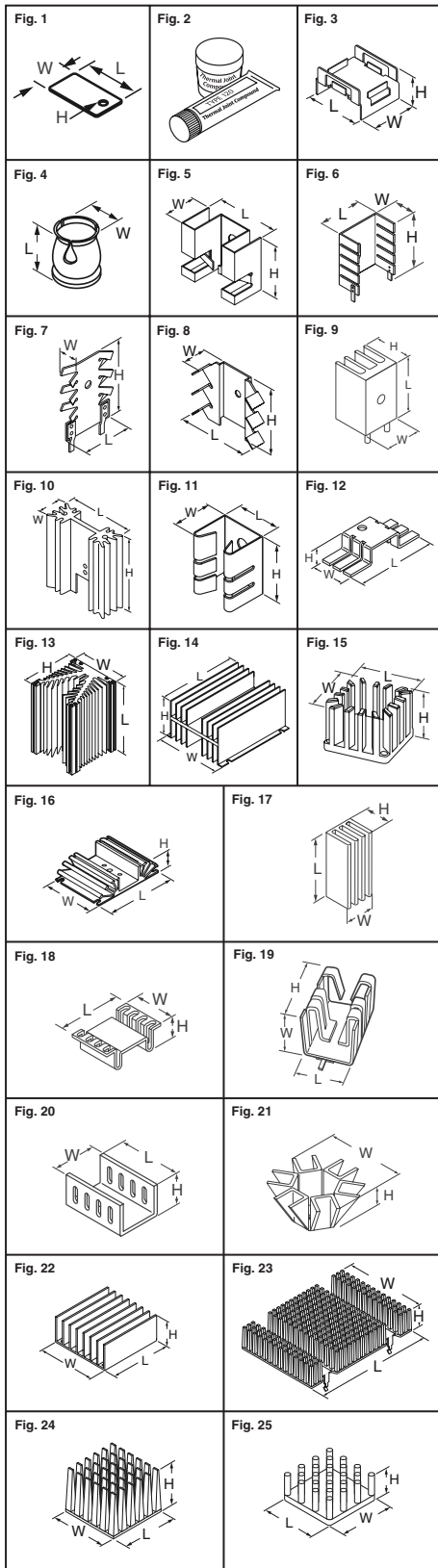


Fig.	Description	Dimensions - mm L x W x H	Digi-Key Part No.	Price Each 1 100	Wakefield Part No.
1	DeltaPad Thermal Pad TO-220 No Adhesive (.18mm)	18.0 x 12.7 x 3.6 dia.	345-1000-ND	.46 .33 .23	173-7-220P
	DeltaPad Thermal Pad TO-220, Adhesive (.18mm)	19.1 x 12.7 x 3.7 dia.	345-1079-ND	.61 .44 .31	173-7-240A
	DeltaPad Thermal Pad TO-220, No Adhesive (.23mm)	19.1 x 12.7 x 3.2 dia.	345-1080-ND	.38 .28 .20	173-9-230P
	DeltaPad Thermal Pad TO-220, No Adhesive (.23mm)	19.1 x 12.7 x 3.7 dia.	345-1001-ND	.69 .49 .35	173-9-240P
	Kapton Thermal Pad, TO-220, No Adhesive (.15mm)	18.0 x 12.7 x 3.6 dia.	345-1002-ND	.36 .26 .18	175-6-220P
	Kapton Thermal Pad TO-220, No Adhesive (.15mm)	19.1 x 12.7 x 3.2 dia.	345-1003-ND	.28 .20 .14	175-6-230P
Kapton Thermal Pad TO-220, No Adhesive (.15mm)	19.1 x 12.7 x 3.7 dia.	345-1004-ND	.30 .22 .16	175-6-240P	
Kapton Thermal Pad TO-220, No Adhesive (.15mm)	21.8 x 18.8 x 4.1 dia.	345-1005-ND	.49 .35 .25	175-6-280P	
2	Silicon Thermal Grease, 4 gram Plastic Pack	—	345-1006-ND	3.66 2.44 1.90	120-SA
	Silicon Thermal Grease, 2 Oz. Jar	—	345-1007-ND	9.45 6.31 4.89	120-2
	Silicon Thermal Grease, 5 Oz. Tube	—	345-1008-ND	17.74 12.42 10.64	120-5
	Silicon Thermal Grease, 8 Oz. Jar	—	345-1009-ND	21.62 15.14 12.97	120-8
	Silicon Thermal Grease, 5 Lbs. Can	—	345-1010-ND	107.41 75.19 64.45	120-80
	Synthetic Non-Silicon Thermal Compound 4 Oz Tube	—	345-1011-ND	19.04 13.33 11.43	126-4
3	D-Pack/SOT-23 Heat Sink, Pretinned, Autoinsertable	18.80 x 15.24 x 9.14	345-1012-ND	.38 .28 .20	217-36CT6
	D-Pack/SOT-23 Heat Sink, Pretinned, Autoinsertable	18.80 x 15.24 x 9.14	345-1099-ND	.33 .22 .17	217-36CTE6
4	TO-5 Clip-On Cup Style With 4-40 Thd Base	9.40 x 9.65 dia.	345-1013-ND	10.85 7.24 5.61	260-4TE
5	TO-220, Self-Locking, Horizontal/Vertical Mount, Black	25.40 x 12.70 x 21.59	345-1016-ND	.49 .35 .25	235-85AB
	TO-220, Vertical Mount Wave-Solderable, With Tabs, Black	25.40 x 12.70 x 29.97	345-1018-ND	1.37 .98 .69	287-1AB
6	TO-220, Low Cost Horizontal/Vertical Mount, Black	25.40 x 12.70 x 18.03	345-1019-ND	.30 .22 .16	289-AB
	TO-220, Dual Low Cost Horizontal/Vertical Mount, Black	25.40 x 12.70 x 29.97	345-1020-ND	.44 .31 .22	290-1AB
7	TO-220, Dual Mount Low Cost, Black	25.40 x 12.70 x 29.97	345-1021-ND	.44 .31 .22	290-2AB
	TO-220, Low Cost Horizontal/Vertical Mount, Black	19.05 x 9.52 x 19.05	345-1022-ND	.41 .29 .21	273-AB
8	TO-220, Low Cost Horizontal/Vertical Mount, Black	13.21 x 9.52 x 19.05	345-1023-ND	.30 .22 .16	274-1AB
	TO-220, Vertical Mount, Black	25.4 x 12.7 x 30.0	345-1081-ND	.81 .59 .41	206-1PABH
9	TO-220, Wave-Solderable Low-Cost Heat Sinks	25.4 x 12.7 x 30.0	345-1088-ND	1.37 .98 .69	287-1ABH
	TO-220, Vertical Mount Wave-Solderable, With Tabs	22.23 x 5.46 x 31.75	345-1024-ND	1.25 .89 .63	288-1AB
10	TO-220 Self-Locking, Vertical Mount, Black	25.40 x 9.14 x 21.84	345-1025-ND	.64 .46 .32	291-H36AB
	TO-220 Power Vertical Mount With Pins/6-32Thds, Black	16.26 x 16.26 x 25.40	345-1026-ND	1.96 1.40 .98	634-10ABP
11	TO-220 Power Vertical Mount With Pins/6-32Thds, Black	16.26 x 16.26 x 38.1	345-1091-ND	2.11 1.51 1.06	634-15ABP
	TO-220 Power Vertical Mount With Pins/6-32Thds, Black	16.26 x 16.26 x 50.80	345-1027-ND	2.21 1.58 1.11	634-20ABP
12	TO-220 Power Vertical Mount With Pins, Black	34.93 x 12.70 x 25.40	345-1028-ND	1.68 1.20 .84	637-10ABP
	TO-220 Power Vertical Mount With Pins, Black	34.93 x 12.70 x 38.10	345-1029-ND	1.81 1.29 .91	637-15ABP
13	TO-220 Power Vertical Mount With Pins, Black	34.93 x 12.70 x 50.80	345-1030-ND	2.06 1.47 1.03	637-20ABP
	TO-220 Power Vertical Mount With Pins, Black	41.91 x 25.40 x 25.40	345-1031-ND	1.96 1.40 .98	647-10ABP
14	TO-220 Power Vertical Mount With Pins, Black	41.91 x 25.40 x 38.10	345-1032-ND	2.16 1.55 1.08	647-15ABP
	TO-220 Power Vertical Mount With Pins, Black	41.91 x 25.40 x 38.10	345-1033-ND	1.78 1.28 .89	657-15ABP
15	TO-220 Power Vertical Mount With Pins, Black	41.91 x 25.40 x 38.10	345-1034-ND	1.78 1.28 .89	657-15ABPN
	TO-220 Power Vertical Mount With Pins, Black	41.91 x 25.40 x 50.80	345-1035-ND	2.16 1.55 1.08	657-20ABP
16	TO-220 Pwr. SpeedClip Mount With Pins (Order clip below)	34.93 x 12.70 x 25.40	345-1037-ND	2.29 1.64 1.15	667-10ABPP
	SpeedClip, Stainless Steel for 667 Series	—	345-1039-ND	.69 .49 .35	330-SC
17	TO-220 Self-Locking Horizontal/Vertical Mount, Black	14.48 x 12.70 x 19.05	345-1040-ND	.41 .29 .21	230-75AB
	TO-220 Low Cost Horizontal/Vertical Mount, Black	44.45 x 9.52 x 17.78	345-1041-ND	.36 .26 .18	270-AB
18	TO-220 Top Mount Booster for 270,272,280 Series, Black	44.45 x 12.70 x 17.78	345-1042-ND	.41 .29 .21	271-AB
	TO-220 Dual Mount Horizontal, Black	44.45 x 9.52 x 36.83	345-1043-ND	.49 .35 .25	272-AB
19	IGBT and SSRs Power Modules Black	180.01 x 124.97 x 135.64	345-1046-ND	87.21 61.05 52.33	392-180AB
	TO-3 Power Horizontal Mount Double Fin, Black	120.65 x 38.10 x 31.75	345-1047-ND	9.26 6.18 4.79	401-A
20	Power Heat Sink Horizontal, Double Fin, No Holes	120.65 x 38.10 x 31.75	345-1048-ND	9.26 6.18 4.79	401-K
	Power Heat Sink Horizontal, Double Fin, No Holes	120.65 x 76.20 x 66.55	345-1049-ND	11.11 7.41 5.74	421-K
21	Power Heat Sink Horizontal, Double Fin, No Holes	120.65 x 139.70 x 66.55	345-1050-ND	14.03 9.83 8.42	423-K
	TO-3 Power, Horizontal Mount, Omnidirectional, Black	45.97 x 45.97 x 31.75	345-1051-ND	9.02 6.02 4.66	608-125A
22	TO-3 Heavy Duty Power, Horizontal Mount, Black	104.78 x 76.20 x 25.40	345-1052-ND	7.91 5.28 4.09	641-A
	Power Heat Sink, Horizontal Mount, No Holes, Black	104.78 x 76.20 x 25.40	345-1053-ND	7.91 5.28 4.09	641-K
23	14-16 Dip IC Heat Sink, Glue On, Black	19.05 x 10.54 x 6.10	345-1054-ND	1.42 1.02 .72	651-B
	Surface Mount, Black	22.9 x 8.0 x 10.2	345-1082-ND	.66 .48 .34	218-40CT3
24	Surface Mount, Aluminum Natural	26.2 x 12.7 x 10.2	345-1083-ND	.76 .55 .39	218-40CT5
	TO-220, Horizontal and Vertical Mount, Black	14.5 x 12.7 x 19.1	345-1085-ND	.49 .35 .25	262-75AB-05
25	TO-220, Low-Height Wave-Solderable, Black	19.1 x 12.7 x 13.2	345-1087-ND	.30 .22 .16	274-2AB
	Stud-Mount, Black, ID=5.1mm	— x 33.8 x 12.3	345-1095-ND	1.45 1.04 .73	695-1B
26	Half Brick DC/DC Converter, Vertical, Black	57.91 x 60.96 x 24.13	345-1055-ND	2.87 1.92 1.49	518-95AB
	Half Brick DC/DC Converter With Hardware/Thermal Pad	57.91 x 60.96 x 24.13	345-1056-ND	5.47 3.65 2.83	518-95AB-MS4
	Half Brick DC/DC Converter Vertical, Black	57.91 x 60.96 x 11.43	345-1057-ND	2.46 1.65 1.28	528-45AB

◆ RoHS Compliant

## CPU, PGA and BGA Heat Sinks

609 Series: Fits PowerPC 601, 604, 255BGA 628 Series: Fits IntelDX4, Intel 80486DX2, AM486DX2/DX4 658 Series: Fits IntelDX4, AM29240, PowerPC 603

Fig.	Description	Dimensions - mm L x W x H	Digi-Key Part No.	Price Each 1 100	Wakefield Part No.
<b>CPU Cooler</b>					
17	35mm BGA Unidirectional Fin Heat Sink	35.00 x 35.00 x 11.4	345-1092-ND	1.66 1.18 .83	642-45AB
22	16.5mm BGA/PGA With Thermal Tape, Black	16.5 x 16.5 x 8.9	345-1101-ND	1.71 1.22 .86	LTN20069-T5
23	40mm QFP and 21mm BGA With Clips and Thermal Tape, Black	73.41 x 50.80 x 12.70	345-1058-ND	7.73 5.16 4.00	609-50AB53
	21mm BGA With Thermal Double Sided Tape	21.01 x 21.01 x 6.35	345-1059-ND	2.39 1.71 1.20	624-25ABT4
24	21mm BGA With Thermal Double Sided Tape	21.01 x 21.01 x 6.35	345-1098-ND	2.05 1.37 1.06	624-25ABT4E
	23mm BGA With Thermal Double Sided Tape	24.99 x 24.99 x 6.35	345-1060-ND	2.69 1.93 1.35	625-25ABT4
25	17x17 PGA No Tape, Black	44.45 x 43.18 x 10.16	345-1061-ND	1.93 1.38 .97	628-40AB
	17x17 PGA No Tape, Black	44.45 x 43.18 x 16.51	345-1062-ND	1.74 1.17 .91	628-65AB
26	28-38mm CQFP No Tape, Black	27.94 x 27.94 x 6.35	345-1063-ND	1.15 .82 .58	658-25AB
	28-38mm CQFP With Thermal Tape (Chomerics T-405), Black	27.94 x 27.94 x 6.35	345-1065-ND	2.44 1.75 1.22	658-25ABT1
27	28-38mm CQFP With Thermal Tape (Arclad 8223) Black	27.94 x 27.94 x 6.35	345-1096-ND	2.37 1.59 1.23	658-25ABT3
	28-38mm CQFP With Thermal Tape (Chomerics T-412), Black	27.94 x 27.94 x 6.35	345-1065-ND	2.33 1.56 1.21	658-25ABT4
28	28-38mm CQFP No Tape, Black	27.94 x 27.94 x 8.89	345-1066-ND	1.20 .86 .60	658-35AB
	28-38mm CQFP With Thermal Tape (Chomerics T-412), Black	27.94 x 27.94 x 8.89	345-1067-ND	2.37 1.59 1.23	658-35ABT3
29	28-38mm CQFP With Thermal Tape (Chomerics T-410), Black	27.94 x 27.94 x 8.89	345-1068-ND	2.42 1.62 1.25	658-35ABT4
	28-38mm CQFP With Thermal Tape (Chomerics T-410), Black	27.94 x 27.94 x 8.89	345-1109-ND	2.42 1.62 1.25	658-35ABT4E
30	28-38mm CQFP No Tape, Black	27.94 x 27.94 x 11.43	345-1069-ND	1.25 .89 .63	658-45AB
	28-38mm CQFP With Thermal Tape (Chomerics T-412), Black	27.94 x 27.94 x 11.43	345-1097-ND	2.46 1.65 1.28	658-45ABT3
31	28-38mm CQFP With Thermal Tape (Chomerics T-410), Black	27.94 x 27.94 x 11.43	345-1071-ND	2.53 1.69 1.31	658-45ABT4
	28-38mm CQFP No Tape, Black	27.94 x 27.94 x 15.24	345-1072-ND	1.45 1.04 .73	658-60AB
32	28-38mm CQFP With Thermal Tape (Chomerics T-405), Black	27.94 x 27.94 x 15.24	345-1073-ND	2.37 1.59 1.23	658-60ABT1
	28-38mm CQFP With Thermal Tape (Chomerics T-412), Black	27.94 x 27.94 x 15.24	345-1075-ND	2.57 1.72 1.33	658-60ABT3
33	21mm BGA With Omnidirectional Pin Fin Heat Sink, Black	21.01 x 21.01 x 11.4	345-1089-ND	2.39 1.71 1.20	624-45ABT3
	25mm BGA With Omnidirectional Pin Fin Heat Sink, Black	24.99 x 24.99 x 11.4	345-1090-ND	1.68 1.20 .84	625-45AB
34	Pin Fin Heat Sinks, Black	40.6 x 40.6 x 13.3	345-1093-ND	2.42 1.73 1.21	658-53AB
	Omnidirectional Pin Fin, Black	27.9 x 27.9 x 15.2	345-1094-ND	2.61 1.75 1.36	658-60ABT4
<b>CPU Composite Cooler — RoHS Compliant</b>					
25	CPU Composite Cooler for 84-100QFP, 169BGA, No Tape, Black	16.51 x 16.51 x 10.16	345-1076-ND	1.47 1.06 .74	D10650-40
	CPU Composite Cooler for 128-200QFP, 313BGA, No Tape, Black	21.59 x 21.59 x 10.16	345-1077-ND	1.83 1.31 .92	D10850-40

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