BGA THERMAL SOLUTIONS MATRIX

BGA Sizes	Foot Print (mm)	Heat Sink Height (inches)	Series # Solution	Page #	Attachment Method
21mm	21x21	.40	D10850/D20850	10	Adhesive
21mm	21x21	.25 .35 .45 .60	624	4	Adhesive
25mm	25x25	.25 .35 .45 .60	625	4	Adhesive
27mm	28x28	.25 .35 .45 .60	658	5	Adhesive
35mm	35x35	.25 .35 .45 .60	642	6	Adhesive
35mm	35x35	.25 .35 .45 .60	630	8	Adhesive
37mm	37x37	.65	659	5	Adhesive
37mm	38x38	.29	660	6	Adhesive
40mm	71x43	.50 1.00	609	11	Clip
40mm	73x50	.95	619	11	Clip
40mm	40x40	.26 .53	655	5	Adhesive
40mm	40x28	.35	643	9	Clip
45mm	43x43	.20 .25 .35 .40 .65	628	7	Adhesive
45mm	43x43	.15	662	7	Adhesive
45mm	71x43	.50 1.00	609	11	Clip
45mm	73x50	.95	619	11	Clip
45mm	50x50	.40 .65 .80 1.00	698	8	Adhesive
45mm	53x47	.40 .65 .80 1.00	798	9	Adhesive

THERMAL INTERFACE MATERIAL PART NUMBER GUIDE

PART NUMBER	T1	T2	T3	T4	T5	S3	S4	S5	S6	S7	S8
D10650-40											
D10850-40		▲									
D20850-40			▲								
609-100AB											
609-50AB						▲					
619-100AB											
624-25AB	▲	▲	▲	▲							
624-35AB	▲	▲	▲	▲							
624-45AB	▲	▲	▲	▲							
624-60AB	▲	▲	▲	▲							
625-25AB	▲	▲	▲	▲							
625-35AB	▲	▲	▲	▲							
625-45AB	▲	▲	▲	▲							
625-60AB	▲	▲	▲	▲							
628-20AB											
628-25AB											
628-35AB											
628-40AB		▲	▲								
628-65AB	▲										
630-25AB											
630-35AB											
630-45AB											
630-60AB											

PART NUMBER	T1	T2	T3	T4	T5	S3	S4	S5	S6	S7	S8
642-25AB	▲	▲	▲	▲							
642-35AB	▲	▲	▲	▲							
642-45AB	▲	▲	▲	▲							
642-60AB	▲	▲	▲	▲							
643-35AP	▲	▲	▲	▲							
655-26AB	▲										
655-53AB											
658-25AB	▲	▲	▲	▲							
658-35AB		▲	▲	▲							
658-45AB	▲	▲		▲							
658-60AB	▲	▲	▲	▲							
659-65AB	▲	▲									
660-29AB											
663-35AB											
698-100AB											
698-40AB											
698-65AB											
698-80AB											
798-100AB	▲										
798-40AB											
798-65AB											
798-80AB											

THERMAL INTERFACE MATERIAL PART NUMBER GUIDE

All the heat sinks shown in this brochure are available with any of the following thermal tape and interface materials, pre-applied at the factory. Use the "T" series, thermally enhanced, pressure sensitive adhesives to attach the heat sink to the electronic package and provide a good thermal link to the heat sink. The "S" series interface materials have adhesive on only one side, for pre-attachment to the heat sink, and provide superior thermal performance. Specify these materials in applications where the heat sink will be fixed to the electronic package by some mechanical means other than a tape. Please note that none of these materials are for use in applications requiring electrical isolation from the electronic device.

To specify the interface, add the desired suffix from the table below to the base part number for the heat sink shown in this brochure.

"T" Series Thermally Enhanced, Pressure Sensitive Adhesives

Suffix	Manufacturer, Product	Thermal Impedance, C-in ^ 2/W	Thickness, inches	Comments
-T1	Chomerics, T-405	0.47	0.006	Aluminum Carrier
-T2	Adhesives Research, Arclad 8223	0.25	0.005	Great Thermal performance
-T3	Chomerics, T412	0.25	0.009	Great thermal performance and conformity
-T4	Chomerics, T410	1.10	0.007	Attaches to plastic packages
-T5	Chomerics, T-411	1.00	0.011	Conforms to out-of-flat plastic packages

"S" Series Thermal Interface Materials

Suffix	Manufacturer, Product	Thermal Impedance, C-in ^ 2/W	Thickness, inches	Comments
-S3	Bergquist, Q-Pad 3	0.14	0.005	Graphite embedded polymer matrix
-S4	Bergquist, Softface	0.07	0.005	Great thermal performance. Hot stamped to heat sink.
-S5	Chomerics, T710	0.18	0.005	Phase change material (45C). For pressures in 5-20 psi range.
-S6	Chomerics, T443	0.10	0.005	Phase change interface (43C). For pressures in 20-60 psi range.
-S7	Power Devices, Thermstrate AL-S	0.03 (20PSI)	0.003	Very high performance phase change material(60C). No liner needed.
-S8	Bergquist, Hi-Flow 200U	0.04 (20PSI)	0.007	Very high performance phase change material(55C). No liner needed.

Note: To obtain the estimated thermal resistance of the interface material in your application, divide the Thermal Impedance value by the area of the pad in square inches. For example, a 2"x2" piece of T4 has a resistance of: 1.10 C-in ^ 2/W x 4 in ^ 2 = 4.4 C/W.

Not all heat sink and interface material combinations are normally stocked. Please refer to the table on page 2 which identifies which combinations are readily available.