

THERMAL COMPOUNDS, ADHESIVES AND INTERFACE MATERIALS



173/174 SERIES
175 SERIES

DeltaPads™ Thermally Conductive Insulators
Greaseless Thermally Conductive Kapton® Reinforced Insulators

TO-3, TO-66, TO-220, DO-4, DO-5 SHEET

The 173, 174, and 175 Series are highly efficient thermally conductive insulators designed for semi-conductor interface to heat sinks. Their properties eliminate messy concerns associated with thermal greases.

Characteristics	DeltaPads™ 173-7 Series	DeltaPads™ 173-9 Series	DeltaPads™ 174-9 Series	Kapton® 175-6 Series	Test Method
Material Thickness	0.007 in.	0.009 in.	0.009 in.	0.006 in.	Micrometer
Color	Gray	Gray	Tan	Gray	Visual
Tear Strength, lb/in. Typical	100	100	100	100	ASTM 0624
Volume Resistivity, megohm-cm, Minimum Normal	1.0 x 10e 9	1.0 x 10e 9	1.0 x 10e 13	1 x 10e 13	ASTMD257
Breakdown Voltage, Minimum	4,000	5,000	5,000	6,000	ASTM 0149
Dielectric Constant at 60 Hz and 100 V Maximum	2.70	2.40	2.50	5.5 @ 1,000 Hz	ASTMD 150
Continuous Use Temperature, °C	-60/+200	-60/+200	-60/+200	-60/+200	-
Thermal Conductivity, cal/cm sec. °C, Minimum	3 x 10e -3	3 x 10e -3	1 x 10e -2	1.2 x 10e -3	-
Thermal Resistance (TO-3), 1 in. 2°C/W	0.33	0.50	0.25	0.40	-
Recommended Mounting Pressure, lb/in. 2	350/550	350/550	350/550	350/550	Formula*

$$*P \text{ (pressure in psi)} = \frac{T \text{ (torque [in.-lb]} \times N \text{ (number of fasteners)}}{0.2 \times D \text{ (Thread Dia)} \times A \text{ (contact surface area square inches)}}$$

Series					Mechanical Dimensions in. (mm)				
No Adhesive	Adhesive Backing	No Adhesive	No Adhesive	Greaseless	A	B	C	D	Case Style
173-7-210P	-	173-9-210P	174-9-210P	175-6-210P	0.687 (17.4)	0.562 (14.3)	0.218 (5.5)	0.125 (3.2)	TO-220
173-7-220P▲	-	173-9-220P▲	174-9-220P	175-6-220P	0.710 (18.0)	0.500 (12.7)	0.160 (4.1)	0.141 (3.6)	TO-220
173-7-230P	-	173-9-230P	174-9-230P	175-6-230P	0.750 (19.1)	0.500 (12.7)	0.187 (4.8)	0.125 (3.2)	TO-220
173-7-240P	173-7-240A	173-9-240P	174-9-240P	175-6-240P▲	0.750 (19.1)	0.500 (12.7)	0.187 (4.8)	0.147 (3.7)	TO-220
173-7-250P	-	173-9-250P	174-9-250P	175-6-250P	0.865 (22.0)	0.650 (16.5)	0.205 (5.2)	0.140 (3.6)	TO-220
-	-	-	-	175-6-260P	1.000 (25.4)	0.750 (19.1)	0.320 (8.1)	0.141 (3.6)	TO-220
-	-	173-9-280P	-	175-6-280P	0.860 (21.8)	0.740 (18.8)	0.200 (5.1)	0.160 (4.1)	TO-220
173-7-290P	-	173-9-290P	-	-	0.855 (21.7)	0.630 (16.0)	0.230 (5.8)	0.093 (2.4)	TO-220
173-7-310P	-	173-9-310P	174-9-310P	175-6-310P▲	1.593 (40.5)	1.100 (27.9)	0.156 (4.0)	0.062 (1.6)	TO-3
173-7-320P	173-7-320A	173-9-320P	174-9-320P	175-6-320P	1.650 (41.9)	1.140 (29.0)	0.122 (3.1)	0.062 (1.6)	TO-3
173-7-330P	-	173-9-330P	174-9-330P	175-6-330P	1.650 (41.9)	1.140 (29.0)	0.140 (3.6)	0.093 (3.4)	TO-3
173-7-340P	-	173-9-340P	-	175-6-340P	1.780 (45.2)	1.250 (31.8)	0.140 (3.6)	0.093 (3.4)	TO-3
173-7-350P	-	173-9-350P	-	-	1.563 (39.7)	1.050 (26.7)	0.140 (3.6)	0.080 (2.0)	TO-3
173-7-410P	-	173-9-410P	174-9-410P	175-6-410P	0.625 (15.9)OD	0.200 (5.1)ID	N/A	N/A	DO-4, DO-5
173-7-510P	-	173-9-510P	174-9-510P	175-6-510P	0.800 (20.3)OD	0.260 (6.6)ID	N/A	N/A	DO-4, DO-5
173-7-520P	-	173-9-520P	174-9-520P	175-6-520P	1.000 (25.4)OD	0.260 (6.6)ID	N/A	N/A	DO-4, DO-5
173-7-610P	-	173-9-610P	174-9-610P	175-6-610P	1.312 (33.3)	0.762 (19.4)	0.140 (3.6)	0.062(1.6)	TO-66
173-7-710P	-	173-9-710P	-	175-6-710P	0.360 (9.14)OD	0.200 (5.1)ID	0.040 (1.0)	-	TO-5
-	-	173-9-810P	-	175-6-810P	2.000 (50.8)	0.750 (19.1)	0.187 (4.3)	0.125 (3.8)DIA	TO-220
-	-	173-9-820P	-	175-6-820P	4.000 (101.6)	0.750 (19.1)	0.187 (4.3)	0.125 (3.8)DIA	TO-220
-	-	173-9-910P	-	-	1.000 (25.4)	0.500 (12.7)	0.200 (5.1)	0.141 (3.6)	TO-66
173-7-66P	173-7-66A	173-9-66P	174-9-66P	175-6-66P	6.000 (152.4)	6.000 (152.4)	N/A	N/A	SHEET
173-7-1212P	173-7-1212A	173-9-1212P	174-9-1212P	-	12.000 (304.8)	12.000 (304.8)	N/A	N/A	SHEET
-	-	-	-	175-6-1311P	13.000 (330.2)	11.000 (279.4)	N/A	N/A	SHEET

