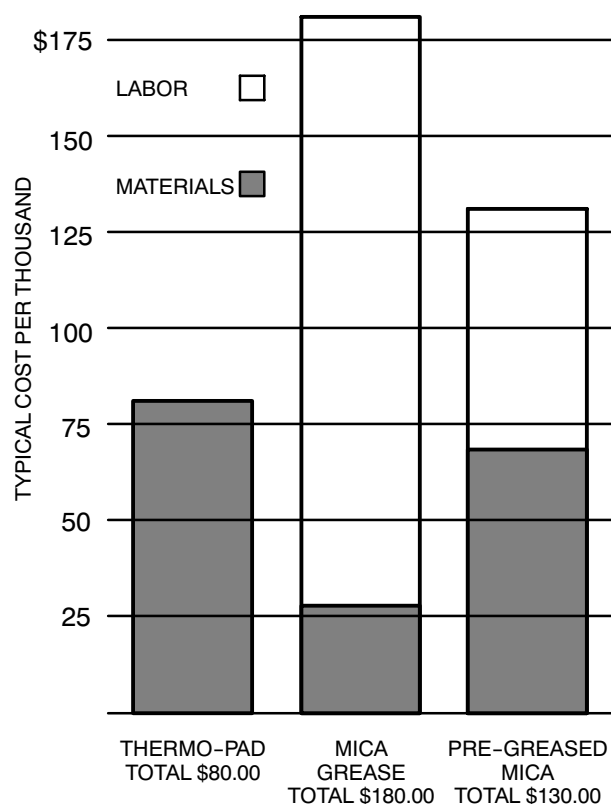


THERMO PADS

NTE's THERMO-PADS do away with the old fashioned mica wafer and conductive grease method of mounting power semiconductors. These thermally conductive insulators offer low heat transfer resistance while still providing high electrical isolation between the parts of the assembly. The elastomeric material combines the electrical isolation of rigid insulators with the ability to conform to rough surfaces and reduce contact resistance in much the same manner as thermal greases. Proper selection and use of these THERMO-PADS results in a securely-mounted power semiconductor and minimum resistance to the heat transfer between it and the heat sink.

INSTALLED COST PER THOUSAND UNITS



Note: NTE425 is a self-adhesive, thermal interface pad for use in computer applications. For additional information, refer to page 1-356.

TYPICAL PROPERTIES

PROPERTY	0.009 INCH THICKNESS	TEST METHOD
Construction	Silicone/Fiberglass	-
Color	Gray	Visual
Thickness (Expressed in Inches)	0.009 $\pm$ 0.001	-
Hardness, Shore A	85	ASTM D 2240
Breaking Strength Lbs./Inch	30	ASTM D 1458
Elongation, (%45°n to Warp and Fill)	54	ASTM D 412
Tensile Strength (psi) / (MPa)	3000	ASTM D 412
Continuous Use Temperature (°C)	-60° to +180°	-
Dielectric Breakdown Voltage (VAC)	4500	ASTM D 149
Dielectric Constant (1000 Hz)	5.5	ASTM D 150
Volume Resistivity (Ohm - Meter)	10 ¹¹	ASTM D 257
Flame Rating	V-O	U.L. 94
Thermal Conductivity $\frac{W}{m-k}$	0.9	-
Thermal Performance (TO220 Test @ 50psi °C/W)	6.61	-
Thermal Impedance (Note 1) (Test @ 50psi °C-in ³ /W)	1.45	-

Note 1. The ASTM D 5470 test fixture was used. The recorded value includes interfacial thermal resistance. These values are provided for reference only. Actual application performance is directly related to the surface roughness, flatness and pressure applied.

DIMENSIONAL OUTLINE DRAWINGS

TO3 Style TP0001	TO66 Style TP0002	DO4 Style TP0003
TO126 Style TP0004	TO218 Style TP0005	TO220 Style TP0006
DO5 Style TP0007	TO3P Style TP0008	TO36 Style TP0009
TO3PML Style TP0010	Precut Sheet TP0011 6" x 6" TP0012A 12" x 12" TP0013 2.25" x 1.75"	Thermo Pad material is also available in a 1ft. x 25ft. roll and can be ordered using the NTE part number: TP-3 <i>NTE can also supply thermal grease in 1 gram tubes. See page 1-359.</i>

THERMO PADS

NTE Part Number to Thermo Pad Cross Reference

NTE Part No.	Thermo Pad No.	NTE Part No.	Thermo Pad No.	NTE Part No.	Thermo Pad No.	NTE Part No.	Thermo Pad No.	NTE Part No.	Thermo Pad No.	NTE Part No.	Thermo Pad No.	NTE Part No.	Thermo Pad No.
27	TP0001	252	TP0001	959	TP0006	2313	TP0006	2931	TP0010	5216A	TP0003	293A	TP0007
29	TP0001	253	TP0004	960	TP0006	2314	TP0008	2932	TP0010	5217A	TP0003	5294A	TP0007
30	TP0001	254	TP0004	961	TP0006	2315	TP0006	2933	TP0010	5218A	TP0003	5295A	TP0007
36	TP0008	256	TP0005	962	TP0006	2316	TP0005	2934	TP0010	5219A	TP0003	5296A	TP0007
37	TP0008	261	TP0006	963	TP0006	2317	TP0005	2935	TP0010	5220A	TP0003	5351	TP0002
38	TP0002	262	TP0006	964	TP0006	2318	TP0005	2936	TP0010	5221A	TP0003	5411	TP0004
39	TP0004	263	TP0006	965	TP0006	2319	TP0001	2953	TP0006	5222A	TP0003	5412	TP0004
51	TP0006	264	TP0006	966	TP0006	2324	TP0010	2954	TP0006	5223A	TP0003	5413	TP0004
52	TP0001	270	TP0005	967	TP0006	2325	TP0006	2955	TP0006	5224A	TP0003	5414	TP0004
53	TP0001	271	TP0005	968	TP0006	2327	TP0004	2956	TP0006	5225A	TP0003	5415	TP0004
54	TP0006	274	TP0002	969	TP0006	2328	TP0010	2957	TP0006	5226A	TP0003	5416	TP0004
55	TP0006	275	TP0002	970	TP0002	2329	TP0006	2958	TP0006	5227A	TP0003	5417	TP0006
56	TP0006	280	TP0001	971	TP0006	2330	TP0008	2959	TP0006	5228A	TP0003	5418	TP0006
60	TP0001	281	TP0001	972	TP0006	2331	TP0010	2960	TP0006	5229A	TP0003	5419	TP0006
61	TP0001	283	TP0001	1904	TP0006	2332	TP0006	2966	TP0008	5230A	TP0003	5424	TP0006
62	TP0001	284	TP0001	1910	TP0006	2333	TP0006	2967	TP0008	5231A	TP0003	5426	TP0006
66	TP0006	285	TP0001	1911	TP0001	2334	TP0006	2968	TP0008	5232A	TP0003	5437	TP0006
67	TP0006	291	TP0006	1912	TP0001	2335	TP0008	2969	TP0008	5240A	TP0007	5438	TP0006
68	TP0001	292	TP0006	1913	TP0001	2336	TP0006	2970	TP0008	5241A	TP0007	5440	TP0006
78	TP0006	308	TP0002	1914	TP0001	2337	TP0006	2971	TP0008	5242A	TP0007	5461	TP0006
87	TP0001	308P	TP0006	1915	TP0001	2338	TP0004	2972	TP0008	5243A	TP0007	5462	TP0006
88	TP0001	309K	TP0001	1916	TP0001	2339	TP0006	2973	TP0008	5244A	TP0007	5463	TP0006
89	TP0001	310	TP0002	1918	TP0001	2343	TP0006	2987	TP0006	5245A	TP0007	5465	TP0006
94	TP0001	310P	TP0006	1919	TP0001	2344	TP0006	3300	TP0006	5246A	TP0007	5466	TP0006
97	TP0001	314	TP0001	1920	TP0001	2348	TP0008	3301	TP0006	5247A	TP0007	5468	TP0006
98	TP0001	327	TP0001	1924	TP0001	2349	TP0001	3302	TP0006	5248A	TP0007	5498	TP0006
99	TP0001	328	TP0001	1925	TP0001	2350	TP0001	3303	TP0006	5249A	TP0007	5499	TP0006
104	TP0001	330	TP0009	1932	TP0006	2353	TP0010	3310	TP0008	5250A	TP0007	5511	TP0002
105	TP0009	331	TP0006	1934	TP0008	2354	TP0008	5174A	TP0003	5251A	TP0007	5512	TP0002
121	TP0001	332	TP0006	1934X	TP0008	2380	TP0006	5175A	TP0003	5252A	TP0007	5513	TP0002
124	TP0002	369	TP0002	1936	TP0008	2381	TP0006	5176A	TP0003	5253A	TP0007	5536	TP0006
127	TP0001	373	TP0004	1938	TP0008	2382	TP0006	5177A	TP0003	5254A	TP0007	5538	TP0005
130	TP0001	374	TP0004	1940	TP0008	2383	TP0006	5178A	TP0003	5255A	TP0007	5539	TP0005
152	TP0006	375	TP0006	1942	TP0006	2384	TP0001	5179A	TP0003	5256A	TP0007	5540	TP0005
153	TP0006	376	TP0006	1951	TP0006	2385	TP0006	5180A	TP0003	5257A	TP0007	5550	TP0006
157	TP0004	377	TP0006	1952	TP0006	2386	TP0001	5181A	TP0003	5258A	TP0007	5552	TP0006
162	TP0001	378	TP0006	1953	TP0006	2387	TP0006	5182A	TP0003	5259A	TP0007	5554	TP0006
163A	TP0001	379	TP0006	1954	TP0006	2388	TP0006	5183A	TP0003	5260A	TP0007	5556	TP0006
164	TP0001	384	TP0002	1955	TP0006	2390	TP0006	5184A	TP0003	5261A	TP0007	5558	TP0006
165	TP0001	385	TP0001	1956	TP0006	2392	TP0001	5185A	TP0003	5262A	TP0007	5600	TP0004
175	TP0002	386	TP0001	1960	TP0006	2393	TP0008	5186A	TP0003	5263A	TP0007	5601	TP0004
179	TP0001	387	TP0001	1961	TP0006	2394	TP0008	5187A	TP0003	5264A	TP0007	5602	TP0004
180	TP0001	388	TP0001	1962	TP0006	2506	TP0004	5188A	TP0003	5265A	TP0007	5603	TP0004
181	TP0001	389	TP0001	1963	TP0006	2507	TP0006	5189A	TP0003	5266A	TP0007	5604	TP0004
184	TP0004	390	TP0005	1964	TP0006	2511	TP0004	5190A	TP0003	5267A	TP0007	5605	TP0004
185	TP0004	391	TP0005	1965	TP0006	2512	TP0004	5191A	TP0003	5268A	TP0007	5606	TP0004
196	TP0006	392	TP0005	1966	TP0006	2534	TP0008	5192A	TP0003	5269A	TP0007	5607	TP0004
197	TP0006	393	TP0005	1967	TP0006	2535	TP0008	5193A	TP0003	5270A	TP0007	5608	TP0006
198	TP0006	394	TP0005	1968	TP0006	2536	TP0008	5194A	TP0003	5271A	TP0007	5609	TP0006
213	TP0009	398	TP0006	1970	TP0006	2537	TP0008	5195A	TP0003	5272A	TP0007	5610	TP0006
214	TP0008	581	TP0006	1971	TP0006	2538	TP0010	5196A	TP0003	5273A	TP0007	5620	TP0006
215	TP0008	597	TP0006	1972	TP0006	2539	TP0008	5197A	TP0003	5274A	TP0007	5631	TP0006
218	TP0002	598	TP0006	1973	TP0006	2541	TP0008	5198A	TP0003	5275A	TP0007	5632	TP0006
219	TP0001	599	TP0006	1974	TP0006	2542	TP0008	5199A	TP0003	5276A	TP0007	5633	TP0006
230	TP0002	623	TP0006	1975	TP0006	2544	TP0004	5200A	TP0003	5277A	TP0007	5634	TP0006
231	TP0002	624	TP0006	1976	TP0006	2545	TP0006	5201A	TP0003	5278A	TP0007	5635	TP0006
235	TP0006	625	TP0006	1977	TP0006	2546	TP0006	5202A	TP0003	5279A	TP0007	5636	TP0006
236	TP0006	626	TP0006	2300	TP0005	2553	TP0006	5203A	TP0003	5280A	TP0007	5637	TP0006
238	TP0001	627	TP0006	2301	TP0005	2559	TP0010	5204A	TP0003	5281A	TP0007	5638	TP0006
241	TP0006	628	TP0006	2302	TP0008	2560	TP0010	5205A	TP0003	5282A	TP0007	5645	TP0006
242	TP0006	629	TP0006	2303	TP0006	2561	TP0006	5206A	TP0003	5283A	TP0007	5646	TP0006
243	TP0001	630	TP0006	2304	TP0008	2566	TP0006	5207A	TP0003	5284A	TP0007	5699	TP0006
244	TP0001	931	TP0001	2305	TP0005	2567	TP0006	5208A	TP0003	5285A	TP0007	5810	TP0003
245	TP0001	932	TP0001	2306	TP0005	2578	TP0006	5209A	TP0003	5286A	TP0007	5811	TP0003
246	TP0001	933	TP0001	2307	TP0008	2579	TP0006	5210A	TP0003	5287A	TP0007	5818	TP0003
247	TP0001	934	TP0001	2308	TP0008	2594	TP0010	5211A	TP0003	5288A	TP0007	5819	TP0003
248	TP0001	935	TP0001	2309	TP0008	2633	TP0004	5212A	TP0003	5289A	TP0007	5820	TP0003
249	TP0001	956	TP0006	2310	TP0005	2634	TP0004	5213A	TP0003	5290A	TP0007	5821	TP0003
250	TP0001	957	TP0006	2311	TP0005	2638	TP0006	5214A	TP0003	5291A	TP0007	5822	TP0003
251	TP0001	958	TP0006	2312	TP0006	2930	TP0010	5215A	TP0003	5292A	TP0007	5823	TP0003

THERMO PADS

NTE Part Number to Thermo Pad Cross Reference

NTE Part No.	Thermo Pad No.	NTE Part No.	Thermo Pad No.	NTE Part No.	Thermo Pad No.	NTE Part No.	Thermo Pad No.	NTE Part No.	Thermo Pad No.	NTE Part No.	Thermo Pad No.	NTE Part No.	Thermo Pad No.
5830	TP0003	5872	TP0003	5912	TP0003	5986	TP0007	6041	TP0007	6093	TP0008	56063	TP0006
5831	TP0003	5873	TP0003	5913	TP0003	5987	TP0007	6042	TP0007	6200	TP0001	56064	TP0006
5832	TP0003	5874	TP0003	5914	TP0003	5988	TP0007	6043	TP0007	6202	TP0001	56065	TP0006
5833	TP0003	5875	TP0003	5915	TP0003	5989	TP0007	6044	TP0007	6204	TP0001	56066	TP0006
5834	TP0003	5876	TP0003	5916	TP0003	5990	TP0007	6045	TP0007	6206	TP0001	56067	TP0006
5835	TP0003	5877	TP0003	5917	TP0003	5991	TP0007	6046	TP0007	6208	TP0001	56068	TP0006
5836	TP0003	5878	TP0003	5918	TP0003	5992	TP0007	6047	TP0007	6210	TP0001	56069	TP0006
5837	TP0003	5879	TP0003	5919	TP0003	5993	TP0007	6048	TP0007	6240	TP0006	56070	TP0006
5838	TP0003	5880	TP0003	5920	TP0003	5994	TP0007	6049	TP0007	6241	TP0006	56071	TP0006
5839	TP0003	5881	TP0003	5921	TP0003	5995	TP0007	6050	TP0007	6244	TP0006		
5840	TP0003	5882	TP0003	5922	TP0003	5998	TP0007	6051	TP0007	6246	TP0005		
5841	TP0003	5883	TP0003	5923	TP0003	5999	TP0007	6054	TP0007	6247	TP0005		
5842	TP0003	5884	TP0003	5924	TP0003	6002	TP0007	6055	TP0007	56004	TP0006		
5843	TP0003	5885	TP0003	5925	TP0003	6003	TP0007	6058	TP0007	56006	TP0006		
5846	TP0003	5886	TP0003	5926	TP0007	6004	TP0007	6059	TP0007	56008	TP0006		
5847	TP0003	5887	TP0003	5927	TP0007	6005	TP0007	6060	TP0007	56010	TP0006		
5848	TP0003	5888	TP0003	5928	TP0003	6006	TP0007	6061	TP0007	56015	TP0006		
5849	TP0003	5889	TP0003	5929	TP0003	6007	TP0007	6064	TP0007	56016	TP0006		
5850	TP0003	5890	TP0003	5930	TP0007	6008	TP0007	6065	TP0007	56017	TP0006		
5851	TP0003	5891	TP0003	5931	TP0007	6009	TP0007	6068	TP0007	56018	TP0006		
5852	TP0003	5892	TP0003	5932	TP0003	6010	TP0007	6069	TP0007	56019	TP0006		
5853	TP0003	5893	TP0003	5933	TP0003	6011	TP0007	6070	TP0007	56020	TP0006		
5854	TP0003	5894	TP0003	5940	TP0007	6013	TP0006	6071	TP0007	56028	TP0006		
5855	TP0003	5895	TP0003	5941	TP0007	6020	TP0007	6072	TP0007	56030	TP0005		
5856	TP0003	5896	TP0003	5942	TP0007	6021	TP0007	6073	TP0007	56033	TP0005		
5857	TP0003	5897	TP0003	5943	TP0007	6022	TP0007	6074	TP0007	56040	TP0006		
5858	TP0003	5898	TP0003	5944	TP0007	6023	TP0007	6075	TP0007	56041	TP0006		
5859	TP0003	5899	TP0003	5945	TP0007	6026	TP0007	6076	TP0007	56042	TP0006		
5860	TP0003	5900	TP0003	5946	TP0007	6027	TP0007	6077	TP0007	56043	TP0006		
5861	TP0003	5901	TP0003	5947	TP0007	6030	TP0007	6078	TP0007	56044	TP0006		
5862	TP0003	5902	TP0003	5948	TP0007	6031	TP0007	6079	TP0007	56045	TP0006		
5863	TP0003	5903	TP0003	5949	TP0007	6032	TP0007	6083	TP0006	56046	TP0006		
5864	TP0003	5904	TP0003	5950	TP0007	6033	TP0007	6084	TP0003	56047	TP0006		
5865	TP0003	5905	TP0003	5951	TP0007	6034	TP0007	6085	TP0006	56049	TP0006		
5866	TP0003	5906	TP0007	5952	TP0007	6035	TP0007	6086	TP0006	56050	TP0006		
5867	TP0003	5907	TP0007	5953	TP0007	6036	TP0007	6087	TP0006	56051	TP0006		
5868	TP0003	5908	TP0003	5980	TP0007	6037	TP0007	6088	TP0006	56052	TP0006		
5869	TP0003	5909	TP0003	5981	TP0007	6038	TP0007	6090 (TO218)	TP0005	56058	TP0006		
5870	TP0003	5910	TP0003	5982	TP0007	6039	TP0007	6090 (TO3P)	TP0008	56059	TP0006		
5871	TP0003	5911	TP0003	5983	TP0007	6040	TP0007	6094	TP0007	56060	TP0006		