High Performance

Sil-Pad 1000®, Sil-Pad 1500® and Sil-Pad 2000®

SIL-PAD 1000

Sil-Pad 1000 has the same excellent mechanical and physical characteristics of our Sil-Pad 400 material while offering a 35% reduction in thermal resistance.

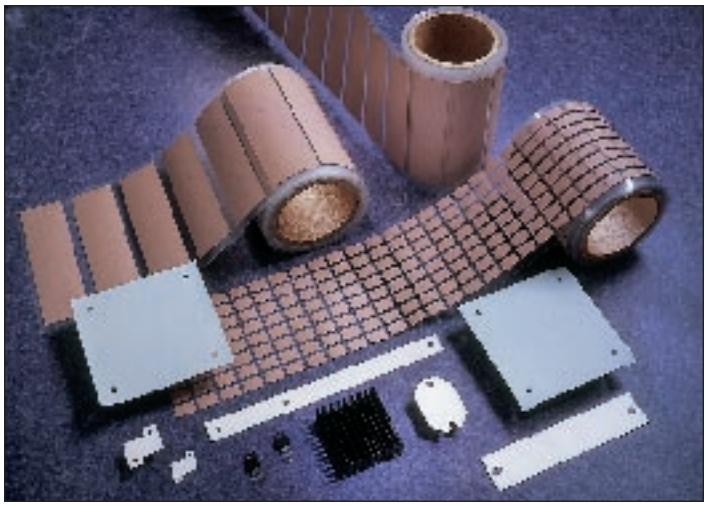
Sil-Pad 1000 is a composite of silicone rubber and fiberglass. It is specially filled and offers low thermal resistance. Sil-Pad 1000 is non-toxic and resists damage from cleaning agents. It is flame retardant and specially formulated for use as a thermally conductive insulator.

SIL-PAD 1500

Sil-Pad 1500 is an economical, high performance insulator with a thickness between that of Sil-Pad 1000 and Sil-Pad 2000.

SIL-PAD 2000

Sil-Pad 2000 is Bergquist's high performance, high reliability thermally conductive insulator. Sil-Pad 2000 is designed for demanding military / aerospace and commercial applications. In these applications, Sil-Pad 2000 complies with military standards. This silicone elastomer is specially filled to maximize the thermal and dielectric performance of the filler / binder matrix. The result is a "grease-free", conformable material capable of meeting or exceeding the thermal and electrical requirements of high reliability electronic packaging applications. Sil-Pad 2000 is also available in thicknesses from .010" to .060".



Die-Cut parts, Rolls and Sheets

Sil-Pad 1000, 1500 and 2000 are available in die-cut parts and sheets (6" x 6" min., 6" x 12", 8" x 8", 10" x 10" and 12" x 12"). Only Sil-Pad 1000 and 1500 are available in roll form.

SIL-PAD 2000 Outgassing Data for Spacecraft Materials

Post Cure Conditions	%TML (1.0% Max Acceptable)	%CVCM (0.1% Max Acceptable)
24 hrs. @ 175°C	.07	.03
No Post Cure	.26	.10

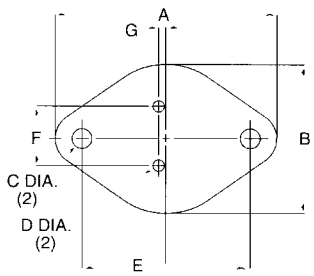
MIL SPEC.
MIL-M-38527/08
MIL-I-49456
MIL-I-49466/02
MIL-M-87111
U.L. FILE NUMBER
E59150
FSCM NUMBER 55285

Physical Properties	Sil-Pad 1000	Sil-Pad 1500	Sil-Pad 2000	Test Method
Color	Pink	Green	White	Visual
Thickness Inches (mm)	.009 ± .001" (.23 ± .025)	0.010 ± .001" (.25 ± .025)	.015 ±.002" (.38 ± .025)	ASTM D 374
Elongation, % 45° to warp and fill	45	20	20	ASTM D 412
Hardness, Shore A ± 5	85	80	90	ASTM D 2240
Breaking Strength Lbs/inch (kN/m)	100 (18)	65 (12)	65(12)	ASTM D 1458
Tensile Strength, kPsi (MPa)	4 (30)			ASTM D 412
Thermal Vacuum Weight Loss % (TML) as manufactured	.22		see	NASA SP-R-0022A
Volatile Condensable Material % (CVCM) as manufactured	.08		see	NASA SP-R-0022A
Specific Gravity	1.5	1.5	1.5	ASTM D 792
Continuous Use Temp., °C	-60 to +180	-60 to + 200	-60 to +200	--
Construction	Silicone/Fiberglass	Silicone/Fiberglass	Silicone/Fiberglass	

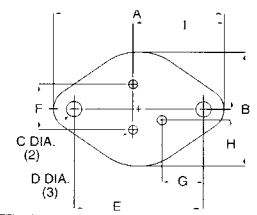
Thermal Properties	Sil-Pad 1000	Sil-Pad 1500	Sil-Pad 2000	Test Method
Thermal Resistance, °C/-in²/W	0.35	0.23	0.2	ASTM D 5470
Thermal Conductivity, W/m-K	1.2	2.0	3.5	ASTM D 5470

Electrical Properties	Sil-Pad 1000	Sil-Pad 1500	Sil-Pad 2000	Test Method
Breakdown Voltage, Volts a-c Min.	4500	4000	4000	ASTM D 149
Dielectric Constant, 1000 Cps (Hz)	4.5	4	4.0	ASTM D 150
Volume Resistivity, Ohm Metre	$1.0x10^{11}$	1.0×10^{11}	$1.0x10^{11}$	ASTM D 257

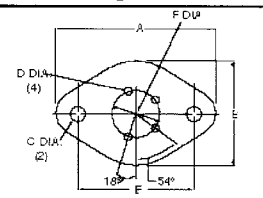
Configurations Standard des SIL-PAD®



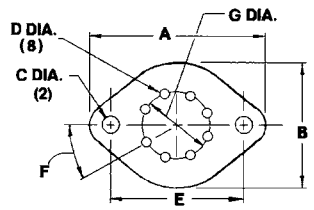
Boiter TO-3	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	"G"
					en mm			
	-03	39.70	26.67	3.56	2.03	30.15	10.92	1.83
	-18	39.70	26.67	3.56	3.56	30.15	10.92	1.83
	-23	40.46	26.67	3.96	1.57	30.15	10.92	1.83
	-29	27.05	27.05	3.56	1.17	30.15	10.92	1.83
	-04	41.91	28.96	3.10	1.57	30.15	10.92	1.83
	-05	41.91	28.96	3.56	2.36	30.15	10.92	1.83
	-06	41.91	28.96	4.19	1.57	30.15	10.92	1.83
	-17	41.91	28.96	3.56	1.17	30.15	10.92	1.83
	-59 sans patte	41.91	28.96	4.19		30.15		
	-24	43.18	30.15	3.96	1.57	30.15	10.92	1.83
	-02	45.21	31.75	3.56	2.36	30.15	10.92	1.83
	-07	45.21	31.75	4.19	2.39	30.15	10.92	1.83
	-15	45.21	31.75	3.56	1.17	30.15	10.92	1.83
	-16	52.58	39.62	3.10	1.57	30.15	10.92	1.83



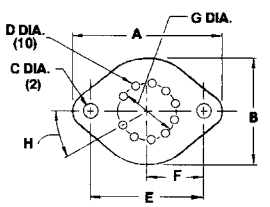
TO-3 3 cond.	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"
	-92	41.91	28.96	3.56	2.36	30.15	10.92	10.16	3.94	18.24



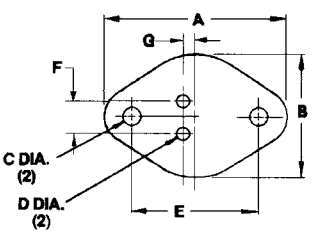
TO-3 4 cond.	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
	-86	1.560	26.67	3.96	2.03	29.72	11.94	18°	59°
	-87	1.563	26.67	3.96	1.60	30.15	11.94	18°	59°



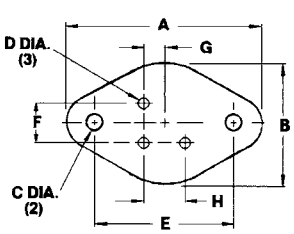
TO-3 8 cond.	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	"G"
	-88	42.04	30.15	3.96	1.52	30.15	40°	12.7



TO-3 10 cond.	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
	-91	41.91	28.96	4.19	1.02	30.15	15.06	12.7	32.7°

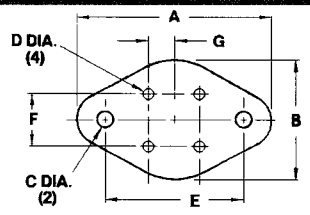


Boiter TO-66	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	"G"
	-30	31.75	17.78	3.56	1.57	24.38	5.08	2.54
	-11	33.32	19.35	3.56	1.57	24.38	5.08	2.54
	-31	33.32	19.35	3.56	1.57	24.38	5.08	2.54
	-10	36.58	25.40	3.56	1.90	24.38	5.08	2.54

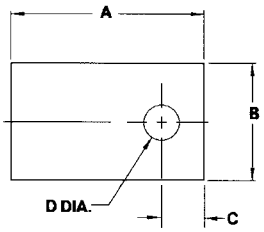


TO-66 3 cond.	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"I"
	-85	32.38	19.05	3.96	2.54	24.38	5.08	2.54	5.08

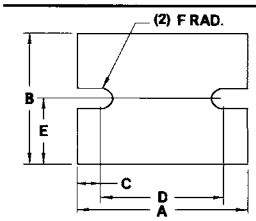
Configurations Standard des SIL-PAD®



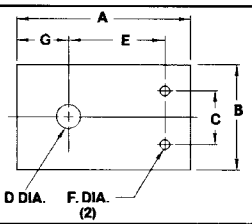
TO-66 4 cond.	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	"G"
	-84	33.32	19.35	3.57	1.57	24.38	5.08	2.54



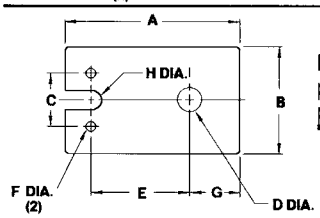
Composant puissance plastique	Suffixe du n° d'article	"A"	"B"	"C"	"D"		Suffixe du n° d'article	"A"	"B"	"C"	"D"
TO-126	-50	11.10	7.92	3.56	2.36	Divers	-62	19.05	15.24	6.10	3.81
TO-126	-60	11.10	7.92	3.56	3.10	Divers	-63	19.05	15.24	6.10	2.92
Divers	-64	12.7	9.78	4.32	3.05	Divers	-56	21.72	14.27	5.54	3.18
TO-220	-55	15.49	14.22	6.22	3.18	Divers	.52	21.72	16.00	5.84	2.36
Divers	-51	17.45	14.28	5.54	3.18	TO-218	.90	21.84	18.80	5.08	4.06
Divers	-35	18.03	12.7	4.06	3.58	Divers	-68	28.58	15.88	5.08	3.71
Divers	-61	19.05	.410	5.72	3.96	Divers	-70	13.56	20.57	9.02	3.71
TO-220(montage à clip)	-43	19.05	12.7			Divers	-102	22.00	16.51	5.51	3.61
TO-220	-54	19.05	12.7	4.75	3.18	Divers	-103	19.05	20.32	3.81	4.06
TO-220	-58	19.05	12.7	4.75	3.73	TO-3P	-104	1.000	19.05	7.62	3.56



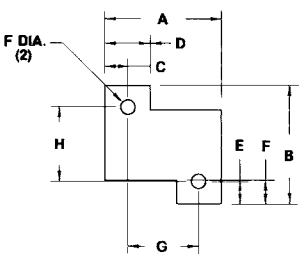
Module de Puissance	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"
	-67	38.1	22.86	3.81	30.48	11.43	1.90
	-101	63.5	5.08	8.74	46.02	25.4	3.96



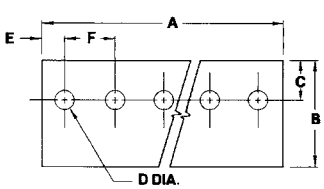
Module de puissance plastique	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	"G"
	-57	23.11	12.7	5.08	3.18	14.73	1.17	6.73
	-89	24.97	19.05	10.97	3.96	16.89	2.56	5.51



Module de puissance plastique	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
	-66	25.4	12.7	5.08	3.58	15.90	1.17	5.56	0.81

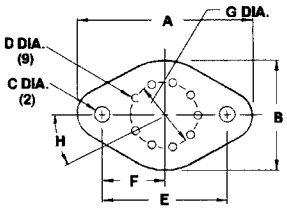


Résistances de puissance	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"
RH-25	-94	14.75	31.75	5.94	11.91	5.38	3.96	18.26	19.84	3.56
RH-50	-95	22.36	32.13	6.73	13.46	5.33	6.48	39.70	21.46	3.56
RH-5	-96	18.42	19.58	3.56	7.11	3.56	3.96	11.30	12.47	2.36
RH-10	-97	20.48	22.61	3.22	6.35	3.30	4.83	14.00	16.00	3.07
RH-25	-98	29.21	29.97	5.87	10.80	4.83	6.86	17.48	20.32	3.73
RH-50	-99	1.965	31.39	5.03	10.26	3.35	6.68	39.85	24.69	3.30

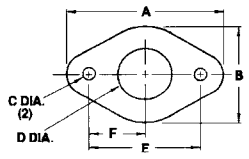


TO-220 Multiples	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	Trous
2 éléments	-34	25.40	19.05	4.75	3.18	6.35	12.7	2
3 éléments	-36	38.10	19.05	4.75	3.18	6.35	12.7	3
	-37	50.80	19.05	4.75	3.18	6.35	12.7	4
	-38	63.50	19.05	4.75	3.18	6.35	12.7	5
	-39	76.20	19.05	4.75	3.18	6.35	12.7	6
	-40	88.90	19.05	4.75	3.18	6.35	12.7	7
	-41	101.60	19.05	4.75	3.18	6.35	12.7	8

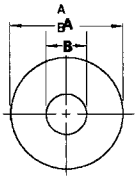
Configurations Standard des SIL-PAD®



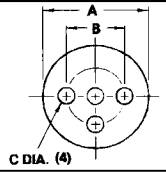
TO-66 9 cond.	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
					en mm				
	-83	36.58	25.40	3.56	1.40	24.38	12.19	.325	36°



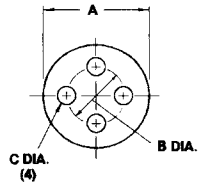
TO-66 Multi-cond.	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"
	-93	34.29	20.32	3.56	10.16	24.38	12.19



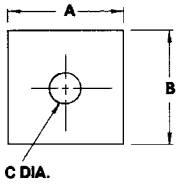
Composant puissance plastique	Suffixe du n° d'article	"A"	"B"		Suffixe du n° d'article	"A"	"B"
Divers	-75	9.14	6.60	Divers	-27	20.62	2.92
Divers	-19	12.95	3.56	Divers	-27	20.62	2.92
DO-4	-20	12.95	5.08	DO-8	-78	22.22	7.95
Divers	-82	13.00	4.09	Divers	-28	25.40	3.56
DO-4(surdimensionné)	-22	15.88	5.08	DO-5(surdimensionné)	-25	25.40	6.60
Divers	-76	19.05	3.18	Divers	-79	29.97	13.08
Divers	-77	20.32	4.82	Divers	-80	31.75	9.65
DO-5	-21	20.32	6.60	Divers	-81	38.10	5.08



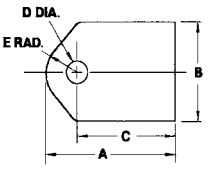
TO-36	Suffixe du n° d'article	"A"	"B"	"C"	"D"
	-08	27.00	17.53	4.83	4.83



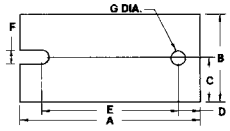
Petit module de puissance	Suffixe du n° d'article	"A"	"B"	"C"
TO-18, 3 trous	-12	6.35	2.54	0.91
TO-18, 4 trous	-13	6.35	2.54	0.91
TO-5, 3 trous	-09	9.14	5.08	1.02
TO-5, 4 trous	-33	9.14	5.08	1.02
TO-5, 3 trous	-44	9.91	5.08	1.02
TO-5, 4 trous	-45	9.91	5.08	1.02



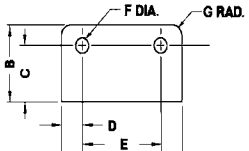
Redresseur	Suffixe du n° d'article	"A"	"B"	"C"
	-48	25.40	25.40	4.75
	-47	28.58	28.58	3.56
	-46	31.75	31.75	5.08



Ensembles TIP	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"
TIP-36 plastique	-53	21.97	16.51	16.51	3.56	5.21
Montage à clip	-42	24.99	19.99			5.21
Clip plastique	-73	24.99	19.99	17.98	3.61	5.21



Module de Puissance	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	"G"
	-100	63.75	32.00	16.00	7.75	48.26	5.21	5.21



Ensemble SIP	Suffixe du n° d'article	"A"	"B"	"C"	"D"	"E"	"F"	"G"
	-105	36.83	2.28	15.54	6.22	24.38	4.32	3.05