

**TU-862HF Typical Dk/Df Value***Thin core Standard Construction List*

Typical Thickness		Mean Thickness		Tolerance(+/-)		Construction	Average R/C(%)	Dk@					Df@					Copper
mil	mm	mil	mm	mil	mm			1M Hz	1G Hz	2G Hz	5G Hz	10G Hz	1M Hz	1G Hz	2G Hz	5G Hz	10G Hz	
2	0.051	2	0.051	0.5	0.013	106x1	70.5	4.22	3.91	3.90	3.88	3.79	0.0137	0.0167	0.0169	0.0175	0.0185	不限
2	0.051	2	0.051	0.5	0.013	1067x1	66.1	4.29	4.03	4.02	4.00	3.92	0.013	0.016	0.0162	0.0168	0.0178	不限
2.5	0.064	2.5	0.064	0.5	0.013	1067x1	71.9	4.20	3.87	3.87	3.84	3.76	0.0139	0.0169	0.0171	0.0177	0.0187	不限
3	0.076	3	0.076	0.5	0.013	1080x1	64.3	4.33	4.08	4.07	4.05	3.97	0.0128	0.0157	0.0159	0.0165	0.0175	不限
3	0.076	3	0.076	0.5	0.013	1086x1	60.2	4.39	4.19	4.18	4.16	4.08	0.0122	0.0151	0.0153	0.0159	0.0169	不限
3.5	0.089	3.5	0.089	0.5	0.013	2113x1	52.6	4.52	4.39	4.38	4.36	4.29	0.011	0.0139	0.0141	0.0147	0.0157	不限
3.5	0.089	3.5	0.089	0.5	0.013	1037x2	69.9	4.23	3.93	3.92	3.90	3.81	0.0136	0.0166	0.0168	0.0174	0.0184	不限
3.5	0.089	3.5	0.089	0.5	0.013	3313x1	50.0	4.57	4.46	4.46	4.43	4.37	0.0106	0.0134	0.0136	0.0142	0.0152	不限
4	0.102	4	0.102	0.5	0.013	2113x1	57.1	4.45	4.27	4.27	4.24	4.17	0.0117	0.0146	0.0148	0.0154	0.0164	不限
4	0.102	4	0.102	0.5	0.013	106x2	70.5	4.22	3.91	3.90	3.88	3.79	0.0137	0.0167	0.0169	0.0175	0.0185	不限
4	0.102	4	0.102	0.5	0.013	3313x1	54.9	4.48	4.33	4.32	4.30	4.23	0.0114	0.0142	0.0144	0.015	0.0160	不限
4	0.102	4	0.102	0.5	0.013	1067x2	66.1	4.29	4.03	4.02	4.00	3.92	0.013	0.016	0.0162	0.0168	0.0178	不限
4	0.102	4.2	0.107	0.5	0.013	2116x1	47.6	4.61	4.52	4.52	4.49	4.43	0.0103	0.0131	0.0133	0.0139	0.0149	不限
4.5	0.114	4.5	0.114	0.5	0.013	2116x1	50.9	4.55	4.44	4.43	4.41	4.34	0.0108	0.0136	0.0138	0.0144	0.0154	不限
5	0.127	5	0.127	0.7	0.018	2116x1	56.2	4.46	4.29	4.29	4.26	4.19	0.0116	0.0144	0.0146	0.0152	0.0162	不限
5	0.127	5	0.127	0.7	0.018	1080x2	59.6	4.41	4.20	4.20	4.17	4.10	0.0121	0.015	0.0152	0.0158	0.0168	不限

Typical Thickness		Mean Thickness		Tolerance(+/-)		Construction	Average R/C(%)	Dk@					Df@					Copper
mil	mm	mil	mm	mil	mm			1M Hz	1G Hz	2G Hz	5G Hz	10G Hz	1M Hz	1G Hz	2G Hz	5G Hz	10G Hz	
5	0.127	5	0.127	0.7	0.018	1067x2	71.9	4.20	3.87	3.87	3.84	3.76	0.0139	0.0169	0.0171	0.0177	0.0187	不限
5.5	0.140	5.5	0.140	0.7	0.018	1652x1	47.7	4.61	4.52	4.52	4.49	4.43	0.0103	0.0131	0.0133	0.0139	0.0149	不限
5.5	0.140	5.5	0.140	0.7	0.018	1080x2	60.8	4.39	4.17	4.17	4.14	4.07	0.0123	0.0152	0.0154	0.016	0.0170	不限
6	0.152	6.2	0.157	0.7	0.018	1506x1	43.7	4.68	4.63	4.63	4.60	4.54	0.0097	0.0124	0.0126	0.0132	0.0142	不限
6	0.152	6	0.152	0.7	0.018	1652x1	50.9	4.55	4.44	4.43	4.41	4.34	0.0108	0.0136	0.0138	0.0144	0.0154	不限
6	0.152	6	0.152	0.7	0.018	1080x2	64.3	4.33	4.08	4.07	4.05	3.97	0.0128	0.0157	0.0159	0.0165	0.0175	不限
6	0.152	6	0.152	0.7	0.018	1086x2	60.2	4.39	4.19	4.18	4.16	4.08	0.0122	0.0151	0.0153	0.0159	0.0169	不限
6	0.152	6	0.152	0.7	0.018	1078x2	64.3	4.33	4.08	4.07	4.05	3.97	0.0128	0.0157	0.0159	0.0165	0.0175	不限
6.5	0.165	6.5	0.165	0.7	0.018	1506x1	47.6	4.61	4.53	4.52	4.50	4.44	0.0103	0.013	0.0132	0.0138	0.0148	不限
7	0.178	7	0.178	1.0	0.025	2113x2	52.6	4.52	4.39	4.38	4.36	4.29	0.011	0.0139	0.0141	0.0147	0.0157	不限
7	0.178	7.2	0.183	1.0	0.025	7628x1	42.4	4.70	4.67	4.66	4.64	4.58	0.0095	0.0122	0.0124	0.013	0.0140	不限
7.5	0.191	7.5	0.191	1.0	0.025	7628x1	43.0	4.69	4.65	4.65	4.62	4.56	0.0096	0.0123	0.0125	0.0131	0.0141	不限
8	0.203	8	0.203	1.0	0.025	7628x1	45.9	4.64	4.57	4.57	4.54	4.48	0.01	0.0128	0.013	0.0136	0.0146	不限
8	0.203	8	0.203	1.0	0.025	2113x2	57.1	4.45	4.27	4.27	4.24	4.17	0.0117	0.0146	0.0148	0.0154	0.0164	不限
8	0.203	8.2	0.208	1.0	0.025	2116x2	47.6	4.61	4.52	4.52	4.49	4.43	0.0103	0.0131	0.0133	0.0139	0.0149	不限
9	0.229	9	0.229	1.0	0.025	2116x2	50.9	4.55	4.44	4.43	4.41	4.34	0.0108	0.0136	0.0138	0.0144	0.0154	不限
10	0.254	10	0.254	1.0	0.025	2116x2	56.2	4.46	4.29	4.29	4.26	4.19	0.0116	0.0144	0.0146	0.0152	0.0162	不限
11	0.279	11	0.279	1.0	0.025	1652x2	47.7	4.61	4.52	4.52	4.49	4.43	0.0103	0.0131	0.0133	0.0139	0.0149	不限
12	0.305	12.2	0.310	1.5	0.038	1506x2	43.7	4.68	4.63	4.63	4.60	4.54	0.0097	0.0124	0.0126	0.0132	0.0142	不限

Typical Thickness		Mean Thickness		Tolerance(+/-)		Construction	Average R/C(%)	Dk@					Df@					Copper
mil	mm	mil	mm	mil	mm			1M Hz	1G Hz	2G Hz	5G Hz	10G Hz	1M Hz	1G Hz	2G Hz	5G Hz	10G Hz	
13	0.330	13	0.330	1.5	0.038	1506x2	47.6	4.61	4.53	4.52	4.50	4.44	0.0103	0.013	0.0132	0.0138	0.0148	不限
14	0.356	14	0.356	1.5	0.038	2116x3	49.8	4.57	4.47	4.46	4.44	4.37	0.0106	0.0134	0.0136	0.0142	0.0152	不限
14	0.356	14.2	0.361	1.5	0.038	7628x2	42.4	4.70	4.67	4.66	4.64	4.58	0.0095	0.0122	0.0124	0.013	0.0140	不限
15	0.381	15	0.381	1.5	0.038	7628x2	43.0	4.69	4.65	4.65	4.62	4.56	0.0096	0.0123	0.0125	0.0131	0.0141	不限
16	0.406	16	0.406	1.5	0.038	7628x2	45.9	4.64	4.57	4.57	4.54	4.48	0.01	0.0128	0.013	0.0136	0.0146	不限
18	0.457	18	0.457	1.5	0.038	7628x2+1080x1	46.3	4.63	4.56	4.55	4.53	4.47	0.0101	0.0128	0.013	0.0136	0.0146	不限
20	0.508	20	0.508	2.0	0.051	7628x2+2116x1	46.1	4.63	4.57	4.56	4.54	4.48	0.0101	0.0128	0.013	0.0136	0.0146	不限
21	0.533	21.2	0.538	2.0	0.051	7628x3	42.4	4.70	4.67	4.66	4.64	4.58	0.0095	0.0122	0.0124	0.013	0.0140	不限
23	0.584	23	0.584	2.0	0.051	7628x3	44.8	4.66	4.60	4.60	4.57	4.51	0.0099	0.0126	0.0128	0.0134	0.0144	不限
24	0.610	24	0.610	2.0	0.051	7628x3	45.9	4.64	4.57	4.57	4.54	4.48	0.01	0.0128	0.013	0.0136	0.0146	不限
24	0.610	24	0.610	2.0	0.051	7628x2+2116x2	46.2	4.63	4.56	4.56	4.53	4.47	0.0101	0.0128	0.013	0.0136	0.0146	不限
25	0.635	25	0.635	2.0	0.051	7628x2+2116x2	46.1	4.63	4.57	4.56	4.54	4.48	0.0101	0.0128	0.013	0.0136	0.0146	不限
26	0.660	26	0.660	2.0	0.051	7628x2+1506x2	43.1	4.68	4.65	4.64	4.62	4.56	0.0096	0.0123	0.0125	0.0131	0.0141	不限
28	0.711	28.2	0.716	2.0	0.051	7628x4	42.4	4.70	4.67	4.66	4.64	4.58	0.0095	0.0122	0.0124	0.013	0.0140	不限
31	0.787	31	0.787	3	0.076	7628x4	43.7	4.68	4.63	4.63	4.60	4.54	0.0097	0.0124	0.0126	0.0132	0.0142	H/H
39	0.991	39	0.991	3	0.076	7628x5	43.0	4.69	4.65	4.65	4.62	4.56	0.0096	0.0123	0.0125	0.0131	0.0141	H/1
39	0.991	39	0.991	3	0.076	7628x5	43.7	4.68	4.63	4.63	4.60	4.54	0.0097	0.0124	0.0126	0.0132	0.0142	H/H
50	1.270	50	1.270	5	0.127	7628x7	40.9	4.72	4.71	4.70	4.68	4.62	0.0093	0.012	0.0122	0.0128	0.0138	1/1
50	1.270	50	1.270	5	0.127	7628x7	42.4	4.70	4.67	4.66	4.64	4.58	0.0095	0.0122	0.0124	0.013	0.0140	H/H



Typical Thickness		Mean Thickness		Tolerance(+/-)		Construction	Average R/C(%)	Dk@					Df@					Copper
mil	mm	mil	mm	mil	mm			1M Hz	1G Hz	2G Hz	5G Hz	10G Hz	1M Hz	1G Hz	2G Hz	5G Hz	10G Hz	
51	1.295	51	1.295	5	0.127	7628x7	41.8	4.71	4.68	4.68	4.65	4.60	0.0094	0.0121	0.0123	0.0129	0.0139	1/1
56	1.422	56	1.422	5	0.127	7628x8	41.1	4.72	4.70	4.70	4.67	4.62	0.0093	0.012	0.0122	0.0128	0.0138	H/H
56	1.422	56	1.422	5	0.127	7628x7	44.8	4.66	4.60	4.60	4.57	4.51	0.0099	0.0126	0.0128	0.0134	0.0144	1/1
58	1.473	58	1.473	5	0.127	7628x8	41.8	4.71	4.68	4.68	4.65	4.60	0.0094	0.0121	0.0123	0.0129	0.0139	1/1
59	1.499	59	1.499	5	0.127	7628x8	42.1	4.70	4.67	4.67	4.64	4.59	0.0095	0.0122	0.0124	0.013	0.0140	H/H
59	1.499	59	1.499	5	0.127	7628x8	42.4	4.70	4.67	4.66	4.64	4.58	0.0095	0.0122	0.0124	0.013	0.0140	1/1
60	1.524	60	1.524	5	0.127	7628x8	43.0	4.69	4.65	4.65	4.62	4.56	0.0096	0.0123	0.0125	0.0131	0.0141	H/H
62	1.575	62	1.575	5	0.127	7628x8	43.7	4.68	4.63	4.63	4.60	4.54	0.0097	0.0124	0.0126	0.0132	0.0142	1/1

備註：1、厚度 $\leq 28\text{mil}$ 为不含铜厚度， $> 28\text{mil}$ 为含铜厚度

2、由於廠內板厚規格眾多，以上僅為廠內常用規格，若有其他規格需求，另請單獨提出。

## TU-86PHF Typical Dk/Df Value

### Prepreg Standard Construction List

PP Type	R/C(%)	Mean		Tolerance(+/-)		Dk@					Df@				
		mil	mm	mil	mm	1M Hz	1G Hz	2G Hz	5G Hz	10G Hz	1M Hz	1G Hz	2G Hz	5G Hz	10G Hz
7628	46.0	7.9	0.201	0.8	0.020	4.63	4.56	4.53	4.50	4.47	0.0105	0.0128	0.0130	0.0136	0.0146
	48.0	8.3	0.211	1.1	0.028	4.60	4.50	4.48	4.44	4.42	0.0106	0.0130	0.0132	0.0138	0.0148
	50.0	8.7	0.221	1.1	0.028	4.56	4.45	4.42	4.39	4.36	0.0111	0.0135	0.0137	0.0143	0.0153
1506	48.0	6.5	0.165	0.7	0.018	4.60	4.50	4.48	4.44	4.42	0.0106	0.0130	0.0132	0.0138	0.0148
	50.0	6.9	0.175	0.7	0.018	4.56	4.45	4.42	4.39	4.36	0.0111	0.0135	0.0137	0.0143	0.0153
1652	54.0	6.4	0.163	0.6	0.015	4.50	4.34	4.31	4.28	4.25	0.0116	0.0140	0.0142	0.0148	0.0158
	56.0	6.7	0.170	0.7	0.018	4.46	4.28	4.26	4.22	4.19	0.0119	0.0143	0.0145	0.0151	0.0161
	58.0	7.1	0.180	0.7	0.018	4.43	4.23	4.20	4.16	4.14	0.0125	0.0148	0.0150	0.0156	0.0166
2116	52.0	4.5	0.114	0.5	0.013	4.53	4.39	4.37	4.33	4.31	0.0115	0.0138	0.0140	0.0146	0.0156
	55.0	5.0	0.127	0.5	0.013	4.48	4.31	4.28	4.25	4.22	0.0120	0.0143	0.0145	0.0151	0.0161
	58.0	5.4	0.137	0.5	0.013	4.43	4.23	4.20	4.16	4.14	0.0125	0.0148	0.0150	0.0156	0.0166
	60.0	5.7	0.145	0.6	0.015	4.39	4.17	4.15	4.11	4.08	0.0128	0.0151	0.0153	0.0159	0.0169
3313	55.0	4.0	0.102	0.4	0.010	4.48	4.31	4.28	4.25	4.22	0.0120	0.0143	0.0145	0.0151	0.0161
	57.0	4.2	0.107	0.4	0.010	4.45	4.26	4.23	4.19	4.17	0.0123	0.0146	0.0148	0.0154	0.0164
	59.0	4.4	0.112	0.4	0.010	4.41	4.20	4.18	4.14	4.11	0.0127	0.0150	0.0152	0.0158	0.0168
2113	58.0	4.0	0.102	0.4	0.010	4.43	4.23	4.20	4.16	4.14	0.0125	0.0148	0.0150	0.0156	0.0166
	61.0	4.4	0.112	0.4	0.010	4.37	4.13	4.11	4.07	4.04	0.0127	0.0151	0.0153	0.0159	0.0169



PP Type	R/C(%)	Mean		Tolerance(+/-)		Dk@					Df@				
		mil	mm	mil	mm	1M Hz	1G Hz	2G Hz	5G Hz	10G Hz	1M Hz	1G Hz	2G Hz	5G Hz	10G Hz
1080	63.0	2.9	0.074	0.3	0.008	4.34	4.09	4.06	4.03	4.00	0.0133	0.0156	0.0158	0.0164	0.0174
	65.0	3.1	0.079	0.3	0.008	4.31	4.04	4.02	3.98	3.95	0.0133	0.0157	0.0159	0.0165	0.0175
	67.0	3.3	0.084	0.3	0.008	4.27	3.98	3.95	3.91	3.88	0.0139	0.0163	0.0165	0.0171	0.0181
	70.0	3.6	0.091	0.4	0.010	4.22	3.90	3.87	3.83	3.80	0.0141	0.0165	0.0167	0.0173	0.0183
106	74.0	2.2	0.056	0.4	0.010	4.15	3.79	3.76	3.72	3.69	0.0148	0.0172	0.0174	0.0180	0.0190
	76.0	2.4	0.061	0.4	0.010	4.12	3.74	3.70	3.66	3.63	0.0151	0.0175	0.0177	0.0183	0.0193
1086	63.0	3.2	0.081	0.3	0.008	4.34	4.09	4.06	4.03	4.00	0.0133	0.0156	0.0158	0.0164	0.0174
	67.0	3.6	0.091	0.4	0.010	4.27	3.98	3.95	3.91	3.88	0.0139	0.0163	0.0165	0.0171	0.0181
1067	71.0	2.4	0.061	0.3	0.008	4.20	3.87	3.84	3.80	3.77	0.0143	0.0167	0.0169	0.0175	0.0185
	76.0	3.0	0.076	0.4	0.010	4.12	3.74	3.70	3.66	3.63	0.0151	0.0175	0.0177	0.0183	0.0193
1078	64.0	3.0	0.076	0.3	0.008	4.32	4.06	4.04	4.00	3.97	0.0134	0.0158	0.0160	0.0166	0.0176
	68.0	3.4	0.086	0.3	0.008	4.26	3.96	3.93	3.89	3.86	0.0140	0.0164	0.0166	0.0172	0.0182
1037	66.0	1.6	0.041	0.3	0.008	4.29	4.01	3.98	3.94	3.91	0.0135	0.0159	0.0161	0.0167	0.0177

備註：以上僅為廠內常用規格，若有其他規格需求，另請單獨提出