



# IT-968 Electrical Properties

High Speed, High Tg, Low Dk And Ultra Low Df Laminate & Prepreg

Core			IT-968 TC				Dk /- 5%				Df < 8%			
Laminate		Standard Constructions	1 GHz	2 GHz	5 GHz	10 GHz	1 GHz	2 GHz	5 GHz	10 GHz	1 GHz	2 GHz	5 GHz	10 GHz
Imperial units Thickness (in) ± 10%	Metric system Thickness (mm) ± 10%		1 GHz	2 GHz	5 GHz	10 GHz	1 GHz	2 GHz	5 GHz	10 GHz	1 GHz	2 GHz	5 GHz	10 GHz
0.0020	0.051	1067x1	3.49	3.48	3.41	3.39	0.0036	0.0044	0.0048	0.0052				
0.0020	0.051	106x1	3.43	3.42	3.35	3.33	0.0038	0.0045	0.0049	0.0053				
0.0023	0.058	1067x1	3.43	3.42	3.35	3.33	0.0038	0.0045	0.0049	0.0053				
0.0025	0.064	1078x1	3.63	3.62	3.55	3.53	0.0034	0.0041	0.0045	0.0050				
0.0030	0.076	1086x1	3.60	3.59	3.52	3.51	0.0034	0.0041	0.0046	0.0050				
0.0035	0.089	3313x1	3.77	3.76	3.68	3.66	0.0032	0.0039	0.0043	0.0048				
0.0040	0.102	2116x1	3.89	3.88	3.80	3.78	0.0030	0.0037	0.0042	0.0047				
0.0040	0.102	3313x1	3.70	3.69	3.62	3.60	0.0033	0.0040	0.0044	0.0049				
0.0040	0.102	106x2	3.43	3.42	3.35	3.33	0.0038	0.0045	0.0049	0.0053				
0.0045	0.114	2116x1	3.87	3.86	3.78	3.76	0.0030	0.0037	0.0042	0.0047				
0.0045	0.114	1067x2	3.43	3.42	3.35	3.33	0.0038	0.0045	0.0049	0.0053				
0.0050	0.127	2116x1	3.75	3.74	3.66	3.64	0.0032	0.0039	0.0044	0.0048				
0.0050	0.127	1080x2	3.67	3.66	3.59	3.57	0.0033	0.0040	0.0045	0.0049				
0.0060	0.152	1086x2	3.60	3.59	3.52	3.51	0.0034	0.0041	0.0046	0.0050				
0.0070	0.178	3313x2	3.77	3.76	3.68	3.66	0.0032	0.0039	0.0043	0.0048				
0.0080	0.203	2116x2	3.89	3.88	3.80	3.78	0.0030	0.0037	0.0042	0.0047				
0.0080	0.203	3313x2	3.70	3.69	3.62	3.60	0.0033	0.0040	0.0044	0.0049				
0.0100	0.254	2116x2	3.75	3.74	3.66	3.64	0.0032	0.0039	0.0044	0.0048				
0.0120	0.305	2116x3	3.89	3.88	3.80	3.78	0.0030	0.0037	0.0042	0.0047				
0.0120	0.305	3313x3	3.70	3.69	3.62	3.60	0.0033	0.0040	0.0044	0.0049				
0.0150	0.381	2116x3	3.75	3.74	3.66	3.64	0.0032	0.0039	0.0044	0.0048				
0.0150	0.381	3313x4	3.73	3.72	3.65	3.63	0.0032	0.0039	0.0044	0.0049				
0.0160	0.406	2116x4	3.89	3.88	3.80	3.78	0.0030	0.0037	0.0042	0.0047				
0.0160	0.406	3313x4	3.70	3.69	3.62	3.60	0.0033	0.0040	0.0044	0.0049				
0.0180	0.457	2116x4	3.81	3.80	3.73	3.71	0.0031	0.0038	0.0043	0.0048				
0.0180	0.457	3313x4	3.57	3.56	3.49	3.47	0.0035	0.0042	0.0046	0.0051				
0.0200	0.508	2116x4	3.75	3.74	3.66	3.64	0.0032	0.0039	0.0044	0.0048				
0.0200	0.508	3313x5	3.70	3.69	3.62	3.60	0.0033	0.0040	0.0044	0.0049				
0.0210	0.533	2116x5	3.59	3.58	3.51	3.49	0.0034	0.0042	0.0046	0.0051				
0.0210	0.533	3313x5	3.99	3.98	3.90	3.88	0.0029	0.0036	0.0041	0.0046				
0.0240	0.610	2116x5	3.77	3.76	3.69	3.67	0.0031	0.0039	0.0043	0.0048				
0.0240	0.610	3313x6	3.70	3.69	3.62	3.60	0.0033	0.0040	0.0044	0.0049				
0.0280	0.711	2661x6	3.79	3.78	3.71	3.69	0.0031	0.0038	0.0043	0.0048				
0.0280	0.711	3313x7	3.70	3.69	3.62	3.60	0.0033	0.0040	0.0044	0.0049				
0.0300	0.762	2116x6	3.75	3.74	3.66	3.64	0.0032	0.0039	0.0044	0.0048				
0.0320	0.813	2116x8	3.89	3.88	3.80	3.78	0.0030	0.0037	0.0042	0.0047				
0.0320	0.813	3313x8	3.63	3.62	3.55	3.53	0.0034	0.0041	0.0045	0.0050				
0.0340	0.864	2116x8	3.89	3.88	3.80	3.78	0.0030	0.0037	0.0042	0.0047				
0.0380	0.965	2116x9	3.86	3.85	3.77	3.75	0.0030	0.0038	0.0042	0.0047				

Prepreg			IT-968 BS				Dk +/- 5%				Df < 8%			
Laminated Prepreg			1 GHz	2 GHz	5 GHz	10 GHz	1 GHz	2 GHz	5 GHz	10 GHz	1 GHz	2 GHz	5 GHz	10 GHz
Prepreg Type	Thickness (mill) ± 10%	Resin Content (%)	1 GHz	2 GHz	5 GHz	10 GHz	1 GHz	2 GHz	5 GHz	10 GHz	1 GHz	2 GHz	5 GHz	10 GHz
1037	1.8	73.0	3.33	3.32	3.26	3.24	0.0040	0.0047	0.0051	0.0055				
	2.0	75.0	3.30	3.29	3.23	3.21	0.0041	0.0048	0.0052	0.0056				
106	2.0	71.5	3.36	3.35	3.29	3.27	0.0039	0.0047	0.0051	0.0055				
	2.3	75.0	3.30	3.29	3.23	3.21	0.0041	0.0048	0.0052	0.0056				
1067	2.6	71.5	3.36	3.35	3.29	3.27	0.0039	0.0047	0.0051	0.0055				
	3.0	75.0	3.30	3.29	3.23	3.21	0.0041	0.0048	0.0052	0.0056				
1078	2.7	62.0	3.55	3.54	3.47	3.45	0.0035	0.0042	0.0047	0.0051				
	3.1	65.0	3.48	3.47	3.41	3.39	0.0036	0.0044	0.0048	0.0052				
	3.5	68.0	3.42	3.42	3.35	3.33	0.0038	0.0045	0.0049	0.0054				
	3.7	70.0	3.39	3.38	3.31	3.29	0.0038	0.0046	0.0050	0.0054				
1080	2.9	62.0	3.55	3.54	3.47	3.45	0.0035	0.0042	0.0047	0.0051				
	3.2	65.0	3.48	3.47	3.41	3.39	0.0036	0.0044	0.0048	0.0052				
	3.5	68.0	3.42	3.42	3.35	3.33	0.0038	0.0045	0.0049	0.0054				
1086	3.2	61.0	3.57	3.56	3.49	3.47	0.0035	0.0042	0.0046	0.0051				
	3.5	65.0	3.48	3.47	3.41	3.39	0.0036	0.0044	0.0048	0.0052				
	3.9	68.0	3.42	3.42	3.35	3.33	0.0038	0.0045	0.0049	0.0054				
2113	3.9	56.0	3.69	3.68	3.61	3.59	0.0033	0.0040	0.0045	0.0049				
	4.2	58.0	3.64	3.63	3.56	3.54	0.0034	0.0041	0.0045	0.0050				
	4.4	60.0	3.59	3.58	3.51	3.49	0.0034	0.0042	0.0046	0.0051				
3313	4.2	56.0	3.69	3.68	3.61	3.59	0.0033	0.0040	0.0045	0.0049				
	4.4	58.0	3.64	3.63	3.56	3.54	0.0034	0.0041	0.0045	0.0050				
	4.6	60.0	3.59	3.58	3.51	3.49	0.0034	0.0042	0.0046	0.0051				
2116	4.9	53.0	3.77	3.76	3.68	3.66	0.0032	0.0039	0.0043	0.0048				
	5.2	55.0	3.71	3.70	3.63	3.61	0.0032	0.0040	0.0044	0.0049				
	5.4	57.0	3.66	3.65	3.58	3.56	0.0033	0.0040	0.0045	0.0049				

Test methods: 1GHz by RF impedance/material analyzer HP4291B (IPC 2.5.5.9);  
2GHz, 5GHz, 10GHz by Resonator Cavity (IPC 2.5.5.13)

The above data and fabrication guide provide designers and PCB shop for their reference. We truly believe that these information are accurate, moreover, test methods and specification must be consider interlory. The effective sale is in accordance with the specification, and ITEQ maintains the authority of revision to keep the best suitability for users.