



IT-968 SE Electrical Properties

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

Core		IT-968TC SE		Dk ±5%				Df ≤8%			
Laminate			1 GHz	2 GHz	5 GHz	10 GHz	1 GHz	2 GHz	5 GHz	10 GHz	
Imperial units Thickness (in)	Metric system Thickness (mm)	Standard Constructions									
0.0020	0.051	1067x1	3.07	2.97	2.92	2.91	0.0022	0.0024	0.0025	0.0029	
0.0023	0.058	1067x1	3.02	2.92	2.88	2.86	0.0021	0.0023	0.0024	0.0028	
0.0025	0.064	1078x1	3.18	3.08	3.04	3.02	0.0026	0.0028	0.0029	0.0033	
0.0030	0.076	1078x1	3.10	3.00	2.95	2.94	0.0023	0.0025	0.0026	0.0030	
0.0040	0.102	3313X1	3.23	3.13	3.08	3.07	0.0027	0.0029	0.0030	0.0034	
0.0040	0.102	2116X1	3.41	3.31	3.25	3.24	0.0032	0.0034	0.0036	0.0040	
0.0045	0.114	2116x1	3.36	3.26	3.20	3.20	0.0031	0.0033	0.0034	0.0038	
0.0045	0.114	1067x2	3.02	2.92	2.88	2.86	0.0021	0.0023	0.0024	0.0028	
0.0050	0.127	2116x1	3.28	3.18	3.12	3.11	0.0028	0.0030	0.0032	0.0036	
0.0050	0.127	1078x2	3.18	3.08	3.04	3.02	0.0026	0.0028	0.0029	0.0033	
0.0050	0.127	1067x2	2.99	2.89	2.85	2.83	0.0020	0.0022	0.0023	0.0027	
0.0060	0.152	1086x2	3.17	3.07	3.02	3.00	0.0025	0.0027	0.0028	0.0032	
0.0070	0.178	2013x2	3.31	3.21	3.15	3.15	0.0029	0.0031	0.0033	0.0037	
0.0080	0.203	3313X2	3.23	3.13	3.08	3.07	0.0027	0.0029	0.0030	0.0034	
0.0080	0.203	2116x2	3.41	3.31	3.25	3.24	0.0032	0.0034	0.0036	0.0040	
0.0100	0.254	2116x2	3.28	3.18	3.12	3.11	0.0028	0.0030	0.0032	0.0036	
0.0120	0.305	3313X3	3.23	3.13	3.08	3.07	0.0027	0.0029	0.0030	0.0034	
0.0120	0.305	2116x3	3.41	3.31	3.25	3.24	0.0032	0.0034	0.0036	0.0040	
0.0140	0.356	2116x3	3.32	3.22	3.16	3.16	0.0029	0.0031	0.0033	0.0037	
0.0150	0.381	2116x3	3.28	3.18	3.12	3.11	0.0028	0.0030	0.0032	0.0036	
0.0160	0.406	3313X4	3.23	3.13	3.08	3.07	0.0027	0.0029	0.0030	0.0034	
0.0160	0.406	2116x4	3.41	3.31	3.25	3.24	0.0032	0.0034	0.0036	0.0040	
0.0180	0.457	2116x4	3.34	3.24	3.18	3.18	0.0030	0.0032	0.0034	0.0038	
0.0200	0.508	3313X5	3.23	3.13	3.08	3.07	0.0027	0.0029	0.0030	0.0034	
0.0200	0.508	2116x4	3.28	3.18	3.12	3.11	0.0028	0.0030	0.0032	0.0036	
0.0210	0.533	2116x5	3.41	3.31	3.25	3.24	0.0032	0.0034	0.0036	0.0040	
0.0240	0.610	3313X6	3.23	3.13	3.08	3.07	0.0027	0.0029	0.0030	0.0034	
0.0240	0.610	2116x5	3.26	3.16	3.11	3.10	0.0028	0.0030	0.0031	0.0035	
0.0280	0.711	3313X7	3.23	3.13	3.08	3.07	0.0027	0.0029	0.0030	0.0034	
0.0280	0.711	2116x6	3.32	3.22	3.16	3.16	0.0029	0.0031	0.0033	0.0037	

Prepreg		IT-968BS SE		Dk ±5%				Df ≤8%			
Laminated Prepreg			1 GHz	2 GHz	5 GHz	10 GHz	1 GHz	2 GHz	5 GHz	10 GHz	
Prepreg Type	Thickness (mil)	Resin Content (%)									
1067	2.4	71.5	3.00	2.90	2.86	2.84	0.0020	0.0022	0.0023	0.0027	
	2.5	73.0	2.98	2.88	2.84	2.82	0.0020	0.0022	0.0022	0.0026	
	2.7	75.0	2.95	2.85	2.82	2.79	0.0019	0.0021	0.0021	0.0026	
1078	2.6	62.0	3.15	3.05	3.00	2.99	0.0025	0.0027	0.0028	0.0032	
	2.9	65.0	3.10	3.00	2.95	2.94	0.0023	0.0025	0.0026	0.0030	
	3.2	68.0	3.05	2.95	2.91	2.89	0.0022	0.0024	0.0025	0.0029	
1080	2.6	62.0	3.15	3.05	3.00	2.99	0.0025	0.0027	0.0028	0.0032	
	2.9	65.0	3.10	3.00	2.95	2.94	0.0023	0.0025	0.0026	0.0030	
	3.2	68.0	3.05	2.95	2.91	2.89	0.0022	0.0024	0.0025	0.0029	
1086	2.9	61.0	3.17	3.07	3.02	3.00	0.0025	0.0027	0.0028	0.0032	
	3.3	65.0	3.10	3.00	2.95	2.94	0.0023	0.0025	0.0026	0.0030	
	3.6	68.0	3.05	2.95	2.91	2.89	0.0022	0.0024	0.0025	0.0029	
2013	3.6	56.0	3.26	3.16	3.11	3.10	0.0028	0.0030	0.0031	0.0035	
	3.8	58.0	3.22	3.12	3.07	3.06	0.0027	0.0029	0.0030	0.0034	
	4.0	60.0	3.18	3.08	3.04	3.02	0.0026	0.0028	0.0029	0.0033	
3313	3.7	56.0	3.26	3.16	3.11	3.10	0.0028	0.0030	0.0031	0.0035	
	3.9	58.0	3.22	3.12	3.07	3.06	0.0027	0.0029	0.0030	0.0034	
	4.1	60.0	3.18	3.08	3.04	3.02	0.0026	0.0028	0.0029	0.0033	
2116	4.7	53.0	3.32	3.22	3.16	3.16	0.0029	0.0031	0.0033	0.0037	
	4.9	55.0	3.28	3.18	3.12	3.11	0.0028	0.0030	0.0032	0.0036	
	5.2	57.0	3.24	3.14	3.09	3.08	0.0027	0.0029	0.0030	0.0035	

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)

Note: Dk value should be subtracted 0.3 to be target data for impedance calculation

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 interiorly. The effective sale is in accordance with the specification, and ITEQ maintains the authority of revision to keep the best suitability for users.