



IT-988G SE Electrical Properties

High Speed, High Tg, Low Dk & Ultra Low Loss Laminate & Prepreg

Preliminary

Core IT-988G SE TC

Laminate				Dk						Df					
Thickness (in)	Thickness (mm)	Standard Constructions	Resin Content (%)	1 GHz	2 GHz	5 GHz	10 GHz	15 GHz	20 GHz	1 GHz	2 GHz	5 GHz	10 GHz	15 GHz	20 GHz
0.0020	0.051	1-1067	67.5%	3.12	3.12	3.12	3.12	3.12	3.12	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0023	0.058	1-1067	71.0%	3.09	3.09	3.09	3.09	3.09	3.09	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0025	0.064	1-1067	73.5%	3.07	3.07	3.07	3.07	3.06	3.06	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013
0.0030	0.076	1-1078	67.3%	3.12	3.12	3.12	3.12	3.12	3.12	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0030	0.076	2-1027	71.5%	3.08	3.08	3.08	3.08	3.08	3.08	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0033	0.084	1-1078	70.0%	3.10	3.10	3.10	3.10	3.09	3.09	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0033	0.084	2-1027	74.0%	3.06	3.06	3.06	3.06	3.06	3.06	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013
0.0035	0.089	1-1086	68.0%	3.11	3.11	3.11	3.11	3.11	3.11	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0035	0.089	1-1078	71.5%	3.08	3.08	3.08	3.08	3.08	3.08	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0035	0.089	2-1027	75.5%	3.05	3.05	3.05	3.05	3.05	3.05	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013
0.0040	0.102	1-3313	60.0%	3.19	3.19	3.19	3.19	3.19	3.19	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0040	0.102	2-1037	74.7%	3.06	3.06	3.06	3.06	3.05	3.05	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013
0.0040	0.102	1-1078	74.8%	3.05	3.05	3.05	3.05	3.05	3.05	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013
0.0045	0.114	1-3313	63.7%	3.16	3.16	3.16	3.16	3.15	3.15	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0045	0.114	2-1067	71.0%	3.09	3.09	3.09	3.09	3.09	3.09	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0045	0.114	2-1037	77.3%	3.03	3.03	3.03	3.03	3.03	3.03	0.0011	0.0012	0.0012	0.0012	0.0012	0.0012
0.0050	0.127	1-3313	67.0%	3.12	3.12	3.12	3.12	3.12	3.12	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0050	0.127	2-1067	73.5%	3.07	3.07	3.07	3.07	3.06	3.06	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013
0.0060	0.152	2-1078	67.3%	3.12	3.12	3.12	3.12	3.12	3.12	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0060	0.152	1-2116	64.2%	3.15	3.15	3.15	3.15	3.15	3.15	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0060	0.152	2-1067	77.3%	3.03	3.03	3.03	3.03	3.03	3.03	0.0011	0.0012	0.0012	0.0012	0.0012	0.0012
0.0066	0.168	2-1078	70.0%	3.10	3.10	3.10	3.10	3.09	3.09	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0070	0.178	2-1086	68.0%	3.11	3.11	3.11	3.11	3.11	3.11	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0070	0.178	2-1078	71.5%	3.08	3.08	3.08	3.08	3.08	3.08	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0070	0.178	1067 - 1078	75.9%	3.04	3.04	3.05	3.04	3.04	3.04	0.0011	0.0012	0.0012	0.0013	0.0013	0.0013
0.0080	0.203	2-3313	60.0%	3.19	3.19	3.19	3.19	3.19	3.19	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
0.0080	0.203	2-1078	74.8%	3.05	3.05	3.05	3.05	3.05	3.05	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013
0.0100	0.254	2-2116	58.4%	3.20	3.20	3.20	3.20	3.20	3.20	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
0.0120	0.305	3-3313	60.0%	3.19	3.19	3.19	3.19	3.19	3.19	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
0.0150	0.381	3-3313	67.0%	3.12	3.12	3.12	3.12	3.12	3.12	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0150	0.381	3-2116	58.4%	3.20	3.20	3.20	3.20	3.20	3.20	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
0.0160	0.406	4-3313	60.0%	3.19	3.19	3.19	3.19	3.19	3.19	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
0.0180	0.457	4-3313	63.7%	3.16	3.16	3.16	3.16	3.15	3.15	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0200	0.508	4-3313	67.0%	3.12	3.12	3.12	3.12	3.12	3.12	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0200	0.508	5-3313	60.0%	3.19	3.19	3.19	3.19	3.19	3.19	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
0.0210	0.533	5-2116	52.3%	3.27	3.27	3.27	3.27	3.26	3.26	0.0013	0.0014	0.0014	0.0014	0.0014	0.0014
0.0240	0.610	4-2116	64.2%	3.15	3.15	3.15	3.15	3.15	3.15	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
0.0240	0.610	6-3313	60.0%	3.19	3.19	3.19	3.19	3.19	3.19	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
0.0280	0.711	7-3313	60.0%	3.19	3.19	3.19	3.19	3.19	3.19	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
0.0300	0.762	6-2116	58.4%	3.20	3.20	3.20	3.20	3.20	3.20	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
0.0320	0.813	8-3313	60.0%	3.19	3.19	3.19	3.19	3.19	3.19	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
0.0340	0.864	8-2116	52.3%	3.27	3.27	3.27	3.27	3.26	3.26	0.0013	0.0014	0.0014	0.0014	0.0014	0.0014
0.0380	0.965	9-2116	52.3%	3.27	3.27	3.27	3.27	3.26	3.26	0.0013	0.0014	0.0014	0.0014	0.0014	0.0014

Prepreg IT-988G SE BS

Prepreg				Dk						Df					
PrepregType	Thickness (in)	Thickness (mm)	Resin Content (%)	1 GHz	2 GHz	5 GHz	10 GHz	15 GHz	20 GHz	1 GHz	2 GHz	5 GHz	10 GHz	15 GHz	20 GHz
1027	0.0017	0.042	74.0%	3.06	3.06	3.06	3.06	3.06	3.06	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013
1027	0.0018	0.045	75.5%	3.05	3.05	3.05	3.05	3.05	3.05	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013
1037	0.0020	0.051	74.7%	3.06	3.06	3.06	3.06	3.05	3.05	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013
1037	0.0023	0.057	77.3%	3.03	3.03	3.03	3.03	3.03	3.03	0.0011	0.0012	0.0012	0.0012	0.0012	0.0012
1035	0.0025	0.064	74.0%	3.06	3.06	3.06	3.06	3.06	3.06	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013
1035	0.0029	0.072	77.0%	3.04	3.04	3.04	3.04	3.03	3.03	0.0011	0.0012	0.0012	0.0013	0.0013	0.0013
106	0.0022	0.056	76.0%	3.04	3.04	3.05	3.04	3.04	3.04	0.0011	0.0012	0.0012	0.0013	0.0013	0.0013
1067	0.0023	0.059	71.0%	3.09	3.09	3.09	3.09	3.09	3.08	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
1067	0.0025	0.065	73.5%	3.07	3.07	3.07	3.07	3.06	3.06	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013
1067	0.0030	0.076	77.3%	3.03	3.03	3.03	3.03	3.03	3.03	0.0011	0.0012	0.0012	0.0012	0.0012	0.0012
1078	0.0033	0.085	70.0%	3.10	3.10	3.10	3.10	3.09	3.09	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
1078	0.0035	0.089	71.5%	3.08	3.08	3.08	3.08	3.08	3.08	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
1078	0.0040	0.102	74.8%	3.05	3.05	3.05	3.05	3.05	3.05	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013
1080	0.0035	0.088	71.0%	3.09	3.09	3.09	3.09	3.09	3.08	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
1080	0.0039	0.099	74.0%	3.06	3.06	3.06	3.06	3.06	3.06	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013
1086	0.0035	0.090	68.0%	3.11	3.11	3.11	3.11	3.11	3.11	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
1086	0.0040	0.102	71.5%	3.08	3.08	3.08	3.08	3.08	3.08	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
3313	0.0040	0.103	60.0%	3.19	3.19	3.19	3.19	3.19	3.19	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
3313	0.0045	0.115	63.7%	3.16	3.16	3.16	3.16	3.15	3.15	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
3313	0.0051	0.128	67.0%	3.12	3.12	3.12	3.12	3.12	3.12	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
2116	0.0050	0.128	58.4%	3.20	3.20	3.20	3.20	3.20	3.20	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
2116	0.0055	0.140	61.4%	3.17	3.17	3.18	3.17	3.17	3.17	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013
2116	0.0060	0.153	64.2%	3.15	3.15	3.15	3.15	3.15	3.15	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013

Notes: - The data presented above relates to the perpendicular (Stripline) dielectric parameters of the substrates and it is based upon measurements using cylindrical resonators.
- Resonators with different diameters have been used for the measurements of the disk samples. Please use the above data for stripline designs.