

Frequency		10⁷ Hz			10⁹ Hz			3 x 10⁹ Hz		
Material	T [°C]	ε	ε_{eff}	tan δ	ε	ε_{eff}	tan δ	ε	ε_{eff}	tan δ
Food										
Beef steak	25	50	1300	26	50	39	0.78	40	12	0.3
Bacon fat	25	-	-	-	2.6	0.16	0.06	2.5	0.13	0.052
Potato	25	80	47.8	0.598	65.1	19.6	0.30	53.7	15.7	0.3
Turkey cooked	25	-	-	-	46.0	68.0	1.47	40.0	14.0	0.4
Butter	35	-	-	-	-	-	-	4.15	0.44	0.11
Glass										
Fused Silica	25	3.78	<10 ⁻⁴	3x10 ⁻⁵	3.78	0.0002	5.3x10 ⁻⁵	3.78	0.0002	5.3x10 ⁻⁵
96% SiO ₂	25	3.85	0.0023	6x10 ⁻⁴	3.85	0.0023	6x10 ⁻⁴	3.84	0.0026	6.8x10 ⁻⁴
Minerals and Ceramics										
Ruby mica. muscovite	25	5.4	0.0016	3x10 ⁻⁴	-	-	-	5.4	0.0016	3x10 ⁻⁴
Marble. dry	25	9.0	0.33	0.04	-	-	-	9.0	0.22	0.02
Sandy soil. dry	25	2.55	0.04	0.02	2.55	0.026	0.01	2.55	0.016	0.007
Porcelain (aluminium oxide)	25	8.95	0.0018	2x10 ⁻⁴	8.93	0.008	9x10 ⁻⁴	8.90	0.01	0.001
Barium titanate	25	1140.0	8.55	8x10 ⁻³	1100	55.0	0.05	600.0	180.0	0.3
Oils and waxes										
Cable oil	25	2.17	0.009	0.004	2.17	0.009	0.004	2.16	0.0043	0.002
Gasoline (100 octane)	25	-	-	-	1.94	0.00016	8x10 ⁻⁵	1.92	0.0027	1.4x10 ⁻³
Wax	25	2.36	0.0006	0.0003	2.31	0.00083	3.6x10 ⁻⁴	2.31	0.0011	4.76x10 ⁻⁴
Plastics										
Araldite	-	-	-	-	-	-	-	3.14	0.076	0.02
Laminated fiber glass (69% fiber glass. 31% bakelite)	24	5.0	0.17	0.034	4.54	0.108	0.024	4.4	0.128	0.03
Melamine formaldehyde	25	5.53	0.23	0.04	4.37	0.228	0.05	4.2	0.219	0.05
Cellulose acetate	-	3.3	0.07	0.02	3.28	0.072	0.008	3.24	0.094	0.03
Polyamide. Nylon	25	3.24	0.07	0.02	3.06	0.043	0.01	3.02	0.036	0.01

Source: A.C Metaxas. R.J Meredith. Industrial Microwave Heating. IEE power engineering series. London. 1983

For comparison purposes: A microwave oven (kitchen) works at 2.455 GHz ($\lambda = 122$ mm)