

# ROGERS 高周波基板 特性一覽表

## Rogers High Frequency Circuit Materials

Property	RT/duroid® 5880	RT/duroid® 5870	ULTRALAM® 2000	RT/duroid® 6002	RT/duroid® 6006	RT/duroid® 6010LM	TMM® 3	TMM® 4	TMM® 6	TMM® 10	TMM® 10i	
組成	PTFE Glass Fiber	PTFE Glass Fiber	PTFE Woven Glass	PTFE Ceramic	PTFE Ceramic	PTFE Ceramic	Hydro- Carbon Ceramic	Hydro- Carbon Ceramic	Hydro- Carbon Ceramic	Hydro- Carbon Ceramic	Hydro- Carbon Ceramic	
$\epsilon_r$ 誘電率 10GHz	2.20 ±0.020	2.33 ±0.020	2.40-2.60 ±0.040	2.94 ±0.040	6.15 ±0.150	10.2 ±0.250	3.27 ±0.032	4.50 ±0.045	6.00 ±0.080	9.20 ±0.230	9.80 ±0.245	
誘電正接 10GHz	0.0009	0.0012	0.0019	0.0012	0.0019	0.0023	0.0020	0.0020	0.0023	0.0023	0.0020	
誘電率の 温度係数 -50° to 150°C ppm/°C	-125	-115	-100	+12	-410	-425	<sup>(4)</sup> +39	—	<sup>(4)</sup> -10	<sup>(4)</sup> -38	<sup>(4)</sup> -43	
体積抵抗率 Mohm·cm (Typical)	2x10 <sup>7</sup>	2x10 <sup>7</sup>	2x10 <sup>7</sup>	10 <sup>6</sup>	2x10 <sup>7</sup>	5x10 <sup>5</sup>	3x10 <sup>9</sup>	6x10 <sup>8</sup>	1x10 <sup>8</sup>	2x10 <sup>7</sup>	—	
表面抵抗 Mohm (Typical)	3x10 <sup>8</sup>	2x10 <sup>8</sup>	4x10 <sup>7</sup>	10 <sup>7</sup>	7x10 <sup>7</sup>	5x10 <sup>6</sup>	>9x10 <sup>9</sup>	1x10 <sup>9</sup>	1x10 <sup>9</sup>	4x10 <sup>7</sup>	—	
引張り弾性率	X - kpsi (MPa)	156 (1,076)	189 (1,340)	1700 (11,730)	120 (828)	74 (511)	135 (932)	1916 (13,210)	2000* (13,790)	2200 (15,168)	2400 (16,547)	
	Y - kpsi (MPa)	125 (863)	185 (1,277)	1300 (8,970)	120 (828)	91 (628)	81 (559)	1916 (13,210)	2000* (13,790)	2200* (15,168)	2400 (16,547)	—
	Z - kpsi (MPa)	136 (938)	120 (828)	—	360* (2,482)	155 (1,070)	311 (2,146)	742 (5,116)	752 (5,185)	736 (5,075)	575 (3,964)	—
吸湿度 D24/23 % (Typical)	0.015	0.015	0.03	0.1	0.05	0.05	<sup>(4)</sup> 0.04	<sup>(4)</sup> 0.010	<sup>(4)</sup> 0.06	<sup>(4)</sup> 0.09	<sup>(4)</sup> 0.16	
熱伝導率 W/m <sup>2</sup> K (Typical)	0.20	0.22	0.24	0.60	0.49	0.78	0.70	0.70	0.72	0.76	0.76	
熱膨張係数 ppm/°C 0° to 100°C (typ)	X	31	22	15	16	47	24	16	14	16	16	16*
	Y	48	28	15	16	34	24	16	14	16	16	16*
	Z	237	173	200	24	117	24	20	20	20	20	20*
比重 gm/cm <sup>3</sup> (typical)	2.2	2.2	2.2	2.1	2.7	2.9	1.78	2.07	2.37	2.77	2.77	