

Properties	Test Method	Standard Dk			High Dk		New
		MC24M	MC12M	MC8M	MC12TM	MC8TM	MC24P
Dielectric Thickness, μm	Nominal	22	12	8	12	8	22
Cp @ 1 MHz, nF/in ² (pF/cm ²)	Nominal	1.2 (186)	2.0 (320)	3.1 (480)	4.2 (650)	6.5 (1010)	1.0 (150)
Dk (Dielectric Constant) @ 1 MHz/1 GHz	Mitsui Method	4.4/3.5	4.4/3.5	4.4/3.5	10.0/9.5	10.5/10.0	3.8/ -
Df (Loss Tangent) @1 MHz/1 GHz	Mitsui Method	0.015/0.016	0.015/0.020	0.016/0.021	0.015/0.020	0.020/0.021	0.013/ -
Peel Strength, kN/m 1 oz Cu	IPC TM-650 2.4.8C*	1.5	1.5	1.5	0.9	0.9	1.2
Breakdown Voltage, V	IPC TM-650 2.5.6.2A*	$\geq 5000\text{V}$	$\geq 4000\text{V}$	$\geq 3500\text{V}$	$\geq 2500\text{V}$	$\geq 1500\text{V}$	$\geq 5000\text{V}$
Tensile Strength, MPa (kpsi)	ASTM D-882	219 (31.8)	194 (28.2)	126 (18.3)	153 (22.2)	127 (18.4)	219 (31.8)
Elongation, %	ASTM D-882A	36.0	13.5	8.5	31.4	14	36.0
CTE, ppm/ $^{\circ}\text{C}$, x-y, TMA	IPC TM-650 2.4.24.5*	24	23	32	28	22	24
Tg, $^{\circ}\text{C}$, DMA	IPC TM-650 2.4.24.4*	183	187	188	189	191	183
Hi-Pot test (each panel)	IPC TM-650 2.5.7.2*	PASS (500V)	PASS (500V)	PASS (500V)	PASS (500V)	PASS (250V)	PASS (500V)
Thermal Stress (10 Sec Float @288 $^{\circ}\text{C}$), Times	Mitsui Method	>10	>10	>10	>10	>10	>10
Moisture Absorption %	TM-650 2.6.2.1*	1.3	1.3	0.5	0.8	0.5	1.3
THB, 85 $^{\circ}\text{C}$ /85% RH/dc bias	Mitsui Method	PASS (50V)	PASS (50V)	PASS (35V)	PASS (50V)	PASS (35V)	PASS (50V)
HAST, 130 $^{\circ}\text{C}$ /85% RH/dc bias	Mitsui Method w/GEA-700G	PASS (50V)	PASS (50V)	PASS (50V)	PASS (50V)	PASS (50V)	PASS (50V)
Flammability/Temp Rating	UL 94	V0 130 $^{\circ}\text{C}$	V0 130 $^{\circ}\text{C}$	V0 125 $^{\circ}\text{C}$	V0 130 $^{\circ}\text{C}$	V0 130 $^{\circ}\text{C}$	01/2021
PWB Processing	—	Both sides	Both sides	Both sides	Both sides	Both sides	Both sides

*Common copper weights: 0.5 oz, 1.0 oz, 2.0 oz

Note: This chart provides typical values for FaradFlex® products. *Indicates some modifications to test method. For a full list of our products please contact us.