

EPOXY GLASS CLOTH LAMINATED SHEET (FR-4)
MATERIAL TEST

<u>PROPERTIES</u>	<u>UNIT</u>	<u>STANDARD VALUE</u>	<u>TEST RESULTS</u>
ζ COMPRESSIVE STRENGTH	MPa	-	461
// COMPRESSIVE STRENGTH	MPa		362
TENSILE STRENGTH	MPa	-	405
ζ FLEXURAL STRENGTH AT ROOM TEMPERATURE	MPa	≥ 350	437
// NOTCH IMPACT STRENGTH (CHARPY)	kJ/m ²	≥ 37	65
ζ DIELECTRIC STRENGTH (IN OIL 90 +-2°C)	kV/mm	≥ 14.2	22
// BREAKDOWN VOLTAGE (IN OIL 90 +-2°C)	kV	≥ 45	65
1MHz DIELECTRIC CO-EFFICIENT	-	≤ 5.5	4.13
1MHz LOSS FACTOR	-	≤ 0.04	0.021
WATER ABSORPTION RATE D-24/23, 1.6MM THICK	%	≤ 0.25	0.08
FLAMMABILITY	-	FV0	FV0
INSULATION RESISTANCE IMPREGNATED IN WATER D-24/23	Ω	≥ 5.0 X 10 ¹⁰	8.2 X 10 ¹⁰
BONDING STRENGTH	N	≥ 6500	8168

SYMBOLS:

ζ PERPENDICULAR TO LAMINATIONS

// PARALLEL TO LAMINATIONS