

FR-1纸质酚醛树脂铜箔积层板

COPPER CLAD PAPER PHENOLIC LAMINATE

ETL-XPC-204 (N TYPE)

特性 FEATURE

- 尺寸变化、弯曲度小
- 优越之电气火灾安全性
- 高耐漏电性(CTI)性能
(CTI 600性能需提出要求)
- 符合UL 746E规范,RoHS要求
- Dimensional change and warpage are small.
- Electrical fire safety is excellent.
- High CTI(Comparative Tracking Index) value.
(Asking first when CTI 600 needed.)
- Meet UL 746E and conform to the request of RoHS.

性能表 PERFORMANCE LIST

试验项目 Test Item		单位 Unit	处理条件 Condition	规格值 Guarantee Value	测定值 Test Value	测定值 Test Value
绝缘阻抗 Insulation Resistivity		Ω	C-96/20/65	Above 1×10^{11}	4.2×10^{11}	3.4×10^{11}
			C-96/20/65 +D-2/100	Above 1×10^8	9.3×10^8	1.2×10^9
介电常数(1MHz) Dielectirc Constant		—	C-96/20/65	Below 5.3	2.6	2.6
			C-96/20/65 +D-48/50	Below 5.6	4.5	4.5
散发因子(1MHz) Dissipation Factor		—	C-96/20/65	Below 0.045	0.0364	0.0363
			C-96/20/65 +D-48/50	Below 0.055	0.0522	0.0516
弯曲强度 Flexural Strength		kgf/mm ²	A	Above 10	15.2	14.8
铜箔剥离强度 Peel Strength		kgf/cm	A	Above 1.5	1.95-2.05	2.00-2.05
耐碱性 Alkali Resistance		—	3% NaOH 40℃	-----	无异常 No Abnormality	
吸水率 Water Absorption		%	E-24/50 +D-24/23	Below 1.2	0.57	0.58
焊锡耐热性(260℃) Solder Heat Resistance		sec	A	Above 10	24-32	—
耐热性 Heat Resistance		—	A	190℃ 30min No Blistering	195℃ 30min No Blistering	
难燃性 Flammability UL 94		sec	A&E-168/70	— X below 5 Max below 10	— X = 4.2	Max = 8.8
尺寸变化率 Dimensional Stability	纵向 M.D.	%	E-0.25/80 E-1/150	—	0.070~0.090	—
	横向 T.D.			—	0.113~0.158	—
加工冲孔性 Punch ability		—	A	60℃~80℃	60℃~80℃ GOOD	
板材纤维方向性 Machine Direction		—	—	—	EC ↑ 纤维方向 Machine Direction	

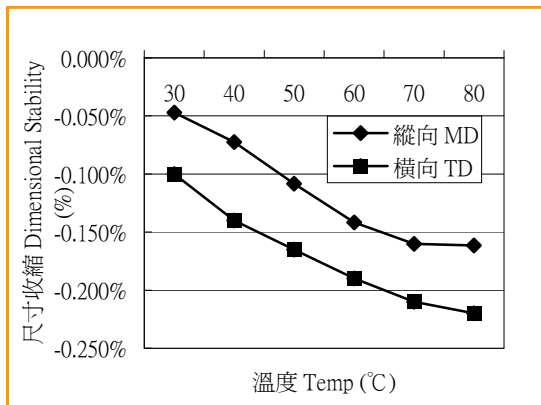
*以上数据试片厚度：1.6 mm / *Test specimen thickness is 1.6mm

处理条件 / Treatment Condition

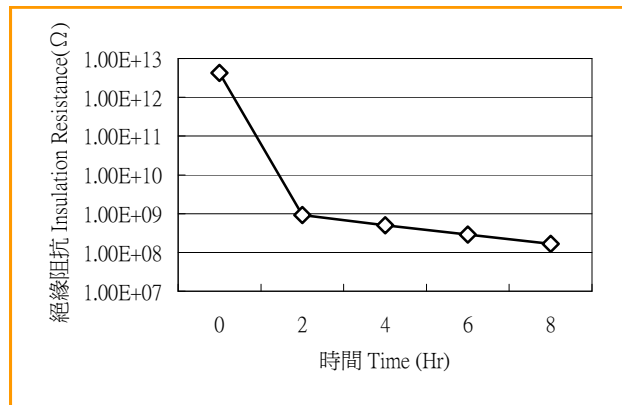
- A：保持试片原状不加任何处理。 / Taken as without any treatment.
 C：在空气中恒温、恒湿处理。 / Treatment carried out in air at constant temperature and humidity.
 D：恒温的水中浸放处理。 / Immersion treatment carried out in water at constant temperature.
 E：在空气中，恒温处理。 / Treatment carried out in air at constant temperature.

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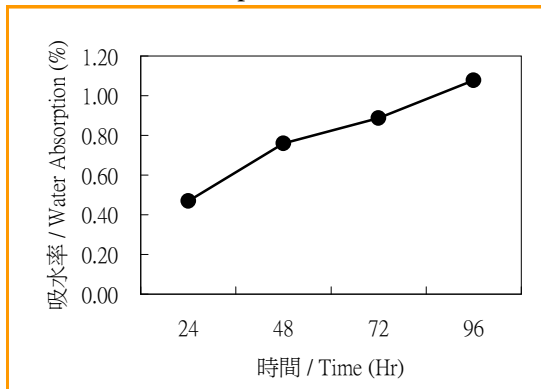
■ 冲孔后尺寸变化
Dimensional Change



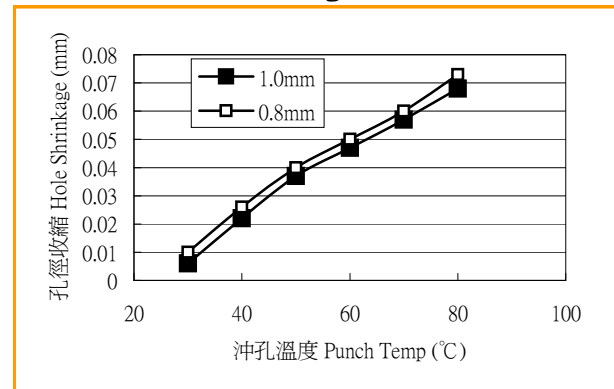
■ 绝缘阻抗经时试验
Insulation Resistance



■ 板材吸水率经时试验
Moisture Absorption



■ 冲孔后孔径收缩
Punched Hole Shrinkage



■ 产品尺寸、厚度与规格
Dimension, Thickness and Specification

板材品名 Type	成品尺寸 Panel Dimension	铜箔厚度 Copper thickness	成品厚度 Manufactured thickness	CTI值 CTI value
ETL-XPC-204(N) FR-1 / NEMA ANSI PP7F / JIS	1030*1230mm	35um 70um	0.8~1.6mm	500/600V

注：可依据客户之需求提供对应之尺寸、厚度与规格

Other panel dimension, thickness and specification could be available upon customer's request.