



品质承认书 Quality specification

客户 Customer:		
供应商: 广东东溢新材料科技有限公司		
Supplier: GUANGDONG DONGYI HIGH-TECH MATERIAL SCIENCE&TECHNOLOGY CO., LTD.		
产品类型 Product type: 无胶单面板 FCCL Based PI Film		
材料品名 Material name: DSJF050025LJ1		
编号 No:P039 版本 Ver: A1		
制作日期 Date of production:2024/04/11		
客户确认 Customer:		
采购 Purchase:	品质 Quality:	工程 Engineering:
职务 Position:	职务 Position:	职务 Position:
备注 Note: (盖章 Seal)		
广东东溢新材料科技有限公司 GUANGDONG DONGYI HIGH-TECH MATERIAL SCIENCE&TECHNOLOGY CO., LTD.		
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职务 Position:总监	职务 Position:经理	职务 Position: 经理
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● 产品特性 Product Features

- 优异的耐热性和耐化学性 Outstanding thermal resistance and chemical resistance
- 卓越的电性能和绝缘性 Fine electrical performance and insulation performance
- 良好的尺寸稳定性 Good dimensional stability
- 极佳的挠曲性 Excellent flexibility
- 无卤无锑，符合 ROHS 环保指令 Halogen & antimony free, ROHS compliant

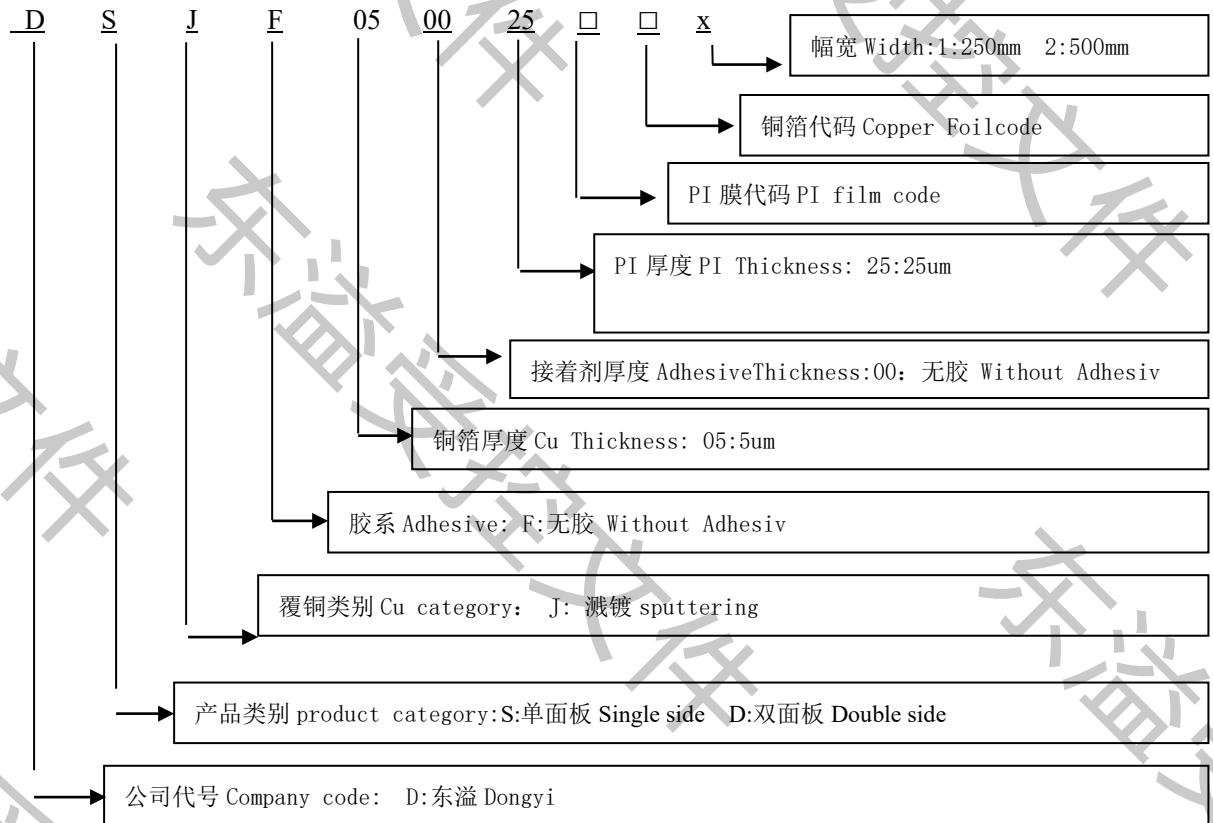
● 产品结构 Product Structure



● 编码原则 Product coding principle

品名示意图如下 The diagram as follows:

注：□：表示英文字母 English alphabet; x: 阿拉伯数字 Arabic numeral.



●物性指标 General Properties

序号 Item	性能项目 Test Item	单位 Unit	测试条件 Test Condition	标准 Standard	测试方法 Test Method
1	厚度 Thickness	um	A	±10%	东溢规范 DongyiMethod
2	幅宽 Width	mm	A	标准 Standard+2/-0	东溢规范 DongyiMethod
3	焊锡耐热性 Solder Resistance	---	288°C/10S	无分层、起泡 No delamination, sparkling	IPC-TM-650-2.4.13
4	尺寸稳定性 Dimensional stability	%	Method - B	≦±0.15	IPC-TM-650-2.2.4
5	吸水率 Moisture Absorption	%	D-24/23	≦2.0	IPC-TM-650-2.6.2
6	表面电阻 Surface Resistance	Ω	C-96/23/65	≧10 ¹¹	IPC-TM-650-2.5.17
7	体积电阻 Volume Resistance	Ω.cm	C-96/23/65	≧10 ¹³	IPC-TM-650-2.5.17
8	介电常数 Dielectric Constant	---	C-24/23/50 (10MHz)	≦4.0	IPC-TM-650-2.5.5.3
9	消耗因素 Dissipation Factor	---	C-24/23/50 (10MHz)	≦0.04	IPC-TM-650-2.5.5.3

注 Note : A 代表常态 “A” Means normal.

●外观管控 Appearance requirement

异常类型 Exception classes	异常大小 Abnormal size	允许个数 Allowed value (250*400mm)
杂质 Impurity	0.1~0.5mm	≦8 个 dots
垫伤 Pad injury	0.5~1mm	≦1 个 dots
气泡 Bubble	≧1mm	不允许 Not allowed
接头 Joint		≦3 个

注Note:产品边缘3mm以内异常,不作管控要求 From the product within 3 mm of the edge of exception, don't do control requirements.

●储存 Storage

温度<30°C、湿度<70% RH、真空包装、无腐蚀性气体的室内，制造日期后保存

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此规格书为东溢公司机密文件且涉及专利保护事宜，未经东溢公司书面签章确认同意严禁转载转发，此规格书中所有条款内容最终解释权归东溢公司所有，特此声明！Hereby declared that this technical datasheet is a confidential document of Dongyi and involves patent protection matters, reproduction and forwarding without the written permission of Dongyi Company is strictly prohibited, the final interpretation of all the terms and conditions in this technical datasheet belongs to Dongyi.

12 months. Temperature <30°C, humidity < 70% RH, airproof vacuumed packaging, no corrosive gas chamber for 12 months.

●包装 Packing

1. 每一卷成品用纸管卷取。每批出货的每个规格提供一份品质检验报告 Each volume of finished paper tube winding.

2. 每一卷成品用纸箱包装，避免在运输上碰撞。产品采用防潮、干燥、密封包装，成卷装入纸箱 Each volume of finished carton packaging, in the transport collision avoidance. Products using moistureproof, dry, sealed packaging, rolls into cartons.

3. 包箱标签 Package box label

无卤标签 Halogen free label: 环保标签 Green label: 合格标签 Inspection tag:



唛头 Shipping mark:

東溢 DONGYI 广东东溢新材料科技有限公司 GUANGDONG DONGYI HIGH-TECH MATERIAL SCIENCE&TECHNOLOGY CO., LTD.	
覆铜箔	
订单号 Order:	
型号 Type:	
宽度 Width:	mm
长度 Length:	m
面积 Area:	m ²
接头 Splice:	m
批号 Lot. NO:	
生产日期 Production date:	
保质期至 Shelf life:	
储存环境 Storage :	<30°C, <70%RH



月份标签 Month label:

一月 Jan.	二月 Feb.	三月 Mar.	四月 Apr.	五月 May.	六月 June.	七月 July.	八月 Aug.	九月 Sept.	十月 Oct.	十一月 Nov.	十二月 Dec.
1	2	3	4	5	6	7	8	9	1	11	1

●装运 Shipment

每批提供一份质量检验报告:Each shipment of each specification provides a quality inspection report.

●使用注意事项 Matters needing attention

1. 如产品被放置在低于10度以下储存环境,建议客户在使用前将产品静置4小时以上回暖直至产品温度回升至室温温度(20--30℃)后方才使用、以确保最佳产品使用特性,同时也应避免放置在阳光直接照射及高温环境下 if product was placed in under Temperature 10℃ for storage, the product should be placed in the room temperature 20~30℃ more than 4 hours before using, in order to make the product temperature up to 20~30℃, to ensure the best product features. At the same time should also avoid placing it in direct sunlight and high temperature environment.
2. 在背胶前,如接触界面做表面清洁,须保证接触界面干燥及不残留溶剂(如酸碱、油污等)。Before lamination, such as contact interface makes the surface cleaning, must also ensure that the contact interface and not dry residual solvents (such as acid and alkali, oil etc.).
3. 压合后的产品建议使用千层架烘烤,如无千层架建议叠层张数不超过20PNL,以避免叠层太多而影响产品固化效果。Pressing products recommend the use of multi-layer frame, such as no proposal for multi-layer frame lamination number no more than 20 PNL, to avoid the laminated too much and influence product curing effect.
4. 此规格书中表述的所有测试数据以及建议之工艺条件和参数仅供参考,产品使用方需要按照自身实际生产设备及产品要求等因素自行确认最优生产工艺及作业参数。特此声明! Hereby declared that all test data and recommended process conditions and operating parameters presented in this technical datasheet are for informational purposes only. Product users need to confirm the optimal production process and operating parameters according to their actual production equipment and product requirements.

●物性测试方法 Properties Test Method

尺寸安定性检验方法 Dimensional Stability Test Method

1. 范围 The range:

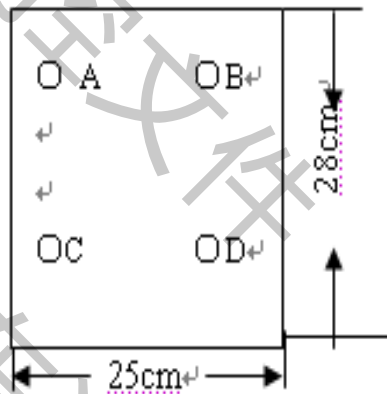
本检验方法适用于本公司产品中覆铜板尺寸安定性之量测。This test method for FCCL measurement of dimensional stability.

2. 检测设备 Testing instruments:

二次元坐标仪、冲孔机、烘箱 Two dimensional coordinate system, punching machine, oven

3. 样品制作 The sample:

裁切尺寸 MD28±1cm×TD25±1cm，并在四个角位置用冲孔机打出四个孔，其尺寸如图所示。Cutting size MD28±1cm×TD25±1cm, and in the four angular position with a punch press four holes, whose dimensions are shown in Figure:



4. 测量 Measure:

a) 对打出的四个孔，分别标以 A. B. C. D. 符号，以二次元测量 A. B. C. D. 四孔之间的距离并记录。The four hole, respectively, marked with A. B. C. D. symbol to the two dimension measurement of the distance between the A. B. C. D. four holes and record.

b) 将样品的铜完全蚀刻掉，以清水清洗 1 分钟后，擦干静放 0.5 小时，样品晾干后，用二次元测量 A. B. C. D. 四孔之间的距离并记录。The samples of the copper is completely etched off to clear water for 1 minutes after cleaning, dry static for 0.5 hours, after the sample dry, with two dimensional measurement of the distance between the A. B. C. D. four holes and records.

公式计算 Formula to calculate:

$$TD = \frac{\left[\frac{(A-B)_F - (A-B)_I}{(A-B)_I} + \frac{(C-D)_F - (C-D)_I}{(C-D)_I} \right]}{2} \times 100\%$$

$$MD = \frac{\left[\frac{(A-C)_F - (A-C)_I}{(A-C)_I} + \frac{(B-D)_F - (B-D)_I}{(B-D)_I} \right]}{2} \times 100\%$$

TD : 横向尺寸变化百分率 Percentage change in lateral dimension

MD : 纵向尺寸变化百分率 Longitudinal dimension variation

I : 起初(第一次)之距离读数 First distance readings

F : 蝕刻後(第二次)之距离读数 After etching (second times) the distance readings

E: 每个样品分别测量三组, 然后取其平均值作为判定标准。Each sample was measured in three groups, and then the average value was taken as the criterion.

注: 以上规范参考 IPC-TM-650, Method 2.2.4; Note: The above specification reference

IPC - TM - 650, Method 2.2.4.