

产品规格承认书

SPECIFICATION APPROVAL

(软磁铁氧体片系列产品)

Soft ferrite sheet

客户产品名称 (材料) :

Customer Part Number

东磁产品名称 : FS150-T125X125X0.1A-J 黑色

DMEGC Part Number

内容

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客户名称: 俄罗斯 LEPCOS

CUSTOMER:

确 认:

APPROVED:

拟 制

杨云芯

审 核

金良泉

批 准

张小杭

日期

2022.10.20

DRAWN

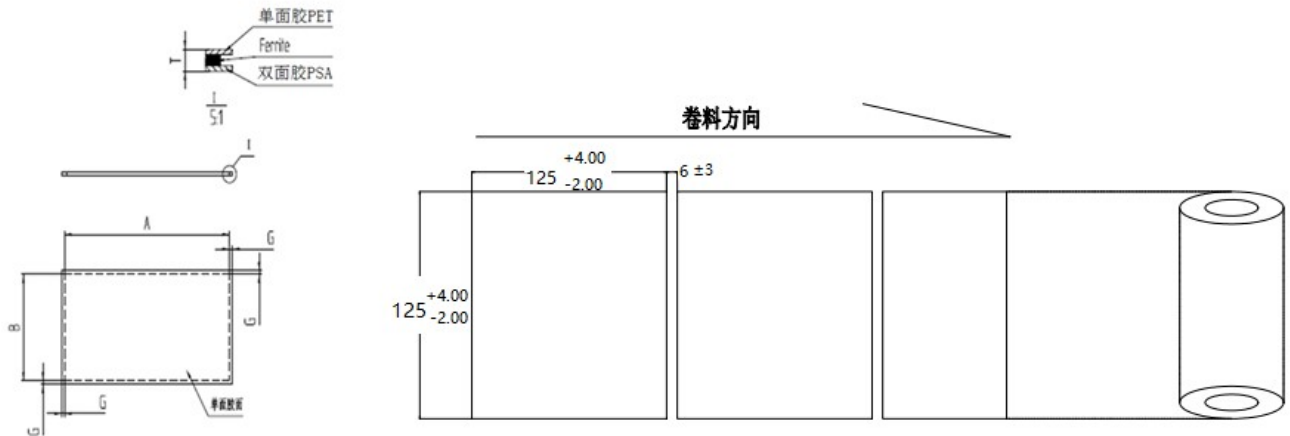
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1、产品组成和尺寸

STRUCTURE AND DIMENSIONS



*T(总厚)	A	B	4-G(胶边距)	C
0.12±0.012	125.00 ^{+4.00} _{-2.00}	125.00 ^{+4.00} _{-2.00}	3 MAX	6.00±3

单面胶	铁氧体	双面胶	离型膜
0.01ref	0.10±0.01	0.01ref	0.05ref

备注：1. 以上总厚度不包含离型膜；

2. 单面胶面不带弱粘膜；







3. 卷带出货 0.01 黑色单面胶面朝上。




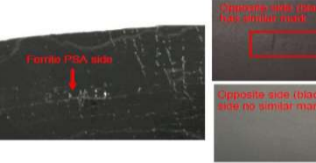


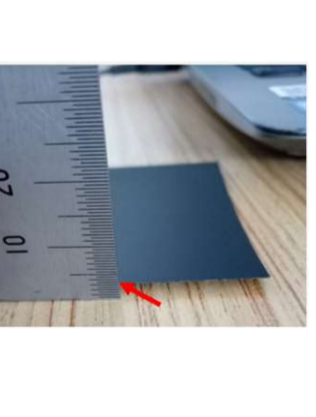


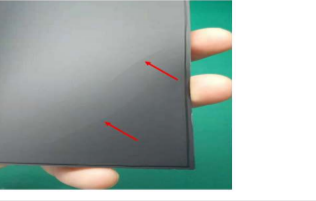

注意：1. 以上 T 寸法的测量方法为总厚（包括离型层）减掉离型层的厚度（供方标准值）；

Note: 1. the above T size measurement method : total thick (including Release liner) lose the Release liner thickness (The supplier standard) ;

2. 测量工具：测厚仪，投影仪； Thickness gauge, Projector;

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 软磁事业本部 质量管理作业指导文件		文件编号 Doc.No	QP/DMRC-17-7.5-06-17.09	拟制 Prepare	审核 Review	批准 Approve
文件类别 Doc.Type	检验标准 Inspection standard	版本号 Rev.	H	李东亮	金良泉	卢将平
产品系列 Product series	铁氧体 Ferrite sheet	页码 Page	3	发布日期 Released date	2022/1/10	
文件名称 Doc. Name	东磁铁氧体检验标准 DMEGC Ferrite sheet inspection standard.					
检验要求 Inspection requirements		检验标准 Inspection standard		检验要求 Inspection requirements		检验标准 Inspection standard
1,环境条件 Environment condition		普通车间 温度: 10-28°C,湿度: ≤75% Normal room Temperature: 10~28°C, humidity: ≤75%		2,光照强度 Light source		800~1200 lux
3,取样工站 Sample station		检验/检分/终检 工站 Inspection/Sorting / FQC		4,取样数量 Sample Qty		检分,全检; 终检,依照抽样计划 Separation/ sorting 100% inspection; FQC follow sample plan
5,检验距离 Viewing distance		目视检验眼睛距产品: 30+/-2cm;菲林规检验判定 眼睛距产品: 15+/-2cm 30 cm +/- 2 cm between eyes and part for visual inspection by naked eye, 15 cm +/- 2 cm between eyes and part for film gauge judgement		6,检验角度 Viewing angles		上下左右各旋转+/-75° Vertical rotation angle: +/-75° from normal (top to bottom) Horizontal rotation angle: +/-75° from normal (left to right)
7,检验区域 Inspection area		产品内外, 正反面都需检验 Inspection both outer surface/front and inner surface/back of part		8,检验时间 Inspection time		5~8秒, 取决于产品型号 5~8s, Depends on part number
9,外观检验标准 Cosmetic inspection standard						
缺陷项目 Defect Type	样品图片(仅供参考) Sample Image (Reference only)	检验标准 Inspection standard			检验方法 Inspection Method	
1).划痕 Scratch		没有暴露基材的划痕可以接受. No exposed base, All Allowed			目视/Visual	
2). 膜与铁氧体之间的外来 杂质颗粒 Foreign Substance between PET & Ferrite		1.总厚度超出标准, 或则面积大于0.7mm ² , 0收1退 Total thickness OOS or Area > 0.7mm ² Acc 0 / Rej 1 2.总厚度在规格范围内, 并且面积在0.3~0.7mm ² 之间, 5收6退 As long as total thickness meet spec & area 0.3~0.7mm ² , Acc5/Rej 6 3.总厚度在规格范围内, 并且面积小于0.3mm ² , 全部可以接受 As long as total thickness meet spec & area <0.3mm ² , All Allow			目视/Visual 高度规/Hight Gauge 菲林比对片/Film dot Gauge	
3), PET膜外的颗粒, 可以 去除的颗粒。 PET outside particle, removable		可擦除, 可以接受 Removable, acceptable			目视/Visual	
4).铁氧体边缘缺料 Ferrite edge missing ferrite/Chipping		1. 原片铁氧体尺寸>100mm, 从边缘延伸6.5mm以内可以接受 Raw-ferrite size>100mm, extend to less than 6.5mm from end edge can be accepted. 2,原片铁氧体尺寸≤100mm, 从边缘延伸3mm以内可以接受 Raw-ferrite size≤100mm, extend to less than 3mm from end edge can be accepted. 3, 冲切成品不允许有缺料. 0收1退 Die-cut finished goods not allow missing. Acc 0/Rej 1			目视/Visual 钢尺/Rule	
5) 裂片宽度 Crack width		裂纹宽度≤3mm, 允收 Crack width ≤3mm, acceptable			目视/Visual 钢尺/Rule	

6).气泡/凹坑 Bubble/Dimple		<p>1.凹坑 / 气泡 $\leq 8\text{mm}^2$, 总体厚度在规格范围内, 可接受 Dimple/bubble $\leq 8\text{mm}^2$ & total thickness in thickness spec, All Allow</p> <p>2.凹坑 / 气泡 $> 8\text{mm}^2$, 或则总厚度超出标准 0收1退 Dimple/bubble $> 8\text{mm}^2$ or total thickness OOS, Acc 0 / Rej 1</p>	<p>目视/Visual 高度规/Hight Gauge 菲林比对片/Film dot Gauge</p>
7).凹点(凸点) Dent		<p>1.凹点 $\leq 0.7\text{mm}^2$ 并且总厚度在厚度标准之内, 可以接受 Dent area $\leq 0.7\text{mm}^2$ and total thickness within thickness tolerance, All Allow</p> <p>2. 凹点 $> 0.7\text{mm}^2$, 0收1退 Dent $> 0.7\text{mm}^2$, Acc 0 / Rej 1</p>	<p>目视/Visual 高度规/Hight Gauge 菲林比对片/Film dot Gauge</p>
8).周边波浪纹 Ferrite Edge Distortion /Waving		<p>1, 铁氧体尺寸 $> 100\text{mm}$, 波浪纹 $>$ 边缘 12mm 不接受 Ferrite size $> 100\text{mm}$, Distortion/Waving $> 16\text{mm}$ end of ferrite edge, Acc 0 / Rej 1</p> <p>2, 铁氧体尺寸 $\leq 100\text{mm}$, 波浪纹 $>$ 边缘 6mm 不接受 Ferrite size $\leq 100\text{mm}$, Distortion/Waving $> 8\text{mm}$ end of ferrite edge, Acc 0 / Rej 1</p>	<p>目视/Visual 钢尺/Rule</p>
9).裂痕(亮痕) Ferrite Crack(light line)		<p>1.不暴露铁氧体基材, 裂痕一致, 不影响性能, 可接受. No exposed base, Consistent Crack, Not affect performance, All Allow.</p> <p>2. 铁氧体膜损坏, 破损, 缺失 不接受 Ferrite PET side damaged/missing, Acc 0 / Rej 1</p>	<p>目视/Visual</p>
10).起皱 Wrinkle		<p>起皱不接受, 详细遵照限度样品 Wrinkle is not acceptable, detail follow limit samples</p>	<p>目视/Visual</p>
11).表面脏污 Surface contamination		<p>1. 脏污 $> 3 \times 3\text{mm}$ 大小不接受 Contamination $> 3 \times 3\text{mm}$ size, Acc 0 / Rej 1</p> <p>2. 保护膜, 离型膜上的脏污可以接受 Contamination is on Protective film, lamination liner, all allow</p>	<p>目视/Visual</p>
12). 磁片弯曲 Ferrite sheet		<p>弯曲距离 (磁片边缘翘起最高点与水平面的距离)</p> <p>1.外形尺寸 $< 50\text{mm}$, 弯曲高度 $< 3\text{mm}$, 允收 Size $< 50\text{mm}$, Bent height $< 3\text{mm}$ allow</p> <p>2. $50\text{mm} <$ 外形尺寸 $< 100\text{mm}$, 弯曲高度 $< 6\text{mm}$, 允收 $50\text{mm} <$ Size $< 100\text{mm}$, Bent height $< 6\text{mm}$, allow</p> <p>3. $100\text{mm} <$ 外形尺寸 $< 120\text{mm}$, 弯曲高度 $< 8\text{mm}$, 允收 $100\text{mm} <$ Size $< 120\text{mm}$, Bent height $< 8\text{mm}$, allow</p> <p>4.外形尺寸 $> 120\text{mm}$, 弯曲高度 $< 10\text{mm}$, 允收 Size $> 120\text{mm}$, Bent height $< 10\text{mm}$, allow</p>	<p>目视/Visual 钢尺/Rule</p>
13).贴膜移位 Laminate displacement		<p>贴膜移位, 铁氧体边缘从PET和双面胶之间露了出来不能接受。0收1退 Laminate displacement, Ferrite edge exposed from PET and Adhesive tape. Acc 0/ Rej 1</p>	<p>目视/Visual</p>
14). PET面颜色印刷不均 Color uneven printing on PET tape		<p>印刷不均匀, 可以接受 Uneven print, all allow</p>	<p>目视/Visual</p>
15). 亮线/折线 Bright line & Fold line		<p>厚度不变, 仅仅是外观线, 可以接受 no thickness change. Only visual line, all allow</p>	<p>目视/Visual</p>
16). 模切成品边缘毛刺 Die-cut finished goods, Edge burr		<p>允许毛刺长度 0.3mm 以内 The length of edge burr less than 0.3mm is allowed.</p>	<p>目视/Visual 投影仪/Projector</p>

17), 折痕 Crease line		单面胶PET面（黑膜面）折痕处不允许有凹陷或凸起，不允许有手感！折痕处平整无手感视为OK品。 Single PET surface (black film surface) crease line is not allowed to have dent or convex, not allowed to feel! Crease line is flat and no feel is considered OK.	目视/Visual
18) 离型膜撕/保护膜撕不开 Release film cannot be torn off		支撑点距离铁氧体边缘5~10mm，撕膜角度90~180度。双面胶离型膜或单面胶保护膜可以正常撕开视为OK品。如果撕不开视为NG品。 The supporting point is 5~10mm away from the edge of ferrite, and the tearing Angle is 90~180 degrees. Double-sided adhesive release film or single-sided adhesive protective film can be torn as normal as OK. If not open as NG product.	手工/Manual
19) 模切品卷边 die-cut crimping		模切卷边<=0.2mm，允收 Die-cut crmping<=0.2mm, acceptable	目视/Visual 投影仪/Projector
20) 反离型检查 Inverse release check		撕开离型膜检查铁氧体片，如果铁氧体能够保留在重离型膜上判定OK，反之NG。 Tear release film to check the ferrite sheet, if the ferrite can be retained on the heavier release film to determine OK, otherwise NG	手工/Manual 目视/Visual
21) 白点 White dot		总厚度在规格范围内，并且直径<=2mm，允收 As long as total thickness meet spec & diameter <2mm, All Allow	目视/Visual 高度规/Hight Gauge 菲林比对片/Film dot Gauge
其他 Others	/	其他标准内没有与明的不良缺陷,请找品质部门或客户确认。 Other cosmetic inspection standard, please contact QA Dept. or Customer for confirmation	目视/Visual

22) 尺寸测量要求
Dimention measurement requirements

测量类型 Measured Type	测量内容及标准 Measured items and standard	测量方法 Measured Method
尺寸 Dimensions	1)铁氧体长/宽/厚; 胶边距, 总长/总宽/总厚, 标准参考图纸 Ferrite sheet Length/Width/Thickness; tape edge, total Length/width/thickness, standard follow to drawing 2) 对模切铁氧体抽样测量尺寸时, 依照模具穴位进行取样。 For die-cutting ferrite sheet, according to cave to sample, make sure that each cave can be sampled.	厚度规/直尺, 测量方法参考MSOP Thickness Gauge/rule, Measured Method follow MSOP

23,电性能测试要求
Electric performance test requirements

测试项目 Test Type	测试内容及标准 Test items and standard	测试方法 Test Method
磁导率 Permeability	u'和u",标准参考图纸 Permeability u' and u", standard followe drawing	E4990A阻抗仪,检验方法参考SOP E4990A tester, test method follow SOP
电感/电阻 ACL/ACR	电感和电阻,标准参考图纸 ACL and ACR, standard followe drawing	LCR 仪, IM3536, 检验方法参考SOP LCR tester, IM3536, , test method follow SOP

变更履历

发行日期	版本	变更内容
2018/11/14	A	新发行
2019/8/26	B	更新 铁氧体边缘缺料/Update Ferrite edge missing ferrite/Chipping
2019/9/12	C	增加折痕不良/Add Crease line defect
2020/3/3	D	增加撕膜检查项目/Add tearing off release film check item
2020/8/4	E	增加模切卷边检查项目/Add die-cut crimping check item
2020/11/2	F	增加模切铁氧体抽样方法/Add die-cutting ferrtie sheet sampling method.
2021/7/15	G	增加反离型检查/Add Inverse release check
2021/1/10	H	1,更新磁片弯曲标准/ Update ferrite bent height. 2,增加白点缺陷/Add White dot defect

3、基本特性

TYPICAL VALUE

项目 ITEM	特性 ALUE		测试方法 Measuring Method
磁导率 Permeability (@13.56MHz,T=25±2°C)	μ'	150±10%	安捷伦 E4990A 阻抗仪或同等精度的其他设备 Agilent E4990A impedance instrument or equivalent accuracy of other equipment
	μ''	≤5	
工作温度(°C)[包括胶和膜] Operating Temperature(Including double-faced and membrane)	-40~85°C		/

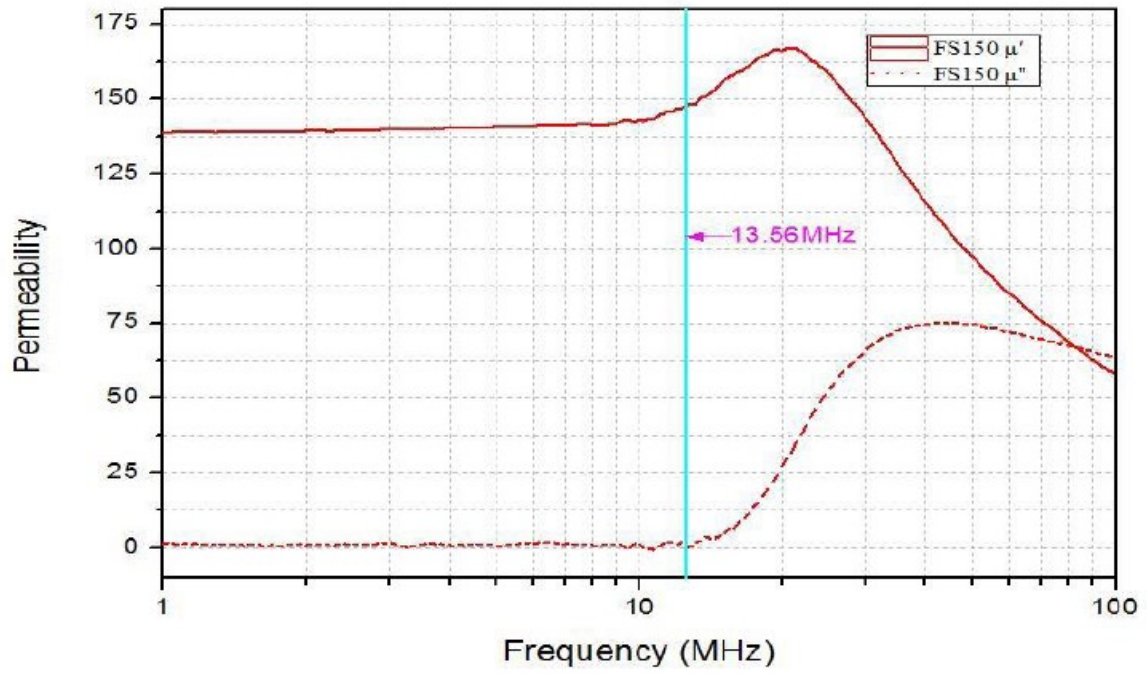
*备注：环境要求:符合 ROHS 要求

*Note:Environment:Comply With ROHS

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4、磁导率特性曲线

PERMEABILITY CHARACTERISTIC



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5、可靠性测试

RELIABILITY TEST

NO	项目/Item	测试条件 /Test Condition	测试标准 /Test Requirements
1	热冲击测试 /Thermal Shock (高低温循环 /Temperature Cycle)	1、-40℃/30min /+85℃/30min; 2、循环次数/Number of cycle: 48 次; 3、测试完放置 120min 后常温测试 /Measure after left for 120min.at room temperature	1、外观无破损/No visual damage 2、磁导率变化: ±15%以内 /Permeability change±within15%。
2	高温测试 /High Temperature Resistance	1、温度/ Temperature: +85±5℃; 2、时间/ Time: 240hrs; 3、试验完放置 120min 后常温测试 /Measure after left for 120min.at room temperature	1、外观无破损/No visual damage 2、磁导率变化: ±15%以内 /Permeability change±within15%。
3	低温测试 /Low Temperature Resistance	1、温度/ Temperature: -40±5℃; 2、时间/ Time: 240hrs; 3、试验完放置 120min 后常温测试 /Measure after left for 120min.at room temperature	1、外观无破损/No visual damage 2、磁导率变化: ±15%以内 /Permeability change±within15%。
4	湿度测试 /Humidity	1、湿度/Humidity: 85%RH; 2、温度/ Temperature: +85±3℃ 3、时间/Time: 240hrs; 4、试验完放置 120min 后常温测试 /Measure after left for 120min.at room temperature	1、外观无破损/No visual damage 2、磁导率变化: ±15%以内 /Permeability change±within15%。

注: 本项测试为保护膜、铁氧体片、双面胶及离型膜贴覆在一起后进行测试的结果
/ The protection film and the double-faced tape are included

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6、包装

PACKAGING

6.1 内包装/Inner case

采用塑料袋

Use Plastic bag

6.2 外包装/Outer case

采用纸箱

Use carton box

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7、保管条件

STORAGE CONDITIONS

- 避免日光直射、高温、高湿环境下储藏
- Keep away from high-temperature and high-humidity.
- 保管环境：温度5~35°C，湿度65%RH以下。
- Keep at a temperature 35°C from 5°C and humidity of less than 65 [%RH].
- 保质期：应在纳入期 1 年内使用
- The product should be used within 1 year from the time of delivery

8、验收规则

INSPECTION RULE

- 1 客户在接收到磁片产品后一个月内须验收完毕,并将验收结果书面通知供货方,否则视为已验收合格。

The customer should finish the work of sheets inspection in 1 months. After received the cores and please send the results of cores inspection to the supplier in report as soon as possible. If no report given to the Supplier, the core would be treating as qualified products.

- 2 尺寸验收仪器: 千分尺(厚度), 游标卡尺/投影仪(其他尺寸)

Size inspection instrument: Micrometer (Thickness), Vernier Caliper/Projector (Other size)

- 3 性能验收仪器: 安捷伦 E4991A 阻抗仪或同等精度的其他设备
Agilent E4991A impedance or equivalent system

- 4 因客户搬运、保管、使用不当引起的表面龟裂、折痕等不良, 由客户自己承担责任

For customers in the handling, storage, as well as the surface cracks caused by improper use, crease, his responsibility by the customer.

说明

NOTE

- 1 本承认书的数据更改需经双方确认,任一方单独修改无效。

Any revise to the contents in this Approval Application must be confirmed by the supplier and the customer, otherwise the revise is invalid.

- 2 本承认书在客户收到 3 个月之内(如果在 3 个月之内有量产,要在量产之前回签承认书),必须签章返回,逾期视为默认。

The Specification Approval should be sent back to the supplier with customer's chop on it within 3 month after receiving it, or we will take it as approved by customer's automatically.

- 3 在磁性的检查结果得到确认以后,如果还有问题发生,双方本着友好合作的原则,协调解决问题。

After the inspection results of cores were confirmed, if there are still some problems, we should resolve them adhering to the principles of advocating equality and mutual benefit and reaching consensus through consultation.

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