ACME Electronics Corporation
越峰電子材料股份有限公司

客戶 CUSTOMER: Platan

日 期 DATE: 2022.11.01

認 可 書
SPECIFICATION FOR APPROVAL

客戶品名 CUSTOMER P/N	
越峰品名 ACME P/N	P4LM114CH
認可書編號 SPEC. NO.	

越峰電子 ACME 產品承認

為保證訂單順利完成，請在一個月內簽回。否則，將默認貴司同意依此份認可書內容製作您所有此規格的訂單產品。

In order to ensure the leadtime for your order, pls confirm and sign this spec for ACME within one month while you received it. Or else, it means that you have approved this spec, and you have agreed with that ferrite cores from your order be produced according to this spec.

客戶認可 APPROVED BY：

如有客戶品碼（料號），請填寫在下
客戶品碼（料號）：
CUSTOMER P/N

承認書製作廠別 Factory
■廣州廠：越峰電子(廣州)有限公司 / 中國廣東省廣州增城市增江街東區府前路1號
No.1 Fuqian East Road, Zengjiang Street East Square, Guangzhou-Zengcheng City, 511300, Guangdong Province, China
Tel: +86-20-3285-1888: Fax: +86-20-3285-1666
■昆山廠：越峰電子(昆山)有限公司 / 中國江蘇省昆山市黃浦江北路533號
No.533 Huangpujiang North Rd., Kunshan City, 215337, Jiang-Su Province, China
Tel: +86-512-5793-2888: Fax: +86-512-5766-4667

批准	審核	擬制
APPROVED BY	CHECKED BY	PREPARED BY
陳建志	孟偉青	涂國其

ACME Electronics Corporation
越峰電子材料股份有限公司

歷史變更記錄
REVISION RECORDS LIST

客戶CUSTOMER: Platan	P/N	P4LM114CH
	SPEC./N	

I .更改記綠 REVISION RECORD:

版本號 REV. NO.	更改內容及原因 CONTENTS AND REASONS	日期 DATE OF APPROVAL	擔當 DRAWN
1	新制 NEW RELEASE	2022.11.01	涂國其

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NO.	總 目 錄 For Approval List	頁碼 Page No.	備注 Remark
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3	承認書總目錄 For Approval List	3	
4	規格書(型號、圖紙、材質、參數等) Drawing (P/N, Dimension, Effective Parameter) 電氣特性 Electrical Characteristics	4	
5	檢查成績表 Inspection Data Sheet	5	
6	產品外觀檢驗標准及方法 Appearance Specification	6	
7	材質特性曲線圖 Material Chatacteristic Curve	7	

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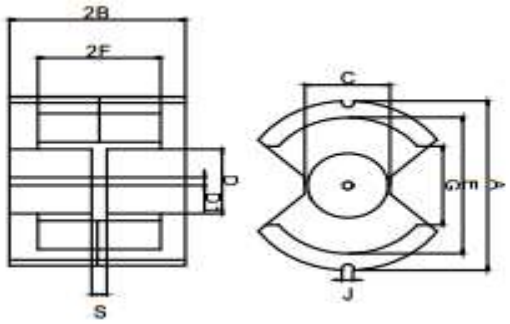
規格書名稱/Specifications :P4LM114CH	客戶料號/Customer P/N：

一、形狀、尺寸、材質/Shape, dimensions & material：

(1)形狀、尺寸：如下圖所示(單位：mm)Shape & dimensions：

(2)材質Material： P4

圖例/Drawing：



尺寸規格/Dimensions：

A：	114+0/-4.5
2B：	93+0/-1
C：	45max
D：	43+0/-1.4
E：	88+3.7/-0
2F：	63+1.6/-0
G：	52Min
J：	5.3+1/-0

Ae:	1720 mm^2
Le:	200 mm
Ve:	344000 mm^3

二、電磁特性規格 Electrical Characteristics：

低鐵損材質(Low Power Loss Materials)

材質 Material	初導磁率ui Initial Permeability
P4	2500±25%

測試條件 Test Condition

測試項目 Item	單位 Units	測試條件 Test Condition	測試溫度 Temperature	規格 Spec	測試儀器 Equipment	測試線包 Test coil
AL	nH/N^2	10kHz,50mV	25℃±3℃	16000+30%/-20%	HP4284A	1.0mm,10Ts(ACME)
Pc	W	25kHz,100 mT	100℃±3℃	14 max	SY8218	N1:N2=5:2

量測手法（選擇項目為”■“）Test method(”■“ means Yes)：

■包麥拉帶2.5圈Wrap 2.5 layers of tape

□客戶測試夾子Test with clip

□至少對磨三次以上測試Abrad matching surface each other 3 times before testing the inductance

□平面配GAP測試Test by nogap core and gapped core

□雙GAP測試Test by pair of gapped cores

□GAP產品放置於引線端測試Place the gapped core at the test side and close to the bobbin before testing

□GAP產品放置於非引線端測試Place the nogap core at the test side and close to the bobbin before testing

注意事項: Remarks

越峰電子 ACME 產品承認

ACME Electronics Corporation
越峰電子材料股份有限公司
Sample Inspection Report
樣品檢驗報告

Part Number品名： P4LM114CH　　Customer客戶： Platan

Quantity數量： 10PCS　　Date日期： 2022.10.31

Customer P/N客戶料號

□K.Y □G.Z ■K.S　　(MARK ■)

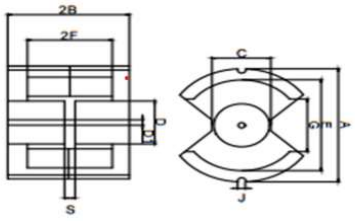
MEASUREMENT(量測數據):

Item(項目):	A	2B	C	D	D1	E	2F	G	J	Pc(W)	AL(nH/N²)
Target 中值:	114.00	93.00	45.00	43.00	5.40	88.00	63.00	52.00	5.30	14.00	16000
Tolerance 公差：	+0/-4.5	+0/-1	Max	+0/-1.4	+0.4/-0	+3.7/-0	+1.6/-0	Min	+1/-0	max	+30%/-20%
Upper Spec. 上限：	114.00	93.00		43.00	5.80	91.70	64.60		6.30		20800
Lower Spec. 下限：	109.50	92.00		41.60	5.40	88.00	63.00		5.30		12800
1	113.03	92.44	44.58	42.46	5.63	91.05	63.46	54.31	5.80	6.70	14126
2	111.48	92.14	44.31	42.19	5.58	89.83	63.24	53.64	5.72		15487
3	113.16	92.58	44.68	42.53	5.68	91.13	63.98	54.73	5.79		18700
4	113.18	92.50	44.76	42.58	5.68	91.31	63.36	54.45	5.73		14624
5	113.02	92.56	44.73	42.59	5.68	91.01	63.34	54.23	5.76		16875
6	113.13	92.48	44.74	42.52	5.64	91.14	63.74	54.68	5.78		
7	112.97	92.46	44.62	42.42	5.68	90.87	63.42	54.10	5.78		
8	113.15	92.52	44.59	42.53	5.66	91.22	63.30	54.32	5.74		
9	113.01	92.44	44.70	42.51	5.69	91.29	63.44	54.26	5.77		
10	113.13	92.56	44.88	42.46	5.64	91.07	63.68	54.69	5.76		
Min. 最小值	111.48	92.14	44.31	42.19	5.58	89.83	63.24	53.64	5.72	6.70	14126
Max. 最大值	113.18	92.58	44.88	42.59	5.69	91.31	63.98	54.73	5.80	6.70	18700
Range R差	1.70	0.44	0.57	0.40	0.11	1.48	0.74	1.09	0.08	0.00	4574
Average 平均值	112.93	92.47	44.66	42.48	5.66	90.99	63.50	54.34	5.76	6.70	15962
Judge 判定	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

TEST	Equip 儀器: 卡尺 (callipers)/HP4284A/SY8218	Cond 條件	AL:10kHz,50mV Pc:25kHz,100mT　Coil 線圈:AL:1.0mm,10Ts(ACME) Pc:N1:N2=5:2
CLAUSE	PPR No 流程單:	TEMP 溫度	AL:25℃±3℃Pc:1　Series No 序號:K2209040

REMARK 備註:

越峰電子 ACME 產品承認



Tested by 測試: 塗國其　　Checked by 審查: 呂明靜　　Approved by 核准: 陳建志

越峯電子材料股份有限公司
產品外觀標準(開放型)

1.缺角，脫帽(chip, uncap)

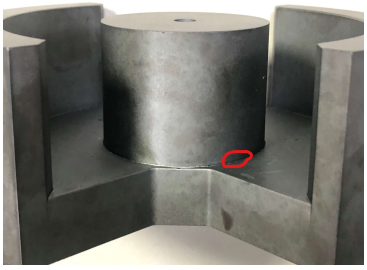
ACME P/N	單點最大面積 Max.size/point（mm2）	缺角/脫帽總面積（mm²） total area(mm2)
P4LM114CH	50.0	100

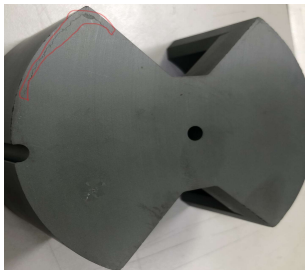
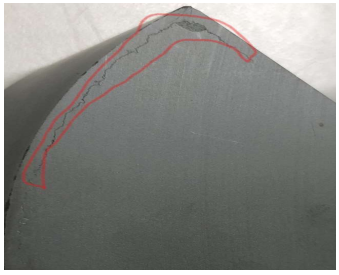
註明：① 小於最大點面積的缺角/脫帽以總面積進行判定。The cumulative area of chip, uncap less than the total area is allowable.

② 單點面積＜1.5 mm^2不作統計.The defect won't be counted which area less than 0.5mm2.

2. 裂(crack)

產品結合線處允許有裂（如下圖1、2），背部裂＜1/2背部周長(如下圖3、4)，其餘部分裂參考IEC-60424。The product foot and back joint line is allowed to have caracks,it is ok that the crack of back wall is less than 1/2 circle,other Specification is based on IEC－60424



3. 結晶(crystallize):

ACME P/N	凹槽面 bottom surface		其他面 other surface	
	單點最大面積 Max.size/point（mm2）	總面積 total area（mm2）	單點最大面積 Max.size/point（mm2）	總面積 total area（mm2）
P4LM114CH	0.25*A	0.25*A*2	0.2*A	0.2*A*2

註明：① 小於最大點面積的結晶點數以總面積進行判定。The cumulative area of chip, uncap less than the total area is allowable.

② 單點面積＜1.5 mm2不作統計.The defect won't be counted which area less than 1.0mm2.

4. 粘模（sticking）：

(1) 面積：≦1/4所在面面積.area: less than the 1/4 of respective surface.

(2) 深度: ≦ 0.2mm. Depth: ≤0.2mm

5. 毛邊（ragged edge）：

(1)高度:不超過該尺寸面為判定基准.Height: It is not permitted exceed the respective surface dimension.

(2) 長度:≦1/4發生面的周長.Length: It is permitted up to 1/4 of surface perimeter.

6. 劃痕

刮傷可接受。 Scrapes are allowed on surface.

ACME Electronics(Kunshan)Co.,Ltd.
Product Approval

備注：

1.以上標準之制定參照國際電工標準：IEC-60424。This Specification is based on IEC－60424。

2.以上標準未詳盡之處仍以IEC電工標準為參照依據 。The other details that not be mentioned in this document are referred to IEC－60424 too.

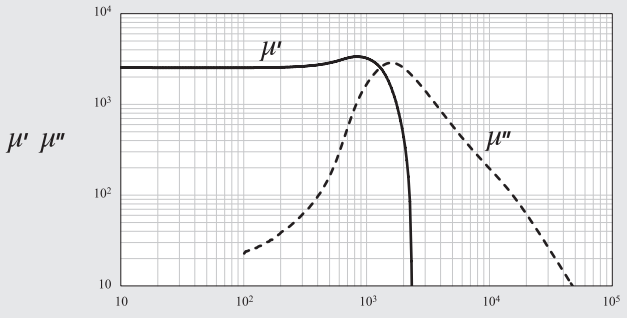
3.抽樣計劃採用 MIL-STD-105E表(II)次水準,單次抽樣計劃AQL=1.0

The sampling is according to MIL-STD-105E, verification level Ⅱ is used and AQL=1.0.

	Symbol	Unit	Measuring Conditions			Conventional Low Loss Material
			Freq.	Flux den.	Temp.	P4
Initial Permeability	μ_i		≤ 10kHz	0.25mT	25°C	2500 ± 25%
Amplitude Permeability	μ_a		25kHz	200mT	25°C	> 4500
					100°C	> 4500
Power Loss	Pv	KW/m³	25kHz	200mT	25°C	105
					100°C	55
			100kHz	200mT	25°C	700
					100°C	450
			300kHz	100mT	25°C	660
					100°C	430
			500kHz	50mT	25°C	380
					100°C	330
Saturation Flux Density	Bs	mT	10kHz	H = 1200A/m	25°C	480
					100°C	380
Remanence	Br	mT	10kHz	H = 1200A/m	25°C	135
					100°C	75
Coercivity	Hc	A/m	10kHz	H = 1200A/m	25°C	14
					100°C	9
Hysteresis Material Constant	η_B	10^{-6}/mT	10kHz	1.5-3.0mT	25°C	< 1.2
Disaccommodation Factor	D_F	10^{-6}	10kHz	< 0.25 mT	25°C	< 2
Curie Temperature	Tc	°C				≥ 220
Resistivity	ρ	Ωm				5.50
Density	d	g/cm³				4.80

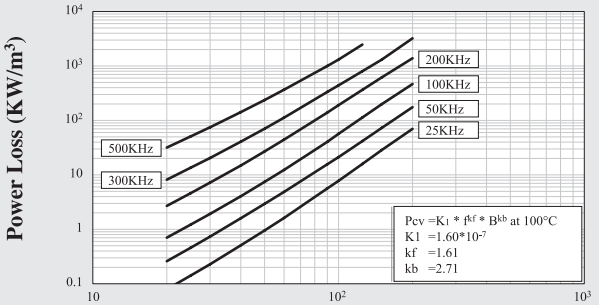
Note: Material characteristics are typical for a toroid core.
Product specification will differ from these data due to the influence of geometry and size.

Complex Permeability V.S. Frequency



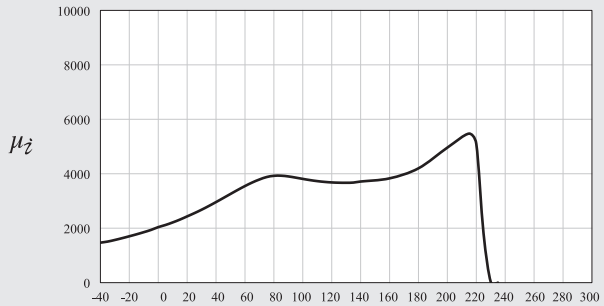
Test Core : T25*15*10

Power Loss V.S. Temperature/Flux Density/Frequency



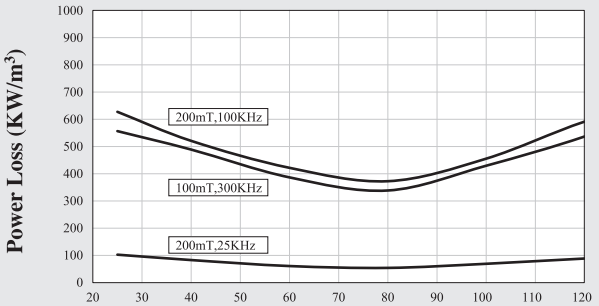
Test Core : T25*15*10

Initial Permeability V.S. Temperature



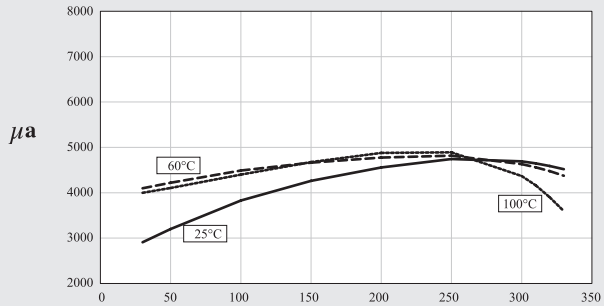
Test Core : T25*15*10

Power Loss V.S. Temperature



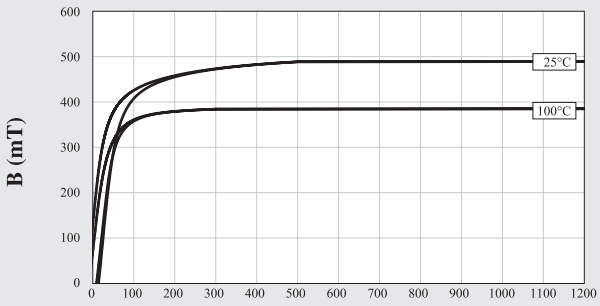
Test Core : T25*15*10

Amplitude Permeability V.S. Flux Density (Bm)



Test Core : T25*15*10

Saturation Flux Density V.S. Magnetic Field



Test Core : T25*15*10