SPECIFICATION FOR APPROVAL

CUSTOMER:	ES		CUST.P/N:					
ORDERING CODE:	K15 RH 4x4x1.5		K.C.P/N:					
(1) SHAPE:			A	4.0±0.2		mm		
			В	4.0±0.3		mm		
	ı ∕−øc		С	1.50±0.1	5	mm		
	Ţ		D			mm		
	+) 		Е			mm		
			F			mm		
ļ-	A - B		G			mm		
平角								
(2)ELECTRICAL REQUIREMENTS:				(3) TEST CONDITIONS:				
Z_1 = 21 min OHM AT 25 MHz				1 IMPEDANCE ANALYZER: Agilent E4991A				
Z_2 = 31 min OHM AT 100 MHz			TEST FIXTURE: HP16092A					
					.Wx 63mm x 1/2	2Ts		
			3.DRA	WING:				
					=====	<u> </u>		
					2	0		
				23		<u> </u>		
(4)PACKING			(5) A	APPEARA	NCE			
X IN BU	LK VACUUM	INSERTION		(1)AREA OF BI	REAK :	$<2 \text{ mm}^2$		
2000 PCS/BAG* 8	BAGS/INNER BOX'4	BOXES/CARTON = 64000 PCS		(2)SUM OF BR	EAKING AREA	$:<3 \text{ mm}^2$		
PCS/PLATE*	PLATES/CARTON=	PCS		(3)DEPTH OF	F BREAK	:<1 mm		
PCS/TRAY*	TRAYS/CARTON=	PCS	It is co	onsidered as a	normal condition	on that the		
			surface	of core covers	s with ferrite po	owder.		
(6)REMARK:			App	proved by	美炳勲			
			Che	ecked by	吴明珠			
			Dra	wn by	鍾佩宜	2013/9/16		
			DW	G.NO.	20139001A	1		

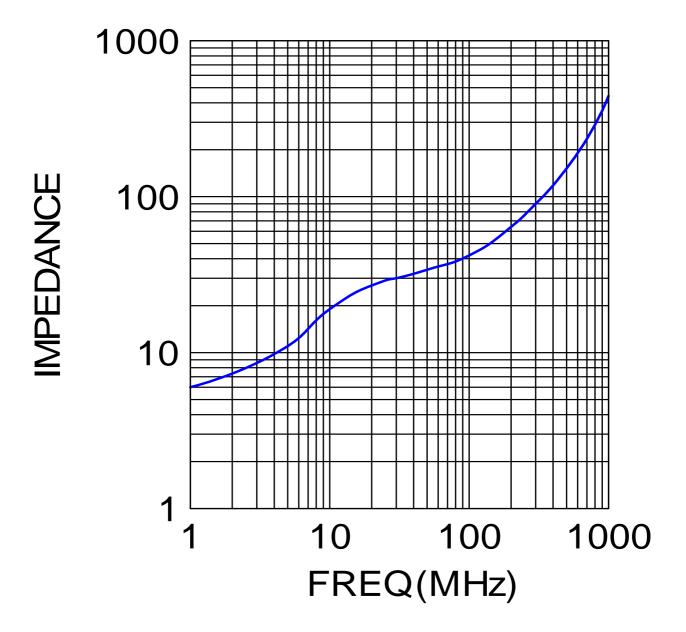
ER011B

TEST DATA FOR PREPRODUCTION SAMPLES

CUSTOMER	ES			CUST. P/N		
ORDERING CODE	K15 RH 4x4x1.5			K.C. P/N		
TEMP.	24 °C	RH	69 %	DWG.NO.	20139001A	
WIRE	0.65x63mm T.C.W	WINDING	<i>1/2</i> Ts	Q'TY	5PCS	
Test Instrument	T.S.			-		
Meas. Item.	Z (OHM)	Z (OHM)	A mm	B mm	C mm	
Specification	21 min	31 min	4.0±0.2	4.0±0.3	1.50±0.15	
Test Freq.	25 MHz	100 MHz				
sample#1	29	42	3.98	4.01	1.49	
sample#2	29	42	4.01	4.02	1.47	
sample#3	29	42	3.95	3.96	1.46	
sample#4	29	42	3.98	3.97	1.46	
sample#5	29	42	3.99	3.99	1.47	
sample#6						
sample#7						
sample#8						
sample#9						
sample#10						
X	29.0	42.0	3.982	3.990	1.470	
R	0	0	0.06	0.06	0.03	
REMARK:					Approved by:	卖炳
					Checked by:	吴明琛
					Drawn by:	鍾佩宜

KING CORE ELECTRONICS INC.

K15 RH 4x4x1.5





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測試結果(Test Results)

測試部位(PART NAME) No.1: 鐵灰色塊狀 (IRON-GRAY LUMP)

測試項目 (Test Items)			方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
鎬 / Cadmium (Cd)	mg/kg	參考IEC 62321: 2008方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	100
鉛 / Lead (Pb)	mg/kg	參考IEC 62321: 2008方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	1000
汞 / Mercury (Hg)	mg/kg	参考IEC 62321: 2008方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	1000
六價鉻 / Hexavalent Chromium Cr(VI)	mg/kg	参考IEC 62321: 2008方法,以UV-VIS 檢測. / With reference to IEC 62321: 2008 and performed by UV- VIS.	2	n.d.	1000
全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	参考US EPA 3550C: 2007方法,以液相層析/質譜儀檢測. / With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.	-
全氟辛酸(銨)/ PFOA (CAS No.: 335-67- 1)	mg/kg	參考US EPA 3550C: 2007方法,以液相層析/質譜儀檢測. / With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.	-



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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1	法規 限値 (Limit)
多溴聯苯總和 / Sum of PBBs			-	n.d.	1000
一溴聯苯 / Monobromobiphenyl			5	n.d.	-
二溴聯苯 / Dibromobiphenyl			5	n.d.	_
三溴聯苯 / Tribromobiphenyl			5	n.d.	_
四溴聯苯 / Tetrabromobiphenyl			5	n.d.	_
五溴聯苯 / Pentabromobiphenyl			5	n.d.	
六溴聯苯 / Hexabromobiphenyl			5	n.d.	ı
七溴聯苯 / Heptabromobiphenyl			5	n.d.	-
八溴聯苯 / Octabromobiphenyl			5	n.d.	-
九溴聯苯 / Nonabromobiphenyl		参考IEC 62321: 2008方法,以氣相層	5	n.d.	-
十溴聯苯 / Decabromobiphenyl	mg/kg	析/質譜儀檢測. / With reference	5	n.d.	-
多溴聯苯醚總和 / Sum of PBDEs	mg/ 11g	to IEC 62321: 2008 and performed	-	n.d.	1000
一溴聯苯醚 / Monobromodiphenyl ether		by GC/MS.	5	n.d.	-
二溴聯苯醚 / Dibromodiphenyl ether			5	n.d.	1
三溴聯苯醚 / Tribromodiphenyl ether			5	n.d.	1
四溴聯苯醚 / Tetrabromodiphenyl ether			5	n.d.	-
五溴聯苯醚 / Pentabromodiphenyl ether			5	n.d.	-
六溴聯苯醚 / Hexabromodiphenyl ether			5	n.d.	-
七溴聯苯醚 / Heptabromodiphenyl ether			5	n.d.	-
八溴聯苯醚 / Octabromodiphenyl ether			5	n.d.	-
九溴聯苯醚 / Nonabromodiphenyl ether			5	n.d.	-
十溴聯苯醚 / Decabromodiphenyl ether			5	n.d.	-
鹵素 / Halogen					
鹵素(氟)/ Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg		50	n.d.	-
鹵素(氣) / Halogen-Chlorine (C1) (CAS No.: 22537-15-1)	mg/kg	参考BS EN 14582:2007, 以離子層析 儀分析. / With reference to BS EN	50	n.d.	-
鹵素(溴)/ Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	14582:2007. Analysis was performed by IC.	50	n.d.	-
鹵素 (碘) / Halogen-Iodine (I) (CAS No.: 14362-44-8)	mg/kg		50	n.d.	-



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備註(Note):

- 1. mg/kg = ppm; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected (未檢出)
- 3. MDL = Method Detection Limit (方法偵測極限值)
- 4. "-" = Not Regulated (無規格值)

PFOS参考資訊(Reference Information): 持久性有機污染物 POPs - (EU) 757/2010

PFOS濃度在物質或製備中不得超過0.001%(10ppm),在半成品、成品或零部件中不得超過0.1%(1000ppm),在紡織品或塗層材料中不得超過1 μ g/m²。(Outlawing PFOS as substances or preparations in concentrations above 0.001% (10ppm), in semi-finished products or articles or parts at a level above 0.1%(1000ppm), in textiles or other coated materials above 1μ g/m².)



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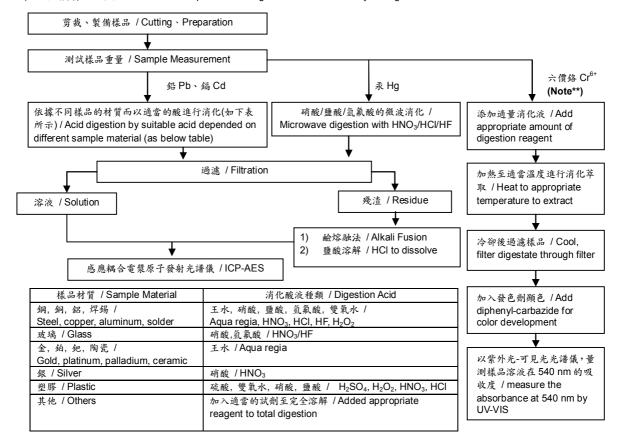
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- 1) 根據以下的流程圖之條件,樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) 测試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人: 張啓興 / Name of the person in charge of measurement: Troy Chang



Note**:(1) 針對非金屬材料加入鹼性消化液 n 加熱至 90~95℃萃取. / For non-metallic material, add alkaline digestion reagent and heat to 90~95℃.

(2) 針對金屬材料加入純水,加熱至沸騰萃取. / For metallic material, add pure water and heat to boiling.

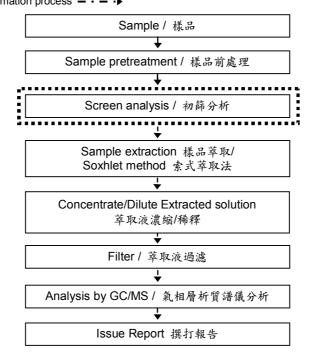


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多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

- 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong





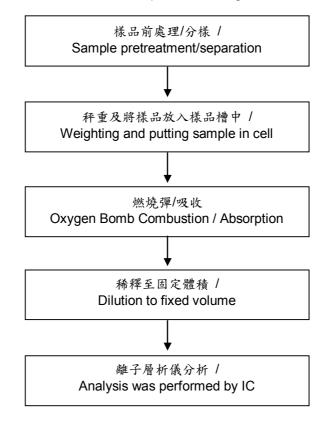
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鹵素分析流程圖 / Analytical flow chart of halogen content

- 測試人員: 陳恩臻 / Name of the person who made measurement: Rita Chen
- 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang





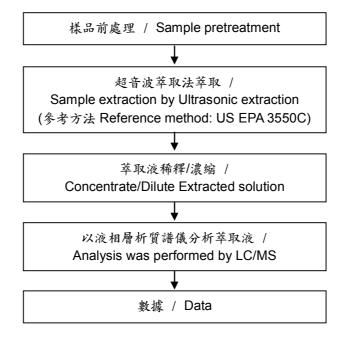
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全氟辛酸(銨)/全氟辛烷磺酸分析流程圖 / PFOA/PFOS analytical flow chart

- 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong
- 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang





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* 照片中如有箭頭標示,則表示為實際檢測之樣品/部位. *
(The tested sample / part is marked by an arrow if it's shown on the photo.)

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** 報告結尾(End of Report) **