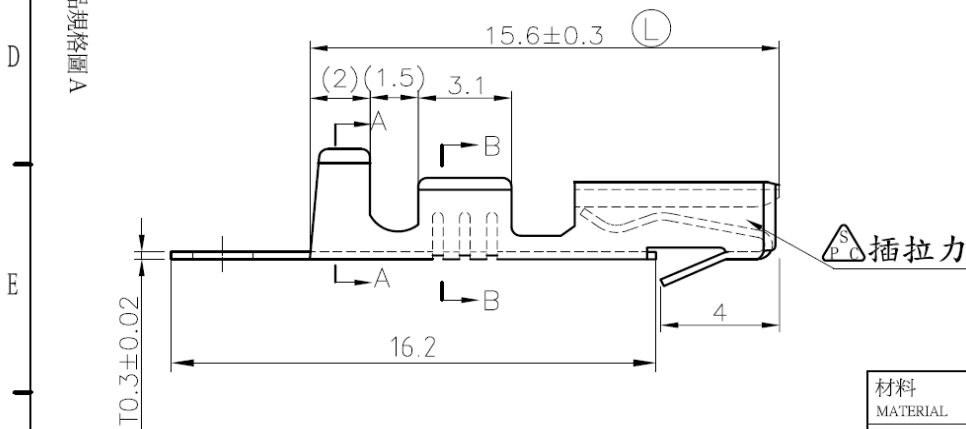
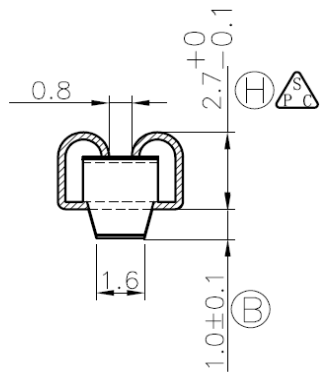
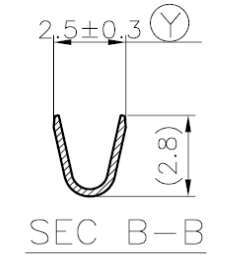
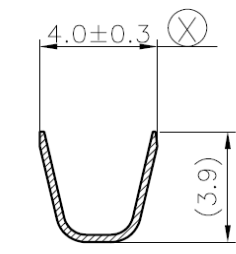
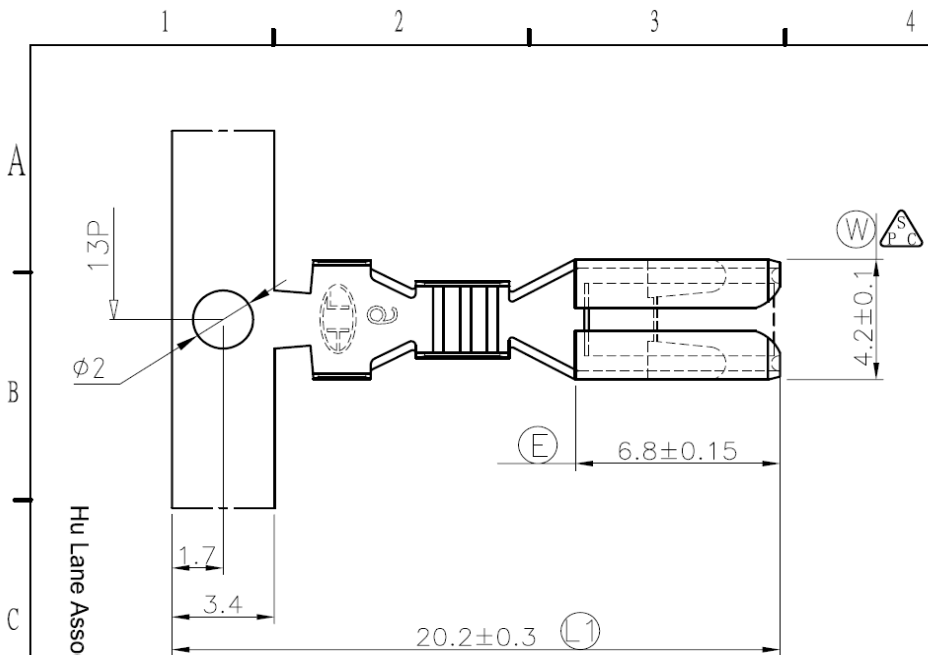


產品編號 Product Number :6604151BSS

(110 TYPE FEMALE TERMINALS)

項目	內容	頁數	備註	
1	Design Records of Saleable Product 設計記錄	V	1	Drawing Name : 110 TYPE FEMALE TERMINALS 圖名 : 110 TYPE FEMALE TERMINALS
2	Engineering Change Documents (if any) 變更文件〔若有〕			N/A 無
3	Customer Engineering approval (if required) 工程設計核准〔若要求〕			N/A 無
4	Design FMEA 設計FMEA			N/A 無
5	Process Flow Diagrams 生產流程圖	V	1	Process Flow Diagrams 生產流程圖
6	Process FMEA 製程FMEA	V	4	FMEA 失效模式與效應分析
7	Control Plan 管制計劃	V	2	Control Plan 管制計劃
8	Measurement System Analysis Studies 量測系統分析	V	2	R & R Analysis 量測設備再現性與再生性分析表
9	Dimensional /Performance Test Results 尺寸/性能測試結果	V	2	I.S.I.R. & Performance Report 初期樣品檢驗報告與產品性能試驗 綜合報告
10	Material Results 材料結果	V	2	Material Report 材質證明
11	Initial Process Study 初期製程研究	V	2	X-Bar R Chart 平均值與全距管制圖
12	Qualified Laboratory Documentation 認可實驗室文件			N/A 無
13	Appearance Approval Report (AAR) 外觀核准書報告			Inappropriate 不適用
14	Sample Product 產品樣品			Sample Product N/A
15	Master Sample 主樣品			Undemanding 無需求
16	Checking Aids 檢查輔助器材			N/A 無
17	Records of Compliance with Customer- Specific Requirements 客戶特定要求之完整記錄			N/A 無
18	Part Submission Warrant (PSW) 送審保證書	V	1	PSW 送審保證書
	Bulk Material Requirements Checklist 散裝材料檢查表			Inappropriate 不適用



修訂 Revision					
記號 MARK	版本 REV.	修訂內容 DESCRIPTION	變更單 ECN	日期 DATE	繪圖 DWN.
	1.3	增加特殊特性符號			
	1.4	更改字碼，更改特殊特性符號 標原工段變更通知單號ECN2008/05/15-014A起15.9更改為16.2		MAY 14 2008	劉亞梅
	2.0	更改BS0品號插拔力管制圖冊，插入力由1.3kg以下更改為1.0kg以下，拉拔力由0.5-1.5kg更改為0.4-1.5kg	ECN 2010/5/11-048B	AUG 12 2010	孫王榮

- 說明:
- BSS: 預鍍亮錫, 膜厚40U" 以上
插入力: 0.3-0.85KG
拉拔力: 0.3-0.85KG
 - BS0/BW0: 素材
插入力: 1.0KG以下
拉拔力: 0.4-1.5KG
1. BSS: Pre-Tin Plated Thickness More
Inserted Force: 0.3-0.85Kg
Tensile Force: 0.3-0.85Kg
2. BS0: None.
Inserted Force: Less Than 1.0kg
Tensile Force: 0.4-1.5KG

Hu Lane Associate Inc. 產品規格圖 A



3	6604151BW0	Brass	Note 2	0.5-1.25mm ²
2	6604151BS0	Brass	Note 2	0.5-1.25mm ²
1	6604151BSS	Brass	Note 1	0.5-1.25mm ²
NO.	產品編號 Part Number	材料 Material	表面處理 Surface Treatment	線徑 Wire Range

材料 MATERIAL		SEE TABLE		AUTO CAD	
表面處理 FINISH		SEE NOTE			
核發單位 ISSUED BY	制定單位 INSTITUTED BY	核准 APPROVED BY	審核 CONFIRMED BY	制定 DRAWN BY	繪圖 DRAWER

一般公差 Tolerances unless other specified
<1.0 : ± 0.10
1.0-5.0 : ± 0.15
5.0-10.0 : ± 0.20
10.0-20.0 : ± 0.25
20.0-45.0 : ± 0.30
>45.0 : ± 0.50
ANGLE : ± 2.0°
圖紙: A3 size
單位: mm Unit









	胡達精密股份有限公司 Hu Lane Associate Inc.
	圖名 DRAWING NAME 110 TYPE FEMALE TERMINALS 圖號 DRAWING NUMBER 604151
比例 Scale: 6/1	頁數 Sheet: 1/1
CODE: N12	

Supplier

HU LANE ASSOCIATE INC.

PROCESS FLOW DIAGRAM

Part Certification

Family name					Date (Orig.)	Prepared by		
					2010/8/12	S.W.WANG		
Part Number					Date (Rev.)	Title		
6604151BSS					N/A	Product Engineer		
Part Name					Page	Phone Number		
110 TYPE FEMALE TERMINALS					1 of 1	025-52774425-2303		
Cross Functional Team Members					Symbol Key:  Manufacturing/Assembly  Movement of Materials/Parts  Storage of Materials/Parts  Inspection			
S.W.WANG L.JIANG A.Z.LV X.Y.WANG W.B.CHEN X.Y.LI A.J.JI D.Y.GUO X.M.SUN C.Q.QIAN								
Step #	Fab	Move	Store	Insp	Operation description	Item #	Special Characteristics	
								
10		*			Receiving Material		label,material weight	contact supervisor
20				*	Incoming Inspection		dimensional	thickness,width,hardness,tensile strength,percentage elongation
30			*		Storage		storage specification	contact supervisor
40	*				To get material		label	contact supervisor
50	*				To set up a mold		process speed	tool and process adjustments
60	*				Stamping		visuals,gages	tool and process adjustments
70				*	process quality Inspection		dimensional,visual,performance	W、 H
80	*				Production(Labeling)		label	quantity
90				*	Final Inspection		dimensional,visual,performance	W、 H
100			*		Storage			
110		*			Deliving			

POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS

Design FMEA

Process FMEA

GM Restricted

<input type="radio"/> System	<input type="radio"/> Subsystem	<input checked="" type="radio"/> Component	1 of 4	Page	FMEA Number	
Part Number 6604151BSS		Design or Process Responsibility jiangli		Prepared by jiangli		Telephone # 025-52774425-6113
Model Year(s) / Vehicle(s) 110 TYPE FEMALE TERMINALS		Key Date		Original FMEA Date		FMEA Revision Date N/A

Core Team
 S.W.WANG L.JIANG A.Z.LV X.Y.WANG W.B.CHEN X.Y.LI A.J.JI D.Y.GUO X.M.SUN C.Q.QIAN

Design Item or Process Function Requirements	Potential Failure Mode	Potential Effect(s) of Failure	S e v	C l a s s	Potential Cause(s) / Mechanism(s) of Failure	O c c	Current preventive to Process Controls	Current Design or Process Controls	D e t	R P N	Recommended Actions	Responsibility & Target Completion Date	Actions Taken	S e v	O c c	D e t	R P N
Step#10 Receiving Material	to receive wrong material	Material account not symbol	4		supply wrong material	1		check material account & supply quality manager	7	28							
Step#20 Incoming Inspection	In the raw material has the impurity	material pollution	2		Material problem	3		incoming quality inspection	5	30							
Step#30 Storage	wet the material	product funtion fail	4		the Storage got out of control Storage	1		Thermometer & Thermometer check list	7	28							
Step#40 To get material	Picking wrong items	1.Extruding, damaged mold, extraordinary quality	5		A. Wrong picking card	1		A. The operational process of the product structure system	7	35							
					B. Mixed items C. Wrong mark	1 1		B.C. Multi control and examination during picking, mold-erecting, initial items and changing items	5	25 25							
Step#50 To set up a mold	1.The module is not fixed up	1. This might cause the up and the down module to deviate from the mold and be damaged	4		A. Screws not tighten up	1		A. Managed by the operator	7	28							
(Fix the module)		2. The depth is not fixed up that causes the quality of the terminal (highly) unstable	4		B. Over tightened screws that cause a break	1		B. Managed by the mold-erecting personnel	5	20							
					C. Over tightened screws that cause a crack (not break)	1		C. Non	8	32							

POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS

Design FMEA

Process FMEA

GM Restricted

<input type="radio"/> System	<input type="radio"/> Subsystem	<input checked="" type="radio"/> Component	2 of 4	Page	FMEA Number
Part Number 6604151BSS		Design or Process Responsibility jiangli		Prepared by jiangli	Telephone # 025-52774425-6113
Model Year(s) / Vehicle(s) 110 TYPE FEMALE TERMINALS		Key Date		Original FMEA Date	FMEA Revision Date N/A

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	2.The module is not parallel	1. This causes the terminal tape to bend	5		The parallel of the mold has not yet been measured.	1		The mold-erecting operational instruction: the measurement the operation should implement	5	25							
		2. Unstable feeding causes extrusion and damages the mold	4														
Step#50 To set up a mold	1.Insufficient amount for each volume	1.The customer's complaints	5		A. The configuration was not adjusted	4		A Confirm by the operator of the initial products	2	40							
(Punch configuration)					B. Wrong engineering sheet	1		B Control and confirm by the operator	7	35							
					C. The counter was out of order	1											
	2.The speed rate (RPM) of the punch becomes too fast	1. Exceed the ability of the mold that causes extrusion and damage the mold	6		A. The configuration is not adjusted in accordance with the specification	3		A. Confirm by the operator of the initial products	2	36							
		2. RPM is too fast that causes unstable punching quality (the thrust and the pulling force)	5		B. The configuration is not corrected according to the watch	4		B. Mold-erecting operational instruction (Confirmed by the mold-erecting operator)	2	40							
		3. The unstable forming of the terminal cause intermittent deformation	5		C. Wrong specification and standard	1		C. Sensed by the operator	7	35							

POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS

Design FMEA

Process FMEA

GM Restricted

<input type="radio"/> System	<input type="radio"/> Subsystem	<input checked="" type="radio"/> Component	3 of 4	Page	FMEA Number	
Part Number 6604151BSS		Design or Process Responsibility jiangli		Prepared by jiangli		Telephone # 025-52774425-6113
Model Year(s) / Vehicle(s) 110 TYPE FEMALE TERMINALS		Key Date		Original FMEA Date		FMEA Revision Date N/A

Core Team
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Design Item or Process Function Requirements	Potential Failure Mode	Potential Effect(s) of Failure	S e v	C l a s s	Potential Cause(s) / Mechanism(s) of Failure	O c c	Current preventive to Process Controls	Current Design or Process Controls	D e t	R P N	Recommended Actions	Responsibility & Target Completion Date	Actions Taken	S e v	O c c	D e t	R P N
Step#60 Stamping	1.defected surface	Customer complaint	5		A defected material	1		A modeling staff modeling reconfirmation B. operation, QP staff independence; initial product; independence; circular; final eyesight tes	2	10							
Step#70 process quality Inspection	1. Size wrong	Insufficient function	7	W(SPC)	A. defected material B. mode wear C. improper staff operation D equipment abnormal	1 2 2 2		A. modeling reconfirmation operation; QC staff initial product; material passing ,circular; final test by rule	B	3	42						
				H(SPC)	A. defected material B. mode wear C. improper staff operation D equipment abnormal	1 2 2 2		A. modeling reconfirmation operation; QC staff initial product; material passing, circular; final test by rule	B	3	42						
Step#80 Production(La beling)	1.wrong label	1. Wrong transfer, wrong account 2. Client misuse; Complaint	3 7		A. Wrong label B. the old label remained removed, or deleted C. Wrong data	2 2 2		A chief approval; independence; final test; material control B operator independence; final test control C independence/chief	3 3 3	42							
Step#90 Final Inspection	1. Size wrong 2. Function fail	Insufficient function	7	W	A. defected material B. mode wear C. improper staff operation D. equipment abnormal	1 2 2 2		A. modeling reconfirmation operation; QC staff initial product; material passing ,circular; final test by rule	B	3	42						
				H	A. defected material B. mode wear C. improper staff operation D equipment abnormal	1 2 2 2		A. modeling reconfirmation operation; QC staff initial product; material passing, circular; final test by rule	B	3	42						

CONTROL PLAN

Part Certification

HU LANE ASSOCIATE INC.

Control Plan Category <input type="radio"/> Prototype <input type="radio"/> Pre-Launch <input checked="" type="radio"/> Production		Key Contact Name jiangli	Date (Orig) 2010/8/12	Date (Rev) N/A	Page 1 of 3
Control Plan Number		Key Contact Phone 025-52774425-6113	Customer Engineering Approval (If Req'd)		Date (If Req'd)
Part Number 6604151BSS	ECL 2.0	Supplier / Plant Approval / Date	Customer Quality Approval (If Req'd)		Date (If Req'd)
Part Name / Description 6604151BSS		Other supplier approval by (If Req'd)	Other Approval (If Req'd)		Date (If Req'd)
Supplier / Plant HU LANE ASSOCIATE INC.	Supplier Code	Other Approval Date (If Req'd)			

Core team Members
S.W.WANG L.JIANG A.Z.LV X.Y.WANG W.B.CHEN X.Y.LI A.J.JI D.Y.GUO X.M.SUN C.Q

Manufacturing plant maintains listing of all Gage Numbers.

Part / Proc #	Process Name / Operation description	Machine, Device, Jig, Tools For Mfg.	Characteristics				Methods					Reaction Plan	
			No.	Product	Process	Special Char. Class.	Product / Process Specification / Tolerance	Evaluation / Measurement Technique	Sample Size	Sample Freq.	Control Method		
10	Receiving Material			LABEL QUANTITY	PERFORMANCE		PERFORMANCE RECORD			ONCE	100%	Visual insp.	PUT OUT THEN REPORT TO PURCHASER
20	Incoming Inspection			MATERIAL WIDTH			+0 27.5 -0.1 mm	VERNIER CALIPER	per lot package/roll 1-5: 1PC 6-10: 2PCS 11-20: 3PCS 21-30: 4PCS 31-40: 5PCS 41-50: 6PCS 51-60: 7PCS 61: 8PCS	CHECK "RECEIVING RECEIPT" SPECIFICALLY FOR Part No.	segregate, put out then report to supervisor and purchaser		
				MATERIAL THICKNESS			0.30±0.01mm	MICROMETER					
				TENSILE STRENGTH			411-539N/mm ²	MICRO-COMPUTER UNIVERSAL TESTING MACHINE					
				ELONGATION RATE			> 12%						
				HARDNESS			140-165HV	Micro-Vickers. HARDNESS TESTER					
30	Storage			AVOIDING DAMP			PACKAGE AND stack layers		ONCE	100%	RECEIVING RECEIPT	PUT OUT	

CONTROL PLAN

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HU LANE ASSOCIATE INC.

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Part / Proc #	Process Name / Operation description	Machine, Device, Jig, Tools For Mfg.	Characteristics			Methods					Reaction Plan	
			No.	Product	Process	Special Char. Class	Product / Process Specification / Tolerance	Evaluation / Measurement Technique	Sample Size	Sample Freq.		Control Method
40	To get material	STAMPING PRESS		STOCK SPECIFICATION			REF. PART SPECIFIC CONTROL PLAN DOCUMENTS NO.3086	REF. PART SPECIFIC CONTROL PLAN DOCUMENTS NO.3052			ISSUE MATERIAL ACCORDING TO PICKING CARD	REPORT TO SUPERVISER
50	To set up a mold	STAMPING PRESS		REF. PART SPECIFIC CONTROL PLAN DOCUMENTS NO.3167			REF. PART SPECIFIC CONTROL PLAN DOCUMENTS NO.3167	REF. PART SPECIFIC CONTROL PLAN DOCUMENTS NO.3167			MOLD MAINTENANCE RECORD	CONTACT SUPERVISER
60	Stamping	STAMPING PRESS		REF. PART SPECIFIC CONTROL PLAN DOCUMENTS NO.3167			REF. PART SPECIFIC CONTROL PLAN DOCUMENTS NO.3167	REF. PART SPECIFIC CONTROL PLAN DOCUMENTS NO.3167			MOLD MAINTENANCE RECORD	CONTACT SUPERVISER
70	process quality inspection	STAMPING PRESS		W		SPC	4.20±0.10	CALIPERS	5PCS	20Min	INITIAL SAMPLE INSPECTION REPORT	CONTACT mold-erecting personnel
				H		SPC	2.7+0/-0.1	CALIPERS	5PCS	20Min	INITIAL SAMPLE INSPECTION REPORT	CONTACT mold-erecting personnel
80	PRODUCTION	STAMPING PRESS		REF. PART SPECIFIC CONTROL PLAN DOCUMENTS NO.3125			REF. PART SPECIFIC CONTROL PLAN DOCUMENTS NO.3125	REF. PART SPECIFIC CONTROL PLAN DOCUMENTS NO.3125			DAILY PRODUCTION REPORT	CONTACT mold-erecting personnel
90	FINAL INSPECTION			W			4.20±0.10	CALIPERS	5PCS	1DAY	PRODUCT INSPECTION REPORT	CONTACT mold-erecting personnel
				H			2.7+0/-0.1	CALIPERS	5PCS	1DAY	PRODUCT INSPECTION REPORT	CONTACT mold-erecting personnel
				L			15.60±0.30	CALIPERS				
				L1			20.20±0.30	CALIPERS				
				X			4.00±0.30	CALIPERS				
				Y			2.50±0.30	CALIPERS				

CONTROL PLAN

Part Certification

HU LANE ASSOCIATE INC.

Control Plan Category <input type="radio"/> Prototype <input type="radio"/> Pre-Launch <input checked="" type="radio"/> Production		Key Contact Name jiangli	Date (Orig) 2010/8/12	Date (Rev) N/A	Page 3 of 3
Control Plan Number		Key Contact Phone 025-52774425-6113	Customer Engineering Approval (If Req'd)		Date (If Req'd)
Part Number 6604151BSS	ECL 2.0	Supplier / Plant Approval / Date	Customer Quality Approval (If Req'd)		Date (If Req'd)
Part Name / Description 6604151BSS		Other supplier approval by (If Req'd)	Other Approval (If Req'd)		Date (If Req'd)
Supplier / Plant HU LANE ASSOCIATE INC.	Supplier Code	Other Approval Date (If Req'd)			

Core team Members
[S.W.WANG](#) [L.JIANG](#) [A.Z.LV](#) [X.Y.WANG](#) [W.B.CHEN](#) [X.Y.LI](#) [A.J.JI](#) [D.Y.GUO](#) [X.M.SUN](#) [C.Q](#)

Manufacturing plant maintains listing of all Gage Numbers.

Part / Proc #	Process Name / Operation description	Machine, Device, Jig, Tools For Mfg.	Characteristics			Methods					Reaction Plan	
			No.	Product	Process	Special Char. Class	Product / Process Specification / Tolerance	Evaluation / Measurement Technique	Sample Size	Sample Freq.		Control Method
				B			1.00±0.10	CALIPERS				
100	Storage			AVOIDING DAMP/stack layers			4 layers max	visual	100%	per lot	WAREHOUSE WARRANT	segregate, review or adjust the storage envirenement
110	Deliving				label		customer requirement	visual	100%	per lot	PACKING LIST	segregate and sort

Supplier

REPEATABILITY AND REPRODUCIBILITY ANALYSIS REPORT

HU LANE ASSOCIATE INC.

NON DESTRUCTIVE TEST

- Using TOLERANCE method
- Using Part to Part variation

Part Certification

PLEASE SPECIFY THE FOLLOWING PARAMETERS AND COMPLETE THE FORM ACCORDINGLY

PARAMETERS ARE

K ₁	Number of Trials	Must be either 2 or 3	3	OK
K ₂	Number of Operators	Must be either 2 or 3	3	OK
K ₃	Number of Parts	Can be any value between 2 and 10	10	OK

GAGE APPROVED, USE IT

Part number	6604151BSS	Part name	110 TYPE FEMALE TERMINALS	Plant	00
Characteristic	4.2	Gage number	BDA07	Coord by	jiangli
Tolerance	0.2	Units	mm	Gage name	CALIPERS
Tolerance (Tol)	0.2	Gage ECL/revision	0	Phone #	
				Date	2014/11/19

OPERATOR	P		A		R		T				RESULTS	
TRIAL #	1	2	3	4	5	6	7	8	9	10	AVG	
A	4.21	4.17	4.25	4.18	4.23	4.20	4.18	4.21	4.19	4.25	A ₁ 4.20700	
2	4.20	4.17	4.25	4.18	4.23	4.21	4.18	4.21	4.19	4.24	A ₂ 4.20600	
3	4.21	4.17	4.25	4.18	4.23	4.20	4.18	4.22	4.19	4.24	A ₃ 4.20700	
Average	4.20667	4.17	4.25	4.18	4.23	4.20333	4.18	4.21333	4.19	4.24333	\bar{X}_A 4.20667	
Range	0.01	0.0	0.0	0.0	0.0	0.01	0.0	0.01	0.0	0.01	\bar{R}_A 0.00400	
B	4.21	4.17	4.25	4.19	4.23	4.21	4.18	4.21	4.19	4.25	B ₁ 4.20900	
2	4.21	4.17	4.25	4.18	4.23	4.20	4.18	4.21	4.19	4.25	B ₂ 4.20700	
3	4.21	4.17	4.25	4.19	4.23	4.20	4.18	4.22	4.19	4.24	B ₃ 4.20800	
Average	4.21	4.17	4.25	4.18667	4.23	4.20333	4.18	4.21333	4.19	4.24667	\bar{X}_B 4.20800	
Range	0.0	0.0	0.0	0.01	0.0	0.01	0.0	0.01	0.0	0.01	\bar{R}_B 0.00400	
C	4.21	4.17	4.25	4.19	4.23	4.20	4.18	4.21	4.19	4.25	C ₁ 4.20800	
2	4.21	4.17	4.25	4.18	4.23	4.21	4.18	4.22	4.19	4.24	C ₂ 4.20800	
3	4.21	4.17	4.25	4.19	4.23	4.20	4.18	4.21	4.19	4.25	C ₃ 4.20800	
Average	4.21	4.17	4.25	4.18667	4.23	4.20333	4.18	4.21333	4.19	4.24667	\bar{X}_C 4.20800	
Range	0.0	0.0	0.0	0.01	0.0	0.01	0.0	0.01	0.0	0.01	\bar{R}_C 0.00400	
Part Avg	4.20889	4.17	4.25	4.18444	4.23	4.20333	4.18	4.21333	4.19	4.24556	\bar{X}_{PART} = 4.20756	
Part Range											R_{PART} = 0.08000	
$\bar{R} = R_A + R_B + R_C / \text{No of operators} =$		0.00400		+		0.00400		+		0.00400 / 3		$\bar{R} =$ 0.00400
$\bar{X}_{DIFF} = [\text{Max}(\bar{X})_{ABC}] - [\text{Min}(\bar{X})_{ABC}] =$		4.20800		-		4.20667						$\bar{X}_{DIFF} =$ 0.00133
UCL _R = $\bar{R} * D_4 =$		0.00400		*		2.580						UCL _{R} = 0.01032}
LCL _{R} = $\bar{R} * D_3 =$}		0.00400		*		0.000						LCL _{R} = 0.00000}

OPERATOR	NAME	NOTE: It has been statistically proven that the Tolerance Method is better to determine measurement equipment reliability. Even with negative Kurtosis data sets, the recorded measurements will be less than 1% away from the true value if GR&R is below 30%. Contact Quality Group if you need more information.
A	RYAN KAO	
B	AMY WU	
C	RONNIE PENG	
GOOD UNTIL GAGE ECL/revision CHANGE		

FROM DATA SHEET:	$\bar{R} =$ 0.00400	$\bar{X}_{DIFF} =$ 0.00133	$R_{PART} =$ 0.08000				
Measurement Unit Analysis	Based on the TOLERANCE Method						
Repeatability - Equipment Variation (EV)	$EV = \bar{R} * K_1$ $EV =$ 0.01220 <table border="1"> <tr><th>Trials</th><th>K₁</th></tr> <tr><td>3</td><td>3.05</td></tr> </table>			Trials	K ₁	3	3.05
Trials	K ₁						
3	3.05						
Reproducibility - Appraiser Variation (AV)	$AV = \sqrt{[(\bar{X}_{DIFF} * K_2)^2 - (EV^2 / nr)]}$ $AV =$ 0.00283 <table border="1"> <tr><th>Oper</th><th>K₂</th></tr> <tr><td>3</td><td>2.70</td></tr> </table>			Oper	K ₂	3	2.70
Oper	K ₂						
3	2.70						
Repeatability & Reproducibility (R & R)	$R\&R = \sqrt{(EV^2 + AV^2)}$ $R\&R =$ 0.01252						
Part Variation (PV)	$PV = R_{PART} * K_3$ $PV =$ 0.12960 <table border="1"> <tr><th>Parts</th><th>K₃</th></tr> <tr><td>10</td><td>1.62</td></tr> </table>			Parts	K ₃	10	1.62
Parts	K ₃						
10	1.62						
Total Variation (TV)	$TV = \sqrt{(R\&R^2 + PV^2)}$ $TV =$ 0.13020						
GAGE IS ACCEPTED All ranges OK							

Supplier
HU LANE ASSOCIATE INC.
Part Certification

REPEATABILITY AND REPRODUCIBILITY ANALYSIS REPORT

NON DESTRUCTIVE TEST

Using TOLERANCE method
 Using Part to Part variation

PLEASE SPECIFY THE FOLLOWING PARAMETERS AND COMPLETE THE FORM ACCORDINGLY

PARAMETERS ARE

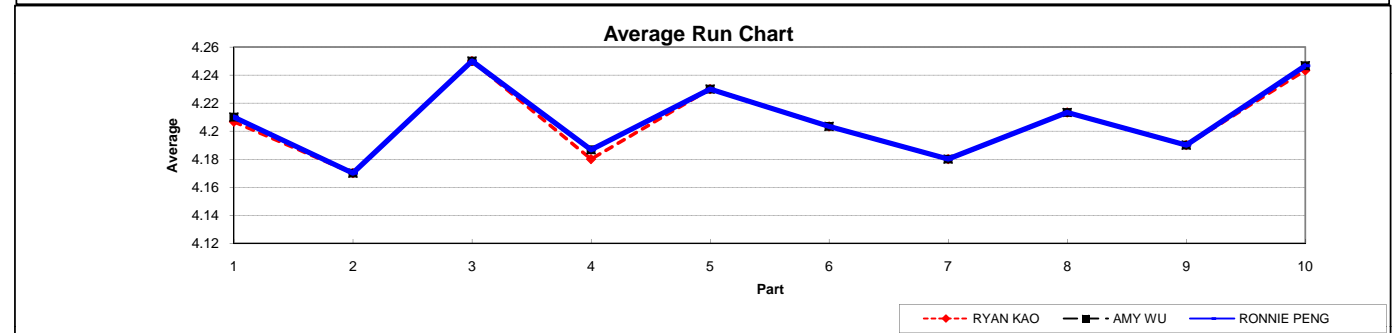
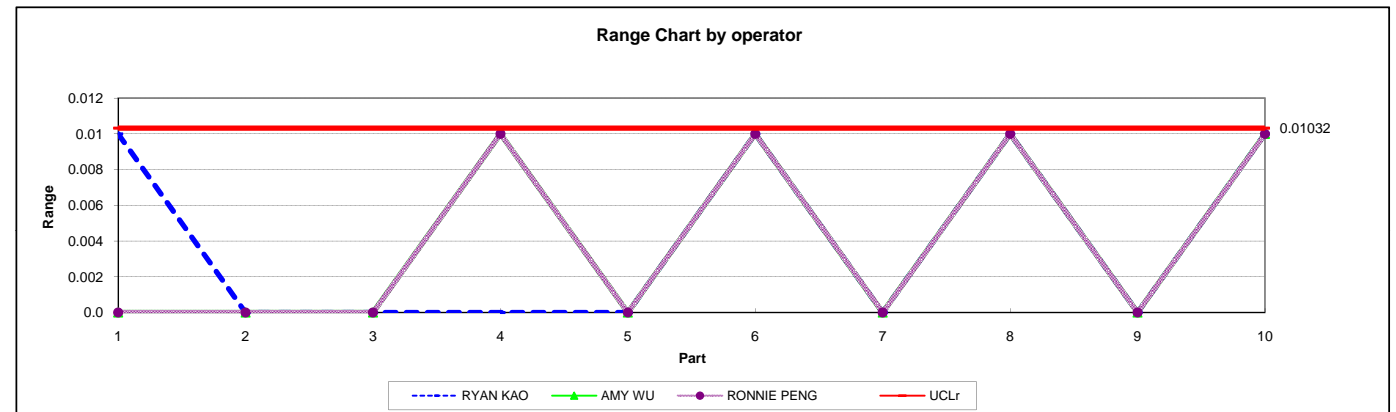
K₁	Number of Trials	Must be either 2 or 3	3	OK
K₂	Number of Operators	Must be either 2 or 3	3	OK
K₃	Number of Parts	Can be any value between 2 and 10	10	OK

			GAGE APPROVED, USE IT		
Part number	6604151BSS	Part name	110 TYPE FEMALE TERMINALS	Plant	00
Characteristic	4.2	Gage number	BDA07	Coord by	jiangli
Tolerance	0.2	Gage name	CALIPERS	Phone #	
Tolerance (Tol)	0.2	Gage ECL/revision	0	Date	2014/11/19

Guidelines for acceptance of gage repeatability and reproducibility (%R&R):
UNDER 10% ERROR: Gage system OK
10% to 30% ERROR: May be acceptable based upon importance of application. Calculate "breakpoint" = RPN x (% Gage R&R/100) and check that is less than 37.8 and (% Gage R&R) less than 30%. See next page for conclusion of usage.
OVER 30% ERROR: Gage system needs improvement. Identify the problems and have them corrected.

DETERMINE THE RISK PRIORITY NUMBER (RPN) FROM THE FMEA ASSOCIATED WITH THE DIMENSION BEING GAGED. TYPE THE RPN # UNDER THE RPN # FIELD PROVIDED (RIGHT) AND FOLLOW INSTRUCTION OF USAGE IN NEXT ROW:	BREAKPOINT	=	RPN #	x	%GRR/100
	2.63	=	42.0	x	0.06262

CONCLUSION IS ... GAGE APPROVED, USE IT



Notes:

中铝洛阳铜业有限责任公司

CHINA CO LuoYang Copper Co.,Ltd

产品质量证明书

CERTIFICATE OF QUALITY

日期Date:14-02-13

顾客/Customer		南京胡连			合同号/Contract No.		
牌号	状态	规格(mm)	批号	数量/Amount		重量	
Grade Number(No)	Condition Of Supply	Size	Batch No.	箱/捆	卷数	weight	
				Case/Bond	Quantity		
C2680	H	0.3*27.5	508B095	-	-	562	
		0.3*28				552.5	
机械性能/Mechanical Properties						产品标准/Product standard	
项目	抗拉强度	延伸率	硬度(HV)	导电率	表面处理	尺寸公差Size Tolerance	
Item	Rm(N/mm ²)	All.(%)	Hardness	Expansion	Surface Treatment	厚度 宽度	
	TensileStrength	Elongation				Thickness Width	
实测	450	22/23	152/158	-	-	+/-0.01 +/-0.1	
化学成分/Chemical Composition (%)						说明 货到后请立即拆包(箱)验收并存放在室内干燥处,验收后如有异议,请在收到货后三个月内函告本集团公司,并注明本证入库日期,产品,牌号,状态,规格,合同号,批号,交货日期,重量.	
元素Element	CU	Fe	Pb	Ni	Zn		杂质总和
标准	63.5-68	≤0.1	≤0.03	≤0.5	余量		≤0.3
实测	65.8	0.085	0.019	0.36	余量		0.15
备注	产品尺寸精度及表面质量均符合标准					Upon products arriving, please dismount to check at once and store in dry place indoor. If there are some objections, please inform us by mail within 3 months from receiving the products. Note clearly the date of storing, product name, grade No, conditions, size, contract No, batch No, date of delivery, weight, No. and manufacture No. etc. in order to	
Remark	Accuracy of size and quality of surface are in keeping with standard						

检查员/Inspector: 03

WI-QC01-A-002

Supplier: HU LANE ASSOCIATE INC.

PROCESS CAPABILITY CERTIFICATION REPORT

(see if any notes are on page 2)

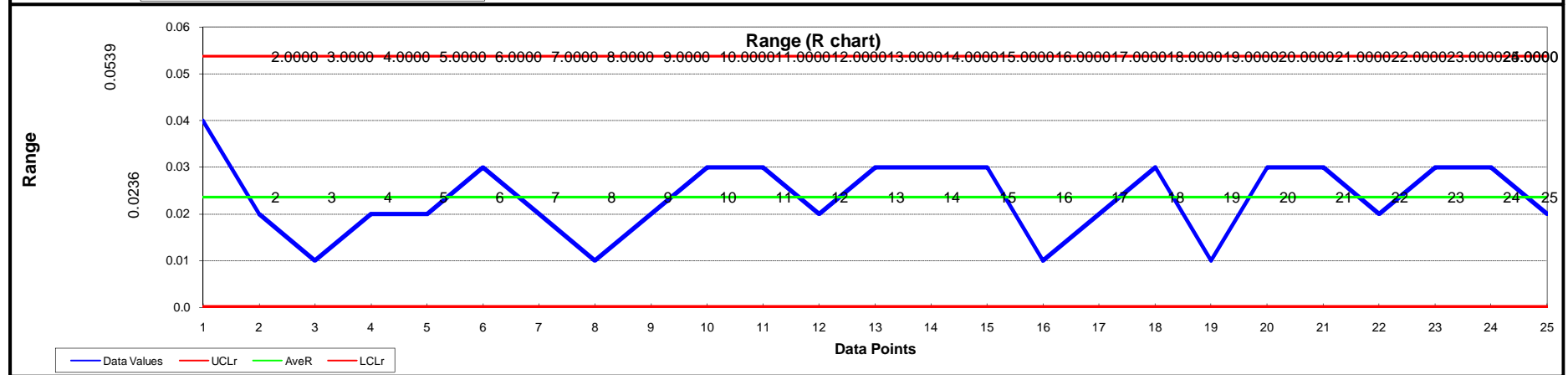
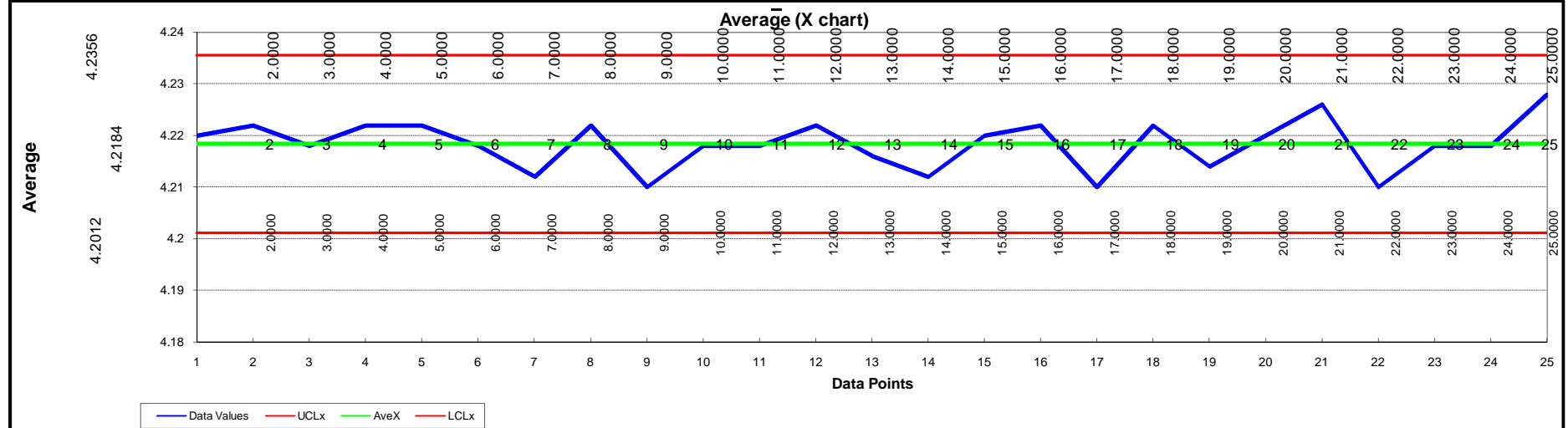
Part Certification

Two sided spec (bilateral)
 One sided (MIN)
 One sided (MAX)

Number of readings per subgroup: **4**

LOCATION	Plant	HSICHIH CITY,TAIPEI HSIEN,TAIWAN,R.O.C.	Dept:		Date:	2014/11/19
PART	Part number:	110 TYPE FEMALE TERMINALS	Part description	0		
	Drawing number	6604151BSS	Eng. chg. level	2		
TOOL	Tool number	0	# Cavities			
DIMENSION	Description	W	Units	mm		
	SPEC	4.2	PLUS	0.1	MINUS	0.1
	Lwr Spec L	4.1	NOMINAL	4.2	Upr Spec L	4.3

PROCESS INFORMATION			
Significant trends of data points:		X Chart	R Chart
Increasing	RUN LENGTH	3	3
	HOW MANY RUNS	0	0
Decreasing	RUN LENGTH	3	3
	HOW MANY RUNS	0	0
Out of control limits		0	0
Consecutive data points above avg.		2	3
Consecutive data points below avg.		3	4



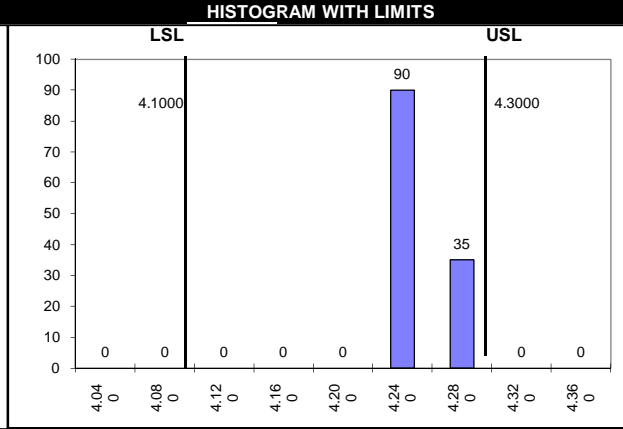
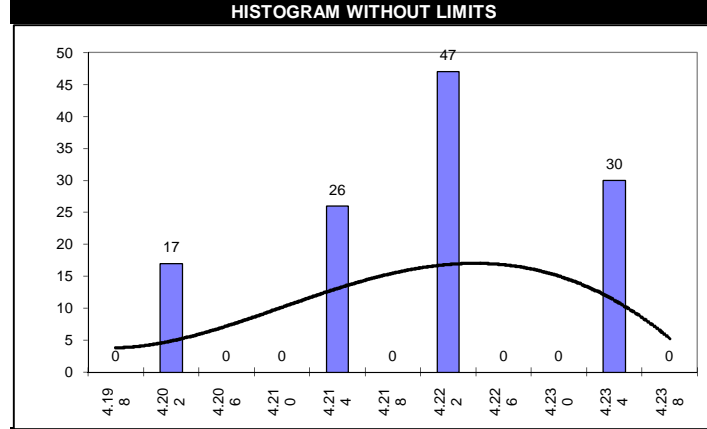
Supplier

HU LANE ASSOCIATE INC.

PROCESS CAPABILITY CERTIFICATION REPORT

(see if any notes are on page 2)

LOCATION	Plant	HSICHIH CITY,TAIPEI HSIEN,TAIWAN,R.O.C.		Dept:	0	Date:	2014/11/19	DESCRIPTIVE STATISTICS	VALUES
PART	Part number:	110 TYPE FEMALE TERMINALS		Part description	0			Number of readings	125
	Drawing number	6604151BSS		Eng. chg. level	2			Lower spec limit (LSL)	4.1000
TOOL	Tool number	0		# Cavities				Nominal	4.2000
DIMENSION	Description	W		Units	mm			Upper spec limit (USL)	4.3000
	SPEC	4.2	PLUS	0.1	MINUS	0.1		Total sum	527.3000
	Lwr Spec L	4.1	NOMINAL	4.2	Upr Spec L	4.3		Average readings (\bar{x})	4.2184



Average Range (R)	0.0236
D ₂ Value n = 4	2.0590
Upper capability index (CPU)	2.3731
Lower capability index (CPL)	3.4433
Capability index (C _p)	2.9082
Process Capability (C _{pk})	2.3731
Capability ratio (CR)	0.3439
Std Deviation (n-1)	0.0107
Std Deviation (n)	0.0106
Variance (n-1)	0.0001
Variance (n)	0.0001
Performance index (P _p)	3.1282
Performance ratio (PR)	0.3197
Performance index (P_{pk})	2.5526

	S U B G R O U P S																			
n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
R	4.2	4.22	4.22	4.22	4.22	4.23	4.21	4.23	4.22	4.23	4.22	4.22	4.21	4.21	4.20	4.22	4.23	4.22	4.22	4.22
E	4.23	4.21	4.22	4.21	4.23	4.22	4.22	4.22	4.22	4.22	4.22	4.21	4.23	4.22	4.23	4.22	4.22	4.22	4.22	4.21
A	4.21	4.23	4.21	4.23	4.22	4.20	4.21	4.22	4.20	4.20	4.20	4.23	4.20	4.21	4.22	4.22	4.20	4.21	4.21	4.21
D	4.22	4.23	4.22	4.23	4.23	4.21	4.22	4.22	4.21	4.21	4.21	4.23	4.23	4.20	4.23	4.22	4.21	4.24	4.22	4.21
I	4.24	4.22	4.22	4.22	4.21	4.23	4.20	4.22	4.20	4.23	4.23	4.22	4.21	4.23	4.20	4.22	4.20	4.22	4.21	4.24
N																				
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送審保證書

Part Name 零組件名稱	<u>110 TYPE FEMALE TERMINAL</u>	Cust. Part Number 零件號碼	
Shown on Drawing Number 所示圖紙編號	<u>604151</u>	Org. Part Number 組織零件編號	<u>6604151BSS</u>
Engineering Change Level 工程變更等級	<u>2.0</u>	Dated 日期	<u>2010/8/12</u>
Additional Engineering Changes 附加的工程變更		Dated 日期	
Safety and/or Government Regulation 安全規定 / 政府法規	<input type="checkbox"/> YES 是 <input checked="" type="checkbox"/> NO 否	Purchase Order No. 採購訂單號碼	Weight (kg) 重量 (公斤) <u>0.00045kg</u>
Checking Aid No. 輔助檢具號碼	Checking Aid Engineering Change Level 輔助檢具工程變更版次	Dated 日期	

ORGANIZATION MANUFACTURING INFORMATION

組織製造廠訊息

HU LANE ASSOCIATE INC.

Organization Name and Supplier Code / Vendor Code
組織名稱和供應商 / 供應商代碼
#REF!

Street Address 街道地址
#REF!

City 城市 Region 地區 Postal Code 郵遞區號 Country 國家

CUSTOMER SUBMITTAL INFORMATION

提交顧客訊息

WWELEKTRONIK SPOLKA Z OGRANICZONA

Customer Name / Division
顧客名稱 / 部門

Buyer / Buyer Code 採購人員 / 採購人員代碼

Application 適用範圍

MATERIALS REPORTING 材料報告

Has customer-required Substances of Concern information been reported?
顧客要求的受關注物質訊息是否已報告? Yes 是 No 否 n/a 無

Submitted by IMDS or other customer format 透過IMDS報告或用顧客規定的其他表格報告:

Are polymeric parts identified with appropriate ISO marking codes?
塑膠件是否已標註相應的ISO標示編碼? Yes 是 No 否 n/a 無

REASON FOR SUBMISSION 送件理由

<input checked="" type="checkbox"/> Initial submission 首次提交	<input type="checkbox"/> Change to Optional Construction or Material 物料變更
<input type="checkbox"/> Engineering Change (s) 工程變更	<input type="checkbox"/> Sub-Supplier or Material Source Change 供應商或材料來源變更
<input type="checkbox"/> Tooling : Transfer , Replacement , Refurbishment , or additional 工裝 : 轉移、更換、整修或添加	<input type="checkbox"/> Change in Part Processing 零件製程變更
<input type="checkbox"/> Correction of Discrepancy 差異之修正	<input type="checkbox"/> Parts produced at Additional Location 新廠生產之零件
<input type="checkbox"/> Tooling Inactive > than 1 year 工、模具停產超過一年	<input type="checkbox"/> Other - please specify below 其它 - 請敘述

REQUESTED SUBMISSION LEVEL (Check one) 要求送件層級 (選一項)

Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.
第一級只提交保證書 (若指定為外觀項目, 還應提交外觀核准報告)。

Level 2 - Warrant with product samples and limited supporting data submitted to customer.
第二級提交保證書、產品樣品及部份資料。

Level 3 - Warrant with product samples and complete supporting data submitted to customer.
第三級提交保證書、產品樣品及完整資料。

Level 4 - Warrant and other requirements as defined by customer.
第四級提交保證書、客戶指定資料。

Level 5 - Warrant with product samples and complete supporting data reviewed at supplier's manufacturing location.
第五級保證書、產品樣品和完整資料保留在組織製造現場, 供審查時使用。

SUBMISSION RESULTS 送件結果

dimensional measurements 尺寸量測 material and functional tests 材料及性能測試 appearance criteria 外觀評估 statistical process package 統計數據

These results meet all drawing and specification requirements 以上結果是否符合所有圖面及規格要求:
 Yes 是 No (If "NO" - Explanation Required) 否 (如果「否」務必說明)

MOLD模型 / Cavity多模穴 / Production Process製造流程:

DECLARATION 聲明

I affirm that the samples represented by this warrant are representative of our parts which were made by a process that meets all PPAP Manual 4th Edition Requirements. I further affirm that these samples were produced at the rate of 30k / 1 hrs. I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from this declaration below.
本人確定本保證所提出之樣品係本廠承製零件之代表, 依PPAP第四版要求所生產, 我保證此樣品是出於數量所完成的; 所有符合性證明文件都已歸檔備妥, 以供審查, 並說明任何與此聲明有偏差的內容, 見下文。

EXPLANATION/COMMENTS 說明 / 建議:

Is each Customer Tool properly tagged and numbered? 每種顧客的工具是否都已適當加標籤和編號? Yes 是 No 否

Organization Authorized Signature 經授權的組織代表簽名 蔣莉 Date 日期 2014/11/19

Print Name 印刷體姓名 蔣莉 Phone No. 電話 025-52774425 Fax 傳真 025-52771366

Title 職務 QA SUPERVISOR E-mail jiangli@hulane.com.cn

FOR CUSTOMER USE ONLY (IF APPLICABLE) 顧客專用欄 (若適用)

PPAP Warrant Disposition 保證書處理意見: Approved 核准 Rejected 拒收 Other 其他:

Customer Signature 經授權的組織代表簽名 _____ Date 日期 _____

Print Name 印刷體姓名 _____ Customer Tracking Number 顧客追蹤編號 _____