



承認書

SPECIFICATION FOR APPROVAL

客 戶: 鴻海精密工業(股)公司

品 名: 2.5mm WTB Wafer Conn. T/H S/R R/A Type 4P

宏致料號: 50323-00471-001

鍍層厚度: Gold Flash (0.6u-0.8u)

端子: 磷銅

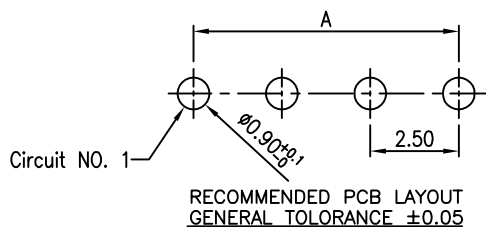
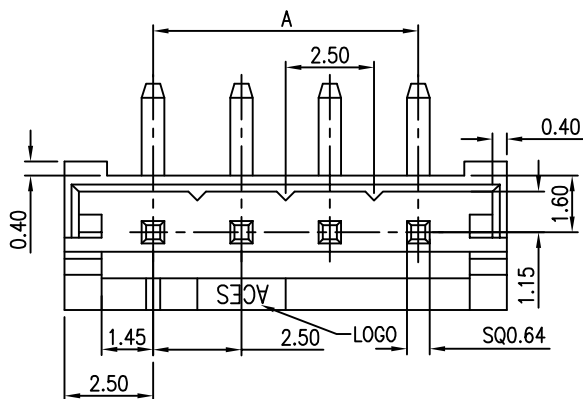
膠體: Nylon HTN (cap-Nylon HTN)

承認日期	
部 門	
承 認 欄	

宏致電子股份有限公司
Aces Electronic Co., Ltd.

地 址 : 桃園縣中壢市東園路13號
電 話 : 03-4632808
業務代表 : 蔡睿庭 分機1834

日期 : 2020/11/6



NOTES:

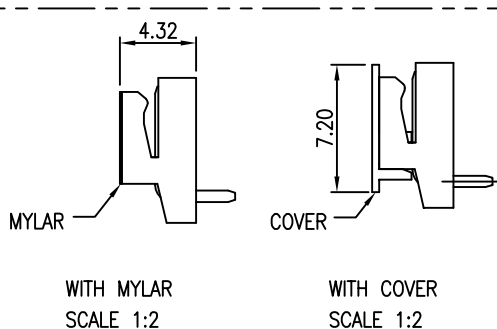
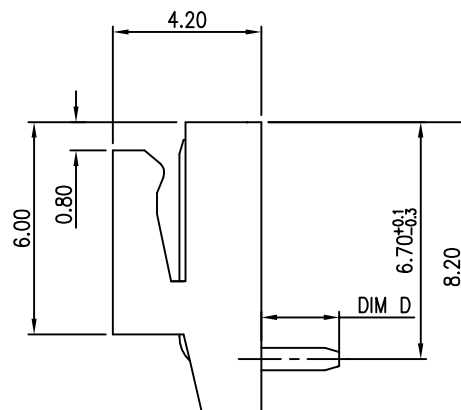
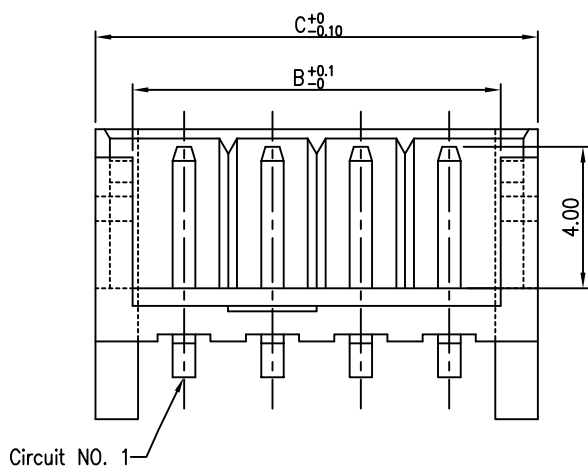
- MATERIAL:
 - HOUSING: HALOGEN FREE PLASTIC, HIGH TEMP., UL94V-0;
 - CONTACT: COPPER ALLOY
- FINISH:
 - CONTACT: 50u" MIN. NICKEL UNDERPLATING OVERALL.
 - N: 100u" MIN. MATT TIN PLATING OVERALL,
 - 1: GOLD FLASH OVERALL,
- SPEC. PLS. REFER TO PS-50323-xxxx-xxx.
- PACKAGE PLS. REFER TO 88334-XXXX-TRP

50323-XXX X X-XXX
Q'ty OF CKT
Packing
0:TAPE&REEL
4:TAPE&REEL WITH MYLAR
7:TAPE&REEL WITH COVER

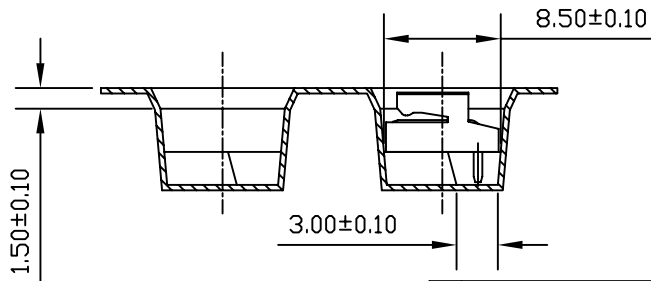
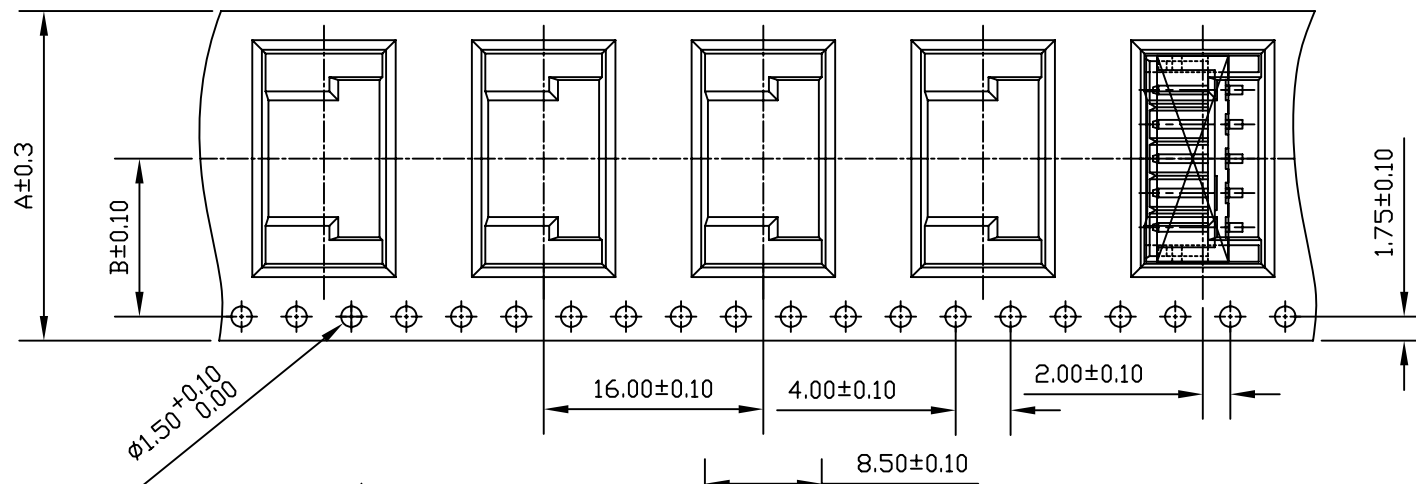
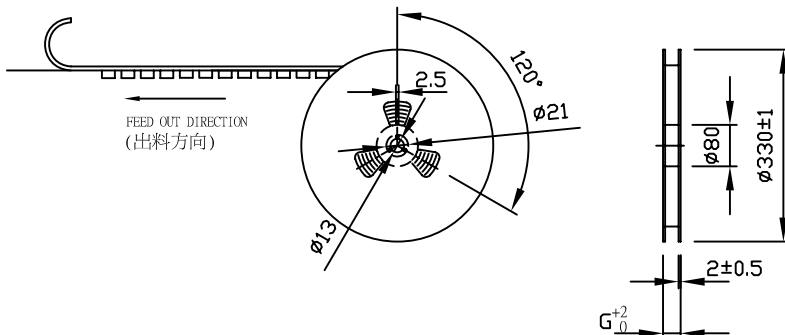
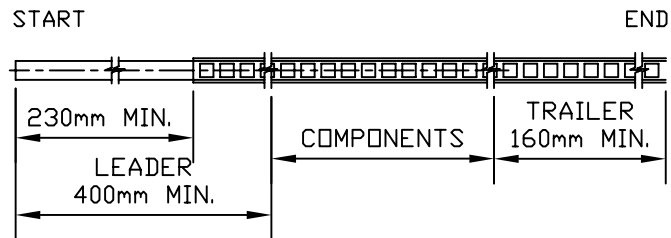
Others	Housing color	HALOGEN FREE	DIM D
001	BLACK	HF	2.2
002	BLACK	HF	1.2

PLATING :
N:MATT TIN
1:GOLD FLASH OVER ALL

CKT	DIM A	DIM B	DIM C
2	2.5	5.4	7.5
3	5.0	7.9	10.0
4	7.5	10.4	12.5
5	10.0	12.9	15.0
6	12.5	15.4	17.5
7	15.0	17.9	20.0
8	17.5	20.4	22.5
9	20.0	22.9	25.0
10	22.5	25.4	27.5
11	25.0	27.9	30.0
12	27.5	30.4	32.5
13	30.0	32.9	35.0
14	32.5	35.4	37.5
15	35.0	37.9	40.0



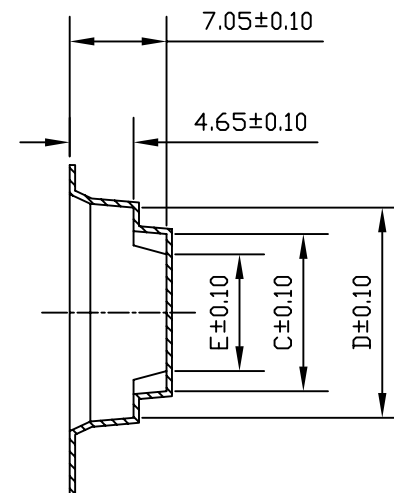
一般公差 TOLERANCES X ±0.5 XX ±0.15 X ±0.25 XXX ±0.1 ANGLES ±2°		宏致電子股份有限公司 Aces Electronic Co.,Ltd.	
檢驗尺寸標示 SYMBOLS ① ② INDICATE CLASSIFICATION DIMENSION	品名 (TITLE) 2.5mm W-T-B WAFER R/A T/H TYPE	製圖 (DR) 20/11/06 GUOFEI	審核 (CHKD) XUZHUYONG
① MARK IS CRITICAL DIM. ② MARK IS MAJOR DIM.	圖號 (DWG.NO) 50323-XXXXX-XXX	核准 (APPD) XUZHUYONG	
表面處理 (FINISH)	比例 (SCALE) 5:1	單位 (UNITS) mm	張數 (SHEET) 1 OF 1 SIZE A4 REV B



CKT.	A	B	C	D	E	G
02	16.00	7.50	3.95	7.80	1.00	16.40
03	24.00	11.50	6.45	10.30	3.50	24.40
04	24.00	11.50	8.95	12.80	6.00	24.40
05	24.00	11.50	11.45	15.30	8.50	24.40

NOTES:

- 10 SPROCKET HOLE PITCH CUMULATIVE TOLERANCE:±0.20mm
- CARRIER CAMBER NOT TO EXCEED 1mm IN 250mm.
- ALL DIMENSIONS MEET EIA-481-3 REQUIREMENTS.
- MATERIAL: BLACK ANTI-STATIC POLYSTYRENE.
- THICKNESS: 0.4 ± 0.05 mm.
- PACKING LENGHT PER 22" REEL : 27 METERS.
- COMPONENT LOAD PER 13" REEL : 500 PCS.
- 成品擺放方向應同向.



一般公差 TOLERANCES X ±0.5 XX ±0.15 X ±0.25 XXX ±0.10 ANGLES ±1°		宏致電子股份有限公司 Aces Electronic Co.,Ltd.	
檢驗尺寸標示 SYMBOLS Ⓢ Ⓢ INDICATE CLASSIFICATION DIMENSION	品名 (TITLE) EMBOSSED TAPE PACKING	製圖 (DR) 06/04/10	WGCH
Ⓢ MARK IS CRITICAL DIM. Ⓢ MARK IS MAJOR DIM.	圖號 (DWG.NO) 88334-XXXX-TRP	審核 (CHKD) JASON	
表面處理 (FINISH)	比例 (SCALE) 2:1	單位 (UNITS) mm	核准 (APPD) JASON
修訂 REV	修改摘要 REVISION DESCRIPTION	日期 DATE	簽名 SIGNATURE
D ECN-0902318 新增2PIN (APD970323)		08/09/11	liuwei
C 新增6PIN (ECN-0804034)		08/04/09	EVEN
E 修改摘要			

張數 (SHEET) 1 OF 2	SIZE A4	REV D
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SPECIFICATION

宏致電子股份有限公司

桃園縣中壢市東園路13號

No.13, Dongyuan Rd., Jhongli City,

Taoyuan County 320, Taiwan (R.O.C.)

TEL: +886-3-463-2808

FAX: +886-3-463-1800

SPEC. NO.: PS-50323-xxxxx-xxx

REVISION: C

PRODUCT NAME: 2.5MM PITCH WTB (WAFER) CONNECTOR

PRODUCT NO: 50323、50325 series

PREPARED: CHENYA DATE: 2015.06.01	CHECKED: BRAVE DATE: 2015.06.01	APPROVED: FRANK DATE: 2015.06.01
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Aces P/N: **50323** series

TITLE: **2.5MM PITCH WTB (WAFER) CONNECTOR**

RELEASE DATE: 2015/06/01

REVISION: C

ECN No: ECN-1506085

PAGE: **2** OF **9**

1	REVISION HISTORY	3
2	SCOPE	4
3	APPLICABLE DOCUMENTS.....	4
4	REQUIREMENTS	4
5	PERFORMANCE	4
6	PRODUCT QUALIFICATION AND TEST SEQUENCE.....	8
7	INSERTION & WITHDRAWAL FORCE(MATING / UNMATING FORCES).....	9



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ECN No: ECN-1506085

PAGE: **3** OF **9**

1 Revision History

Rev.	ECN #	Revision Description	Prepared	Date
O	ECN-0812218	NEW RELEASE	Jason	2008.12.25
A	ECN-1005190	REVISE SPEC	Violet	2010.05.12
B	ECN-1401180	ADD WORKING VOLTAGE	XUFEI	2014.01.10
C	ECN-1506003	REVISE SPEC	CHENYA	2015.06.01

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PAGE: **4** OF **9**

2 SCOPE

This specification covers performance, tests and quality requirements for **2.5mm pitch WTB (wafer) Connector . ACES P/N:50323,50325 series.**

3 APPLICABLE DOCUMENTS

EIA-364 ELECTRONICS INDUSTRIES ASSOCIATION

4 REQUIREMENTS

4.1 Design and Construction

Product shall be of design, construction and physical dimensions specified on applicable product drawing.

4.2 Materials and Finish

4.2.1 Contact: High performance copper alloy (**BRASS**)

Finish: (a) Contact Area: **Pure Tin**

(b) Under plate: **Nickel-plated all over**

(c) Solder area: **Pure Tin plated**

4.2.2 Housing: Thermoplastic or Thermoplastic High Temp., UL94V-0

4.3 Ratings

4.3.1 Working voltage less than 36 volts (per pin)

4.3.2 Voltage: **250 Volts (AC ,DC per pin)**

4.3.3 Current: **3 Amperes (per pin)**

4.3.4 Operating Temperature : **-25°C to +85°C**

5 Performance

5.1. Test Requirements and Procedures Summary

Item	Requirement	Standard
Examination of Product	Product shall meet requirements of applicable product drawing and specification.	Visual, dimensional and functional per applicable quality inspection plan.

TITLE: 2.5MM PITCH WTB (WAFER) CONNECTOR

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ECN No: ECN-1506085

PAGE: **5** OF **9**

ELECTRICAL		
Item	Requirement	Standard
Low-signal Level Contact Resistance	55 m Ω Max.(initial)per contact 20 m Ω Max. Change allowed	Mate connectors, measure by dry circuit, 20mV Max., 100mA Max. (EIA-364-23)
Insulation Resistance	500 M Ω Min.	Unmated connectors, apply 500 V DC between adjacent terminals. (EIA-364-21)
Dielectric Withstanding Voltage	300 VAC Min. at sea level for 1 minute. No discharge, flashover or breakdown. Current leakage: 1 mA max.	Test between adjacent contacts of unmated connectors. (EIA-364-20)
Temperature rise	30°C Max. Change allowed	Mate connector: measure the temperature rise at rated current until temperature stable. The ambient condition is still air at 25 °C (EIA-364-70 METHOD 1,CONDITION 1)
MECHANICAL		
Item	Requirement	Standard
Durability	50 cycles.	The sample should be mounted in the tester and fully mated and unmated the number of cycles specified at the rate of 25.4 $\pm$ 3mm/min. (EIA-364-09)
Mating / Unmating Forces	Mating Force: See the table(8) Unmating Force: See the table(8)	A Housing with crimped contacts and the sample shall be mated/Unmated on the same axis. Operation Speed : 25.4 $\pm$ 3 mm/minute.. Measure the force required to mate/Unmate connector. (EIA-364-13)
Contact Retention Force	300gf Min.	Operation Speed : 25.4 $\pm$ 3 mm/minute.. Measure the contact retention force with Tensile strength tester.

TITLE: 2.5MM PITCH WTB (WAFER) CONNECTOR

RELEASE DATE: 2015/06/01

REVISION: C

ECN No: ECN-1506085

PAGE: **6** OF **9**

MECHANICAL

Item	Requirement	Standard
Vibration	1 μ s Max.	The electrical load condition shall be 100 mA maximum for all contacts. Subject to a simple harmonic motion having amplitude of 0.76mm (1.52mm maximum total excursion) in frequency between the limits of 10 and 55 Hz . The entire frequency range, from 10 to 55 Hz and return to 10 Hz , shall be traversed in approximately 1 minute. This motion shall be applied for 2 hours in each of three mutually perpendicular directions. (EIA-364-28 Condition I)
Shock (Mechanical)	1 μ s Max.	Subject mated connectors to 50 G's (peak value) half-sine shock pulses of 11 milliseconds duration. Three shocks in each direction shall be applied along the three mutually perpendicular axes of the test specimen (18 shocks). The electrical load condition shall be 100mA maximum for all contacts. (EIA-364-27, test condition A)

ENVIRONMENTAL

Resistance to Wave Soldering Heat	See Product Qualification and Test Sequence Group 8	Solder Temp. : 245 $\pm$ 5 $^{\circ}$ C, 10 $\pm$ 0.5sec.
Thermal Shock	See Product Qualification and Test Sequence Group 4	Mate module and subject to follow condition for 5 cycles. 1 cycles: -25 +0/-3 $^{\circ}$ C, 30 minutes +85 +3/-0 $^{\circ}$ C, 30 minutes (EIA-364- 32 , test condition A)
Humidity	See Product Qualification and Test Sequence Group 4	Mated Connector 40°C$\pm$3°C , 90~95% RH, 96 hours . (EIA-364-31, Condition A, Method II)
Temperature life	See Product Qualification and Test Sequence Group 5	Subject mated connectors to temperature life at 85°C for 96 hours . Measure Signal. (EIA-364-17, Test condition A)



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TITLE: **2.5MM PITCH WTB (WAFER) CONNECTOR**

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REVISION: C

ECN No: ECN-1506085

PAGE: **7** OF **9**

ENVIRONMENTAL

Item	Requirement	Standard
Salt Spray (Only For Gold Plating)	See Product Qualification and Test Sequence Group 6	Subject mated/unmated connectors to 5% salt-solution concentration, 35°C (I) Gold flash for 8 hours (II) Gold plating 5 u" for 96 hours. (EIA-364-26)
Solder ability	Solder able area shall have minimum of 75% solder coverage.	Subject the test area of contacts into the flux for 5-10 sec. And then into solder bath, Temperature at 245 ±5°C, for 4- 5 sec. (EIA-364-52)

Note. Flowing Mixed Gas shall be conduct by customer request.

TITLE: 2.5MM PITCH WTB (WAFER) CONNECTOR

RELEASE DATE: 2015/06/01

REVISION: C

ECN No: ECN-1506085

PAGE: **8** OF **9**

6 PRODUCT QUALIFICATION AND TEST SEQUENCE

Test or Examination	Test Group									
	1	2	3	4	5	6	7	8	9	10
	Test Sequence									
Examination of Product				1、7	1、6	1、4		1、3		
Low-signal Level Contact Resistance		1、5	1、4	2、10	2、9	2、5				
Insulation Resistance				3、9	3、8					
Dielectric Withstanding Voltage				4、8	4、7					
Temperature rise	1									
Mating / Unmating Forces		2、4								
Durability		3								
Contact Retention Force								4		
Vibration			2							
Shock (Mechanical)			3							
Thermal Shock				5						
Humidity				6						
Temperature life					5					
Salt Spray						3				
Solder ability							1			
Resistance to Wave Soldering Heat								2		
Sample Size	2	4	4	4	4	4	2	4		

TITLE: 2.5MM PITCH WTB (WAFER) CONNECTOR

RELEASE DATE: 2015/06/01

REVISION: C

ECN No: ECN-1506085

PAGE: **9** OF **9**

7 INSERTION & WITHDRAWAL FORCE(Mating / Unmating Forces)

NO. OF Ckt.	At Initial		At 50th
	I.F(N max.)	W.F.(N min.)	W.F.(N min.)
2	19.6	3.9	2.0
3	24.5	4.9	2.9
4	29.4	5.9	3.9
5	34.3	6.9	4.9
6	39.2	7.8	5.9
7	44.1	8.8	6.9
8	49.0	9.8	7.8
9	53.9	10.8	8.8
10	58.8	11.8	9.8
11	63.7	12.7	10.8
12	68.6	13.7	11.8
13	73.5	14.7	12.7
14	78.4	15.7	13.7
15	83.3	16.7	14.7