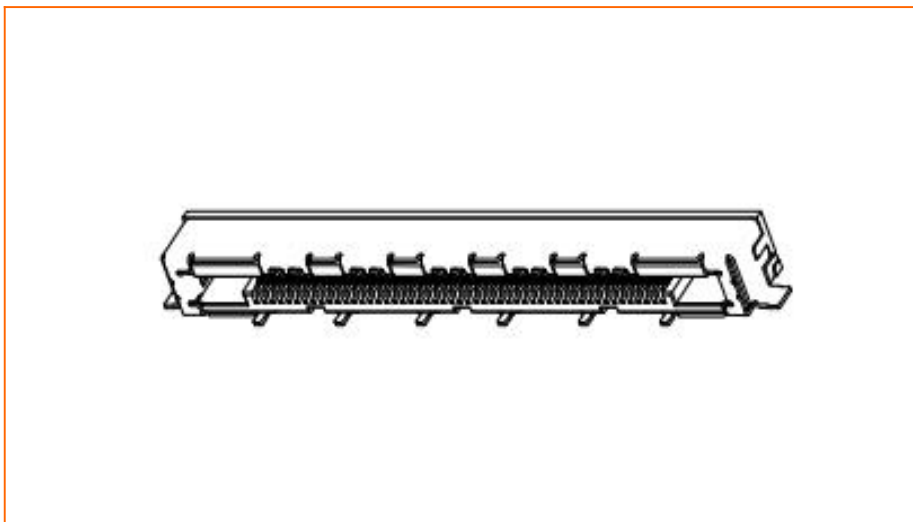


**Product Specification**

深圳市臺華達科技有限公司

**SHENZHEN SHI THD Electronics Co., Ltd.**



Product.No

**THD-LVDS – 51R – GF**

**Pitch=0.5mm Wafer Connector (Front-Flip Lower Contact)**

A	Release
Rev.	Description
<b>Approved Signatures</b>	
■Prepared By : JIM	■Date: 2012.05.24
■Checked By : JIM	■Date: 2012.05.24
■Approved By : 黄德进	■Date: 2012.05.24

## ■ Scope

This specification covers the 1.0 mm Pitch Wafer Connector **THDLVDS** series.

## ■ Ordering information

### **THDLVDS - 51 R - GF**

①                      ②                      ③                      ④

①	Series name : THDLVDS	④	Plating : GF= 1μ"~3μ" Gold Flash G3= 3μ" Gold over Nickel G5= 5μ" Gold over Nickel SN= Tin(Lead Free) over Nickel
②	Number of contacts : 51		
③	PIN		

## ■ Rating

Item	Standard
Voltage Rating (Max.)	200V AC
Current Rating (Max.)	1.0A DC
Operating Temperature Range	-55°C ~ +85°C (Including terminal temperature rise)

## ■ Material

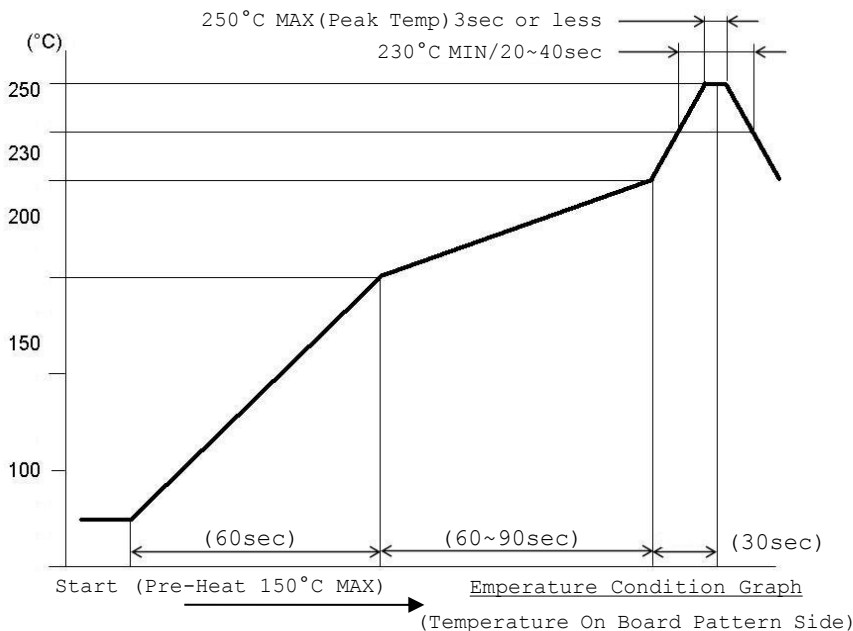
Housing	Actuator	Terminal	Solder pin	SHELL
L.C.P (UL94V-0)	L.C.P (UL94V-0)	Copper alloy	Copper alloy	Copper alloy

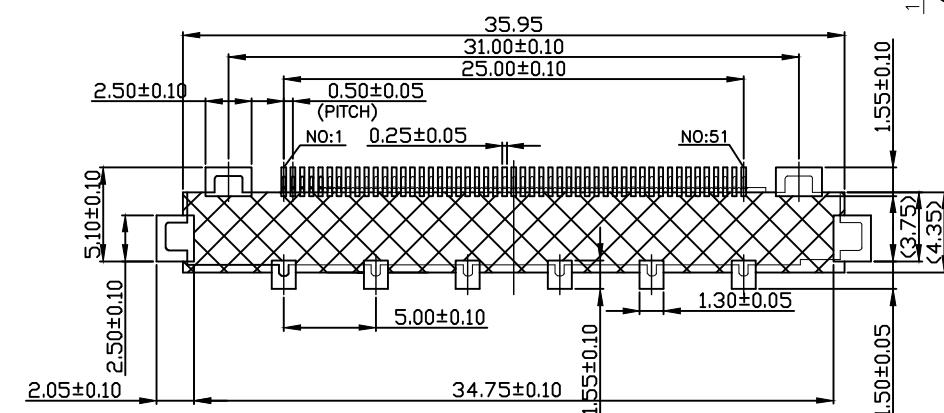
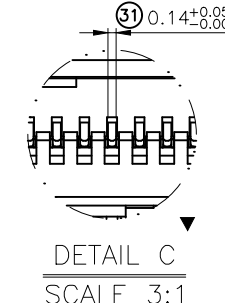
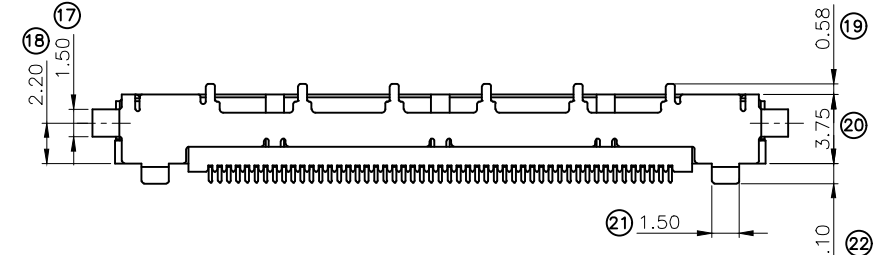
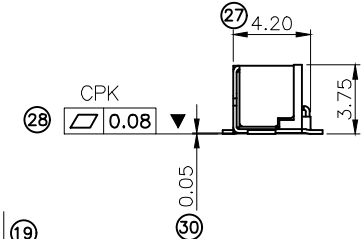
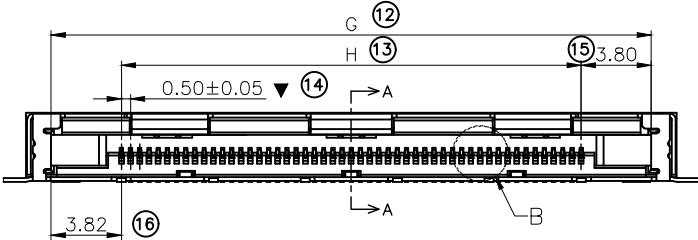
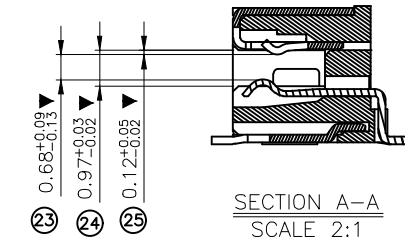
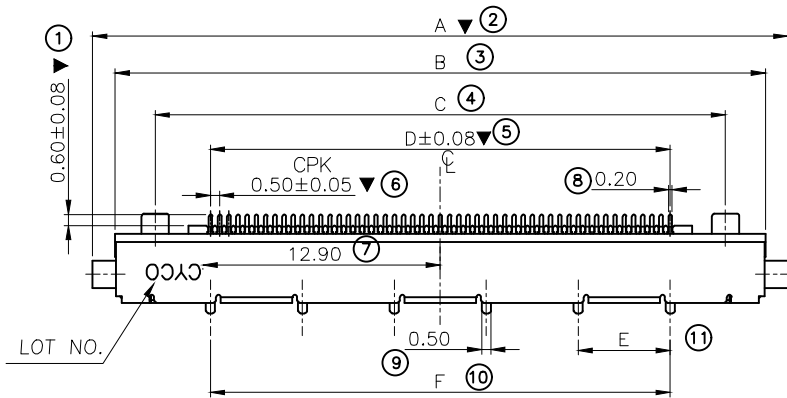
## ■ Performance

Item	Test Condition	Specification	
Contact Resistance	Mate applicable FPC and measure by dry circuit, 20mV Max, 1mA.	40 mΩ Max.	
Insulation Resistance	Mate applicable FPC and apply 500V DC between adjacent terminal or ground.	100 MΩ Min.	
Dielectric Strength	Mate applicable FPC, apply 250V AC(rms) for 1 minute between adjacent terminal or ground.	No Breakdown	
FPC Retention Force	Insert the actuator, pull the FPC at a rate of 25±3mm per minute.	Per pin x 2N MAX.	
Terminal Retention Force	Apply axial pull out force at the rate of 25±3 mm/minute on the terminal assembled in the housing.	Per pin x 0.15Kgf {1.5N} Min.	
Vibration	Mate connectors and subject to the following vibration conditions, for period of 2 hours in each of 3 mutually perpendicular axes, passing DC 1mA during the test.  Amplitude : 1.5mm P-P Frequency : 10~55~10 Hz in 1 minute. Duration : 2 hours in each of X,Y,Z axes.	Appearance	No Damage
		Contact Resistance	100 mΩ Max.
		Discontinuity	1 μsec Max.
Shock	Mate applicable FPC and subject to the following shock conditions. 3 times of shocks shall be applied for each 6 directions along 3 mutually perpendicular axes, passing DC 1 mA current during the test.  Peak value : 490m/s <sup>2</sup> {50G}	Appearance	No Damage
		Contact Resistance	100 mΩ Max.
		Discontinuity	1 μsec Max.
Salt Spray	Mate applicable FPC and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water, after which the specified measurements shall be performed.  NaCl solution Concentration : 5 ± 1% Spray time : 48 ± 4 hours Ambient temperature : 35 ± 2°C	Appearance	No Damage
		Contact Resistance	100 mΩ Max.

Item	Test Condition	Specification	
Heat Resistance	Mate applicable FPC and expose to 85±2°C for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed.	Appearance	No Damage
		Contact Resistance	100 mΩ Max.
Cold Resistance	Mate applicable FPC and expose to -40±2°C for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed.	Appearance	No Damage
		Contact Resistance	100 mΩ Max.
Humidity	Mate applicable FPC and expose to 60 ± 2°C, relative humidity 90 to 95% for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed.	Appearance	No Damage
		Contact Resistance	100 mΩ Max.
		Dielectric Strength	No Breakdown
Insulation Resistance		Insulation Resistance	50 MΩ Min.
Temperature Rise	Mate applicable FPC and measure the temperature rise of contact when the maximum AC rated current is passed.	Temperature rise	30°C Max.
Temperature Cycling	Mate applicable FPC and subject to the following conditions for 5 cycles. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. 1 cycle a) -55±3°C      30minutes b) +85±3°C      30minutes (Transit time shall be with in 3 minutes)	Appearance	No Damage
		Contact Resistance	100 mΩ Max.
Solderability	Tip of solder tails and fitting nails into the molten solder (held at 245±5°C) up to 0.1mm from the bottom of the housing for 3±0.5 seconds.	Solder Wetting	95% of immersed area must show no voids, pin holes.
Resistance to Soldering	When reflowing refer to Infrared reflow condition <u>Soldering iron method</u> 0.2mm from terminal tip and fitting nail tip. Soldering time : 5 seconds Max. Solder temperature : 370~400°C	Appearance	No Damage

### ■ Recommended Temperature Profile





NOTES:

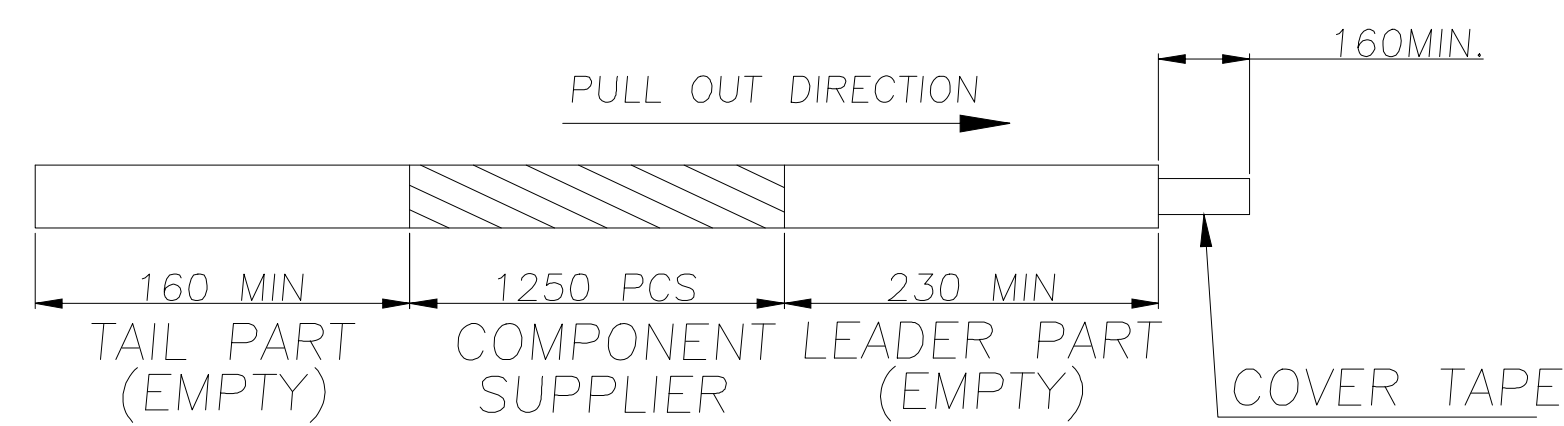
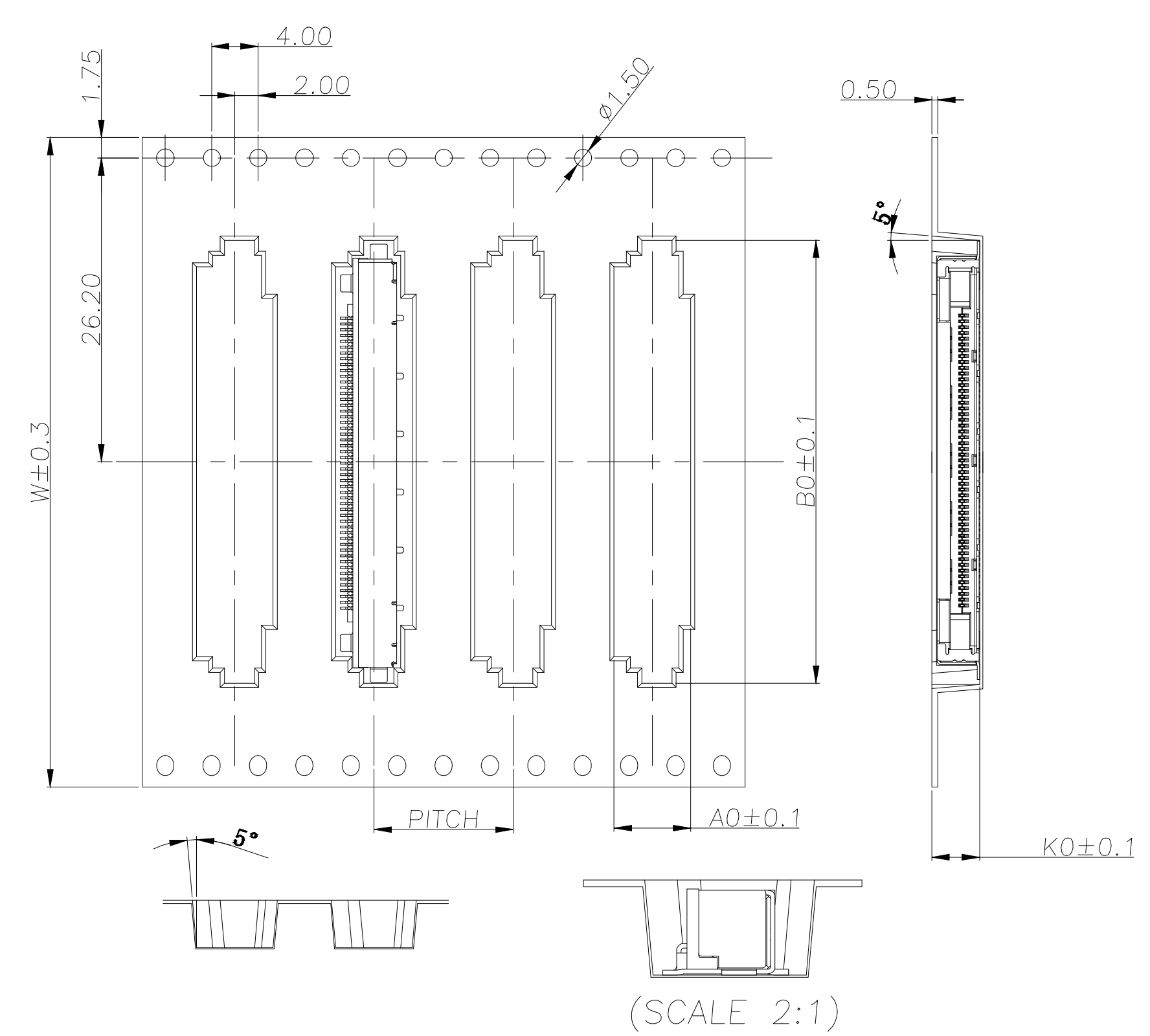
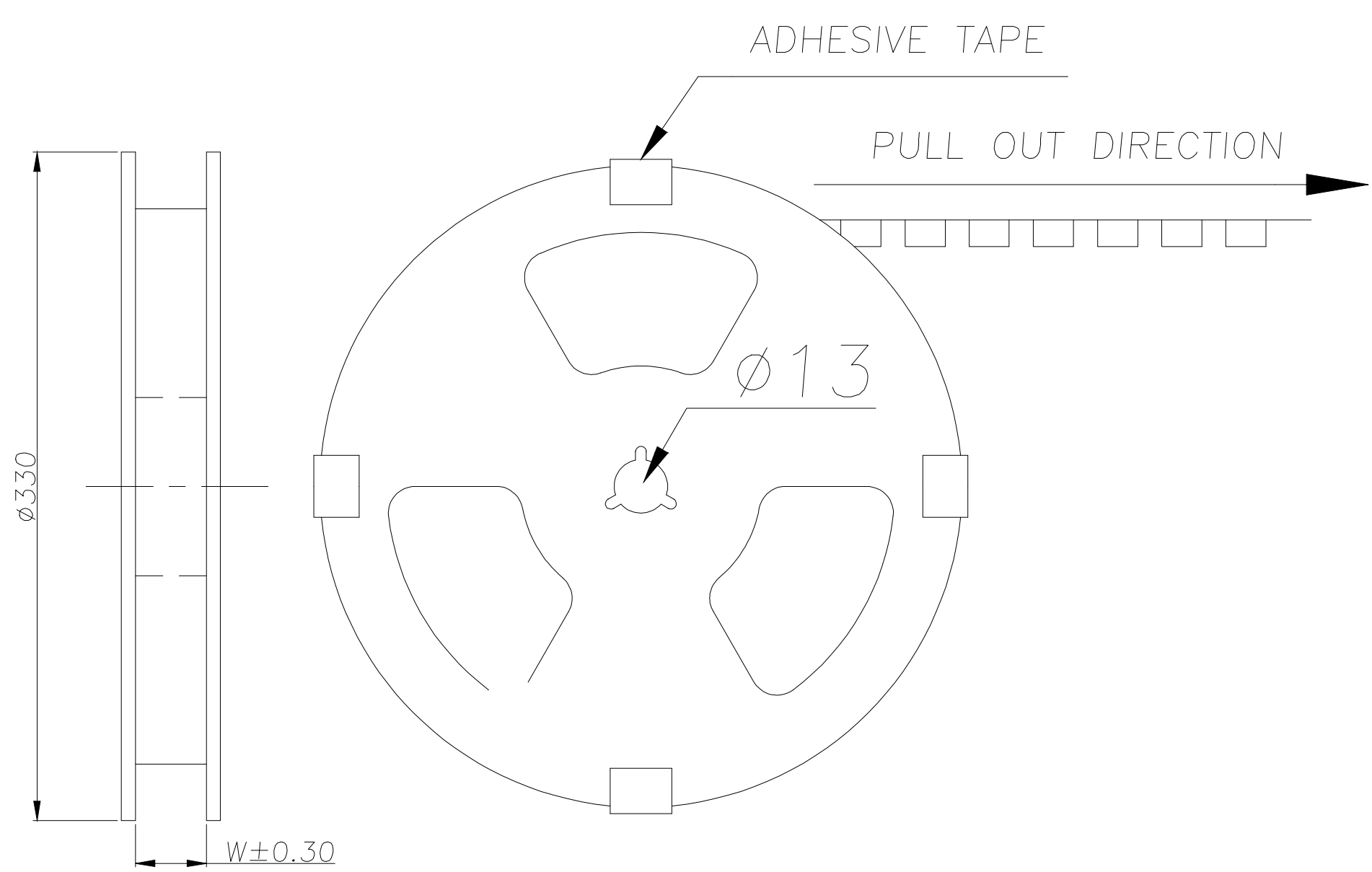
1. MATERIAL:
  - 1.1 HOUSING: THERMOPLASTIC, HIGH TEMP. UL94V-0; COLOR:BLACK.
  - 1.2 CONTACT: COPPER ALLOY,T=0.20.
  - 1.3 SHELL:STAINLESS STEEL,T=0.20.
2. PLATING:
  - 2.1 CONTACT: UNDER PLATING: 50u" MIN. NICKEL OVERALL. PLATING: Au 5u" MIN
  - 2.2 SHELL: UNDER PLATING: 20u"MIN. NICKEL OVERALL. PLATING: MATTE PURE TIN 70u" MIN.
3. " " IMPORTANT DIMENSION

NO.OF PIN	DIMENSION										
	A±0.15	B±0.15	C±0.15	D±0.15	E±0.1	F±0.1	G <sup>+0.10</sup> / <sub>0.00</sub>	H±0.15	I	J	
51	37.8	35.35	31.00	25.00	5.00	25.00	32.65	25.00	35.95	34.75	
41	32.8	30.35	26.00	20.00	4.00	20.00	28.65	20.00	30.95	29.75	
1	HOUSING	LCP, BLACK				1					
2	SHELL	SUS304R-3/4H T=0.2				1	20u"min 镍底 70u"min 雾锡				
3	TERMINAL	C5210R-EH T=0.2				51	50u"min 镍底 5u"min 半金雾锡				
ITEM	DESC.	MATERIAL				Q'T	REMARKS				

**深圳市台华达科技有限公司**  
**SHENZHENSHI THD ELECTRONICS CO., LTD.**

GENERAL TOLERANCE UNLESS OTHERWISE SPECIFIED X.X ±0.25 X.XX ±0.15 X.XXX ±0.1 ANG. ±3°	DRAWN <i>Jim</i> 2012.05.24 CHECKED <i>Jim</i> 2012.05.24 APPROVED 黄德进 2012.05.24	PART NO. THD-LVDS-51R-GF TITLE: 0.5 PITCH 51P LVDS CONN. LOWER CONTACT H=3.75mm
SHEET 1/2	UNIT MM	SCALE 1:1

A Release 黄德进 2012.05.24  
 REV. REVISIONS CHK DATE



NO. OF CONTACT	P/N	W	A0	B0	K0	PITCH	PCS/REEL
51	THD-LVDS-51R-GF	56.0	6.6	38.2	4.1	12.0	1000 PCS

 深圳市台华达科技有限公司  
SHENZHENSHI THD ELECTRONICS CO., LTD.

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE X.X ±0.25 X.XX ±0.20 X.XXX ANG. ±2'		APPROVED JIM15.01.06	TITLE LVDS 0.5PITCH 51P H=3.75 CONN. (CUSTOMER DRAWING)	
A 新版图面发行		CHECKED JIM15.01.06	DRAWING NO. THD-LVDS-51R-GF	
05-11-2013		DRAWN JIM15.01.06	PAGE 4	
REV	DESCRIPTION/ECN NO.	DATE	UNIT mm	SIZE A4
			PART NO. 101002-XX0510	REV A
				SHEET 4/4
				SCALE 1:1

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