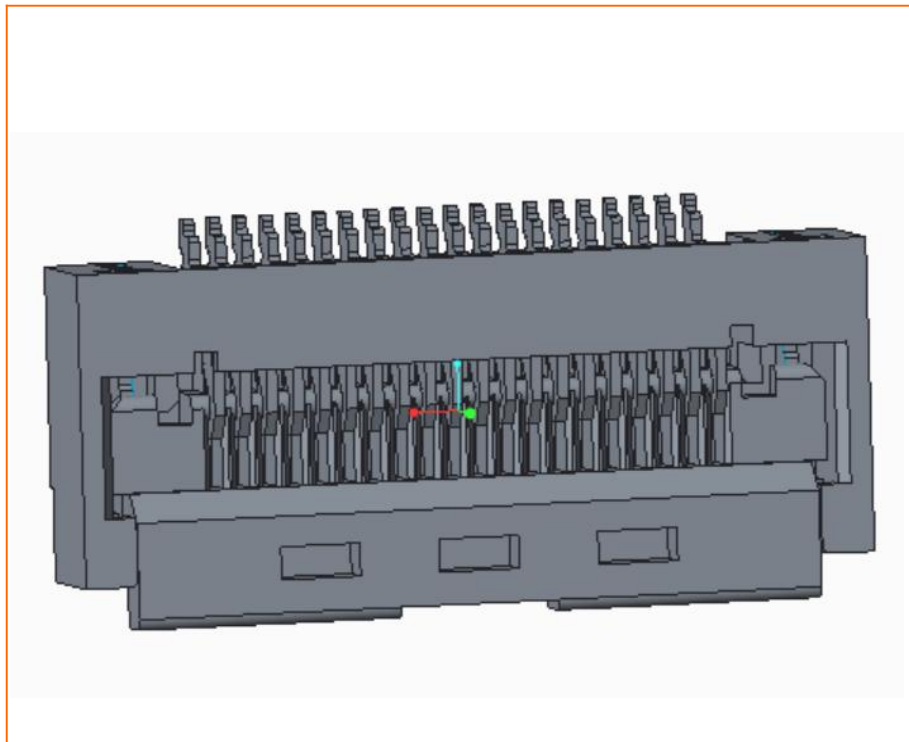


**Product Specification**

深圳臺華達科技有限公司

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



Product.No

**THD0525 – xxCL – GF**

**Pitch=0.50mm,H=2.5 mm FPC Connector (Front-Flip Lower Contact)**

A	Release
Rev.	Description

**Approved Signatures**

■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 0.5 mm Pitch FPC Connector **THD0525** series.

## ■ Ordering information

### **THD0525 - xx CL - GF**

①                      ②                      ③                      ④

①	Series name : THD0525	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 : 4 TO 60		
③	Contact type : CL:Lower contact CU:Upper contact		

## ■ Rating

Item	Standard
Voltage Rating (Max.)	50V AC
Current Rating (Max.)	0.5A DC
Operating Temperature Range	-55°C ~ +85°C (Including terminal temperature rise)

## ■ Material

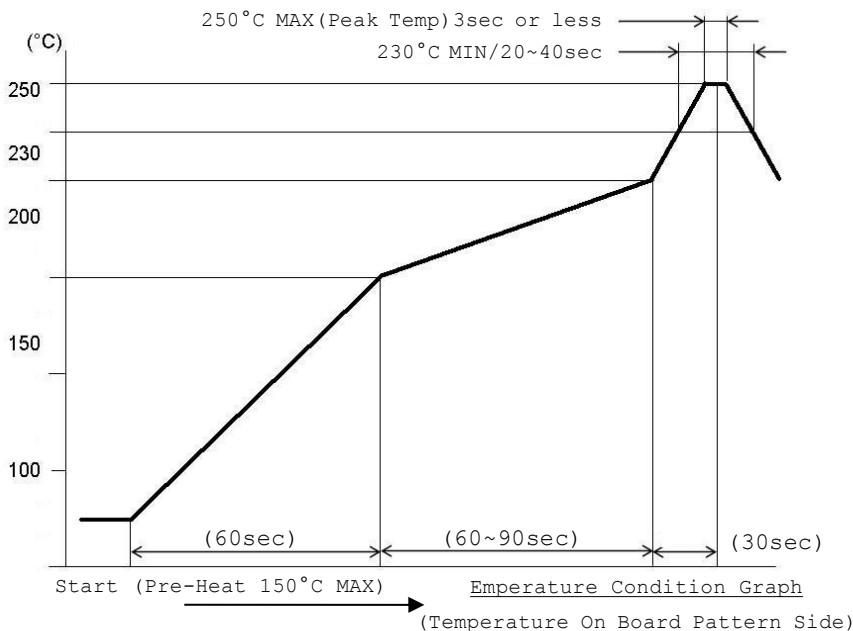
Housing	Actuator	Terminal	Solder pin	Plating
L.C.P (UL94V-0)	L.C.P (UL94V-0)	Copper alloy	Copper alloy	1μ"~3μ" Gold over Nickel
Color : Black	Color : Black			

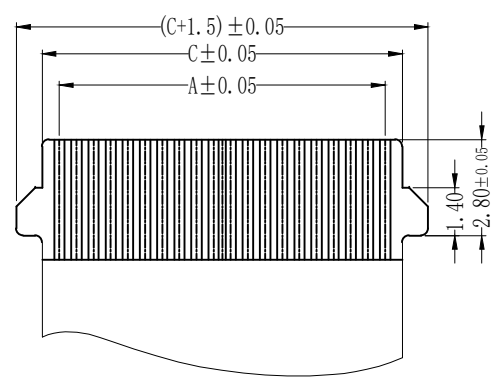
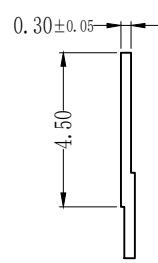
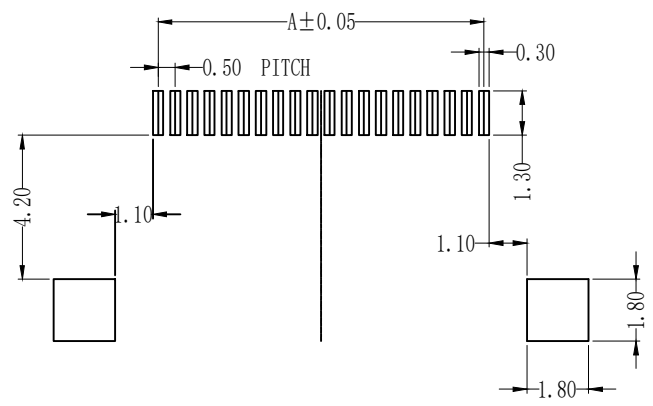
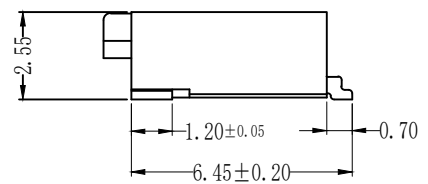
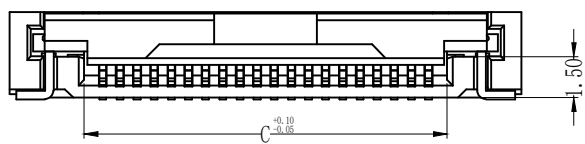
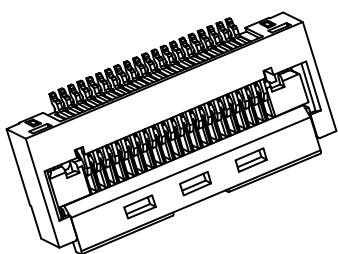
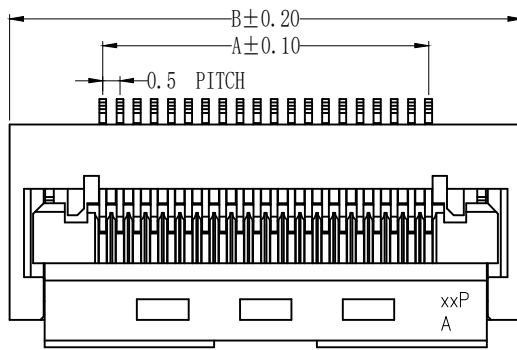
## ■ Performance

Item	Test Condition	Specification	
Contact Resistance	Mate applicable FPC and measure by dry circuit, 20mV Max, 1mA.	100 mΩ Max.	
Insulation Resistance	Mate applicable FPC and apply 500V DC between adjacent terminal or ground.	50 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 0.6N Min.	
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 0.06Kgf {0.6N} 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	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






1.MATERIAL  
 HOUSING:LCP UL 94V-0  
 ACTUATOR:LCP UL 94V-0  
 CONTACTS:COPPER ALLOY  
 PEG: COPPER ALLOY  
 2.PLATING:  
 CONTACTS:GOLD FLASH OVER NICKEL  
 PEG:TIN OVER NICKEL  
 3.PART NO:  
 OPERATING VOLTAGE:50V AC,DC  
 CURRENT RATING:0.3A AC,DC  
 OPERATING TEMPERATURE:-25C~+85C  
 4.PART NO:

THD0525-xxCL-GF  
 GF:GOLD FLASH  
 SN:TIN OVER NICKEL

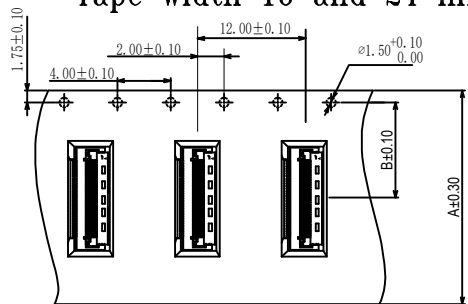
NO.OF CONTACTS:(04Pin~66Pin)

No. of Contacts	DIM.		
	A	B	C
08	3.50	8.92	4.50
10	4.50	9.92	5.50
20	9.50	14.92	10.50
24	11.50	16.92	12.50
28	13.50	18.92	14.50
30	14.50	19.92	15.50
40	19.50	24.92	20.50
50	24.50	29.92	25.50
60	29.50	34.92	30.50
66	32.50	37.92	33.50

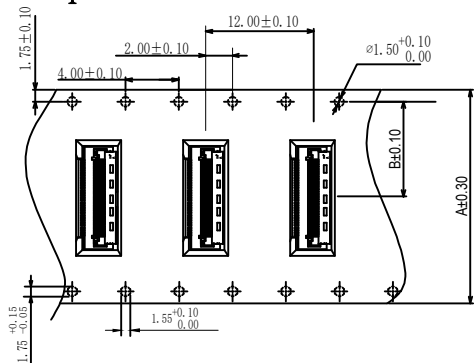

 深圳市台华达科技有限公司  
 SHENZHEN THD ELECTRONICS CO., LTD.

GENERAL TOLERANCE UNLESS OTHERWISE SPECIFIED				DRAWN <b>JIM 2015.01.14</b>		PART NO. THD0525-XXCL-GF	
X.X ±0.35				CHECKED <b>Jim 2015.01.14</b>		TITLE: 0.5 PITCH 2.50H FPC CONN.	
X.XX ±0.25				APPROVED <b>黄德进 2015.01.14</b>		SHEET	
X.XXX ±0.15				ANG. ±3°		1/1	
X Prototype JIM 2015/01/14				UNIT MM		SCALE 1:1	
REV.	REVISIONS	CHK	DATE	SIZE A4		REV X1	

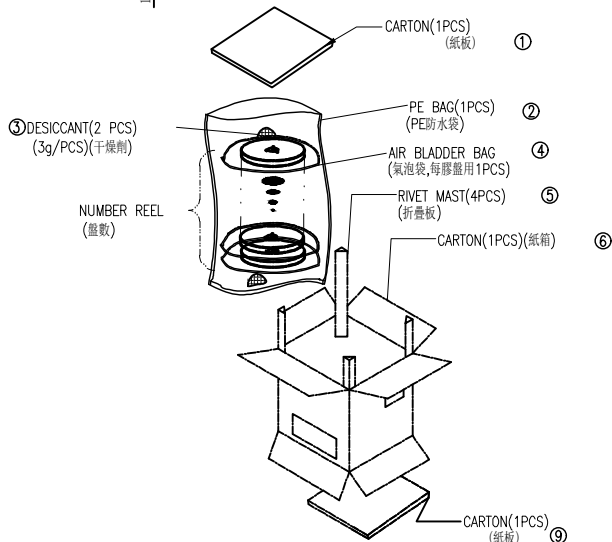
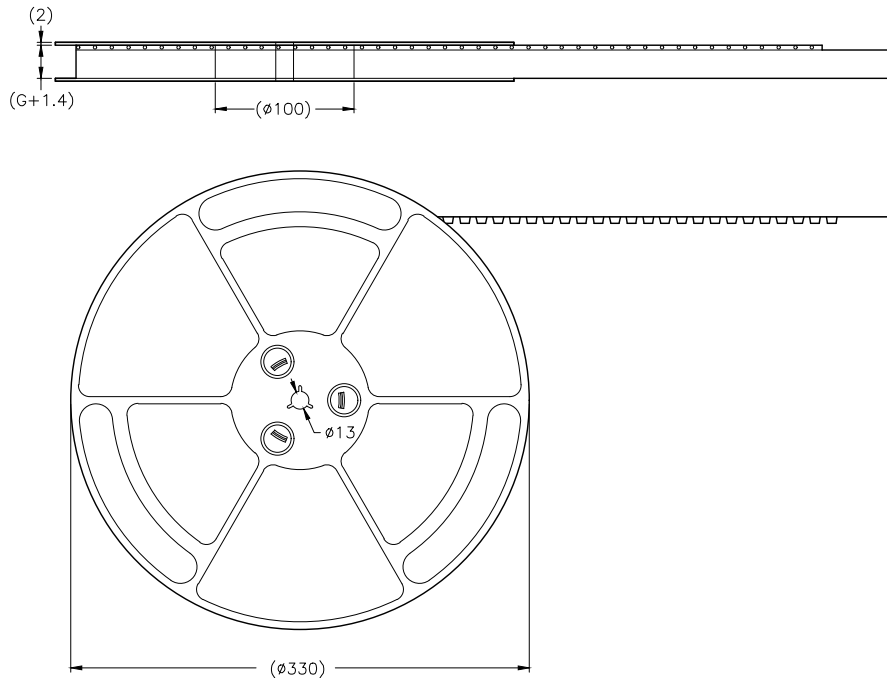
Tape width 16 and 24 mm



Tape width 32 and 56 mm

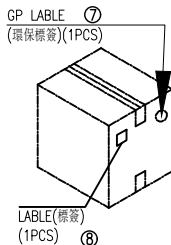


REEL Dim




Notes:

- 1.Component load per 13" reel:1500 Pcs
- 2.Material : Black Conductive Polystyrene Alloy.
- 3.Thickness : 0.3±0.05mm
- 4.All dimensions meet EIA-481-C requirements.



MEAS:35\*35\*35 CM

No. of Contacts	DIM.			REEL (CARTON)	SUM (PCS)
	A	B	C		
THD0525 4pin~8pin	16	7.5	—	15	22500
THD0525 10pin~24pin	24	11.5	—	10	15000
THD0525 25pin~35pin	32	14.2	28.4	8	12000
THD0525 36pin~50pin	44	20.2	40.4	6	9000
THD0525 51pin~66pin	56	26.25	52.5	5	7500


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

GENERAL TOLERANCE UNLESS OTHERWISE SPECIFIED		DRAWN <i>Jim</i> 2012.05.24		PART NO. THD0525-XXCL-GF	
X.X ±0.25		CHECKED <i>Jim</i> 2012.05.24		TITLE: 0.5 PITCH FPC CONN.	
X.XX ±0.15		APPROVED 黄德 2012.05.24		LOWER CONTACT H=2.50mm	
X.XXX ±0.1		SHEET 2/2		UNIT MM	
ANG. 註		SCALE 1:1		SIZE A4	
REV.	REVISIONS	CHK	DATE		

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