

APPROVAL SHEET

CUSTOMER 華凌光電(常熟)有限公司

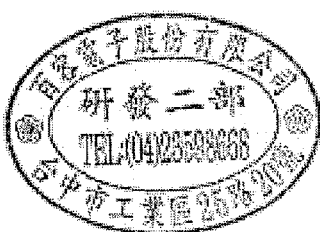



PART NAME EFC-PT24-SD40H2A-31Z-E2000 *CNR6231XXXXXXXXXXXX00*

PART NUMBER 767100240310Z

SPECIFICATION NUMBER F0908708

CUSTOMER APPROVAL & COMMENTS


CUSTOMERS MODEL NO.

R & D APPR. SIGNATURED			DEPT. 
ISSUE	CHECK	APPROVAL	
 AUG.31.2009 慧如	 AUG.31.2009 權澤	 AUG.31.2009 伯杉	

EXCEL CELL ELECTRONIC CO., LTD.

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 EXCEL CELL ELECTRONIC CO., LTD. <small>An ISO 9001 & 14001 Company</small>	NO.		PAGE 1/2
SPECIFICATION	Edition	7	

0.5mm Contact Spacing, ZIF Type Board To FPC Connectors
Slide SMT Type
EFC-PT24 SERIES (SU/SD)

■ **FEATURES**

- 0.5 mm contact spacing.
- No. of contacts : 4~60 pin.
- Connector Heights : 2.0 mm.
- Available in tube or embossed type for automatic mounting.

● **SPECIFICATIONS**

1. ELECTRICAL

- Voltage rating : 50V (per contact)
- Current rating : 0.5A (per contact)
- Dielectric Withstanding Voltage:250VAC RMS
- Contact resistance : 20 mΩ max.(initial)
40 mΩ max.(final)
- Insulation resistance : 50 MΩ min.
- Accommodated FFC/FPC Thickness : 0.30mm
- Operating Temp.: -40°C~+80°C
- Storage Temp.: -20°C~+65°C

2.MECHANICAL

- Durability : Mate & Unmate with applicability for 20 times, Contact resistance: 40 mΩ max.
- Operating force (Slider): 0.05kgf*n(0.49N*n) max. (n : Pin)
- Cable holding force:0.03 kgf*n(0.294N*n) min. (n : Pin)
- Contact retention force: 0.1 kgf (0.98N) min.

● **MATERIALS**

1. MATERIAL

- Contacts : Copper Alloy
- Hold Down : Copper Alloy
- Insulator Housing : High Temp. Thermoplastic
- Slide : High Temp. Thermoplastic

2. PLATING

Contact:

- Nickel In All Area
- Tin over Nickel (RoHS Compliant)
- Tin & Au over Nickel (RoHS Compliant)
- Au over Nickel (RoHS Compliant)

Hold Down:

- Tin over Nickel (RoHS Compliant)
- Flash Au over Nickel (RoHS Compliant)

● **PACKING**


1. Packing method

1-1. All connector are packed in tube or reel method.

2. Information on label (stuck to each ploy bag, reel and box)

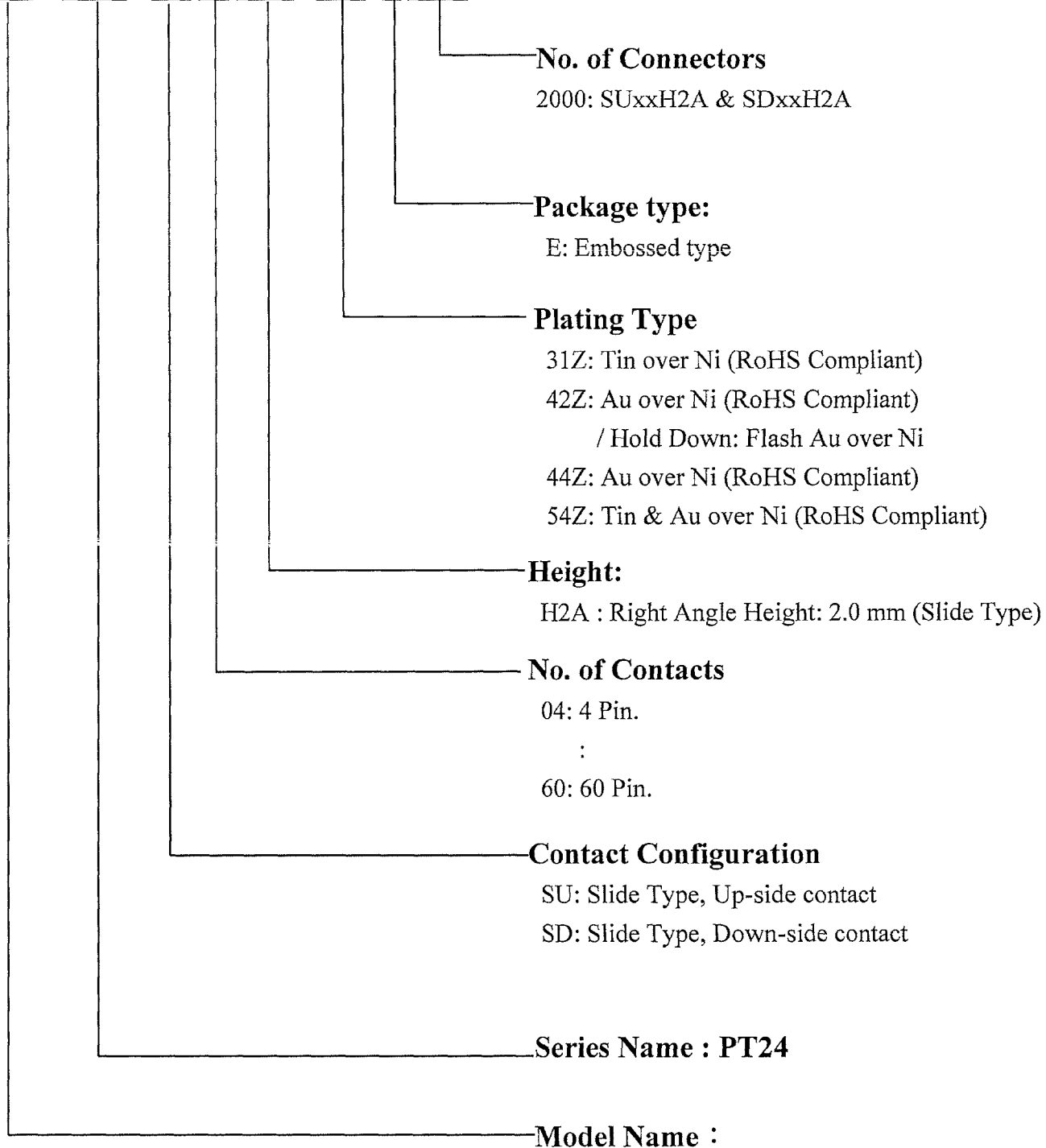
(1)Part No. (2) Section. (3) Lot No. (4) Quantity.
 (5) QC stamp. (6) Reprocess No. (7) ECE mark.

- **DRAWING** Main dimensions : see attached drawing.

 EXCEL CELL ELECTRONIC CO., LTD. <small>An ISO 9001 & 14001 Company</small>	NO.	PAGE
		2/2
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● PART NUMBERING SYSTEM

EFC - PT24 - SD 40 H2A - 31Z - E 2000



No. of Connectors

2000: SUxxH2A & SDxxH2A

Package type:

E: Embossed type

Plating Type

31Z: Tin over Ni (RoHS Compliant)

42Z: Au over Ni (RoHS Compliant)

/ Hold Down: Flash Au over Ni

44Z: Au over Ni (RoHS Compliant)

54Z: Tin & Au over Ni (RoHS Compliant)

Height:

H2A : Right Angle Height: 2.0 mm (Slide Type)

No. of Contacts

04: 4 Pin.

:

60: 60 Pin.

Contact Configuration

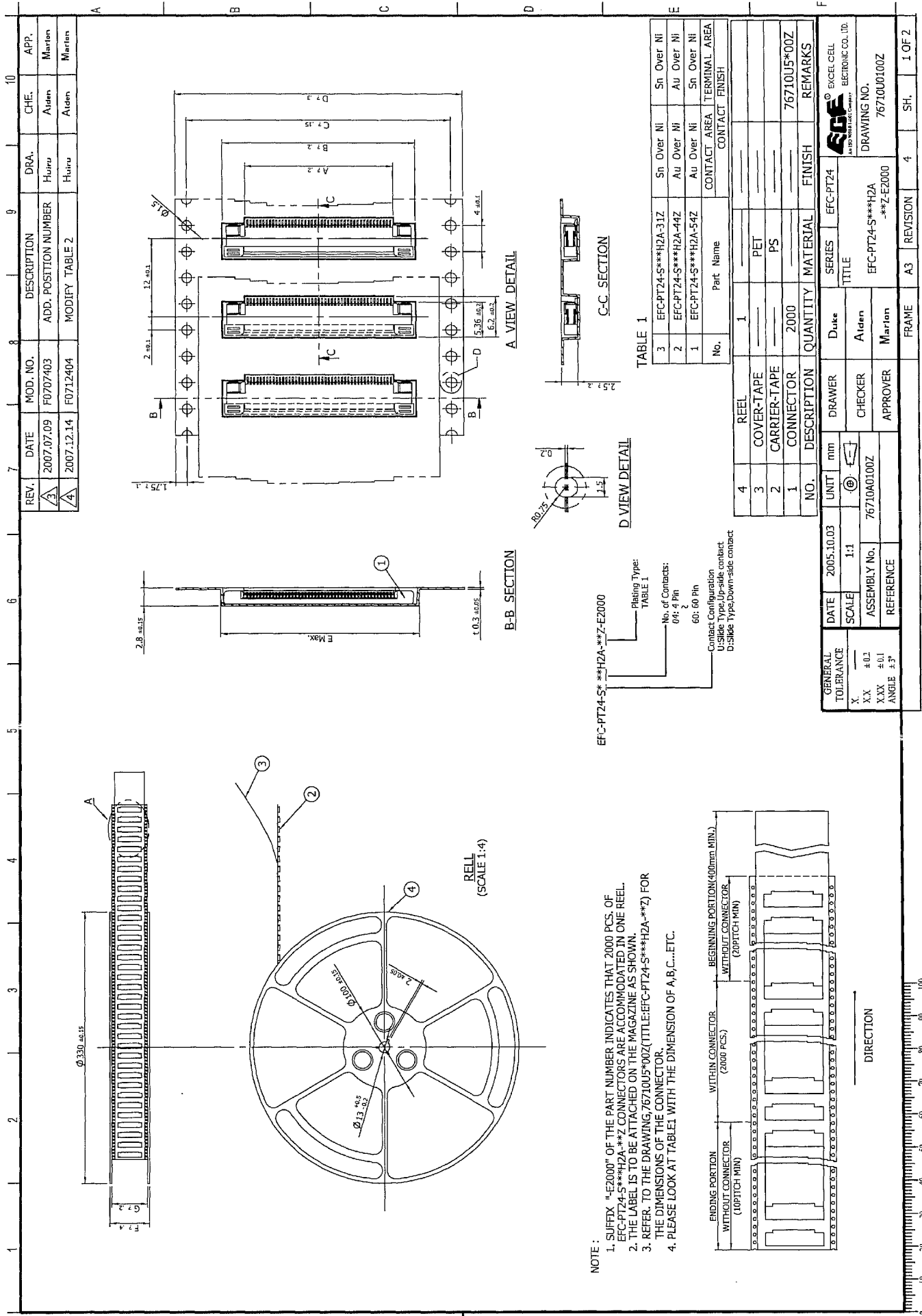
SU: Slide Type, Up-side contact

SD: Slide Type, Down-side contact

Series Name : PT24

Model Name :

EFC: FFC/FPC Connectors



REV.	DATE	MOD. NO.	DESCRIPTION	DRA.	CHE.	APP.
3	2007.07.09	F0707403	ADD. POSITION NUMBER	Fujitsu	Aiden	Marion
2	2007.12.14	F0712404	MODIFY TABLE 2	Fujitsu	Aiden	Marion

GENERAL TOLERANCE	DATE	2005.10.03	UNIT	mm	SERIES	EFC-PT24
X. ±0.1	SCALE	1:1	ASSEMBLY No.	76710A0100Z	CHECKER	Aiden
X.XX ±0.1	REFERENCE				APPROVER	Marion
ANGLE ±3°						

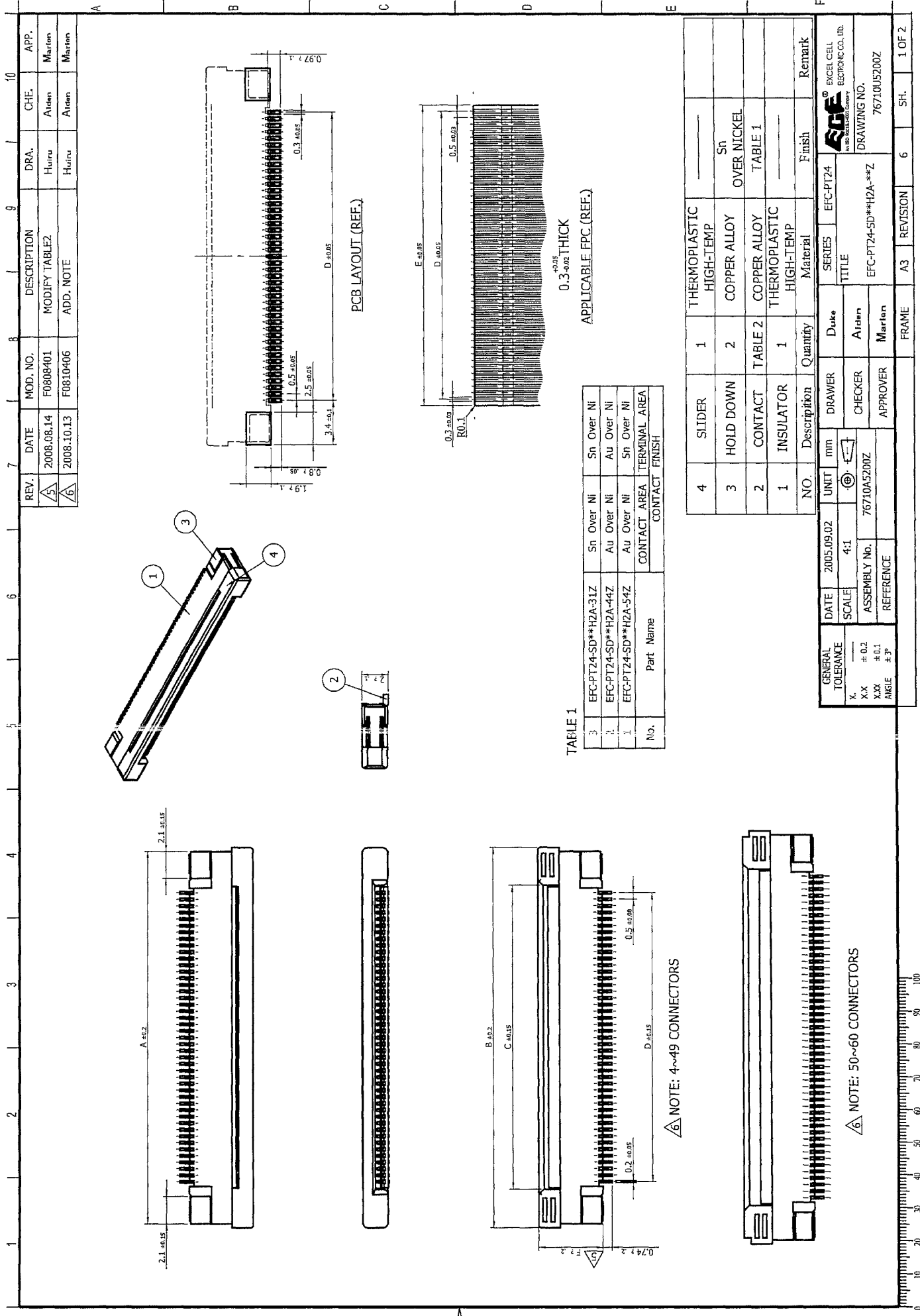
FRAME	A3	REVISION	4	SH.	1 OF 2
DRAWING NO. 76710U0100Z					
TITLE EFC-PT24-S-***H2A-**-Z-E2000					

TABLE 2

Main table with columns: NO., PART NAME, PART NUMBER, A, B, C, D, E, F, G, MO., PART NAME, PART NUMBER, A, B, C, D, E, F, G, NO., PART NAME, PART NUMBER, A, B, C, D, E, F, G, REV., DATE, MOD. NO., DESCRIPTION, DRA., CHE., APP.

NOTE: and drawing information including DATE (2005.10.03), SCALE (1:1), ASSEMBLY No. (76710A0100Z), REVISION (4), and DRAWING NO. (76710U0100Z)

General Tolerance table with columns: X, X.X, X.XX, X.XXX, ANGLE, and values like ±0.2, ±0.1, ±0.1



REV.	DATE	MOD. NO.	DESCRIPTION	DRA.	CHE.	APP.
5	2008.08.14	F0808401	MODIFY TABLE2	Hsiuu	Aiden	Marion
6	2008.10.13	F0810406	ADD. NOTE	Hsiuu	Aiden	Marion

MOD. NO.	DESCRIPTION	DRA.	CHE.	APP.
F0808401	MODIFY TABLE2	Hsiuu	Aiden	Marion
F0810406	ADD. NOTE	Hsiuu	Aiden	Marion

NO.	Part Name	CONTACT AREA	TERMINAL AREA	CONTACT FINISH
3	EFC-PT24-SD**H2A-31Z	Sn Over Ni	Sn Over Ni	
2	EFC-PT24-SD**H2A-44Z	Au Over Ni	Au Over Ni	
1	EFC-PT24-SD**H2A-54Z	Au Over Ni	Sn Over Ni	

NO.	Description	Quantity	Material	Finish	Remark
4	SLIDER	1	THERMOPLASTIC HIGH-TEMP		
3	HOLD DOWN	2	COPPER ALLOY	Sn OVER NICKEL	
2	CONTACT	TABLE 2	COPPER ALLOY	TABLE 1	
1	INSULATOR	1	THERMOPLASTIC HIGH-TEMP		

GENERAL TOLERANCE	DATE	2005.09.02	UNIT	mm	DRAWER	Duke	SERIES	EFC-PT24
X.X ± 0.2	SCALE	4:1	ASSEMBLY No.	76710A5200Z	CHECKER	Aiden	TITLE	
X.XX ± 0.1	REFERENCE				APPROVER	Marion		
ANGLE ± 3°								

FRAME	A3	REVISION	6	SH.	1 OF 2

PCB LAYOUT (REF.)

0.3 ±0.02 THICK
APPLICABLE IPC (REF.)

TABLE 1

NOTE: 4~49 CONNECTORS

NOTE: 50~60 CONNECTORS

10

9

8

7

6

5

4

3



2

1

TABLE 2

NO.	PART NAME	PART NUMBER	REV.						DATE	MOD. NO.	DESCRIPTION	DRA.		CHE.		APP.
			A	B	C	D	E	F				Huiro	Alden	Huiro	Alden	
21	EFC-PT24-S011H2A-312	767105223310Z	16.41	17	11.15	10	10.95	4.86	2008.08.14	F0808401	MODIFY TABLEZ	Huiro	Alden			
22	EFC-PT24-S012H2A-312	767105223310Z	16.91	17.5	11.65	10.5	11.45	4.86	2008.10.13	F0810406	ADD. NOTE	Huiro	Alden			
23	EFC-PT24-S013H2A-312	767105223310Z	17.41	18	12.15	11	11.95	4.86								
24	EFC-PT24-S014H2A-312	767105223310Z	17.91	18.5	12.65	11.5	12.45	4.86								
25	EFC-PT24-S015H2A-312	767105223310Z	18.41	19	13.15	12	12.95	4.86								
26	EFC-PT24-S016H2A-312	767105223310Z	18.91	19.5	13.65	12.5	13.45	4.86								
27	EFC-PT24-S017H2A-312	767105223310Z	19.41	20	14.15	13	13.95	4.86								
28	EFC-PT24-S018H2A-312	767105223310Z	19.91	20.5	14.65	13.5	14.45	4.86								
29	EFC-PT24-S019H2A-312	767105223310Z	20.41	21	15.15	14	14.95	4.86								
30	EFC-PT24-S020H2A-312	767105223310Z	20.91	21.5	15.65	14.5	15.45	4.86								
31	EFC-PT24-S021H2A-312	767105223310Z	21.41	22	16.15	15	15.95	4.86								
32	EFC-PT24-S022H2A-312	767105223310Z	21.91	22.5	16.65	15.5	16.45	4.86								
33	EFC-PT24-S023H2A-312	767105223310Z	22.41	23	17.15	16	16.95	4.86								
34	EFC-PT24-S024H2A-312	767105223310Z	22.91	23.5	17.65	16.5	17.45	4.86								
35	EFC-PT24-S025H2A-312	767105223310Z	23.41	24	18.15	17	17.95	4.86								
36	EFC-PT24-S026H2A-312	767105223310Z	23.91	24.5	18.65	17.5	18.45	4.86								
37	EFC-PT24-S027H2A-312	767105223310Z	24.41	25	19.15	18	18.95	4.86								
38	EFC-PT24-S028H2A-312	767105223310Z	24.91	25.5	19.65	18.5	19.45	4.86								
39	EFC-PT24-S029H2A-312	767105223310Z	25.41	26	20.15	19	19.95	4.86								
40	EFC-PT24-S030H2A-312	767105223310Z	25.91	26.5	20.65	19.5	20.45	4.86								

NO.	PART NAME	PART NUMBER	REV.						DATE	MOD. NO.	DESCRIPTION	DRA.		CHE.		APP.
			A	B	C	D	E	F				Huiro	Alden	Huiro	Alden	
41	EFC-PT24-S041H2A-442	767105241440Z	26.41	27	21.15	20	20.95	4.86								
42	EFC-PT24-S042H2A-442	767105241440Z	26.91	27.5	21.65	20.5	21.45	4.86								
43	EFC-PT24-S043H2A-442	767105241440Z	27.41	28	22.15	21	21.95	4.86								
44	EFC-PT24-S044H2A-442	767105241440Z	27.91	28.5	22.65	21.5	22.45	4.86								
45	EFC-PT24-S045H2A-442	767105241440Z	28.41	29	23.15	22	22.95	4.86								
46	EFC-PT24-S046H2A-442	767105241440Z	28.91	29.5	23.65	22.5	23.45	4.86								
47	EFC-PT24-S047H2A-442	767105241440Z	29.41	30	24.15	23	23.95	4.86								
48	EFC-PT24-S048H2A-442	767105241440Z	29.91	30.5	24.65	23.5	24.45	4.86								
49	EFC-PT24-S049H2A-442	767105241440Z	30.41	31	25.15	24	24.95	4.86								
50	EFC-PT24-S050H2A-442	767105241440Z	30.91	31.5	25.65	24.5	25.45	4.86								
51	EFC-PT24-S051H2A-442	767105241440Z	31.41	32	26.15	25	25.95	4.86								
52	EFC-PT24-S052H2A-442	767105241440Z	31.91	32.5	26.65	25.5	26.45	4.86								
53	EFC-PT24-S053H2A-442	767105241440Z	32.41	33	27.15	26	26.95	4.86								
54	EFC-PT24-S054H2A-442	767105241440Z	32.91	33.5	27.65	26.5	27.45	4.86								
55	EFC-PT24-S055H2A-442	767105241440Z	33.41	34	28.15	27	27.95	4.86								
56	EFC-PT24-S056H2A-442	767105241440Z	33.91	34.5	28.65	27.5	28.45	4.86								
57	EFC-PT24-S057H2A-442	767105241440Z	34.41	35	29.15	28	28.95	4.86								
58	EFC-PT24-S058H2A-442	767105241440Z	34.91	35.5	29.65	28.5	29.45	4.86								
59	EFC-PT24-S059H2A-442	767105241440Z	35.41	36	30.15	29	29.95	4.86								
60	EFC-PT24-S060H2A-442	767105241440Z	35.91	36.5	30.65	29.5	30.45	4.86								

GENERAL TOLERANCE	DATE	2005.09.02	UNIT	mm
X.XX ±0.2	SCALE	4:1		
X.XX ±0.1	ASSEMBLY No.	76710A5200Z		
ANGLE ±0.5	REFERENCE			

DRAWER	Duke	EFC-PT24
CHECKER	Alden	
APPROVER	Marion	
SERIES	TITLE	EFC-PT24-SD**H2A-442
FRAME	A3	REVISION
6	SH.	2 OF 2





CERTIFICATE OF APPROVAL

This is to certify that the Quality Management System of:

Excel Cell Electronic Co., Ltd.
Taichung Industrial Park, Taichung, Taiwan

has been approved by Lloyd's Register Quality Assurance
to the following Quality Management System Standards:

ISO 9001:2000

The Quality Management System is applicable to:

Design and manufacture of electromechanical components including switches (DIP switches, rotary switches, push switches, micro switches), relay, terminal block, connector and socket, connector relative components, modular plug and phone jack; plastic injection & molds for electromechanical components; stamping components and lead frames.

This certificate is valid only in association with the certificate schedule bearing the same number on which the locations applicable to this approval are listed.

Approval
Certificate No: TWN0933574

Original Approval: 4 May 2000

Current Certificate: 12 November 2008

Certificate Expiry: 31 October 2011

Issued by: Lloyd's Register Inspection Limited Taiwan
Branch for and on behalf of Lloyd's Register Quality Assurance Limited



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*This document is subject to the provision on the reverse
Rm. 806, 8FL Worldwide House, 129 Min-Sheng East Road, Sec. 3, Taipei, Taiwan.
This approval is carried out in accordance with the LRQA assessment and certification procedures and monitored by LRQA.
71 Fenchurch Street, London EC3M 4BS, UK
The use of the UKAS Accreditation Mark indicates Accreditation in respect of those activities covered by the Accreditation Certificate Number 001
Metric Reference 11*



CERTIFICATE OF APPROVAL

This is to certify that the Environmental Management System of:

**Excel Cell Electronic Co., Ltd.
No. 20, 25th Road, Taichung Industrial Park,
Taichung City, Taiwan**

has been approved by Lloyd's Register Quality Assurance
to the following Environmental Management System Standard:

ISO 14001:2004

The Environmental Management System is applicable to:

**Design and manufacture of electromechanical components
and Lead Frames.**

This certificate is valid only in association with the certificate schedule bearing the same
number on which the locations applicable to this approval are listed.

Approval
Certificate No: TWN0200203

Original Approval: 22 June 2000
Current Certificate: 07 August 2009
Certificate Expiry: 06 August 2012

Issued by: Lloyd's Register Inspection Limited Taiwan
Branch for and on behalf of Lloyd's Register Quality
Assurance Limited



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This document is subject to the provision on the reverse
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71 Fenchurch Street, London EC3M 4BS United Kingdom. Registration number 1879370
This approval is carried out in accordance with the LRQA assessment and certification procedures and monitored by LRQA.
Macro Revision 13