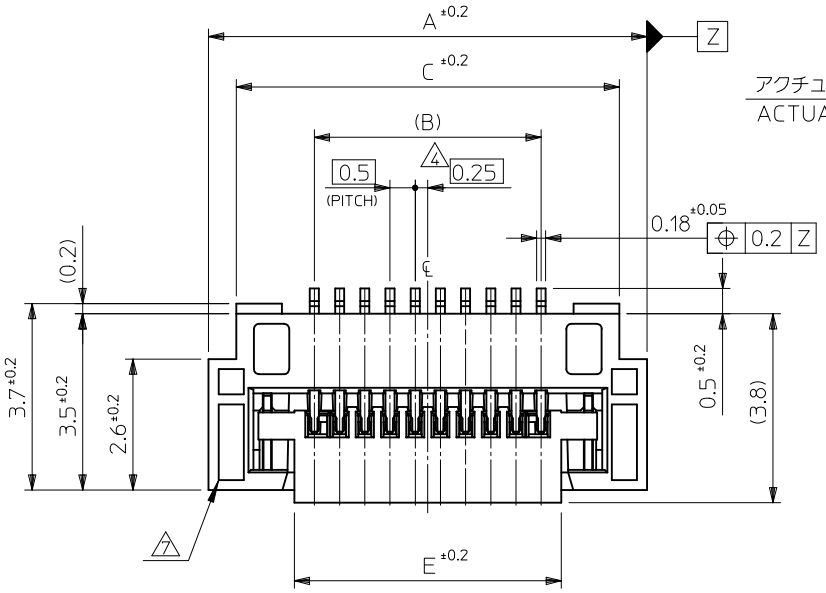
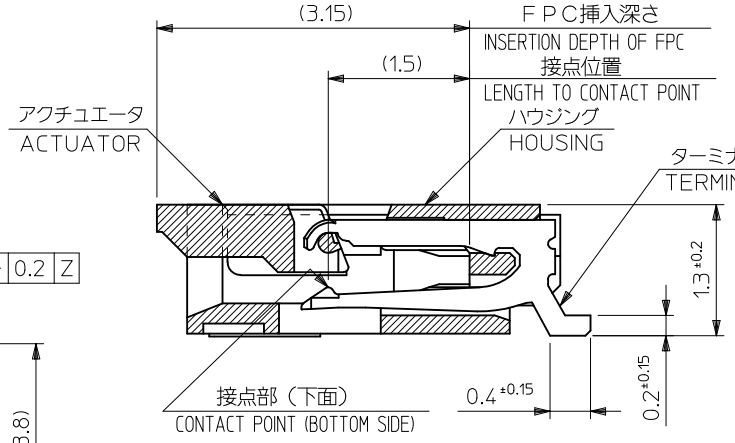
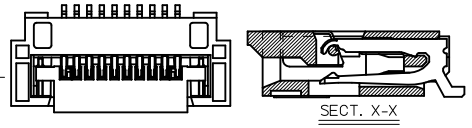
THE DATASHEET OF

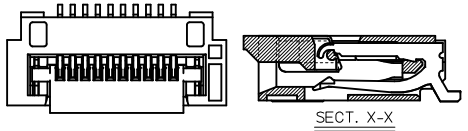
512964093





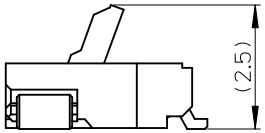


-30極以上-
30 Ckt. OR MORE

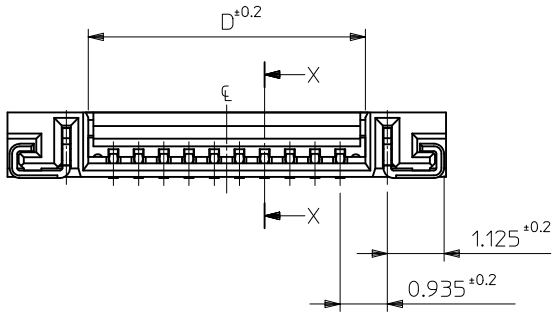


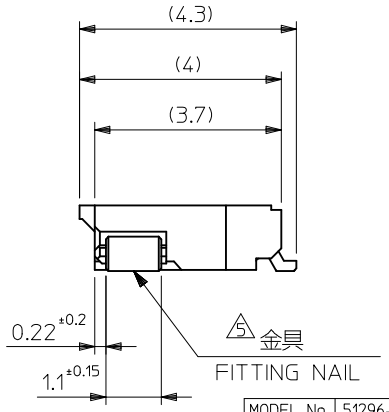
-29極以下-
29 Ckt. OR LESS

△7 SECT. X-X



△7 外観形状
APPEARANCE FORM





(アクチュエータが開口した状態)
(WHEN ACTUATOR IS OPENED)

E	D	C	B	A	EMBOSSED TAPE ORDER No. オーダー番号	製品番号 MATERIAL No.	極数 Ckt
30.3	30.5	32.6	29.5	33.7	51296-6093	51296-6041	60
25.3	25.5	27.6	24.5	28.7	51296-5093	-5041	50
22.8	23.0	25.1	22.0	26.2	51296-4593	-4541	45
20.3	20.5	22.6	19.5	23.7	51296-4093	-4041	40
17.3	17.5	19.6	16.5	20.7	51296-3493	-3441	34
9.3	9.5	11.6	8.5	12.7	51296-1893	-1841	18
7.3	7.5	9.6	6.5	10.7	51296-1493	-1441	14
6.3	6.5	8.6	5.5	9.7	51296-1293	-1241	12
4.3	4.5	6.6	3.5	7.7	51296-0893	51296-0841	8

MODEL No. 51296-**41

REVISED
EC NO: J2011-0996 2010/11/01
DRWN:KOMURAKAMI
CH'KD:
APPR:KMORIKAWA 2011/02/15
DESCRIPTION
REV

GENERAL TOLERANCES (UNLESS SPECIFIED)

10 UNDER	± ---
10 OVER 30 UNDER	± ---
30 OVER	± ---
ANGULAR	± --- °

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: ---
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: K.MURAKAMI DATE: 2004/02/06
CHECKED BY: S.AIHARA DATE: 2004/02/06
APPROVED BY: M.SASAO DATE: 2004/02/06

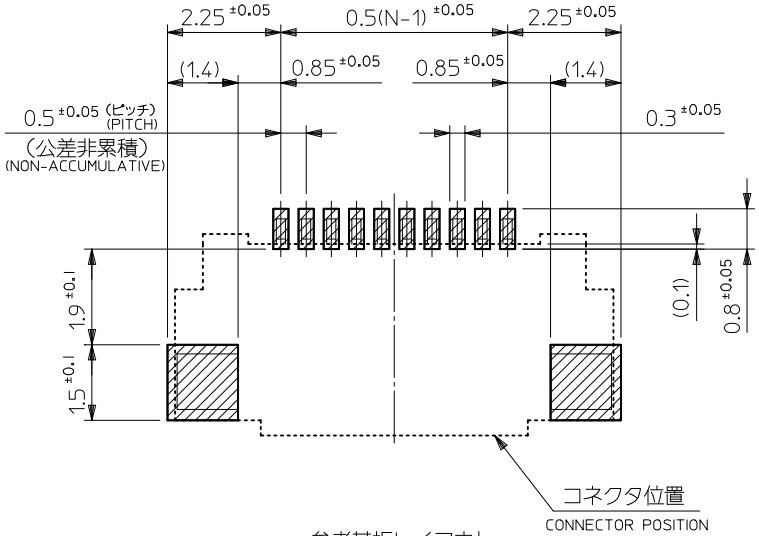
TITLE: 0.5 FPC CONN EASY ON HGT=1.3MM ASSY -LEAD FREE-

MOLEX INCORPORATED

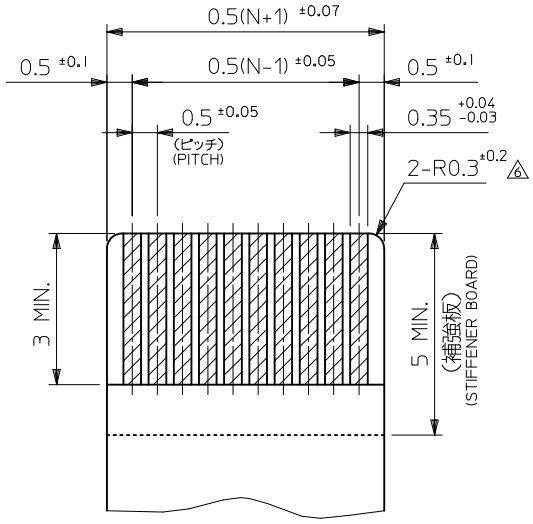
MATERIAL NO.: SEE TABLE
DOCUMENT NO.: SD-51296-007
SHEET NO.: 1 OF 2

SIZE A3

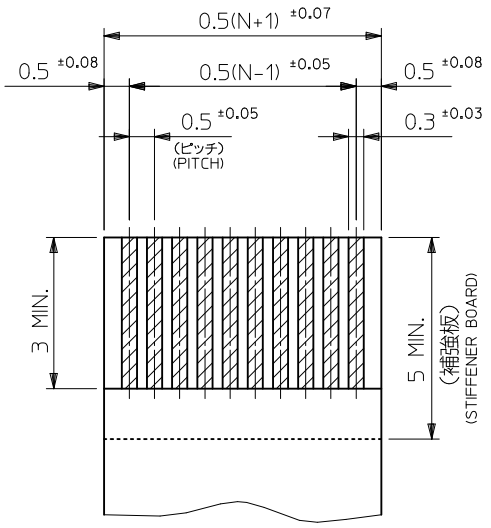
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION



参考基板レイアウト
P.C.BOARD PATTERN DIMENSION (REF.)
(マウント面)
(MOUNTING SIDE)



適合ＦＰＣ推奨寸法
APPLICABLE FPC RECOMMENDED DIMENSION
(仕上がり厚さ：0.3 ±0.05)
(THICKNESS:0.3 ±0.05)



適合ＦＦＣ推奨寸法
APPLICABLE FFC RECOMMENDED DIMENSION
(仕上がり厚さ：0.3 ±0.05)
(THICKNESS:0.3 ±0.05)

注記 NOTES

1. 使用材料 MATERIAL

ハウジング HOUSING	：	液晶ポリマー　ガラス充填，UL94V-0（ベージュ） LIQUID CRYSTAL POLYMER GLASS FILLED, UL94V-0 (BEIGE)
アクチュエータ ACTUATOR	：	ポリアミド9T　ガラス充填，UL94V-0（黒） POLYAMIDE 9T GLASS FILLED, UL94V-0 (BLACK)
ターミナル TERMINAL	：	リン青銅（t＝0．18） PHOSPOR BRONZE
金具 FITTING NAIL	：	リン青銅（t＝0．15） PHOSPOR BRONZE

2. メッキ仕様 PLATING

ターミナル TERMINAL
- 錫ビスマスメッキ 1.0マイクロメートル以上
- ニッケル下地 1.0マイクロメートル以上

TIN-BISMUTH (Sn-Bi) 1.0 MICROMETER MINIMUM
OVER NICKEL PLATING 1.0 MICROMETER MINIMUM

金具 FITTING NAIL
- 錫メッキ 1.0マイクロメートル以上
- ニッケル下地 1.0マイクロメートル以上

TIN (Sn) 1.0 MICROMETER MINIMUM
OVER NICKEL (Ni) PLATING 1.0 MICROMETER MINIMUM

3. エンボステープ梱包時は、アクチュエータが閉じた状態とする。
IN THE PACKAGE,ACTUATOR OF PART NO.51296-**41 SHOULD BE CLOSED.

△4 偶数極に適用。
APPLY FOR EVEN CIRCUIT.

△5 パターンはくり止め用金具
FITTING NAIL FOR PREVENTION OF PEELING OF PCB PATTERN.

△6 R0．3は、FPC導体部にかからないこと。
R0.3 MUST NOT BE OVERLAPPED TO PATTERN OF FPC.

△7 極数によりハウジング形状が異なるので注意のこと。
THE HOUSING SHAPE IS DIFFERENT ACCORDING TO THE CIRCUIT.

8 本製品は51296-**31の鉛フリー製品である。
THIS PRODUCT IS LEAD FREE OF 51296-**31.

ＦＰＣ／ＦＦＣについて：
打抜き方向は導体側から補強板側を推奨いたします。
導体部については軟銅箔３５マイクロメーターまたは５０マイクロメーターを推奨致します。
ABOUT FPC/FFC
RECOMMENDED PUNCHER DIRECTION : FROM CONDUCTOR SIDE TO STIFFENER FILM SIDE.
RECOMMENDED CONDUCTOR SPEC :
THICKNESS OF SOFT COPPER FOIL : 35 MICROMETER OR 50 MICROMETER

ＦＰＣについて：
補強フィルム材質はポリイミドを推奨します。
接着剤は熱硬化接着剤を推奨します。
ABOUT FPC
RECOMMENDED MATERIAL :
STIFFENER FILM : POLYIMIDE
BONDING AGENT : THERMOSETTING BONDING AGENT

REVISED
EC NO: J2011-0996 2010/11/01
DRWN:KOMURAKAMI
CHKD:
APPR:KMORIKAWA 2011/02/15
DESCRIPTION
REV

GENERAL TOLERANCES (UNLESS SPECIFIED)

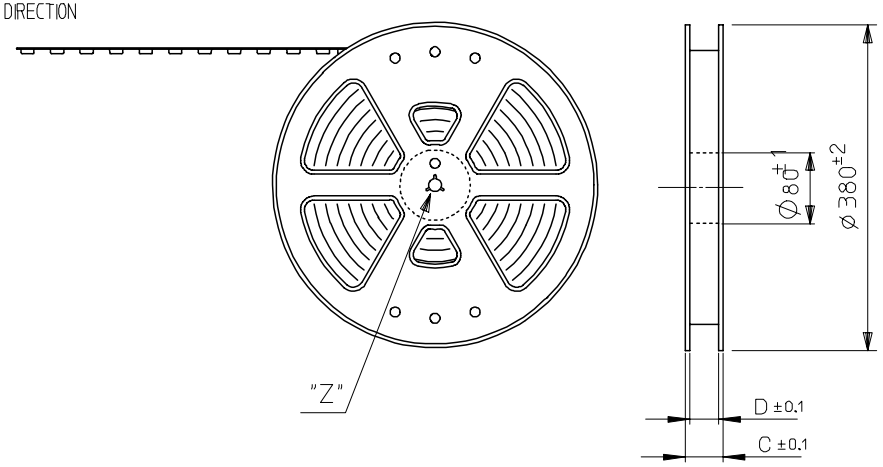
10 UNDER	±---
10 OVER 30 UNDER	±---
30 OVER	±---
ANGULAR	±--- °

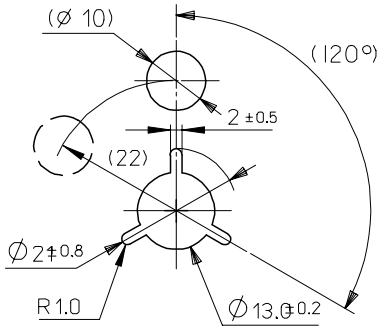
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE	MM ONLY
SCALE	---
DESIGN UNITS	METRIC
	THIRD ANGLE PROJECTION
DRAWN BY / DATE	K.MURAKAMI 2004/02/06
CHECKED BY / DATE	S.AIHARA 2004/02/06
APPROVED BY / DATE	M.SASAO 2004/02/06
MATERIAL NO.	SEE TABLE
TITLE	0.5 FPC CONN EASY ON HGT=1.3MM ASSY -LEAD FREE-
	MOLEX INCORPORATED
DOCUMENT NO.	SD-51296-007
SHEET NO.	2 OF 2
MODEL No.	51296-**41
SIZE	A3

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

引き出し方向
PULL OUT DIRECTION

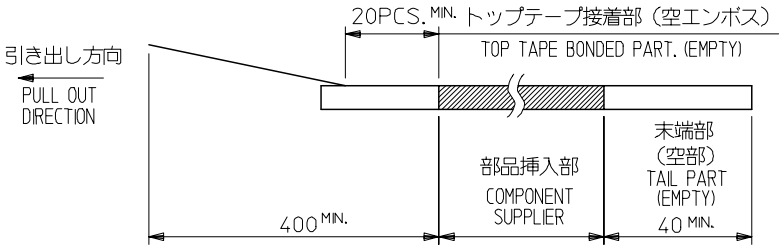




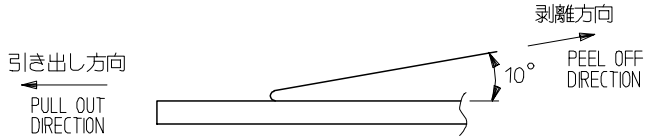
DETAIL "Z"

NOTES

1. 製品詳細寸法については図面 SD-51296-007 を参照下さい。
   RE DETAILED DIMENSION, SEE SD-51296-007
2. 梱包数量：３０００個／リール
   NUMBER OF CONNECTORS : 3000PCS/REEL
3. リードテープ長さ LEAD TAPE LENGTH



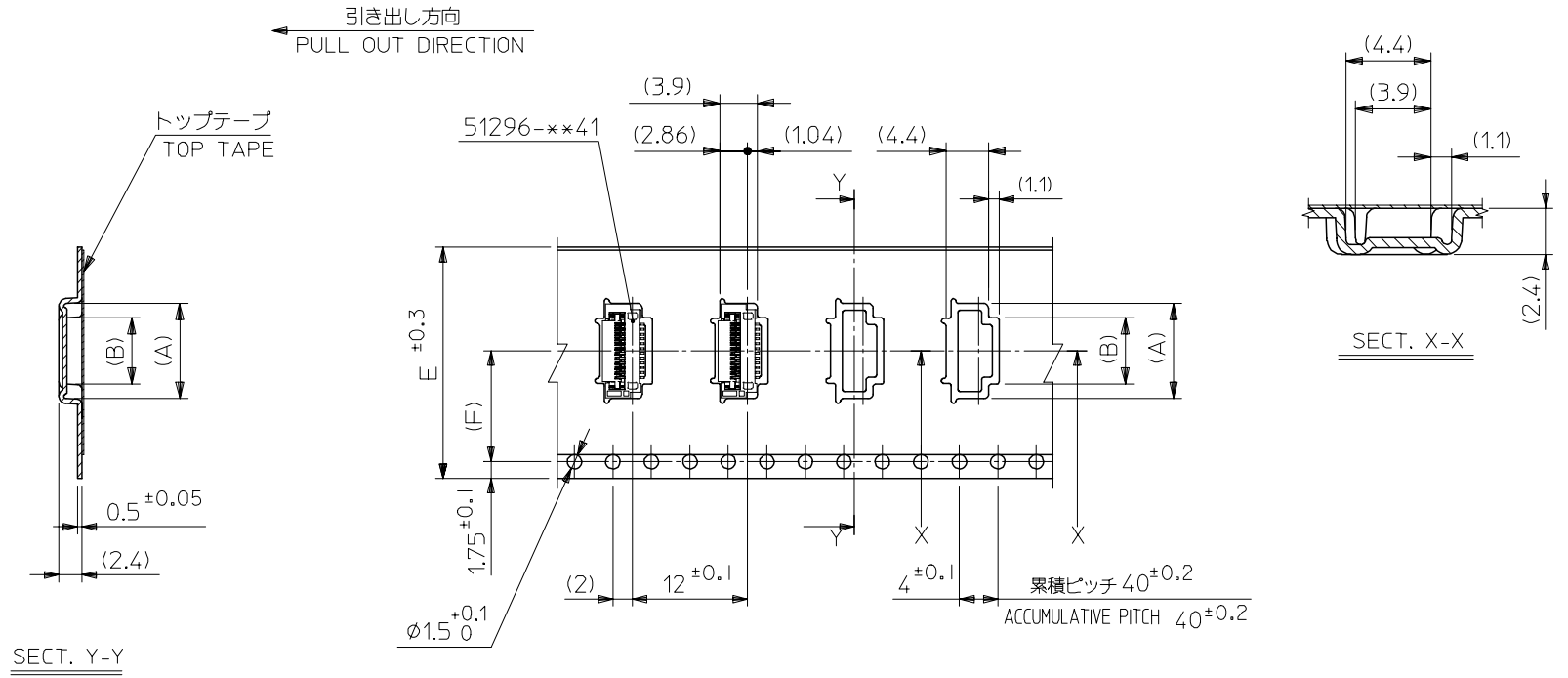
4. トップテープの剥離強度：0.1N ～1.3N(10gf ～130gf)
   （剥離方向は下図参照）
   尚、本規格値は出荷時に適用。（但し、輸送時に剥離が発生しないこと。）
   PEELING OFF FORCE OF TOP TAPE : 0.1N ～1.3N(10gf ～130gf)
   (PEELING DIRECTION AS SHOWN IN FOLLOWING FIG.)
   THIS REQUIREMENT SHOULD BE APPLIED AT SHIPMENT.
   PEEL OFF SHOULD NOT BE ALLOWED , DURING TRANSPORTATION.



5. 材料(MATERIAL)
   キャリアテープ(CARRIER TAPE) :ポリプロピレン(POLYPROPYLENE)
   トップテープ (TOPTAPE) : PET, PE, PEF
   リール(REEL): ポリスチレン(PS)<リサイクル材を含む>
   POLYSTYRENE (PS) <RECYCLE MATERIAL CONTAINED>
6. 本製品は、51296-**92 の鉛フリー製品である。
   THIS PRODUCT IS LEAD FREE OF 51296-**92.

REVISED EC NO: J2005-1696	2004/12/08	C	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE: MM ONLY	SCALE: ---	DESIGN UNITS: METRIC / THIRD ANGLE PROJECTION
DRWN:KOMURAKA	2004/12/08		10 UNDER ±---	DRAWN BY: K.MURAKAMI DATE: 2004/02/06	TITLE: 0.5 FPC CONN EASY ON HGT=1.3MM EMBSTP PKG -LEAD FREE-	
CHKD:			10 OVER 30 UNDER ±---	CHECKED BY: S.AIHARA DATE: 2004/02/06		
APPR:HHIRATA	2004/12/14		30 OVER ±---	APPROVED BY: M.SASAO DATE: 2004/02/06	molex MOLEX INCORPORATED	
DESCRIPTION		REV	ANGULAR ±--- °	MATERIAL NO.: SEE CHART	DOCUMENT NO.: SD-51296-008	SHEET NO.: 1 OF 3
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SIZE: A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	

51296-**93 | MODEL NO.



11.5	24	25.4	29.4	9.89	12.9	51296-1893	18
				7.89	10.9	51296-1493	14
				6.89	9.9	51296-1293	12
7.5	16	17.4	21.4	4.89	7.9	51296-0893	8
(F)	E	D	C	(B)	(A)	製品番号 MATERIAL No	極数 Ckt

51296-**93 MODEL NO.

REVISED
EC NO: J2005-1696 2004/12/08
DRWN:KOMURAKA 2004/12/08
CHKD: 2004/12/14
APPR:HHIRATA
DESCRIPTION
REV

GENERAL TOLERANCES (UNLESS SPECIFIED)

10 UNDER	±---
10 OVER 30 UNDER	±---
30 OVER	±---
ANGULAR	±--- °

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: ---
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: K.MURAKAMI DATE: 2004/02/06
CHECKED BY: S.AIHARA DATE: 2004/02/06
APPROVED BY: M.SASAO DATE: 2004/02/06

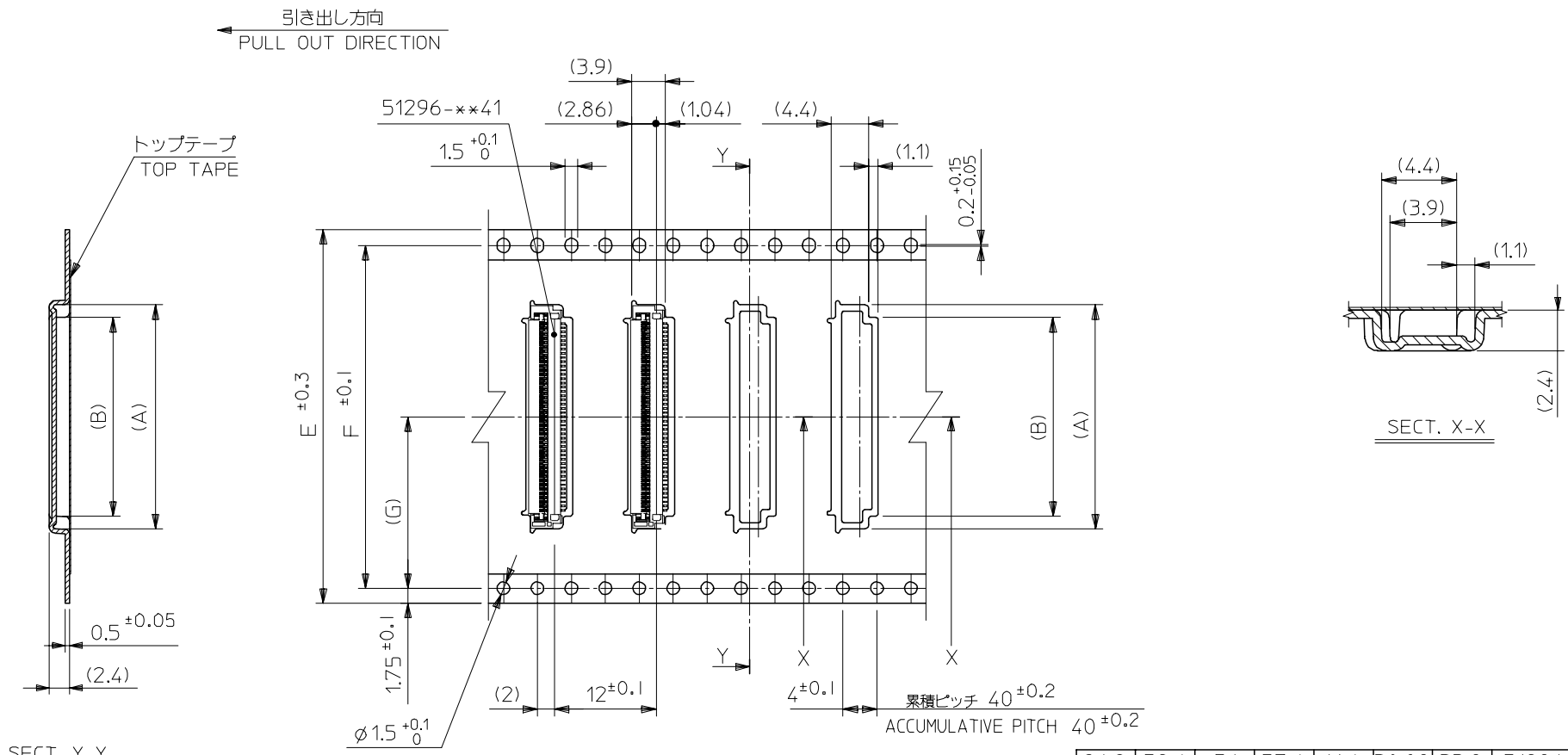
TITLE: 0.5 FPC CONN EASY ON HGT=1.3MM EMBSTP PKG -LEAD FREE-

MOLEX INCORPORATED

MATERIAL NO.: SEE CHART
DOCUMENT NO.: SD-51296-008
SHEET NO.: 2 OF 3

SIZE A3

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION



(G)	F	E	D	C	(B)	(A)	製品番号 MATERIAL No	極数 Ckt
26.2	52.4	56	57.4	61.4	30.89	33.9	51296-6093	60
20.2	40.4	44	45.4	49.4	25.89	28.9	51296-5093	50
					23.39	26.4	51296-4593	45
					20.89	23.9	51296-4093	40
14.2	28.4	32	33.4	37.4	17.89	20.9	51296-3493	34

51296-**93 MODEL NO.

REVISED
EC NO: J2005-1696 2004/12/08
DRWN:KOMURAKA 2004/12/08
CHKD:
APPR:HIIRATA 2004/12/14
DESCRIPTION
REV

GENERAL TOLERANCES (UNLESS SPECIFIED)

10 UNDER	±---
10 OVER 30 UNDER	±---
30 OVER	±---
ANGULAR ±--- °	

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: ---
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: K.MURAKAMI DATE: 2004/02/06
CHECKED BY: S.AIHARA DATE: 2004/02/06
APPROVED BY: M.SASAO DATE: 2004/02/06
MATERIAL NO.: SEE CHART

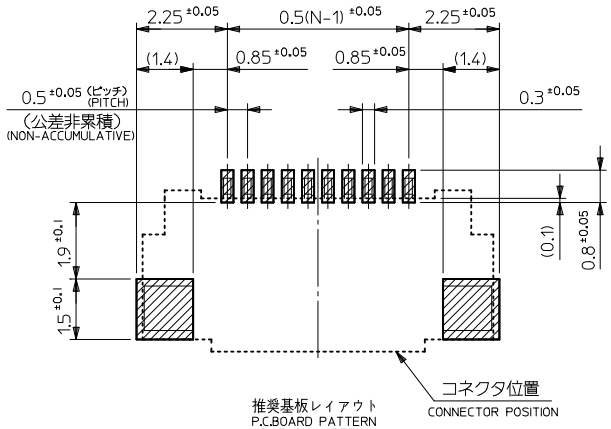
TITLE: 0.5 FPC CONN EASY ON HGT=1.3MM EMBSTP PKG -LEAD FREE-

MOLEX INCORPORATED

DOCUMENT NO.: SD-51296-008
SHEET NO.: 3 OF 3

SIZE A3

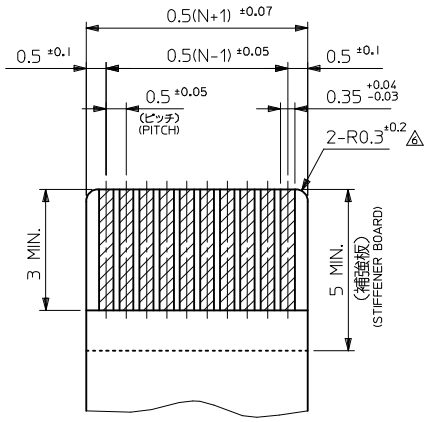
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION



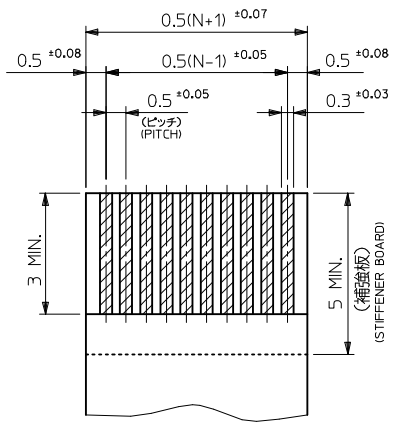
推奨基板レイアウト
P.C.BOARD PATTERN
DIMENSION (REF.)
(マウント面)
(MOUNTING SIDE)

マスク厚　：100μm
マスク開口率：100%

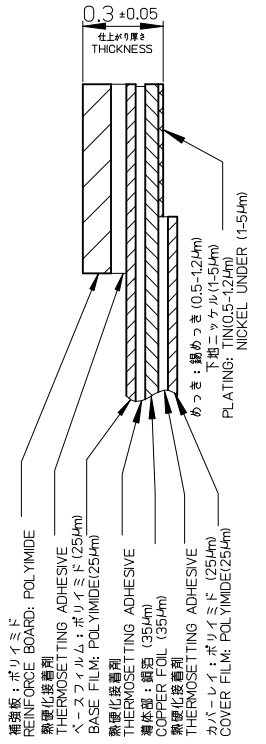
SCREEN THICKNESS :100 MICROMETER
SCREEN OPEN RATIO :100%



適合ＦＰＣ推奨寸法
APPLICABLE FPC
RECOMMENDED DIMENSION
(仕上がり厚さ：0.3 ±0.05)
(THICKNESS:0.3 ±0.05)



適合ＦＦＣ推奨寸法
APPLICABLE FFC
RECOMMENDED DIMENSION
(仕上がり厚さ：0.3 ±0.05)
(THICKNESS:0.3 ±0.05)



FPC構成推奨仕様
STRUCTURE OF FPC

注記 NOTES

1. 使用材料　MATERIAL

ハウジング HOUSING	：	液晶ポリマー(LCP)、ベージュ、ガラス充填、UL94V-0 LIQUID CRYSTAL POLYMER, BEIGE, GLASS FILLED, UL94V-0
アクチュエータ ACTUATOR	：	ポリアミド(PPS)、黒、ガラス充填、UL94V-0 POLYAMIDE, BLACK, GLASS FILLED, UL94V-0
ターミナル TERMINAL	：	リン青銅（t＝0。18） PHOSPOR BRONZE
金具 FITTING NAIL	：	リン青銅（t＝0。15） PHOSPOR BRONZE

2. メッキ仕様 PLATING
   ターミナル TERMINAL
   錫銀ビスマスメッキ（1.0μm以上）
   TIN SILVER BISMUTH PLATING (1.0 MICROMETER MINIMUM)
   下地：ニッケルめっき(1.0μm以上)
   UNDER PLATING:NICKEL PLATING (1.0 MICROMETER MINIMUM)
   金具 FITTING NAIL
   錫メッキ（1.0μm以上）
   TIN PLATING (1.0 MICROMETER MINIMUM)
   下地：ニッケルめっき(1.0μm以上)
   UNDER PLATING:NICKEL PLATING (1.0 MICROMETER MINIMUM)
3. エンボステープ梱包時は、アクチュエータが閉じた状態とする。
   IN THE PACKAGE,ACTUATOR SHOULD BE CLOSED.

⚠4 偶数極に適用。
APPLY FOR EVEN CIRCUIT.

⚠5 パターンはくり止め用金具
FITTING NAIL FOR PREVENTION OF PEELING OF PCB PATTERN.

⚠6 R0．3は、FPC導体部にかからないこと。
R0.3 MUST NOT BE OVERLAPPED TO PATTERN OF FPC.

⚠7 極数によりハウジング形状が異なるので注意のこと。
THE HOUSING SHAPE IS DIFFERENT ACCORDING TO THE CIRCUIT.

8. テール及び金具の平坦度は、0.1ミリメートル以下とする。
TAIL AND FITTING NAIL COPLANARITY TO BE 0.1 MILLMETERS.

9. ELV及びRoHS適合品
ELV AND RoHS COMPLIANT

FPCについて：
抜き方向は、導体側から補強板側を推奨致します。
補強フィルム材質は、ポリイミドを推奨致します。
接着剤は熱硬化接着剤を推奨します。
尚、接着剤の接点部への付着は導通不良の原因になりますので、
染み出しが無い様お願い致します。

ABOUT FPC:
RECOMMENDED PUNCHER DIRECTION:
FROM CONDUCTOR SIDE TO STIFFNER SIDE
RECOMMENDED MATERIAL : STIFFENER FILM POLYIMIDE
BONDING AGENT : THERMOSETTING AGENT
PLEASE PUT APPROPRIATE AMOUNT OF ADHESIVE ON ADHEREND
BECAUSE THERE IS A POSSIBILITY THAT THE EXTRA ADHESIVE
CAUSES THE DEFECT IN ELECTRICAL CONTINUITY.

FFC/FPCについて：
打抜き方向は導体側から補強板側を推奨致します。
導体部については軟銅箔35μmまたは50μmを推奨致します。

ABOUT FFC/FPC:
RECOMMENDED PUNCHER DIRECTION:
FROM CONDUCTOR SIDE TO STIFFENER FILM SIDE.
RECOMMENDED CONDUCTOR SPECIFICATION:
THICKNESS OF SOFT COPPER FOIL: 35MICROMETER OR 50 MICROMETER

SEE SHEET 1 OF 2
EC NO: J2014-0096
DRWN:AISHII 2013/07/18
CH'KD:KTAKAHASHI 2013/07/18
APPR:YNOGAWA 2013/08/19
DESCRIPTION
REV B

GENERAL TOLERANCES (UNLESS SPECIFIED)

10 UNDER	±---
10 OVER 30 UNDER	±---
30 OVER	±---
ANGULAR ±--- °	

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE	MM ONLY
SCALE	---
DESIGN UNITS	METRIC
	THIRD ANGLE PROJECTION
DRAWN BY / DATE	AISHII 2012/09/19
CHECKED BY / DATE	KTAKAHASHI 2012/09/19
APPROVED BY / DATE	KMORIKAWA 2013/03/15
MATERIAL NO.	SEE SHEET1
TITLE	0.5MM FPC CONN F/F E/O HOUSING ASSY
DOCUMENT NO.	SD-51296-017
SHEET NO.	2 OF 2
SIZE	A3

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