

(アクチュエータが開いた状態)  
(WHEN ACTUATOR IS OPENED)

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	4 -5041	50
22.8	23.0	25.1	22.0	26.2	51296-4593	4 -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	7 -1441	14
6.3	6.5	8.6	5.5	9.7	51296-1293	7 -1241	12
4.3	4.5	6.6	3.5	7.7	51296-0893	51296-0841	8
E	D	C	B	A	EMBOSSED TAPE	製品番号	極数
					ORDER No. オーダー番号	MATERIAL No.	Ckt

MODEL No. 51296-\*\*41

金具 FITTING NAIL

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: --- METRIC

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

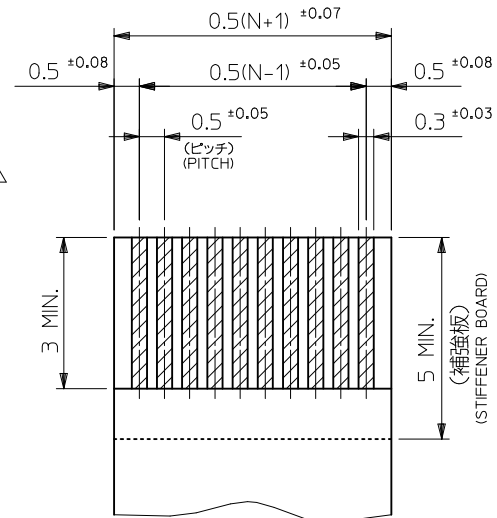
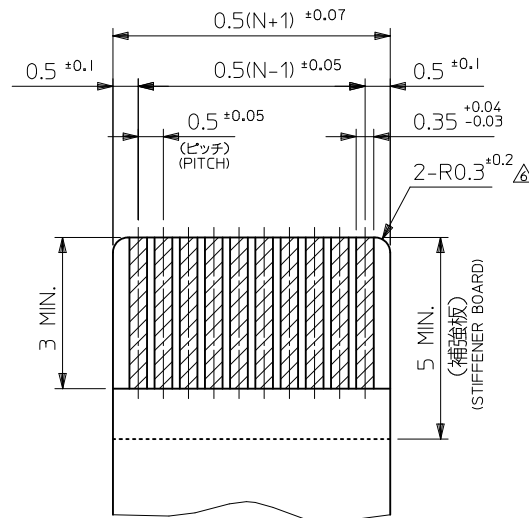
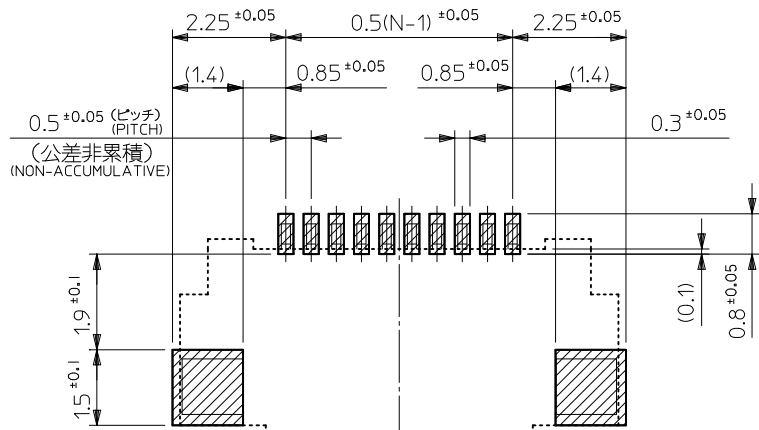
TITLE: 0.5 FPC CONN EASY ON HGT=1.3MM ASSY -LEAD FREE-

MATERIAL NO. SEE TABLE

DOCUMENT NO. SD-51296-007

SHEET NO. 1 OF 2

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)  
コネクタ位置  
CONNECTOR POSITION

注記 NOTES

1. 使用材料 MATERIAL

ハウジング : 液晶ポリマー ガラス充填, UL94V-0 (ベージュ)  
HOUSING LIQUID CRYSTAL POLYMER GLASS FILLED, UL94V-0 (BEIGE)  
アクチュエータ : ポリアミド 9T ガラス充填, UL94V-0 (黒)  
ACTUATOR POLYAMIDE 9T GLASS FILLED, UL94V-0 (BLACK)  
ターミナル : リン青銅 (t=0.18)  
TERMINAL PHOSPOR BRONZE  
金具 : リン青銅 (t=0.15)  
FITTING NAIL 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.  
△ 偶数極に適用。  
APPLY FOR EVEN CIRCUIT.  
△ パターンはくり止め用金具  
FITTING NAIL FOR PREVENTION OF PEELING OF PCB PATTERN.  
△ 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.  
△ 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:

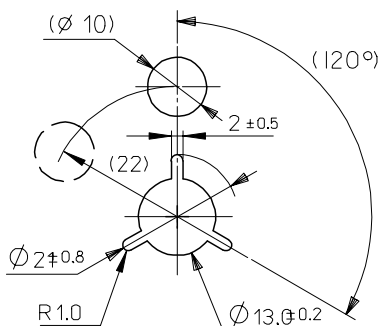
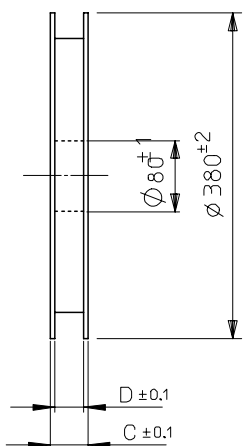
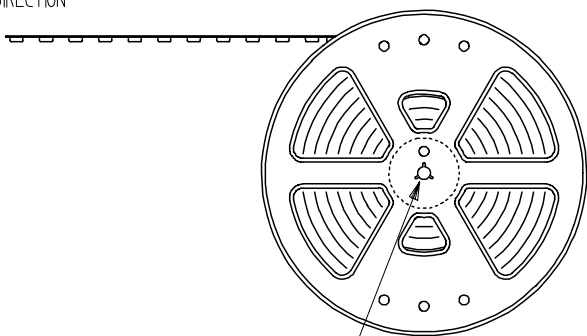
打抜き方向は導体側から補強板側を推奨いたします。  
導体部については軟銅箔35マイクロメートルまたは50マイクロメートルを推奨致します。  
ABOUT FPC/FFC  
RECOMMENDED PUNCHER DIRECTION : FROM CONDUCTOR SIDE TO STIFFENER FILM SIDE.  
RECOMMENDED CONDUCTOR SPEC :  
THICKNESS OF SOFT COPPER FOIL : 35 MICROMETER OR 50 MICROMETER

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 DRAWN: K.MURAKAMI 2010/11/01 CHKD: APPR: K.MORIKAWA 2011/02/15	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY	SCALE ---	DESIGN UNITS METRIC	MODEL No.   51296-***41
	10 UNDER	± ---	DRAWN BY DATE K. MURAKAMI 2004/02/06	TITLE 0.5 FPC CONN EASY ON HGT=1.3MM ASSY -LEAD FREE-		THIRD ANGLE PROJECTION
	10 OVER 30 UNDER	± ---	CHECKED BY DATE S. AIHARA 2004/02/06	MOLEX INCORPORATED		SHEET NO. 2 OF 2
	30 OVER	± ---	APPROVED BY DATE M. SASAO 2004/02/06	DOCUMENT NO. SD-51296-007		
	ANGULAR ± --- °	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		

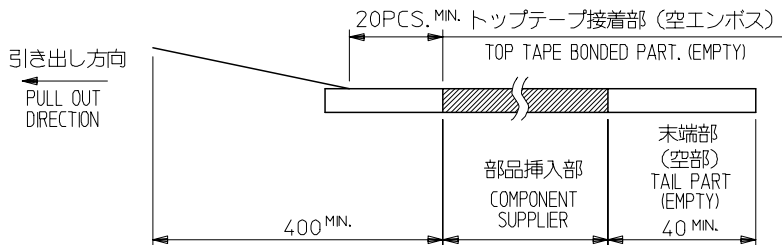
引き出し方向  
PULL OUT DIRECTION



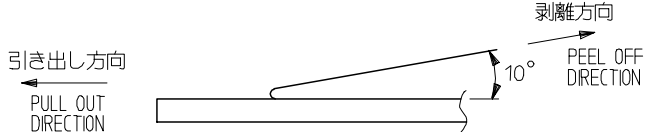
DETAIL "Z"

NOTES

- 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
- 梱包数量：3000個/リール  
NUMBER OF CONNECTORS : 3000PCS/REEL
- リードテープ長さ LEAD TAPE LENGTH



- 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.



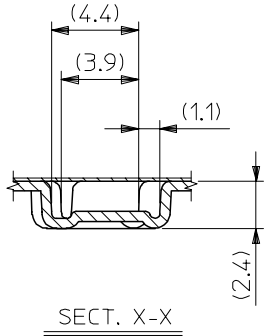
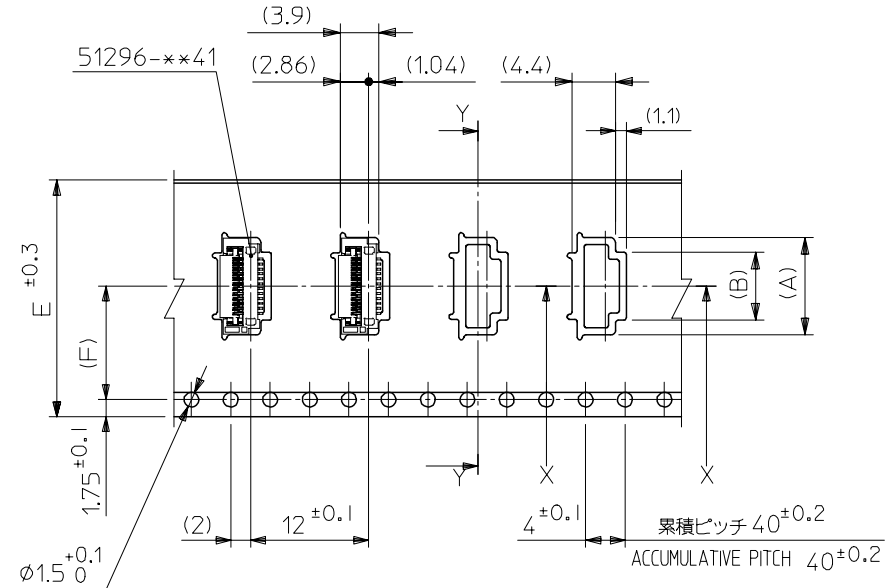
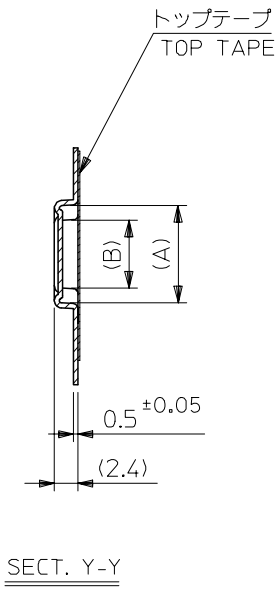
- 材料(MATERIAL)  
キャリアテープ(CARRIER TAPE) : ポリプロピレン(POLYPROPYLENE)  
トップテープ (TOPTAPE) : PET, PE, PEF  
リール(REEL): ポリスチレン (PS) <リサイクル材を含む>  
POLYSTYRENE (PS) <RECYCLE MATERIAL CONTAINED>
- 本製品は、51296-\*\*92 の鉛フリー製品である。  
THIS PRODUCT IS LEAD FREE OF 51296-\*\*92.

REVISED EC NO: J2005-1696 DRWN: KONURAKA CHKD: APPR: HIRATA	2004/12/08 2004/12/08 2004/12/14	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE ---	51296-**93	MODEL NO.		
		10 UNDER	± ---	DRAWN BY K.MURAKAMI	DATE 2004/02/06	TITLE 0.5 FPC CONN EASY ON HGT=1.3MM EMBSTP PKG -LEAD FREE-		DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
		10 OVER 30 UNDER	± ---	CHECKED BY S.AIHARA	DATE 2004/02/06	APPROVED BY M.SASAO		DATE 2004/02/06	MOLEX INCORPORATED	
		30 OVER	± ---	MATERIAL NO. SEE CHART		DOCUMENT NO. SD-51296-008		SHEET NO. 1 OF 3		
ANGULAR ± --- °		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				

10 9 8 7 6 5 4 3 2 1

F  
E  
D  
C  
B  
A

引き出し方向  
PULL OUT DIRECTION



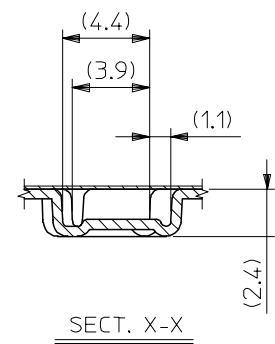
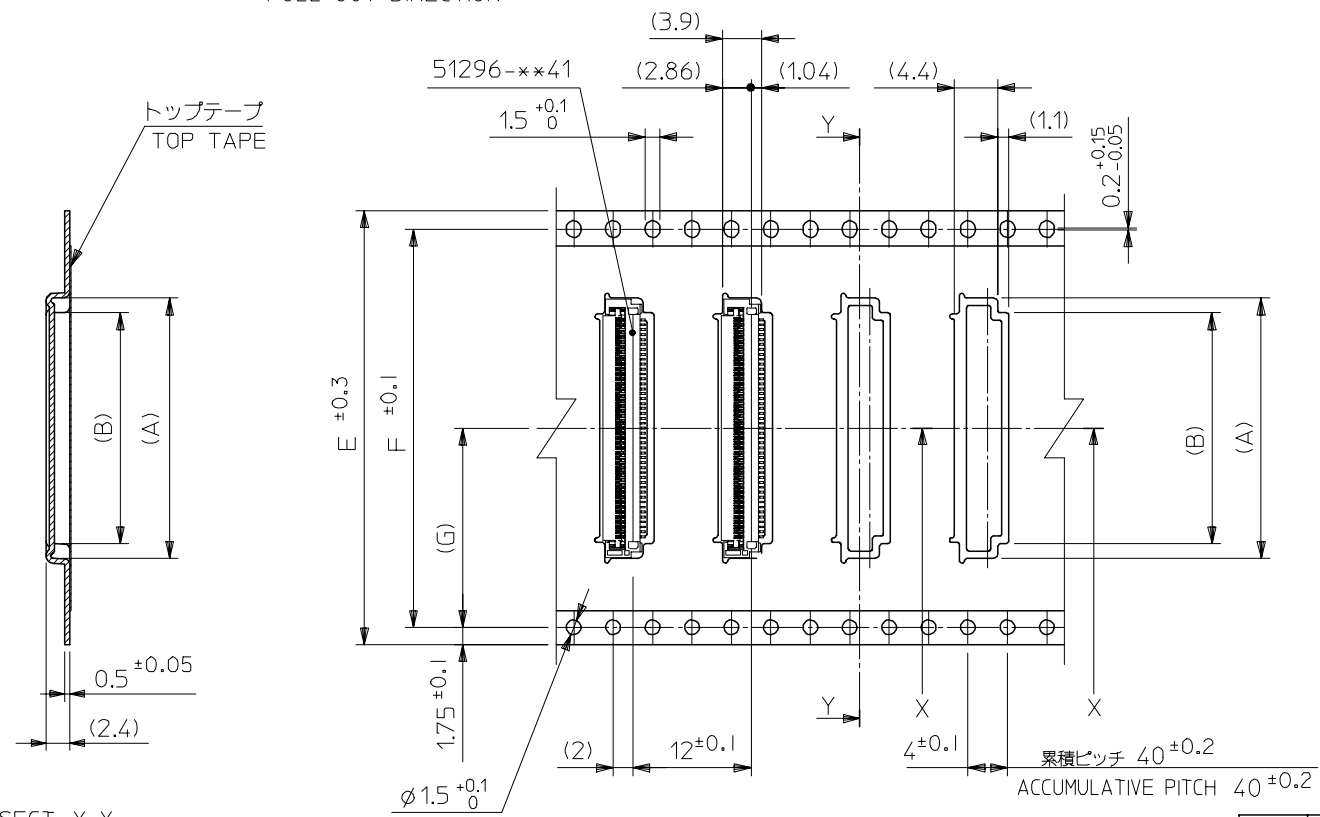
11.5	24	25.4	29.4	9.89	12.9	51296-1893	18
				7.89	10.9	51296-1493	14
				6.89	9.9	51296-1293	12
7.5	16	17.4	21.4	4.89	7.9	51296-0893	8
(F)	E	D	C	(B)	(A)	製品番号 MATERIAL No	極数 Ckt

REVISED EC NO: J2005-1696 DRAWN: KOMURAKA 2004/12/08 CHKD: 2004/12/08 APPR: HIRATA 2004/12/14	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE ---	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
	10 UNDER	± ---	DRAWN BY DATE K.MURAKAMI 2004/02/06		TITLE 0.5 FPC CONN EASY ON HGT=1.3MM EMBSTP PKG -LEAD FREE-		
	10 OVER 30 UNDER	± ---	CHECKED BY DATE S.AIHARA 2004/02/06		MOLEX INCORPORATED		
	30 OVER	± ---	APPROVED BY DATE M.SASAO 2004/02/06		DOCUMENT NO. SD-51296-008		
	ANGULAR ± --- °		MATERIAL NO. SEE CHART		SHEET NO. 2 OF 3		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					

10 9 8 7 6 5 4 3 2 1

F  
E  
D  
C  
B  
A

引き出し方向  
PULL OUT DIRECTION

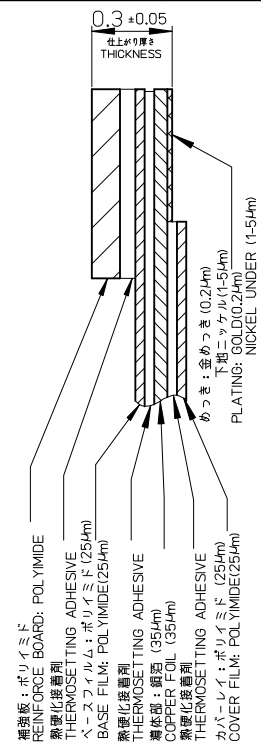
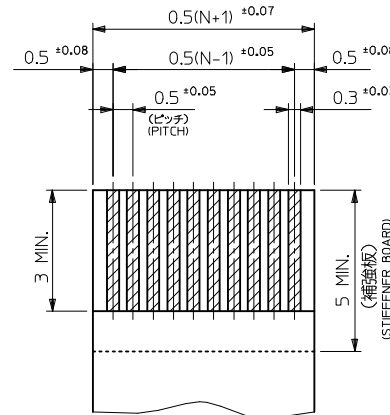
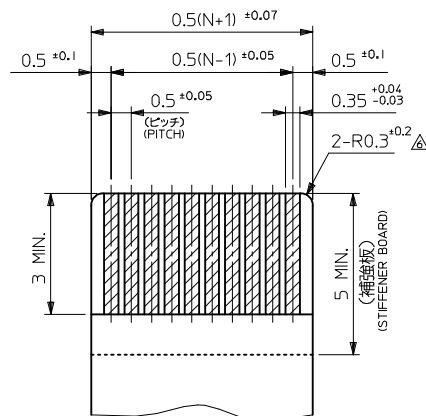
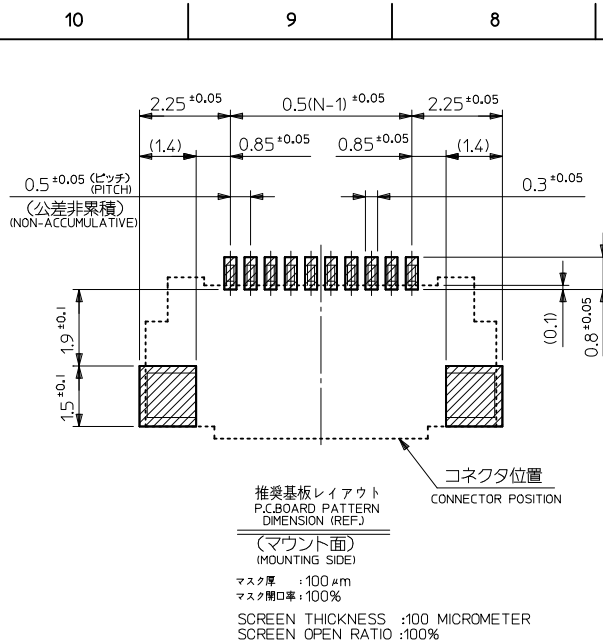


SECT. Y-Y

26.2	52.4	56	57.4	61.4	30.89	33.9	51296-6093	60
					25.89	28.9	51296-5093	50
20.2	40.4	44	45.4	49.4	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
(G)	F	E	D	C	(B)	(A)	製品番号 MATERIAL No	極数 Ckt

REVISED EC NO: J2005-1696 DRAWN: KOMURAKA 2004/12/08 CHKD: 2004/12/08 APPR: HIRATA 2004/12/14	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE ---	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
	10 UNDER	± ---	DRAWN BY K.MURAKAMI		DATE 2004/02/06		TITLE 0.5 FPC CONN EASY ON HGT=1.3MM EMBSTP PKG -LEAD FREE-	
	10 OVER 30 UNDER	± ---	CHECKED BY S.AIHARA		DATE 2004/02/06		MOLEX INCORPORATED	
	30 OVER	± ---	APPROVED BY M.SASAO		DATE 2004/02/06		DOCUMENT NO. SD-51296-008	
	ANGULAR	± --- °	MATERIAL NO.		SEE CHART		SHEET NO. 3 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			

9 8 7 6 5 4 3 2 EN-02JA(021)



注記 NOTES

1. 使用材料 MATERIAL

- ハウジング : 液晶ポリマー(LCP), ベージュ, ガラス充填, UL94V-0  
HOUSING LIQUID CRYSTAL POLYMER, BEIGE, GLASS FILLED, UL94V-0
- アクチュエータ : ポリアミド(PPS), 黒, ガラス充填, UL94V-0  
ACTUATOR POLYAMIDE, BLACK, GLASS FILLED, UL94V-0
- ターミナル : リン青銅 (t=0.18)  
TERMINAL PHOSPOR BRONZE
- 金具 : リン青銅 (t=0.15)  
FITTING NAIL PHOSPOR BRONZE

2. メッキ仕様 PLATING

- ターミナル TERMINAL
  - 鍍銀ビスマスマッキ (1.0 μm以上)
  - TIN SILVER BISMUTH PLATING (1.0 MICROMETER MINIMUM)
  - 下地: ニッケルめっき(1.0 μm以上)
  - UNDER PLATING: NICKEL PLATING (1.0 MICROMETER MINIMUM)
- 金具 FITTING NAIL
  - 鍍メッキ (1.0 μm以上)
  - TIN PLATING (1.0 MICROMETER MINIMUM)
  - 下地: ニッケルめっき(1.0 μm以上)
  - UNDER PLATING: NICKEL PLATING (1.0 MICROMETER MINIMUM)

3. エンボステップ梱包時は、アクチュエータが閉じた状態とする。  
IN THE PACKAGE, ACTUATOR SHOULD BE CLOSED.

偶数極に適用。  
APPLY FOR EVEN CIRCUIT.

パターンはくり止め用具  
FITTING NAIL FOR PREVENTION OF PEELING OF PCB PATTERN.

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

種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 MILLIMETERS.

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 STIFFENER 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35 μmまたは50 μm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

RELEASED EC NO: J2013-1133 DRWN: NAKANUMA 2013/04/10 CHKD: KAKAHASHI 2013/04/11 APP: KMORIKAWA 2013/04/16	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE ---	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
	10 UNDER	± ---	DRAWN BY AISHII	DATE 2012/09/19	TITLE 0.5MM FPC CONN F/F E/O HOUSING ASSY		
	10 OVER 30 UNDER	± ---	CHECKED BY KTAKAHASHI	DATE 2012/09/19			
	30 OVER	± ---	APPROVED BY KMORIKAWA	DATE 2013/03/15			
ANGULAR	± --- °	MATERIAL NO. SEE SHEET1		DOCUMENT NO. SD-51296-017		SHEET NO. 2 OF 2	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					