Jameco Part Number 884969

MOLEX TAIWAN LTD (GC)

TITLE :	
	SINGLE PORT UP-RIGHT TYPE USB
	CONNECTOR

		TITLE : SINGLE PORT, UP-RIGHT TYPE, USB CONNECTOR		
B	PER ECN T98-181	**Product Specification**		
REV	DESCRIPTION	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
DOCUMENT NO **PS - 89485** File Name: PS89485		Prepared By: Vincent	Date : 971205	SHEET NO. 1 of **8**
		Checked By:	Date :	
		Approved By:	Date :	

1.0 SCOPE

This specification covers the USB series product.

2.0 APPLICABLE DOCUMENTS

The following documents form a part of this specification to the extent specified herewith. In the event of conflict between the requirements of the specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of the specification and the referenced documents, this specification shall take precedence.

MIL-STD-202 Test Mthods for Electronic and Electrical Component Parts

MIL-STD-1344 Test Methods for Electrical Connectors

3.0 MATERIAL SPECIFICATIONS

3.1 Design and Construction
Connector shall be of the design, construction and physical dimensions specified on the applicable sales drawing

3.2 Materials
a) Contacts : Refer To Respective Molex Sales & Engineering Drawings

b) Housing : Refer To Respective Molex Sales & Engineering Drawings

c)Metal Shell : Refer To Respective Molex Sales & Engineering Drawings

d)Plating : Refer To Respective Molex Sales & Engineering Drawings

3.3 Performance and Test Description
Connector shall be designed to meet the electrical, mechanical and environmental performance requirements specified in 3.4

3.4 Test Requirments and Procedures.

ELECTRICAL

Item	Requirement	Test methods
Contact Resistance	**30** mΩ max	Maximum applied Voltage 20mV
(initial value)		at a current of 100mA per Mil-Std-
		1344A Method 3002.1

Dielectric	No Breakdown	Test between adjacent contacts
Withstanding		at 750 V AC (rms) and 60 seconds
Voltage		hold time, per Mil-Std-1344A
		Method 3001.1, Test Condition I.

Insulation	**1000** Mega Ω	Test between adjacent contacts
Resistance	min	at 500 V dc for 2 minutes,
		per Mil-Std-1344A Method 3003.1

Capacitance	**2** picofarad	Test between adjacent contacts
	max	to 1 Megahertz max per Mil-Std-202F
		Method 305.

Current Rating	30deg C rise	Apply the rated current to
1 Amp	in temp. max	connector for 96 hours
(Temperature rise)		

MECHANICAL

Item	Requirement	Test methods
Durability (Au flash Plating)	Contact Resistance **30** mohm max after **1500** cycles.	Mate this connector with its mating part. Other conditions follow Mil-Std-1344A Method 2016
Terminal Retention	**0.8** Kg min	Apply a pull out force in the axial direction of the contact per Mil-Std-1344A method 2007.1
Vibration	a. Contact Resistance **30** mohm max b. No discontinuity greater than **1** μsec.	Subject mated connector to simple harmonic motion with double amplitude displacement of 0.03 inch or 15 G's and frequency sweep of 10 to 55 and return to 10 Hz in 2 hours in each direction. Total 5 cycles. per Mil-Std-202F Method 201A
Mechanical Shock	a. No Damage b. Contact Resistance **30** mohm max b. No discontinuity greater than **1** μsec.	Subject mated connector to 50 G half sine in 11 msec according to Mil-Std-1344 Method 2004.1, Condition A.
Mating and Unmating Forces	a. Mating = **3.57** Kg max b. Unmating = **1.02** Kg min	Mate the connector with its mating part and measure force per Mil-Std-1344A Method 2013.1

ENVIRONMENTAL

Item	Requirement	Test methods
Thermal Shock	Contact Resistance	Subject mated connector to
	30 mΩ max	5 cycles of exposure at
		- 55 deg C and 85 deg C
		Mil-Std-1344A, Method
		1003.1, Condition A

Steady State	Contact Resistance	Expose mated connector to
Humidity	**30** mΩ max	40 deg C and 90-95% RH for
		96 hours according to Mil-
		Std-1344A, Method 1002.2,
		Type I, Condition B.

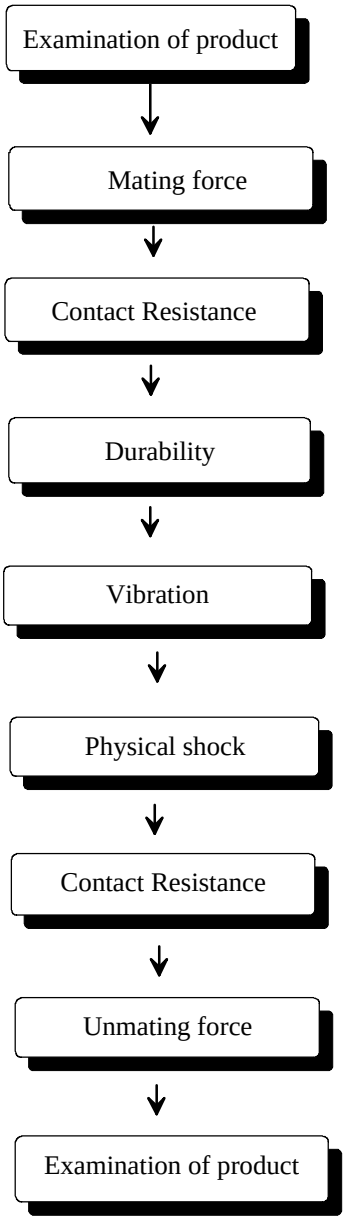
Temperature	Contact Resistance	Subject mated connector to
Life (Thermal	**30** mΩ max	ambient temperature of 125 deg C
aging)		for 250 hours per Mil-Std-1344A
		Method 1005.1 Condition B

3.5 Test Groups and Test Sequences :

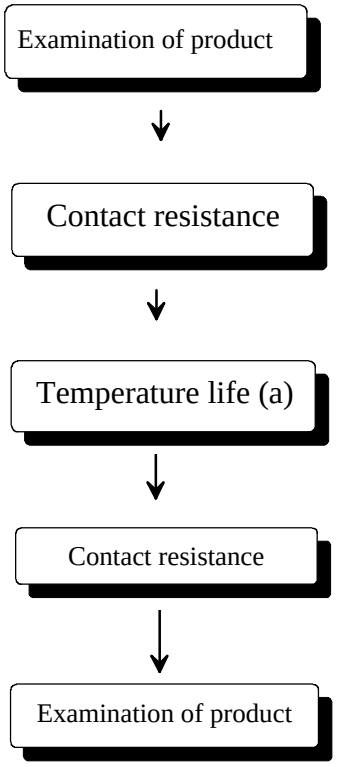
The tests are categorized into 3 major groups. The test sequences are defined as follow .
***The tests for Solderability, Terminal Retention are performed independently.**

Sample selection: All test groups shall consist a minimum of eight connectors.A minimum of 30 contacts shall be selected and identified.

GROUP I

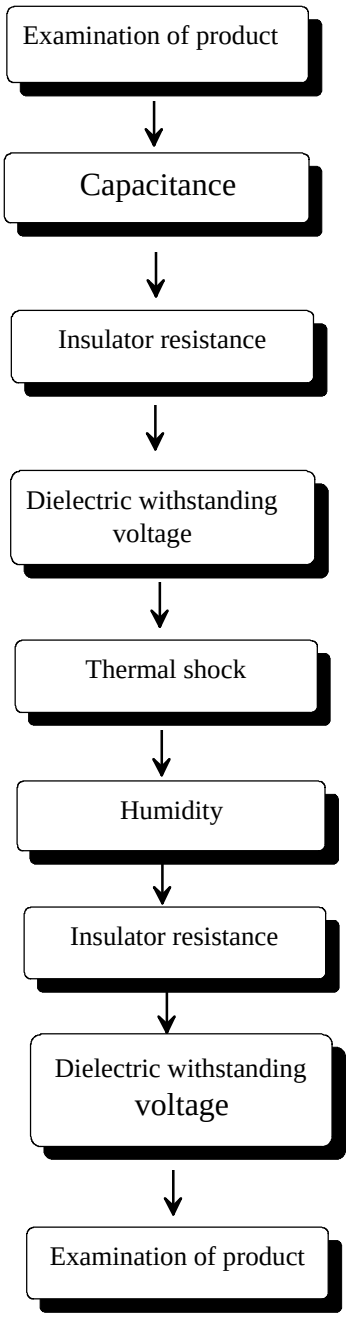


GROUP II



(a): Pre-mating and unmating 10 cycles

GROUP III


Examination of product
Capacitance
Insulator resistance
Dielectric withstanding voltage
Thermal shock
Humidity
Insulator resistance
Dielectric withstanding voltage
Examination of product

		TITLE : SINGLE PORT, UP-RIGHT TYPE, USB CONNECTOR
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REV	DESCRIPTION	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

DOCUMENT NO **PS - 89485** File Name: PS89485	Prepared By: Vincent	Date : 971205	SHEET NO. 9 of **8**
	Checked By:	Date :	
	Approved By:	Date :	

		TITLE : SINGLE PORT, UP-RIGHT TYPE, USB CONNECTOR
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	Checked By:	Date :	
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	Checked By:	Date :	
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		TITLE : SINGLE PORT, UP-RIGHT TYPE, USB CONNECTOR
B	PER ECN T98-181	**Product Specification**
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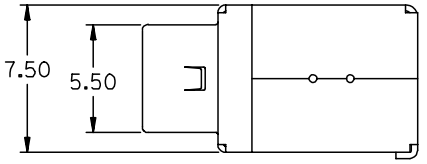
	Checked By:	Date :	
	Approved By:	Date :	

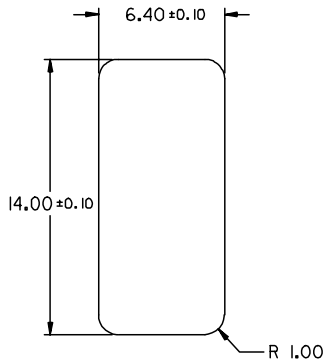
NOTES :

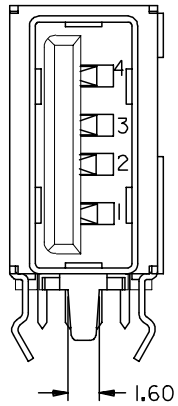
1. MATERIAL :
   HOUSING : HIGH TEMPERTURE NYLON , GLASS FIBRE FILLED, UL94-VO , COLOR: BLACK
   TERMINAL : PHOSPHOR BRONZE
   METAL SHELL : DEEP DRAWN STEEL
2. PLATING :
   TERMINAL :
   CONTACT AREA : (a) GOLD FLASH.
   (b) GOLD (Au), THICKNESS = 30 MICROINCH MINIMUM.
   SOLDER TAIL :
   PURE TIN THICKNESS= 75 MICROINCH MINIMUM .
   UNDER PLATE : NICKEL (NI), THICKNESS= 50 MICROINCH MINIMUM.
   METAL SHELL :
   TIN (Sn) ALLOY , THICKNESS= 100 MICROINCH MINIMUM.
   UNDER PLATE : NICKEL (NI) , THICKNESS= 50 MICROINCH MINIMUM.
3. RECOMMENDED PCB THICKNESS : 1.60±0.05 mm
4. PRODUCT SPECIFICATION : REFER TO PS-89485
5. TRAY PACKAGING SPECIFICATION REFER TO : PK-89485-002
   TUBE PACKAGING SPECIFICATION REFER TO : PK-89485-001
   TUBE PACKAGING P/N, PLEASE REFER TO SHEET 2,3

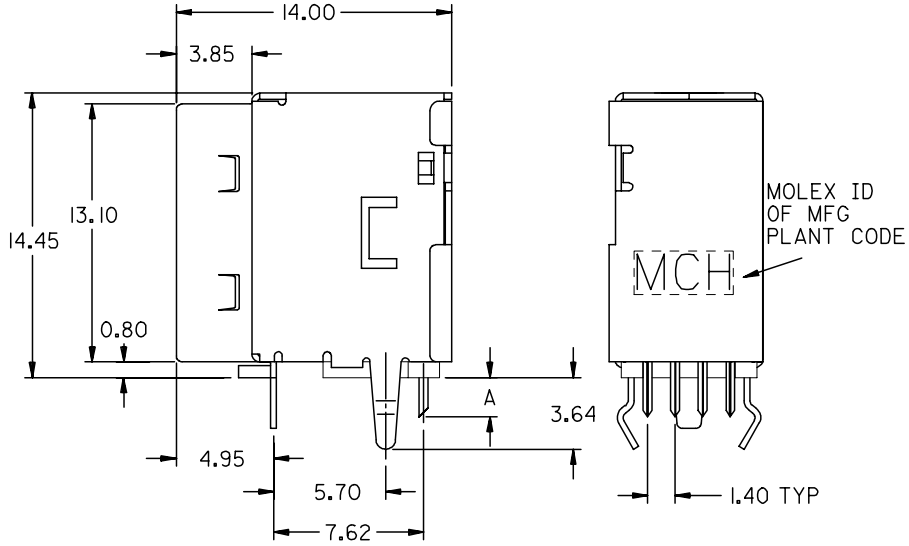
DIMENSION "A"	P/N FOR TRAY PACKING	
$2.00^{+0.35}_{-0.15}$	89485-8000	GOLD FLASH PLATING ON CONTACT AREA
	89485-8001	30 MICRO INCH GOLD PLATING ON CONTACT AREA
$2.50^{+0.35}_{-0.10}$	89485-8002	GOLD FLASH PLATING ON CONTACT AREA
	89485-8003	30 MICRO INCH GOLD PLATING ON CONTACT AREA

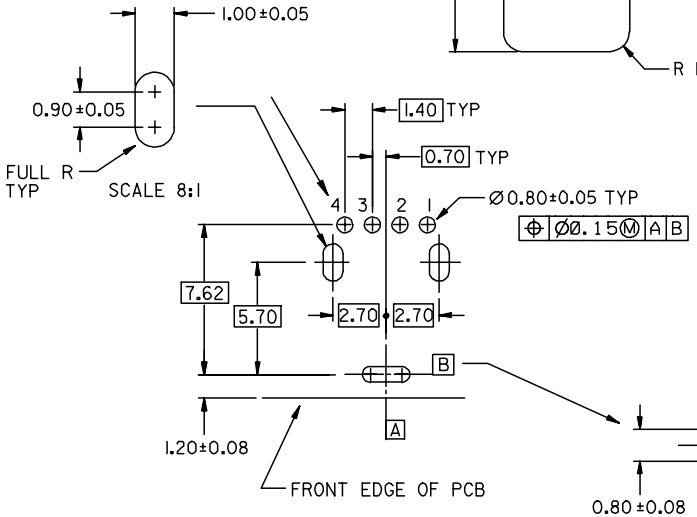


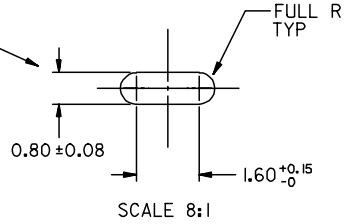
Recommended Panel Opening











LTR	REVISION RECORD	ECN	DR	DATE
A	NEW RELEASE FOR LEAD-FREE		DAVID HU	2004/11/5

REVISE ONLY ON CAD SYSTEM

MATERIAL :	SEE NOTE
FINISH :	SEE NOTE
WIRE RANGE :	N/A
INS. RANGE :	N/A
DRAWN BY DAVID HU 2004/11/5	CHK'D BY
APPR'D BY	SCALE 4:1

MOLEX TAIWAN LTD.
SHEET 1 OF 3

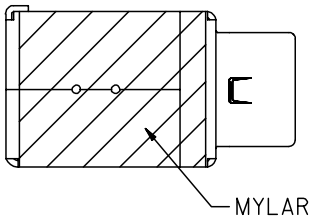
GENERAL TOLERANCES
ANGLE : ± 3° DIM : ± .25/.010

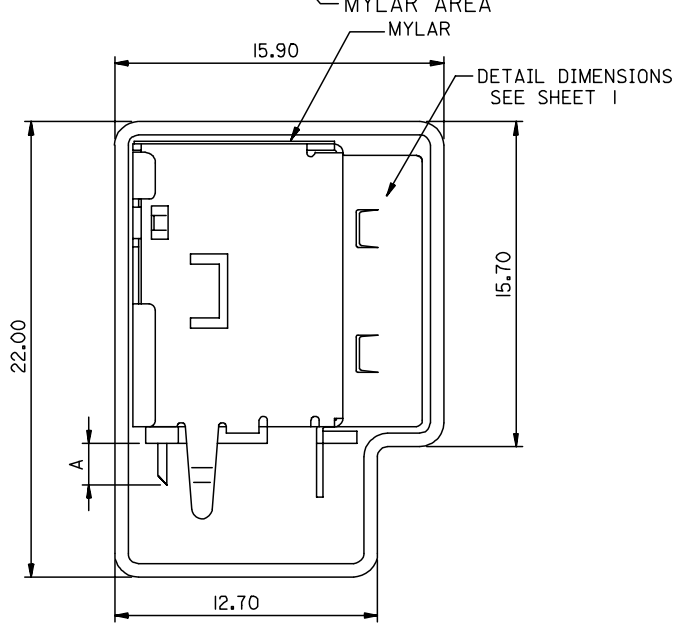
ENG. NO.: SD-89485-003 REV A

TITLE : SINGLE PORT UP-RIGHT USB CONNECTOR (LEAD-FREE)

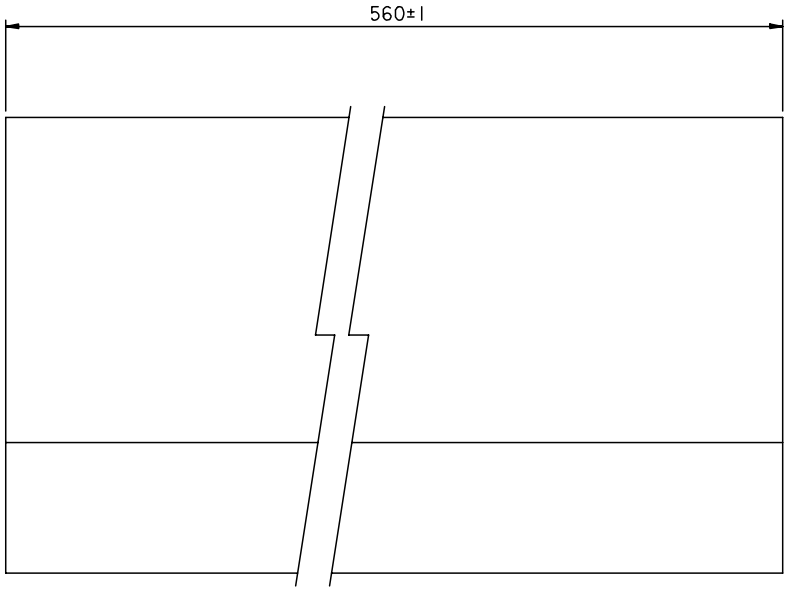
ENG. NO | EDP NO. | SIMILAR ITEM | CAD FILE : | DO NOT SCALE DRAWING

MXT , Sa - 13





NOTE:
1. DETAIL DIMENSIONS , PLEASE REFER TO SHEET 1 OF SD-89485-003
2. THE TUBE PACKAGE INCLUDE TWO PLUGS ON RIGHT AND LEFT SIDES.
B 3. TUBE PACKAGING SPECIFICATION REFER TO: PK-89485-001



PART NUMBER LEGEND:

P/N FOR TUBE PACKING AND MYLAR ADDITION			
MATERIAL NUMBER		DIMENSION 'A'	PLATING SPECIFICATION
WITH MYLAR	89485-8100	2.00 +0.35 -0.15	GOLD FLASH PLATING ON CONTACT AREA
	89485-8101		30 MICRO INCH GOLD PLATING ON CONTACT AREA
	89485-8102	2.50 +0.35 -0.10	GOLD FLASH PLATING ON CONTACT AREA
	89485-8103		30 MICRO INCH GOLD PLATING ON CONTACT AREA

NEW RELEASE
EC NO.
DRWN: DAVID HU 2004/10/28
CH'K:
APPR:
DESCRIPTION
A
REV

QUALITY SYMBOLS
MAJOR ▼ = 0
CRITICAL ▽C = 0

GENERAL TOLERANCES: (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± .	±.
3 PLACES	± .	±.
2 PLACES	±0.25	±.010
1 PLACE	±0.25	±.010

ANGULAR: ±3°

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

SCALE 4 : 1
DESIGN UNITS ☒mm ☐INCH
THIRD ANGLE PROJECTION
DIMENSIONS: ☐ mm/INCH ☐ INCH/mm ☒ mm ONLY
SHT REV
REVISE ON CAD ONLY

DRAWN BY & DATE: DAVID HU 2004/10/28
CHECKED BY & DATE:
APPROVED BY & DATE:
CAD FILENAME: S8948503.S02

TITLE: USB A UPRIGHT 89485 WITH MYLAR BY TUBE PACKAGE (LEAD-FREE)

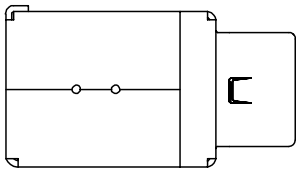
MOLEX INCORPORATED

MATERIAL NO.: SEE TABLE
DRAWING NO.: SD-89485-003
SHEET NO.: 2

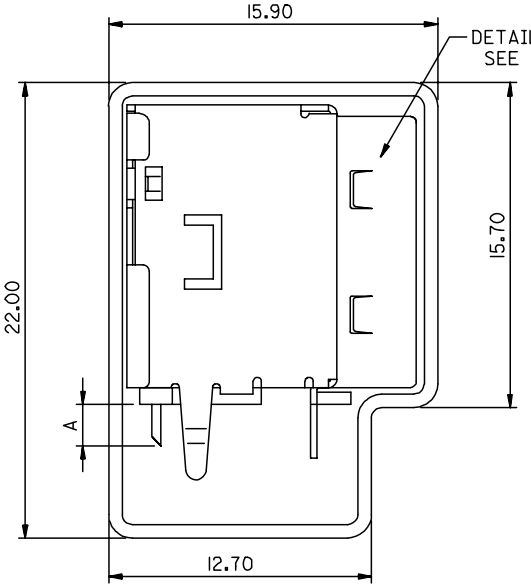
SIZE A3

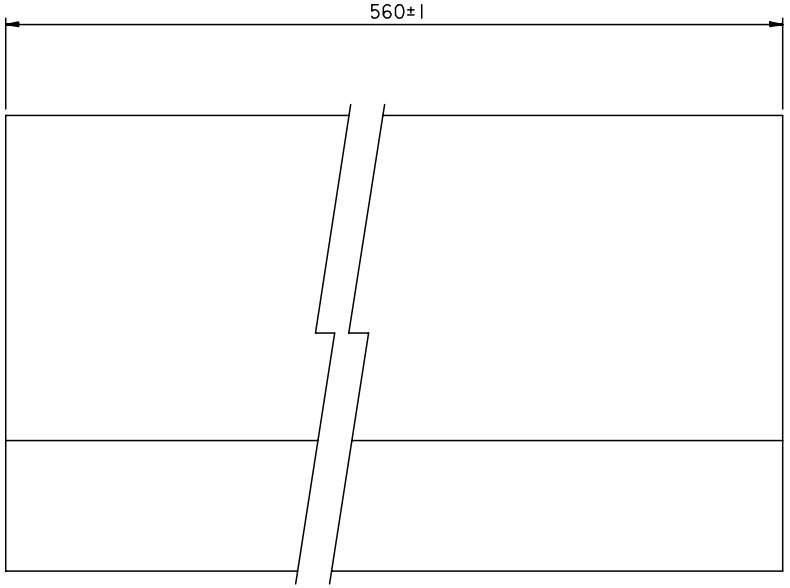
ENG. NO
EDP NO.
SIMILAR ITEM
CADFILE NO.
DO NOT SCALE DRAWING

GC.DGN REV A
96/06/12 LEVEL 3



NOTE:
1.DETAIL DIMENSIONS , PLEASE REFER TO SHEET 1 OF SD-89485-003
2.THE TUBE PACKAGE INCLUDE TWO PLUGS ON RIGHT AND LEFT SIDES.
3.TUBE PACKAGING SPECIFICATION REFER TO: PK-89485-001





PART NUMBER LEGEND:

P/N FOR TUBE PACKING			
MATERIAL NUMBER		DIMENSION 'A'	PLATING SPECIFICATION
WITHOUT MYLAR	89485-8200	2.00 +0.35 -0.15	GOLD FLASH PLATING ON CONTACT AREA
	89485-8201		30 MICRO INCH GOLD PLATING ON CONTACT AREA
	89485-8202	2.50 +0.35 -0.10	GOLD FLASH PLATING ON CONTACT AREA
	89485-8203		30 MICRO INCH GOLD PLATING ON CONTACT AREA

NEW RELEASE
EC NO.
DRWN: DAVID HU 2004/10/28
CH'K:
APPR:
DESCRIPTION
A
REV

QUALITY SYMBOLS
MAJOR ▼ = 0
CRITICAL ▽C = 0

GENERAL TOLERANCES: (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± .	±.
3 PLACES	± .	±.
2 PLACES	±0.25	±.010
1 PLACE	±0.25	±.010

ANGULAR: ±3°

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

SCALE 4 : 1
DESIGN UNITS ☒mm ☐INCH
THIRD ANGLE PROJECTION
DIMENSIONS: ☐ mm/INCH ☐ INCH/mm ☒ mm ONLY
SHT REV
REVISE ON CAD ONLY

DRAWN BY & DATE: DAVID HU 2004/10/28
CHECKED BY & DATE:
APPROVED BY & DATE:

TITLE: USB A UPRIGHT 89485 BY TUBE PACKAGE (LEAD-FREE)

MOLEX INCORPORATED

CAD FILENAME: S8948503.S03
MATERIAL NO.: SEE TABLE
DRAWING NO.: SD-89485-003
SHEET NO.: 3

SIZE A3

ENG. NO
EDP NO.
SIMILAR ITEM
CADFILE NO.
DO NOT SCALE DRAWING

GC.DGN REV A
96/06/12 LEVEL 3