E28476
Project 4787128076

October 23, 2015
REPORT

on

COMPONENT - CONNECTORS FOR USE IN DATA, SIGNAL, CONTROL AND POWER APPLICATIONS – COMPONENT

Tyco Electronics Corp
Middletown, PA

DESCRIPTION

PRODUCT COVERED:

USR, CNR Component Connector, Mid Board Copper receptacle Cat. Nos. 2291316-1, 2291316-2, 2293921-1, 2293921-2, 2293818-1, 2292096-1, 2292096-2, 2292055-1, 2292069-1, 2294186-1, 2294190-1, 2297117-1, **2297117-2**, **2314572-1**, **2314572-2**.

GENERAL:

These devices are multi-pole connectors intended for factory assembly on printed wiring boards where the acceptability of combinations is determined by UL LLC. The devices are identified as follows:

USR indicates investigation to United States Standards, UL 1977.

CNR indicates investigation to Canadian National Standards, C22.2 No. 182.3.

RATINGS:

Cat. No.	CNR RATING		USR RATING
	Voltage Vac/Vdc	Ampere (A)	
2291316-1 2291316-2 2293921-1 2293921-2 2293818-1 2292096-1 2292096-2 2292055-1 2292069-1 2294186-1 2294190-1 2297117-1 2297117-2 2314572-1 2314572-2	Less than 30V	Less than 1	--

Disconnecting Use - see Sec Gen for required marking

*

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Use - For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC.

Conditions of Acceptability - The following are among the considerations to be made when evaluating the device in the end-use product.

Interruption of Current

1. These devices are not suitable for interrupting the flow of current by connecting or disconnecting the mating connector.

Current-Carrying Capability and Current Ratings

2. These devices have not been subjected to the Temperature test and as a result do not have an assigned current rating for USR. For CNR, the device is rated less than 1 A. The device's current carrying capability is to be reviewed in the end-use by measuring temperatures on the connector housing and/or terminals when current is flowing through the connector under conditions of normal use.

Insulating Materials

3. These devices employ insulating materials with properties as tabulated below at the minimum thickness employed in the connector housing, the suitability of the insulating materials based on the documented values shall be determined in the end-use application. Please note the values specified in the table when multiple materials are indicated represent the minimum values for the group of materials.

Cat. No.	Insulating Material (#)	Measured Minimum Thickness	Flame Class	HWI	HAI	RTI Elec	Max Operating Temp, ^{0}C
2291316-1 2291316-2 2293921-1 2293921-2 2293818-1 2292096-1 2292096-2 2292055-1 2292069-1 2294186-1 2294190-1 2297117-1 2297117-2 2314572-1 2314572-2	A	0.35	(+)	2	0	240	130

Note:

(#) – Code for Insulating Body Material.

(+): Thickness is less than the minimum Recognized material thickness, as such no assigned Flame class.

A. TYCO RM No. [redacted]
1. Dielectri[redacted]gth (kV/mm): 39
2. CTI: 4

Terminations

4. The suitability of the solder terminal for grounding shall be determined in the end-use.

CONSTRUCTION DETAILS:

Spacings - Minimum of 1.2 mm (3/64 in.), provided through air and over surface between live-metal parts of opposite polarity and between live parts and exposed dead-metal parts.

Markings (USR) – See Sec Gen.

Markings (CNR) – See Sec Gen.

Insulating Materials - The following Recognized Component Plastic materials (QMFZ2) are employed for the parts specified.

Cat. No.	Material Manufacturer	Grade Designation	Max Temperature,°C
2291316-1 2291316-2 2293921-1 2293921-2 2293818-1 2292096-1 2292096-2 2292055-1 2292069-1 2294186-1 2294190-1 2297117-1, 2297117-2, 2314572-1, 2314572-2	Polyplastic Co. Ltd (E106764)	Vectra or Laperos E130i(d)(e)(f1)	130

Index to Illustrations - Refer to the following illustrations for details of construction.

Cat. No.	Description	Ill. No.
2291316-1 2291316-2	Receptacle Connector Vertical 74 Position	1
2293921-1 2293921-2	Receptacle Connector Vertical 26 Position	2
2293818-1	Receptacle Connector Right Angle 26 Position	3
2292096-1 2292096-2	Receptacle Connector Vertical 50 Position	4
2292055-1	Receptacle Connector Right Angle 50 Position	5
2292069-1	Receptacle Connector Right Angle 74 Position	6
2294186-1	Receptacle Connector Right Angle 100 Position	7
2294190-1	Receptacle Connector Right Angle 124 Position	8
2297117-1 2297117-2	Receptacle Connector Vertical 148 Position, Card Edge	9
2314572-1 2314572-2	Receptacle Connector Vertical 148 Position, Card Edge	10

CONNECTOR

Mid Board Copper receptacle
Cat. No. 2291316-1, **-2** ILL. No. 1

General - See Construction Details for insulating materials.

1. Housing - Dimensions:

Measurement	mm	[in.]
Width	4.8	0.19
Length	28.45	1.12
Height	13.65	0.53
Minimum thickness:		
Outer wall	0.35	0.014
Between adjacent contacts	0.35	0.014

Refer to Ill. 1 for supplemental dimensional details.

2. Contacts - Copper alloy, plated. Refer to Ill. 1 for dimensions.

3. Terminal - Solder tab type. Copper alloy, integral with contact.

Cat. No. 2293921-1, -2 **ILL. No. 2**

General - See Construction Details for insulating materials.

1. Housing - Dimensions:

Measurement	**mm**	**[in.]**
Width	**4.8**	**0.19**
Length	**14.05**	**0.55**
Height	**13.65**	**0.53**
Minimum thickness:		
Outer wall	**0.35**	**0.014**
Between adjacent contacts	**0.35**	**0.014**

Refer to Ill. 2 for supplemental dimensional details.

2. Contacts - Copper alloy, plated. Refer to Ill. for dimensions.

3. Terminal - Solder tab type. Copper alloy, integral with contact.

Cat. No. 2293818-1 ILL. No. 3

General - See Construction Details for insulating materials.

1. Housing - Dimensions:

Measurement	mm	[in.]
Width	12.05	0.47
Length	15.67	0.62
Height	6.9	0.27
Minimum thickness:		
Outer wall	0.35	0.014
Between adjacent contacts	0.35	0.014

Refer to Ill. 3 for supplemental dimensional details.

2. Contacts - Copper alloy, plated. Refer to Ill. 3 for dimensions.

3. Terminal - Solder tab type. Copper alloy, integral with contact.

Cat. No. 2292096-1, -2 ILL. No. 4

General - See Construction Details for insulating materials.

1. Housing - Dimensions:

Measurement	mm	[in.]
Width	4.8	0.19
Length	21.25	
Height	13.65	0.53
Minimum thickness:		
Outer wall	0.35	0.014
Between adjacent contacts	0.35	0.014

Refer to Ill. 4 for supplemental dimensional details.

2. Contacts - Copper alloy, plated. Refer to Ill. 4 for dimensions.

3. Terminal - Solder tab type. Copper alloy, integral with contact.

Cat. No. 2292055-1 ILL. No. 5

General - See Construction Details for insulating materials.

1. Housing - Dimensions:

Measurement	mm	[in.]
Width	15.67	0.62
Length	19.25	0.76
Height	6.9	0.27
Minimum thickness:		
Outer wall	0.35	0.014
Between adjacent contacts	0.35	0.014

Refer to Ill. 5 for supplemental dimensional details.

2. Contacts - Copper alloy, plated. Refer to Ill. 5 for dimensions.

3. Terminal - Solder tab type. Copper alloy, integral with contact.

Cat. No. 2292069-1 ILL. No. 6

General - See Construction Details for insulating materials.

1. Housing - Dimensions:

Measurement	mm	[in.]
Width	6.9	0.27
Length	26.45	1.04
Height	15.67	0.62
Minimum thickness:		
Outer wall	0.35	0.014
Between adjacent contacts	0.35	0.014

Refer to Ill. 6 for supplemental dimensional details.

2. Contacts - Copper alloy, plated. Refer to Ill. 6 for dimensions.

3. Terminal - Solder tab type. Copper alloy, integral with contact.

Cat. No. 2294186-1 ILL. No. 7

General - See Construction Details for insulating materials.

1. Housing - Dimensions:

Measurement	mm	[in.]
Width	15.67	0.62
Length	36.65	1.44
Height	6.9	0.27
Minimum thickness:		
Outer wall	0.35	0.014
Between adjacent contacts	0.35	0.014

Refer to Ill. 7 for supplemental dimensional details.

2. Contacts - Copper alloy, plated. Refer to Ill. 7 for dimensions.

3. Terminal - Solder tab type. Copper alloy, integral with contact.

Cat. No. 2294190-1 ILL. No. 8

General - See Construction Details for insulating materials.

1. Housing - Dimensions:

Measurement	mm	[in.]
Width	6.9	0.27
Length	43.85	1.73
Height	15.67	0.62
Minimum thickness:		
Outer wall	0.35	0.014
Between adjacent contacts	0.35	0.014

Refer to Ill. 8 for supplemental dimensional details.

2. Contacts - Copper alloy, plated. Refer to Ill. 8 for dimensions.

3. Terminal - Solder tab type. Copper alloy, integral with contact.

Cat. No. 2297117-1, -2 ILL. No. 9

General - See Construction Details for insulating materials.

1. Housing - Dimensions:

Measurement	mm	[in.]
Width	6.0	0.236
Length	52.65	2.07
Height	7.3	0.29
Minimum thickness:		
Outer wall	0.35	0.014
Between adjacent contacts	0.35	0.014

Refer to Ill. 9 for supplemental dimensional details.

2. Contacts - Copper alloy, plated. Refer to Ill. 9 for dimensions.

3. Terminal - Solder SMT type. Copper alloy, integral with contact.

Cat. No. 2314572-1, 2314572-2 - ILL. No. 10

General - See Construction Details for insulating materials.

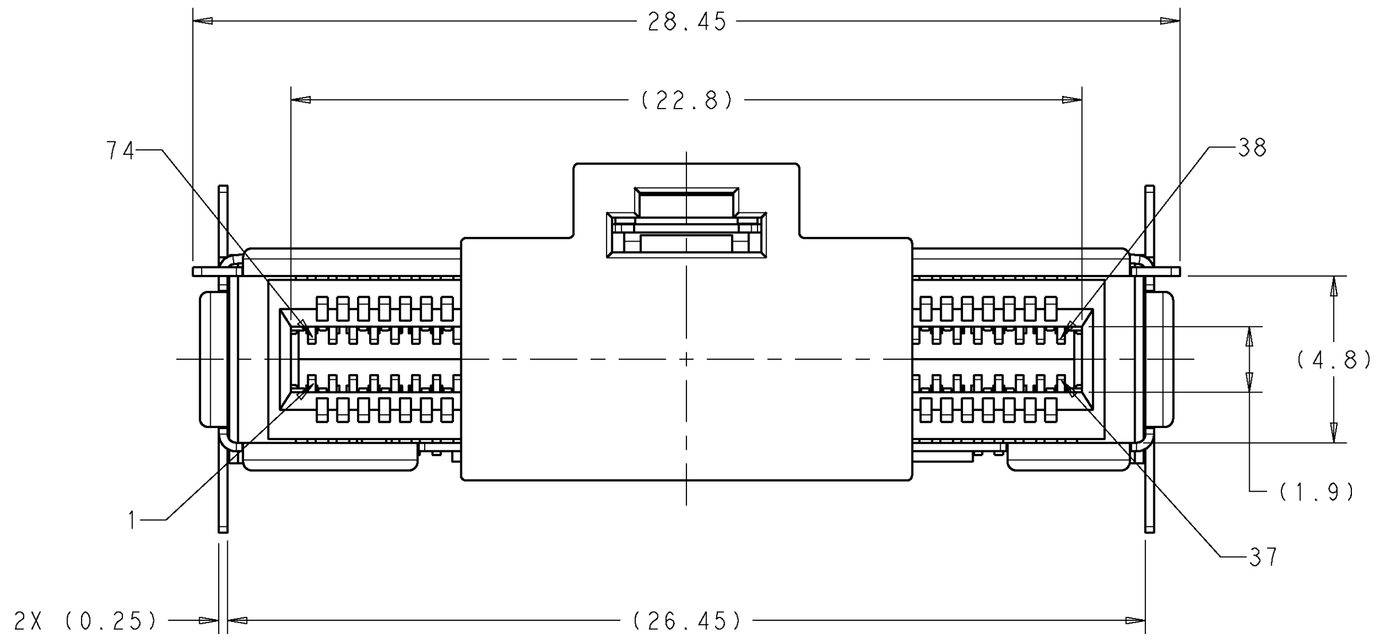
1. Housing - See ILL. 10 for dimensional details.

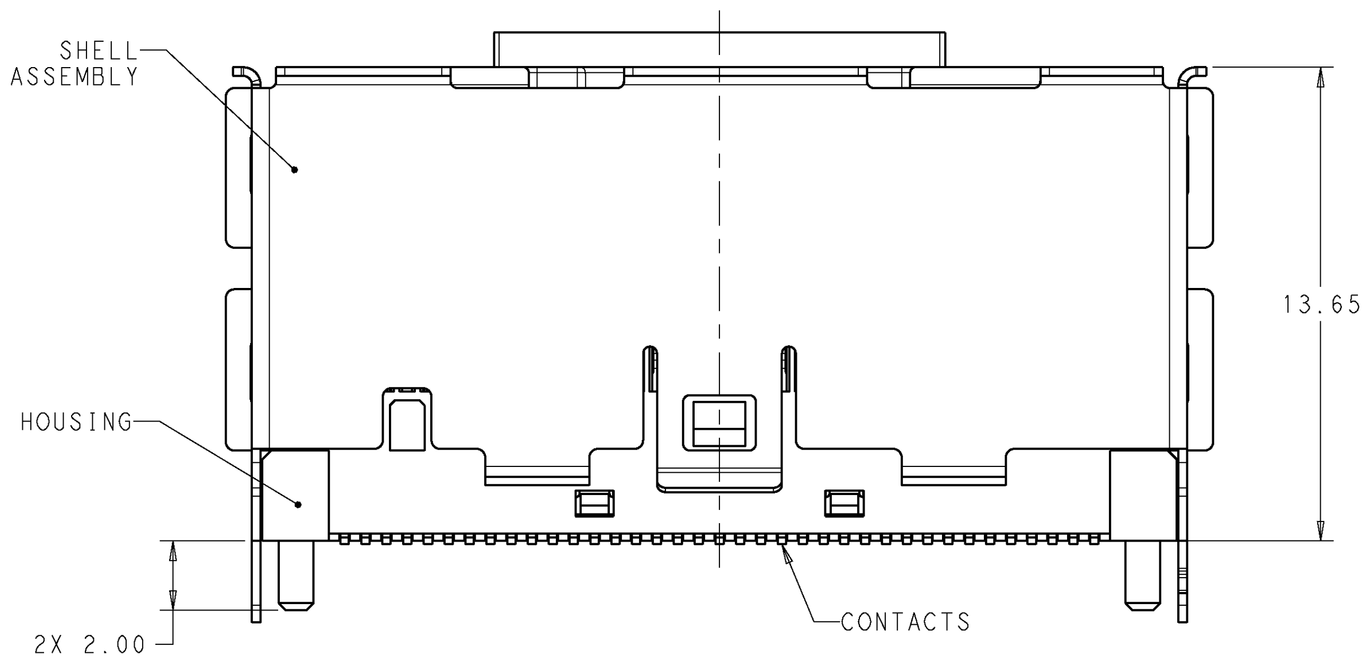
2. Contacts - Copper alloy, plated. Refer to Ill. 10 for dimensions.

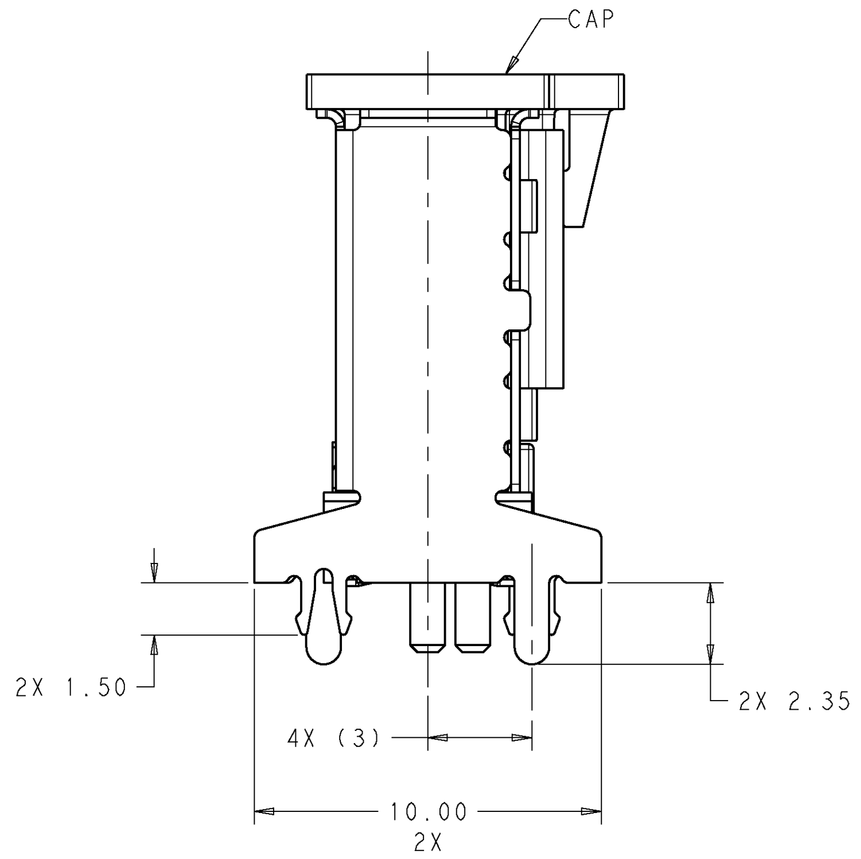
3. Terminal - Solder SMT type. Copper alloy, integral with contact.

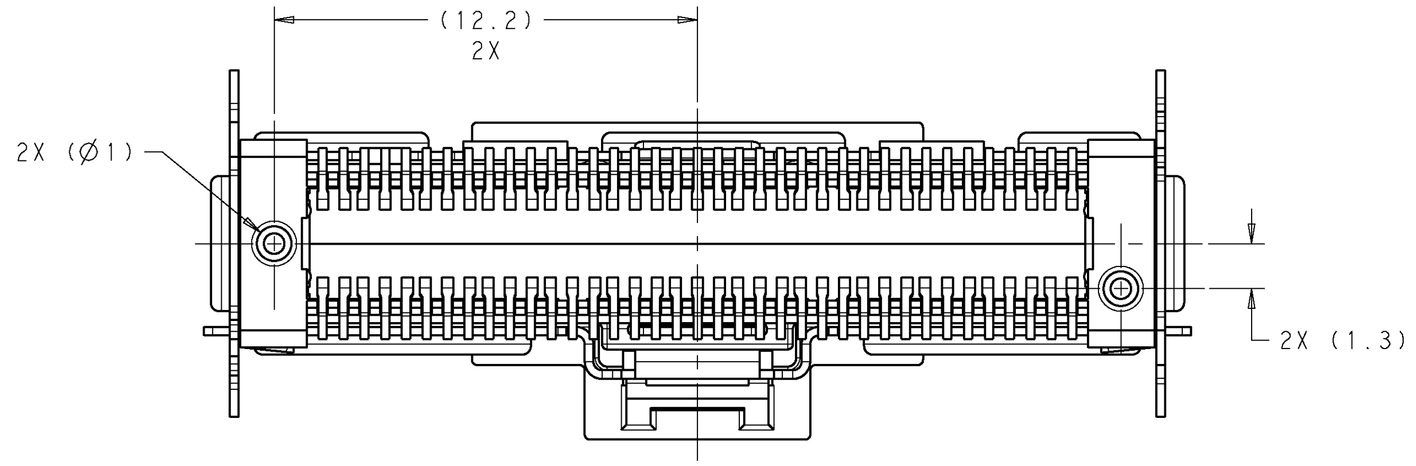
REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	9	ADD -2 PART NUMBER, CAP, REVISED NOTE 1	10FEB2016	MS	MP









1. HOUSING AND CONTACT OVERMOLD: LCP, BLACK.
   CAP: NYLON, BLACK.
   CONTACTS: COPPER ALLOY.
   SHELL ASSEMBLY: COPPER ALLOY, NICKEL PLATED.
   TIN PLATED ON HOLD DOWNS.
2. GOLD PLATED ON MATING INTERFACE. TIN PLATED ON SOLDER TAILS.
3. DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.
4. DESIGNED FOR A 1.42 MIN THICK PC BOARD.
5. RECOMMENDED COMPONENT KEEP OUT AREA.

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

WITHOUT CAP	2291316-2
WITH CAP	2291316-1
REMARKS	PART NUMBER

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±-
1 PLC ±-
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -1
FINISH -2

DWN M SHIRK 09MAR2015
CHK M PHILLIPS 09MAR2015
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

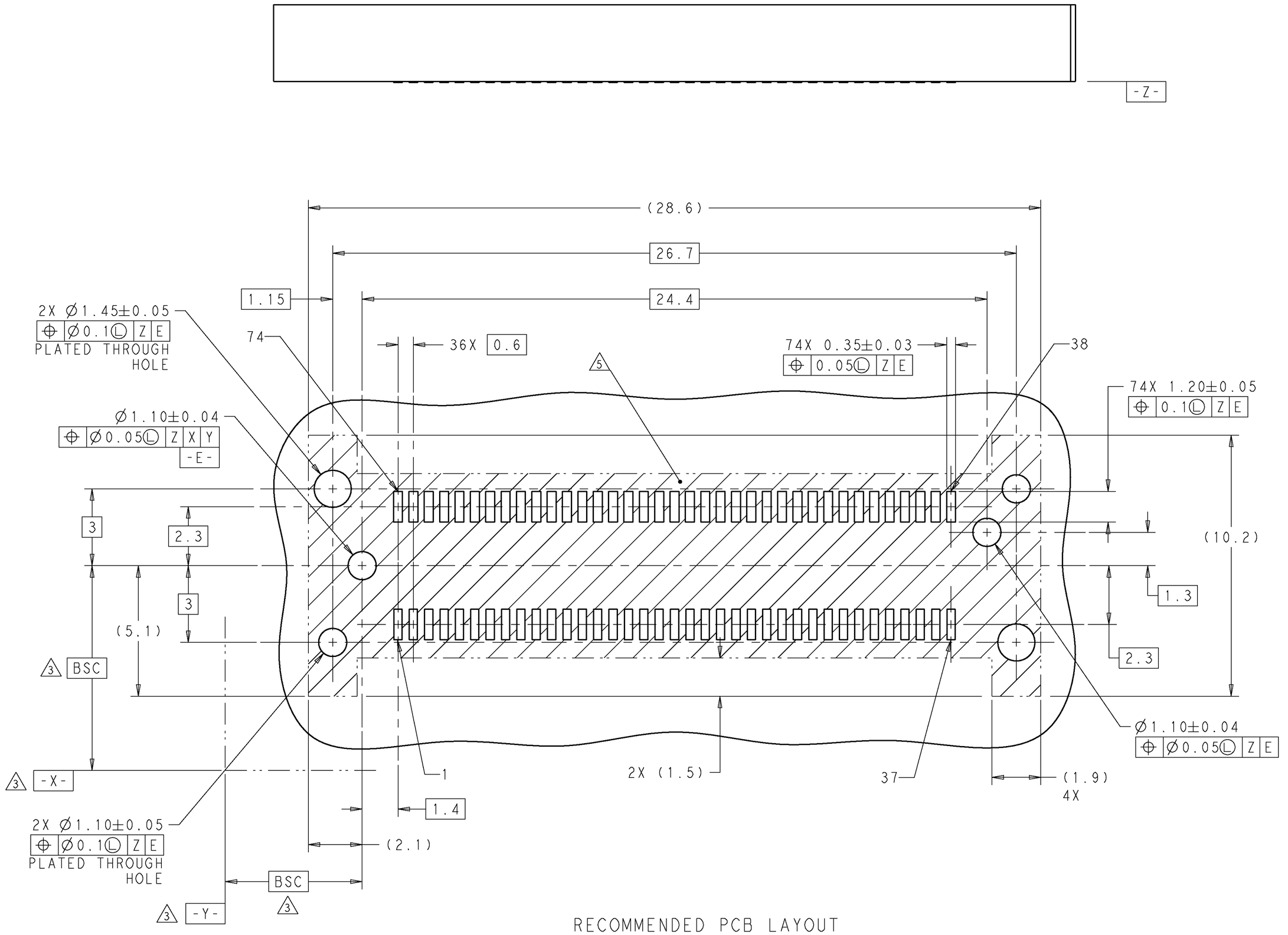
NAME RECEPTACLE CONNECTOR, VERTICAL, 74 POSITION, SLIVER
-

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A1	-	C-2291316	-

CUSTOMER DRAWING | SCALE 8:1 | SHEET 1 OF 2 | REV 9

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-



RECOMMENDED PCB LAYOUT
AND KEEP OUT AREA
SCALE 10:1

PIN #	DESCRIPTION	PIN #	DESCRIPTION
1	SIGNAL GROUND	38	SIGNAL GROUND
2	SIGNAL	39	SIGNAL
3	SIGNAL	40	SIGNAL
4	SIGNAL GROUND	41	SIGNAL GROUND
5	SIGNAL	42	SIGNAL
6	SIGNAL	43	SIGNAL
7	SIGNAL GROUND	44	SIGNAL GROUND
8	SIGNAL	45	SIGNAL
9	SIGNAL	46	SIGNAL
10	SIGNAL GROUND	47	SIGNAL GROUND
11	SIGNAL	48	SIGNAL
12	SIGNAL	49	SIGNAL
13	SIGNAL GROUND	50	SIGNAL GROUND
14	SIGNAL	51	SIGNAL
15	SIGNAL	52	SIGNAL
16	SIGNAL GROUND	53	SIGNAL GROUND
17	SIGNAL	54	SIGNAL
18	SIGNAL	55	SIGNAL
19	SIGNAL GROUND	56	SIGNAL GROUND
20	SIGNAL	57	SIGNAL
21	SIGNAL	58	SIGNAL
22	SIGNAL GROUND	59	SIGNAL GROUND
23	SIGNAL	60	SIGNAL
24	SIGNAL	61	SIGNAL
25	SIGNAL GROUND	62	SIGNAL GROUND
26	SIGNAL	63	SIGNAL
27	SIGNAL	64	SIGNAL
28	SIGNAL GROUND	65	SIGNAL GROUND
29	SIGNAL	66	SIGNAL
30	SIGNAL	67	SIGNAL
31	SIGNAL GROUND	68	SIGNAL GROUND
32	SIGNAL	69	SIGNAL
33	SIGNAL	70	SIGNAL
34	SIGNAL GROUND	71	SIGNAL GROUND
35	SIGNAL	72	SIGNAL
36	SIGNAL	73	SIGNAL
37	SIGNAL GROUND	74	SIGNAL GROUND

PRELIMINARY
NOT RELEASED FOR PRODUCTION

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DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±
1 PLC ±
2 PLC ±0.15
3 PLC ±
4 PLC ±
ANGLES ±

MATERIAL - -

FINISH - -

DWN M SHIRK 09MAR2015
CHK M PHILLIPS 09MAR2015
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

NAME RECEPTACLE CONNECTOR, VERTICAL, 74 POSITION, SLIVER -

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A1	-	C-2291316	-

CUSTOMER DRAWING | SCALE 5:1 | SHEET 2 OF 2 | REV 9

REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
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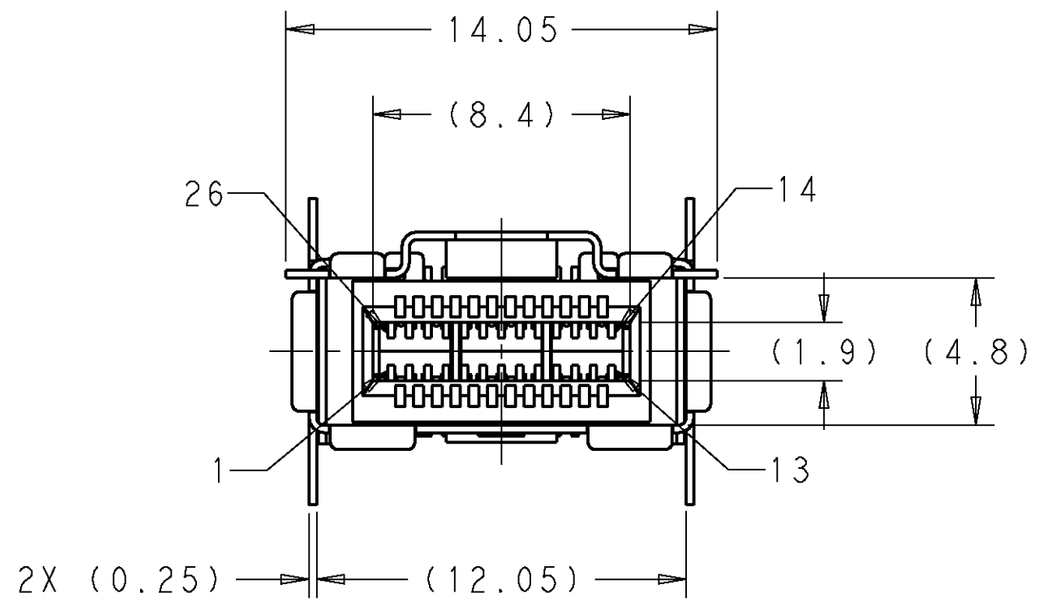
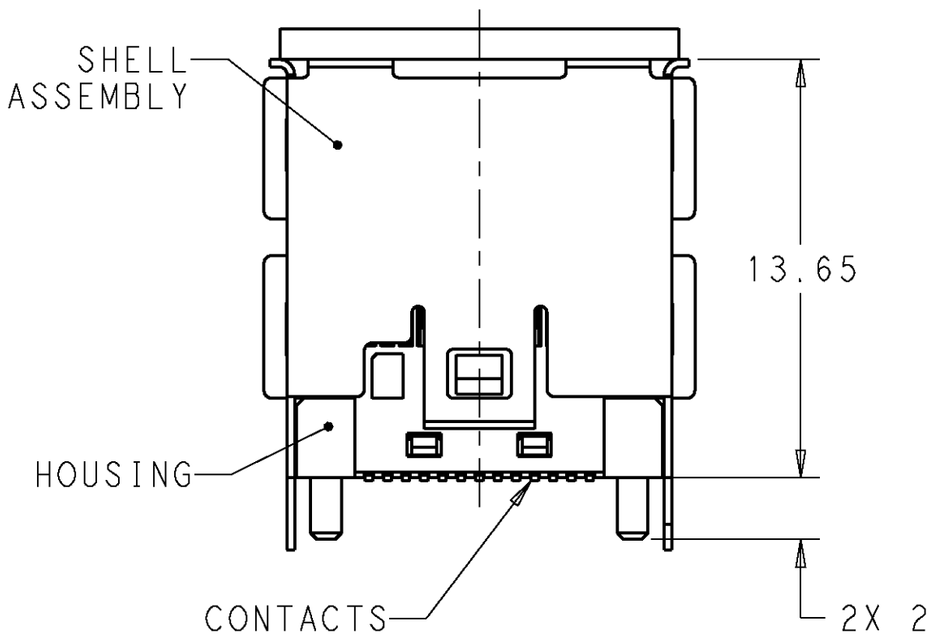
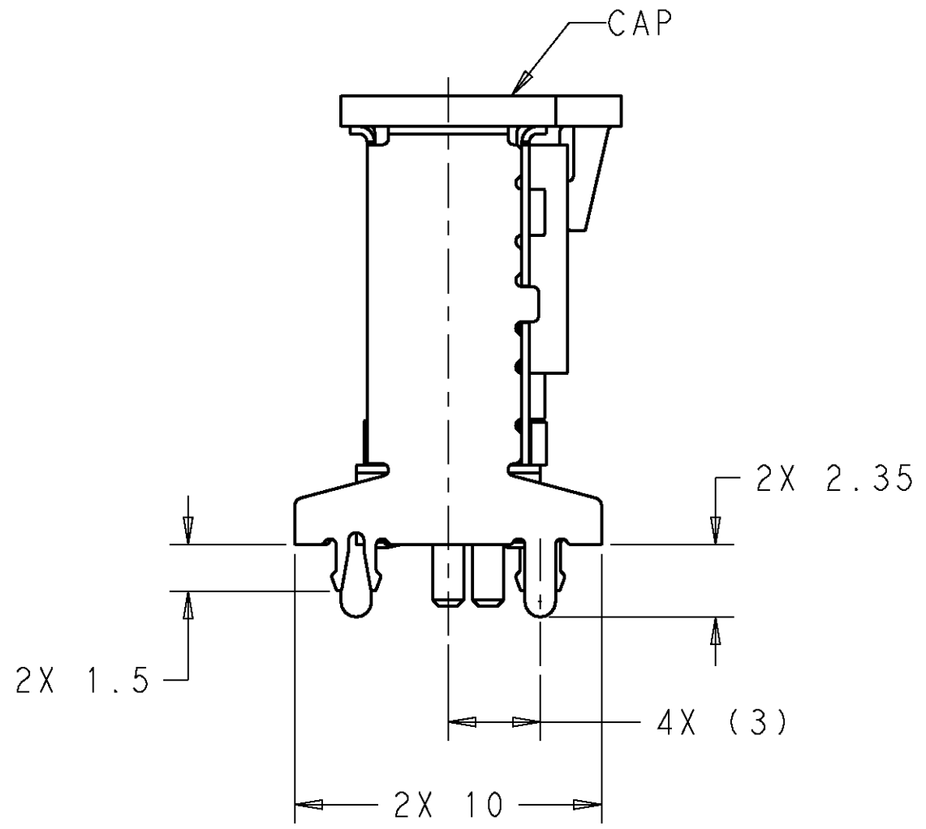
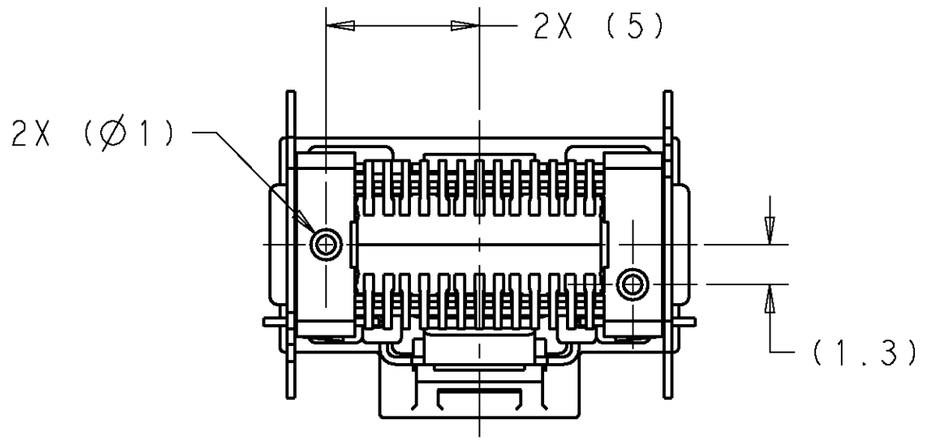
	2	ADD -2 PART NUMBER, CAP, REV NOTE 1, 4	19NOV2015	MS	MP



VIEW SHOWN WITHOUT CAP







1. HOUSING AND CONTACT OVERMOLD: LCP, BLACK.
   CAP: NYLON, BLACK.
   CONTACTS: COPPER ALLOY.
   SHELL ASSEMBLY: COPPER ALLOY, NICKEL PLATED.
   TIN PLATED ON HOLD DOWNS.
2. GOLD PLATED ON MATING INTERFACE. TIN PLATED ON SOLDER TAILS.
3. DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.
4. DESIGNED FOR A 1.42 MIN THICK PC BOARD.
5. RECOMMENDED COMPONENT KEEP OUT AREA.

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

PRELIMINARY NOT RELEASED FOR PRODUCTION

WITHOUT CAP	2293921-2
WITH CAP	2293921-1
REMARKS	PART NUMBER

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -1

FINISH -2

DWN M.SHIRK 19JUN2015
CHK M.PHILLIPS 19JUN2015
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

CUSTOMER DRAWING

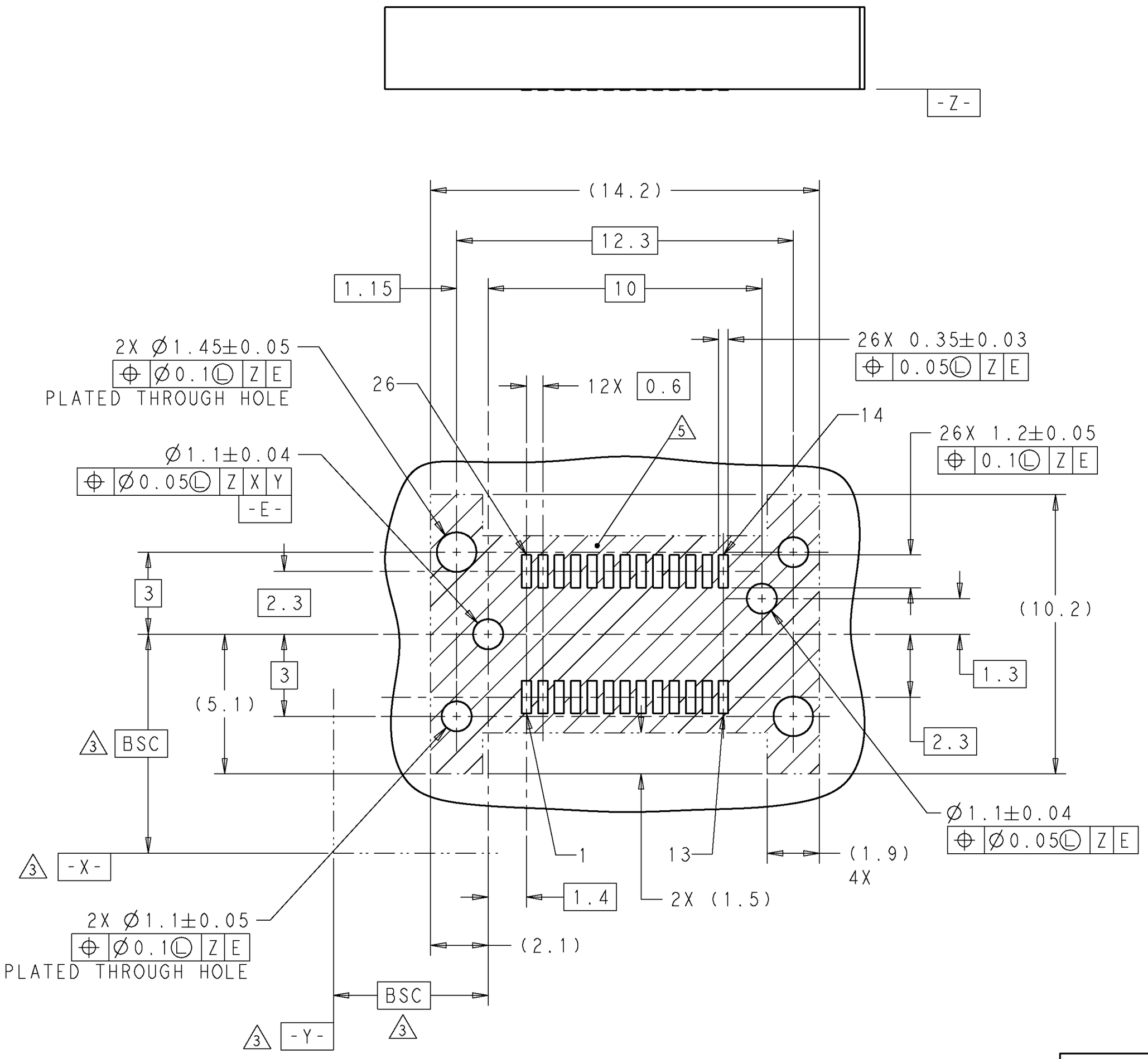
TE Connectivity

NAME RECEPTACLE CONNECTOR, VERTICAL, 26 POSITION, SLIVER

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2293921	-

SCALE 5:1 SHEET 1 OF 2 REV 2

REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-



RECOMMENDED PCB LAYOUT
AND KEEP OUT AREA
SCALE 8:1

PIN #	DESCRIPTION	PIN #	DESCRIPTION
1	SIGNAL GROUND	14	SIGNAL GROUND
2	SIGNAL	15	SIGNAL
3	SIGNAL	16	SIGNAL
4	SIGNAL GROUND	17	SIGNAL GROUND
5	SIGNAL	18	SIGNAL
6	SIGNAL	19	SIGNAL
7	SIGNAL GROUND	20	SIGNAL GROUND
8	SIGNAL	21	SIGNAL
9	SIGNAL	22	SIGNAL
10	SIGNAL GROUND	23	SIGNAL GROUND
11	SIGNAL	24	SIGNAL
12	SIGNAL	25	SIGNAL
13	SIGNAL GROUND	26	SIGNAL GROUND

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DIMENSIONS: mm

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0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -
FINISH -

DWN M.SHIRK 19JUN2015
CHK M.PHILLIPS 19JUN2015
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

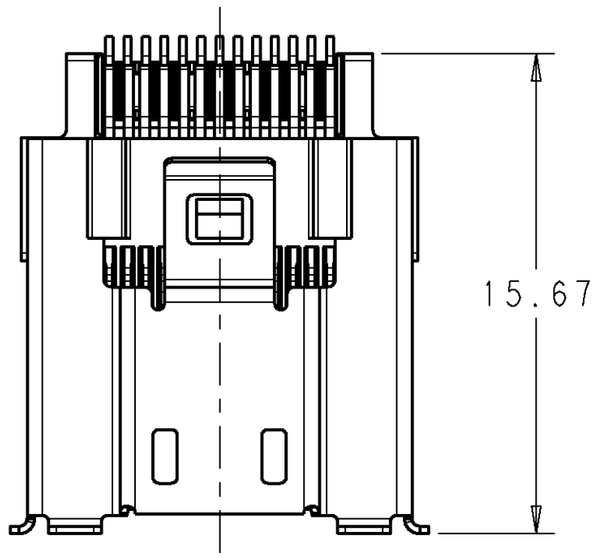
NAME RECEPTACLE CONNECTOR, VERTICAL, 26 POSITION, SLIVER

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2293921	-

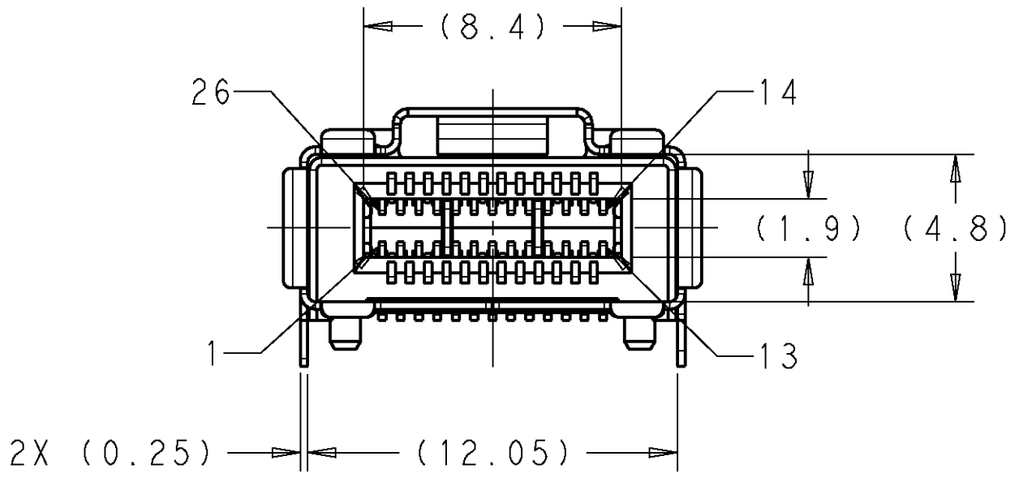
CUSTOMER DRAWING | SCALE 5:1 | SHEET 2 OF 2 | REV 2

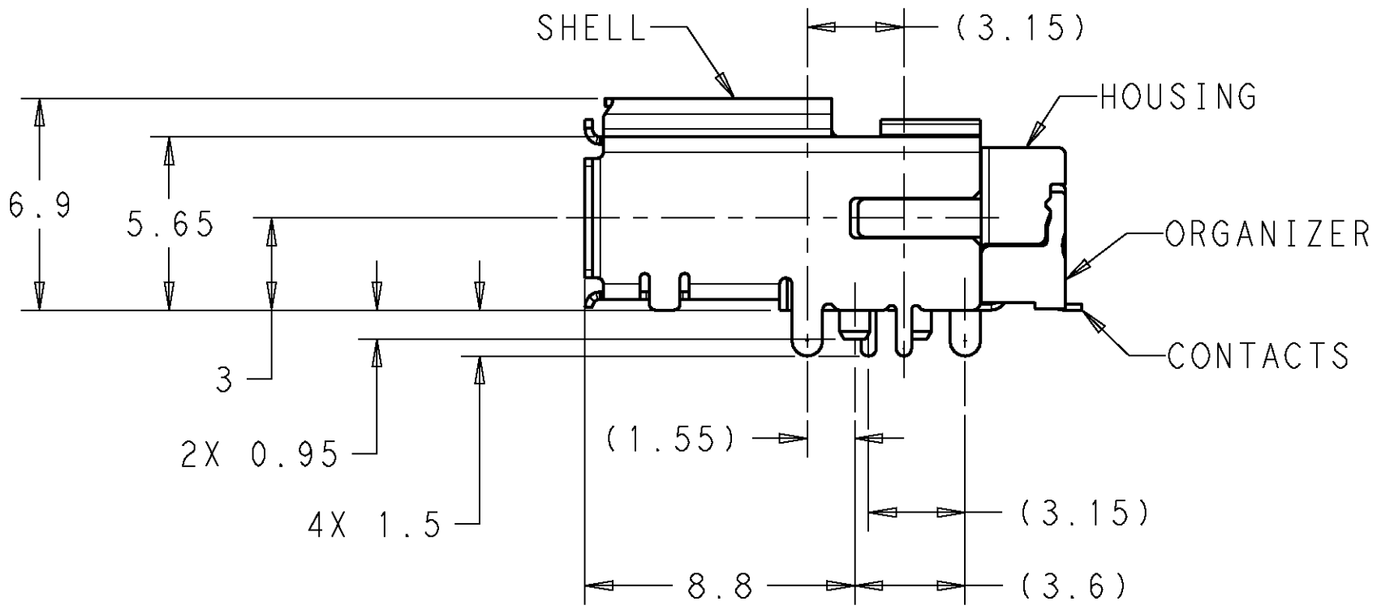
REVISIONS

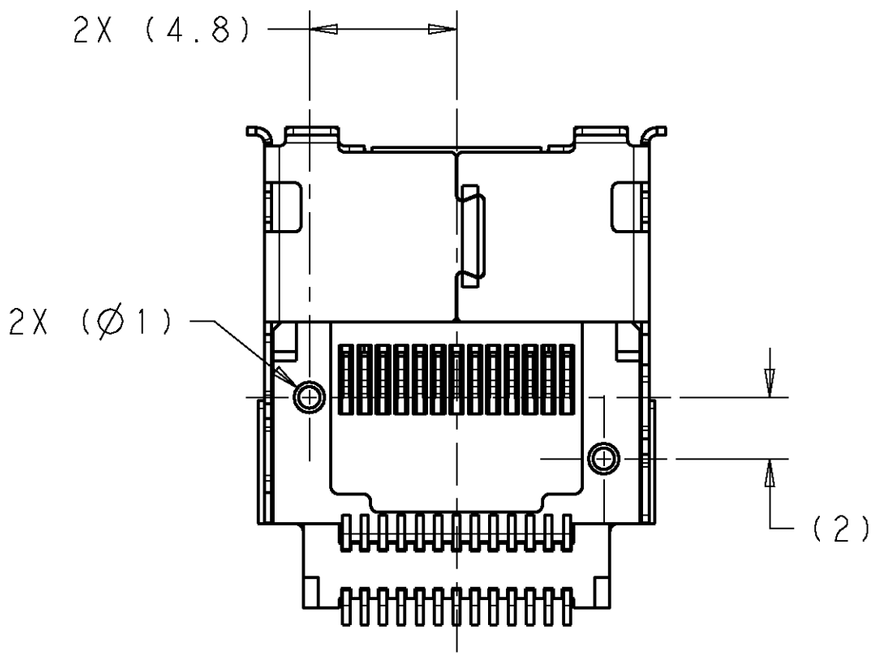
P	LTR	DESCRIPTION	DATE	DWN	APVD
	1	PROPOSED	16JUN2015	MS	MP
	2	WAS 3.5, 2, NOW 3, 1.5, REVISED NOTE 4	05JAN2016	MS	MP
	3	4.25 BSC WAS 4.55, PCB LAYOUT	17FEB2016	MP	MS
	4	REVISED SHELL AND PCB LAYOUT	10MAR2016	MS	MP



1. HOUSING, ORGANIZER AND CONTACT OVERMOLD: LCP, BLACK.
   CONTACTS: COPPER ALLOY.
   SHELL: COPPER ALLOY, NICKEL PLATED. TIN PLATED ON HOLD DOWNS.
2. GOLD PLATED ON MATING INTERFACE. TIN PLATED ON SOLDER TAILS.
3. DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.
4. DESIGNED FOR A 1.42 MIN THICK PC BOARD.
5. RECOMMENDED COMPONENT KEEP OUT AREA.
6. RECOMMENDED COMPONENT AND TRACES KEEP OUT AREA.







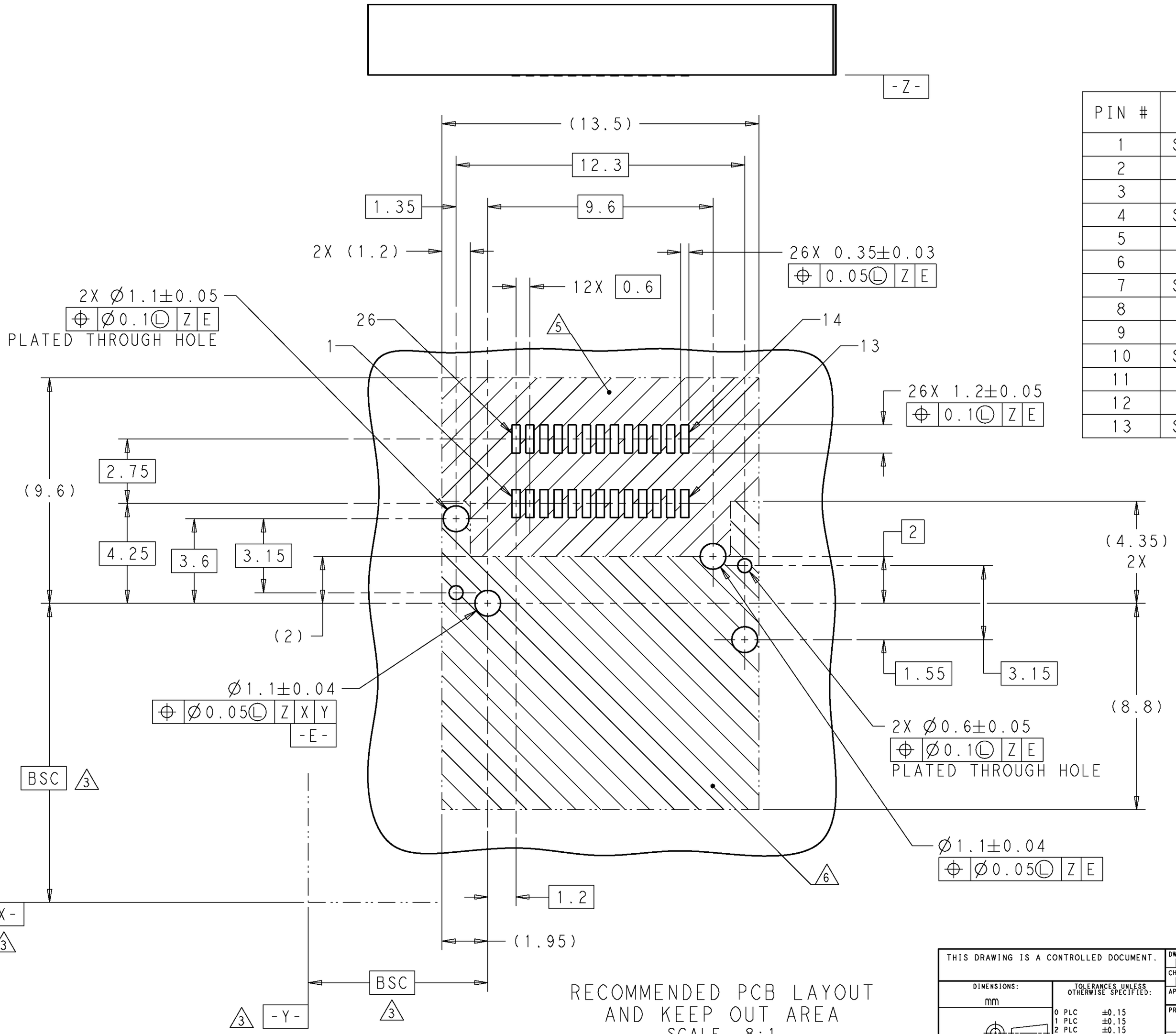
PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN M.SHIRK 16JUN2015	TE Connectivity
DIMENSIONS: mm	TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ±0.15, 1 PLC ±0.15, 2 PLC ±0.15, 3 PLC ±-, 4 PLC ±-, ANGLES ±-	CHK M.PHILLIPS 16JUN2015	NAME RECEPTACLE CONNECTOR, RIGHT ANGLE, 26 POSITION, SLIVER
		APVD -	
		PRODUCT SPEC -	
		APPLICATION SPEC -	
MATERIAL -1	FINISH -2	WEIGHT -	SIZE A2 / CAGE CODE - / DRAWING NO C-2293818 / RESTRICTED TO -
		CUSTOMER DRAWING	SCALE 5:1 / SHEET 1 OF 2 / REV 4

2293818-1
PART NUMBER

REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-



RECOMMENDED PCB LAYOUT AND KEEP OUT AREA
SCALE 8:1

PIN #	DESCRIPTION	PIN #	DESCRIPTION
1	SIGNAL GROUND	14	SIGNAL GROUND
2	SIGNAL	15	SIGNAL
3	SIGNAL	16	SIGNAL
4	SIGNAL GROUND	17	SIGNAL GROUND
5	SIGNAL	18	SIGNAL
6	SIGNAL	19	SIGNAL
7	SIGNAL GROUND	20	SIGNAL GROUND
8	SIGNAL	21	SIGNAL
9	SIGNAL	22	SIGNAL
10	SIGNAL GROUND	23	SIGNAL GROUND
11	SIGNAL	24	SIGNAL
12	SIGNAL	25	SIGNAL
13	SIGNAL GROUND	26	SIGNAL GROUND

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -
FINISH -

DWN M.SHIRK 16JUN2015
CHK M.PHILLIPS 16JUN2015
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

CUSTOMER DRAWING

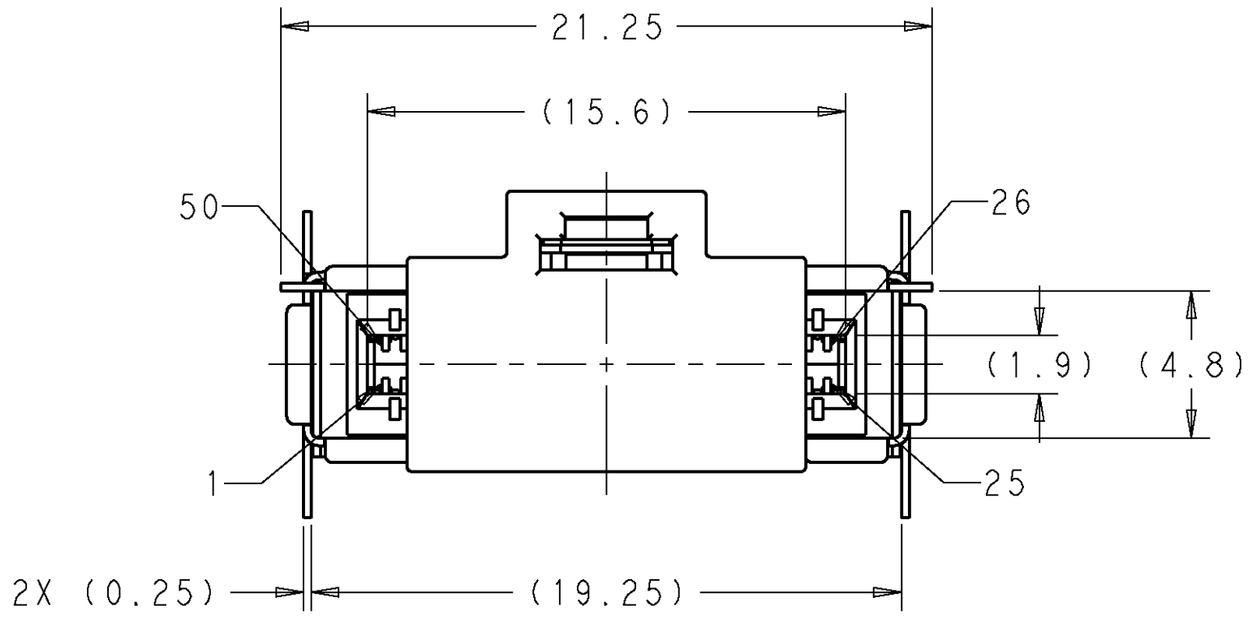
TE Connectivity

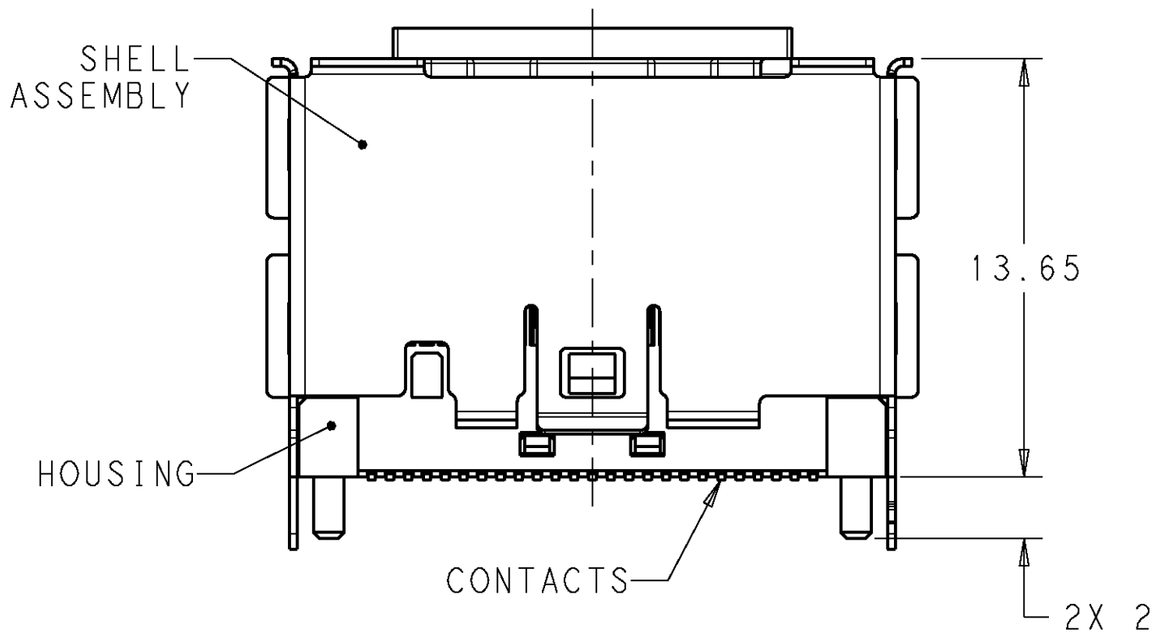
NAME RECEPTACLE CONNECTOR, RIGHT ANGLE, 26 POSITION, SLIVER

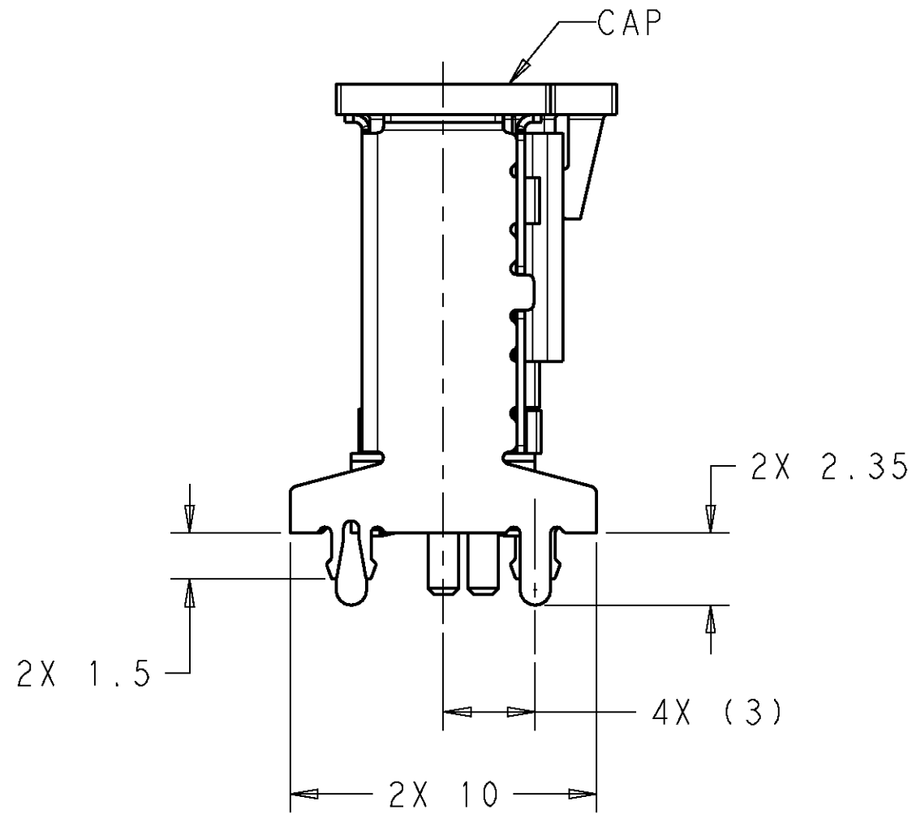
SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2293818	-

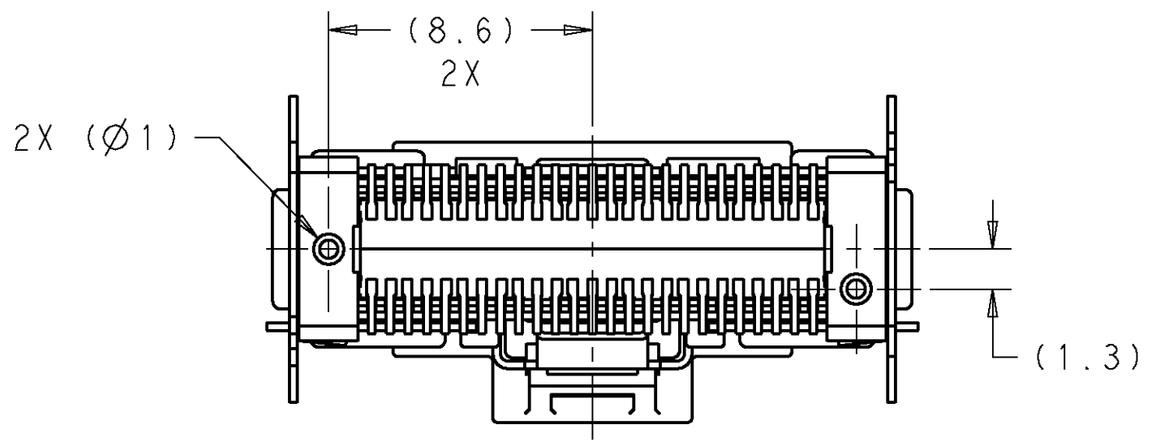
SCALE 5:1 SHEET 1 OF 2 REV 4

REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	5	REVISED HOLD DOWN, WAS 1.50 NOW 2.35	22OCT2015	MS	MP
	6	ADD -2 PART NUMBER, CAP, REVISED NOTE 1	12FEB2016	MS	MP









1. HOUSING AND CONTACT OVERMOLD: LCP, BLACK.
   CAP: NYLON, BLACK.
   CONTACTS: COPPER ALLOY.
   SHELL ASSEMBLY: COPPER ALLOY, NICKEL PLATED.
   TIN PLATED ON HOLD DOWNS.
2. GOLD PLATED ON MATING INTERFACE. TIN PLATED ON SOLDER TAILS.
3. DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.
4. DESIGNED FOR A 1.42 MIN THICK PC BOARD.
5. RECOMMENDED COMPONENT KEEP OUT AREA.

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

**PRELIMINARY
NOT RELEASED FOR PRODUCTION**

WITHOUT CAP	2292096-2
WITH CAP	2292096-1
REMARKS	PART NUMBER

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -1

FINISH -2

DWN M.SHIRK 06APR2015
CHK M.PHILLIPS 06APR2015
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

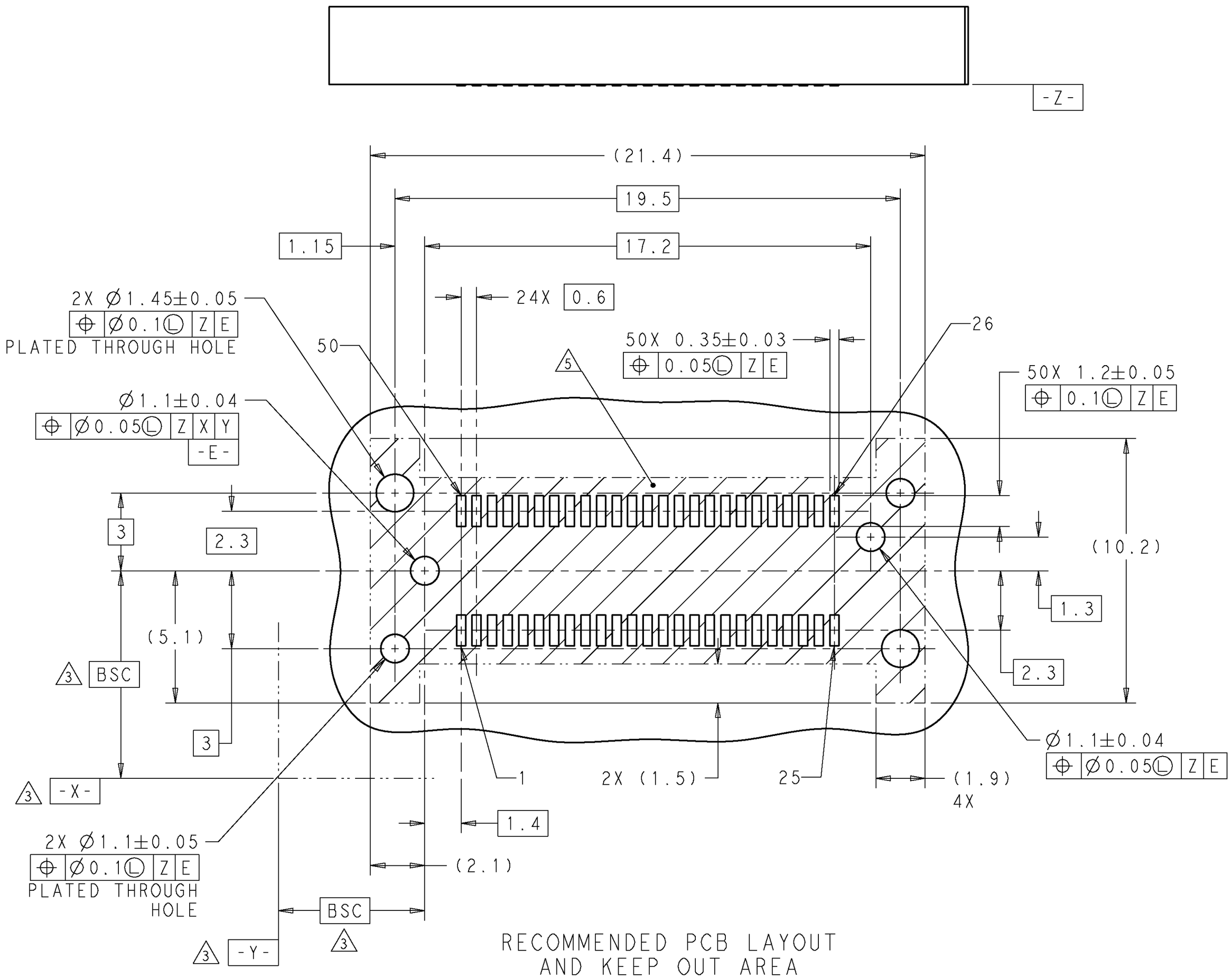
NAME RECEPTACLE CONNECTOR, VERTICAL, 50 POSITION, SLIVER

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2292096	-

CUSTOMER DRAWING | SCALE 5:1 | SHEET 1 OF 2 | REV 6

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-



RECOMMENDED PCB LAYOUT
AND KEEP OUT AREA
SCALE 8:1

PIN #	DESCRIPTION	PIN #	DESCRIPTION
1	SIGNAL GROUND	26	SIGNAL GROUND
2	SIGNAL	27	SIGNAL
3	SIGNAL	28	SIGNAL
4	SIGNAL GROUND	29	SIGNAL GROUND
5	SIGNAL	30	SIGNAL
6	SIGNAL	31	SIGNAL
7	SIGNAL GROUND	32	SIGNAL GROUND
8	SIGNAL	33	SIGNAL
9	SIGNAL	34	SIGNAL
10	SIGNAL GROUND	35	SIGNAL GROUND
11	SIGNAL	36	SIGNAL
12	SIGNAL	37	SIGNAL
13	SIGNAL GROUND	38	SIGNAL GROUND
14	SIGNAL	39	SIGNAL
15	SIGNAL	40	SIGNAL
16	SIGNAL GROUND	41	SIGNAL GROUND
17	SIGNAL	42	SIGNAL
18	SIGNAL	43	SIGNAL
19	SIGNAL GROUND	44	SIGNAL GROUND
20	SIGNAL	45	SIGNAL
21	SIGNAL	46	SIGNAL
22	SIGNAL GROUND	47	SIGNAL GROUND
23	SIGNAL	48	SIGNAL
24	SIGNAL	49	SIGNAL
25	SIGNAL GROUND	50	SIGNAL GROUND

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -
FINISH -

DWN M.SHIRK 06APR2015
CHK M.PHILLIPS 06APR2015
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -
CUSTOMER DRAWING

TE Connectivity

NAME RECEPTACLE CONNECTOR, VERTICAL, 50 POSITION, SLIVER

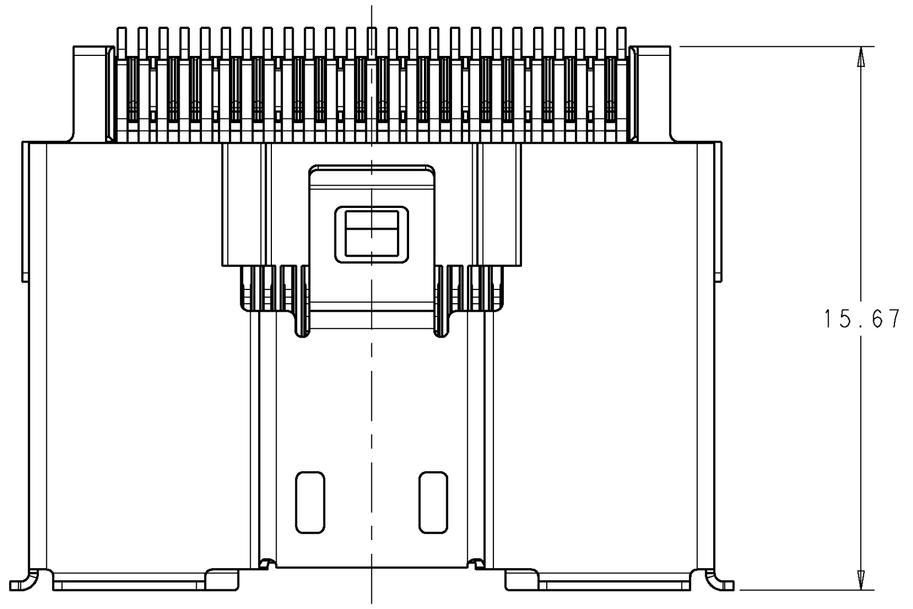
SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2292096	-

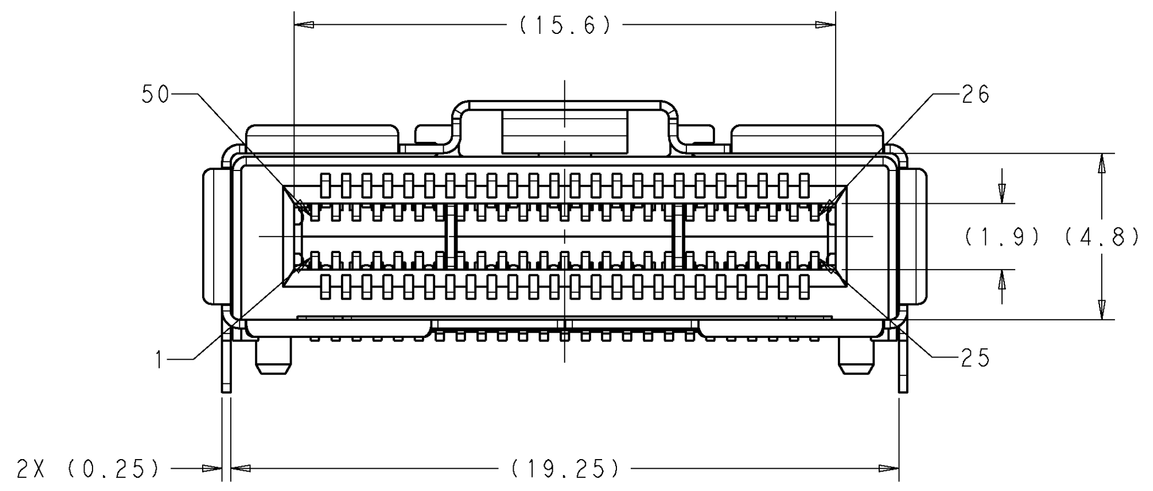
SCALE 5:1 SHEET 2 OF 2 REV 6

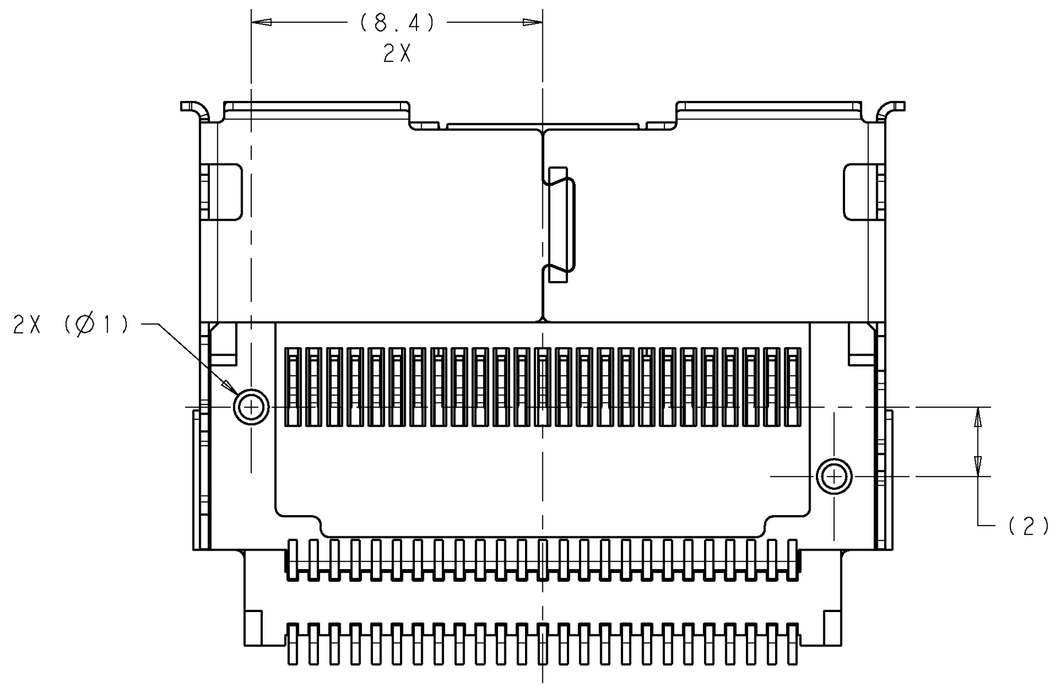
Vol. 85 Sec. 6 ILL-4 and Report
Issued: 2015-10-23

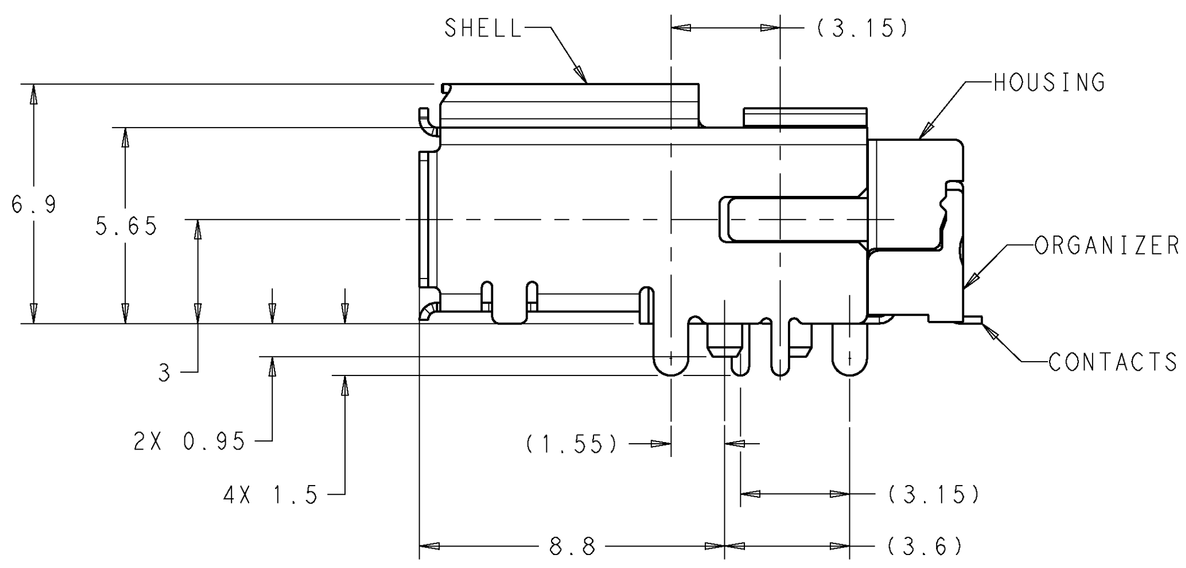
REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	5	4.25 BSC WAS 4.55, PCB LAYOUT	16FEB2016	MP	MS
	6	REVISED SHELL AND PCB LAYOUT	09MAR2016	MS	MP









1. HOUSING, ORGANIZER AND CONTACT OVERMOLD: LCP, BLACK.
   CONTACTS: COPPER ALLOY.
   SHELL: COPPER ALLOY, NICKEL PLATED. TIN PLATED ON HOLD DOWNS.
2. GOLD PLATED ON MATING INTERFACE. TIN PLATED ON SOLDER TAILS.
3. DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.
4. DESIGNED FOR A 1.42 MIN THICK PC BOARD.
5. RECOMMENDED COMPONENT KEEP OUT AREA.
6. RECOMMENDED COMPONENT AND TRACES KEEP OUT AREA.

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

2292055-1
PART NUMBER

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±
4 PLC ±
ANGLES ±

MATERIAL -1

FINISH -2

DWN M SHIRK 06APR2015
CHK M PHILLIPS 06APR2015
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

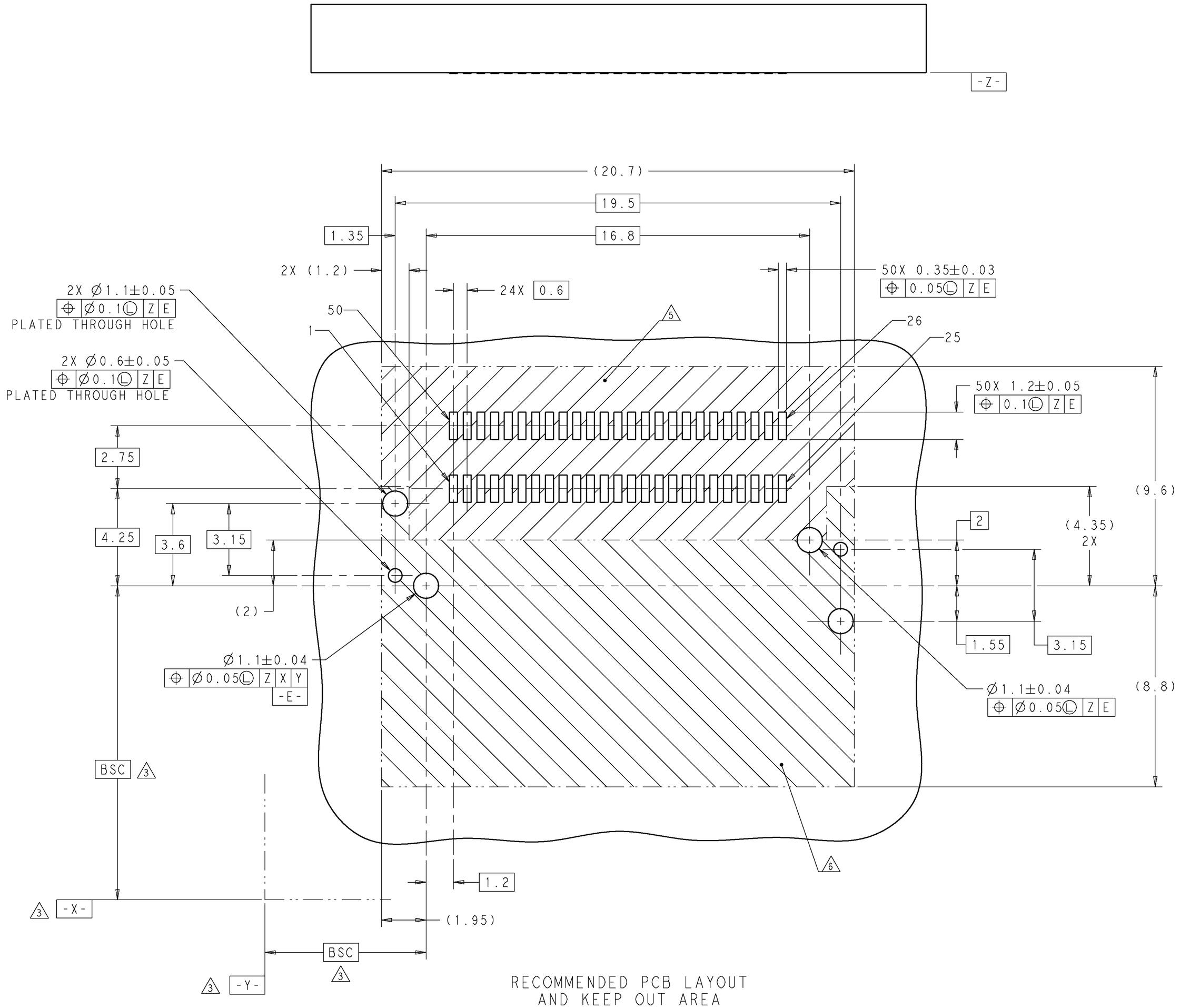
NAME RECEPTACLE CONNECTOR, RIGHT ANGLE, 50 POSITION, SLIVER

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A1	-	C-2292055	-

CUSTOMER DRAWING | SCALE 8:1 | SHEET 1 OF 2 | REV 6

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-



RECOMMENDED PCB LAYOUT
AND KEEP OUT AREA
SCALE 10:1

PIN #	DESCRIPTION	PIN #	DESCRIPTION
1	SIGNAL GROUND	26	SIGNAL GROUND
2	SIGNAL	27	SIGNAL
3	SIGNAL	28	SIGNAL
4	SIGNAL GROUND	29	SIGNAL GROUND
5	SIGNAL	30	SIGNAL
6	SIGNAL	31	SIGNAL
7	SIGNAL GROUND	32	SIGNAL GROUND
8	SIGNAL	33	SIGNAL
9	SIGNAL	34	SIGNAL
10	SIGNAL GROUND	35	SIGNAL GROUND
11	SIGNAL	36	SIGNAL
12	SIGNAL	37	SIGNAL
13	SIGNAL GROUND	38	SIGNAL GROUND
14	SIGNAL	39	SIGNAL
15	SIGNAL	40	SIGNAL
16	SIGNAL GROUND	41	SIGNAL GROUND
17	SIGNAL	42	SIGNAL
18	SIGNAL	43	SIGNAL
19	SIGNAL GROUND	44	SIGNAL GROUND
20	SIGNAL	45	SIGNAL
21	SIGNAL	46	SIGNAL
22	SIGNAL GROUND	47	SIGNAL GROUND
23	SIGNAL	48	SIGNAL
24	SIGNAL	49	SIGNAL
25	SIGNAL GROUND	50	SIGNAL GROUND

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -
FINISH -

DWN M.SHIRK 06APR2015
CHK M.PHILLIPS 06APR2015
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

NAME RECEPTACLE CONNECTOR, RIGHT ANGLE, 50 POSITION, SLIVER

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A1	-	C-2292055	-

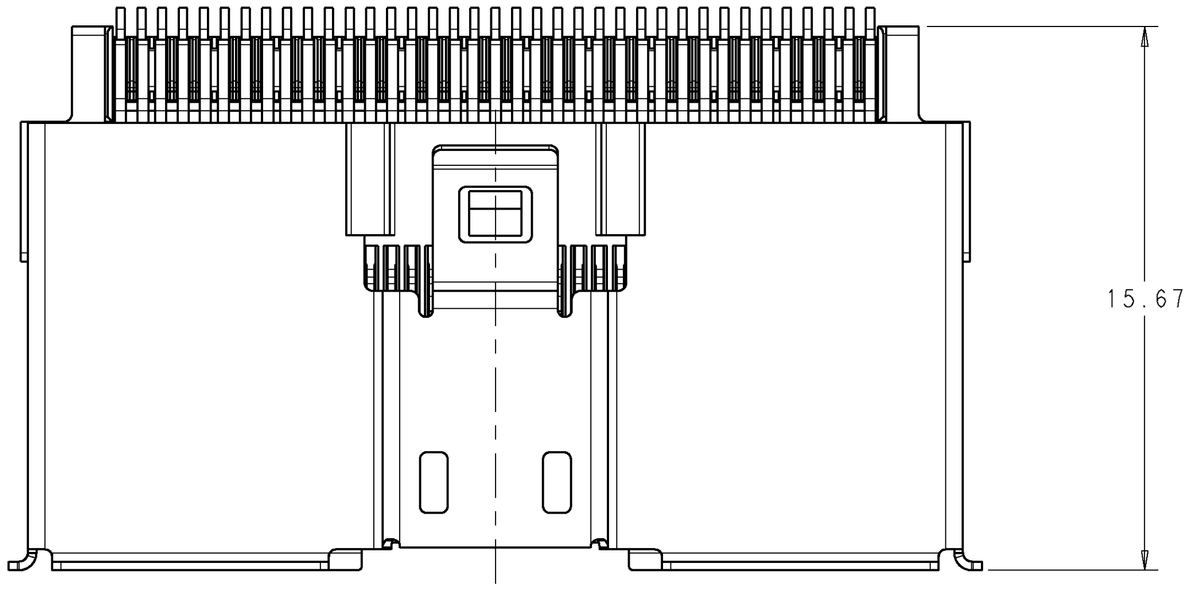
CUSTOMER DRAWING | SCALE 8:1 | SHEET 2 OF 2 | REV 6

Vol: 85 Sect: 6 ILL-5 and Report

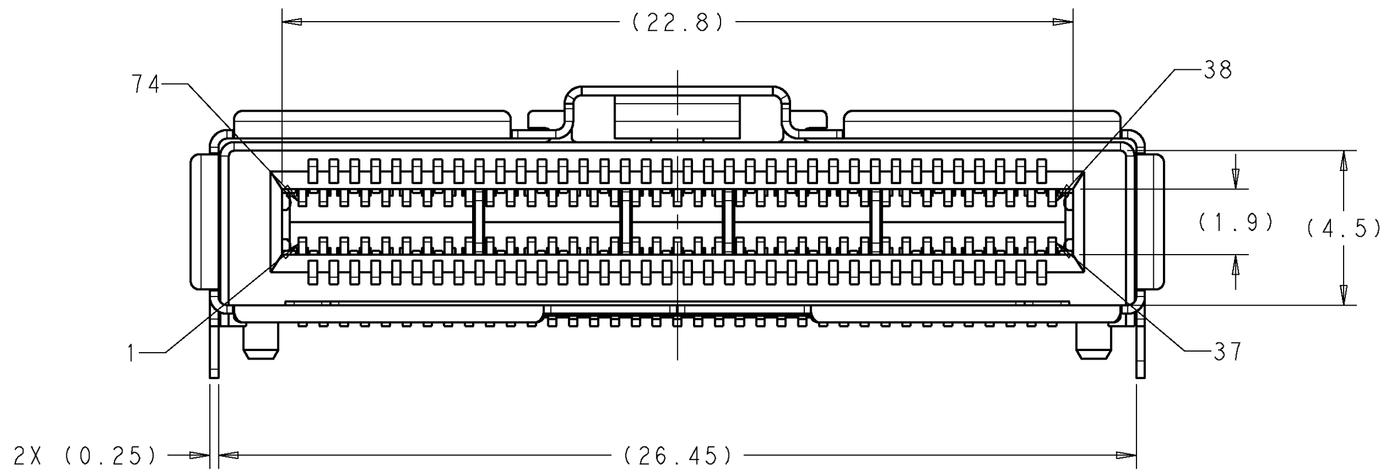
Issued: 2015-10-23

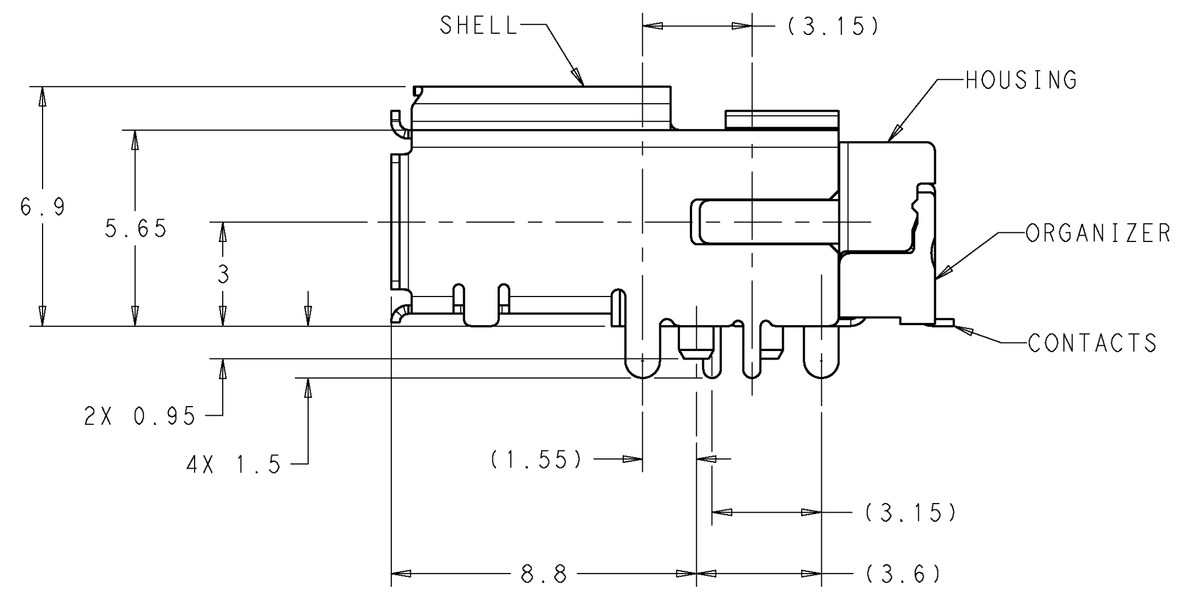
REVISIONS

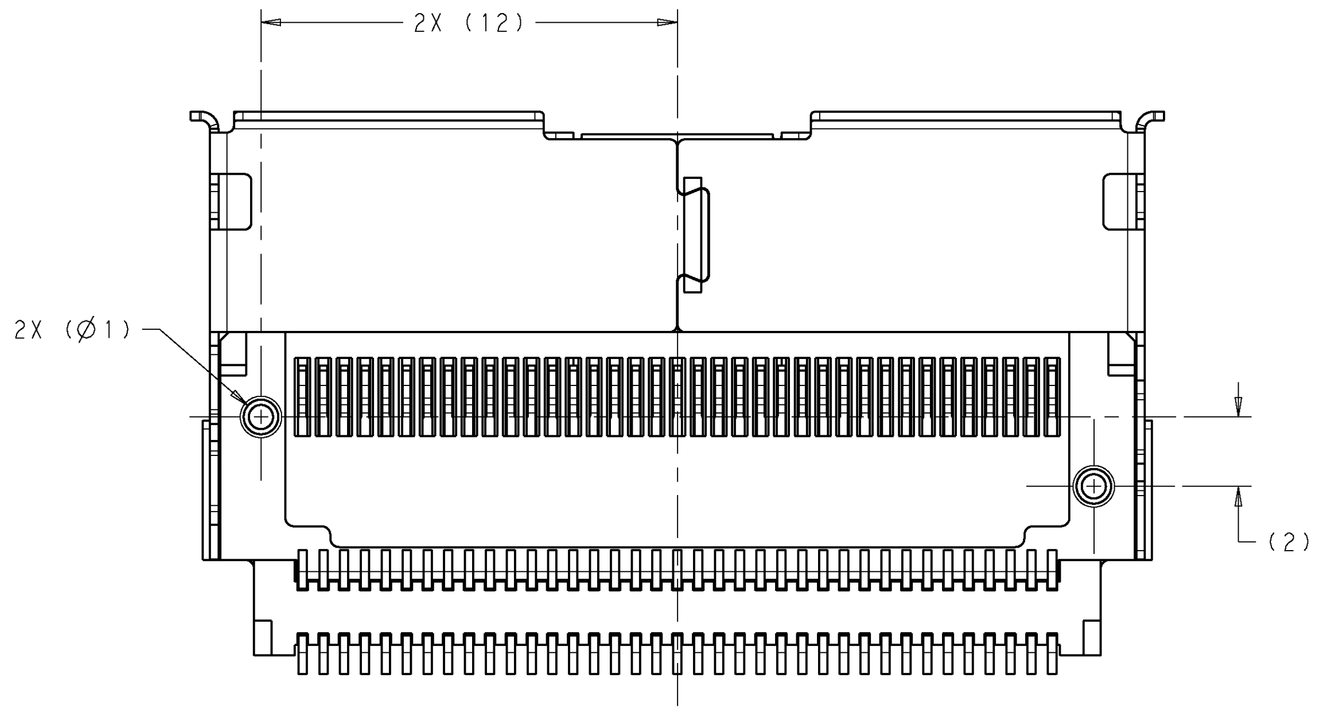
P	LTR	DESCRIPTION	DATE	DWN	APVD
	5	REVISED NOTE 4, SHELL HOLD DOWNS	16OCT2015	MS	MP
	6	4.25 BSC WAS 4.55, PCB LAYOUT	16FEB2016	MP	MS
	7	REVISED SHELL AND PCB LAYOUT	08MAR2016	MS	MP



1. HOUSING, ORGANIZER AND CONTACT OVERMOLD: LCP, BLACK.
   CONTACTS: COPPER ALLOY.
   SHELL: COPPER ALLOY, NICKEL PLATED. TIN PLATED ON HOLD DOWNS.
2. GOLD PLATED ON MATING INTERFACE. TIN PLATED ON SOLDER TAILS.
3. DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.
4. DESIGNED FOR A 1.42 MIN THICK PC BOARD.
5. RECOMMENDED COMPONENT KEEP OUT AREA.
6. RECOMMENDED COMPONENT AND TRACES KEEP OUT AREA.





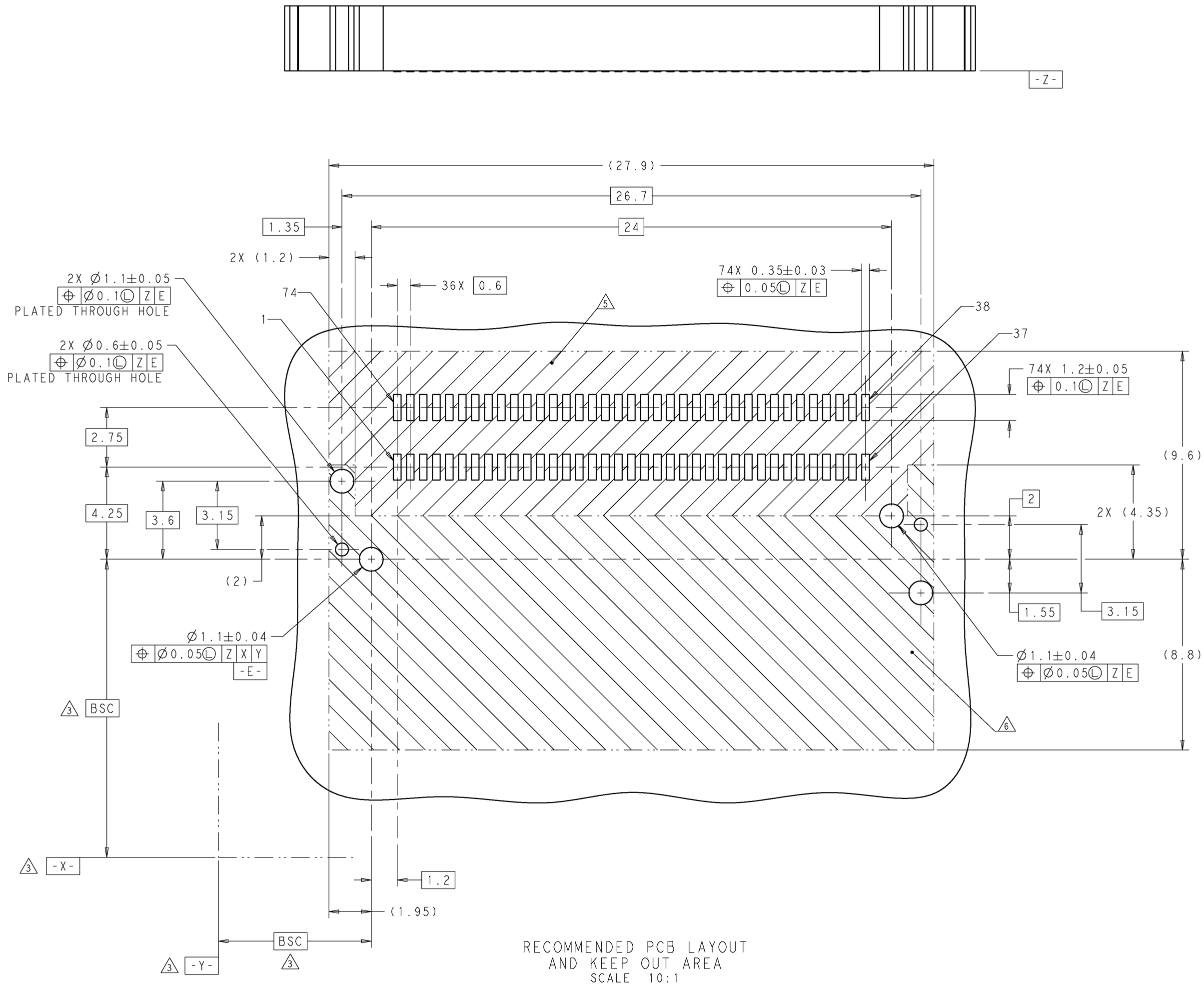


PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

THIS DRAWING IS A CONTROLLED DOCUMENT.	DWN M.SHIRK 06APR2015	TE Connectivity	2292069-1
DIMENSIONS: mm	CHK M.PHILLIPS 06APR2015		PART NUMBER
TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ±0.15, 1 PLC ±0.15, 2 PLC ±0.15, 3 PLC ±, 4 PLC ±, ANGLES ±	APVD -	NAME RECEPTACLE CONNECTOR, RIGHT ANGLE, 74 POSITION, SLIVER -	
	PRODUCT SPEC -		
	APPLICATION SPEC -	SIZE A1 / CAGE CODE - / DRAWING NO C-2292069 / RESTRICTED TO -	
MATERIAL -1	FINISH -2	WEIGHT -	
		CUSTOMER DRAWING	SCALE 8:1 / SHEET 1 OF 2 / REV 7

REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-



RECOMMENDED PCB LAYOUT
AND KEEP OUT AREA
SCALE 10:1

PIN #	DESCRIPTION	PIN #	DESCRIPTION
1	SIGNAL GROUND	38	SIGNAL GROUND
2	SIGNAL	39	SIGNAL
3	SIGNAL	40	SIGNAL
4	SIGNAL GROUND	41	SIGNAL GROUND
5	SIGNAL	42	SIGNAL
6	SIGNAL	43	SIGNAL
7	SIGNAL GROUND	44	SIGNAL GROUND
8	SIGNAL	45	SIGNAL
9	SIGNAL	46	SIGNAL
10	SIGNAL GROUND	47	SIGNAL GROUND
11	SIGNAL	48	SIGNAL
12	SIGNAL	49	SIGNAL
13	SIGNAL GROUND	50	SIGNAL GROUND
14	SIGNAL	51	SIGNAL
15	SIGNAL	52	SIGNAL
16	SIGNAL GROUND	53	SIGNAL GROUND
17	SIGNAL	54	SIGNAL
18	SIGNAL	55	SIGNAL
19	SIGNAL GROUND	56	SIGNAL GROUND
20	SIGNAL	57	SIGNAL
21	SIGNAL	58	SIGNAL
22	SIGNAL GROUND	59	SIGNAL GROUND
23	SIGNAL	60	SIGNAL
24	SIGNAL	61	SIGNAL
25	SIGNAL GROUND	62	SIGNAL GROUND
26	SIGNAL	63	SIGNAL
27	SIGNAL	64	SIGNAL
28	SIGNAL GROUND	65	SIGNAL GROUND
29	SIGNAL	66	SIGNAL
30	SIGNAL	67	SIGNAL
31	SIGNAL GROUND	68	SIGNAL GROUND
32	SIGNAL	69	SIGNAL
33	SIGNAL	70	SIGNAL
34	SIGNAL GROUND	71	SIGNAL GROUND
35	SIGNAL	72	SIGNAL
36	SIGNAL	73	SIGNAL
37	SIGNAL GROUND	74	SIGNAL GROUND

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL - -
FINISH - -

DWN M SHIRK 06APR2015
CHK M PHILLIPS 06APR2015
APVD - -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

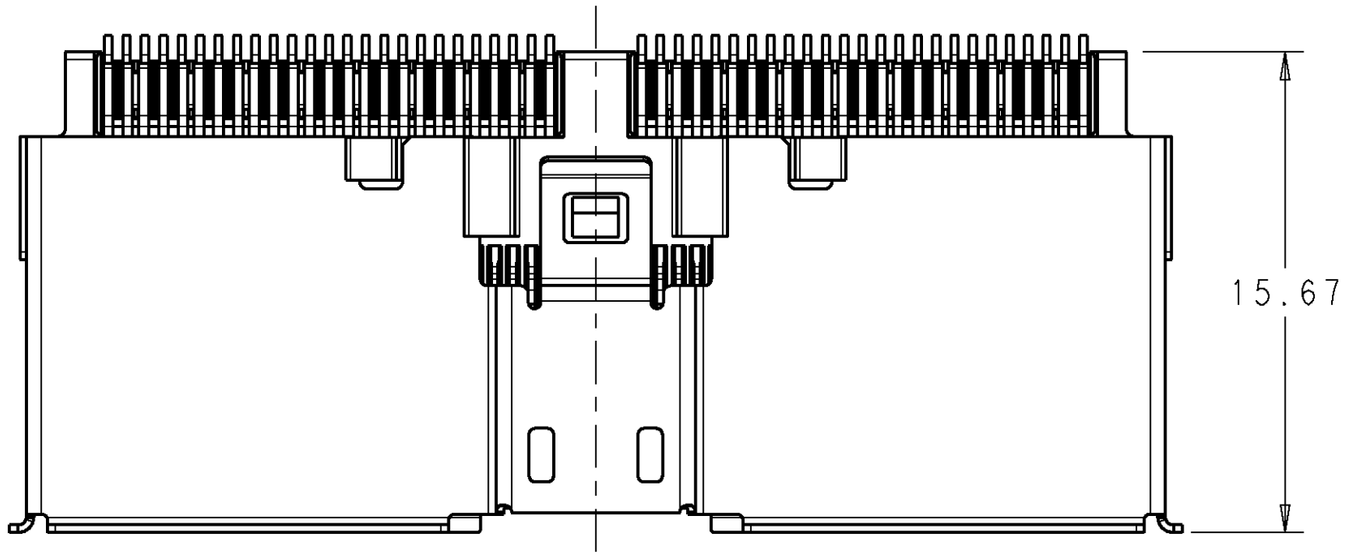
TE Connectivity

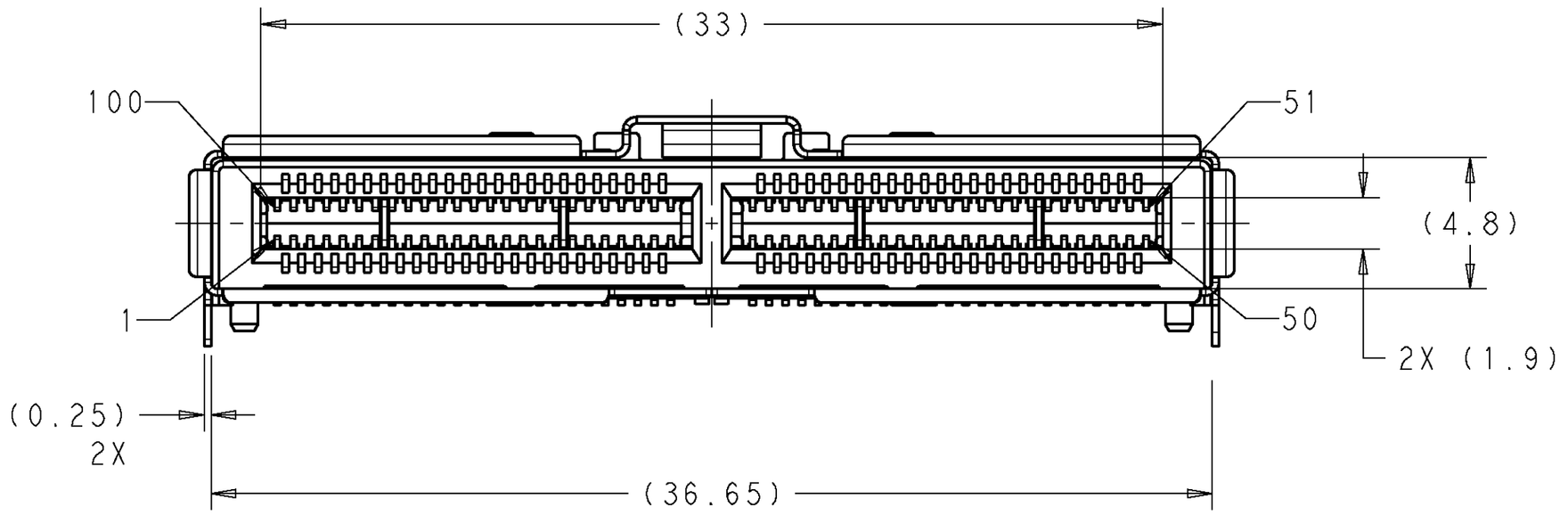
NAME RECEPTACLE CONNECTOR, RIGHT ANGLE, 74 POSITION, SLIVER -

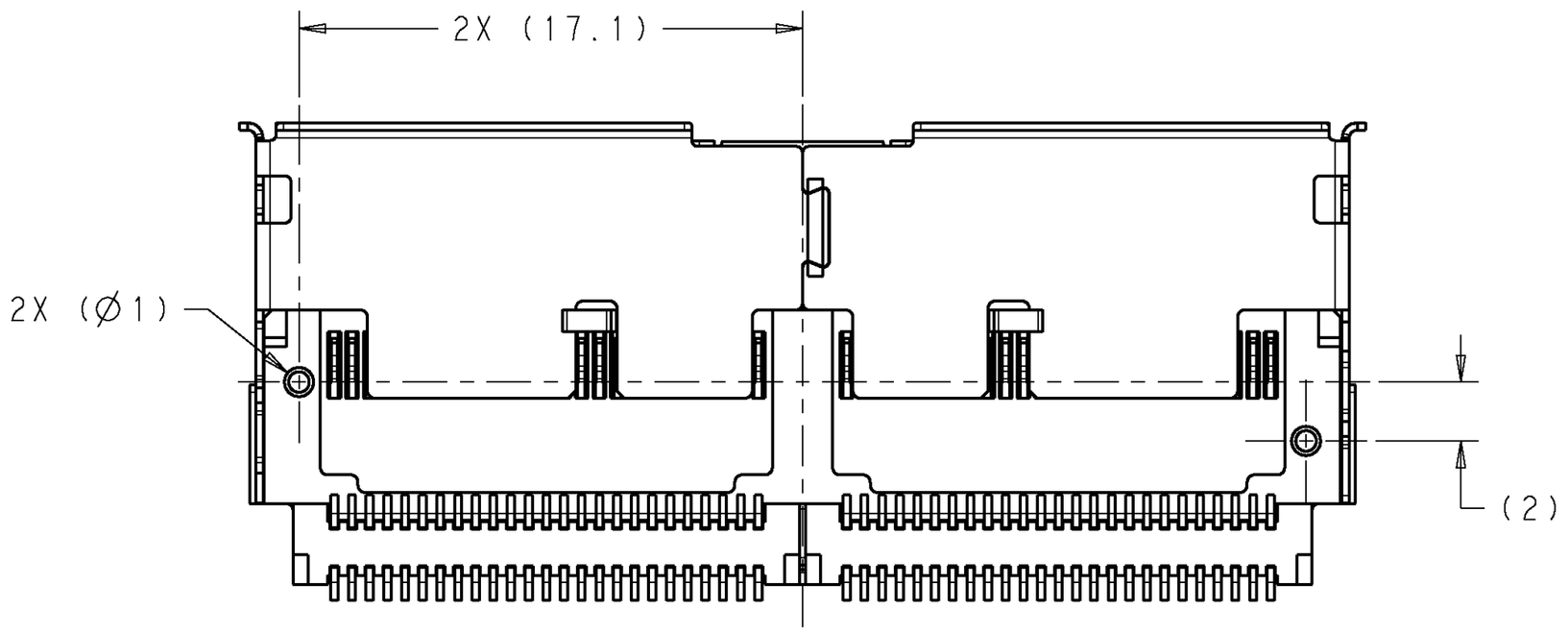
SIZE A1 | CAGE CODE - | DRAWING NO C-2292069 | RESTRICTED TO -

CUSTOMER DRAWING | SCALE 8:1 | SHEET 2 OF 2 | REV 7

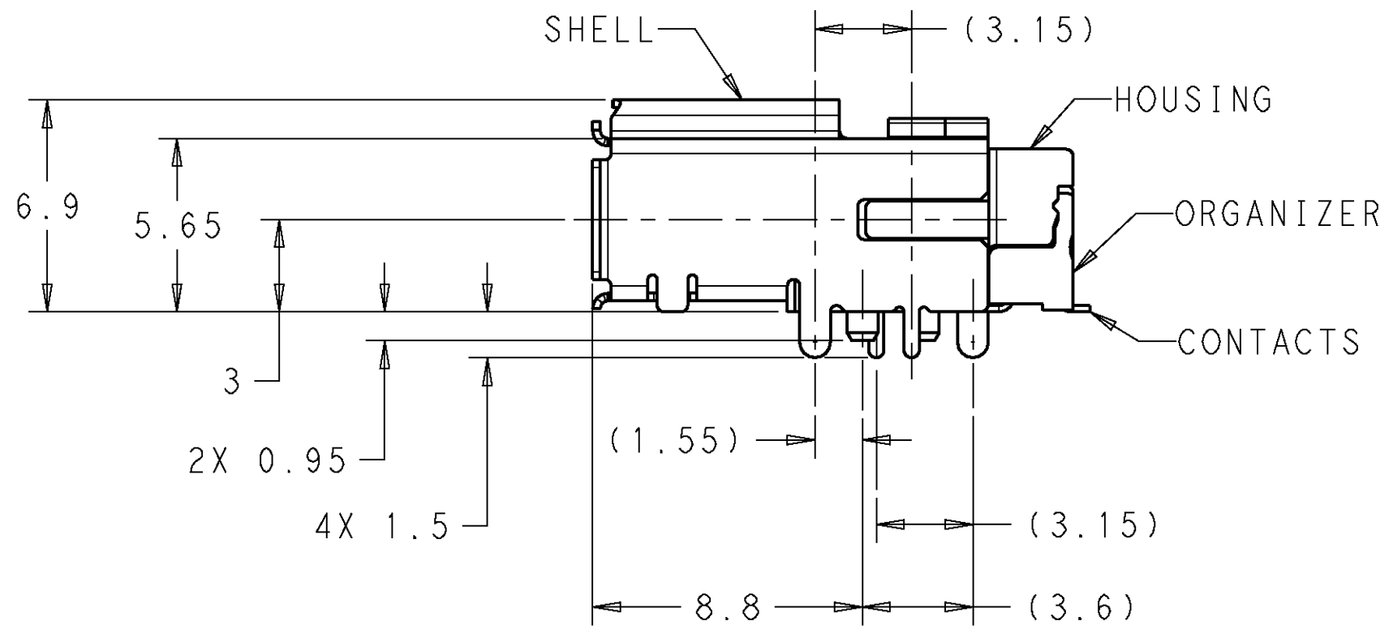
REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	1	PROPOSED	06JUL2015	MS	MP
	2	WAS 7.4, 6.15, 3.5 NOW 6.9, 5.65, 3	15FEB2016	MS	MP
	3	4.25 BSC WAS 4.55, PCB LAYOUT	17FEB2016	MP	MS
	4	REVISED SHELL AND PCB LAYOUT	08MAR2016	MS	MP







1. HOUSING, ORGANIZER AND CONTACT OVERMOLD: LCP, BLACK.
   CONTACTS: COPPER ALLOY.
   SHELL: COPPER ALLOY, NICKEL PLATED. TIN PLATED ON HOLD DOWNS.
2. GOLD PLATED ON MATING INTERFACE. TIN PLATED ON SOLDER TAILS.
3. DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.
4. DESIGNED FOR A 1.42 MIN THICK PC BOARD.
5. RECOMMENDED COMPONENT KEEP OUT AREA.
6. RECOMMENDED COMPONENT AND TRACES KEEP OUT AREA.



PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

2294186-1
PART NUMBER

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -1

FINISH -2

DWN M.SHIRK 06JUL2015
CHK M.PHILLIPS 06JUL2015
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

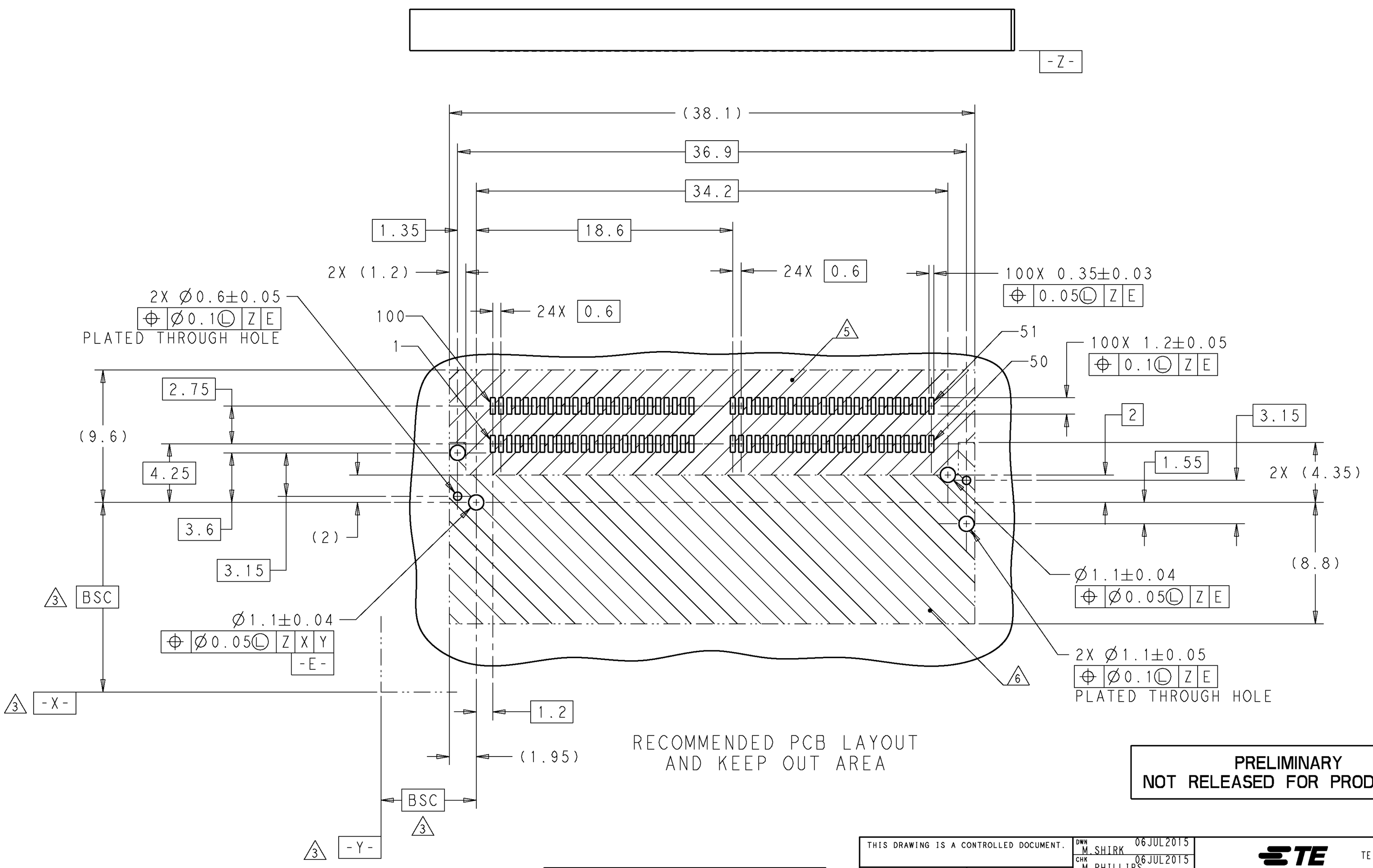
NAME RECEPTACLE CONNECTOR, RIGHT ANGLE, 100 POSITION, SLIVER

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2294186	-

CUSTOMER DRAWING | SCALE 5:1 | SHEET 1 OF 3 | REV 4

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-



RECOMMENDED PCB LAYOUT
AND KEEP OUT AREA

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -
-

FINISH -
-

DWN M. SHIRK 06JUL2015
CHK M. PHILLIPS 06JUL2015
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

NAME RECEPTACLE CONNECTOR, RIGHT ANGLE, 100 POSITION, SLIVER

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2294186	-

CUSTOMER DRAWING | SCALE 5:1 | SHEET 2 OF 3 | REV 4

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-

PIN #	DESCRIPTION	PIN #	DESCRIPTION
1	SIGNAL GROUND	76	SIGNAL GROUND
2	SIGNAL	77	SIGNAL
3	SIGNAL	78	SIGNAL
4	SIGNAL GROUND	79	SIGNAL GROUND
5	SIGNAL	80	SIGNAL
6	SIGNAL	81	SIGNAL
7	SIGNAL GROUND	82	SIGNAL GROUND
8	SIGNAL	83	SIGNAL
9	SIGNAL	84	SIGNAL
10	SIGNAL GROUND	85	SIGNAL GROUND
11	SIGNAL	86	SIGNAL
12	SIGNAL	87	SIGNAL
13	SIGNAL GROUND	88	SIGNAL GROUND
14	SIGNAL	89	SIGNAL
15	SIGNAL	90	SIGNAL
16	SIGNAL GROUND	91	SIGNAL GROUND
17	SIGNAL	92	SIGNAL
18	SIGNAL	93	SIGNAL
19	SIGNAL GROUND	94	SIGNAL GROUND
20	SIGNAL	95	SIGNAL
21	SIGNAL	96	SIGNAL
22	SIGNAL GROUND	97	SIGNAL GROUND
23	SIGNAL	98	SIGNAL
24	SIGNAL	99	SIGNAL
25	SIGNAL GROUND	100	SIGNAL GROUND

PIN #	DESCRIPTION	PIN #	DESCRIPTION
26	SIGNAL GROUND	51	SIGNAL GROUND
27	SIGNAL	52	SIGNAL
28	SIGNAL	53	SIGNAL
29	SIGNAL GROUND	54	SIGNAL GROUND
30	SIGNAL	55	SIGNAL
31	SIGNAL	56	SIGNAL
32	SIGNAL GROUND	57	SIGNAL GROUND
33	SIGNAL	58	SIGNAL
34	SIGNAL	59	SIGNAL
35	SIGNAL GROUND	60	SIGNAL GROUND
36	SIGNAL	61	SIGNAL
37	SIGNAL	62	SIGNAL
38	SIGNAL GROUND	63	SIGNAL GROUND
39	SIGNAL	64	SIGNAL
40	SIGNAL	65	SIGNAL
41	SIGNAL GROUND	66	SIGNAL GROUND
42	SIGNAL	67	SIGNAL
43	SIGNAL	68	SIGNAL
44	SIGNAL GROUND	69	SIGNAL GROUND
45	SIGNAL	70	SIGNAL
46	SIGNAL	71	SIGNAL
47	SIGNAL GROUND	72	SIGNAL GROUND
48	SIGNAL	73	SIGNAL
49	SIGNAL	74	SIGNAL
50	SIGNAL GROUND	75	SIGNAL GROUND

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL - -

FINISH - -

DWN M.SHIRK 06JUL2015
CHK M.PHILLIPS 06JUL2015
APVD - -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

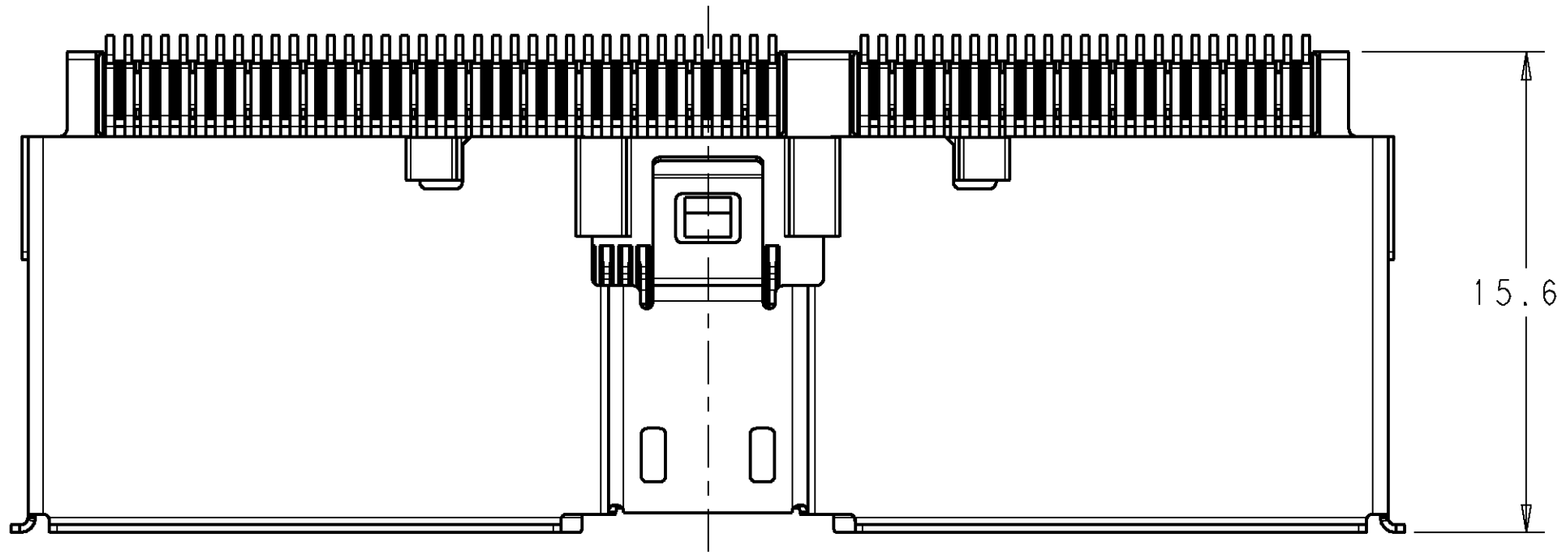
TE Connectivity

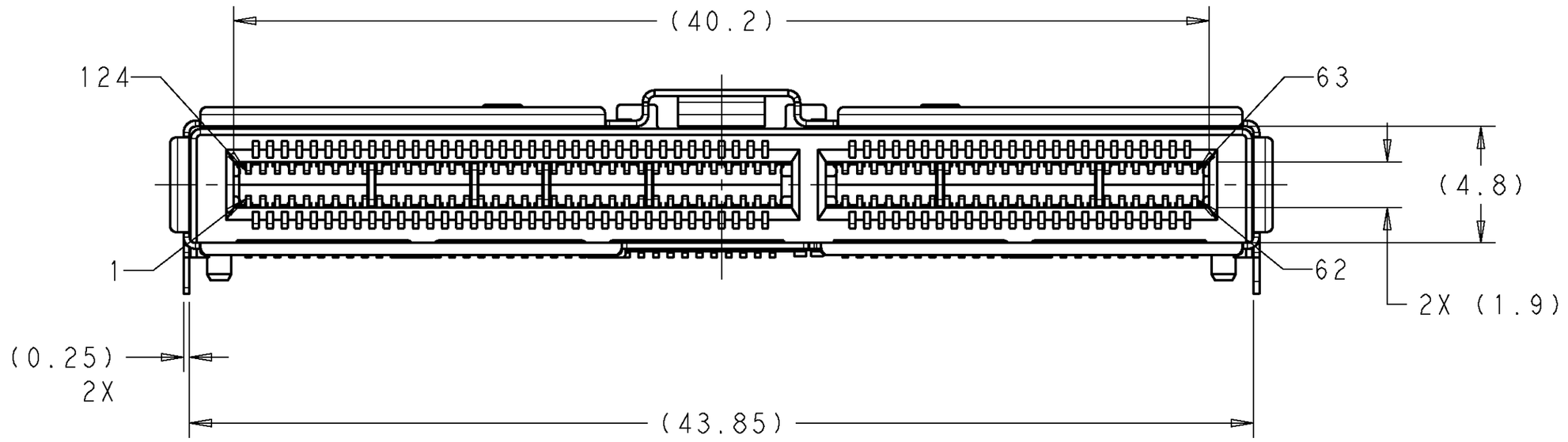
NAME RECEPTACLE CONNECTOR, RIGHT ANGLE, 100 POSITION, SLIVER

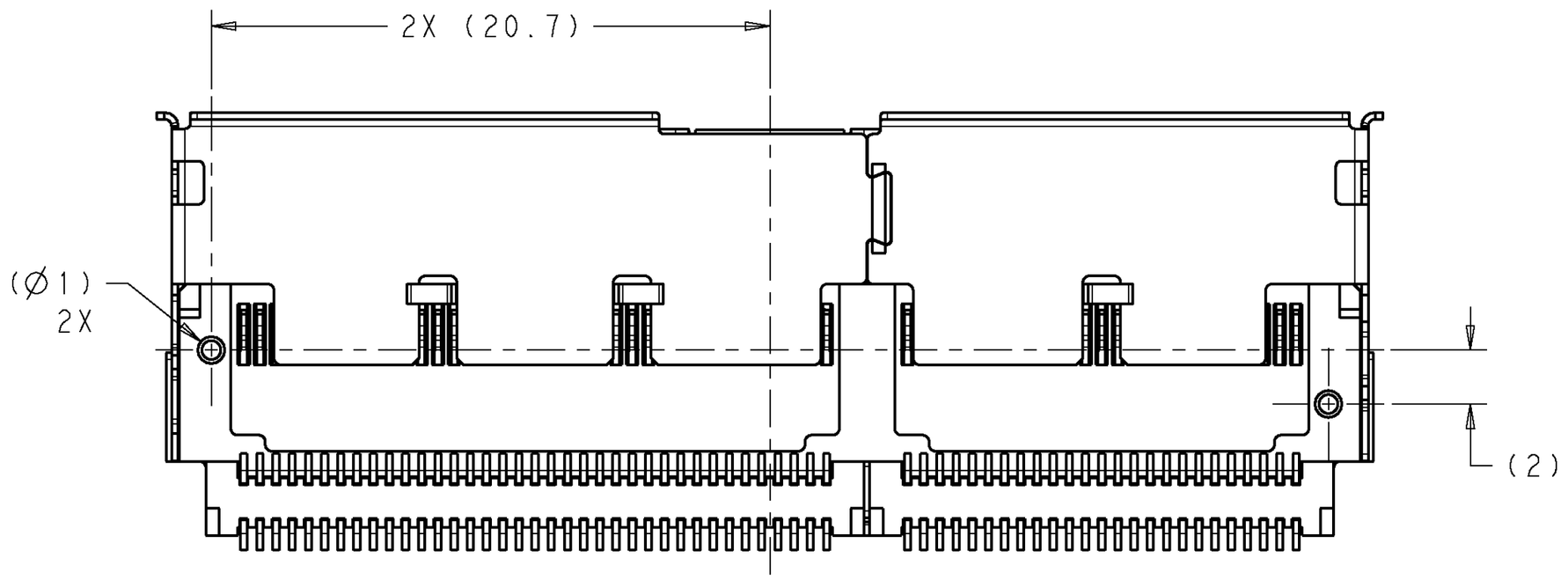
SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2294186	-

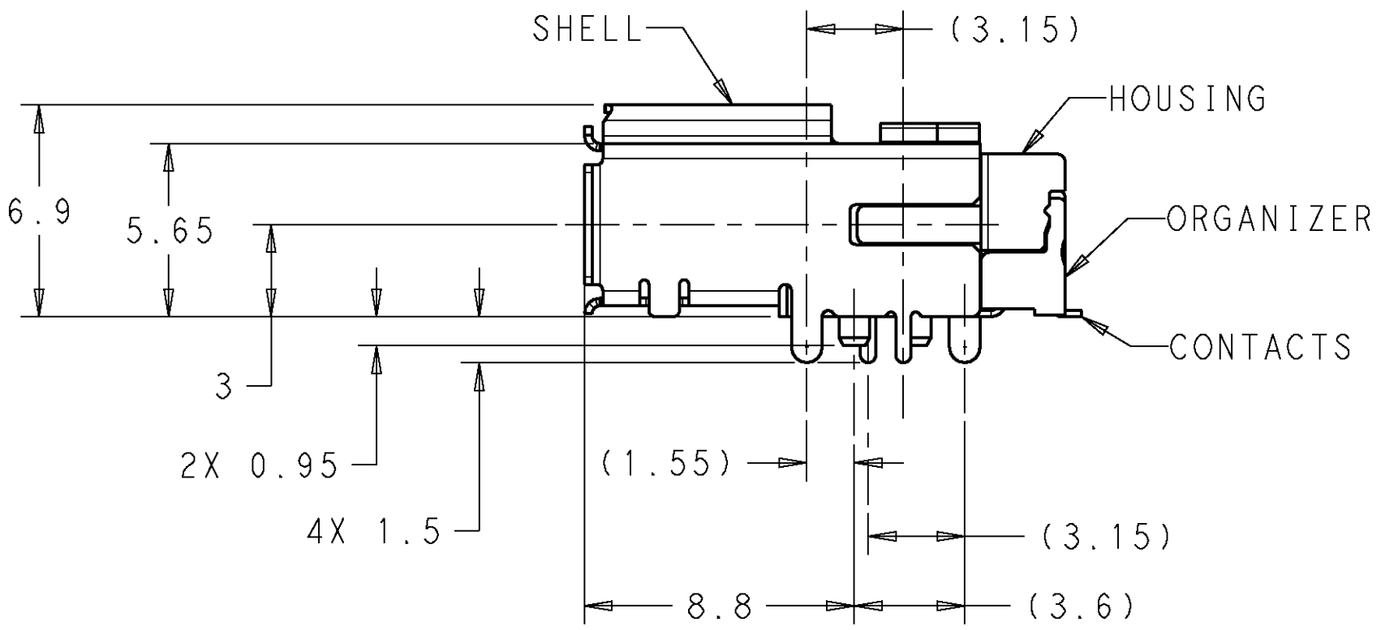
CUSTOMER DRAWING | SCALE 5:1 | SHEET 3 OF 3 | REV 4

REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	1	PROPOSED	07JUL2015	MS	MP
	2	WAS 7.4, 6.15, 3.5 NOW 6.9, 5.65, 3	15FEB2016	MS	MP
	3	4.25 BSC WAS 4.55 BSC, PCB LAYOUT	16FEB2016	MP	MS
	4	REVISED SHELL, PCB LAYOUT	07MAR2016	MS	MP









1. HOUSING, ORGANIZER AND CONTACT OVERMOLD: LCP, BLACK.
   CONTACTS: COPPER ALLOY.
   SHELL: COPPER ALLOY, NICKEL PLATED. TIN PLATED ON HOLD DOWNS.
2. GOLD PLATED ON MATING INTERFACE. TIN PLATED ON SOLDER TAILS.
3. DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.
4. DESIGNED FOR A 1.42 MIN THICK PC BOARD.
5. RECOMMENDED COMPONENT KEEP OUT AREA.
6. RECOMMENDED COMPONENT AND TRACES KEEP OUT AREA.

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

2294190-1
PART NUMBER

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -1
FINISH -2

DWN M.SHIRK 07JUL2015
CHK M.PHILLIPS 07JUL2015
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

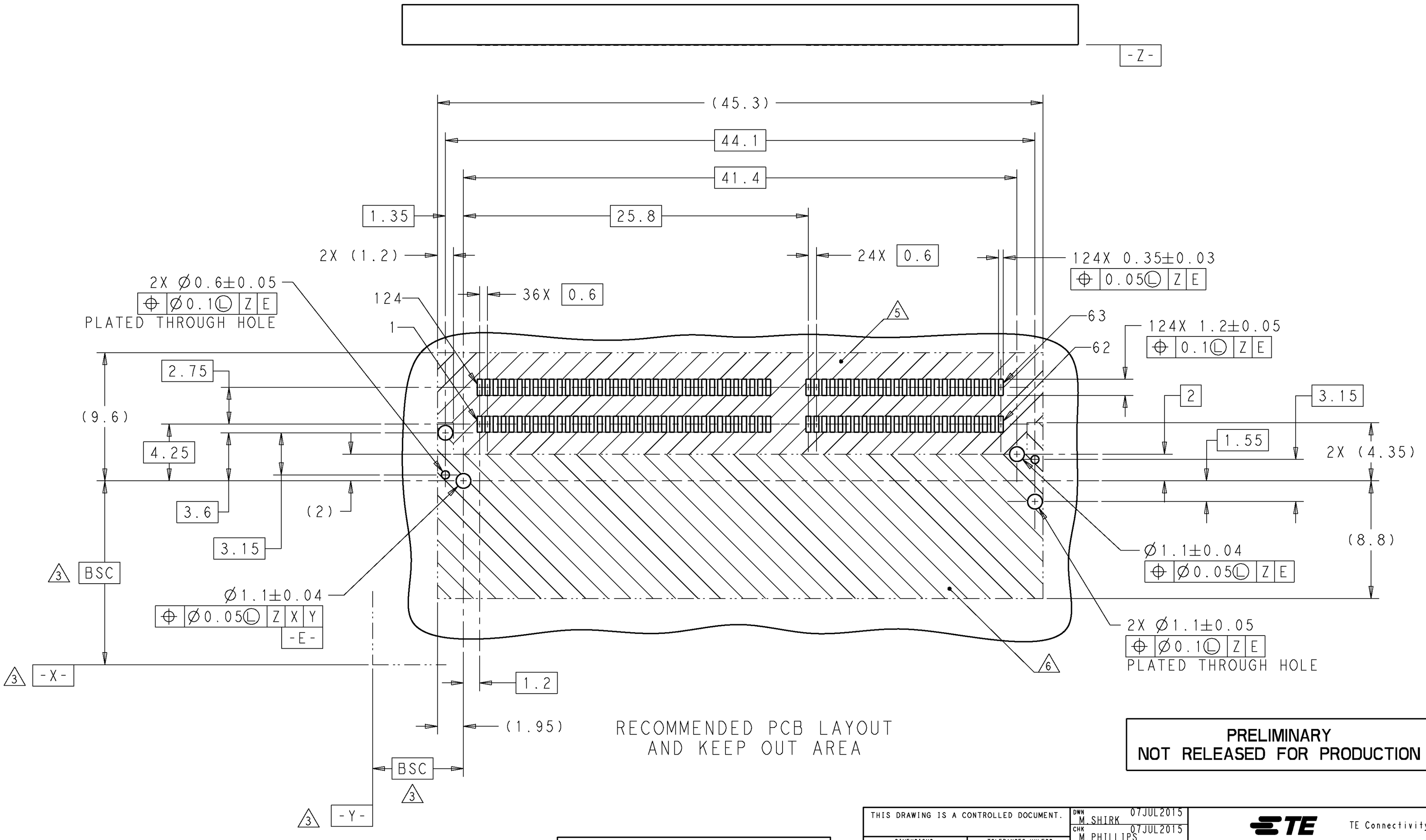
TE Connectivity

NAME RECEPTACLE CONNECTOR, RIGHT ANGLE, 124 POSITION, SLIVER

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2294190	-

CUSTOMER DRAWING | SCALE 5:1 | SHEET 1 OF 3 | REV 4

REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-



RECOMMENDED PCB LAYOUT
AND KEEP OUT AREA

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±
4 PLC ±
ANGLES ±

MATERIAL -
-

FINISH -
-

DWN M.SHIRK 07JUL2015
CHK M.PHILLIPS 07JUL2015
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

NAME RECEPTACLE CONNECTOR, RIGHT ANGLE, 124 POSITION, SLIVER

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2294190	-

CUSTOMER DRAWING | SCALE 5:1 | SHEET 2 OF 3 | REV 4

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-

PIN #	DESCRIPTION	PIN #	DESCRIPTION
1	SIGNAL GROUND	88	SIGNAL GROUND
2	SIGNAL	89	SIGNAL
3	SIGNAL	90	SIGNAL
4	SIGNAL GROUND	91	SIGNAL GROUND
5	SIGNAL	92	SIGNAL
6	SIGNAL	93	SIGNAL
7	SIGNAL GROUND	94	SIGNAL GROUND
8	SIGNAL	95	SIGNAL
9	SIGNAL	96	SIGNAL
10	SIGNAL GROUND	97	SIGNAL GROUND
11	SIGNAL	98	SIGNAL
12	SIGNAL	99	SIGNAL
13	SIGNAL GROUND	100	SIGNAL GROUND
14	SIGNAL	101	SIGNAL
15	SIGNAL	102	SIGNAL
16	SIGNAL GROUND	103	SIGNAL GROUND
17	SIGNAL	104	SIGNAL
18	SIGNAL	105	SIGNAL
19	SIGNAL GROUND	106	SIGNAL GROUND
20	SIGNAL	107	SIGNAL
21	SIGNAL	108	SIGNAL
22	SIGNAL GROUND	109	SIGNAL GROUND
23	SIGNAL	110	SIGNAL
24	SIGNAL	111	SIGNAL
25	SIGNAL GROUND	112	SIGNAL GROUND
26	SIGNAL	113	SIGNAL
27	SIGNAL	114	SIGNAL
28	SIGNAL GROUND	115	SIGNAL GROUND
29	SIGNAL	116	SIGNAL
30	SIGNAL	117	SIGNAL
31	SIGNAL GROUND	118	SIGNAL GROUND
32	SIGNAL	119	SIGNAL
33	SIGNAL	120	SIGNAL
34	SIGNAL GROUND	121	SIGNAL GROUND
35	SIGNAL	122	SIGNAL
36	SIGNAL	123	SIGNAL
37	SIGNAL GROUND	124	SIGNAL GROUND

PIN #	DESCRIPTION	PIN #	DESCRIPTION
38	SIGNAL GROUND	63	SIGNAL GROUND
39	SIGNAL	64	SIGNAL
40	SIGNAL	65	SIGNAL
41	SIGNAL GROUND	66	SIGNAL GROUND
42	SIGNAL	67	SIGNAL
43	SIGNAL	68	SIGNAL
44	SIGNAL GROUND	69	SIGNAL GROUND
45	SIGNAL	70	SIGNAL
46	SIGNAL	71	SIGNAL
47	SIGNAL GROUND	72	SIGNAL GROUND
48	SIGNAL	73	SIGNAL
49	SIGNAL	74	SIGNAL
50	SIGNAL GROUND	75	SIGNAL GROUND
51	SIGNAL	76	SIGNAL
52	SIGNAL	77	SIGNAL
53	SIGNAL GROUND	78	SIGNAL GROUND
54	SIGNAL	79	SIGNAL
55	SIGNAL	80	SIGNAL
56	SIGNAL GROUND	81	SIGNAL GROUND
57	SIGNAL	82	SIGNAL
58	SIGNAL	83	SIGNAL
59	SIGNAL GROUND	84	SIGNAL GROUND
60	SIGNAL	85	SIGNAL
61	SIGNAL	86	SIGNAL
62	SIGNAL GROUND	87	SIGNAL GROUND

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL - -

FINISH - -

DWN M.SHIRK 07JUL2015
CHK M.PHILLIPS 07JUL2015
APVD - -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

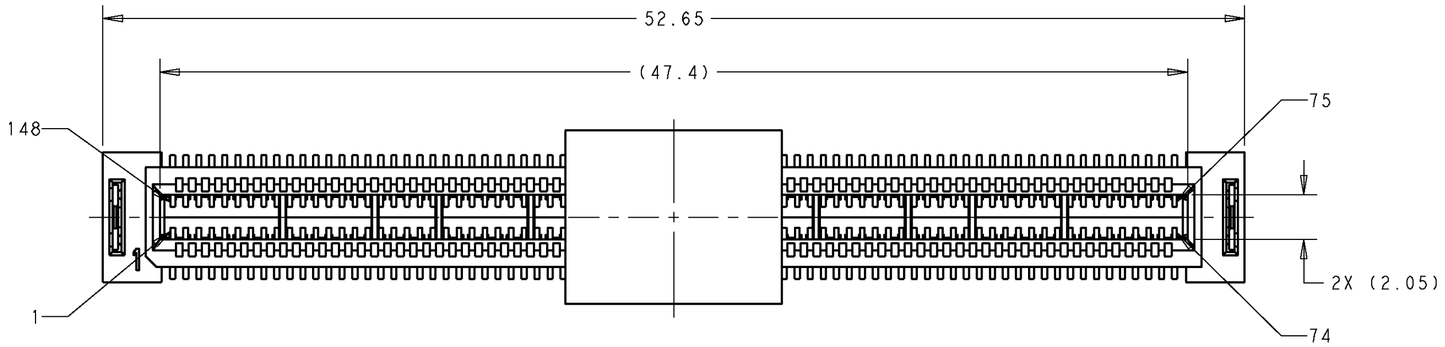
TE Connectivity

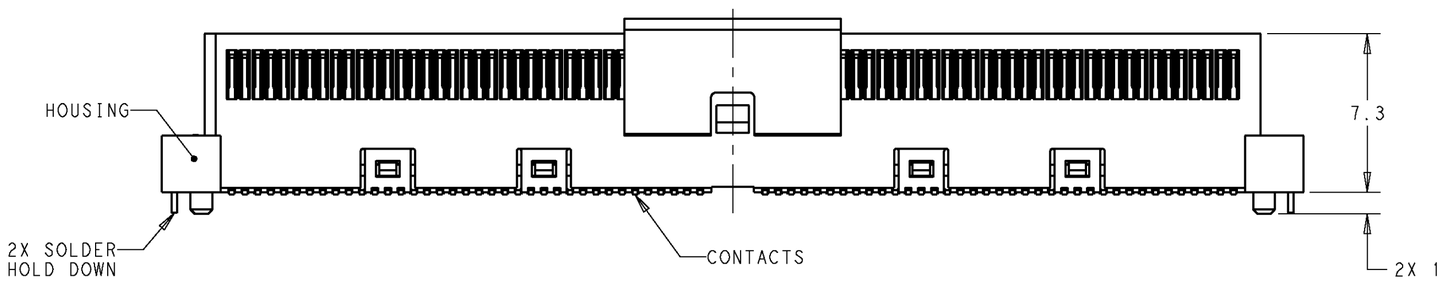
NAME RECEPTACLE CONNECTOR, RIGHT ANGLE, 124 POSITION, SLIVER

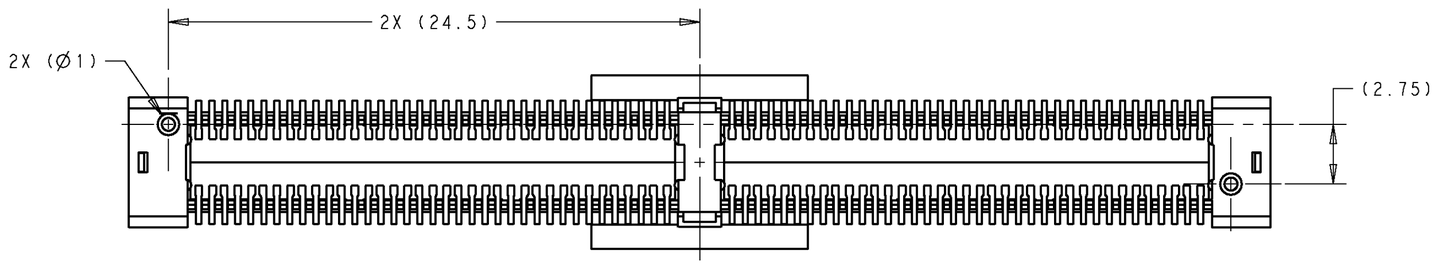
SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2294190	-

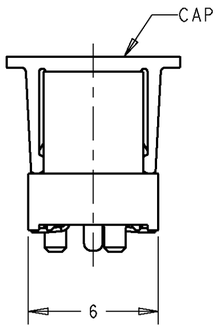
CUSTOMER DRAWING | SCALE 5:1 | SHEET 3 OF 3 | REV 4

REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	13	REV CAP MATERIAL AND 1.9 DIM IN DETAIL C	13DEC2016	MS	DH









1. HOUSING AND CONTACT OVERMOLD: LCP, BLACK.
   CONTACTS: COPPER ALLOY.
   HOLD DOWN: COPPER ALLOY, TIN PLATED.
   PICK AND PLACE TAPE: POLYIMIDE FILM.
   PICK AND PLACE CAP: LCP 30, BLACK.
2. GOLD PLATED ON MATING INTERFACE. TIN PLATED ON SOLDER TAILS.
3. DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.
4. DESIGNED FOR A 1.5 MIN THICK PC BOARD.
5. RECOMMENDED COMPONENT KEEP OUT AREA.

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

PACKAGING	PART NUMBER
TAPE & REEL WITH PICK AND PLACE TAPE	2297117-1
TAPE & REEL WITH PICK AND PLACE CAP	2297117-2

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -1
FINISH -2

DWN M. SCHMITT 4NOV2015
CHK M. SCHMITT 4NOV2015
APVD - -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

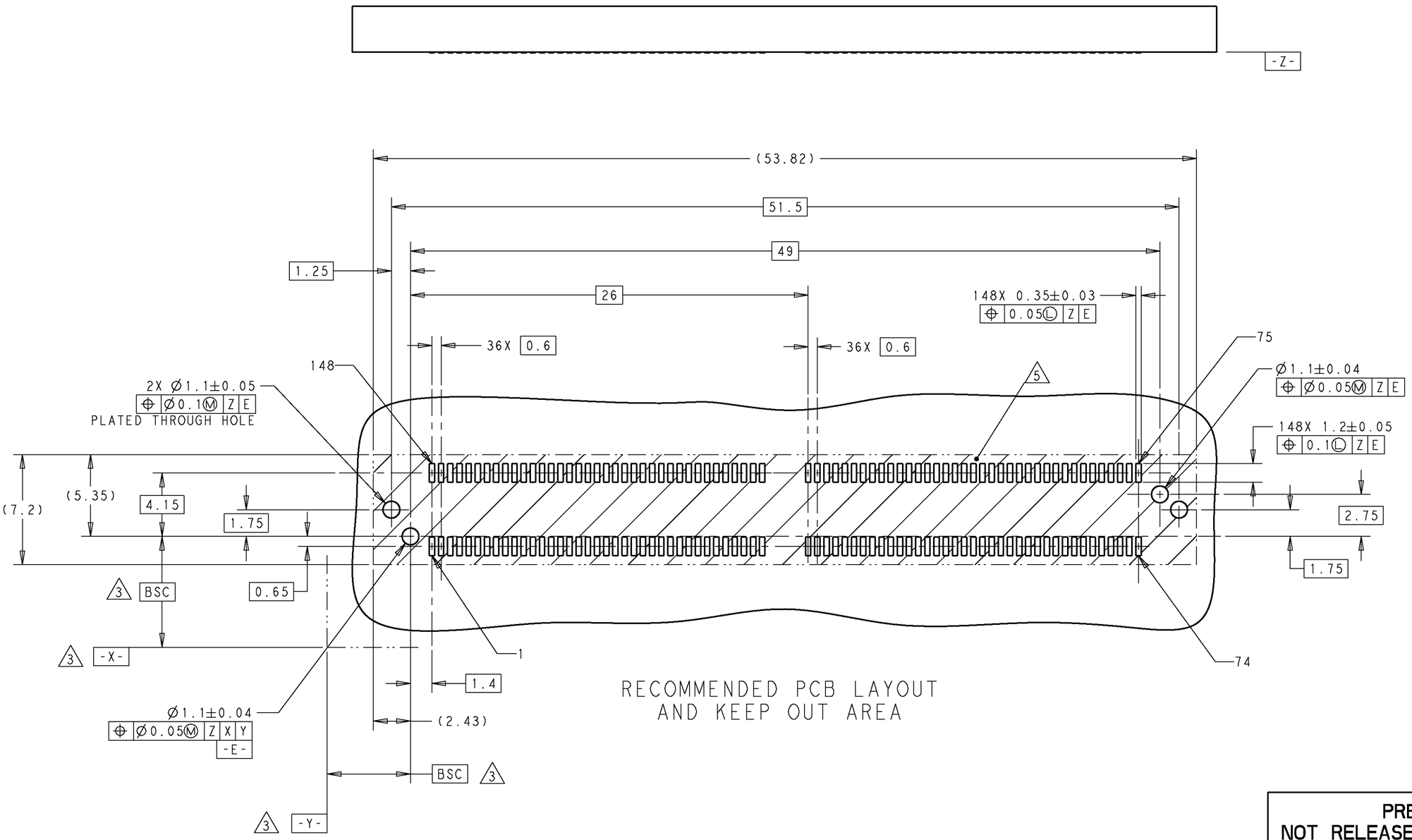
NAME RECEPTACLE CONNECTOR, VERTICAL, 148 POSITION, SLIVER .070 CARD EDGE

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2297117	-

CUSTOMER DRAWING | SCALE 5:1 | SHEET 1 OF 4 | REV 13

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-



RECOMMENDED PCB LAYOUT
AND KEEP OUT AREA

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL - -

FINISH - -

DWN M. SCHMITT 4NOV2015
CHK M. SCHMITT 4NOV2015
APVD - -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

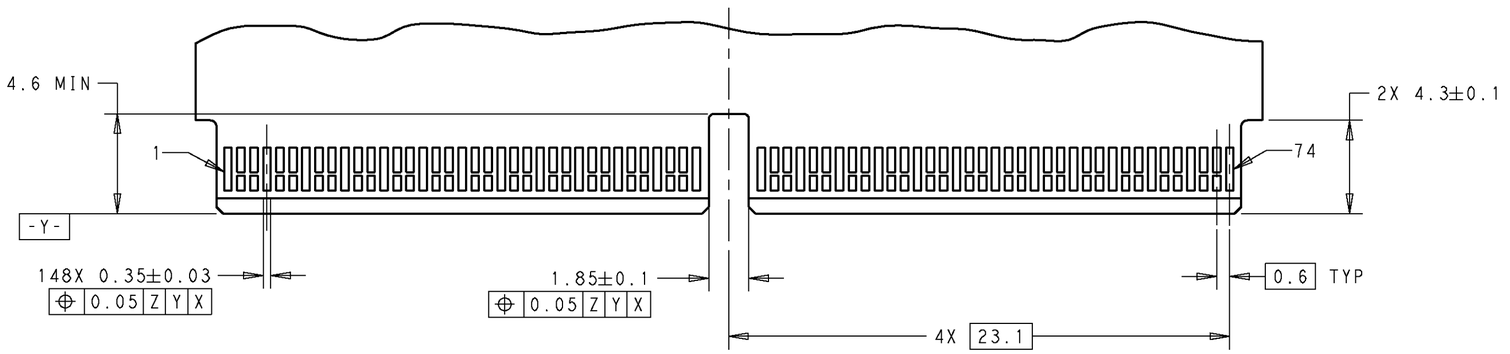
NAME RECEPTACLE CONNECTOR, VERTICAL, 148 POSITION, SLIVER .070 CARD EDGE

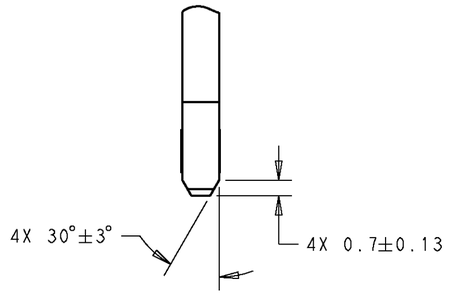
SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2297117	-

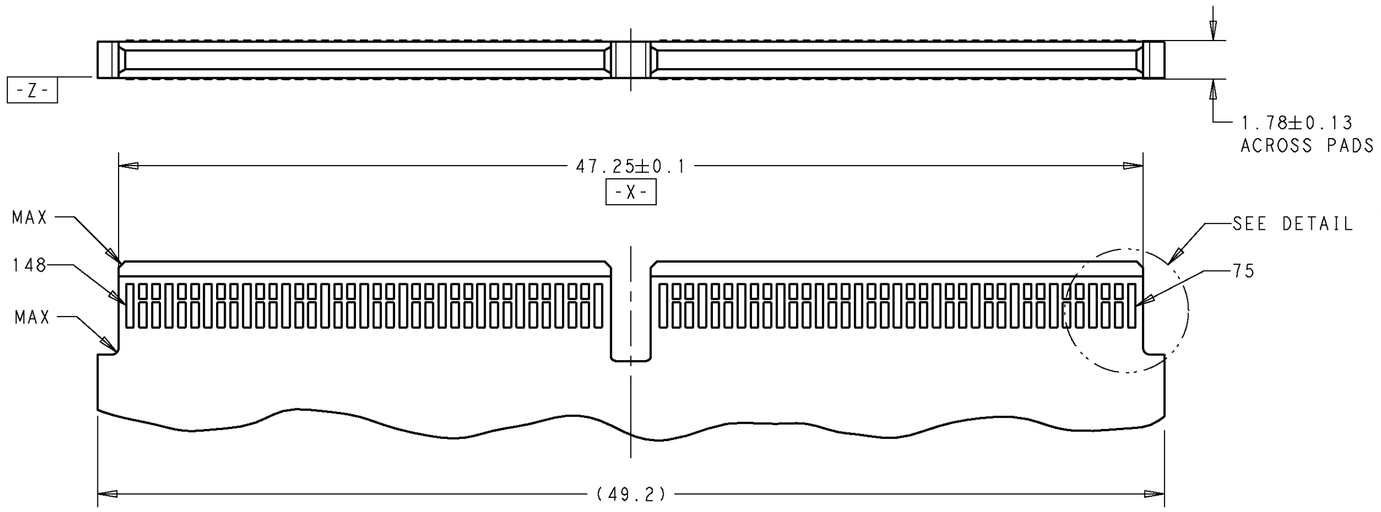
CUSTOMER DRAWING | SCALE 5:1 | SHEET 2 OF 4 | REV 13

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-

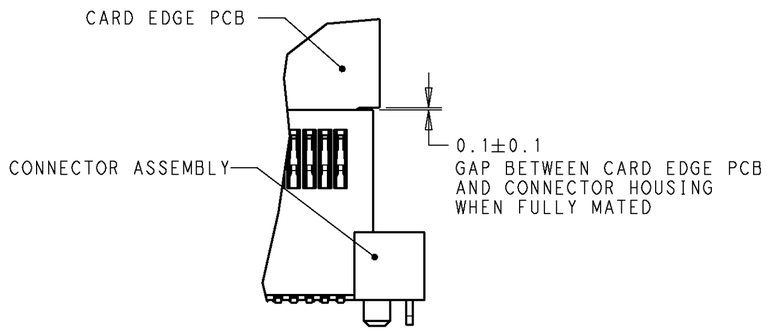






RECOMMENDED CARD EDGE LAYOUT

DETAIL C
SCALE 10:1



SCALE 6:1
CARD EDGE PCB SHOWN MATED TO CONNECTOR ASSEMBLY

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±.
4 PLC ±.
ANGLES ±.

MATERIAL -
FINISH -

DWN M. SCHMITT 4NOV2015
CHK M. SCHMITT 4NOV2015
APVD - -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

NAME RECEPTACLE CONNECTOR, VERTICAL, 148 POSITION, SLIVER .070 CARD EDGE

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2297117	-

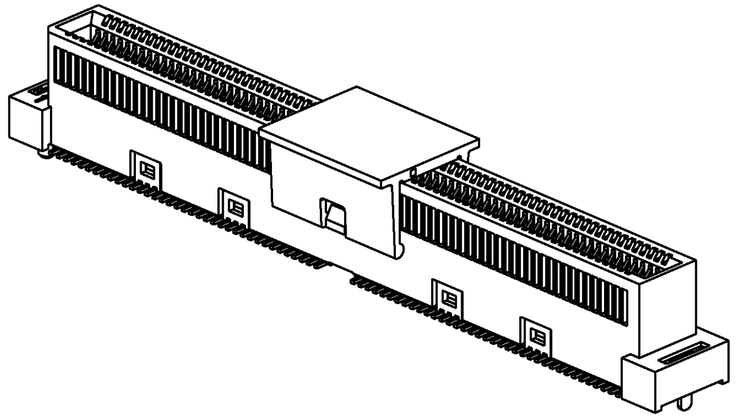
CUSTOMER DRAWING | SCALE 5:1 | SHEET 3 OF 4 | REV 13

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-

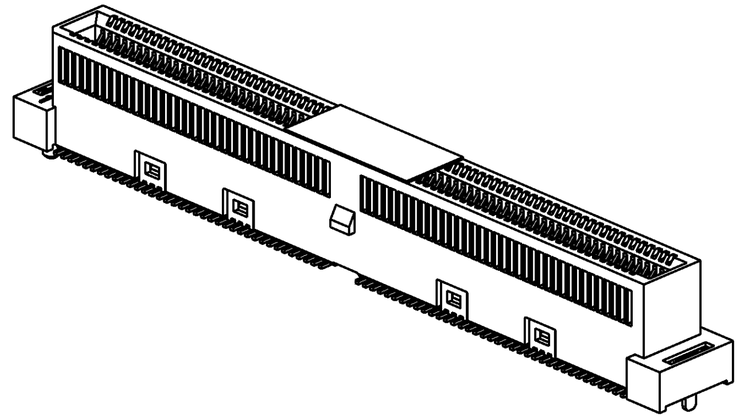
REVISIONS

PIN #	DESCRIPTION	PIN #	DESCRIPTION
1	SIGNAL GROUND	75	SIGNAL GROUND
2	SIGNAL	76	SIGNAL
3	SIGNAL	77	SIGNAL
4	SIGNAL GROUND	78	SIGNAL GROUND
5	SIGNAL	79	SIGNAL
6	SIGNAL	80	SIGNAL
7	SIGNAL GROUND	81	SIGNAL GROUND
8	SIGNAL	82	SIGNAL
9	SIGNAL	83	SIGNAL
10	SIGNAL GROUND	84	SIGNAL GROUND
11	SIGNAL	85	SIGNAL
12	SIGNAL	86	SIGNAL
13	SIGNAL GROUND	87	SIGNAL GROUND
14	SIGNAL	88	SIGNAL
15	SIGNAL	89	SIGNAL
16	SIGNAL GROUND	90	SIGNAL GROUND
17	SIGNAL	91	SIGNAL
18	SIGNAL	92	SIGNAL
19	SIGNAL GROUND	93	SIGNAL GROUND
20	SIGNAL	94	SIGNAL
21	SIGNAL	95	SIGNAL
22	SIGNAL GROUND	96	SIGNAL GROUND
23	SIGNAL	97	SIGNAL
24	SIGNAL	98	SIGNAL
25	SIGNAL GROUND	99	SIGNAL GROUND
26	SIGNAL	100	SIGNAL
27	SIGNAL	101	SIGNAL
28	SIGNAL GROUND	102	SIGNAL GROUND
29	SIGNAL	103	SIGNAL
30	SIGNAL	104	SIGNAL
31	SIGNAL GROUND	105	SIGNAL GROUND
32	SIGNAL	106	SIGNAL
33	SIGNAL	107	SIGNAL
34	SIGNAL GROUND	108	SIGNAL GROUND
35	SIGNAL	109	SIGNAL
36	SIGNAL	110	SIGNAL
37	SIGNAL GROUND	111	SIGNAL GROUND

PIN #	DESCRIPTION	PIN #	DESCRIPTION
38	SIGNAL GROUND	112	SIGNAL GROUND
39	SIGNAL	113	SIGNAL
40	SIGNAL	114	SIGNAL
41	SIGNAL GROUND	115	SIGNAL GROUND
42	SIGNAL	116	SIGNAL
43	SIGNAL	117	SIGNAL
44	SIGNAL GROUND	118	SIGNAL GROUND
45	SIGNAL	119	SIGNAL
46	SIGNAL	120	SIGNAL
47	SIGNAL GROUND	121	SIGNAL GROUND
48	SIGNAL	122	SIGNAL
49	SIGNAL	123	SIGNAL
50	SIGNAL GROUND	124	SIGNAL GROUND
51	SIGNAL	125	SIGNAL
52	SIGNAL	126	SIGNAL
53	SIGNAL GROUND	127	SIGNAL GROUND
54	SIGNAL	128	SIGNAL
55	SIGNAL	129	SIGNAL
56	SIGNAL GROUND	130	SIGNAL GROUND
57	SIGNAL	131	SIGNAL
58	SIGNAL	132	SIGNAL
59	SIGNAL GROUND	133	SIGNAL GROUND
60	SIGNAL	134	SIGNAL
61	SIGNAL	135	SIGNAL
62	SIGNAL GROUND	136	SIGNAL GROUND
63	SIGNAL	137	SIGNAL
64	SIGNAL	138	SIGNAL
65	SIGNAL GROUND	139	SIGNAL GROUND
66	SIGNAL	140	SIGNAL
67	SIGNAL	141	SIGNAL
68	SIGNAL GROUND	142	SIGNAL GROUND
69	SIGNAL	143	SIGNAL
70	SIGNAL	144	SIGNAL
71	SIGNAL GROUND	145	SIGNAL GROUND
72	SIGNAL	146	SIGNAL
73	SIGNAL	147	SIGNAL
74	SIGNAL GROUND	148	SIGNAL GROUND



2297117-2
WITH PICK AND PLACE CAP
SCALE 4:1



2297117-1
WITH PICK AND PLACE TAPE
SCALE 4:1

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -
-

FINISH -
-

DWN M. SCHMITT 4NOV2015
CHK M. SCHMITT 4NOV2015
APVD - -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

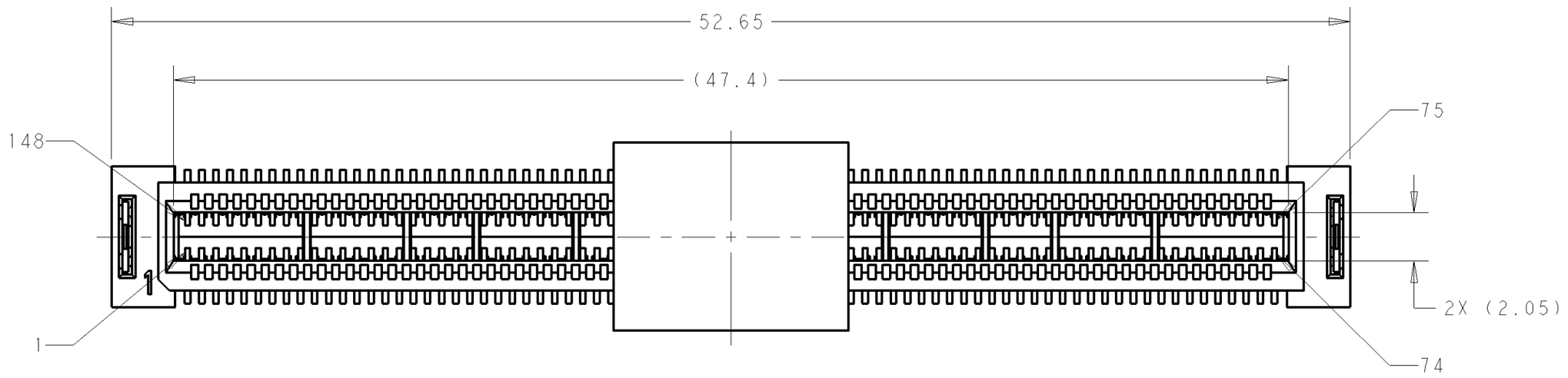
NAME RECEPTACLE CONNECTOR, VERTICAL, 148 POSITION, SLIVER .070 CARD EDGE

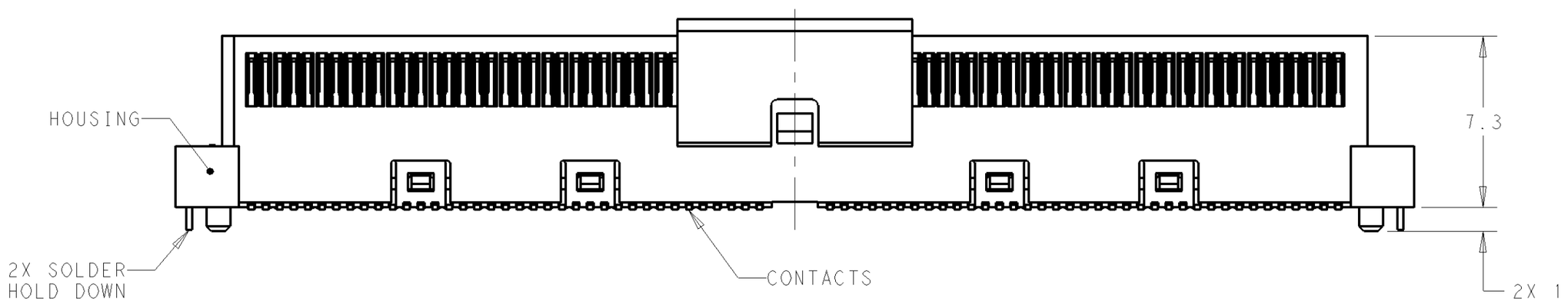
SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2297117	-

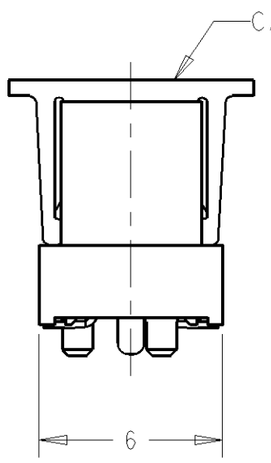
CUSTOMER DRAWING | SCALE 5:1 | SHEET 4 OF 4 | REV 13

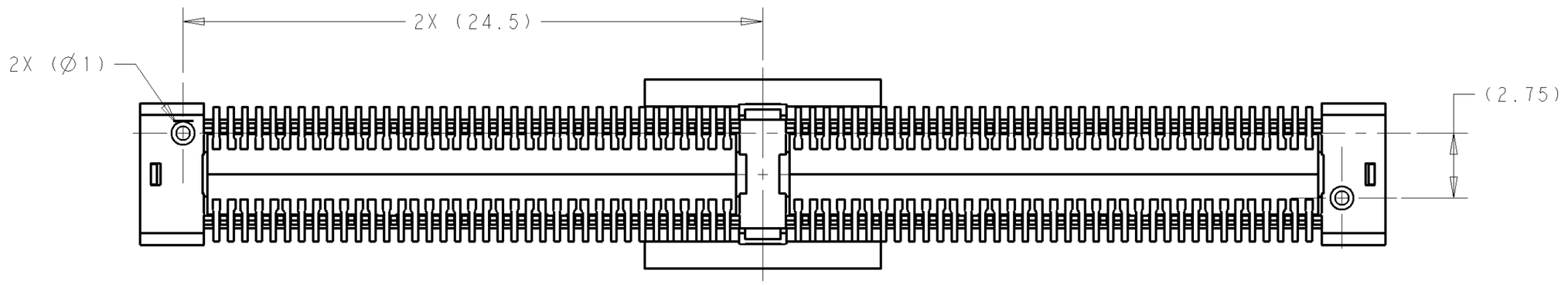
REVISIONS

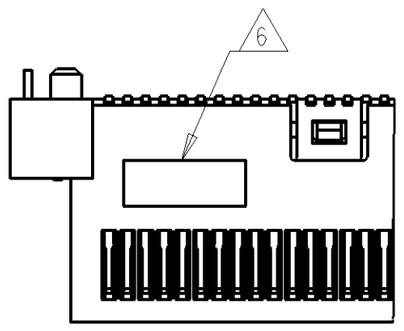
P	LTR	DESCRIPTION	DATE	DWN	APVD
	1	INITIAL RELEASE	16DEC2016	MS	DH
	2	ADDED NOTE 6, PARTIAL SIDE VIEW	22MAR2017	MS	DH
	3	3B2 5.70 MIN 6.50 MAX WAS 5.9±0.18	08JUL2017	DH	DH











1. HOUSING AND CONTACT OVERMOLD: LCP, BLACK.
   CONTACTS: COPPER ALLOY.
   HOLD DOWN: COPPER ALLOY, TIN PLATED.
   PICK AND PLACE TAPE: POLYIMIDE FILM.
   PICK AND PLACE CAP: LCP 30, BLACK.
2. GOLD PLATED ON MATING INTERFACE. TIN PLATED ON SOLDER TAILS.
3. DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.
4. DESIGNED FOR A 1.5 MIN THICK PC BOARD.
5. RECOMMENDED COMPONENT KEEP OUT AREA.
6. DATE CODE MARKED IN APPROXIMATE AREA SHOWN.

PRELIMINARY
NOT RELEASED FOR PRODUCTION

TAPE & REEL WITH PICK AND PLACE TAPE	2314572-1
TAPE & REEL WITH PICK AND PLACE CAP	2314572-2
PACKAGING	PART NUMBER

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.15
1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -1

FINISH -2

DWN M.SHIRK 16DEC2016
CHK D.HARMON 16DEC2016
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

NAME RECEPTACLE CONNECTOR, VERTICAL, 148 POSITION, SLIVER .070 CARD EDGE

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2314572	DLC

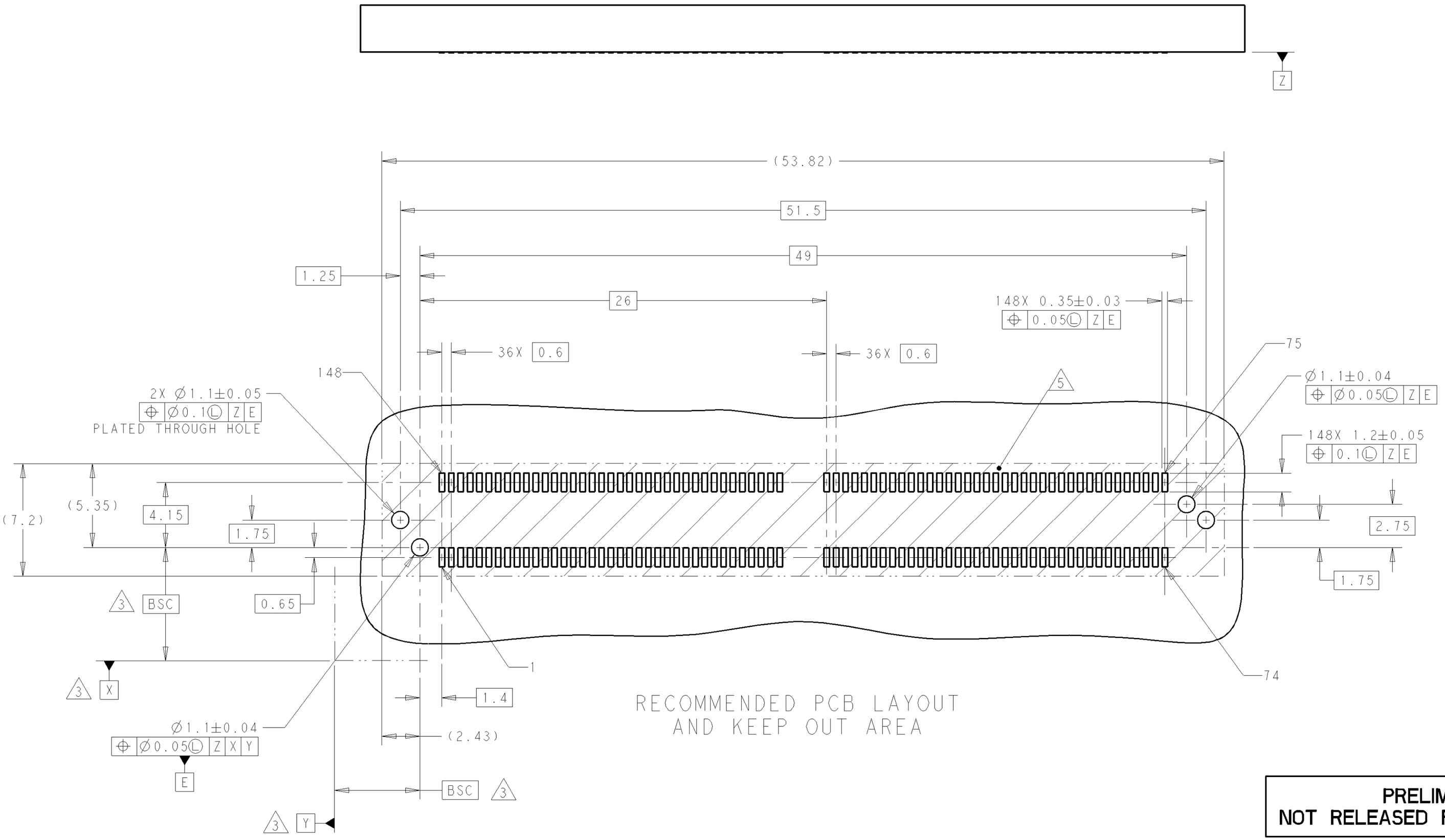
RESTRICTED CUSTOMER

SCALE 5:1 SHEET 1 OF 4 REV 3

Vol. 85 Sec. 6 ILL-10 and Report
Issued: 2015-10-23

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-



RECOMMENDED PCB LAYOUT
AND KEEP OUT AREA

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
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1 PLC ±0.15
2 PLC ±0.15
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL - -

FINISH - -

DWN M.SHIRK 16DEC2016
CHK D.HARMON 16DEC2016
APVD - -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

NAME RECEPTACLE CONNECTOR, VERTICAL, 148 POSITION, SLIVER .070 CARD EDGE

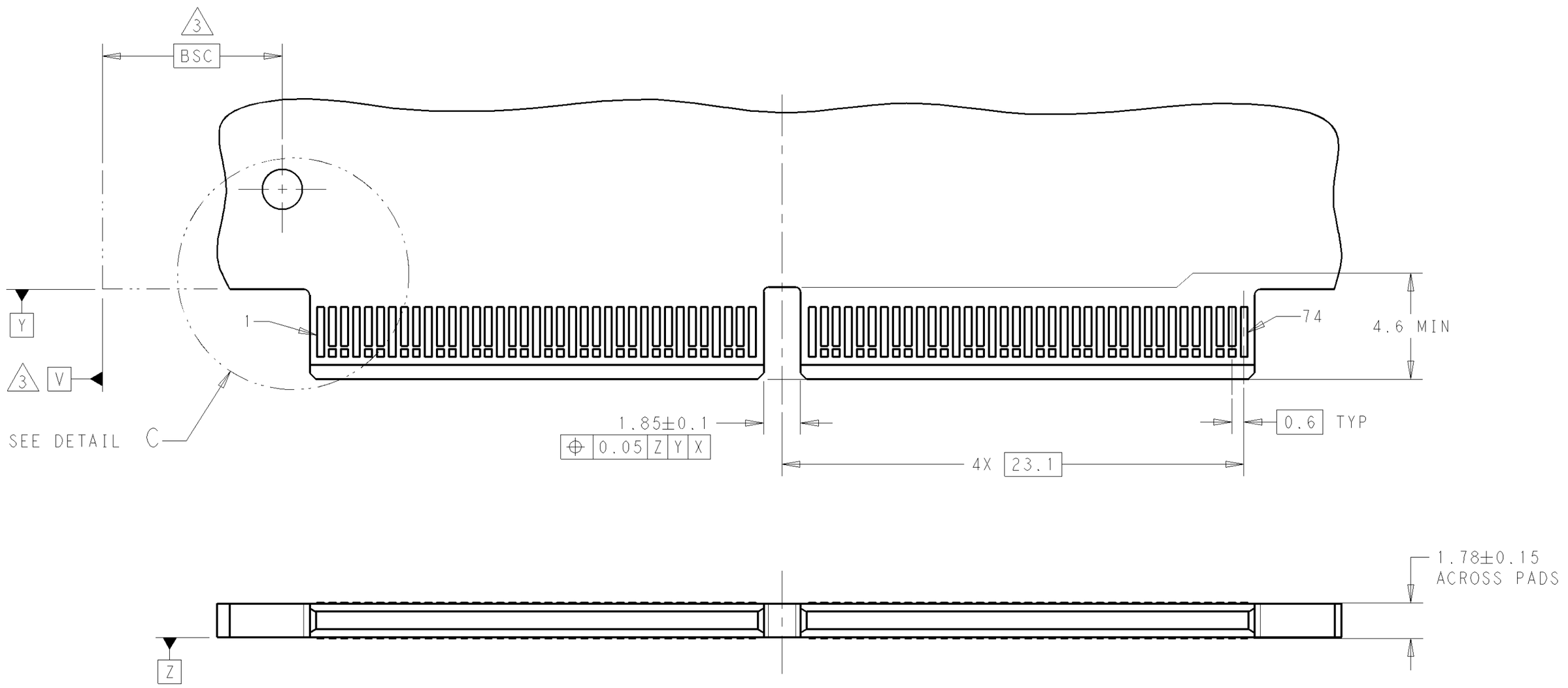
SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	-	C-2314572	DLC

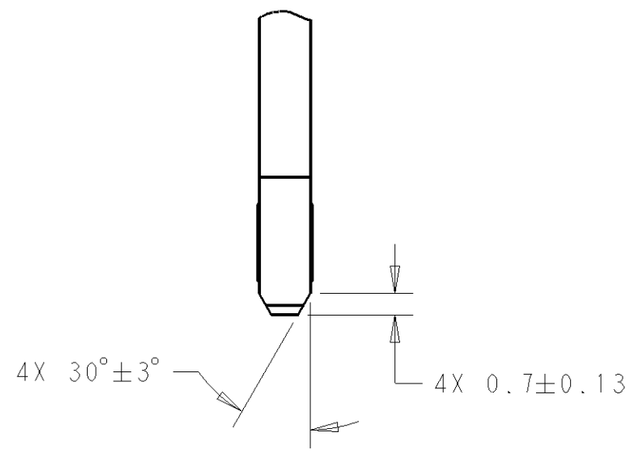
RESTRICTED CUSTOMER

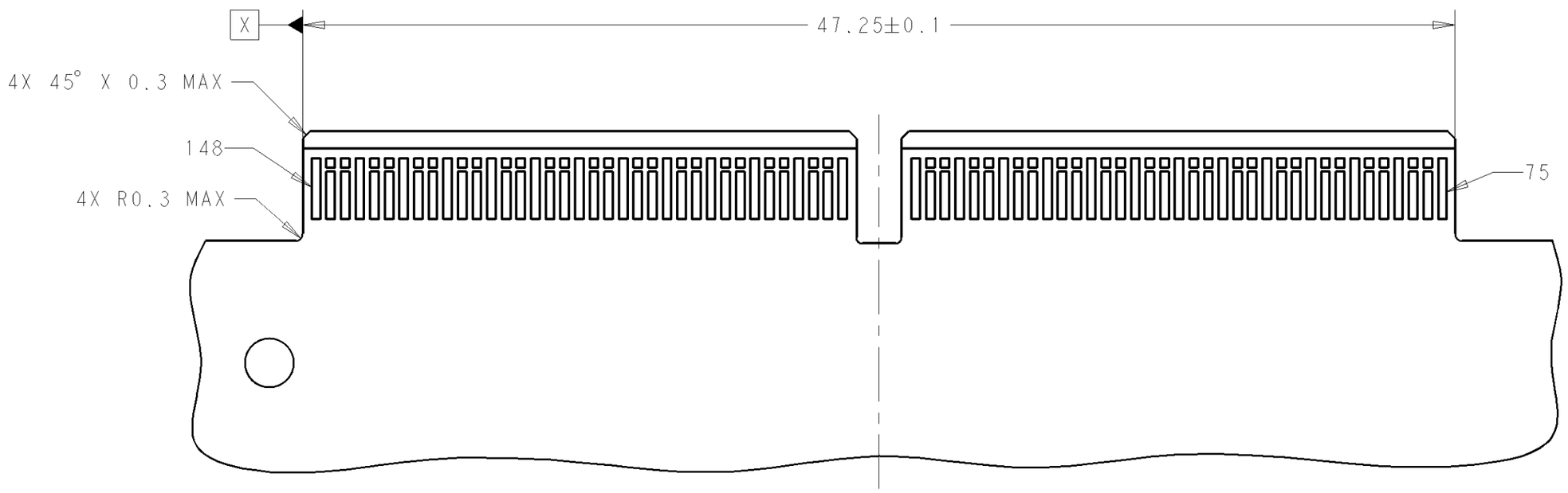
SCALE 5:1 SHEET 2 OF 4 REV 3

REVISIONS

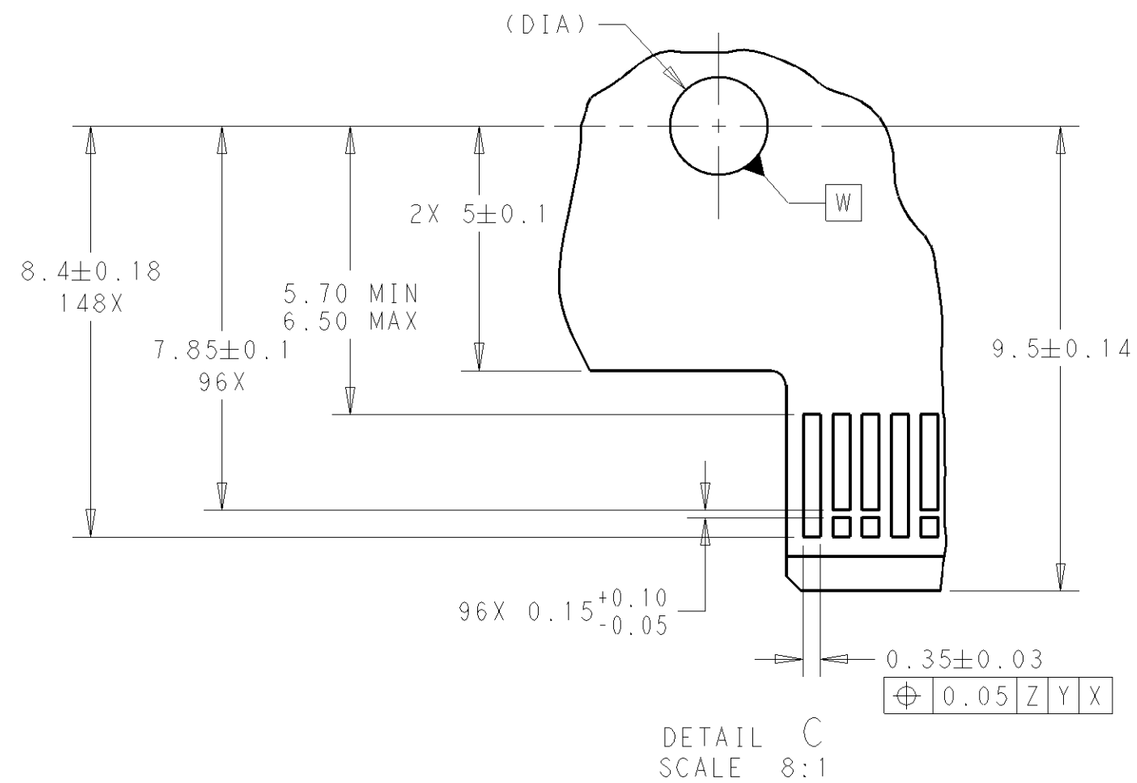
P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-







RECOMMENDED CARD EDGE LAYOUT



DETAIL C
SCALE 8:1

PRELIMINARY
NOT RELEASED FOR PRODUCTION

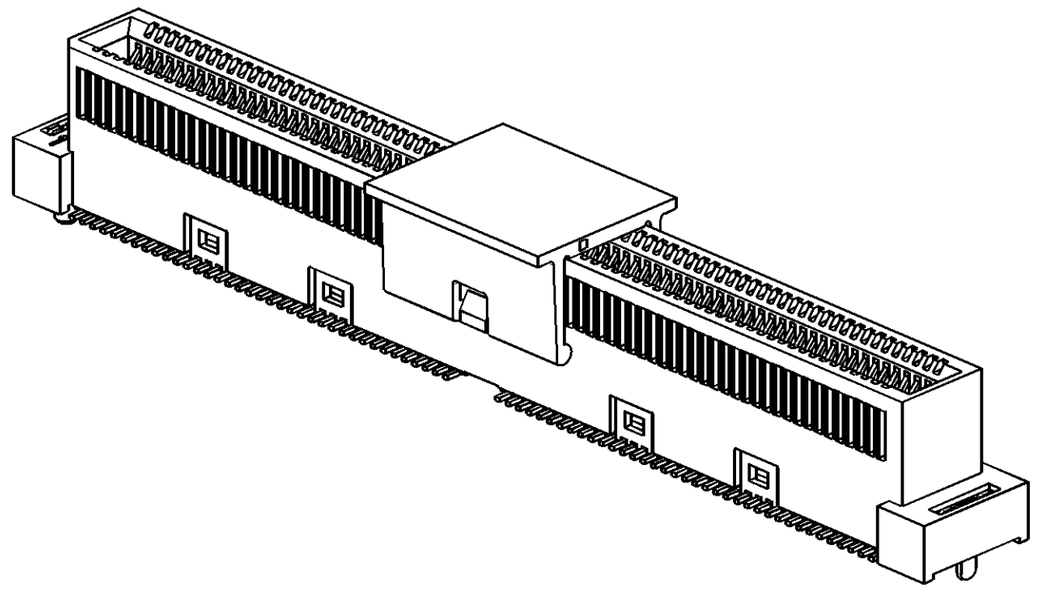
THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN M. SHIRK 16DEC2016	TE Connectivity
DIMENSIONS: mm	TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ±0.1 1 PLC ±0.1 2 PLC ±0.1 3 PLC ±- 4 PLC ±- ANGLES ±-	CHK D. HARMON 16DEC2016	NAME RECEPTACLE CONNECTOR, VERTICAL, 148 POSITION, SLIVER .070 CARD EDGE
		APVD -	
		PRODUCT SPEC -	
		APPLICATION SPEC -	SIZE A2 / CAGE CODE - / DRAWING NO C-2314572 / RESTRICTED TO DLC
MATERIAL - -	FINISH - -	WEIGHT -	RESTRICTED CUSTOMER / SCALE 5:1 / SHEET 3 OF 4 / REV 3

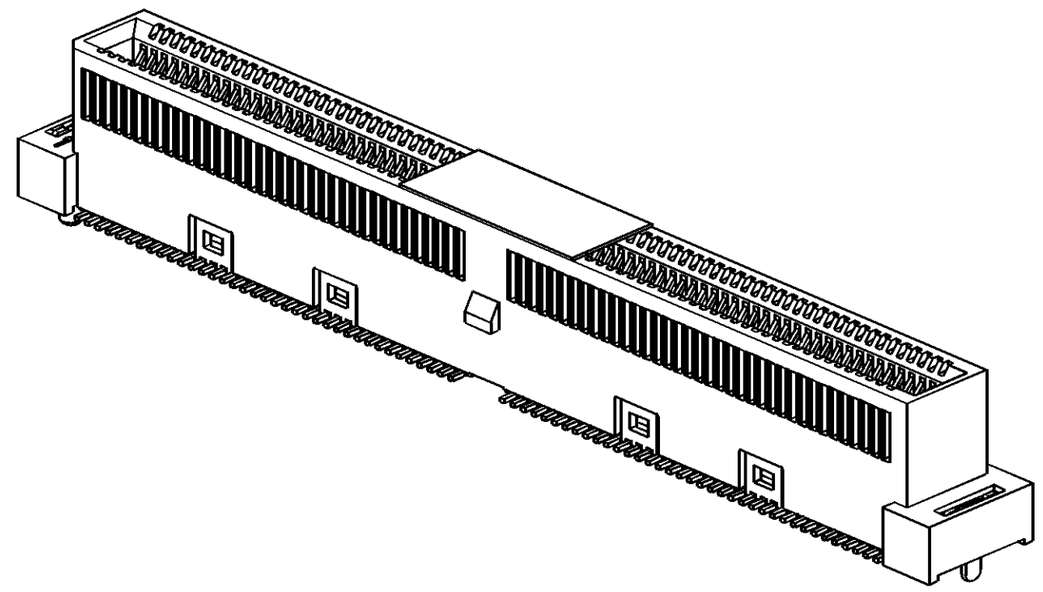
REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-

PIN #	DESCRIPTION	PIN #	DESCRIPTION
1	SIGNAL GROUND	75	SIGNAL GROUND
2	SIGNAL	76	SIGNAL
3	SIGNAL	77	SIGNAL
4	SIGNAL GROUND	78	SIGNAL GROUND
5	SIGNAL	79	SIGNAL
6	SIGNAL	80	SIGNAL
7	SIGNAL GROUND	81	SIGNAL GROUND
8	SIGNAL	82	SIGNAL
9	SIGNAL	83	SIGNAL
10	SIGNAL GROUND	84	SIGNAL GROUND
11	SIGNAL	85	SIGNAL
12	SIGNAL	86	SIGNAL
13	SIGNAL GROUND	87	SIGNAL GROUND
14	SIGNAL	88	SIGNAL
15	SIGNAL	89	SIGNAL
16	SIGNAL GROUND	90	SIGNAL GROUND
17	SIGNAL	91	SIGNAL
18	SIGNAL	92	SIGNAL
19	SIGNAL GROUND	93	SIGNAL GROUND
20	SIGNAL	94	SIGNAL
21	SIGNAL	95	SIGNAL
22	SIGNAL GROUND	96	SIGNAL GROUND
23	SIGNAL	97	SIGNAL
24	SIGNAL	98	SIGNAL
25	SIGNAL GROUND	99	SIGNAL GROUND
26	SIGNAL	100	SIGNAL
27	SIGNAL	101	SIGNAL
28	SIGNAL GROUND	102	SIGNAL GROUND
29	SIGNAL	103	SIGNAL
30	SIGNAL	104	SIGNAL
31	SIGNAL GROUND	105	SIGNAL GROUND
32	SIGNAL	106	SIGNAL
33	SIGNAL	107	SIGNAL
34	SIGNAL GROUND	108	SIGNAL GROUND
35	SIGNAL	109	SIGNAL
36	SIGNAL	110	SIGNAL
37	SIGNAL GROUND	111	SIGNAL GROUND

PIN #	DESCRIPTION	PIN #	DESCRIPTION
38	SIGNAL GROUND	112	SIGNAL GROUND
39	SIGNAL	113	SIGNAL
40	SIGNAL	114	SIGNAL
41	SIGNAL GROUND	115	SIGNAL GROUND
42	SIGNAL	116	SIGNAL
43	SIGNAL	117	SIGNAL
44	SIGNAL GROUND	118	SIGNAL GROUND
45	SIGNAL	119	SIGNAL
46	SIGNAL	120	SIGNAL
47	SIGNAL GROUND	121	SIGNAL GROUND
48	SIGNAL	122	SIGNAL
49	SIGNAL	123	SIGNAL
50	SIGNAL GROUND	124	SIGNAL GROUND
51	SIGNAL	125	SIGNAL
52	SIGNAL	126	SIGNAL
53	SIGNAL GROUND	127	SIGNAL GROUND
54	SIGNAL	128	SIGNAL
55	SIGNAL	129	SIGNAL
56	SIGNAL GROUND	130	SIGNAL GROUND
57	SIGNAL	131	SIGNAL
58	SIGNAL	132	SIGNAL
59	SIGNAL GROUND	133	SIGNAL GROUND
60	SIGNAL	134	SIGNAL
61	SIGNAL	135	SIGNAL
62	SIGNAL GROUND	136	SIGNAL GROUND
63	SIGNAL	137	SIGNAL
64	SIGNAL	138	SIGNAL
65	SIGNAL GROUND	139	SIGNAL GROUND
66	SIGNAL	140	SIGNAL
67	SIGNAL	141	SIGNAL
68	SIGNAL GROUND	142	SIGNAL GROUND
69	SIGNAL	143	SIGNAL
70	SIGNAL	144	SIGNAL
71	SIGNAL GROUND	145	SIGNAL GROUND
72	SIGNAL	146	SIGNAL
73	SIGNAL	147	SIGNAL
74	SIGNAL GROUND	148	SIGNAL GROUND



2314572-2
WITH PICK AND PLACE CAP
SCALE 4:1



2314572-1
WITH PICK AND PLACE TAPE
SCALE 4:1

PRELIMINARY
NOT RELEASED FOR PRODUCTION

THIS PRODUCT HAS NOT COMPLETED VALIDATION AND QUALIFICATION TESTING

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN M.SHIRK 16DEC2016	TE Connectivity
DIMENSIONS: mm	TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ±0.15, 1 PLC ±0.15, 2 PLC ±0.15, 3 PLC ±-, 4 PLC ±-, ANGLES ±-	CHK D.HARMON 16DEC2016	NAME RECEPTACLE CONNECTOR, VERTICAL, 148 POSITION, SLIVER .070 CARD EDGE
MATERIAL - -	FINISH -	APVD - / PRODUCT SPEC - / APPLICATION SPEC - / WEIGHT -	SIZE A2 / CAGE CODE - / DRAWING NO C-2314572 / RESTRICTED TO DLC
		RESTRICTED CUSTOMER	SCALE 5:1 / SHEET 4 OF 4 / REV 3

TEST RECORD NO. 1

SAMPLES:

A sample of the Mid Board Copper receptacle Cat. No. 2291316-1 constructed as described herein, was submitted by the manufacturer for examination and test.

GENERAL:

Tests conducted in accordance with UL 1977, Component Connectors for Use in Data, Signal, Control and Power Applications, Second Edition, Revised July 9, 2013 were considered representative of the same tests required by Canadian Standard CAN/CSA C22.2 No. 182.3-M1987. Where test names differ or additional tests were conducted in accordance with CAN/CSA C22.2 No. 182.3-M1987, Update No. 4 July 2011, the tests are identified by the standard and paragraph/clause information enclosed by parenthesis.

The following tests were conducted:

Mold Stress Relief Test (Part Number Report Format):	14

Test results relate only to the items tested.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in UL 1977, Component Connectors for Use in Data, Signal, Control and Power Applications, Second Edition, Revised July 9, 2013 and CAN/CSA C22.2 No. 182.3-M1987, Update No. 4 July 2011 and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

TEST RECORD NO. 2

SAMPLES:

Samples of Cat. No. 2294190-1 as indicated below and constructed as described herein, was submitted by the manufacturer for examination and test.

Cat. No. 2294190-1 molded of E130i(d)(e)(f1) by Polyplastics Co Ltd. was used for investigation purposes and were considered representative of the entire series.

GENERAL:

Tests conducted in accordance with UL 1977, Component Connectors for Use in Data, Signal, Control and Power Applications, Third Edition, Revised January 7, 2016 were considered representative of the same tests required by Canadian Standard CAN/CSA C22.2 No. 182.3-M1987. Where test names differ or additional tests were conducted in accordance with CAN/CSA C22.2 No. 182.3-M1987, Update No. 4 July 2011, the tests are identified by the standard and paragraph/clause information enclosed by parenthesis.

The following tests were conducted:

Mold Stress Relief Test (Part Number Report Format):	14

Test results relate only to the items tested.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in UL 1977, Component Connectors for Use in Data, Signal, Control and Power Applications, Third Edition, Revised January 7, 2016 CAN/CSA C22.2 No. 182.3-M1987, Special use attachment plugs, receptacles, and connectors First Edition, July 1, 2011, (Reaffirmed 2014) and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Test Record by: Reviewed by:

Richard Rossbotham John Tsavalos
Engineering Associate Sr. Staff Engineer

TEST RECORD NO. 3

SAMPLES:

Samples of Cat. Nos. 2297117-1 and 2297117-2 molded of plastic Vectra or Laperos E130i(d)(e)(f1), produced by Polyplastic Co. Ltd (E106764) as indicated below and constructed as described herein, was submitted by the manufacturer for examination and test.

Cat. No. 2297117-2 was used for investigation purposes and serves to represent Cat. No. 2297117-1.

GENERAL:

Tests conducted in accordance with UL 1977, Component Connectors for Use in Data, Signal, Control and Power Applications, Third Edition, dated January 7, 2016 were considered representative of the same tests required by Canadian Standard CAN/CSA C22.2 No. 182.3-16. Where test names differ or additional tests were conducted in accordance with CAN/CSA C22.2 No. 182.3-16, Dated: July 2016, the tests are identified by the standard and paragraph/clause information enclosed by parenthesis.

The following tests were conducted:

Mold Stress Relief Test (Part Number Report Format):	14 (6.22)

Test results relate only to the items tested.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in UL 1977, Component Connectors for Use in Data, Signal, Control and Power Applications, Third Edition, Dated: January 7, 2016 CAN/CSA C22.2 No. 182.3-16,Dated July 2016 the standards noted below and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Report by: Reviewed by:

Richard Rossbotham
Engineering Associate

John Tsavalos
Sr. Staff Engineer

TEST RECORD NO. 4

SAMPLES:

Samples of the Cat. Nos. 2314572-1 and 2314572-2 were submitted by the manufacturer for examination and test in accordance with UL 1977, Component Connectors for Use in Data, Signal, Control and Power Applications, Third Edition, Dated: December 1, 2017 and CAN/CSA C22.2 No. 182.3-16, Dated July 2016.

GENERAL:

The following tests were waived:

Test	Rationale for Waived Test+	File Reference	Report Date	Test Record No.
Mold Stress Relief Test (Part Number Report Format):	1, 2	E28476	2015-10-23	1 - 3

+

1. Similarity to currently Recognized products, Cat. Nos. 2297117-1 and 2297117-2. The only difference is the mounting based on a customer request.
2. Engineering judgment that the changes do not negatively impact the performance of the product for the specific test waived.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in UL 1977, Component Connectors for Use in Data, Signal, Control and Power Applications, Third Edition, Dated: December 1, 2017 and CAN/CSA C22.2 No. 182.3-16, Dated July 2016 and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Test Record by: Reviewed by:

Michael Ketterling John Tsavalos

Staff Engineer Sr. Staff Engineer

CONCLUSION

Samples of the component covered by this Report have been found to comply with the requirements covering the category and the component is found to comply with UL's applicable requirements. The description and test result in this Report are only applicable to the sample(s) investigated by UL and does not signify the product(s) described as being covered under UL's Follow-Up Service Program. When covered under UL's Follow-Up Service Program, the manufacturer is authorized to use the Recognized Marking on such products which comply with UL's Follow-Up Service Procedure and any other applicable requirements of UL LLC. The Recognized Component Mark of UL LLC on the product, or the Recognized Marking symbol on the product and the Recognized Component Mark on the smallest unit container in which the product is packaged, is the only method to identify products investigated by UL to published requirements and manufactured under UL's Recognition and Follow-Up Service.

Report by: Reviewed by:

John Tsavalos
Sr Staff Engineer

Kathleen A. King
Sr Staff Engineer