PRODUCT SPECIFICATION

		No. T-1-2187 (R-1-2187)	Date Issued: February 7, 2005
Customer:	GENERAL	Revised: E	Date Revised: December 4, 2014
Title Subject:	XH Connector (Lead-free product)		Issued by: Osaka Engineering Center

This product specification contains the results of performance tests for the XH Connector (Lead-free product).

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Prepared by:	Checked by:	Reviewed by:	Approved by:
M.Ueda	S.Matsumoto	T.Kusuda	H.Tomimoto

Title Subject: XH Connector (Lead-free product)	No. T-1-2187 (R-1-2187)	Revised: E

1. PART NAME, PART NUMBER & DRAWING NUMBER

Part Name		Part Number	Drawing Number
Contact		SXH-001T-P0.6 SXH-002T-P0.6	KRD-5607-1 KRD-4311-1
Housing		XHP-∗ XHP-20	KRD-4195-2 KRD-5387-3
Header	Top entry type	B2B-XH-A (LF)(SN) B∗B-XH-A (LF)(SN) B20B-XH-A (LF)(SN)	KRD-33576 KRD-38224-1 KRD-38225
	Side entry type	S2B-XH-A (LF)(SN) S∗B-XH-A (LF)(SN) S2B-XH-A-1 (LF)(SN) S∗B-XH-A-1 (LF)(SN)	KRD-34612-2 KRD-34613-1 KRD-34614 KRD-34615-1

Note$_1$: Number of circuits in one or two-digit figure is indicated in ∗.
Note$_2$: (LF)(SN) as identification part number indicating lead-free product shall be displayed on a label until all products are shifted to the lead-free.

2. CONSTRUCTION, DIMENSIONS, MATERIAL & SURFACE FINISH

Construction and dimensions shall be in accordance with the referenced drawings.
Material and surface finish shall be as specified below.

Part Name		Material	Surface Finish, etc.
Contact		Phosphor bronze	Tin-plated
Housing		PA 6	Flammability: UL94V-0
Header	Post	Brass	Copper-underplated Tin-plated
	Wafer	PA 66	Flammability: UL94V-0

3. CHARACTERISTICS

Item		Rated Value	
Current rating		3 A (AC, DC)	(Note$_3$)
Voltage rating		250 V (AC, DC)	
Temperature range		-25 to +85 °C	(Note$_4$)
Applicable wire	Conductor size	001 type: AWG #28 to #22 002 type: AWG #30 to #26	
	Insulation O.D.	001 type: ϕ0.9 to ϕ1.9 mm 002 type: ϕ0.9 to ϕ1.3 mm	
	Conductor spec.	Tin-plated annealed copper wire (stranded wire)	
Recommended printed circuit board (PCB)	Thickness	1.6 mm	
	Hole size	2-circuit, top entry type: 1.0 ± 0.05 mm Other than above: 0.9 +0.1/-0 mm	(Note$_5$)

Note$_3$: When AWG #22 applied.
Note$_4$: Including temperature rise in applying an electrical current.
Note$_5$: Recommended values when paper based epoxy resin PCB with drilled hole is used. Tolerance changes depending on PCB material and piercing method.

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4. ABOUT WHISKER

Although the lead-free plating of this product has performed re-flow tin plating which ensures maximum effectiveness for retarding whisker growth, it is not possible to completely eliminate the whisker problem.

5. SPECIMEN

Part Name		Part Number
Contact		SXH-001T-P0.6 SXH-002T-P0.6
Housing		XHP-∗
Header	Top entry type	B∗B-XH-A (LF)(SN)
	Side entry type	S∗B-XH-A (LF)(SN) S∗B-XH-A-1 (LF)(SN)

Note$_6$: Number of circuits in one or two-digit figure is indicated in ∗.

6. TEST CONDITIONS

1) When tested in accordance with the test conditions and methods specified in each item, each requirement shall be met. Unless otherwise specified, tests shall be conducted under the following ambient conditions specified in JIS C 60068-1 (IEC 60068-1) [Basic Environmental Testing Procedures General and Guidance].

Temperature: 15 to 35 °C
Relative humidity: 25 to 75 %

2) For environmental tests, as a rule, the specimen assembled for actual use and the wire of UL1007 style AWG #22 shall be used.

7. REQUIREMENTS, TEST METHODS & TEST RESULTS

7.1 Appearance

Requirement: There shall be no crack, deformation or discoloration which may affect the performance specified in this specification.

Test method: Visual inspection.

Test result: Good.

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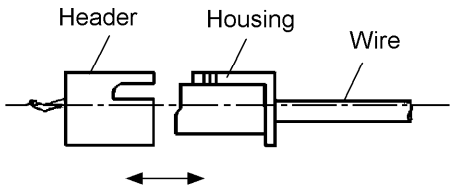
7.2 Mechanical Performance Test

7.2.1 Insertion Force (I.F.) & Withdrawal Force (W.F.)

Requirement:

UNIT: N

No. of circuits	At Initial		At 50th
	I.F. (N max.)	W.F (N min.)	W.F. (N min.)
2	29.4	7.8	5.9
3	34.3	9.8	7.8
4	39.2	11.8	8.8
5	44.1	11.8	8.8
6	49.0	13.7	9.8
7	53.9	13.7	9.8
8	58.8	15.7	11.8
9	63.7	15.7	11.8
10	68.6	17.6	13.7
11	73.5	17.6	13.7
12	78.4	19.6	15.7
13	83.3	19.6	15.7
14	88.2	21.6	17.6
15	93.1	23.5	19.6
16	98.0	23.5	19.6
20	108	29.4	25.5



Test method: A housing with crimped contacts and a header shall be mated and unmated on the mating axis. Initial insertion and withdrawal forces and also withdrawal force at 50th shall be measured. (Testing speed: 1 to 5 mm/sec.)

Test result:

UNIT: N

No. of circuits	Items	Ave.	Max.	Min.
2	Initial I.F.	17.5	18.2	17.0
	Initial W.F.	19.9	21.5	18.9
	W.F. at 50th	14.4	16.7	12.8
3	Initial I.F.	20.0	22.0	18.3
	Initial W.F.	22.6	25.1	20.9
	W.F. at 50th	16.0	17.1	15.4
4	Initial I.F.	22.0	24.0	19.7
	Initial W.F.	24.6	27.0	22.8
	W.F. at 50th	17.2	18.1	15.7
5	Initial I.F.	25.6	28.7	23.7
	Initial W.F.	28.6	31.3	26.1
	W.F. at 50th	22.3	24.8	18.3

n=10

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Test result:

UNIT: N

No. of circuits	Items	Ave.	Max.	Min.
6	Initial I.F.	26.5	28.9	24.1
	Initial W.F.	29.9	34.5	25.0
	W.F. at 50th	23.8	30.2	19.9
7	Initial I.F.	28.8	30.5	27.7
	Initial W.F.	30.4	33.7	26.2
	W.F. at 50th	26.0	30.9	22.2
8	Initial I.F.	31.9	36.4	30.4
	Initial W.F.	34.5	37.5	31.5
	W.F. at 50th	30.9	36.3	27.7
9	Initial I.F.	33.3	36.0	31.4
	Initial W.F.	37.0	41.8	34.6
	W.F. at 50th	33.1	38.3	28.8
10	Initial I.F.	40.7	42.1	38.2
	Initial W.F.	43.5	48.7	41.8
	W.F. at 50th	35.8	40.0	28.4
11	Initial I.F.	41.3	44.8	38.9
	Initial W.F.	44.9	49.0	41.5
	W.F. at 50th	38.7	44.8	34.1
12	Initial I.F.	50.5	54.8	48.4
	Initial W.F.	54.0	56.3	49.3
	W.F. at 50th	41.1	45.2	34.5
13	Initial I.F.	51.8	54.5	47.5
	Initial W.F.	56.2	60.7	52.2
	W.F. at 50th	42.2	46.7	38.8
14	Initial I.F.	53.6	59.4	49.8
	Initial W.F.	56.2	61.1	51.9
	W.F. at 50th	46.9	51.5	43.5
15	Initial I.F.	62.7	65.5	57.5
	Initial W.F.	61.6	66.1	56.0
	W.F. at 50th	51.0	60.7	45.5
16	Initial I.F.	69.5	72.5	66.9
	Initial W.F.	65.5	71.4	58.9
	W.F. at 50th	55.2	60.1	48.4
20	Initial I.F.	78.9	83.3	73.0
	Initial W.F.	71.7	75.1	66.9
	W.F. at 50th	59.3	64.4	52.8

n=10

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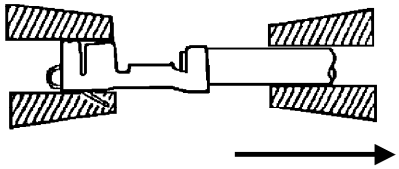
7.2.2 Crimp Tensile Strength

Requirement:

Wire to be used	Requirements N min.
AWG #30	7.8
AWG #28	9.8
AWG #26	19.6
AWG #24	29.4
AWG #22	39.2



Test method: Pulling load shall be applied to a correctly crimped contact and a wire. The load required to pull the wire out of the contact or break the wire shall be measured. (Testing speed: 25 mm/min.)

Test result:

SXH-001T-P0.6 UNIT: N

Wire size	Ave.	Max.	Min.
AWG #28	28.0	32.3	25.5
AWG #26	42.9	45.1	37.2
AWG #24	62.3	65.7	59.8
AWG #22	89.6	96.0	87.2

n=10

SXH-002T-P0.6 UNIT: N

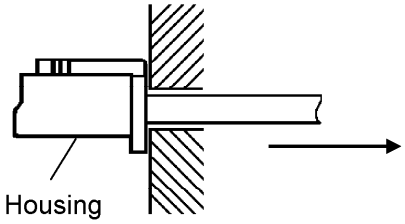
Wire size	Ave.	Max.	Min.
AWG #30	16.7	19.6	14.7
AWG #28	26.1	30.4	21.6
AWG #26	42.2	44.1	40.2

n=10

7.2.3 Contact Retention Force

Requirement: 19.6 N min.

Test method: A crimped contact shall be inserted into a housing and pulled in the axial direction. The load required to pull the contact out of the housing shall be measured. (Testing speed: 1 to 5 mm/sec.)



Test result:

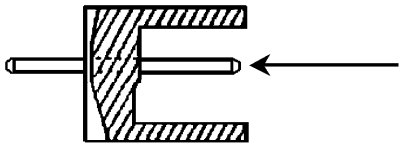
UNIT: N

Ave.	Max.	Min.
45.7	53.9	41.2

n=20

7.2.4 Post Retention Force

Requirement: 19.6 N min.



Test method: The end of a post shall be pushed perpendicularly. The load required to make the post start moving from a wafer shall be measured. (Testing speed: 25 mm/min.)

Test result:

UNIT: N

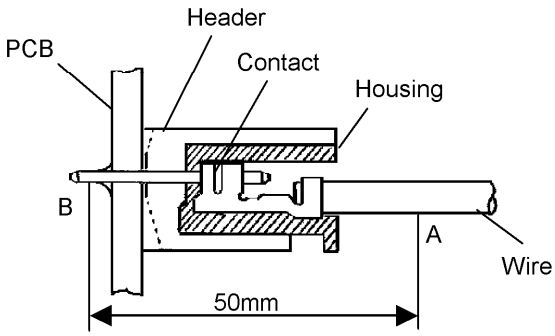
Ave.	Max.	Min.
49.1	52.5	43.7

n=20

7.3 Electrical Performance Test

7.3.1 Contact Resistance

Requirement: Initial: 10 mΩ max.
After tests: 20 mΩ max.



Test method: Contact resistance between points A and B of a specimen assembled for actual use as shown in the figure on the right side shall be measured under the following conditions.

Test current: 10 mA (DC)
Open voltage: 20 mV max.
Wire to be used: AWG #22

Test result: See each environmental test item.

7.3.2 Current Continuity

Requirement: There shall be no current discontinuity longer than 1 microsecond during a vibration test.

Test method: Each circuit of a specimen assembled for actual use shall be connected in series and test current of 10 mA(DC) shall be applied. Current discontinuity longer than 1 microsecond during the test shall be detected by continuity meter.

Test result: See vibration test item.

7.3.3 Insulation Resistance

Requirement: Initial: 1,000 MΩ min.
After tests: 500 MΩ min. (Humidity & Thermal shock tests)

Test method: 500 VDC shall be applied between adjacent contacts of a mated specimen to measure insulation resistance. (The header shall not be soldered.)

Test result:

UNIT: MΩ

Item	Measured value
Initial	1,000 min.
After humidity test	500 min.
After thermal shock test	500 min.

n=20

7.3.4 Dielectric Withstanding Voltage

Requirement: There shall be no breakdown or flashover.

Test method: Testing voltage specified below shall be applied between adjacent contacts of a mated specimen for one minute. (The header shall not be soldered.)

Initial: 1,000 VAC
After tests: 1,000 VAC (Humidity & Thermal shock tests)

Test result:

Initial	Good.
After humidity test	Good.
After thermal shock test	Good.

n=20

7.4 Environmental Test

7.4.1 Durability

Requirement: Contact resistance shall be 20 mΩ max. after the test.

Test method: A housing with crimped contacts and a header shall be mated and unmated. After repeated 50 cycles, contact resistance shall be measured.

Test result:

UNIT: mΩ

Test item	Initial			After the test		
Contact Resistance	Ave.	Max.	Min.	Ave.	Max.	Min.
	4.59	5.4	4.2	4.88	5.1	4.7

n=16

7.4.2 Humidity

Requirement: Contact resistance shall be 20 mΩ max. after the test.
Insulation resistance shall be 500 MΩ min. after the test.
There shall be no breakdown or flashover on the dielectric withstanding voltage test.

Test method: A specimen shall be placed in a humidity chamber of the following conditions. After the test, contact resistance, insulation resistance and dielectric withstanding voltage shall be measured.

Temperature: 40 ± 2 °C
Relative humidity: 90 to 95 %
Period: 240 hours

Test result:

UNIT: mΩ

Test item	Initial			After the test		
Contact Resistance	Ave.	Max.	Min.	Ave.	Max.	Min.
	4.18	4.4	4.0	4.49	5.2	4.1

n=16

7.4.3 Heat Aging

Requirement: Contact resistance shall be 20 mΩ max. after the test.

Test method: A specimen shall be placed in a heat oven of the following conditions. After the test, contact resistance shall be measured.

Temperature: 85 ± 2 °C
Period: 250 hours

Test result:

UNIT: mΩ

Test item	Initial			After the test		
Contact Resistance	Ave.	Max.	Min.	Ave.	Max.	Min.
	4.09	4.2	4.0	4.38	4.8	4.2

n=16

7.4.4 Thermal Shock

Requirement: Contact resistance shall be 20 mΩ max. after the test.
Insulation resistance shall be 500 MΩ min. after the test.
There shall be no breakdown or flashover on the dielectric withstanding voltage test.

Test method: A specimen shall be subjected to a thermal shock test of the following conditions. After the test, contact resistance, insulation resistance and dielectric withstanding voltage shall be measured.

1 cycle consists of:
- 55 ± 3 °C for 30 minutes
+85 ± 2 °C for 30 minutes
Total cycles: 25 cycles

Test result:

UNIT: mΩ

Test item	Initial			After the test		
Contact Resistance	Ave.	Max.	Min.	Ave.	Max.	Min.
	4.06	4.3	3.9	4.52	5.0	4.1

n=16

7.4.5 Hydrogen Sulfide Gas

Requirement: Contact resistance shall be 20 mΩ max. after the test.

Test method: A specimen shall be subjected to hydrogen sulfide gas of the following conditions. After the test, contact resistance shall be measured.

Concentration: 3 ± 1 ppm
Temperature: 40 ± 2 °C
Relative humidity: 80 ± 5 %
Period: 96 hours

Test result:

UNIT: mΩ

Test item	Initial			After the test		
Contact Resistance	Ave.	Max.	Min.	Ave.	Max.	Min.
	4.62	5.0	4.3	4.87	5.7	4.4

n=16

7.4.6 Salt Spray

Requirement: Contact resistance shall be 20 mΩ max. after the test.

Test method: A specimen shall be subjected to a salt spray test of the following conditions. After the test, it shall be washed with running water and dried naturally before the measurement of contact resistance.

Temperature: 35 ± 2 °C
Concentration: 5 % in weight
Period: 48 hours

Test result:

UNIT: mΩ

Test item	Initial			After the test		
Contact Resistance	Ave.	Max.	Min.	Ave.	Max.	Min.
	4.57	5.1	4.4	5.13	5.8	4.5

n=20

7.4.7 Vibration

Requirement: Contact resistance shall be 20 mΩ max. after the test.
There shall be no current discontinuity longer than 1 microsecond during the test.

Test method: A specimen shall be mounted on a PCB and subjected to a vibration test of the following conditions. During the test, current continuity shall be checked. After the test, contact resistance shall be measured.

Frequency: 10-55-10Hz/min
Amplitude: 1.52mm
Direction: Each of X, Y and Z-axis directions
* Each axis shall be at right angles to others.
Period: 2 hours for each direction

Test result:

UNIT: mΩ

Test item	Initial			After the test		
Contact Resistance	Ave.	Max.	Min.	Ave.	Max.	Min.
	4.36	4.6	4.2	4.88	6.1	4.4

Current continuity	There was no current discontinuity longer than 1 microsecond.

n=20

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7.4.8 Ammonia Gas

Requirement: There shall be no stress corrosion cracking.

Test method: A mated specimen shall be subjected to ammonia gas of the following conditions. (The connector shall not be soldered.)
After the test, stress corrosion cracking shall be checked.

Ammonia solution: 3 % in weight
Solution volume: 25ml per liter of volume
Period: 7 hours

Test result:

There was no stress corrosion cracking.

n=20

7.5 Solder Test (Header)

7.5.1 Solderability

Requirement: Plating surface of solder-dipping section of a specimen shall be covered with smooth solder.

Test method: Fluxed soldering section of a specimen shall be dipped in solder of the following conditions.

Solder: Sn-3Ag-0.5Cu
Flux: Activation flux
(CF-110VH-2A made by Tamura Kaken Corporation)
Solder temperature: 245 ± 3 °C
Immersion period: 3 ± 0.5 seconds

Test result:

Good.

n=20

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7.5.2 Resistance to Soldering Heat

Requirement: There shall be no deformation or damage which may affect the performance.

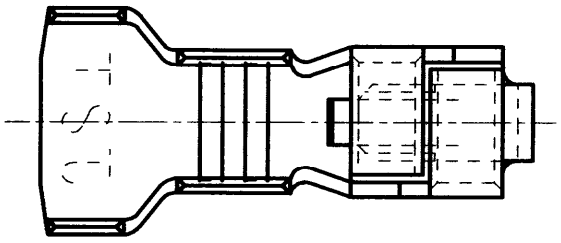
Test method: A specimen shall be mounted on a PCB and subjected to a resistance to soldering heat test of the following conditions.

Solder:	Sn-3Ag-0.5Cu
Flux:	Activation flux (CF-110VH-2A made by Tamura Kaken Corporation)
PCB to be used:	Material; Paper based epoxy resin, Pattern on one side
Solder temperature:	260 ± 5 °C
Immersion period:	5 ± 0.5 seconds

Test result:

There was no deformation or damage which may affect the performance.

n=20

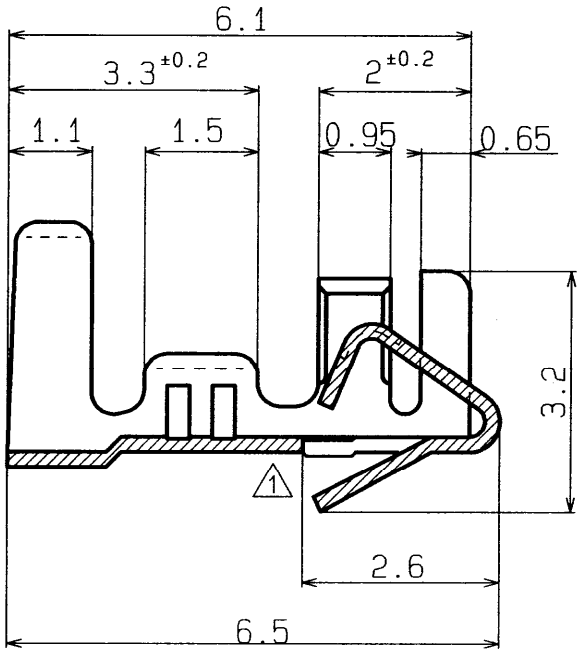


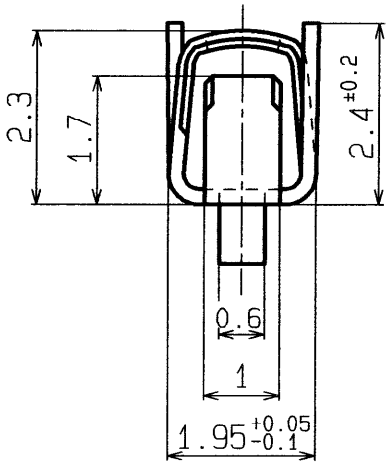
NOTE

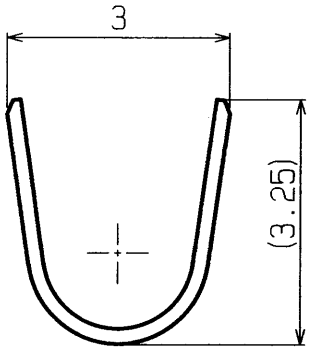
1. Unless otherwise specified, tolerances are ±0.3

REVISIONS

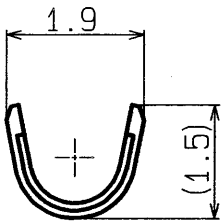
R1. 1)' 96. 8. 28 2)Change of configuration. 3)M. N







INSULATION BARREL



WIRE BARREL

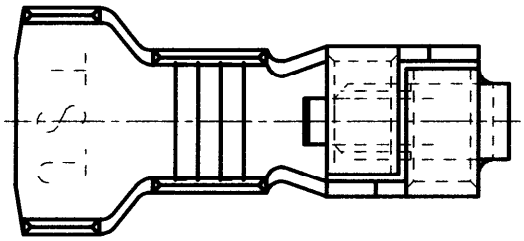
No.	NAME	MATERIAL	REMARKS
	CONTACT	PHOSPHOR BRONZE t0.2	TIN-PLATED (PRETIN)

REVISIONS

J. S. T.

APPROVED BY	CHECKED BY	DRAWN BY	SCALE	PROJECTION	DATE
T-N	S.S.	Nago	free		Dec. 20 '90

PART NAME	XH CONNECTOR
PART No.	SXH-001T-P0.6
DRAWING No.	KRD-5607-1 R1

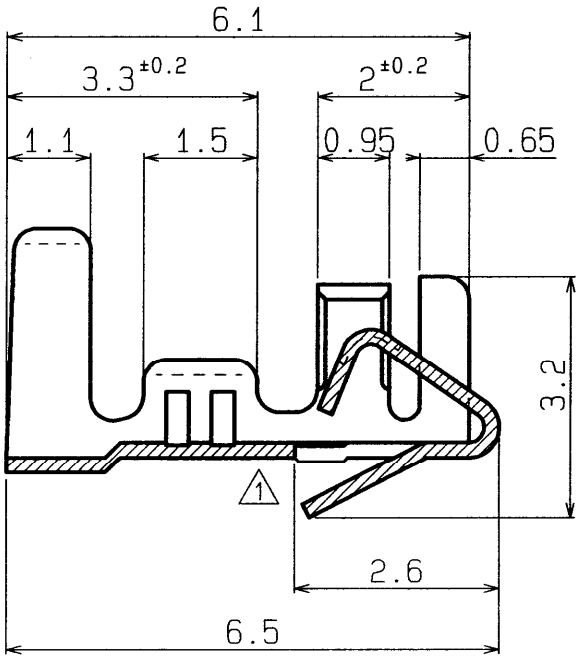


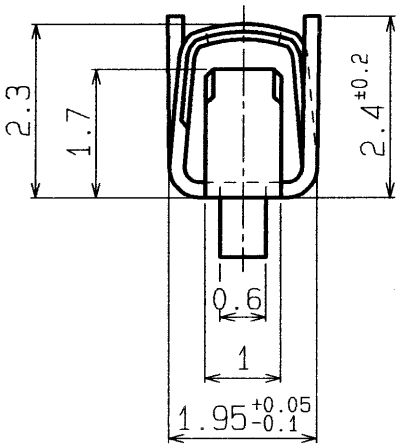
NOTE

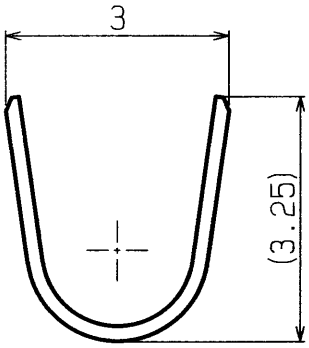
1. Unless otherwise specified, tolerances are ±0.3

REVISIONS

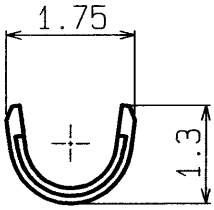
R1. 1)' 96. 8. 28 2)Change of configuration. 3)M. N







INSULATION BARREL



WIRE BARREL

No.	NAME	MATERIAL	REMARKS
	CONTACT	PHOSPHOR BRONZE t0.2	TIN-PLATED (PRETIN)

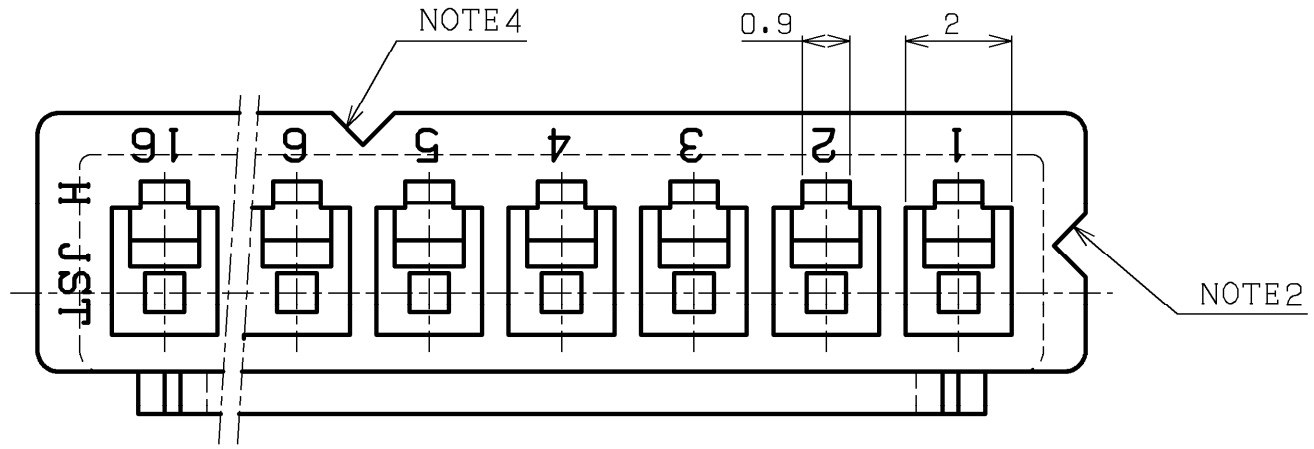
REVISIONS

J. S. T.

APPROVED BY	CHECKED BY	DRAWN BY	SCALE	PROJECTION	DATE
T-N	S.S.	Nago	free		Dec. 20 '90

PART NAME	XH CONNECTOR
PART No.	SXH-002T-P0.6
DRAWING No.	KRD-4311-1 R1

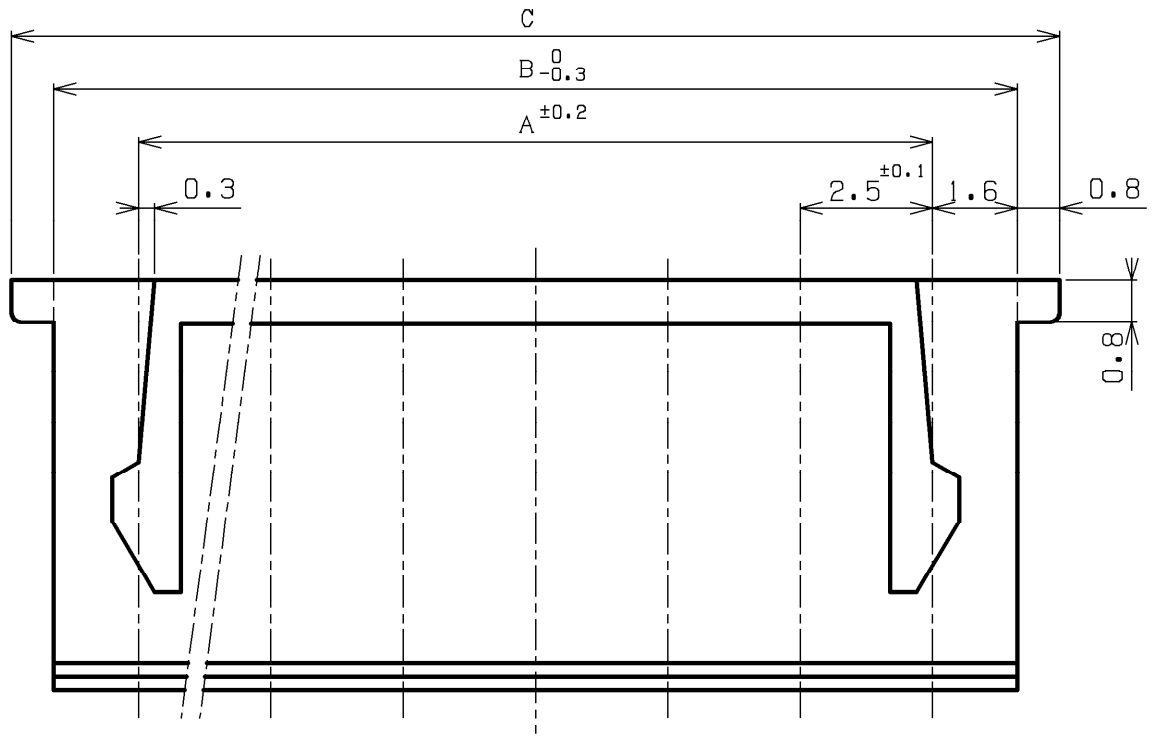
REV.	DESCRIPTION	DATE	DESIGNED
△			

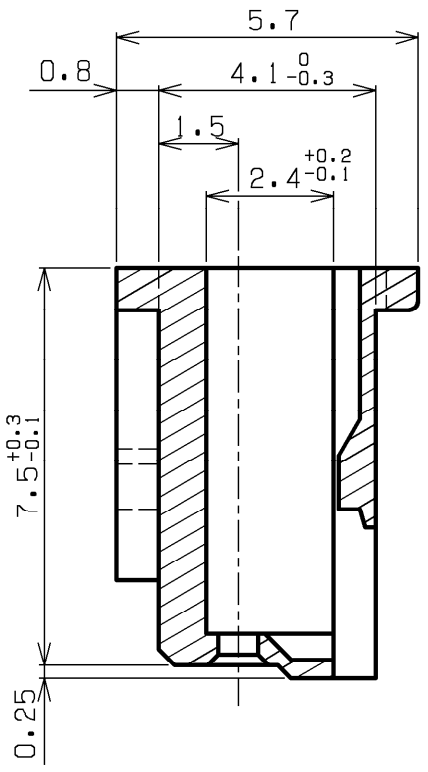


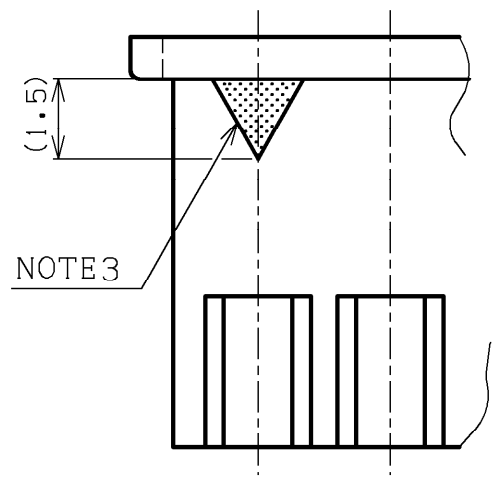
NOTE

1. Unless otherwise specified, tolerances are ±0.3
2. Housing hole No.1
3. Housing hole No.1
4. V recessing at every 5 circuits.

Cir-cuits	A	B	C
2	2.5	5.7	7.3
3	5.0	8.2	9.8
4	7.5	10.7	12.3
5	10.0	13.2	14.8
6	12.5	15.7	17.3
7	15.0	18.2	19.8
8	17.5	20.7	22.3
9	20.0	23.2	24.8
10	22.5	25.7	27.3
11	25.0	28.2	29.8
12	27.5	30.7	32.3
13	30.0	33.2	34.8
14	32.5	35.7	37.3
15	35.0	38.2	39.8
16	37.5	40.7	42.3







	HOUSING	6NYLON		UL94V-0
No.	PART NAME	MATERIAL	SURFACE FINISH	REMARKS

SIZE	UNIT	SCALE	PROJECTION	DATE
A3	METRIC	7:1		NOV.28.2014

APPROVEED	CHECKED	DESIGNED	DRAWN
K.N	K.M	T.S	

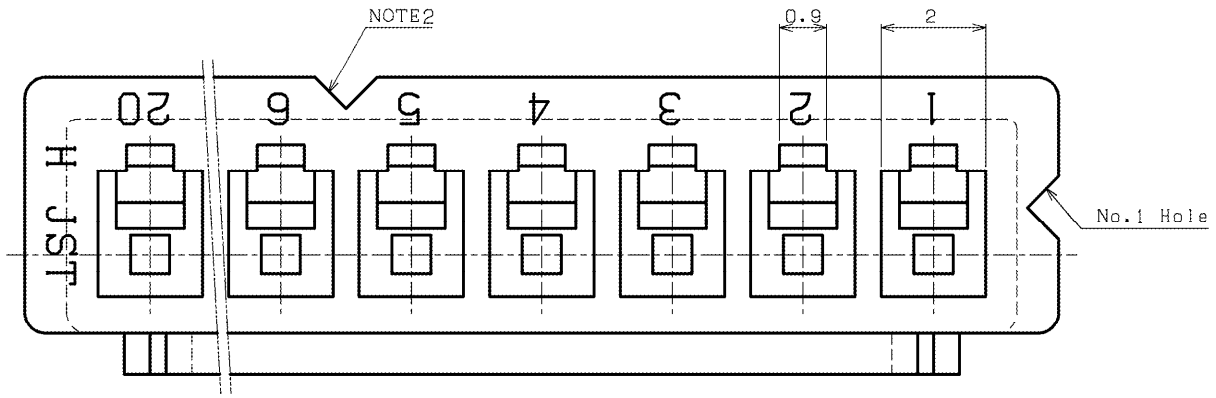
JST J.S.T.MFG.CO., LTD.

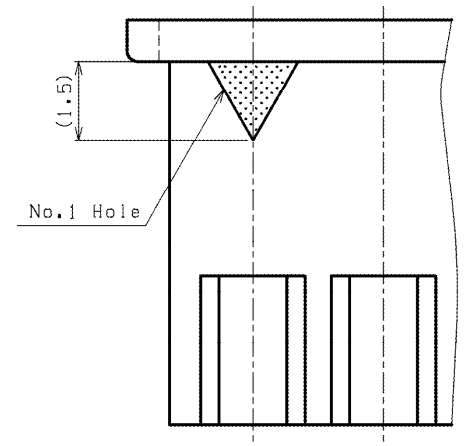
CUSTOMER

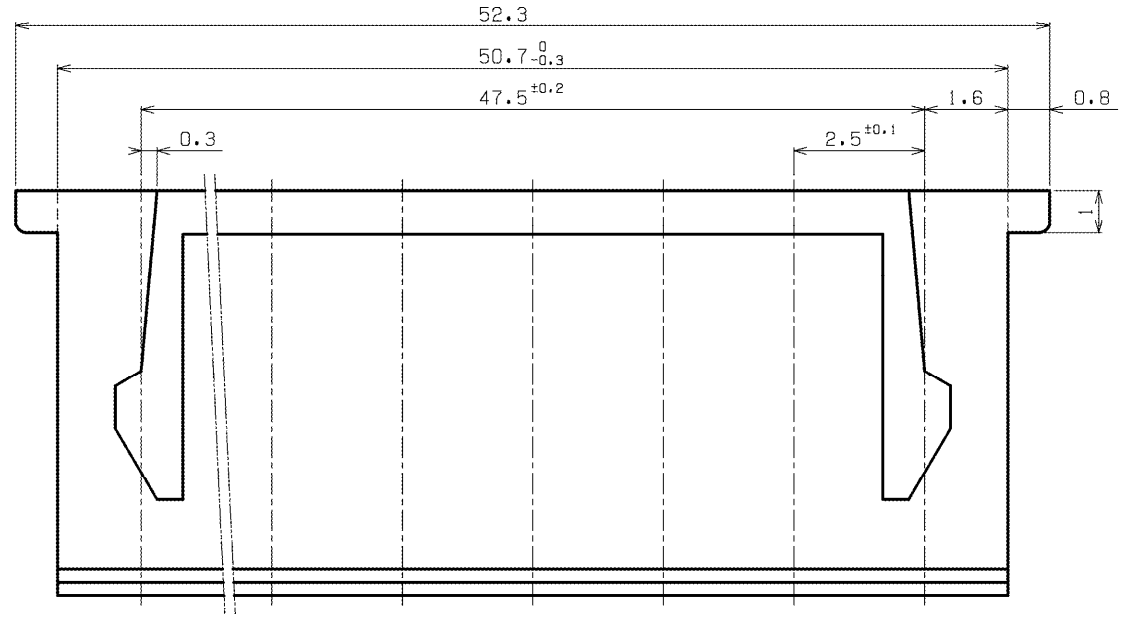
SERIES NAME	XH CONNECTOR	
PART No.	XHP-( )	
DRAWING No.	KRD-4195-2	R0

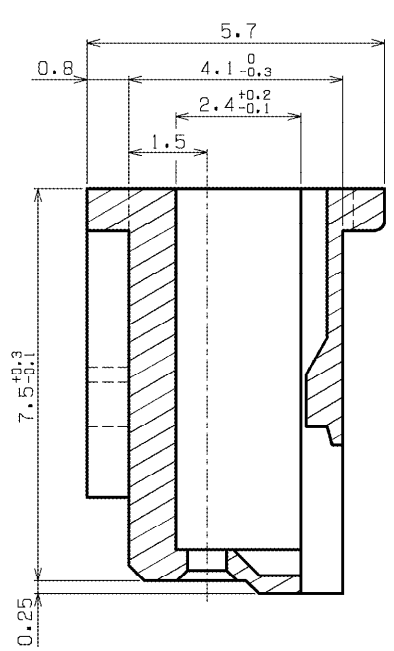
EC4109-2

REV.	DESCRIPTION	DATE	DESIGNED
1	Drawing format change.	Nov. 1.1999	T.TERASHIMA









NOTE

1. Unless otherwise specified, tolerances are ±0.3
2. V slot shall be placed every five poles.

No.	PART NAME	MATERIAL	SURFACE FINISH	REMARKS
	HOUSING	6NYLON		UL94V-0

SIZE	UNIT	SCALE	PROJECTION	DATE
A2	METRIC	10:1		AUG.28.1996

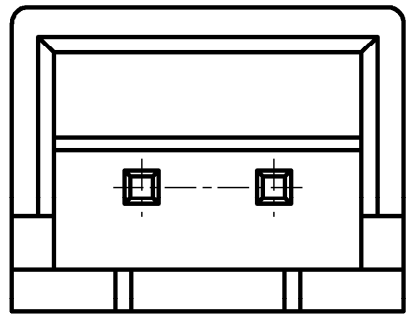
APPROVED	CHECKED	DESIGNED	DRAWN
T.N	S.S	T.T	M.T

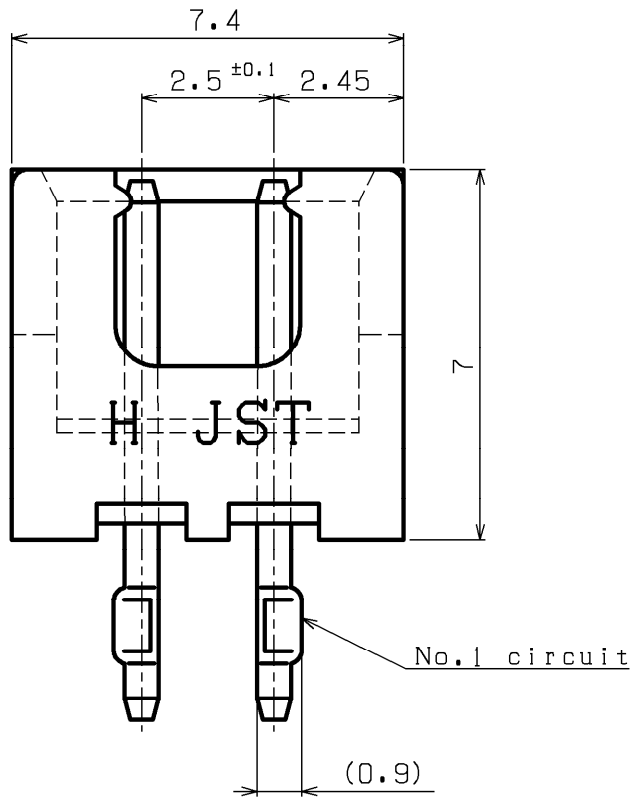
J.S.T.MFG.CO., LTD

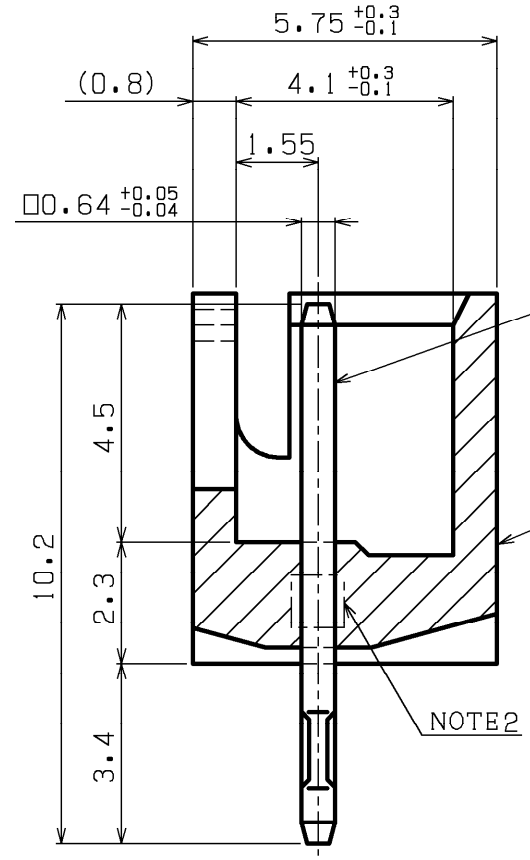
CUSTOMER	
SERIES NAME	XH CONNECTOR
PART No.	XHP-20
DRAWING No.	KRD-5387-3 R1

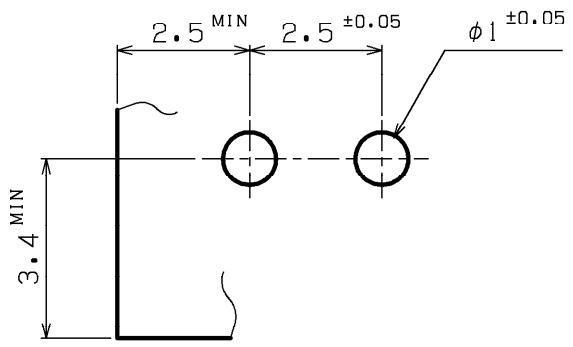
EC4113-2

REV.	DESCRIPTION	DATE	DESIGNED
△			









Recommendable P.C.Board hole layout

NOTE
1. Unless otherwise specified, tolerances are ±0.3
2. Post side with holding construction for housing.
3. If using products as VDE approval, please print visible marking of "No.1" or equivalent marking on PCB.

No.	PART NAME	MATERIAL	SURFACE FINISH	REMARKS
2	WAFER	66NYLON		UL94V-0, NATURAL
1	POST	BRASS	COPPER-UNDERPLATED TIN-PLATED	

SIZE	UNIT	SCALE	PROJECTION	DATE
A3	METRIC	7:1		OCT.28.2004

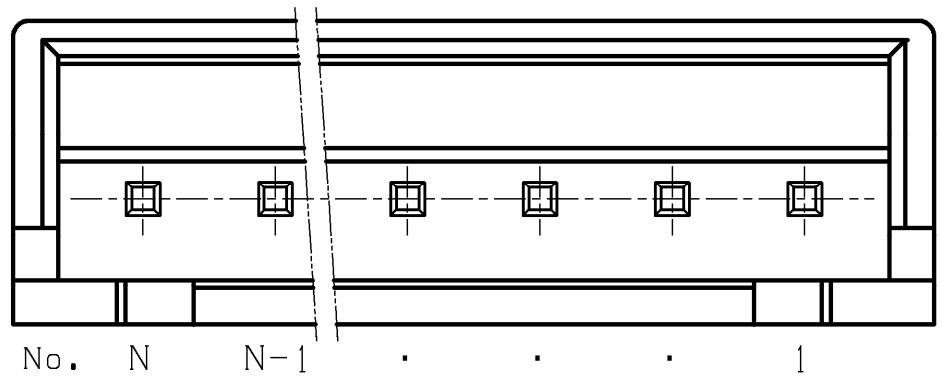
APPROVED	CHECKED	DESIGNED	DRAWN
S.K		E.N	A.M

JST J.S.T.MFG.CO., LTD.

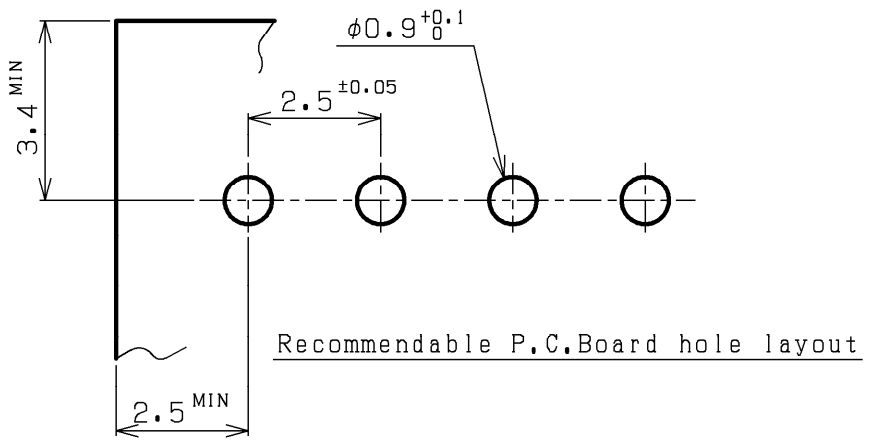
CUSTOMER	
SERIES NAME	XH, NR CONNECTOR
PART No.	B2B-XH-A (LF) (SN)
DRAWING No.	KRD-33576 R0

EC4109-2

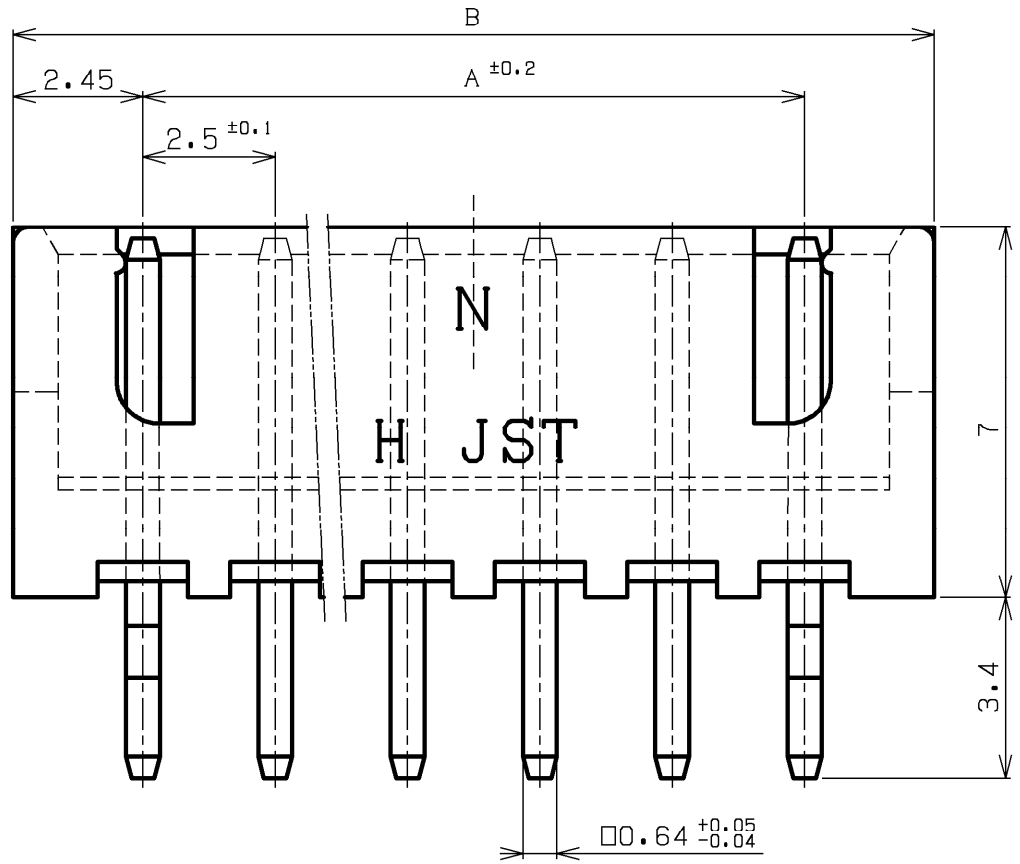
REV.	DESCRIPTION	DATE	DESIGNED
△			

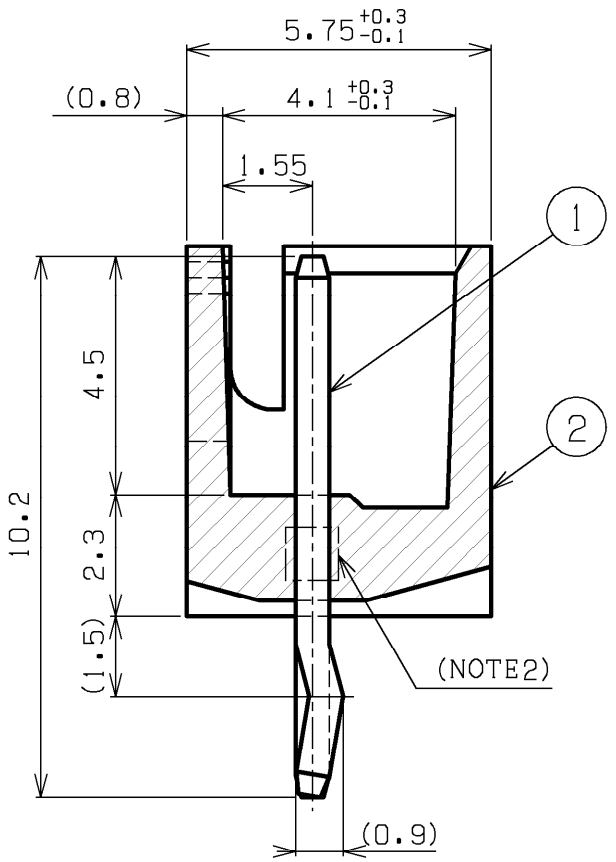


Circuit No. N N-1 · · · 1



Recommendable P.C.Board hole layout





16	37.5	42.4
15	35.0	39.9
14	32.5	37.4
13	30.0	34.9
12	27.5	32.4
11	25.0	29.9
10	22.5	27.4
9	20.0	24.9
8	17.5	22.4
7	15.0	19.9
6	12.5	17.4
5	10.0	14.9
4	7.5	12.4
3	5.0	9.9
Circuits	A	B

NOTE

1. Unless otherwise specified, tolerances are ±0.3
2. Post side with holding construction for housing.
3. If using products as VDE approval, please print visible marking of "No.1" or equivalent marking on PCB.
4. Tolerance of hole pitch on PCB are not cumulative.

No.	PART NAME	MATERIAL	SURFACE FINISH	REMARKS
2	WAFER	66NYLON		UL94V-0, NATURAL
1	POST	BRASS	COPPER-UNDERPLATED TIN-PLATED	

SIZE	UNIT	SCALE	PROJECTION	DATE
A3	METRIC	7:1		NOV.13.2009

APPROVEED	CHECKED	DESIGNED	DRAWN
S.K	E.N	T.S	

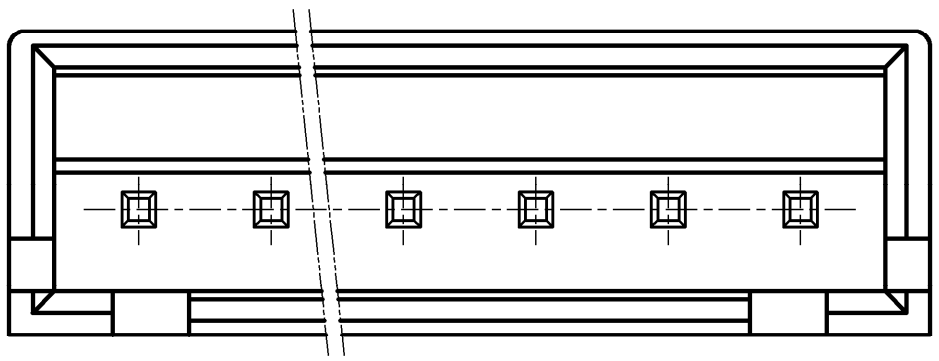
JST J.S.T.MFG.CO., LTD.

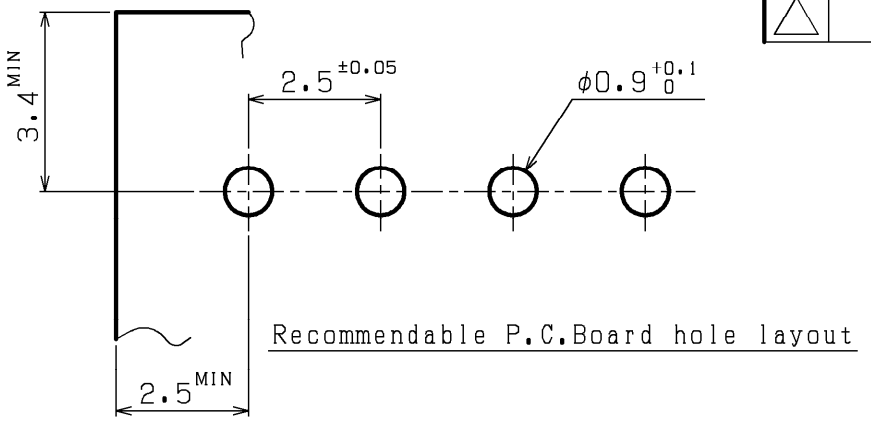
CUSTOMER

SERIES NAME	XH, NR CONNECTOR
PART No.	B( )B-XH-A (LF)(SN)
DRAWING No.	KRD-38224-1 RO

EC4109-2

REV.	DESCRIPTION	DATE	DESIGNED
△			

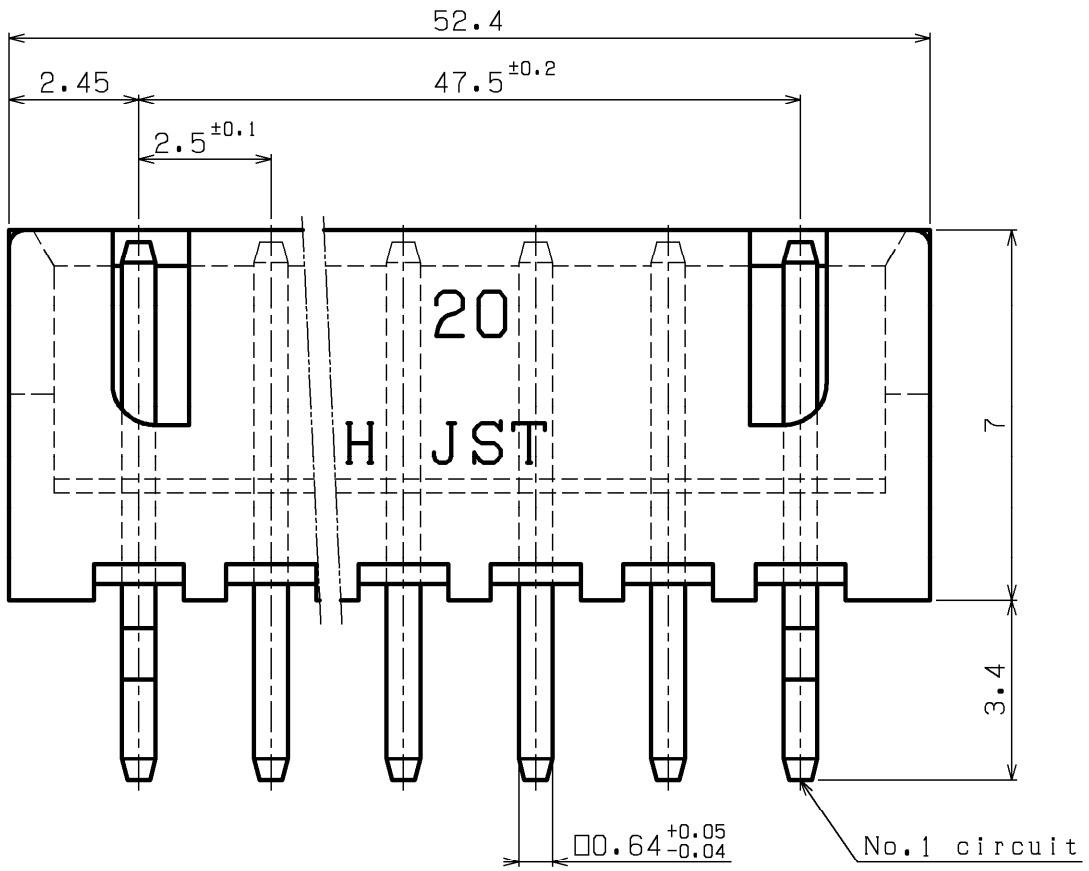


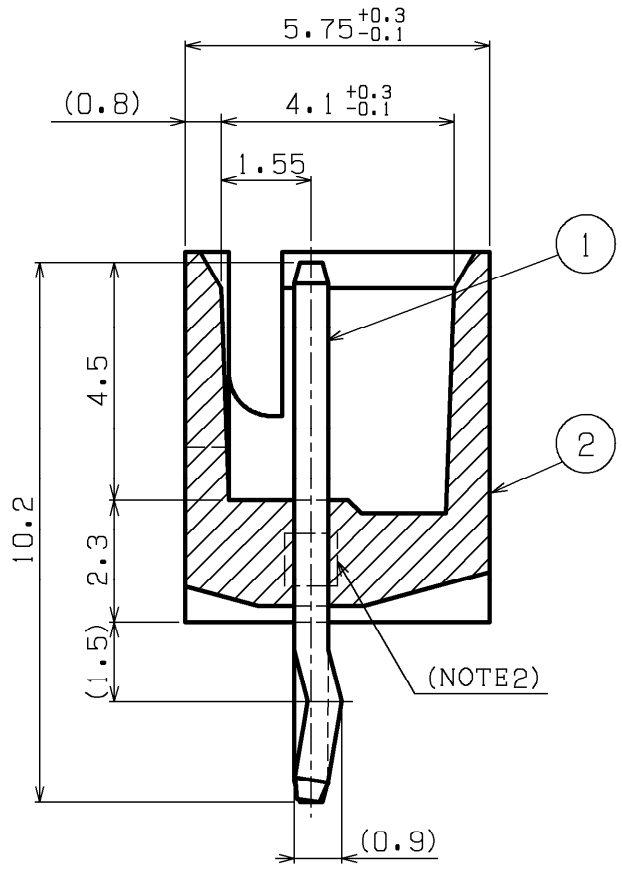


Recommendable P.C.Board hole layout

NOTE

1. Unless otherwise specified, tolerances are ±0.3
2. Post side with holding construction for housing.
3. If using products as VDE approval, please print visible marking of "No.1" or equivalent marking on PCB.
4. Tolerance of hole pitch on PCB are not cumulative.





No.	PART NAME	MATERIAL	SURFACE FINISH	REMARKS
2	WAFER	66NYLON		UL94V-0, NATURAL
1	POST	BRASS	COPPER-UNDERPLATED TIN-PLATED	

SIZE	UNIT	SCALE	PROJECTION	DATE
A3	METRIC	7:1		OCT.14.2005

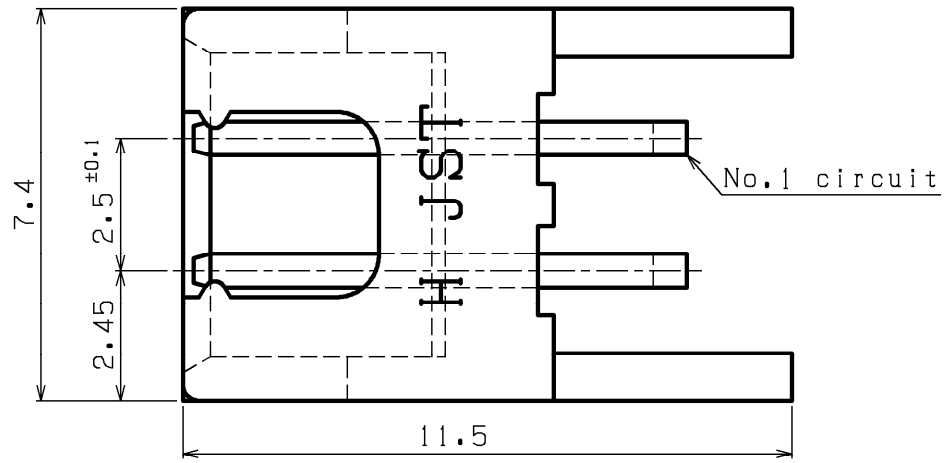
APPROVEED	CHECKED	DESIGNED	DRAWN
S.K		T.S	M.Y

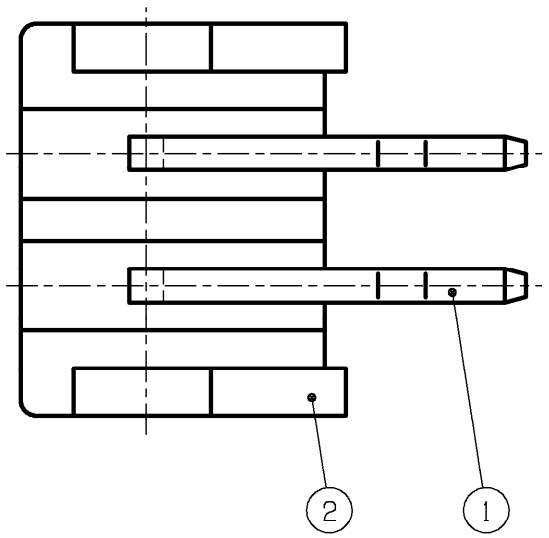
JST J.S.T.MFG.CO., LTD.

CUSTOMER	
SERIES NAME	XH, NR CONNECTOR
PART No.	B20B-XH-A (LF)(SN)
DRAWING No.	KRD-38225 R0

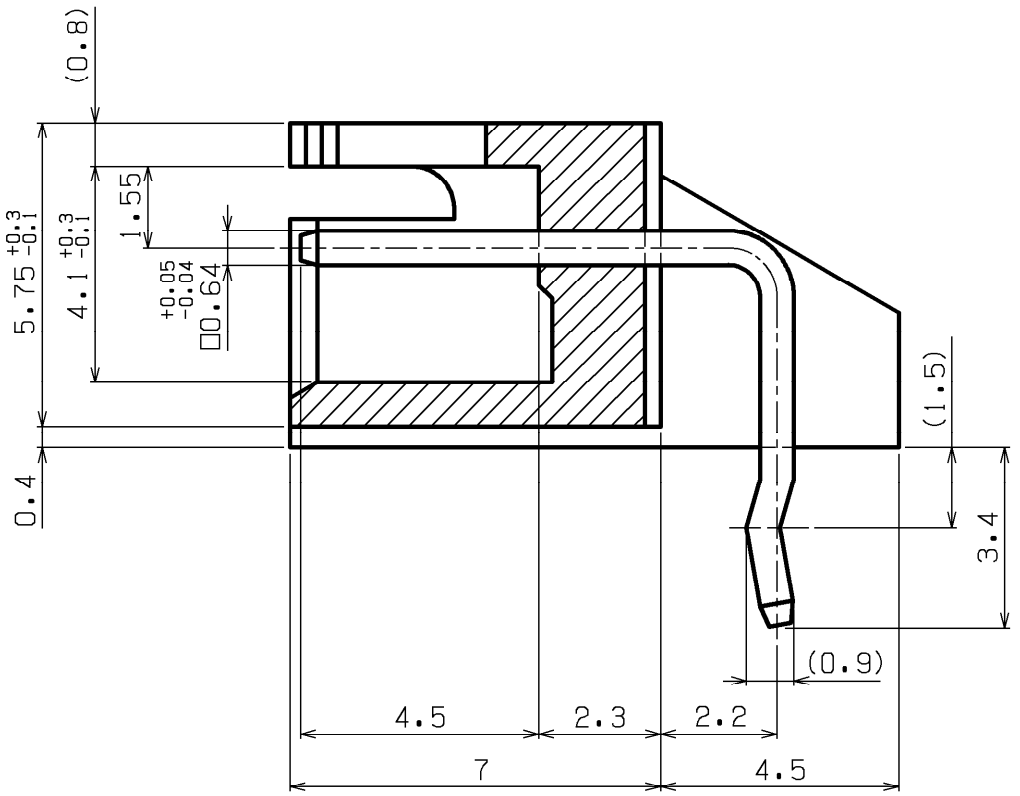
EC4109-2

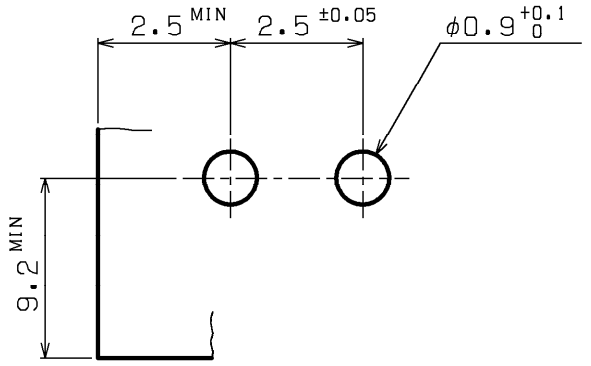
REV.	DESCRIPTION	DATE	DESIGNED
△			





NOTE
1. Unless otherwise specified, tolerances are ±0.3
2. If using products as VDE approval, please print visible marking of "No.1" or equivalent marking on PCB.





Recommendable P.C.Board hole layout

No.	PART NAME	MATERIAL	SURFACE FINISH	REMARKS
2	WAFER	66NYLON		UL94V-0, NATURAL
1	POST	BRASS	COPPER-UNDERPLATED TIN-PLATED	

SIZE	UNIT	SCALE	PROJECTION	DATE
A3	METRIC	7:1		APR. 1.2008

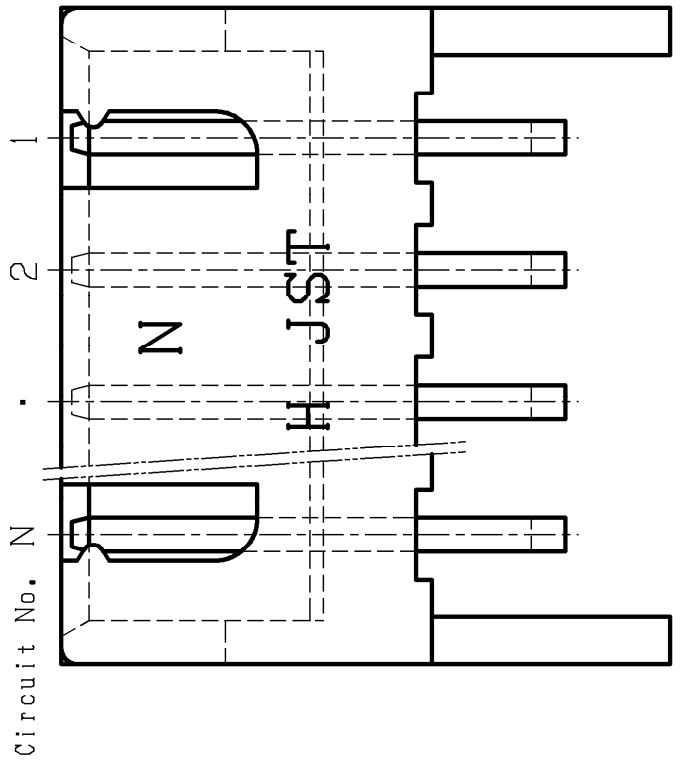
APPROVEED	CHECKED	DESIGNED	DRAWN
S.K		T.S	M.Y

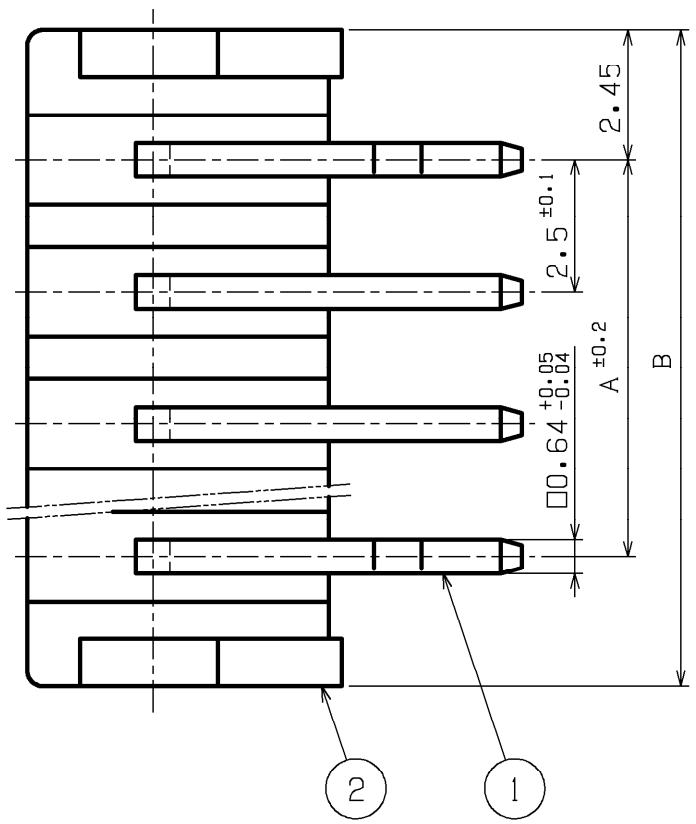
JST J.S.T.MFG.CO., LTD.

CUSTOMER	
SERIES NAME	XH, NR CONNECTOR
PART No.	S2B-XH-A (LF) (SN)
DRAWING No.	KRD-34612-2 RO

EC4109-2

REV.	DESCRIPTION	DATE	DESIGNED
△			

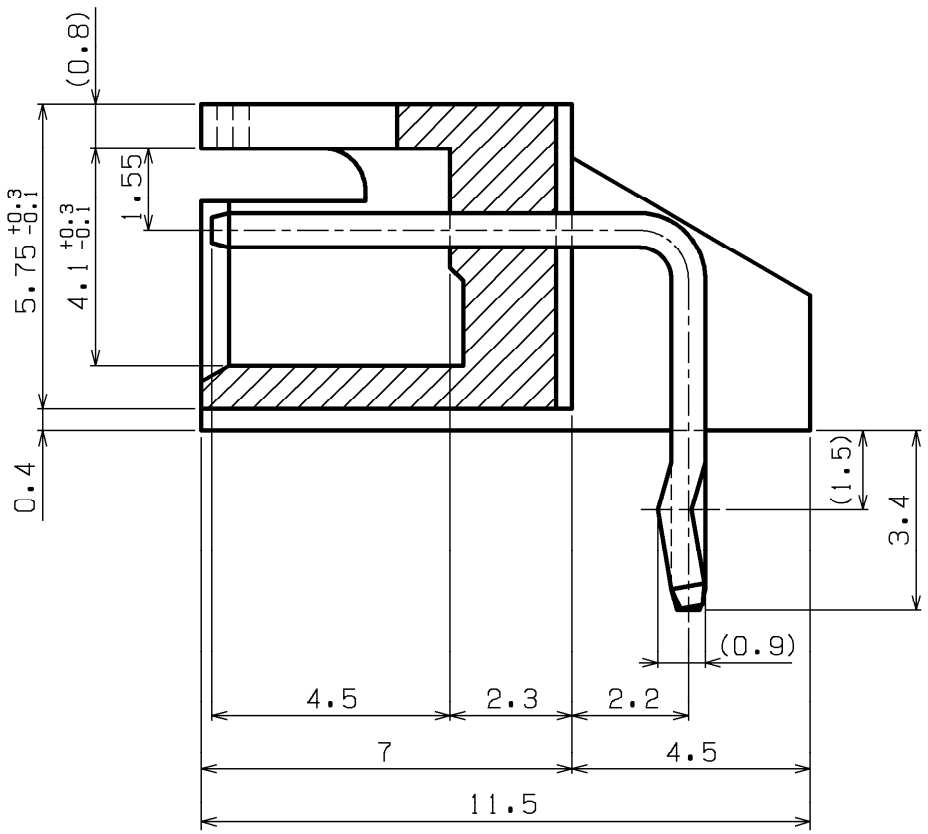


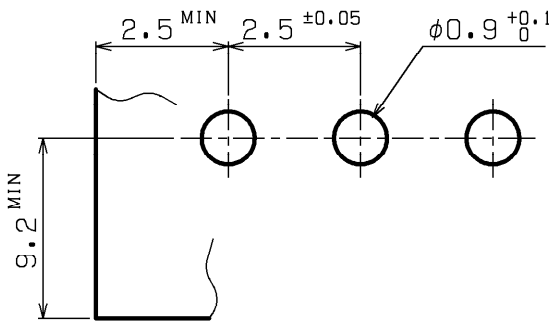


NOTE

1. Unless otherwise specified, tolerances are ±0.3
2. If using products as VDE approval, please print visible marking of "No.1" or equivalent marking on PCB.
3. Tolerance of hole pitch on PCB are not cumulative.

Circuits	A	B
3	5.0	9.9
4	7.5	12.4
5	10.0	14.9
6	12.5	17.4
7	15.0	19.9
8	17.5	22.4
9	20.0	24.9
10	22.5	27.4
11	25.0	29.9
12	27.5	32.4
13	30.0	34.9
14	32.5	37.4
15	35.0	39.9
16	37.5	42.4





Recommendable P.C.Board hole layout

No.	PART NAME	MATERIAL	SURFACE FINISH	REMARKS
2	WAFER	66NYLON		UL94V-0, NATURAL
1	POST	BRASS	COPPER-UNDERPLATED TIN-PLATED	

SIZE	UNIT	SCALE	PROJECTION	DATE
A3	METRIC	7:1		DEC.21.2004

APPROVEED	CHECKED	DESIGNED	DRAWN
S.K		E.N	M.Y

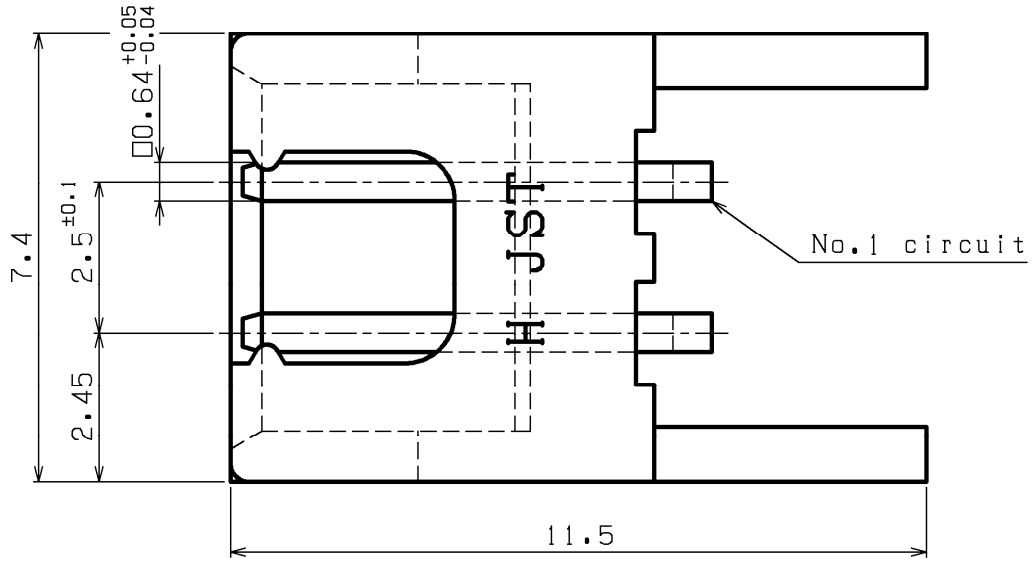
JST J.S.T.MFG.CO., LTD.

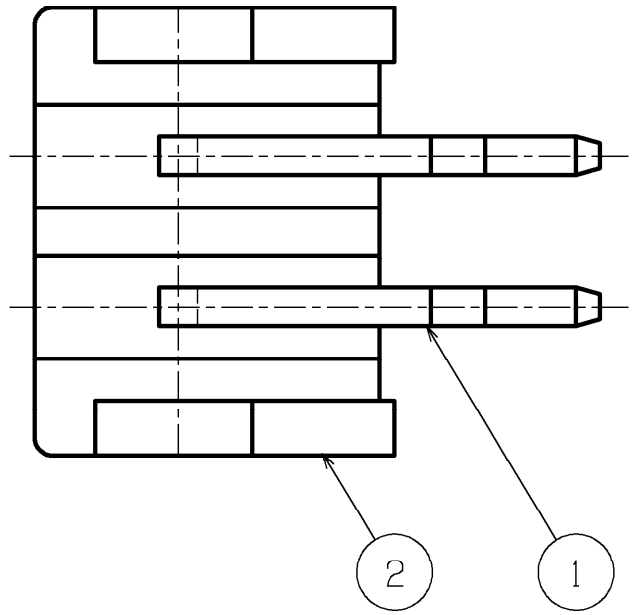
CUSTOMER

SERIES NAME	XH, NR CONNECTOR
PART No.	S( )B-XH-A (LF)(SN)
DRAWING No.	KRD-34613-1 RO

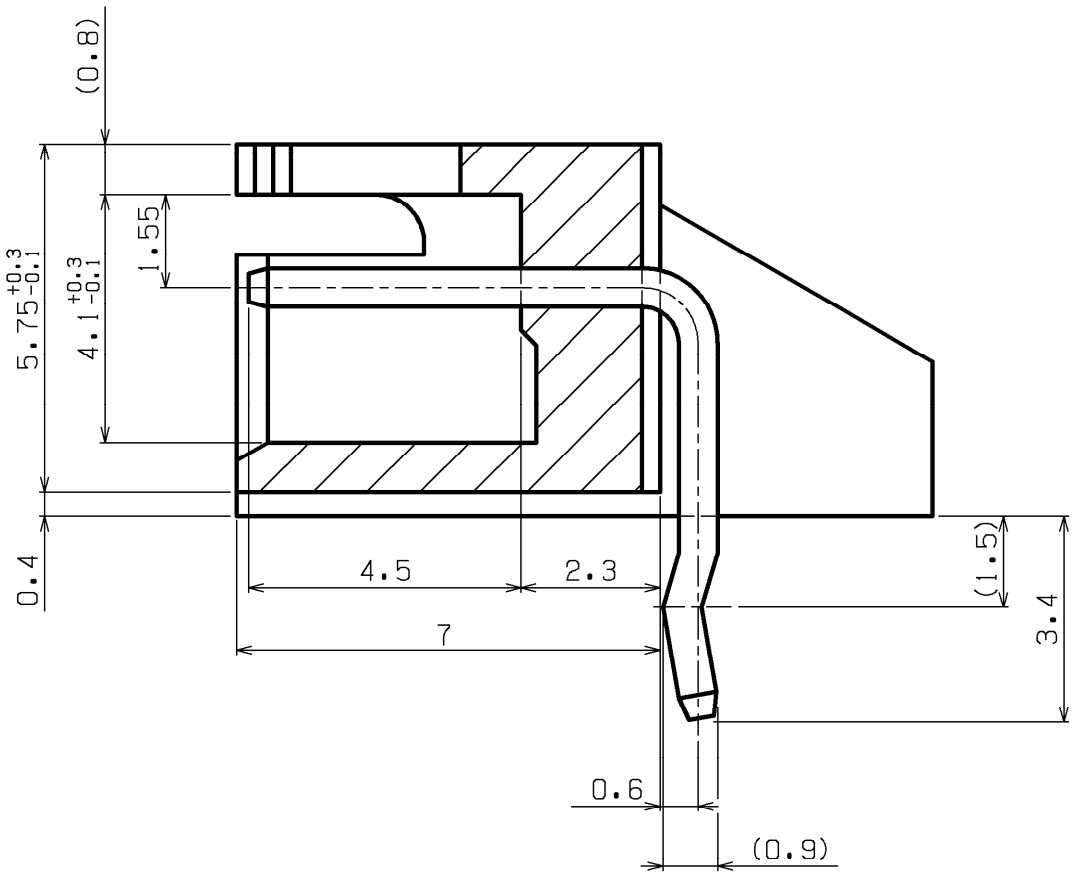
EC4109-2

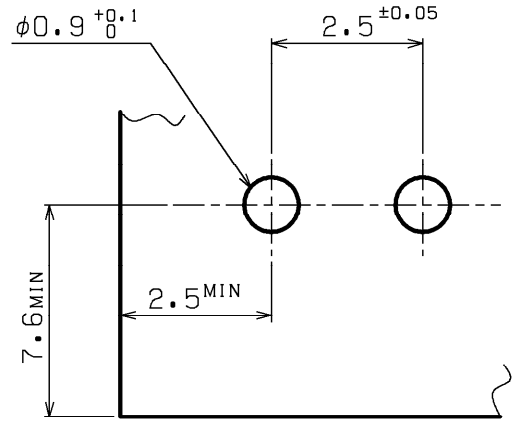
REV.	DESCRIPTION	DATE	DESIGNED
△			





NOTE
1. Unless otherwise specified, tolerances are ±0.3
2. If using products as VDE approval, please print visible marking of "No.1" or equivalent marking on PCB.





Recommendable P.C.Board hole layout

No.	PART NAME	MATERIAL	SURFACE FINISH	REMARKS
2	WAFER	66NYLON		UL94V-0, NATURAL
1	POST	BRASS	COPPER-UNDERPLATED TIN-PLATED	

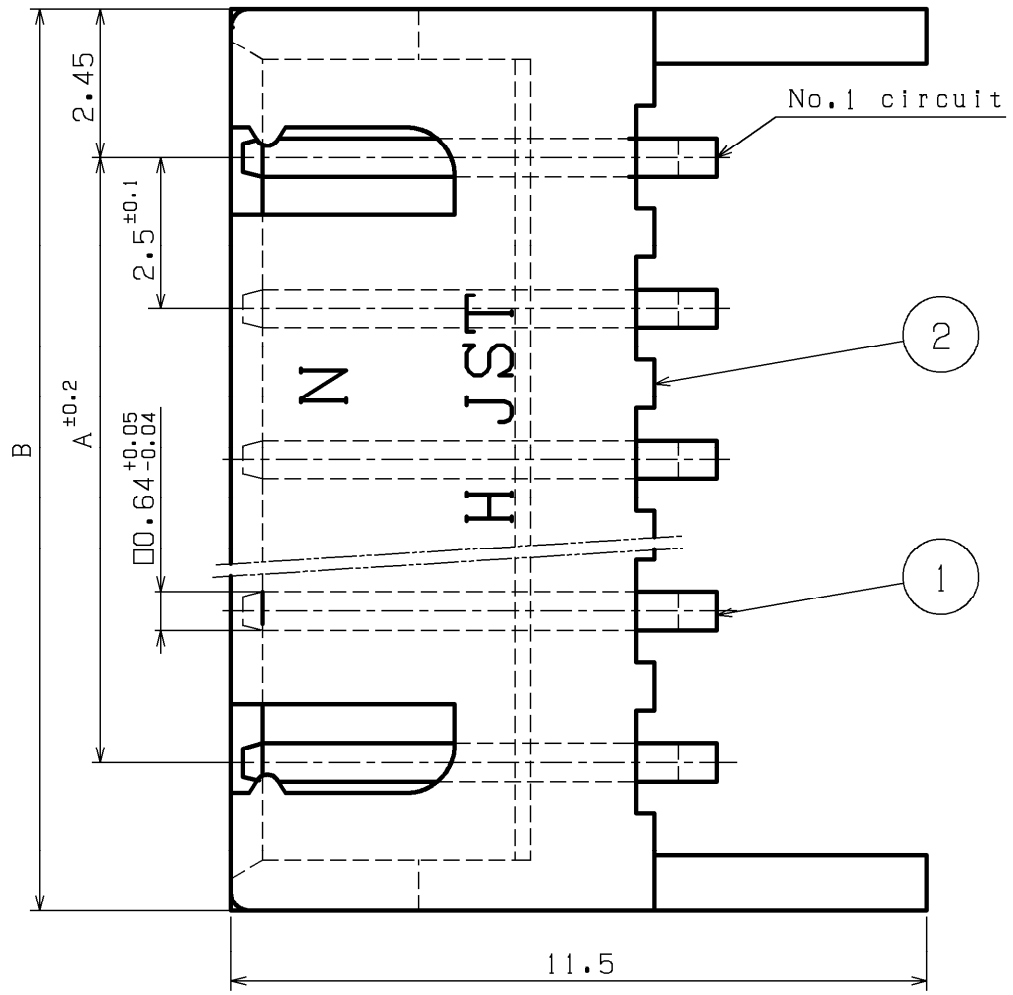
SIZE	UNIT	SCALE	PROJECTION	DATE
A3	METRIC	8:1		FEB. 4.2005

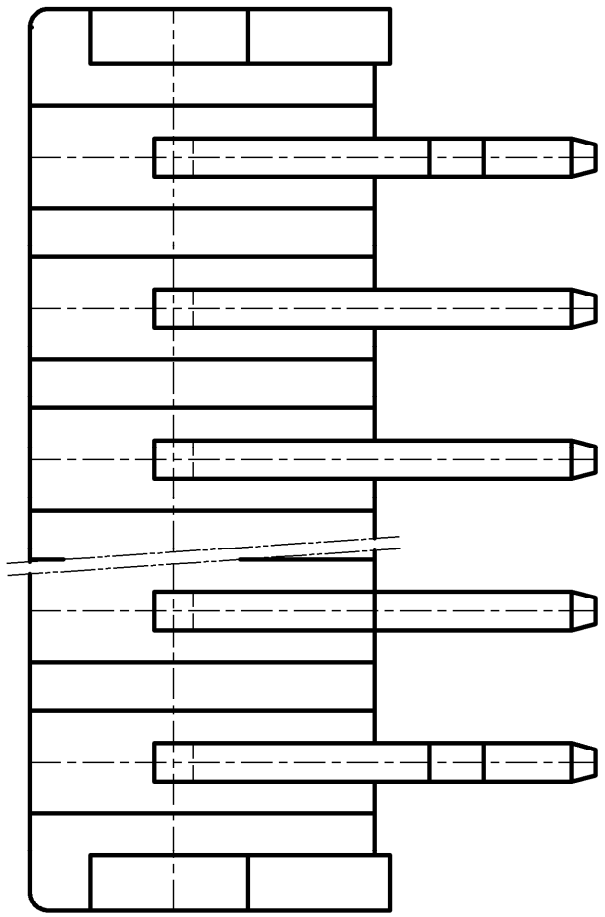
APPROVEED	CHECKED	DESIGNED	DRAWN
S.K		M.I	N.H

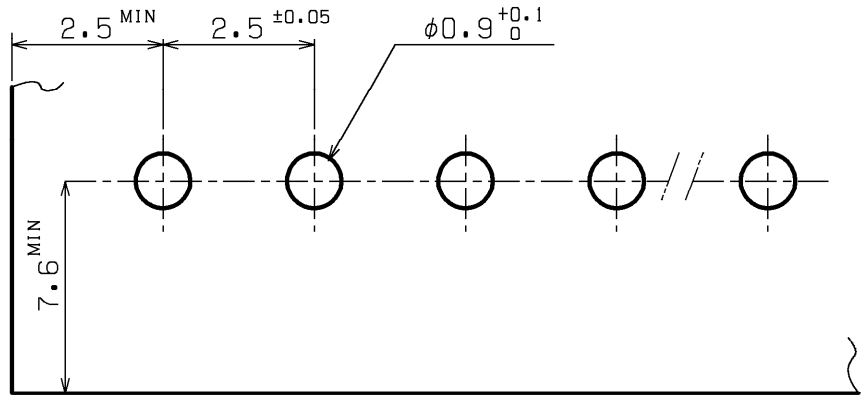
JST J.S.T.MFG.CO., LTD.

CUSTOMER	
SERIES NAME	XH, NR CONNECTOR
PART No.	S2B-XH-A-1 (LF) (SN)
DRAWING No.	KRD-34614 R0

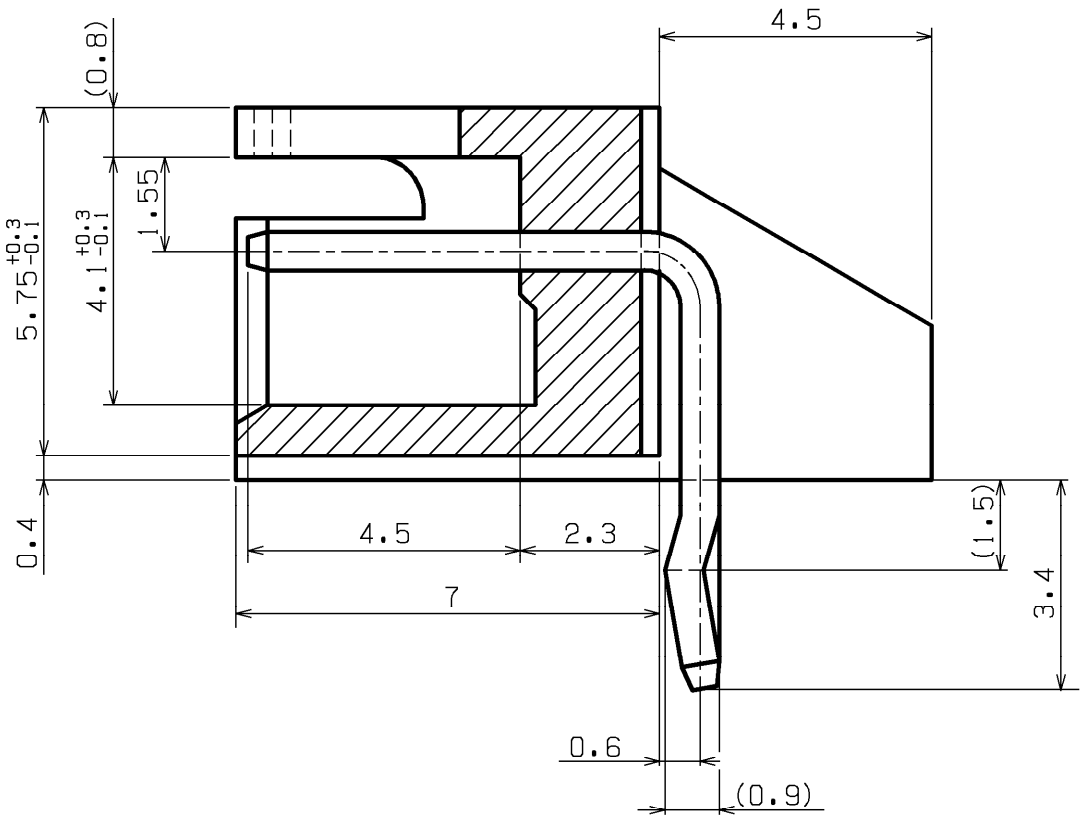
EC4109-2







Recommendable P.C.Board hole layout



REV.	DESCRIPTION	DATE	DESIGNED
△			

NOTE

1. Unless otherwise specified, tolerances are ±0.3
2. If using products as VDE approval, please print visible marking of "No.1" or equivalent marking on PCB.
3. Tolerance of hole pitch on PCB are not cumulative.

Circuits	A	B
3	5.0	9.9
4	7.5	12.4
5	10.0	14.9
6	12.5	17.4
7	15.0	19.9
8	17.5	22.4
9	20.0	24.9
10	22.5	27.4
11	25.0	29.9
12	27.5	32.4
13	30.0	34.9
14	32.5	37.4
15	35.0	39.9
16	37.5	42.4

No.	PART NAME	MATERIAL	SURFACE FINISH	REMARKS
2	WAFER	66NYLON		UL94V-0, NATURAL
1	POST	BRASS	COPPER-UNDERPLATED TIN-PLATED	

SIZE	UNIT	SCALE	PROJECTION	DATE
A3	METRIC	8:1		FEB. 4.2005

APPROVED	CHECKED	DESIGNED	DRAWN
S.K		M.I	N.H

JST J.S.T.MFG.CO., LTD.

CUSTOMER

SERIES NAME	XH, NR CONNECTOR
PART No.	S( )B-XH-A-1 (LF)(SN)
DRAWING No.	KRD-34615-1 RO

EC4109-2

单击下面可查看定价，库存，交付和生命周期等信息

>>JST(杰世腾)