

Order Placement Recommendations and Considerations

The products and specifications listed in this document are subject to change (including changes made to specifications and the suspension of production) as occasioned by the improvements that we introduce into our products. Consequently, when you review the mass-production design for the products listed or when you place orders for these products, we ask you to contact one of our customer service representatives and check that the details listed in the document are commensurate with the most up-to-date information.

[Safety precautions]

We are consistently striving to improve quality and reliability. However, the fact remains that electrical components and devices generally cause failures at a given statistical probability. Furthermore, their durability varies with use environments or use conditions. In this respect, we ask you to check for actual electrical components and devices under actual conditions before use without fail. Continuously using them in a state of degraded performance may cause deterioration in insulation performance, thus resulting in abnormal heat generation, smoke generation, or firing. To avoid that, we ask you to carry out safety design including redundancy design, design for fire spread prevention, and design for malfunction prevention as well as periodic maintenance so that no accidents resulting in injury or death, fire accidents, or social damage will be caused as a result of our product failure or service life.

Although it has always been our policy to make a continual effort to improve quality and reliability, the fact remains that electrical components and devices do fail at a given statistical probability. In this respect, we ask you to take adequate steps to ensure safety design by, for instance, introducing redundancy design, taking measures in design to prevent fires from spreading, and preventing incorrect operation also in design so that no bodily injury, fire accidents or any social damage will be caused by the failure of any of our products.

Our quality standards fall into the following three categories depending on the applications of the products: Reference Standards, Special Standards, and Specified Standards that meet the quality assurance program designated by the customer. These quality standards have been established so that our products will be used for the applications listed below.

Reference Standards: Computers, office automation equipment, communications equipment, audio-video products, home electrical appliances, machine tools, personal devices, industrial robots

Special Standards: Transportation equipment (automobiles, trains, ships, etc.), traffic signal equipment, crime and disaster prevention devices, electric power equipment, various safety devices, and medical equipment not directly targeted for life support

Specified Standards: Aircraft equipment, aeronautical and space equipment, seabed relay equipment, nuclear power control systems, and medical equipment, devices and systems for life support

Before considering the use of our products under the following conditions, you must contact one of our customer service representatives without fail and exchange written specifications.

- (1) When our products are to be used in any of the applications listed for the Special Standards or Specified Standards
- (2) When, even for any of the applications listed for the Reference Standards, our products may possibly be used beyond the range of the specifications, environment or conditions listed in the document or when you are considering the use of our products in any conditions or an environment that is not listed in the document

[Acceptance inspection]

In connection with the products you have purchased from us or with the products delivered to your premises, we ask that you perform an acceptance inspection with all due speed and, in connection with the handling of our products both before and during the acceptance inspection, we ask that you give full consideration to the control and preservation of our products.

[Warranty period]

Unless otherwise stipulated by both parties, the warranty period of our products is one year after their purchase by you or after their delivery to the location specified by you.

[Scope of warranty]

In the event that we are found to blame for any failures or defects in our products during the warranty period, we will provide replacements or supply the necessary spare parts or replace and/or repair the defective sections free of charge and with all due speed at the location where the products concerned were purchased or delivered.

However, the following failures and defects are not covered by the warranty:

- (1) When the failure or defect was caused by a specification, standard, handling method, etc. which was specified by you
- (2) When the failure or defect was caused after purchase by you or delivery to your premises by an alteration in construction, performance, specification, etc. which did not involve us
- (3) When the failure or defect was caused by a phenomenon that could not be predicted by the technology that was being applied in practice either after purchase by you or at the time when the contract was signed
- (4) When the use of our products deviated from the scope of the conditions and environment set forth in the catalog and specifications
- (5) When, after our products were incorporated into your products or equipment for use, damage resulted which could have been avoided if your products or equipment had been equipped with the functions, construction, etc. the provision of which is accepted practice in the industry
- (6) When the failure or defect was caused by a natural disaster or other force majeure

The terms and conditions of the warranty here set forth apply solely to the warranty of the discrete products which were purchased by you or delivered to your premises, and they do not cover any damage induced by their failure or defects.

Connector Division
Matsushita Electric Works, Ltd.

S P E C I F I C A T I O N S		NARROW-PITCH CONNECTORS	
		AXE5E○○26 / AXE6E○○26	
		Page ; 1 / 7	

1. Name	: Narrow-pitch connectors for PC board to FPC board
2. Type	: A4S (Terminal spacing 0.4 mm 2 rows) for inspection Stacking height 0.8 mm
3. Part No.	
3-1) Part No.	Socket : AXE5E○○26 Header : AXE6E○○26
3-2) Product drawing	Socket : AXE5E4026 Header : AXE6E4026
Package drawing	Socket : AXE5E4026H (Embossed packaging) Header : AXE6E4026H (Embossed packaging)
3-3) Ordering information	

	A X E ○ E	○ ○	2	6
A X E 5 E : A4S socket for inspection				
A X E 6 E : A4S header for inspection				

• Number of contacts (2 digits)	
10:10 contacts	12:12 contacts
16:16 contacts	18:18 contacts
22:22 contacts	24:24 contacts
28:28 contacts	30:30 contacts
34:34 contacts	36:36 contacts
40:40 contacts	50:50 contacts
64:64 contacts	70:70 contacts
	80:80 contacts

• Function	
2	: No positioning projections

• Plating (contact / terminal)	
6	: PdNi + Au flash / Au

4. Material	: Molded portion	: Heat resistant plastic (UL 94V-0), Black
	: Contact / Post	: Copper Alloy
	: Metal bracket	: Copper Alloy

T O :			DATE: Jul, 23, 2008
MATSUSHITA ELECTRIC WORKS, LTD. CONNECTOR DIVISION	DRAWN BY <i>Y. Miyazaki</i>	REVIEWED BY <i>M. Mito</i>	
	CHECKED BY <i>K. Okura</i>	APPROVED BY <i>H. Yoneyama</i>	

SPECIFICATIONS

NARROW-PITCH CONNECTORS

AXE5E○○26 / AXE6E○○26

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5. Plating : Contact / Post : Contact portion : PdNi+Au flash plating (Min. 0.03 μ m)
over nickel
: Terminal portion : Au plating over nickel
(except for top of the terminal)
: Metal bracket (Socket) : Pd + Au flash plating over nickel
(except for top of the terminal)
: Metal bracket (Header) : Au plating over nickel
(except for top of the terminal)

6. Characteristics

The followings show specifications, when mated with

Socket(Inspection use only:AXE5E○○26) and Header(Standard product:AXE6○○124),

Header(Inspection use only:AXE6E○○26) and Socket(Standard product:AXE5○○124).

Item	Specification	Test condition
6-1. Electrical characteristics		
1) Rated current	Each pin ; Max 0.3 A All pins can carry ; Max. 5 A	
2) Rated voltage	AC, DC 60 V	
3) Insulation resistance	Min.1000 M Ω (Initial stage)	Using 250 V DC megger (1 minute)
4) Breakdown voltage	150 V AC for 1 minute	Detection current : 1 mA
5) Contact resistance	Max. 90 m Ω	According to the method of JIS C 5402
6-2. Mechanical characteristics		
1) Contact holding force (Socket contact)	Min.0.20 N/contact.	Measuring the maximum force. As the contact is axially pull out.
6-3. Environmental characteristics		
1) Ambient temperature (Operating temperature)	-55 $^{\circ}$ C~+85 $^{\circ}$ C	No freezing or condensation
2) Storage temperature	-55 $^{\circ}$ C~+85 $^{\circ}$ C (Products only) -40 $^{\circ}$ C~+50 $^{\circ}$ C (Packaging structure)	No freezing or condensation

TO :

DATE: Jul, 23, 2008

MATSUSHITA ELECTRIC WORKS, LTD.
CONNECTOR DIVISION

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S P E C I F I C A T I O N S

NARROW-PITCH CONNECTORS

AXE5E○○26 / AXE6E○○26

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Item	Specification	Test condition
6-4. Life characteristics Insertion and removal life with no load	3000 times • Contact resistance Max. 90 mΩ	Repeated insertion and removal cycles of max. 200 times/hour by machine. The other that is mating is exchanged every 50 times.
6-5. Soldering temperature resistance	The initial specification must be satisfied electrically and mechanically	Max. peak temperature of 260 °C Infrared reflow soldering (PC board surface temperature) near connector terminals Soldering iron 300 °C within 5 s 350 °C within 3 s
6-6. Solder paste thickness	The initial specification must be satisfied electrically and mechanically	Recommendation t=0.12 mm

7. Package : Embossed packaging

8. About safety Remarks

- 8-1. Do not use these connectors outside the specification ranges for the rated current, breakdown voltage and other environmental conditions, or the connectors may make damages to the circuit by generating an abnormal level of heat, giving off smoke or catching fire.
- 8-2. To prevent an accident, please refer the specifications and / or the operation manuals before start using connectors. In the case the connector has to be used outside the specification, please consult us.
- 8-3. We are consistently striving to improve quality and reliability.
However, the fact remains that electrical components and devices generally cause failures at a given statistical probability. Furthermore, their durability varies with use environments or use conditions. In this respect, we ask you to check for actual electrical components and devices under actual conditions before use without fail. Continuously using them in a state of degraded performance may cause deterioration in insulation performance, thus resulting in abnormal heat generation, smoke generation, or firing. To avoid that, we ask you to carry out safety design including redundancy design, design for fire spread prevention, and design for malfunction prevention as well as periodic maintenance so that no accidents resulting in injury or death, fire accidents, or social damage will be caused as a result of our product failure or service life.

TO :

DATE: Jul, 23, 2008

MATSUSHITA ELECTRIC WORKS, LTD.
CONNECTOR DIVISION

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SPECIFICATIONS

NARROW-PITCH CONNECTORS

AXE5E0026 / AXE6E0026

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9. Remarks

9-1. This connector is only for inspection uses. Please do not use it for the inside of actual products.

9-2. Regarding PC board design

Refer the recommended PC board pattern for keeping the strength of soldering.

9-3. Connector placement

When the placement machine has excessive keeping force.

The housing will be transformation. Please check the placement machine.

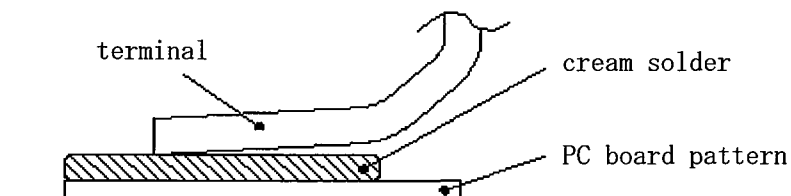
9-4. Soldering

1) Manual soldering.

- These connector is low profile type. If too much solder is supplied for hand soldering, It makes miss mating because of interference at soldering portion. Please pay attentions.
- Please use the soldering iron under specification' s temperature and times.
- In case of exercise care not to contaminate the card contacts with solder flux from the soldering iron tip. And make sure that the card contacts are not contaminated to dispersed solder flux with a magnifying glass and so on. When the contact portion is contaminated, please clean it by washing or so.
- Please pay attentions. Not to deform terminals when mating or unmating connectors without mounting to PC boards. Don' t apply an excessive force to terminals, or the connection between terminals and a housing may lose.
- Please soldering iron is cleaning.

2) Reflow soldering.

- Please use screen soldering regarding cream solder printing.
- PC board and metalmasking drawing show the relationship between screen open window area and PC board foot pattern area. The side of terminal tip is base.
- Please pay attentions not to provide too much solder. It makes miss mating because of interference at soldering portion when mating.



TO :

DATE: Jul, 23, 2008

MATSUSHITA ELECTRIC WORKS, LTD.
CONNECTOR DIVISION

DRAWN BY *S. Miyazaki*

REVIEWED BY *M. Akita*

CHECKED BY *K. Okura*

APPROVED BY *H. Yoneyama*

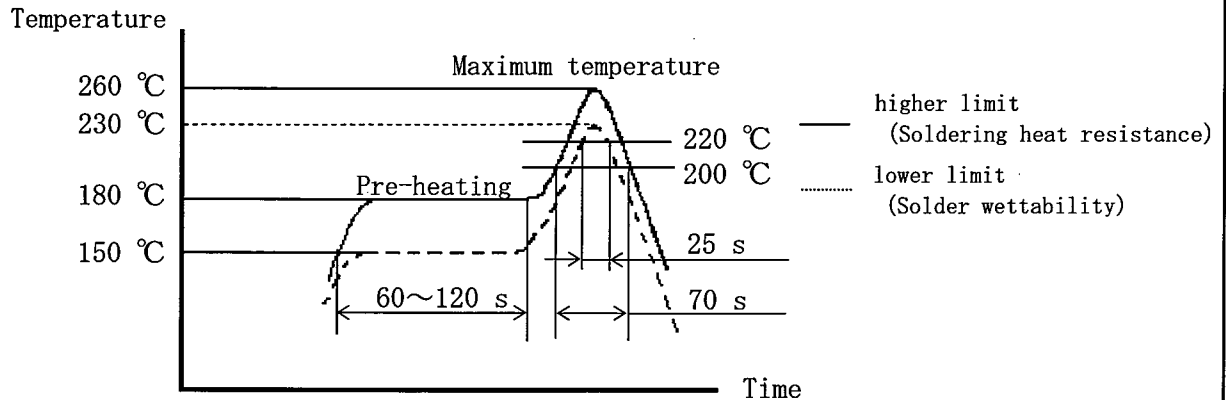
SPECIFICATIONS

NARROW-PITCH CONNECTORS

AXE5E○○26 / AXE6E○○26

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- When applying the different thickness of a screen, please consult us.
- There may be a case of difficult self-alignment depending on the connector size. In that case, please pay attentions to align terminals and solder pads.
- The following diagram shows the recommended reflow soldering temperature profile.



- Infrared reflow soldering is able to passed two times.
 - The temperature measured on the PC board surface near connector terminals.
 - There is the possibility that the solder rize is generated by the kind of solder and flux. Please set the reflow condition in consideration of the characteristic of solder and flux used.
 - After reflow soldering, In case of PC board surface the reverse side using reflow soldering, for example an adhesive and so on connector of fixed disposition.
- 3) Rework of soldering portion.
- Rework is one time.
 - In case of soldering rework of bridges. Please use a flat-head soldering iron and don' t use supplementary solder flux. Doing so may cause contact problems by flux.
 - Please use the soldering iron under specification' s temperature.
- 9-5. Since excessive force on the terminals will cause deformation and the integrity of the soldering will be lost during reflow soldering, avoid dropping or rough handing of the product.
- 9-6. Be careful not to deform the terminals or brackets when inserting or removing the connector before soldering. Do not put excessive force to terminals. Doing so may loosen the fixation of terminals and molding parts.

TO :

DATE: Jul, 23, 2008

MATSUSHITA ELECTRIC WORKS, LTD.
CONNECTOR DIVISION

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H. Yoneyama

SPECIFICATIONS

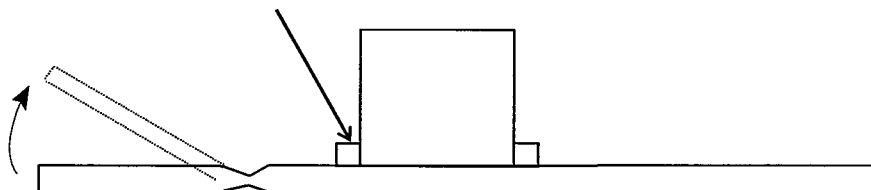
NARROW-PITCH CONNECTORS

AXE5E○○26 / AXE6E○○26

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- 9-7. When cutting the PC board after mounting the connector, please assure soldered terminals aren't affected by the stress.

The stress should not affect the terminals soldered.



- 9-8. If the number of times of mating increases, the wear powder of molded portion will be generated. please blow a connector by air suitably.

- 9-9. When mounting connectors on a FPC board : Due to it's flexibility, a FPC board may make the connector terminal soldering connection weak. In order to strengthen the connection and prevent the peeling off of terminal soldering, a stiffener is strongly recommended to be attached to the backside of the connector area.

The size of stiffener should be bigger than the recommended PC board pattern area shown in the drawing. (Outward dimension + approximate 1 mm)

Recommended material of reinforcement is Glass-Fiber board or Polyimide board which have 0.2 to 0.3 mm thickness.

- 9-10. Other cautions.

- After soldering is no coating. In case of using coating. Please don't stick to the terminal.
- Connector doesn't have switching fundamentally.

10. We declare the following ;

In the manufacturing process for the products being provided to your company, the following materials are not used at all.

- Ozone-depleting materials ;
CFC- 11, 12, 13, 111, 112, 113, 114, 115, 211, 212, 213, 214, 215, 216, 217
Halon 1211, 1301, 2402
Carbon tetrachloride
Methyl chloroform
- Polybrominated flame retardants ;
PBBO_s, PBDO, PBDPO, PBDPE, DBDO, OBDO, TBDO, PBB_s, PBDE
- Specified chemical substances (Impurities are excepted) ;
Mercury, Cadmium, Hexavalent chromium, Lead

TO :

DATE: Jul, 23, 2008

MATSUSHITA ELECTRIC WORKS, LTD.
CONNECTOR DIVISION

DRAWN BY

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REVIEWED BY

M. Ohira

CHECKED BY

K. Ohara

APPROVED BY

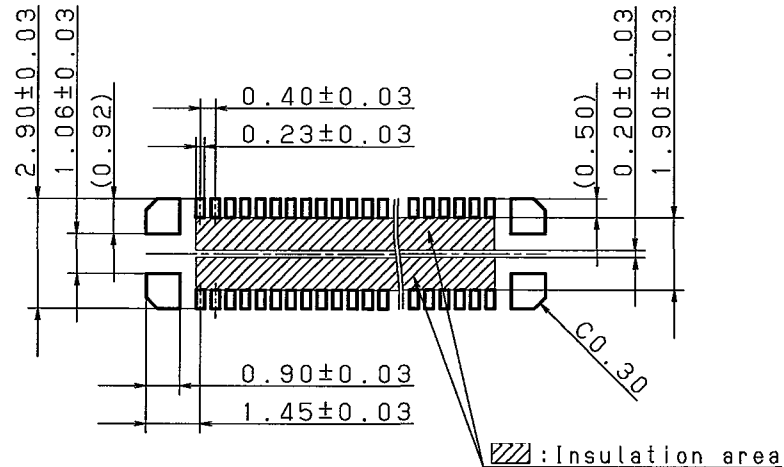
M. Yonegawa

SPECIFICATIONS		NARROW-PITCH CONNECTORS	
		AXE5E○○26 / AXE6E○○26	
		Page ; 7 / 7	
• Other toxic substances Asbestos Organic tin compounds (Tributyl tin compounds, Triphenyl tin compounds) Polychlorinated biphenyls Polychlorinated naphthalenes Azo compounds			
1 1. Note Although the best attention will be paid for the quality controls of the products, please consider the followings :			
1) To prevent unexpected failures as much as possible under the conditions not shown in this specifications, please let us know the detailed information on the application, such as the environmental, operational and mounting condition. 2) By any chance, if the failure of the product is considered to cause a personal injury or death or property damage, the safety rate should be added to the specified values shown in this specifications and the dual safety structure or circuit is recommended to be taken from the stand point of the Product Liability Indemnity. 3) We will either repair or replace any products or parts thereof which prove to be defective against only the items written in this specifications within 1 year from the date of products acceptance at the site of delivery. 4) The following cases are exclusive from the indemnity. ① The case of other damage caused by the failure or defect of the product. ② The case that the product condition changed by handling, storage and / or transportation after delivery. ③ The case caused by the phenomenon which has never been discovered and is impossible to be foreknown with the existing technologies. ④ The case of force majeure, such as acts of Got, public enemy or war, fires, floods and any other causes beyond the control of the people concerned.			
TO :		DATE: Jul, 23, 2008	
MATSUSHITA ELECTRIC WORKS, LTD. CONNECTOR DIVISION		DRAWN BY <i>Y. Miyazaki</i>	REVIEWED BY <i>M. Saito</i>
		CHECKED BY <i>K. Okura</i>	APPROVED BY <i>H. Yoneyama</i>

Recommended specification of mounting pattern on PC board and window size of metalmasking

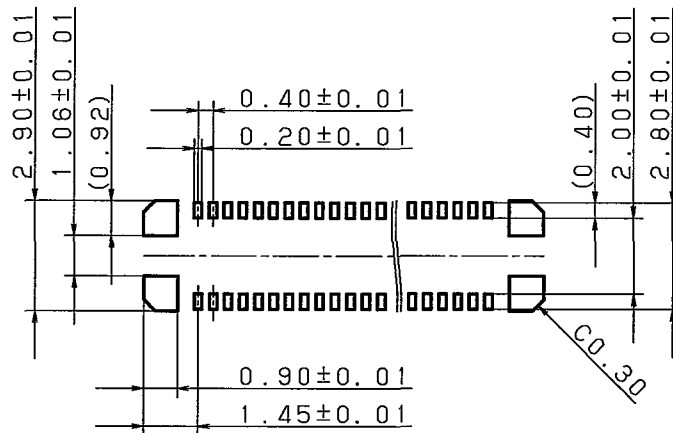
Product: Narrow-pitch connector A4S socket

Recommended mounting pattern on PC board (Top view)



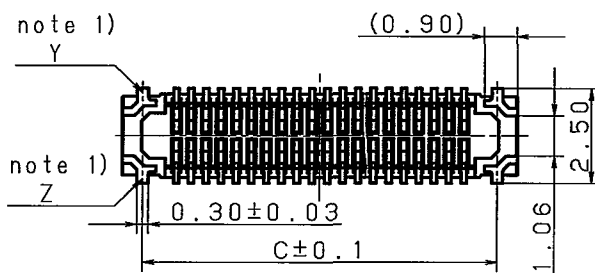
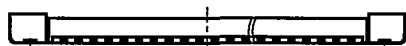
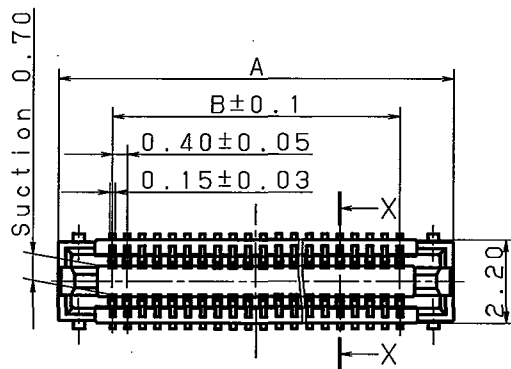
Recommended window size of metalmasking (Top view)

Thickness of metalmasking: 120 μm
(Terminal part window ratio: 70%)
(Metal bracket part window ratio: 100%)



Window ratio is calculated by dividing window size of metalmasking by the original mounting pad.

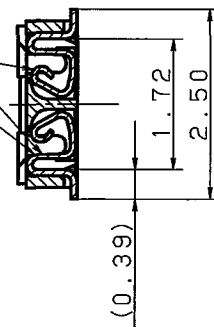
Sym	Item or Code No	Material & Size	qt.	Process	Remark
Catalog No			Drawing Name		
Name Narrow-pitch connector A4S Socket			Drawing No		
Remark			Scale 5 : 1	Unit: mm	Date May. 14 ' 08
Drawn K. Sakaguchi	Reviewed M. Ohtsuka		MATSUSHITA ELECTRIC WORKS. LTD. CONNECTOR DIVISION.		
Designed Y. Miyazaki	Approved K. Yoneyama				
Checked K. Okura					



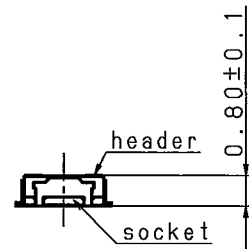
The degree of terminal flat
 0.77 0.08
 (Contact and Metal bracket)

Plating:
 PdNi+Au flash

Without lock part



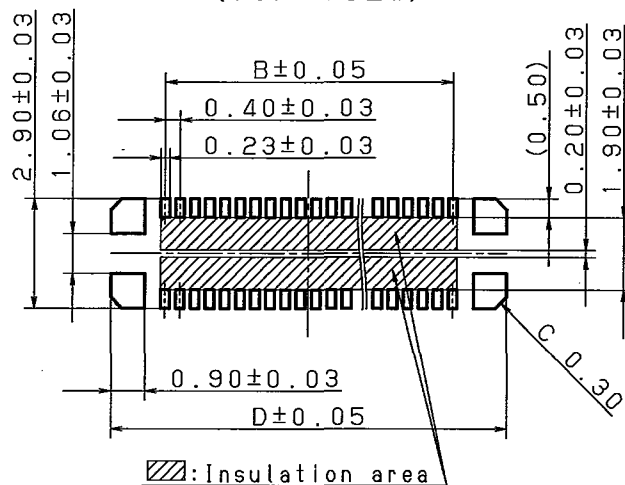
X-X cross section



Setting drawing

Recommended PC board pattern
 (mounting pad layout)

(TOP VIEW)



Dimension No. of contacts	A	B	C	D
10	4.5	1.6	3.4	4.5
12	4.9	2.0	3.8	4.9
14	5.3	2.4	4.2	5.3
16	5.7	2.8	4.6	5.7
18	6.1	3.2	5.0	6.1
20	6.5	3.6	5.4	6.5
22	6.9	4.0	5.8	6.9
24	7.3	4.4	6.2	7.3
26	7.7	4.8	6.6	7.7
28	8.1	5.2	7.0	8.1
30	8.5	5.6	7.4	8.5
32	8.9	6.0	7.8	8.9
34	9.3	6.4	8.2	9.3
36	9.7	6.8	8.6	9.7
38	10.1	7.2	9.0	10.1
40	10.5	7.6	9.4	10.5
50	12.5	9.6	11.4	12.5
60	14.5	11.6	13.4	14.5
64	15.3	12.4	14.2	15.3
70	16.5	13.6	15.4	16.5
80	18.5	15.6	17.4	18.5

Note 1) Because the metal bracket Y and Z are the unified structure,
 they are connected electrically.

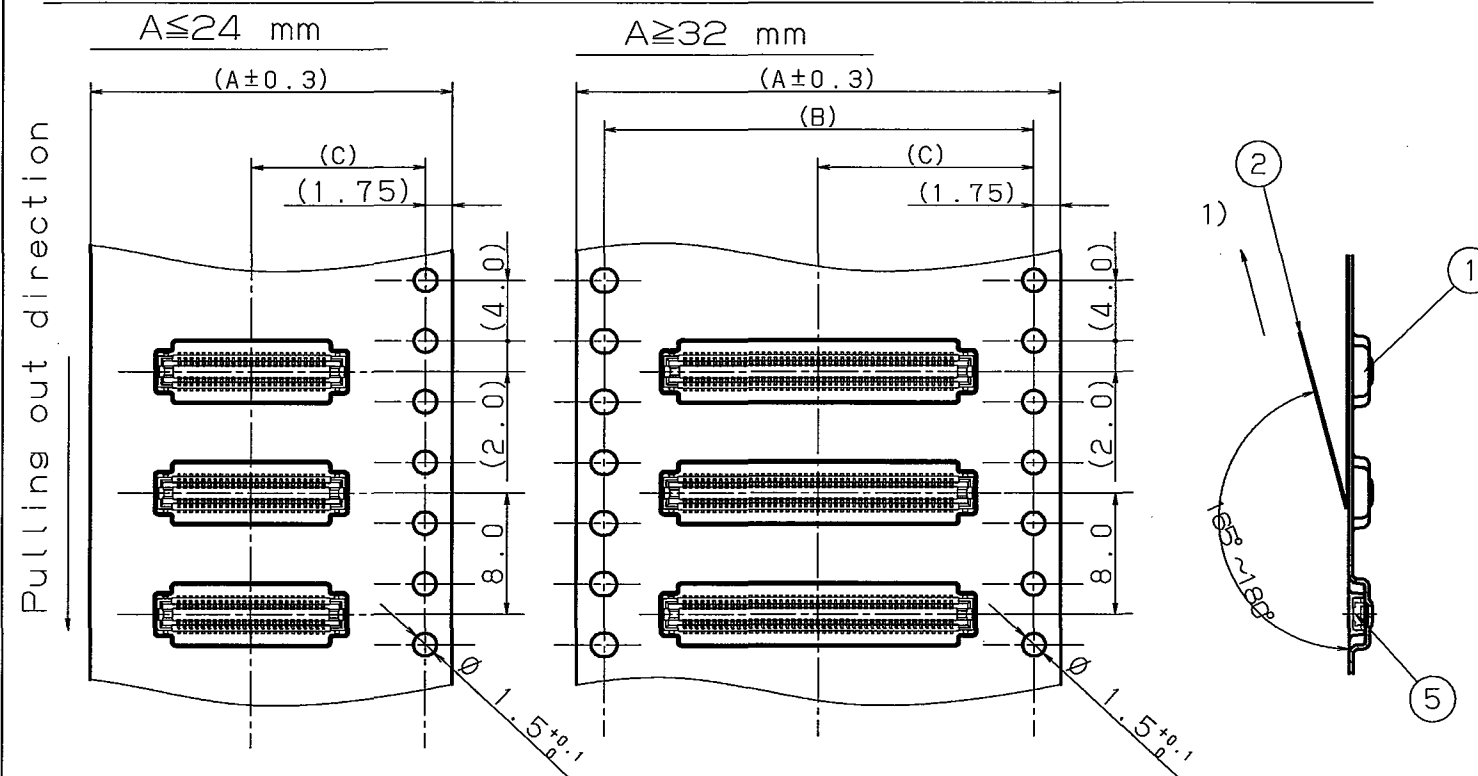
General tolerance ± 0.2

Sym	Item or Code No	Material & Size	qt.	Process	Remark
Catalog No			Drawing Name		
Name Narrow-pitch connectors A4S socket for inspection			Drawing No AXE5E4026		
Remark			Scale 5:1	Unit: mm	Date Jul. 23, '08
Drawn K. Sakaguchi	Reviewed		MATSUSHITA ELECTRIC WORKS. LTD. CONNECTOR DIVISION		
Designed F. Miyazaki	Approved H. Yonegawa				
Checked K. Okura					

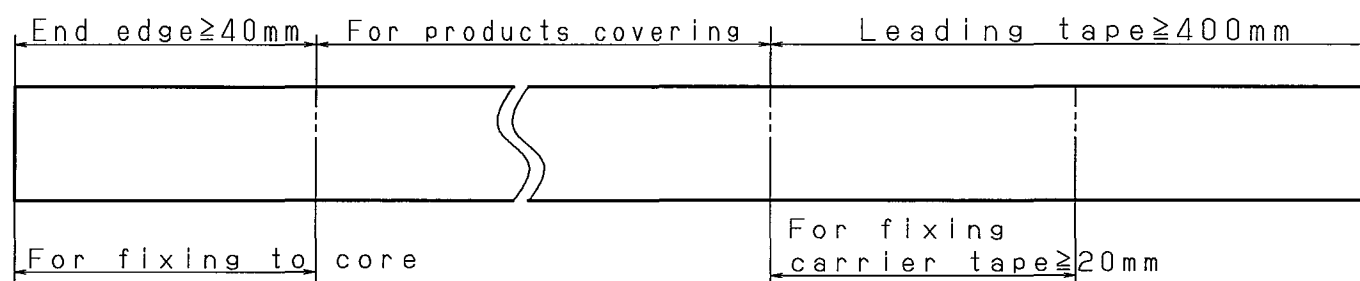
Tape packed status (JIS C 0806-1990)

The mounting pitch may not be conformed to the JIS.

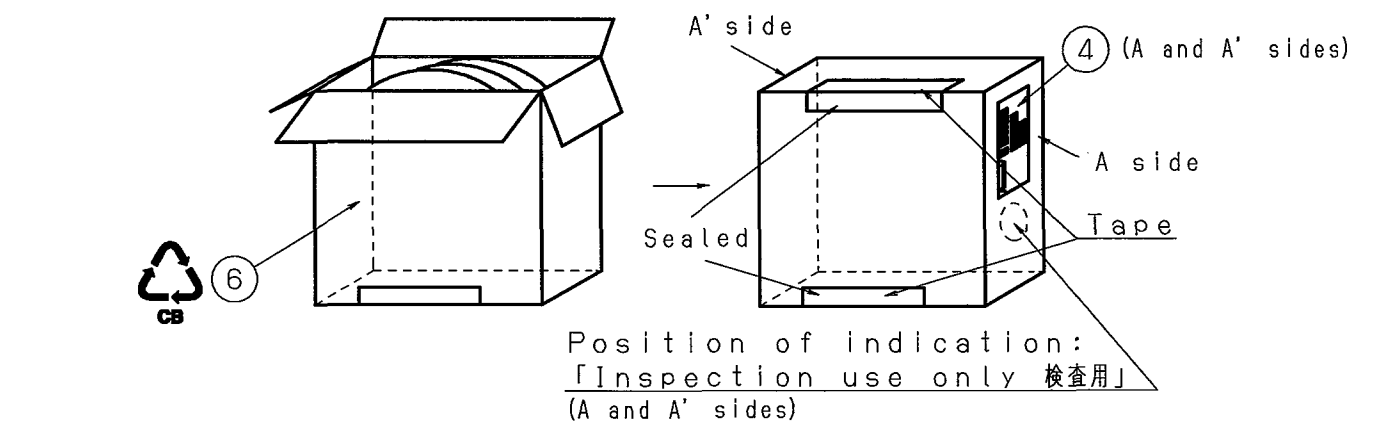
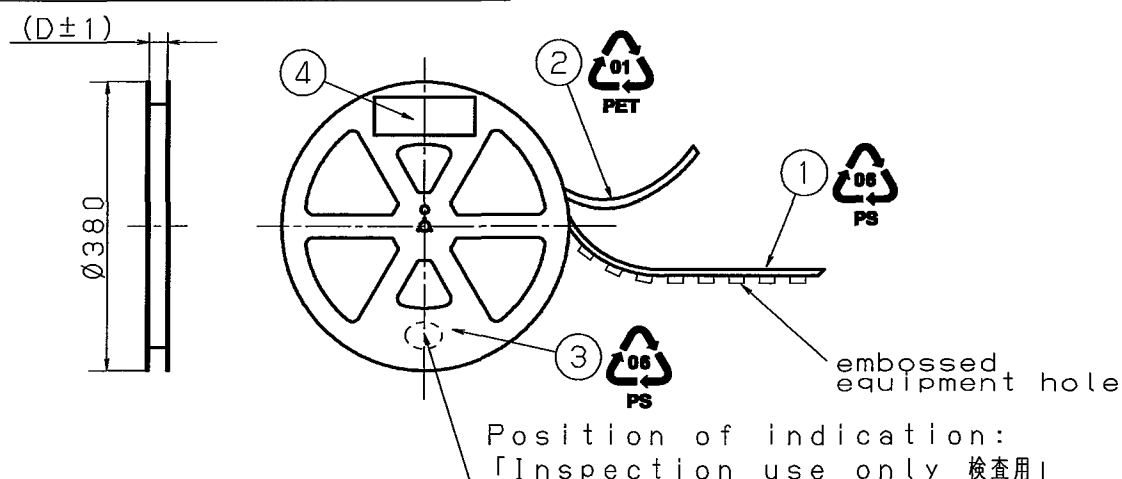
Carton containing 2 reels



Dimension No. of contacts	A	B	C	D
Max: 24	16.0	—	7.5	17.4
26~70	24.0	—	11.5	25.4
80	32.0	28.4	14.2	33.4



Reel Package (EIAJ ET-7200B)



Label attached

Code of Matsushita Electric Works, Ltd.

Part No. **Panasonic** AXE5E4026

Name **CONNECTOR**

PCS. **Lot.No.** **Matsushita Electric Works, Ltd. Made in Japan**

(pcs) **Packing quantity**

Reel	Carton
5000	10000

Identification sign of exterior/interior

Date Code

Marking of inspection use

検査用
Inspection use only

2) The beginning of the carrier tape and the end edge is fixed by tapeing up.
Note 1) In case of stripping off the cover tape, the tape itself must not be torn.

6	Carton	Corrugated fiberboard			
5	Narrow-pitch connectors				
4	Label	Coat Paper			
3	Reel	PS		Color : Black	
2	Cover tape	PET			
1	Embossed Carrier tape	PS			
Sym	Item or Code No	Material & Size	qt.	Process	Remark
Catalog No			Drawing Name Embossed tape packaging		
Name Narrow-pitch connectors A4S socket for inspection			Drawing No AXE5E4026H		
Remark			Scale	Unit: mm	Date Jul. 23, '08
Drawn K. Sakaguchi		Reviewed M. Aki		MATSUSHITA ELECTRIC WORKS. LTD CONNECTOR DIVISION	
Designed Y. Miyazaki		Approved N. Yonegawa			
Checked K. Okura					