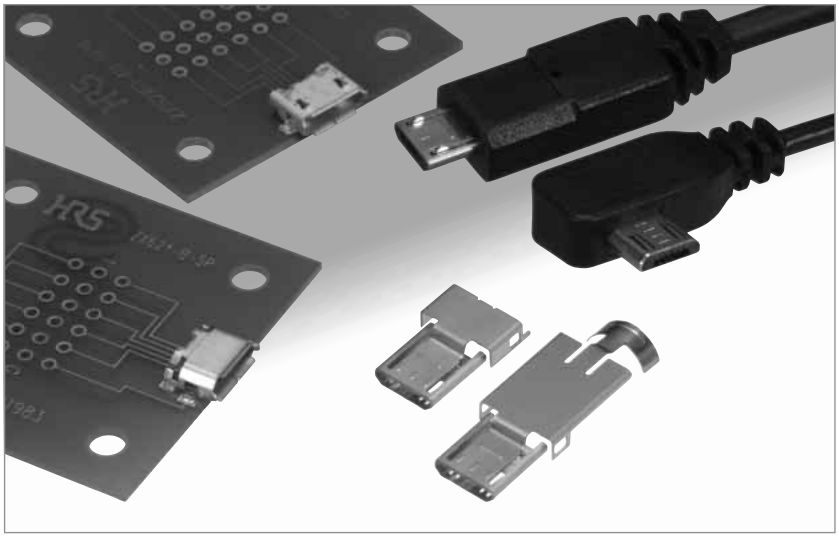
NEW

Micro-USB connectors meeting requirements of USB 2.0 Standard

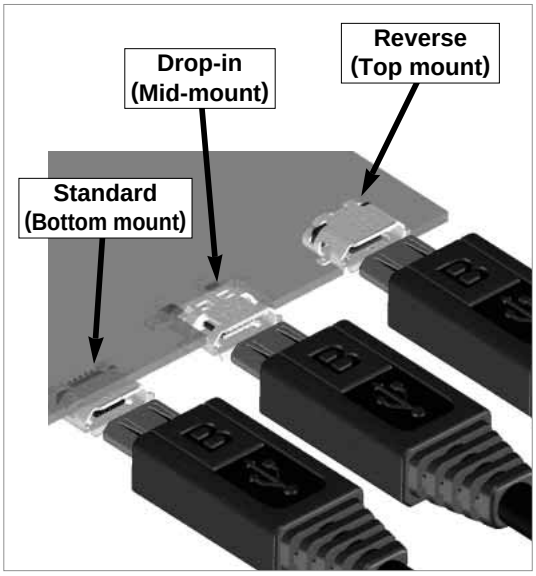
ZX Series



Note: Contact us to ascertain whether a TID number has been acquired for an individual product.

■Overview

Extremely small high reliability connectors complying with physical, electrical and environmental requirements of Micro-USB standard (USB 2.0).
Receptacles and plugs are available in a wide variety of mounting and termination configurations, permitting their use in various applications.



■Features

1. Size reduction

Compared with the standard Mini-B connectors, the size of ZX connectors is reduced by approximately 60% while still allowing a high-speed data transfer of 480 Mbps, specified in USB 2.0.

2. Receptacle styles

Two interface configurations: Micro-B and Micro-AB in standard, mid-mount and reverse mounting styles.
SMT and through-hole (shell) PC board terminations

3. Plug styles

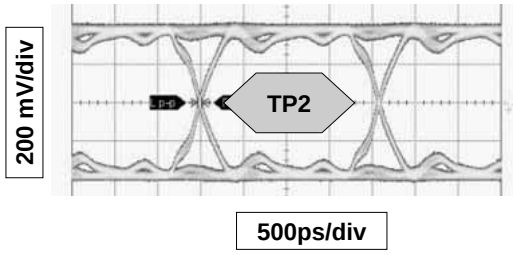
Corresponding to the receptacle styles, two interface configurations: Micro-B and Micro-A, with direct wire or PCB wire soldering.
Several plug styles can be used for data transmission, earphone or charging applications.

4. High durability

Unique contact and lock configuration assures high durability while maintaining easy insertion / disconnection. Fully mated condition (when mated with corresponding HRS connector) is confirmed by a definite tactile sensation

USB 2.0 Hi-Speed (480 Mbps)

Eye pattern measurement results:
Measured with USB 2.0 cable 2.4 m long



■Specifications

Ratings	Current rating	1 A (per contact) or 1.8 A (contacts No. 1 and 5) and 0.5 A (contacts No. 2, 3, and 4)	Voltage rating	30 V AC
			Operating temperature range	-30°C to +85 °C (Note1)
			Storage temperature range	-30 °C to +85°C

Item	Specification	Conditions
1. Contact resistance	30 mΩ max.	100 mA
2. Withstanding voltage	No flashover or insulation breakdown	100 V AC / 1 minute
3. Capacitance	2 pF max.	Between adjacent contacts at 1,000 Hz (AC voltage)
4. Durability	Contact resistance: Rise from initial value of 10 mΩ max.	10,000 cycles
5. Total insertion/removal force	Insertion force: 35 N max., Removal force: 8 N min.	Mated with corresponding connector

Note1: Includes temperature rise caused by current flow.
Note2: Information contained in this catalog represents general requirements for this Series. Contact us for the drawings and specifications for a specific part number shown.

■Materials

●Receptacles

Part	Material	Finish	Remarks
Insulator	LCP	Micro-B: Black, Micro-AB: Gray	UL94V-0
Contacts	Copper alloy	Selective gold plated	————
Shell	Stainless steel	Tin alloy plating	————

●Plugs

Part	Material	Finish	Remarks
Insulator	Synthetic resin	Micro-A: White, Micro-B: Black	UL94V-0
Contacts	Copper alloy	Selective gold plated	————
Lock spring	Stainless steel	————	————
Shell	Stainless steel	Nickel plated or unfinished	————

■Ordering information

●Receptacles

ZX 62 RD - B - 5 P ✻ 8
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

●Plugs

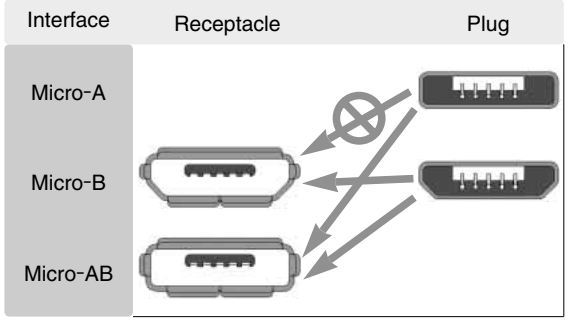
ZX 40 - B - 5 S ✻ - UNIT
❶ ❷ ❹ ❺ ❻ ❼ ❾

ZX 40 - B - SLDA
❶ ❷ ❹ ❾

❶ Series name		ZX
❷ Termination style		10's: Right-angle PCB wire, SMT 20's: Straight, PCB wire 40's: Direct wire 60's: Right-angle, PCB wire 80's: Cradle SMT
❸ Board mounting style (Receptacles)	Blank	Standard (Bottom mount)
	D	Standard (Bottom mount) through hole
	R	Reverse (Top mount)
	RD	Reverse (Top mount) through hole
	M	Drop-in (Mid-mount)
❹ Mating side configuration	A	Micro-A
	B	Micro-B
	AB	Micro-AB
❺ Number of contacts		5
❻ Contact type	P	Receptacle- Male
	S	Plug – Female
❼ Serial No.		
❽ Shell termination style – Receptacles	Blank	SMT
	8	Through hole (solder tab length: 0.8mm)
❾ Components-plugs	UNIT	Assembly (Insulator/contact/lock)
	SLD✻	Cover (Note 1)

Note 1: Classifiers such as A, B, and C are entered for ✻.

■Product Styles Table



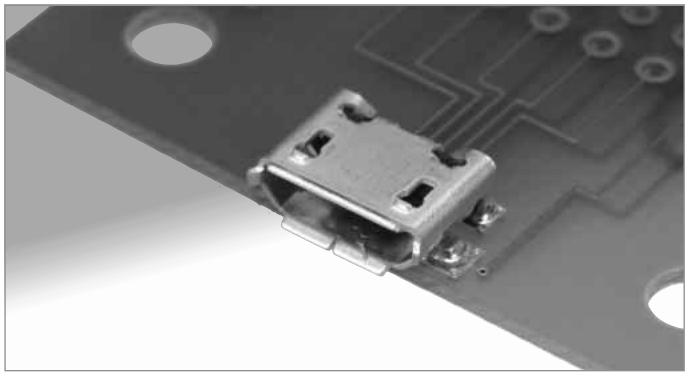
■Configurations

	Mating side configuration	Application	Mounting, termination styles/wire attachment	Part Number	3D Image	Page
Receptacles	Micro-B	Standard	SMT	ZX62-B-5PA(11)		4
			SMT + DIP	ZX62D-B-5PA8		4
		Reverse	SMT	ZX62R-B-5P		5
		Drop-in	SMT	ZX62M-B-5P(02)		5
	Micro-AB	Standard	SMT	ZX62-AB-5PA(11)		6
			SMT + DIP	ZX62D-AB-5P8		6
		Reverse	SMT	ZX62R-AB-5P		7
			SMT + DIP	ZX62RD-AB-5P8		7
Plugs	Micro-B	Data	Direct wire soldering	Assembly (insulator/contacts/lock) :ZX40-B-5S-UNIT(12) Cover-top :ZX40-B-SLDA Cover-bottom :ZX40-SLDB		9 and 10
			PCB wire soldering (right angle, through hole)	Assembly (insulator/contacts/lock) :ZX10-B-5S-UNIT(12) Cover-top :ZX10-B-SLDA Cover-bottom :ZX10-SLDB(3.3)		11 and 12
		Earphone	PCB wire soldering (straight, through hole)	Assembly (insulator/contacts/lock) :ZX20-B-5S-UNIT(12) Cover :ZX20-B-SLDC		13
		Charging	PCB wire soldering (SMT)	Assembly (insulator/contacts/lock) :ZX64-B-5S-UNIT(14) Cover-top :ZX64-B-SLDA Cover- bottom :ZX64-SLDB		14 and 15
		Charging Earphone	PCB wire soldering (SMT)	Assembly (insulator/contacts/lock) :ZX64-B-5S-UNIT(14) Cover :ZX64-B-SLDC		14 and 16
	Micro-A	Data	Direct wire soldering	Assembly (insulator/contacts/lock) :ZX40-A-5S-UNIT Cover-top :ZX40-A-SLDA Cover- bottom :ZX40-SLDB		17 and 18
Cradles	Micro-B	Cradle	SMT + DIP	ZX80-B-5S	With lock 	19
				ZX80-B-5SA	Without lock 	19

Note: 1. Part numbers in the Plugs section of the above table list the Assembly (insulator/contacts/locks) and the corresponding Shields/Covers.
Note: 2. Optional Printed Circuit boards for the Plugs are shown for reference only. Not supplied with applicable connectors.
Note: 3. The color of the insulators body in the Assembly (insulator/contacts/lock) shown in the 3D Image column above is blue for clarity. Refer to the Materials (Page 2) for correct colors.

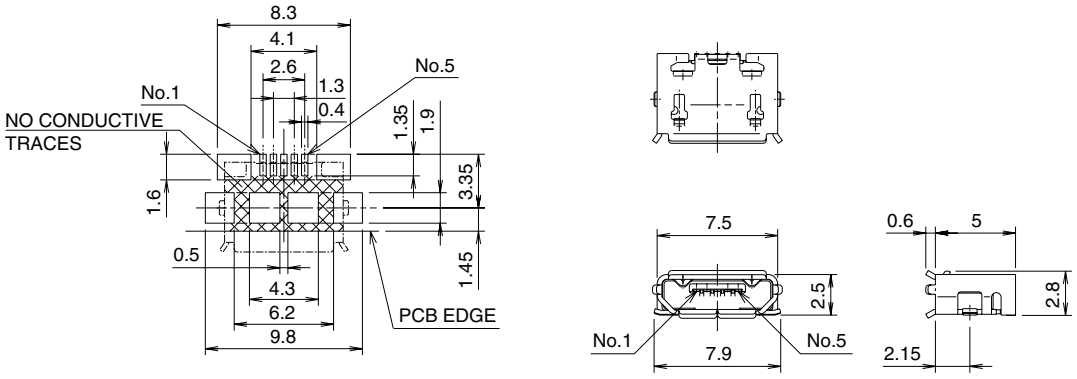
■Receptacles

●Micro B - Standard (Bottom mount), Shell SMT



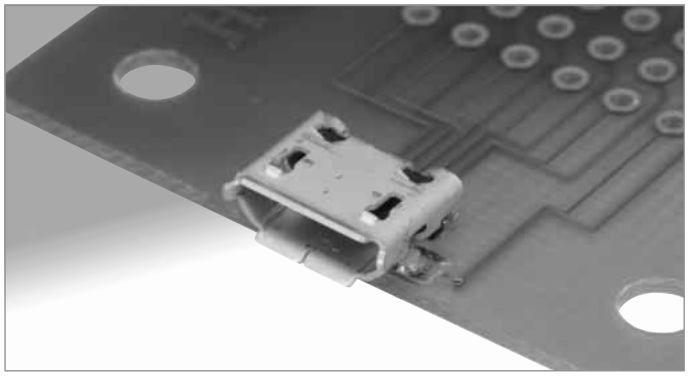
Part Number	CL No.	Packaging
ZX62-B-5PA(11)	242-0033-8-11	3,500 pieces per reel

■Recommended PCB mounting pattern



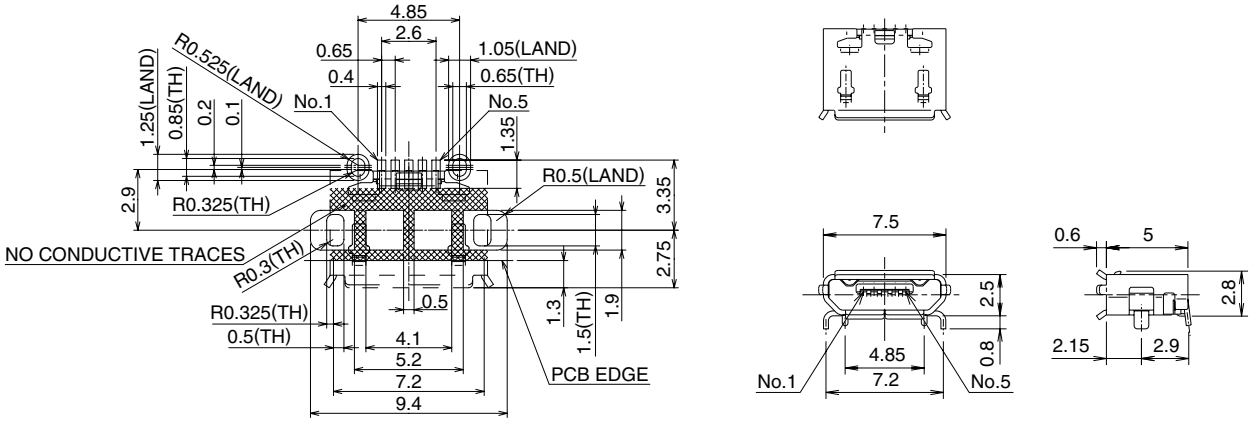
All dimensions: mm

●Micro B - Standard (Bottom mount), Shell through hole



Part Number	CL No.	Packaging
ZX62D-B-5PA8	242-0056-3	2,000 pieces per reel

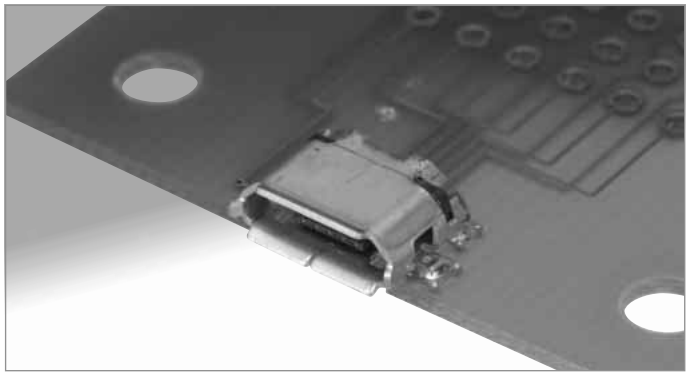
■Recommended PCB mounting pattern



All dimensions: mm

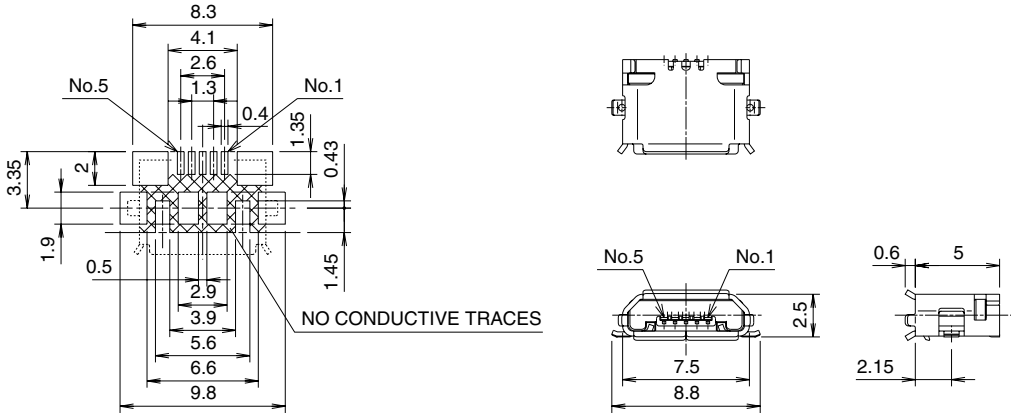
■Receptacles

●Micro B - Reverse (Top mount) Shell SMT



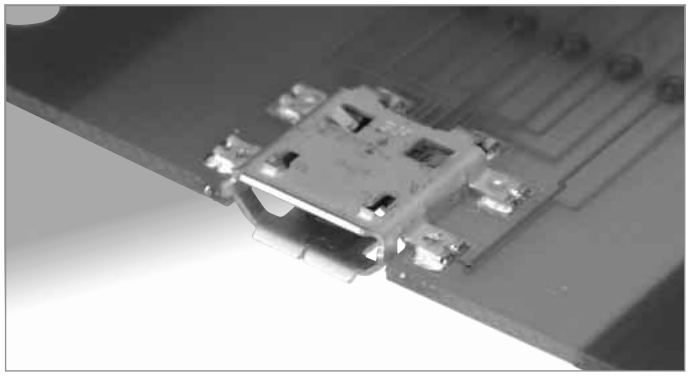
Part Number	CL No.	Packaging
ZX62R-B-5P	242-0028-8	2,000 pieces per reel

■Recommended PCB mounting pattern

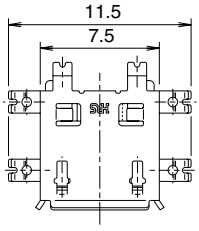


All dimensions: mm

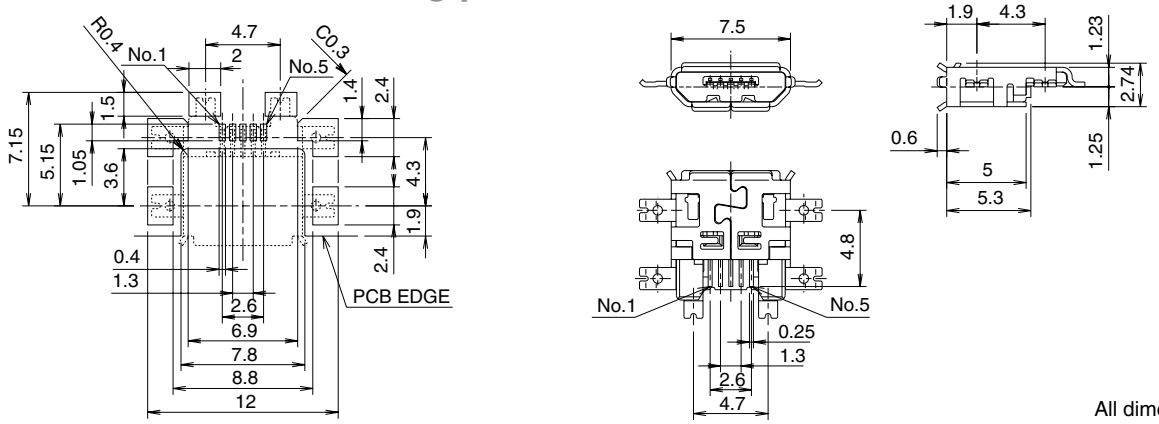
●Micro B - Drop-in (Mid-mount), Shell SMT



Part Number	CL No.	Packaging
ZX62M-B-5P(02)	242-0024-7-02	2,000 pieces per reel



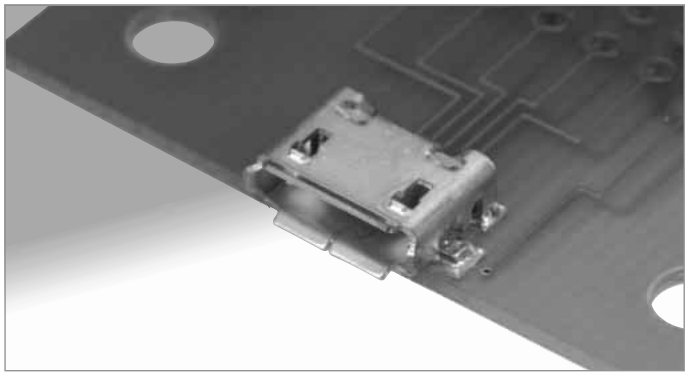
■Recommended PCB mounting pattern



All dimensions: mm

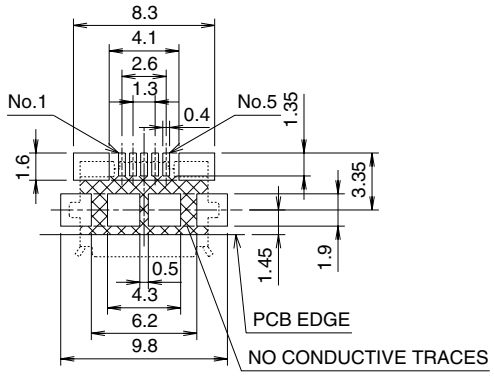
■Receptacles

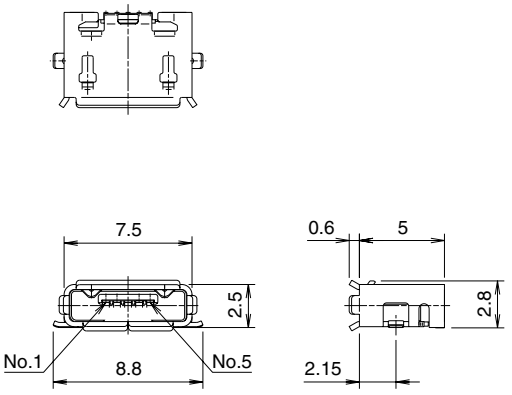
●Micro AB - Standard (Bottom mount), Shell SMT



Part Number	CL No.	Packaging
ZX62-AB-5PA(11)	242-0045-7-11	3,500 pieces per reel

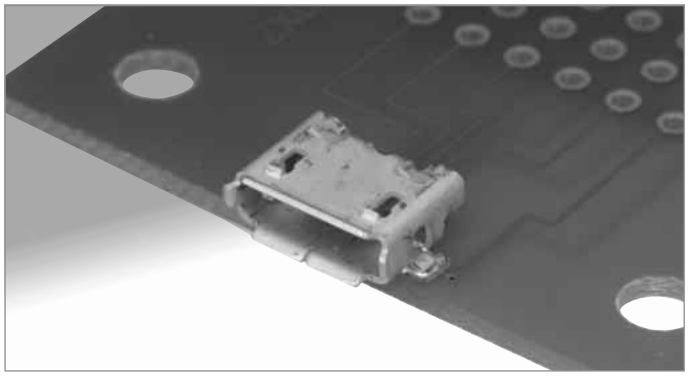
■Recommended PCB mounting pattern





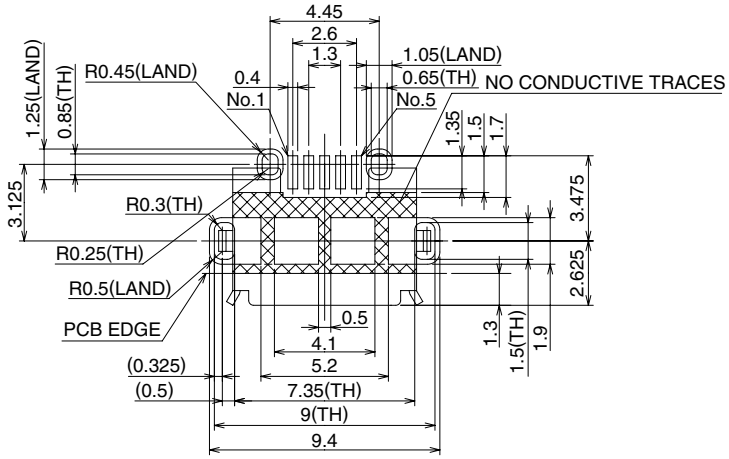
●Micro AB - Standard (Bottom mount), Shell through hole

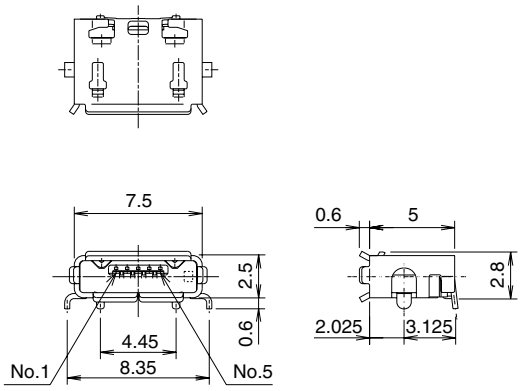
All dimensions: mm



Part Number	CL No.	Packaging
ZX62D-AB-5P8	242-0027-5	2,000 pieces per reel

■Recommended PCB mounting pattern

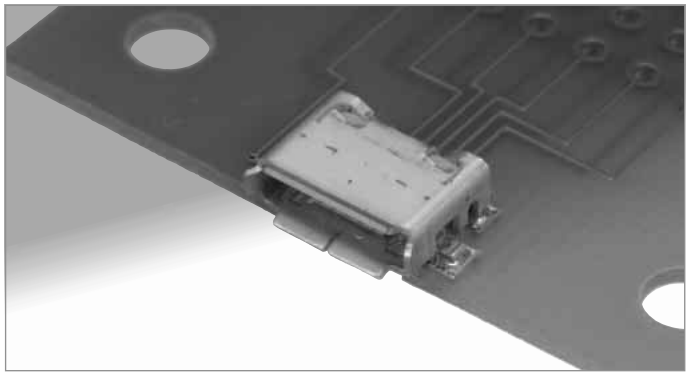




All dimensions: mm

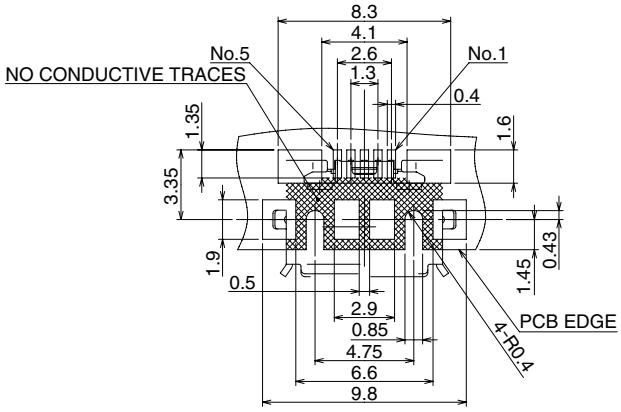
■Receptacles

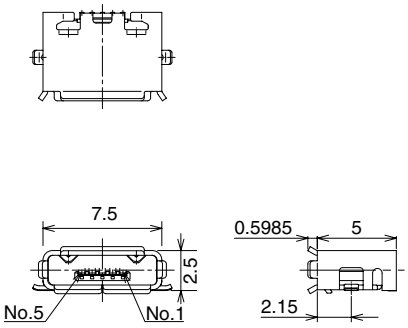
●Micro AB - Reverse (Top mount), Shell SMT



Part Number	CL No.	Packaging
ZX62R-AB-5P	242-0035-3	2,000 pieces per reel

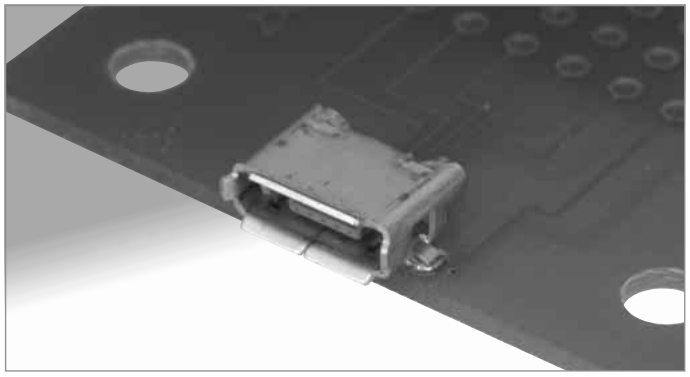
■Recommended PCB mounting pattern





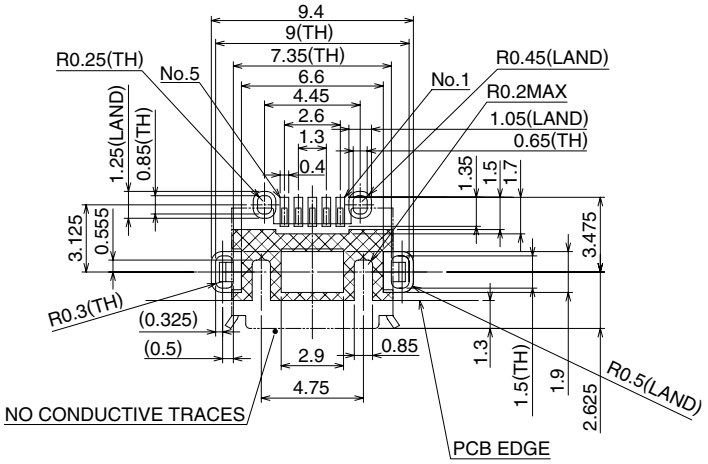
●Micro AB - Reverse (Top mount), Shell through hole

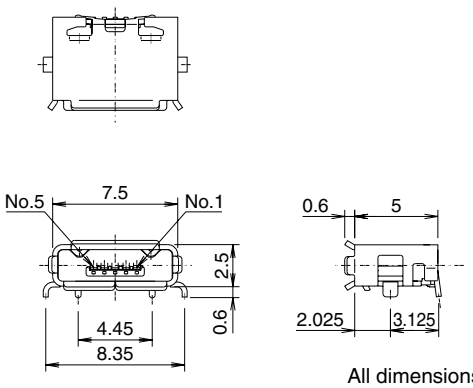
All dimensions: mm



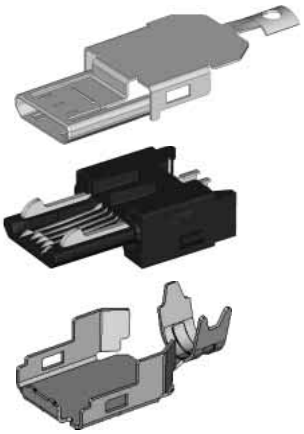
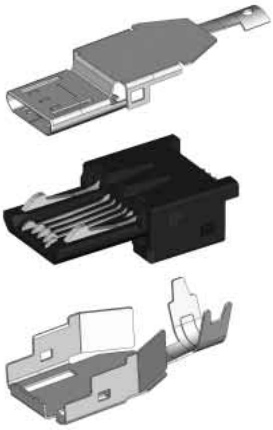
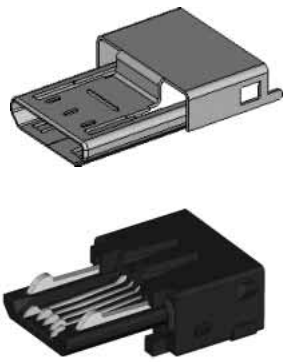
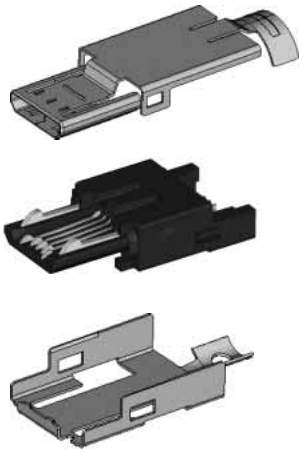
Part Number	CL No.	Packaging
ZX62RD-AB-5P8	242-0025-0	2,000 pieces per reel

■Recommended PCB mounting pattern



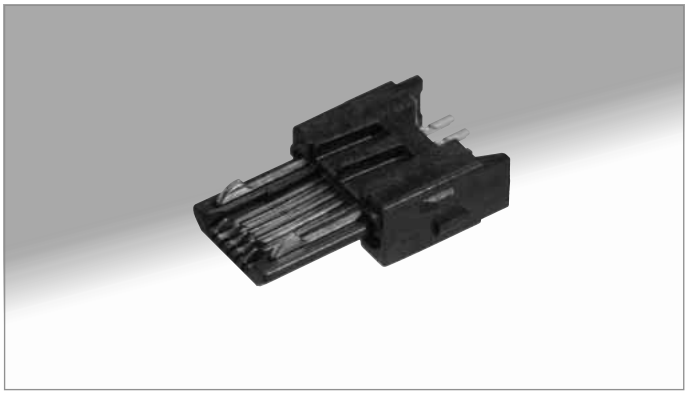


All dimensions: mm

Plugs – assembled (not-terminated, without overmold)	Components
ZX40 - Direct wire soldering 	 **ZX40-∗-SLDA** **Cover-top** **ZX40-∗-5S-UNIT** **Assembly (insulator/contacts/lock)** ∗No PCB required **ZX40-SLDB** **Cover-bottom**
ZX10 - PCB wire soldering 	 **ZX10-B-SLDA** **Cover-top** **ZX10-B-5S-UNIT** **Assembly (insulator/contacts/lock)** ∗SMT PCB termination **ZX10-SLDB** **Cover-bottom**
ZX20 - PCB wire soldering 	 **ZX20-∗-SLDC** **Cover** **ZX20-∗-5S-UNIT** **Assembly (insulator/contacts/lock)** ∗Straight through hole PCB termination
ZX64 - PCB wire soldering 	 **ZX64-∗-SLDA** **Cover-top** **ZX64-∗-5S-UNIT** **Assembly (insulator/contacts/lock)** ∗Right angle through hole PCB termination **ZX64-SLDB** **Cover-bottom**

■Plugs

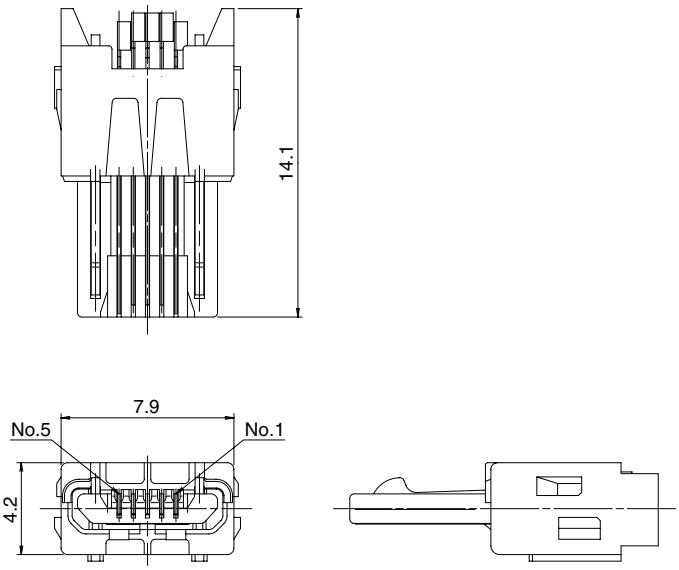
●Micro B - Assembly (insulator/contacts/lock) – Direct wire soldering





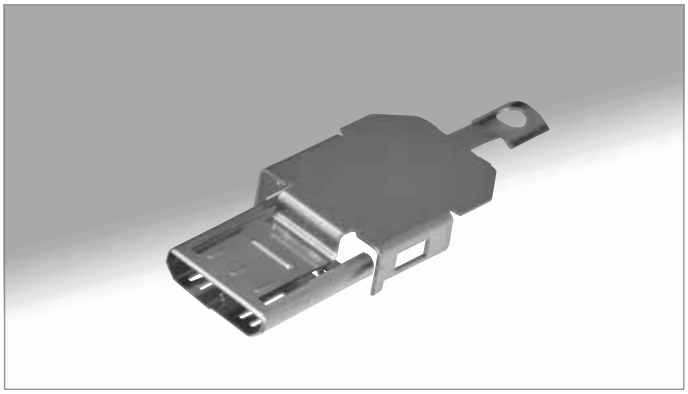
Part Number	CL No.
ZX40-B-5S-UNIT(12)	242-0002-4-12

Contact HRS for Cable Termination Procedure Manual.

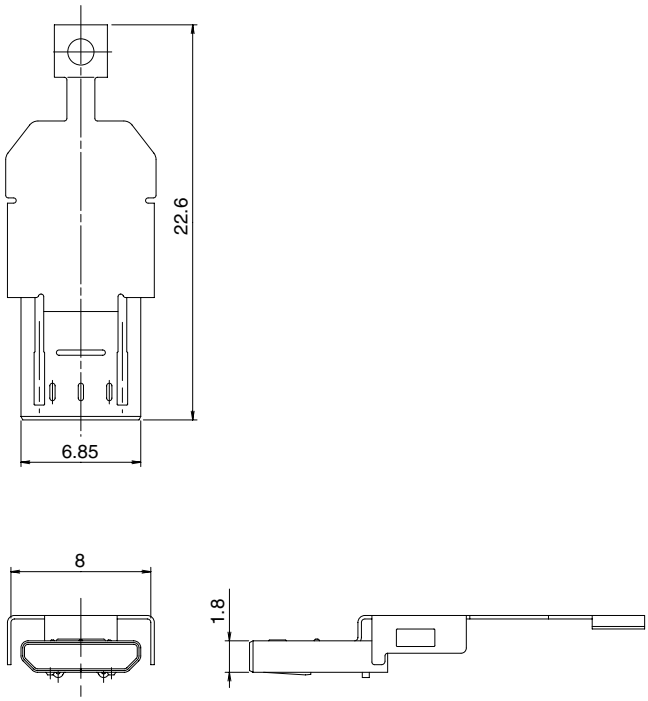


All dimensions: mm

●Micro B - Component, Cover-top - Direct wire soldering



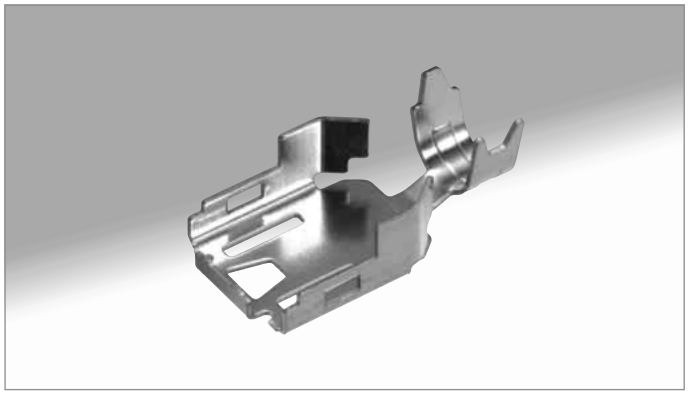
Part Number	CL No.	Packaging
ZX40-B-SLDA	242-0003-7	4,000 pieces per reel

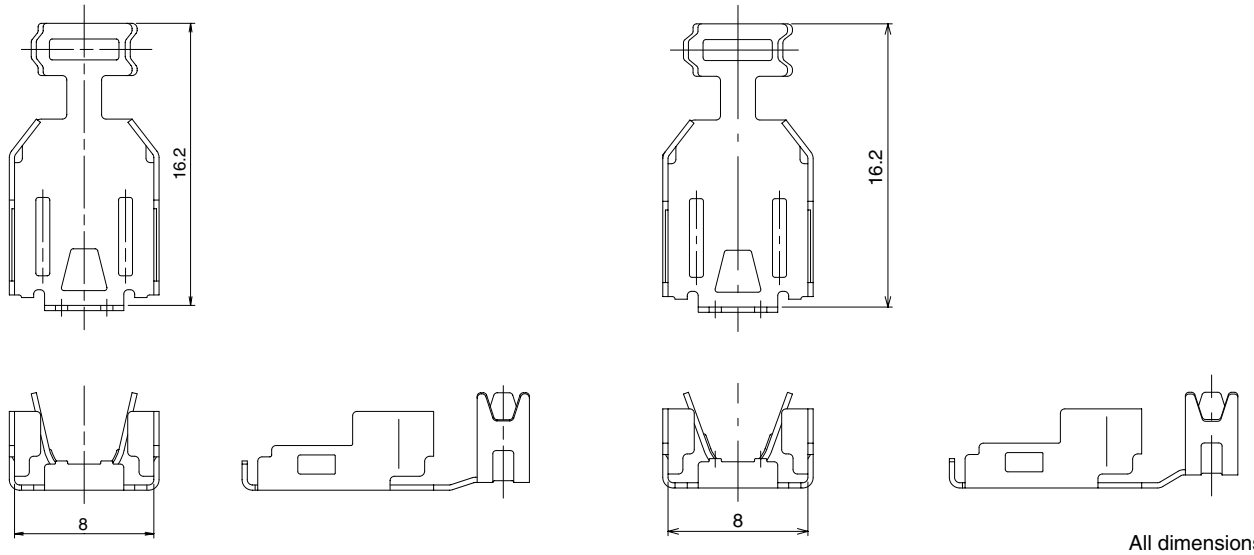


All dimensions: mm

■Plugs

●Micro A, Micro B - Component, Cover-bottom - Direct wire soldering



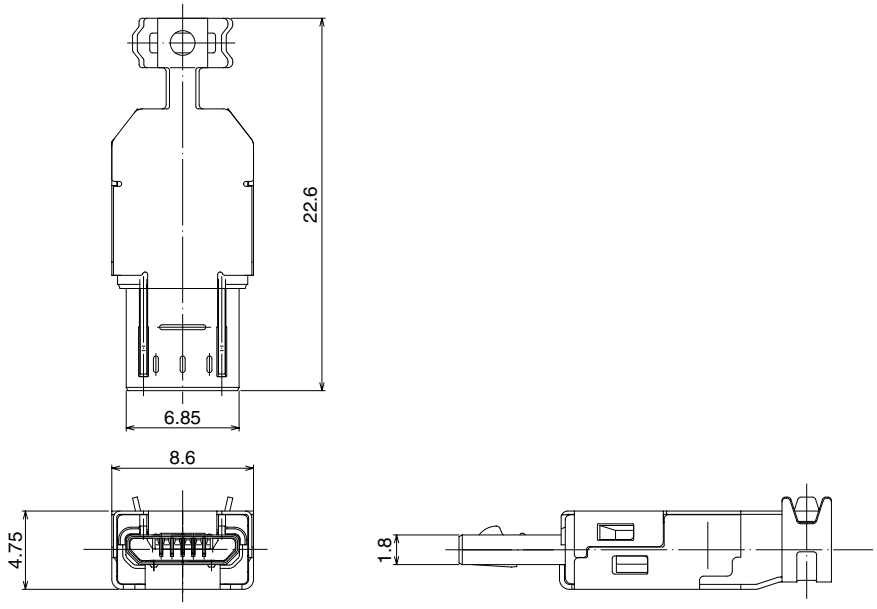


All dimensions: mm

ZX40-SLDB　　ZX40-SLDB(3.3)

Part Number	CL No.	Packaging	Cable dia.
ZX40-SLDB	242-0004-0	4,000 pieces per reel	ϕ3.8
ZX40-SLDB(3.3)	242-0023-4		ϕ3.3

●Assembled



All dimensions: mm

■Plugs

●Micro B - Assembly (insulator/contacts/lock) - Right angle through hole PCB wire soldering (non-direct)

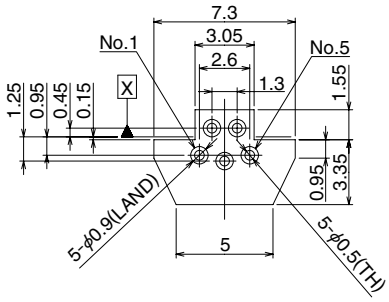


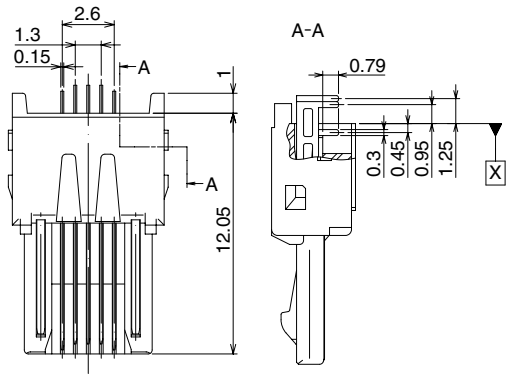
Part Number	CL No.	Packaging
ZX10-B-5S-UNIT(12)	242-0030-0-12	1,500 pieces per reel

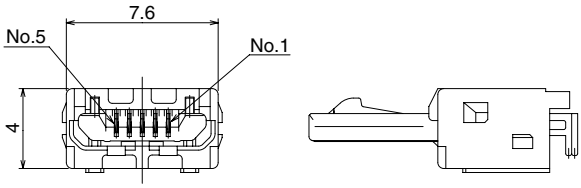
Contact HRS for Cable Termination Procedure Manual.



PCB mounting pattern
*PCB required (not supplied)
Max. thickness: 0.6mm

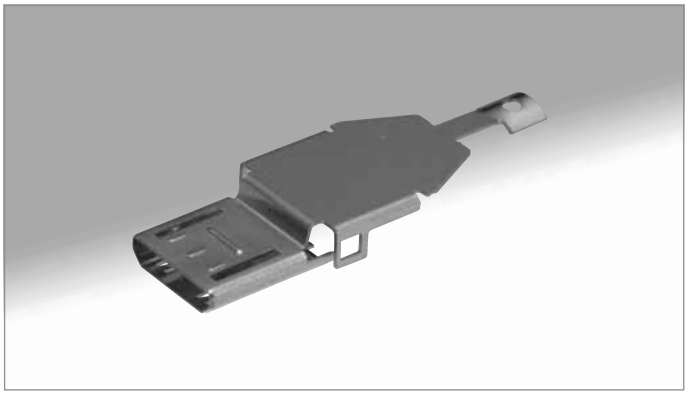




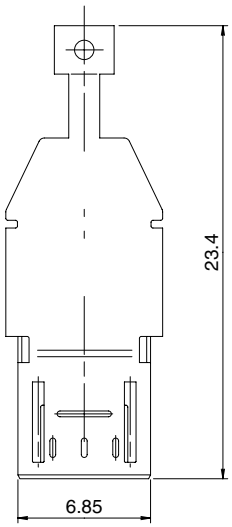


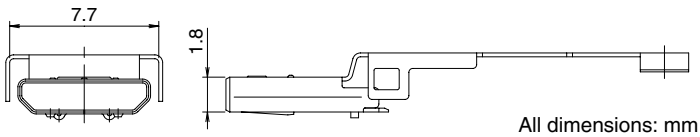
●Micro B - Component, Cover-top - Right angle through hole

All dimensions: mm



Part Number	CL No.	Packaging
ZX10-B-SLDA	242-0031-2	4,500 pieces per reel

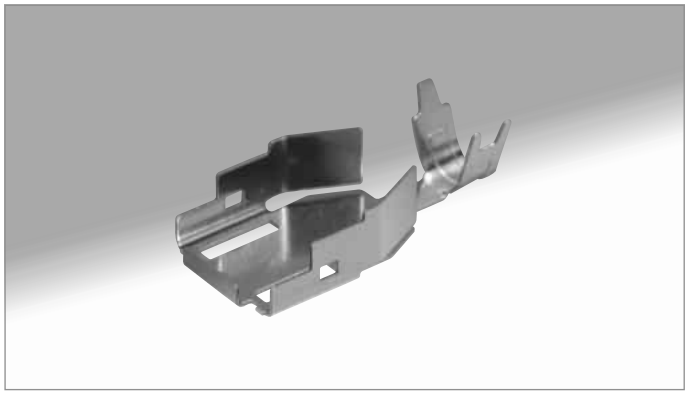




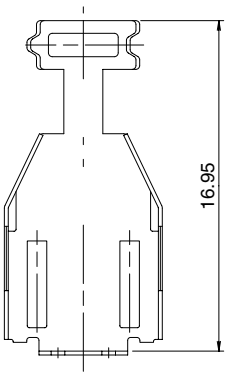
All dimensions: mm

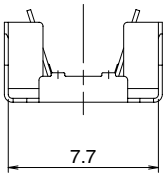
■Plugs

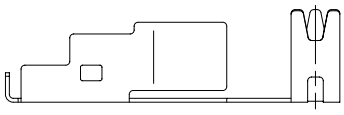
●Micro B - Component, Cover-bottom – Right angle through hole



Part Number	CL No.	Packaging
ZX10-SLDB(3.3)	242-0032-5	4,500 pieces per reel

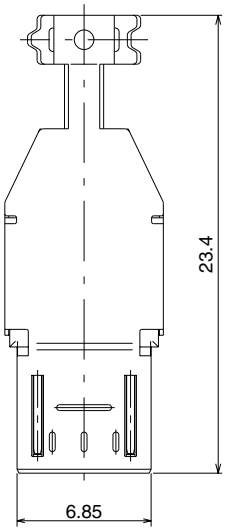


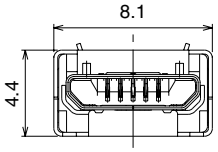


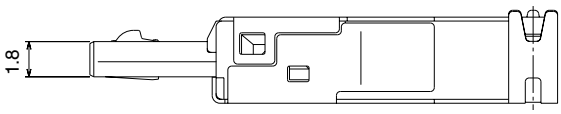


All dimensions: mm

●Assembled



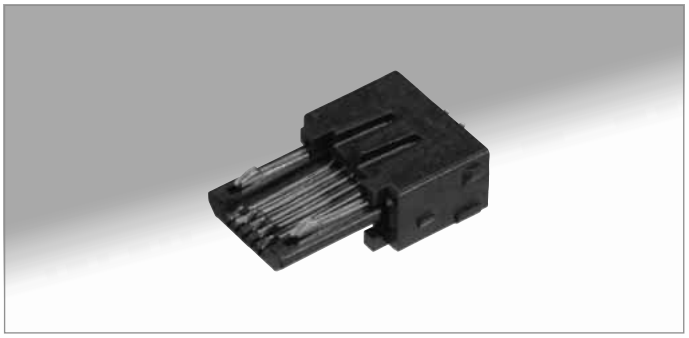




All dimensions: mm

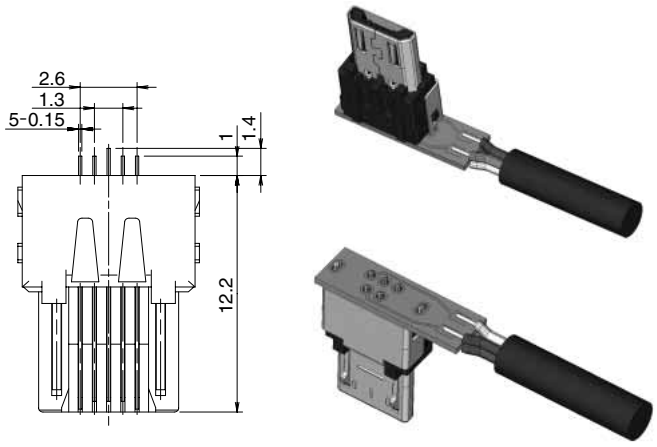
■Plugs

●Micro B - Assembly (insulator/contacts/lock) - Straight through hole PCB wire soldering (non-direct)

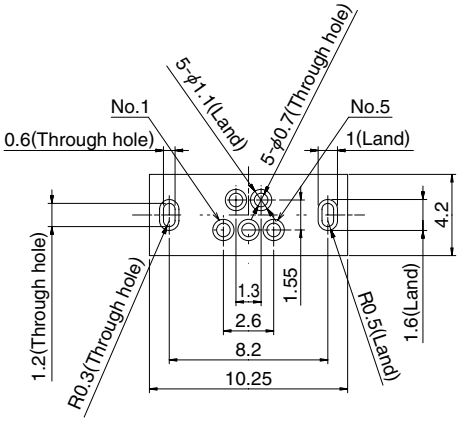


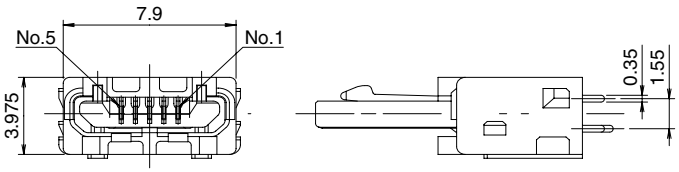
Part Number	CL No.
ZX20-B-5S-UNIT(12)	242-0012-8-12

Contact HRS for Cable Termination Procedure Manual.



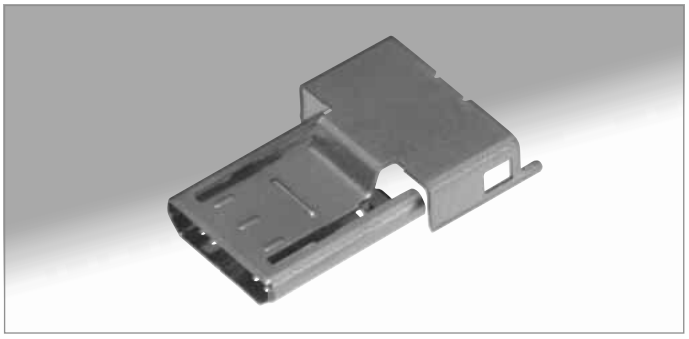
PCB mounting pattern
*PCB required (not supplied)
Max. thickness: 0.6mm



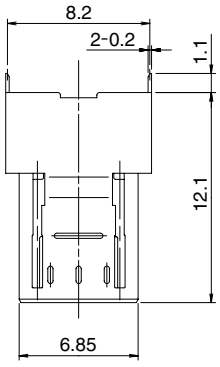


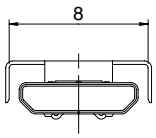
All dimensions: mm

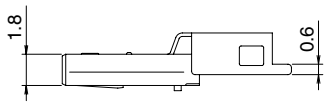
●Micro B - Component, Cover - Straight, through hole



Part Number	CL No.	Packaging
ZX20-B-SLDC	242-0022-1	4,000 pieces per reel







●Assembled

All dimensions: mm

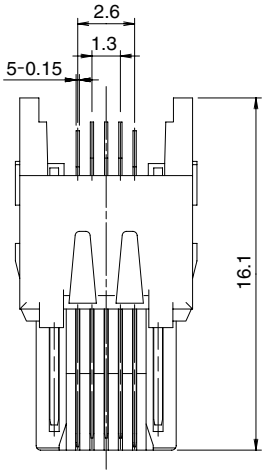
■Plugs

●Micro B - Assembly (insulator/contacts/lock) - Right angle SMT



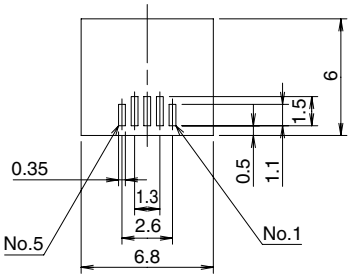
Part Number	CL No.
ZX64-B-5S-UNIT(14)	242-0009-0-14

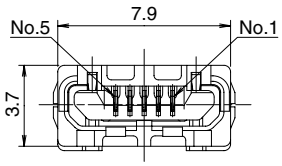
Contact HRS for Cable Termination Procedure Manual.

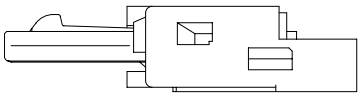




PCB mounting pattern
*PCB required (not supplied)
Max. thickness: 1.0mm





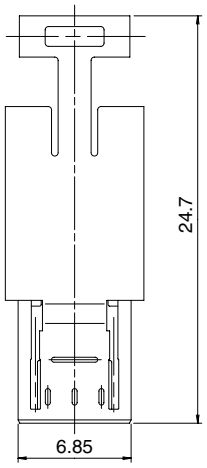


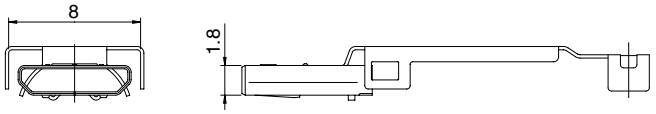
All dimensions: mm

●Micro B - Component, Cover-top – Right angle SMT



Part Number	CL No.	Packaging
ZX64-B-SLDA	242-0013-0	4,000 pieces per reel

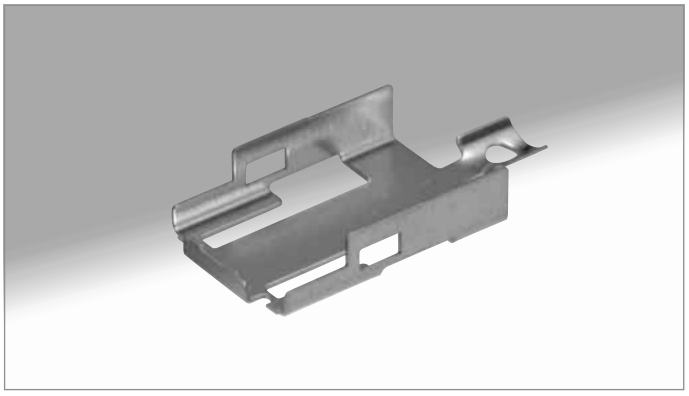




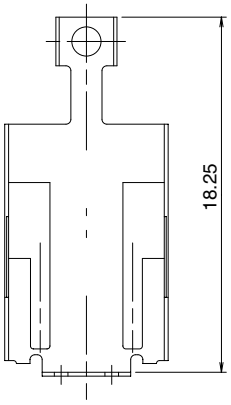
All dimensions: mm

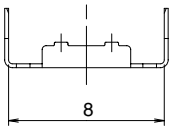
■Plugs

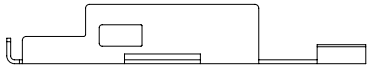
●Micro B - Component, Cover-bottom - Right angle SMT



Part Number	CL No.	Packaging
ZX64-SLDB	242-0049-8	4,000 pieces per reel

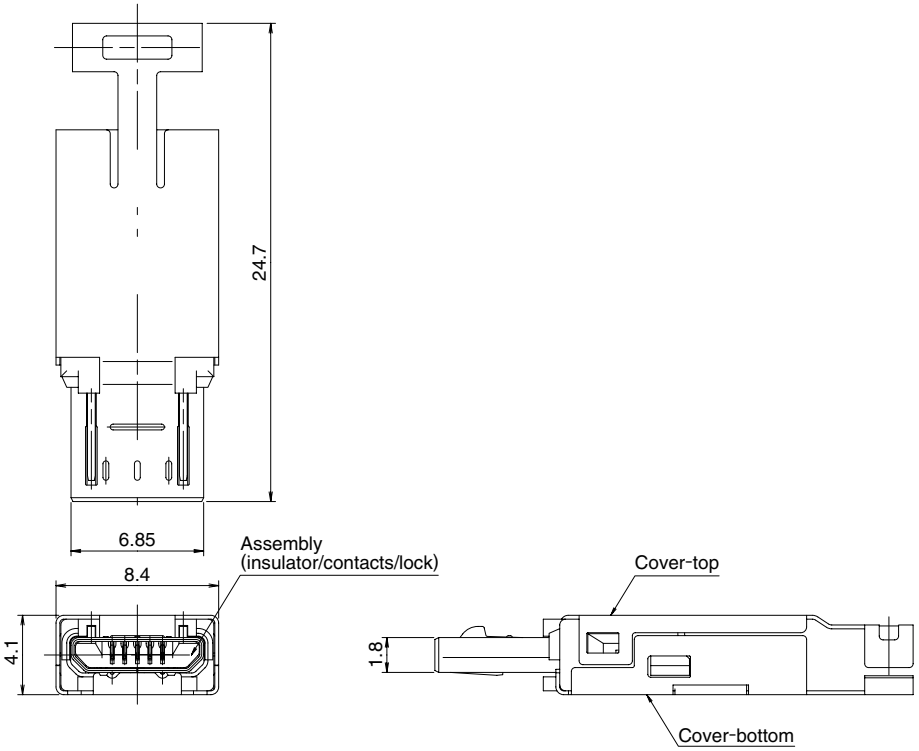






●Assembled

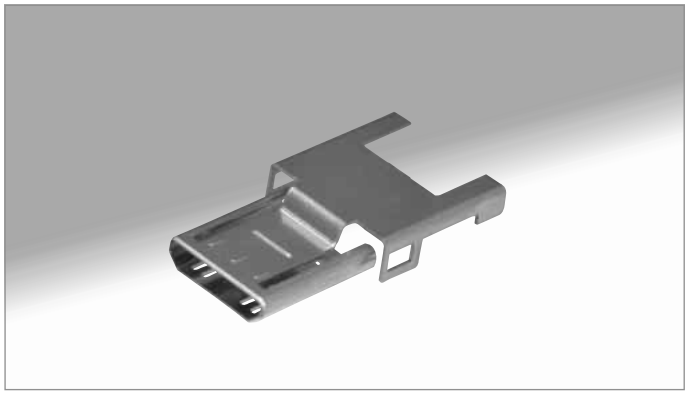
All dimensions: mm



All dimensions: mm

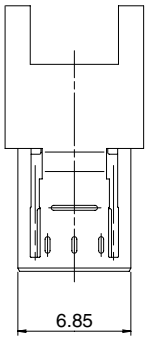
■Plugs

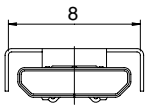
●Micro B - Component, Shell/cover – Right angle SMT

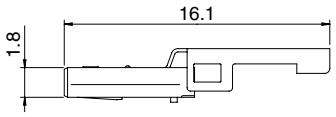


Part Number	CL No.	Packaging
ZX64-B-SLDC	242-0018-4	4,000 pieces per reel

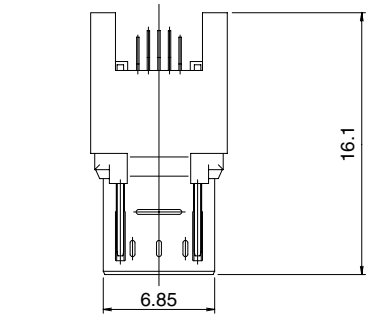
Shell/cover, without cable clamp
This shell/cover does not require ZX64-SLDB.

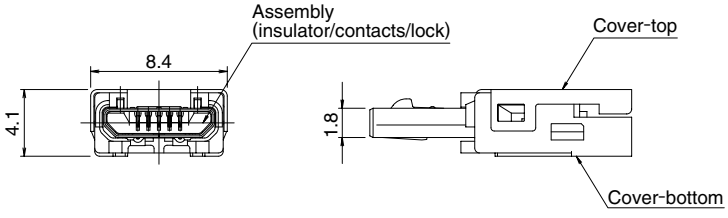






●Assembled

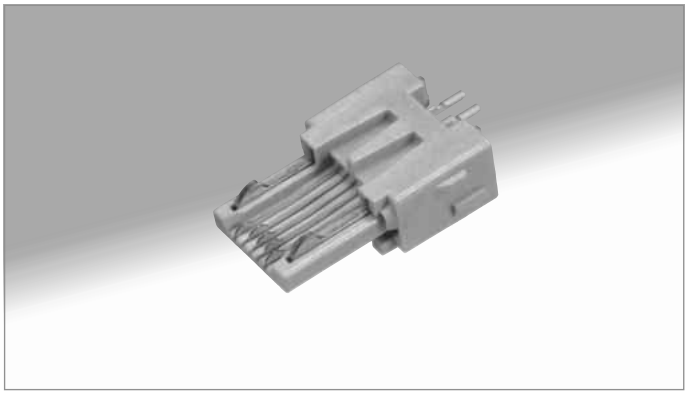




All dimensions: mm

■Plugs

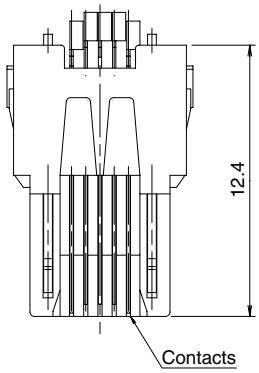
●Micro A - Assembly (insulator/contacts/lock) - Direct wire soldering

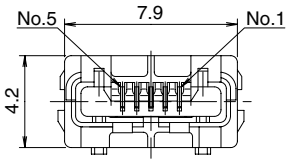


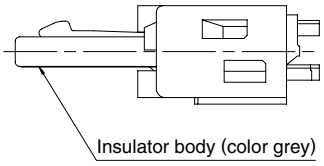
Part Number	CL No.
ZX40-A-5S-UNIT	242-0010-2

Contact HRS for Cable Termination Procedure Manual.



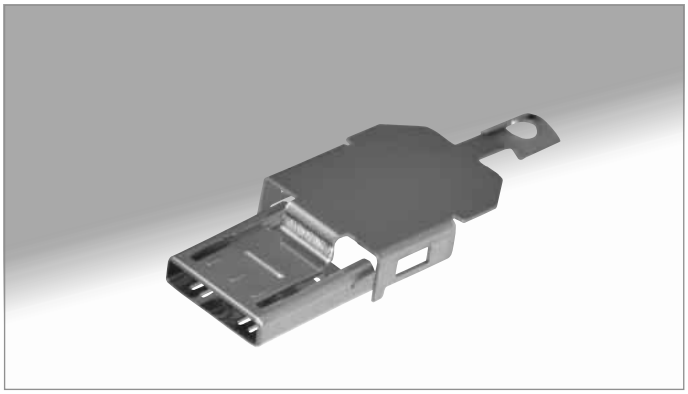




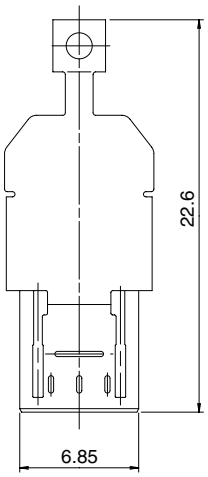


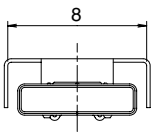
All dimensions: mm

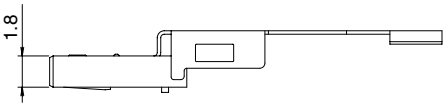
●Micro A - Component, Cover-top - Direct wire soldering



Part Number	CL No.	Packaging
ZX40-A-SLDA	242-0011-5	4,000 pieces per reel



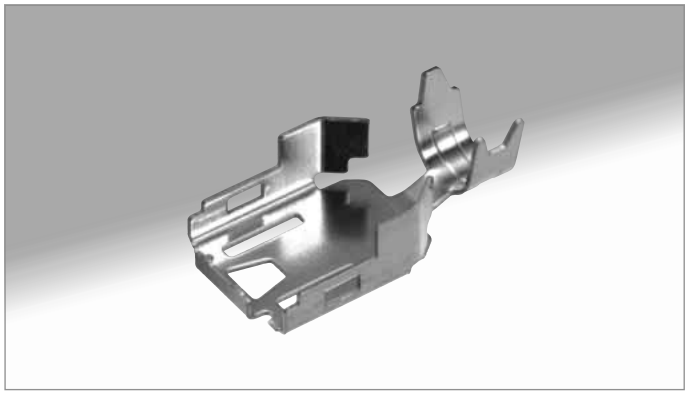


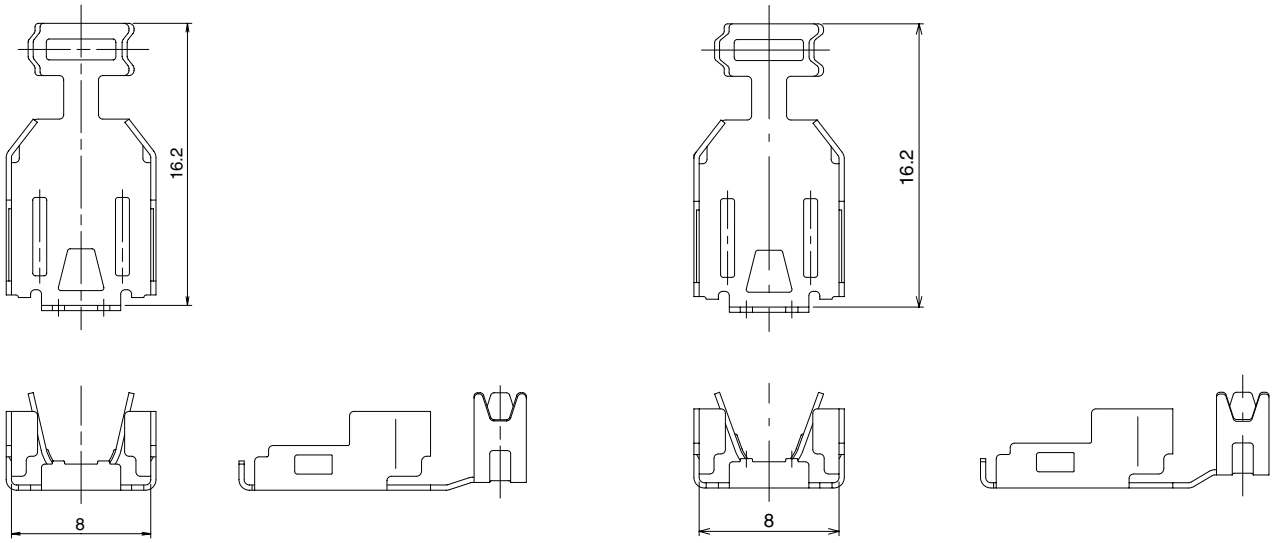


All dimensions: mm

■Plugs

●Micro A, Micro B - Component, Cover-bottom - Direct wire soldering



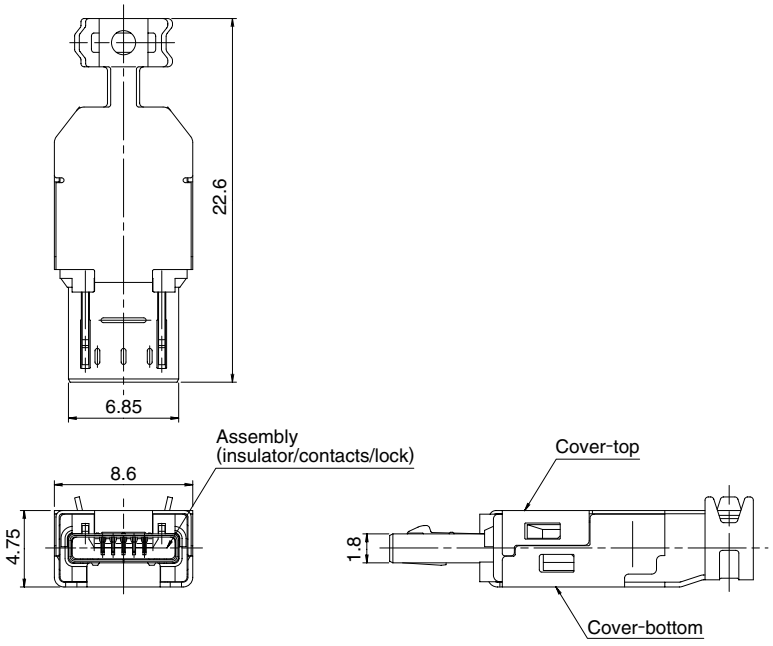


All dimensions: mm

ZX40-SLDB　　ZX40-SLDB(3.3)

Part Number	CL No.	Packaging	Cable dia.
ZX40-SLDB	242-0004-0	4,000 pieces per reel	ϕ3.8
ZX40-SLDB(3.3)	242-0023-4		ϕ3.3

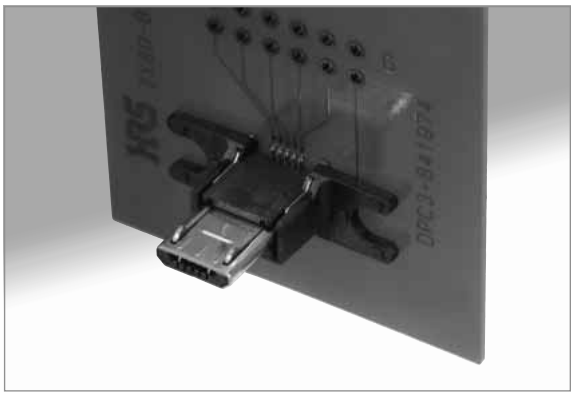
●Assembled

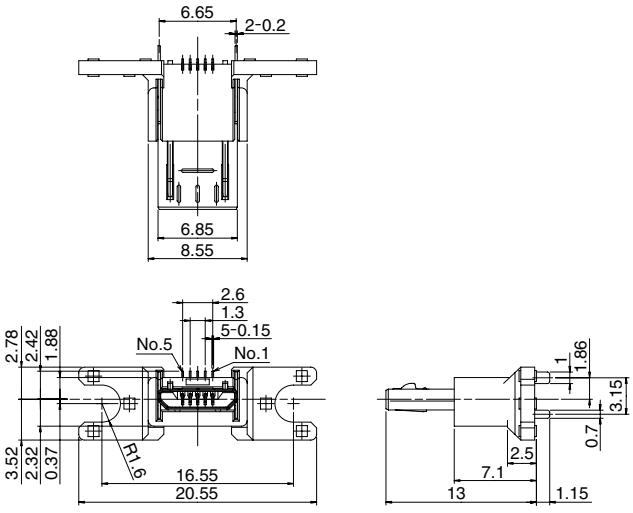


All dimensions: mm

■Plug-Vertical, cradle mount, Shell through hole

●Micro B, with lock

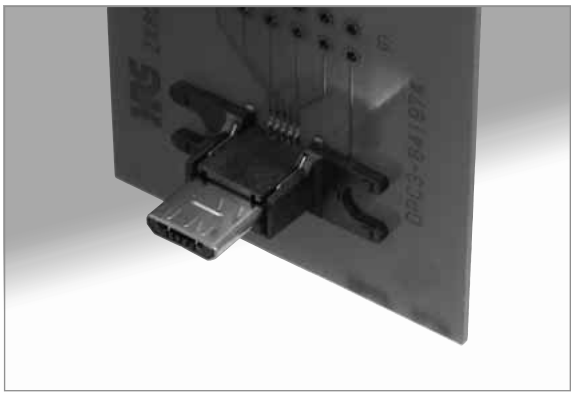


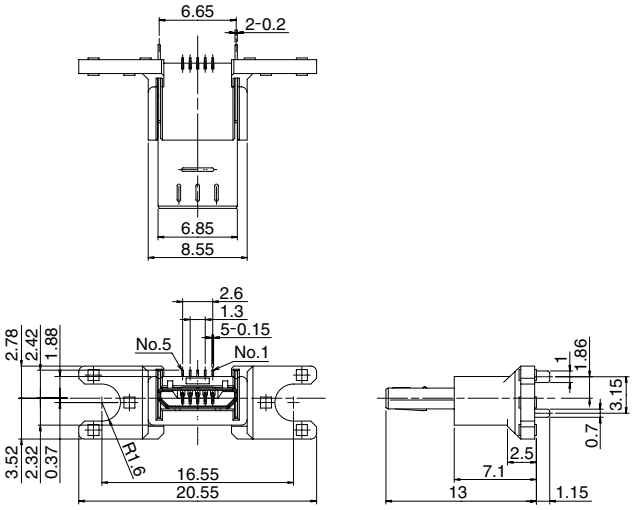


Part Number	CL No.	Packaging
ZX80-B-5S	242-0017-1	100 pieces

All dimensions: mm

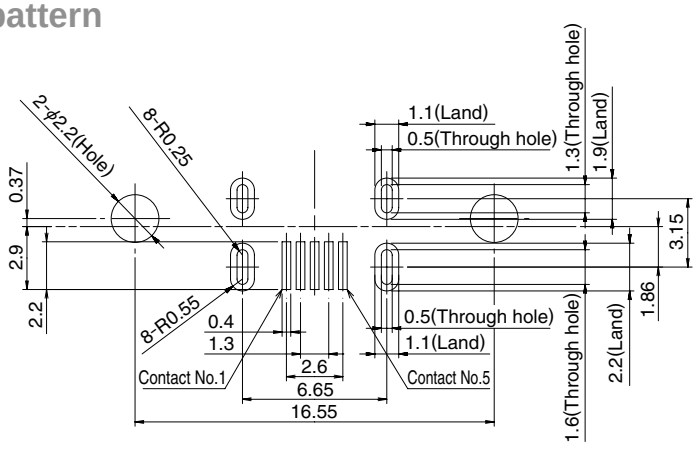
●Micro B, without lock





Part Number	CL No.	Packaging
ZX80-B-5SA	242-0019-7	100 pieces

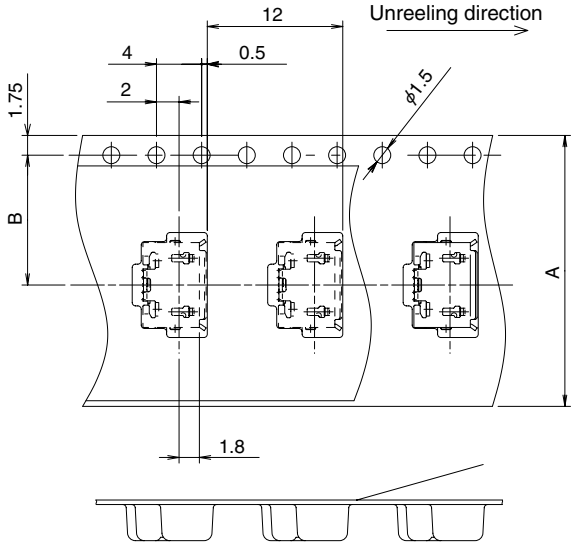
■PCB mounting pattern



All dimensions: mm

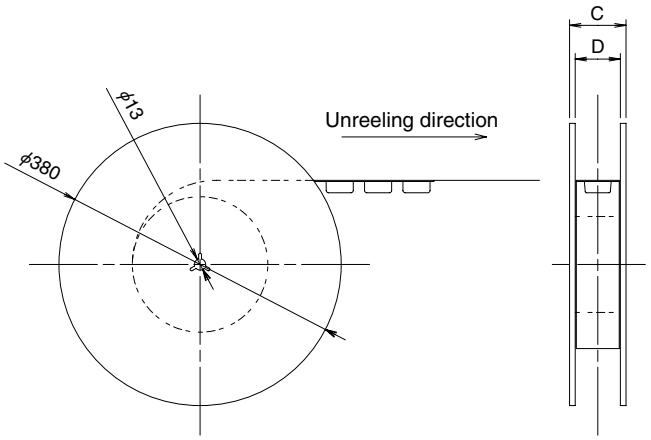
■Packaging Specifications

●Embossed carrier tape dimensions



Part Number	A dimension	B dimension
ZX62-B-5PA	24	11.5
ZX62-AB-5PA	24	11.5
ZX62M-B-5P	24	11.5
Other	16	7.5

●Reel Dimensions

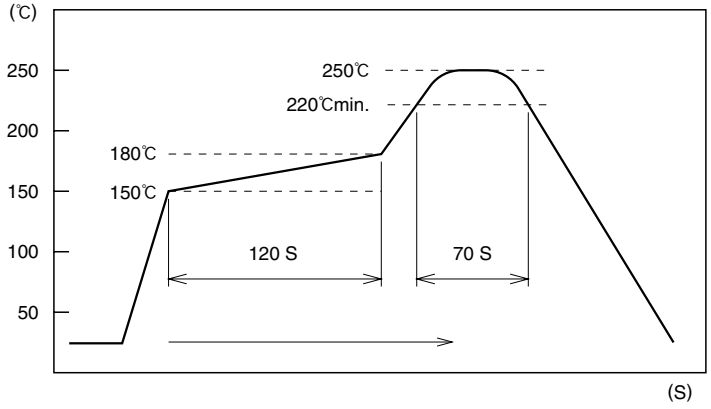


Part Number	C dimension	D dimension
ZX62-B-5PA	30.4	24.4
ZX62-AB-5PA	30.4	24.4
ZX62M-B-5P	30.4	24.4
Other	22.4	16.4

Note : Tape and reel packaging (2,000 pieces/reel).
Order by number of reels.

■Recommended Temperature Profile - Receptacles

●Using lead-free solder paste



HRS test condition

Solder composition :Paste,96.5%Sn/3.0%Ag/0.5%Cu

Test board :Glass epoxy 35mm×35mm×0.8mm thick

The temperature profile is based on the left conditions. In individual applications the actual temperature may vary, depending on solder paste type, volume/thickness and board size/thickness. Contact your solder paste and equipment manufacturer for specific recommendations.

Note 1: Up to 2 cycles of Reflow soldering are possible under the same conditions, provided that there is a return to normal temperature between the first and second cycle.
Note 2: The temperature profile indicates the board surface temperature at the point of contacts with the connector terminals.

■Precautions

1. Exercise care when handling the connectors. Do not subject them to excessive external forces when mating/un-mating.
2. Mate and un-mate as intended, holding by the overmolded body, in the correct direction. Do not un-mate by pulling on the cable.
3. Some tooling marks may be visible on the surfaces of receptacle (shell/cover). No form/fit or function is affected.
4. Appearance of the surface finishes on the receptacles may vary between production runs. No affect on form, fit or function.

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