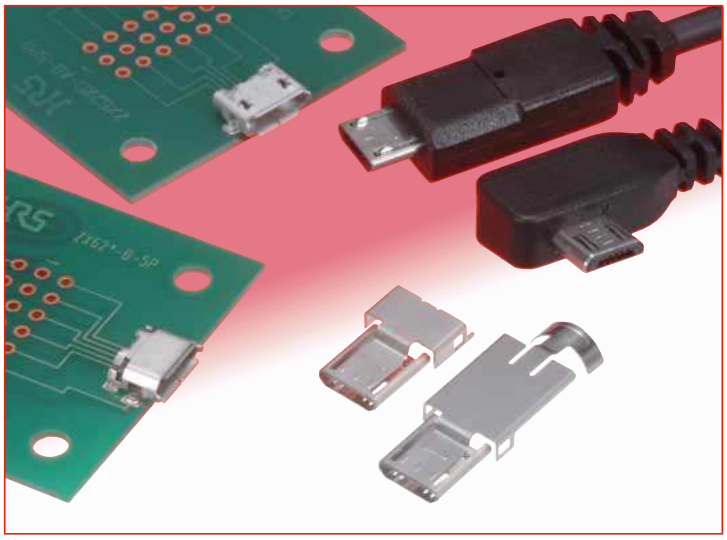
Micro-USB connectors meeting USB 2.0 Standard

ZX Series



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

Fig.1

Overview

Extremely small highly reliable 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 styles, allowing their use in various applications.

Features

1. Size reduction

Compared with the standard Mini-USB 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-A and Micro-B, with direct wire or PCB wire soldering.
Several plug styles can be used for data transmission, earphone or charging applications.

4. Smooth mating and unmating

A smooth mating and unmating operation results in less wear and a longer product life. The unique Hirose active latch mechanism produces a reliable and durable connector.
Even after repeated use, the user will experience a smooth click sensation when mating the connectors.
Note: The statement above only applies when using both plug and receptacles made by Hirose Electric.

5. Hirose was the first company to obtain a Micro-USB certification (TID number).

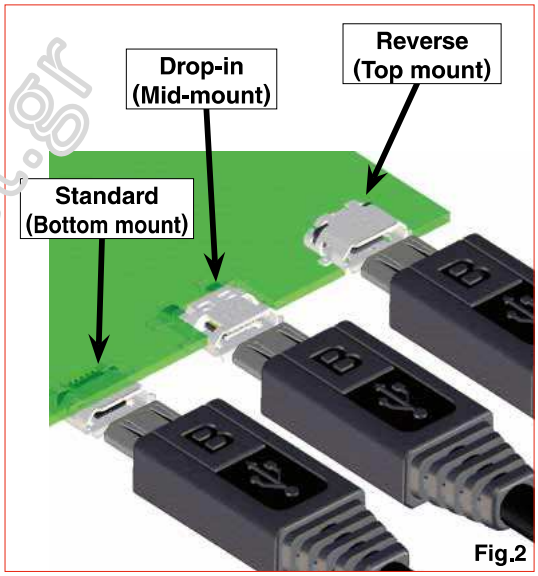


Fig.2

USB 2.0 Hi-Speed (480 Mbps)

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

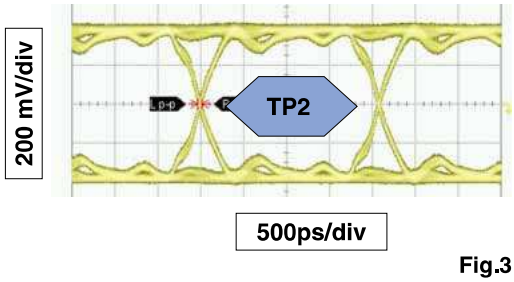


Fig.3

■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 +60°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	LCP	Micro-B: Black, Micro-AB: Gray	UL94V-0
Contacts	Copper alloy	Selective gold plated	————
Shell	Stainless steel	Tin alloy plating	————

■Ordering information

●Receptacles

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

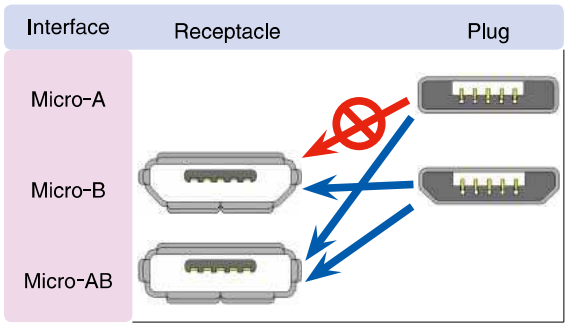
●Plugs

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

ZX 40 - B - SLDA
❶ ❷ ❹ ❾

❶Series name		ZX
❷Termination 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
❸Board 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)
❹Mating side configuration	A	Micro-A
	B	Micro-B
	AB	Micro-AB
❺Number of contacts		5
❻Contact type	P	Receptacle- Male
	S	Plug – Female
❼Serial No.		
❽Shell termination style Receptacles	–Blank	SMT
	8	Through hole (solder tab length: 0.8mm)
❾Components-plugs	UNIT	Assembly (Insulator/contact/lock) Cover (Note 1)

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



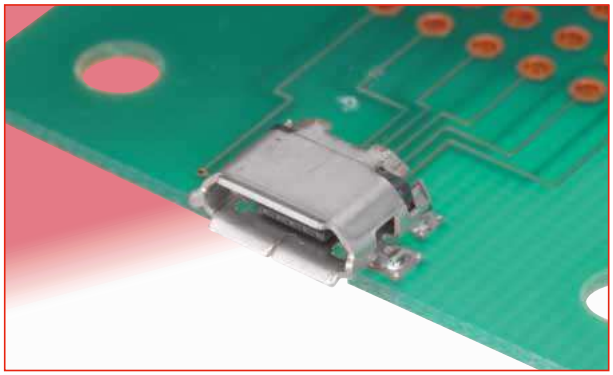
■Configurations

	Mating side configuration	Type		Part No.	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(01)		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	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 (straight, through hole)		Assembly (insulator/contacts/lock) :ZX20-B-5S-UNIT Cover :ZX20-B-SLDC		11
		PCB wire soldering (SMT)		Assembly (insulator/contacts/lock) :ZX64-B-5S-UNIT(14) Cover-top :ZX64-B-SLDA Cover- bottom :ZX64-SLDB		12 and 13
		PCB wire soldering (SMT)		Assembly (insulator/contacts/lock) :ZX64-B-5S-UNIT(14) Cover :ZX64-B-SLDC		12 and 14
	Micro-A	Direct wire soldering		Assembly (insulator/contacts/lock) :ZX40-A-5S-UNIT Cover-top :ZX40-A-SLDA Cover- bottom :ZX40-SLDB		15 and 16
Cradles	Micro-B	SMT + DIP		ZX80-B-5S	With lock 	17
				ZX80-B-5SA	Without lock 	17

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.

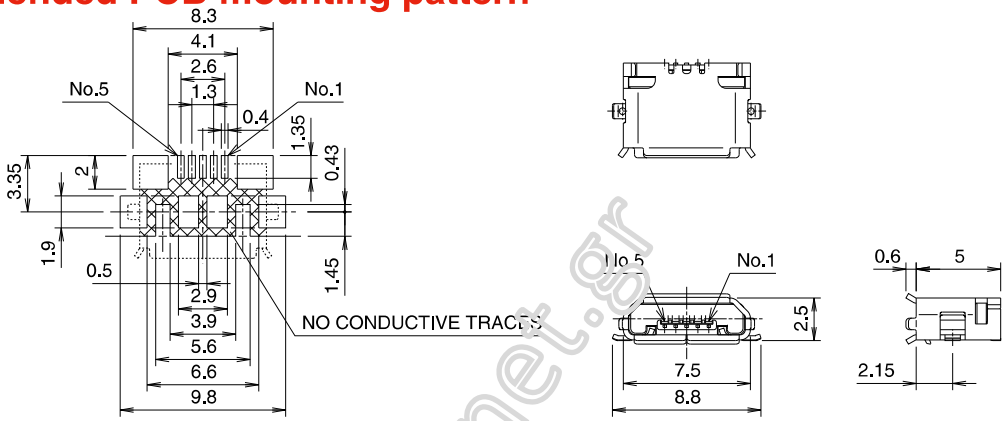
■Receptacles

●Micro B - Reverse (Top mount) Shell SMT



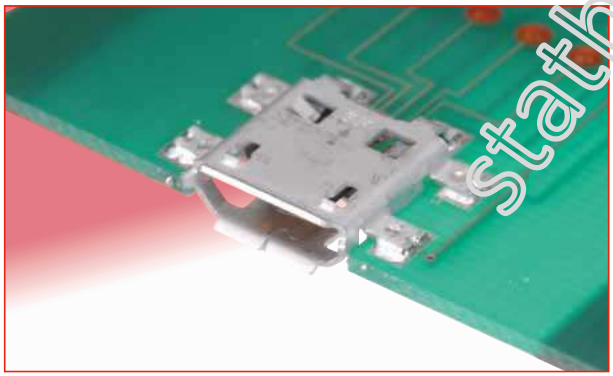
Part No.	HRS No.	Packaging
ZX62R-B-5P	242-0028-8	2,000 pcs/reel

◆Recommended PCB mounting pattern

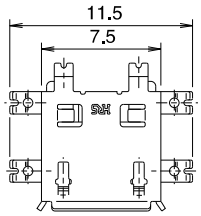


All dimensions: mm

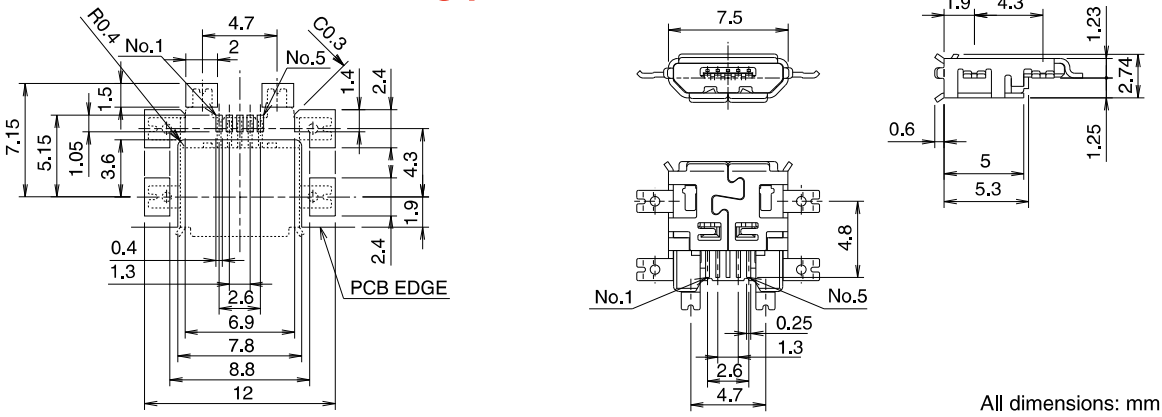
●Micro B - Drop-in (Mid-mount), Shell SMT



Part No.	HRS No.	Packaging
ZX62M-B-5P(01)	242-0024-7 01	1,500 pcs/reel



◆Recommended PCB mounting pattern



All dimensions: mm