

GT43 Series

# Shielded Coaxial Connector Supporting LVDS



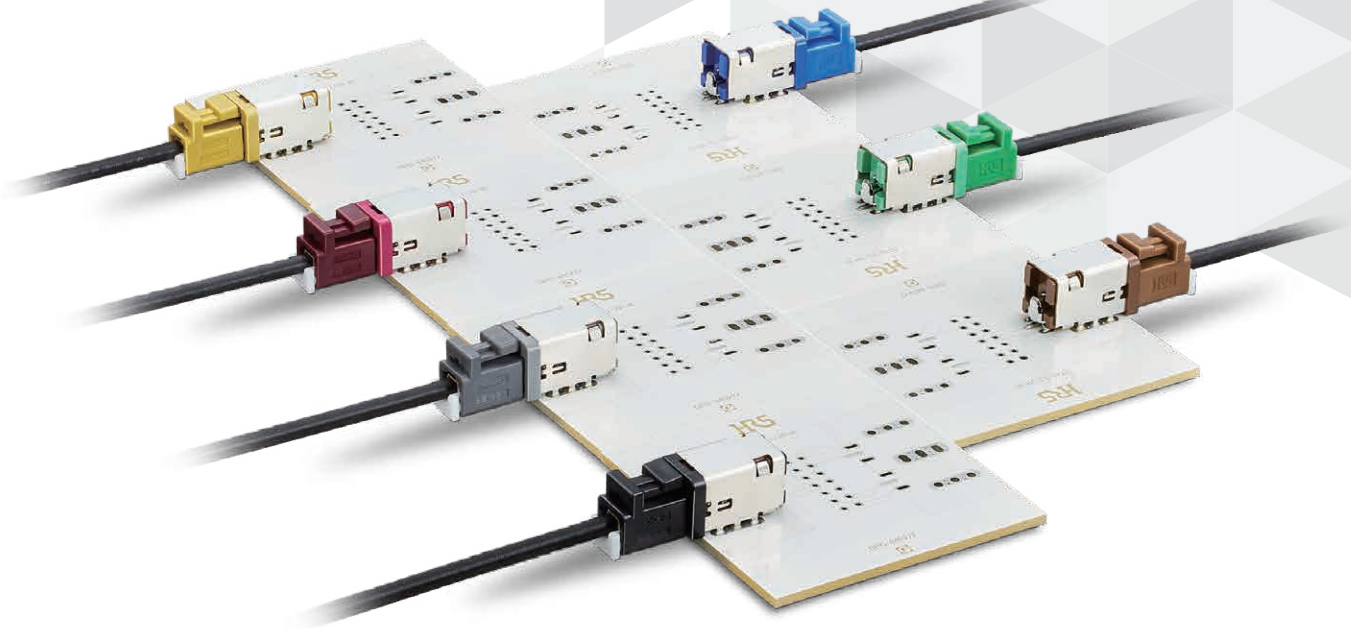
Space Saving



Noise Prevention



Wide Variation



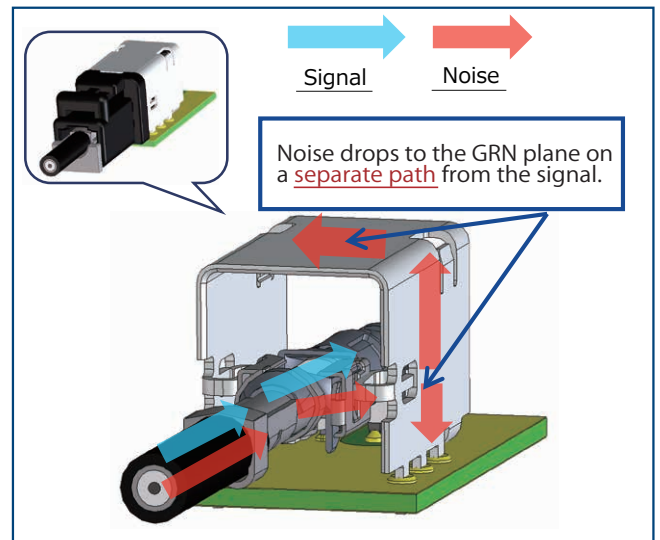
## Features

### 1. Compact and Space-Saving Design

### 2. Noise Resistant Design (Passed strict tests for noise resistance)

The external current flow on the shield case enables a shorter path to the GND plane, such as the board, for enhanced noise resistance.

\*Noise characteristics vary depending on the equipment used. Be sure to evaluate with the equipment used.



### 3. Variety of Mating Keys

Prevent mis-mating with mating keys and 7 color variations.

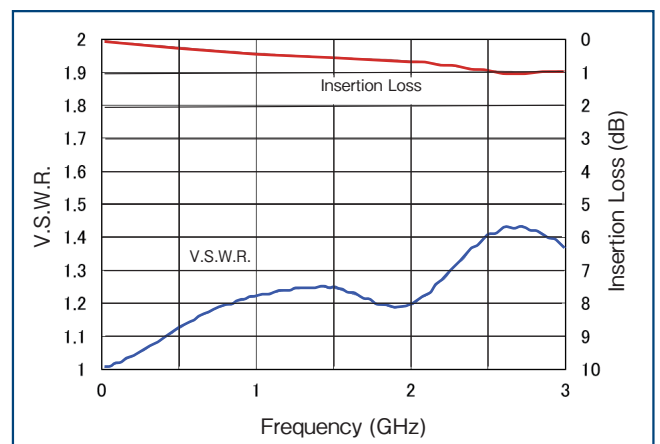
### 4. One Step Termination

The center conductor of the coaxial wire and the outer conductor can be crimped together.

### 5. High Frequency Characteristics

V.S.W.R. is 1.5 or less at DC to 3GHz.

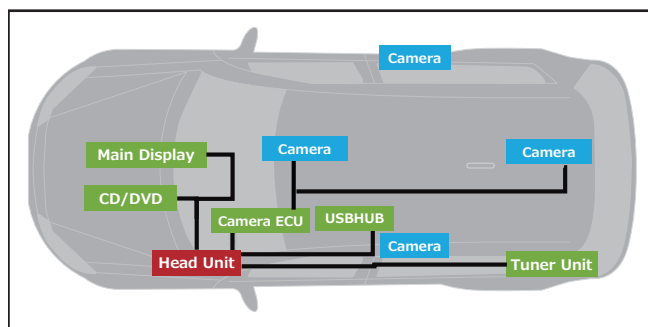
\*Please consider the GT21 Series or GT36S Series for non-video transmission use.



Measured with Board to Cable Assembly

## Applications

GT43 can be used for various applications such as the head unit and camera image transmission.



## Product Specifications

Rated Current	1A	Operating Temperature (Note 1)	-40 to +105°C
Rated Voltage	50V DC		

Item	Specification	Conditions
Contact Resistance	50mΩ Max.	Measured at 1A DC
Insulation Resistance	100MΩ Min.	Measured at 500V DC
Withstanding Voltage	No flashover or insulation breakdown	500V AC for 1 min.
Mating Durability	Contact Resistance : 100mΩ Max.	30 times insertion and extraction
Vibration Resistance	No electrical discontinuity of 10 μs Min. Contact Resistance : 100mΩ Max. No damage, cracks or part dislocation.	Frequency 20 to 200Hz. 3 hours in 3 directions at an acceleration of 43.1m/s <sup>2</sup>
Thermal Shock	Contact Resistance : 100mΩ Max. No damage, cracks or part dislocation.	Temperature : -40 → +5 to +35 → +105 → +5 to +35°C Time : 30 → 5 → 30 → 5 minutes Above conditions repeated for 1,000 cycles
Heat Resistance	Contact Resistance : 100mΩ Max. No damage, cracks or part dislocation.	Left at 105°C for 300 hours.
Cold Resistance	Contact Resistance : 100mΩ Max. No damage, cracks or part dislocation.	Left at -40°C for 120 hours.
Moisture Resistance	Contact Resistance : 100mΩ Max. Insulation Resistance : 100MΩ Min. No damage, cracks or part dislocation.	Left at 60°C and 90 to 95% humidity for 500 hours.

Note 1 : Includes temperature rise due to current flow.

Note 2 : Contact Resistance of the outer conductor after the environmental and endurance tests shall be 150 mΩ Max.

## Material / Finish

Product	Part	Material	Color / Finish	Remarks
Receptacle	Center Contact	Brass	Tin Plating	-
	Insulator	PA	Black	UL94V-0
	External Contact	Brass	Tin Plating	-
	Housing	PA	Brown, Green, Blue, Black (Note), Gray, Purple, Mustard	UL94V-0
	Shield Case	Copper Alloy	Tin Plating	-
Plug	Housing	PBT	Brown, Green, Blue, Black (Note), Gray, Purple, Mustard	UL94HB
Jack (In-line Type)	Housing	PBT	Black	UL94HB
Retainer		PBT	White	UL94HB
Shielding Plate		Copper Alloy	Tin Plating	-
Coaxial Terminal	Center Contact	Copper Alloy	Tin Plating	-
	Insulator	PPS	Black	UL94V-0
	External Contact	Copper Alloy	Tin Plating	-

Note : The standard color is black.

## Product Number Structure

Refer to the chart below when determining the product specifications from the product number.  
Please select from the product numbers listed in this catalog when placing orders.

### Connector

## GT43 D - 1 P - H (F) (30)

① ② ③ ④ ⑤ ⑥ ⑦

① Series Name	GT43	⑤ Contact Shape or Component Type	H : SMT Right Angle HU : Housing R : Retainer CSB : Shielding Plate
② Specifications	None : Standard Product D : Ground Spring Type	⑥ Mating Key (Note)	A, B, C, D, E, F, H
③ No. of Pos.	1pos.	⑦ Packaging	None : Tray Packing (30) : Embossed Packaging
④ Connector Type	P : Receptacle S : Plug PP : Jack (In-line Type) P/S : Compatible with Both Plug and Jack		

Note : D key is the standard mating key.

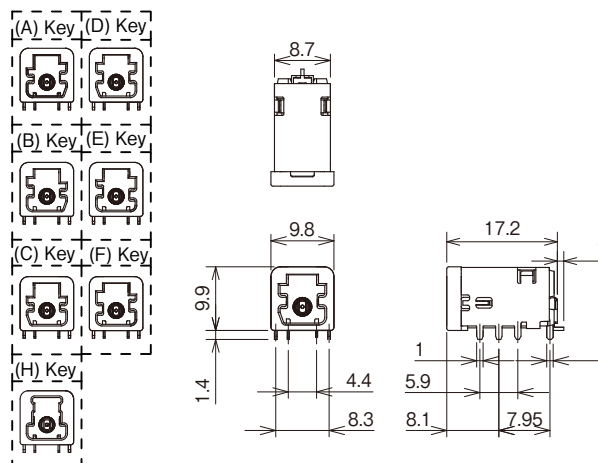
### Coaxial Terminal

## GT43 - 2428/1.6-2.9 SCF

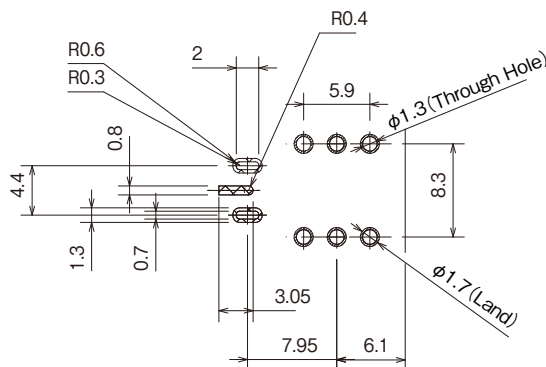
① ② ③

① Series Name	GT43	③ Contact Shape	SCF: Female Contact PCF: Male Contact
② Wire Size	2428/1.6-2.9 : 1.5D Equivalent		

# Receptacle



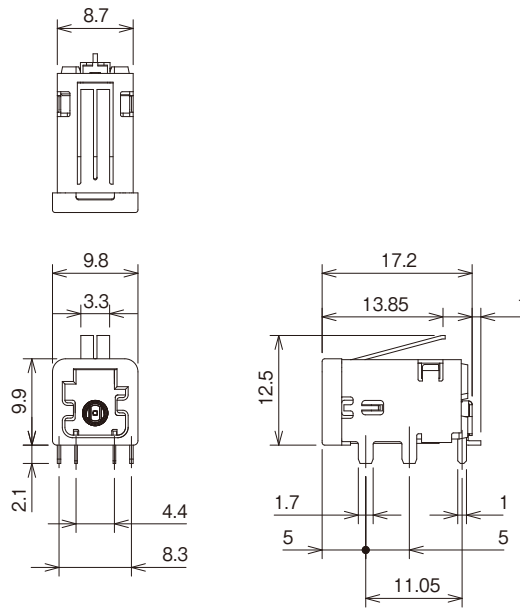
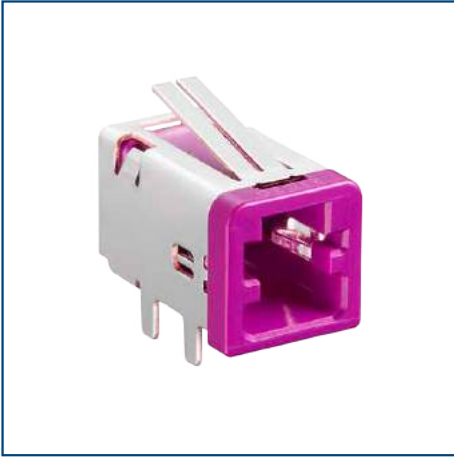
**Recommended PCB Layout**  
(PCB Thickness : 1.6mm, Metal Mask Thickness : 0.15mm)



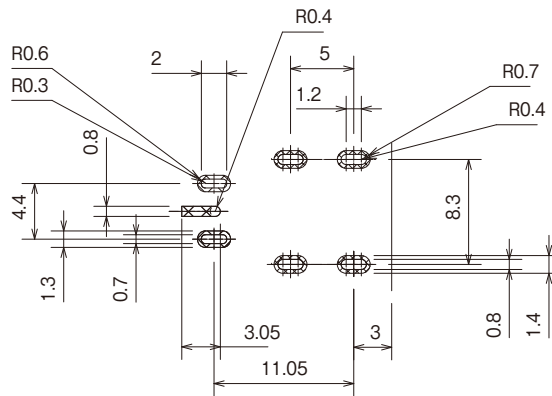
Part No.	HRS No.	Color	Mating Key	Purchase Unit (##) : None	Purchase Unit (##) : (30)
GT43-1P-H(A)(##)	CL0753-1001-0-##	Brown	A Key	70pcs per tray	290pcs per reel
GT43-1P-H(B)(##)	CL0753-1013-0-##	Green	B Key		
GT43-1P-H(C)(##)	CL0753-1014-0-##	Blue	C Key		
GT43-1P-H(D)(##) (Note)	CL0753-1015-0-##	Black	D Key		
GT43-1P-H(E)(##)	CL0753-1016-0-##	Gray	E Key		
GT43-1P-H(F)(##)	CL0753-1017-0-##	Purple	F Key		
GT43-1P-H(H)(##)	CL0753-1025-0-##	Mustard	H Key		

Note : Standard Color/Mating Key.

## With Ground Spring

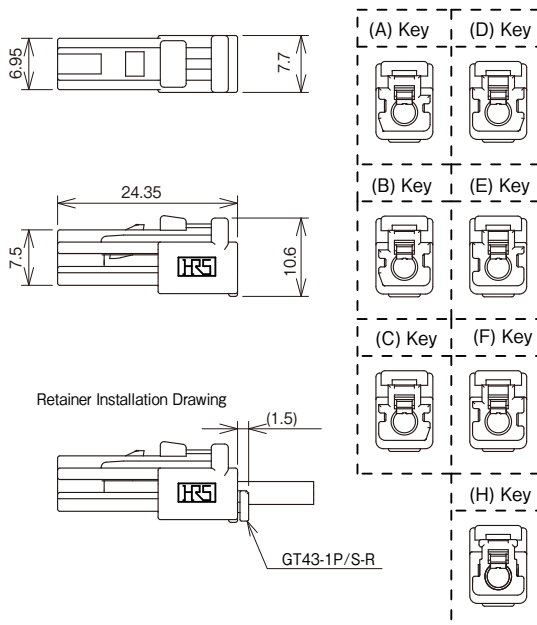


### Recommended PCB Layout (PCB Thickness : 1.6mm, Metal Mask Thickness : 0.15mm)



Part No.	HRS No.	Color	Mating Key	Purchase Unit
GT43D-1P-H(F)	CL0753-1018-0-00	Purple	F Key	70pcs per tray

# Plug

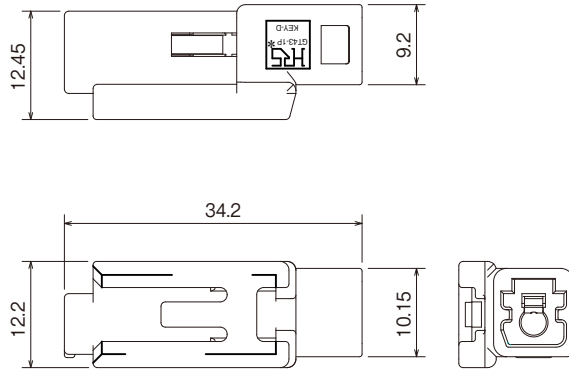


Part No.	HRS No.	Color	Mating Key	Purchase Unit
GT43-1S-HU(A)	CL0753-1002-0-00	Brown	A Key	1,000pcs per bag
GT43-1S-HU(B)	CL0753-1008-0-00	Green	B Key	
GT43-1S-HU(C)	CL0753-1009-0-00	Blue	C Key	
GT43-1S-HU(D) (Note)	CL0753-1010-0-00	Black	D Key	
GT43-1S-HU(E)	CL0753-1011-0-00	Gray	E Key	
GT43-1S-HU(F)	CL0753-1012-0-00	Purple	F Key	
GT43-1S-HU(H)	CL0753-1026-0-00	Mustard	H Key	

Note 1 : Standard Color/Mating Key.

Note 2 : Compatible coaxial terminal is GT43-2428/1.6-2.9SCF. Use with the retainer (GT43-1P/S-R), sold separately.

## Jack (In-line Type)



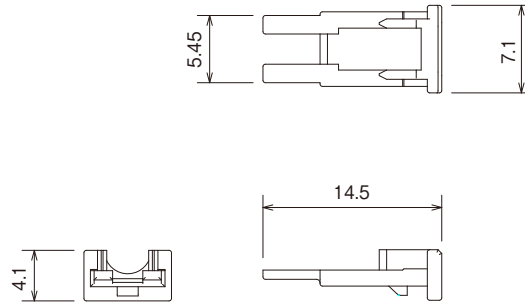
Part No.	HRS No.	Color	Mating Key	Purchase Unit
GT43-1PP-HU(D)	CL0753-1006-0-00	Black	D Key	500pcs per bag

Note 1 : Standard Color/Mating Key.

Note 2 : Compatible coaxial terminal is GT43-2428/1.6-2.9PCF. Use with the retainer (GT43-1P/S-R), sold separately.



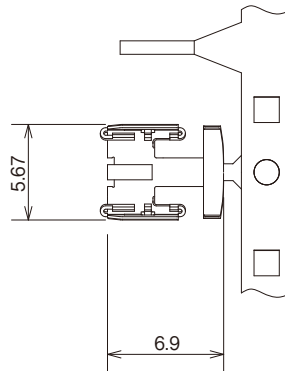
## Retainer



Part No.	HRS No.	Color	Purchase Unit
GT43-1P/S-R	CL0753-1007-0-00	White	2,000pcs per bag

Note : Applicable to both the plug (GT43-1S-HU(#)) and the jack (GT43-1PP-HU(D)).

## Shielding Plate

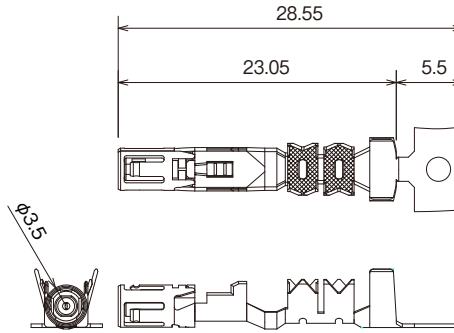


Part No.	HRS No.	Packaging Specification	Purchase Unit
GT43-1P/S-CSB	CL0753-1005-0-00	2,450pcs per reel 2 reels per box (4,900pcs total)	4,900pcs per box

Note : Compatible coaxial terminals are GT43-2428/1.6-2.9SCF, GT43-2428/1.6-2.9PCF.

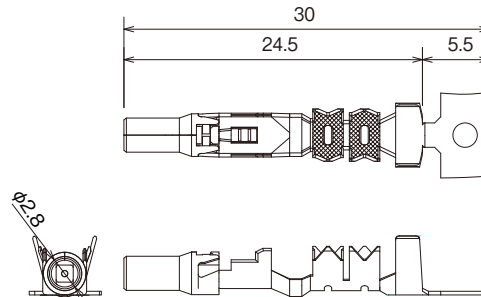
## Coaxial Terminal

### Female Contact



Part No.	HRS No.	Applicable Cable	Purchase Unit
GT43-2428/1.6-2.9SCF	CL0753-1003-0-00	Core Size : 24 to 28 AWG Insulation Outer Diameter : $\phi$ 1.5 to 2.0 Cable Jacket Outer Diameter : $\phi$ 2.6 to 3.1	2,500pcs per reel

### Male Contact

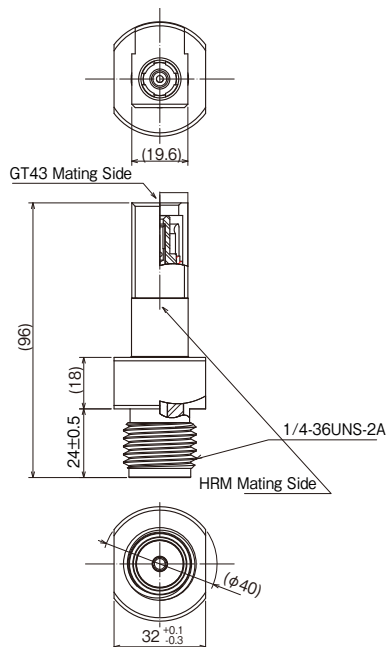


Part No.	HRS No.	Applicable Cable	Purchase Unit
GT43-2428/1.6-2.9PCF	CL0753-1004-0-00	Core Size : 24 to 28 AWG Insulation Outer Diameter : $\phi$ 1.5 to 2.0 Cable Jacket Outer Diameter : $\phi$ 2.6 to 3.1	2,500pcs per reel

## Conversion Adapter

### SMA Conversion Adapter

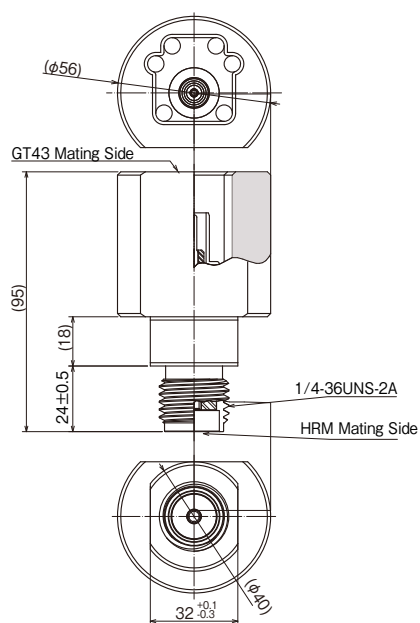
(Mated Portion-SMA Side : Jack, GT43 Side : Plug)



Part No.	HRS No.	Purchase Unit
GT43S-HRMJ	CL0753-1024-0-00	10pcs per bag

### SMA Conversion Adapter

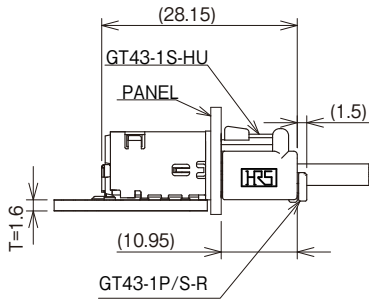
(Mated Portion-SMA Side : Jack, GT43 Side : Jack)



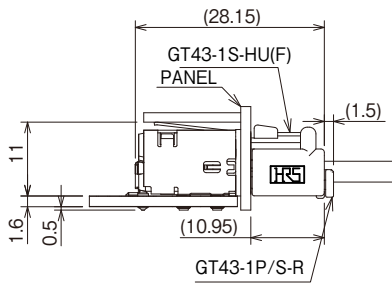
Part No.	HRS No.	Purchase Unit
GT43P-HRMJ	CL0753-1023-0-00	10pcs per bag

## Mating Dimensions Diagram

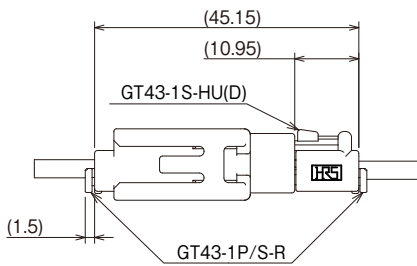
### Receptacle to Plug Connection



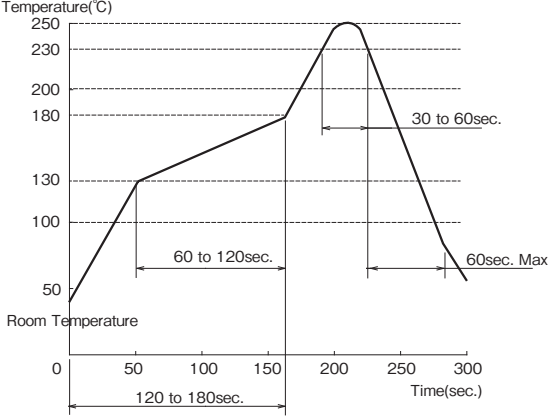
### Receptacle (with Ground Spring) to Plug Connection



### Jack (In-line Type) to Plug Connection



## Usage Precautions

<p>Recommended Temperature Profile</p>	 <p>Temperature(°C)</p> <p>250 230 200 180 130 100 50 Room Temperature 0</p> <p>0 50 100 150 200 250 300 Time(sec.)</p> <p>60 to 120sec. 120 to 180sec. 30 to 60sec. 60sec. Max.</p> <p><b>[Conditions]</b>  1. Peak Temperature 250°C Peak  2. Heating Part 230°C Min. 30 to 60sec. Max.  3. Preheating Section 130 to 180°C, 60 to 120sec.  4. Number of Times 2 times Max.</p>
<p>Recommended Manual Soldering Profile</p>	<p>Soldering Iron Temperature : 280 to 300°C , Soldering Time : 2 seconds Max.</p>
<p>Cautions</p>	<ol style="list-style-type: none"> <li>1. Extracting the connector by force may damage the connector. If it is difficult to pull out, press down lightly once and then pull out the lock.</li> <li>2. Always turn off power source before reseating the connector.</li> <li>3. Please do not touch the terminal area as it is very dangerous while the power is on.</li> <li>4. Contact a Hirose representative for harness procedures and instructions.</li> </ol>

## While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please confirm the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, assurance will not be given.

If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/ defense etc. Hirose must review before assurance of reliability can be given.