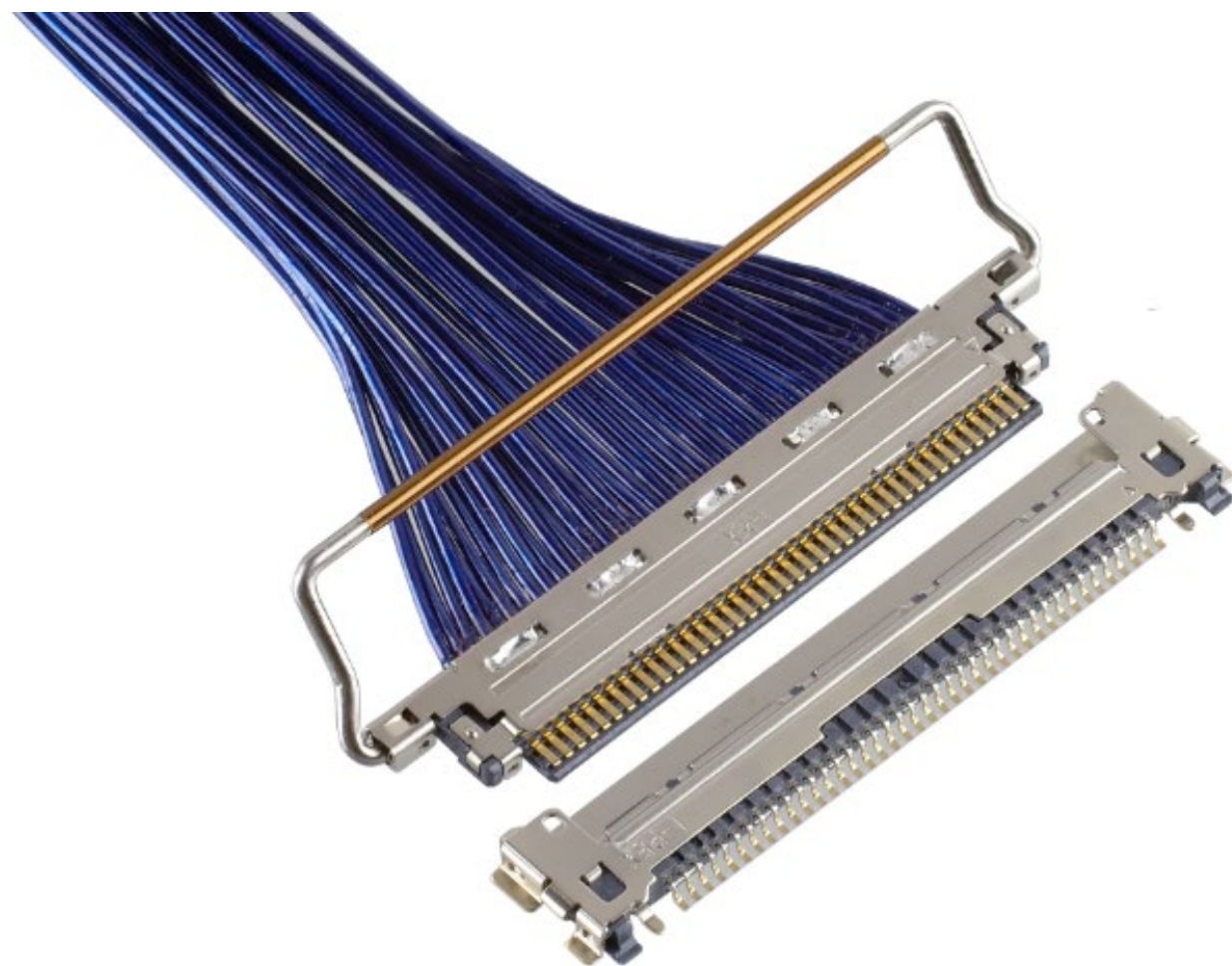


# CABLINE<sup>®</sup>-CA

0.4 mm pitch, Micro-coax connector

# CABLINE<sup>®</sup>-CA : Product Summary

0.4mm pitch, Horizontal mating type Micro-coaxial connector with mechanical lock

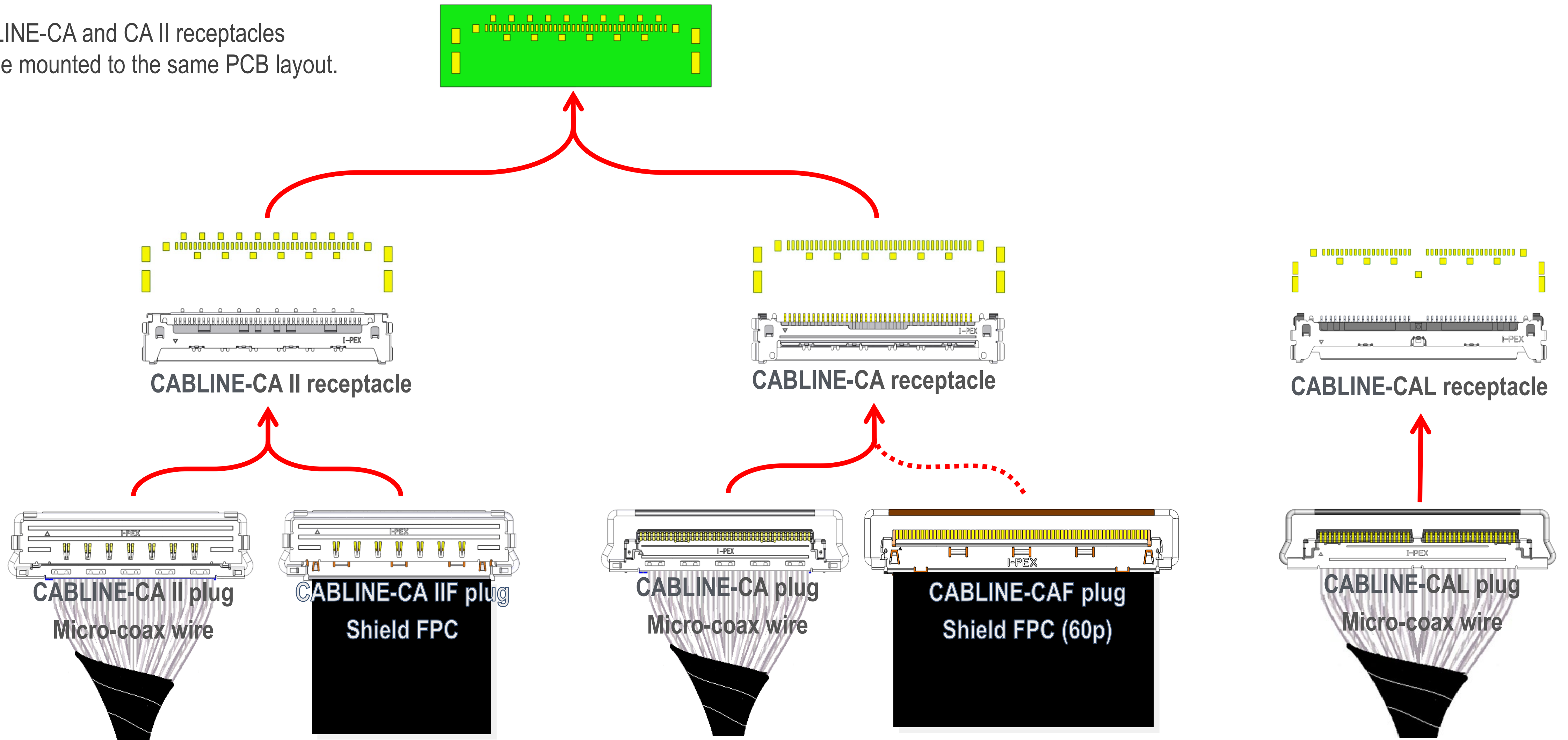


CABLINE<sup>®</sup>-CA

■ Name	CABLINE <sup>®</sup> -CA
■ Pitch	0.4 mm
■ Pin range	6 – 60 p
■ Available pin count	10, 12, 20, 30, 40, 50, 60 p
■ Mating type	Horizontal mating type
■ Mated Height	1.0 mm +/- 0.1 mm
■ Depth	5.73 mm *including lock bar
■ Width formula	6.95 + (0.4*?p) mm *including lock bar
■ Wire	Micro-Coax 45Ω AWG #38 or smaller wire Micro-Coax 50Ω AWG #40 or smaller wire Twincoax AWG #40 Discrete AWG #34 or smaller wire

# CABLINE<sup>®</sup>-CA series (0.4 mm pitch) connectors

CABLINE-CA and CA II receptacles  
can be mounted to the same PCB layout.

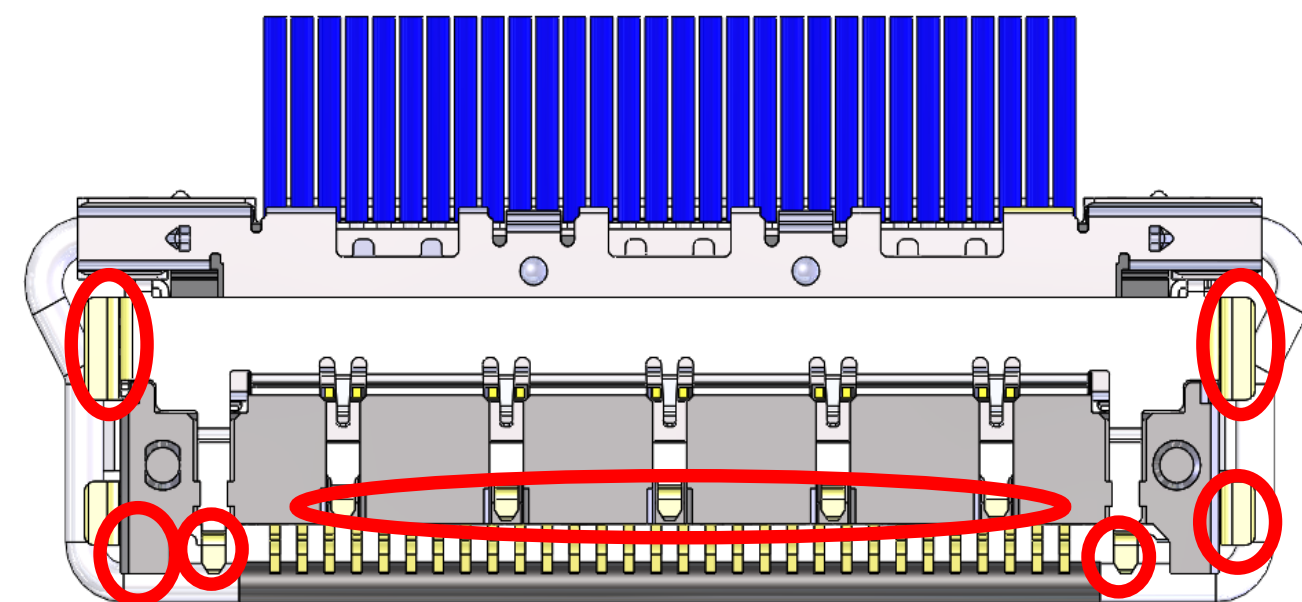




# Grounding path

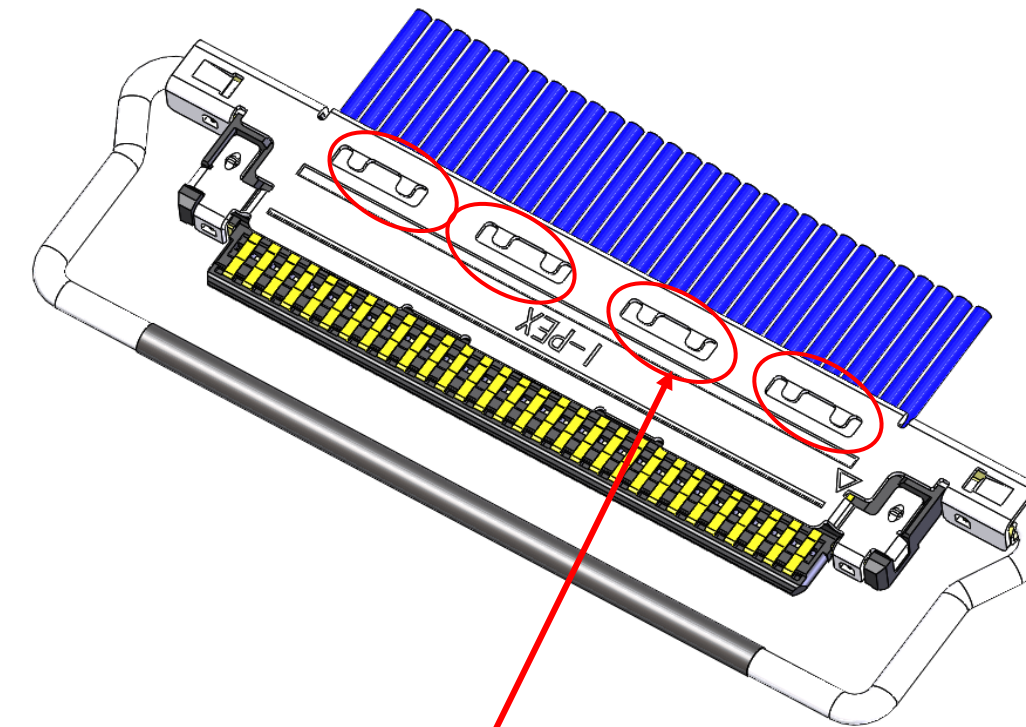
## Multi ground connection design

	12P	20P	30P	40P	50P	60P
GND BAR to PLUG	2pcs	5pcs	7pcs	9pcs	11pcs	12pcs
PLUG to RECE	7pcs	9pcs	13pcs	15pcs	17pcs	17pcs
RECE to PCB	8pcs	9pcs	11pcs	12pcs	13pcs	13pcs

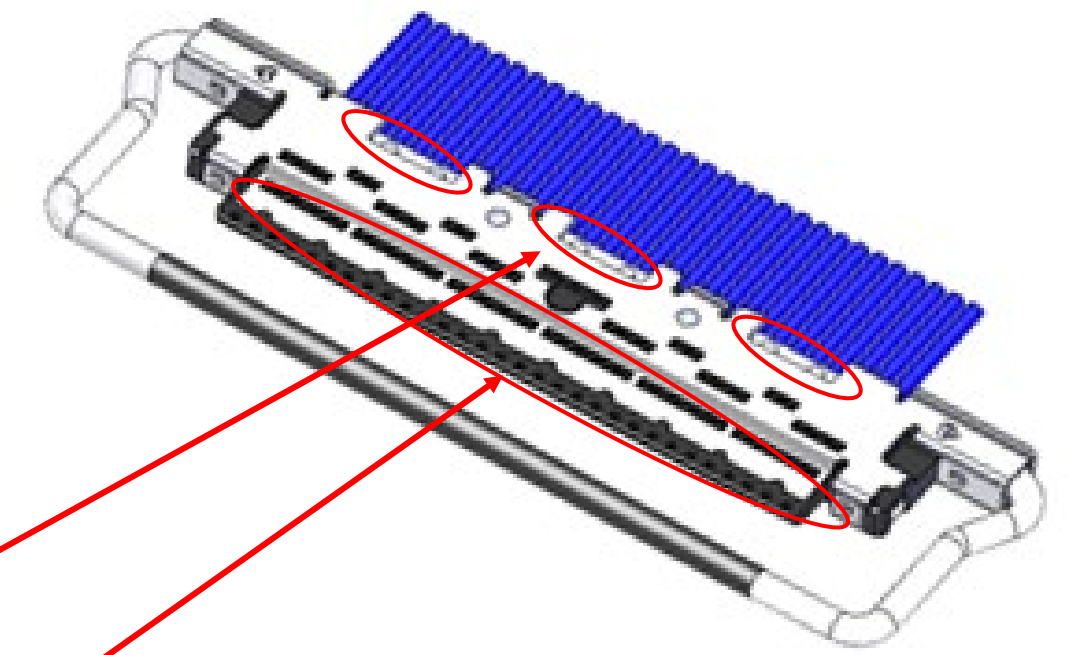


Back view : GND to PCB

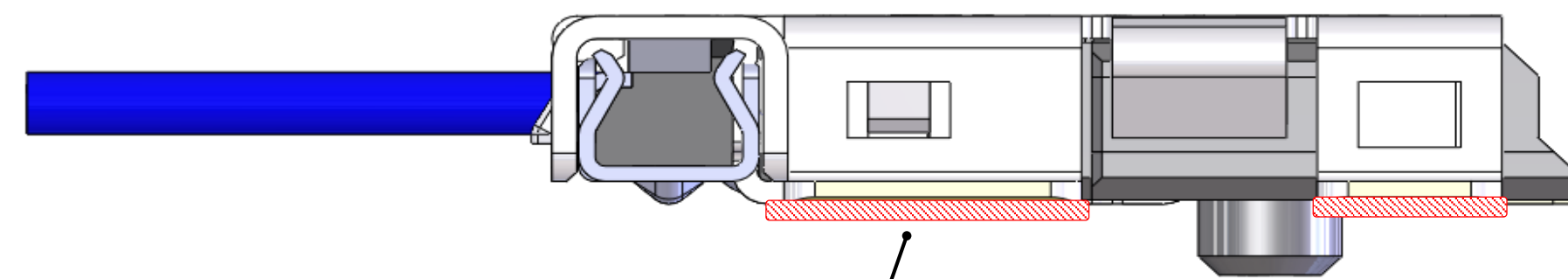
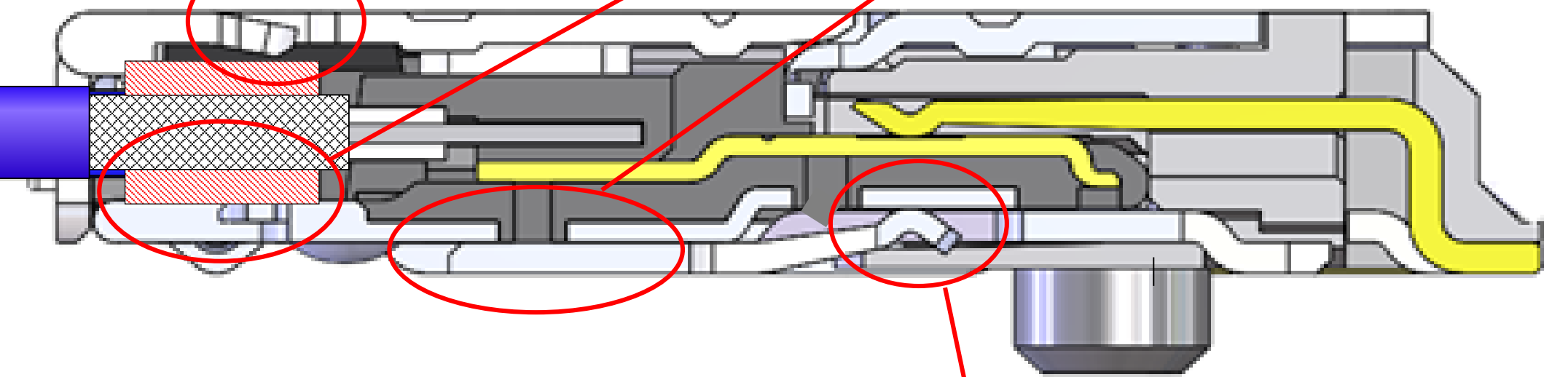
Top view : Plug shell A



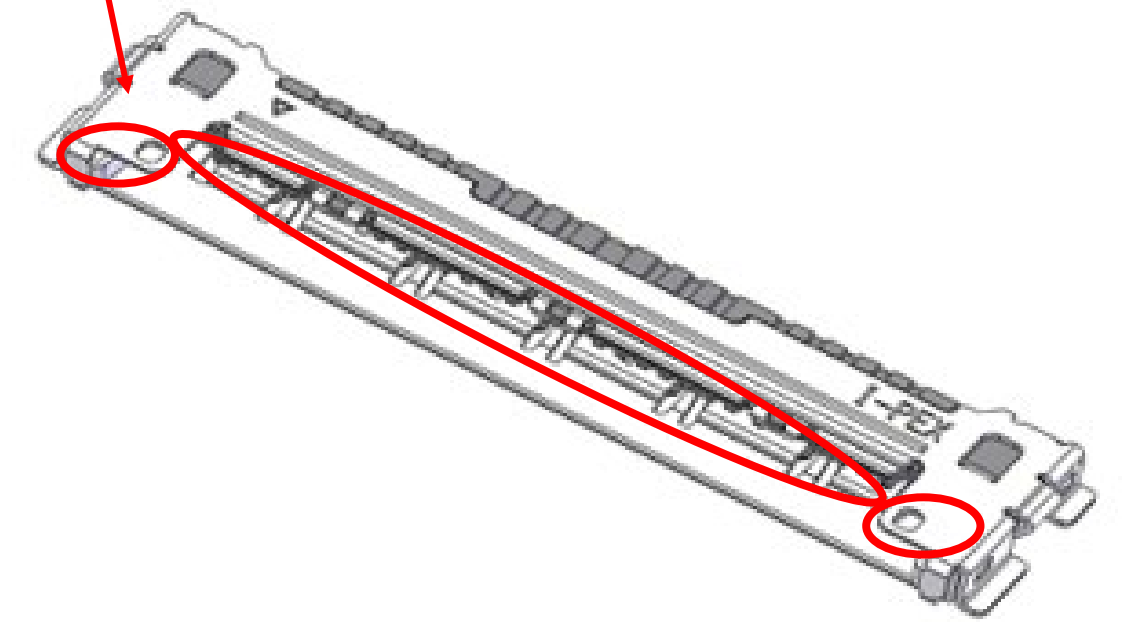
Back view : Plug shell B



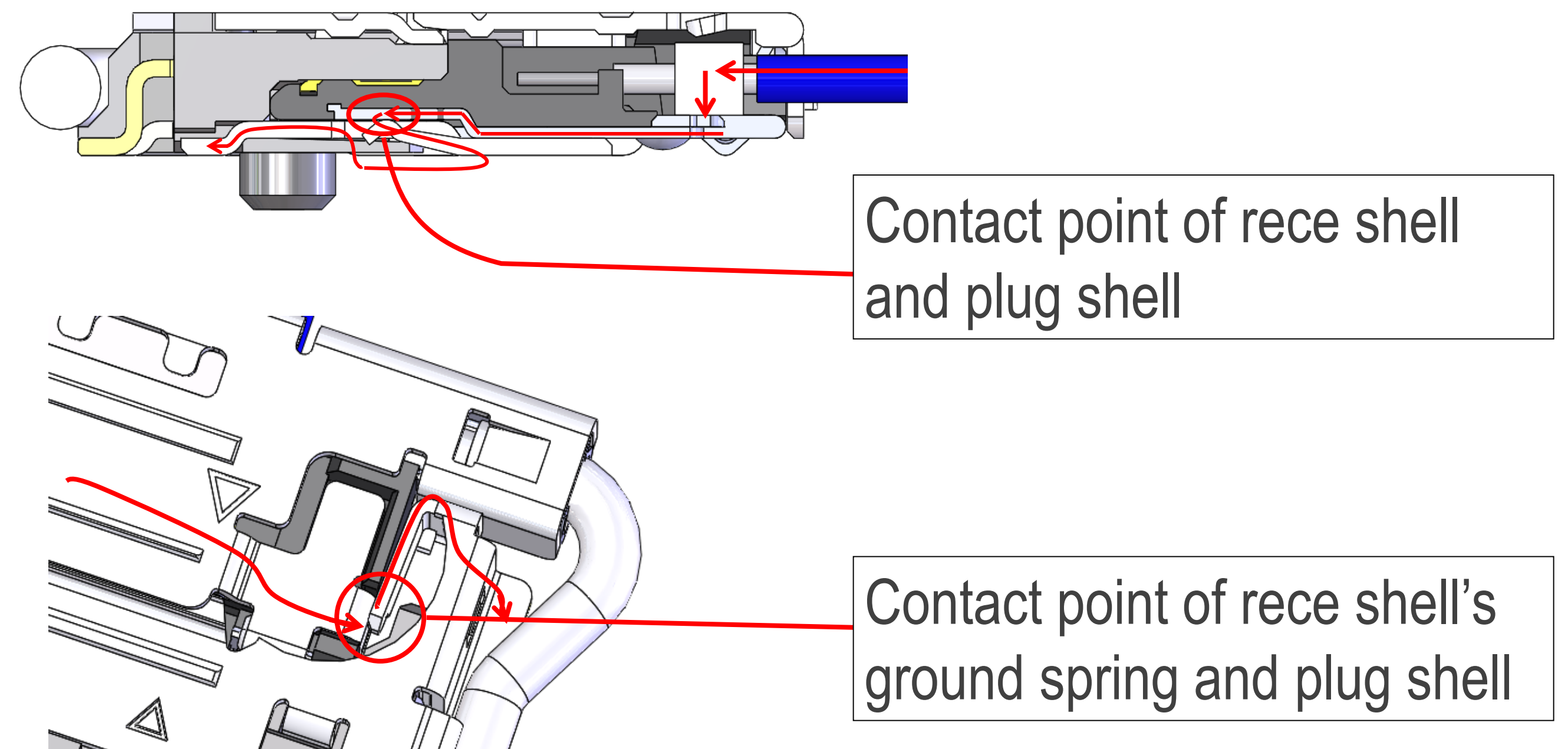
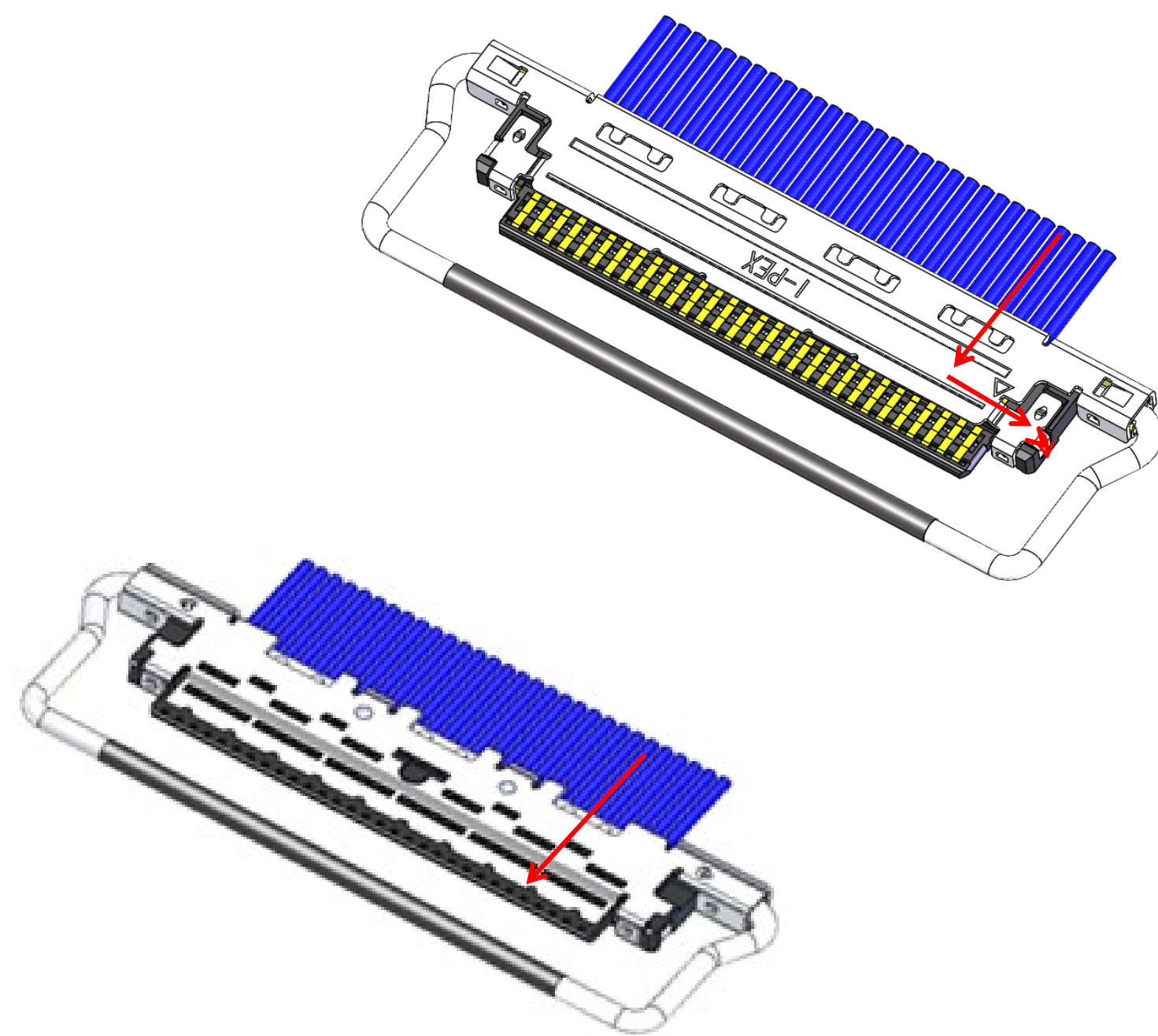
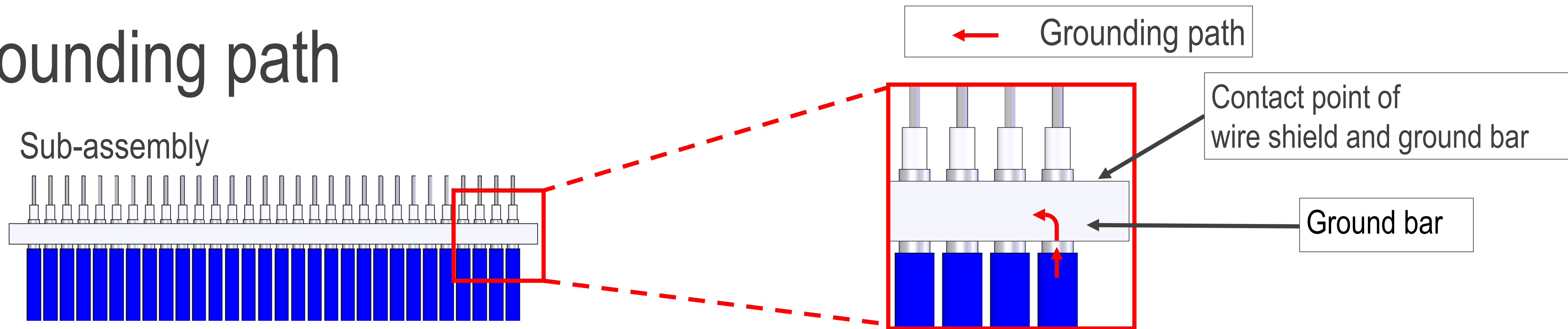
Micro-coax wire



Side view : Solder paste

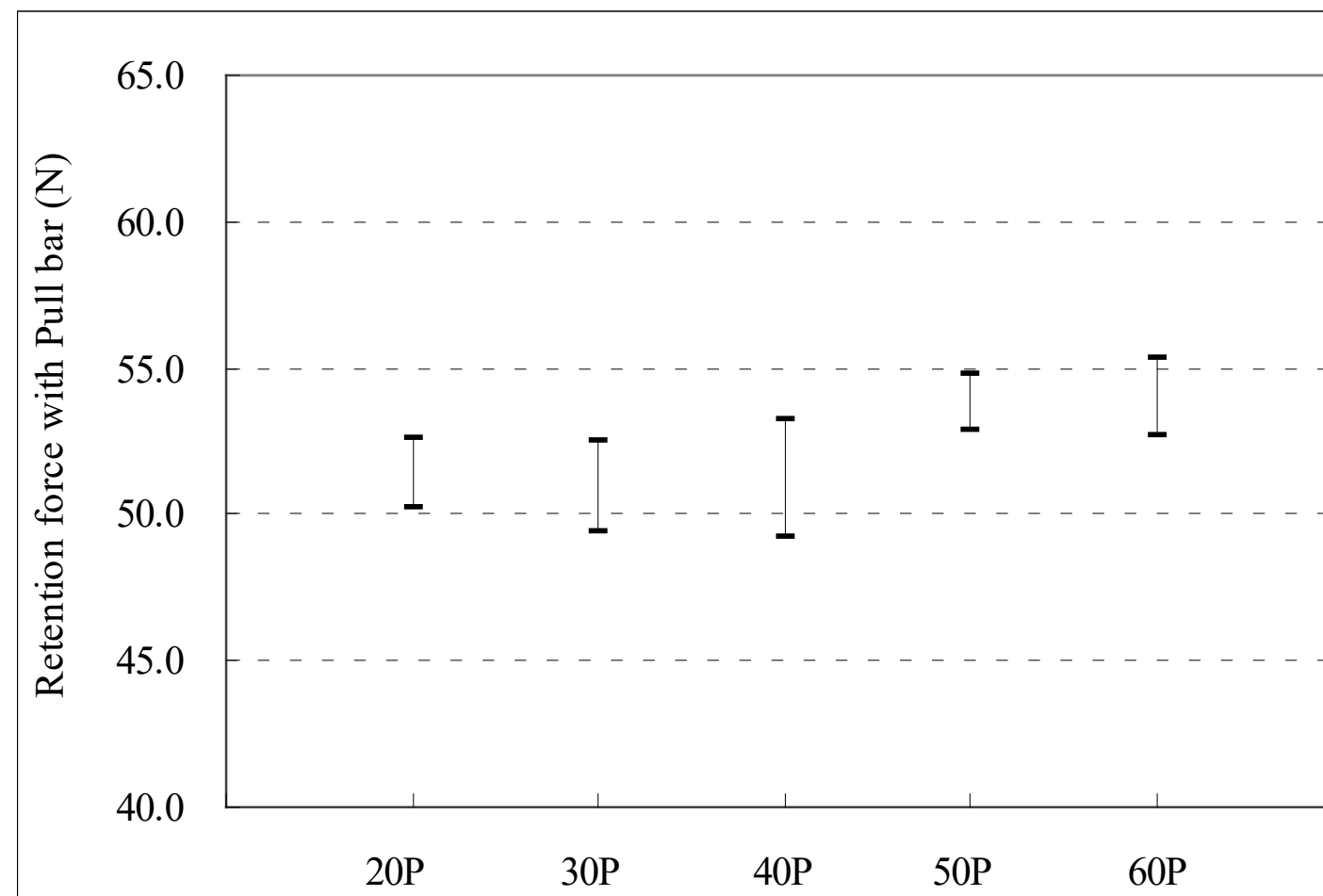
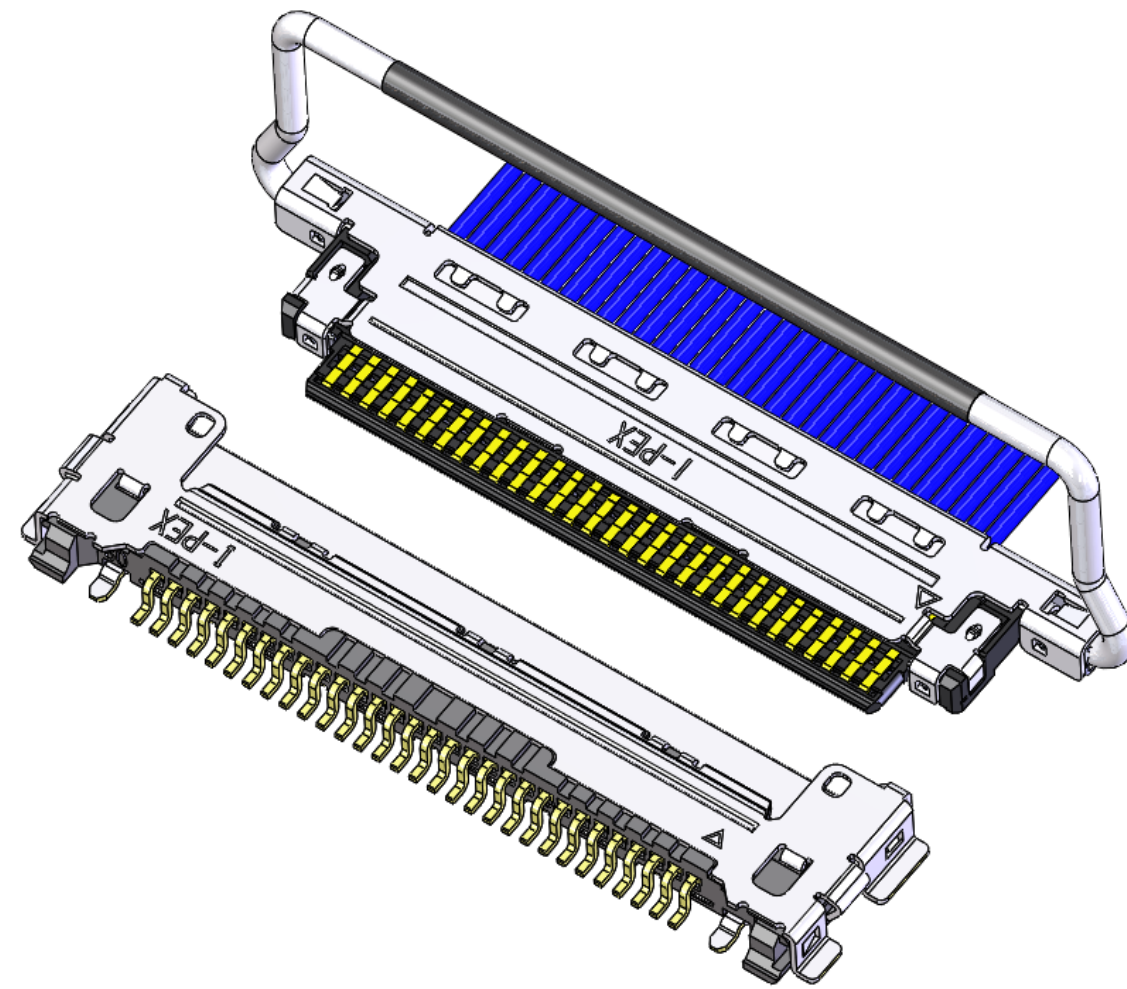


# Grounding path



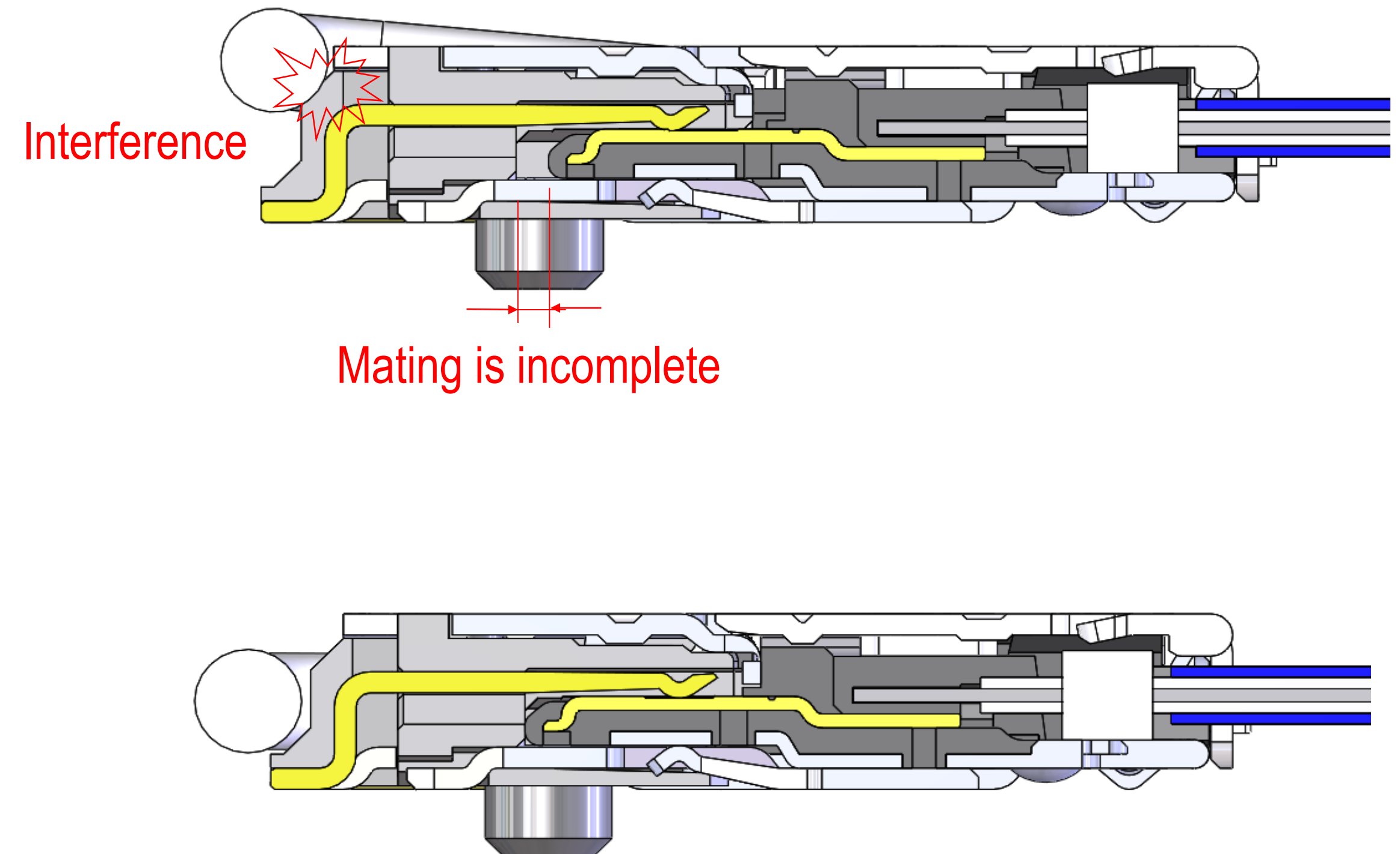


# Optional lock bar



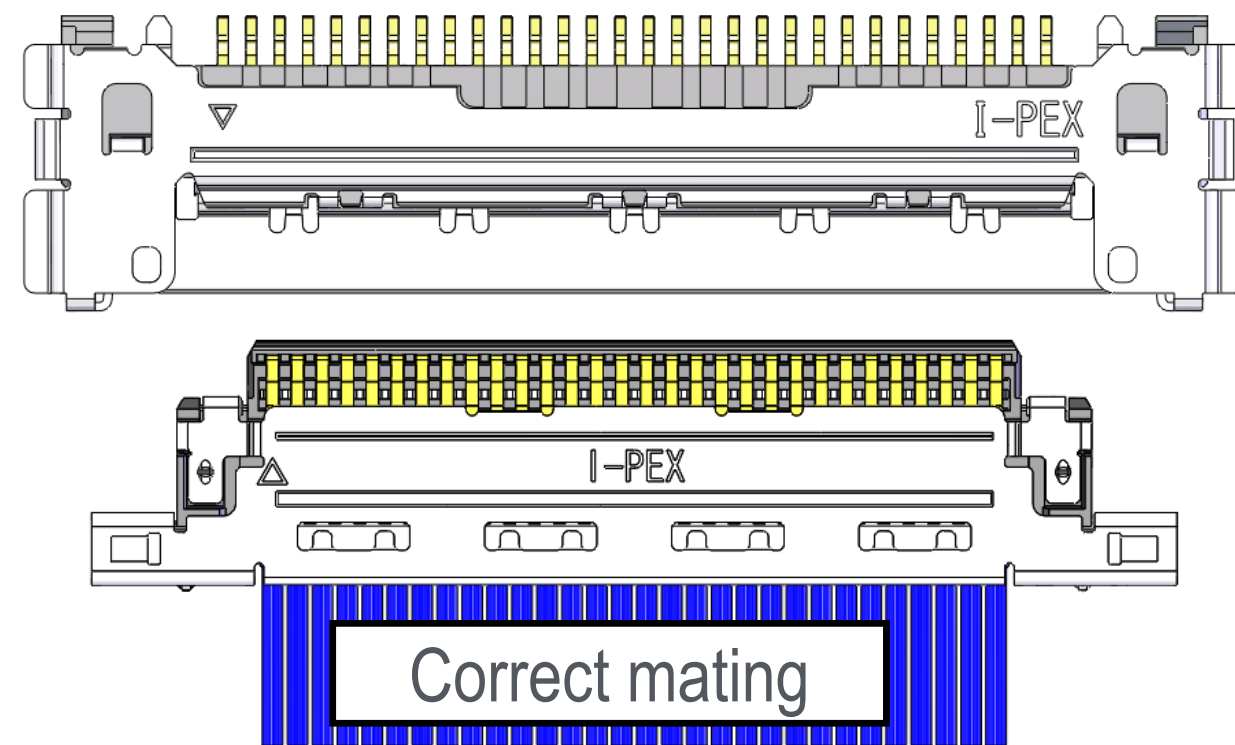
Height retention force with lock bar

Mechanical locking bar can be locked only when plug is fully mated to receptacle.

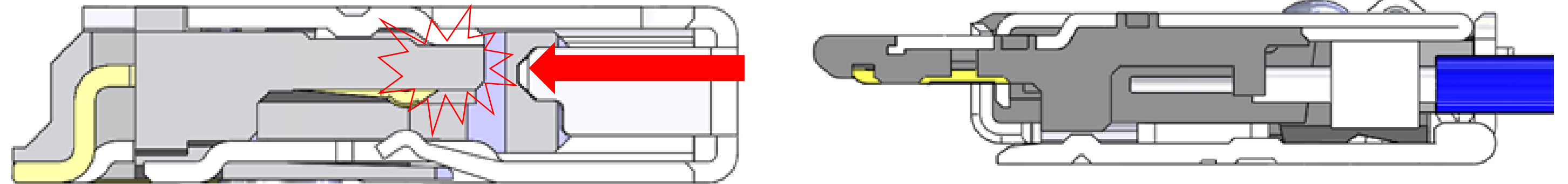
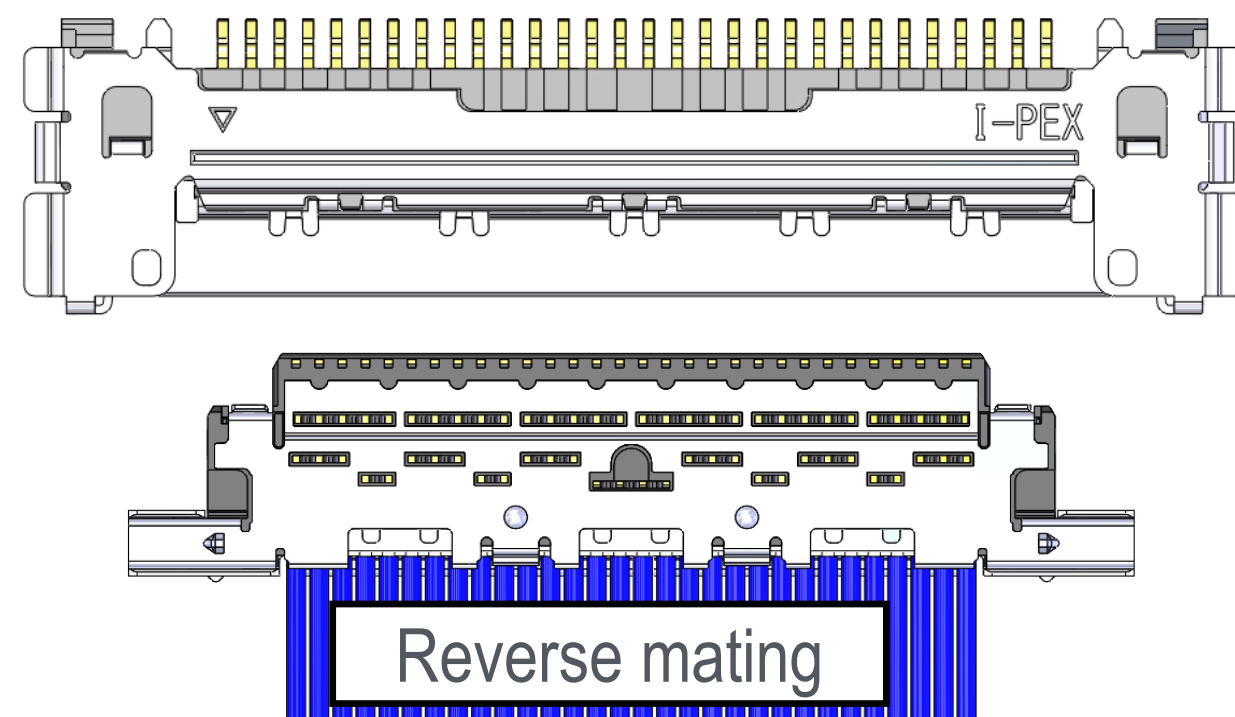
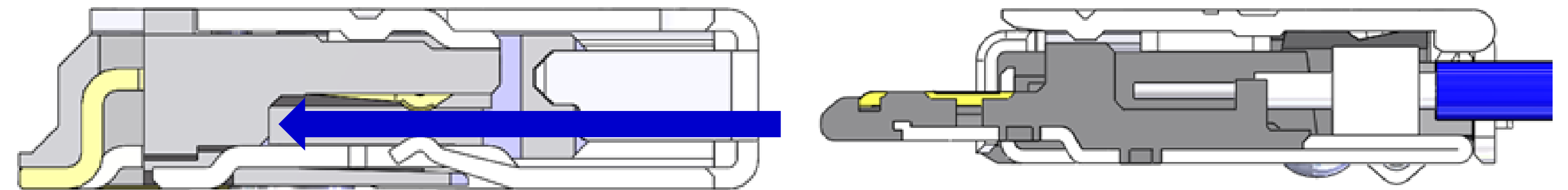


# Anti-reverse mating

Visual identification

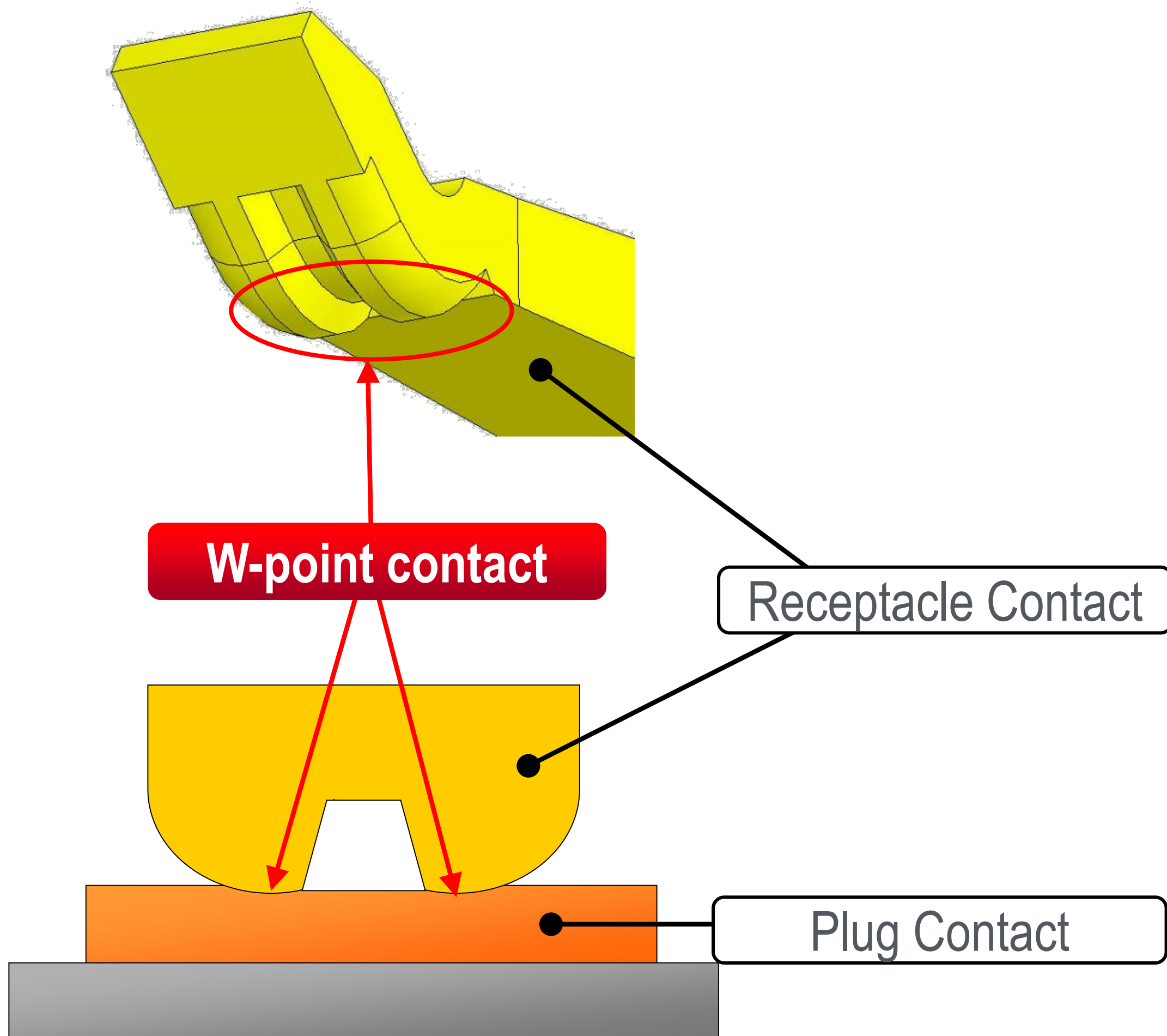


Plug and receptacle design prevent reverse mating



# Reliable contact design

High reliability with two points of contacts



Comparison of W-point contact and single-point contact in a harsh test.

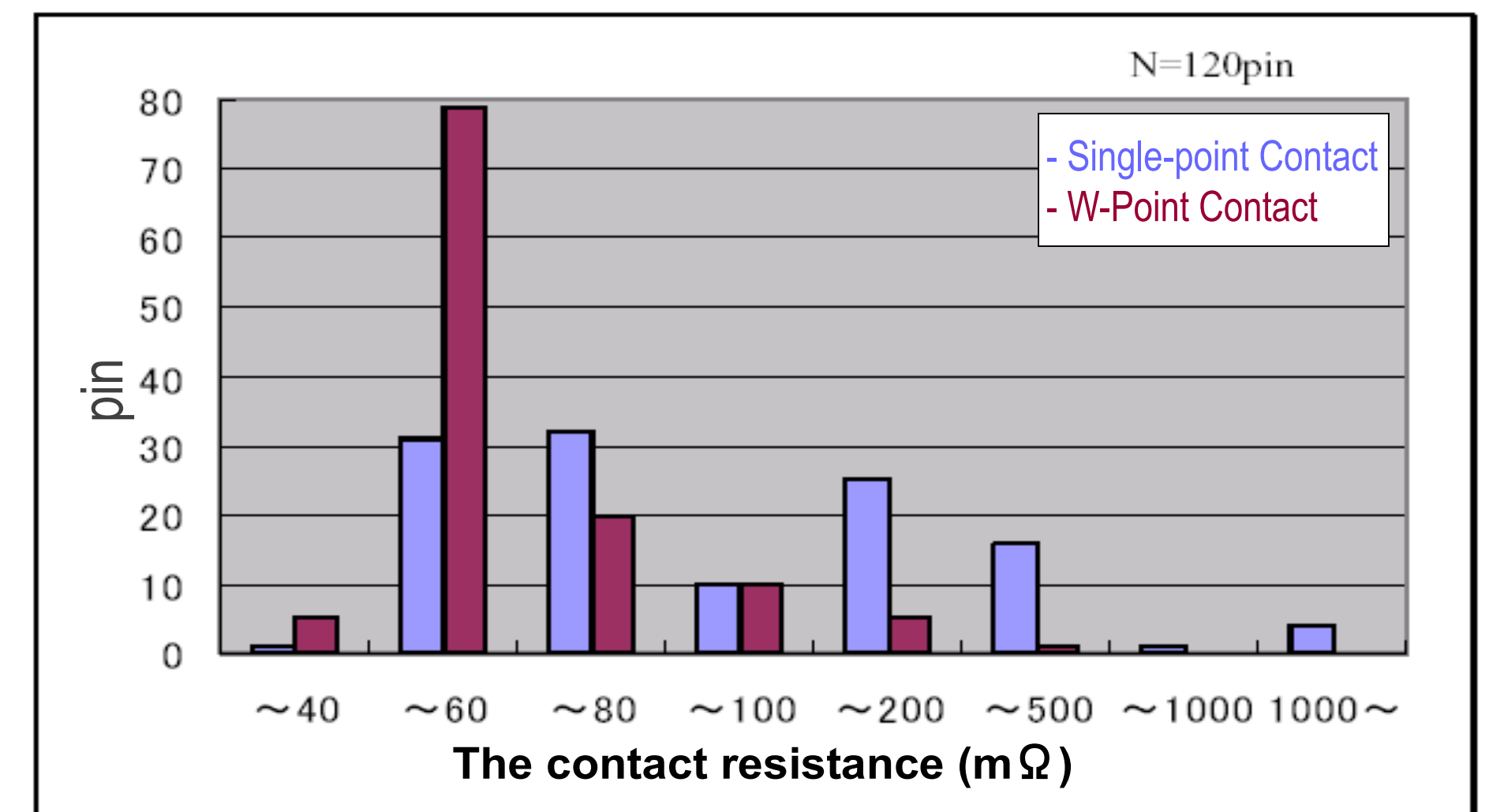
<Test method>

Dip plug in the flux for 1 minutes and let dry for 24 hours.

Mate plug with receptacle and measure contact resistance.

<Test Result>

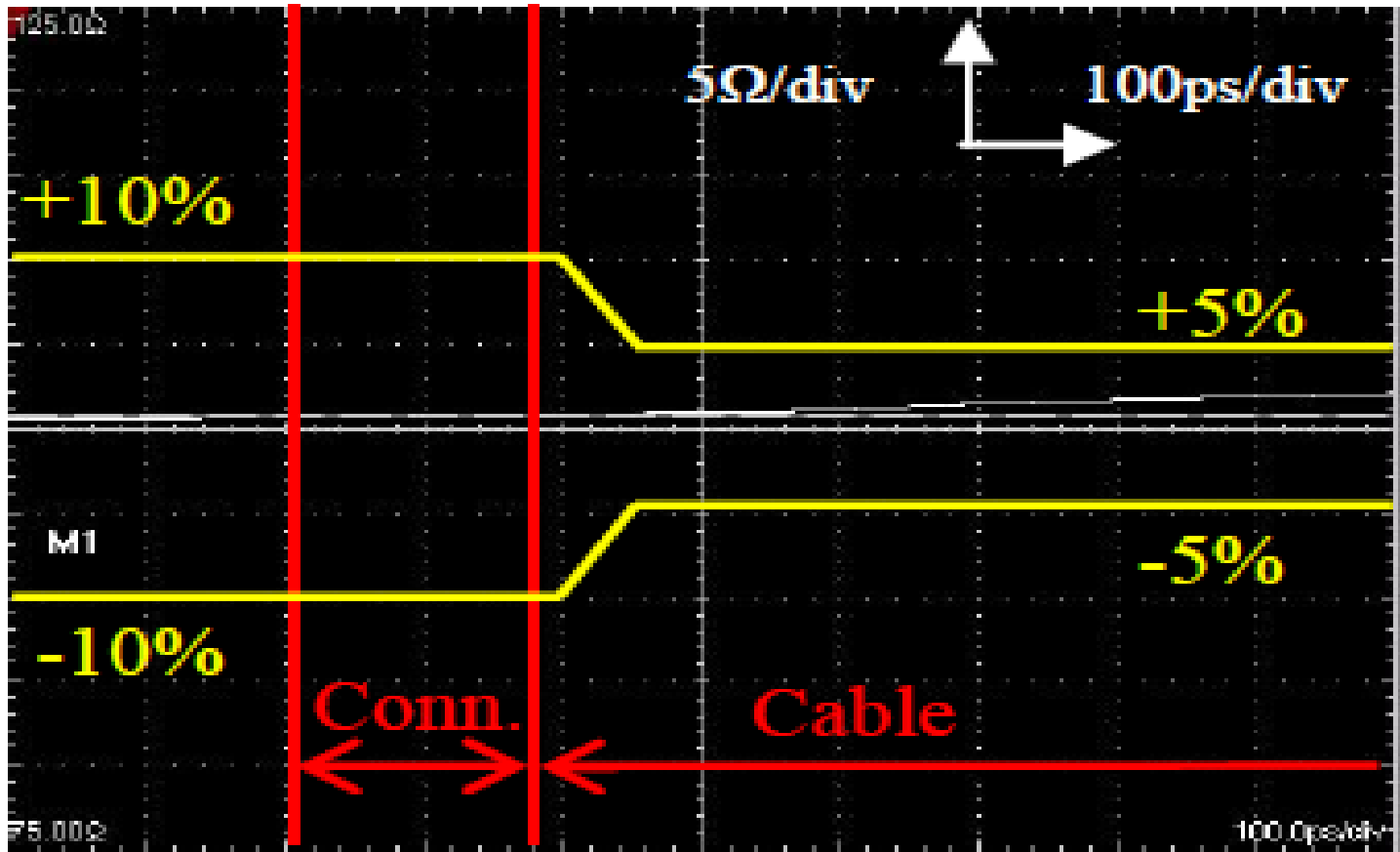
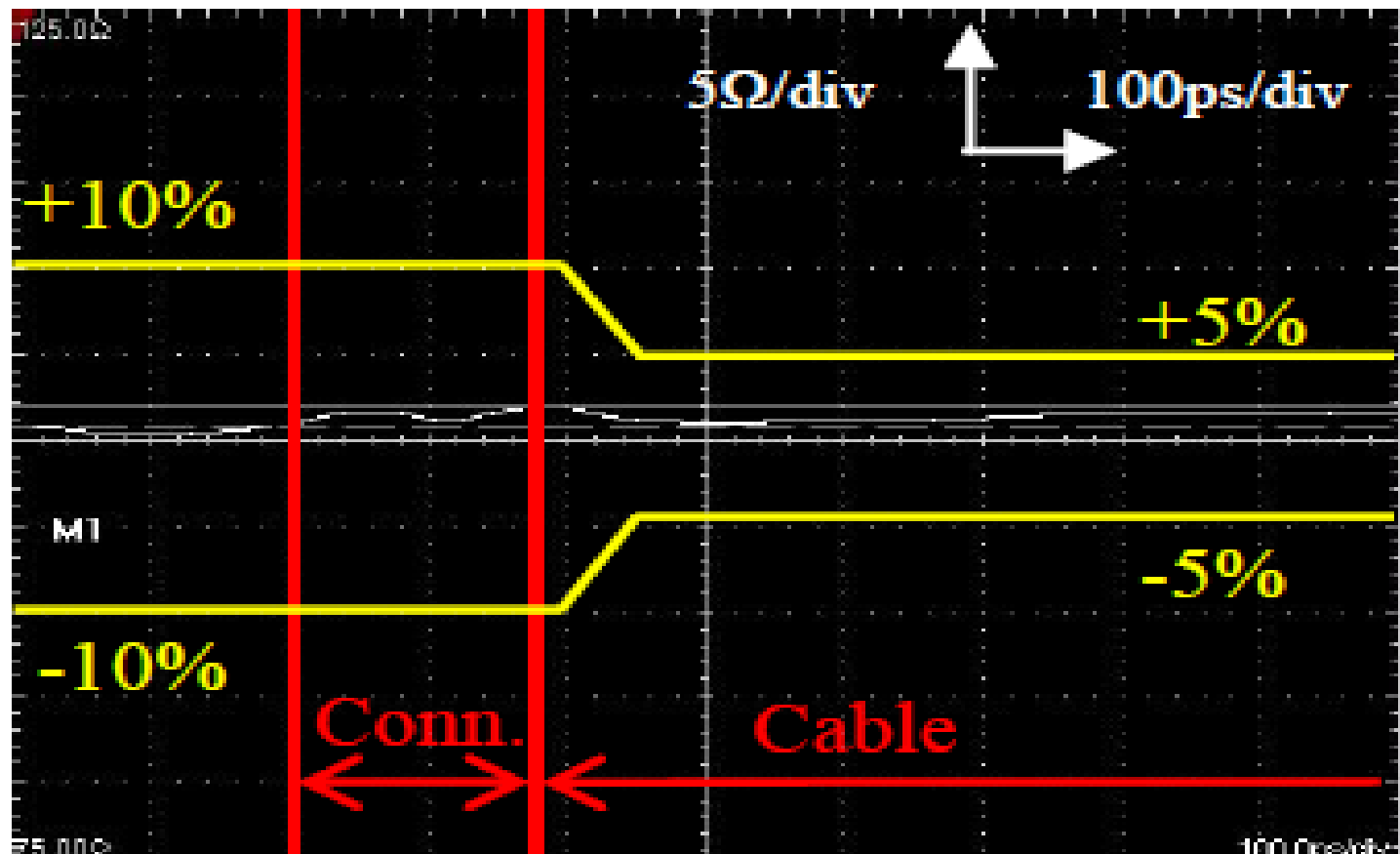
W-point contact provides better result than single-point contact.

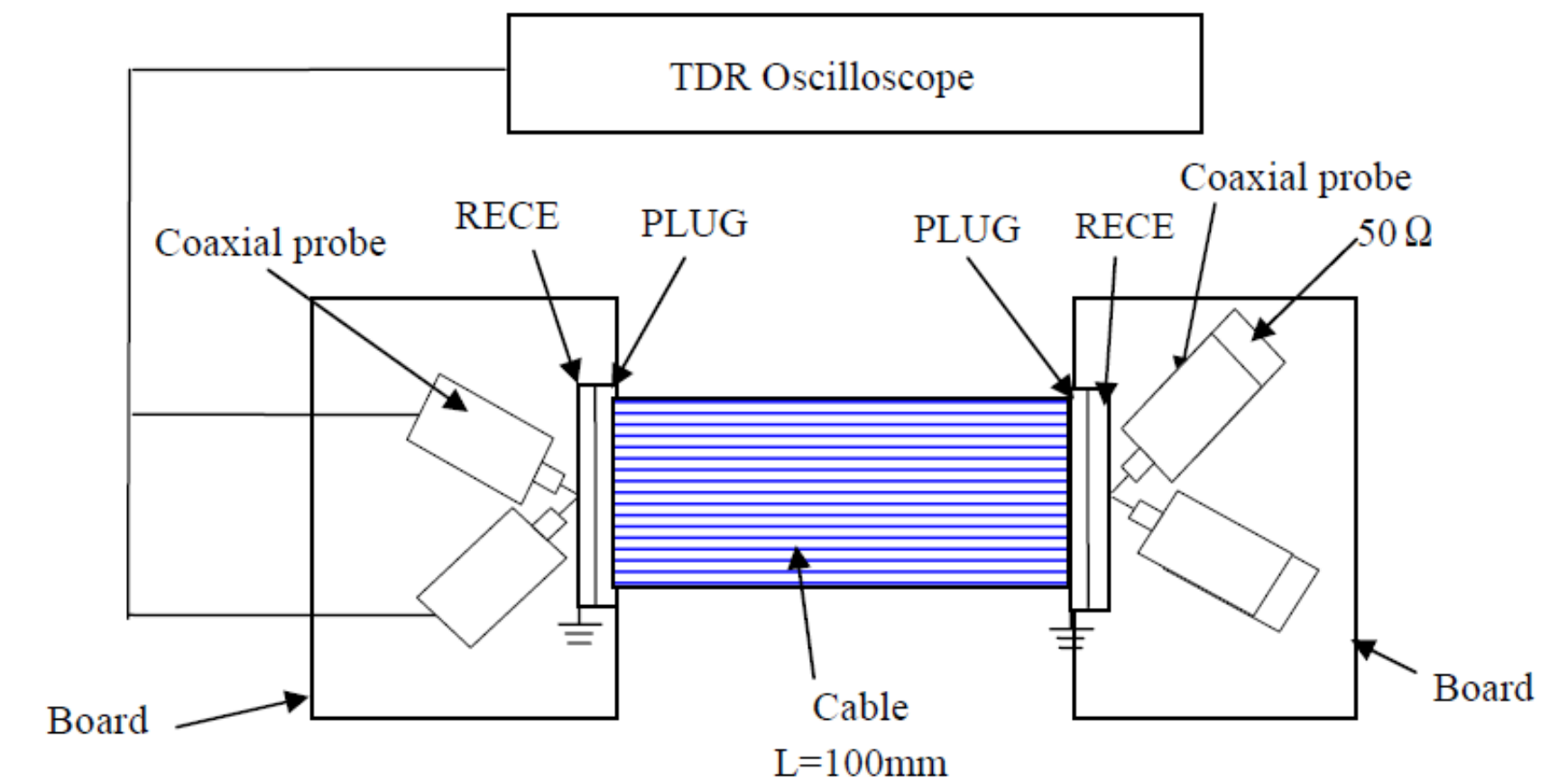




# High transfer rate (VESA eDP Specification)

## Characteristic Impedance

Rise time	CABLINE-CA
130ps(20%-80%) 2.7Gbps (DisplayPort)	
65ps(20%-80%) 5.4Gbps (No specified DisplayPort)	

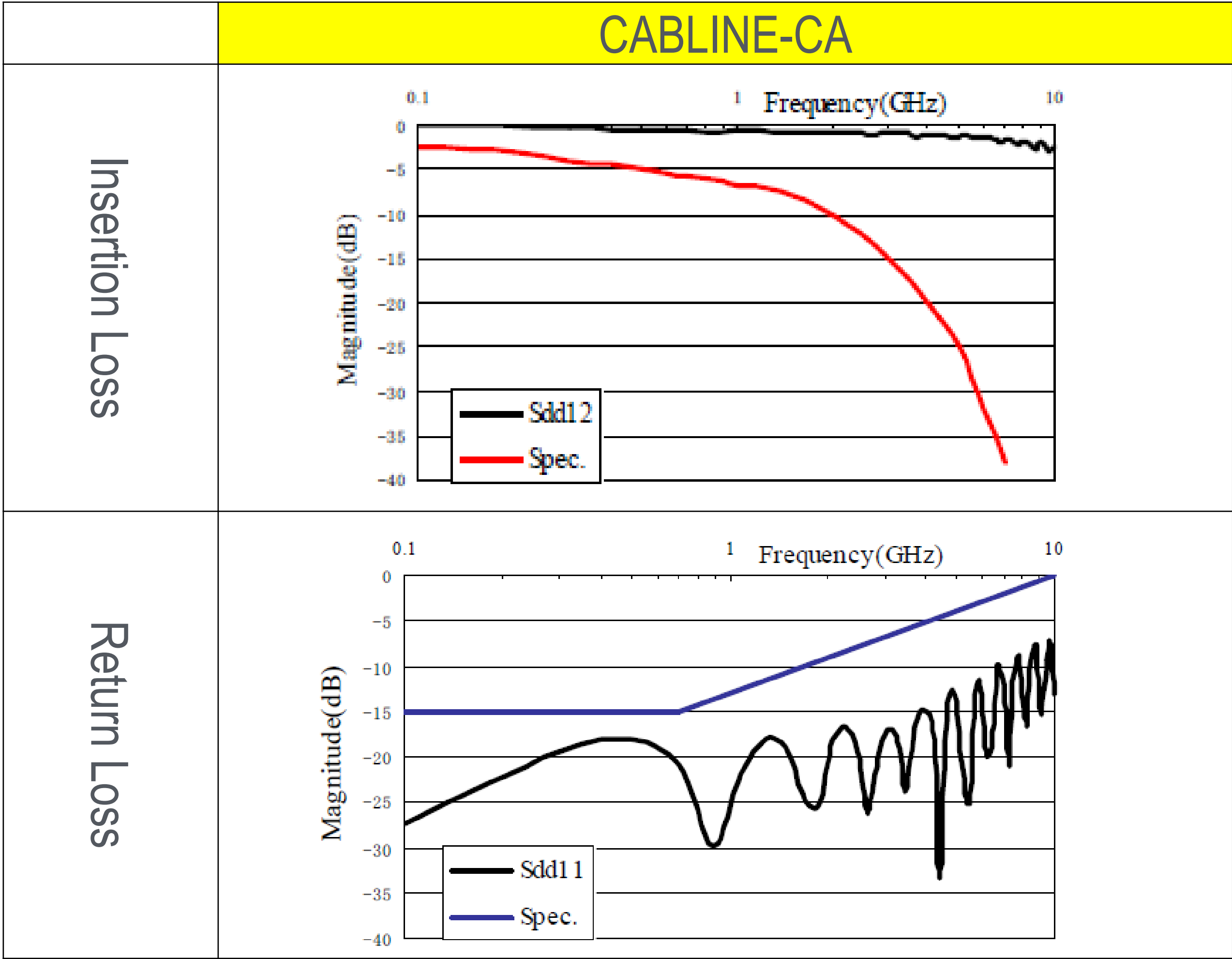


**Fig-1. Characteristic Impedance**

Micro-coax wire AWG #40  
L = 100mm

# High transfer rate (VESA eDP Specification)

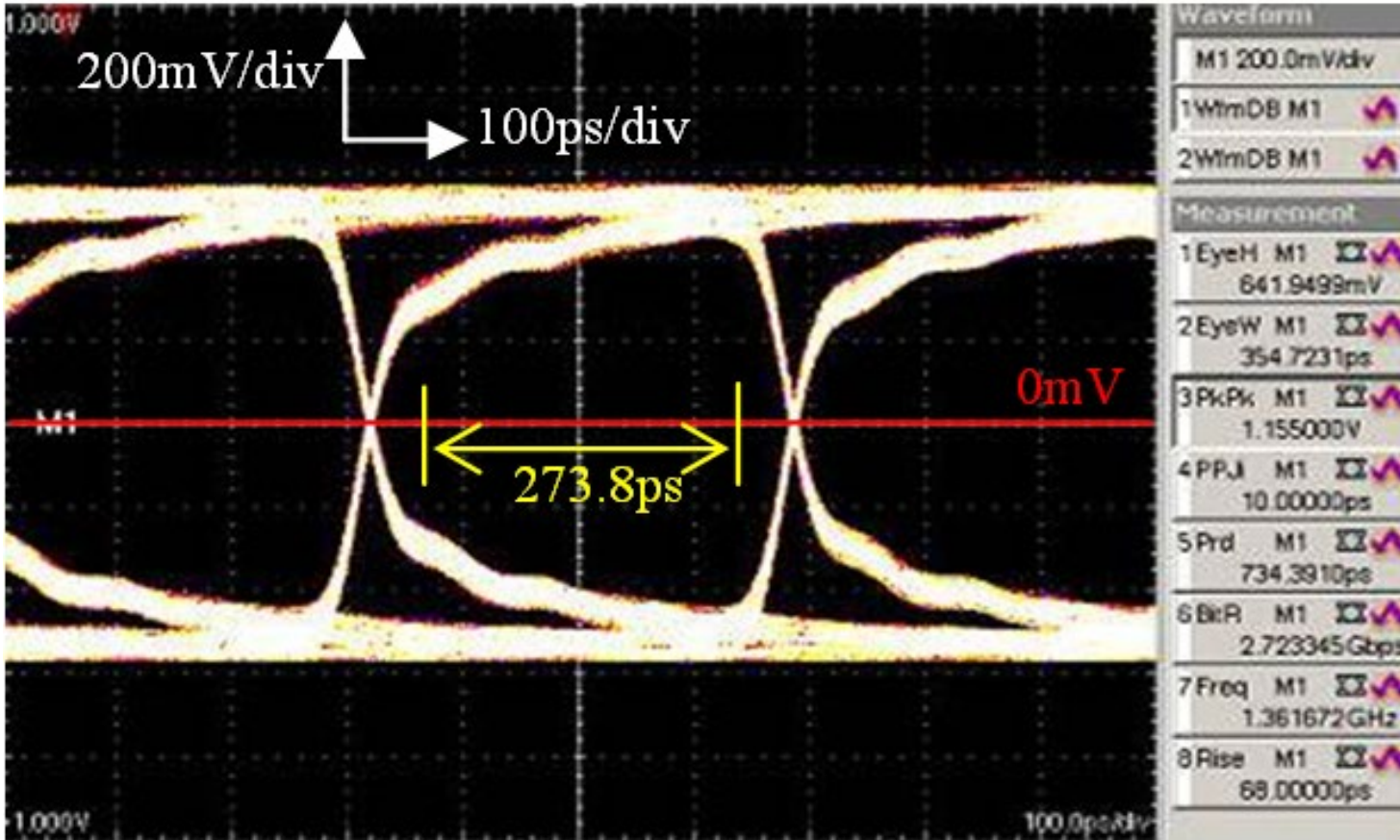
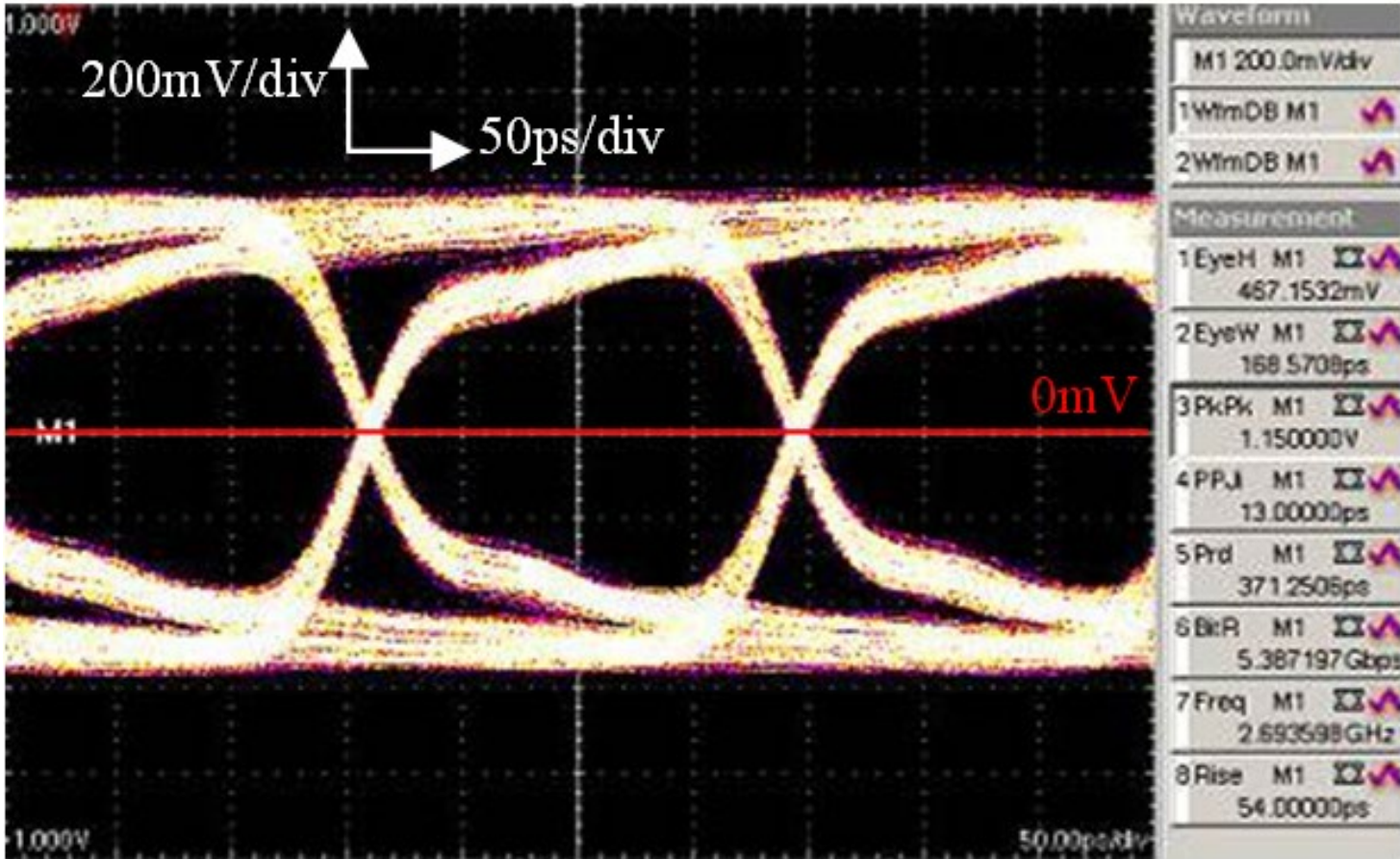
## Insertion and Return Loss



Micro-coax wire AWG#40  
L = 100mm

# High transfer rate (VESA eDP Specification)

## Eye Pattern

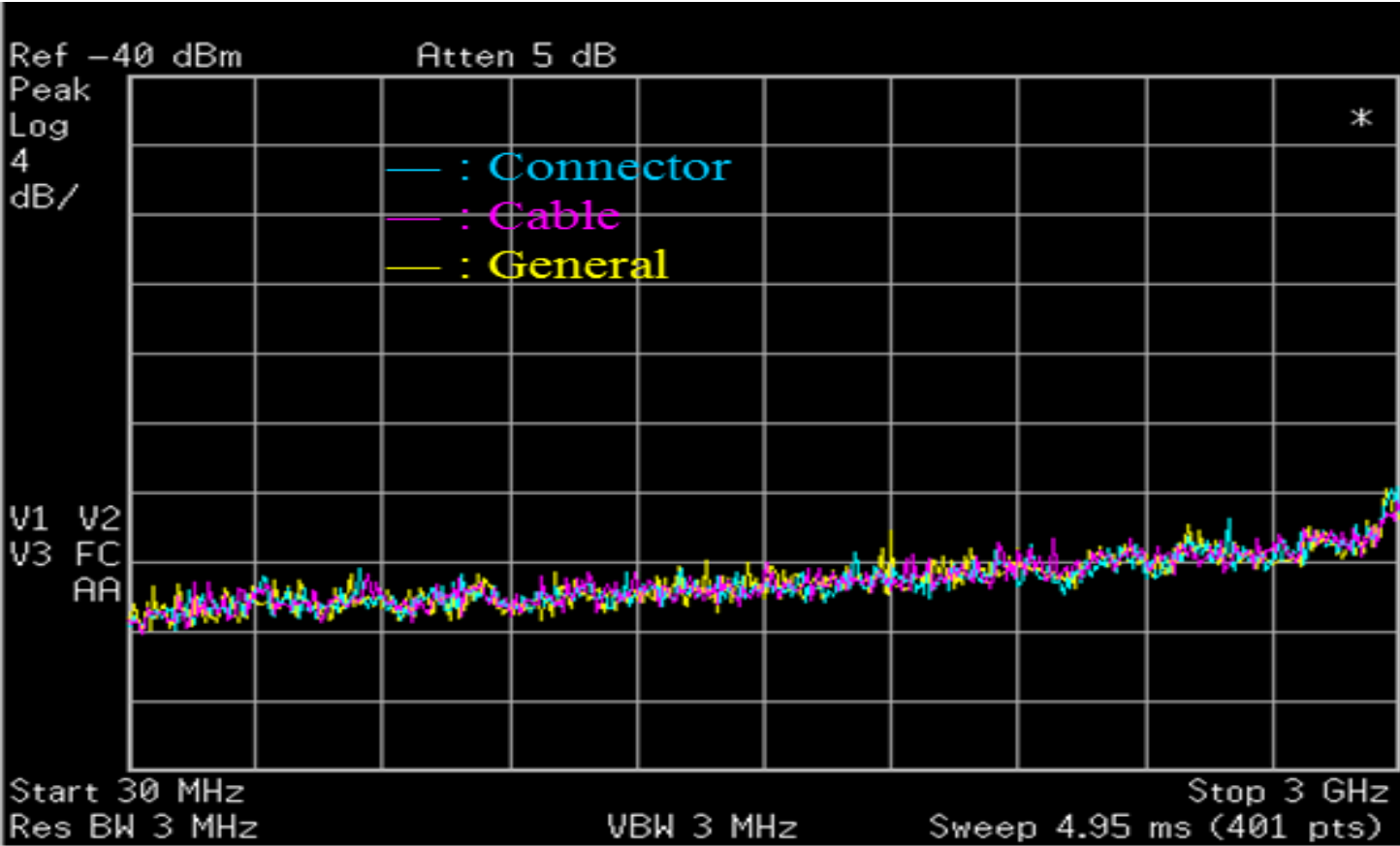
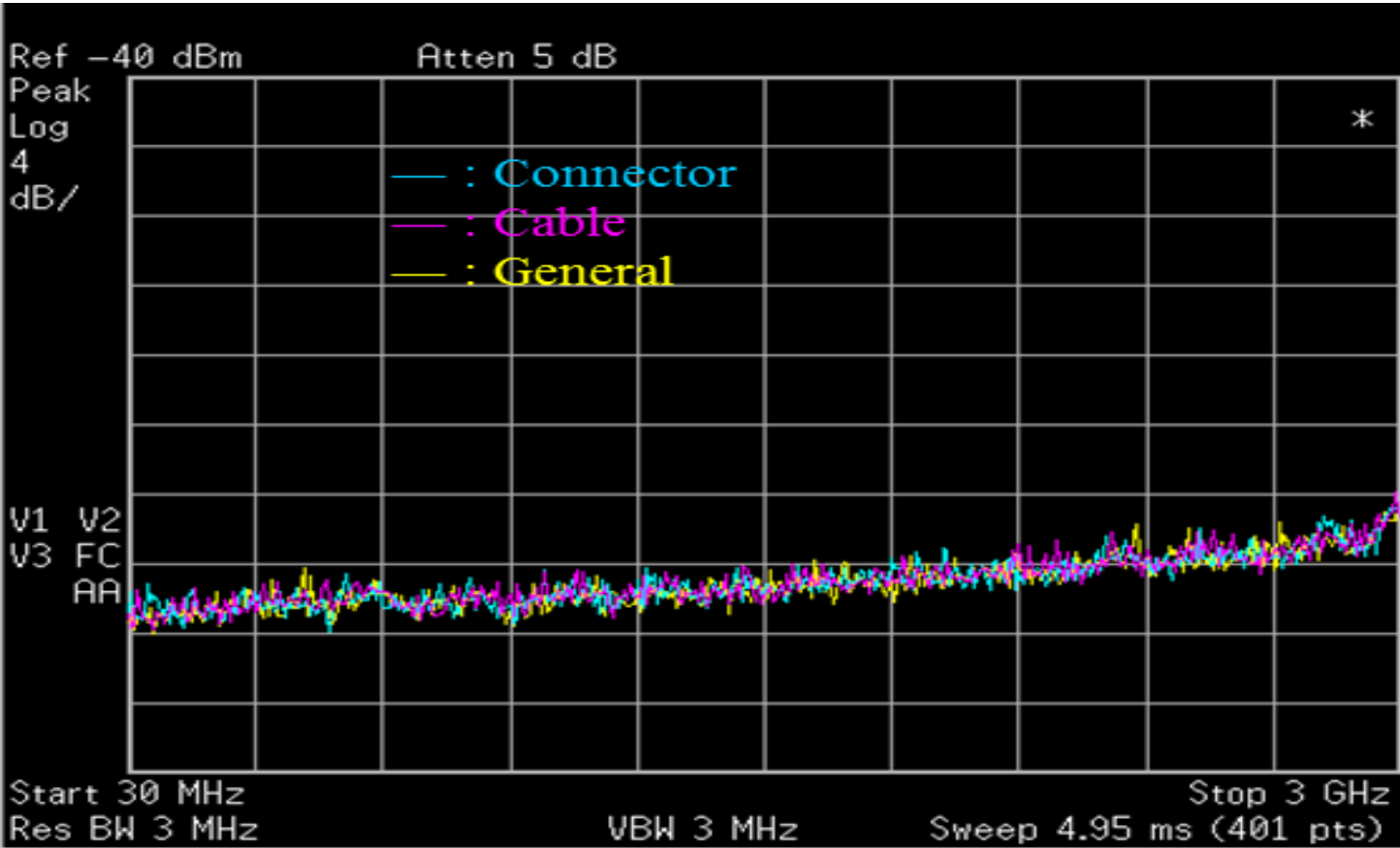
Input signal	CABLINE-CA
2.7Gbps	
5.4Gbps	

Eye Pattern (Differential)  
Bit rate : 2.7Gbps / 5.4Gbps  
Rise time : 60ps (10-90%)  
Input Voltage : 1.2V  
  
Micro-coax wire AWG #40  
L = 100mm



# High transfer rate (VESA eDP Specification)

## EMI

Input signal	CABLINE-CA
2.7Gbps	 <p>Ref -40 dBm    Atten 5 dB</p> <p>Peak Log 4 dB/</p> <p>— : Connector — : Cable — : General</p> <p>V1 V2 V3 FC AA</p> <p>Start 30 MHz    Stop 3 GHz Res BW 3 MHz    VBW 3 MHz    Sweep 4.95 ms (401 pts)</p>
5.4Gbps	 <p>Ref -40 dBm    Atten 5 dB</p> <p>Peak Log 4 dB/</p> <p>— : Connector — : Cable — : General</p> <p>V1 V2 V3 FC AA</p> <p>Start 30 MHz    Stop 3 GHz Res BW 3 MHz    VBW 3 MHz    Sweep 4.95 ms (401 pts)</p>



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