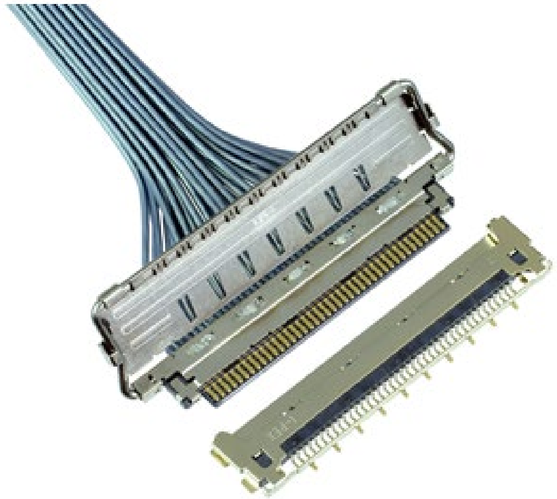
CABLINE®-CA II

0.4 mm pitch, Micro-coax connector with EMI shielding cover

CABLINE®-CA II : Product Summary

0.4 mm pitch , mating height 1.1 mm max.
High speed micro-coax connector with EMI shielding cover

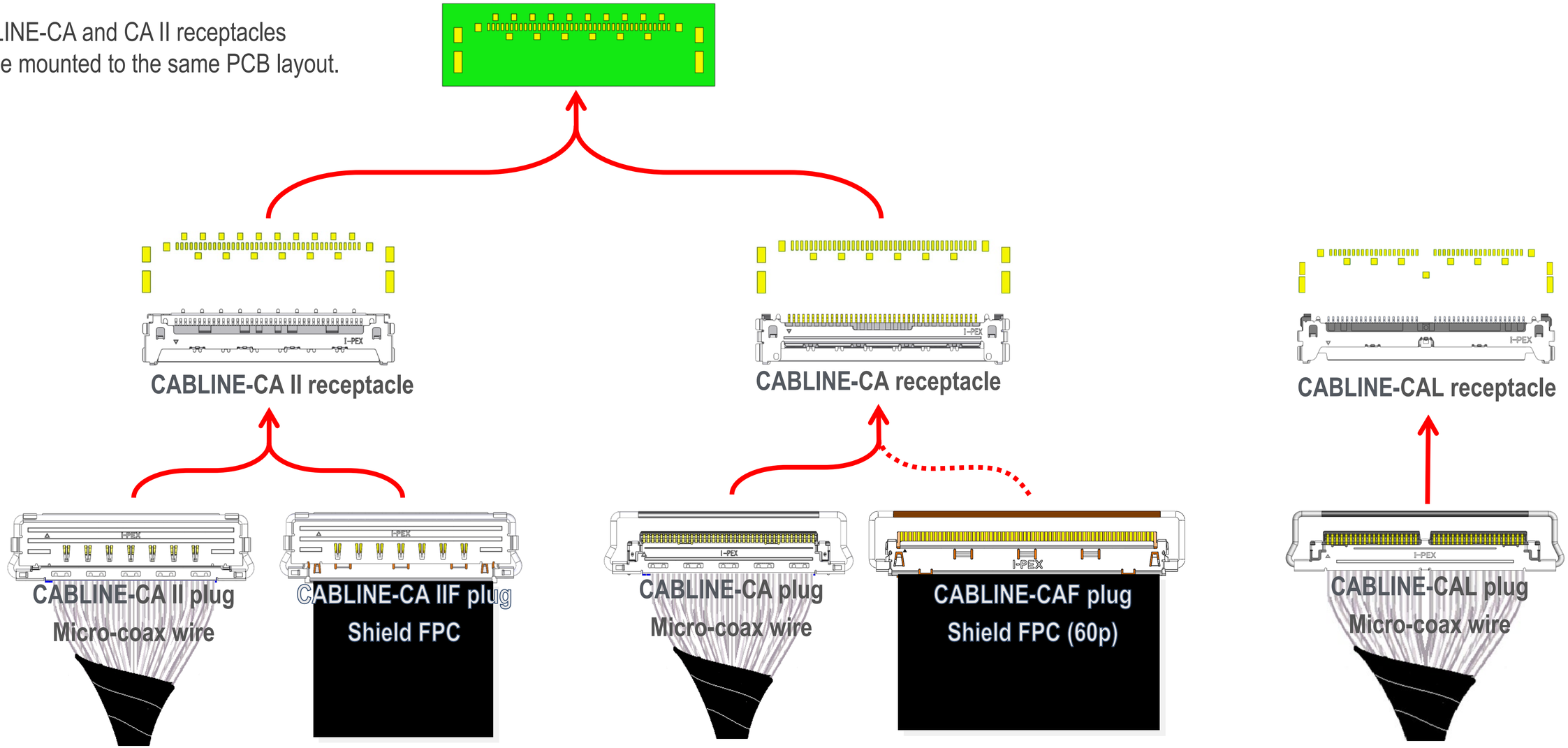


CABLINE-CA II

■ Name	CABLINE®-CA II
■ Pitch	0.4 mm
■ Pin range	6 – 60 pin
■ Pin count	20, 30, 40, 50 p (60 p is available with CA II PLUS)
■ Mating type	Horizontal mating type
■ Mated Height	1.1 mm max. with cover
■ Depth	6.20 mm (including lock bar ass'y)
■ Width formula	6.95 + (0.4 * ?p) mm (including lock bar ass'y)
■ 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

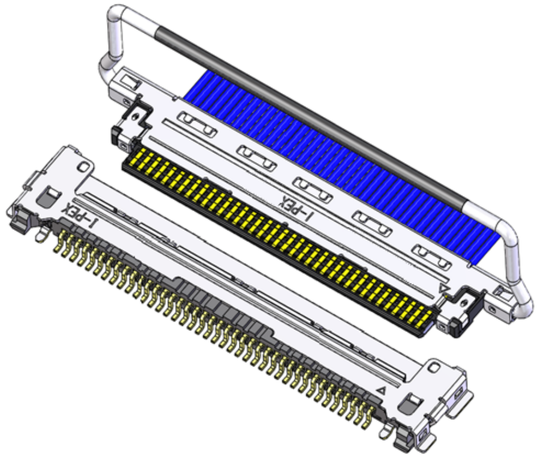
CABLINE®-CA series (0.4 mm pitch) connectors

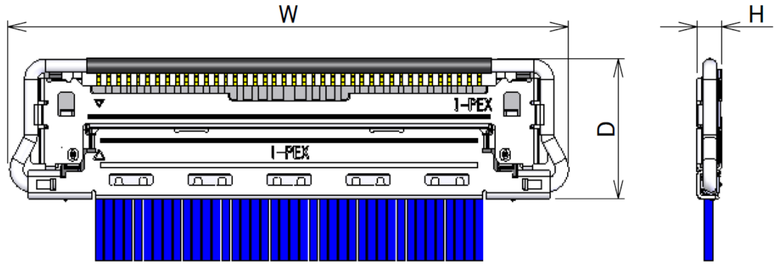
CABLINE-CA and CA II receptacles
can be mounted to the same PCB layout.



Size comparison with CABLINE®-CA and CA II 40p

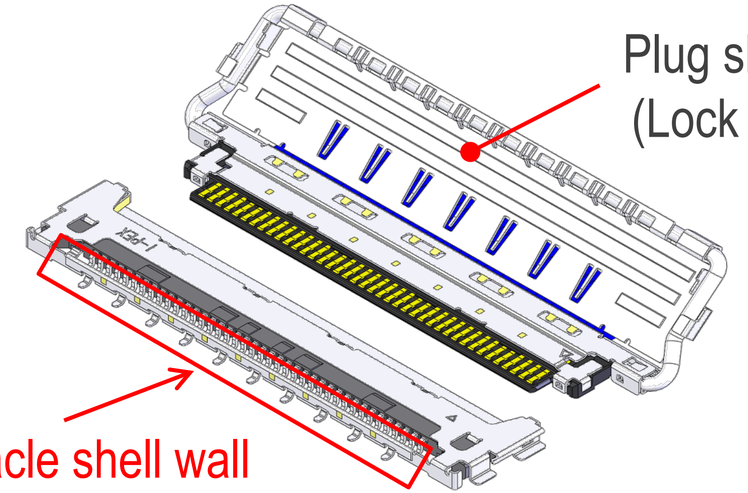
CABLINE-CA 40p

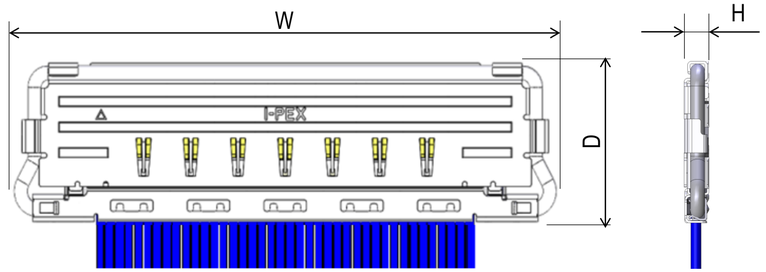




CABLINE®-CA			
(mm)	W	D	H
40P	22.95	5.73	1.10 max.

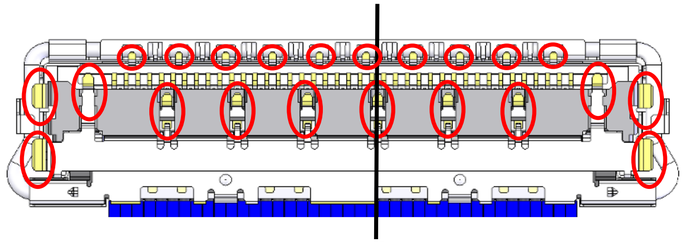
CABLINE-CA II 40p



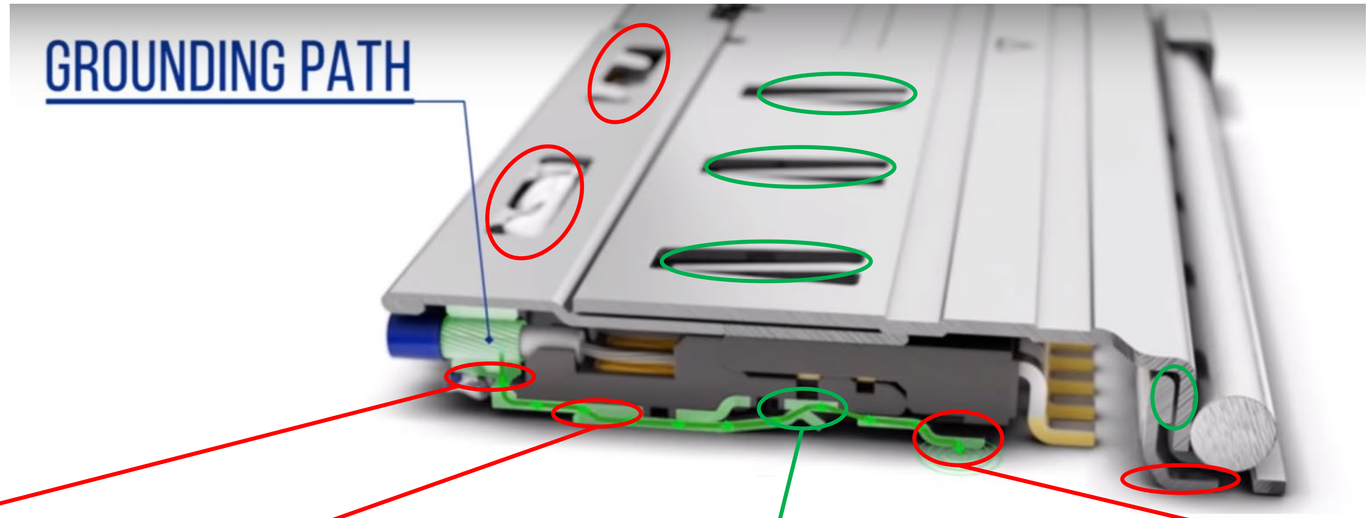


CABLINE®-CA II			
(mm)	W	D	H
40P	22.95	6.20	1.10 max.

Ground structure



CABLINE-CA II 40p

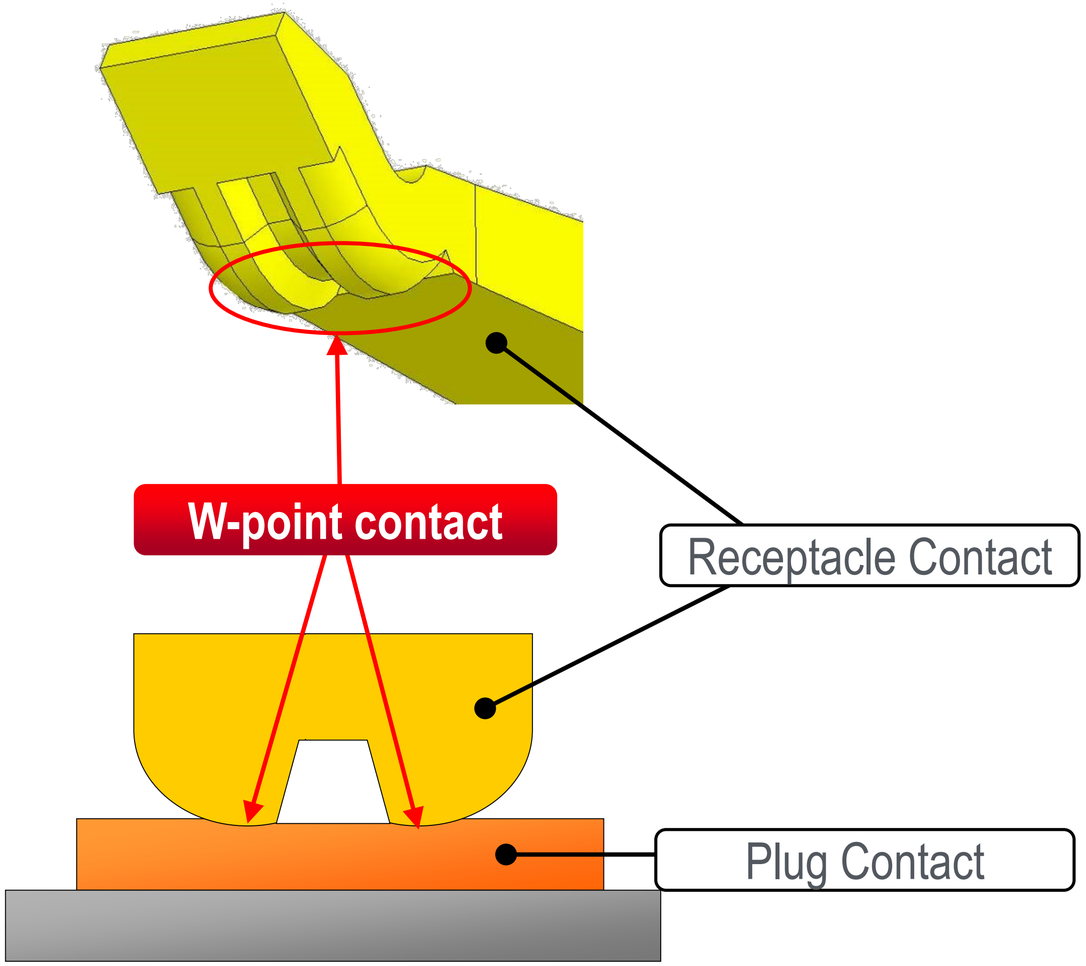


Soldered contacts
Mechanical contacts

Wire shield to Ground bar → Ground bar to Plug shell → Plug shell to Receptacle shell → Receptacle shell to PCB

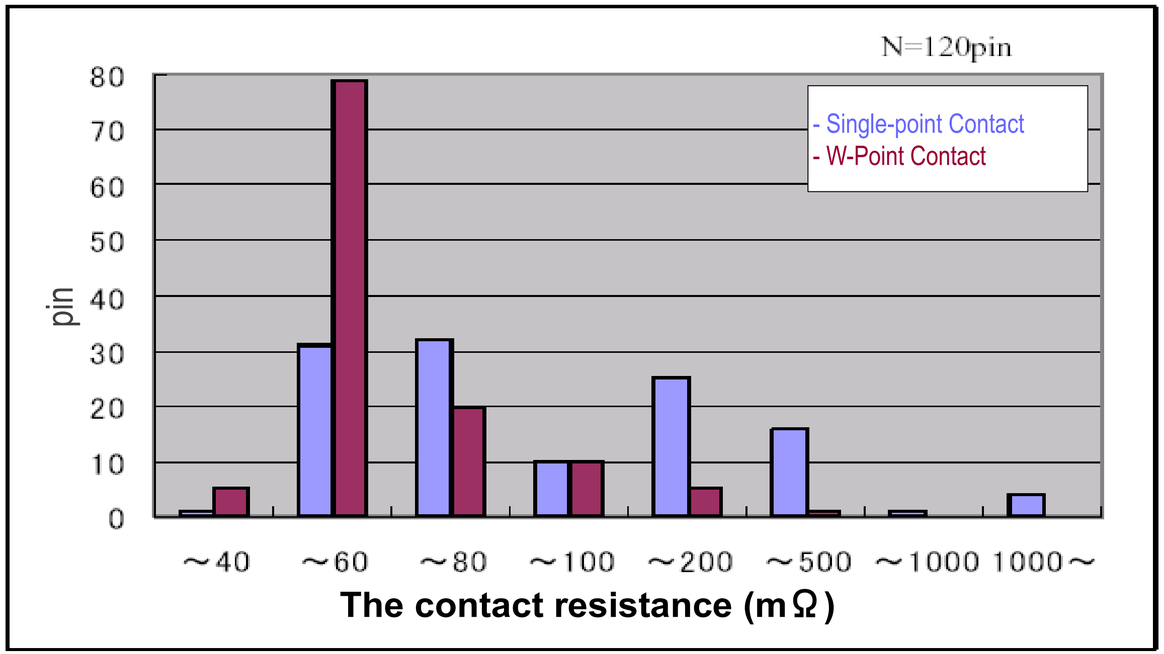
Reliable contact design

High reliability with two points of contacts



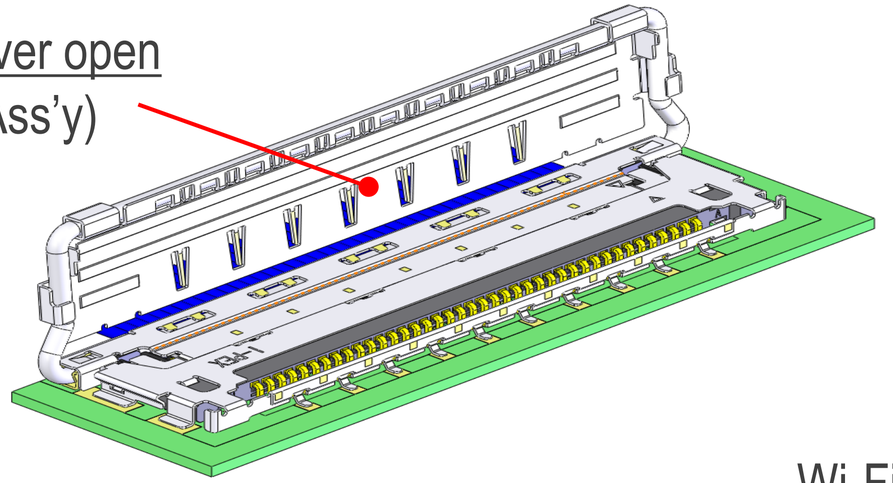
Comparison of W-point contact and single-point contact in a harsh test.

<Test method>
Dip plug in the flux for 1 minutes and let dry for 24 hours.
Mate plug with receptacle and measure contact resistance.



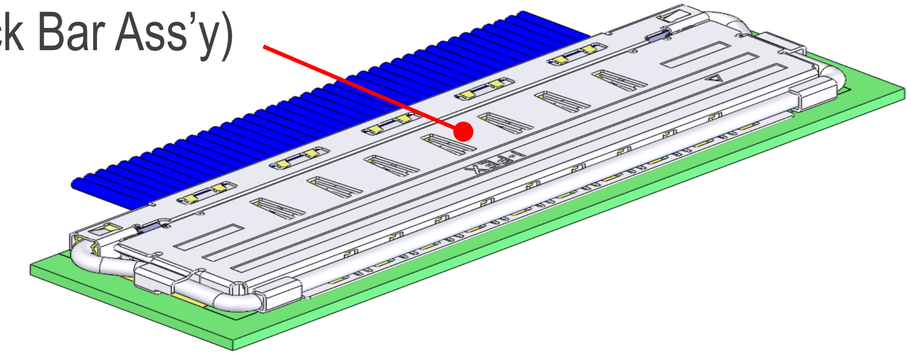
True 100% shielding
Prevent EMI leakage from contact tails

Plug shield cover open
(Lock Bar Ass'y)



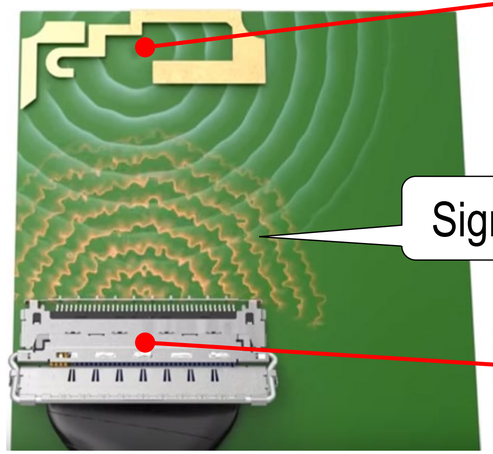
Close cover

Plug shield cover close
(Lock Bar Ass'y)

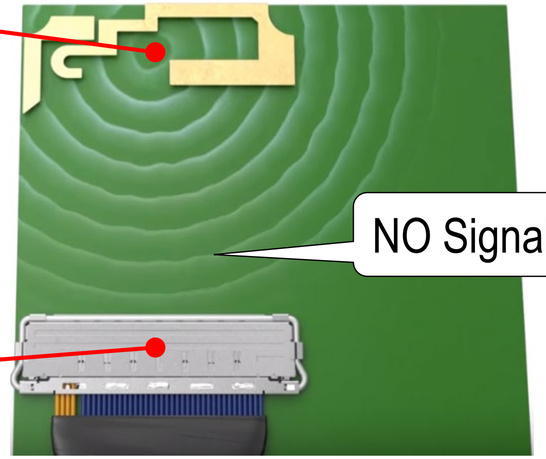


Example

Wi-Fi Antenna
5GHz



Signal interference



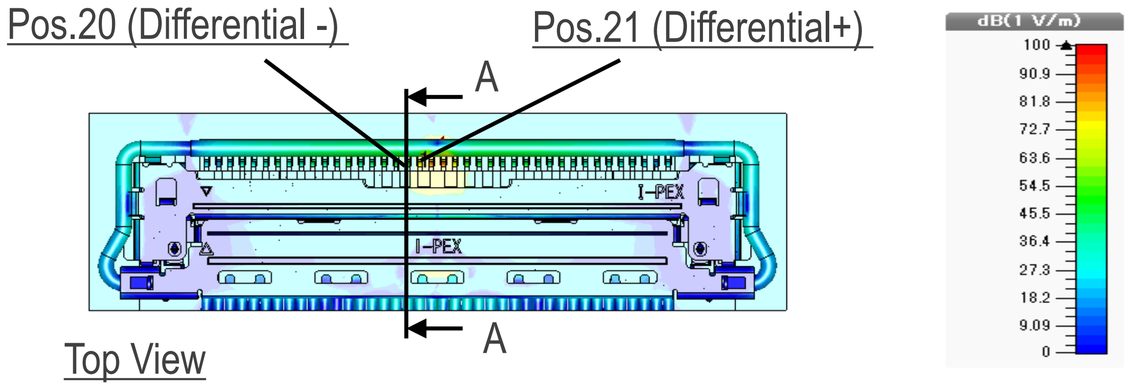
NO Signal interference

USB3.1 connection
(10Gbps ⇒ 5GHz equivalent)

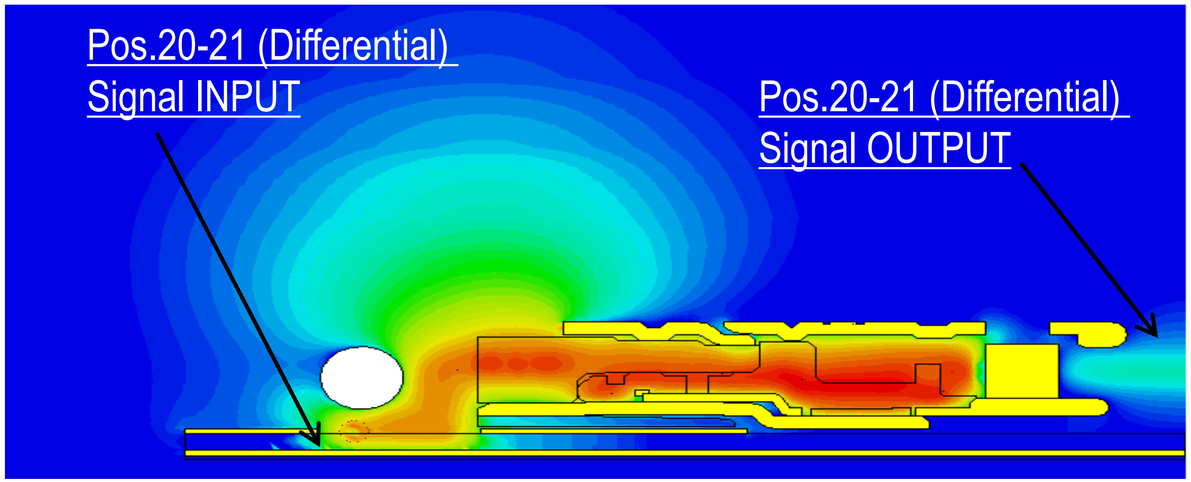
Comparison with CABLINE®-CA

EMI Simulation

CABLINE-CA

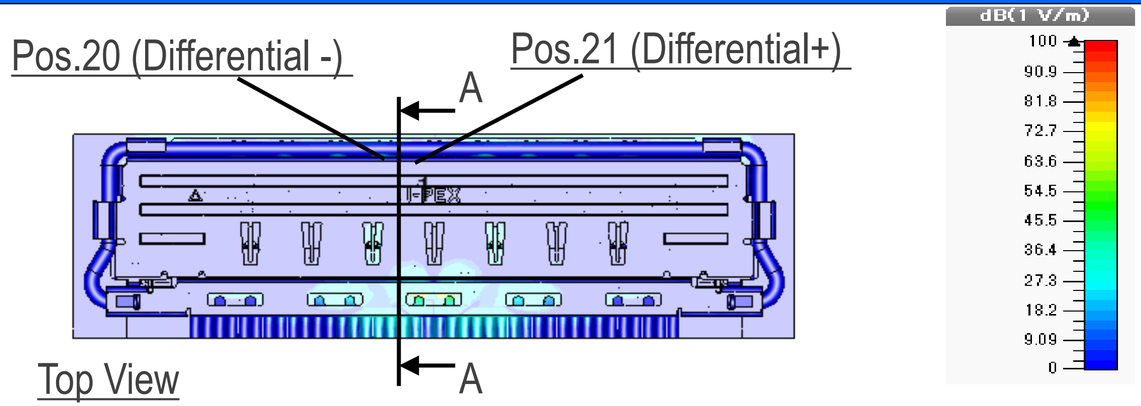


Top View

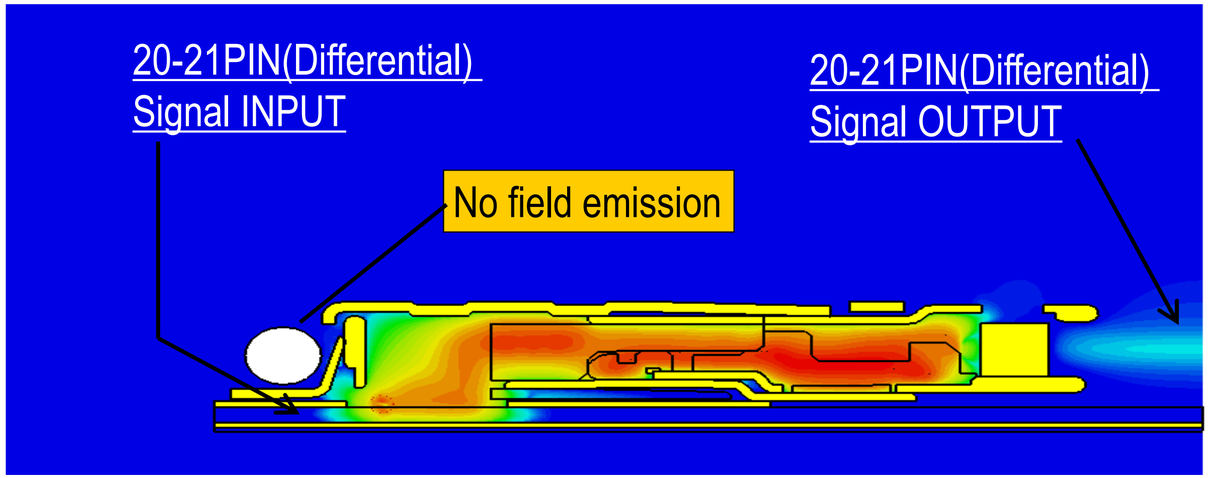


Cross-section A-A

CABLINE-CA II

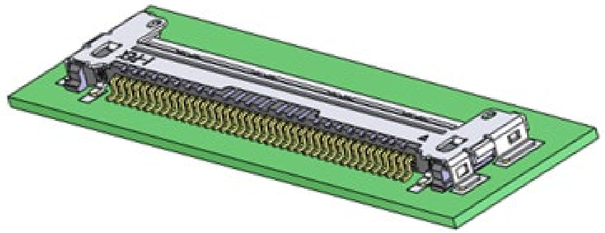
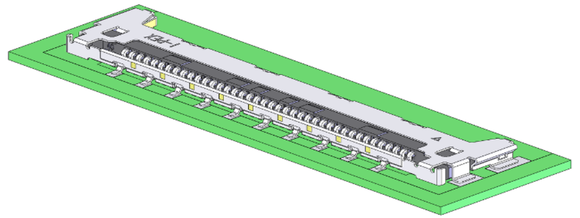
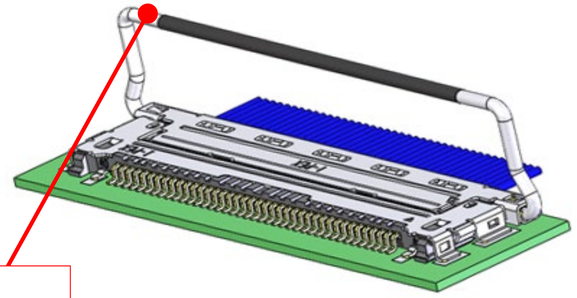
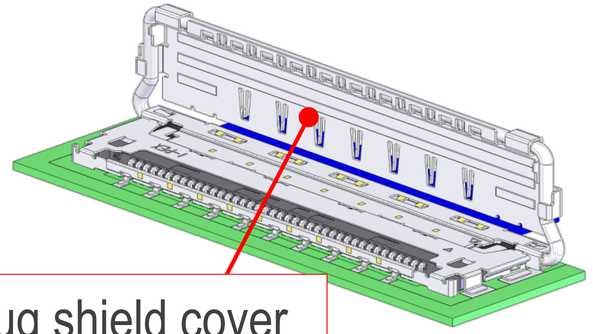
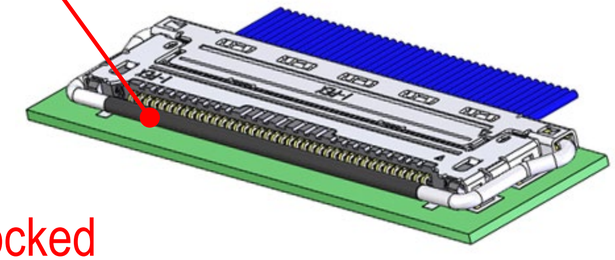
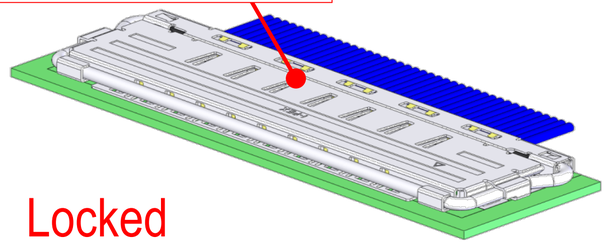


Top View



Cross-section A-A

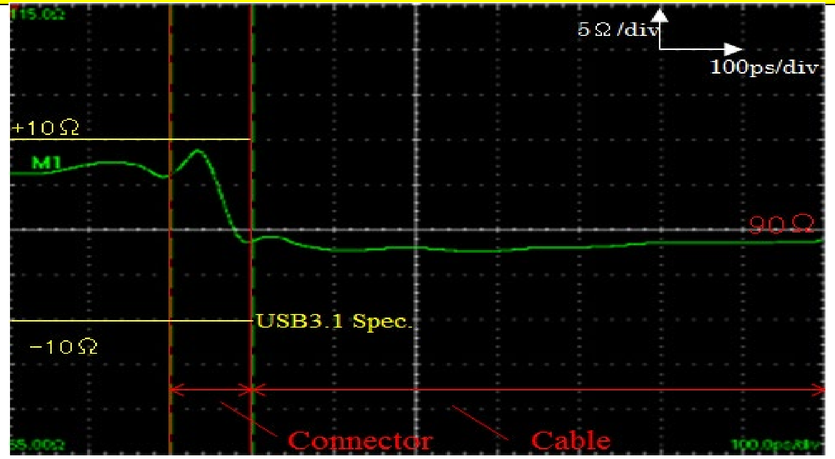
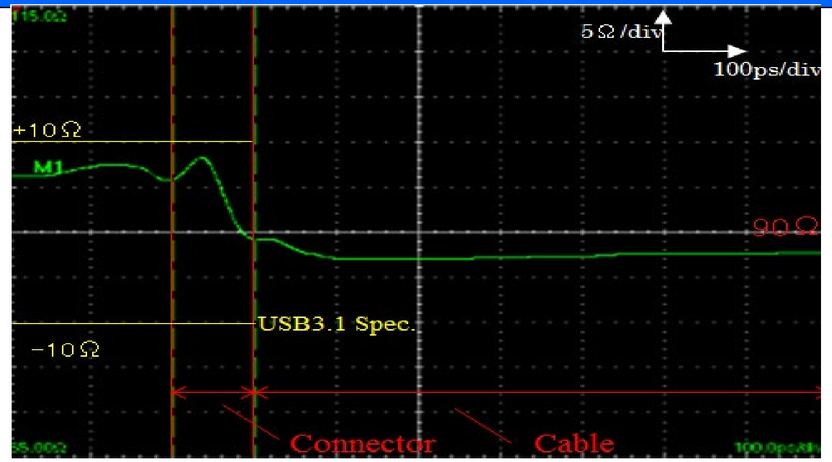
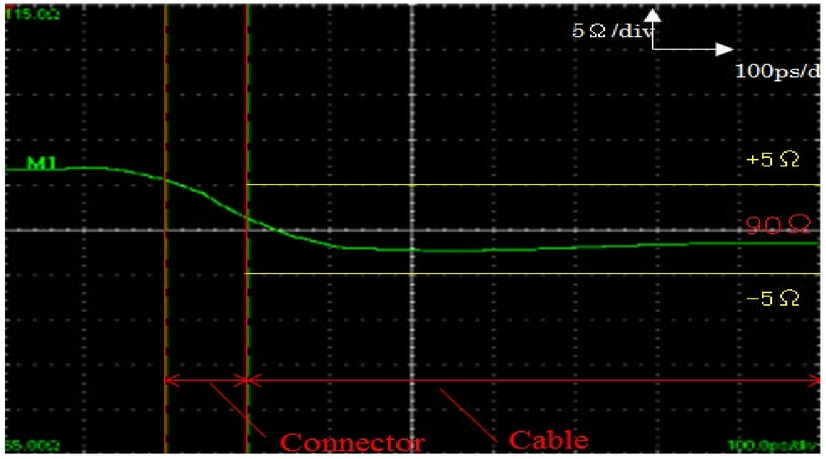
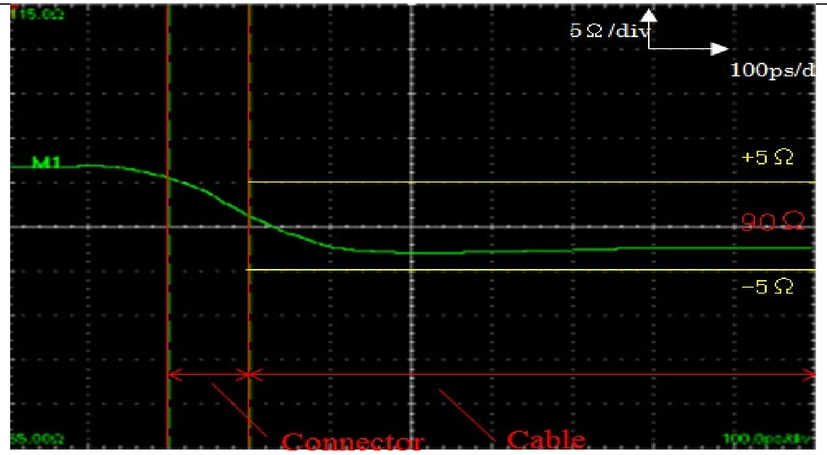
Comparison with CABLINE®-CA

Operation process	CABLINE-CA	CABLINE-CA II
(1) SMT receptacle on PCB		
⇩		
(2) Mate plug and receptacle	 Lock Bar	 Plug shield cover (Lock Bar Ass'y)
⇩		
(3) Lock using lock bar or lock bar Ass'y	 Locked	 Locked

Comparison with CABLINE®-CA

Characteristic Impedance (USB3.1)

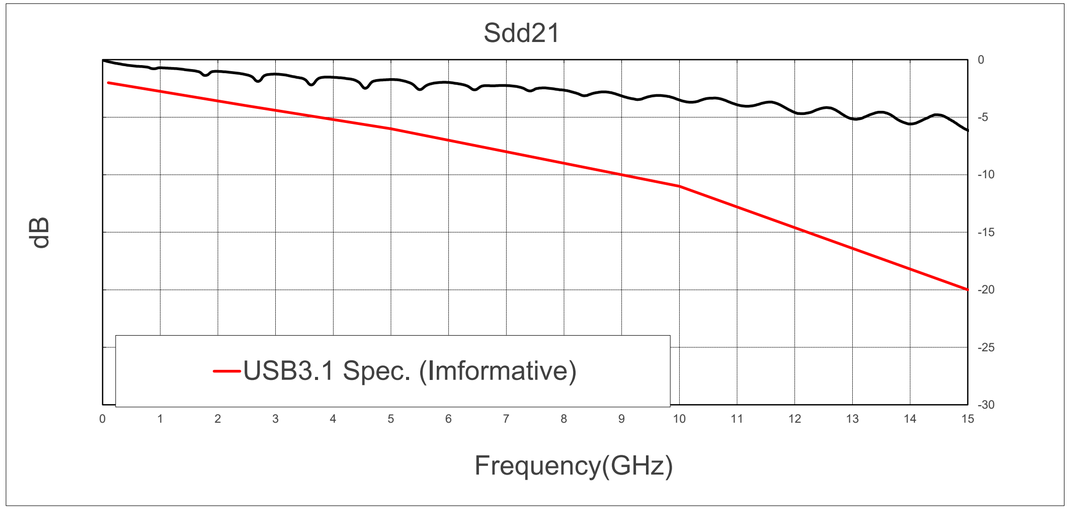
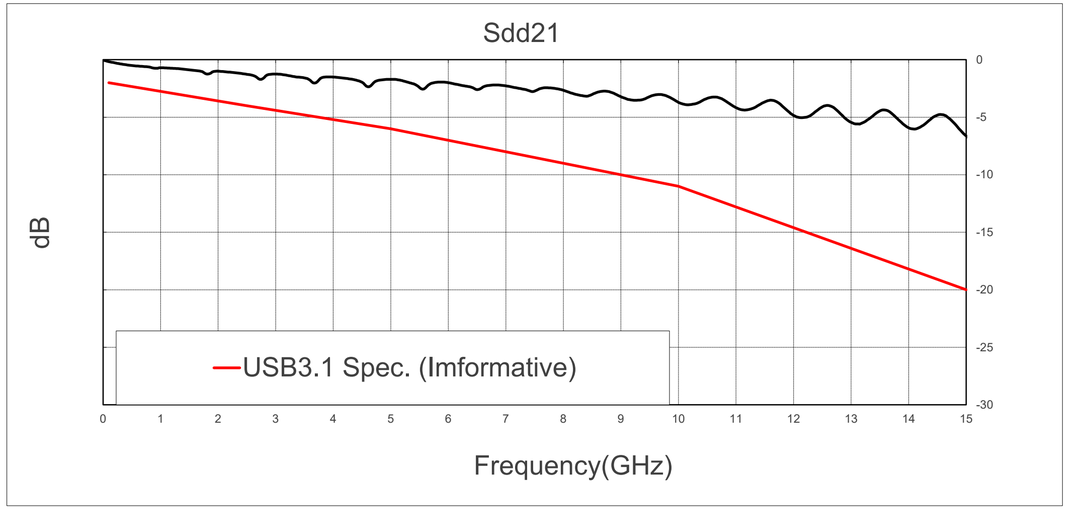
Micro-coax wire : AWG38, 45 Ohm, 100mm

	CABLINE-CA	CABLINE-CA II
CONNECTOR (90 ± 10 Ohm, Tr=40ps 20% to 80%)		
Cable (90 ± 5 Ohm, Tr=200ps 10% to 90%)		

Comparison with CABLINE®-CA

Insertion Loss (USB 3.1)

Micro-coax wire : AWG38, 45 Ohm, 100mm

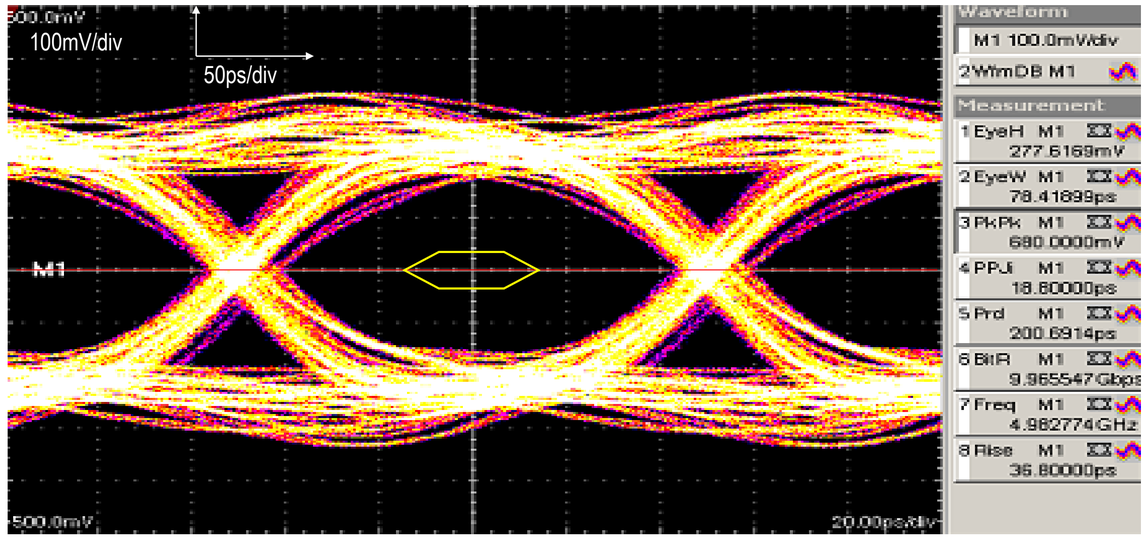
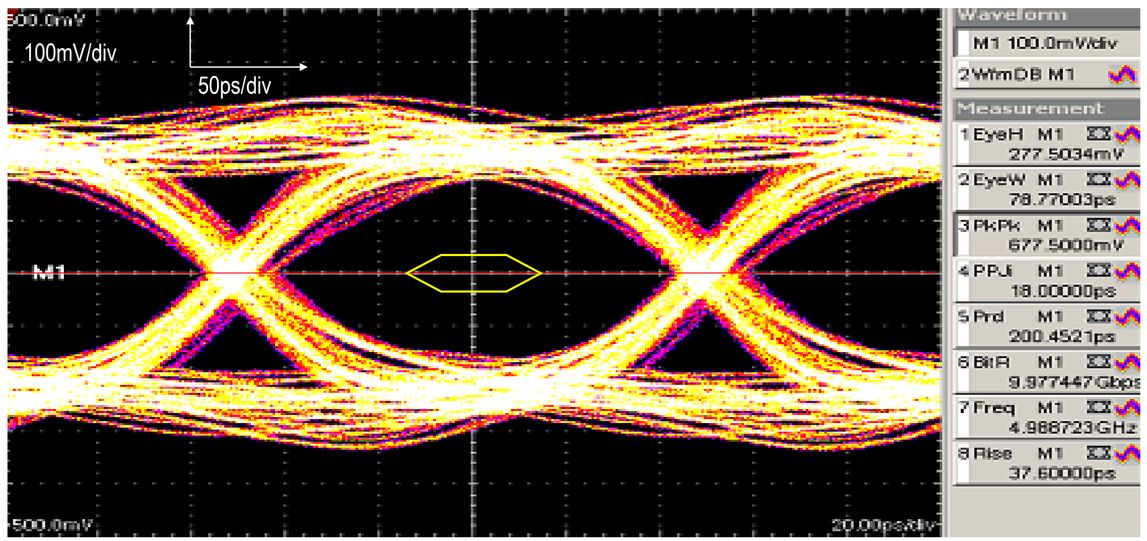
CABLINE-CA	CABLINE-CA II
	

Unit:dB

Comparison with CABLINE®-CA

Eye Pattern (USB 3.1)

Micro-coax wire : AWG38, 45 Ohm, 100mm

CABLINE-CA	CABLINE-CA II
	

Unit:dB

www.i-pex.com