THine ® Interface to the Future
- Solution by Smart Connectivity -

Presentation

MIPI SerDes Starter Kit Cable Length Consideration

2023.08.28 **THine Electronics, Inc.**

SC:E

Sensor Module/Mode vs. Cable Length

- Cat 6A

Case	Sensor Module	Mode	2m	5m	10m	20m
6A-1	FSM-IMX327C	FHD@60fps	Pass	Pass	Pass	Pass
6A-2	FSM-IMX415C	8M@30fps	Pass	Pass	Pass	-
6A-3	FSM-IMX415C	8M@60fps	Pass	Pass	-	-

- Cat 7

Case	Sensor Module	Mode	2m	5m	10m	15m	20m
7-1	FSM-IMX327C	FHD@60fps	Pass	Pass	Pass	Pass	Pass
7-2	FSM-IMX415C	8M@30fps	Pass	Pass	Pass	Pass	-
7-3	FSM-IMX335C	5M@60fps	Pass	Pass	Pass	-	-
7-4	FSM-IMX415C	8M@60fps	Pass	Pass	-	-	-

THine Electronics, Inc.   SC:E

6A-1:FSM-IMX327C FHD@60fps

- Bit Rate: 1.11375Gpbs
- Lane #: 2 lanes
- Cable Length: 20 m
- Category: Cat 6A

After Equalization of THCV242A   Before Equalization
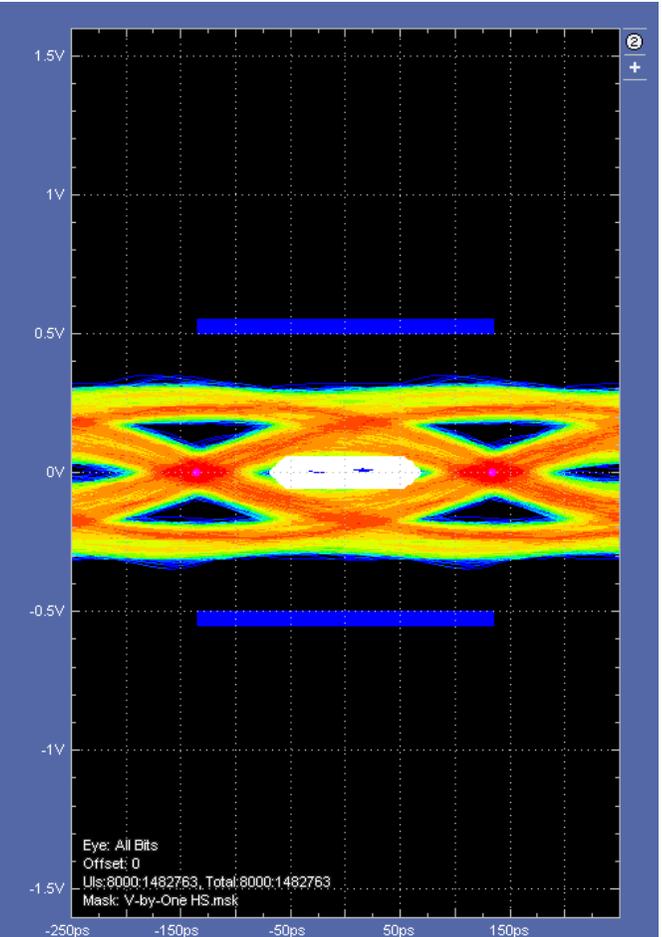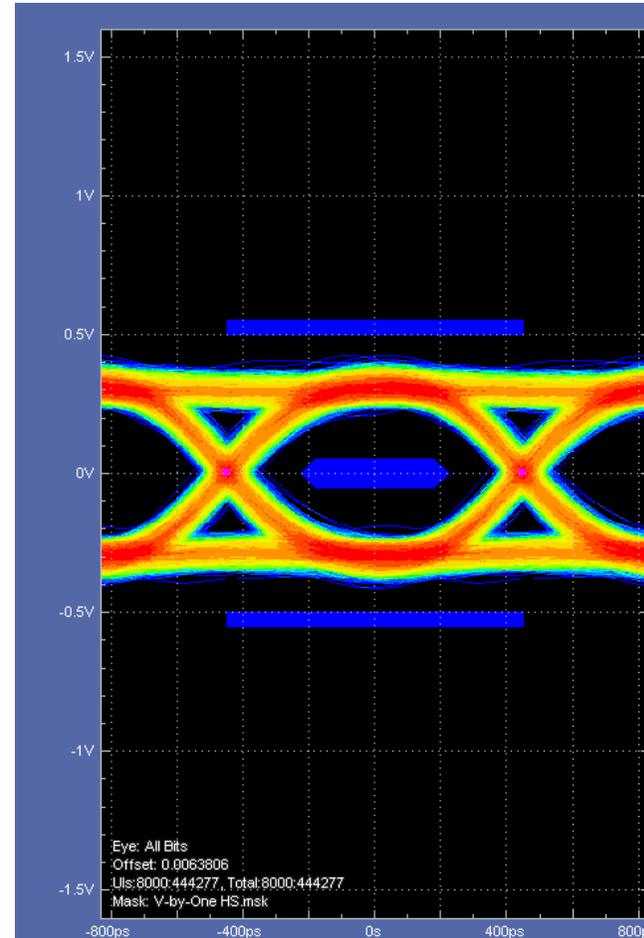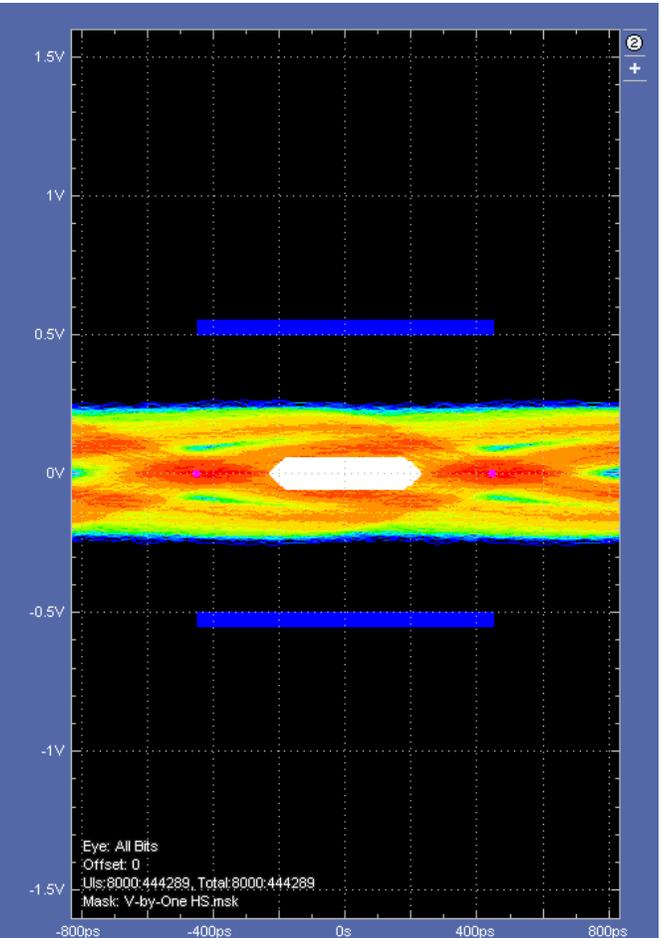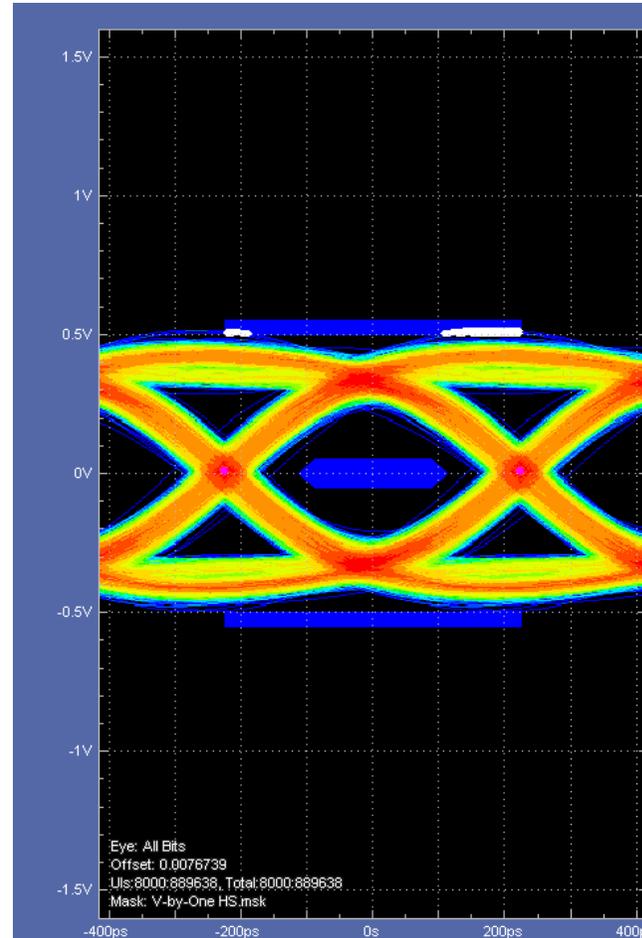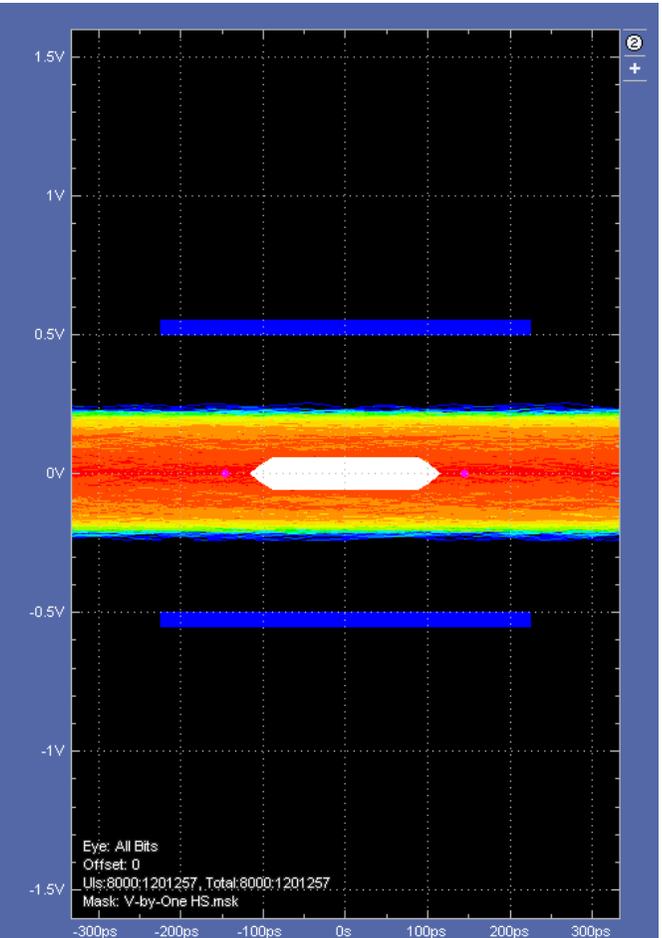
6A-2:FSM-IMX415C 8M@30fps

- Bit Rate: 2.227Gpbs
- Lane #: 2 lanes
- Cable Length: 10m
- Category: Cat 6A

After Equalization of THCV242A   Before Equalization

4

6A-3:FSM-IMX415C 8M@60fps

- Bit Rate: 3.7125Gpbs
- Lane #: 2 lanes
- Cable Length: 5m
- Category: Cat 6A

After Equalization of THCV242A   Before Equalization

7-1:FSM-IMX327C FHD@60fps

- Bit Rate: 1.11375Gpbs
- Lane #: 2 lanes
- Cable Length: 20 m
- Category: Cat 7

After Equalization of THCV242A   Before Equalization

7-2:FSM-IMX415C 8M@30fps

- Bit Rate: 2.227Gpbs
- Lane #: 2 lanes
- Cable Length: 15m
- Category: Cat 7
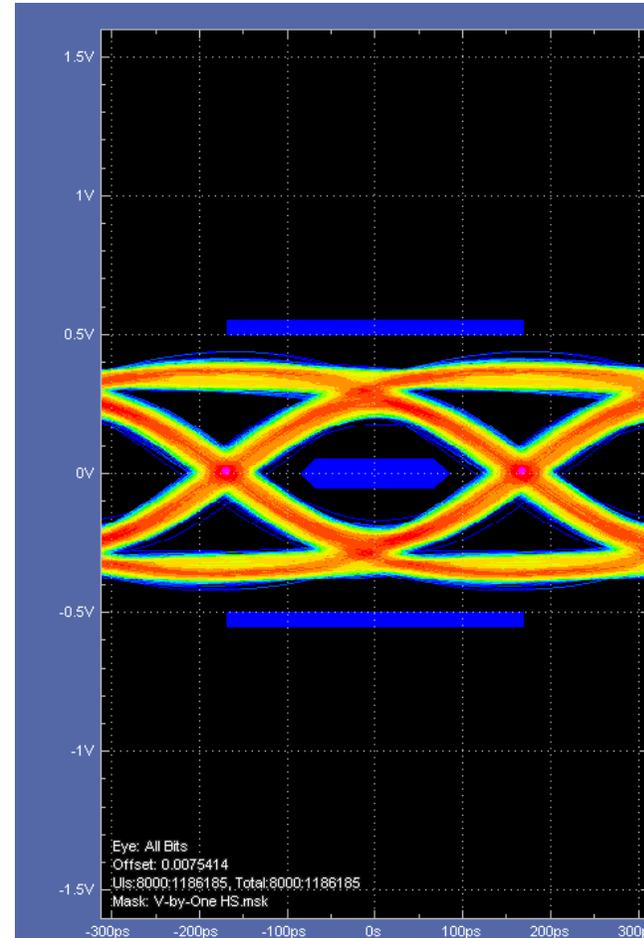
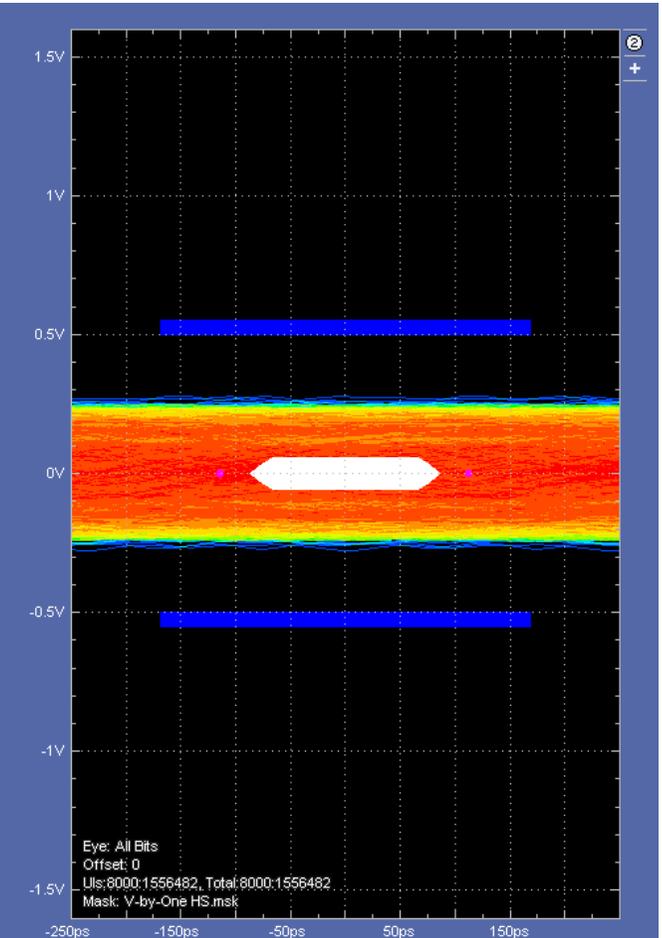After Equalization of THCV242A   Before Equalization

7-3:FSM-IMX335C 5M@60fps

- Bit Rate: 2.970Gpbs
- Lane #: 2 lanes
- Cable Length: 10m
- Category: Cat 7
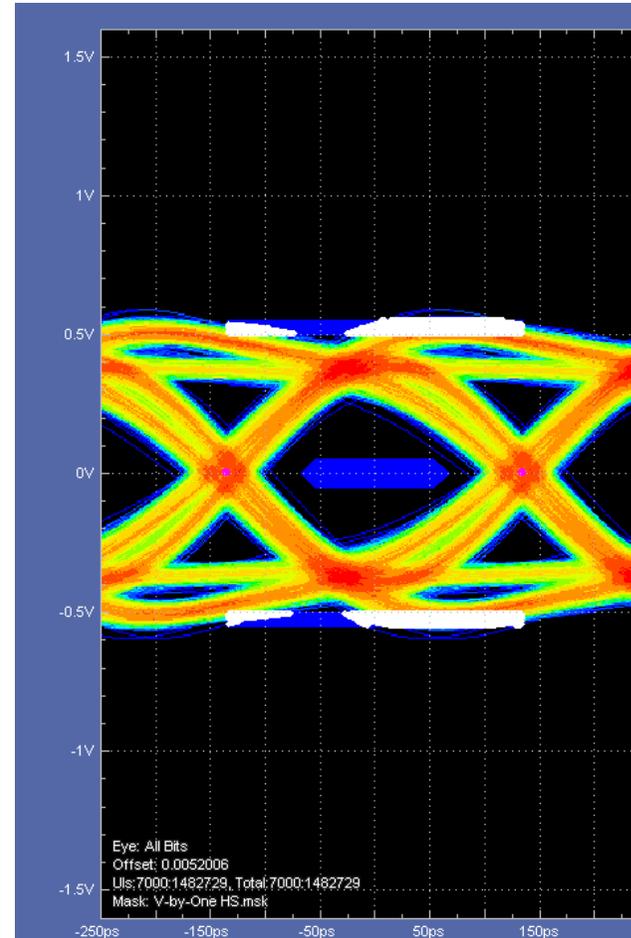
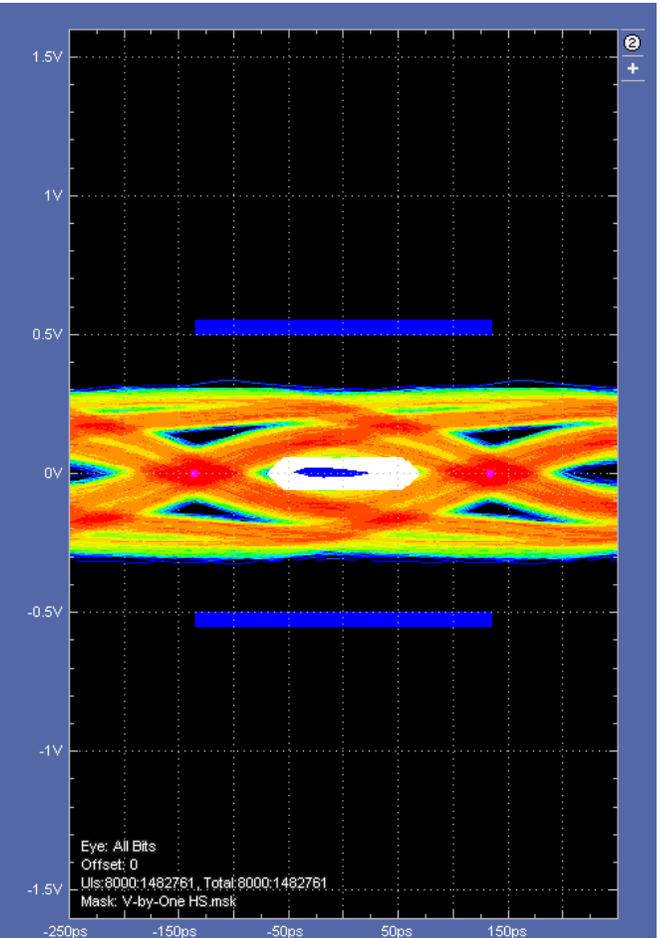After Equalization of THCV242A

Before Equalization

7-4:FSM-IMX415C 8M@60fps

- Bit Rate: 3.7125Gpbs
- Lane #: 2 lanes
- Cable Length: 5m
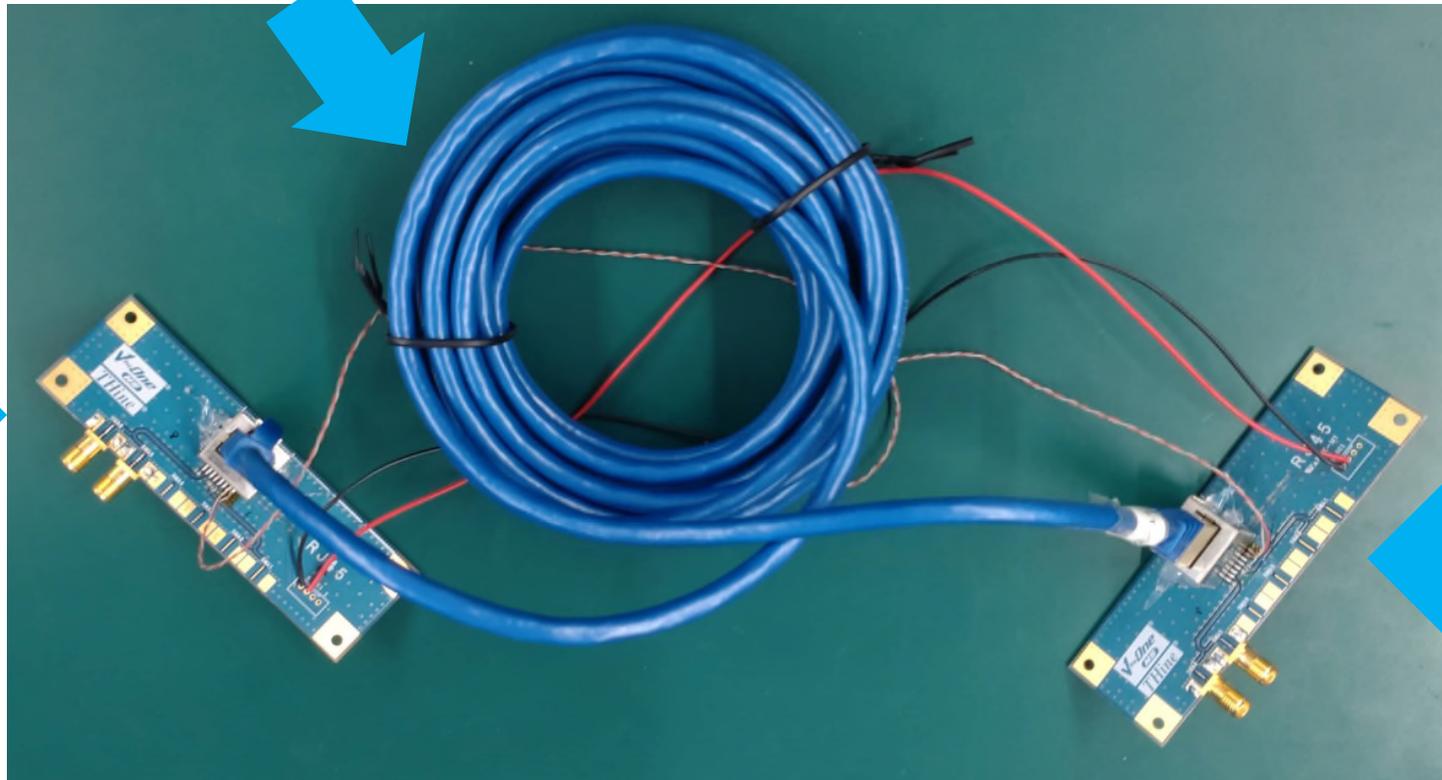- Category: Cat 7

After Equalization of THCV242A

Before Equalization

DUT for Cable Insertion Loss Evaluation

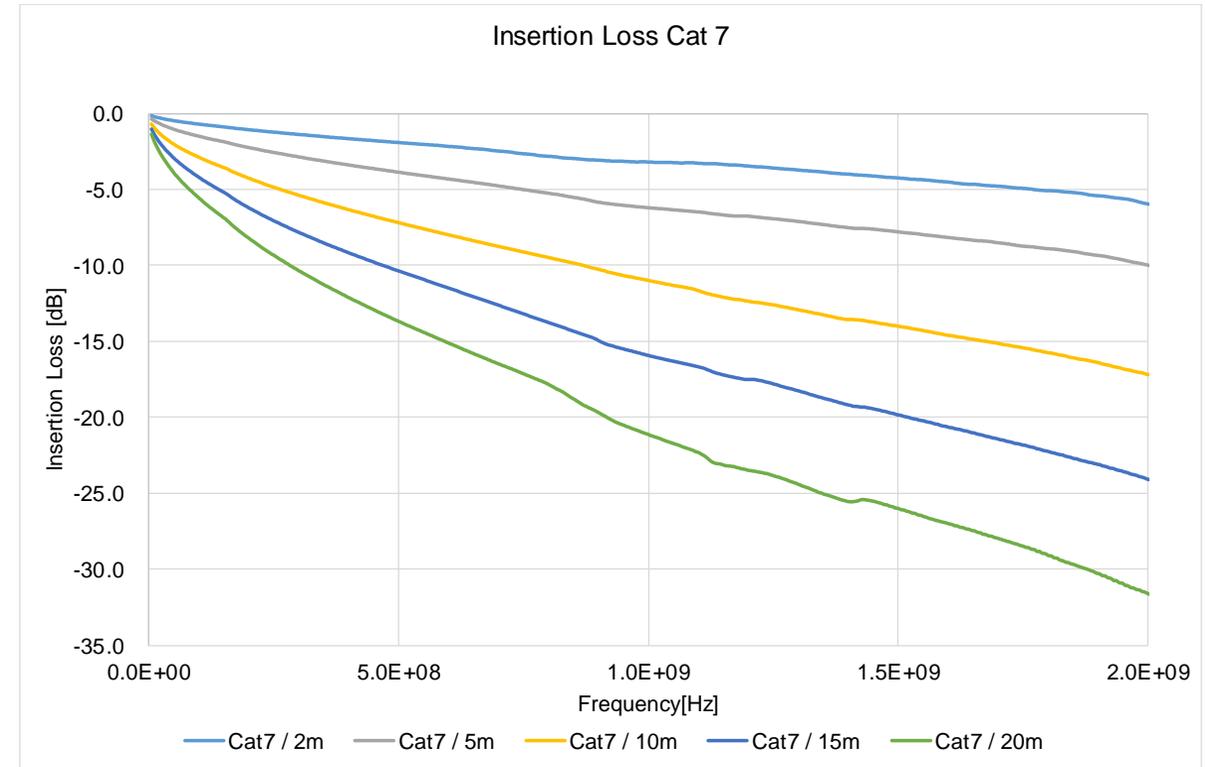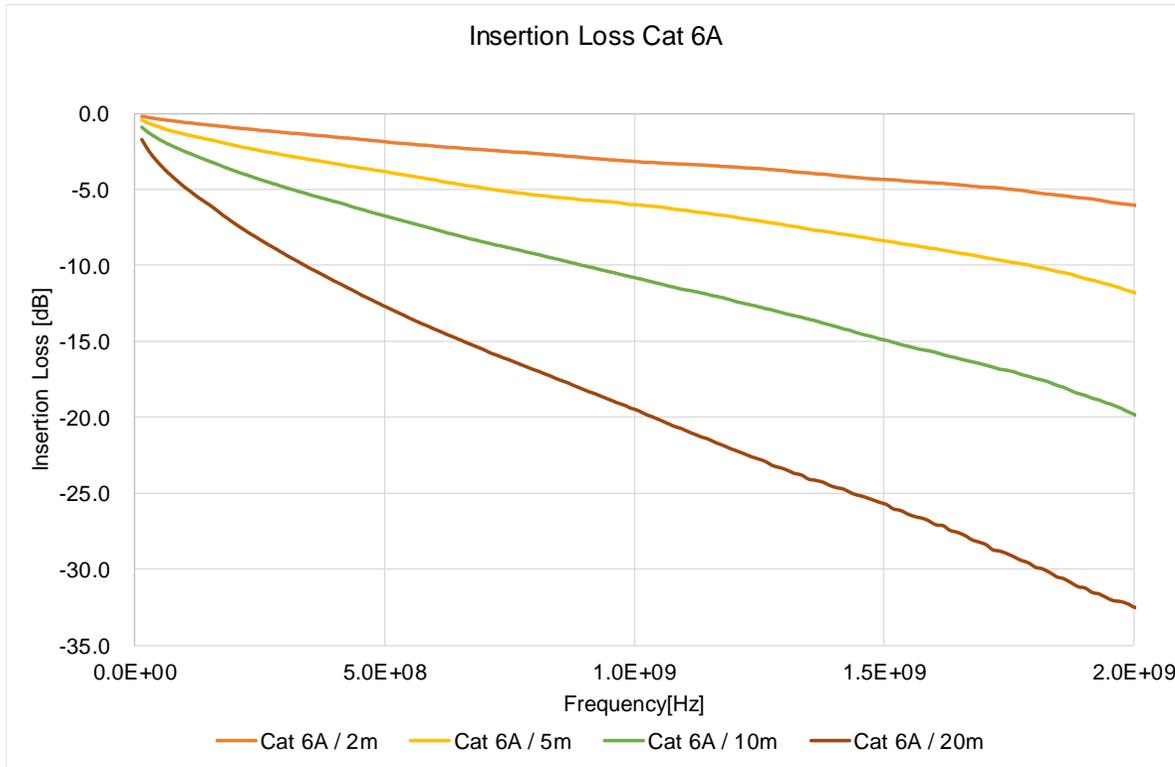● NOTE: The results of the following page include the characteristics of the jigs.

Ethernet Cable

Jig for
RJ45 to SMA
Conversion

Jig for
RJ45 to SMA
Conversion

SC:E

Insertion Loss

Insertion Loss Cat 6A

Cat 6A / 2m — Cat 6A / 5m — Cat 6A / 10m — Cat 6A / 20m

Insertion Loss Cat 7

Cat7 / 2m — Cat7 / 5m — Cat7 / 10m — Cat7 / 15m — Cat7 / 20m

Thank You

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