

RF Cables

Technical Reference



Introduction

This document describes the typical performance of MultiLane's RF cables portfolio. The information is organized by cable connector type and length. The measured performance for every cable is insertion loss (S21), and VSWR* (S11), and skew for phase matched cable pairs and sets.

* VSWR Voltage Standing Wave Ratio, and is also referred to as Standing Wave Ratio (SWR). VSWR is a function of the reflection coefficient, $VSWR = (1+R)/(1-R)$, R = reflection coefficient.

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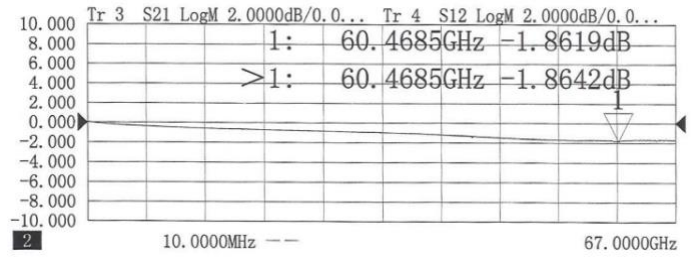
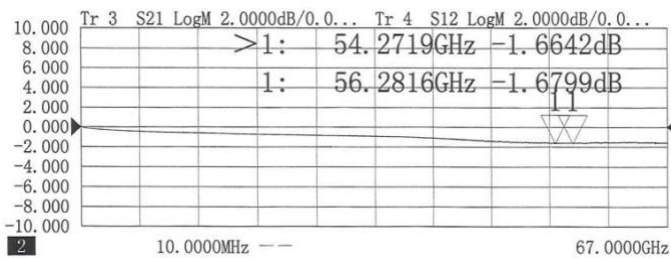
1.85 mm, 30 cm / 12-inch cable

MLCBPS-1.85-30 Single phase stable cable - 1.85 mm, 30 cm / 12 inch
 MLCBPM-1.85-30 Pair of phase matched cables - 1.85 mm, 30 cm / 12 inch
 MLCBPM-1.85-30-4/8/16/32 Set of 4/8/16/32 phase matched cables - 1.85 mm, 30 cm / 12 inch

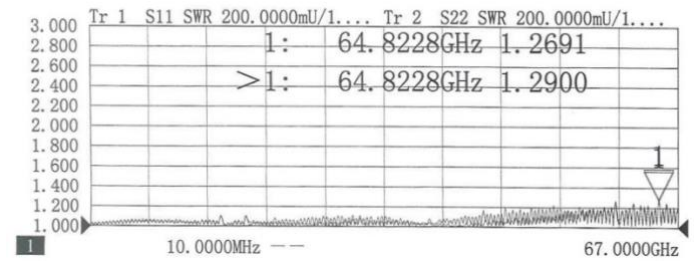
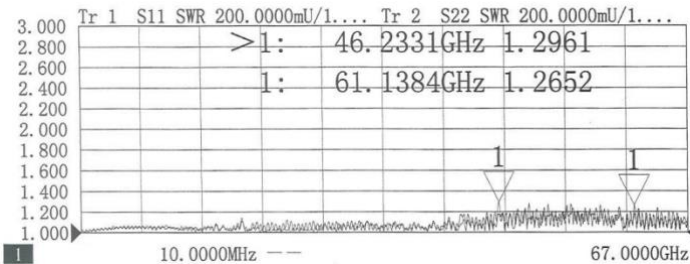
Specifications

Insertion loss, max = 1.9 dB at 67 GHz
 VSWR, max = 1.35
 Skew, max = 1.0 ps

Insertion loss plot

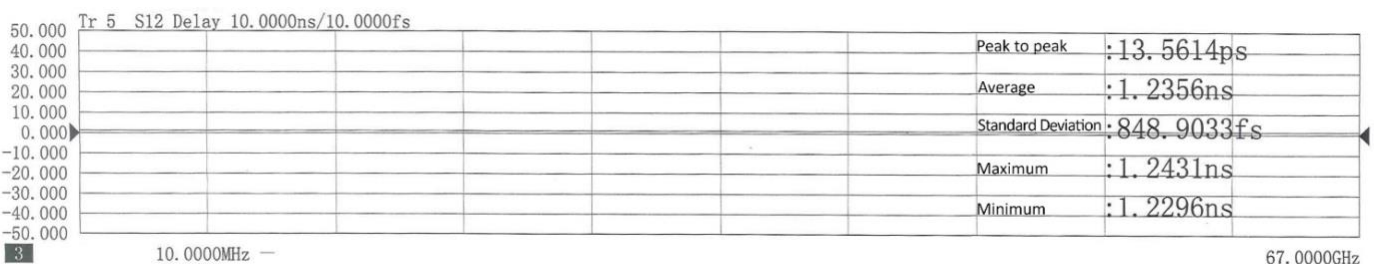
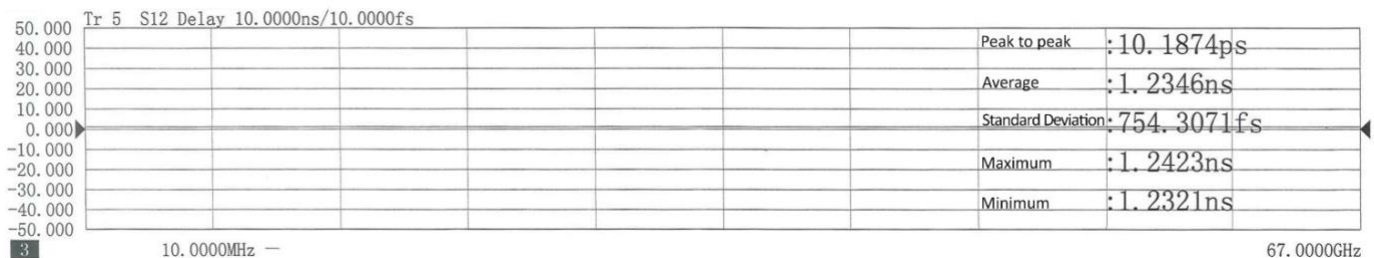


VSWR plot



Skew plot

Skew = 1.0 ps **



** Skew = ABS (average delay,1 - average delay,2)

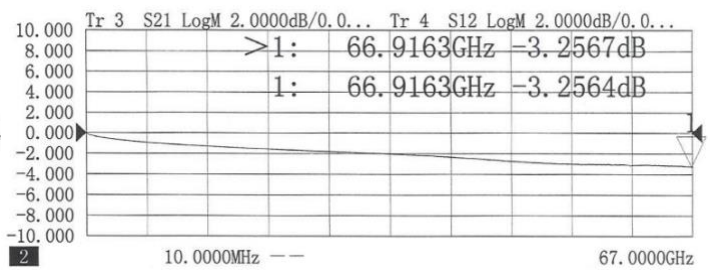
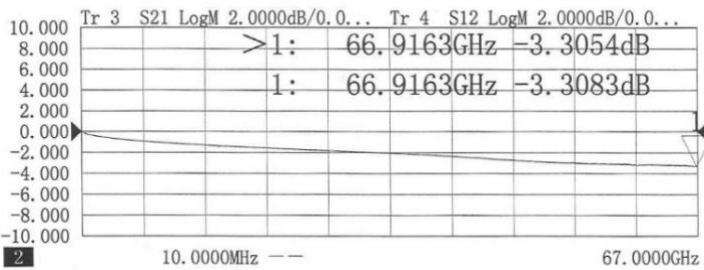
1.85 mm, 60 cm / 24-inch cable

MLCBPS-1.85-60 Single phase stable cable - 1.85 mm, 60 cm / 24 inch
 MLCBPM-1.85-60 Pair of phase matched cables - 1.85 mm, 60 cm / 24 inch
 MLCBPM-1.85-60-4/8/16/32 Set of 4/8/16/32 phase matched cables - 1.85 mm, 60 cm / 24 inch

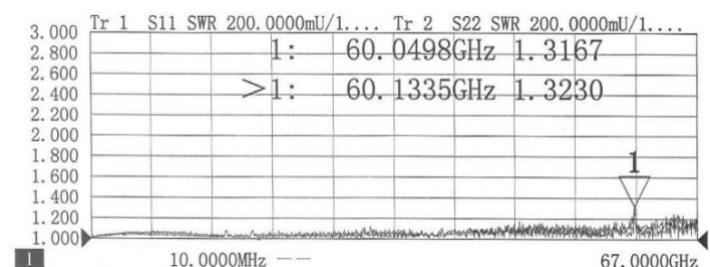
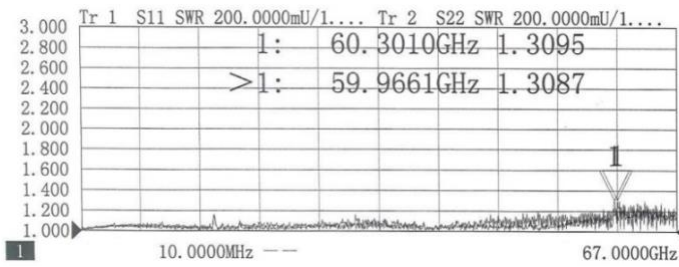
Specifications

Insertion loss, max = 3.5 dB at 67 GHz
 VSWR, max = 1.35
 Skew, max = 1.0 ps

Insertion loss plot

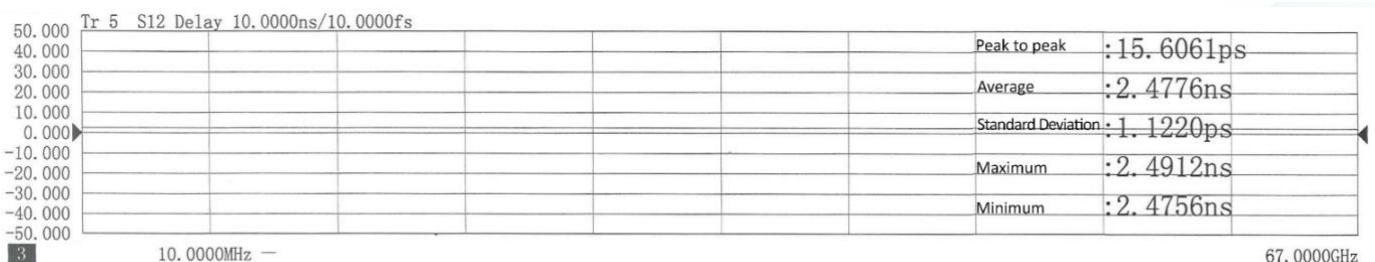
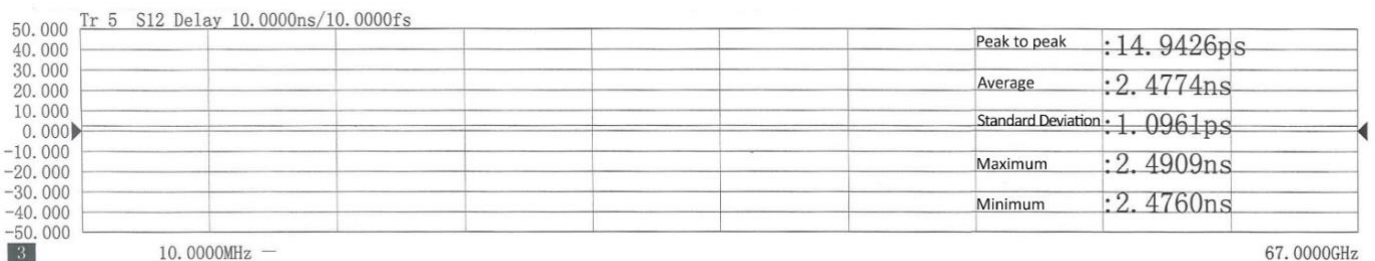


VSWR plot



Skew plot

Skew = 0.2 ps



Innovation for the next generation

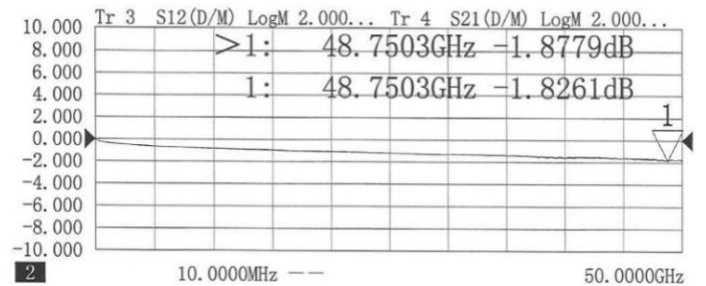
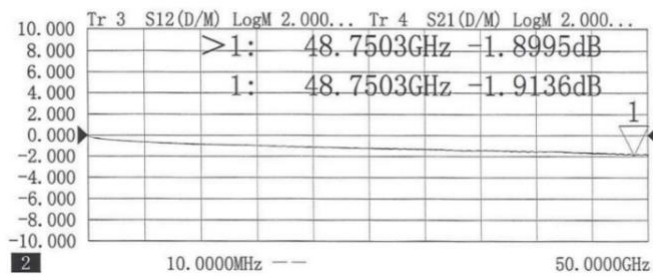
2.4 mm, 30 cm / 12-inch cable

MLCBPS-2.4-30	Single phase stable cable – 2.4 mm, 30 cm / 12 inch
MLCBPM-2.4-30	Pair of phase matched cables – 2.4 mm, 30 cm / 12 inch
MLCBPM-2.4-30-4/8/16/32	Set of 4/8/16/32 phase matched cables – 2.4 mm, 30 cm / 12 inch

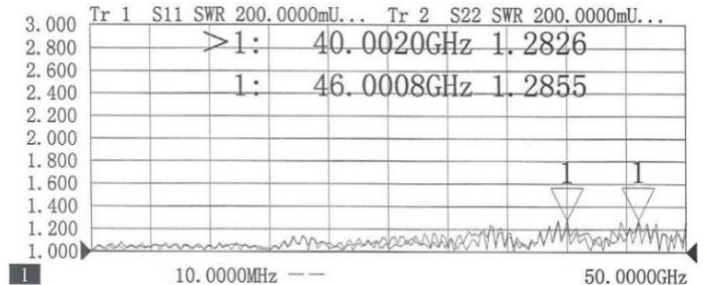
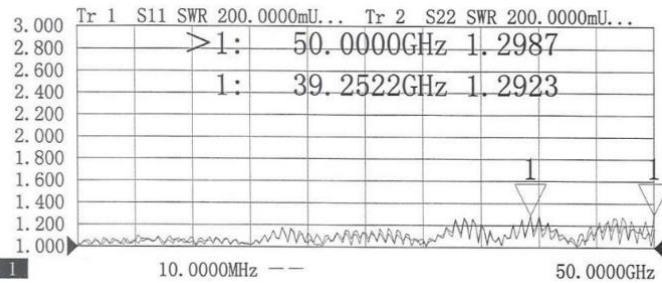
Specifications

Insertion loss, max = 2.1 dB at 50 GHz
 VSWR, max = 1.30
 Skew, max = 1.0 ps

Insertion loss plot

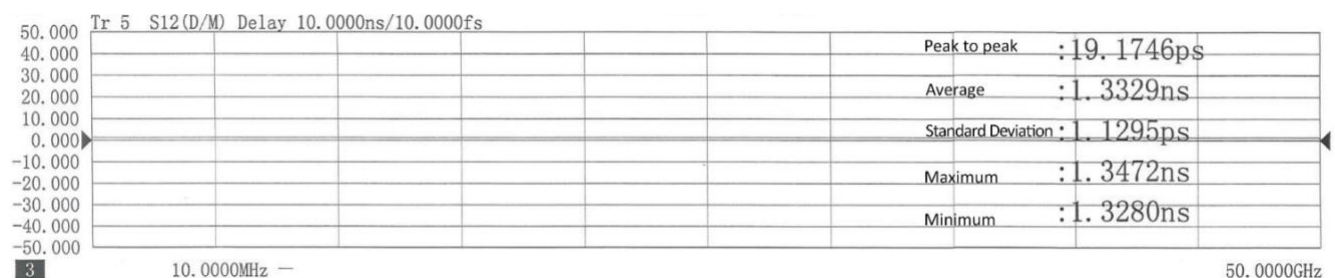
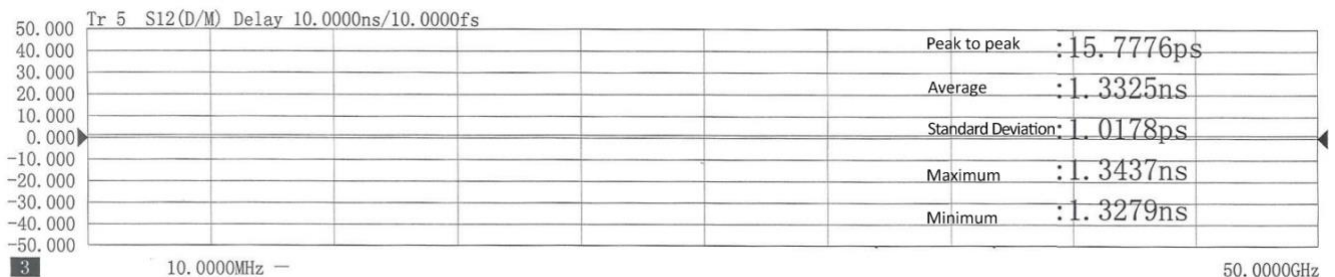


VSWR plot



Skew plot

Skew = 0.4 ps



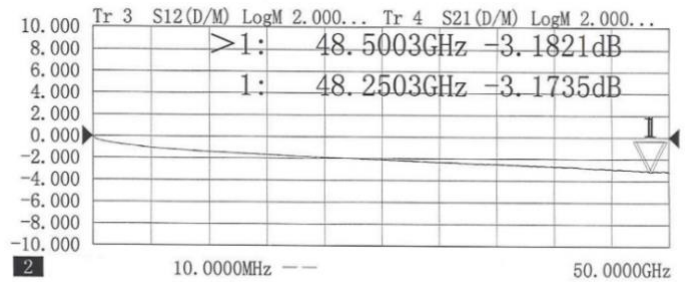
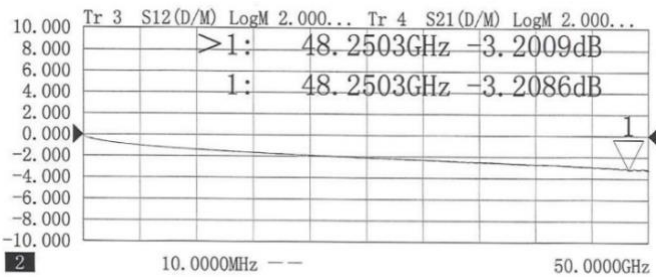
2.4 mm, 60 cm / 24-inch cable

MLCBPS-2.4-60	Single phase stable cable – 2.4 mm, 60 cm / 24 inch
MLCBPM-2.4-60	Pair of phase matched cables – 2.4 mm, 60 cm / 24 inch
MLCBPM-2.4-60-4/8/16/32	Set of 4/8/16/32 phase matched cables – 2.4 mm, 60 cm / 24 inch

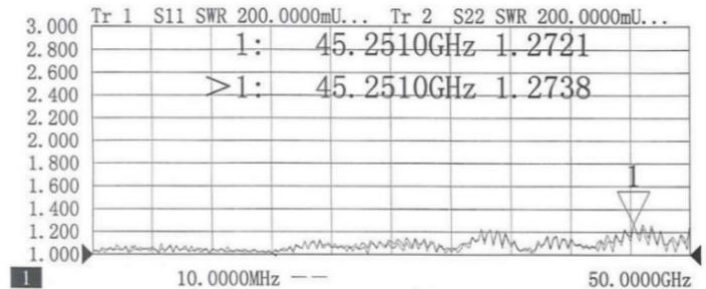
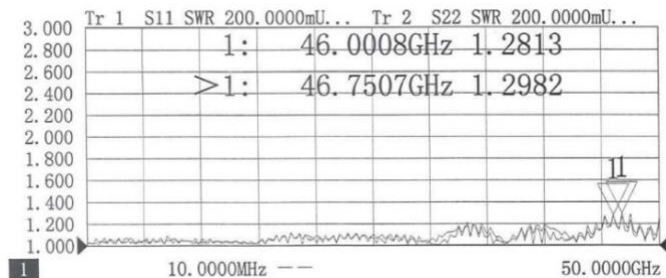
Specifications

Insertion loss, max = 3.4 dB at 50 GHz
 VSWR, max = 1.30
 Skew, max = 1.0 ps

Insertion loss plot

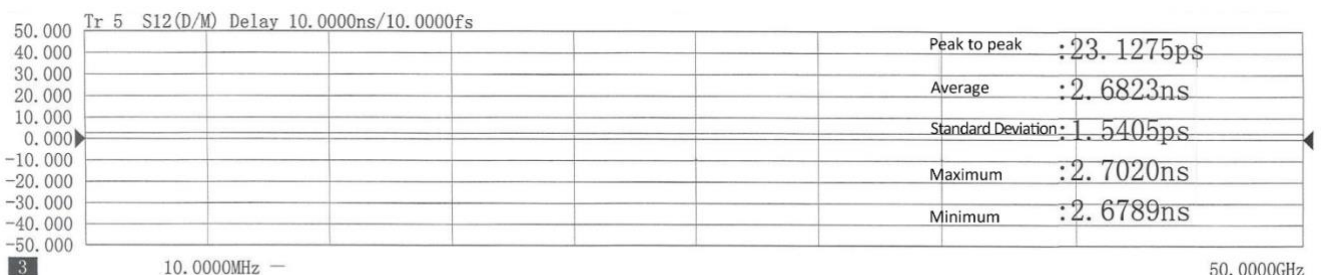
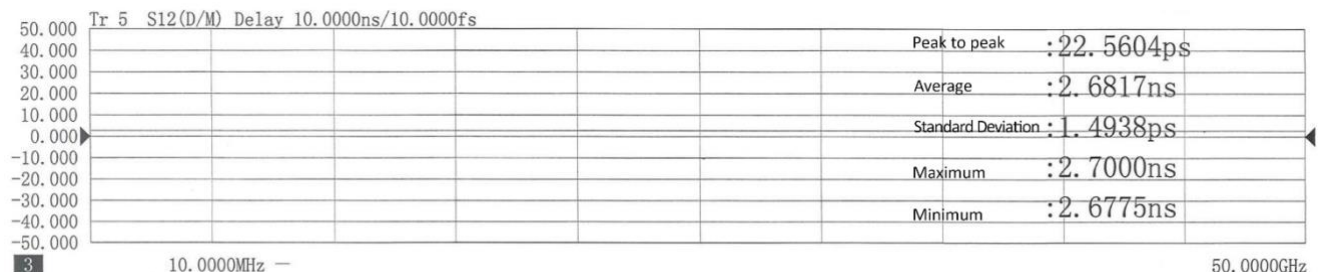


VSWR plot



Skew plot

Skew = 0.5 ps



2.4 mm, 100 cm / 40-inch cable

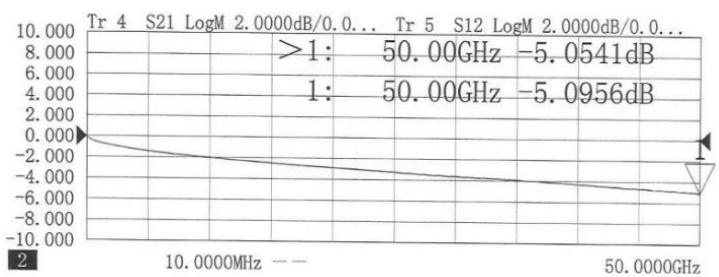
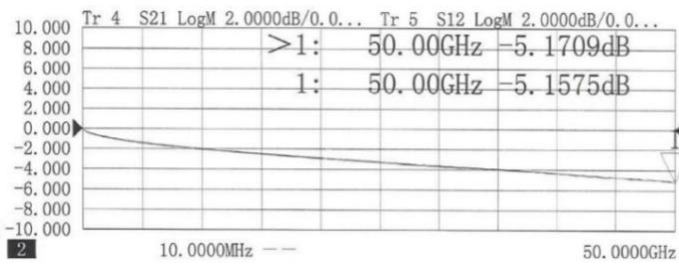
MLCBPS-2.4-100
MLCBPM-2.4-100

Single phase stable cable – 2.4 mm, 100 cm / 40 inch
Pair of phase matched cables – 2.4 mm, 100 cm / 40 inch

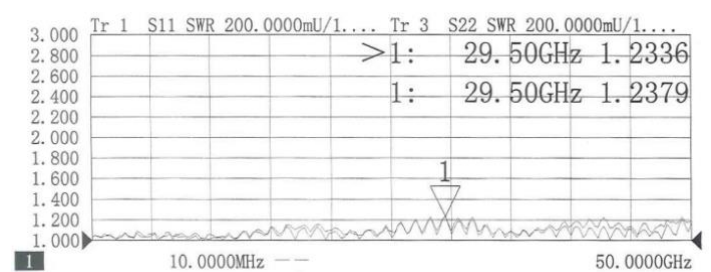
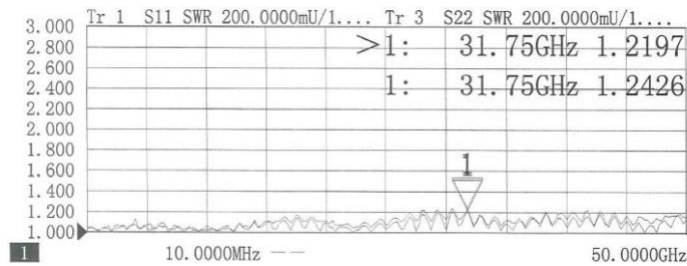
Specifications

Insertion loss, max = 5.2 dB at 50 GHz
VSWR, max = 1.30
Skew, max = 1.0 ps

Insertion loss plot

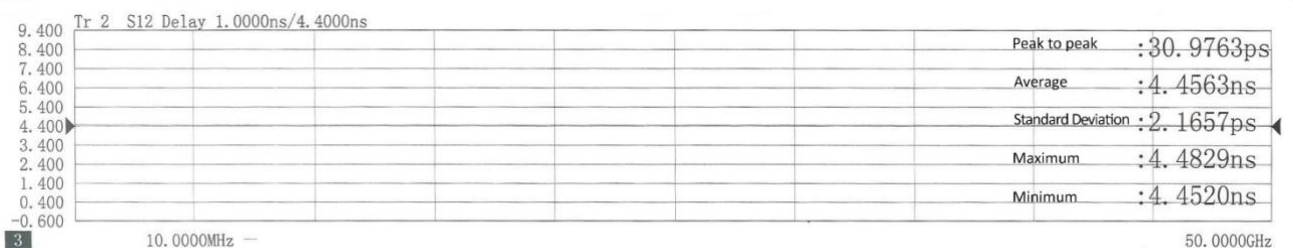
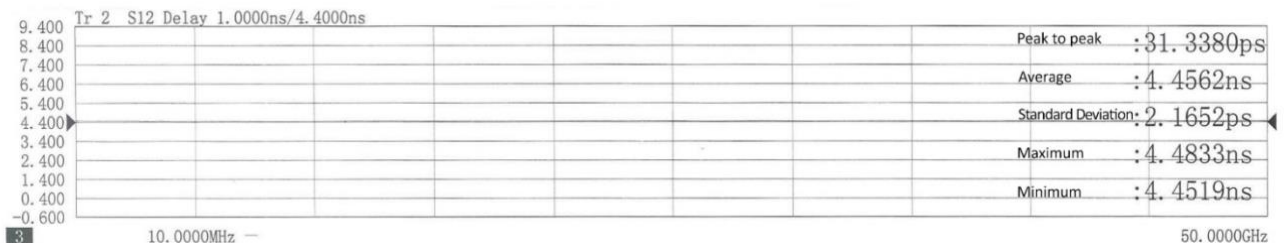


VSWR plot



Skew plot

Skew = 0.1 ps



2.92 mm, 30 cm / 12-inch cable

MLCBPS-2.92-30

MLCBPM-2.92-30

MLCBPM-2.92-30-4/8/16/32

Single phase stable cable – 2.92 mm, 30 cm / 12 inch

Pair of phase matched cables – 2.92 mm, 30 cm / 12 inch

Set of 4/8/16/32 phase matched cables – 2.92 mm, 30 cm / 12 inch

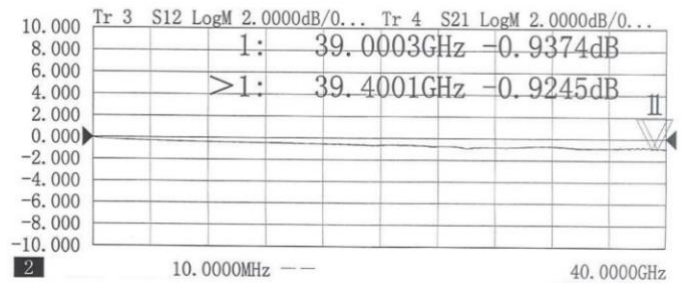
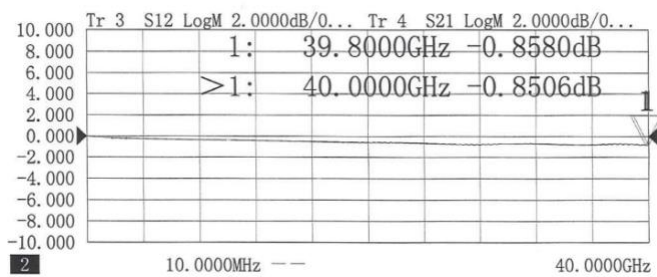
Specifications

Insertion loss, max = 1.2 dB at 40 GHz

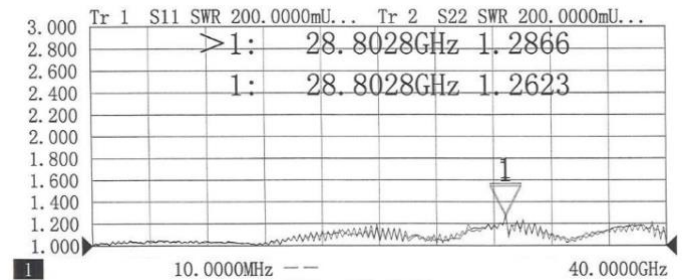
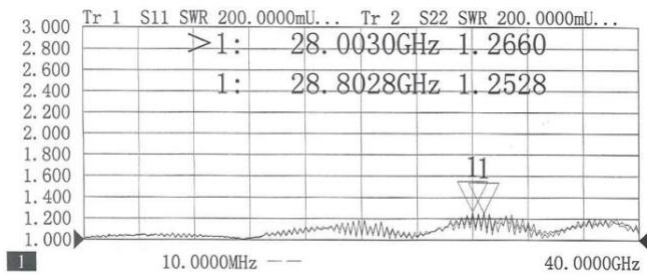
VSWR, max = 1.30

Skew, max = 1.0 ps

Insertion loss plot

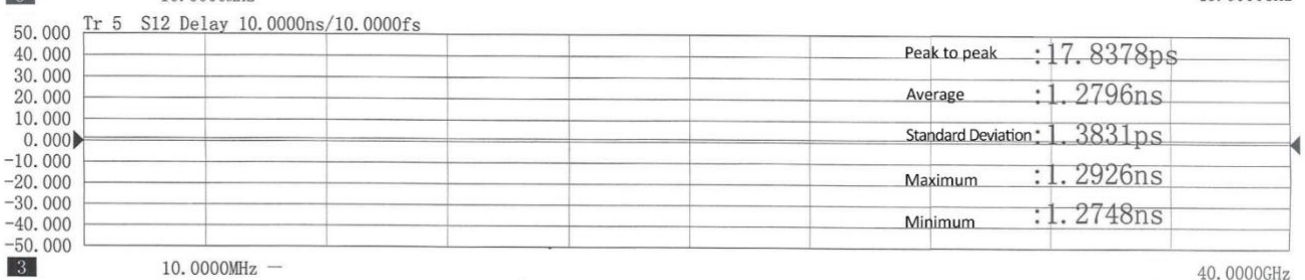
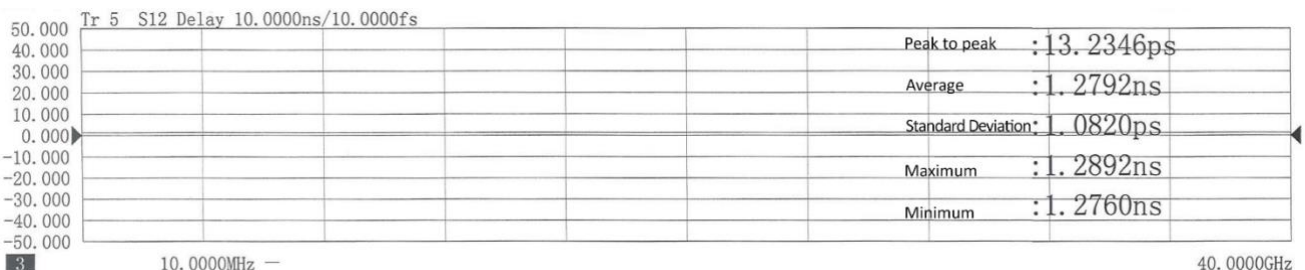


VSWR plot



Skew plot

Skew = 0.4 ps



2.92 mm, 60 cm / 24-inch cable

MLCBPS-2.92-60

MLCBPM-2.92-60

MLCBPM-2.92-60-4/8/16/32

Single phase stable cable – 2.92 mm, 60 cm / 24 inch

Pair of phase matched cables – 2.92 mm, 60 cm / 24 inch

Set of 4/8/16/32 phase matched cables – 2.92 mm, 60 cm / 24 inch

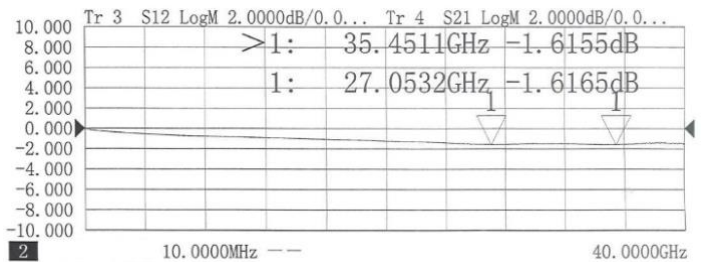
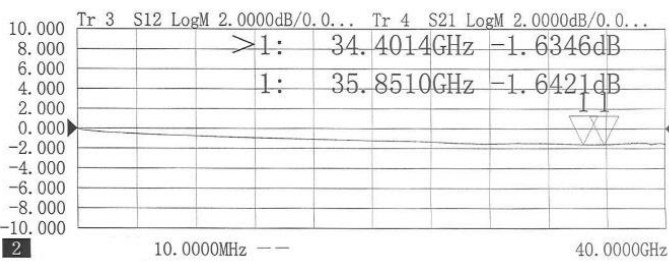
Specifications

Insertion loss, max = 1.9 dB at 40 GHz

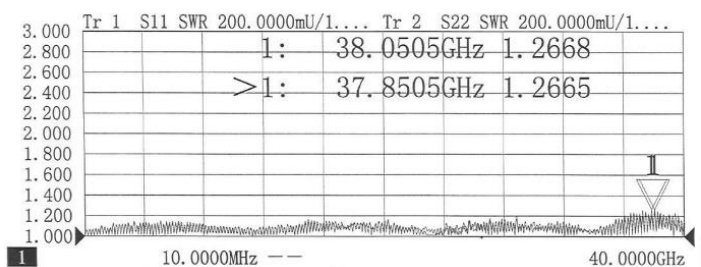
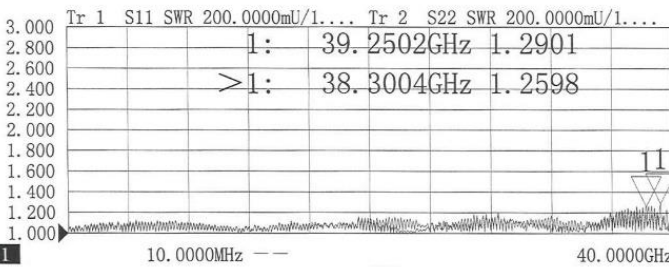
VSWR, max = 1.30

Skew, max = 1.0 ps

Insertion loss plot

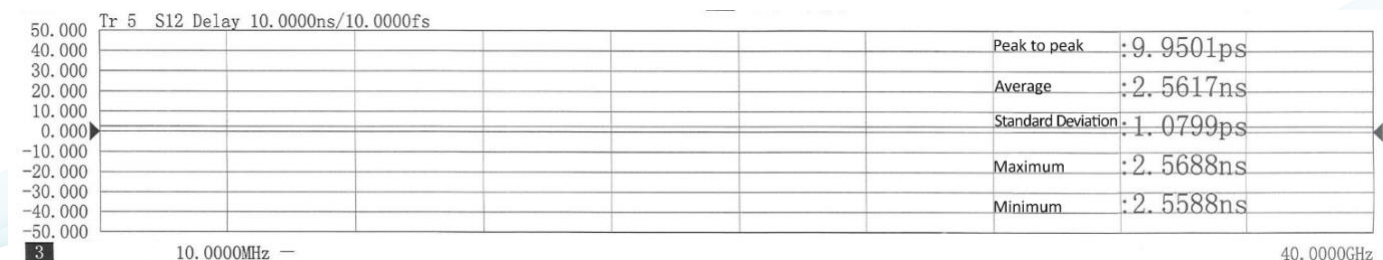
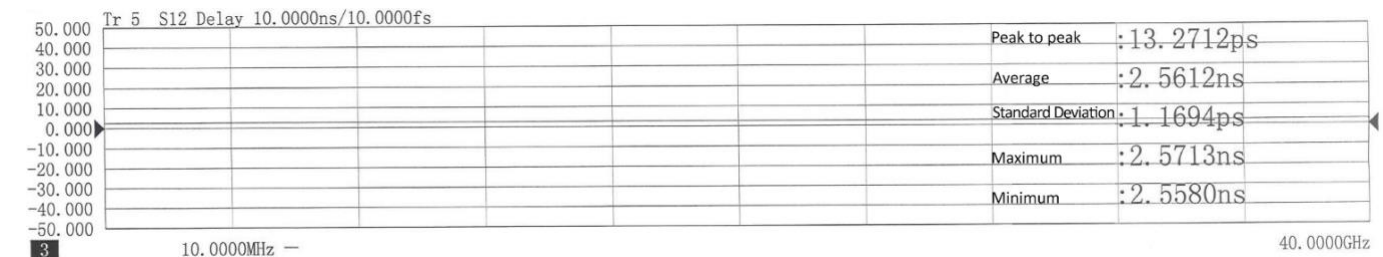


VSWR plot



Skew plot

Skew = 0.5 ps



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2.92 mm, 80 cm / 32-inch cable

MLCBPS-2.92-80

MLCBPM-2.92-80

MLCBPM-2.92-80-4/8/16/32

Single phase stable cable – 2.92 mm, 80 cm / 32 inch

Pair of phase matched cables – 2.92 mm, 80 cm / 32 inch

Set of 4/8/16/32 phase matched cables – 2.92 mm, 80 cm / 32 inch

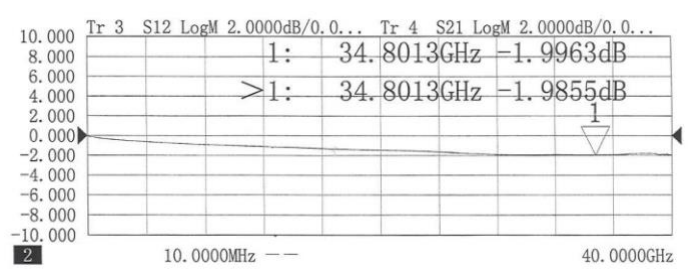
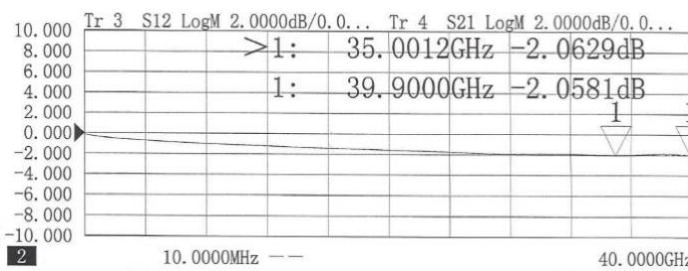
Specifications

Insertion loss, max = 2.3 dB at 40 GHz

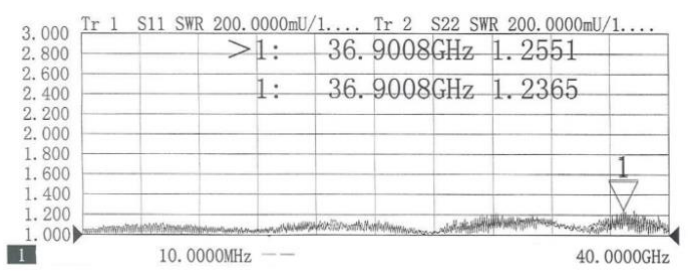
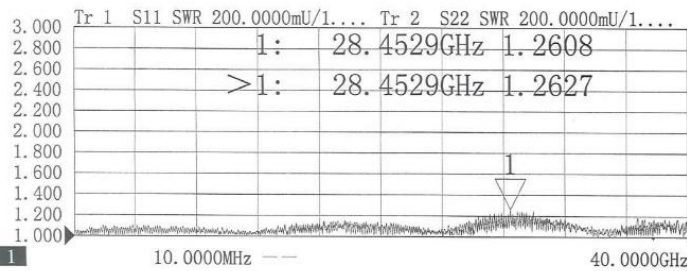
VSWR, max = 1.30

Skew, max = 1.0 ps

Insertion loss plot

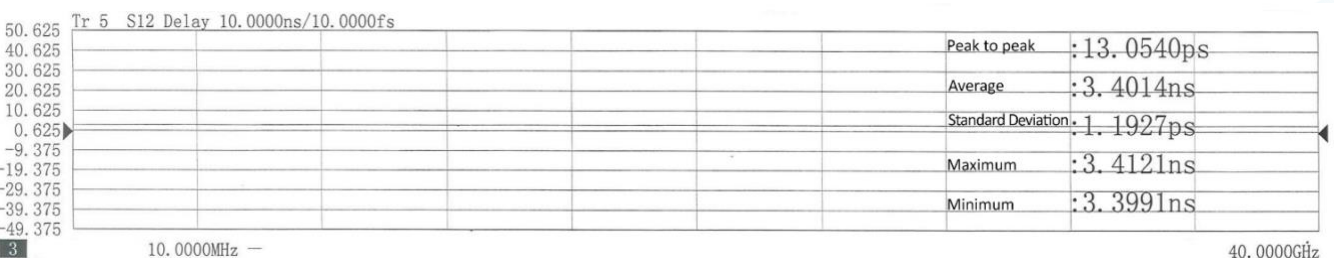
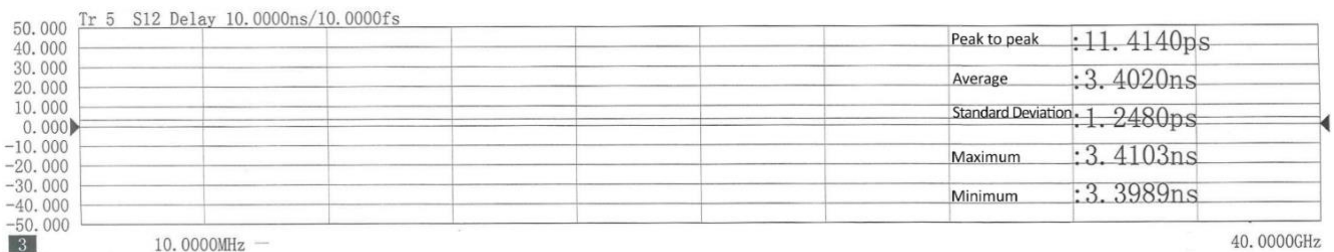


VSWR plot



Skew plot

Skew = 0.6 ps



2.92 mm, 100 cm / 40-inch cable

MLCBPS-2.92-100
MLCBPM-2.92-100

Single phase stable cable – 2.92 mm, 100 cm / 40 inch
Pair of phase matched cables – 2.92 mm, 100 cm / 40 inch

Specifications

Insertion loss, max = 3.0 dB at 40 GHz
VSWR, max = 1.30
Skew, max = 1.0 ps

3.5 mm, 30 cm / 12-inch cable

MLCBPS-SMA-30
MLCBPM-SMA-30
MLCBPM-SMA-30-4/8/16/32

Single phase stable cable – 3.5 mm, 30 cm / 12 inch
Pair of phase matched cables – 3.5 mm, 30 cm / 12 inch
Set of 4/8/16/32 phase matched cables – 3.5 mm, 30 cm / 12 inch

Specifications

Insertion loss, max = 0.6 dB at 26 GHz
VSWR, max = 1.25
Skew, max = 1.0 ps

3.5 mm, 60 cm / 24-inch cable

MLCBPS-SMA-60
MLCBPM-SMA-60
MLCBPM-SMA-60-4/8/16/32

Single phase stable cable – 3.5 mm, 60 cm / 24 inch
Pair of phase matched cables – 3.5 mm, 60 cm / 24 inch
Set of 4/8/16/32 phase matched cables – 3.5 mm, 60 cm / 24 inch

Specifications

Insertion loss, max = 1.2 dB at 26 GHz
VSWR, max = 1.25
Skew, max = 1.0 ps

3.5 mm, 80 cm / 32-inch cable

MLCBPS-SMA-80
MLCBPM-SMA-80
MLCBPM-SMA-80-4/8/16/32

Single phase stable cable – 3.5 mm, 80 cm / 32 inch
Pair of phase matched cables – 3.5 mm, 80 cm / 32 inch
Set of 4/8/16/32 phase matched cables – 3.5 mm, 80 cm / 32 inch

Specifications

Insertion loss, max = 1.5 dB at 26 GHz
VSWR, max = 1.25
Skew, max = 1.0 ps

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