

MVE Low Loss Flexible

MCBL-LL181.50

Phase Stable Coax Cable



Features

- DC-18GHz
- High Flexibility, Matching Cycles
- Phase & Loss Stable
- Stainless Steel Connectors
- Full Armor Solution

Applications:

- High Volume Production Test Stations
- Field Installation, Test and Calibration
- Research and Development Labs
- High Matching Cycles, Stainless Steel Connectors
- RF & Microwave Systems Interconnection

CONSTRUCTION

ITEM	MATERIALS	DIAMETER(mm)	TOL. (mm)
CENTER CONDUCTOR	Silver Plated Copper	0.94	±0.02
DIELECTRIC	Soild PTFE	2.97	--
INNER SHIELD	Silver Plated Copper Ribbon	3.17	3.3 Max.
INTER LAYER	Aluminum Laminate	3.33	--
OUTER SHIELD	Silver Plated Copper Braid	3.90	3.9 Max.
JACKET	FEP	4.90	±0.10

ELECTRICAL DATA

BEND RADIUS(mm)	20 (Installation)
BEND RADIUS(mm)	50 (Repeated)
WEIGHT(kg/m)	0.06
CONNECTOR RETENTION(N)	500
MATING LIFE CYCLE	5000
FLEX LIFE	10000
TEMPERATURE(°C)	-55~200 /-65~200

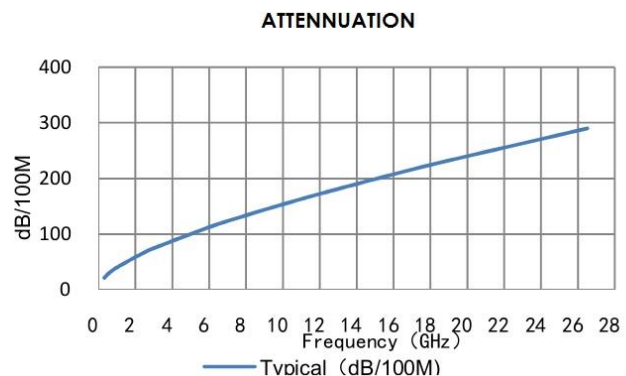
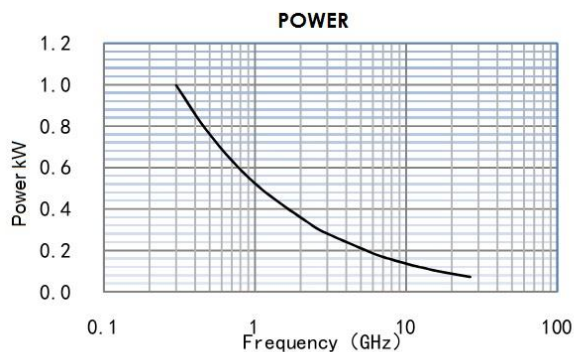
MECHANICAL DATA

FREQUENCE(GHz)	DC-18
IMPEDANCE(ohm)	50
VELOCITY OF PROPAGATION	70%
TIME DELAY(ns/m)	4.76
SHIELDING EFFECTIVENESS(DB)	>100
MECHANICAL PHASE STABILITY(°)	0.19°/GHz
MECHANICAL PHASE STABILITY (dB)	±<0.1dB(18GHz)

TYP. ATTENUATION and TYP. AVG. POWER (40°C)

Freq.(MHz)	300	500	1000	2400	3000	6000	8000	10000	12400	18000
dB/100m	21.0	27.5	40.0	65.4	74.3	112.0	133.6	153.5	175.9	224.0
Power kW	0.997	0.760	0.522	0.320	0.281	0.187	0.156	0.136	0.119	0.093

$$K1=1.1414400 \quad K2=0.0039360 \quad \text{Equation} = K1*\sqrt{F\text{MHz}}+K2*F \text{ MHz}$$



NOTES:

1. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME
2. CUSTOMER OUTLINE DRAWING FOR REFERENCE ONLY





Cable Assembly Part Number

MVE PART NUMBER	CONNECTOR 1	CONNECTOR 2	LENGTH (cm)	FREQUENCY (GHz)	VSWR
280280.LL181.XX	SMA MALE S/T	SMA MALE S/T	15, 30, 50, 60, 90, 100	18	1.20
260280.LL181.XX	N MALE S/T	SMA MALE S/T	15, 30, 50, 60, 90, 100	18	1.25
260260.LL181.XX	N MALE S/T	N MALE S/T	15, 30, 50, 60, 90, 100	18	1.30

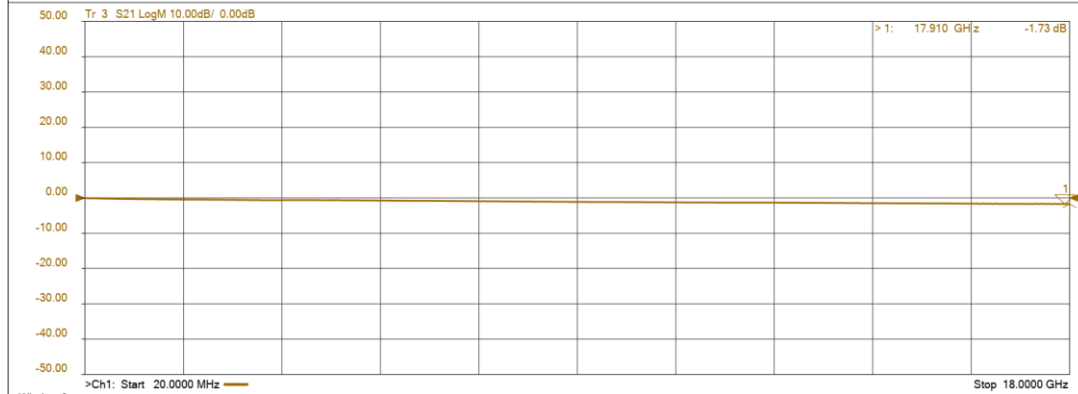
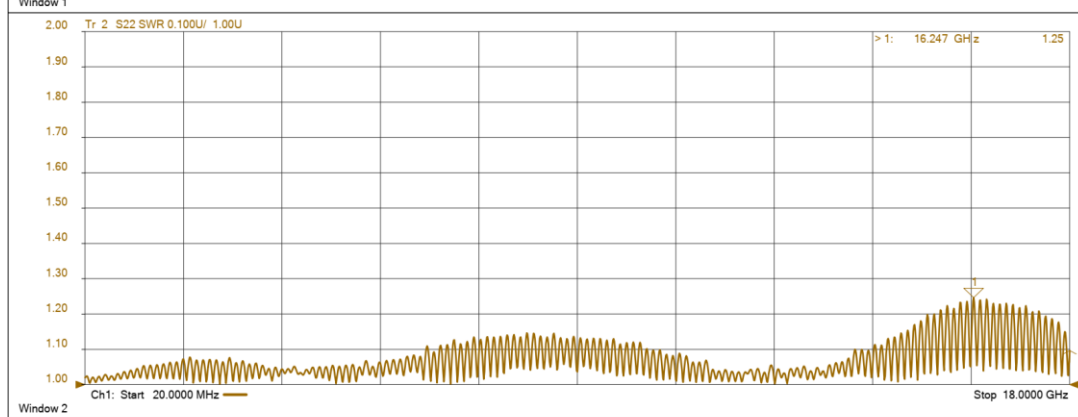
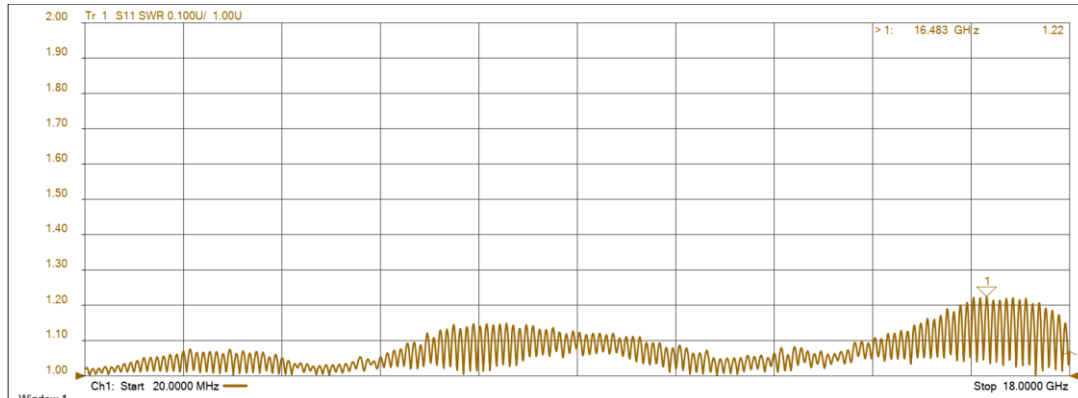
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Typical Test Result

PART NUMBER	DESCRIPTION
280280.LL181.90	SMA Male/Stainless To SMA Male/Stainless, LL181/L:90cm DC-18GHz Low Loss, Phase Stable Cable



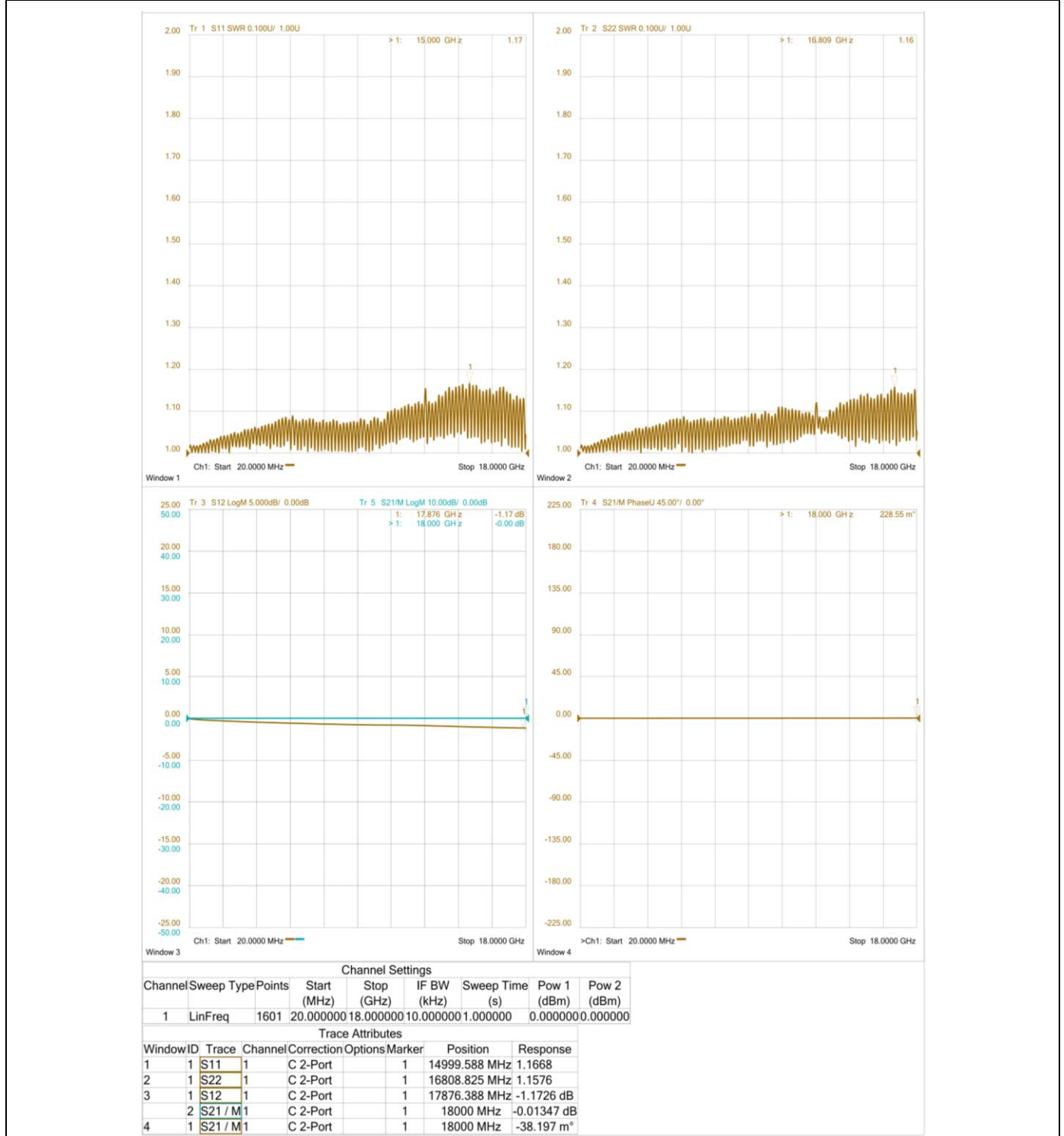
Channel Settings								
Channel	Sweep Type	Points	Start (MHz)	Stop (GHz)	IF BW (kHz)	Sweep Time (s)	Pow 1 (dBm)	Pow 2 (dBm)
1	LinFreq	1601	20.000000	18.000000	10.000000	1.000000	0.000000	0.000000

Trace Attributes								
Window	ID	Trace	Channel	Correction	Options	Marker	Position	Response
1	1	S11	1	C 2-Port		1	16482.938 MHz	1.2250
2	1	S22	1	C 2-Port		1	16246.95 MHz	1.2465
3	1	S21	1	C 2-Port		1	17662.875 MHz	-1.7286 dB

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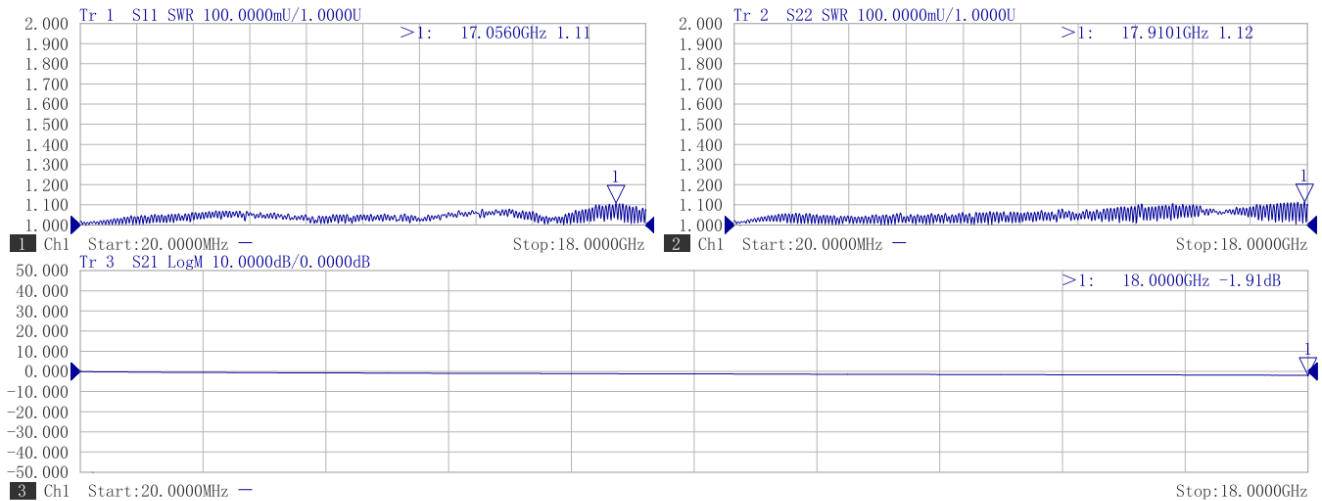
PART NUMBER	DESCRIPTION
280280.LL181.60	SMA Male/Stainless To SMA Male/Stainless, LL181/L:60cm DC-18GHz Low Loss, Phase Stable Cable



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PART NUMBER	DESCRIPTION
260280.LL181.100	N Male/Stainless To SMA Male/Stainless, LL181/L:100cm DC-18GHz Low Loss, Phase Stable Cable



Ch1	SweepType	Start Frequency	Stop Frequency	Points	IF BW (Hz)	SweepTime (s)	Port1, 2Power (dBm)
Ch1	LIN_SWEEP	0.0200000000GHz	18.0000000000GHz	1601	10000	1.000000	0.0, 0.0

Win1	Marker	Delta	Stimulus	Response
Trace1--S11	1		17.0560GHz	1.109
Trace2--S22	1		17.9101GHz	1.115
Trace3--S21	1		18.0000GHz	-1.911dB



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