

# MVE Low Loss Flexible 50GHz Test Cables

## MCBL-LL401.50



### Features

- FREQUENCY: 50GHz
- High Flexibility
- Phase & Loss Stable
- High Matching Cycles, Stainless Steel Connectors
- ROHS compliant
- Full Armor solutions

### Applications:

- RF&Microwave Test and Calibration
- Research and Development Labs
- Interconnect RF Equipment in Narrow Environment
- Military / Commercial Communication Systems Interconnect

### Specifications

CONSTRUCTION		
ITEM	MATERIAL	DIAMETER
INNER CONDUCTOR	Silver Plated Copper	0.72 ±0.02mm
DIELECTRIC	PTFE	2.21mm
OUTER CONDUCTOR	Silver-plated Copper Foil	2.38mm (2.45mm Max.)
INNER TAPE	PTFE	2.68mm
OUTER SHIELDING	Round Silver-plated Copper	3.14mm (3.25mm Max.)
JACKET	FEP (Blue)	3.60±0.1mm
ARMOR	STAINLESS STEEL PTFE	6.1±0.1mm

ELECTRICAL DATA	
ITEM	SPECIFICATION
FREQUENCY	50GHz
CHARACTERISTIC IMPEDANCE	50 Ohm
BEND RADIUS(mm)	24mm MIN.
OPERATING TEMP	-55°C~ +165°C
SHIELDING EFFECTIVENESS	Typically <-90 dB
WORKING VOLTAGE	1000V RMS Max.
VELOCITY OF PROPAGATION	74.0 %

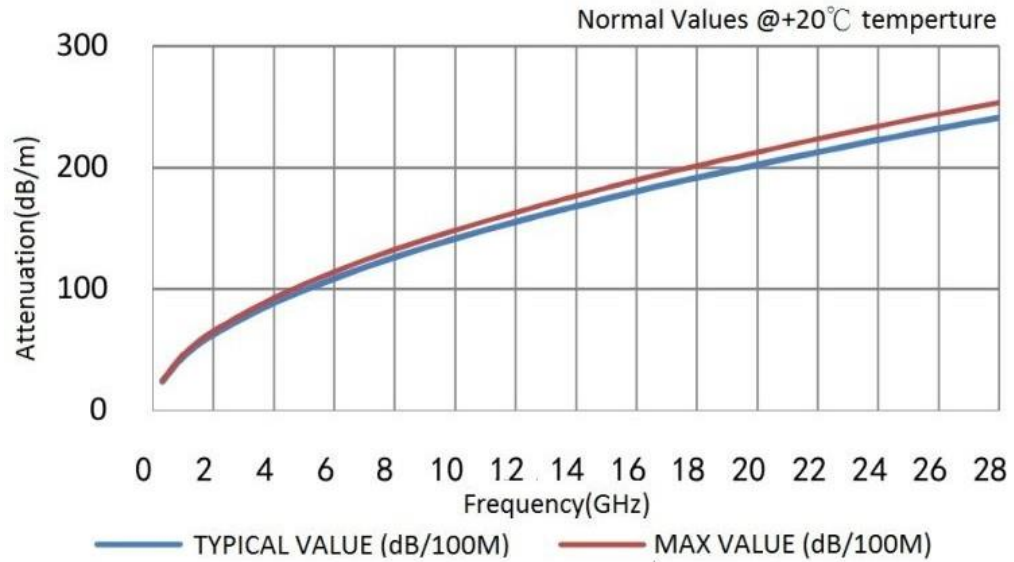
TYP. ATTENUATION(25°C) and TYP. AVG. POWER (40°C)												
Freq.(GHz)	0.3	1.0	2.0	4.0	6.0	8.0	10.0	12.0	18.0	26.5	40.0	50.0
dB/100m	23.9	43.8	62.2	88.5	108.8	126.1	141.5	155.4	191.8	234.8	291.7	328.5
Power kW	0.750	0.409	0.288	0.202	0.165	0.142	0.127	0.115	0.093	0.076	0.061	0.055

$$K1 = 1.3707349$$

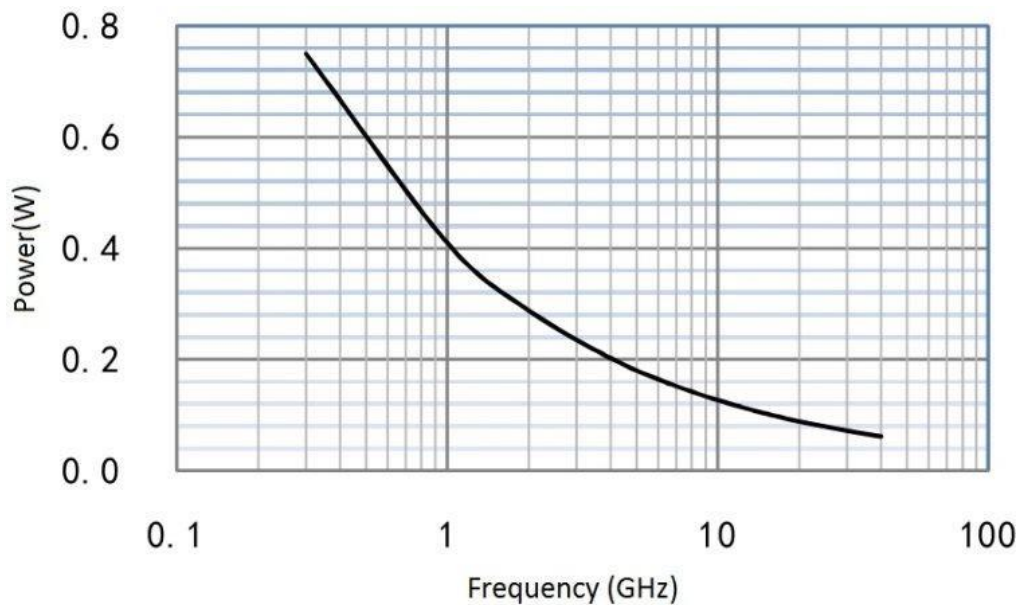
$$K2 = 0.0004400$$

$$\text{Equation} = K1 * \sqrt{\text{FMHz}} + K2 * \text{FMHz}$$

### Cable Attenuation



### Average Power



NOTES:

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



## Cable Assembly Part Number

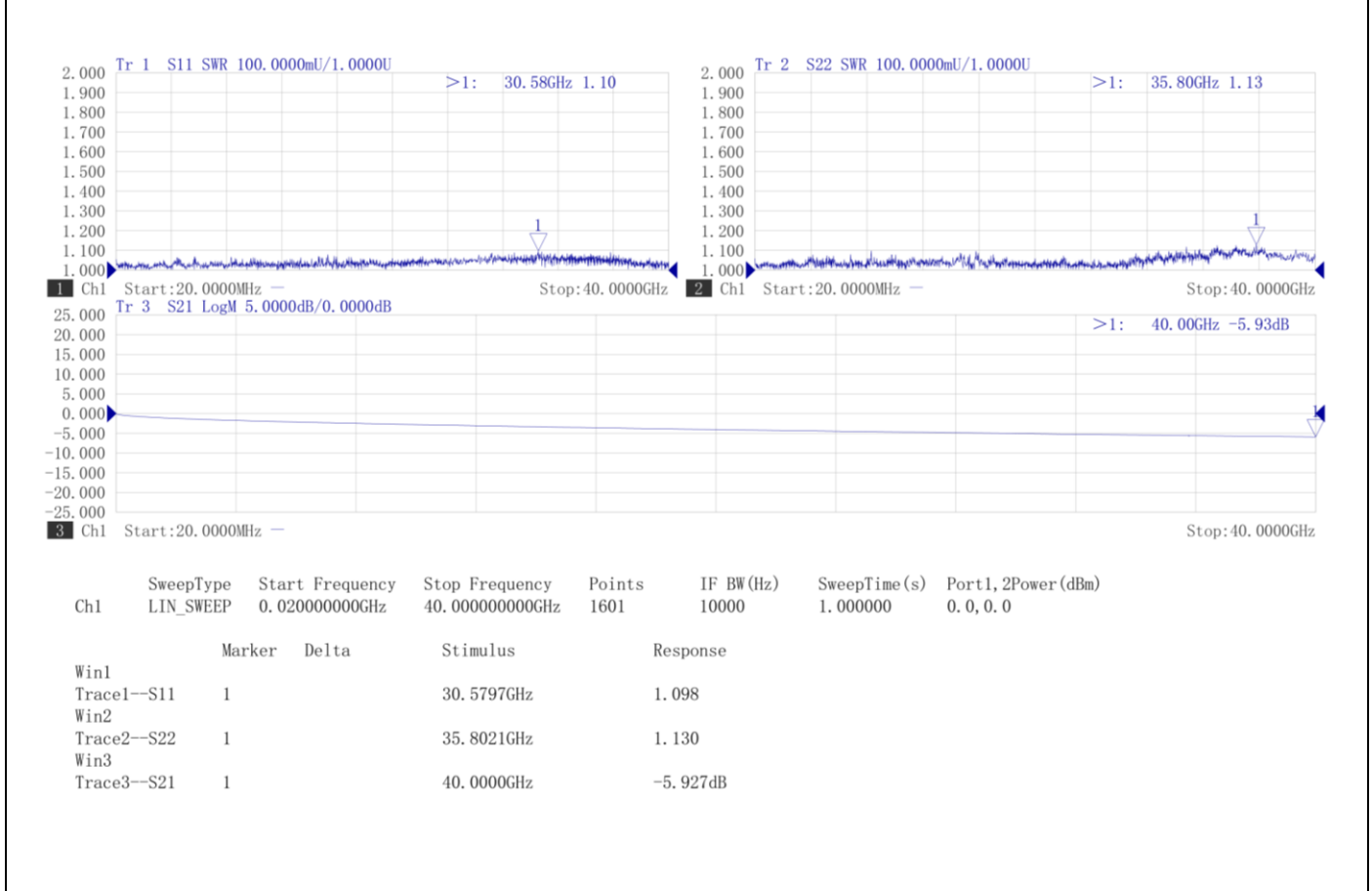
MVE PART NUMBER	CONNECTOR 1	CONNECTOR 2	LENGTH(cm)	FREQUENCY (GHz)	VSWR
140140.LL401.XX	2.92MM MALE S/T	2.92MM MALE S/T	15, 30, 50, 60, 90, 100	40	1.30
140140.LL401.XXF	2.92MM MALE S/T	2.92MM MALE S/T	15, 30, 50, 60, 90, 100	40	1.30
140140.LL401P2.XX	2.92MM MALE S/T	2.92MM MALE S/T	15, 30, 50, 60, 90, 100	40	1.30

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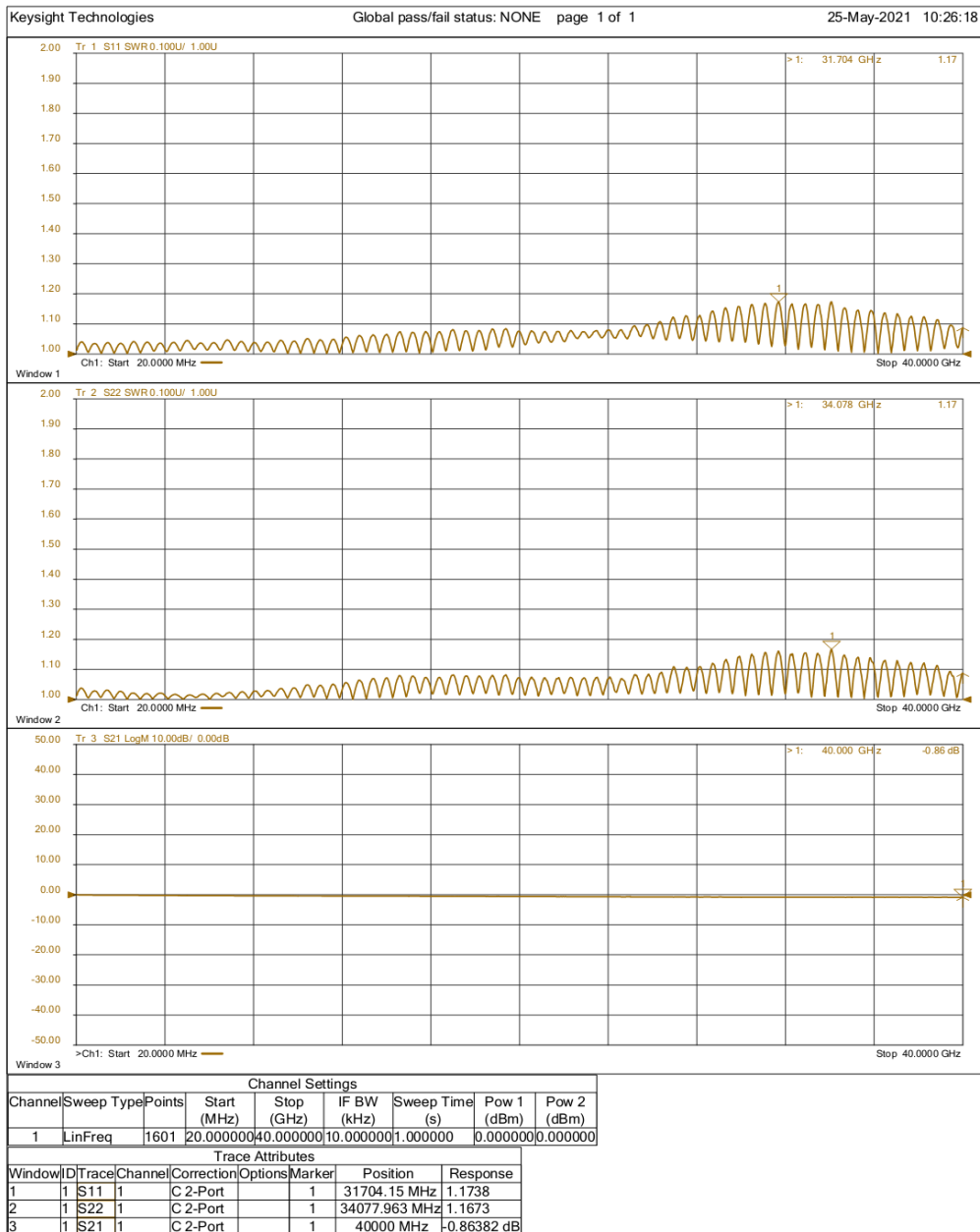
PART NUMBER	DESCRIPTION
140140.LL401.200	2.92mm Male/Stainless To 2.92mm Male/Stainless, DC-40GHz LL401 Low Loss, Phase Stable Cable/L:200cm/VSWR<1.30, IL<6.5dB



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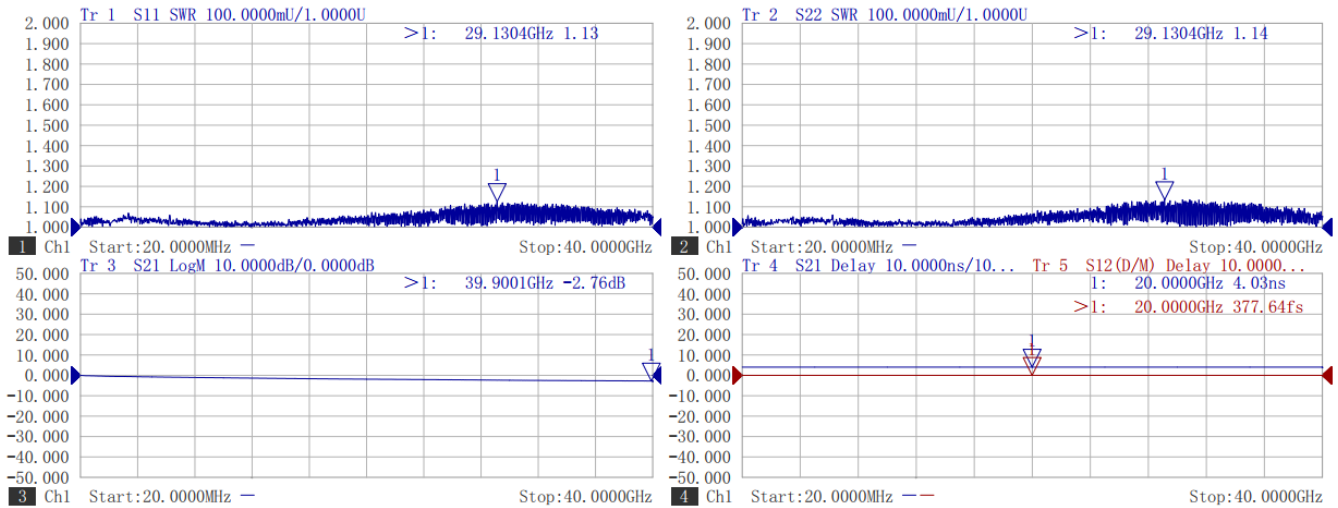
PART NUMBER	DESCRIPTION
140140.LL401.20F	2.92mm Male/Stainless To 2.92mm Male/Stainless, DC-40GHz LL401 Low Loss, Phase Stable Cable/L:20cm(without heat shrink tube)



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PART NUMBER	DESCRIPTION
140140.LL401P2.90	2.92mm Male To 2.92mm Male, DC-40GHz LL401 Cable(Phase stability $\leq \pm 5^\circ$ phase match $\leq \pm 2ps@4pcs/group$ Loss stability $\leq \pm 0.1dB$ )



Ch1	SweepType	Start Frequency	Stop Frequency	Points	IF BW (Hz)	SweepTime (s)	Port1, 2Power (dBm)
Ch1	LIN_SWEEP	0.020000000GHz	40.000000000GHz	1601	10000	1.000000	0.0, 0.0

Marker	Delta	Stimulus	Response
Win1			
Trace1--S11	1	29.1304GHz	1.126
Win2			
Trace2--S22	1	29.1304GHz	1.135
Win3			
Trace3--S21	1	39.9000GHz	-2.764dB
Win4			
Trace4--S21	1	20.0000GHz	4.034ns
Trace5--S12	1	20.0000GHz	377.644fs



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