

MVE Low Loss Flexible

MCBL-LL403P.50*PhaseStable

50GHz Test Cables



Features:

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

Applications:

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

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

ELECTRICAL DATA	
ITEM	SPECIFICATION
FREQUENCY	50GHz
CHARACTERISTIC IMPEDANCE	50 Ohm
BEND RADIUS(mm)	14.4mm MIN./ 36mm MIN. (Repetition)
OPERATING TEMP	-55°C~ +165°C
SHIELDING EFFECTIVENESS	Typically <-90 dB
WORKING VOLTAGE	1000V RMS Max.
VELOCITY OF PROPAGATION	74.0 %
WEIGHT(g/m)	34
*OPTION-P (PASSE STABILITY)	± 5° TYP. (P/N# MCBL-LL403P.50)

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	16.0	26.5	40.0	50.0
dB/100m	23.9	43.8	62.2	88.5	108.8	126.1	141.5	155.4	180.4	234.8	291.7	328.5
Power kW	0.750	0.409	0.288	0.202	0.165	0.142	0.127	0.115	0.099	0.076	0.061	0.055

Systems Interconnect

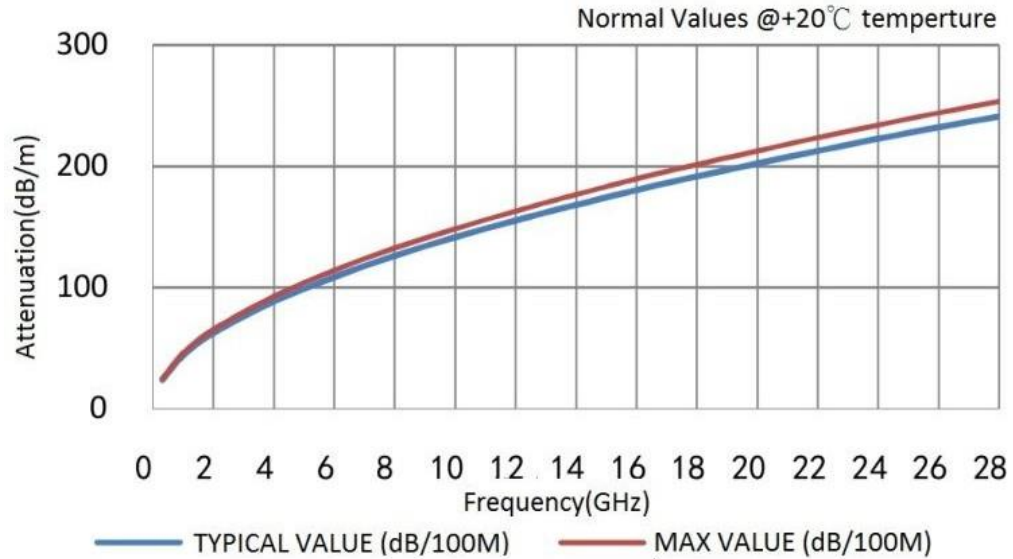
K1= 1.3707349

K2= 0.0004400

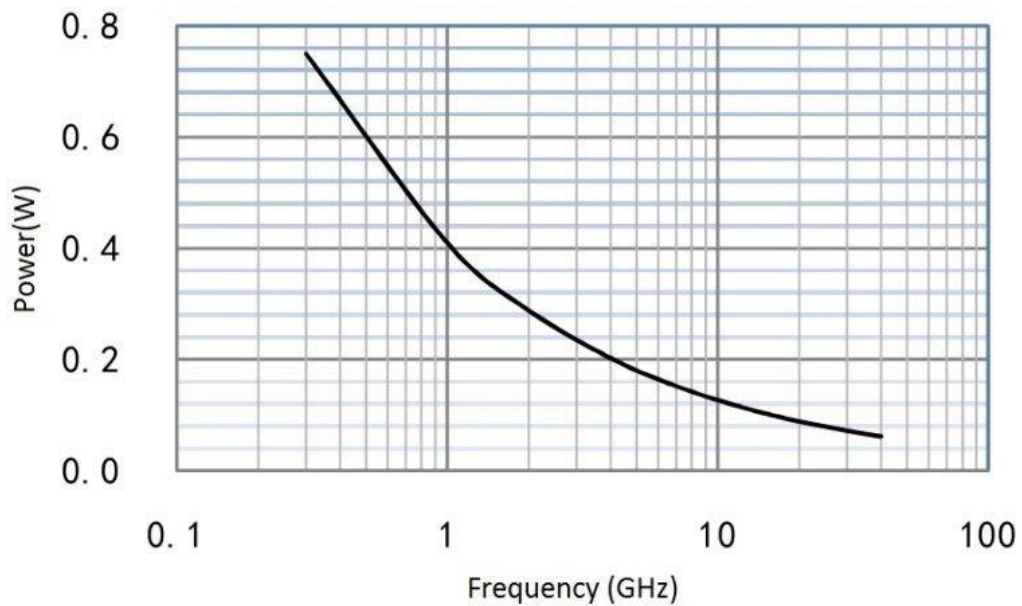
Equation = $K1 \cdot \sqrt{FMHz} + K2 \cdot FMHz$



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 PartNumber

MVE PART NUMBER	CONECTOR 1	CONNECTOR 2	LENGTH (cm)	FREQUENCY (GHz)	VSWR
120120.LL403P.XXH	2.4mm Male	2.4mm Male	15, 30, 50, 60, 90, 100	50	1.40
120120.LL403P1.XXH	2.4mm Male	2.4mm Male	15, 30, 50, 60, 90, 100	50	1.30
120130.LL403P.XXH	2.4mm Male	2.4mm Female	15, 30, 50, 60, 90, 100	50	1.40
130130.LL403P.XXH	2.4mm Female	2.4mm Female	15, 30, 50, 60, 90, 100	50	1.40

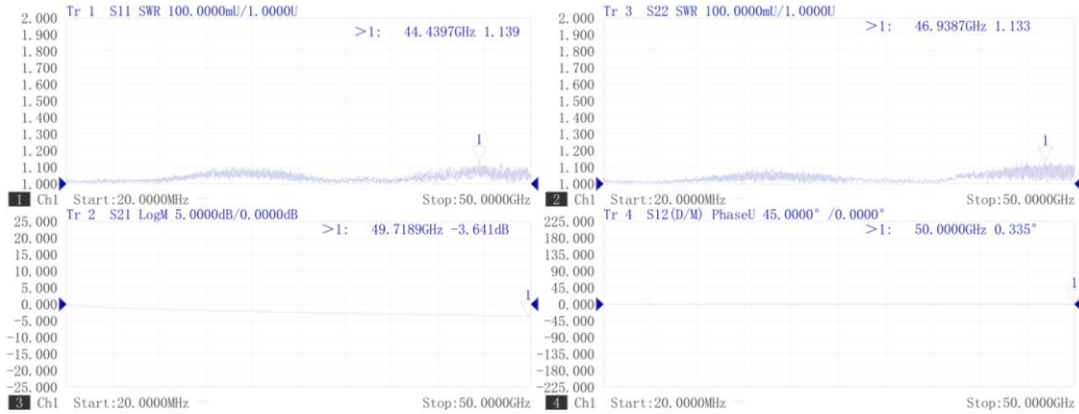
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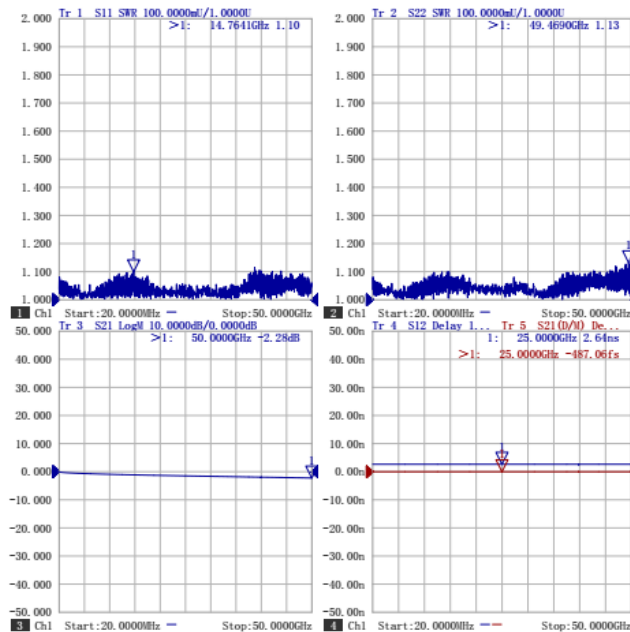
Typical Test Report

PART NUMBER	DESCRIPTION
120120.LL403P.100H	2.4mm Male To 2.4mm Male, DC-50GHz LL403P Cable /L:100cm (VSWR<1.3, IL<3.9dB)



Ch1	SweepType	Start Frequency	Stop Frequency	Points	IF BW (Hz)	SweepTime (s)	Port1, 2Power (dBm)
Ch1	LIN_SWEEP	0.020000000GHz	50.000000000GHz	1601	10000	1.000000	0.0, 0.0
Marker	Delta	Stimulus	Response				
Win1							
Trace1--S11	1	44.4397GHz	1.139				
Win2							
Trace3--S22	1	46.9387GHz	1.133				
Win3							
Trace2--S21	1	49.7188GHz	-3.641dB				
Win4							
Trace4--S12	1	50.0000GHz	0.335°				

PART NUMBER	DESCRIPTION
120120.LL403P1.60H	2.4mm Male To 2.4mm Male, DC-50GHz LL403P Cable / L:60cm (VSWR<1.3, IL<2.7dB)



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PART NUMBER	DESCRIPTION																																																								
120130.LL403P.100H	2.4mm Male To 2.4mm Female, DC-50GHz LL403P Low Loss, Phase Stable Cable/L:100cm/VSWR<1.3, I.L<3.86dB																																																								
 <table border="1" data-bbox="293 824 1139 1043"> <thead> <tr> <th>Ch1</th> <th>SweepType</th> <th>Start Frequency</th> <th>Stop Frequency</th> <th>Points</th> <th>IF BW (Hz)</th> <th>SweepTime (s)</th> <th>Port1, 2Power (dBm)</th> </tr> </thead> <tbody> <tr> <td>Ch1</td> <td>LIN_SWEEP</td> <td>0.0200000000GHz</td> <td>50.000000000GHz</td> <td>1601</td> <td>10000</td> <td>1.000000</td> <td>0.0, 0.0</td> </tr> <tr> <th>Win1</th> <th>Marker</th> <th>Delta</th> <th>Stimulus</th> <th>Response</th> <td colspan="3"></td> </tr> <tr> <td>Trace1—S11</td> <td>1</td> <td></td> <td>40.9411GHz</td> <td>1.216</td> <td colspan="3"></td> </tr> <tr> <td>Trace3—S22</td> <td>1</td> <td></td> <td>50.0000GHz</td> <td>1.181</td> <td colspan="3"></td> </tr> <tr> <td>Trace2—S21</td> <td>1</td> <td></td> <td>50.0000GHz</td> <td>-3.808dB</td> <td colspan="3"></td> </tr> <tr> <td>Trace4—S12</td> <td>1</td> <td></td> <td>50.0000GHz</td> <td>-0.205°</td> <td colspan="3"></td> </tr> </tbody> </table>		Ch1	SweepType	Start Frequency	Stop Frequency	Points	IF BW (Hz)	SweepTime (s)	Port1, 2Power (dBm)	Ch1	LIN_SWEEP	0.0200000000GHz	50.000000000GHz	1601	10000	1.000000	0.0, 0.0	Win1	Marker	Delta	Stimulus	Response				Trace1—S11	1		40.9411GHz	1.216				Trace3—S22	1		50.0000GHz	1.181				Trace2—S21	1		50.0000GHz	-3.808dB				Trace4—S12	1		50.0000GHz	-0.205°			
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