

## **RF ONE Phase Matched Cable Assemblies**

Phase matching is a term generally used to describe two or more cable assemblies with the same electrical length. Normally two specifications are used for phase matched cables assemblies:

## 1. Time Delay Match

Measure the time delay of each cable assembly by VNA, mark the time delay data typically at the middle point of the frequency range.

For example, a pair of 4 pcs cable assembly matched as DC-67GHz, time delay +/-2ps. Typical phase matching data as in below table.

Please refer to the test report example(<u>www.rfone.cn/uploadfiles/pdf/Match-Electrical-Degrees.pdf</u>) for more details.

S/N	01 Cable	02 Cable	03 Cable	04 Cable	
Measured Delay	4048.8ps@33.5GHz	4048.9ps@33.5GHz	4047.7ps@33.5GHz	4049.3ps@33.5GHz	
* Result	Max: 4049.3ps, Min:4047.7ps, Range:1.6ps(±0.8ps), Judgement: Pass				

Notes:

\* When the range of min & max data is within the phase match limit, it is judged Pass.

## 2. Electrical Length Match in Degrees at a Specified Frequency

Measure the phase of each cable assembly by VNA across the required frequency range.

For example, a pair of 4 pcs cable assembly matched as DC-26.5GHz, +/-5 degree. Typical phase matching data as in below table.

Please refer to the test report example(<u>www.rfone.cn/uploadfiles/pdf/Match-Electrical-Degrees.pdf</u>) for more details.

S/N	01 Cable	02 Cable	03 Cable	04 Cable	
* Measured Phase	0 degree	0.9 degree	2.0 degree	-1.1 degree	
** Result	Max: 2.0 degree, Min:-1.1 degree, Range:3.1 degree(±1.6 degree), Judgement: Pass				

Notes:

\* Using S/N 001 as reference cable, phase of which is normalized on VNA. Measuring the phase for each of the rest cables.

\*\* When the range of min & max data is within the phase match limit, it is judged Pass.