Mohr CT100 TDR and CT Viewer™
Cable and Interconnect Quality Control Example:

Interconnect Impedance Profile and Electrical Length Variation in 50 Ohm SMA and BNC Cables
Cable A: precision 36 in. 50 Ohm SMA cable
X: 0.100 m/div, Y: 73.2 millirho/div

SMA interconnect at test port
SMA open
Cable A: 36 in. 50 Ohm SMA cable, tested from both ends
X: 0.100 m/div, Y: 73.2 millirho/div

SMA interconnect variation
(red forward test, blue reverse test)
Cable A: 36 in. 50 Ohm SMA interconnects, detail comparison
SMA interconnects show different impedance profiles
X: 0.005 m/div, Y: 5 millirho/div
Cable B: Another 36 in. 50 Ohm SMA cable, interconnect detail
Essentially identical appearance of both interconnects
X: 0.005 m/div, Y: 5 millirho/div
Comparison of Cable A (color traces) to Cable B (black traces)

Cable A shows much greater variation between cable ends

X: 0.005 m/div, Y: 5 millirho/div
Cable A vs. Cable B: Electrical length measurements
Much greater variation in electrical length of cable A
due to interconnect impedance variation
X: 0.002 m/div
Several 50 Ohm SMA cables with interconnect defects
All show varying degrees of directional variation
X: 0.010 m/div
Manufacturing batch of 36 in. 50 Ohm BNC cables:
Comparing electrical lengths of precision cables
X: 0.004 m/div

Open cable ends

Electrical length variation
(largely due to mechanical lengths variation)