

D-COAX d047 Series Cable Pair

High Frequency, Skew Matched, Phase Stable Cable Pair (40 GHz)

D-COAX d047 Series Cable Pair consists of two skew matched (to $\leq 1\text{ps}$) flexible cable assemblies with 2.92 mm male connectors on both ends. Compared to other D-COAX offerings this pair is low weight and utilizes low profile connectors. The new type of bend relief, “free-bend”, allows for tighter bends. Low weight cable assemblies reduce the moment-arm force in delicate probing applications and overall weight of the test setup where multiple cables are used.

The d047 series cable is a low loss and phase stable cable. This cable utilizes silver plated copper conductor, with a low loss FEP dielectric. The shield consists of two conductive layers: the first layer is a silver plated copper flat wire, applied in such manner that it yields low contact resistance, resulting in low insertion loss, the second layer is a silver plated copper braided shield that contributes to excellent RF leakage characteristics, specified at $> -100\text{ dB}$ to 18 GHz. The standard outside jacket is a tough extruded FEP.

This assembly uses impedance-matched 2.92mm connectors to accomplish low return loss up to 40 GHz. These assemblies will make great and cost effective test cables. d047 Series cable pair is available in custom lengths also.

D047 Series Skew Matched Cable Pair

www.d-coax.com



Features and Benefits

Flexibility	0.4-inches bend radius
	Low profile connectors
	Low weight cable assembly
Durability	Multi-layer outer braid
	Outside jacket is a tough, extruded FEP
RF performance	Center conductor is silver-plated solid copper
	Inner shield is silver-plated copper flat wire
	Outer shield is a round silver-plated copper
	FEP Dielectric
	≤ 1ps skew match
	Phase Stable
	Low insertion loss
	Low return loss
High bandwidth	

Specification*

Electrical

Characteristic Impedance	50-Ohm
Max Frequency	40GHz
Phase stability with bending	5.5-degrees max (IEC 60966-1 method)
Amplitude stability with bending	0.40 dB max (IEC 60966-1 method)
Capacitance (cable)	29.2 pf/foot
Skew Matched	≤ 1ps
Attenuation/ Insertion Loss	Less than 6dB (2 feet)
Return loss	Better than 15 dB
Shielding effectiveness	> -100 dB to 18 GHz
Power Handling	< 5 Watts @ 40GHz (Cable)

Mechanical

Overall Length	Available in 12 inch, 24inch, 48 inch, or custom lengths
Cable outside diameter	0.060 inch
Connector type	Male 2.92 mm compatible connector
Bend Radius	0.4 inches (centerline)
Connector Retention	8 lb. (straight pull)
Center Conductor Retention	5 lb. (straight pull)
Weight	3g (12-inch assembly), 8g (24-inch assembly), 15g (48-inch assembly)
Temperature Range	-40 to +100 degree Celsius
Number of connections	> 2,000

D047 Series Skew Matched Cable Pair

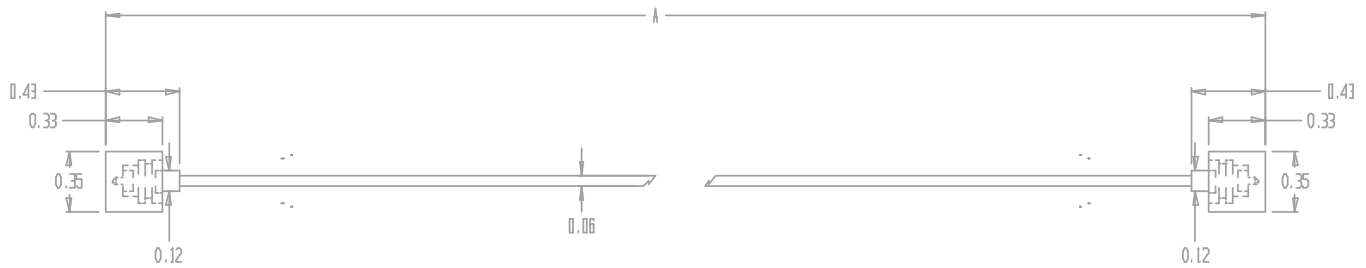
www.d-coax.com



* Data, design and specifications depend on individual process conditions and can vary according to equipment configurations. Not all specifications may be valid simultaneously.

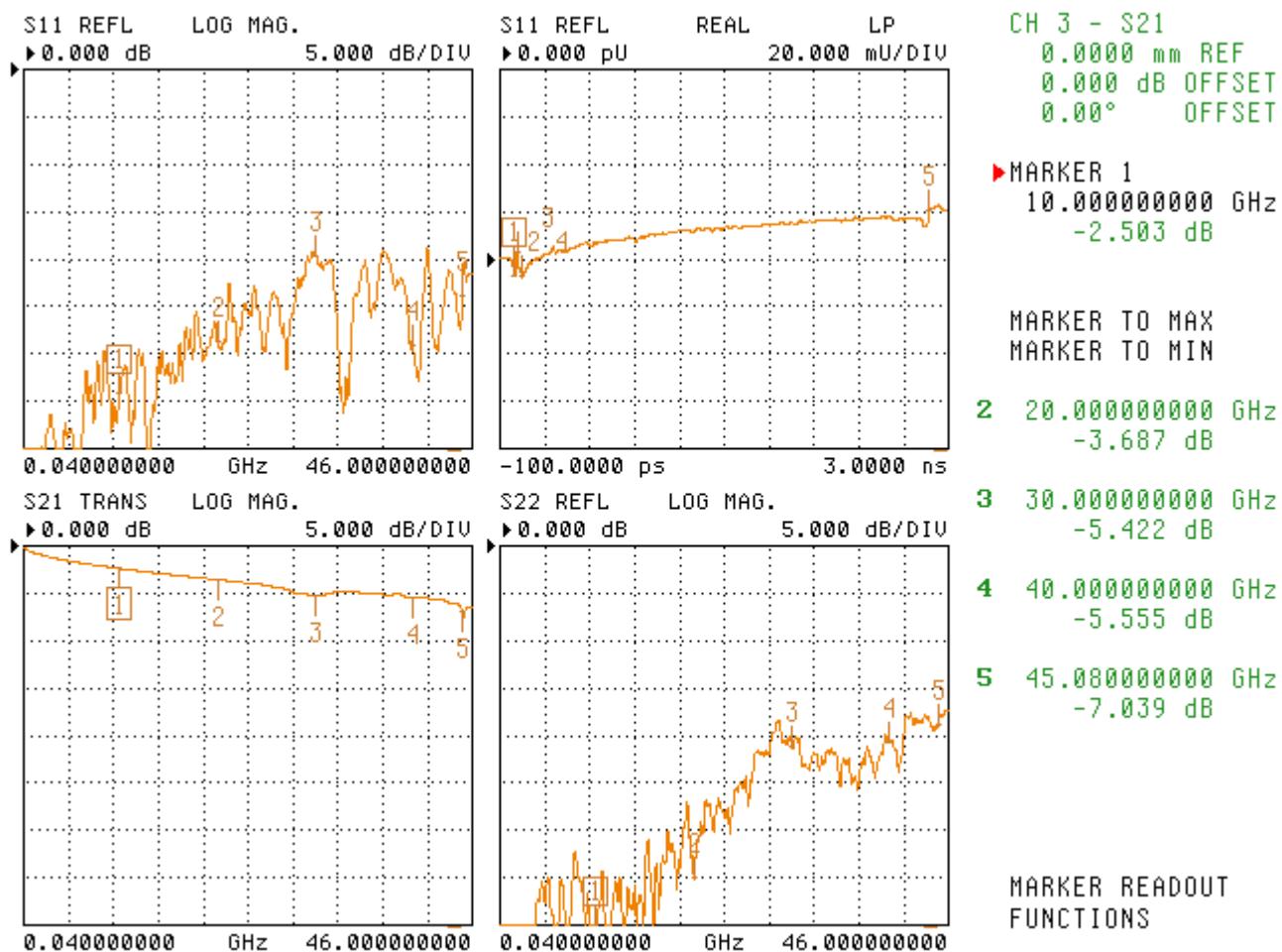
Physical Dimensions

Series d047 cable dimensions (all dimensions in inches, A – is variable length of the assembly)



Typical Performance

S-parameters performance of 24inch cable



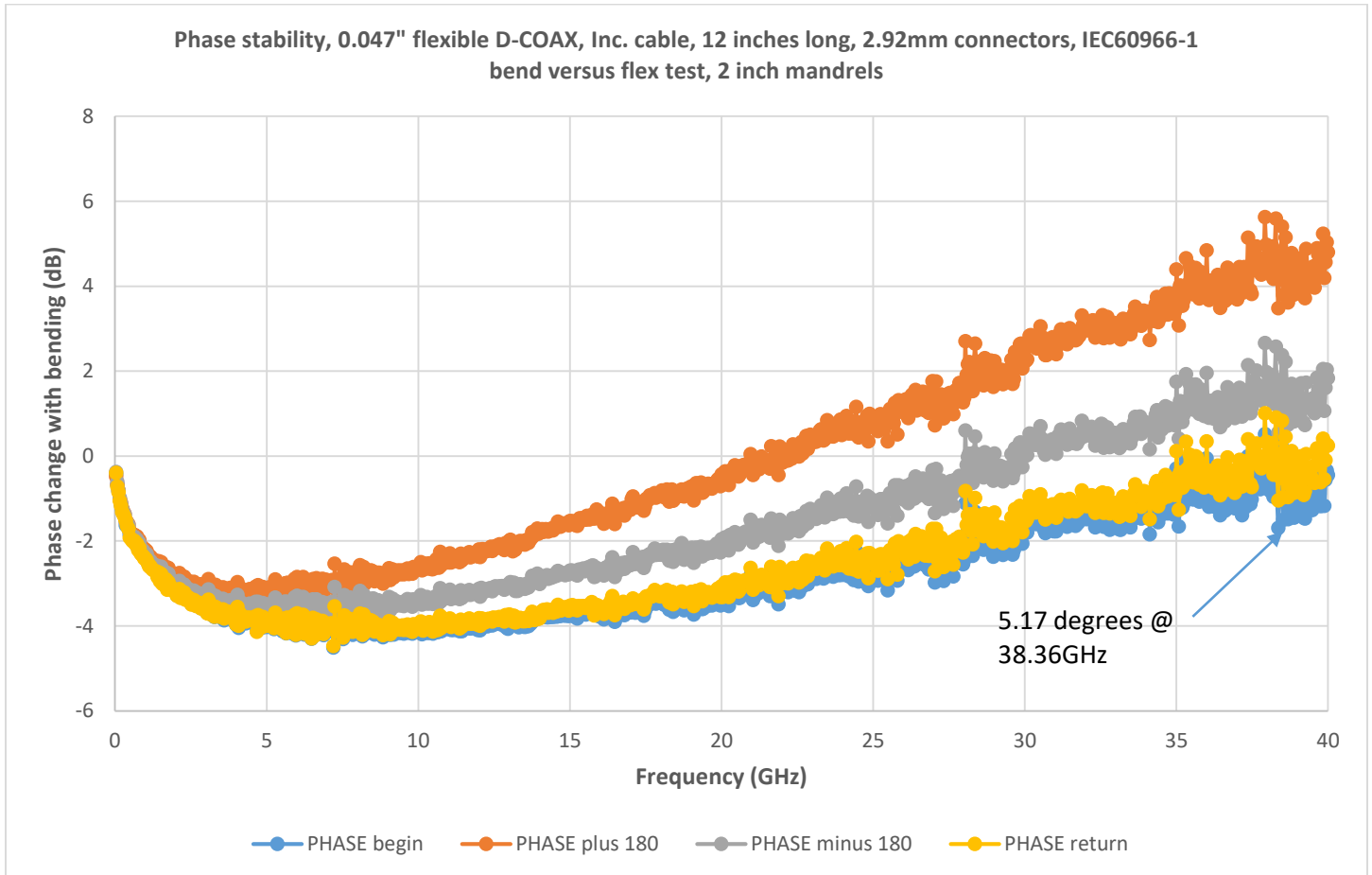
D047 Series Skew Matched Cable Pair

www.d-coax.com



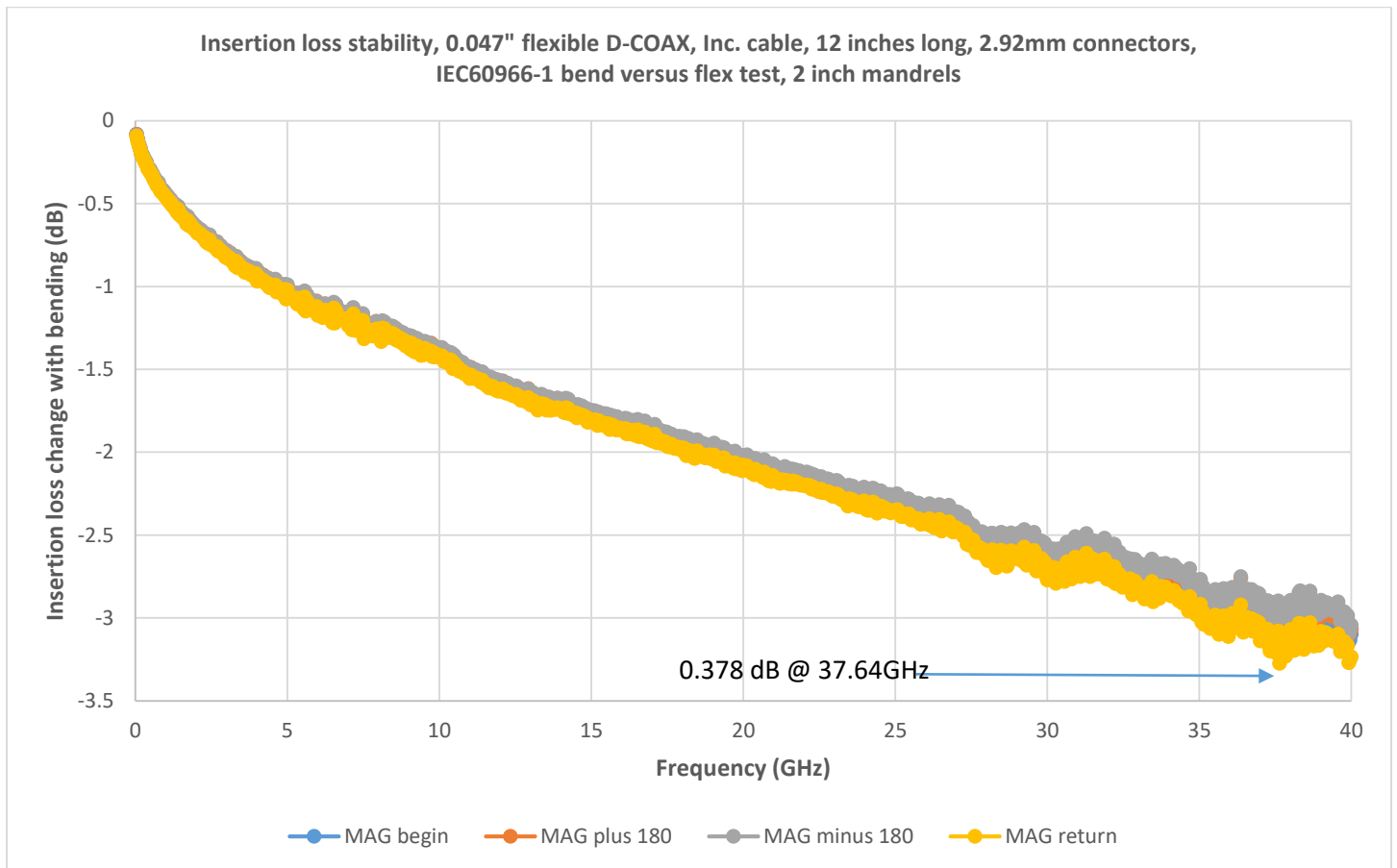
Typical Performance (continued)

Phase Stability with bending for 12 inch cable Per IEC 60966-1 specifications



Typical Performance (continued)

1. Amplitude Stability with bending for 12 inch cable Per IEC 60966-1 specifications



Applications

The d047 Series Cable Pair is ideal for:

- Signal Integrity
- Chanel Modeling
- Jitter Measurements
- Differential Measurements
- VNA measurements
- Replacement for semi-rigid cable

Ordering Information

Standard Length Cable Pairs:

Part Number	Description	Length
600-00185-00	40 GHz d047 Series Cable Pair, 2.92 mm Male/Male, Straight/Straight	12"
600-00186-00	40 GHz d047 Series Cable Pair, 2.92 mm Male/Male, Straight/Straight	24"
600-00187-00	40 GHz d047 Series Cable Pair, 2.92 mm Male/Male, Straight/Straight	48"

Custom lengths are available.

D-COAX, Inc.
Corporate Headquarters
Phone: (503) 922-2436
Email: info@d-coax.com

D047 Series Skew Matched Cable Pair
www.d-coax.com

