

QL30 SERIES

DC - 26.5GHz



QL30 series cable assemblies, which are phase stable and specifically designed for use with vector network analyzers (VNA), have excellent return loss, insertion loss, and amplitude stability. These cables also feature 3.5 mm **quick-lock connectors** on the DUT side that may be used in three ways: push-on/pull-off, hand screwed with a twist nut, or tightened by a torque wrench. In short, QL30 cables are cost effective, high-performance cable assemblies designed for the most demanding test and measurement applications.

SPECIFICATIONS

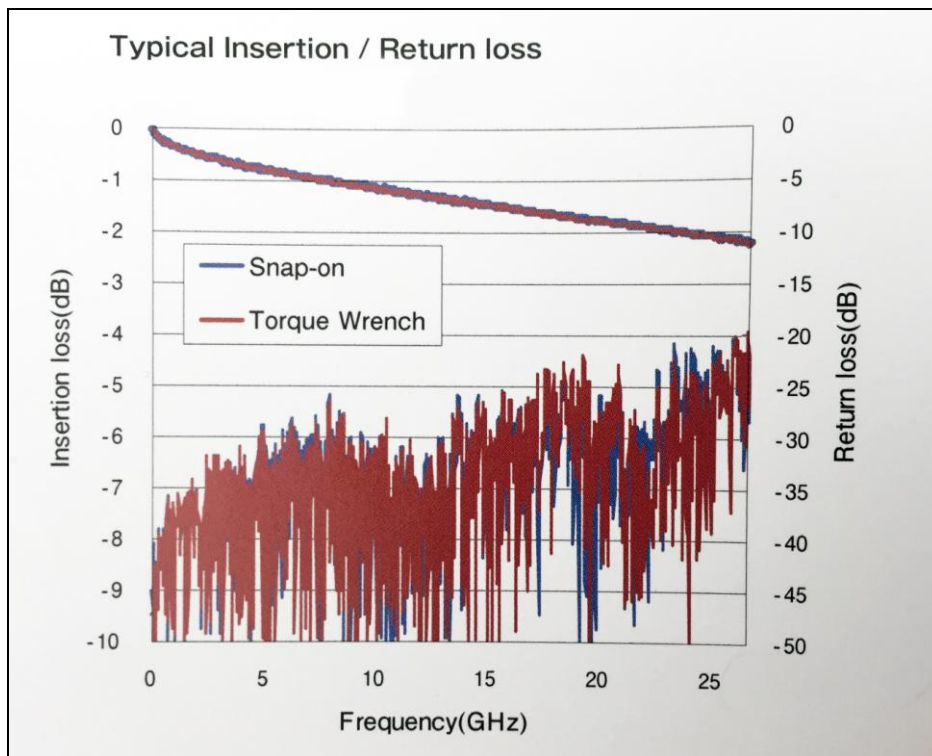
GENERAL SPECIFICATION

SPECIFICATION	UNITS	QL30
IMPEDANCE	Ohms	$50 \pm 1 \Omega$
MAX FREQUENCY	GHz	26.5
VSWR (max)		1.35
INSERTION LOSS (FOR 1M LENGHT)	dB/m	1.6 @ 18.0 GHz 2.0 @ 26.5 GHz
VELOCITY OF PROPAGATION	%	79
CAPACITANCE	pF/m	85
PHASE STABILITY (max)	°	± 6.0 (DC - 26.5 GHZ)
OUTER DIAMETER	mm	8.5
MIN BEND RADIUS	mm	30
WEIGHT	g/m	122
CENTER CONDUCTOR		Silver plated copper
DIELECTRIC		Low density PTFE
OUTER JACKET		Polyester fiber
OPERATING TEMPERATURE	°C	-30° TO + 85°
MATING CYCLES		> 1000 (typical >5000)

QL30 Cable Assembly Construction



QL30 Cable Assembly : Typical IL and RL Data



- Typical insertion loss: $(0.67 \times (0.038 \times f \text{ (GHz)} + 0.37 \times \sqrt{f \text{ (GHz)}}) + 0.007) \times L \text{ (m)}$
- Max insertion loss: $(0.67 \times (0.038 \times f \text{ (GHz)} + 0.37 \times \sqrt{f \text{ (GHz)}}) + 0.007) \times 1.12 \times L \text{ (m)}$

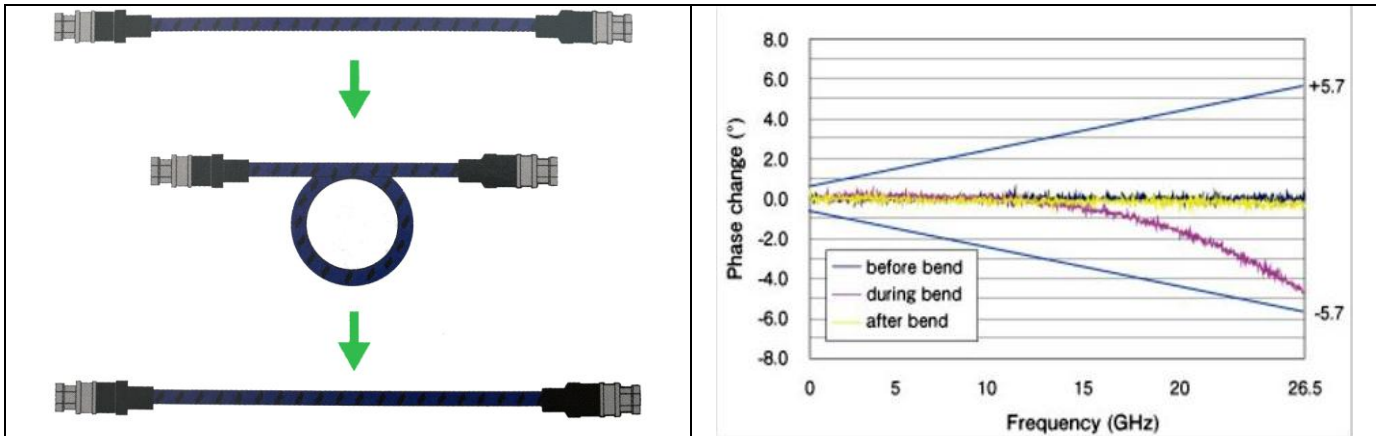
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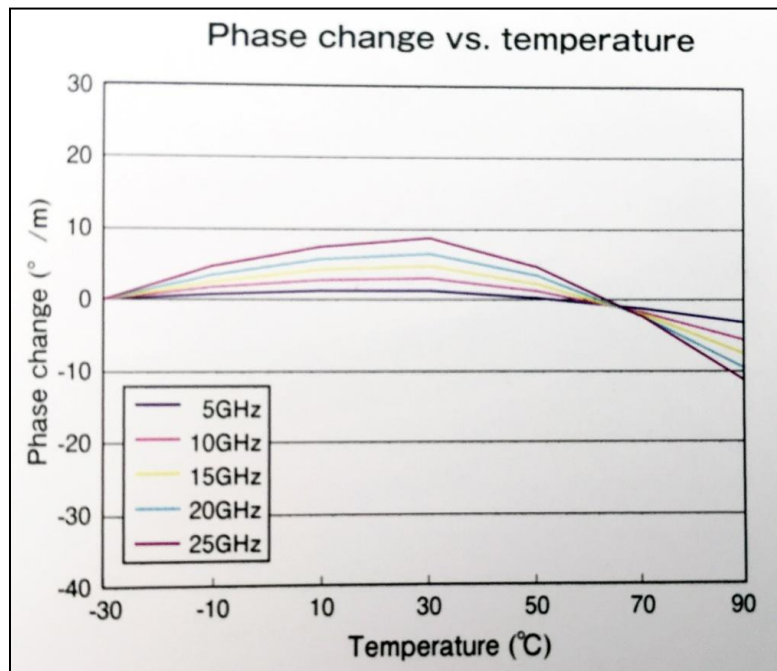
PHASE STABLE FLEXIBLE CABLE ASSEMBLY WITH QUICK-LOCK CONNECTORS

REV 1.0

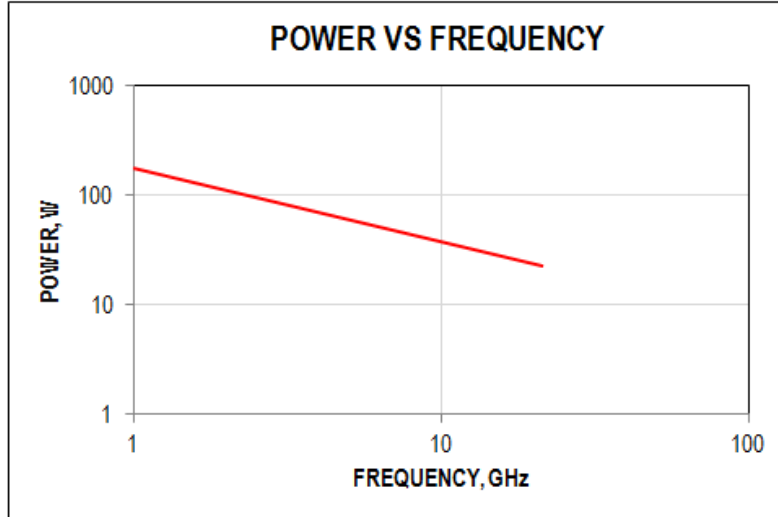
QL30 Cable Assembly Wrapped 360° Around 60 mm Diameter Mandrel



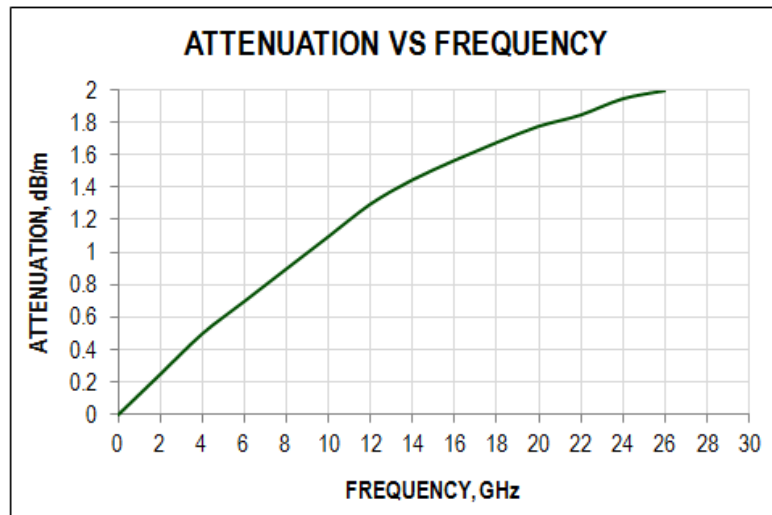
QL30 Cable Assembly Phase vs. Temperature and Frequency



QL30 Cable Assembly Power vs. Frequency



QL30 Cable Assembly Insertion Loss vs. Frequency



ORDERING INFO

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PHASE STABLE FLEXIBLE CABLE ASSEMBLY WITH QUICK-LOCK CONNECTORS

REV 1.0

EPC	-	3MQ	-	QL30	-	1.0M	-	3SM
PRODUCT CODE		CONNECTOR TYPE		CABLE SERIES		LENGTH		CONNECTOR TYPE
		SMS = SMA (M) STRAIGHT (18GHz) SFS = SMA (F) STRAIGHT (18GHz) 3MS = 3.5MM (M) STRAIGHT 3FS = 3.5MM (F) STRAIGHT 3MQ = 3.5MM (M) QUICK-LOCK NMS = N-TYPE (M) STRAIGHT (18GHz)		QL30 = Flexible Cable		X.XM = METERS XX.X = INCHES		SMS = SMA (M) STRAIGHT (18GHz) SFS = SMA (F) STRAIGHT (18GHz) 3MS = 3.5MM (M) STRAIGHT 3FS = 3.5MM (F) STRAIGHT 3MQ = 3.5MM (M) QUICK-LOCK NMS = N-TYPE (M) STRAIGHT (18GHz)

Example: EPC-3MQ-QL30-1.0M-SM (one meter cable assembly with 3.5mm quick-lock connector on one side and 3.5mm on other side).

