QUALWAVE · RF CABLES AND CABLE ASSEMBLIES · DC – 110 GHZ

RF Cables and Cable Assemblies up to 110 GHz

The Qualwave cable range covers test cables up to 110 GHz and VNA test cables, phase-stable low-loss cables, semi-rigid, outdoor and cryogenic cables. Low insertion loss, high phase stability and long life, used in laboratories, avionics, phased-array radar and satellite communication.



The range at a glance

Test cable assemblies

QT, QTE, QTF · up to 110 GHz

High-performance, economical and ultra-flexible test cables with connectors from 1.0 mm to N.

VNA test cables

QTV · up to 67 GHz

Phase and amplitude stable cables for network analyzers with 1.85 mm to N.

Low loss and phase stable

QA, QB, QZ, QG · up to 50 GHz

Flexible cables with low loss, stable under flexing and temperature.

Special cables

QY, QR, QH, QE, QD, QCE, RG

Outdoor and wireless cables, semi-rigid and semi-flex, cryogenic cables down to −268 °C and standard cables.

Short lead times

According to Qualwave, most cables ship in 1 to 2 weeks, test cables in 2 to 6 weeks.

Assemblies to your specification

Cable assemblies with the connectors and lengths you need, QA220 and QH280 also as multi-channel assemblies. Talk to us.

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Which cable for which application?

SELECTION GUIDE BY USE CASE

Application	Series	up to GHz
Laboratory and test, test cables	QT, QTE, QTF	110
Vector network analyzer (VNA) measurements	QTV	67
Phase stable, ultra low loss	QA	50
Stable under flexing (loss, VSWR, phase)	QB	18
Ultra flexible	QZ	40
Low loss, flexible	QG	18
Outdoor use, 20 years life	QY	18
Wireless communication and base stations	QR	5.8
Flexible alternative to semi-rigid	QH	40
Semi-rigid, low VSWR and PIM	QE	40
Hand formable (semi-flex)	QD	40
Cryogenics down to −268 °C	QCE	18
Low-cost standard cables	RG / RF	12.4
Cable armor	QAM	–

Typical applications

- Laboratory and test
- Avionics
- Phased-array radar
- Satellite communication
- Base stations

Test cable assemblies

QT, QTE, QTF · UP TO 110 GHZ



The QT series reaches 110 GHz with 1.0 mm connectors, the QT67 and QT50 offer up to 100,000 bending cycles. QTE is the economical, QTF the ultra-flexible version.

Model	Frequency (GHz)	VSWR (max.)	Shielding (dB min.)	Phase stability (° max.)	Temperature (°C)	Bending / mating cycles	Ø (mm)	Connectors	Lead time (wks)
QT110	DC–110	1.5	90	–	-55 ~ +125	50k	1.5	1.0 mm	4–6
QT67	DC–67	1.5	90	±7	-55 ~ +125	100k	2.4	1.85 mm, Mini-SMP, 2.4 mm, 2.92 mm, SMP	3–5
QT50	DC–50	1.4	90	±7	-55 ~ +165	100k	3.6	2.4 mm, 2.92 mm, 3.5 mm, SMA, N	2–3
QTE	DC–18	1.3	90	–	-55 ~ +125	5k / 5k	4	SMA, N	2–3
QTF	DC–26.5	1.3	90	–	-55 ~ +85	5k / 5k	5.2	SMA, N	2–3

VNA test cables

QTV · UP TO 67 GHZ

Model	Frequency (GHz)	VSWR (max.)	Phase (±°)	Amplitude (±dB)	Bend radius (mm)	Connectors	Lead time (wks)
QTV-V	DC–67	1.5	10	0.13	50	1.85 mm	2–4
QTV-2	DC–50	1.42	8	0.1	50	2.4 mm	2–4
QTV-K	DC–40	1.35	6	0.1	50	2.92 mm	2–4
QTV-3	DC–26.5	1.3	5	0.06	50	3.5 mm	2–4
QTV-N	DC–18	1.3	4	0.05	50	N	2–4

Ultra low loss and phase stable

QA · UP TO 50 GHZ · 13 TYPES



Flexible cables with ultra low loss and low phase change over temperature, with diameters from 1.5 to 8.3 mm.

Model	Frequency (GHz)	Phase change (ppm, −55 to +85 °C)	Shielding (dB min.)	PIM (dBc)	Temperature (°C)	Ø (mm)	Lead time (wks)
QA150	DC–40	1000	90	-155	-55 ~ +125	1.5	2–4
QA220*	DC–50	750	90	-155	-55 ~ +125	2.2	2–4
QA300	DC–50	750	90	-155	-55 ~ +165	3.1	2–4
QA360	DC–40	750	90	-155	-55 ~ +165	3.6	1–2
QA400	DC–40	750	90	-155	-55 ~ +165	4	1–2
QA480	DC–26.5	750	90	-155	-55 ~ +165	4.8	1–2
QA500	DC–26.5	750	90	-155	-55 ~ +165	5.2	1–2
QA550	DC–18	750	90	-155	-55 ~ +165	5.6	1–2
QA750	DC–18	750	90	-155	-55 ~ +165	7.4	1–2
QA760	DC–18	750	90	-155	-55 ~ +165	7.65	1–2
QA800	DC–18	750	90	-155	-55 ~ +165	7.9	1–2
QA810	DC–18	750	90	-155	-55 ~ +165	8.1	1–2
QA830	DC–18	–	90	–	-55 ~ +165	8.3	1–2

* Also available as multi-channel assembly.

Stable under flexing

QB · STABLE LOSS, VSWR AND PHASE WHEN FLEXED

Model	Frequency (GHz)	Shielding (dB min.)	PIM (dBc)	Temperature (°C)	Ø (mm)	Lead time (wks)
QB520	DC–18	90	-155	-55 ~ +200	5.2	1–2
QB1200	DC–8	90	-155	-55 ~ +200	12	1–2
QB1500	DC–6	90	-155	-55 ~ +200	14.7	1–2

Ultra-flexible cables

QZ · UP TO 40 GHZ

Model	Frequency (GHz)	Shielding (dB min.)	Temperature (°C)	Ø (mm)	Lead time (wks)
QZ360	DC–40	90	-55 ~ +85	3.6	1–2
QZ500	DC–26.5	90	-55 ~ +85	5	1–2
QZ600	DC–26.5	90	-55 ~ +85	5.9	1–2
QZ800	DC–18	90	-55 ~ +85	8	1–2

Low loss flexible cables

QG · UP TO 18 GHZ

Model	Frequency (GHz)	Shielding (dB min.)	Temperature (°C)	Ø (mm)	Lead time (wks)
QG360	DC–18	70	-55 ~ +125	3.6	1–2
QG500	DC–18	70	-55 ~ +125	5.10	1–2
QG800	DC–18	90	-55 ~ +125	8.10	1–2

Weatherproof low loss cables

QY · 20 YEARS OUTDOOR LIFE

Model	Frequency (GHz)	Shielding (dB min.)	Temperature (°C)	Ø (mm)	Outdoor (years)	Lead time (wks)
QY460	DC–18	70	-55 ~ +85	5	20	1–2
QY520	DC–18	70	-55 ~ +85	6	20	1–2
QY635	DC–18	70	-55 ~ +85	7.2	20	1–2
QY1000	DC–10	70	-55 ~ +85	10.15	20	1–2

Low loss wireless communication cables

QR · UP TO 5.8 GHZ · 20 YEARS OUTDOOR LIFE

Model	Frequency (GHz)	Shielding (dB min.)	Temperature (°C)	Ø (mm)	Outdoor (years)	Lead time (wks)
QR280	DC–5.8	90	-40 ~ +85	2.8	20	1–2
QR500	DC–5.8	90	-40 ~ +85	5	20	1–2
QR500U	DC–5.8	90	-40 ~ +85	5	20	1–2
QR600	DC–5.8	90	-40 ~ +85	6	20	1–2
QR600U	DC–5.8	90	-40 ~ +85	6	20	1–2
QR700	DC–5.8	90	-40 ~ +85	7.6	20	1–2
QR1000	DC–5.8	90	-40 ~ +85	10	20	1–2
QR1000U	DC–2	90	-40 ~ +85	10.3	20	1–2
QR1500	DC–5.8	90	-40 ~ +85	15	20	1–2
QR1500U	DC–2	90	-40 ~ +85	15	20	1–2

Flexible alternative to semi-rigid

QH · UP TO 40 GHZ

Model	Frequency (GHz)	Shielding (dB min.)	Temperature (°C)	Ø (mm)
QH160	DC–18	90	-55 ~ +125	1.6
QH280*	DC–40	90	-55 ~ +125	2.65
QH400	DC–26.5	90	-55 ~ +125	4.0

* Also available as multi-channel assembly.

Semi-rigid cables

QE · LOW VSWR AND PIM

Model	Frequency (GHz)	Shielding (dB min.)	Temperature (°C)	Ø (mm)
QE020	DC–40	165	-55 ~ +125	0.58
QE047	DC–40	165	-55 ~ +125	1.2
QE086	DC–40	165	-55 ~ +125	2.18
QE141	DC–26.5	165	-55 ~ +125	3.58

Hand formable semi-flex cables

QD · UP TO 40 GHZ

Model	Frequency (GHz)	Shielding (dB min.)	Temperature (°C)	Ø (mm)
QD047	DC–20	–	-55 ~ +200	1.19
QD086	DC–40	100	-55 ~ +150	2.17
QD141	DC–26.5	90	-55 ~ +150	4.1
QD250	DC–6	100	-55 ~ +150	6.3

Cryogenic cables

QCE · –268 TO +150 °C

Model	Frequency (GHz)	Shielding (dB min.)	Temperature (°C)	Ø (mm)
QCE020	DC–18	165	-268 ~ +150	0.58
QCE034	DC–18	165	-268 ~ +150	0.86
QCE047	DC–18	165	-268 ~ +150	1.2
QCE086	DC–18	165	-268 ~ +150	2.15

Standard RG and RF cables

LOW COST AND FLEXIBLE

Model	Frequency (GHz)	Capacitance (pF/m)	Temperature (°C)	Ø (mm)
RF081	DC–6	98	-55 ~ +200	0.81
RF113	DC–6	98	-55 ~ +200	1.13
RF137	DC–6	96	-55 ~ +200	1.37
RG178	DC–6	96	-55 ~ +200	1.8
RG178D	DC–6	100±5	-40 ~ +200	2.4
RG316	DC–6	95	-55 ~ +165	2.5
RG316D	DC–6	95	-55 ~ +200	2.9
RG179	DC–3	64	-55 ~ +200	2.54
RG174	DC–3	101	-20 ~ +75	2.8
RG58	DC–3	100	-20 ~ +80	5
RG142	DC–12.4	95	-55 ~ +200	4.95
RG400	DC–12.4	95	-55 ~ +200	4.95
RG223	DC–6	100	-20 ~ +80	5.4
RG304	DC–6	96	-55 ~ +200	7.1
RG6	0.005–2.2	53	-20 ~ +70	7.8

Cable armor

QAM · JACKETS IN PUR, NYLON AND PTFE

Model	Outer Ø (mm)	Inner Ø (mm)	Jacket	Temperature (°C)
QAM0-40-U	7.0±0.15	4.0±0.1	PUR	-40 ~ +80
QAM0-54-N	7.95±0.15	5.4±0.1	Nylon	-40 ~ +105
QAM0-54-P	7.55±0.15	5.4±0.1	PTFE	-40 ~ +165
QAM0-54-U	8.3±0.15	5.4±0.1	PUR	-40 ~ +80
QAM0-62-N	9.6±0.15	6.2±0.1	Nylon	-40 ~ +105
QAM0-62-P	9.15±0.15	6.2±0.1	PTFE	-40 ~ +165
QAM0-62-U	10.1±0.15	6.2±0.1	PUR	-40 ~ +80
QAM0-80-N	12.2±0.15	8.0±0.1	Nylon	-40 ~ +105
QAM0-85-P	12.5±0.15	8.5±0.1	PTFE	-40 ~ +165
QAM0-85-U	14.2±0.15	8.5±0.1	PUR	-40 ~ +80
QAM1-22-P	4.7±0.15	3.0±0.1	PTFE	-40 ~ +80
QAM1-40-P	6±0.15	4.0±0.1	PTFE	-40 ~ +165
QAM1-62-P	8.25±0.15	6.2±0.1	PTFE	-40 ~ +165

All data as specified by the manufacturer Qualwave. Lead times in weeks ex works according to Qualwave. Detailed datasheets are available from bq-microwave.

Your contact for Qualwave

Looking for the right cable or an assembly with specific connectors and lengths? We are happy to advise you and clarify details directly with Qualwave.

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