

QT50 Phase & Loss Stable, Long Flex Life

- | | |
|------------------------|---------------------------|
| Features: | Applications: |
| * Low Insertion Loss | * Laboratory Test |
| * High Phase Stability | * Avionics |
| * High Power | * Phased-array Radar |
| * High Durability | * Satellite Communication |

Electrical

Frequency:	DC-50GHz
Impedance:	50Ω
Velocity of Propagation:	76%
Shielding Effectiveness:	90dB min.
Voltage Withstand:	500V DC
Phase Stability*1:	±7°
Amplitude Stability*1:	±0.05dB

[1] 50mm radius, 360° bending

Mechanical

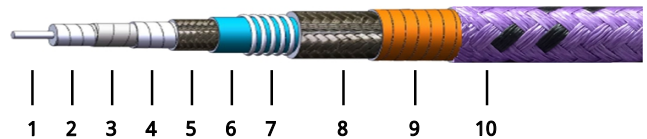
Unarmored Bend Radius (installation/repeated):	18mm/36mm min.
Armored Bend Radius (installation/repeated):	30mm/60mm min.
Bending Life Cycle:	100,000
Mating Life Cycle*2:	5,000

[2] For connectors 2.4mm, 2.92mm, 3.5mm, SMA, N only.

Environmental

Temperature: -55~+165°C

Construction



No.	Name	Size (mm)	Material
1	Inner Conductor	0.72	Silver-plated copper
2	Dielectric	2.1	Low density PTFE
3	Inner Shield	2.25	Silver-plated copper tape
4	Interlayer	2.55	Low density PTFE
5	Outer Shield	3.01	Silver-plated copper braid
6	Jacket	3.60	FEP
7-9	Armor (optional)	5.50	Composite
10		6.00	PTFE

Tolerance: ±0.2mm [±0.008in]

Attenuation & Power Handling

Frequency (GHz)	1	2	3	6	8	10	12.4	18	26.5	40	50
Attenuation*3 (dB/100m)	48.1	68.3	83.9	119.4	138.4	155.2	173.4	210.2	257.1	319.2	359.2
Average Power*4 (W)	506	356	290	204	176	157	140	116	95	76	68

[3] VSWR:1.0; Ambient: +25°C (77°F); Raw cable

[4] VSWR:1.0; Ambient: +40°C (104°F); Sea level

Calculate Cable Attenuation: Attenuation (dB/100m) = 1.507808 * √F (MHz) + 0.000440 * F (MHz)

Calculate Connector Attenuation: Attenuation (dB) = 0.03 * √F (GHz)

How To Order

QT50W-X-Y-Z

W: Armor: P, without armor: blank

X: Frequency In GHz

Y: Connector type

Z: Length in meters

Examples:

To order a QT50 test cable assembly with armor, DC-50GHz, 2.4mm male to 2.4mm female, 0.5 meter, specify QT50P-50-22F-0.5.

Connector naming rules:

- 2 - 2.4mm (50GHz, VSWR 1.4)
- K - 2.92mm (40GHz, VSWR 1.25)
- 3 - 3.5mm (33GHz, VSWR 1.35)
- S - SMA (26.5GHz, VSWR 1.25)
- N - N (18GHz, VSWR 1.25)

Female Connector - Add 'F' after connector name

Right Angle - Add 'R' after connector name (VSWR increase 0.1)

T50 Mating Connector

QC2-MRG-T50-1

2.4mm male, Right angle,
Stainless steel

QC2-MG-T50-2

2.4mm male, Stainless
steel

QC2-FG-T50-1

2.4mm female, Stainless
steel

QC2-FRG-T50-1

2.4mm female, Right angle,
Stainless steel

QCK-MG-T50-1

2.92mm male, Stainless
steel

QCK-MRG-T50-1

2.92mm male, Right angle,
Stainless steel

QCK-FG-T50-1

2.92mm female, Stainless
steel


QCK-FRG-T50-1

2.92mm female, Right
angle, Stainless steel

QC3-MG-T50-1

3.5mm male, Stainless
steel

QC3-FG-T50-1

3.5mm female, Stainless
steel

QCS-MG-T50-1

SMA male, Stainless steel

QCS-FG-T50-1

SMA female, Stainless steel

QCN-MG-T50-4

N male, Stainless steel

QCN-FG-T50-1

N female, Stainless steel



T50P Mating Connector

QC2-MRG-T50P-1

2.4mm male, Right angle,
Stainless steel

QC2-MG-T50P-4

2.4mm male, Stainless
steel

QC2-FG-T50P-4

2.4mm female, Stainless
steel


QCN-MG-T50P-3

N male, Stainless steel

QC3-MG-T50P-1

3.5mm male, Stainless
steel

QC3-FG-T50P-1

3.5mm female, Stainless
steel



High Performance Test Cable Assemblies

QCK-MG-T50P-4

2.92mm male, Stainless steel

**QCS-MG-T50P-3**

SMA male, Stainless steel

**QCK-MRG-T50P-1**

2.92mm male, Right angle, Stainless steel

QCS-FG-T50P-1

SMA female, Stainless steel

**QCK-FG-T50P-3**

2.92mm female, Stainless steel

**QCN-FG-T50P-1**

N female, Stainless steel

QCK-FRG-T50P-1

2.92mm female, Right angle, Stainless steel