

# QA150

## Ultra Low Loss & Phase Stable

**Features:**

- \* Low Insertion Loss
- \* High Phase Stability
- \* High Power
- \* Low PIM

**Applications:**

- \* Phased-array Radar
- \* Satellite Communication
- \* Avionics

**Electrical**

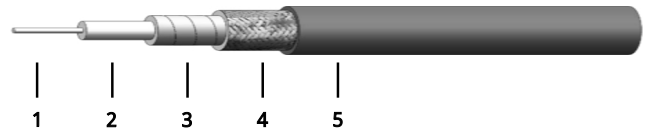
Frequency:	DC~40GHz
Cut-off Frequency:	128GHz
Impedance:	50Ω
Velocity of Propagation:	80%
Shielding Effectiveness:	90dB min.
Voltage Withstand:	400V DC
PIM:	-155dBc
Phase Stability:	1000PPM@-55°C~+85°C max.

**Mechanical**

Bend Radius (installation):	8mm
Bend Radius (repeated):	15mm
Weight:	5.4g/m

**Environmental**

Temperature: -55~+125°C

**Construction**


No.	Name	Size (mm)	Material
1	Inner Conductor	0.30	Silver-plated copper
2	Dielectric	0.88	Low density PTFE
3	Inner Shield	1	Silver-plated copper tape
4	Outer Shield	1.23	Silver-plated copper braid
5	Jacket	1.5	PFA

**Attenuation & Power Handling**

Frequency (GHz)	1	2	3	6	8	10	12.4	18	26.5	40
Attenuation*1 (dB/100m)	113.7	161.6	198.5	282.9	328	368	411.3	499.3	611.5	760.4
Average Power*2 (W)	97	68	56	39	34	30	27	22	18	15

[1] VSWR:1.0; Ambient: +25°C (77°F)

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

 Calculate Cable Attenuation: Attenuation (dB/100m) =  $3.557846 * \sqrt{F \text{ (MHz)}} + 0.001221 * F \text{ (MHz)}$ 

 Calculate Connector Attenuation: Attenuation (dB) =  $0.03 * \sqrt{F \text{ (GHz)}}$ 
**How To Order**
**QA150-X-Y-Z**

X: Frequency in GHz

Y: Connector type

Z: Length in meters

**Examples:**

To order a QA150 cable assembly, DC-110GHz, 1.0mm male to 1.0mm female, 0.8 meter, specify QA150-110-11F-0.8.

**Connector naming rules:**

K - 2.92mm (40GHz, VSWR 1.35)

S - SMA (26.5GHz, VSWR 1.35)

Female Connector - Add 'F' after connector name

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

**Mating Connector**

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**QCV-MG-047-1**

1.85mm male, Stainless steel

**QC2-MG-047-1**

2.4mm male, Stainless steel

**QCG-MB-047-1**

SSMP male, Beryllium copper

**QCG-MRB-047-1**

SSMP male, Right angle, Beryllium copper

**QCK-MG-047-1**

2.92mm male, Stainless steel

**QCP-FB-047-1**

SMP female, Beryllium brass

**QCA-FL2B-047-1**

SSMA female, Beryllium copper

**QCS-MG-047-1**

SMA male, Stainless steel

**QCS-MRG-047-1**

SMA male, Right angle, Stainless steel

**QCS-FG-047-1**

SMA female, Stainless steel

