

# QE047

## Low PIM

Features:  
\* Low PIM

Applications:  
\* Phased-array Radar  
\* Instrument  
\* Interconnection in and between equipment

### Electrical

Frequency:	DC~40GHz
Cut-off Frequency:	110GHz
Impedance:	50Ω
Velocity of Propagation:	70%
Shielding Effectiveness:	165dB min.
Voltage Withstand:	100V DC

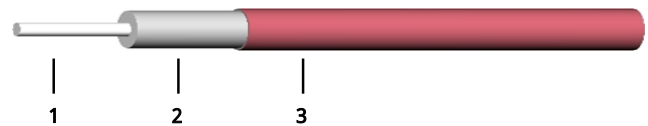
### Mechanical

Bend Radius (installation):	4.2mm
Weight:	3g/m

### Environmental

Temperature: -55~+125°C

### Construction



No.	Name	Size (mm)	Material
1	Inner Conductor	0.28	Silver-plated copper
2	Dielectric	0.92	PTFE
3	Outer Conductor	1.20	Ternary alloy plated seamless copper tube

### Attenuation & Power Handling

Frequency (GHz)	0.3	0.5	1	3	6	10	12.4	18	26.5	40
Attenuation*1 (dB/100m)	60	80	110	200	290	380	430	520	650	820
Average Power*2 (W)	109	84	59	33	23	18	16	13	10	8

[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) =  $3.5016 * \sqrt{F} \text{ (MHz)} + 0.0029 * F \text{ (MHz)}$

Calculate Connector Attenuation: Attenuation (dB) =  $0.03 * \sqrt{F} \text{ (GHz)}$

### How To Order

#### QE047-X-Y-Z

X: Frequency in GHz

Y: Connector type

Z: Length in meters

Examples:

To order a QE047 cable assembly, DC-18GHz, SMA male to SMA female, 0.5 meter, specify QE047-18-SSF-0.5.

Connector naming rules:

2 - 2.4mm (40GHz, VSWR 1.35)

K - 2.92mm (40GHz, VSWR 1.35)

P - SMP (26.5GHz, VSWR 1.3)

A - SSMA (26.5GHz, VSWR 1.3)

S - SMA (26.5GHz, VSWR 1.3)

G - Mini-SMP (mateable with GPPO & SSMP, 18GHz, VSWR 1.3)

N - N (12GHz, VSWR 1.2)

X - MMCX (6GHz, VSWR 1.3)

M - MCX (6GHz, VSWR 1.3)

B - BNC (4GHz, VSWR 1.4)

D - SMB (4GHz, VSWR 1.25)

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

