

# QA830

## Ultra Low Loss & Phase Stable

**Features:**

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

**Applications:**

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

**Electrical**

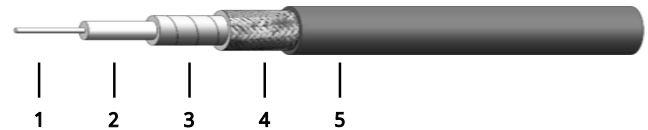
Frequency:	DC~18GHz
Cut-off Frequency:	18GHz
Impedance:	50Ω
Velocity of Propagation:	83%
Shielding Effectiveness:	90dB min.
Voltage Withstand:	2500V DC
PIM:	-155dBc
Phase Stability:	750PPM@-55°C~+85°C max.

**Mechanical**

Bend Radius (installation):	41.0mm
Bend Radius (repeated):	83.0mm
Weight:	162g/m

**Environmental**

Temperature: -55~+165°C

**Construction**


No.	Name	Size (mm)	Material
1	Inner Conductor	2.44	Silver-plated copper
2	Dielectric	6.50	Low density PTFE
3	Inner Shield	6.90	Silver-plated copper tape
4	Outer Shield	7.65	Silver-plated copper braid
5	Jacket	8.30	PFA

**Attenuation & Power Handling**

Frequency (GHz)	1	2	4	6	8	10	12.4	16	18
Attenuation*1 (dB/100m)	13.3	18.9	27.1	33.6	39.1	44.1	49.5	56.9	60.6
Average Power*2 (W)	1894	1326	925	747	641	569	507	442	414

[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) =  $0.408997 * \sqrt{F} \text{ (MHz)} + 0.000320 * F \text{ (MHz)}$

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

**How To Order**
**QA830-X-Y-Z**

X: Frequency in GHz

Y: Connector type

Z: Length in meters

**Examples:**

To order a QA830 cable assembly, DC-18GHz, N male to SMA female, 0.5 meter, specify QA830-18-SFN-0.5.

**Connector naming rules:**

S - SMA (18GHz, VSWR 1.25)

N - N (18GHz, VSWR 1.25)

T - TNC (18GHz, 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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**QCS-MG-A830-1**  
SMA male, Stainless steel



**QCN-MG-A830-1**  
N male, Stainless steel

