



industrial data rf cable series

BCB012

High-Frequency Avionics Coaxial Cable

50 Ω low-loss ePTFE avionics RF coaxial cable with dual Ag-Cu screen (DC-18 GHz)



EN 4604 / FAR 25.869

50 Ω · DC-18 GHz · 82% VoP

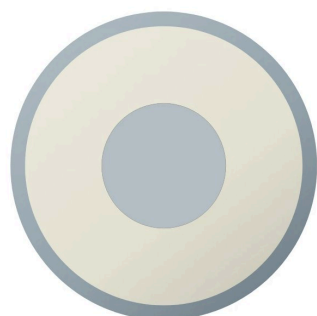
-65 °C to +200 °C

Application

50 Ω aerospace RF coaxial cable per EN 4604 / MIL-DTL-17 with a silver-plated copper conductor, low-loss PTFE dielectric (70–76 % VoP), silver-plated copper braid (> 60 dB screening), and FEP/ETFE fluoropolymer jacket for avionics up to 6 GHz and +200 °C.

Typical uses: Commercial & Military Avionics, Airborne Weather & AESA Radar, TCAS, DME & ADS-B Transponders, UAV & Satellite Payload Links, Flight-Test Telemetry

Construction



Cross-section, not to scale

- 1 Silver-plated copper center conductor
- 2 Microporous expanded PTFE (ePTFE) dielectric
- 3 Inner silver-plated copper flat ribbon shield
- 4 Outer silver-plated copper round wire braid
- 5 Fluoropolymer (FEP / ETFE) outer jacket

Technical data

Typical values

Characteristic impedance	50 Ω ± 2 Ω	Operating frequency range	DC to 18 GHz
Velocity of propagation	82 % nominal (65.0 pF/m)	Attenuation @ 1 / 6 / 18 GHz	21.5 / 54.0 / 98.0 dB/100m
Shielding effectiveness	≥ 90 dB (up to 18 GHz)	Operating temperature range	-65 °C to +200 °C
Thermal phase stability	< 500 ppm (-55 °C to +125 °C)	Max. operating voltage	1,000 V RMS at sea level
Center conductor Ø	0.94 mm (19×0.19 mm or solid SPC)	Overall cable diameter	3.60 mm ± 0.10 mm nominal
Min. bending radius	5 × OD (18 mm) static · 10 × OD dynamic	Flammability & smoke	FAR 25.869 / EN 3475 / ABD0031 pass
Aircraft fluid resistance	Resists Skydrol, Jet-A1, MIL-PRF-5606, glycol	Altitude & outgassing	70,000 ft altitude · low vacuum outgassing
Standards	EN 4604 / SAE AS22759 / MIL-DTL-17		

Sizes

8 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Impedance / size	Conductor & dielectric	Wall ≈ mm	Outer Ø ≈ mm	Metal kg/km	Weight ≈ kg/km	Min. bend R fixed mm
Standard BCB012 configurations 8 sizes							
☐ BCB012	50 Ω · Ø 0.94 mm	SPC 19×0.19 + ePTFE	0.35	3.60	19.5	29.0	18
☐ BCB012-S	50 Ω · Ø 0.91 mm	Solid SPC + ePTFE	0.35	3.55	19.0	28.0	18
☐ BCB012-ETFE	50 Ω · Ø 0.94 mm	SPC 19×0.19 + ePTFE/ETFE	0.38	3.65	19.5	29.5	18
☐ BCB012-LS	50 Ω · Ø 1.02 mm	SPC 19×0.20 + ePTFE	0.40	3.85	22.0	33.0	19
☐ BCB012-PFA	50 Ω · Ø 0.94 mm	SPC 19×0.19 + ePTFE/PFA	0.38	3.65	19.5	30.2	18
☐ BCB012-M	50 Ω · Ø 0.72 mm	SPC 19×0.15 + ePTFE	0.30	2.95	13.8	20.5	15
☐ BCB012-HD	50 Ω · Ø 1.14 mm	SPC 19×0.23 + ePTFE	0.42	4.30	27.5	41.0	22
☐ BCB012-TR	50 Ω · Triaxial	SPC + ePTFE + Dual Braid	0.45	4.65	34.0	49.0	24

– Outer diameters and weights are nominal engineering values for BCB012 subject to standard manufacturing tolerances per EN 4604 / SAE AS22759 / FAR 25.869 (50 Ω Avionics RF Coax).

RF & electrical data

8 sizes

Configuration	Max. DC R @ 20 °C Ω/km	Char. Z0 Ω	Velocity VoP / L (% or nH/m)	Dielectric test V AC rms
BCB012 (50 Ω · Ø 0.94 mm)	28.50	50.0	82.0	1,500
BCB012-S (50 Ω · Ø 0.91 mm)	27.00	50.0	83.0	1,500
BCB012-ETFE (50 Ω · Ø 0.94 mm)	28.50	50.0	82.0	1,500
BCB012-LS (50 Ω · Ø 1.02 mm)	24.20	50.0	82.0	1,500
BCB012-PFA (50 Ω · Ø 0.94 mm)	28.50	50.0	82.0	1,500
BCB012-M (50 Ω · Ø 0.72 mm)	48.00	50.0	81.0	1,200
BCB012-HD (50 Ω · Ø 1.14 mm)	19.20	50.0	83.0	1,800
BCB012-TR (50 Ω · Triaxial)	28.50	50.0	82.0	1,800

– Characteristic impedance, propagation velocity, DC resistance at +20 °C, and dielectric withstand voltages verified per EN 4604 / SAE AS22759 / FAR 25.869 (50 Ω Avionics RF Coax).

Standards and approvals

- ✓ EN 4604 / SAE AS22759 / FAR 25.869 (50 Ω Avionics RF Coax)
- ✓ CE (2014/35/EU) & RoHS 3 (2015/863/EU) Compliant
- ✓ REACH SVHC Compliance Verified

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/bcb012-high-frequency-avionics-coaxial-cable



Typical values for this cable type, based on EN 4604 / SAE AS22759 / FAR 25.869 (50 Ω Avionics RF Coax). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.