



Aerospace & Avionics Data Bus & RF Cables

BCB009

Low-Loss Avionics RF Coaxial Cable

EN 4604-009 / BCB009 · 50 Ω ± 2 Ω · Ø 4.85 mm · SPC center · Expanded PTFE (82 % VoP) ·



BCB009 / EN 4604-009

50 Ω · DC-18 GHz

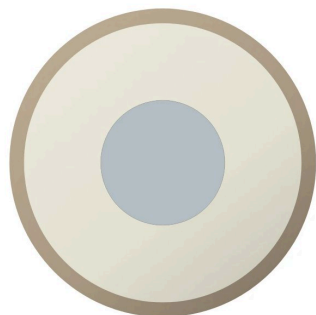
82 % VoP ePTFE · > 95 dB

Application

BCB009 Low-Loss Avionics RF Coaxial Cable (EN 4604-009 / Airbus ABS0969 / low-loss RG-400 replacement) is a 50 Ω microwave airframe coaxial cable operating from DC to 18 GHz (-55 °C to +200 °C). By combining a silver-plated copper center conductor

Typical uses: Commercial Airliner L-Band (TCAS / ADS-B / DME), 4.3 GHz Radio Altimeter (RADALT) & 5G Filter, Airborne SATCOM (Inmarsat / Iridium / Ka-Ku), Military Radar Warning & EW Harnesses, Low-Loss Microwave Test Bench Jumpers

Construction



Cross-section, not to scale

1	Silver-plated copper center conductor	EN 4604-009 / BCB009
2	Expanded microporous PTFE dielectric	EN 4604-009 / BCB009
3	100 % flat silver-plated copper strip	EN 4604-009 / BCB009
4	Round silver-plated copper outer braid	EN 4604-009 / BCB009
5	Airframe FEP / ETFE fluoropolymer jacket	ABD0031 / FAR 25.853

Technical data

Typical values

Characteristic impedance Z_0	50 Ω $\pm$ 2 Ω	Nominal capacitance	81.0 pF/m (24.7 pF/ft)
Velocity of propagation (VoP)	80.0 % – 82.0 % (4.07 ns/m delay)	Shielding effectiveness	> 95 dB (Flat SPC strip + SPC braid)
Operating frequency range	DC to 18 GHz	Max. operating / test voltage	1,500 V rms / 3.0 kV rms test
Operating temperature range	-55 °C to +200 °C continuous	Storage temperature range	-65 °C to +200 °C
Airframe fire & smoke compliance	FAA FAR 25.853, Airbus ABD0031, BSS 7230	Phase vs temperature stability	< 500 ppm across -55 to +125 °C
Cold-bend rating	-55 °C without cracking	Continuous CW power @ 1 GHz	480 W (@ +40 °C ambient)
Center conductor diameter	1.26 mm SPC (vs 0.98 mm in RG-400)	Dielectric diameter	3.30 mm $\pm$ 0.08 mm
Outer jacket diameter	4.85 mm $\pm$ 0.12 mm (0.191 in)	Min. bend radius (fixed / dynamic)	25 mm (5xD) / 50 mm (10xD)
Nominal cable weight	56.0 kg/km (25 % lighter than RG-400)	Connector compatibility	TNC, SMA, BNC, Type N, ARINC 600 Size 8/5
Aviation fluids & Skydrol	100 % resistant to Skydrol LD-4, Jet-A &	High-altitude moisture sealing	Hydrophobic ePTFE core + FEP jacket
HIRF & RADALT 5G rejection	> 95 dB composite flat-strip + braid shield	Wet arc-tracking resistance	Passes EN 3475 / SAE AS4373
Fungus & ozone resistance	Inert fluoropolymer construction	RoHS / REACH status	Aerospace RoHS compliant
Standards	EN 4604-009 / Airbus ABS0969 / BCB009		

Sizes

4 standard constructions

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

Order designation	Construction / Variant	Conductor	Outer $\varnothing$ $\approx$ mm	Metal kg/km	Weight $\approx$ kg/km	Min. bend R fixed mm
Standard BCB009 variants 4 sizes						
☐ BCB009 (EN 4604-009) Low-Loss Solid SPC	50 Ω Flat SPC Strip + SPC Braid (FEP)	$\varnothing$ 1.26 mm SPC	4.85	36.0	56.0	24
☐ BCB009-F Stranded Low-Loss Flex (19x0.25 SPC)	50 Ω Flat SPC Strip + SPC Braid (FEP)	19x0.25 mm SPC	4.90	37.5	58.0	24
☐ RG-400/U (M17/128) Solid-PTFE Sister Coax	50 Ω Dual Round SPC Braids (FEP)	20 AWG (19x0.20 SPC)	4.95	46.5	74.4	25
☐ Miniature Low-Loss ePTFE 2.6 mm Coax	50 Ω Flat SPC Strip + SPC Braid (FEP)	$\varnothing$ 0.68 mm SPC	2.65	11.0	17.5	13

- Dimensions and weights are nominal production values subject to manufacturing tolerances per EN 4604-009 / ABS0969 (BCB009) / MIL-DTL-17 Ref..

Attenuation & RF power handling

7 sizes

Frequency	Nominal attenuation dB / 100 m	Nominal attenuation dB / 100 ft	Max. CW RF power W (@ 40 °C)	Impedance Z_0 Ω	Velocity VoP %
100 MHz (VHF Comms / VOR)	9.2	2.80	1,500	50	82.0
400 MHz (UHF / ELT)	18.5	5.64	760	50	82.0
1000 MHz (1 GHz TCAS / ADS-B / DME)	29.5	8.99	480	50	82.0
2400 MHz (2.4 GHz S-Band)	46.8	14.26	300	50	82.0
4300 MHz (4.3 GHz Radio Altimeter)	63.5	19.35	220	50	82.0
10000 MHz (10 GHz X-Band WXR)	101.0	30.78	140	50	82.0
18000 MHz (18 GHz Ku-Band SATCOM)	142.0	43.28	98	50	82.0

- Attenuation values apply at +20 °C ambient into a matched 50 Ω load; CW power ratings assume VSWR 1.0:1 at +40 °C ambient.

Standards and approvals

- ✓ EN 4604-009 / BCB009
- ✓ FAA FAR 25.853 / ABD0031
- ✓ DC-18 GHz VNA Certified

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/bcb009-low-loss-avionics-rf-coaxial-cable



Typical values for this cable type, based on EN 4604-009 / ABS0969 (BCB009) / MIL-DTL-17 Ref.. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.