High-temperature RF coaxial & avionics data

LL142 50Ω ePTFE Coax

LL142 50 Ω Low-Loss Expanded-PTFE Microwave Coax

18 GHz triple-shielded expanded-PTFE blue FEP microwave coaxial cable



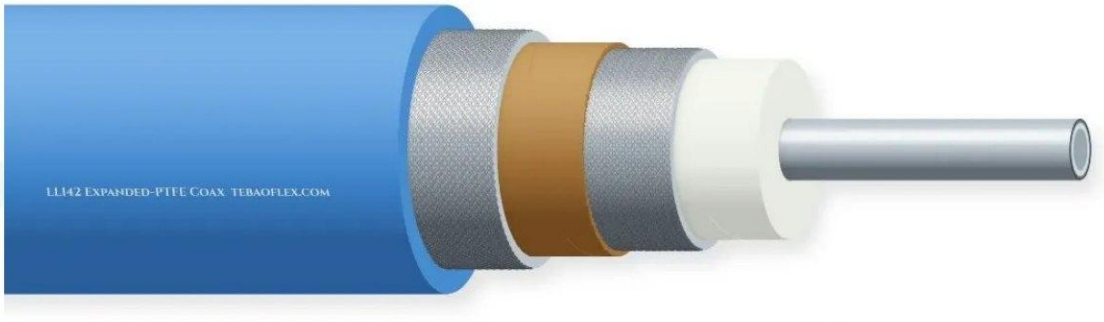
MIL-DTL-17 (ref.) | 500 V · +200 °C | Fluoropolymer HT

Application

LL142 Expanded-PTFE Coax pairs a silver-plated copper centre conductor and microporous expanded-PTFE (ePTFE) dielectric with double silver-plated copper shields and a blue FEP jacket for low-loss RF runs up to 18 GHz.

Typical uses: Commercial & military aircraft avionics bays, Radar, electronic warfare & satellite transceivers, MIL-STD-1553B airborne multiplex data networks, High-temperature RF test benches & telemetry

Construction





Cross-section, not to scale

1	**Conductor**	ASTM B298 Class K stranded silver-plated annealed copper · ASTM B298 Silver Cu
2	**Dielectric / core insulation**	Low-loss microporous expanded PTFE (ePTFE, 50 Ω) · MIL-DTL-17 (ref.)
3	**Metallic EMC screen**	Flat silver-plated copper strip + Al-foil + round SPC outer braid · EMC ≥ 85% shield
4	**Outer sheath**	Blue 200 °C chemical-resistant extruded FEP outer jacket · Up to 18 GHz Low-Loss

Technical data

Typical values

Rated voltage	500 V	**Test voltage**	1.5 kV AC
Conductor	Silver-Plated Cu	**Insulation**	Low-loss microporous expanded PTFE
Impedance / insulation	50 Ω ± 1 Ω · 80% velocity	**Temp. range (fixed)**	-65 °C to +200 °C
Temp. range (flexing)	-55 °C to +165 °C	**Peak / short-circuit**	+220 °C (short-term)
Min. bending radius	10 × OD (fixed)	**Flame / fire rating**	Up to 18 GHz Low-Loss
Thermal / chemical	> 90 dB Shielding	**Mechanical / special**	80% Velocity of Propagation
Outer finish	Blue 200 °C chemical-resistant extruded		

Sizes

4 standard constructions

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

	Impedance · Centre	Outer Ø ≈ mm	Max. R20 Ω/km	Metal index kg/km	Weight ≈ kg/km	Min. bend R 10×D mm
☐	**50 Ω · 19 AWG SPC (ePTFE)**	**5.0**	**27.20**	**34**	**64**	**50**
☐	**50 Ω · 18 AWG SPC (ePTFE)**	**5.6**	**21.50**	**42**	**78**	**56**
☐	**50 Ω · 16 AWG SPC (ePTFE)**	**6.4**	**13.60**	**56**	**102**	**64**
☐	**50 Ω · 13 AWG SPC (ePTFE)**	**8.5**	**6.80**	**92**	**168**	**85**

- Conductor DC resistance R20 at 20 °C per ASTM B298 Silver Cu.
- Minimum bending radius calculated at 10 × nominal outer diameter (OD). Custom core counts and lengths available on request.

Standards and approvals

- ✓ MIL-DTL-17 (ref.)
- ✓ IEC 61196
- ✓ 50 Ω ± 1 Ω RF Coax
- ✓ EN 10204 3.1 Factory Test Certificate
- ✓ CE, RoHS 2 (2011/65/EU) & REACH

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/ll142-50-ohm-low-loss-expanded-ptfe-microwave-coax

Typical values for this cable type, based on MIL-DTL-17 (ref.) · IEC 61196 · 50 Ω ± 1 Ω 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.