



High-frequency enamelled Litz winding wire

HF Litz Wire

Multi-Strand Enamelled High-Frequency Litz Winding

Multi-strand enamelled copper high-frequency Litz wire (10 kHz – 5 MHz) to IEC 60317-11



10 kHz – 5 MHz AC

Ø 0.02 – 0.50 mm Strands

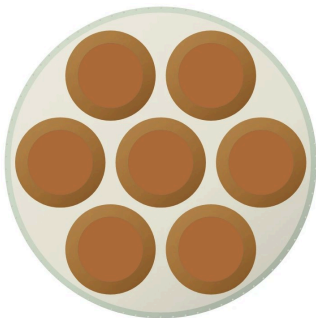
Class 155 / 180 / 200

Application

Precision multi-bundle high-frequency Litz winding wire (HF Litz Wire) constructed from 7 to 10,000+ individually insulated fine enamelled copper strands (0.020 mm / 52 AWG to 0.50 mm / 24 AWG) twisted in concentric planetary stages to suppress AC.

Typical uses: SiC & GaN High-Frequency LLC / DAB Power Converters, EV Static & Dynamic Wireless Power Transfer (85 kHz SAE J2954), Industrial Induction Heating, Brazing & Melting Coils, Solar String Inverters, EV On-Board Chargers (OBC) & DC Fast Chargers, Ultrasonic Transducers, MRI Gradient Coils & RF Antennas

Construction



Cross-section, not to scale

- 1 Individually enamelled fine OFHC copper strands (Ø 0.020–0.50 mm)
- 2 Multi-stage planetary Roebel bundle transposition (Type 1 / 2 / 7 / 8)
- 3 Outer serving, film-tape wrap or extruded fluoropolymer jacket

Technical data

Typical values

Recommended frequency match 10–50 kHz: Ø 0.20 mm (32 AWG) · 50–100 kHz: Ø 0.10 mm (38 AWG) · 100–350 kHz: Ø 0.071 mm (41 AWG) · 350 kHz–1 MHz: Ø 0.050 mm (44 AWG) · 1–5 MHz: Ø 0.030 mm (48 AWG)

Outer jacket breakdown (taped/extruded) 1.5 kVrms to 10 kVrms (custom HV solid-state transformer grades)

High-temp PEI / PEI+PAI Class 180 / Class 200 (IEC 60317-13 / -26) for high-temp vacuum pressure impregnation

Compacted rectangular fill 65 % to 72 % copper fill factor (Type 8 profiled Litz)

Partial discharge (HV grades) Corona-resistant polyimide/ETFE outer barriers for SiC dv/dt > 50 V/ns

Strand enamel breakdown Grade 1 or Grade 2 per IEC 60317-0-1

Solderable Polyurethane (PU) Class 155 (IEC 60317-20) & Class 180 (IEC 60317-51), direct dip-solderable at +375–390 °C

Total copper cross-section 0.05 mm² to 120 mm² (7 to 12,000+ strands)

Varnish & oil compatibility Compatible with epoxy VPI resins, silicone potting & transformer oils

Standards IEC 60317-11 · IEC 60317-20 · IEC 60317-51 · NEMA MW 1000 (MW 79-C / 80-C)

Sizes

12 standard constructions

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

Order designation	Target Freq. Band	Strands × Ø mm AWG	Enamel & Outer Insulation	Net Cu mm ²	Nom. OD / H×W mm	Typ. R _{DC} mΩ/m
10 kHz – 100 kHz Litz Builds (Induction Heating, 85 kHz EV Wireless & Solar/OBC Inductors) 6 sizes						
☐ LITZ-60X0.20-PU180-SN	10–50 kHz	60 × 0.20 mm (32 AWG)	PU 180 + Single Nylon	1.88	2.15	9.55
☐ LITZ-200X0.20-PU180-DN	10–50 kHz	5×40 × 0.20 mm (32 AWG)	PU 180 + Double Nylon	6.28	4.10	2.88
☐ LITZ-120X0.10-PU180-SN	50–100 kHz	3×40 × 0.10 mm (38 AWG)	PU 180 + Single Nylon	0.94	1.52	19.20
☐ LITZ-420X0.10-PU180-SB	50–100 kHz	7×60 × 0.10 mm (38 AWG)	PU 180 + Self-Bonding	3.30	2.85	5.52
☐ LITZ-1050X0.10-PU180-ETFE	85 kHz EV WPT	5×5×42 × 0.10 mm (38 AWG)	PU 180 + Extruded ETFE	8.25	5.10	2.22
☐ LITZ-2500X0.10-PEI200-PI	20–85 kHz	5×10×50 × 0.10 mm (38 AWG)	PEI 200 + 2× Polyimide Tape	19.63	7.65	0.94
100 kHz – 2 MHz Litz Builds (SiC/GaN LLC Transformers, Medical RF & Compacted Rectangular) 6 sizes						
☐ LITZ-180X0.071-PU180-SN	100–350 kHz	3×60 × 0.071 mm (41 AWG)	PU 180 + Single Silk/Nylon	0.71	1.32	25.40
☐ LITZ-600X0.071-PU180-ETFE	100–350 kHz	5×3×40 × 0.071 mm (41 AWG)	PU 180 + 3 kV ETFE Jacket	2.38	2.80	7.68
☐ LITZ-1200X0.071-TYPE8-PI	100–300 kHz	1200 × 0.071 mm Profiled	PU 180 + Compacted PI Tape	4.75	2.1 × 4.2	3.86
☐ LITZ-300X0.050-PU180-SN	350 kHz–1 MHz	5×60 × 0.050 mm (44 AWG)	PU 180 + Natural Silk	0.59	1.22	30.80
☐ LITZ-1000X0.050-PU180-FEP	350 kHz–1 MHz	5×4×50 × 0.050 mm (44 AWG)	PU 180 + Extruded FEP	1.96	2.55	9.35
☐ LITZ-450X0.030-PU180-SS	1–5 MHz	3×3×50 × 0.030 mm (48 AWG)	PU 180 + Single Silk	0.32	0.94	57.20

– Any strand count (7 to 12,000+), pitch lay length, compacted rectangular dimension (H × W), or triple-insulated (TIW-Litz) jacket can be engineered to your switching frequency.

Standards and approvals

- ✓ IEC 60317-11 / -20 / -51 High-Frequency Litz Wire Compliant
- ✓ NEMA MW 1000 (MW 79-C / MW 80-C) Solderable Litz

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/multi-strand-enamelled-high-frequency-litz-winding-wire



Typical values for this cable type, based on IEC 60317-11 / IEC 60317-20 / IEC 60317-51 / NEMA MW 1000 (MW 79-C / MW 80-C). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.