7.5 kVDC PEEK vacuum & radiation twin cable

HSC-7.5-2K2SA

7.5 kVDC PEEK Vacuum & Radiation Cable

IEC 60544 / VDE 0250 · 7.5 kVDC HV + LV · −60…+250 °C PEEK + V2A stainless braid cable

7.5 kVDC + LV | −60…+250 °C PEEK | UHV & Radiation



Application

HSC-7.5-2K2SA 7.5 kVDC vacuum- and radiation-resistant parallel twin-circuit cable pairing an AWG 22 nickel-plated copper PEEK-insulated 7.5 kVDC coaxial unit with an AWG 22 PEEK LV return core under a common V2A stainless-steel wire braid.

Typical uses: Ultra-High Vacuum (UHV) Chambers & Surface Physics, Nuclear Research, Synchrotrons & Beamline Instrumentation, Space Simulation, Ion Thrusters & Bake-Out Ovens, High-Temperature Mass Spectrometers & Electron Optics

Construction





Cross-section, not to scale

1	HV Unit (7.5 kVDC)	IEC 60544 / DIN VDE 0250
2	Parallel LV Unit	IEC 60544 / DIN VDE 0250
3	Outer Mechanical & EMC Braid	IEC 60544 / DIN VDE 0250

Technical data

Typical values

Rated voltage / transmission duty	7.5 kVDC + LV (IEC 60544 / DIN VDE 0250)	**Core / conductor construction**	HV Unit (7.5 kVDC) — AWG 22 (19 x 0.16 mm) nickel-plated copper conductor, 7.5 kVDC PEEK dielectric, nickel-plated copper braid screen, and thin PEEK sub-jacket
Primary dielectric / insulation	Parallel LV Unit — AWG 22 (19 x 0.16 mm, 0.38 mm²) nickel-plated copper low-voltage return/sense core with extruded PEEK insulation laid parallel to HV unit	**Continuous operating temperature**	−60…+250 °C (rated operating envelope)
Storage & transport temperature	−40…+80 °C on export drum or reel	**Outer protection / sheath**	Outer Mechanical & EMC Braid — Overall V2A (AISI 304) stainless-steel wire braid enclosing the parallel twin assembly for ultra-high vacuum (UHV), radiation, and +250 °C service
Minimum bending radius	10 × OD	**Structural layer count**	3 concentric functional layers
Environmental & chemical resistance	Industrial moisture, oils and mechanical wear per IEC 60544 / DIN VDE 0250	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	IEC 60544 / DIN VDE 0250		

Sizes

3 standard constructions

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

Order designation	Configuration	Core / stranding	Outer Ø ≈ mm	Weight ≈ kg/km	Tensile load kN ≈	Min. bend R mm
HSC-7.5-2K2SA Construction Schedule (−60…+250 °C) 3 sizes						
☐ **HSC-5.0-2K2SA (5.0 kVDC + LV PEEK)**	2 × AWG 22 (0.38 mm²)	19×0.16 mm NPC + V2A braid	4.8	38	0.4	48
☐ **HSC-7.5-2K2SA (7.5 kVDC + LV PEEK)**	2 × AWG 22 (0.38 mm²)	19×0.16 mm NPC + V2A braid	5.6	49	0.5	56
☐ **HSC-10-2K2SA (10 kVDC + LV PEEK)**	2 × AWG 20 (0.61 mm²)	19×0.20 mm NPC + V2A braid	6.8	68	0.7	68

– Custom core counts, cross-sections, sheath colours and factory-tested cut lengths available per IEC 60544 / DIN VDE 0250.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Capacity	Operating temp.
2 × AWG 22 (5.0 kVDC + LV)	51.50	5.0 kVDC HV / 600 V LV	−60…+250 °C
2 × AWG 22 (7.5 kVDC + LV)	51.50	7.5 kVDC HV / 600 V LV	−60…+250 °C
2 × AWG 20 (10 kVDC + LV)	32.40	10 kVDC HV / 600 V LV	−60…+250 °C

– Every production length undergoes routine conductor DC resistance, high-voltage dielectric and dimensional verification.

Standards and approvals

- IEC 60544 Compliant
- 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/hsc-7-5-2k2sa-7-5kvdc-peek-vacuum-radiation-resistant-twin-cable

Typical values for this cable type, based on IEC 60544 / DIN VDE 0250. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.