# Cat 6
# 4x2x23/7 AWG S/FTP BBA LSZH-SHF1

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| **BATT Part No:** | 77109 |
| **Applications:** | Offshore installations, Maritime Environment, Data-Centres/SANs, High data rates, High bandwidth digital applications with low BER, Outdoor and direct burial installations, Indoor/Outdoor use, fixed installations, Ships, High speed & Light craft |
| **General Construction:** | Category 6, S/FTP, Armoured, SHF1, marine type cable constructed with 4 individually foil-shielded twisted pairs with stranded conductors, cabled together, inner jacket, bronze braid armour and outer jacket. |
| **Conductor** | Outer Jacket Material: FR-LSZH |
| **Outer Diameter:** | 12.4 mm nom. |
| **Weight:** | 245 kg/km |
| **Conductor Material:** | Annealed Tinned Copper |
| **Conductor Size:** | 23/7 AWG |
| **Conductor Construction:** | Stranded |
| **Insulation Material:** | Cellular PO |
| **Insulation O.D.:** | 1.48 mm nom. |
| **Conductor unit identification:** | Solid Colour |
| **Colour Code:** | Per TIA/EIA 568-B |
| **Ind. Shield Material:** | Aluminium/Polyester Foil |
| **Ind. Shield Design:** | Helically applied Aluminium foil, 100% coverage |
| **Conductor unit lay-up:** | Pairs |
| **Overall Braid Shield:** | Yes |
| **Overall Braid Material:** | Annealed Tinned Copper |
| **Braid Coverage:** | 65%nom. |
| **Overall Drain-wire Material:** | Annealed Tinned Copper |
| **Inner Jacket Material:** | FR-LSZH |
| **Inner Jacket Diameter min.:** | 8.6 mm. min. |
| **Inner Jacket Colour:** | Grey |
| **Armouring:** | Braided Bronze Wire |
| **Total number of conductors:** | 8 |
| **Outer Jacket Colour:** | Grey |
| **Applicable Standards:** | DNV-GL certified, ABS certified, IEC 60092-359, IEC 60092-350, IEC 60811-2-1, IEC 61156, ISO/IEC 11801, RoHS-2 2011/65/EU |
| **Flammability Rating:** | IEC 60332-1, IEC 60332-3-22, IEC 60754-1/2, IEC 61034-1/2 |
| **Frequency Range:** | 1 - 250 MHz |
| **Impedance:** | 100 Ω |
| **Transfer Impedance:** | Grade 1 |
| **Coupling Attenuation:** | Type II |
| **DC Resistance:** | 73 Ω/km nom. |
| **Max. Resistance Unbalance:** | 2% |
| **Max. Screen Resistance:** | 15 Ω/Km @20°C |
| **Capacitance Unbalance:** | 1.2 pF/m max. |
| **Velocity of Propagation:** | 78%nom. |
| **Propagation Delay Skew:** | 25 ns/100m max. |
| **Dielectric Strength:** | 700 V/minute |
| **Dielectric Strength to Shield:** | 700 V/minute |

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| **Min. Insulation Resistance :** | 5 GΩ•km |
| **Tensile Strength - Short Term:** | 240 N max. |
| **Min. Bend Radius:** | 130 mm |
| **Cold Bend:** | per UL 44, per CSA C22.2 No. 38-95 |
| **Cold Impact:** | per UL 44, per CSA C22.2 No.0.3 |
| **Max. Operating Temperature:** | +75 °C |
| **Min. Operating Temperature:** | - 40 °C |
| **UV resistance:** | Yes |
| **Rodent Resistance:** | Yes |

## Electrical Properties

| Freq MHz | Attenuation dB/100m 20°C | PS NEXT Loss dB | | NEXT Loss dB | | RL dB | | PS ANEXT dB | | PS ELFEXT dB | | ELFEXT dB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Typical Value | Typical Value | Cat 6 | Typical Value | Cat 6 | Typical Value | Cat 6 | Typical Value | Cat 6 | Typical Value | Cat 6 | Typical Value | Cat 6 |
| 1 | 2.0 | 87 | 72.3 | 90 | 75.3 | 22 | 20 | 70 | 67 | 85 | 65 | 88 | 68 |
| 4 | 3.5 | 87 | 63.3 | 90 | 66.3 | 25 | 23 | 70 | 67 | 73 | 53 | 76 | 56 |
| 10 | 5.4 | 87 | 57.3 | 90 | 60.3 | 30 | 25 | 70 | 67 | 65 | 45 | 68 | 48 |
| 20 | 7.6 | 87 | 52.8 | 90 | 55.8 | 30 | 25 | 70 | 67 | 59 | 39 | 62 | 42 |
| 30 | 9.6 | 87 | 50.1 | 90 | 53.1 | 27 | 23.8 | 70 | 67 | 55.4 | 35.4 | 58.4 | 38.4 |
| 100 | 17.8 | 80 | 42.3 | 83 | 45.3 | 24 | 21.1 | 67 | 62.5 | 45 | 25 | 48 | 28 |
| 150 | 22.2 | 78 | 39.7 | 81 | 42.7 | 22 | 18.8 | 66 | 59.8 | 41.5 | 21.5 | 44.5 | 24.5 |
| 200 | 25.4 | 78 | 37.8 | 81 | 40.8 | 21 | 18 | 65 | 58.0 | 49 | 19 | 52 | 22 |
| 250 | 28.6 | 75 | 36.3 | 78 | 39.3 | 20 | 17.3 | 63 | 56.5 | 37 | 17 | 40 | 20 |