DATA SHEET

Low-loss, 50 Ohm, 7.5 GHz, 85°C, ø12.9 mm, PE jacket

S_10172_B-11

Properties

- Alternative to standard SPUMA cables
- Low loss

Construction			
Component	**Material**	**Detail**	**Diameter**
Centre conductor	Aluminium / Copper	Wire	3.8 mm - 0.2 mm
Dielectric	SPE (Foamed Polyethylene)		9.9 mm
Outer conductor	Copper	longitudinal Foil, 100%	10 mm
Outer conductor	Copper	Braid, 80%	10.8 mm
Jacket	PE (Polyethylene)	RAL 9005 - bk	12.9 mm +/- 0.2 mm

Electrical data	
Impedance	50 Ω +/-2Ω
Operating frequency	≤ 7.5 GHz
Capacitance	77 pF/m
Inductance	0.248 µH/m
Velocity of signal propagation	87 %
Signal delay	3.85 ns/m
Screening effectiveness	90 dB at frequency 0.001 GHz ... 7.5GHz
Insulation resistance	100000000 MΩ*m
Inner conductor resistance	2.3 Ω/km
Operating Voltage (at sea level)	≤ 1.5 kVrms
Phase vs temperature	3000 ppm at temperature -40 ... 70°C
Phaase vs bending	2 °/GHz
Test voltage (50 Hz/1 min)	≤ 3 kVrms

Mechanical data	
Weight	approx. 150 g/m
Static bending radius	≥ 100 mm
Repeated bending radius	200 mm

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Environmental data	
Operation temperature	-40 °C ... 85 °C
Installation temperature	-20 °C ... 60°C
Fire characteristics	free of halogenes, acc. standard IEC 60754

Suitable connectors	
Cable group	S39

Ordering information

Item number	Item description	Available as assembly only
22512320	S_10172_B-11	No

Power Matrix

Calculation: typical Attenuation [formula: (a*f^0.5 + b*f)] and maximum Power CW [formula: (p/f^0.5)]

a coefficient typical =	**0.0826**	b coefficient typical =	**0.0129**
fmax =	**7.5**	P at 1 GHz =	**700.0**
Frequency	**Nom. attenuation**	**Nom. attenuation**	**CW power**
GHz	**(dB/m)**	**(dB/ft)**	**(W)**
	sea level 25°C ambient temperature	sea level 25°C ambient temperature	sea level 40°C ambient temperature
0.10	0.027	0.008	2214
0.20	0.040	0.012	1565
0.40	0.057	0.017	1107
0.60	0.072	0.022	904
1.00	0.096	0.029	700
1.50	0.121	0.037	572
2.00	0.143	0.044	495
6.00	0.280	0.085	286
6.50	0.294	0.090	275
7.00	0.309	0.094	265
7.50	0.323	0.098	256

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