

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
Outer conductor resistance	3.9 Ω/km
Operating Voltage (at sea level)	≤ 1.5 kVrms
Phase vs temperature	3000 ppm within the temperature range -40 ... 70 °C
Phase 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	
Material compliance			
Item number	Directive / Regulation	Rating	Exemptions / Details
22512320	RoHS 2011/65/EU and (EU) 2015/863	Compliant without exemption	
	REACH 1907/2006 Article 33 SVHC	Free of SVHC >0,1%	
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
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	0.043	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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