DATA SHEET

Hand formable (RG402) 50Ohm, 33GHz, 165°C, ø4.1mm FEP jacket

SUCOFORM_141_CU_FEP

Properties

- Hand-formable alternative to semi-rigid cables
- Small bend radius allows for space saving routing and packaging
- Performance comparable to semi-rigid cables
- Non-magnetic
- FEP jacket



Construction			
Component	**Material**	**Detail**	**Diameter**
Centre conductor	Copper, Silver plated	Wire	0.95 mm
Dielectric	PTFE (Polytetrafluoroethylene)		2.95 mm
Outer conductor	Copper, Tin plated	Tin soaked braid, 100%	3.58 mm
Jacket	FEP (Fluorinated ethylene propylene)	RAL 3020 - rd	4.1 mm +/- 0.1 mm

Electrical data	
Impedance	50 Ω +/-2Ω
Operating frequency	≤ 33 GHz
Capacitance	92 pF/m
Velocity of signal propagation	71 %
Signal delay	4.7 ns/m
Screening effectiveness	100 dB at frequency 1 GHz ... 18GHz
Insulation resistance	100000000 MΩ*m
Inner conductor resistance	25 Ω/km
Outer conductor resistance	18 Ω/km
Operating Voltage (at sea level)	≤ 1.9 kVrms
Test voltage (50 Hz/1 min)	≤ 5 kVrms

Mechanical data	
Weight	approx. 47 g/m
Static bending radius	≥ 8 mm
Repeated bending radius	40 mm (bendings, up to 50)

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Environmental data	
Operation temperature	-65 °C ... 165 °C
Installation temperature	-20 °C ... 60 °C
Flame propagation standard	IEC 60332-1
	UL 1581 § 1080 (VW-1)
Fire characteristics	contains halogene

Material compliance			
Item number	Directive / Regulation	Rating	Exemptions / Details
22512256	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	Y12

Ordering information		
Item number	Item description	Available as assembly only
22512256	SUCOFORM_141_CU_FEP	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 =	**0.355**	b coefficient typical =	**0.04**
fmax =	**33**	P at 1 GHz =	**560**
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
0.20	0.167	0.051	1252
0.40	0.241	0.073	885
0.60	0.299	0.091	723
0.80	0.350	0.107	626
1.00	0.395	0.120	560
1.20	0.437	0.133	511
1.40	0.476	0.145	473
1.60	0.513	0.156	443
1.80	0.548	0.167	417
2.00	0.582	0.177	396
4.00	0.870	0.265	280
6.00	1.110	0.338	229
8.00	1.324	0.404	198
10.00	1.523	0.464	177
15.00	1.975	0.602	145
20.00	2.388	0.728	125
25.00	2.775	0.846	112
30.00	3.144	0.958	102
33.00	3.359	1.024	97

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