DATA SHEET

Hand formable (RG405) 50Ohm, 40GHz, 165°C, ø2.5mm FEP jacket

SUCOFORM_86_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
- FEP jacket



Construction			
Component	**Material**	**Detail**	**Diameter**
Centre conductor	Steel, Copper + Silver plated	Wire	0.53 mm
Dielectric	PTFE (Polytetrafluoroethylene)		1.65 mm
Outer conductor	Copper, Tin plated	Tin soaked braid, 100%	2.1 mm
Jacket	FEP (Fluorinated ethylene propylene)	RAL 3020 - rd	2.5 mm +/- 0.1 mm

Electrical data	
Impedance	50 Ω +/-2Ω
Operating frequency	≤ 40 GHz
Capacitance	95 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	199 Ω/km
Outer conductor resistance	39 Ω/km
Operating Voltage (at sea level)	≤ 1.5 kVrms
Test voltage (50 Hz/1 min)	≤ 3 kVrms

Mechanical data	
Weight	approx. 18 g/m
Static bending radius	≥ 6 mm
Repeated bending radius	20 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
22511942	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	Y16

Ordering information		
Item number	Item description	Available as assembly only
22511942	SUCOFORM_86_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 =	**0.6283**	b coefficient typical =	**0.04**
fmax =	**40**	P at 1 GHz =	**280**
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	0.289	0.088	626
0.40	0.413	0.126	443
0.60	0.511	0.156	361
0.80	0.594	0.181	313
1.00	0.668	0.204	280
1.20	0.736	0.224	256
1.40	0.799	0.244	237
1.60	0.859	0.262	221
1.80	0.915	0.279	209
2.00	0.969	0.295	198
4.00	1.417	0.432	140
6.00	1.779	0.542	114
8.00	2.097	0.639	99
10.00	2.387	0.728	89
15.00	3.033	0.925	72
20.00	3.610	1.100	63
25.00	4.141	1.262	56
30.00	4.641	1.415	51
35.00	5.117	1.560	47
40.00	5.574	1.699	44

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