DATA SHEET

Hand formable (RG401) 50Ohm, 18GHz, 165°C, ø6.8mm FEP jacket

SUCOFORM_250-01_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	Copper, Silver plated	Wire	1.67 mm
Dielectric	PTFE (Polytetrafluoroethylene)		5.24 mm
Outer conductor	Copper, Tin plated	Tin soaked braid, 100%	6.3 mm
Jacket	FEP (Fluorinated ethylene propylene)	RAL 3020 - rd	6.8 mm +/- 0.1 mm

Electrical data	
Impedance	50 Ω +/-2Ω
Operating frequency	≤ 18 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	8 Ω/km
Outer conductor resistance	25 Ω/km
Operating Voltage (at sea level)	≤ 3.5 kVrms
Test voltage (50 Hz/1 min)	≤ 7.5 kVrms

Mechanical data	
Weight	approx. 138 g/m
Static bending radius	≥ 30 mm
Repeated bending radius	120 mm (bendings, up to 15)

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Environmental data	
Operation temperature	-65 °C ... 165 °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
84007941	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	Y14

Ordering information		
Item number	Item description	Available as assembly only
84007941	SUCOFORM_250-01_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 =	**0.21**	b coefficient typical =	**0.031**
fmax =	**18**	P at 1 GHz =	**1000**
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	0.100	0.031	2236
0.40	0.145	0.044	1581
0.60	0.181	0.055	1291
0.80	0.213	0.065	1118
1.00	0.241	0.073	1000
1.20	0.267	0.081	913
1.40	0.292	0.089	845
1.60	0.315	0.096	791
1.80	0.338	0.103	745
2.00	0.359	0.109	707
4.00	0.544	0.166	500
6.00	0.700	0.213	408
8.00	0.842	0.257	354
10.00	0.974	0.297	316
15.00	1.278	0.390	258
18.00	1.449	0.442	236

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