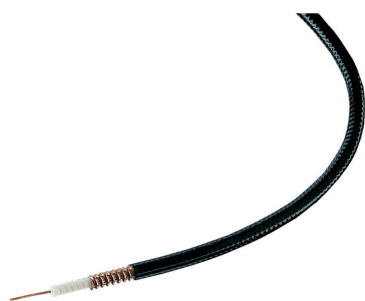


# TS041-50

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TS041-50, HELIAX® Foam Coaxial Cable, corrugated copper, 4.1 mm, black PE jacket

## Product Classification

<b>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®
<b>Product Series</b>	TS041-50

## General Specifications

<b>Flexibility</b>	Superflexible
<b>Jacket Color</b>	Black
<b>Performance Note</b>	Attenuation values typical, guaranteed within 5%

## Dimensions

<b>Diameter Over Dielectric</b>	2.921 mm   0.115 in
<b>Diameter Over Jacket</b>	4.851 mm   0.191 in
<b>Inner Conductor OD</b>	1.016 mm   0.04 in
<b>Outer Conductor OD</b>	4.14 mm   0.163 in
<b>Nominal Size</b>	4.1 mm

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm $\pm$ 1.5 ohm
<b>Capacitance</b>	98.4 pF/m   29.992 pF/ft
<b>dc Resistance, Inner Conductor</b>	20.998 ohms/km   6.4 ohms/kft
<b>dc Resistance, Outer Conductor</b>	11.812 ohms/km   3.6 ohms/kft
<b>dc Test Voltage</b>	1300 V
<b>Inductance</b>	0.24 $\mu$ H/m   0.073 $\mu$ H/ft
<b>Insulation Resistance</b>	100000 MOhms-km

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<b>Jacket Spark Test Voltage (rms)</b>	2000 V
<b>Operating Frequency Band</b>	1 – 18000 MHz
<b>Peak Power</b>	4.2 kW
<b>Velocity</b>	69 %

## Attenuation

<b>Frequency (MHz)</b>	<b>Attenuation (dB/100 m)</b>	<b>Attenuation (dB/100 ft)</b>	<b>Average Power (kW)</b>
1.0	0.972	0.296	4.2
1.5	1.191	0.363	4.2
2.0	1.377	0.42	4.2
10.0	3.1	0.945	2.25
20.0	4.407	1.343	1.59
30.0	5.419	1.652	1.29
50.0	7.041	2.146	0.99
85.0	9.258	2.822	0.75
88.0	9.426	2.873	0.74
100.0	10.073	3.07	0.69
108.0	10.484	3.195	0.67
150.0	12.445	3.793	0.56
174.0	13.452	4.1	0.52
200.0	14.476	4.412	0.48
204.0	14.627	4.458	0.48
300.0	17.946	5.47	0.39
400.0	20.933	6.38	0.33
450.0	22.304	6.798	0.31
460.0	22.57	6.879	0.31
500.0	23.611	7.196	0.3
512.0	23.917	7.289	0.29
600.0	26.071	7.946	0.27
700.0	28.364	8.645	0.25
800.0	30.526	9.304	0.23
824.0	31.028	9.457	0.23
894.0	32.46	9.893	0.22
960.0	33.769	10.292	0.21
1000.0	34.545	10.529	0.2

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<b>1218.0</b>	38.575	11.757	0.18
<b>1250.0</b>	39.142	11.93	0.18
<b>1500.0</b>	43.392	13.225	0.16
<b>1700.0</b>	46.601	14.203	0.15
<b>1794.0</b>	48.059	14.648	0.15
<b>1800.0</b>	48.151	14.676	0.15
<b>2000.0</b>	51.16	15.593	0.14
<b>2100.0</b>	52.623	16.039	0.13
<b>2200.0</b>	54.06	16.477	0.13
<b>2300.0</b>	55.474	16.908	0.13
<b>2500.0</b>	58.238	17.75	0.12
<b>2700.0</b>	60.924	18.569	0.11
<b>3000.0</b>	64.825	19.758	0.11
<b>3400.0</b>	69.824	21.281	0.1
<b>3600.0</b>	72.248	22.02	0.1
<b>3700.0</b>	73.442	22.384	0.1
<b>3800.0</b>	74.626	22.745	0.09
<b>3900.0</b>	75.8	23.103	0.09
<b>4000.0</b>	76.964	23.457	0.09
<b>4100.0</b>	78.118	23.809	0.09
<b>4200.0</b>	79.263	24.158	0.09
<b>4300.0</b>	80.399	24.504	0.09
<b>4400.0</b>	81.527	24.848	0.09
<b>4500.0</b>	82.646	25.189	0.08
<b>4600.0</b>	83.757	25.528	0.08
<b>4700.0</b>	84.86	25.864	0.08
<b>4800.0</b>	85.956	26.198	0.08
<b>4900.0</b>	87.045	26.53	0.08
<b>5000.0</b>	88.127	26.86	0.08
<b>6000.0</b>	98.596	30.051	0.07
<b>8000.0</b>	118.069	35.986	0.06
<b>8800.0</b>	125.444	38.233	0.06
<b>10000.0</b>	136.161	41.5	0.05
<b>12000.0</b>	153.274	46.716	0.05
<b>14000.0</b>	169.644	51.705	0.04

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<b>15800.0</b>	183.87	56.041	0.04
<b>16000.0</b>	185.425	56.515	0.04
<b>18000.0</b>	200.726	61.178	0.03

## Material Specifications

<b>Dielectric Material</b>	PTFE
<b>Jacket Material</b>	PE
<b>Inner Conductor Material</b>	Silver-plated copper wire
<b>Outer Conductor Material</b>	Corrugated copper

## Mechanical Specifications

<b>Minimum Bend Radius, multiple Bends</b>	19.05 mm   0.75 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	20
<b>Tensile Strength</b>	14 kg   30.865 lb
<b>Bending Moment</b>	1.4 N-m   12.391 in lb
<b>Flat Plate Crush Strength</b>	0.7 kg/mm   39.198 lb/in

## Environmental Specifications

<b>Installation temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Operating Temperature</b>	-55 °C to +85 °C (-67 °F to +185 °F)
<b>Storage Temperature</b>	-70 °C to +85 °C (-94 °F to +185 °F)
<b>Attenuation, Ambient Temperature</b>	68 °F   20 °C
<b>Average Power, Ambient Temperature</b>	104 °F   40 °C
<b>Average Power, Inner Conductor Temperature</b>	212 °F   100 °C