RCT5, RADIA® Coaxial Radiating Cable with Bump, 800–2000 MHz, tuned foil, 7/8 in, black non-halogenated, fire retardant polyolefin jacket

Product Classification

Brand
RCT5

Construction Materials

Jacket Material
Non-halogenated, fire retardant polyolefin

Dielectric Material
Foam PE

Inner Conductor Material
Copper tube

Jacket Color
Black

Outer Conductor Material
Copper foil

Dimensions

Nominal Size
7/8 in

Diameter Over Jacket, maximum
27.686 mm | 1.090 in

Inner Conductor OD
0.3720 in | 9.4500 mm

Outer Conductor OD
0.950 in | 24.100 mm

Cable Weight
0.28 lb/ft | 0.42 kg/m

Electrical Specifications

Operating Frequency Band
50 – 2000 MHz

Optimum Operating Frequency Band
1800 – 2000 MHz | 800 – 960 MHz

Polarization
Vertical

Velocity
91 %

VSWR Installed, typical, 1700–2700 MHz
1.38

VSWR Installed, typical, 50–960 MHz
1.30

VSWR on Reel, typical
1.43

Cable Impedance
50 ohm ±2 ohm

dc Resistance, Inner Conductor
0.410 ohms/kft | 1.435 ohms/km

dc Resistance, Outer Conductor
1.036 ohms/kft | 3.400 ohms/km

dc Test Voltage
6000 V

Insulation Resistance
100000 Mohms•km
RCT5-CP-1A-RNA

Jacket Spark Test Voltage (rms) 8000 V
Peak Power 91.0 kW

Environmental Specifications
Installation Temperature -30 °C to +60 °C (-22 °F to +140 °F)
Operating Temperature -30 °C to +80 °C (-22 °F to +176 °F)
Storage Temperature -30 °C to +80 °C (-22 °F to +176 °F)

General Specifications
Cable Type Radiating Mode (RCT) Series

Mechanical Specifications
Bending Moment 14.9 N-m | 11.0 ft lb
Flat Plate Crush Strength 35.0 lb/in | 0.6 kg/mm
Indication of Slot Alignment Yes; bumps face the wall
Minimum Bend Radius, Single Bend 254.00 mm | 10.00 in
Recommended Distance from the Wall 101.6 mm | 4.0 in
Recommended Hanger Spacing 1.0 m | 3.3 ft
Tensile Strength 215 kg | 475 lb
Fire Retardancy Test Method IEC 60332-1 | IEC 60332-3C-24
Smoke Index Test Method IEC 61034
Toxicity Index Test Method IEC 60754-1 | IEC 60754-2

Standard Conditions
Attenuation Test Method IEC 61196-4
Attenuation Tolerance ±5%
Attenuation, Ambient Temperature 20 °C | 68 °F
Average Power, Ambient Temperature 40 °C | 104 °F
Average Power, Inner Conductor Temperature 100 °C | 212 °F
Coupling Loss Test Method IEC 61196-4
Coupling Loss Tolerance ±5 dB

Electrical Performance

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Attenuation (dB/100 m)</th>
<th>Attenuation (dB/100 ft)</th>
<th>Coupling Loss 50%</th>
<th>Coupling Loss 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 MHz</td>
<td>0.90</td>
<td>0.27</td>
<td>70</td>
<td>78</td>
</tr>
<tr>
<td>100 MHz</td>
<td>1.10</td>
<td>0.34</td>
<td>68</td>
<td>80</td>
</tr>
<tr>
<td>150 MHz</td>
<td>1.30</td>
<td>0.40</td>
<td>74</td>
<td>85</td>
</tr>
<tr>
<td>350 MHz</td>
<td>2.20</td>
<td>0.67</td>
<td>88</td>
<td>98</td>
</tr>
<tr>
<td>450 MHz</td>
<td>2.50</td>
<td>0.76</td>
<td>86</td>
<td>97</td>
</tr>
<tr>
<td>800 MHz</td>
<td>3.40</td>
<td>1.04</td>
<td>71</td>
<td>74</td>
</tr>
<tr>
<td>900 MHz</td>
<td>3.70</td>
<td>1.13</td>
<td>72</td>
<td>76</td>
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</tbody>
</table>
## Regulatory Compliance/Certifications

<table>
<thead>
<tr>
<th>Agency</th>
<th>Classification</th>
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<tbody>
<tr>
<td>RoHS 2011/65/EU</td>
<td>Compliant</td>
</tr>
<tr>
<td>ISO 9001:2015</td>
<td>Designed, manufactured and/or distributed under this quality management system</td>
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</table>

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>Bandwidth (GHz)</th>
<th>Center Frequency (Hz)</th>
<th>Gain (dBi)</th>
<th>ITU (dBm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1700</td>
<td>6.10</td>
<td>63</td>
<td>74</td>
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</tr>
<tr>
<td>1800</td>
<td>6.40</td>
<td>62</td>
<td>75</td>
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<tr>
<td>1900</td>
<td>6.70</td>
<td>61</td>
<td>73</td>
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<tr>
<td>2000</td>
<td>7.20</td>
<td>59</td>
<td>71</td>
<td></td>
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