RCT5, RADIAX® Coaxial Radiating Cable with Bump, 50–500 MHz, tuned foil, 7/8 in, black non-halogenated, fire retardant polyolefin jacket

Product Classification
Brand
RCT5
Product Series
RCT5
Product Type
Radiating cable

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
9.4490 mm | 0.3720 in
Outer Conductor OD
24.130 mm | 0.950 in
Cable Weight
0.42 kg/m

Electrical Specifications
Operating Frequency Band
50 – 900 MHz
Optimum Operating Frequency Band
150 – 500 MHz
Polarization
Horizontal
Velocity
91 %
VSWR Installed, typical, 50–960 MHz
1.30
VSWR on Reel, typical
1.43
Stop Bands
320 – 340 MHz | 615 – 670 MHz
Cable Impedance
50 ohm ±2 ohm
dc Resistance, Inner Conductor
1.435 ohms/km
dc Resistance, Outer Conductor
3.400 ohms/km
dc Test Voltage
6000 V
Insulation Resistance
100000 Mohms•km
RCT5-LT-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  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>1.00</td>
<td>0.30</td>
<td>66</td>
<td>76</td>
</tr>
<tr>
<td>100 MHz</td>
<td>1.10</td>
<td>0.34</td>
<td>63</td>
<td>74</td>
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<tr>
<td>150 MHz</td>
<td>1.40</td>
<td>0.43</td>
<td>72</td>
<td>82</td>
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<tr>
<td>350 MHz</td>
<td>2.60</td>
<td>0.79</td>
<td>53</td>
<td>57</td>
</tr>
<tr>
<td>400 MHz</td>
<td>2.60</td>
<td>0.79</td>
<td>55</td>
<td>57</td>
</tr>
<tr>
<td>420 MHz</td>
<td>2.60</td>
<td>0.79</td>
<td>56</td>
<td>58</td>
</tr>
<tr>
<td>450 MHz</td>
<td>2.70</td>
<td>0.82</td>
<td>58</td>
<td>63</td>
</tr>
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<table>
<thead>
<tr>
<th>Frequency</th>
<th>Gain 1</th>
<th>Gain 2</th>
<th>Gain 3</th>
<th>Gain 4</th>
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</thead>
<tbody>
<tr>
<td>500 MHz</td>
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<td>0.85</td>
<td>54</td>
<td>56</td>
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<tr>
<td>800 MHz</td>
<td>4.00</td>
<td>1.22</td>
<td>55</td>
<td>59</td>
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<tr>
<td>900 MHz</td>
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<td>1.31</td>
<td>57</td>
<td>65</td>
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</table>

Regulatory Compliance/Certifications

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